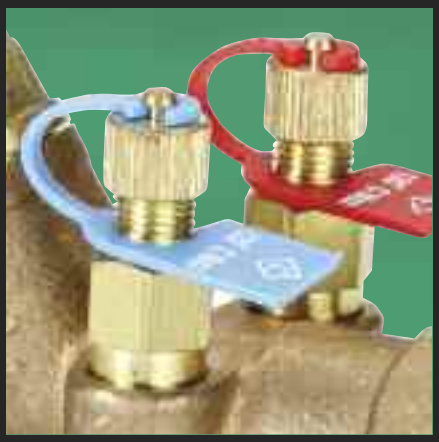
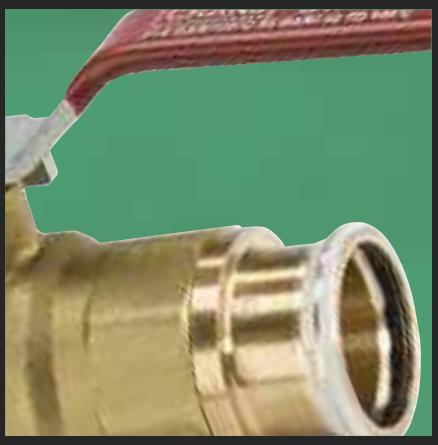
CRANE

FLUID SYSTEMS

PRODUCT DIRECTORY





ISSUE 1

BALANCING VALVES | GENERAL VALVES

PRESS-FIT VALVES | PUBLIC HEALTH VALVES | PIPE FITTINGS

OUR GENIUS IS VALVES

CRANE BUILDING SERVICES & UTILITIES

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TECHNICAL HELPLINE: +44 (0)1473 277400
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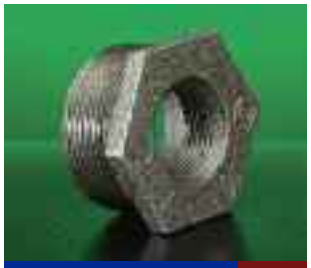
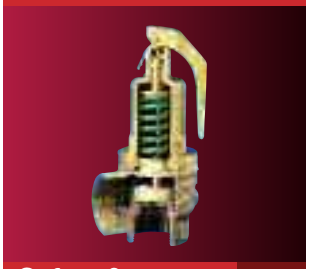


Sister Brands

NABIC™



brownall™

FULL TECHNICAL DATA AVAILABLE ON **WWW.CRANEFS.COM**

OUR HERITAGE

Crane Building Services & Utilities forms part of the Fluid Handling Group within Crane Co., which was founded in 1855, and now is a multi-industry manufacturer that generated 2011 net sales of $2.5 billion.

In 1906, James E. Bennett set up a business in London as a coppersmith. He soon recognised a growing interest in the trade for the latest American pipe fittings and valves, and turned his attention to importing. Amongst the products he introduced to the British industry were those of Crane Co., a thriving American Company founded in the mid-19th century.

Crane soon realised that a manufacturing unit in the UK would help expand their international business. In 1919, Crane Co. purchased the assets of the English Company and changed its name to Crane-Bennett Limited with the intention of manufacturing valves and fittings in the UK.

Today, the Company forms part of Crane Building Services & Utilities, which was created as a result of Crane Ltd acquiring Viking Johnson, Helden and WASK in 2003 and Hattersley in 2004. The most recent acquisition was Delta Fluid Products in 2008. Each of these companies has a long and distinguished history:

- Crane Limited founded in Ipswich in 1919
- Viking Johnson founded in Hitchin in the 1930s
- WASK founded in Keighley in 1888
- Delta Fluid Products founded in 1900

The name Crane speaks of who we are, what we stand for and how our customers perceive us: a company with history and tradition, but also a company that is innovative, quality-minded and one which acts with integrity, still holding to the resolution of its founder.

Crane Co. was founded on the 5th July 1855 by Richard Teller Crane who made the following resolution:

"I am resolved to conduct my business in the strictest honesty and fairness; to avoid all deception and trickery; to deal fairly with both customers and competitors; to be liberal and just towards employees; and to put my whole mind upon the business."

The essence of this resolution is the business policy of Crane Co. today.

Richard Teller Crane

Brownall Vent Cock

Hattersley Hook Up

NABIC Safety Relief Valve

Crane FS Balancing Valve

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BRANDS YOU KNOW

Crane Building Services & Utilities has leading brands serving the building services, water and gas markets. These brands are Crane Fluid Systems, NABIC, Brownall, Rhodes, Wade, IAT, WASK, Sperryn, Viking Johnson, PosiFlex and Helden.

TECHNOLOGY YOU WANT

Crane Building Services & Utilities designs, manufactures and sells a range of gate, globe, check, ball, butterfly, balancing and pressure control valves and manifold systems in a range of materials including cast steel, iron, bronze, brass and DZR.

The Company also manufactures pipe connections, repair and flow control products for the water sector, and fittings, valves, flow regulators and equipment for the gas industry.

SOLUTIONS YOU NEED

Crane Building Services & Utilities provides solutions for balancing and controlling water systems in commercial buildings, connecting the same or disparate pipe materials for water distribution as well as supplying fittings and equipment for the safe transmission, control and connection of gas.

CRANE FLUID SYSTEMS

For more than 90 years, Crane Fluid Systems has manufactured a range of valves and pipe fittings for the Building Services industry, and is now developing a range of next generation balancing solutions. The product portfolio comprises a full range of traditional valves: ball, butterfly, check, gate, globe and radiator valves as well as strainers and drain cocks. There is a range of static balancing valves and flow management systems providing the ultimate in accuracy and reliability. In addition, a range of malleable iron pipe fittings and unions, which carry the BSI Kitemark and are WRAS approved, and a range of bronze pipe fittings are also available.

NABIC™

One of the UK's leading suppliers of gunmetal safety valves, NABIC has long been recognised as the industry standard for commercial and industrial hot water applications. In fact, NABIC valves are ideal for hot water supply, heating, pump relief, bypass relief, outside installation and for use with different gases and liquids.

brownall™

The Brownall range of automatic air eliminators cover low, medium and high pressure applications and are suitable for use with water, aviation fuel, diesel and light oils. The range is complemented by three-way vent valves, offering efficient performance and reliable service combined with potential savings in time and cost by simplifying the venting system for single/multi boiler or calorifier installations.

Wade™

An extensive range of low and medium pressure, brass compression fittings, valves and accessories. The range also covers SISTEM-P and compact push-in fittings, nickel-plated BSP fittings, quick release couplings, air guns, recoil hoses and tubing.

RHODES™

Rhodes is a market leader in the design and manufacture of sight flow indicator equipment, having produced indicators since 1951. Rhodes sight flow indicators can be found in process, petrochemical and pharmaceutical plants all over the world.

IAT Ingolstadt Armaturen is a brand of specialised water safety valves which were originally developed in Ingolstadt, Germany in the 1960s for the prevention of contamination of potable water by industrial, commercial or domestic activities. These products are now approved to BS EN 1717, a water safety standard which became a UK regulation in January 2002.

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VIKING JOHNSON™

Viking Johnson is a world leader in the manufacture and supply of couplings, flange adaptors, pipe repair and jointing solutions for the international water, wastewater, gas and industrial markets.

The Viking Johnson shouldered pipe jointing system can claim over 80 years of effective performance worldwide. The unique mechanical characteristics of shouldered joints offer speed and ease of installation along with proven reliability. The system consists of a comprehensive range of joints and fittings ranging from 40mm to 1250mm (1.5" to 50") in size, for use with shouldered carbon steel, (including lightweight steel), stainless steel, lined pipe and other piping materials.

The Carlton pipe joint is installed in many UK coal pits and used on methane drainage, compressed air and some water services. Approved to UK Coal Specification 596, it is a simple mechanical method of connecting pipe, which allows a high degree of flexibility at each point.

WASK™

Market leader in the supply of specialist mains and service fittings, along with pipeline equipment of the highest quality, WASK is renowned in the global gas distribution market. WASK Teeset and bagging-off equipment has become a standard in the UK gas industry and in many markets overseas.

Latest additions to the range include a robust gas gate valve and unique modular system which allows PE pipework to supply gas into single or multiple occupancy dwellings.

WASK has a reputation as a leader in producing innovative and safe gas control valves.

POSIFLEX™

PosiFlex expansion joints provide relief for piping system stress caused by thermal and mechanical vibration and/or movement, and can also be utilised to overcome problems of noise. These flexible connectors are fabricated from a wide range of rubber compounds, open or filled, single or multiple arch and are designed to accommodate the needs of individual pipe systems conveying materials as diverse as fluids, foodstuffs, chemicals or crude oil.

SPERRYN GAS CONTROLS™

Sperryn is a leading supplier of meter installation kits and emergency control valves for domestic, commercial and industrial applications. Using the latest design facilities and technologies, Sperryn regulators offer increased capacity, accuracy and lower pressure drops. Where applicable, fittings and control valves comply with the requirements of the relevant British Gas Engineering Standards.

Press-Fit Valves

NEW

- A dedicated core range of Press-Fit Valves
- Quickly and easily installed onto pipe using proven Geberit Mapress technology
- Valves and fittings have been redesigned to ensure enhanced thread engagement
- Pre-assembled – rigorously tested
- Number of joints to make on-site is dramatically reduced
- Performance, exact dimensions and tolerances are known in advance
- Balancing, Ball, Check Valves and Strainers available

General Valves

Ball Valves

- Isolation valves with full flow in open position and bubble tight in closed
- Quarter turn to open & close
- Light, compact units

Butterfly Valves

- Quarter turn isolation valves
- Supplied in wafer or lugged variants with lever or gearbox
- Linings are EPDM or nitrile rubber

Check Valves

- Permit flow in one direction only
- Close automatically if flow reverses
- Entirely automatic depending on pressure & velocity of flow

Drain Cocks

- Enable systems to be drained without removing pipework
- Prevent build-up of sediment
- Prolong life of pipework

Gate Valves

- Dependable where minimum pressure drop is important
- Efficient stop valves with flow in either direction
- Little resistance to flow

Globe Valves

- Highly efficient for throttling service
- Offer proportional flow characteristics
- Ensure accurate flow control and regulation

Radiator Valves

- Easy temperature adjustment
- Suitable for installations where rugged construction is predominant
- Aesthetically pleasing for commercial and domestic interiors

Strainers

- Eliminate scale and dirt in pipes
- Prevent damage to pipeline equipment
- Baskets are easily removed for cleaning

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ProBalance Balancing Valves

NEW

Balancing - Static

- Range of flow measurement devices and double regulating valves
- Allow accurate, precise control and measurement of flow
- Allow design engineers to specify flow characteristics

CommPac

- For fixed or variable flow systems
- Flow management module
- Prefabricated units
- Simple and fast on-site connection
- Assembled to order
- Contains all the control components and pipework needed

Differential Pressure Control Valves

- For use with variable speed pumps
- Set to maximum differential pressure so flow cannot exceed a desired rate
- Reduce energy consumption
- Reduce noise
- Simplify commissioning

Dominator® - now with PICV

- Prefabricated unit
- Compact
- Ready for quick on-site connection
- Allows easy back-flushing, forward-flushing and isolation

Pressure Independent Control Valves

- Offer full authority and an automatic balancing function
- Create energy savings
- Used as part of a variable flow system
- Accurate flow rates and precise temperature control

Public Health Range

Thermal Balancing Valves

- For control of potable hot water services
- Enable constant flow, maintaining temperatures and preventing deadlegs
- Help prevent legionella

Thermostatic Mixing Valves

- Blend hot and cold water to ensure constant, controlled safe outlet temperature
- Ideal for healthcare, schools, workplace and domestic environments
- Tamper-proof
- Integral strainers and check valves

Pipe Fittings

Malleable Iron and Bronze

- Available in Malleable Iron or Bronze
- Carry the BSI Kitemark and are WRAS approved
- Corrosion resistant
- Quality casting and design integrity mean high pressures can be tolerated
- For use on most general applications including water, gas and steam

For full product specifications please refer to the CFS website: www.cranefs.com

VALVE FUNCTION	VALVE TYPE		BODY MATERIAL	CHILLED WATER, LTHW AND MTHW								CWS		DHWS		AIR/GAS		OIL	
				PN6		PN10		PN16		PN25									
				≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm
ISOLATION	GATE	THREADED	BRONZE	D151	D151	D151	D151	D151	D151	D151X	D151X	D151	D151	D151	D151	-	-	D151	D151
		THREADED	DZR	D151A	D151A	D151A	D151A	D151A	D151A	-	-	D151A	D151A	D151A	D151A	-	-	D151A	D151A
		FLANGED	BRONZE	-	-	-	DM160	-	DM160	DM161	DM161	-	-	-	-	-	-	-	-
		COMPRESSION	BRONZE	D155C	-	D155C	-	D155C	-	-	-	D155C	-	D155C	-	-	-	-	-
		FLANGED	CAST IRON	-	FM52	-	FM57	-	FM63	-	-	-	-	-	-	-	-	-	FM52
	BALL	THREADED	BRONZE	D171	-	D171	-	D171	-	D171	D171	D171	-	D171	-	D171	-	D171	-
		THREADED	DZR	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-	-	-	-	-
		THREADED	BRASS	-	-	-	-	-	-	-	-	-	-	-	-	D191	-	D191	-
		COMPRESSION	BRONZE	D171C	-	D171C	-	D171C	-	-	-	D171C	-	D171C	-	D171C	-	D171C	-
		COMPRESSION	DZR	-	-	-	-	-	-	-	-	D181C	-	D181C	-	-	-	-	-
	BUTTERFLY	SEMI-LUGGED	DUCTILE IRON	-	-	F611 F621 F626	F611 F612 F621 F622 F626 F627 (See (Note 1)	F611 F621 F626	F611 F612 F621 F622 F626 F627 (See (Note 1)	-	-	F621 WRAS	F621 F622 WRAS	F621 WRAS	F621 F622 WRAS	F611	F611 F622	REFER TO CRANE	
		FULLY LUGGED		-	-	F614 F624 F628	F614 F615 F624 F625 F628 F629 (See (Note 2)	F614 F624 F628	F614 F615 F624 F625 F628 F629 (See (Note 2)	DM 975G	DM 975G	F624 WRAS	F624 F625 WRAS	F624 WRAS	F624 F625 WRAS	F614	F614 F615		
NON-RETURN	SWING CHECK	RESILIENT SEAT	BRONZE	D140	D140	D140	D140	D140	D140	D140	D140	-	-	-	-	D140	-	-	-
		METAL SEAT		D138	D138	D138	D138	D138	D138	D138	D138	D138	-	D138	-	D138	-	D138	-
		RESILIENT SEAT	CAST IRON	-	-	-	-	-	FM469	-	-	-	-	-	-	-	FM469	-	-
		METAL SEAT		-	-	-	-	-	FM492	-	-	-	-	-	-	-	-	-	-
	WAFER CHECK	RESILIENT SEAT	CAST IRON	-	-	-	-	-	FM451	FM455	FM455	-	-	-	-	-	-	-	-
		METAL SEAT		-	-	-	-	-	FM450	-	-	-	-	-	-	-	-	-	-
PIPELINE PROTECTION	STRAINER Y-TYPE	THREADED	BRONZE	D297	-	D297	-	D297	-	-	-	D297	-	D297	-	D297	-	D297	-
		FLANGED	CAST IRON	-	-	-	FM276	-	FM276	FM278	FM278	-	-	-	-	-	FM276	-	FM276
		THREADED	MALLEABLE IRON	F273	-	F273	-	F273	-	F273	-	-	-	-	-	-	-	-	-
DRAINING	DRAW OFF BALL		BRONZE	D171 MHU	- -	D171 MHU	- -	D171 MHU	-	-	-	D171 MHU	-	D171 MHU	-	-	-	-	-
	DRAINING TAP		BRONZE	D340	-	D340	-	D340	-	-	-	D340	-	D340	-	-	-	-	-
	DRAW OFF COCK		BRONZE	D344 1/2	-	D344 1/2	-	D344 1/2	-	-	-	D344 1/2	-	D344 1/2	-	-	-	-	-

(Note 1) Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 and ANSI B16.1 Class 125 (Sizes 2" - 12"). Sizes 350mm to 600mm suitable for use with PN16 flanges only.

(Note 2) Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16.

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FUNCTION	VALVE TYPE		BODY MATERIAL	THREADED/ COMPRESSION			FLANGED/ LUGGED	
				PN10	PN16	PN25	PN16	PN25
REGULATION	DRV	DOUBLE REGULATING VALVE	BRONZE	-	-	D921 D923*	-	-
			DUCTILE IRON	-	-	-	DM921 DM925G	DM975G
FLOW MEASUREMENT	FMD	FLOW MEASUREMENT DEVICE	DZR	-	-	D901 D902*	-	-
			STAINLESS STEEL	-	-	-	DM900	DM900
CIRCUIT BALANCING	2 UNIT DRV + FMD	DOUBLE REGULATING VALVE + FLOW MEASUREMENT DEVICE	BRONZE/DZR	-	-	D921 + D901 D923* + D902*	-	-
			DUCTILE IRON	-	-	-	DM921 + DM900 DM925G + DM900	DM975G + DM900
	SINGLE UNIT FODRV	FIXED ORIFICE DOUBLE REGULATING VALVE	BRONZE	-	-	D931 D933* D934** D981P for use with actuator D983P* for use with actuator D984P** for use with actuator	-	-
			DUCTILE IRON	-	-	-	DM941 DM950G	-
	SINGLE UNIT VODRV	VARIABLE ORIFICE DOUBLE REGULATING VALVE	DUCTILE IRON	-	-	-	DM931	-
	SINGLE UNIT FODRV	TERMINAL UNIT FLOW MANAGEMENT SYSTEM	BRONZE	-	Dominator® Z3000 Series	-	-	-
MANIFOLD COMMISSIONING SYSTEM	MULTIPLE UNIT FODRV	TERMINAL UNIT FLOW MANAGEMENT SYSTEM	BRONZE	-	CommPac	-	-	-
DIFFERENTIAL PRESSURE CONTROL	DPCV	FLOW MOUNTED	BRONZE	-	DPAF951	-	-	-
		RETURN MOUNTED			DPAR951	-	-	-
		COMPANION VALVE			DP931	-	-	-
PRESSURE INDEPENDENT CONTROL	PICV		BRASS/ CAST IRON	-	DPIC991	-	DPIC991F	-
THERMAL BALANCING	TBV	<10m CIRCUITS	BRONZE	-	D1880	-	-	-
		>10m CIRCUITS			D1890			
	TEMPERATURE POCKET	MULTITEE			D1892			
THERMOSTATIC MIXING	TMV 3	WITHOUT ISOLATION	DZR	D1088	-	-	-	-
		WITH ISOLATION		D1089				

* Low Flow
** Ultra Low Flow

Project Gallery

Project: Arsenal Emirates Stadium, London
Specification: Crane Fluid Systems' Z3000 Dominators - ProBalance balancing valves

Crane Fluid Systems' Z3000 Dominators have been installed in the 60,335 capacity home of Arsenal Football Club, The Emirates Stadium, North London. The heating and air-conditioning of the office building and players' changing rooms are controlled by fan coil units, in which the Dominator is installed.

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S Shand-Brown

Completed in August 2006, the ground has four tiers of seating covered by 30,000sq m of roofing, which makes it the second largest football stadium in England, behind Manchester United's Old Trafford. In 2004, Emirates airline signed a fifteen year contract for the naming rights of the stadium, a deal worth approximately £100 million.
The Dominator, which is part of the Crane FS ProBalance range, is a compact, prefabricated unit that combines a control valve, flow measurement device, bypass valve, strainer and drain, ready for simple and fast on-site connection to fan coils and other terminal units.

D901 / D902 Flow Measurement Device (FMD) PN25

ProBalance

Specification

D901 & D902
Flow Measurement Devices have square edged entrance orifice plates with tappings for P84 insertion style test points. Flow measurement accuracy of ±3%.

D901 - Sizes ½" to 2"
Inlet - BS EN 10226 formerly BS 21 (ISO 7) taper female
Outlet - BS EN 10226 formerly BS 21 (ISO 7) taper male

D901/D902 - Sizes ½"
Inlet - (ISO 228) parallel female supplied with compression adaptor to suit 15mm BS EN 1057: Half hard R250 copper tube.
Outlet - BS EN 10226 formerly BS 21 (ISO 7) taper male.
Discard adaptor if connecting steel pipe.


D901

Application

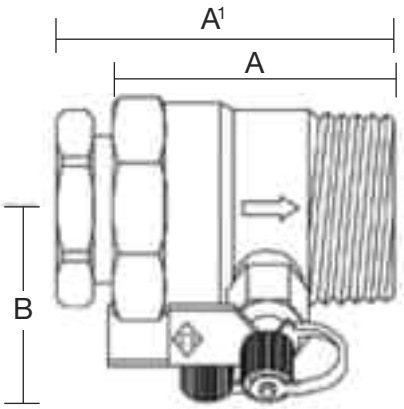
D901 Flow Measurement Devices are suitable for systems where pipes have been sized on the basis that pipe frictional losses lie in the range 100 to 400 Pa/m.

D902 Flow Measurement Device (½"/15mm size only) is suitable for the measurement of ultra low flows in the range 0.015 to 0.06 l/sec eg. flows to fan coil units.

Please note: The fitting of P82 test points will give an increased temperature rating of 180°C.

Conforms to BS 7350*:1990

Dimensional Drawing



Materials

PART	MATERIAL	SPECIFICATION
Body and Integral Orifice	DZR copper alloy	BS EN 12165 CW602N
P84 Pressure Test Point	DZR copper alloy	BS EN 12164 CW602N

Dimensions, Coefficients & Weights

CAT. NO.	NOM. SIZE	END TO END		CENTRE-TO-TOP	FLOW	HEAD LOSS	Kvs	WEIGHT
		A (mm)	A1 (mm)	B (mm)	(Kv)	(K)		(kg)
D901	½" DN15	57	66	55	2.8	13.5	2.2	0.29
	¾" DN20	58	-	61	6.1	9.1	4.7	0.30
	1" DN25	66	-	65	11.9	6.1	8.6	0.40
	1¼" DN32	72	-	71	23.4	4.8	16.6	0.50
	1½" DN40	72	-	73	36.2	3.7	24.5	0.54
	2" DN50	82	-	79	71.6	2.4	46.1	0.77
D902	½" DN15	57	66	55	0.57	333	0.54	0.29

Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C

Note: In line with BS EN 1254/2, the maximum pressure must not exceed 16 bar when using compression adaptors.

*Except pressure rating exceeds BS.

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DM900 Flow Measurement Device (FMD) PN25

ProBalance

Specification

DM900 is a stainless steel orifice plate which has a square edged entrance. The two stainless steel extension tubes are fitted with Crane P84 pressure test points. Accuracy of flow measurement at normal velocities is ±3%.

Application

DM900 can be used as a single unit or close coupled to other regulating or isolating valves to provide accurate flow measurement.

Suitable for use with PN10. PN16, or PN25 flanges or flanged valves with ratings detailed in the appropriate flange or valve product standard. When fitted with P84 pressure test points, the DM900 is limited to 120°C max. For use at temperatures above 120°C, suitable alternative pressure test points should be fitted. For temperatures between 120-180°C, replace P84 with P82. Please consult Crane Fluid Systems' technical team for more information.

Installation

The DM900 can be mounted between valve and/or pipe flanges to BS EN 1092-1+2 with PN10, PN16 or PN25 ratings. The outside diameter ensures a proper alignment when installed between PN10/16 flanges and PN25 flanges up to 80mm size. When assembling between PN25 flanges sized 100mm and larger, ensure the device has been correctly centered with the mating flanges.

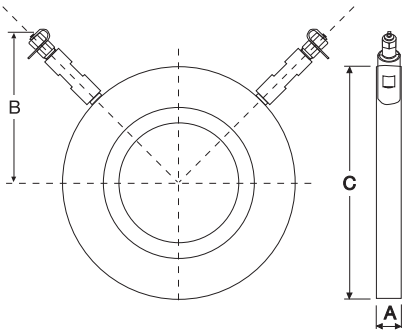
Conforms to BS 7350:1990*

Materials

PART	MATERIAL
Orifice and Carrier	Stainless Steel
Extension Tubes	Stainless Steel
Pressure Test Points (P84)	DZR

DM900

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	25.0

Dimensions & Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	OUTSIDE DIAMETER C (mm)	WEIGHT (kg)
20	18	116	63	0.7
25	18	119	73	0.8
32	18	124	84	1.0
40	18	127	94	1.1
50	18	131	109	1.4
65	18	114	129	1.5
80	18	120	144	1.8
100	18	127	164	2.2
125	18	137	194	2.6
150	18	147	220	3.0
200	18	167	275	4.4
250	18	187	331	5.7
300	18	207	386	7.1
350	21	216	444	12.4
400	21	235	495	14.5
450	21	256	555	18.0
500	21	278	617	22.1
600	25	319	734	36.1

Coefficients

DN	FLOW (Kv)	HEADLOSS (K)	KVS
20	6.0	9.6	4.7
25	11.6	6.6	8.6
32	23	5.1	16.6
40	35	4.0	24.5
50	72	2.5	46.1
65	154	1.5	90
80	220	1.4	120
100	373	1.4	220
125	570	1.4	342
150	789	1.5	468
200	1383	1.6	792
250	2122	1.7	1224
300	3116	1.6	1800
350	2754	2.6	1795
400	3573	2.6	2334
450	4583	2.6	2981
500	5686	2.6	3700
600	8229	2.6	4491

*Larger sizes available on application. *Except pressure rating exceeds BS.

D921 / D923 Double Regulating Valve (DRV) PN25

ProBalance

WRAS APPROVED PRODUCT

Specification

The Double Regulating Valve offers an accuracy of ± 5% on all settings, for precise flow regulation.

They are Y-Pattern globe valves with characterised throttling disc tending towards equal percentage performance. Double regulating feature allows valve opening to be set with an Allen key. Operation of the valve is by means of the Microset handwheel. WRAS approved.

End Connection

Sizes 1" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21. Sizes 1/2" & 3/4" DN15 & DN20 parallel threaded to BS EN ISO 228-1 (formerly BS 2779).

Adaptor kits for use with copper tube also available.

Also available threaded to ANSI B1.20.1.

Please add suffix AT to denote American Thread i.e. D921AT/D923AT

Application

In two unit systems, the D921 has sufficient authority to give effective regulation over the range of flows covered by matching flow measurement devices/valves.

In particular, the D923 low flow regulating valve has an authority matched to the range of ultra low flows covered by the D902 flow measurement device.

Conforms to BS 7350*:1990

Materials

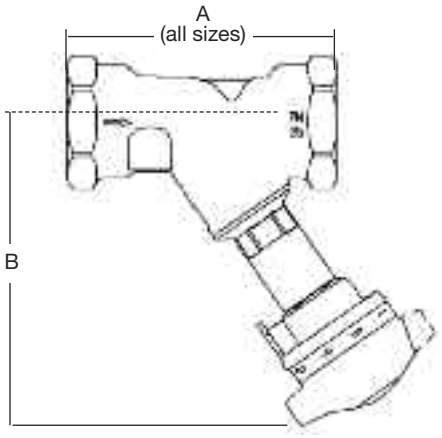
PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Bonnet	DZR Copper Alloy	BS EN 12165 CW602N
Stem	DZR Copper Alloy	BS EN 12165 CW602N
Disc	DZR Copper Alloy	BS EN 12165 CW602N
O-Ring Seal	EPDM Rubber	
Handwheel	Plastic	

Dimensions, Coefficients & Weights

FIG. NO.	NOM. SIZE	DIMENSIONS (mm)		FULLY OPEN		WEIGHT (kg)
		A	B	FLOW (Kv)	HEAD LOSS (K)	
D921	1/2" DN15	87	105	2.14	23.11	0.54
	3/4" DN20	96	106	3.61	26.14	0.58
	1" DN25	100	127	6.37	21.45	0.88
	1 1/4" DN32	114	128	12.30	17.42	1.05
	1 1/2" DN40	125	143	21.30	10.66	1.43
	2" DN50	146	144	31.30	12.63	1.88
D923	1/2" DN15	87	105	2.26	20.72	0.54

D921

Dimensional Drawing



Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C.

Note: In line with BS EN 1254/2 the maximum pressure must not exceed 16 bar when using compression adaptors.

*Except pressure rating which exceeds BS.

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D931 / D933 / D934 Fixed Orifice Double Regulating Valve (FODRV) PN25

ProBalance

WRAS APPROVED PRODUCT

Specification

The Double Regulating Valve, with its integral fixed orifice design, offers an accuracy of ± 5% on all settings, for precise flow regulation and measurement.

They are Y-Pattern globe valves having characterised throttling disc tending towards equal percentage performance. Integral square edged entrance orifice plate and P84 insertion test points fitted. Double regulating feature allows valve opening to be set with an Allen key. Operation of the valve is by means of the Microset handwheel.

The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

D931

End Connection

Sizes 1" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.
Sizes 1/2" & 3/4" DN15 & DN20 BS 2779 (ISO 228) parallel.

Adaptor kits for use with copper tube also available.

Also available threaded to ANSI B1.20.1AT.
Order code D931AT/D933AT/D934AT.

Application

D933 size 1/2" low flow FODRV combines the functions of regulation and flow measurement in a unit of high authority making it particularly suitable for low flow applications in the range of 0.03 to 0.07 l/s.

D934 size 1/2" ultra low flow FODRV combines the functions of regulation and flow measurement in a unit of high authority making it particularly suitable for ultra low flow applications in the range of 0.016 to 0.04 l/s.

Conforms to BS 7350*:1990

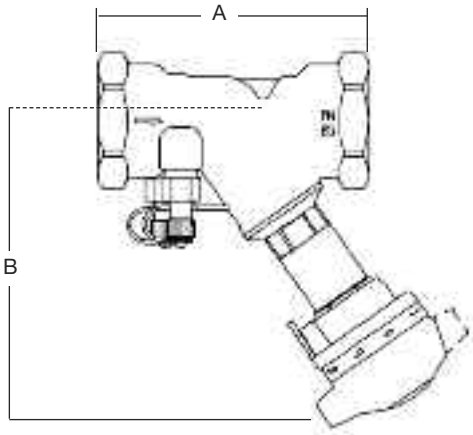
Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Bonnet	DZR Copper Alloy	BS EN 12165 CW602N
Stem	DZR Copper Alloy	BS EN 12164 CW602N
Disc	DZR Copper Alloy	BS EN 12164/5 CW602N
O-Ring Seal	EPDM Rubber	
Orifice Insert	DZR Copper Alloy	BS EN 12164 CW602N
P84 Test Valve	DZR Copper Alloy	BS EN 12164 CW602N
Handwheel	Plastic	

Dimensions, Coefficients & Weights

FIG. NO.	NOM. SIZE	DIMENSIONS (mm)		FULLY OPEN		KVs	WEIGHT (kg)
		A	B	FLOW (Kv)	HEAD LOSS (K)		
D931	1/2" DN15	87	105	1.87	30.27	2.2	0.61
	3/4" DN20	96	106	3.14	34.55	4.7	0.65
	1" DN25	100	127	5.59	27.85	8.6	0.95
	1 1/4" DN32	114	128	10.80	22.60	16.6	1.13
	1 1/2" DN40	125	143	18.10	14.76	24.5	1.52
	2" DN50	146	144	29.10	14.62	46.1	1.98
D933	1/2" DN15	87	105	1.06	94.20	1.1	0.61
D934	1/2" DN15	87	105	0.57	325.80	0.58	0.61

Dimensional Drawing



Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C.

Note: In line with BS EN 1254/2, the maximum pressure must not exceed 16 bar when using compression adaptors.

*Except pressure rating exceeds BS.

MotoBalance DS981 / DS983 / DS984 Fixed Orifice Double Regulating Valve (FODRV) PN25

ProBalance

Features & Benefits

- Designed for installation in circuits where combined functions of actuated regulation and flow measurement are required
- Easy to adjust/set flow using graduated dial and setting key
- Tamperproof - once flow is set with key, it cannot be adjusted without key
- The DN15 valve is also available in low flow (DS983) and ultra-low flow (DS984). Dials are colour coded for easy identification:
  - DS981 - Standard Flow - White - 0.061 to 0.132 l/sec
  - DS983 - Low Flow - Yellow - 0.03 to 0.07 l/sec
  - DS984 - Ultra-Low Flow - Green - 0.016 to 0.04 l/sec
- P84 test points fitted enable accuracy of flow measurement of +/- 5% across all drive settings
- Profiled disc gives equal percentage flow control
- Y-Pattern globe valve
- Integral square edged entrance orifice plates
- Double regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rates

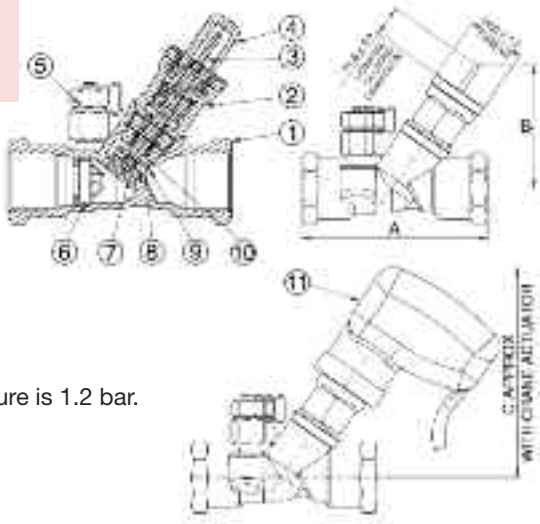
DS981

DS981 with Actuator

Materials

NO.	PART	MATERIAL
1	Body	Bronze BS EN 1982 CC49IK
2	Bonnet	DZR Brass BS EN 12164 CW602N
3	Stem	Stainless Steel BS EN 10088-3
4	Flow Setting Key	Nylon Grade PA6
5	P84 Pressure Tapping Point	DZR Brass BS EN 12164 CW602N
6	Orifice Insert	DZR Brass BS EN 12164 CW602N
7	Plug	DZR Brass BS EN 12164 CW602N
8	Disc	EPDM WRAS approved
9	Backing Washer	Stainless Steel BS EN 10088-3
10	O-Ring Retainer	DZR Brass BS EN 12164 CW602N
11	Crane Actuator (Optional Accessory)	N/A

Dimensional Drawings



Dimensions & Weights

FIG. NO.	NOM SIZE	DIMENSIONS (mm)			FLOW (Kv)	HEAD LOSS (K)	KVs	WEIGHT (kg)
		A	B	C				
DS981	DN15	87	66	115	1.245	30.27	2.2	0.45
DS983	DN15	87	66	115	0.667	90.42	1.1	0.45
DS984	DN15	87	66	115	0.580	325.80	0.58	0.45
DS981	DN20	96	66	115	2.300	34.55	4.7	0.51

Pressure/Temperature Ratings

The maximum static pressure is 16 bar, the maximum differential pressure is 1.2 bar.

Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	14.8	13.5

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

OPERATOR: MotoBalance should be fitted with an actuator. Modulating (ACT60M) and three-point Actuators (ACT50) are available from Crane Fluid Systems

END CONNECTIONS:

- Sizes DN15 & DN20 - parallel threaded to BS EN ISO 228-1 (formerly BS 2779)
- Threaded ANSI is also available. Please add suffix AT to denote American Thread
- When using compression adaptors, the maximum pressure must not exceed 16 bar (in line with BS EN 1254/2)

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DM921 Double Regulating Valve (DRV) PN16

ProBalance

Specification

Y-Pattern globe valve with a characterised throttling disc and ends flanged to BS EN 1092-2 PN16.

The valve opening may be set to control flow at a pre-determined rate. Operation of the valve is by means of a handwheel incorporating a micrometer device.

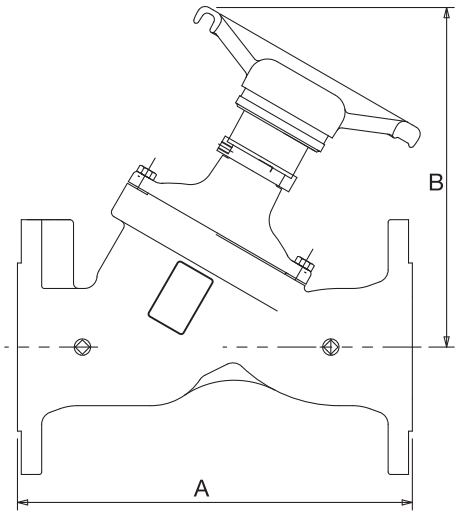
The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

Application

In two unit systems, the DM921 has sufficient authority to regulate flow in circuits incorporating a flow measurement device.
Fitted with 2 x ¼" BSPT plugs for conversion to DM931 if required.

DM921

Dimensional Drawing



Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet Gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast Iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland Nut	Brass
Packing	Non-asbestos
Seat Ring	Bronze

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS 4504).

Dimensions & Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	15.8
80	310	267	19.5
100	350	300	28.0
125	400	325	37.5
150	480	340	50.5
200	600	525	123.0
250	730	575	192.0
300	850	645	251.0

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)
65	85	4.9
80	111	5.5
100	146	9.2
125	250	7.3
150	380	6.5
200	600	7.8
250	1211	4.6
300	1521	6.0

*Fully open position.

DM931 - PN16 • DA931 - Class 125
Variable Orifice Double Regulating Valve (VODRV)

ProBalance

Specification

These are Y-Pattern globe valves supplied with two pressure test points P84 to provide flow measurement, regulation and isolation. Valves conform to requirements of BS 7350: 1990 and ends are flanged to BS EN 1092-2 (formerly BS 4504).

Application

Primarily used in injection or other circuits requiring a double regulating valve for system balancing. Accuracy of flow measurement is ±10% at the full open position of the valve. Some reduction in accuracy occurs at partial openings of the valve in accordance with BS 7350.

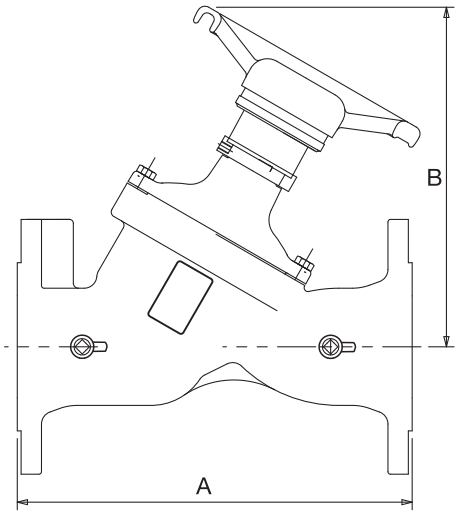
The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

DM931

Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet Gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland Nut	Brass
Packing	Non-asbestos
Seat Ring	Bronze

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS 4504).

Dimensions & Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	15.8
80	310	267	19.5
100	350	300	28.0
125	400	325	37.5
150	480	340	50.5
200	600	525	123.0
250	730	575	192.0
300	850	645	251.0

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)
65	85	4.9
80	111	5.5
100	146	9.2
125	250	7.3
150	380	6.5
200	600	7.8
250	1211	4.6
300	1521	6.0

* Fully open position.

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DM941 - PN16 • DA941 - Class 125
Fixed Integral Orifice Double Regulating Valve (FODRV)

ProBalance

Specification

Single unit Y-Pattern globe valves incorporating an integral orifice plate to form a fixed orifice flow measurement unit with regulation and isolation capacity. Valves conform to requirements of BS 7350: 1990 and ends are flanged to BS EN 1092-2 (formerly BS 4504).

Application

Primarily used in injection or other circuits requiring a double regulating valve for system balancing. Accuracy of flow measurement is ±5% at all open positions of the valve in accordance with BS 7350: 1990.

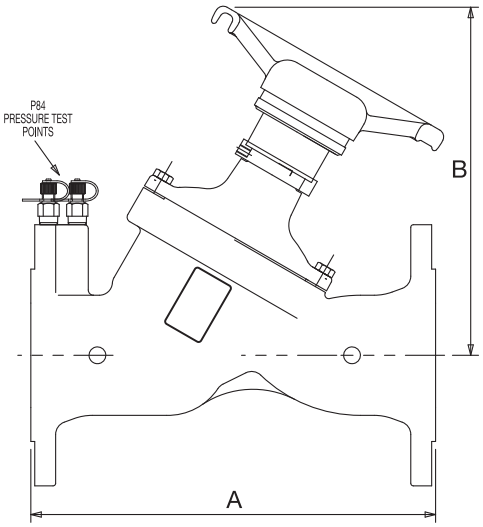
The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

DM941

Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet Gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast Iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland Nut	Brass
Packing	Non-asbestos
Seat Ring	Bronze

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS 4504).

Dimensions & Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	16.3
80	310	267	20.0
100	350	300	28.5
125	400	325	38.0
150	480	340	51.0
200	600	525	124.0
250	730	575	194.0
300	850	645	254.0

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)	Kvs
65	93	6.9	90
80	99	6.8	120
100	136	12.7	220
125	229	8.7	342
150	342	8.9	468
200	550	10.3	792
250	1052	6.0	1224
300	1367	7.8	1800

* Fully open position.

DM925G - PN16 • DM925L - PN16
Gearbox Operated Double Regulating Valve

ProBalance

Specification

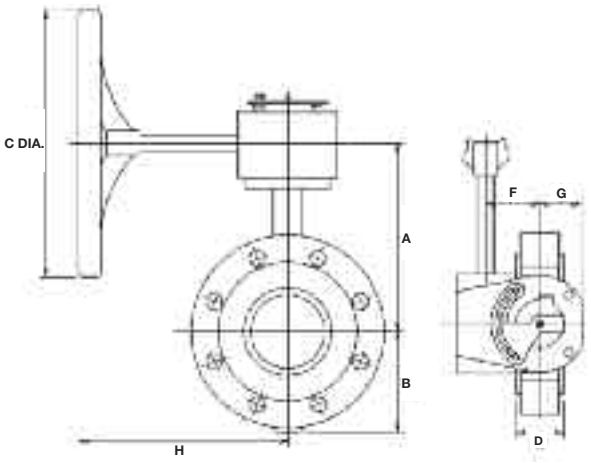
The DM925G and DM925L Double Regulating Valves consist of a fully lugged, EPDM liner butterfly valve with a Double Regulating Gearbox or Lever. The gearbox Double Regulating feature allows the valve to be used to isolate and to be reopened to its pre-set position.

The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

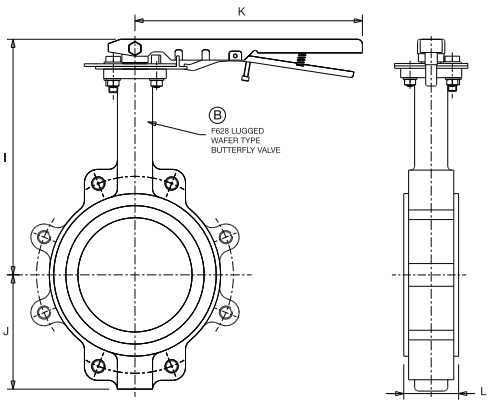

DM925G

Installation

As an alternative to the DM921, the DM925G and DM925L can be used in conjunction with a flow measurement device to measure flow.



Dimensional Drawings



Materials

PART	MATERIAL	SIZES
Body	Ductile Iron ASTM A536 65-45-12	All
Disc	Aluminium Bronze	All
Seat	EPDM	All
Shaft	Stainless Steel ASTM A532 Type 416	All
Taper Pin	Stainless Steel ASTM A276 Type 316	All
Key	Carbon Steel	All
O-Ring	Nitrile (Buna)	All
Shaft Bushing	PTFE or Bronze	All

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 130
PRESSURE (BAR)	16

Dimensions & Weights

DN	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)
50	8.6	162	80	150	42	45	54	158	195	83	260	44
65	9.1	175	89	150	45	45	54	158	207	95	260	48
80	11.8	181	95	150	45	45	54	158	213	102	260	48
100	17.2	200	144	150	52	45	54	158	232	124	260	54
125	18.1	213	127	200	54	45	54	148	245	137	260	57
150	19.5	225	139	200	56	45	54	148	256	150	266	57
200	29.5	260	175	300	61	78	81	226	–	–	–	–
250	39.9	292	203	300	66	78	81	226	–	–	–	–
300	54.9	337	242	300	77	78	81	226	–	–	–	–
350	61.0	406	260	300	78	78	81	226	–	–	–	–
400	94.0	447	290	450	86	120	130	277	–	–	–	–

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)
50	100	1.216
65	170	0.856
80	261	0.856
100	519	0.650
125	884	0.553
150	1142	0.483
200	1873	0.367
250	2900	0.315
300	5079	0.266
350	10274	0.129
400	14129	0.116

* Fully open position

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DM950G - PN16 • DM950L - PN16
Gearbox Operated Flow Measurement & Regulating Valve

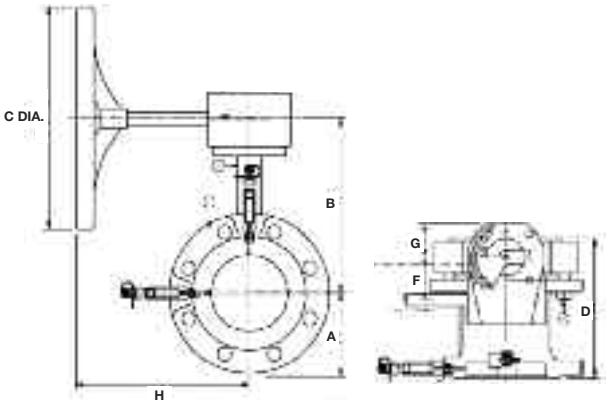
ProBalance

Specification

The DM950G and DM950L consist of a DM925G/L coupled with a fixed orifice flow measurement device using a spool piece connector, to form a fixed orifice flow measurement unit with regulation and isolation capability. Test points are supplied loose.

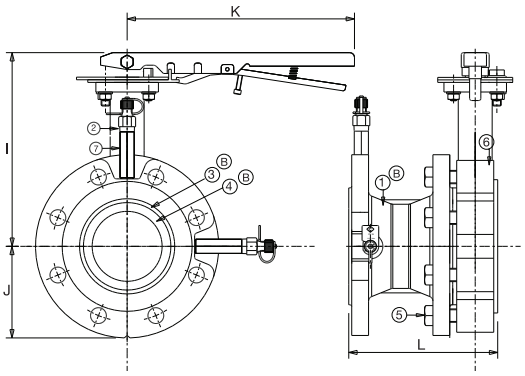
Installation

The DM950G and DM950L is supplied ready assembled to site. Suitable gasket and bolting should be provided by the contractor/installer.




DM950G

Dimensional Drawing



Materials

PART	MATERIAL	SIZES
Extension Piece	Steel DIN 17100 R.St.37.2/ASTM A53.Gr.A	150-400
Extension Piece	Steel DIN 17100 R.St. 37.2	50-125
P84 Test Valve	See Fig No P84	All
Orifice Plate Retain	Steel DIN 17100 R.St. 37.2	All
Orifice Plate	Stainless Steel BS 970 316S31	All
Orifice Plate Gasket	Asbestos Free	All
Flange Bolts	Steel BS 3692 Gr. 8.8	All
DM925G	See Fig. No DM925G Gear Operated	All
Test Point Extension	DZR Brass BS EN 12164 CW602N	All
Test Point Adaptor	DZR Brass BS EN 12164 CW602N	50-125
Socket Head Cap Screw	Steel BS 4168 Gr. 12.9	All

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16

Note: 350mm and 400mm limited to 110°C.

Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)
50	19.7	162	80	150	158	45	54	158	194	83	260	132
65	20.8	175	89	150	161	45	54	158	95	206	150	260
80	23.4	181	95	150	171	45	54	158	213	102	260	165
100	32.5	200	114	150	181	45	54	158	232	124	260	192
125	38.4	213	127	200	190	45	54	148	244	137	260	219
150	47.1	225	139	200	232	45	54	148	257	150	260	246
200	67.8	260	175	300	287	78	81	226	–	–	–	–
250	89.2	292	203	300	345	78	81	226	–	–	–	–
300	124.2	337	242	300	404	78	81	226	–	–	–	–
350	170	406	260	300	451	78	81	226	–	–	–	–
400	250	447	290	450	511	120	130	277	–	–	–	–

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)	Kvs
50	58	3.4	46.1
65	114	2.6	90
80	168	2.3	120
100	303	2.0	220
125	479	1.8	342
150	649	1.8	468
200	1113	1.6	792
250	1713	1.6	1224
300	2656	1.5	1800
350	2754	1.3	1795
400	3573	1.3	2334

DM975G - PN25 • DM975L - PN25
Gearbox Operated Double Regulating Valve

ProBalance

Specification

The DM975G Double Regulating Butterfly Valves consist of:

- A fully-lugged butterfly valve for use with PN25 flanges.
- High temperature EPDM liner for applications up to 120°C.
- A Double Regulating Gearbox as standard.

The Double Regulating feature allows the valve to be used for isolation and to be reopened to its pre-set position to maintain required flow rate.

Installation

The DM975G can be used in conjunction with a flow measurement device DM900 to regulate and measure flow.

DM975G

Also available in a lever version - DM975L.

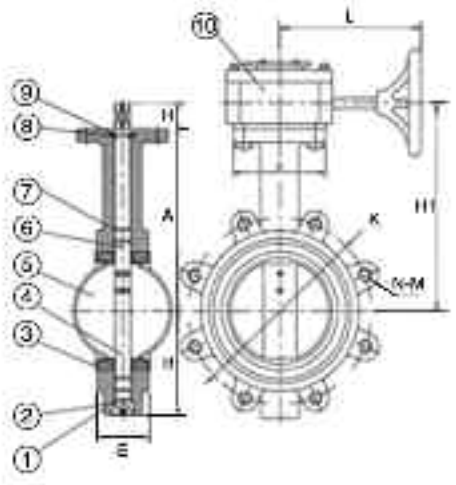
Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	25

Materials

NO.	PART	MATERIAL
1	Body	Ductile Iron BS EN 12563 EN GJS 500/7
2	Plug	Carbon Steel
3	Liner	EPDM
4	Shaft (Lower)	Steel - AISI 431
5	Disc	Stainless Steel - SS304
6	Shaft (Upper)	Steel - AISI 431
7	O-Ring	EPDM
8	Lock Plate	Brass - ASTM B16 C36000
9	Snap Ring	Carbon Steel
10	Gearbox	

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	H (mm)	D (mm)	E (mm)	L (mm)	K (mm)	N-M (mm)	H1 (mm)
50	10.0	140	68	35	90	43	160	125	4-M16	172.5
65	10.8	152	76	35	90	45	160	145	8-M16	184.5
80	11.0	160	85	35	90	46	160	160	8-M16	192.5
100	13.0	180	100	35	90	51.5	160	190	8-M20	212.5
125	16.0	191	120	35	90	56	160	220	8-M24	223.5
150	18.5	202	132	35	90	56.5	160	250	8-M24	234.5
200	29.8	241	160	45	125	60	238	310	8-M24	278.0
250	40.0	274	200	45	125	68.5	238	370	12-M27	311.0
300	53.0	315	230	45	125	79.5	238	430	16-M27	366.0

Coefficients*

DN	FLOW (Kv)	HEADLOSS (K)
50	85	1.86
65	204	0.95
80	370	0.50
100	820	0.29
125	982	0.37
150	1353	0.43
200	2923	0.31
250	3374	0.56
300	6350	0.33

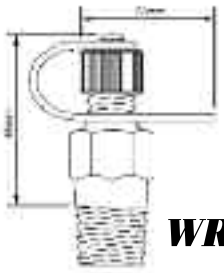
* Fully open position.

Pressure Test Valve P82 / Extension Tube P83 / Pressure Test Point P84

ProBalance

Pressure Test Points P84
Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

P84 insertion style pressure test points are fitted as standard to Crane flow measurement and regulation valves.



WRAS APPROVED PRODUCT

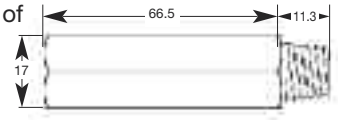
Materials

PART	MATERIAL
Cap	DZR Copper Alloy BS EN 12164 CW602N
Cap Washer	EPDM
Body	DZR Copper Alloy BS EN 12164 CW602N
Tie	Polypropylene
Seal	EPDM
Retaining Ring	DZR Copper Alloy BS EN 12164 CW602N

WEIGHT	0.025kg
PRESSURE RATING	PN25
MAX. TEMP.	120°C

Extension Tube P83
Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

P83 pressure test point extension tubes allow Crane valves to be insulated to a thickness of 2" without the test points being covered.



Materials

PART	MATERIAL
P83	DZR Copper Alloy BS EN 12164 CW602N

Pressure Test Valve P82
Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

Pressure test valve P82 is suitable for use in LTHW and MTHW systems. A conventional needle valve, operated by a standard radiator aircock key, is backed by a spring loaded self-sealing ball unit to provide double sealing. The double sealing facility offers maximum operational safety in accordance with the Health & Safety at Work legislation. It also makes it possible, with the valve closed to pipeline pressure, to clear the ball seat of any pipeline debris. Although P82 is also suitable for use in HTHW systems it should not be operated while such a system is 'live'.

For 'live' HTHW systems copper bleed tubes should be taken from the valves and terminated in needle valves, eg. Crane D71 or D72.

The manometer connection on the valve accepts a Mechseal adaptor. When not in use a screw cap protects the connection from dust.

Materials

PART	MATERIAL
Body	DZR
Stem	DZR
Shield	Brass
O-Ring	Viton
Adaptor	DZR
Ball	Stainless Steel
Spring	Stainless Steel
Dust Cap	Brass

WEIGHT	0.07kg
PRESSURE RATING	PN40
MAX. TEMP.	182°C

CommPac
Manifold Commissioning System

ProBalance

Crane CommPac provides one easy access point for commissioning and maintenance of multiple heating/chilled water terminal units.

On large projects, significant time and cost can be eliminated by enabling commissioning at convenient locations. Ends of corridors, or accessible cupboards can be used, which would also eliminate disruption to occupiers during maintenance works.

The CommPac is an exceptionally robust, efficient, practical and versatile system:

- Depending on flow rates, up to six terminals can be served from a single CommPac unit.
- All units are custom built to suit site specification.
- All site connections can be made without the need to access the internal components.
- CommPac is suitable for variable flow or constant flow systems.
- All connections are BSPT Female, enabling standard pipe or specialist adapters to be used.
- Fan coil units can be flushed, vented and balanced without the time-consuming 'looping out' procedure. This can be carried out by one commissioning engineer instead of a team.
- A single strainer serves all circuits, eliminating the need for individual strainers.
- All systems can be flushed through the unique Dominator H-body.
- The single DPCV maintains constant differential pressure between manifolds.

Materials

PART	MATERIAL
H-Body	Bronze (Z3000)
Strainer	Bronze (D297)
Manifolds	Bronze
Isolation Valves	DZR Brass (D171A)
Regulation Valves	Bronze (D931 or D981P Series)

Maximum pressure 16 bar
Temperature rating -10 to 100°C

Dimensions & Weights

OUTLETS & INLETS	LENGTH (mm)	HEIGHT (mm)	WIDTH (mm)	WEIGHT (kg)
6x6	1120	250	290	40
5x5	1120	250	290	38
4x4	880	250	290	36
3x3	880	250	290	34
2x2	640	250	290	30

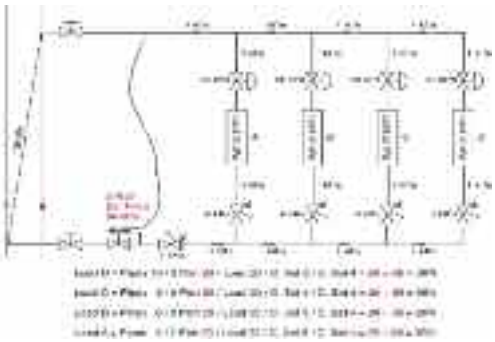
Units with outlets and inlets on same side.

Dimensions & Weights

OUTLETS & INLETS	LENGTH (mm)	HEIGHT (mm)	WIDTH (mm)	WEIGHT (kg)
6x6	1120	200	400	40
5x5	1120	200	400	38
4x4	880	200	400	36
3x3	880	200	400	34
2x2	640	200	400	30

Units with outlets and inlets on opposite side.

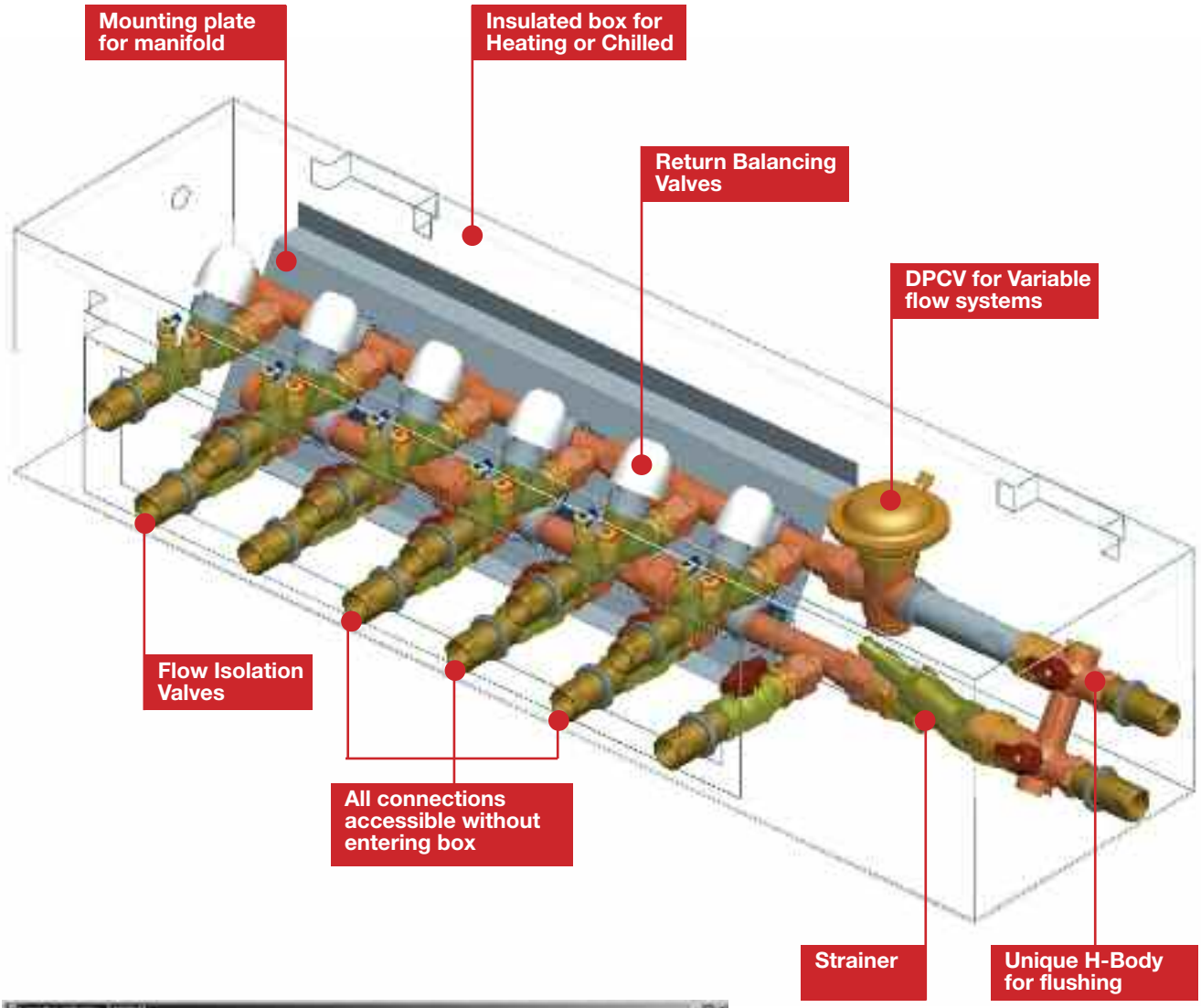
Typical Schematic



TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

CommPac
Manifold Commissioning System

ProBalance



CommPac modules are built to suit individual project design requirements. Correct selection of balancing valves and differential pressure control valves is essential to ensure comfort control and system efficiency.

To streamline this selection process we have developed software that allows all variables to be considered and best valve options selected. The selection programme is used by Crane Sales/Technical staff to input customer information throughout the design process and ensure that the optimum design is achieved.

DPAF951 - Flow • DPAR951 - Return Differential Pressure Control Valves

ProBalance

To meet the growing use of variable speed pumps for HVAC applications, Crane Fluid Systems has launched a range of Differential Pressure Control Valves (DPCV) specifically aimed at optimising system performance.

Extremely efficient, the DPCV is set to a maximum differential pressure which ensures flow cannot exceed a desired rate. It therefore helps reduce energy consumption, the risk of noise and simplifies the commissioning process.


DPCV

Materials

ITEM	DESCRIPTION	MATERIAL
1	Body	Bronze BS EN 1982 (CC491K)
2	Bonnet	Bronze BS EN 1982 (CC491K)
3	Chamber	Bronze BS EN 1982 (CC491K)
4	Adjuster	Nylon Grade PA6
INT	Stem / Piston	Stainless Steel BS EN 10088 - 1: 2005
INT	Diaphragm	Rubber EPDM
INT	O-Ring Seals	Rubber EPDM

See diagrams for item numbers.

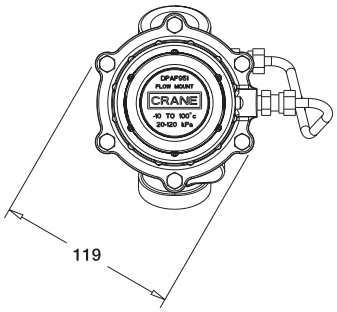
INT denotes an internal component not visible on these drawings.

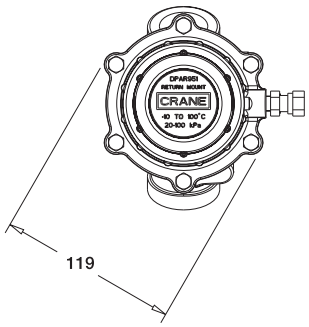
Dimensions & Weights

DN	A (mm)	B (mm)	END CONNECTION	WEIGHT (kg)
15	90	175	3/4" BSP Parallel Male	2.34
20	96	175	1" BSP Parallel Male	2.39
25	114	185	1 1/4" BSP Parallel Male	2.62
32	132.5	190	1 1/2" BSP Parallel Male	2.76
40	150.5	195	3/4" BSP Parallel Male	3.07
50	184	205	2 3/8" BSP Parallel Male	3.57

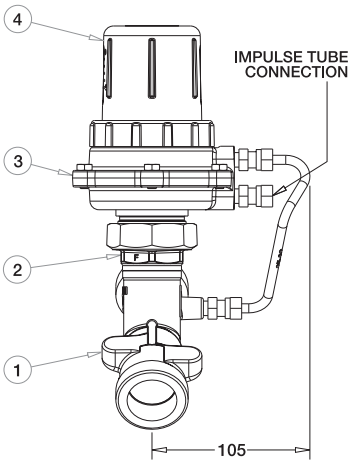
Male and female tailpieces are available - please contact Crane Fluid Systems.

Dimensional Drawing

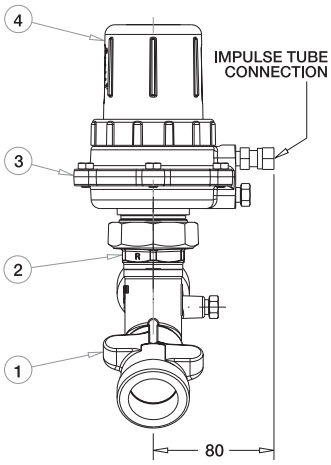




Flow Configuration
Top View

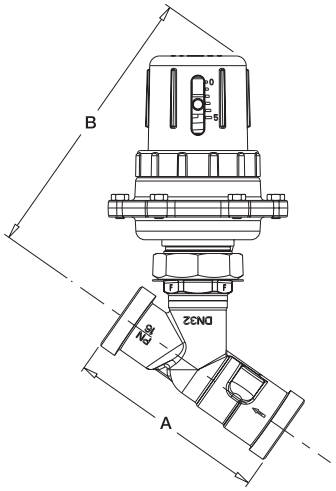


Return Configuration
Top View



Flow Configuration
Front View

Return Configuration
Front View



Flow & Return Configuration
Side View

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

Dominator® Z3000 PN16
Flow Management system for terminal units

ProBalance

The Z3000 is a prefabricated unit combining the essential control components and connecting pipework associated with terminal units, into one compact, fully-assembled unit ready for simple and fast on-site connection.


Z3000

Features & Benefits

The Dominator is compact and lightweight

- The complete unit is factory tested
- 80mm supply/return centres allow for ease of lagging
- Easy to install

The unique bypass valve unit comprising two T-Ported ball valves

- Allows easy back flushing, forward flushing and isolation
- The position of the T-Handle gives clear indication of flow/bypass mode
- Designed around 3/4" full bore ball for optimum flow
- Can be adapted to 1/2", 3/4" and 1" end connections
- Simple attachment to existing hangers

The strainer unit has an integral drain cock and pressure test point

- Enabling measurement of pressure drop across load
- Allowing for flushing of strainer and coil without need to remove basket

Benefits for Design Engineers

- Minimal design involvement
- All the necessary components supplied as one tested unit
- No risk of a component being omitted from a system at installation
- Known performance of the entire unit
- Saves time, reduces specification risks and provides maximum value to the client
- Reduces envelope space

Benefits for Installing Contractors

- Significant reduction in site labour and installation costs
- Fast connection of one complete assembly
- Standardised components with guaranteed tested performance
- Less purchase orders, minimal administration
- Simple on-site connection

Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

Materials

DESCRIPTION	MATERIAL
Bypass Valve	Bronze to BS EN 1982 CC491K
D931	Refer to page 17
D299P Strainer	Bronze to BS EN 1982 CC491K
Union	Brass to BS EN 12165 CW617N
P84 Test Points	DZR to BS EN 12164 CW602N
Drain Cock	DZR to BS EN 12164 CW614

Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 160
PRESSURE (BAR)	16

Maximum temperature 120°C

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Dominator® Z3000 PN16
Flow Management system terminal coil units

ProBalance

The Dominator range consists of three series:

Z3000 series features the Crane ProBalance Fixed Orifice Double Regulating valve D931.

Z3900 series features the Crane MotoBalance Fixed Orifice Double Regulating valve D981P, suitable for use with actuator.

Both series provide versions for heated and chilled water systems and combinations with and without drains and strainers.The versions for chilled water systems include extension stems (EXS) on the ball valve T-Handles to allow for lagging. The Z3000 series also includes low flow and ultra low flow versions.

Z3000 Series comprises the three variants as shown below.

Z3000 with drain and strainer

Z3010 without drain and strainer

Z3020 with drain but without strainer

This series utilises the Crane bronze commissioning valves D931, D933 or D934 depending on flow rate required.
All selections are made by Crane and each unit is tagged with individual fan coil reference numbers to assist contractors with site installation. Extension stems are fitted to isolation ball valves for chilled water applications.

Z3900 Series comprises the three variants as shown below.

Z3900 with drain and strainer

Z3910 without drain and strainer

Z3920 with drain but without strainer

This series utilises the Crane motorised commissioning valves D981P, D983P or D984P depending on flow rate required.
The MotoBalance offers on/off or modulating control with equal percentage characteristics.
All selections are made by Crane and each unit is tagged with individual fan coil reference numbers to assist contractors with site assembly. Extension stems are fitted to isolation ball valves for chilled water applications.

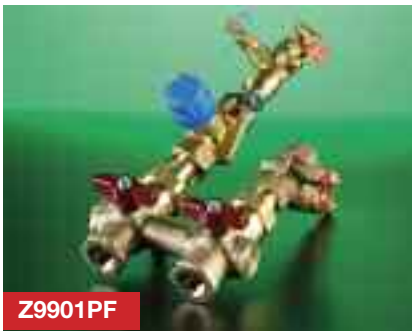
TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

Z9901P & Z9901PF - PN16
Dominator & PICV (with Strainer & Drain)

NEW

Features & Benefits

- Ultra compact, prefabricated unit - now available with Pressure Independent Control Valve
- Provides accurate flow rates and differential pressure control as well as flow measurement (Z9901PF), system flushing and isolation
- Fully assembled and factory tested unit reduces installation time, costs and specification risks
- Can be tailored to suit customer's specification:
  - available with extension stems (Z9901PEXT) or without (Z9901P)
  - add an extra Flow Measurement device for verification of flow rates (Z9901PF & Z9901PFEXT)
- On/Off or modulating actuators are available separately to match specification



Materials

NO.	PART	MATERIAL	QTY
1	Bypass H-Body	Bronze BS EN 1982 CC491K	1
2	Tailpiece	DZR Brass BS EN 12164 CW602N	2
3	D299P Strainer*	Bronze BS EN 1982 CC491K	1
4	DPIC991 PICV*	Brass CW617N	1
5	Tailpiece Female BSPT	DZR Brass BS EN 12164 CW602N	1
6	D901 FMD*	DZR Brass BS EN 12164 CW602N	1

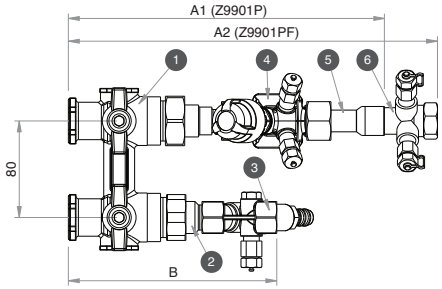
* Individual datasheets available

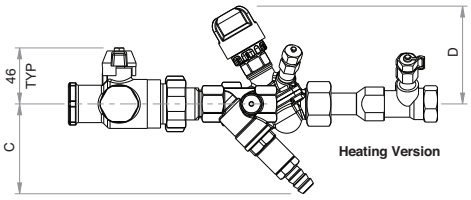
Dimensions & Weights

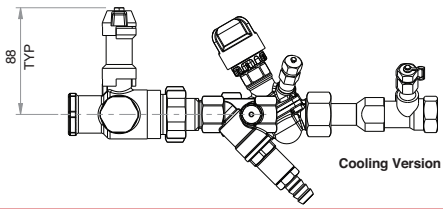
SIZE	WEIGHT (kg)	A1 (mm)	A2 (mm)	B (mm)	C (mm)	D (mm)
Z9901P DN15/15	2.46	260	-	175	75	75
Z9901P DN20/15	2.46	260	-	175	75	75
Z9901P DN20/20	2.87	290	-	180	80	77
Z9901P DN25/20	2.87	315	-	205	80	77
Z9901P DN25/25	4.35	360	-	225	85	88
Z9901PF DN15/15	2.75	-	310	175	75	75
Z9901PF DN20/15	2.75	-	310	175	75	75
Z9901PF DN20/20	3.17	-	335	180	80	77
Z9901PF DN25/20	3.32	-	360	205	80	77
Z9901PF DN25/25	4.75	-	390	225	85	88

Dimensional Drawings

(Left-hand configuration shown)







PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 120°C

END CONNECTIONS: Flushing bypass body - BSP Parallel, Strainers & Tailpieces - BSP Taper

SPECIFICATION: Bronze (BS EN 1982 CC491K) fan-coil valve/ terminal unit valve assembly. Pre-assembled to the requirements of each individual terminal unit to include a flushing bypass with integral isolation valves, Pressure Independent Control Valve (PICV), with options for low flow, flow measurement device, strainer, drain and pressure test points as and where specified. Extended handles will be fitted for Chilled Water applications. On/Off or modulating actuator is required to control the PICV. Valve assembly will be labelled to include the terminal unit reference number and flow rate. Generally as Crane Fluid Systems Z9901P Dominator system.

Z9911P & Z9911PF - PN16
Dominator & PICV (without Strainer & Drain)

NEW

Features & Benefits

- Ultra compact, prefabricated unit - now available with Pressure Independent Control Valve
- Provides accurate flow rates and differential pressure control as well as flow measurement (Z9911PF), system flushing and isolation
- Fully assembled and factory tested unit reduces installation time, costs and specification risks
- Can be tailored to suit customer's specification:
  - available with extension stems (Z9901PEXT) or without (Z9901P)
  - add an extra Flow Measurement device for verification of flow rates (Z9901PF & Z9901PFEXT)
- On/Off or modulating actuators are available separately to match specification

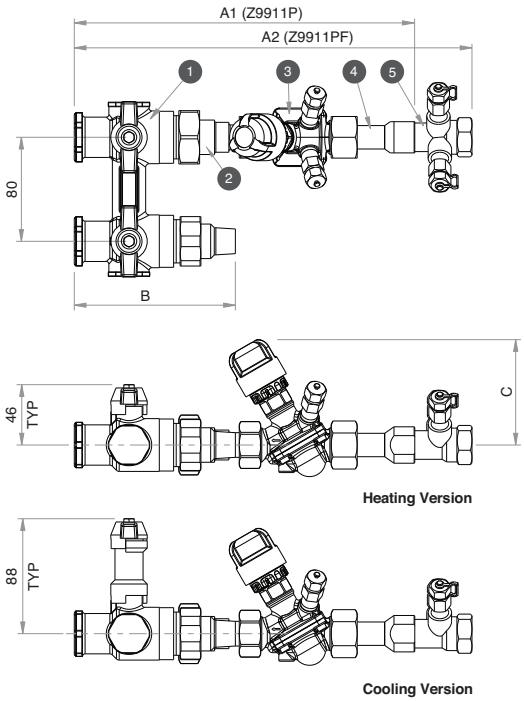
Materials

NO.	PART	MATERIAL	QTY
1	Bypass H-Body	Bronze BS EN 1982 CC491K	1
2	Tailpiece	DZR Brass BS EN 12164 CW602N	2
3	DPIC991 PICV*	Brass CW617N	1
4	Tailpiece Female BSPT	DZR Brass BS EN 12164 CW602N	1
5	D901 FMD*	DZR Brass BS EN 12164 CW602N	1

* Individual datasheets available

Dimensional Drawings

(Left-hand configuration shown)



Dimensions & Weights

SIZE	WEIGHT (kg)	A1 (mm)	A2 (mm)	B (mm)	C (mm)
Z9911P DN15/15	2.21	260	-	125	75
Z9911P DN20/15	2.21	260	-	125	75
Z9911P DN20/20	2.52	290	-	125	77
Z9911P DN25/20	2.82	315	-	150	77
Z9911P DN25/25	3.90	360	-	160	88
Z9911PF DN15/15	2.50	-	310	125	75
Z9911PF DN20/15	2.50	-	310	125	75
Z9911PF DN20/20	2.82	-	335	125	77
Z9911PF DN25/20	3.12	-	360	150	77
Z9911PF DN25/25	4.40	-	390	160	88

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 120°C

END CONNECTIONS: Flushing bypass body - BSP Parallel, Strainers & Tailpieces - BSP Taper

SPECIFICATION: Bronze (BS EN 1982 CC491K) fan-coil valve/ terminal unit valve assembly. Pre-assembled to the requirements of each individual terminal unit to include a flushing bypass with integral isolation valves, Pressure Independent Control Valve (PICV), with options for low flow, flow measurement device, strainer, drain and pressure test points as and where specified. Extended handles will be fitted for Chilled Water applications. On/Off or modulating actuator is required to control the PICV. Valve assembly will be labelled to include the terminal unit reference number and flow rate. Generally as Crane Fluid Systems Z9911P Dominator system.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

Z9921P & Z9921PF - PN16
Dominator & PICV (with Drain only)

NEW

Features & Benefits

- Ultra compact, prefabricated unit - now available with Pressure Independent Control Valve
- Provides accurate flow rates and differential pressure control as well as flow measurement (Z9901PF), system flushing and isolation
- Fully assembled and factory tested unit reduces installation time, costs and specification risks
- Can be tailored to suit customer's specification:
  - available with extension stems (Z9901PEXT) or without (Z9901P)
  - add an extra Flow Measurement device for verification of flow rates (Z9901PF & Z9901PFEXT)
- On/Off or modulating actuators are available separately to match specification

Materials

NO.	PART	MATERIAL	QTY
1	Bypass H-Body	Bronze BS EN 1982 CC491K	1
2	Tailpiece	DZR Brass BS EN 12164 CW602N	2
3	D342 Drain*	Bronze BS EN 1982 CC491K	1
4	DPIC991 PICV*	Brass CW617N	1
5	Tailpiece Female BSPT	DZR Brass BS EN 12164 CW602N	1
6	D901 FMD*	DZR Brass BS EN 12164 CW602N	1

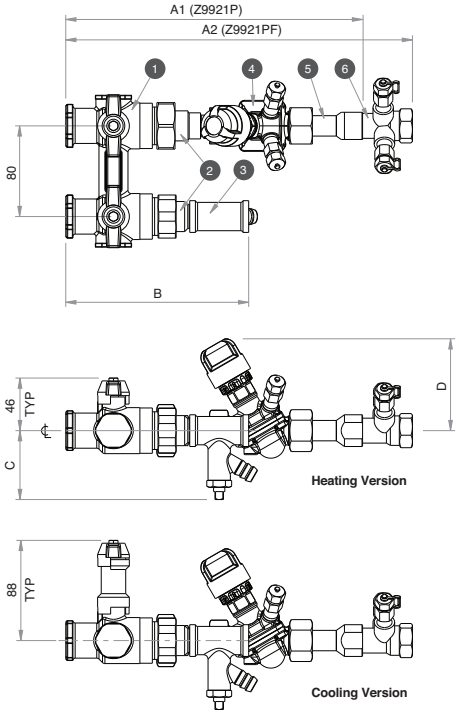
* Individual datasheets available

Dimensions & Weights

SIZE	WEIGHT (kg)	A1 (mm)	A2 (mm)	B (mm)	C (mm)	D (mm)
Z9921P DN15/15	2.41	260	-	165	61	75
Z9921P DN20/15	2.41	260	-	165	61	75
Z9921P DN20/20	2.82	290	-	175	67	77
Z9921P DN25/20	3.12	315	-	200	67	77
Z9901P DN25/25	4.40	360	-	220	67	88
Z9921PF DN15/15	2.70	-	310	165	61	75
Z9921PF DN20/15	2.70	-	310	165	61	75
Z9921PF DN20/20	3.12	-	335	175	67	77
Z9921PF DN25/20	3.42	-	360	200	67	77
Z9921PF DN25/25	4.80	-	390	220	67	88

Dimensional Drawings

(Left-hand configuration shown)



PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 120°C

END CONNECTIONS: Flushing bypass body - BSP Parallel, Strainers & Tailpieces - BSP Taper

SPECIFICATION: Bronze (BS EN 1982 CC491K) fan-coil valve/ terminal unit valve assembly. Pre-assembled to the requirements of each individual terminal unit to include a flushing bypass with integral isolation valves, Pressure Independent Control Valve (PICV), with options for low flow, flow measurement device, strainer, drain and pressure test points as and where specified. Extended handles will be fitted for Chilled Water applications. On/Off or modulating actuator is required to control the PICV. Valve assembly will be labelled to include the terminal unit reference number and flow rate. Generally as Crane Fluid Systems Z9901P Dominator system.

DPIC991 - PN16
PICV - DN10 / DN50

Pressure Independent Control Valves offer full authority and an automatic balancing function

- Energy savings: Optimal control creates energy savings when used as part of a variable flow system
- Accurate flow rates: Built-in differential pressure controller ensures accurate system design flow rates are achieved and eliminates overflows caused by fluctuating system pressures, which in turn reduces the system running costs
- Easy to install: For use with fan coils, chilled beams and other terminal units, the PICV is compact and easy to install in limited and difficult site conditions
- Precise temperature control: Linear or equal percentage characteristics, settable with an actuator, contribute to precise environmental temperature control
- Low flow option: Sizes DN10 and DN15 are available in low flow versions (add suffix LF)
- Extensive range: Available in threaded (DPIC991) and flanged (DPIC991F) versions
- Dominator: Ask us about our PICV Dominator Flow Management Module in threaded sizes ½" to 1".

DN10-32 DPIC991

DN40-50 DPIC991 with Actuator*

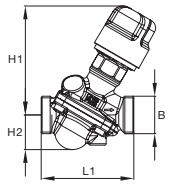
*Please note that actuators and male BSP end connectors are sold separately. Please order one actuator and two end connectors per body from Crane Fluid Systems using the Part numbers below. Crane Fluid Systems recommend the use of their 3 point and modulating actuators and cannot accept responsibility for product performance if a different actuator is used.

Materials

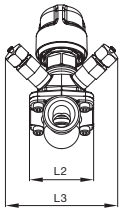
PART	MATERIAL
Valve Bodies (DN10-32)	Brass CUZN40PB2 - CW 617N
Valve Bodies (DN40-50)	Cast Iron EN-GJL-250 (GG 25)
Membranes and O-Rings	EPDM
Disc (Pc) (DN10-32)	Steel to BS EN 10027 W.Nr. 1.4305
Disc (Pc) (DN40-50)	Brass CUZN40PB3 - CW 614N, W.Nr. 1.4305
Seat (Pc) (DN10-32)	EPDM
Seat (Pc) (DN40-50)	Steel to BS EN 10027 W.Nr. 1.4305
Disc (Cv)	Brass CUZN40PB3 - CW614N
Seat (Cv) (DN10-32)	Brass CUZN40PB2 - CW617N
Seat (Cv) (DN40-50)	Steel to BS EN 10027 W.Nr 1.4305

Pc - Pressure Controller Part
Cv - Control Valve Part

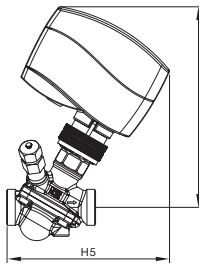
Dimensional Drawings



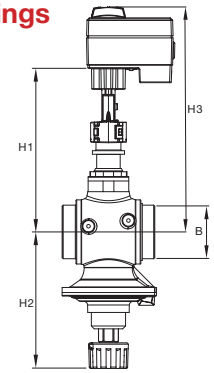
DN10-32



DN10-32



DN10-32 - with Actuator*



DN40-50 - with Actuator*

Dimensions & Weights

SIZE	PART NO.	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	B ISO 228/1	WEIGHT kg	MAX FLOW RATE l/s	3 POINT ACTUATOR Fig No.	3 POINT ACTUATOR Part No.	MODULATING ACTUATOR Fig No.	MODULATING ACTUATOR Part No.	MALE BSP ADAPTOR* Fig No.	MALE BSP ADAPTOR* Part No.
DN10 LF	0JG91613D	53	36	79	73	20	100	138	109	G 1/2	0.38	0.042	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91630E
DN10	0JG91614E	53	36	79	73	20	100	138	109	G 1/2	0.38	0.076	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91630E
DN15 LF	0JG91615F	65	45	79	75	25	102	141	116	G 1/2	0.48	0.076	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91631F
DN15	0JG91616G	65	45	79	75	25	102	141	116	G 3/4	0.48	0.125	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91631F
DN20	0JG91617H	82	56	79	77	33	105	143	125	G 1	0.65	0.25	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91632G
DN25	0JG91618J	104	71	79	88	42	117	155	142	G 1 1/4	1.45	0.47	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91633H
DN32	0JG91619K	130	90	79	102	50	128	166	160	G 1 1/2	2.21	0.89	ACT991TP	0JG91637M	ACT991M	0JG91638N	P605MM	0JG91634J
DN40	0JG91620C	110	-	-	192	174	315	-	-	G 2	6.9	2.08	-	-	ACT991M	0JG91639P	P605MM	0JG91635K
DN50	0JG91621D	130	-	-	192	174	315	-	-	G 2 1/2	7.8	3.47	-	-	ACT991M	0JG91639P	P605MM	0JG91636L

PRESSURE RATING: PN16 / -10°C to 120°C

OPERATOR: Actuator - Modulating (ACT991M) or 3 Point Actuators (ACT991TP) available - these are ordered separate to the valve

END CONNECTION: External Male Threads to ISO 228/1
Can be converted to Male BSP using P605MM end connectors which are available on request

SPECIFICATION: Available on request

DPIC991F - PN16
PICV - DN50 / DN250

Pressure Independent Control Valves offer full authority and an automatic balancing function

- Energy savings: Optimal control creates energy savings when used as part of a variable flow system.
- Easy to install: For use with fan coils, chilled beams and other terminal units, the PICV is compact and easy to install in limited and difficult site conditions.
- Precise temperature control: Linear or equal percentage characteristics, settable with an actuator, contribute to precise environmental temperature control.
- Extensive range: Available in threaded (DPIC991) and flanged (DPIC991F) versions.
- Dominator: Ask us about our PICV Dominator Flow Management Module in threaded sizes ½" to 1".

DPIC991F

DPIC991F with Actuator*

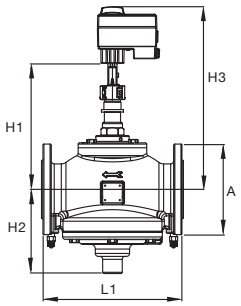
Please note that actuators are sold separately. Please order one actuator per body from Crane Fluid Systems using the Part numbers below. Crane Fluid Systems recommend the use of their modulating actuators and cannot accept responsibility for product performance if a different actuator is used.

Materials

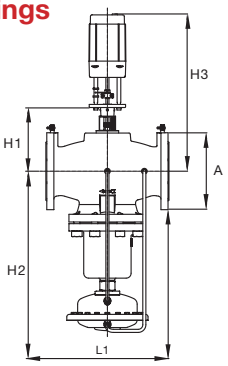
PART	MATERIAL
Valve Bodies	Cast Iron EN-GJL-250 (GG25)
Membranes / Bellow (DN50-100)	EPDM
Membranes / Bellow (DN125)	Steel to BS EN 10027 W.Nr. 1.4571
Membranes / Bellow (DN150-250)	Steel to BS EN 10027 W.Nr. 1.4568, W.Nr. 1.4310
O-Rings	EPDM
Disc (Pc) (DN50-100)	Brass CUZN40PB3 - CW614N
Disc (Pc) (DN125)	Brass CUZN40PB2 - CW617N
Disc (Pc) (DN150-250)	Steel to BS EN 10027 W.Nr. 1.4305
Seat (Pc) (DN50-100)	Steel to BS EN 10027 W.Nr. 1.4305
Seat (Pc) (DN125-250)	Steel to BS EN 10027 W.Nr. 1.4027
Disc (Cv) (DN50-100)	Brass CUZN40PB3 - CW614N
Disc (Cv) (DN125)	Steel to BS EN 10027 W.Nr. 1.4404NC
Disc (Cv) (DN150-250)	Steel to BS EN 10027 W.Nr. 1.4021
Seat (Cv) (DN50-100)	Steel to BS EN 10027 W.Nr. 1.4305
Seat (Cv) (DN125-250)	Steel to BS EN 10027 W.Nr. 1.4027

Pc - Pressure Controller Part.
Cv - Control Valve Part

Dimensional Drawings



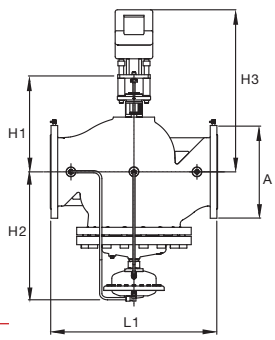
DN50-100 - with Actuator*



DN125-150 - with Actuator*

Dimensions & Weights

SIZE	PART NO.	L1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	A EN1092-2	WEIGHT kg	MAX FLOW RATE l/s	MODULATING ACTUATOR Fig No.	MODULATING ACTUATOR Part No.
DN50	0JG91622E	230	192	174	315	165	14.2	3.47	ACT991M	0JG91639P
DN65	0JG91623F	290	233	172	373	185	38	5.56	ACT991M	0JG91639P
DN80	0JG91624G	310	236	177	376	200	45	7.78	ACT991M	0JG91639P
DN100	0JG91625H	350	249	187	389	220	57	10.56	ACT991M	0JG91639P
DN125	0JG91626J	40	232	518	507	250	85.3	25	ACT991M	0JG91640G
DN150	0JG91627K	480	268	465	518	285	138	40.28	ACT991M	0JG91640G
DN200	0JG91628L	600	401	483	618	340	219	52.78	ACT991M	0JG91641H
DN250	0JG91629M	730	397	533	708	405	342	77.78	ACT991M	0JG91641H



DN200-250 - with Actuator*

PRESSURE RATING: PN16 / -10°C to 120°C
OPERATOR: Actuator - Modulating (ACT991M) available - this is ordered separate to the valve
SPECIFICATION: Available on request

Project Gallery

Project: One New Change, London
Client: Land Securities PLC
Architect/Consulting Engineer: Jean Nouvel (AJN Architects)
Contractor: SPIE Matthew Hall
Distributor: BSS Ltd, Islington
Specification: Crane Fluid Systems - swing check valves, strainers, ball valves, balancing valves, butterfly valves, wafer check valves, double regulating valves and Dominators.

Described as the 'most prestigious and desirable office space in London', One New Change provides 560,000sq ft of modern office and retail space. In the heart of central London, the build contains offices, shops, cafés and restaurants, all of which will be heated or cooled by ceiling-mounted fan coil systems.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

Completed in 2010, the first tenants included K&L Gates, a leading global law firm.

A large variety of Crane Fluid Systems' valves have been selected to control and measure the flow rates around the fan coil systems. Chosen for their weight and space-saving as well as their durable quality, the Crane valves can be easily commissioned and allow very precise control of the heating and cooling systems.

D171 / D171EXS
PN25

WRAS APPROVED PRODUCT

D171 Bronze Ball Valve
D171EXS Extended Stem Bronze Ball Valve

Crane D171 Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171 and D171EXS are WRAS approved.


D171


D171EXS

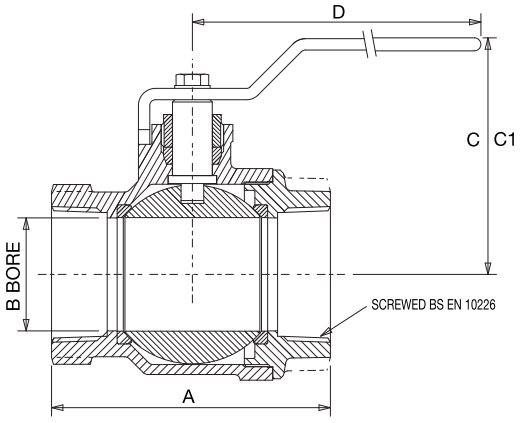
Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N	All
Seat Ring	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	DZR Brass BS EN 12164 CW602N	1/4 - 2
Lever	Mild Steel (Zinc Plated)	All
Screw	Mild Steel (Zinc Plated)	All
Lever Cover	PVC	All
Extension Housing	Aluminium	D171EXS
Extension Stem	Brass BS EN 12164 CW602N	D171EXS

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171EXS	D (mm)
1/4	0.15	46	10	39	-	81
3/8	0.15	46	10	39	-	81
1/2	0.22	57	15	52	97	92
3/4	0.45	67	20	58	98	92
1	0.69	77	25	66	118	127
1 1/4	1.12	91	32	72	124	127
1 1/2	1.67	103	40	82	142	142
2	2.93	122	50	90	149	142
2 1/2	4.98	153	65	117	-	202
3	8.75	179	80	132	-	282

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Lever

SPECIFICATION: Quarter Turn, Tight Shut-off.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D171A / D171AEXS
PN25

WRAS APPROVED PRODUCT

D171A Threaded DZR Ball Valve
D171AEXS Threaded DZR Ball Valve with Extension Stem

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.


D171A


D171AEXS

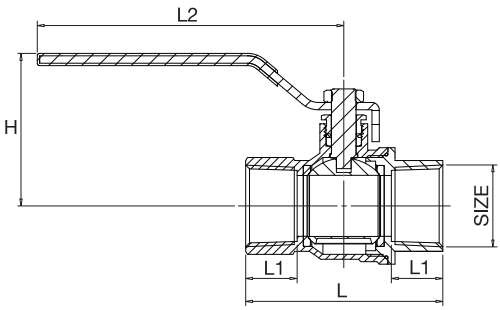
Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
Lever	Steel Dacromet Plated	1
Sleeve	Maroon PVC	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS approved	2
Ball	DZR Brass CW602N Chrome Plated	1
O-Ring	Rubber EPDM WRAS approved	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1
Extension Stem Outer	Aluminium	1
Extension Stem Inner	Steel Plated	1

Dimensions & Weights

SIZE (inch)	WEIGHT (g) A	WEIGHT (g) AEXS	L (mm)	L1 (mm)	L2 (mm) A	H (mm) A	H (mm) AEXS
1/4	152	-	45.3	12	89	41	-
3/8	136	-	45.3	12	89	41	-
1/2	205	270	58.5	15.5	98.5	48	103
3/4	302	366	67	17	98.5	51	107
1	511	589	80.5	21	125	62	116
1 1/4	890	1009	94	23	140	77.5	129
1 1/2	1292	1410	102	23	140	83.5	135
2	2238	2283	124	26.5	165	97.5	150

Dimensional Drawing



All dimensions are nominal.

Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	120
PRESSURE (BAR)	25	21.8

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25
TEMPERATURE OPERATING RANGE: -10 to 120°C
UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21
US END CONNECTION: ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

OPERATOR: Lever
SPECIFICATION: Quarter Turn

D171AC / D171ACEXS PN16

WRAS APPROVED PRODUCT

D171AC Compression DZR Ball Valve

D171ACEXS Compression DZR Ball Valve with Extension Stem

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.

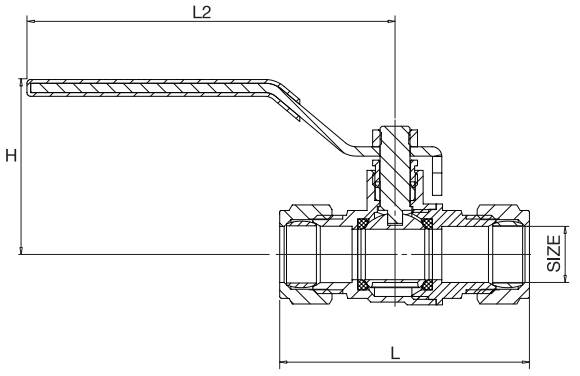
D171AC

D171ACEXS

Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
Lever	Steel Dacromet Plated	1
Handle Sleeve	Maroon PVC	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS approved	2
Ball	DZR Brass CW602N Chrome Plated	1
Bonnet	DZR Brass CW602N	1
Compression Olive	Brass BS EN 12449 CW505L/CW507L	2
Compression Nut	DZR Brass BS EN 12165 CW617N	2
Stem	DZR Brass CW602N	1
Extension Stem Outer	Aluminium	1
Extension Stem Inner	Steel Plated	1

Dimensional Drawing



All dimensions are nominal.

Dimensions & Weights

SIZE (mm)	WEIGHT (g) AC	WEIGHT (g) ACEXS	L (mm) AC	L2 (mm) AC	H (mm) AC	H (mm) ACEXS
15	212	275	66.5	98.5	47	103
22	368	429	80	98.5	51	107
28	608	682	92.5	125	62	116
35	1007	1125	104.5	140	77.5	129
42	1549	1667	122	140	83	135
54	2538	2683	141	165	97.5	150

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 120°C
UK END CONNECTION: Compression ends to suit BS EN 1057: Half hard R250 copper tube

OPERATOR: Lever
SPECIFICATION: Quarter Turn

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D171ACTH / D171ACLS
PN16

WRAS APPROVED PRODUCT

D171ACTH Compression DZR Ball Valve with T-Handle
D171ACLS Compression DZR Ball Valve with Lockshield

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.


D171ACTH

D171ACLS

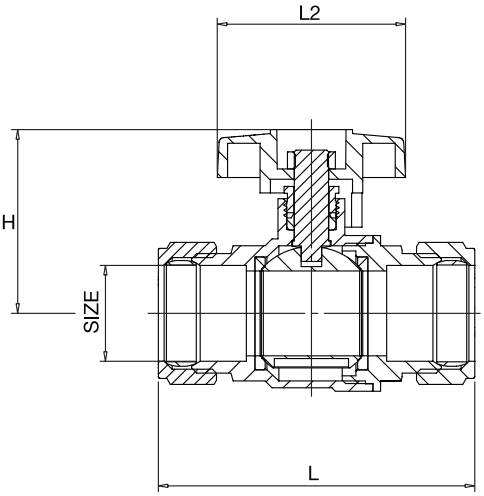
Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
T-Handle	Aluminium AL-46100 Maroon	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS approved	2
Ball	DZR Brass CW602N Chrome Plated	1
Bonnet	DZR Brass CW602N	1
Compression Olive	Brass BS EN 12449 CW505L/CW507L	2
Compression Nut	DZR Brass BS EN 12165 CW617N	2
Stem	DZR Brass CW602N	1
Lockshield	Brass CW617N	1
Lockshield Cover	Polypropelene Maroon	1

Dimensions & Weights

SIZE (mm)	WEIGHT (g) ACTH	WEIGHT (g) ACLS	L (mm)	L2 (mm) ACTH	H (mm) ACTH	H (mm) ACLS
15	187	220	66.5	50	40	42
22	343	376	80	50	43	47
28	567	614	92.5	55	54	59.5
35	977	1039	104.5	82	61	67
42	1487	1549	122	82	67	73.5
54	2634	2437	141	110	80.5	87.5

Dimensional Drawing



All dimensions are nominal.

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 120°C
UK END CONNECTION: Compression ends to suit BS EN 1057: Half hard R250 copper tube

OPERATOR: T-Handle / Spanner or Socket
SPECIFICATION: Quarter Turn

D171ATH / D171ALS
PN25

WRAS APPROVED PRODUCT

D171ATH Threaded DZR Ball Valve with T-Handle
D171ALS Threaded DZR Ball Valve with Lockshield

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.


D171ATH


D171ALS

Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
T-Handle	Aluminium AL-46100 Maroon	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS approved	2
Ball	DZR Brass CW602N Chrome Plated	1
O-Ring	Rubber EPDM WRAS approved	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1
Lockshield	Brass CW617N	1
Lockshield Cover	Polypropelene Maroon	1

Dimensions & Weights

SIZE (inch)	WEIGHT (g) ATH	WEIGHT (g) ALS	L (mm)	L1 (mm)	L2 (mm) ATH	H (mm) ATH	H (mm) ALS
1/2	183	207	59	15.5	50	40	42
3/4	277	302	67	17	50	43	45
1	470	506	80.5	21	55	54	58
1 1/4	809	867	94	23	82	61	67
1 1/2	1210	1269	102	23	82	67	73.5
2	2106	2166	124	26.5	110	80.5	86.5

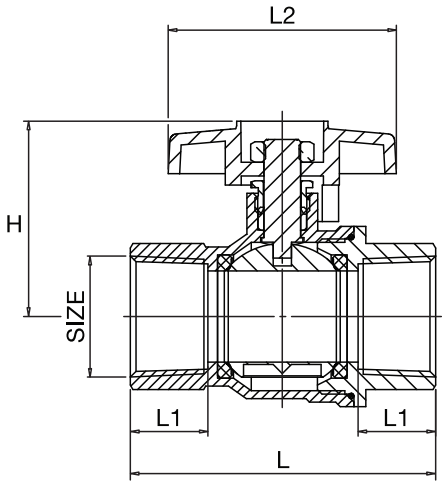
Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	120
PRESSURE (BAR)	25	21.8

Intermediate pressure ratings shall be determined by interpolation.

Dimensional Drawing



All dimensions are nominal.

PRESSURE RATING: PN25
TEMPERATURE OPERATING RANGE: -10 to 120°C
UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21
US END CONNECTION: ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

OPERATOR: T-Handle / Spanner or Socket
SPECIFICATION: Quarter Turn

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D171C / D171CEXS PN16

WRAS APPROVED PRODUCT

D171C Compression Ended Bronze Ball Valve

D171CEXS Compression Ended Bronze Ball Valve with Extension Stem

Crane D171C / D171CEXS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171C and D171CEXS are WRAS approved.

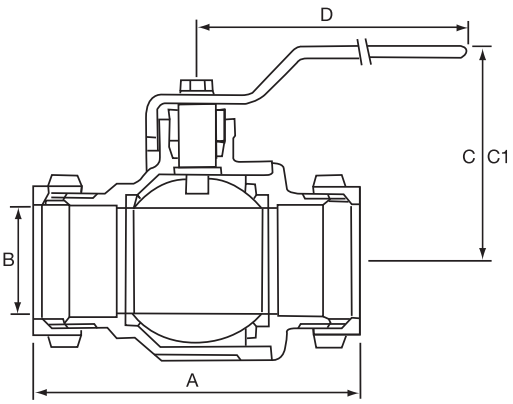
D171C

D171CEXS

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N (Chrome plated)	All
Seat Ring	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
Lever	Mild Steel (Zinc Plated)	D171C
Screw	Mild Steel (Zinc Plated)	D171C
Lever Cover	PVC	D171C
Compression Olive	Brass BS EN 12449 CW505L/CW507L	All
Compression Nut	DZR Brass BS EN 12165 CW617N	All
Extension Housing	Aluminium	D171CEXS
Extension Stem	DZR Brass BS EN 12164 CW602N	D171CEXS

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171CEXS	D (mm)
15	0.27	80	15	52	97	92
22	0.51	84	20	58	98	92
28	0.78	95	25	65	118	127
35	1.19	111	32	70	124	127
42	1.82	124	40	83	142	142
54	3.28	149	50	91	149	142

Pressure/Temperature Ratings

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 120°C

UK END CONNECTION: Compression end to suit BS EN 1057: Half Hard R250 copper tube

OPERATOR: Lever

SPECIFICATION: Quarter Turn, Tight Shut-off.
This valve is intended for Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

D171CT / D171CLS
PN16

WRAS APPROVED PRODUCT

D171CT Compression Ended T-Handle Ball Valve
D171CLS Compression Ended Lockshield Ball Valve

Crane D171CT / D171CLS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171CT and D171CLS are WRAS approved.

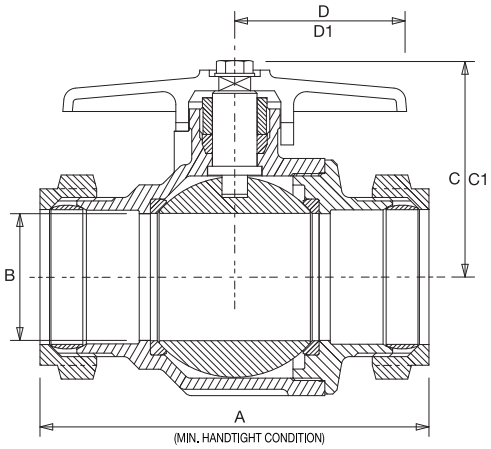

D171CT


D171CLS

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	15 - 28
Seat Retainer	Bronze BS EN 1982 CC491K	35 - 54
Ball	DZR Brass BS EN 12165 CW602N	All
Seat	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
T-Handle	Aluminium	D171CT
Screw	Steel (Zinc Plated)	D171CT
Compression Olive	Brass BS EN 12449 CW505L/CW507L	All
Compression Nut	DZR Brass BS EN 12165 CW617N	All
Lockshield	Brass BS 2872	D171CLS
Lockshield Cover	Nylon 6	D171CLS

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171LCS	D (mm)	D1 (mm) D171CLS
15	0.25	80	15	42	48	55	29
22	0.47	84	20	43	51	55	36
28	0.73	95	25	53	58	83	39

Pressure/Temperature Ratings

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 120°C

UK END CONNECTION: Compression ends to suit BS EN 1057: Half hard R250 copper tube

OPERATOR: T-Handle / Allen Key

SPECIFICATION: Quarter Turn, Tight Shut-off.
This valve is intended for Group 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D171MHU / D171MHULS PN25

WRAS APPROVED PRODUCT

D171MHU Bronze Draw-Off Valve

D171MHULS Bronze Draw-Off Ball Valve with Lockshield

Crane D171MHU / D171MHULS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171MHU and D171MHULS are WRAS approved.

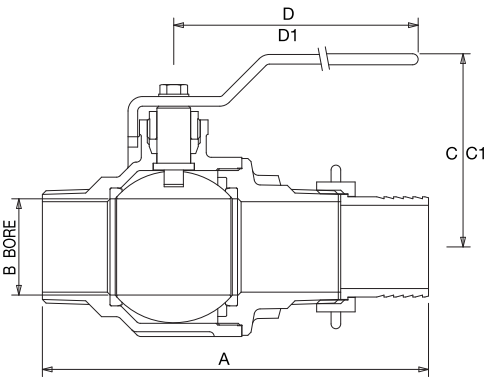
D171MHU

D171MHULS

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N-Chrome Plated	All
Seat	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
Lever	Mild Steel (Zinc Plated)	D171MHU
Lever Screw	Mild Steel (Zinc Plated)	D171MHU
Lever Cover	PVC	D171MHU
Hose Connector	Brass BS EN 12164 CW617N	All
Hose Union Nut	Brass BS EN 12165 CW617N	All
Washer	PTFE	All
Lockshield Cap	Brass BS EN 12164 CW617N	D171MHULS
Lockshield Cover	Nylon 6	D171MHULS

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171MHULS	D (mm)	D1 (mm) D171MHULS
1/2	0.27	104	15	40	47	82	36
3/4	0.55	124	20	58	51	92	36
1	0.88	147	25	65	58	127	39

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: Not Specified

OPERATOR: Lever / Allen Key

SPECIFICATION: Quarter Turn, Tight Shut-off. Male x hose union outlet. This valve is not suitable for use on Group 1 gases and unstable fluids as defined by the Pressure Equipment Directive 97/23/EC.

D171T / D171LS
PN25

WRAS APPROVED PRODUCT

D171T T-Handle Bronze Ball Valve
D171LS Lockshield Bronze Ball Valve

Crane D171 Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171T and D171LS are WRAS approved.


D171T


D171LS

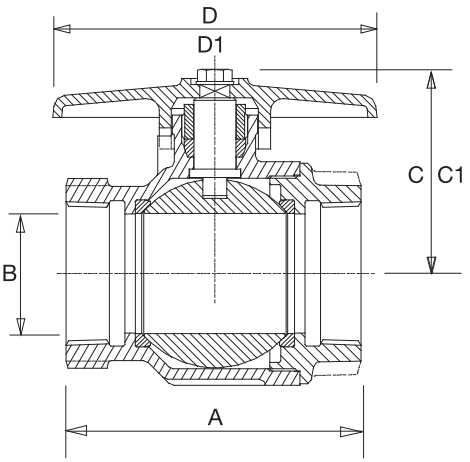
Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N	All
Seats	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	DZR Brass BS EN 12164 CW602N	All
T-Handle	Aluminium	D171T
Screw	Steel (Zinc Plated)	D171T
Lockshield Cap	Brass BS EN 12164 CW617N	D171LS
Screw	Mild Steel	D171LS
Lockshield Cover	Nylon 6	D171LS

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171LS	D (mm)	D1 (mm) D171LS
3/8	0.13	46	10	31	-	38	-
1/2	0.2	57	15	40	48	55	36
3/4	0.41	67	20	43	51	55	36
1	0.64	77	25	53	58	83	39
1 1/4	1.07	91	32	58	63	83	39
1 1/2	1.57	103	40	73	76	108	49
2	2.83	122	50	80	84	108	49

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: T-Handle / Allen Key

SPECIFICATION: Quarter Turn, Tight Shut-off.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D181C
Service Ball Valves - PN16

WRAS APPROVED PRODUCT

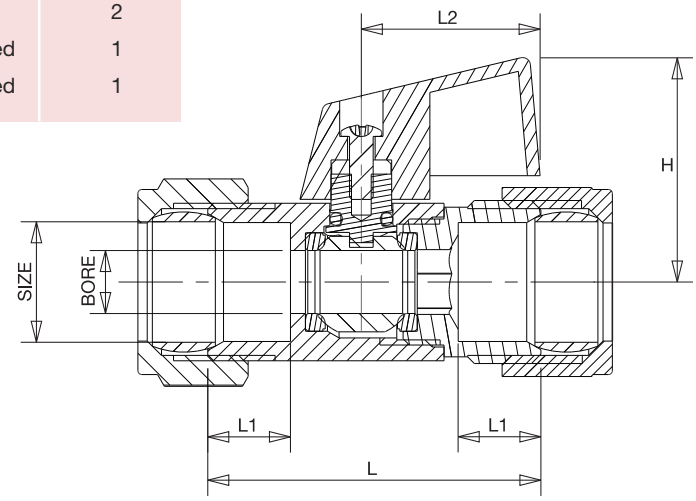
Features & Benefits

- Light, compact and easy to install and operate
- WRAS approved for use on wholesome (wholesome (potable) water
- Compression ends to BS EN 1254-2 for use with BS EN 1057 R250 (half hard) copper tube
- Part of Crane Fluid Systems' extensive public health range
- Chrome plated finish
- Handle can be removed to allow for screwdriver operation

Materials

PART	MATERIAL	QUANTITY
Screw	Steel Dacromet Plated	1
Handle	Nylon (Ral 9017)	1
Stem	DZR Brass Chromium Plated	1
O-Ring	EPDM WRAS approved	1
Nut	DZR Brass CW602N Chromium Plated	2
Olive	Brass CW507L	2
Body	DZR Brass CW602N Chromium Plated	1
PTFE Seat	PTFE WRAS approved	2
Ball	DZR Brass CW602N Chromium Plated	1
Seat Retainer	DZR Brass CW602N Chromium Plated	1

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	BORE (mm)	L (mm)	L1 (mm)	L2 (mm)	H (mm)	WEIGHT (g)
DN15	ø8	42	11	23	29	123
DN22	ø14	53	13	23	34	260

TEMPERATURE °C	-10 to 30	65	110	120
PRESSURE BAR	16	10	6	5

PRESSURE RATING: PN16
OPERATOR: Handle.
The handle can be removed to allow for screwdriver operation.

SPECIFICATION: Compression ends to BS EN 1254-2 for use with BS EN 1057 R250 (half-hard) copper tube. WRAS approved product.

D191
PN25

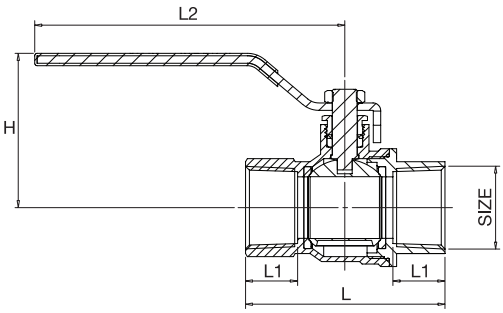
D191 Threaded DZR Ball Valve for Gas Applications

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve features improved leak resistance and reduced risk of damage from over tightening. The D191 is tested by BSI and complies with essential requirements of BS EN 331:1998

Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Dacromet Plated Steel	1
Handle Sleeve	PVC Yellow	1
Handle	Dacromet Plated Steel	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE	1
Body	DZR Brass CW602N	1
Ball	DZR Brass CW602N	1
Seats	PTFE	2
O-Ring	NBR with BS EN 549 Approval	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1

Dimensional Drawing



All dimensions are nominal.

Dimensions & Weights

SIZE (inch)	WEIGHT (g)	L (mm)	L1 (mm)	L2 (mm)	H (mm)
1/4	152	46	12	89	41
3/8	136	46	12	89	41
1/2	205	59	15.5	98.5	48
3/4	302	67	17	98.5	51
1	511	80.5	21	125	63
1 1/4	890	94	23	140	78
1 1/2	1292	102	23	140	83.5
2	2238	124	26.5	165	97.5

Pressure/Temperature Ratings

Non Gas Application

TEMPERATURE (°C)	-10 to 100	110
PRESSURE (BAR)	25	23.5

Gas Application

TEMPERATURE (°C)	-20 to 60
PRESSURE (BAR)	5

Intermediate pressure ratings shall be determined by interpolation.
Gas approved to BS EN 331:1998

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE:
Non Gas -10 to 110°C, Gas -20 to 60°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

OPERATOR: Lever

SPECIFICATION: Quarter Turn, PTFE Seats and Stem Seal.
Tested by BSI and complies with the essential requirements of BS EN 331:1998.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

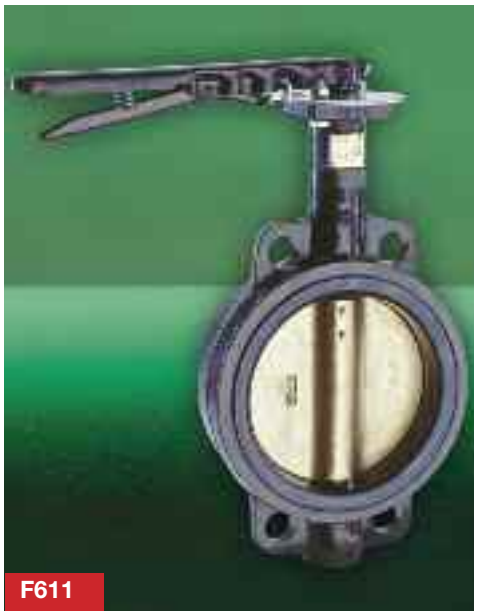
F611 / F621 / F626
PN16

WRAS APPROVED PRODUCT
F621

Semi-Lugged Lever Operated Butterfly Valves to BS EN 593: 2009

Features & Benefits

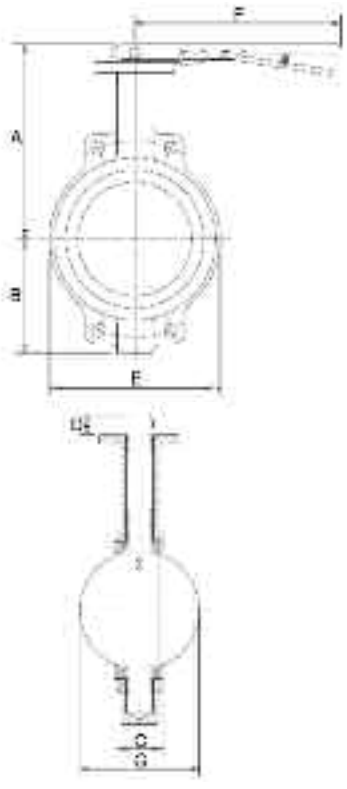
- Aluminium Bronze disc
- Stainless steel shaft
- Trigger lever
- Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 and ANSI B16.1 Class 125


F611

Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F611)	Nitrile Temp. -10 to 90°C
Liner (F621)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F626)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O-Ring	Buna-N
Bushing	PTFE
Lever & Screw	Carbon Steel (Epoxy Paint)
Stop Plate	Carbon Steel (Zn Plated)

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50	3.5	195	83	44	32	102	260	32
65	4	207	95	48	32	121	260	46
80	5.4	213	102	48	32	130	260	64
100	6.7	232	124	54	32	171	260	90
125	9	245	136	57	32	197	260	111
150	9.9	257	150	57	32	219	260	145
200	16.4	305	197	63	44	268	356	193

Pressure/Temperature Ratings

	F611	F621	F626
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

PRESSURE RATING: PN16 / ANSI Class 125
END CONNECTION: Semi-Lugged
OPERATOR: Trigger Lever

SPECIFICATION:

F611 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F621 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS approved.

Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC.

F612 / F622 / F627
PN16

WRAS APPROVED PRODUCT
F622
Sizes 50-300mm

Semi-Lugged Gearbox Operated Butterfly Valves to BS EN 593: 2009

Features & Benefits

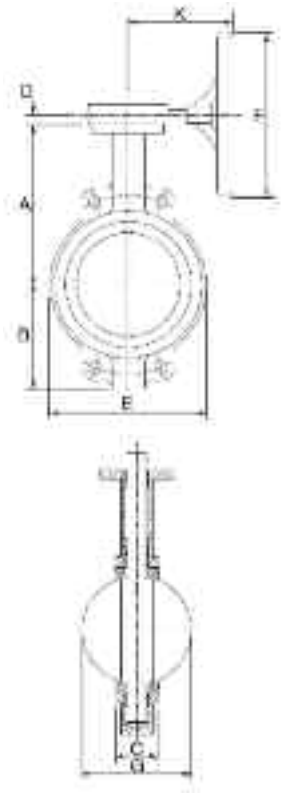
- Aluminium Bronze disc
- Stainless steel shaft
- Gearbox operated
- Valves 50-300mm are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 and ANSI B16.1 Class 125
- Sizes 350mm to 600mm are only PN16 flanges


F612

Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F612)	Nitrile Temp. -10 to 90°C
Liner (F622)	EPDM (WRAS approved) Temp. -10 to 100°C
Liner (F627)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O-Ring	Buna-N
Bushing	PTFE

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
50	15	162	83	44	42	102	150	32	240
65	15.5	175	95	48	42	121	150	46	240
80	16.9	181	102	48	42	130	150	64	240
100	18.2	200	124	54	42	171	150	90	240
125	20.5	213	136	57	42	197	300	111	240
150	21.4	225	150	57	42	219	300	145	240
200	29	260	197	63	40	268	300	193	230
250	33.5	292	210	70	40	332	300	241	230
300	45.8	337	248	79	40	410	300	290	230
350	56.2	368	279	79	40	435	300	325	230
400	88.4	400	305	89	–	508	450	380	277
450	110.2	422	381	108	–	543	450	427	277
500	160.5	479	381	133	–	592	450	474	321
600	260	562	457	156	–	708	450	574	335

Pressure/Temperature Ratings

	F612	F622	F627
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

PRESSURE RATING: PN16 / ANSI Class 125
END CONNECTION: Semi-Lugged
OPERATOR: Gearbox

SPECIFICATION:

F612 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F622 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS approved.

Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC.

F614 / F624 / F628
PN16

WRAS APPROVED PRODUCT
F624

Fully-Lugged Lever Operated Butterfly Valves to BS EN 593: 2009

Features & Benefits

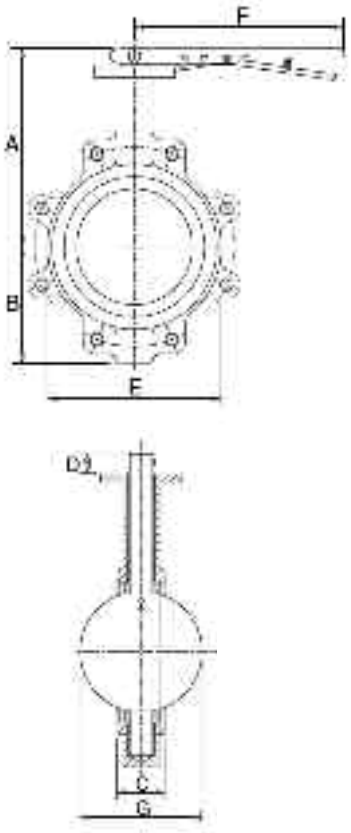
- Aluminium Bronze discs
- Stainless steel shaft
- Trigger lever
- Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16


F614

Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F614)	Nitrile Temp. -10 to 90°C
Liner (F624)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F628)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O-Ring	Buna-N
Bushing	PTFE
Lever & Screw	Carbon Steel (Epoxy Paint)
Stop Plate	Carbon Steel (Zn Plated)

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50	4	195	83	44	32	102	260	32
65	4.5	207	95	48	32	121	260	46
80	7.2	213	102	48	32	130	260	64
100	12.6	232	124	54	32	171	260	90
125	13.5	245	136	57	32	197	260	111
150	14.9	257	150	57	32	219	260	145
200	24.1	305	197	63	44	268	356	193

Pressure/Temperature Ratings

	F614	F624	F628
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

PRESSURE RATING: PN16
END CONNECTION: Lugged
OPERATOR: Trigger Lever

SPECIFICATION:

F614 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F624 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS approved.

Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC.

F615 / F625 / F629
PN16

WRAS APPROVED PRODUCT

Sizes 50-300mm

Fully-Lugged Gearbox Operated Butterfly Valves to BS EN 593: 2009

Features & Benefits

- Aluminium Bronze disc
- Stainless steel shaft
- Gearbox operated
- Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 - Sizes 65-200mm
- BS EN 1092-2 PN16 flanges only - Sizes 250-600mm PN16 only


F625


F629

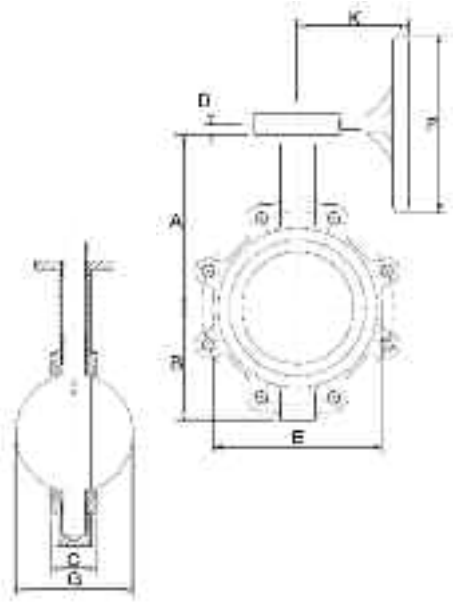
Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F615)	Nitrile Temp. -10 to 90°C
Liner (F625)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F629)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O-Ring	Buna-N
Bushing	PTFE

Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
50	15.5	162	83	44	42	102	150	32	240
65	16	175	95	48	42	121	150	46	240
80	18.7	181	102	48	42	130	150	64	240
100	24.1	200	124	54	42	171	150	90	240
125	25	213	136	57	42	197	300	111	240
150	26.4	225	150	57	42	219	300	145	240
200	36.7	260	197	63	40	268	300	193	230
250	47.1	292	210	70	40	332	300	241	230
300	62.1	337	248	79	40	410	300	290	230
350	84.9	368	279	79	40	435	300	325	230
400	123.8	400	305	89	–	508	450	380	277
450	139.7	422	381	108	–	543	450	427	277
500	215.5	479	381	133	–	592	450	474	321
600	337.3	562	457	156	–	708	450	574	335

Dimensional Drawing



Pressure/Temperature Ratings

	F615	F625	F629
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

PRESSURE RATING: PN16
END CONNECTION: Lugged
OPERATOR: Gearbox

SPECIFICATION:

F615 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F625 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS approved.

Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D104
PN20

Bronze Lift Check Valve

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

Lift Check Valves should only be used in horizontal pipe runs.

The Crane D104 check valve is of the lift check variety.

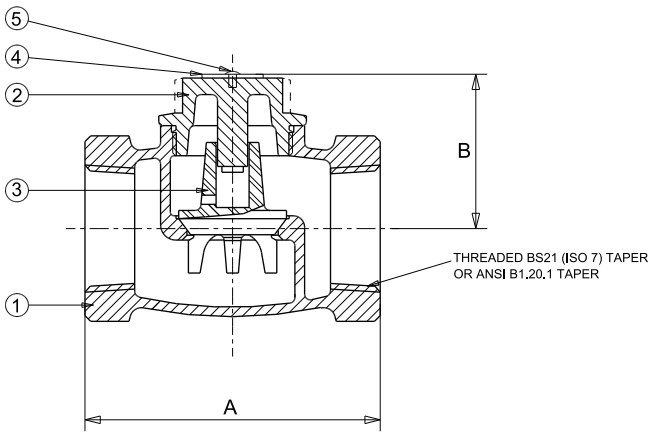
Materials

NO.	PART	MATERIAL	SIZES
1	Body	Bronze BS EN 1982 CC491K	All
2	Cap	Brass BS EN 12164 CW614N	1/2 only
2	Cap	Bronze BS EN 1982 CC491K	3/4 - 2
3	Disc	Bronze BS EN 1982 CC491K	1 - 2
3	Disc	Brass BS EN 12164 CW614N	1/2 & 3/4
4	ID Plate	Aluminium	All
5	Drive Pin	Steel - Electro Brassed	All

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/4	0.24	55	33
3/4	0.35	63	33
1	0.6	77	39
1 1/4	0.97	91	47
1 1/2	1.26	98	54
2	2.09	118	65

Dimensional Drawing



PRESSURE RATING: PN20
TEMPERATURE OPERATING RANGE: -10 to 180°C
UK END CONNECTION: BS 21 Taper
US END CONNECTION: ANSI B1.20.1
OPERATOR: Lift Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS EN 12266-1.
Disc is spherical shaped guided in the cap. Body seat is integral.
Valves having ANSI threads also generally conform to MSS SP-80.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D116
PN32

Bronze Lift Check Valve

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

Lift Check Valves should only be used in horizontal pipe runs.

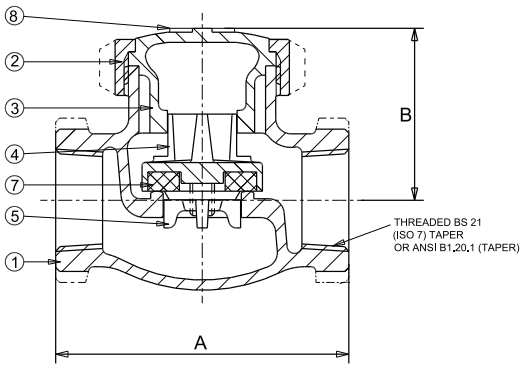
The Crane D116 check valve if of the lift check variety.

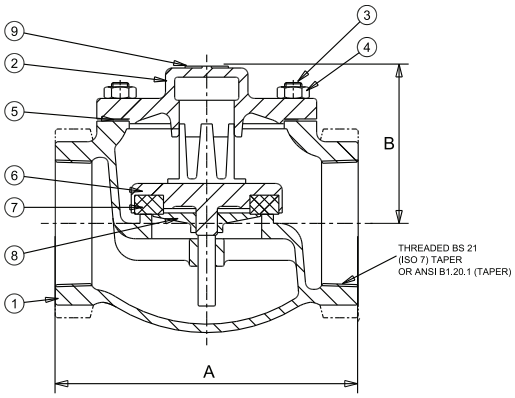

D116

Materials

NO.	PART	MATERIAL	SIZES
1	Body	Bronze BS EN 1982 CC491K	All
2	Union Ring Bronze	BS EN 1982 CC491K	1/4 - 2
3	Cap Bronze	BS EN 1982 CC491K	All
4	Cap Studs Steel	BS 970 070M20	2 1/2 & 3
5	Cap Stud Nuts Steel	BS 4190 Gr.4.0	2 1/2 & 3
6	Disc Holder Bronze	BS EN 1982 CC491K	All
7	Disc Retaining Nut Bronze	BS EN 1982 CC491K	1/2 - 3
7	Disc Retaining Nut Brass	BS EN 12164 CW614N	1/4 & 3/8
8	Washer Brass	BS EN 12164 CW614N	1/4 & 3/8
9	Disc	PTFE (25% Glass Filled)	All
10	Gasket	Asbestos Free	2 1/2 & 3
11	ID Plate	Aluminium	All

Dimensional Drawing





Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/4	0.37	59	37
3/8	0.36	59	37
1/2	0.51	68	43
3/4	0.85	81	49
1	1.32	95	56
1 1/4	1.97	108	65
1 1/2	2.65	121	73
2	4.44	146	87
2 1/2	9	184	94
3	13.6	210	107

PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 198°C
UK END CONNECTION: BS 21 Taper
US END CONNECTION: ANSI B1.20.1
OPERATOR: Lift Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN32 for Series B ratings.
The design incorporates a disc holder which is guided in the seat bore and the cap. The body seat is integral of the semi-crown type. Sizes 1/4" to 2" have a union cap; sizes 2 1/2" and 3" have a bolted cap.

This check valve is available with a nitrile rubber disc for air, hot and cold water.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D138
PN25

Bronze Swing Check Valve with Metal Disc

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

The Crane D138 Bronze check valve is of the swing variety.

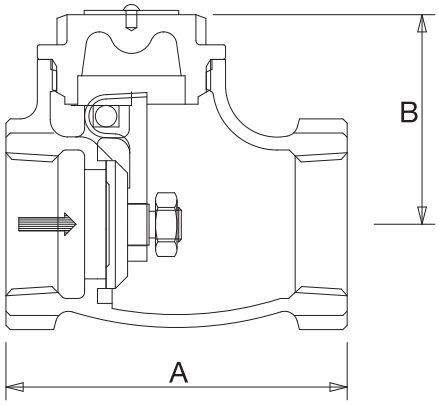
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

D138

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Disc	Brass BS EN 12164 CW614N	3/8 - 1
Disc	Bronze BS EN 1982 CC491K	1 1/4 - 3
Hinge	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel	3/8 - 2
Hinge Pin	Stainless Steel ASTM A182 Gr.F316	2 1/2 & 3
Hinge Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Drive Pin	Steel - Electro Brassed	All
Hinge Pin Plug	Brass BS EN 12164 CW614N	2 1/2 & 3

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
3/8	0.19	48	33
1/2	0.32	58	38
3/4	0.43	66	42
1	0.61	80	49
1 1/4	1.01	89	56
1 1/2	1.34	95	65
2	2.12	108	76
2 1/2	4.08	155	98
3	5.76	190	99

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Swing Type Check Valve

SPECIFICATION: Metal Disc, Screwed in Cap, BSI Kitemark approved. Valves are manufactured in accordance with BS5154:1991 PN25 for Series B ratings.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D140 Bronze
PN25

Bronze Swing Check Valve with Resilient Disc

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

The Crane D140 Bronze check valve is of the swing variety.

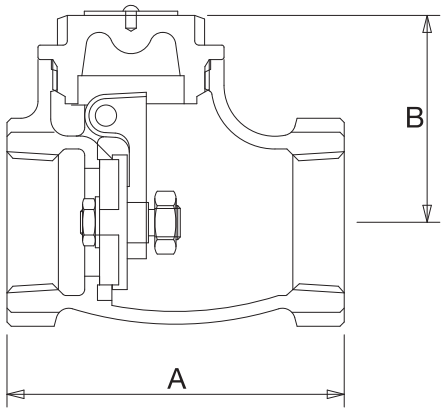
This valve carries the British Standards Institution kitemark - your assurance of exacting quality standards.

D140

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Disc Holder	Brass BS EN 12164 CW614N	1/2 - 1
Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
Disc	Nitrile Rubber	All
Disc Retaining Nut	Brass BS EN 12164 CW614N	1/2 - 2 1/2
Disc Retaining Nut	Bronze BS EN 1982 CC491K	3" only
Washer	Brass BS EN 12164 CW614N	1/2 - 2 1/2
Hinge	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel	1/2 - 2
Hinge Pin	Brass BS EN 12164 CW614N	2 1/2 & 3
Hinge Pin Plug	Brass BS EN 12164 CW614N	2 1/2 & 3
Hinge Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Drive Pin	Steel-Electro Brassed	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/2	0.33	58	38
3/4	0.43	66	42
1	0.63	80	49
1 1/4	1.01	89	56
1 1/2	1.34	95	65
2	2.12	108	76
2 1/2	4.2	153	98
3	6.02	188	98

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100
PRESSURE (BAR)	25

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 100°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Swing Type Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS 5154: 1991 PN25 for Series B ratings but are limited to 100°C maximum temperature.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
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D142
PN32

Bronze Swing Check Valve

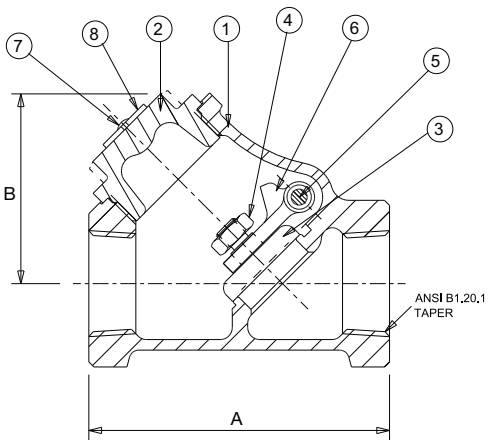
Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

The Crane D142 bronze check valve is of the swing variety.

Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Cap	Bronze BS EN 1982 CC491K
Cap	Brass BS EN 12164 CW721R
Disc	Bronze BS EN 1982 CC491K
Disc	Brass BS EN 12164 CW614N
Disc	Brass BS EN 12164 CW614N
Hinge Nut	Brass BS 2874 CZ121
Hinge Pin/Plug	Stainless Steel
Hinge	Bronze BS EN 1982 CC491K
Drive Pin	Steel-Electro Brassed
ID Plate	Aluminium

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/4	0.26	54	37
3/8	0.25	54	37
1/2	0.39	62	43
3/4	0.62	76	52
1	1.07	94	65
1 1/4	1.65	110	76
1 1/2	2.56	126	89
2	4.05	152	108
2 1/2	6.4	186	134
3	9.3	218	160

PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 260°C
UK END CONNECTION: BS 21 Taper
OPERATOR: Swing Check, Screwed in Cap. Can be mounted vertically as long as flow is upwards

SPECIFICATION: Valves are manufactured in accordance with BS 5154 for Series A ratings.

Design is of the Y-Pattern having flat regrindable swing disc and integral regrindable body seat. The disc is retained on the hinge by a locked nut and is free to swivel. The hinge pin is retained by an external threaded plug.

Valves having ANSI threads also generally conform to MSS SP-80.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

F491
Class 100

Bronze Lift Check Valve

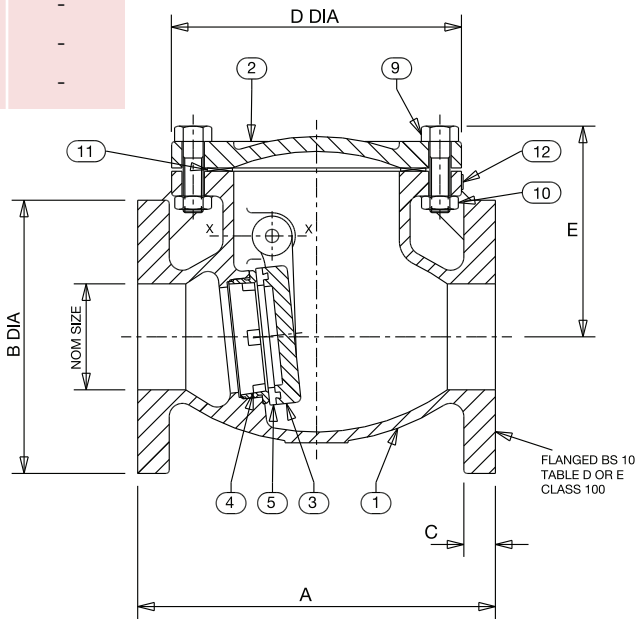
Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.


F491

Materials

NO.	PART	MATERIAL	SIZES
1	Body	Cast Iron BS EN 1561 GJL-250	-
2	Cover	Cast Iron BS EN 1561 GJL-250	-
3	Disc	Cast Iron BS EN 1561 GJL-250	-
4	Body Seat Ring	Bronze BS EN 1982 CC491K	-
5	Disc Face Ring	Bronze BS EN 1982 CC491K	-
6	Hinge Pin Bush	Bronze BS EN 1982 CC491K	-
7	Hinge Pin Plug	Bronze BS EN 1982 CC491K	-
8	Hinge Pin	Stainless Steel Type 304	2 - 4
8	Hinge Pin	13% CR Steel Type 410	5 - 12
9	Cover Bolt	Steel BS 3692 Grade 8.8	-
10	Cover Bolt Nut	Steel BS 3692 Grade 8	-
11	Gasket	Asbestos Free Garlock 2850	-
12	Body Plate	Aluminium	-

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
2	11.3	203	152	16	153	113
$2^1/_2$	15.6	216	178	17	175	126
3	19.3	241	191	19	195	136
4	26.6	292	229	24	225	153
5	44.0	330	254	24	273	186
6	55.5	356	279	25	310	207
8	119.0	495	343	29	365	250

PRESSURE RATING: Class 100
TEMPERATURE OPERATING RANGE: -10 to 232°C
UK END CONNECTION: Flanged BS10 Table D or E
OPERATOR: Swing Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS 5153. Flanges are flat faced and drilled to BS 10 Table D or E. This valve is not suitable for use on Group 1 gases or unstable fluids as defined by the Pressure Equipment Directive 97/23/E.

F493
Class 125

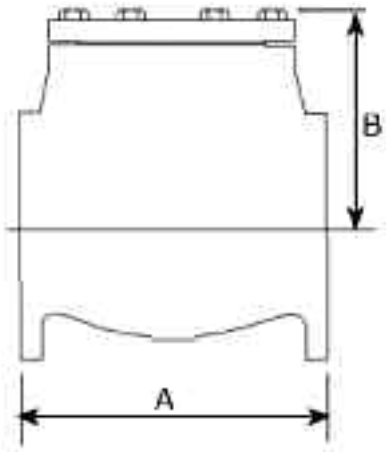
Cast Iron Check Valve

The F493 is a swing check valve with a Bronze trim.
Each valve is manufactured to BS 5153:1974

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	2 - 4
Hinge Pin	13% Cr.Steel AISI Type 410	5 - 12
Cap Bolts	Steel BS 3692 Gr.8.8	All
Cap Bolts Nuts	Steel BS 3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
2	11.3	203	113
$2^1/_2$	15.6	216	126
3	19.3	241	136
4	26.6	292	153
5	44	330	186
6	55.5	356	207
8	119	495	250
10	175	622	352
12	263	698	397

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation

PRESSURE RATING: Class 125
TEMPERATURE OPERATING RANGE: -10 to 230°C
US END CONNECTION: ANSI Class 125
OPERATOR: Swing Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS 5153:1974 and also meet the requirements of MSS.SP-71. End flanges conform to BS 1560. Section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled. This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

FM453 / FM465 / FA453
PN16 / PN25 / ANSI125

Features & Benefits

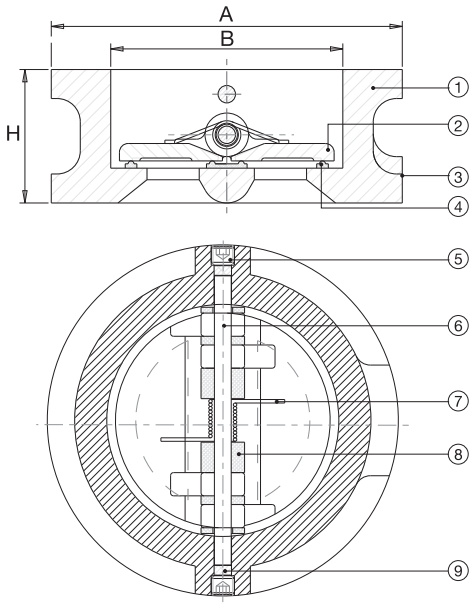
- Check valves permit flow in one direction only and close automatically if flow reverses
- They are entirely automatic in action, depending upon pressure and velocity of flow to perform the functions of opening and closing
- Also available to ANSI125 - FA453
- Eyebolt tapped holes, to fit bolts to BS EN ISO 3226:2010 (eyebolts are not supplied with product)

FM453 / FM465 / FA453

Materials

NO.	PART	MATERIAL
1	Body	Cast Iron EN-JL-1040 PN16 / ANSI125 DN50-DN150
		Ductile Iron EN-JGS-500-7 PN16 / ANSI125 DN200-DN600
		Ductile Iron EN-JGS-500-7 PN25 DN50-DN600
2	Disc	Stainless Steel SS304
3	ID Plate	Anodised Aluminium
4	Seat	EPDM
5	Stop Bolt	Stainless Steel 304
6	Stem	Stainless Steel 304
7	Spring	Stainless Steel 304
8	Washer	PTFE
9	Gasket	EPDM

Dimensional Drawing



Dimensions & Weights

SIZE	A (mm) PN16 PN25	A (mm) ANSI 125	B (mm)	H (mm)	WEIGHT (kg) PN16 ANSI 125	WEIGHT (kg) PN25	EYEBOLT TAPPING (To BS EN 3226:2010)
DN50	107	102	65	43	1.5	1.5	N/A
DN65	127	121	80	46	2.1	2.1	N/A
DN80	142	133	94	64	3.3	3.2	N/A
DN100	162	162	117	64	4.3	4.0	N/A
DN125	192	192	145	70	6.3	5.9	N/A
DN150	218	218	170	76	8.3	8.1	N/A
DN200	273	273	224	89	13.6		M8
DN250	329	329	265	114	24.2		M8
DN300	384	384	310	114	31.5		M10
DN350	446	446	360	127	52.2		M12
DN400	498	498	410	140	74.0		M12
DN450	550	546	450	152	101.0		M12
DN500	610	603	500	152	121.0		M12
DN600	720	714	624	178	174.0		M12

PRESSURE RATING: FM453: PN16, FA453: ANSI 125, FM465: PN25

TEMPERATURE OPERATING RANGE: -10 to 120°C

END CONNECTION: Suitable for flange connection to BS EN 1092-2 PN16 / BS EN 1092-2 PN25 / ANSI B16.1 125

US END CONNECTION: BS 1560, ANSI B16-1, ANSI B16-5

SPECIFICATION: Face-to-face dimensions conform to BS EN 558 series 16. Suitable for installation in vertical and horizontal pipelines. When installed in vertical pipelines the flow must be in an upward direction. This valve is suitable for use on group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
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FM469
PN16

Cast Iron Check Valve

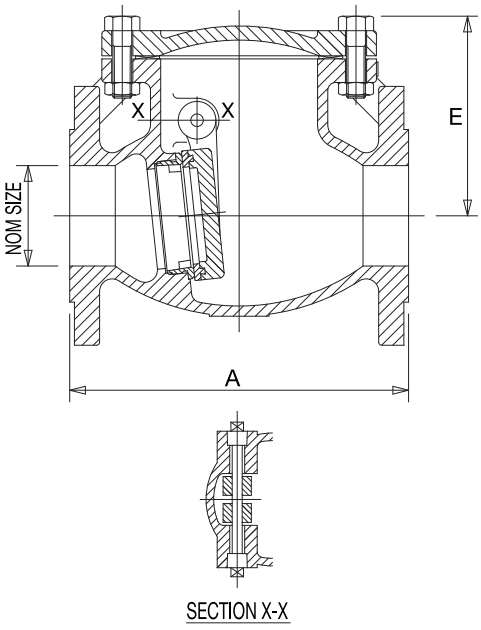
Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

Swing pattern, bronze trim, resilient seated.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Nitrile Rubber	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	50 - 80
Hinge Pin	13% Cr.Steel AISI Type 410	100 - 300
Cap Bolts	Steel BS 3692 Gr.8.8	All
Cap Bolt Nuts	Steel BS 3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All
Disc Ring Retaining Nut	Cast Iron BS EN 1561 GJL-250	All
Retaining Nut Pin	Steel	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	E (mm)
50	11.3	203	113
65	15.6	216	126
80	19.3	241	136
100	26.6	292	153
125	44	330	186
150	55.5	356	207
200	119	495	250
250	175	622	352
300	263	698	397

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65
PRESSURE (BAR)	16

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 65°C
UK END CONNECTION: Flanged BS EN 1092-2 PN16
OPERATOR: Swing Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS EN 12334:2001.

End flanges conform to BS EN 1092-2 Section 3.2 Table 11 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

FM492
PN16

Cast Iron Check Valve

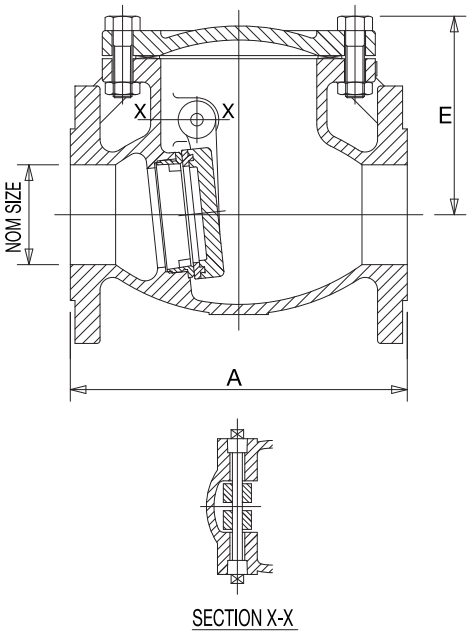
Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

Swing pattern, metal faced disc.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	50 - 100
Hinge Pin	13% Cr.Steel AISI Type 410	125 - 300
Cap Bolts	Steel BS 3692 Gr.8.8	All
Cap Bolt Nuts	Steel BS 3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	E (mm)
50	11.3	203	113
65	15.6	216	126
80	19.3	241	136
100	26.6	292	153
125	44	330	186
150	55.5	356	207
200	119	495	250
250	175	622	352
300	263	698	397

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	220
PRESSURE (BAR)	16	12.1

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 220°C
UK END CONNECTION: Flanged BS EN 1092-2
OPERATOR: Swing Type Check Valve

SPECIFICATION: Valves are manufactured in accordance with BS EN 12334: 2001.

End flanges conform to BS EN 1092-2 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
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147XU
Class 150

Cast Steel • Bolted Cap • Flanged

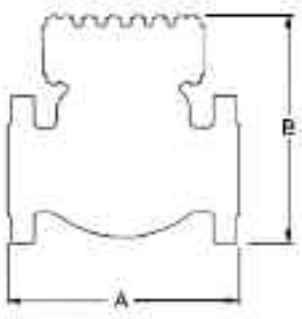
- Swing check valves prevent reversal of flow through the pipeline
- Can be installed in horizontal or vertical, upward flow piping
- Offer low resistance to flow and are particularly suited to low velocity service
- Seat ring is seal welded to eliminate leak paths


147XU

Materials

PART	MATERIAL
Body	A216 WCB
Cap	A216 WCB
Seat Ring	Hardfaced
Disc	13% CR Overlay
Hinge	WCB
Pins, Hinge	410 SS
Disc Washer	Steel
Cap Screw	A307 Gr. B
Cap Gasket	Soft Iron
Cap Studs	A193 Gr. B7
Cap Nuts	A194 Gr. 2H
ID Tags	SS
ID Pins	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)
2	33	8.00	6.75
2 1/2	57	8.50	7.12
3	59	9.50	7.38
4	93	11.50	8.50
6	165	14.00	10.25
8	275	19.50	11.88
10	440	24.50	13.88
12	680	27.50	15.75
14	950	31.00	17.75
16	1225	34.00	19.00
18	1700	38.50	21.25
20	1850	38.50	23.58
24	2900	51.00	26.75

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 24 inches
PRESSURE RATING: Class 150
Carbon Steel
ASTM A216 Grade WCB
285 psi @ -20°F to 100°F

SPECIFICATION: Swing check valves prevent reversal of flow through pipelines. Most Crane FS swing check valves can be installed in horizontal or vertical upward flow piping. They offer low resistance to flow and are particularly suited to low velocity service.

159XU
Class 300

Cast Steel • Bolted Cap • Flanged

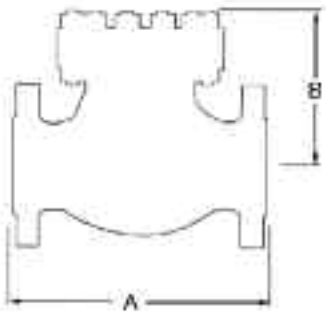
- Swing check valves prevent reversal of flow through the pipeline
- Can be installed in horizontal or vertical, upward flow piping
- Offer low resistance to flow and are particularly suited to low velocity service
- Seat ring is seal welded to eliminate leak paths


159XU

Materials

PART	MATERIAL
Body	A216 WCB
Bonnet	A216 WCB
Seat Ring	Hardfaced
Disc	13% CR Overlay
Hinge	WCB
Pins, Hinge	410 SS
Cap Screw	A307 Gr. B
Cap Gasket	Spiral Wound
Cap Studs	A193 Gr. B7
Cap Nuts	A194 Gr. 2H
ID Tags	SS
ID Pins	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)
2	46	10.50	6.75
$2^1/2$	66	11.50	7.38
3	86	12.50	8.50
4	154	14.00	9.25
6	276	17.50	11.88
8	420	21.00	13.38
10	640	24.50	13.88
12	1000	28.00	16.62
14	1550	33.00	18.88
16	1700	34.00	20.50
18	2200	38.50	23.62
20	2800	44.00	26.38
24	3650	53.00	29.62

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 24 inches

PRESSURE RATING: Class 300

Carbon Steel
ASTM A216 Grade WCB
285 psi @ -20°F to 100°F

SPECIFICATION: Swing check valves prevent reversal of flow through pipelines. Most Crane FS swing check valves can be installed in horizontal or vertical upward flow piping. They offer low resistance to flow and are particularly suited to low velocity service.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D340
PN10

Bronze Draining Taps

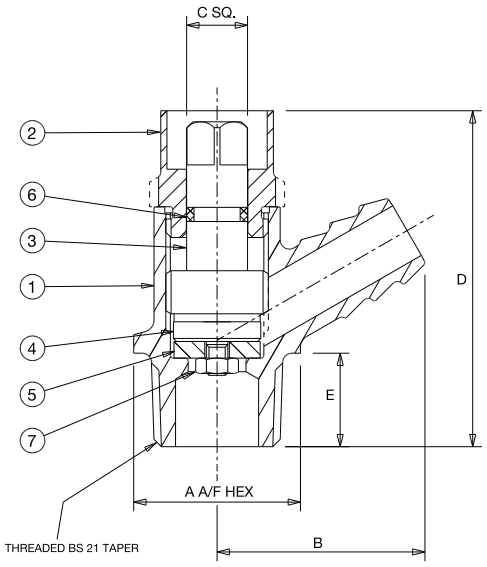
Bronze draining taps are suitable for use on hot and cold water up to 10bar, at temperatures up to 110°C.

The inlet is a threaded taper male connection to BS 21, the outlet is ribbed for hose connection. WRAS approved.

Materials

NO.	PART	MATERIAL	SIZES
1	Body	Bronze BS EN 1982 CC491K	All
2	Gland	Brass BS EN 12164 CW614N	All
3	Stem	Brass BS EN 12164 CW614N	All
4	Washer Plate	Brass BS EN 12164 CW614N	All
5	Washer	Ethylene Propylene	All
6	O-Ring	Ethylene Propylene	All
7	Nut	Brass BS EN 12164 CW614N	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2	0.13	24.6	33.8	7.7	54.8	15.2
3/4	0.35	32.4	47.9	8.4	74.1	17.2
1	0.59	40	62.5	9.5	78.7	20.3

PRESSURE RATING: PN10
TEMPERATURE OPERATING RANGE: 0 to 110°C
UK END CONNECTION: BS 21 Taper Male
US END CONNECTION: Not Specified
OPERATOR: Lockshield

SPECIFICATION: Sizes 1/2" and 3/4" draining taps are designed and manufactured in accordance with BS 2879 type 2.

This valve is excluded from the requirements of the Pressure Equipment Directive 97/23/EC, Article 1 - 3.20.

D341
PN10

Bronze Draining Taps

Bronze draining taps are suitable for use on hot and cold water up to 10 bar, at temperatures up to 110°C.

The inlet is a threaded taper male connection to BS 21, the outlet is ribbed for hose connection. WRAS approved.

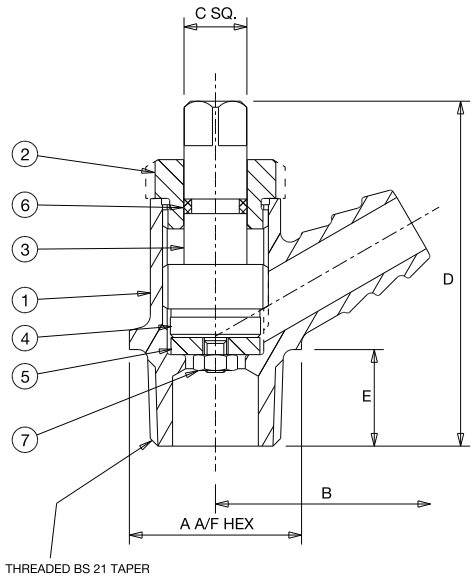
Materials

NO.	PART	MATERIAL	SIZES
1	Body	Bronze BS EN 1982 CC491K	All
2	Gland	Brass BS EN 12164 CW614N	All
3	Stem	Brass BS EN 12164 CW614N	All
4	Washer Plate	Brass BS EN 12164 CW614N	All
5	Washer	Ethylene Propylene	All
6	O-Ring	Ethylene Propylene	All
7	Nut	Brass BS EN 12164 CW614N	All

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2	0.12	24.6	33.8	7.7	59.9	15.2
3/4	0.34	32.4	47.9	8.4	79.8	17.2
1	0.58	40	62.5	9.5	87.9	20.3

Dimensional Drawing



PRESSURE RATING: PN10
TEMPERATURE OPERATING RANGE: 0 to 110°C
UK END CONNECTION: BS 21 Taper Male
US END CONNECTION: Not Specified
OPERATOR: Loose Key Operation

SPECIFICATION: Sizes 1/2" and 3/4" draining taps are designed and manufactured in accordance with BS 2879 type 2.

This valve is excluded from the requirements of the Pressure Equipment Directive 97/23/EC, Article 1 - 3.20.

D344
PN10*

Bronze Gland Pattern Draw-Off Cock

Straight type, gland pattern.

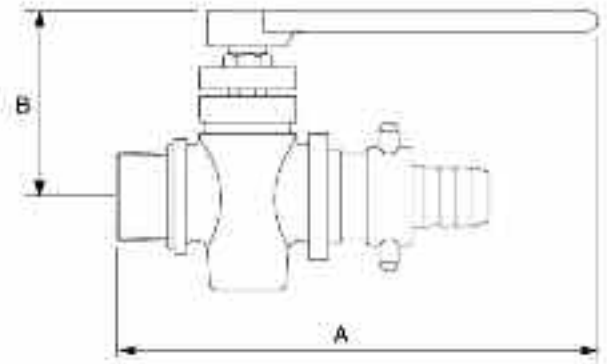
*Whilst these cocks have been classified as PN10, they cannot be used at full PN10 ratings.

The D344 is suitable for use on pressure up to 8.6 bar and at temperatures up to 110°C.

Materials

NO.	PART	MATERIAL	SIZES
1	Body	Bronze BS EN 1982 CC491K	All
2	Plug	Bronze BS EN 1982 CC491K	All
3	Gland	Bronze BS EN 1982 CC491K	All
4	Hose Unions	Brass	All
5	Lever	Malleable Iron	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/4	0.45	114	77
3/4	0.7	136	94
1	1.2	150	114
1 1/4	2.01	170	135
1 1/2	2.61	204	146
2	4.14	240	170

PRESSURE RATING: PN10
TEMPERATURE OPERATING RANGE: -10 to 110°C
UK END CONNECTION: Not Specified
US END CONNECTION: Not Specified
OPERATOR: Lever Operated

SPECIFICATION: Sizes 1/2" to 2", gland pattern, inlet threaded female BS 21 (ISO 7), outlet threaded male BS 2779 (ISO 228) parallel with hose union. Fixed key.

Each draw-off cock is hydraulically tested at 20 bar.

This valve is excluded from the requirements of the Pressure Equipment Directive 97/23/EC, Article 1 - 3.20.

D151
PN20

WRAS APPROVED PRODUCT
(1/4" to 2" only)

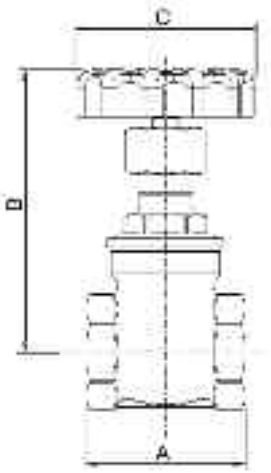
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. The D151 carries the British Standards Institution kitemark - your assurance of exacting quality standards. In addition, the D151 is WRAS approved for use on wholesome (potable) water.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	DZR Brass BS EN 12164 CW602N	1/4 - 3
Stem	Manganese Bronze	4
Disc	Bronze BS EN 1982 CC491K	All
Stem Retainer	DZR Brass BS EN 12164 CW602N	1/2 - 2
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4, 3/8, 2 1/2 & 3
Stuffing Box	Bronze BS EN 1982 CC491K	4
Packing	Asbestos Free	All
Packing Gland	Brass BS EN 12164 CW614N	1/4, 3/8, 1 - 3
Packing Gland Nut	Brass BS EN 12164 CW614N	1/2 & 3/4
Packing Gland	Bronze BS EN 1982 CC491K	4
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 3
Packing Nut	Bronze BS EN 1982 CC491K	4
Handwheel	Aluminium	1/4 - 3
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	4
ID Plate	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3 - 4

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.27	46	75	45
3/8	0.26	46	75	45
1/2	0.269	50	78	52.5
3/4	0.384	54	84	52.5
1	0.593	62	105	65
1 1/4	0.844	71	111	70
1 1/2	1.266	77.5	130	78
2	1.881	87.5	153	92
2 1/2	4.37	96	219	121
3	6.4	105	259	121
4	19.7	162	366	203

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN20

TEMPERATURE OPERATING RANGE: -10 to 180°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Solid wedge disc, non-rising stem, screwed in bonnet.
Valves are manufactured in accordance with BS EN 12288: 2010 PN20 Series B and are BSI Kitemark approved.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D151A
PN20

DZR Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

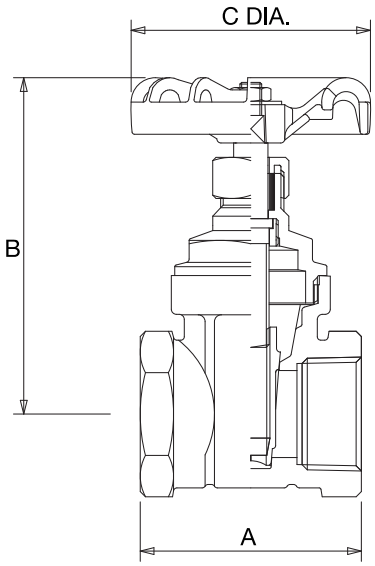
Materials

PART	MATERIAL	SIZES
Body	DZR Brass BS EN 12165 CW602N	All
Bonnet	DZR Brass BS EN 12165 CW602N	All
Stem	DZR Brass BS EN 12165 CW602N	All
Packing Nut	Brass BS EN 12164 CW617N	All
Packing	PTFE	All
Stem Bush	DZR Brass BS EN 12165 CW602N	All
Disc	DZR Brass BS EN 12165 CW602N	All
Handwheel	Aluminium	All
Handwheel Nut	Steel (Zinc Plated)	All

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.2	43	69	45
3/8	0.19	43	69	45
1/2	0.23	50	69	45
3/4	0.36	54	79	52
1	0.5	62	92	52
1 1/4	0.82	70	108	65
1 1/2	1.08	72	125	70
2	1.83	88	150	92
2 1/2	2.9	97	176	103
3	3.97	111	204	120

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN20

TEMPERATURE OPERATING RANGE: -10 to 180°C

END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 PN20 for Series B ratings. Non-Rising Stem.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D151X
PN25

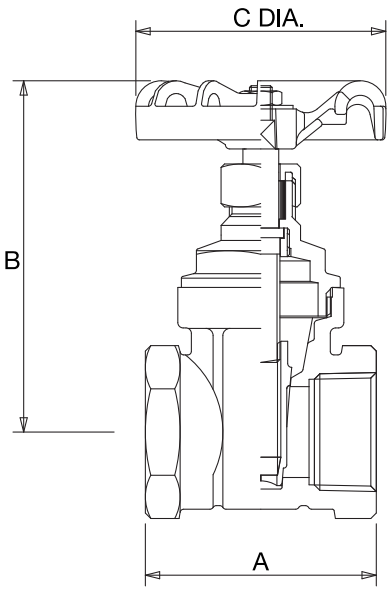
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	DZR Brass BS EN 12164 CW602N	All
Disc	Bronze BS EN 1982 CC491K	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4 - 2
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Handwheel	Aluminium	All
ID Plate	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.27	46	75	45
3/8	0.26	46	75	45
1/2	0.35	51	82	52
3/4	0.55	55	95	65
1	0.84	63	118	70
1 1/4	1.18	71	144	79
1 1/2	1.66	73	166	92
2	2.55	84	190	103
2 1/2	5.62	106	235	103
3	7.89	113	251	121

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 PN25 for Series B ratings. All Sizes BSI Kitemarked. Non-Rising Stem.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D155C
PN16

WRAS APPROVED PRODUCT

Features & Benefits

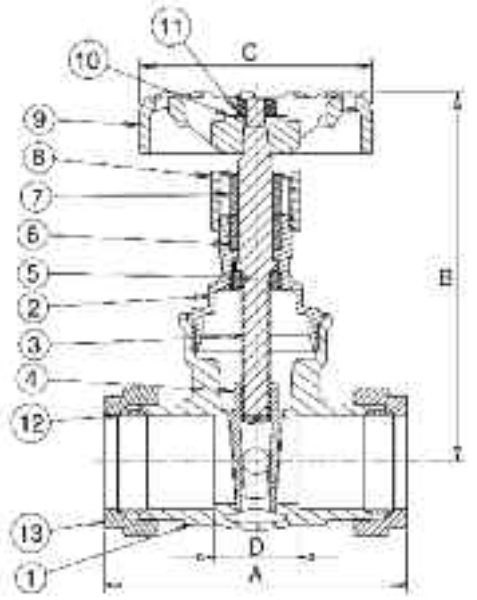
- Robust and high quality bronze body with integral seating surfaces
- Offers the ultimate in dependable service wherever minimum pressure drop is important
- WRAS approved for use with wholesome (potable) water
- Inside screw pattern with non-rising stem


D155C

Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Bonnet	Bronze BS EN 1982 CC491K
Stem DZR	Brass BS EN 12164 CW602N
Disc	Bronze BS EN 1982 CC491K
Stem Retainer	DZR Brass BS EN 12164 CW602N
Packing Ring	Asbestos Free
Gland (28-54 only)	Brass BS EN 12164 CW614N
Packing Nut	Brass BS EN 12164 CW614N
Handwheel	Aluminium
Identification Plate	Aluminium
Handwheel Nut	Brass BS EN 12164 CW614N
Compression Olive	Brass BS EN 12449:1999 CW505L OR CW507L
Compression Nut	Brass BS EN 12165 CW617N

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
15	0.34	69	74	53	26.5
22	0.50	75	86	59	23.5
28	0.70	86	105	65	25.5
35	0.95	100	110	70	30.5
42	1.45	111	131	78	34.5
54	2.50	133	152	93	37

Pressure/Temperature Ratings

TEMPERATURE (°C)	16.0	14.3	12.6	10.0	8.7	7.8	6.9	6.0	5.0
PRESSURE (BAR)	-10 to 30	40	50	65	80	90	100	110	120

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

UK END CONNECTION: Compression ends to BS EN 1057:2006: Half hard R250

OPERATING INSTRUCTIONS: Handwheel.
Gate valves are best for services that require infrequent valve operation and where the disc is kept either fully open or closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 (formerly BS 5154) PN16 for Series B ratings, but are limited to the pressure/temperature ratings detailed in BS EN 1057: 2006 for compression end fittings.

This valve is to be used on Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

D156
PN16

Brass Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

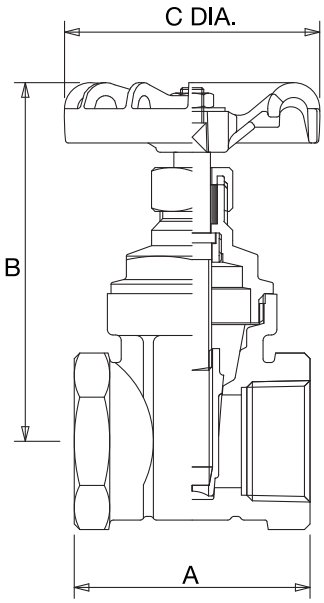
Materials

PART	MATERIAL	SIZES
Body	Brass BS EN 12164 CW617N	All
Bonnet	Brass BS EN 12164 CW617N	All
Stem	Brass BS EN 12165 CW617N	All
Packing Nut	Brass BS EN 12165 CW617N	All
Packing	Asbestos Free	All
Stem Bush	Brass BS EN 12165 CW617N	All
Disc	Brass BS EN 12164 CW617N	All
Handwheel	Aluminium	All
Handwheel Nut	Steel (Zinc Plated)	All

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.2	41	69	44
3/8	0.2	41	69	44
1/2	0.22	48	69	44
3/4	0.35	54	79	52
1	0.52	62	92	52
1 1/4	0.77	68	108	65
1 1/2	1.02	72	125	70
2	1.75	82	150	92
2 1/2	2.77	97	176	103
3	3.9	111	204	120
4	6.35	131	262	152

Dimensional Drawing



Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 170°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves 1/4" to 2" are manufactured in accordance with BS EN 12288: 2010 PN16 for Series B ratings. Non-Rising Stem.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D159
PN32

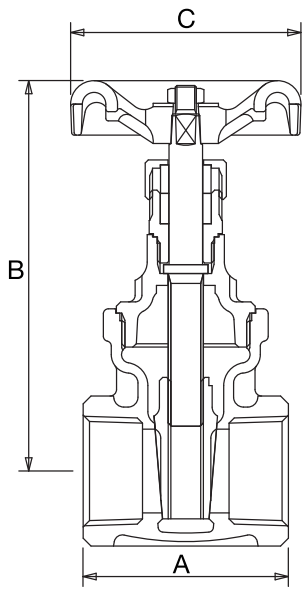
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	1/4 - 3
Stem	DZR Brass BS EN 12164 CW602N	All
Disc	Bronze BS EN 1982 CC491K	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4 - 2
Stuffing Box	Bronze BS EN 1982 CC491K	2 1/2 & 3
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Handwheel	Aluminium	All
ID Plate	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.36	46	75	45
3/8	0.35	46	75	45
1/2	0.47	51	82	52
3/4	0.6	55	95	65
1	0.92	63	118	70
1 1/4	1.41	71	144	79
1 1/2	1.92	73	166	92
2	2.72	83	190	103
2 1/2	5.62	105	232	103
3	7.89	111	264	121

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 198°C
UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21
US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 PN32 for Series B ratings. Non-Rising Stem.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D160
Class 100

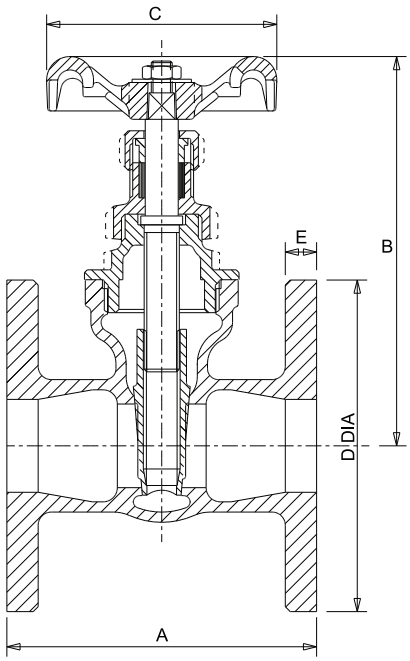
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

PART	MATERIAL	SIZE
Body	Bronze BS EN 1982 CC491K	-
Bonnet	Bronze BS EN 1982 CC491K	-
Disc	Bronze BS EN 1982 CC491K	-
Stem	Bronze BS EN 12164 CW602N	-
Packing	Asbestos Free	-
Gland	Brass BS EN 12164 CW614N	-
Packing Nut	Brass BS EN 12164 CW614N	-
Stuffing Box	Bronze BS EN 12164 CW602N	-
Handwheel	Aluminium	-
Handwheel Nut	Brass BS EN 12164 CW614N	-
Identity Plate	Aluminium	-
Gasket*	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
3/4	2.01	83	107	52	102	6.4
1	2.49	89	124	65	114	7.9
1 1/4	2.86	102	145	70	121	7.9
1 1/2	4.10	114	165	78	133	9.5
2	5.54	127	189	92	152	9.5
2 1/2	8.39	140	232	103	165	11.1
3	11.6	152	269	121	184	12.7

PRESSURE RATING: Class 100
TEMPERATURE OPERATING RANGE: -10 to 170°C
UK END CONNECTION: BS 10 Table E
OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Solid wedge disc, Non-rising stem, screwed-in bonnet. Valves are manufactured in accordance with BS 1952 Class 100 for series B ratings. End flanges conform to BS 10 Table E with flat face and are normally supplied drilled. This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/E.
AVAILABLE OPTIONS: Flanges undrilled

D161
PN25

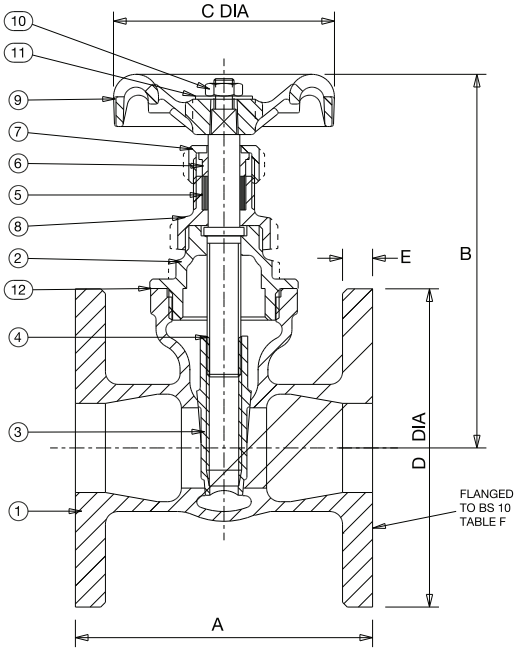
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Bronze BS EN 1982 CC491K	-
3	Disc	Bronze BS EN 1982 CC491K	-
4	Stem	Bronze BS EN 12164 CW602N	-
5	Packing	Asbestos Free	-
6	Gland	Brass BS EN 12164 CW614N	-
7	Packing Nut	Brass BS EN 12164 CW614N	-
8	Stuffing Box	Bronze BS EN 12164 CW602N	-
9	Handwheel	Aluminium	-
10	Handwheel Nut	Brass BS EN 12164 CW614N	-
11	Identity Plate	Aluminium	-
12	Gasket*	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
3/4	2.23	83	107	52	102	7.9
1	2.97	95	124	65	121	9.5
1 1/4	3.54	108	145	70	133	9.5
1 1/2	4.65	121	165	78	140	11.1
2	6.44	133	189	92	165	11.1
2 1/2	10.4	152	232	103	184	12.7
3	13.6	171	269	121	203	14.3

PRESSURE RATING: PN25
TEMPERATURE OPERATING RANGE: -10 to 100°C
END CONNECTION: Flanged to BS 10 Table F

SPECIFICATION: End flanges conform to BS 10 Table F with flat faces and are normally supplied drilled.

D162
PN25

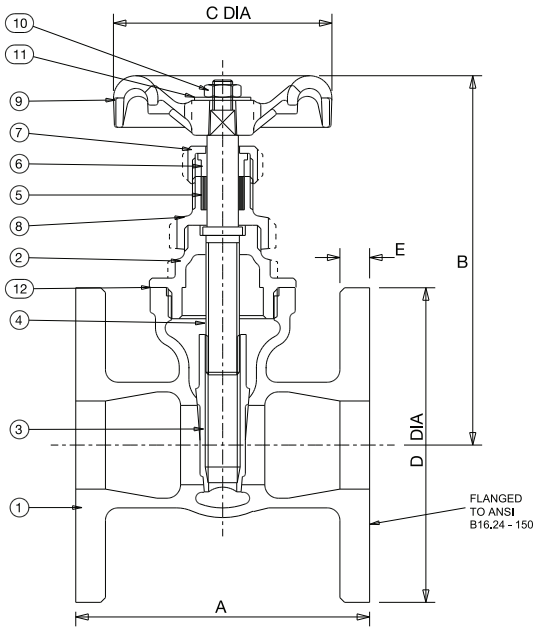
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Bronze BS EN 1982 CC491K	-
3	Disc	Bronze BS EN 1982 CC491K	-
4	Stem	Bronze BS EN 1982 CC491K	2 1/2 & 3
4	Stem	DZR Brass BS EN 12164 CW602N	3/4 - 2
5	Packing	Asbestos Free	-
6	Gland	Brass BS EN 12164 CW614N	-
7	Packing Nut	Brass BS EN 12164 CW614N	-
8	Stuffing Box	DZR Brass BS EN 12164 CW602N	1 1/4 & 1 1/2
8	Stuffing Box	Brass BS EN 12164 CW614N	2" only
8	Stuffing Box	Bronze BS EN 1982 CC491K	2 1/2 & 3
8	Stem Bush	Al Bronze BS EN 12163 CW301G	3/4 & 1
9	Handwheel	MI BS EN 1562 GJMB-300-6	3" only
9	Handwheel	Aluminium	3/4 - 2 1/2
10	Handwheel Nut	Brass BS EN 12164 CW614N	-
11	Identity Plate	Aluminium	-
12	Gasket*	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
3/4	2.27	89	107	52	98.4	8.7
1	2.59	99	124	65	108	9.5
1 1/4	2.86	110	145	70	117.5	10.3
1 1/2	4.10	120	165	78	127	11.1
2	5.54	135	189	92	152.4	12.7
2 1/2	8.39	165	232	103	177.8	14.3
3	11.6	185	269	121	190.5	15.9

PRESSURE RATING: PN25
TEMPERATURE OPERATING RANGE: -10 to 100°C
END CONNECTION: Flanged to BS 10 Table F

SPECIFICATION: End flanges conform to BS 10 Table F with flat faces and are normally supplied drilled.

D166
PN32

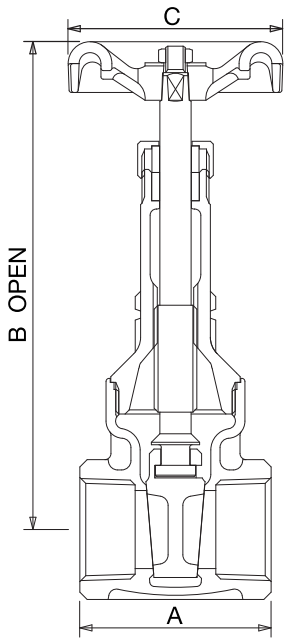
Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	1/4 - 2
Stem	Bronze BS EN 1982 CC491K	All
Disc	Bronze BS EN 1982 CC491K	All
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Handwheel	Aluminium	All
ID Plate	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.32	46	126	45
3/8	0.31	46	126	45
1/2	0.46	51	129	52
3/4	0.72	55	159	65
1	1.1	63	189	70
1 1/4	1.5	71	219	78
1 1/2	2.25	73	246	92
2	3.2	84	301	92
2 1/2	5.8	105	369	134
3	8.52	111	416	134

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32

TEMPERATURE OPERATING RANGE: -10 to 198°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 PN32 for Series B ratings. Rising Stem.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D180
PN32

Bronze Gate Valve

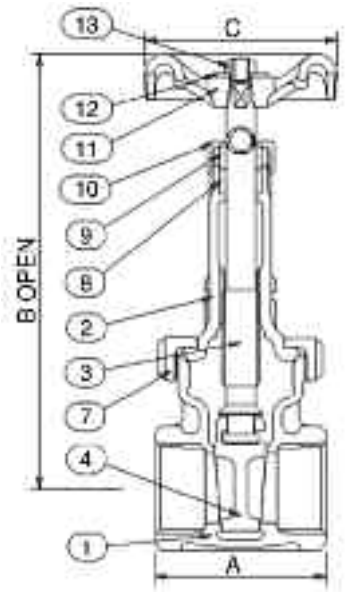
Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.


D180

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	1/4 - 2
Stem	Bronze BS EN 12164 CW602N	2 1/2 & 3
Disc	Bronze BS EN 1982 CC491K	All
Union Ring	Bronze BS EN 1982 CC491K	1/4 - 2 only
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Handwheel	Aluminium	1/4 - 2
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	2 1/2 & 3
ID Plate	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All
Stud	Steel BS 970 070M20	2 1/2 & 3" only
Stud Nut	Steel BS 4190 Gr.4	2 1/2 & 3" only
Gasket	Asbestos Free	2 1/2 & 3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.32	46	126	45
3/8	0.31	46	126	45
1/2	0.46	51	129	52
3/4	0.72	55	159	65
1	1.1	63	189	70
1 1/4	1.5	71	219	78
1 1/2	2.3	73	246	92
2	3.2	83	301	92
2 1/2	5.8	120	369	134
3	8.5	134	416	134

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32

TEMPERATURE OPERATING RANGE: -10 to 260°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288:2010 PN32 for Series A ratings. Rising Stem.

Sizes 1/4" to 2" have a union bonnet; sizes 2 1/2" and 3" have a bolted bonnet. This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D185AT
PN64

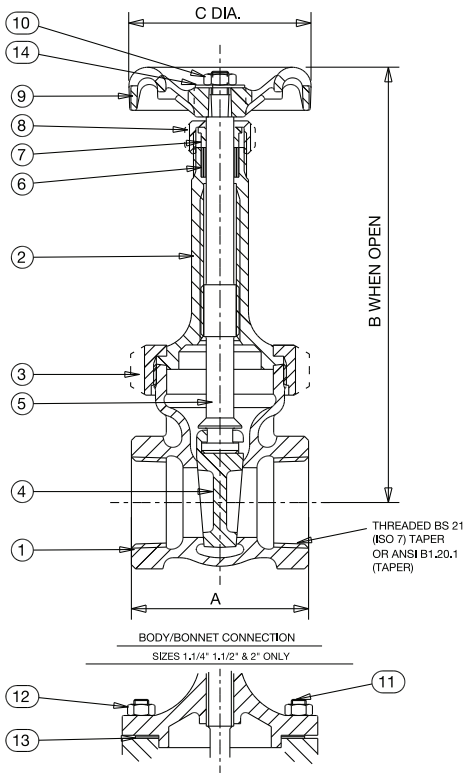
Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Bronze BS EN 1982 CC491K	-
3	Union Ring	Bronze BS EN 1982 CC491K	-
4	Disc	Nickel Alloy	-
5	Stem	Aluminium Bronze BS EN 12163 CW301G	-
6	Packing	Asbestos Free	-
7	Gland	Brass BS EN 12164 CW614N	-
8	Packing Nut	Brass BS EN 12164 CW614N	1/4 - 1 1/2
8	Packing Nut	Bronze BS EN 1982 CC491K	2
9	Handwheel	Aluminium	1/4 - 1 1/2
9	Handwheel	Malleable Iron BS EN 1562 MB-300-6	2
10	Handwheel Nut	Brass BS EN 12164 CW614N	-
11	Bonnet Stud	Steel BS 970 - 605M32'T'	-
12	Bonnet Stud Nut	Steel BS 1490 GRADE 8	-
13	Gasket	Asbestos Free	-
14	Identity Plate	Aluminium	-

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.38	54	133	65
3/8	0.56	54	133	65
1/2	0.81	61	152	70
3/4	1.20	70	180	78
1	1.96	81	212	92
1 1/4	3.24	88	243	103
1 1/2	4.64	96	276	121
2	7.37	109	336	152

Dimensional Drawing



D235
PN32

Materials

1/4 - 2 1/2"

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Bronze BS EN 1982 CC491K	-
3	Stem	Brass BS EN 12164 CW602N	1/4 - 2
4	Disc	Bronze BS EN 1982 CC491K	-
6	Stuffing Box	Brass BS EN 12164 CW602N	-
8	Packing Ring	Asbestos Free WRAS Listed & Approved	-
9	Gland	Brass BS EN 12164 CW614N	-
4	Lockshield	Brass BS EN 12164 CW614N	-
15	Box Spanner	Mild Steel	-
16	Tommy Bar	Mild Steel	-

Dimensions & Weights

SIZE (inch)	METRIC WEIGHT (kg)	B	C	E	F	L/SHIELD KEY No.	IMPERIAL WEIGHT (lbs)	B	C	E	F
1/4	0.36	46	87	90	100	1	0.8	1.81	3.43	3.54	3.93
3/8	0.35	46	87	90	100	1	0.8	1.81	3.43	3.54	3.93
1/2	0.47	51	86	90	100	1	1.0	1.98	3.40	3.54	3.93
3/4	0.60	55	112	90	100	1	1.3	2.14	4.41	3.54	3.93
1	0.92	63	124	125	100	2	2.0	2.46	4.88	4.92	3.93
1 1/4	1.41	71	149	125	100	2	3.1	2.77	5.87	4.92	3.93
1 1/2	1.92	73	175	125	100	2	4.2	2.85	6.89	4.92	3.93
2	2.72	83	196	125	100	2	6.0	3.25	7.71	4.92	3.93

Materials

2 1/2 - 3"

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Bronze BS EN 1982 CC491K	-
3	Stem	Brass BS EN 12164 CW602N	-
4	Disc	Bronze BS EN 1982 CC491K	-
5	Stuffing Box	Brass BS EN 1982 CC491K	-
6	Gland	Brass BS EN 12164 CW614N	-
7	Packing*	Asbestos Free	-
8	Lockshield	Brass BS EN 12164 CW614N	-
9	Gasket*	Asbestos Free	3" only

*Recommended spares

Dimensions & Weights

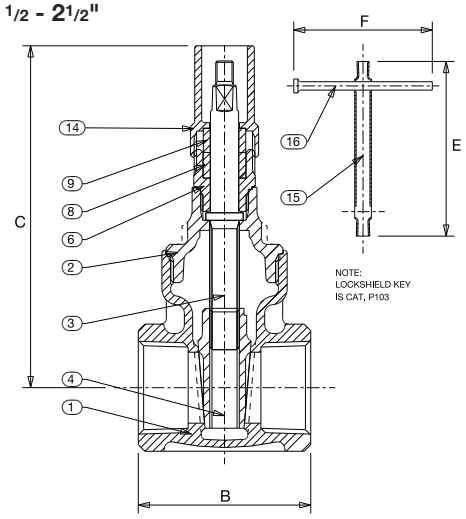
SIZE (inch)	WEIGHT (kg)	A (mm)	E (mm)
2 1/2	4.15	105	218
3	6.24	111	253

Pressure/Temperature Ratings

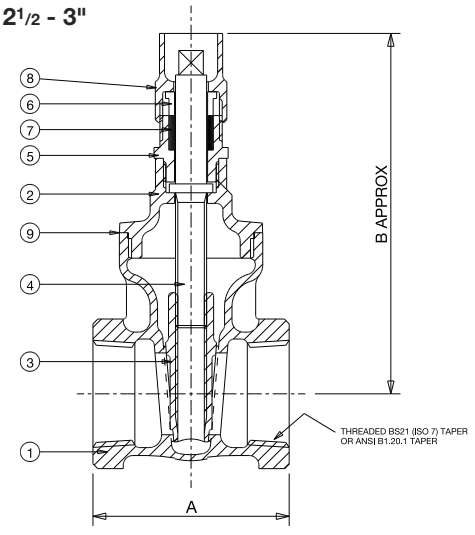
TEMPERATURE (°C)	-10 to 66	100	120	150	170	180	186	198
PRESSURE (BAR)	32	32	28.3	22.8	19.2	17.4	16.2	14.0

Dimensional Drawings

1/2 - 2 1/2"



2 1/2 - 3"



TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D237
PN20

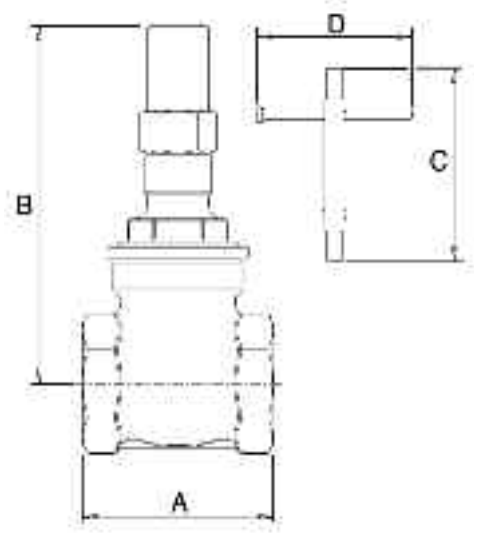
Bronze Gate Valve with Lockshield

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. The D237 carries the British Standards Institution Kitemark - your assurance of exacting quality standards. In addition the D237 is WRAS approved.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	1/2 - 3
Bonnet	Bronze BS EN 1982 CC491K	1/2 - 3
Disc	Bronze BS EN 1982 CC491K	1/2 - 3
Stem	DZR Brass BS EN 12164 CW602N	1/2 - 3
Stuffing Box	DZR Brass BS EN 12164 CW602N	2 1/2 & 3
Stem Retainer	DZR Brass BS EN 12164 CW602N	1/2 - 2
Gland	Brass BS EN 12164 CW614N	1 - 3
Packing	Asbestos Free	1/2 - 3
Lockshield	Brass BS EN 12164 CW614N	1/2 - 3
Box Spanner	Mild Steel	1/2 - 3

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
1/2	0.276	50	78	90	100
3/4	0.389	54	87	90	100
1	0.593	62	106	125	100
1 1/4	0.831	71	116	125	100
1 1/2	1.248	77.5	132	125	100
2	1.882	87.5	156	125	100
2 1/2	4.15	96	218	-	-
3	6.24	105	253	-	-

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN20

TEMPERATURE OPERATING RANGE: -10 to 180°C

END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

OPERATOR: Lockshield.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Solid wedge disc, non-rising stem, screwed in bonnet.

Valves are manufactured in accordance with BS EN 12288: 2010 PN20 Series B and are BSI Kitemark approved.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS:

P103 lockshield key 1/2" - 2"
P100 lockshield key 2 1/2" - 3"

D237A
PN20

Lockshield Operated DZR Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.


D237A

Materials

PART	MATERIAL	SIZES
Body	DZR Brass BS EN 12165 CW602N	All
Bonnet	DZR Brass BS EN 12165 CW602N	All
Stem	DZR Brass BS EN 12164 CW602N	All
Lockshield	Brass BS EN 12165 CW614N	All
Packing	Asbestos Free	All
Stem Bush	DZR Brass BS EN 12164 CW602N	All
Disc	DZR Brass BS EN 12165 CW602N	All

Dimensions & Weights

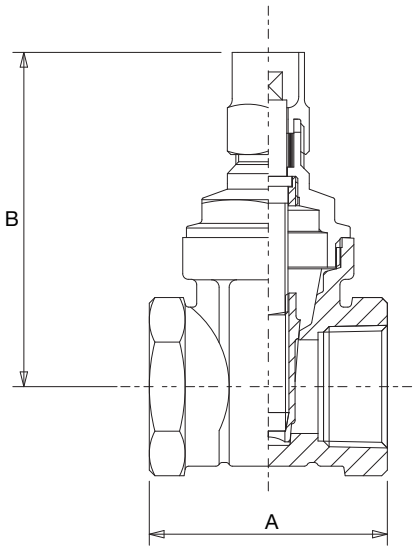
SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)
1/2	0.23	50	65
3/4	0.36	54	75
1	0.5	62	81
1 1/4	0.82	70	105
1 1/2	1.08	72	122
2	1.83	88	149

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

Dimensional Drawing



PRESSURE RATING: PN20

TEMPERATURE OPERATING RANGE: -10 to 180°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

OPERATOR: Lockshield.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed.
They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 for Series B ratings. Non-Rising Stem.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: P103 Lockshield Key

D255C
PN16

WRAS APPROVED PRODUCT

Features & Benefits

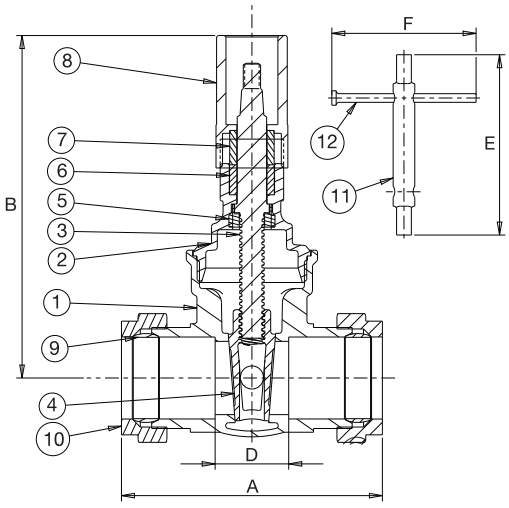
- Robust and high quality bronze body with integral seating surfaces
- Offers the ultimate in dependable service wherever minimum pressure drop is important
- WRAS approved for use with wholesome (potable) water
- Inside screw pattern with non-rising stem


D255C

Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Bonnet	Bronze BS EN 1982 CC491K
Stem	DZR Brass BS EN 12164 CW602N
Disc	Bronze BS EN 1982 CC491K
Stem Retainer	DZR Brass BS EN 12164 CW602N
Packing Ring	Asbestos Free
Gland (28-54 only)	Brass BS EN 12164 CW614N
Lockshield	Brass BS EN 12164 CW614N
Compression Olive	Brass BS EN 12449:1999 CW505L OR CW507L
Compression Nut	Brass BS EN 12165 CW617N

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	D (mm)
15	0.34	69	78	26.5
22	0.50	75	90	23.5
28	0.70	86	110	25.5
35	0.95	100	115	30.5
42	1.45	111	136	34.5
54	2.50	133	160	37

Pressure/Temperature Ratings

TEMPERATURE (°C)	16.0	14.3	12.6	10.0	8.7	7.8	6.9	6.0	5.0
PRESSURE (BAR)	-10 to 30	40	50	65	80	90	100	110	120

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

UK END CONNECTION: Compression ends to BS EN 1057:2006: Half hard R250

OPERATING INSTRUCTIONS: Lockshield.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 12288: 2010 (formerly BS 5154) PN16 for Series B ratings, but are limited to the pressure/ temperature ratings detailed in BS EN 1057: 2006 for compression end fittings.

This valve is to be used on Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: P100 and P102 Lockshield Keys

DM160
PN16 - Series B

Bronze Gate Valve

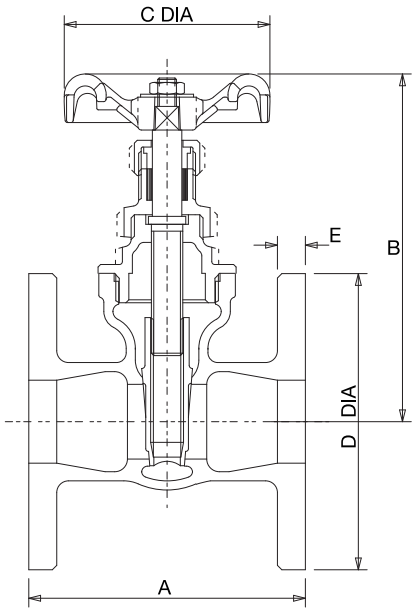
Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.


DM160

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	$2^1/_2$ & 3
Stem	DZR Brass BS EN 12164 CW602N	$^3/_4$ - 2
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	$1^1/_4$ & $1^1/_2$
Stuffing Box	Brass BS EN 12164 CW614N	2" only
Stuffing Box	Bronze BS EN 1982 CC491K	$2^1/_2$ & 3
Stem Bush	Aluminium Bronze BS EN 12163 CW301G	$^3/_4$ & 1
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	3" only
Handwheel	Aluminium	$^3/_4$ - $2^1/_2$
Handwheel Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Gasket	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
20	1.57	89	105	65	105	6
25	2.5	99	116	70	115	8
32	3.38	110	141	92	140	8
40	4.93	120	168	92	150	9
50	5.54	135	189	103	165	11
65	8.39	165	232	103	185	13
80	12.25	185	264	121	200	13

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 170°C

END CONNECTION: Flanged BS EN 1092-3 (formerly BS 4504)

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS 5154: 1991 PN16 for Series B ratings, having 'short' face-to-face dimensions.

Non-Rising Stem. End flanges conform to BS EN 1092-3 with flat face and are normally supplied drilled.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled, P150 Locking Device

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

DM161
PN25

Bronze Gate Valve

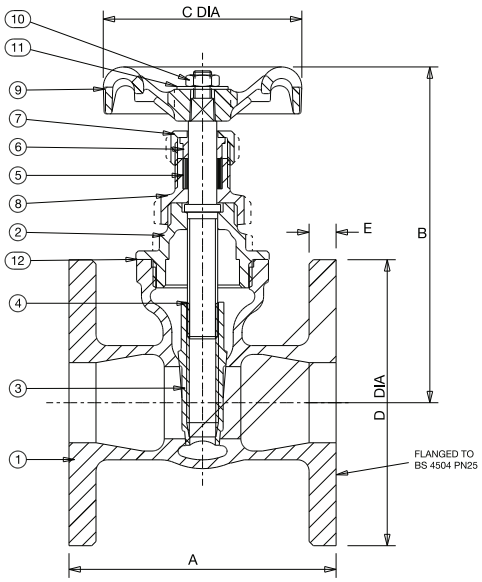
Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.


DM161

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Disc	Bronze BS EN 1982 CC491K	All
4	Stem	Bronze BS EN 1982 CC491K	2 1/2 & 3
4	Stem	DZR Brass BS EN 12164 CW602N	3/4 - 2
5	Packing	Asbestos Free	All
6	Gland	Brass BS EN 12164 CW614N	All
7	Packing Nut	Brass BS EN 12164 CW614N	All
8	Stuffing Box	DZR Brass BS EN 12164 CW602N	1 1/4 & 1 1/2
8	Stuffing Box	Brass BS EN 12164 CW614N	2" only
8	Stuffing Box	Bronze BS EN 1982 CC491K	2 1/2 & 3
8	Stem Bush	Al. Bronze NES 834 Pt.2	3/4 & 1
9	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	3" only
9	Handwheel	Aluminium	3/4 - 2 1/2
10	Handwheel Nut	Brass BS EN 12164 CW614N	All
11	ID Plate	Aluminium	All
12	Gasket	Asbestos Free	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
50	7.5	135	189	92	165	11
65	10.8	165	232	103	185	13
80	14.4	185	264	121	200	14
20	1.73	90	105	52	105	8
25	2.5	100	116	65	115	9
32	4.33	110	145	70	140	9
40	5.75	120	165	78	150	11

PRESSURE RATING: PN25

TEMPERATURE OPERATING RANGE: -10 to 186°C

UK END CONNECTION: Flanged BS 4504

US END CONNECTION: Not Specified

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN25 for Series B ratings, having 'short' face-to-face dimensions. Non-Rising Stem. End flanges conform to BS 4504 Section 3.3 with flat face and are normally supplied drilled. Note: Users' attention is drawn to BS 4504 Section 3.3, Clause 8 regarding types of gaskets and mating flanges to be used with metric flanged valves.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled

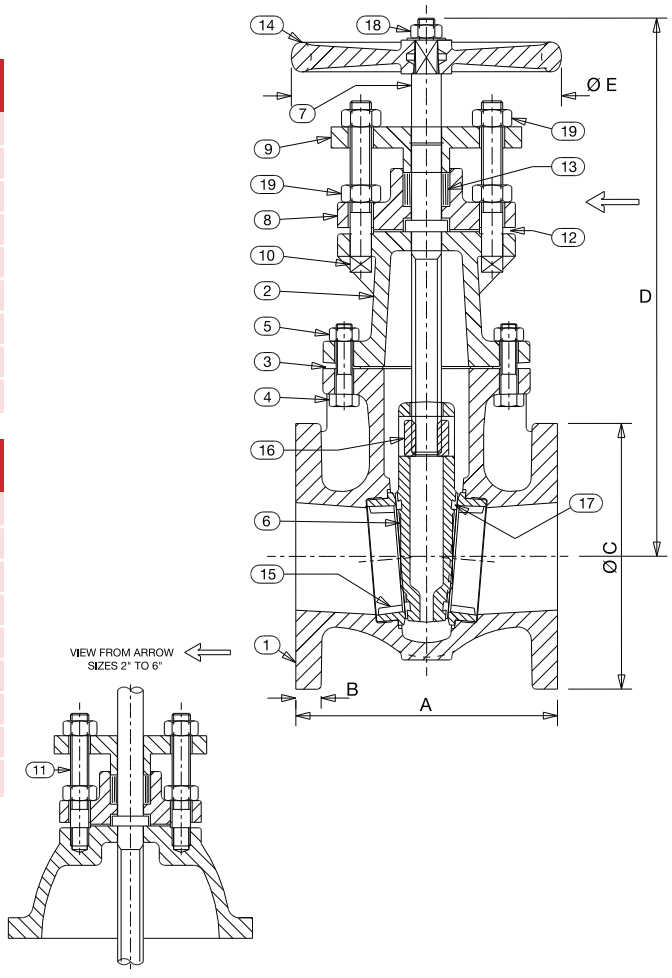
F52
Class 100

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Cast Iron BS EN 1561 GJL-250	All
2	Bonnet	Cast Iron BS EN 1561 GJL-250	All
3	Bonnet Gasket	Asbestos Free	All
4	Bonnet Bolts	Steel BS 4190 Gr. 8.8	All
5	Bonnet Nuts	Steel BS 4190 Gr. 8.0	All
6	Disc	Cast Iron BS EN 1561 GJL-250	All
7	Stem	Brass BS EN 12164 CW721R	All
8	Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
9	Gland	Cast Iron BS EN 1561 GJL-250	All
10	Gland Bolts	Steel BS 4190 Gr. 8.8	8 - 12
11	Gland Studs	Steel BS 4439 Gr. 8.8	2 - 6
12	Stuffing Box Gasket	Asbestos Free	All
13	Packing	Asbestos Free	All
14	Handwheel	Duct Iron BS EN 1563 GJS-450-10	All
15	Body Seat Ring	Bronze BS EN 1982 CC491K	All
16	Disc Stem Nut	Bronze BS EN 1982 CC491K	All
17	Disc Ring	Bronze BS EN 1982 CC491K	All
18	Handwheel Nut	Steel BS 4190 Gr. 8.0	All
19	Gland Stud/Bolt Nuts	Steel BS 4190 Gr. 8.0	All


F52

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (mm)	B (mm)	ØC (mm)	D (mm)	ØE (mm)
2	30.0	5.75	0.75	6.0	11.1	5.5
2 1/2	35.1	6.25	0.75	6.5	11.9	5.5
3	44.1	6.5	0.75	7.25	13.5	6.0
4	60.0	6.75	0.88	8.5	14.8	8.0
5	86.0	7.5	0.88	10.0	17.2	9.0
6	98.1	8.25	0.88	11.0	18.8	9.0
8	178.0	9.5	1.0	13.25	24.0	12.0
10	271.0	10.75	1.0	16.0	28.9	14.0
12	384.0	12.0	1.0	18.0	33.3	16.0

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	ØC (mm)	D (mm)	ØE (mm)
50	13.6	146.1	19.1	152.0	281.6	139.7
65	15.9	158.8	19.1	165.1	301.7	139.7
80	20.0	165.1	19.1	184.0	343.0	152.4
100	27.2	171.5	22.2	215.9	374.7	203.2
125	39.0	190.5	22.2	254.0	436.8	228.6
150	44.5	209.6	22.2	279.4	478.2	228.6
200	81.6	241.3	25.4	337.0	609.1	304.8
250	122.9	273.1	25.4	406.0	732.9	355.6
300	174.2	304.8	28.6	457.2	844.6	406.4

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

F53
Class 125

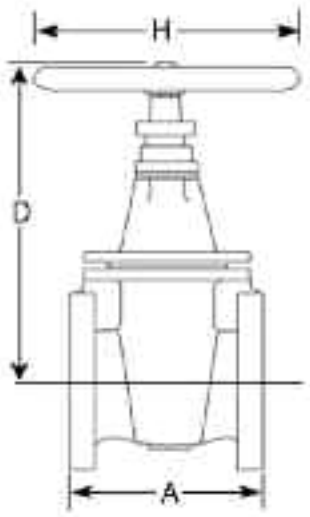
Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS EN 12164 CW721R	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Handwheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	D (mm)	H (mm)
2	12.7	178	277	140
2 1/2	15.8	190	296	140
3	19.5	203	337	152
4	29.3	229	369	203
5	39.5	254	429	229
6	45.8	267	470	229
8	84	292	600	305
10	148	330	722	356
12	198	356	818	406

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230
PRESSURE (BAR)	13.8	8.6

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: Class 125

TEMPERATURE OPERATING RANGE: -10 to 230°C

US END CONNECTION: ANSI Class 125

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS 5150:1990. End flanges conform to BS 1560 Section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled.

Wedge Disc, Non-Rising Stem, Inside Screw, Bronze Trim.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

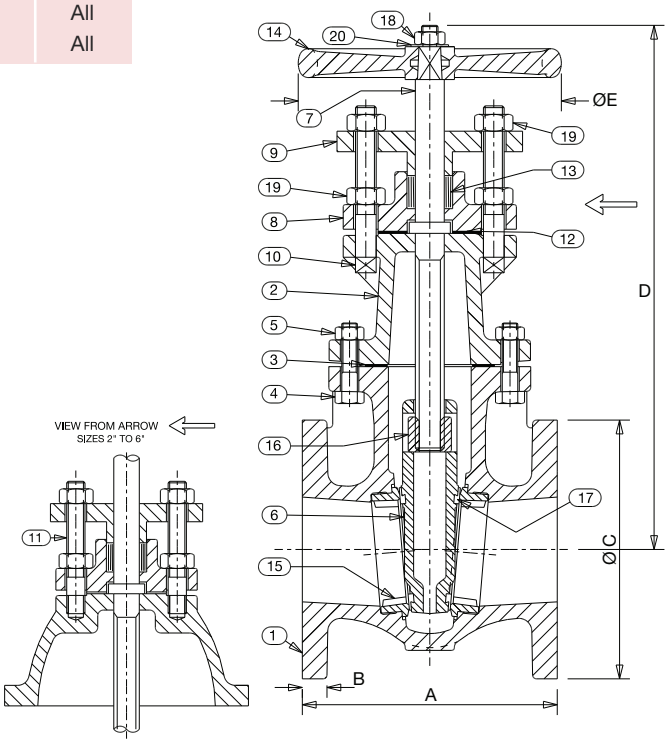
AVAILABLE OPTIONS: Flanges Undrilled

F54
Class 100

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Cast Iron BS EN 1561 GJL-250	All
2	Bonnet	Cast Iron BS EN 1561 GJL-250	All
3	Bonnet Gasket	Asbestos Free	All
4	Bonnet Bolts	Steel BS4190 Gr.8.8	All
5	Bonnet Nuts	Steel BS4190 Gr.8.0	All
6	Disc	Cast Iron BS EN 1561 GJL-250	All
7	Stem	Steel SUS410	All
8	Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
9	Gland	Cast Iron BS EN 1561 GJL-250	All
10	Gland Bolts	Steel BS 4190 Gr.8.8	8 - 12
11	Gland Studs	Steel BS 4439 Gr.8.8	2 - 6
12	Stuffing Box Gasket	Asbestos Free	All
13	Packing	Asbestos Free	All
14	Handwheel	Ductile Iron BS EN 1563 GJS-450-10	All
15	Body Seat Ring	Cast Iron BS EN 1561 GJL-250	All
16	Disc Stem Nut	Ductile Iron BS EN 1563 GJS-450-10	All
17	Disc Ring	Cast Iron BS EN 1561 GJL-250	All
18	Handwheel Nut	Steel BS4190 Gr.8.0	All
19	Gland Stud/Bolt Nuts	Steel BS4190 Gr.8.0	All
20	Handwheel Washer	Steel BS 4320	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (mm)	B (mm)	ØC (mm)	D (mm)	ØE (mm)
2	30.0	5.75	0.75	6.0	11.1	5.5
2 1/2	35.1	6.25	0.75	6.5	11.9	5.5
3	44.1	6.5	0.75	7.25	13.5	6.0
4	60.0	6.75	0.88	8.5	14.8	8.0
5	86.0	7.5	0.88	10.0	17.2	9.0
6	98.1	8.25	0.88	11.0	18.8	9.0
8	178.0	9.5	1.0	13.25	24.0	12.0
10	271.0	10.75	1.0	16.0	28.9	14.0
12	384.0	12.0	1.0	18.0	33.3	16.0

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	ØC (mm)	D (mm)	ØE (mm)
50	13.6	146.1	19.1	152.0	281.6	139.7
65	15.9	158.8	19.1	165.1	301.7	139.7
80	20.0	165.1	19.1	184.0	343.0	152.4
100	27.2	171.5	22.2	215.9	374.7	203.2
125	39.0	190.5	22.2	254.0	436.8	228.6
150	44.5	209.6	22.2	279.4	478.2	228.6
200	81.6	241.3	25.4	337.0	609.1	304.8
250	122.9	273.1	25.4	406.0	732.9	355.6
300	174.2	304.8	28.6	457.2	844.6	406.4

PRESSURE RATING: Class 100

TEMPERATURE OPERATING RANGE: -10 to 170°C

UK END CONNECTION: BS10 Table D or E

OPERATING INSTRUCTIONS: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: End flanges conform to BS 10 Table D or E with flat face and are normally supplied drilled. Orders must specify whether Table D or Table E flanges are required. Wedge disc, non-rising stem, inside screw, all iron. Each valve is hydrostatically tested to BS 6755 Pt 1.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: P150 Locking Device

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

F58
Class 125

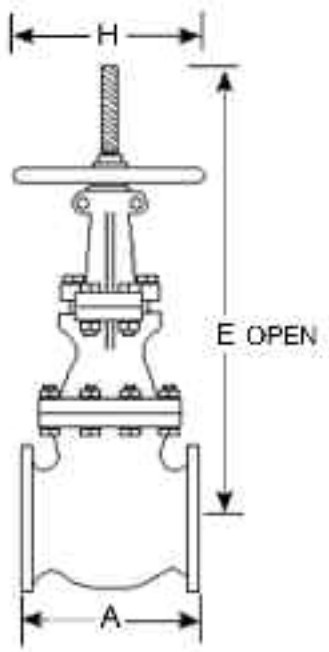
Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	13% Cr.Steel BS 970 Pt.1 410S21 or 431S29	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Yokesleeve	Bronze BS EN 1982 CC491K	All
Yokesleeve Nut	Ductile Iron ASTM A536 65-45-12	2, 3, 5, 8 & 10
Yokesleeve Nut	Cast Iron BS EN 1561 GJL-250	2 1/2, 4, 6 & 12
Yokesleeve Ret'g Nut	Ductile Iron ASTM A536 65-45-12	2, 3, & 5
Yokesleeve Ret'g Nut	Cast Iron BS EN 1561 GJL-250	2 1/2, 4, 6 & 12
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Packing	Asbestos Free	All
Gasket	Asbestos Free	All
Yoke	Cast Iron BS EN 1561 GJL-250	8, 10 & 12
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	E (mm)	H (mm)
2	17	178	365	152
2 1/2	20	190	448	152
3	28	203	481	203
4	38	229	622	229
5	56	254	672	254
6	60	267	835	254
8	112	292	989	305
10	185	330	1208	356
12	242	356	1469	406

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230
PRESSURE (BAR)	13.8	8.6

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: Class 125
TEMPERATURE OPERATING RANGE: -10 to 230°C
US END CONNECTION: ANSI Class 125
OPERATOR: Handwheel.
Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS 5150: 1990. End flanges conform to BS 1560 section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled. Wedge Disc, Rising Stem, Outside Screw and Yoke.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.
AVAILABLE OPTIONS: Flanges Undrilled. P50 Locking Device

F59
Class 125

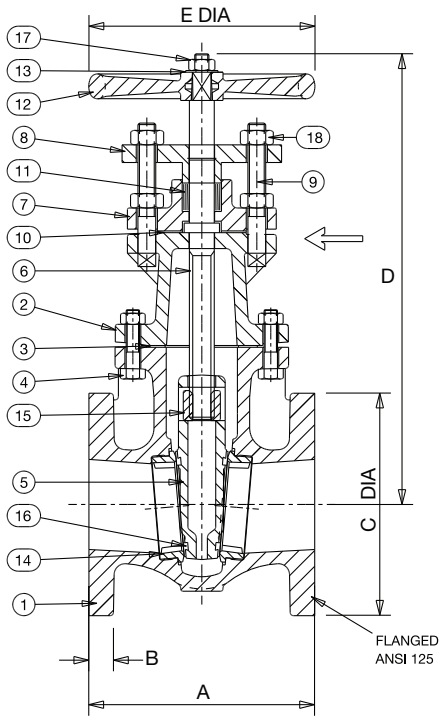
Cast Iron Gate Valve - Iron Trim

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Cast Iron BS EN 1561 GJL-250	All
2	Bonnet	Cast Iron BS EN 1561 GJL-250	All
3	Bonnet Gasket	Asbestos Free	All
4	Bonnet Bolts/ Nuts Bronze	Steel BS4190 Gr.4.6/4.0	All
5	Disc	Cast Iron BS EN 1561 GJL-250	All
6	Stem	13% Cr.Steel	All
7	Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
8	Gland	Cast Iron BS EN 1561 GJL-250	All
9	Gland Bolts	Steel BS 4190 Gr.4.6	200 & 250
9	Gland Studs	Steel BS 4439 Gr.4.8	50 - 150
10	Stuffing Box Gasket	Asbestos Free	All
11	Packing	Asbestos Free	All
12	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	All
13	Washer	Steel	All
14	Body Seat Ring	Integral	All
15	Disc Stem Nut	Ductile Iron ASTM A536 65-45-12	All
16	Handwheel Nut	Steel BS 4190 Gr.4	All
17	Stud/Bolt Nuts	Steel BS 4190 Gr.4	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
50	12.7	178	277	140
65	15.8	190	296	140
80	19.5	203	337	152
100	29.3	229	369	203
125	39.5	254	429	229
150	45.8	267	470	229
200	84	292	600	305
250	148	330	722	356

PRESSURE RATING: Class 125

TEMPERATURE OPERATING RANGE: -10 to 230°C

UK END CONNECTION: Not Specified

US END CONNECTION: ANSI Class 125

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS 5150. End flanges conform to BS 1560 Section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled. Wedge Disc, Non-Rising Stem, Inside Screw, all Iron.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled, P50 Locking Device

F84
Class 125

Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Each valve is manufactured in accordance with BS 5150: 1990.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc	Bronze BS EN 1982 CC491K	2 - 4
Disc	Cast Iron BS EN 1561 GJL-250	5 - 12
Stem	Brass BS EN 12163 CW721R	2 - 4
Stem	Brass JIS - H3250 Gr.6872	5 - 12
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC481K	5 - 12
Yoke	Cast Iron BS EN 1561 GJL-250	5 - 12
Yoke Hub Bolts/Nuts	Steel BS 4190 Gr.4.6/4	5 - 12
Yoke Pad Bolts/Nuts	Steel BS 4190 Gr.4.6/4	5 - 12
Yokesleeve	Manganese Bronze ASTM B584-C86400	2 - 4
Yokesleeve	Bronze BS EN 1982 CC491K	5 - 12
Yokesleeve Ret'g Nut	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Yokesleeve Nut	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Yokesleeve Nut	Ductile Iron ASTM A536 65-45-12	5 - 12
Gland	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Gland	Cast Iron BS EN 1561 GJL-250	5 - 12
Gland Flange	Ductile Iron ASTM A536 65-45-12	5 - 12
Packing	Asbestos Free	All
Gasket	Asbestos Free	All
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	All
Body Plate	Aluminium	All

Dimensions & Weights

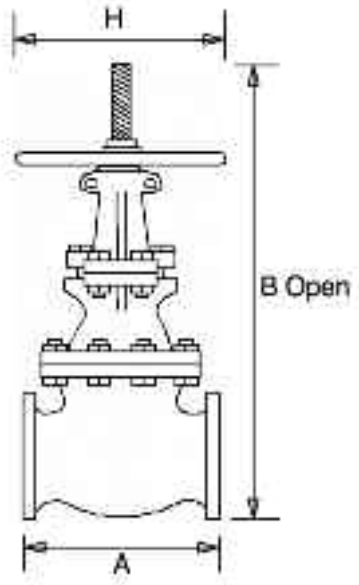
SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	H (mm)
2	21.5	178	399	203
2 1/2	24.8	190	432	203
3	29.5	203	469	203
4	42.7	229	566	229
5	72.3	254	714	305
6	88.1	267	813	305
8	140	292	1013	356
10	225	330	1257	406
12	314	356	1454	457

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230
PRESSURE (BAR)	13.8	8.6

Intermediate pressure ratings shall be determined by interpolation.

Dimensional Drawing



PRESSURE RATING: Class 125

TEMPERATURE OPERATING RANGE: -10 to 230°C

US END CONNECTION: ANSI Flanged

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves meet the requirements of MSS.SP-70: 1998. End flanges conform to BS 1560 Section 3.2/ANSI B16.1. Class 125 with flat face and are normally supplied drilled. Wedge Disc, Rising Stem, Outside Screw and Yoke.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Valves tested in accordance with BS EN 12266-1: 2003.

AVAILABLE OPTIONS: Flanges Undrilled

FM52
PN6

Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Complete with Bronze trim.

Each valve is hydrostatically tested to BS EN 12266-1: 2003

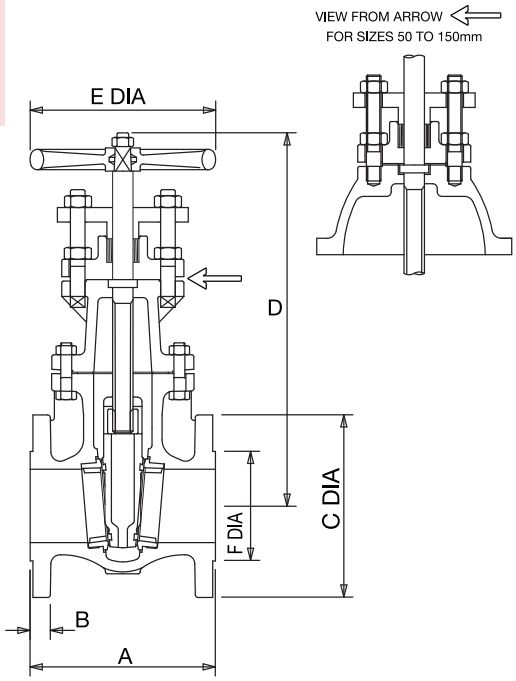
Manufactured in accordance with BS EN 1171: 2002


FM52

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS EN 12163 CW721R	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Handwheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
50	14	150	16	140	277	140	90
65	16	170	16	160	296	140	110
80	20	180	18	190	337	152	128
100	27	190	18	210	369	203	148
125	39	200	20	240	429	229	178
150	44	210	20	265	470	229	202
200	82	292	22	320	600	305	258
250	123	330	24	375	722	356	312
300	174	356	24	440	818	406	365

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	150
PRESSURE (BAR)	6	5.4

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN6

TEMPERATURE OPERATING RANGE: -10 to 150°C

UK END CONNECTION: Flanged BS EN 1092-2 PN6

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Wedge Disc, Non-Rising Stem, Inside Screw and Yoke.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

FM57
PN10

Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

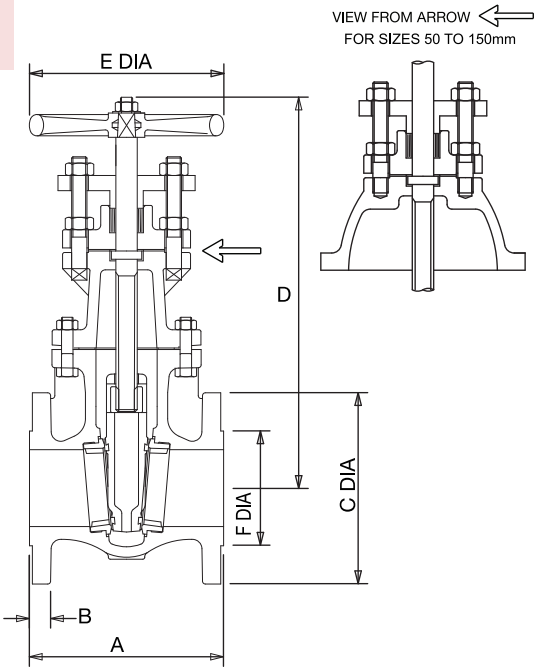
Complete with Bronze trim.

Each valve is hydrostatically tested to BS EN 12266-1: 2003. Manufactured in accordance with BS EN 1171: 2002.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS 2874 CZ114	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Handwheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
50	14	178	20	165	277	140	102
65	17	190	20	185	296	140	122
80	22	203	22	200	337	152	138
100	30	229	24	220	369	203	158
125	41	254	26	250	429	229	188
150	47	267	26	285	470	229	212
200	85	292	26	340	600	305	268
250	146	330	28	395	722	356	320
300	188	356	28	445	818	406	370

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	10	8.4

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN10

TEMPERATURE OPERATING RANGE: -10 to 180°C

UK END CONNECTION: Flanged BS EN 1092-2: PN10

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Long Face-to-face, Wedge Disc, Non-Rising Stem. Valves are manufactured in accordance with BS EN 1171: 2002. End flanges conform to BS EN 1092-2 PN10 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled, P50 Locking Device

FM63
PN16

Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

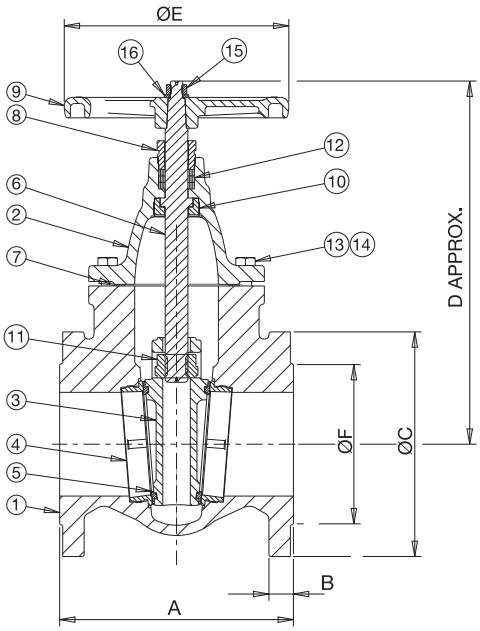
Each valve is manufactured in accordance with BS EN 1171: 2002 and hydrostatically tested to BS EN 12266-1: 2003.


FM63

Materials

NO.	PART	MATERIAL
1	Body	Grey Iron BS EN 1561 GJL-250
2	Bonnet	Grey Iron BS EN 1561 GJL-250
3	Disc	Grey Iron BS EN 1561 GJL-250
4	Body Seat Ring	Bronze BS EN 1982 (CC491K)
5	Disc Seat Ring	Bronze BS EN 1982 (CC491K)
6	Stem	Stainless Steel BS 970: 410S21
7	Gasket	Graphite Graphite (Asbestos Free)
8	Gland Packing Nut	Stainless Steel BS 970: 304S31
9	Handwheel	Grey Iron BS EN 1561 EN-GJL-250
10	Stem Retaining Ring	Stainless Steel BS 970: 304S31
11	Disc Stem Nut	Bronze BS EN 1982 (CC491K)
12	Packing Ring	Graphite Graphite (Asbestos Free)
13	Body/Bonnet Bolt	Steel BS 3692 GR 8.8
14	Body/Bonnet Nut	Steel BS 3692 GR 8
15	Handwheel Retaining Nut	Steel BS 4190 GR 4
16	Handwheel Washer	Steel BS 4320
17	Body ID Plate (Not Shown)	Aluminium

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
65	18.7	190	20	185	262	190	118
80	23.9	203	22	200	286	190	132
100	37.6	229	24	220	356	220	156
125	50.7	254	26	250	426	300	184
150	63.8	267	26	285	463	300	211
200	104.3	292	30	340	578	350	266
250	194.5	330	32	405	773	406	319
300	275.5	356	32	460	860	457	370

All dimensions are nominal.
Please note size 50mm is also available, please refer to the website.

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

PRESSURE/TEMPERATURE OPERATING RANGE:
-10 to 120°C at 16 bar, 200°C at 12.8 bar

UK END CONNECTION: Flanged BS EN 1092-2: PN16

SPECIFICATION: Wedge Disc, Non-Rising Stem, Inside Screw, Handwheel operated.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled, P139 Stem Adapter

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

FM82
PN16

Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

Each valve is hydrostatically tested to BS EN 12266-1: 2003.

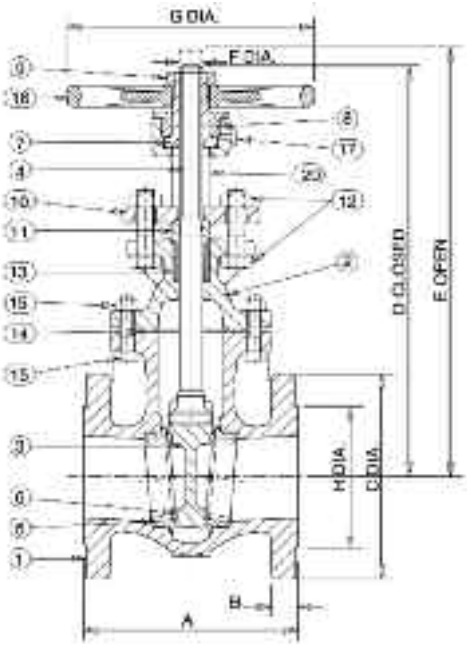
Manufactured in accordance with BS EN 1171: 2002.


FM82

Materials

NO.	PART	MATERIAL
1	Body	Cast Iron BS EN 1561 GJL-250
2	Bonnet/Yoke	Cast Iron BS EN 1561 GJL-250
2	Bonnet	Cast Iron BS EN 1561 GJL-250
3	Disc	Cast Iron BS EN 1561 GJL-250
4	Stem	Stainless Steel 410 S21
5	Body Seat Ring	Bronze BS EN 1982 CC491K
6	Disc Seat Ring	Bronze BS EN 1982 CC491K
7	Yoke Sleeve	Bronze BS EN 1982 CC491K
8	Yoke Sleeve Retg Nut	Ductile Iron ASTM A536 65-45-12
9	Yoke Sleeve Nut	Malleable Iron BS EN 1562 GJMB 300-6
10	Gland Flange	Malleable Iron BS EN 1562 GJMB 300-6
11	Gland (2"-4")	Brass BS EN 12164 CW721R
11	Gland (5"-12")	Malleable Iron BS EN 1562 GJMB-300-6
13	Packing	Graphite
14	Bonnet Gasket	Graphite wrapped with SS304
16	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6
18	Body Plate	Aluminium
20	Yoke	Cast Iron BS EN 1561 GJL-250

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
50	22.5	178	20	165	334	399	19	203	102
65	26.4	190	20	185	354	432	19	203	122
80	31	203	22	200	375	469	19	203	135
100	44.3	229	24	220	449	566	22	229	155
125	72.3	254	26	254	575	714	28.5	305	185
150	88.1	267	26	279	649	813	28.5	305	212
200	140	292	30	340	800	1013	34.9	356	248
250	225	330	32	405	984	1257	39.7	406	320
300	314	356	32	460	1127	1454	39.7	457	378

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 200°C

UK END CONNECTION: Flanged BS EN 1092-2 PN16

OPERATOR: Handwheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

SPECIFICATION: Valves are manufactured in accordance with BS EN 1171: 2002.

End flanges conform to BS EN 1092-2 with raised face and are normally supplied drilled. Bronze Trim, Rising Stem.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

AVAILABLE OPTIONS: Flanges Undrilled

33XU-F
Class 300

Cast Steel • Outside Screw & Yoke • Flexible Wedge Disc • Flanged

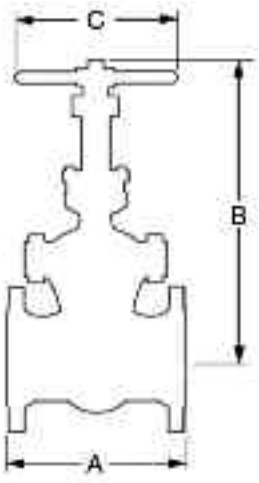
Features & Benefits

- Efficient stop valves with flow in either direction
- Commonly used where a minimum pressure drop is important
- Flexible wedge compensates for deformation of body due to pipe stress
- Seat ring is seal welded to eliminate leak paths

Materials

PART	MATERIAL
Body	A216 WCB
Bonnet	A216 WCB
Seat Rings	Hardfaced
Disc	CA-15 or 13% CR Overlay
Stem	410 SS
Packing	Graphite
Bonnet Gasket	Spiral Wound
Back Seat	410 SS
Yoke Sleeve	D2 Ni-Resist
Retaining Nut	Malleable or Steel
Disc Washer	Carbon Steel
Gland	Steel
Gland Flange	Steel
Eye Bolt	Steel
Eye Bolt Nuts	Steel
Pins	Steel
Bonnet Studs	A193 Gr. B7
Bonnet Nuts	A194 Gr. 2H
Handwheel	Malleable, Ductile or Steel
Handwheel Nut	Ductile or Steel
ID Tags	SS
ID Pins	Steel
Spacer	Steel
Grease Fittings	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)	C (inch)
2	74	8.50	16.00	8.00
2 1/2	80	9.50	19.00	8.00
3	108	11.12	22.00	9.00
4	165	12.00	25.00	10.00
6	320	15.88	32.75	14.00
8	500	16.50	40.00	16.00
10	760	18.00	49.50	18.00
12	1020	19.75	57.50	20.00
14	1380	30.00	64.50	20.00
16	1960	33.00	71.50	24.00
18	2450	36.00	78.50	23.62
20	3890	39.00	86.50	28.35
24	6292	45.00	104.00	35.43

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
BASIC DESIGN	API 600
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 24 inches

PRESSURE TEMPERATURE RATING: Class 300
Carbon Steel
ASTM A216 Grade WCB
285 psi @ -20°F to 100°F

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

47XU-F
Class 150

Cast Steel • Outside Screw & Yoke • Flexible Wedge Disc • Flanged

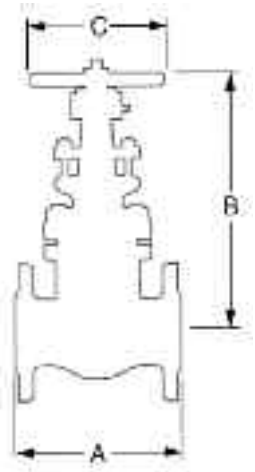
Features & Benefits

- Efficient stop valves with flow in either direction
- Commonly used where a minimum pressure drop is important
- Flexible wedge compensates for deformation of body due to pipe stress
- Seat ring is seal welded to eliminate leak paths

Materials

PART	MATERIAL
Body	A216 WCB
Bonnet	A216 WCB
Seat Rings	Hardfaced
Disc	CA-15 or 13% CR Overlay
Stem	410 SS
Packing	Graphite
Bonnet Gasket	Soft Iron
Back Seat	410 SS
Yoke Sleeve	D2 Ni-Resist
Retaining Nut	Malleable or Steel
Gland	Steel
Gland Flange	Steel
Eye Bolt	Steel
Eye Bolt Nuts	Steel
Pins	Steel
Bonnet Studs	A193 Gr. B7
Bonnet Nuts	A194 Gr. 2H
Handwheel	Malleable, Ductile or Steel
Handwheel Nut	Ductile or Steel
ID Tags	SS
ID Pins	Steel
Spacer	Steel
Grease Fittings	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)	C (inch)
2	46	7.00	16.50	8.00
2 1/2	70	7.50	18.00	8.00
3	76	8.00	21.00	9.00
4	110	9.00	23.00	10.00
6	175	10.50	31.00	12.00
8	310	11.50	39.00	14.00
10	455	13.00	46.75	16.00
12	650	14.00	55.00	18.00
14	860	15.00	60.50	20.00
16	1120	16.00	68.50	20.00
18	1400	17.00	77.50	23.62
20	2125	18.00	84.00	23.62
24	3120	20.00	99.00	28.35

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
BASIC DESIGN	API 600
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 24 inches

PRESSURE TEMPERATURE RATING: Class 150
Carbon Steel
ASTM A216 Grade WCB
285 psi @ -20°F to 100°F

D4
PN20 - Series B

Bronze Globe Valve

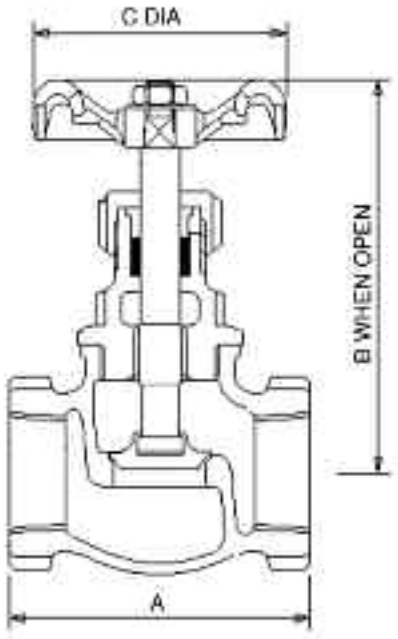
Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc	Brass BS EN 12164 CW614N	1/4 - 1 1/2
Disc	Bronze BS EN 1982 CC491K	2"
Stem	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Disc Stem Ring	Manganese Bronze BS EN 12164 CW721R	2" only
Handwheel	Aluminium	All
Handwheel Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.23	44	75	52
3/8	0.22	44	75	52
1/2	0.31	55	82	52
3/4	0.42	63	89	52
1	0.71	77	102	65
1 1/4	1.12	91	118	70
1 1/2	1.5	98	134	78
2	2.48	118	171	103

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN20

TEMPERATURE OPERATING RANGE: -10 to 180°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel

SPECIFICATION: Valves are manufactured in accordance with BS 5154: 1991 PN20 for Series B ratings. Body seat is integral and is a narrow contact angled type.

Sizes 1/4" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21 versions BSI Kitemarked.

Metal Disc, Screwed Bonnet.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D7
PN32

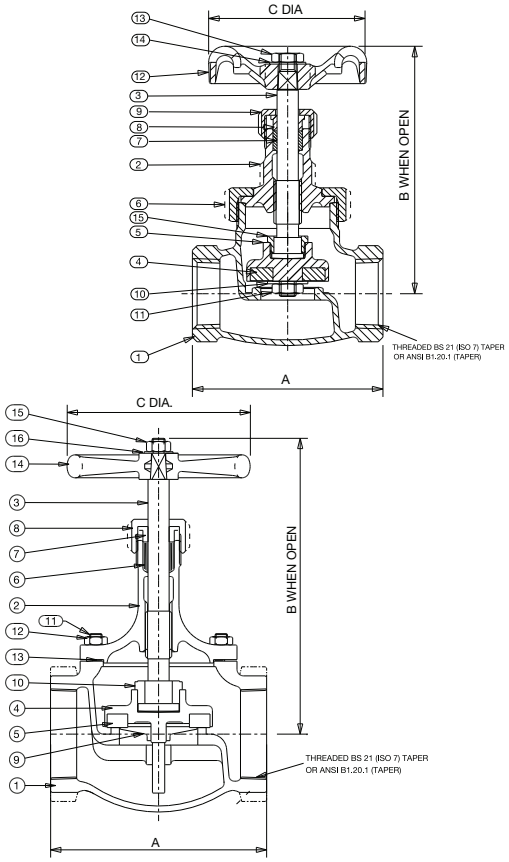
Bronze Globe Valve

Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Brass BS EN 12163 CW721R	1/4 - 2
3	Stem	Bronze BS EN 1982 CC491K	2 1/2 & 3
4	Disc	PTFE - 25% Glass Filled	All
5	Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
5	Disc Holder	Brass BS EN 12164 CW617N	1/4 - 1
6	Union Ring	Bronze BS EN 1982 CC491K	1/4, 3/8, 1/2 & 2
6	Union Ring	Brass BS EN 12164 CW617N	3/4 - 1 1/2
7	Packing	Asbestos Free	All
8	Packing Gland	Brass BS EN 12164 CW614N	All
9	Packing Nut	Brass BS EN 12164 CW614N	1/4 - 1 1/2
9	Packing Nut	Bronze BS EN 1982 CC491K	2 - 3
10	Washer	Brass BS EN 12164 CW614N	1/4 - 2
11	Disc Ret'ng Nut	Brass BS EN 12164 CW614N	1/4 - 2
11	Disc Ret'ng Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
12	Handwheel	Aluminium	1/4 - 2
12	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	2 1/2 & 3
13	Handwheel Nut	Brass BS EN 12164 CW614N	All
14	ID Plate	Aluminium	All
15	Disc Stem Ring	Brass BS EN 12163 CW721R	1/4 - 2
15	Disc Stem Ring	Bronze BS EN 1982 CC491K	2 1/2 & 3
16	Bonnet Stud	Steel BS 970 070M20	2 1/2 & 3
17	Bonnet Stud Nut	Steel BS 4190 Gr.4	2 1/2 & 3
18	Gasket	Asbestos Free	2 1/2 & 3

Dimensional Drawings



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.5	52	100	52
3/8	0.49	52	100	52
1/2	0.73	62	101	52
3/4	1.09	74	115	52
1	1.74	90	125	70
1 1/4	2.44	100	150	70
1 1/2	3.32	115	159	92
2	5.54	136	191	103
2 1/2	10.9	184	278	152
3	16.4	210	308	178

PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 198°C
UK END CONNECTION: BS 21 Taper
US END CONNECTION: ANSI B1.20.1
OPERATOR: Handwheel
AVAILABLE OPTIONS: P150 Locking Device

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN32 for Series B ratings. Design incorporates a disc holder with on sizes 1/4" to 2" slips on to stem, and on sizes 2 1/2" and 3" is retained by a threaded ring. Sizes 1/4" to 3" BS 21 versions BSI Kitemarked.

Body seat is integral of the semi-crown type. Sizes 1/4" to 2" have union bonnet and sizes 2 1/2" and 3" have a bolted bonnet. Valves having ANSI threads also generally conform to MSS SP-80.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D10
Class 150

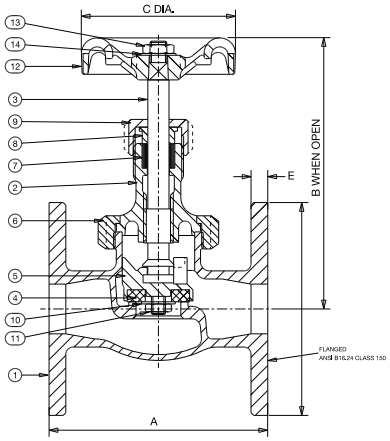
Bronze Globe Valve

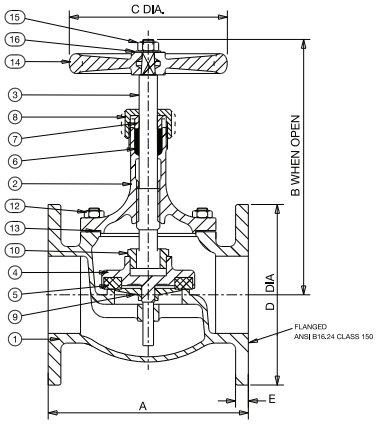
Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Bronze BS EN 1982 CC491K	All
4	Disc	PTFE (25% Glass Filled)	All
5	Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
5	Disc Holder	Brass BS EN 12165 CW617N	1/2 - 1
6	Union Ring	Bronze BS EN 1982 CC491K	1/2 - 2
7	Packing	Asbestos Free	All
8	Gland	Brass BS EN 12164 CW614N	All
9	Packing Nut	Brass BS EN 12164 CW614N	1/2 - 1 1/2
9	Packing Nut	Bronze BS EN 1982 CC491K	2 - 3
10	Washer	Brass BS EN 12164 CW614N	1/2 - 2
11	Disc Ret'ng Nut	Brass BS EN 12164 CW614N	1/2 - 2
11	Disc Ret'ng Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
12	Handwheel	Aluminium	1/2 - 2
12	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	2 1/2 & 3
13	Handwheel Nut	Brass BS EN 12164 CW614N	All
14	ID Plate	Aluminium	All
15	Disc Stem Ring	Bronze BS EN 1982 CC491K	2 1/2 & 3
16	Bonnet Stud	Steel BS 970 070M20	2 1/2 & 3
17	Bonnet Stud Nut	Steel BS 4190 Gr.4	2 1/2 & 3
18	Gasket	Asbestos Free	2 1/2 & 3

Dimensional Drawings





Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2	1.76	108	128	65	89	8
3/4	1.95	117	145	70	98	9
1	3.2	127	161	78	108	10
1 1/4	4.54	146	180	92	118	10
1 1/2	6.12	159	199	103	127	11
2	8.67	190	233	121	152	13
2 1/2	14.9	216	279	152	178	14
3	20.1	254	313	152	191	16

PRESSURE RATING: Class 150
TEMPERATURE OPERATING RANGE: -10 to 186°C
UK END CONNECTION: Not Specified
US END CONNECTION: Flanged Class 150
OPERATOR: Handwheel
AVAILABLE OPTIONS: Flanges Undrilled.
P150 Locking Device

SPECIFICATION: Valves are manufactured in accordance with BS 5154 for Class 150 Series B ratings.

Design incorporates a disc holder retained on a stem by a threaded ring. Body seat is integeral of the semi-crown type. Sizes 1/2" to 2" have a union bonnet; sizes 2 1/2" and 3" have a bolted bonnet. End flanges conform to BS 1560 Section 3.3 and ANSI B16.24 Class 150 with flat face and are normally supplied drilled. Valves have BS 5154 'long' face-to-face.

Valves also generally conform to MSS SP-80.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D14
PN32* - Series A

PN32* Bronze Globe Valve

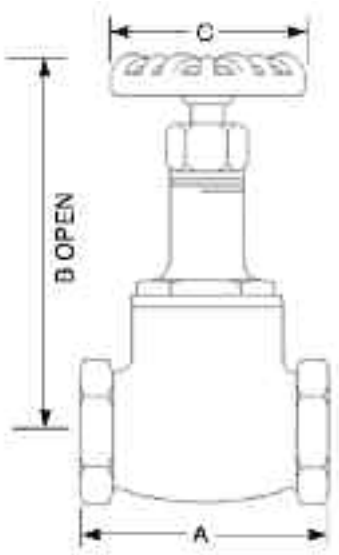
Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

*Sizes 2 1/2" & 3" rated PN25.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	Bronze BS EN 1982 CC491K	All
Stem	Manganese Bronze BS EN 12163 CW721R	All
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2 1/2
Packing Nut	Bronze BS EN 1982 CC491K	3" only
Handwheel	Aluminium	1/4 - 2 1/2
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	3" only
Handwheel Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Gasket	Asbestos Free	2 1/2 - 3

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.39	52	100	52
3/8	0.38	52	100	52
1/2	0.54	62	101	52
3/4	0.65	74	115	52
1	0.9	90	125	70
1 1/4	1.58	100	150	70
1 1/2	2.06	115	159	92
2	3.31	136	191	103
2 1/2	5.9	166	220	121
3	10.3	190	255	152

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32

TEMPERATURE OPERATING RANGE: -10 to 260°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel

SPECIFICATION: Valves are manufactured in accordance with BS 5154:1991 series A, PN32 for sizes 1/4" to 2" and PN25 for sizes 2 1/2" and 3".

Design incorporates a bronze 35 degree wide angle disc retained on stem by a threaded ring; body seat is integral of the narrow contact angled type.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D15
PN32* - Series B

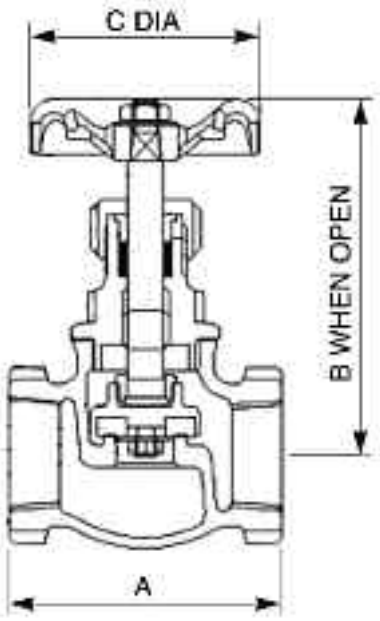
Bronze Globe Valve

The Crane D15 bronze globe valve is highly efficient for throttling service.
*Sizes 2 1/2" & 3" are rated PN25.
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	PTFE (25% Glass Filled)	All
Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
Disc Holder	Brass BS EN 12165 CW617N	1/4 - 1
Disc Retaining Nut	Brass BS EN 12164 CW614N	1/4 - 2
Disc Retaining Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Washer	Brass BS EN 12164 CW614N	1/4 - 2 only
Stem	Brass BS EN 12163 CW721R	1/4 - 2
Stem	Manganese Bronze	2 1/2 & 3
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 - 3
Handwheel	Aluminium	1/4 - 2 1/2
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	3" only
Handwheel Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Gasket	Asbestos Free	2 1/2 only
Gasket	Stainless Steel	3" only

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.4	52	100	52
3/8	0.39	52	100	52
1/2	0.54	62	101	52
3/4	0.65	74	115	52
1	0.81	90	125	70
1 1/4	1.55	100	150	70
1 1/2	2.01	115	159	92
2	3.08	136	191	103
2 1/2	6.1	166	220	121
3	10.5	190	255	152

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 198°C
UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21
US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)
OPERATOR: Handwheel

SPECIFICATION: Valves are manufactured in accordance with BS 5154: 1991 Series B, PN32 for sizes 1/4" to 2" and PN25 for sizes 2 1/2" and 3". Sizes 1/4" to 3" Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21 BSI Kitemarked.
Design incorporates a disc holder retained on stem by a threaded ring; body seat is integral of the semi-crown type.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D16
PN32* - Series A

Bronze Globe Valve

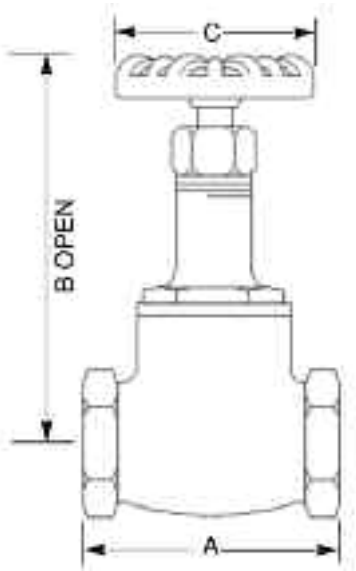
Crane Bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

*Please note Sizes 2 1/2" and 3" are rated at PN25

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Body Seat Ring	13% Cr.Steel BS970 Pt.1 410S21 or 431S29	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	13% Cr.Steel BS970 Pt.1 410S21 or 431S29	1/2 - 2
Disc	Nickel Alloy	1/4, 3/8, 2 1/2 & 3
Stem	Manganese Bronze BS EN 12163 CW721R	All
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2 1/2
Packing Nut	Bronze BS EN 1982 CC491K	3" only
Handwheel	Aluminium	1/4 - 2 1/2
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	3" only
Handwheel Nut	Brass BS EN 12164 CW614N	All
ID Plate	Aluminium	All
Gasket	Asbestos Free	2 1/2 - 3

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.33	52	100	52
3/8	0.31	52	100	52
1/2	0.8	62	101	52
3/4	1.24	74	115	52
1	1.5	90	125	70
1 1/4	1.7	100	150	70
1 1/2	2.16	115	159	92
2	3.67	136	191	103
2 1/2	6	166	220	121
3	10.9	190	255	178

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32

TEMPERATURE OPERATING RANGE: -10 to 260°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

OPERATOR: Handwheel

SPECIFICATION: Valves are manufactured in accordance with BS 5154: 1991 Series A, PN32 for sizes 1/4" to 2" and PN25 for sizes 2 1/2" and 3".

Design incorporates a nickel alloy plug type disc retained on the stem by a threaded ring; body seat is a screwed-in stainless steel ring.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D46
PN40

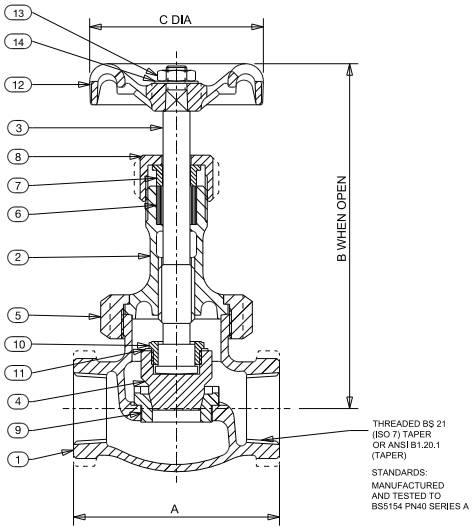
Bronze Globe Valve

Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

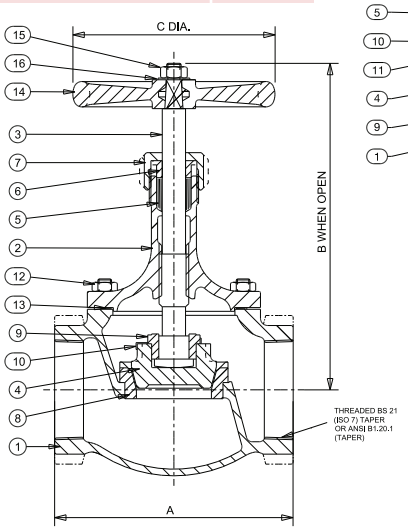
NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Brass BS EN 12163 CW721R	1/4 - 2
4	Disc	Duplex Stainless Steel S32205	All
5	Union Ring	Bronze BS EN 1982 CC491K	1/4 - 2
6	Packing	Asbestos Free	All
7	Gland	Brass BS EN 12164 CW614N	All
8	Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
8	Packing Nut	Bronze BS EN 1982 CC491K	2 - 3
9	Body Seat Ring	13% Cr.Steel BS 970 Pt.1 410S21/431S29	All
10	Disc Stem Ring	Brass BS EN 12164 CW721R	1/4 - 2
11	Lockwasher	Brass BS EN 1652 CuZn 40Pb	All
12	Bonnet Stud	Steel BS 970 070M20	2 1/2 & 3
13	Bonnet Stud Nut	Steel BS 4190 Gr.4	2 1/2 & 3
14	Gasket	Asbestos Free	2 1/2 & 3
15	Handwheel	Aluminium	1/4 - 2
16	Handwheel Nut	Brass BS EN 12164 CW614N	All
17	ID Plate	Aluminium	All

Dimensional Drawings



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	0.53	59	122	52
3/8	0.55	59	122	52
1/2	0.8	68	140	65
3/4	1.24	81	152	70
1	1.82	95	171	78
1 1/4	2.73	108	193	92
1 1/2	3.78	121	220	103
2	6.03	146	251	121



PRESSURE RATING: PN40
TEMPERATURE OPERATING RANGE: -10 to 260°C
UK END CONNECTION: BS 21 Taper
US END CONNECTION: ANSI B1.20.1
OPERATOR: Handwheel
AVAILABLE OPTIONS: P150 Locking Device

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN40 for series A ratings. Design incorporates Duplex Stainless Steel S32205 plug type disc retained on stem by a threaded ring.

The body seat is screwed-in stainless steel ring. Sizes 1/4" to 2" have a union bonnet and sizes 2 1/2" and 3" have a bolted bonnet.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Valves having ANSI threads also generally conform to MSS SP-80.

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D52
PN64

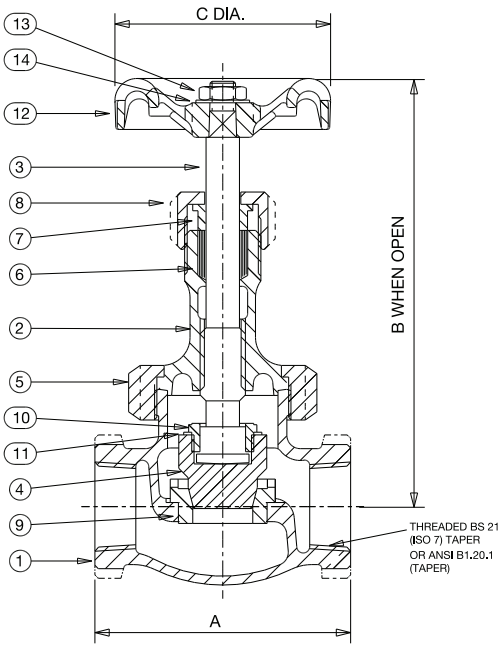
Bronze Globe Valve

Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate. This valve features a renewable nickel alloy plug disc and a stainless steel seat.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Aluminium Bronze NES 834 Pt.2	All
4	Disc	Duplex Stainless Steel S32205	All
5	Union Ring	Bronze BS EN 1982 CC491K	All
5	Disc Holder	Brass BS EN 12165 CW617N	1/2 - 1
6	Packing	Asbestos Free	All
7	Gland	Brass BS EN 12164 CW614N	All
8	Packing Nut	Bronze BS EN 1982 CC491K	1 1/2 & 2
8	Packing Nut	Brass BS EN 12164 CW614N	1/2 - 1 1/4
9	Body Seat Ring	13% Cr.Steel BS 970 Pt.1 410S21	All
10	Disc Stem Ring	Aluminium Bronze NES 834 Pt.2	All
11	Disc Retaining Unit	Brass BS EN 12164 CW614N	1/2 - 2
11	Lockwasher	Brass BS EN 1652 CuZn 40Pb	All
12	Handwheel	Aluminium	1/2 - 1 1/2
12	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	2" only
13	Handwheel Nut	Brass BS EN 12164 CW614N	All
14	ID Plate	Aluminium	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4	1	75	134	70
3/4	1.51	89	159	78
1	2.25	105	177	92
1 1/4	3.59	121	200	103
1 1/2	5.05	133	228	121
2	8.5	162	262	152

PRESSURE RATING: PN64
TEMPERATURE OPERATING RANGE: -10 to 288°C
UK END CONNECTION: BS 21 Taper
US END CONNECTION: Not Specified
OPERATOR: Handwheel
AVAILABLE OPTIONS: P150 Locking Device

SPECIFICATION: Valves having PN64 ratings are not specified in BS 5154. D52 valves meet the requirements of BS 5154 in respect to materials design and method of manufacture as far as applicable.

Design incorporates a Duplex Stainless Steel S32205 plug type disc retained on the stem by a threaded ring. The body seat is a screwed-in stainless steel ring.

Valves having ANSI threads also generally conform to MSS SP-80.

Not suitable for use on unstable fluids as defined by the Pressure Equipment Directive 97/23/EC.

D71
PN32

Materials

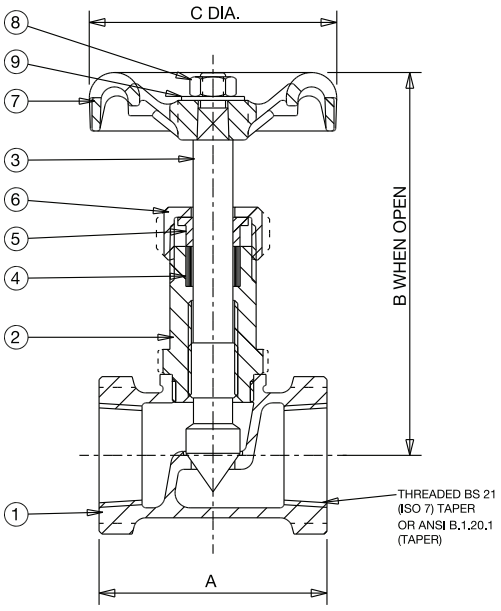
NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Sil. Al. Bronze BS EN 12163 CW301G	1/8 - 3/8
2	Bonnet	Brass BS EN 12164 CW614N	3/4
3	Stem	Sil. Al. Bronze BS EN 12163 CW301G	-
4	Packing*	Asbestos Free	-
5	Gland	Brass BS EN 12164 CW614N	-
6	Packing Nut	Brass BS EN 12164 CW614N	-
7	Handwheel	Aluminium	-
8	Handwheel Nut	Brass BS EN 12164 CW614N	-
9	Identity Plate	Aluminium	-

*Recommended spares

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/8	0.13	29	74	44
1/4	0.15	39	73	44
3/8	0.21	45	77	44
1/2	0.29	51	91	52
3/4	0.46	58	104	65

Dimensional Drawing



PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 100°C
END CONNECTION: Threaded BS 21 or ANSI B1.20.1

SPECIFICATION: Valve are manufactured in accordance with BS 5154 PN32 for Series B ratings. The needle disk is an integral part of the stem, and body seat is integral.

D72
PN32

Materials

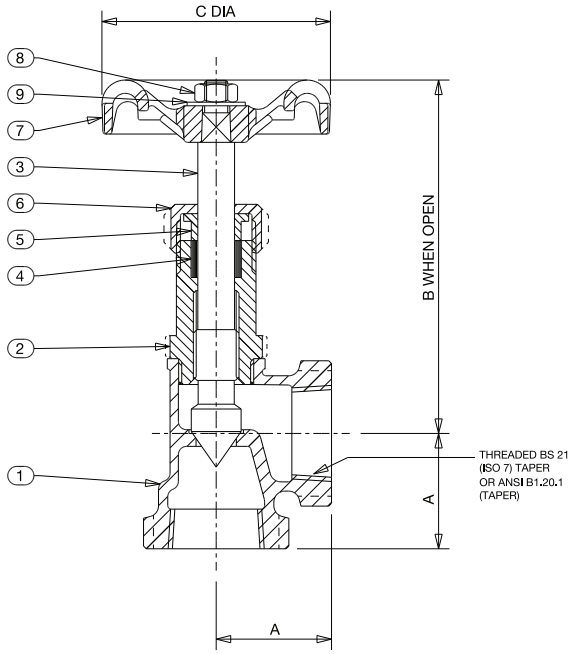
NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	-
2	Bonnet	Sil. Al. Bronze BS EN 12163 CW301G	1/8 - 3/8
2	Bonnet	Brass BS EN 12164 CW614N	3/4
3	Stem	Sil. Al. Bronze BS EN 12163 CW301G	-
4	Packing*	Asbestos Free	-
5	Gland	Brass BS EN 12164 CW614N	-
6	Packing Nut	Brass BS EN 12164 CW614N	-
7	Handwheel	Aluminium	-
8	Handwheel Nut	Brass BS EN 12164 CW614N	-
9	Identity Plate	Aluminium	-

*Recommended spares

Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/8	0.13	15	74	44
1/4	0.15	20	73	44
3/8	0.21	23	77	44
1/2	0.29	27	91	52
3/4	0.46	32	104	65

Dimensional Drawing



PRESSURE RATING: PN32
TEMPERATURE OPERATING RANGE: -10 to 100°C
END CONNECTION: Threaded BS 21 or ANSI B1.20.1

SPECIFICATION: Valve are manufactured in accordance with BS 5154 PN32 for Series B ratings. The needle disk is an integral part of the stem, and body seat is integral.

DM6
PN16

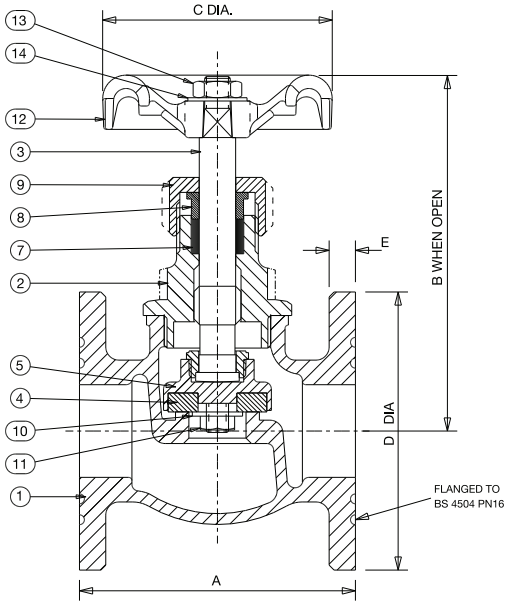
Bronze Globe Valve

Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Brass BS EN 12163 CW721R	All
4	Disc	PTFE (25% Glass Filled)	All
5	Disc Holder	Bronze BS EN 1982 CC491K	All
6	Disc Stem Ring	Brass BS EN 12163 CW721R	All
7	Packing	Asbestos Free	All
8	Gland	Brass BS EN 12164 CW614N	All
9	Packing Nut	Brass BS EN 12164 CW614N	All
10	Washer	Brass BS EN 12164 CW614N	All
11	Disc Retaining Nut	Brass BS EN 12164 CW614N	All
12	Handwheel	Aluminium	All
13	Handwheel Nut	Brass BS EN 12164 CW614N	All
14	ID Plate	Aluminium	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
15	1.24	80	97	52	95	6
20	1.76	90	113	52	105	6
25	2.3	100	126	65	115	8
32	2.82	110	150	70	140	8
40	5.22	120	165	78	150	9
50	5.71	135	189	103	165	11

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 170°C
UK END CONNECTION: Flanged BS 4504
US END CONNECTION: Not Specified
OPERATOR: Handwheel
AVAILABLE OPTIONS: P150 Locking Device

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN16 for Series B ratings, with 'short' face-to-face. Design incorporates disc holder retained on stem by a threaded ring. Body seat is integral of the semi-crown type.

End flanges conform to BS 4504 section 3.3 with flat face and are normally supplied drilled.

Note: Users attention is drawn to BS 4504 Section 3.3 clause 8 regarding types of gaskets and mating flanges to be used with metric flanged valves.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

DM11
PN25

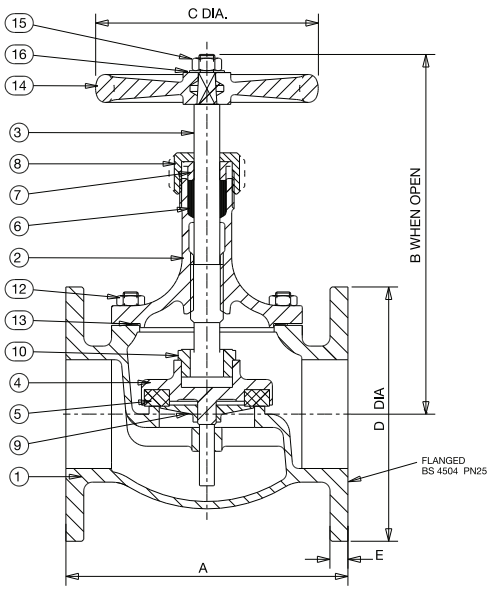
Flanged Bronze Globe Valve

Crane bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

NO.	PART	MATERIAL	SIZE
1	Body	Bronze BS EN 1982 CC491K	All
2	Bonnet	Bronze BS EN 1982 CC491K	All
3	Stem	Bronze BS EN 1982 CC491K	All
4	Disc	PTFE (25% Glass Filled)	All
5	Disc Holder	Brass BS EN 12164 CW617N	15 - 25
5	Disc Holder	Bronze BS EN 1982 CC491K	32 - 80
6	Union Ring	Bronze BS EN 1982 CC491K	15 - 50
7	Packing	Asbestos Free	All
8	Gland	Brass BS EN 12164 CW614N	All
9	Packing Nut	Brass BS EN 12164 CW614N	15 - 40
9	Packing Nut	Bronze BS EN 1982 CC491K	50 - 80
10	Washer	Brass BS EN 12164 CW614N	15 - 50
11	Disc Ret'ng Nut	Brass BS EN 12164 CW614N	15 - 50
11	Disc Ret'ng Nut	Bronze BS EN 1982 CC491K	65 & 80
12	Handwheel	Aluminium	15 - 50
12	Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	65 & 80
13	Handwheel Nut	Brass BS EN 12164 CW614N	All
14	ID Plate	Aluminium	All
15	Disc Stem Ring	Bronze BS EN 1982 CC491K	65 & 80
16	Bonnet Stud	Steel BS 970 070M20	65 & 80
17	Bonnet Stud Nut	Steel BS 4190 Gr.4	65 & 80
18	Gasket	Asbestos Free	65 & 80

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
50	9.74	190	233	121	165	11
65	16.2	216	279	152	185	13
80	21.6	254	313	152	200	14
15	1.71	108	128	65	95	8
20	2.82	117	145	70	105	8
25	3.29	127	161	78	115	9
32	4.93	146	180	92	140	90
40	6.28	159	199	103	150	11

PRESSURE RATING: PN25
TEMPERATURE OPERATING RANGE: -10 to 186°C
UK END CONNECTION: Flanged BS 4504
US END CONNECTION: Not Specified
OPERATOR: Handwheel
AVAILABLE OPTIONS: P150 Locking Device

SPECIFICATION: Valves are manufactured in accordance with BS 5154 PN25 for series B ratings with 'long' face-to-face. Design incorporates disc holder which on sizes 15 to 50 slips on to stem and on sizes 65 and 80 is retained by a threaded ring. Body seat is integeral of the semi-crown type. Sizes 15 to 50 have union bonnet; sizes 65 and 80 have a bolted bonnet.

End flanges conform to BS 4504 Section 3.3 with flat face and are normally supplied drilled.

Note: Users attention is drawn to BS 4504 Section 3.3 Clause 8 regarding types of gaskets and mating flanges to be used with metric flanged valves.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

F372
Class 125

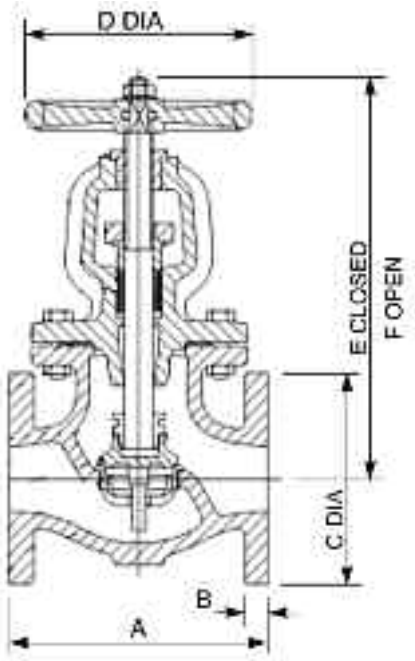
Cast Iron Globe Valve

Crane cast iron globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc Guide Pin	Brass BS EN 12164 CW721R	5 & 6
Gland	Brass BS EN 12164 CW614N	All
Gland Flange	Malleable Iron BS EN 1562 GJMB-300-6	All
Gasket	Asbestos Free	All
Disc Stem Ring	Brass BS EN 12164 CW721R	All
Lockwasher	Brass BS EN 1652	All
Disc	Bronze BS EN 1982 CC491K	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Stem	Brass BS EN 12164 CW721R	All
Packing	Asbestos Free	All
Yoke Bushing	Brass BS EN 12164 CW721R	All
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
2	23.1	203	16	152	203	310	335
$2^1/_2$	27.2	216	17	178	203	330	356
3	34.5	241	19	191	229	362	392
4	54.4	292	24	229	254	416	446
5	70.8	330	24	254	305	457	489
6	95.3	356	25	279	305	476	516

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: Class 125
TEMPERATURE OPERATING RANGE: -10 to 230°C
US END CONNECTION: ANSI Class 125
OPERATOR: Handwheel
AVAILABLE OPTIONS: Flanges Undrilled

SPECIFICATION: Valves are manufactured in accordance with BS 5152: 1974 and also meet the requirements of MSS.SP-85: 2002.

End flanges conform to BS 1560 Section 3.2/ANSI B16.1 Class 125 with Flat Face and are normally supplied drilled.

Valves detailed on this page are dimensioned in metric terms.

This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

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FM369
PN16

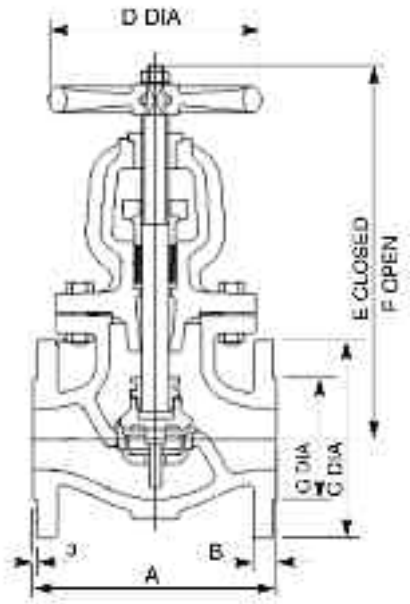
Cast Iron Globe Valve

Crane cast iron globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc Guide Pin	Brass BS EN 12164 CW721R	125 - 150
Gland	Brass BS EN 12164 CW614N	All
Gland Flange	Malleable Iron BS EN 1562 GJMB-300-6	All
Gasket	Asbestos Free	All
Disc Stem Ring	Brass BS EN 12164 CW721R	All
Lockwasher	Brass BS EN 1652	All
Disc	Bronze BS EN 1982 CC491K	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Stem	Brass BS EN 12164 CW721R	All
Packing	Asbestos Free	All
Yoke Bushing	Brass BS EN 12164 CW721R	All
Handwheel	Malleable Iron BS EN 1562 GJMB-300-6	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50	24.2	203	20	165	203	310	335	102
65	29	216	20	185	203	330	356	122
80	36.9	241	22	200	229	362	392	138
100	56	292	24	220	254	416	446	158
125	72.3	330	26	250	305	457	489	188
150	98.8	356	26	285	305	476	516	212

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	220
PRESSURE (BAR)	16	12.1

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
TEMPERATURE OPERATING RANGE: -10 to 220°C
UK END CONNECTION: Flanged BS EN 1092-2 PN16
OPERATOR: Handwheel
AVAILABLE OPTIONS: Flanges Undrilled

SPECIFICATION: Valves are manufactured in accordance with BS EN 13789:2010.
End flanges conform to BS EN 1092-2 PN16 with raised face. Valves are normally supplied drilled.
This valve is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

143XU
Class 150

Cast Steel • Outside Screw & Yoke • Bolted Bonnet

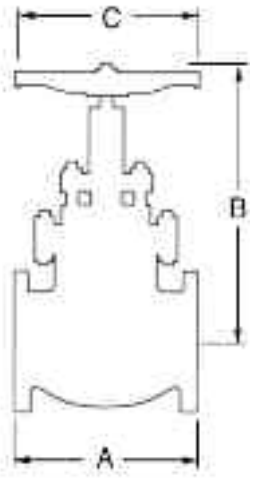
Features & Benefits

- Ideal for throttling service
- Flow characteristics permit accurate and repeatable flow control
- Seat ring is seal welded to eliminate leak paths

Materials

PART	MATERIAL
Body	A216 WCB
Bonnet	A216 WCB
Seat Rings	Hardfaced
Disc	13% CR Overlay
Stem	410 SS
Packing	Graphite
Bonnet Gasket	Soft Iron
Back Seat	410 SS
Disc Stem Nut	410 SS
Disc Washer	Carbon Steel
Gland	410 SS
Gland Flange	WCB
Eye Bolt	Steel
Eye Bolt Nuts	A563 Gr. A or 0
Pins	-
Bonnet Studs	A193 Gr. B7
Bonnet Nuts	A194 Gr. 2H
Handwheel	WCB
Handwheel Nut	A194 Gr. 2H
ID Tags	SS
ID Pins	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)	C (inch)
2	53	8.00	14.00	8.00
$2^1/_2$	70	8.50	15.00	8.00
3	90	9.50	17.00	10.00
4	143	11.50	20.00	12.00
6	246	16.50	24.00	16.00
8	392	19.50	25.00	16.00
10	605	24.50	29.00	20.00
12	900	27.50	38.00	20.00

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 12 inches

PRESSURE TEMPERATURE RATING: Class 150
Carbon Steel
ASTM A216 Grade WCB
285 psi @ -20°F to 100°F

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

151XU
Class 300

Cast Steel • Outside Screw & Yoke • Bolted Bonnet

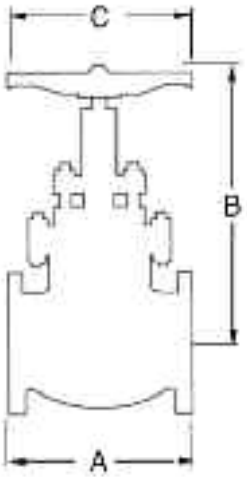
Features & Benefits

- Ideal for throttling service
- Flow characteristics permit accurate and repeatable flow control
- Seat ring is seal welded to eliminate leak paths

Materials

PART	MATERIAL
Body	A216 WCB
Bonnet	A216 WCB
Seat Rings	Hardfaced
Disc	13% CR Overlay
Stem	410 SS
Packing	Graphite
Bonnet Gasket	Spiral Wound
Back Seat	410 SS
Disc Stem Nut	410 SS
Disc Washer	Carbon Steel
Gland	410 SS
Gland Flange	WCB
Eye Bolt	Steel
Eye Bolt Nuts	A563 Gr. A or 0
Pins	-
Bonnet Studs	A193 Gr. B7
Bonnet Nuts	A194 Gr. 2H
Handwheel	WCB
Handwheel Nut	A194 Gr. 2H
ID Tags	SS
ID Pins	Steel

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (lbs)	A (inch)	B Valve Open (inch)	C (inch)
2	75	10.50	16.75	8.00
2 1/2	99	11.50	18.00	10.00
3	132	12.50	21.00	10.00
4	209	14.00	23.00	14.00
6	440	17.50	36.00	18.00
8	693	22.00	39.00	24.00
10	1008	24.50	41.00	24.00
12	1100	28.00	48.00	24.00

Industry Standards

STEEL VALVES	ANSI B16.34
FACE-TO-FACE/END-TO-END	ANSI B16.10
FLANGE DIMENSIONS	ANSI B16.5
TESTING	API 598
ACCEPTANCE	API RP591

SIZE RANGE: 2 - 12 inches

PRESSURE TEMPERATURE RATING: Class 300
Carbon Steel
ASTM A216 Grade WCB
740 psi @ -20°F to 100°F

Universal Valve Body for TRV and Wheel Head

The new range offers interchangeability of the TRV Head and the Wheel Head. The revolutionary body design enables both the TRV head and the Wheel Head to be connected directly to a common valve body without the need for adaptors. This design breakthrough reduces the cost of stock holding and increases the versatility of the range. The range has been consolidated into a single chrome plated finish.

Function

Thermostatic valves are typically used for regulating the fluid flow to the radiators of central heating systems. They are provided with a regulating element which automatically controls the opening of the valve to keep the ambient temperature of the room constant at the set value. This prevents unwanted temperature rises and achieves considerable energy savings.

The new Crane radiator valve range is eminently suitable for building services installations where durability and rugged construction are predominant, while satisfying the aesthetic requirements demanded for modern commercial and domestic interiors.

Operating Principle of Thermostatic Control

The thermostatic valve control head is a proportional temperature regulator, consisting of bellows containing liquid.

When the ambient temperature increases, the consequent build-up in pressure causes an expansion in volume in the bellows, which in turn, dilate. When the temperature falls the reverse takes place; the bellows contract due to the effect of the thrust generated by the return spring. The axial movement of the sensitive element is transmitted to the valve obturator through the connecting spindle, thus regulating the flow of liquid to the heat emitter.

Construction Details

The control spindle is stainless steel with an EPDM O-Ring double seal. This means that the upper part of the control device can be replaced even when the system is in operation.

The obturator is shaped in such a way as to optimise the fluid-dynamic characteristics of the valve during the progressive opening and closing actions in thermostatic operation. The large passage between seat and obturator causes reduced pressure drops in manual use.

Product Range

FIG. NO.	PART NO.	DESCRIPTION	SIZES
D885	0JG90832J	Angle Pattern TRV & Wheel Head Valve Body	1/2"
D885	0JG90833K	Angle Pattern TRV & Wheel Head Valve Body	3/4"
D886	0JG90834L	Straight Pattern TRV & Wheel Head Valve Body	1/2"
D886	0JG90835M	Straight Pattern TRV & Wheel Head Valve Body	3/4"
T80	0JG90848S	Wheel Head	-
T90	0JG90836N	TRV Head	-
T95	0JG90854Q	90° Elbow	-
T100	0JG90837P	Tamperproof Ring	-
D887	0JG90844N	Angle Pattern Lockshield Valve	1/2"
D887	0JG90854P	Angle Pattern Lockshield Valve	3/4"
D888	0JG90846Q	Straight Pattern Lockshield Valve	1/2"
D888	0JG90847R	Straight Pattern Lockshield Valve	3/4"
D889 RS2	0JG90838Q	Remote Sensing TRV Sensor	2m
D889 RS8	0JG90840J	Remote Sensing TRV Sensor	8m
D889 RT2	0JG90841K	Remote Adjusting TRV Transmitter	2m
D889 RT8	0JG90843M	Remote Adjusting TRV Transmitter	8m
T70	0JG90852N	Nut & Olive	1/2"
T70	0JG90853P	Nut & Olive	3/4"

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Technical Specification

Valve Bodies

Material

Body:	Brass (BS EN 12165 CW617N), chrome plated
Valve spindle:	Stainless Steel
Hydraulic seats:	EPDM
Control knob/cap:	ABS (RAL 9010)

Fluid: Water, glycol solutions (Max percentage of glycol – 30%)
Max differential pressure with control fitted: 1 bar
Max working pressure: 10 bar
Temperature range: 5-100ºC

TRV Head

The TRV head is liquid filled, offering speedier reaction to room temperature changes.

The TRV head has full CEN approval and is marked accordingly.

O-Ring seal for better water-tight seal/connection.

Maximum working pressure: 10 bar operating between 5 and 100ºC.

System Sizing

For correct system sizing, the valves are normally selected by identifying the pressure drop in accordance with the flow diagrams.

TRV Head with Remote Sensor

(Head – T90 and Remote Sensor – D889 RS)

Max isolating differential pressure	1 bar
Temperature adjustment range	0 to 28°C
Frost protection cut in	7°C
Max ambient temperature	50°C

0	*	1	2	3	4	5
0ºC	7ºC	12ºC	16ºC	20ºC	24ºC	28ºC

TRV Transmitter

(Remote Adjusting TRV Transmitter – D889 RT)

Max isolating differential pressure	1 bar
Temperature adjustment range	0 to 28°C
Frost protection cut in	6°C
Max ambient temperature	50°C

0	*	1	2	3	4	5
0ºC	6ºC	12ºC	16ºC	20ºC	24ºC	28ºC

D201 Bronze Radiator Valve
PN10

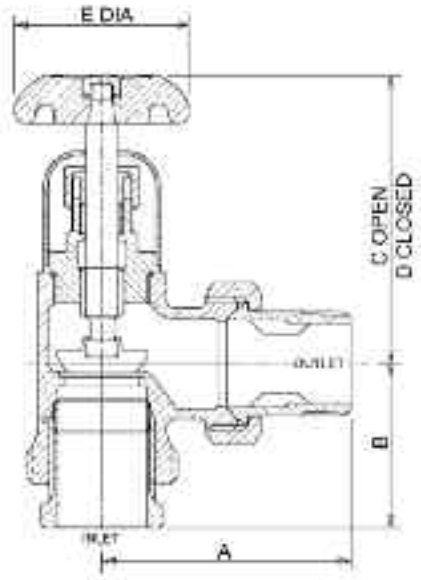
Materials

PART	MATERIAL
Body	Bronze BE EN 1982 CC491K
Bonnet	Brass BS EN 12165 CW617N
Disc	Brass BS EN 12164 CW614N
Stem	Brass BS EN 12164 CW614N
*Packing	Asbestos Free
Gland	Brass BS EN 12164 CW614N
Packing Nut	Brass BS EN 12164 CW614N
†Tailpiece	Brass BS EN 12164 CW614N
Tailpiece Ring	Brass BS EN 12165 CW614N
Shield	Brass BS EN 12449 CW503L or 505L
Handwheel	Bakelite
Handwheel Nut	Brass BS EN 12164 CW614N
Compression Olive	Brass BS EN 12449 CW503L or 505L
Compression Adaptor	Brass BS EN 12164 CW614N

*Recommended spare.

†Internal drive: Size 1/2" - to suit 12mm hex socket wrench,
Size 3/4" - to suit Crane Figure P113 radiator union wrench.

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2	0.30	61.8	27	77.7	70.8	50.8
3/4	0.45	69.3	30.3	87.5	78.5	50.8
1	0.77	75	35.8	80.3	93.7	57.1

Pressure/Temperature Ratings

TEMPERATURE (°C)	0 to 40	60	80	100	120	126
PRESSURE (BAR)	14.0	13.1	12.3	11.4	10.5	1.4

PRESSURE RATING: PN10

UK END CONNECTION:

Threaded ISO 228 - 1½" and ¾"- parallel inlet.
1" - BS EN 10226-2 taper inlet.

Union nut and tailpiece threaded BS 21 on outlet.

Please note only sizes ½" and ¾" have combi ends to allow connection to copper pipe.

TESTING: Each valve is individually tested to BS 2767

OPERATOR: Handwheel

SPECIFICATION: Matt finish only

TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D202 / D203 Bronze Radiator Valve PN10

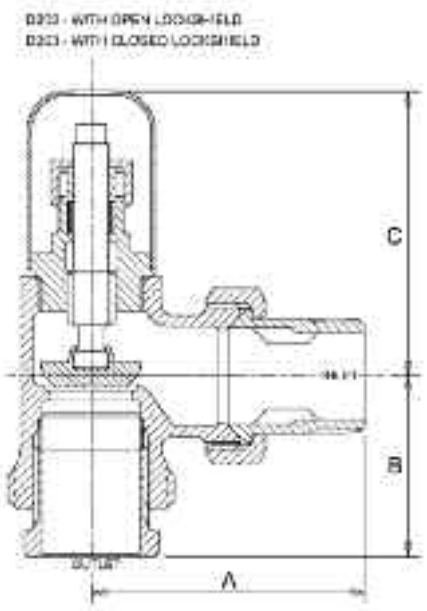
Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Bonnet	Brass BS EN 12165 CW617N
Disc	Brass BS EN 12164 CW614N
Stem	Brass BS EN 12164 CW614N
*Packing	Asbestos Free
Gland	Brass BS EN 12164 CW614N
Packing Nut	Brass BS EN 12164 CW614N
†Tailpiece	Brass BS EN 12164 CW614N
Tailpiece Ring	Brass BS EN 12165 CW614N
Shield	Brass BS EN 12449 CW503L or 505L
Compression Olive	Brass BS EN 12449 CW503L or 505L
Compression Adaptor	Brass BS EN 12164 CW614N

*Recommended spare.

†Internal drive: Size 1/2" - to suit 12mm hex socket wrench,
Size 3/4" - to suit Crane Figure P113 radiator union wrench.

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/2	0.30	61.8	27	72.4
3/4	0.45	69.3	30.3	82.1
1	0.77	75	35.8	73.9

Pressure/Temperature Ratings

TEMPERATURE (°C)	0 to 40	60	80	100	120	126
PRESSURE (BAR)	14.0	13.1	12.3	11.4	10.5	1.4

PRESSURE RATING: PN10

UK END CONNECTION:

Threaded ISO 228 - 1½" and ¾"- parallel inlet.
1" - BS EN 10226-2 taper inlet.

Union nut and tailpiece threaded BS 21 on outlet.

Please note only sizes ½" and ¾" have combi ends to allow connection to copper pipe.

TESTING: Each valve is individually tested to BS 2767

OPERATOR:

D202- Lockshield for key operation.
D203- Closed Lockshield.

SPECIFICATION: Matt finish only

D885 Angle Body & T80 Wheel Head Valve

Materials

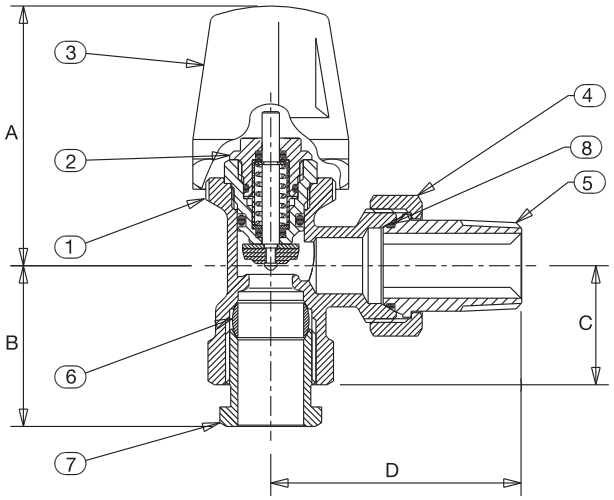
NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Valve Insert Assembly	EPDM Valve Disc
3	T80 Wheel Head	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM

Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	350	60	37	27.5	58
22	519	61	42	30.5	66

D885 + T80

Dimensional Drawing



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D885 Angle Body & T90 TRV Head

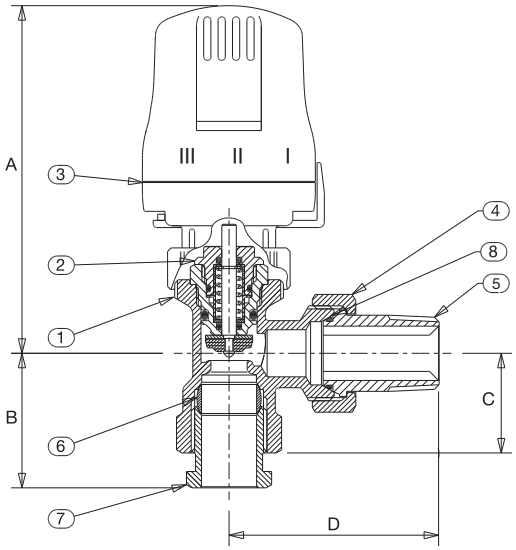
Materials

NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Valve Insert Assembly	EPDM Valve Disc
3	T90 STD Thermostatic Head	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM

Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	350	96	37	27.5	58
22	519	98	42	30.5	66

Dimensional Drawing



D885 with Thermostatic Control Head T90 - Hydraulic Characteristics of Thermostatic Valves with Angle Connections

			KV (m^3/h) PROPORTIONAL BAND (K)				
CODE	DESCRIPTION	SIZE	1	1.5	2	3	Kvs
D885	Universal TRV/Wheel Valve Body	1/2"	0.34	0.52	0.64	0.90	2.39
D885	Universal TRV/Wheel Valve Body	3/4"	0.40	0.63	0.81	1.09	3.19
D887	Lockshield Valve	1/2"	0.34	0.52	0.64	0.90	2.39
D887	Lockshield Valve	3/4"	0.40	0.63	0.81	1.09	3.19

CODE	DESCRIPTION	SIZE	NOMINAL FLOW (l/h)	MAX. DIFF PRES. (bar)
D885	Universal TRV/Wheel Valve Body	1/2"	180	1
D885	Universal TRV/Wheel Valve Body	3/4"	240	1
D887	Lockshield Valve	1/2"	180	1
D887	Lockshield Valve	3/4"	240	1

Kv = volume flow in m^3/h producing pressure drop 1 bar
Kvs = Kv with valve fully open

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E: enquiries@cranefs.com W: www.cranefs.com

D886 Straight Body & T80 Wheel Head Valve

Materials

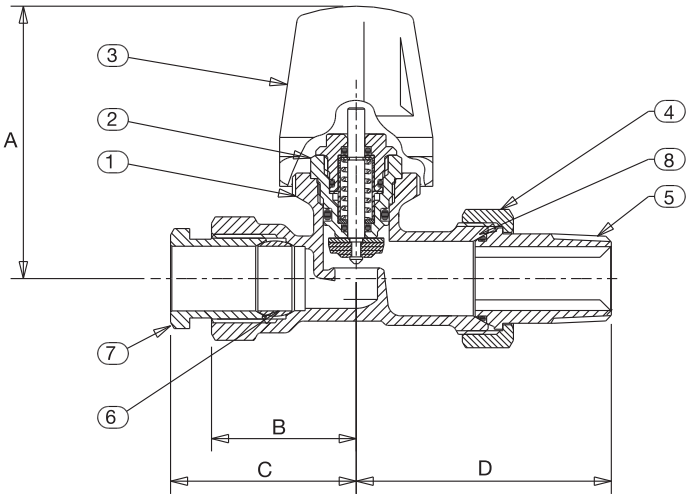
NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Valve Insert Assembly	EPDM Valve Disc
3	T80 Wheel Head	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM


D886 + T80

Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	391	64	34	44	60
22	580	64	40	51	65

Dimensional Drawing



D886 Straight Body & T90 TRV Head

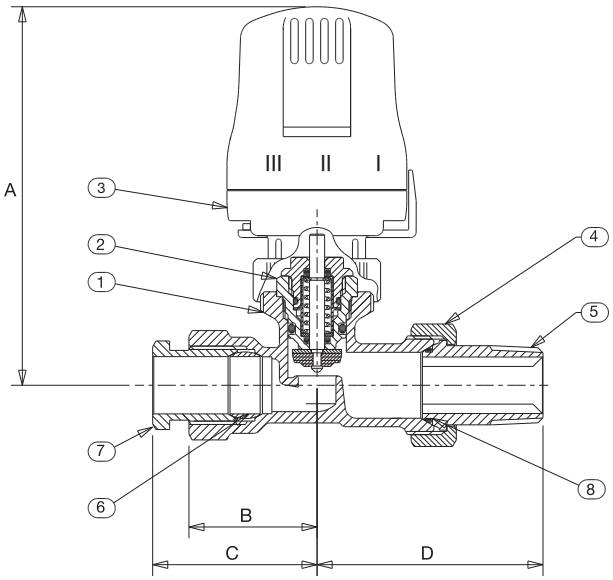
Materials

NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Valve Insert Assembly	EPDM Valve Disc
3	T90 STD Thermostatic Head	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM

Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	391	100	34	44	60
22	580	100	40	51	65

Dimensional Drawing



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D886 with Thermostatic Control Head T90 - Hydraulic Characteristics of Thermostatic Valves with Straight Connections

			KV (m^3/h) PROPORTIONAL BAND (K)				
CODE	DESCRIPTION	SIZE	1	1.5	2	3	Kvs
D886	Universal TRV/Wheel Valve Body	1/2"	0.32	0.50	0.67	0.86	1.52
D886	Universal TRV/Wheel Valve Body	3/4"	0.43	0.63	0.82	1.05	2.20
D888	Lockshield Valve	1/2"	0.32	0.50	0.67	0.86	1.52
D888	Lockshield Valve	3/4"	0.43	0.63	0.82	1.05	2.20

CODE	DESCRIPTION	SIZE	NOMINAL FLOW (l/h)	MAX. DIFF PRES. (bar)
D886	Universal TRV/Wheel Valve Body	1/2"	180	1
D886	Universal TRV/Wheel Valve Body	3/4"	240	1
D888	Lockshield Valve	1/2"	180	1
D888	Lockshield Valve	3/4"	240	1

Kv = volume flow in m^3/h producing pressure drop 1 bar
Kvs = Kv with valve fully open

D887 Angle Lockshield Valve

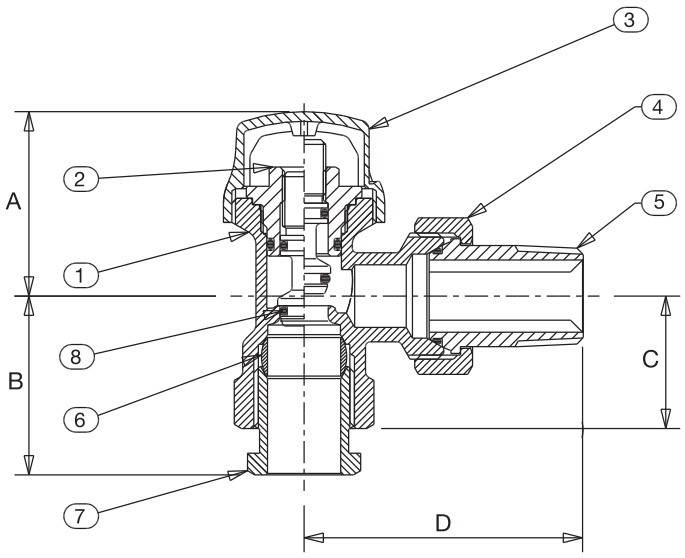
Materials

NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Lockshield Assembly	Brass BS EN 12164 CW614N
3	Lockshield Cap	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM

Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	232	38.5	36.5	27.5	58
22	387	39.5	40.5	30.5	66

Dimensional Drawing



TECHNICAL HELPLINE: +44 (0)1473 277400
E: enquiries@cranefs.com W: www.cranefs.com

D888 Straight Lockshield Valve

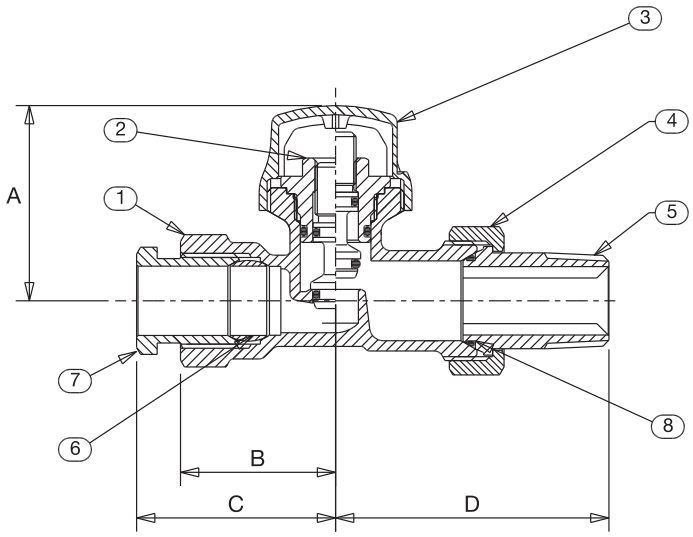
Materials

NO.	PART	MATERIAL
1	Body	Brass (Chrome Plated) BS EN 12164 CW617N
2	Lockshield Assembly	Brass BS EN 12164 CW614N
3	Lockshield Cap	Thermoplastic ABS
4	Tailpiece Ring	Brass BS EN 12164 CW617N
5	Tailpiece	Brass BS EN 12164 CW617N
6	Compression Olive	Brass BS EN 12164 CW602N
7	Compression Adaptor	Brass BS EN 12164 CW614N
8	Hydraulic Seals	Rubber EPDM

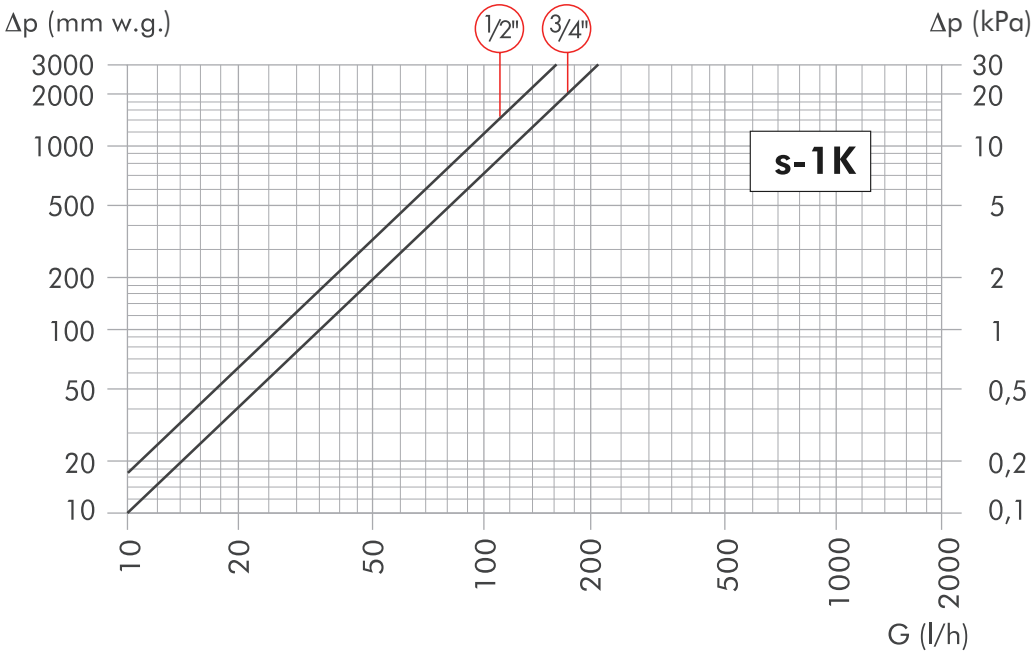
Dimensions & Weights

SIZE (mm)	WEIGHT (g)	A (mm)	B (mm)	C (mm)	D (mm)
15	273	43	34	44	60
22	455	44	40	51	65

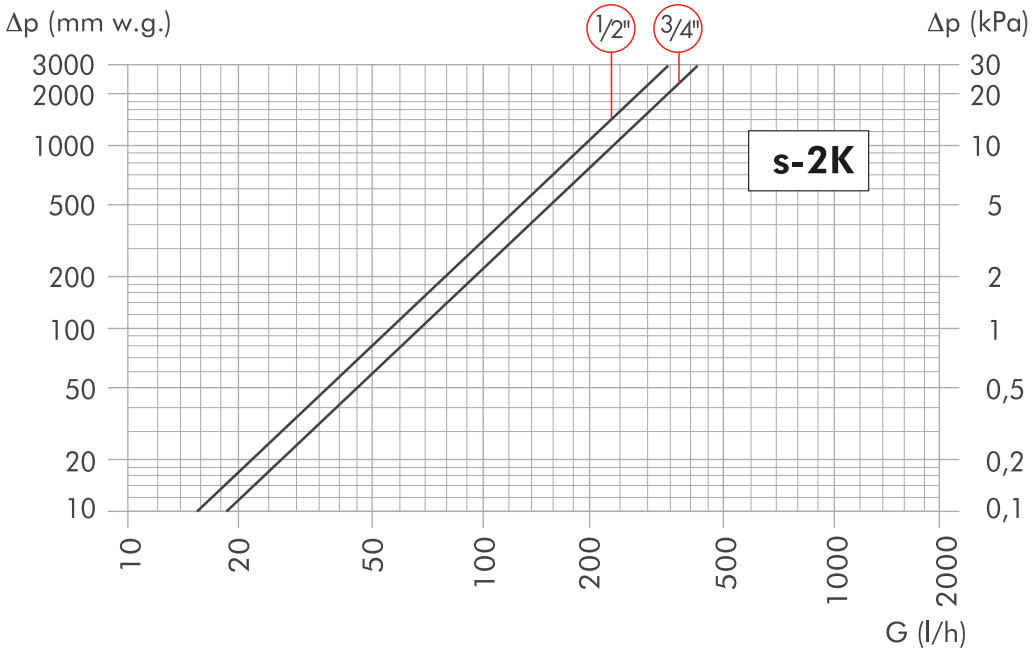
Dimensional Drawing



Hydraulic Characteristics



s= Set temperature based on performance curve
1K = Less 1 deg Kelvin from set point
2K = Less 2 deg Kelvin from set point



s= Set temperature based on performance curve
1K = Less 1 deg Kelvin from set point
2K = Less 2 deg Kelvin from set point

D297
PN32

WRAS APPROVED PRODUCT

Bronze Strainer

Scale and dirt in piping systems cause endless trouble and frequently serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems.

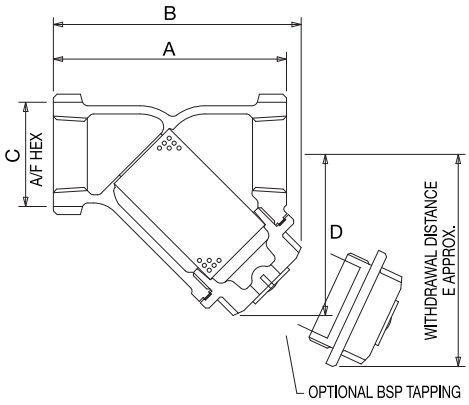
The Crane D297 features: Perforated stainless steel screen, robust design, low flow resistance, high quality materials, WRAS approved.

D297

Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Gasket	Asbestos Free (WRAS)	All
ID Plate	Aluminium	All
Pin	Steel - Electro Brassed	All
Screen	Stainless Steel Type 304	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2	0.38	71	79	30	51	61
3/4	0.63	86	96	38	64	77
1	0.96	101	110	47	72	92
1 1/4	1.81	134	144	56	100	128
1 1/2	2.43	148	157	65	109	139
2	4.13	176	183	79	126	160

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	200
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN32

TEMPERATURE OPERATING RANGE: -10 to 200°C

UK END CONNECTION: Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

US END CONNECTION: ANSI B1.20.1 (please add suffix AT to denote American Thread)

SPECIFICATION: Strainers fitted with stainless steel perforated strainer element with 0.75mm diameter holes.

Screens fitted into Crane Strainers conform to the high standards of materials and workmanship associated with all Crane products.

This strainer is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

D298
PN16

WRAS APPROVED PRODUCT

Bronze Strainer

A generous use of pipeline strainers will make a significant contribution to the reliability of a piping system and to optimise performance of the equipment - pumps, valves, flow measuring devices, traps etc.

Strainers are a low cost investment for any piping system and result in reduced maintenance costs as well as minimising 'downtime' by protecting the circuit from damage by foreign matter.

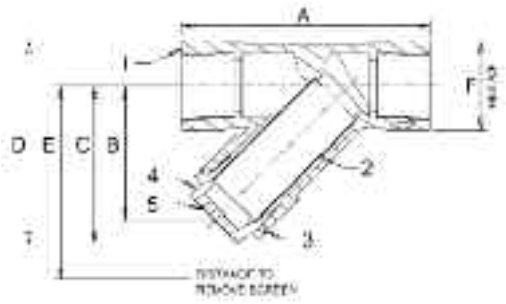
Features

- Robust design
- Threaded ends
- Low flow resistance
- High quality materials

Materials

NO.	PART	MATERIAL
1	Body	Bronze to BS EN 1982 CC491K
2	Mesh	Stainless Steel to A.I.S.I. Type 304
3	Cap Seal	PTFE
4	Cap	Bronze to BS EN 1982 CC491K
5	ID Plate	Aluminium

Dimensional Drawing



D = withdrawal distance for the screen

Dimensions & Weights

DN	MESH HOLE Ø (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	MASS (kg)
15	0.75	58	33	40	55	62	27	0.1875
20	0.75	70	42	54	69	80	33	0.3045
25	0.75	88	48	60	80	93	39	0.4260
32	0.75	96	55	69	95	108	49	0.7437
40	0.75	107	61	76	107	118	55	1.0075
50	0.75	126	79	99	135	153	67	1.4600

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16
16 bar -10° to 100°C
7 bar at 170°C

TEST PRESSURE: 24 bar hydraulic

SPECIFICATION: Bronze body. Screen 304 stainless steel.
End connections threaded to BS EN 10266 (BS 21 Taper ISO R7) & B1.20.1 ANSI.

TECHNICAL HELPLINE: +44 (0)1473 277400
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F277
Class 125

Cast Iron Strainer

Scale and dirt in piping systems causes endless trouble and frequently serious damage to pipeline equipment.

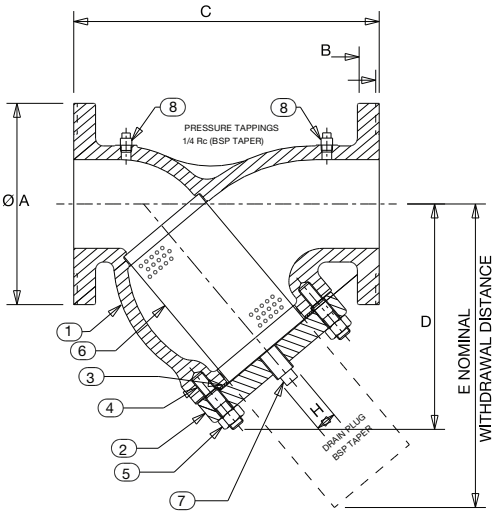
Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems.

Stainless steel strainer element.

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 EN-GJL-250	50 - 200
Cap	Ductile Iron BS EN 1563 EN GJS 500/7	250 - 300
Gasket	Asbestos Free	All
Screen	Stainless Steel AISI Type 304	All
Drain Plug	Malleable Iron	All
Test Point Plug Rc 1/4	Malleable Iron	All

Dimensional Drawing



Dimensions & Weights

SIZE (inch)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (Rc)	SCREEN AREA cm²
2	13	152	15.9	230	156	213	1"	213
2 1/2	23	178	17.5	290	210	298	1 1/4"	343
3	30	191	19.1	310	215	301	1 1/4"	388
4	43	229	23.8	350	245	350	1 1/4"	575
5	71	254	23.8	400	297	430	1 1/2"	884
6	93	279	25.4	480	333	484	1 1/2"	1174
8	161	342	28.6	600	416	611	2"	1999
10	266	406	30.2	686	534	788	2"	3213
12	397	483	31.8	759	624	928	2"	4559

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: Class 125

TEMPERATURE OPERATING RANGE: -10 to 230°C

US END CONNECTION: ANSI Class 125

SPECIFICATION: End flanges conform to BS 1560 - Section 3.2/ANSI B16.1 with flat face and are normally supplied drilled.

This strainer is supplied with a stainless steel perforated element having 1.5mm diameter holes.

This product is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

FM276
PN16

Cast Iron Strainer

Scale and dirt in piping systems causes endless trouble and frequently serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems.

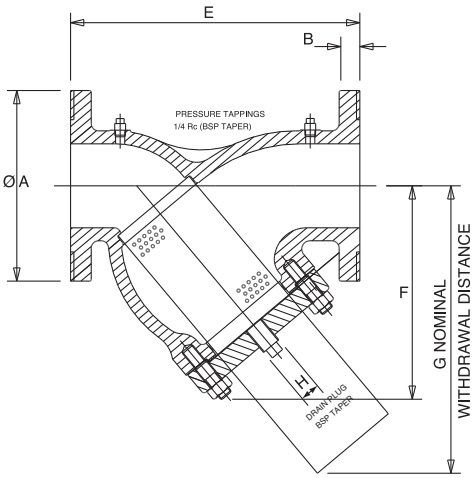
The FM276 offers the integrity of manufacture, quality and reliability which are the hallmarks of all Crane products.

Cap tapped and plugged for drain (drain valve sold separately).

Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 EN-GJL-250	50 - 200
Cap	Ductile Iron BS EN 1563 EN GJS 500/7	250 - 300
Gasket	Asbestos Free	All
Screen	Stainless Steel AISI Type 304	All
Drain Plug	Malleable Iron	All
Test Point Plug Rc 1/4	Malleable Iron	All

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (Rc)
50	13	165	20	102	3	226	142	193	1"
65	23	185	20	122	3	290	216	272	1¼"
80	30	200	122	138	3	306	226	272	1¼"
100	43	220	24	158	3	350	264	330	1¼"
125	71	250	26	188	3	399	320	406	1½"
150	93	285	26	212	3	480	356	457	1½"
200	161	340	30	268	3	600	442	577	2"
250	266	405	32	320	3	686	495	696	2"
300	397	460	32	378	4	757	579	828	2"
350	359	520	36	438	4	946	688	988	2"
400	480	580	38	490	4	1076	743	1108	2"
450	630	640	40	550	4	1172	990	1410	2"

Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation.

PRESSURE RATING: PN16

TEMPERATURE OPERATING RANGE: -10 to 200°C

UK END CONNECTION: Flanged BS EN 1092-2: PN16

SPECIFICATION: End flanges conform to BS EN 1092-2 PN16 Section 3.2 table 11 with raised face and are normally supplied drilled.

Strainers are normally supplied with a stainless steel perforated strainer element having 1.5mm diameter holes.

This product is not suitable for use on group 1 gases or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Bosses drilled, tapped and plugged.

TECHNICAL HELPLINE: +44 (0)1473 277400
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FM278
PN25

Ductile Iron Strainer

Scale and dirt in piping systems causes endless trouble and frequent serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter with piping systems.

The FM278 offers the integrity of manufacture, quality and reliability which are the hallmarks of Crane products.

Cap tapped and plugged for drain (drain valve sold separately).


FM278

Materials

NO.	PART	MATERIAL
1	Body	Ductile Iron - BS EN 1563 EN GJS 500/7
2	Cap	Ductile Iron - BS EN 1563 EN GJS 500/7
3	Gasket	Asbestos Free
4	Plug	Ductile Iron - BS EN 1563 EN GJS 500/7
5	Screen	304 Stainless Steel

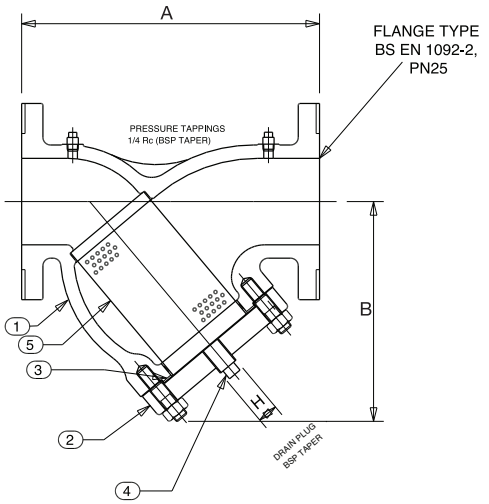
Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	H (Rc)
50	12.0	230	146	½"
65	25.0	273	174	1"
80	33.0	295	198	1"
100	43.0	352	232	1"
125	73.0	416	285	1¼"
150	97.0	470	305	1½"
200	164.0	543	401	1½"
250	270.0	660	473	2"
300	400.0	770	554	2"

Pressure/Temperature Ratings

TEMPERATURE °C	-10 to 120
PRESSURE (BAR)	25

Dimensional Drawing



PRESSURE RATING: PN25

END CONNECTION: Flanged to BS EN 1092-2 PN25

SPECIFICATION: Flanges conform to BS EN 1092-2 PN25 Section 3.2 table 11 with raised face.

Strainers are supplied with a stainless steel perforated strainer element having 1.6mm diameter holes.

This product is suitable for use on Group 2 liquids only, as defined by the Pressure equipment Directive 97/23/EC.

Project Gallery

Project: Domino's Pizza HQ, Milton Keynes
Client: Domino's Pizza Group
Architect: Q2 Architects
Mechanical and Electrical Consultant: Couch Perry & Wilkes LLP
Contractor: The Buckingham Group
Mechanical and Electrical Contractor: Walter Miles
Distributor: BSS Ltd, Leicester
Specification: Crane Fluid Systems' isolation and commissioning valves

Commissioning valve units, strainers and associated products from Crane Fluid Systems have been installed at the commissary recently built for Domino's Pizza Group, the leading pizza delivery company in the UK and Ireland, at West Ashland, Milton Keynes.

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S Shand-Brown

The state-of-the-art facility will provide for the planned future growth of Domino's global business. Over 500 of its stores will rely on the new commissary for the fresh dough and other ingredients they need to produce consistently high-quality pizzas. Crane's isolation and commissioning valves will play a vital role in managing energy use within the £20 million building.

Boasting a compact, space-saving design and fast commissioning, they require fewer on-site joints and thus offer considerable installed cost savings.

Designed by Q2 Architects to the highest environmental standards, the new building's exterior emulates the sleek form of the adjacent MK stadium. It covers an area of some 7,400sq m (80,000sq ft) and incorporates production facilities as well as a distribution warehouse.

...TO CONNECT

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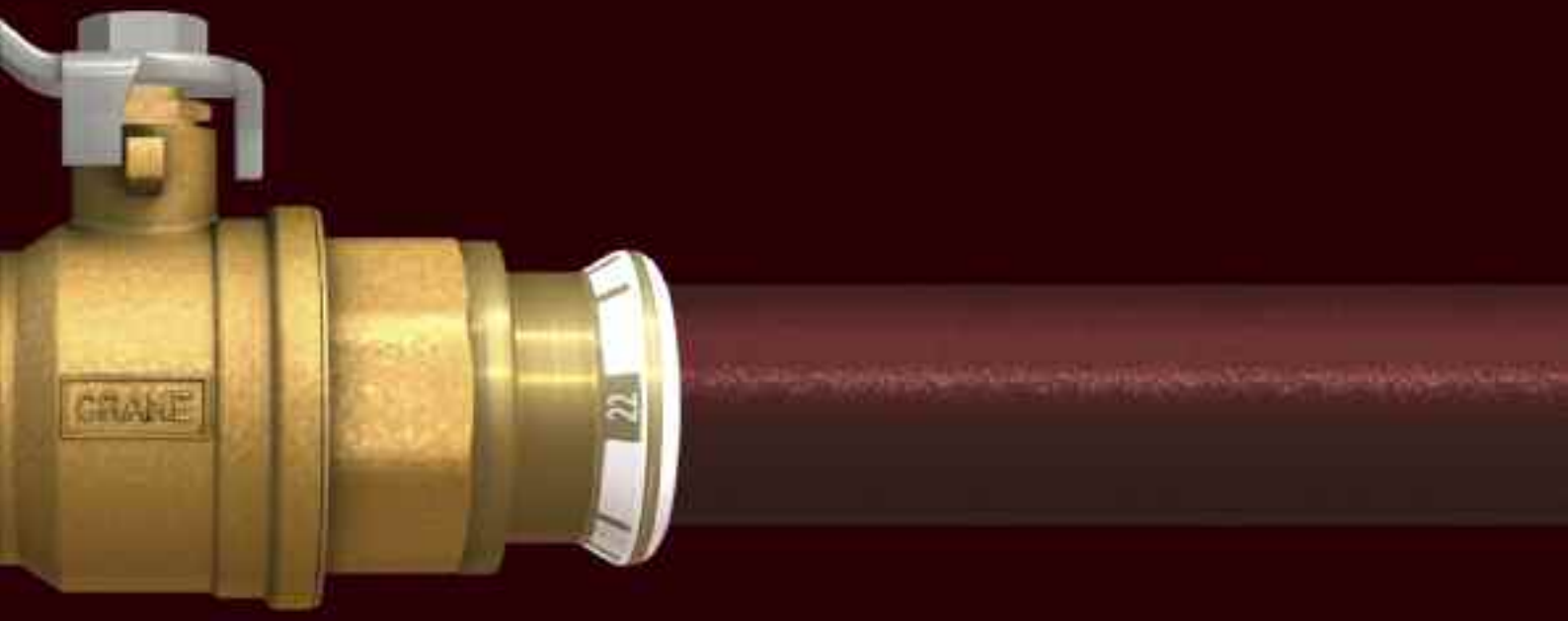


T VALVES

MAPRESS TECHNOLOGY

D921.PF Range
Bronze Double Regulating Valve - PN16

Features & Benefits

- Double regulating valve complete with Press-Fit connectors
- Provides precise and accurate flow regulation
- Standard flow coefficients of D921 and D923 are still valid
- Supplied as one integral unit, meaning less joints to make on-site
- The performance, exact dimensions and tolerances are known in advance
- Incorporates both Crane Fluid Systems and proven Geberit Mapress technology
- Vibration tested to DVGW and bend tested to BS EN 331
- Quickly and easily installed using a Press-Fit tool (supplied by others)

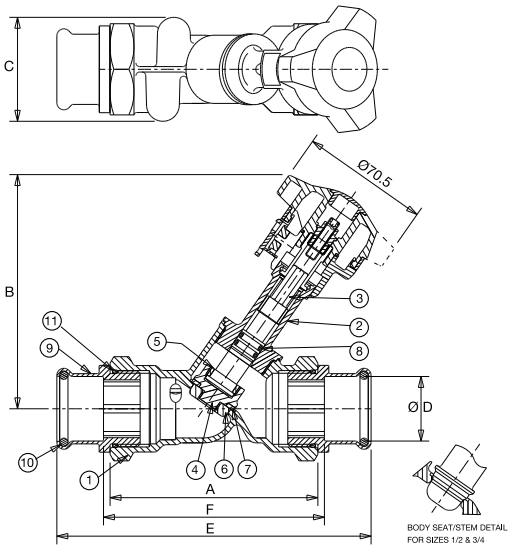

D921.PF


D921.PF Pressed

Materials

NO.	PART	MATERIAL
1	Body	Bronze BS EN 1982 CC49IK
2	Bonnet 1/2" - 1 1/4"	DZR Brass BS EN 12165 CW602N
	Bonnet 1 1/2" - 2"	Bronze BS EN 1982 CC491K
3	Stem	DZR Brass BS EN 12165 CW602N
4	Disc	DZR Brass BS EN 12165 CW602N
5	Disc Retaining Ring (Sizes 1-2" only)	DZR Brass BS EN 12165 CW602N
6	Balancing Cone	DZR Brass BS EN 12165 CW602N
7	Disc Face (Sizes 1-2" only)	PTFE WRAS approved
8	O-Ring Seal	EPDM Rubber WRAS approved
9	Press-Fit Connector	Bronze BS EN 1982 CC499K
10	Connector O-Ring	CIIR Butyl Rubber WRAS approved
11	Joint O-Ring	EPDM Rubber WRAS approved

Dimensional Drawing



Dimensions & Weights

FIG NO.	SIZE (mm)	DIMENSIONS (mm) A	B	C	ØD	E	F	WEIGHT (kg)
D921.PF / D923.PF	15	87	105	46	15	136.6	92.6	0.636
	18	87	105	46	18	133.0	94.0	0.640
D921.PF	22	96	106	51	22	147.0	106.0	0.718
	28	100	51	56	28	151.6	106.6	1.066
	35	114	56	57	35	172.4	121.4	1.354
	42	125	57	61	42	193.2	134.2	1.816
	54	146	75	75	54	227.0	158.0	2.412

PRESSURE RATING: PN16
TEMPERATURE RATING: -10 to 120°C
OPTIONS: Available in standard flow (D921.PF) and low flow (D923.PF)

CRANE FS D921.PF SPECIFICATION CLAUSE: Bronze (BS EN 1982 CC491K) Y-Pattern Globe Type Double Regulating Valve giving modified equal percentage performance with characterised throttling disc and authority sufficient to regulate flow in circuits incorporating flow measurement devices. Double regulating feature set by Allen Key and valve operation by Microset handwheel having two holes to facilitate fitting of wire security seals. Disc with PTFE insert on sizes 1" and above. Conforms to BS7350 for flow regulation. Complete with Geberit Mapress bronze Press-Fit adaptors. Rated PN16, maximum temperature 120°C.

Other specifications clauses are available on request and on our website.

TECHNICAL HELPLINE: +44 (0)1473 277400
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D931.PF Range
Bronze Fixed Orifice Double Regulating Valve - PN16

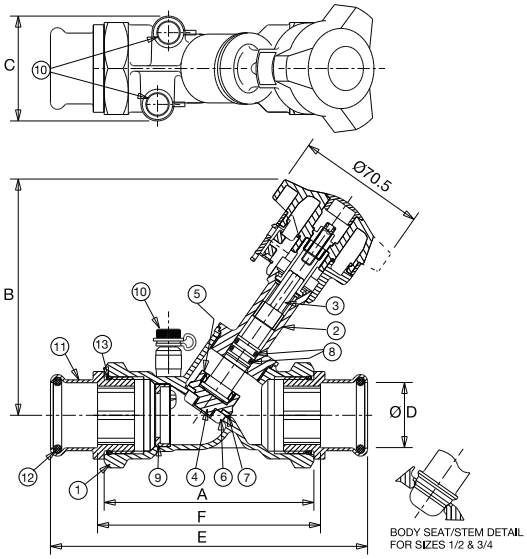
Features & Benefits

- Fixed orifice double regulating valve complete with Press-Fit connectors
- Provides precise and accurate flow regulation and measurement
- Standard flow coefficients of D931, D933 and D934 are still valid
- Supplied as one integral unit, meaning less joints to make on-site
- The performance, exact dimensions and tolerances are known in advance
- Incorporates both Crane Fluid Systems and proven Geberit Mapress technology
- Vibration tested to DVGW and bend tested to BS EN 331
- Quickly and easily installed using a Press-Fit tool (supplied by others)

Materials

NO.	PART	MATERIAL
1	Body	Bronze BS EN 1982 CC49IK
2	Bonnet 1/2" - 1 1/4"	DZR Brass BS EN 12165 CW602N
	Bonnet 1 1/2" - 2"	Bronze BS EN 1982 CC491K
3	Stem	DZR Brass BS EN 12165 CW602N
4	Disc	DZR Brass BS EN 12165 CW602N
5	Disc Retaining Ring (Sizes 1-2" only)	DZR Brass BS EN 12165 CW602N
6	Balancing Cone	DZR Brass BS EN 12165 CW602N
7	Disc Face (Sizes 1-2" only)	PTFE WRAS approved
8	O-Ring Seal	EPDM Rubber WRAS approved
9	Orifice Insert	DZR Brass BS EN 12164 CW602N
10	Cat. No. P84 Press. Test Valve	DZR Brass BS EN 12164 CW602N
11	Press-Fit Connector	Bronze BS EN 1982 CC499K
12	Connector O-Ring	CIIR Butyl Rubber WRAS approved
13	Joint O-Ring	EPDM Rubber WRAS approved

Dimensional Drawing



Dimensions & Weights

FIG NO.	SIZE (mm)	DIMENSIONS (mm) A	B	C	ØD	E	F	WEIGHT (kg)
D931.PF / D933.PF / D934.PF	15	87	105	46	15	136.6	92.6	0.716
	18	87	105	46	18	133.0	94.0	0.720
D931.PF	22	96	106	51	22	147.0	106.0	0.788
	28	100	127	56	28	151.6	106.6	1.136
	35	114	128	57	35	172.4	121.4	1.434
	42	125	143	61	42	193.2	134.2	1.906
	54	146	144	75	54	227.0	158.0	2.512

PRESSURE RATING: PN16
TEMPERATURE RATING: -10 to 120°C
OPTIONS: Available in standard flow (D931.PF), low flow (D933.PF) and ultra-low flow (D934.PF)

CRANE FS D931.PF SPECIFICATION CLAUSE: Bronze (BS EN 1982 CC491K) Y-Pattern Globe Type Fixed Orifice Double Regulating Valve incorporating integral orifice with corner tappings terminating in Crane P84 test points. Double regulating feature set by Allen Key and valve operation by Microset handwheel having two holes to facilitate fitting of wire security seals. Disc with PTFE insert on sizes 1" and above. The entire unit provides a measurement accuracy of ± 5%. Conforms to BS 7350 for flow measurement and regulation. Complete with Geberit Mapress bronze Press-Fit adaptors Rated PN16, maximum temperature 120°C.

Other specifications clauses are available on request and on our website.

D171A.PF Range
DZR Ball Valve - PN16

Features & Benefits

- Quarter-turn full-bore isolation valve complete with Press-Fit connectors
- Supplied as one integral unit, meaning less joints to make on-site
- The performance, exact dimensions and tolerances are known in advance
- Incorporates both Crane Fluid Systems and proven Geberit Mapress technology
- Vibration tested to DVGW and bend tested to BS EN 331
- Quickly and easily installed using a Press-Fit tool (supplied by others)
- The D171A.PF Ball Valve is available with a variety of operator options - Extension Stem Lever (D171AEXS.PF), Lockshield (D171ALS.PF) and T-handle (D171ATH.PF)

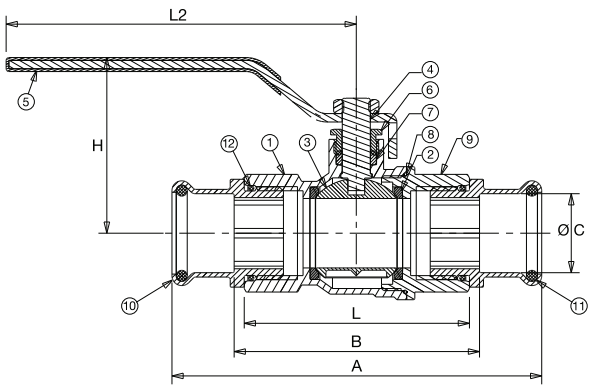

D171A.PF


D171A.PF - Pressed

Materials*

NO.	PART	MATERIAL
1	Body	DZR Brass BS EN 12165 CW602N
2	Seat	PTFE WRAS approved
3	Ball 1/2" - 1"	DZR Brass BS EN 12165 CW602N
	Ball 1 1/4" - 2"	Bronze BS EN 1982 CC491K
4	Stem	Brass BS EN 12164 CW602N
5	Handle	Steel Dacromet Plated
6	Packing Nut	DZR Brass BS EN 12165 CW617N
7	Packing Gland	PTFE WRAS approved
8	O-Ring Seal	EPDM Rubber WRAS approved
9	Seat Retainer	DZR Brass BS EN 12165 CW602N
10	Press-Fit Connector	Bronze BS EN 1982 CC499K
11	Connector O-Ring	CIIR Butyl Rubber WRAS approved
12	Joint O-Ring	EPDM Rubber WRAS approved

Dimensional Drawing



Dimensions & Weights*

SIZE (mm)	DIMENSIONS (mm)						WEIGHT (kg)
	L	A	B	ØC	L2	H	
15	59	104	63	15	99	48	0.319
18	59	105	64	18	99	48	0.323
22	67	118	75	22	99	51	0.463
28	80	132	85	28	125	63	0.728
35	94	152	99	35	140	78	1.146
42	102	170	102	42	140	84	1.527
54	124	205	134	54	165	98	2.382

PRESSURE RATING: PN16
TEMPERATURE RATING: -10 to 120°C
OPERATOR: Lever - D171A.PF,
Extension stem lever - D171AEXS.PF,
Lockshield - D171ALS.PF and T-handle - D171ATH.PF

CRANE FS D171A.PF SPECIFICATION CLAUSE: DZR Brass (CW 602N) bodied end-entry ball valve. Full bore. Quarter-turn, lever operated. DZR brass ball chrome plated. Virgin PTFE seats, blow-out proof stem. Complete with Geberit Mapress bronze Press-Fit adaptors. Rated PN16, maximum temperature 120°C.

Other specifications clauses are available on request and on our website.

*Information shown is for D171A.PF. Options with other operators are available on request.

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D138.PF
Bronze Check Valve - PN16

Features & Benefits

- Check valve complete with Press-Fit connectors
- Permits flow in one direction and automatically closes if flow reverses
- Supplied as one integral unit, meaning less joints to make on-site
- The performance, exact dimensions and tolerances are known in advance
- Incorporates both Crane Fluid Systems and proven Geberit Mapress technology
- Vibration tested to DVGW and bend tested to BS EN 331
- Quickly and easily installed using a Press-Fit tool (supplied by others)


D138.PF


D138.PF - Pressed

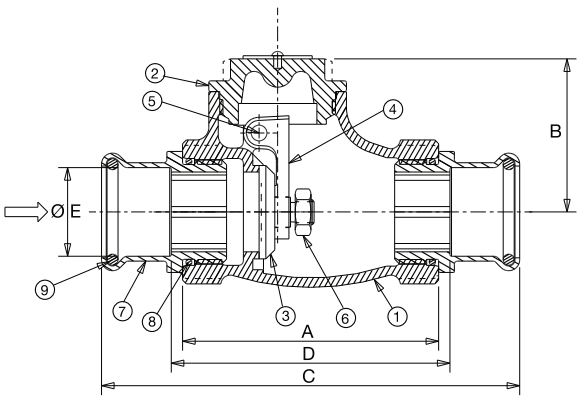
Materials

NO.	PART	MATERIAL
1	Body	Bronze BS EN 1982 CC491K
2	Cap	Bronze BS EN 1982 CC491K
3	Disc 1/2" - 1"	Brass BS EN 12164 CW614N
	Disc 1/4" - 2"	Bronze BS EN 1982 CC491K
4	Hinge	Bronze BS EN 1982 CC491K
5	Hinge Pin	Stainless Steel BS970 GR316S11
6	Hinge Nut	Brass BS EN 12164 CW614N
7	Press-Fit Connector	Bronze BS EN 1982 CC499K
8	Joint O-Ring	EPDM Rubber WRAS approved
9	Connector O-Ring	CIIR Butyl Rubber WRAS approved

Dimensions & Weights

SIZE (mm)	DIMENSIONS (mm) A	B	C	D	ØE	WEIGHT (kg)
15	59.5	33	104.1	65.1	15	0.42
18	59.5	38	105.5	66.5	18	0.42
22	68.0	42	119.0	78.0	22	0.57
28	81.5	49	133.1	88.1	28	0.70
35	93.2	56	151.6	100.6	35	1.31
42	98.3	65	166.5	107.5	42	1.73
54	110.6	76	191.6	122.6	54	2.65

Dimensional Drawing



PRESSURE RATING: PN16
TEMPERATURE RATING: -10 to 120°C

CRANE FS D138.PF SPECIFICATION CLAUSE: Bronze (BS 1982 CC491K) check valve, swing type to BS 5154 series 'B'. Metal disc, free to rotate and hinge pin mounted. Screwed-in cap. Integral seat. Complete with Geberit Mapress bronze Press-Fit adaptors. Rated PN16, maximum temperature 120°C.

D298.PF
Bronze Strainer - PN16

Features & Benefits

- Strainer complete with Press-Fit connectors
- Helps prevent damage to pipeline equipment caused by scale and dirt
- Supplied as one integral unit, meaning less joints to make on-site
- The performance, exact dimensions and tolerances are known in advance
- Incorporates both Crane Fluid Systems and proven Geberit Mapress technology
- Vibration tested to DVGW and bend tested to BS EN 331
- Quickly and easily installed using a Press-Fit tool (supplied by others)


D298.PF


D298.PF - Pressed

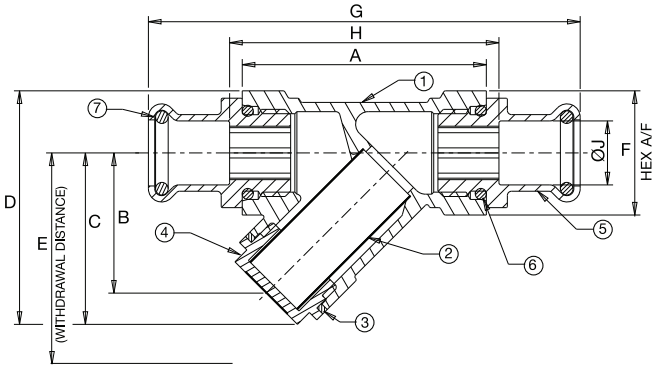
Materials

NO.	PART	MATERIAL
1	Body	Bronze BS EN 1982 CC49IK
2	Mesh	Stainless Steel AISI Type 304
3	Cap Seal	PTFE WRAS approved
4	Cap	Bronze BS EN 1982 CC491K
5	Press-Fit Connector	Bronze BS EN 1982 CC499K
6	Joint O-Ring	EPDM Rubber WRAS approved
7	Connector O-Ring	CIIR Butyl Rubber WRAS approved

Dimensions & Weights

SIZE (mm)	MESH HOLE Ø	DIMENSIONS (mm) A	B	C	D	E	F	G	H	ØJ	WEIGHT (kg)
15	0.75	58	33	40	55	62	27	103	64	15	0.284
18	0.75	58	33	40	55	62	27	104	64	18	0.290
22	0.75	70	42	54	69	80	33	121	80	22	0.443
28	0.75	88	48	60	80	93	40	140	95	28	0.612
35	1.40	96	55	69	95	108	49	154	103	35	1.064
42	1.40	107	61	76	107	118	55	175	117	42	1.416
54	1.40	126	79	99	135	153	67	207	138	54	2.030

Dimensional Drawing



PRESSURE RATING: PN16
TEMPERATURE RATING: -10 to 120°C

CRANE FS D298.PF SPECIFICATION CLAUSE: Bronze (BS EN 1982 CC491K) Y-Type strainer. Fitted with perforated stainless steel screen with 0.75 mm holes (1/2" to 1") and 1.40mm holes (1 1/4" to 2"). Machined screen seats in body and cap ends. Screwed-in cap with captive washer. Complete with Geberit Mapress bronze Press-Fit adaptors Rated PN16, maximum temperature 120°C.

Project Gallery

Project: Phase III, The Avenues, Kuwait
Developers: Gensler (London and Los Angeles), Mabanee Co.
Contractor: Bader Al Mulla
Distributor: Asia Electro-Mechanical
Specification: A wide range of traditional and commissioning valves from Crane Fluid Systems

Phase 3 of Kuwait's largest shopping destination is underway and consists of more than 86,000sq m of retail space. The project will be completed in 2012. Located in the Al Rai district of Kuwait City, the mall has been designed by the London and Los Angeles offices of Gensler in conjunction with Kuwait developers, Mabanee. Once complete, the third phase will house 545 retail units. This stage of the project was awarded to Bader Al Mulla, one of Kuwait's top MEP contractors, on a very tight timescale. Crane Fluid Systems, together with their distributor, Asia Electro-Mechanical, are committed to holding valve stocks in Kuwait to service this project and ensure no delays. This was a key factor in persuading Bader Al Mulla to place the order for the complete range of valves with Asia/Crane FS.

The first phase of the project opened in April 2007 and includes the largest IKEA in the region, the first Carrefour supermarket in Kuwait and a 10 screen cinema complex. The building design is inspired by the natural forms and elements of the desert. It is also built using environmentally-friendly techniques which utilise natural sunlight.

Once complete, the mall will include more than 100 restaurants, a spa, an entertainment centre, a boutique mall, hotels, offices, a convention centre and a theatre.

D1880
PN16

Features & Benefits

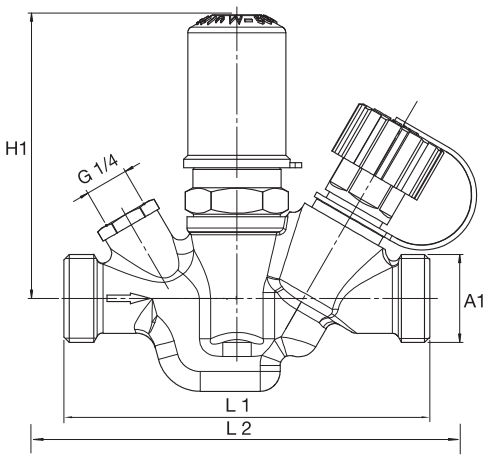
- Ideal for domestic hot water systems to assist with protection against legionella
- Provides self-balancing, thermostatically controlled regulation of flow and disinfection
- Suitable for circuits greater than 10 metres in length
- Thermostatically controlled regulation of the volume flow – self-balancing
- Assists with disinfection at temperatures above 70°C by increasing the flow automatically
- Has an accuracy of +/- 1°C


D1880

Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Upper Part	Bronze BS EN 1982 CC491K
Valve Stem	Bronze BS EN 1982 CC491K
Valve Cone	Bronze BS EN 1982 CC491K
Upper Part Seal, Valve Stem Seal	EPDM 70 EPDM
Closing Upper Part Valve Cone Seal	PTFE Teflon
Drain Plug	Bronze BS EN 1982 CC491K
Closing Handle	Plastic Polyacetal (PA)
Plate / Clamping Band	Plastic Polyacetal (PA)

Dimensional Drawing



Dimensions & Weights

NOM INSIDE DIA (mm)	HEIGHT (H1) (mm)	LENGTH (L1) (mm)	LENGTH (L2) COPPER TAILS (mm)	LENGTH (L2) MAPRESS COPPER (mm)	LENGTH (L2) MEPLA (mm)	WEIGHT (kg)	FLOW Kv (cmb/h)	DRAIN VALVE (G) (BSP)
15	85	110	176	172	174	0.7	0.92	1/4
20	85	123	186	174	178	0.9	1.70	1/4
25	95	133	200	182	186	1.2	2.71	1/4

Pressure/Temperature Ratings

TEMPERATURE °C	90
PRESSURE (BAR)	16

PRESSURE RATING: PN16

OPERATING INSTRUCTIONS: When the set point is preset to 57°C, the valve remains completely open up to a valve temperature of 52°C. Between 52°C and the preset set point of 57°C, the valve starts to close. When the set point temperature has been reached, a minimum volume flow is continuously flowing through the circulation system.
If the storage temperature is further increased to temperatures greater than 70°C to effect disinfection, the valve increases the flow.

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D1890
PN16

Features & Benefits

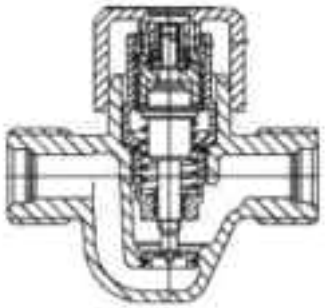
- Ideal for domestic hot water systems to assist with protection against legionella
- Provides self-balancing, thermostatically controlled regulation of flow and disinfection
- Suitable for circuits less than 10 metres in length
- Thermostatically controlled regulation of the volume flow – self-balancing
- Assists with disinfection at temperatures above 70°C by increasing the flow automatically
- Has an accuracy of +/- 1°C


D1890

Materials

PART	MATERIAL
Body	Bronze BS EN 1982 CC491K
Upper Part	Bronze BS EN 1982 CC491K
Valve Stem	Bronze BS EN 1982 CC491K
Valve Cone	Bronze BS EN 1982 CC491K
Upper Part Seal, Valve Stem Seal	EPDM 70 EPDM
Closing Upper Part Valve Cone Seal	PTFE Teflon
Drain Plug	Bronze BS EN 1982 CC491K
Closing Handle	Plastic Polyacetal (PA)
Plate / Clamping Band	Plastic Polyacetal (PA)

Dimensional Drawing



Dimensions & Weights

NOM INSIDE DIA (mm)	HEIGHT (mm)	LENGTH (mm)	LENGTH COPPER TAILS (mm)	LENGTH MAPRESS (mm)	LENGTH MEPLA (mm)	WEIGHT (kg)	FLOW Kv (cmb/h)
15	47	86.5	152	148	150	0.4	0.92

Pressure/Temperature Ratings

TEMPERATURE °C	90
PRESSURE (BAR)	16

PRESSURE RATING: PN16

OPERATING INSTRUCTIONS: When the set point is preset to 57°C, the valve remains completely open up to a valve temperature of 52°C. Between 52°C and the preset set point of 57°C, the valve starts to close. When the set point temperature has been reached, a minimum volume flow is continuously flowing through the circulation system.
If the storage temperature is further increased to temperatures greater than 70°C to effect disinfection, the valve increases the flow.

D1088
TMV 3

Features & Benefits

- Blends hot and cold water to ensure constant, controlled safe outlet temperature
- Fulfils the 'duty of care' requirements against scalding
- Ideal for healthcare, schools, workplace and domestic environments
- Flat face union ensures easy removal for maintenance
- Integral strainers and check valves
- Tamper-proof adjustment


D1088 TMV 3

Materials

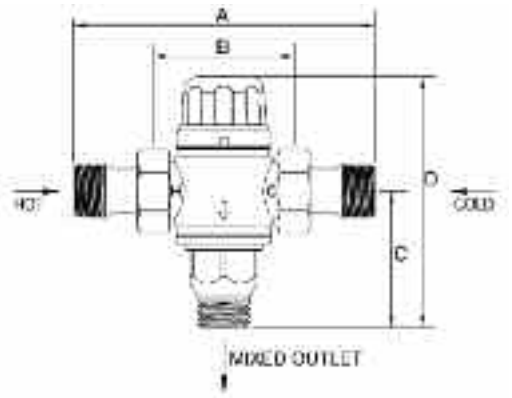
PART	MATERIAL	QUANTITY
O-Ring	EPDM Rubber	7
1.5 Strainer	Stainless Steel 304	2
Reduction Union	DZR Brass CW602N	2
Element	Vernet 0304	1
Spring	Stainless Steel 304	1
Top	DZR Brass CW602N	1
Valve Body	DZR Brass CW602N	1

Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
15	0.6	122	58	55	102
22	0.8	145	58	70	117

FACTORY SETTING	38°C
TEMPERATURE SETTING RANGE	35-46°C
MINIMUM HOT TO MIX TEMPERATURE	10°C
TEMPERATURE STABILITY	±2°C
MAXIMUM WORKING PRESSURE	10 bar
KV	1.26
MINIMUM FLOW PRESSURE	0.2 bar

Dimensional Drawing



PRESSURE RATING: PN10
OPERATOR: Lockshield

SPECIFICATION: The D1088 has been independently tested and certified as meeting the requirements of the D08 specification under the TMV 3 scheme. Crane products are designed for installation and use within suitably designed systems reflecting CIBSE, BSRIA and HVAC guidelines.

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D1089
TMV 3

Features & Benefits

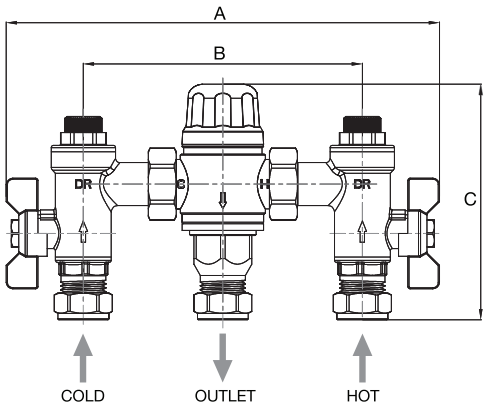
- Blends hot and cold water to ensure constant, controlled safe outlet temperature
- Fulfils the 'duty of care' requirements against scalding
- Ideal for healthcare, schools, workplace and domestic environments
- Flat face union ensures easy removal for maintenance
- Integral strainers and check valves
- Tamper-proof adjustment
- Includes ball valves for isolation

D1089 TMV 3

Materials

PART	MATERIAL	QUANTITY
O-Ring	EPDM Rubber	12
1.5 Strainer	Stainless Steel 304	2
Reduction Union	DZR Brass CW602N	2
Element	Vernet 0304	1
Spring	Stainless Steel 304	1
Top	DZR Brass CW602N	1
Valve Body	DZR Brass CW602N	1
Ball	DZR Brass CW602N	1
T-Handle	Al Alloy	1
Ball Seal	PTFE	2

Dimensional Drawing



Dimensions & Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
15	1.1	200	128	110
22	1.3	200	128	110

FACTORY SETTING	38°C
TEMPERATURE SETTING RANGE	35-46°C
MINIMUM HOT TO MIX TEMPERATURE	10°C
TEMPERATURE STABILITY	±2°C
MAXIMUM WORKING PRESSURE	10 bar
KV	1.26
MINIMUM FLOW PRESSURE	0.2 bar

PRESSURE RATING: PN10
OPERATOR: Lockshield

SPECIFICATION: The D1089 has been independently tested and certified as meeting the requirements of the D08 specification under the TMV 3 scheme. Crane products are designed for installation and use within suitably designed systems reflecting CIBSE, BSRIA and HVAC guidelines.

TYPICAL Kv VALUES

Typical Kv values for various valves to enable Pressure Drop calculations to be made.
For other pipe specifications, valve sizes and valve types, please refer to Crane Fluid Systems.

GATE VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	21.32	38.88	65.69	116.23	161.93	280.6	411.33	635.13	1125.41	1823.03	2718.96	4873.47	7681.73	11315.64

GLOBE VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	3.27	5.96	10.08	17.83	24.84	43.04	63.1	97.42	172.63	279.64	417.07	747.56	1178.32	1735.74

BUTTERFLY VALVES

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	-	-	-	-	-	133	240	410	655	900	1800	3550	7350	9100

BALL VALVES

SIZE (mm)	8	10	15	20	25	32	40	50	65	80
Kv	9	11	20	47	77	1412	198	338	593	82

CHECK VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	8.53	15.55	26.27	46.49	64.77	112.24	164.53	254.05	450.16	729.21	1087.59	1949.39	3072.69	4526.25

STRAINERS (Flanged) (BS 1387 Medium Grade Steel Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	-	-	-	-	33	57	91	131	232	372	544	952	1470	2151

STRAINERS (Threaded) (BS 1387 Medium Grade Steel Pipe)

SIZE (mm)	15	20	25	32	40	50
Kv	4.8	8.8	16.1	25.5	36	68

COMMISSIONING VALVES (Fixed Orifice Double Regulating Valve - Crane DM941)

SIZE (mm)	65	80	100	125	150	200	250	300
Kv	72	100	124	229	324	525	1058	1329

COMMISSIONING VALVES (Fixed Orifice Double Regulating Valve - Crane D931)

SIZE (mm)	15	20	25	32	40	50
Kv	1.87	3.14	5.59	10.8	18.1	29.1

Please do not hesitate to contact us if you require further information, Technical Helpline on +44 (0)1473 277400

Project Gallery

Project: Brockholes Floating Visitors Centre, Preston
Client: Lancashire Wildlife Trust
Main Contractor: Mansell Construction & Balfour Beatty Civil Engineering
M&E Contractor: Smith Group Ltd
Architect: Adam Khan Architects
Distributor: BSS Ltd, Preston
Specification: Wide range of traditional isolating valves and commissioning sets from Crane Fluid Systems

Valves from Crane Fluid Systems have been installed in the heating and air conditioning system of a new, floating visitors centre at Lancashire Wildlife Trust's Brockholes Wetland and Woodland Reserve, situated near Preston. The visitor centre opened in Spring 2011.

Adam Khan Architects designed the unique structure, which will sit less than a foot off the water, to be made of light timber and to have minimal impact on the environment in which it sits. To avoid disturbance at the reserve, Crane FS valves were installed, into the single-storey buildings, offsite.

The construction has been built with sustainability in mind. It features low carbon technologies and smart water metering. Heating and hot water are generated using a biomass boiler fuelled by wood chips. Crane FS valves were chosen because of their weight and space saving as well as their long design life expectancy.

Andy Cook, Project Manager from Smith Group Ltd said, "This was an extremely interesting project from a green perspective. Every choice of component had to be justified as having a small carbon footprint and at the same time, be lightweight. The Crane FS valves were quick and easy to install in modules offsite."

Brockholes has many different natural habitats, including lakes, reed beds, grassland and woodland, attracting all types of wildlife to the area. The centre will finance the reserve, allowing up to 400 visitors to access facilities which will include a café, shop and gallery along with education/meeting rooms.

Specification

Pipe Threads

The machined threads of Crane fittings are supplied to conform with the gauging requirements of BS EN 10226-2 and BS 21. Threads on all fittings are chamfered to assist assembly and avoid 'cross threading'. Female fittings have a chamber behind the thread, permitting the male thread to be assembled without restriction or 'bottoming'.

Design Standards

ISO 49:1994 is the international standard for 'Malleable cast iron fittings' threaded to ISO 7-1. This standard was revised in December 1994 and, compared with the 1983 edition, contained some technical revisions relating to use of alternative ferrous materials, hot dip zinc coatings, dispatch condition, pressure/temperature ratings, acceptance tests, marking and quality assurance.

BS EN 10242:1995 is the new British European Standard for 'Threaded pipe fittings in malleable cast iron' first published in August 1995 and very closely follows ISO 49:1994, the main difference being the inclusion of two informative annexes relating to 'Assessment of conformity' and the 'Relationship with the essential requirements of the Construction Products Directive (84/106/EEC)'.

All European Standards have to be adopted by the member countries of the EU and any conflicting national standards withdrawn. BS 143 and 1256:2000 has been retained to cover those fittings not in BS EN 10242. It should also be noted that BS EN 10242 details a number of fitting types and sizes which were not included in BS 143 & 1256 because they were not in regular demand and/or not available from UK manufacturers. BS 143 & 1256:2000 specifies requirements for the design and performance of 'Malleable cast iron and cast copper alloy threaded pipe fittings' and has developed over many years. BS 143 was first published in 1922 and BS 1256 in 1945, subsequently the two standards were combined in 1968. The BS 143 design requires fittings to have taper external threads and taper internal threads conforming to BS EN 10226 whereas the BS 1256 design has taper external threads and parallel internal threads. The 1986 revision was more closely related to ISO 49:1983 and more accurately reflected the ranges of fittings available from UK manufacturers. BS 143 & 1256 has always been technically more demanding than ISO 49 and consequently BS EN 10242.

BS 143 & 1256 were amended in August 1995 to delete those fittings now covered by BS EN 10242, so the scope of BS 143 & 1256 is now essentially:

(a) BS 143 design and BS 1256 design fittings in malleable iron not covered by BS EN 10242,
(b) BS 143 design fittings threaded to ANSI B1.20.1 (NPT) and
(c) BS 143 design fittings made in cast copper alloy (bronze) material.

Conformance of Crane Fittings

Both malleable iron and steel fittings have been verified by the British Standards Institute (BSI) as conforming to BS EN 10242 and BS 143 & 1256, as appropriate, and as such are permitted to bear the British Standards Kitemark Logo - Kitemark Licence No. KM00382.

Some small size fittings are manufactured in steel and will conform to BS EN 10241.

Crane malleable iron fittings also have the approval of the Loss Prevention Certification Board (LPCB) for use in sprinkler systems.

The Pressure Equipment Directive 97/23/EC (PED)

The Directive applies to the design, manufacture and conformity of pressure equipment and assemblies of pressure equipment with a maximum allowable pressure greater than 0.5 bar. Individual piping components, such as fittings, are excluded from the scope of the Directive and therefore cannot be CE marked. However, Crane pipe fittings are manufactured to the appropriate European standards and satisfy the essential safety requirements of the PED.

A 'Certificate of Incorporation for Pipe Fittings' can be accessed on the Crane website, or will be provided on request from Crane.

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Specification

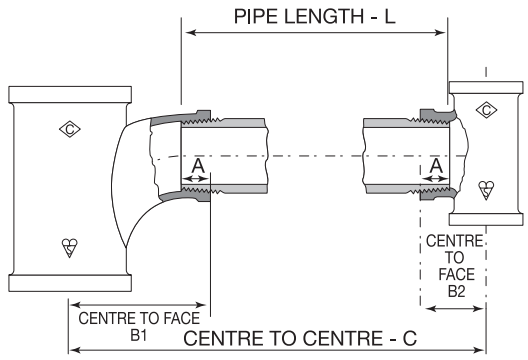
Piping Installation

Compiled from British and International standards on Pipe Threads BS EN 10226 (supercedes BS 21) and Pipe Fittings standards BS EN 10242, BS 143 & 1256 and ISO 49.

Much unnecessary labour and creation of random lengths of pipe might be saved by the application of a few simple figures by the engineer when erecting the pipe line. Generally the pipeline, section by section, is either accommodated within fixed limits, usually the lines of building construction, or is fixed by prescribed dimensions. Except in the case of a continuous run of piping connected either by sockets or flanges, the engineer needs to know the length of pipe required to make up between fixed positions of fittings prior to cutting and threading.

The diagram below and table of 'A' dimensions indicates the length of thread engagement of BS EN 10226 taper pipe threads in nominal sizes 1/8 to 6 inch.

The approximate pipe length is calculated by using the expression L = C - (B1 + B2) + 2A.



'A' Dimension Information

FITTING SIZE (inch)	A (mm)
1/8	7
1/4	10
3/8	10
1/2	13
3/4	15
1	17
1 1/4	19
1 1/2	19
2	24
2 1/2	27
3	30
4	36
5	40
6	40

Dimensions given do not allow for tapping or threading tolerances.

Pipe Ends

Users are advised to ensure that the external threads on the pipe being screwed into Crane fittings are free from damage or any malformation and conform to the gauging requirements of BS EN 10226.

ISO – BS EN – BS Identification Symbols

SYMBOL	TYPE	CRANE FIG. NO. MALLEABLE	BRONZE
A1	Elbows	151	J51
A1/45°		155	J55
A4		152	J53
B1	Tees	161	J61
-		163	-
C1	Crosses	171	J71
D1	Bends	193	-
D4		192	-
D4/45°		156	-
-		191	-
E1	Pitcher tees	199	-
E2	Twin elbows	197	-
Kb1	Return bends	213	-
-	Sockets	176	J76
M2		177	-
M2		179	J79
M3		180	-
N4	Bushes	140	J40
N8	Nipples	144	J44
N8		145	J45
P4	Back nuts	150	J50
T2	Caps	185	J85
T8	Plugs	147	-
T8		148	J48
T9		146	-
T11		149	J49
U1	Unions	241	
U11		256	J256
U11		271	
U11		289	-
U12		257	-
U12		272	-
UA11	Elbow	261	-
UA11	Unions	276	-
UA12		262	-
UA12		277	-

The symbols shown in the above table are those given in BS 143 & 1256, BS EN 10242 and ISO 49 for malleable iron fittings and in BS 143 & 1256 for copper alloy fittings, and relate to the identification of fitting types.

Specification

Designation of Fitting Size

The designation of fitting size for the fittings shown in this catalogue is as follows:

EQUAL FITTINGS: Equal fittings where all outlets are the same size are designated by that one size, irrespective of the number of outlets.

UNEQUAL FITTINGS: Unequal fittings (reducing or enlarging) are specified by the sizes of each outlet, the sequence being dependent on the number of outlets:

(a) For fittings having two outlets, the larger outlet is specified first.

Example: Fig. No. 145 hexagon reducing nipple with one end threaded size 2 and other end threaded size 1, is designated 2 x 1.

(b) For fittings having more than two outlets, Crane uses BS EN 10242 method (b) which gives the run as the first and second sizes of the designation and the branch as the third size of the designation.

This is in contrast to BS EN 10242 method (a) which gives the run as the first and third sizes of the designation and the branch as the second size of the designation. This method is used in certain international markets. (Please see the diagrams below for a visual explanation).

BS EN 10242 method (a) equivalents are specified in this catalogue where applicable.

UK method
BS EN 10242 and ISO 49
Method (b) as used by Crane.

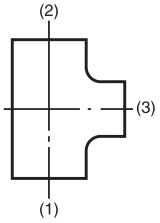


Fig. No. 161 tees

International method
BS EN 10242 and ISO 49
Method (a)

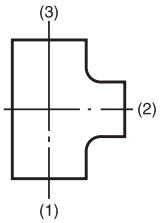


Fig. No. 161 tees

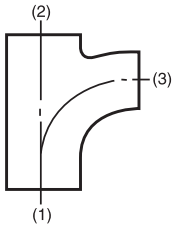


Fig. No. 199 pitcher tees

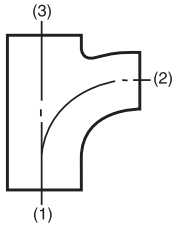


Fig. No. 199 pitcher tees

Malleable Cast Iron

Crane malleable iron is of the Blackheart type ideally suited to pipe fitting and manufacture and conforms to BS EN 1562 Designation EN-GJMB-300-6, ASTM A197 and ISO 5922.

Typical properties of Crane malleable iron are given in the table below, exceeding the requirements in the above BS EN, ASTM and ISO standards.

CHEMICAL COMPOSITION	TYPICAL	MECHANICAL PROPERTIES	TYPICAL
Total carbon	2.7%	Tensile strength (N/mm^2)	340
Silicon	1.75%	Elongation on 36mm (%)	12
Manganese	0.69%	Izod impact (room temp.) (J)	12
Sulphur	0.18%	Brinell hardness	125
Phosphorous	0.02%	Density (g/cm^3)	7.56

The close relationship between the physical properties of test bars and actual castings ensures design integrity and the preservation of high safety factors. Shock pressures within pipe systems can be tolerated with complete safety.

The corrosion resistance of Crane malleable iron is good when compared with grey cast iron and mild steel for most general applications including water, gas and steam.

Crane Bronze

Crane bronze has very good resistance to corrosion by aggressive waters, steam and other fluids which promote dezincification in certain copper alloys. It is also suitable for a wide range of temperatures.

Mild Steel

BS 143 and 1256 allow small size ($^3/_8$" and smaller) straight fittings to be supplied in other ferrous materials eg. mild steel, as an alternative to malleable cast iron, providing the mechanical properties are at least equivalent to the specified grade of malleable iron.

Individual data pages state which Crane fittings are supplied in mild steel.

Galvanising

Where additional resistance to corrosion is required, malleable cast iron fittings can be hot-dip zinc coated (galvanised) prior to machining. This process involves coating the fittings with zinc which, in addition to its natural resistance to corrosion, provides electrochemical protection where the iron of the fitting is exposed by damage. Mild steel fittings can be supplied with a proprietary zinc-based coating.

The coating weight on Crane galvanised fittings conforms to the requirements of BS EN ISO 1461 1998 and ASTM 153 with a minimum coating of 610 g/m^2 (2oz/ft^2) equal to a thickness of 86µm (0.0034 in). Average coatings are well in excess of this and exceed the requirements given in BS EN 10242 and ISO 49.

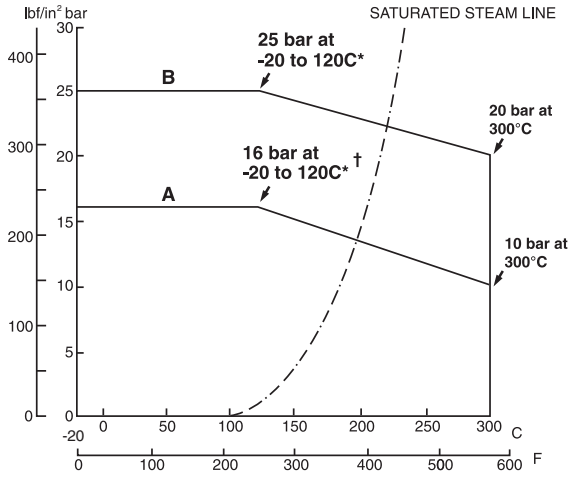
When ordering galvanised or zinc coated fittings add the suffix ‘G’ to the figure number.

Specification

Pressure/Temperature Ratings

BS 143 & 1256:1986 states that fittings are for general purposes for the transmission of fluids within the pressure and temperature ranges specified. The ratings given are uprated from those in the 1968 edition, both for malleable cast iron and bronze fittings.

The graph below shows the BS pressure temperature ratings. Crane malleable iron and bronze fittings are suitable for use at these new ratings with the exception of certain unions (see note Ø below), but such use is dependent on the suitability of the connecting pipe material, the threaded joint and any thread sealants used. Due consideration should also be given to any applicable codes of practice. Pressures stated are maximum non-shock gauge.



*Hot dip zinc coated (galvanised) fittings should not be used below -10°C (14°F).

†Bronze fittings can be used at temperatures below -20°C (-4°F). Refer to Crane for confirmation of suitability.

BS REF	MATERIAL	FITTING TYPE	STEAM, AIR, GAS & OIL SERVICE	WATER SERVICE
BS 143 & 1256 1986	Malleable Iron	All pipe fittings (including unions Ø)	Graph B	Graph B
	Bronze		Graph A	Graph A

Ø Figure No. 241 unions are limited to 230°C maximum.

Figure Nos. 271, 272, 276, 277 and 289 unions are limited to 208°C maximum.

Dimensions given do not allow for tapping or threading tolerances.

Testing

Production testing: Meets requirements of BS EN 10242 or BS 143 and 1256 as applicable. Type testing: In addition to production testing, all pressure containing fittings are required by BS EN 10242, BS 143 & 1256 and ISO 49 to be designed to withstand specified design test pressures and to be type tested accordingly - 100 bar (1450 lbf/in^2) for sizes 4 and smaller malleable iron fittings, 64 bar (928 lbf/in^2) for sizes 5 and 6 malleable iron and all sizes bronze fittings.

Tests carried out show that production fittings have safety margins well in excess of the BS requirement. Some typical burst tests on Crane fittings illustrate their capabilities - size $^1/_2$ figure no. 193 bend tested to 550 bar (8000 lbf/in^2) without failure; size 1 figure no. 241 flat seat union tested to 248 bar (3600 lbf/in^2) without failure; size 6 figure no. 151 elbow tested to 190 bar (2750 lbf/in^2) without failure.

Finish

All malleable iron fittings are given an oil finish as protection against rust while in stock or during transit and after installation prior to plant commissioning. Finished fittings are free of any polycyclic aromatic hydrocarbons.

Marking

All Crane fittings are marked with the ✣ logo and where size permits, the fitting size and Kitemark symbol. In addition, some castings also display a pattern identification number. This is normally located next to the band of the fitting.

This number is used during the manufacturing process as part of the rigorous quality control procedures to ensure consistent high-quality castings. The number is not of relevance to the end user of the product.

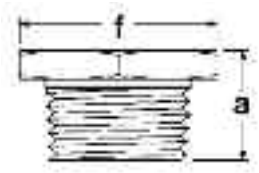
Malleable Iron

Options:


Galvanised


Black

140 Hexagon Bush
PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4 x 1/8	14	16	1.14
*3/8 x 1/8	19	19	2.51
*3/8 x 1/4	19	19	1.60
1/2 x 1/8	24	24	4.05
*1/2 x 1/4	24	24	3.64
1/2 x 3/8	24	24	3.05
3/4 x 1/8	26	30	7.56
3/4 x 1/4	26	30	6.82
3/4 x 3/8	26	30	6.51
3/4 x 1/2	26	30	5.30
1 x 1/4	29	36	11.67
1 x 3/8	29	36	11.45
1 x 1/2	29	36	10.19
1 x 3/4	29	36	8.20
1 1/4 x 1/4	31	46	17.72
1 1/4 x 3/8	31	46	19.42
1 1/4 x 1/2	31	46	18.65
1 1/4 x 3/4	31	46	16.97
1 1/4 x 1	31	46	14.17
1 1/2 x 1/4	31	52	23.72
1 1/2 x 3/8	31	52	23.96
1 1/2 x 1/2	31	52	25.18
1 1/2 x 3/4	31	52	23.45
1 1/2 x 1	31	52	20.82
1 1/2 x 1 1/4	31	52	13.62

FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
2 x 3/8	35	64	40.42
2 x 1/2	35	64	36.35
2 x 3/4	35	64	40.14
2 x 1	35	64	41.41
2 x 1 1/4	35	64	35.60
2 x 1 1/2	35	64	29.67
2 1/2 x 1/2	40	79	61.02
2 1/2 x 3/4	40	79	59.74
2 1/2 x 1	40	79	60.61
2 1/2 x 1 1/4	40	79	61.02
2 1/2 x 1 1/2	40	79	63.49
2 1/2 x 2	40	79	49.14
3 x 1/2	44	93	85.28
3 x 3/4	44	93	85.49
3 x 1	44	93	86.50
3 x 1 1/4	44	93	87.70
3 x 1 1/2	44	93	89.15
3 x 2	44	93	90.90
3 x 2 1/2	44	93	61.76
4 x 1	51	118	149.45
4 x 1 1/4	51	118	146.62
4 x 1 1/2	51	118	150.38
4 x 2	51	118	151.41
4 x 2 1/2	51	118	157.69
4 x 3	51	118	138.64
5 x 4	58	144	210.33
6 x 2	61	171	352.70
6 x 3	61	171	369.67
6 x 4	61	171	359.47

*Supplied in mild steel.

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Malleable Iron

Options:

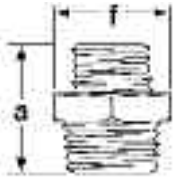

Galvanised


Black

144 Octagon Nipple PN25

FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
*1/4	33	15	2.50
*3/8	35	18	3.91
1/2	44	23	6.50
3/4	49	28	9.90
1	53	36	22.00
1 1/4	57	46	34.00
1 1/2	59	52	42.30
2	68	64	62.70
2 1/2	80	77	101.04
3	89	101	162.12
4	102	124	223.92
6	114	172	492.34

145 Hexagon Nipple PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
*1/4 x 1/8	30	15	2.13
*3/8 x 1/4	35	18	4.02
1/2 x 1/4	41	23	6.42
1/2 x 3/8	41	23	5.81
3/4 x 3/8	48	28	9.32
3/4 x 1/2	49	28	9.67
1 x 1/2	56	35	15.85
1 x 3/4	56	35	15.64
1 1/4 x 1/2	64	44	25.03
1 1/4 x 3/4	64	44	25.39
1 1/4 x 1	64	44	23.48
1 1/2 x 1	64	50	28.94
1 1/2 x 1 1/4	64	50	29.26
2 x 1	69	61	48.82
2 x 1 1/4	69	61	47.05
2 x 1 1/2	71	62	49.00
2 1/2 x 2	77	77	74.78
3 x 2	86	90	104.75
3 x 2 1/2	85	90	109.39

*Supplied in mild steel.

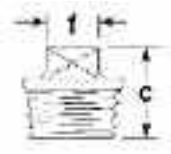
Malleable Iron

Options:


Galvanised

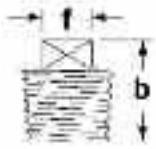

Black

146 Beaded Plug - Solid PN25



FITTING SIZE	DIMENSIONS (mm) c	f	WEIGHT (kg) per 100 pieces
3/8	28	11	3.40
1/2	33	13	6.89
3/4	36	14	11.98
1	41	19	22.56
1 1/4	47	23	32.40
1 1/2	49	23	46.60
2	56	28	73.44

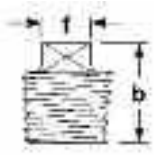
147 Plain Plug - Hollow PN25



FITTING SIZE	DIMENSIONS (mm) b	f	WEIGHT (kg) per 100 pieces
1/2	23	12	3.60
3/4	26	14	5.10
1	29	18	7.95
1 1/4	34	25	13.50
1 1/2	36	30	19.25
2	41	34	29.66
2 1/2	43	36	46.31
3	50	38	71.15
4	59	46	83.28

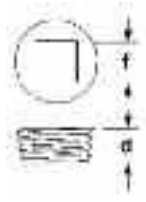
*Supplied in mild steel.

148 Plain Plug - Solid PN25



FITTING SIZE	DIMENSIONS (mm) b	f	WEIGHT (kg) per 100 pieces
*1/8	14	7	0.72
*1/4	20	10	1.67
3/8	20	11	2.31
1/2	23	12	4.16
3/4	26	14	7.21
1	28	17	12.66
1 1/4	33	24	22.60
1 1/2	35	29	32.20
2	41	32	56.44

149 Countersunk Plug PN25



FITTING SIZE	DIMENSIONS (mm) d	f	WEIGHT (kg) per 100 pieces
1/2	16	9	2.71
3/4	16	14	4.65
1	22	19	8.15
1 1/4	22	20	15.51
1 1/2	21	20	21.71
2	27	26	45.20

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Malleable Iron

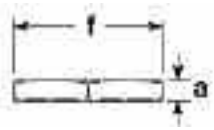
Options:


Galvanised


Black

150 Backnut PN25

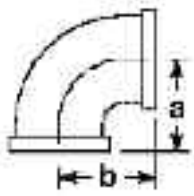
Parallel thread to BS 2779 (ISO 228-1)



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
*1/4	7	22	1.12
3/8	8	26	2.17
1/2	8	31	2.43
3/4	9	38	4.32
1	10	45	6.40
1 1/4	11	55	9.68
1 1/2	12	63	13.64
2	13	76	23.38
2 1/2	13	98	30.18
3	21	109	59.84

*Supplied in mild steel.

151 Elbow PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
Equal			
1/8	19	19	3.12
1/4	21	21	4.08
3/8	25	25	5.91
1/2	28	28	10.80
3/4	33	33	16.70
1	38	38	25.70
1 1/4	45	45	41.40
1 1/2	50	50	51.60
2	58	58	82.30
2 1/2	69	69	134.40
3	78	78	190.60
4	96	96	287.78
5	115	115	500.57
6	131	131	700.00
Reducing			
3/8 x 1/4	23	23	5.47
1/2 x 1/4	25	25	8.00
1/2 x 3/8	26	26	9.10
3/4 x 1/2	30	31	13.20
1 x 1/2	32	34	18.50
1 x 3/4	35	36	22.00
1 1/4 x 1/2	36	41	26.80
1 1/4 x 3/4	36	41	29.10
1 1/4 x 1	42	46	31.98
1 1/2 x 3/4	39	44	31.98
1 1/2 x 1	42	46	38.70
2 x 1	44	51	50.82
2 x 1 1/2	52	55	67.53

*Supplied in mild steel.

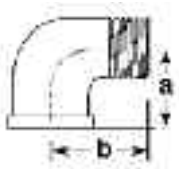
Malleable Iron

Options:


Galvanised


Black

152 Male & Female Elbow PN25



FITTING SIZE	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
Equal			
1/8	19	25	2.60
1/4	21	28	4.34
3/8	25	32	6.36
1/2	28	37	8.76
3/4	33	43	15.97
1	38	52	25.34
1 1/4	45	60	36.30
1 1/2	50	68	44.81
2	58	74	83.02
2 1/2	69	88	124.48
3	78	98	169.95
4	96	118	301.79
Reducing			
3/4 x 1/2	30	40	10.58
1 x 1/2	32	51	16.20
1 x 3/4	35	46	21.40

155 45° Elbow PN25

FITTING SIZE	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	19	4.36
3/8	20	5.44
1/2	22	7.97
3/4	25	11.80
1	28	18.13
1 1/4	33	27.84
1 1/2	36	39.39
2	43	62.64
2 1/2	50	97.34
3	55	156.90
4	66	257.09
6	88	609.25

PN25

FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4	19	19	3.19
3/8	21	21	4.79
1/2	22	28	7.58
3/4	29	29	12.57
1	35	35	20.39
1 1/4	42	42	31.48
1 1/2	48	48	44.04
2	55	55	66.83
2 1/2	61	61	108.97
3	68	68	138.64
4	87	87	296.23

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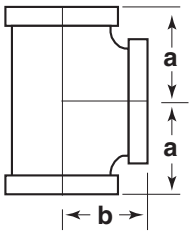
Malleable Iron

Options:


Galvanised


Black

161 Tee
PN25



FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
Equal				
⅛	-	19	19	4.02
¼	-	21	21	5.43
⅜	-	25	25	7.81
½	-	28	28	14.40
¾	-	33	33	23.50
1	-	38	38	35.60
1¼	-	45	45	58.90
1½	-	50	50	69.30
2	-	58	58	108.40
2½	-	69	69	189.40
3	-	78	78	216.09
4	-	96	96	395.11
5	-	115	115	651.99
6	-	131	131	1023.00

FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
Reducing on branch				
⅜ x ¼	-	23	23	7.55
½ x ¼	-	24	24	11.97
½ x ⅜	-	26	26	12.40
¾ x ¼	-	26	27	13.72
¾ x ⅜	-	28	28	17.70
¾ x ½	-	30	31	20.20
1 x ¼	-	28	31	19.16
1 x ⅜	-	32	35	24.44
1 x ½	-	32	34	27.10
1 x ¾	-	35	36	28.50

FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
1¼ x ½	-	34	38	37.00
1¼ x ¾	-	36	41	43.17
1¼ x 1	-	40	42	46.20
1½ x ½	-	36	42	45.40
1½ x ¾	-	38	44	47.80
1½ x 1	-	42	46	54.60
1½ x 1¼	-	46	48	61.50
2 x ½	-	38	48	60.89
2 x ¾	-	40	50	62.58
2 x 1	-	44	52	77.30
2 x 1¼	-	48	54	84.80
2 x 1½	-	52	55	93.50
2½ x ½	-	41	57	84.87
2½ x ¾	-	44	59	109.90
2½ x 1	-	47	60	105.78
2½ x 1¼	-	52	62	114.33
2½ x 1½	-	55	63	139.77
2½ x 2	-	61	66	143.60
3 x ½	-	51	68	156.96
3 x ¾	-	-	-	147.19
3 x 1	-	-	-	143.10
3 x 1¼	-	55	70	169.70
3 x 1½	-	58	71	177.60
3 x 2	-	64	73	192.40
3 x 2½	-	72	76	228.60
4 x 1	-	56	81	204.76
4 x 1¼	-	61	83	220.42
4 x 1½	-	64	84	255.03
4 x 2	-	70	86	250.08
4 x 2½	-	77	89	376.36
4 x 3	-	84	92	315.18
6 x 3	-	92	121	676.71
6 x 4	-	105	125	748.30

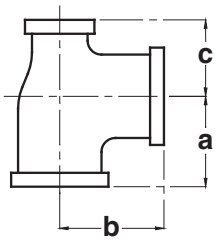
Malleable Iron

Options:


Galvanised

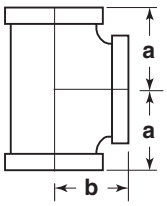

Black

161 Tee
PN25



FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	c	WEIGHT (kg) per 100 pieces
Reducing on run					
½ x ¼ x ½	½ x ½ x ¼	28	28	25	12.26
¾ x ½ x ¾	¾ x ¾ x ½	33	33	31	22.00
1 x ½ x 1	1 x 1 x ½	38	38	34	24.75
1 x ¾ x 1	1 x 1 x ¾	38	38	36	27.51
1¼ x ½ x 1¼	1¼ x 1¼ x ½	45	45	38	38.32
1¼ x ¾ x 1¼	1¼ x 1¼ x ¾	45	45	41	41.69
1¼ x 1 x 1¼	1¼ x 1¼ x 1	45	45	42	46.70
1½ x ½ x 1½	1½ x 1½ x ½	50	50	44	58.00
1½ x ¾ x 1½	1½ x 1½ x ¾	50	50	44	49.50
1½ x 1 x 1½	1½ x 1½ x 1	50	50	46	60.62
2 x ½ x 2	2 x 2 x ½	58	58	52	79.77
2 x ¾ x 2	2 x 2 x ¾	58	58	52	88.60
2 x 1 x 2	2 x 2 x 1	58	58	52	92.80
2 x 1½ x 2	2 x 2 x 1½				102.60
2½ x 1½ x 2½	2½ x 2½ x 1½	69	69	64	124.68
3 x 2 x 3	3 x 3 x 2	78	78	73	191.20
Reducing on run & branch					
½ x ⅜ x ⅜	½ x ⅜ x ⅜	26	26	25	9.34
¾ x ½ x ½	¾ x ½ x ½	30	31	28	19.80
1 x ¾ x ½	1 x ½ x ¾	32	34	30	19.88
1 x ¾ x ¾	1 x ¾ x ¾	35	36	33	30.20

FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	c	WEIGHT (kg) per 100 pieces
1¼ x 1 x ½	1¼ x ½ x 1	36	41	35	36.20
1¼ x 1 x ¾	1¼ x ¾ x 1	36	41	35	29.25
1¼ x 1 x 1	1¼ x 1 x 1	40	42	38	44.64
1½ x 1 x 1	1½ x 1 x 1	42	46	38	43.22
1½ x 1¼ x ½	1½ x ½ x 1¼	37	43	33	45.64
1½ x 1¼ x 1	1½ x 1 x 1¼	42	46	40	56.90
1½ x 1¼ x 1¼	1½ x 1¼ x 1¼	46	48	45	64.00
2 x 1½ x ½	2 x ½ x 1½	44	51	41	66.85
2 x 1½ x ¾	2 x ¾ x 1½	44	51	41	70.40
2 x 1½ x 1	2 x 1 x 1½	44	51	41	64.60
2 x 1½ x 1¼	2 x 1¼ x 1½	48	54	46	71.40
2 x 1½ x 1½	2 x 1½ x 1½	52	55	50	85.50



FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
Increasing on branch				
½ x ¾	-	31	30	15.15
¾ x 1	-	36	35	26.10
1 x 1¼	-	42	40	35.27
1 x 1½	-	46	42	42.91
1¼ x 2	-	54	48	77.35
1½ x 2	-	55	52	72.68
2 x 2½	-	66	61	119.77

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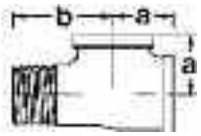
Malleable Iron

Options:


Galvanised

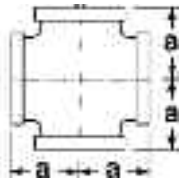

Black

163 Male & Female Tee PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	b	WEIGHT (kg) per 100 pieces
1/2	29	41	12.36
3/4	33	48	19.85
1	38	54	31.19

171 Cross PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	21	7.08
3/8	25	10.04
1/2	28	15.48
3/4	33	21.68
1	38	37.12
1 1/4	45	73.60
1 1/2	50	77.35
2	58	101.76
2 1/2	69	165.73
3	78	233.81
4	96	447.43

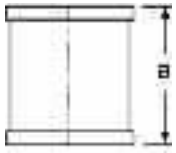
Malleable Iron

Options:


Galvanised


Black

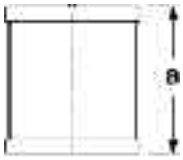
176 Socket
PN25



Parallel thread to
BS 2779 (ISO 228-1)

FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
*1/8	24	2.11
*1/4	27	3.57
*3/8	30	4.53
1/2	34	6.26
3/4	39	8.45
1	42	13.66
1 1/4	49	22.33
1 1/2	54	29.53
2	64	41.72
2 1/2	73	75.19
3	81	101.46
4	94	183.96

177 Socket
PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	27	3.30
3/8	30	4.17
1/2	34	7.90
3/4	39	12.30
1	42	19.70
1 1/4	50	27.50
1 1/2	55	36.20
2	65	48.99
2 1/2	73	80.71
3	81	105.16
4	94	186.43
6	121	454.64

*Supplied in mild steel.

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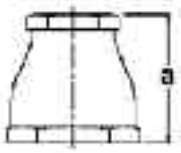
Malleable Iron

Options:


Galvanised


Black

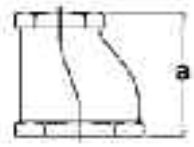
179 Reducing Socket PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
*3/8 x 1/4	29	4.71
1/2 x 1/4	32	7.83
1/2 x 3/8	32	5.26
3/4 x 1/4	37	13.18
3/4 x 3/8	37	7.62
3/4 x 1/2	37	14.53
1 x 1/4	43	11.14
1 x 3/8	43	18.23
1 x 1/2	45	18.65
1 x 3/4	43	19.30
1 1/4 x 1/2	52	22.23
1 1/4 x 3/4	52	23.55
1 1/4 x 1	50	27.30
1 1/2 x 1/2	59	28.39
1 1/2 x 3/4	59	26.35
1 1/2 x 1	59	27.93
1 1/2 x 1 1/4	55	33.23
2 x 1/2	71	34.98
2 x 3/4	71	42.56
2 x 1	71	52.12
2 x 1 1/4	65	54.38
2 x 1 1/2	71	58.61
2 1/2 x 1/2	83	62.58
2 1/2 x 1	83	64.73
2 1/2 x 1 1/4	83	73.62
2 1/2 x 1 1/2	83	67.28
2 1/2 x 2	83	73.24
3 x 1	94	97.80
3 x 2	94	95.53
3 x 2 1/2	94	107.84
4 x 2	111	161.71
4 x 2 1/2	111	178.91
4 x 3	111	201.37
6 x 4	149	443.93

*Supplied in mild steel.

180 Eccentric Socket PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
3/4 x 1/2	37	13.31
1 x 1/2	43	12.33
1 x 3/4	43	12.86
1 1/4 x 1/2	52	19.92
1 1/4 x 3/4	52	25.03
1 1/4 x 1	52	22.33
1 1/2 x 1/2	59	35.64
1 1/2 x 3/4	59	29.68
1 1/2 x 1	59	38.19
1 1/2 x 1 1/4	59	45.22
2 x 1/2	71	55.83
2 x 3/4	71	57.37
2 x 1	71	56.44
2 x 1 1/4	71	47.42
2 x 1 1/2	71	52.41
2 1/2 x 1/2	83	86.40
2 1/2 x 1 1/2	83	99.56
2 1/2 x 2	83	144.10
3 x 2	94	119.17
3 x 2 1/2	94	113.67

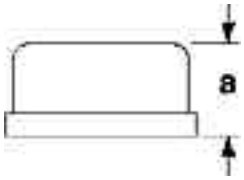
Malleable Iron

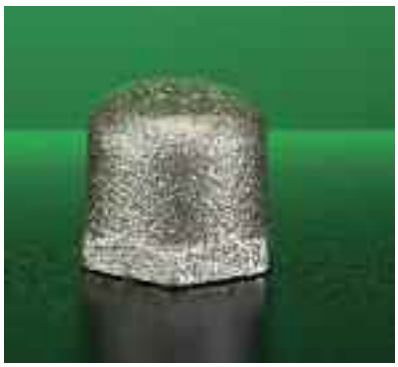
Options:


Galvanised


Black

185 Cap
PN25





FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
*1/4	17	3.21
*3/8	19	4.94
1/2	26	7.36
3/4	27	7.18
1	32	15.75
1 1/4	32	20.19
1 1/2	33	25.94
2	38	42.81
2 1/2	41	65.46
3	44	92.65
4	52	165.83

*Supplied in mild steel.

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Malleable Iron

Options:


Galvanised


Black

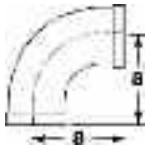
191 Male Bend PN25

FITTING SIZE	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/2	45	8.70
3/4	50	13.60
1	63	23.82
1 1/4	76	42.66
1 1/2	85	56.73
2	102	97.28

192 Male & Female Bend PN25

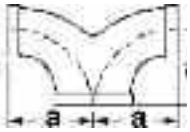
FITTING SIZE	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	30	4.19
3/8	36	6.97
1/2	45	10.87
3/4	50	15.81
1	63	26.27
1 1/4	76	45.24
1 1/2	85	63.45
2	102	102.54
2 1/2	114	163.56
3	127	246.79
4	165	481.53
6	229	1125.79

193 Bend PN25



FITTING SIZE	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	30	6.32
3/8	36	8.84
1/2	45	13.40
3/4	50	19.57
1	63	32.80
1 1/4	76	64.84
1 1/2	85	77.15
2	102	120.20
2 1/2	114	191.58
3	127	270.68
4	165	486.68
5	-	761.17
6	229	1176.26

197 Twin Elbow PN25



FITTING SIZE	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/2	45	20.68
3/4	50	29.66
1	63	49.23
1 1/4	76	88.73
1 1/2	85	111.14
2	102	176.75
2 1/2	114	313.94
3	127	409.12

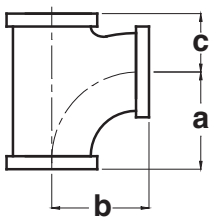
Malleable Iron

Options:


Galvanised


Black

199 Pitcher Tee
PN25



FITTING SIZE (inch) BS EN 10242 Method (b)	Method (a)	DIMENSIONS (mm) a	b	c	WEIGHT (kg) per 100 pieces
Equal					
½		45	45	24	22.06
¾		50	50	28	25.45
1		63	63	33	40.46
1¼		76	76	40	70.91
1½		85	85	43	96.67
2		102	102	53	164.18
2½		114	114	61	262.01
3		127	127	70	353.91
4		165	165	87	608.73
Reducing on branch					
¾ x ½		47	48	25	21.88
1 x ½		49	51	28	29.16
1 x ¾		53	56	30	32.75
1¼ x ½		51	56	30	40.71
1¼ x ¾		55	58	33	47.43
1¼ x 1		66	68	36	57.26
1½ x ½		52	58	29	51.35
1½ x ¾		55	61	33	55.11
1½ x 1		66	71	36	65.63
1½ x 1¼		77	79	41	94.60
2 x ½		54	64	32	72.31
2 x ¾		58	67	35	84.87
2 x 1		70	77	40	96.56
2 x 1¼		80	85	45	114.79
2 x 1½		91	94	48	136.06
2½ x ½		60	75	37	115.88
2½ x ¾		60	75	37	115.22
2½ x 1		72	85	40	131.90
2½ x 1¼		83	93	45	147.50
2½ x 1½		94	103	48	182.96
2½ x 2		104	109	54	226.19
3 x 1½		96	109	50	232.76
3 x 2		106	116	56	266.52
4 x 2½		121	133	69	431.06
4 x 3		132	139	75	493.37
Reducing on run & branch					
¾ x ½ x ½	¾ x ½ x ½	47	48	24	20.73
1 x ¾ x ½	1 x ½ x ¾	49	51	25	26.47
1 x ¾ x ¾	1 x ¾ x ¾	53	54	28	31.11
Reducing on run					
¾ x ½ x ¾	¾ x ¾ x ½	50	50	27	25.38

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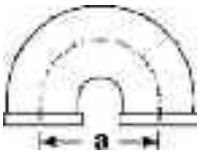
Malleable Iron

Options:


Galvanised

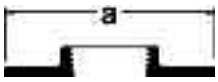

Black

213 Return Bend PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/2	38	17.87
3/4	51	35.71
1	64	52.22
1 1/4	76	92.37
1 1/2	89	115.21
2	102	146.36

233 Round Flange PN25



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
Undrilled and unfaced		
1/2	95	25.75
3/4	102	34.03
1	114	47.90
1 1/4	121	53.02
1 1/2	133	73.13
2	152	105.27
2 1/2	165	124.22
3	184	161.50
4	216	252.35

Malleable Iron

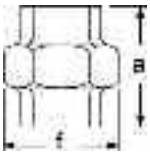
Options:


Galvanised


Black

241 Union PN25

FLAT SEAT



FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/2	49	42	20.44
3/4	53	49	30.39
1	58	57	41.22

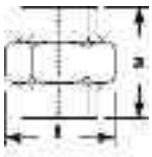
299 Gasket for Fig. 241

FITTING SIZE	WEIGHT (kg) per 100 pieces
1/2	-
3/4	-
1	-

(compressed non-asbestos fibre)

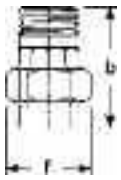
256 Union PN25

SPHERICAL SEAT - Iron to Iron



FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4	42	32	11.14
3/8	45	36	13.75
1/2	49	42	20.70
3/4	53	49	30.08
1	58	57	40.75
1 1/4	64	68	60.67
1 1/2	68	76	78.49
2	75	92	119.89
2 1/2	84	111	187.05
3	92	125	248.33
4	107	155	426.52

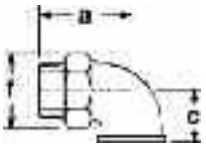
257 Male & Female Union PN25



FITTING SIZE	DIMENSIONS (mm) b	a	f	WEIGHT (kg) per 100 pieces
1/4	57	32	†	11.95
3/8	61	36	†	16.07
1/2	68	56	42	25.85
3/4	74	74	49	36.77
1	82	57	57	50.63
1 1/4	91	68	†	74.26
1 1/2	95	76	†	99.95
2	104	92	†	147.70
2 1/2	116	111	†	232.78
3	131	125	†	324.66

261 Elbow Union PN25

SPHERICAL SEAT - Iron to Iron



FITTING SIZE	DIMENSIONS (mm) a	c	f	WEIGHT (kg) per 100 pieces
1/2	56	28	42	25.72
3/4	64	33	49	37.31
1	72	38	57	54.38

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Malleable Iron

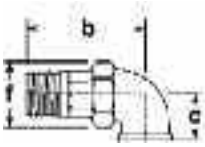
Options:


Galvanised


Black

262 M & F Elbow Union PN25

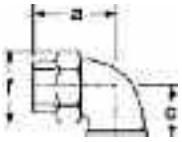
SPHERICAL SEAT - Iron to Iron



FITTING SIZE	DIMENSIONS (mm) b	c	f	WEIGHT (kg) per 100 pieces
1/2	78	28	42	29.89
3/4	86	33	49	44.44
1	98	38	57	62.88

276 Elbow Union PN25

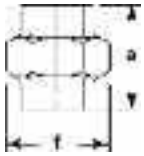
SPHERICAL SEAT - Bronze to Iron

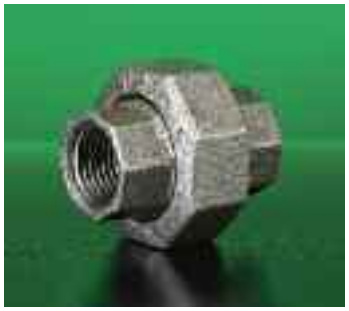


FITTING SIZE	DIMENSIONS (mm) a	c	f	WEIGHT (kg) per 100 pieces
1/2	56	28	42	25.63
3/4	64	33	49	37.27
1	72	38	57	55.00

271 Union PN25

SPHERICAL SEAT - Bronze to Iron





FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/8	42	32	12.26
1/4	42	32	11.03
3/8	45	36	14.54
1/2	49	42	20.69
3/4	53	49	30.33
1	58	57	40.79
1 1/4	64	68	59.64
1 1/2	68	76	77.87
2	75	92	120.10
2 1/2	84	111	187.15
3	92	125	247.81
4	107	155	432.60

Malleable Iron

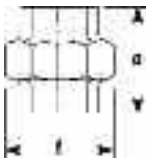
Options:


Galvanised


Black

289 Union PN25

SPHERICAL SEAT - Bronze to Bronze



FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4	42	32	10.91
3/8	45	36	14.98
1/2	49	42	20.97
3/4	53	49	30.44
1	58	57	40.99
1 1/4	64	68	61.13
1 1/2	68	76	79.78
2	75	92	121.54
2 1/2	84	111	187.72
3	92	125	248.02

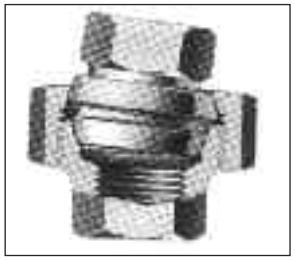
290 Union PN25

FITTING SIZE	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/2	49	44	22.96
3/4	52	48	28.66
1	57	55	37.44
1 1/4	67	67	60.00
1 1/2	78	76	94.48
2	87	90	134.79

The Crane SA (Self Aligning Union)

The Crane SA Union is made with double spherical seats. Pipes which are not in alignment can be securely connected at any angle up to 6° of arc from centre line of the union, thus avoiding the need for offsets. The union provides a pressure tight joint without the use of gaskets or washers.

- Self aligning (SA) Union
- Double spherical seats
- Iron to iron seating
- Taper threads to BS 21 (ISO 7-1)
- Black or Galvanised


SA Union - female


6° out of alignment and still pressure tight

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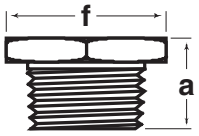
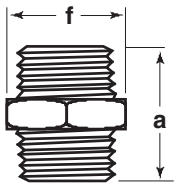
Bronze

J40 Hexagon Bush PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4 x 1/8	15	16	1.40
3/8 x 1/8	16	18	2.34
3/8 x 1/4	17	19	2.24
1/2 x 1/8	22	24	5.67
1/2 x 1/4	22	24	3.29
1/2 x 3/8	22	24	3.89
3/4 x 1/4	25	30	6.50
3/4 x 3/8	25	30	7.87
3/4 x 1/2	25	30	6.07
1 x 1/2	28	36	12.98
1 x 3/4	28	36	9.68
1 1/4 x 1/2	30	46	22.43
1 1/4 x 3/4	30	46	20.91
1 1/4 x 1	31	46	16.48
1 1/2 x 1/2	26	51	30.34
1 1/2 x 3/4	26	51	20.09
1 1/2 x 1	26	51	24.73
1 1/2 x 1 1/4	26	51	15.76
2 x 1	30	64	48.27
2 x 1 1/4	30	64	41.61
2 x 1 1/2	30	64	35.52

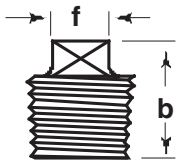
J44 Hexagon Nipple PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/4	35	17	2.68
3/8	36	21	4.45
1/2	44	23	5.31
3/4	49	28	11.37
1	56	35	17.76
1 1/4	64	44	29.90
1 1/2	64	50	38.11
2	71	62	55.35

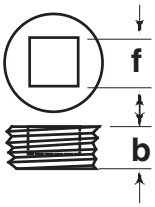
Bronze

J48 Plain Plug
PN16



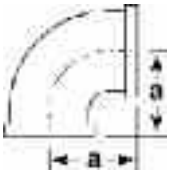
FITTING SIZE (inch)	DIMENSIONS (mm) b	f	WEIGHT (kg) per 100 pieces
1/8	15	7	0.71
1/4	21	10	1.40
3/8	23	11	2.52
1/2	23	12	5.22
3/4	26	13	8.72
1	28	18	17.76
1 1/4	33	24	28.10
1 1/2	35	29	44.38
2	41	32	67.03

J49 Countersunk Plug
PN16



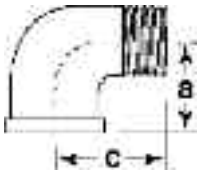
FITTING SIZE (inch)	DIMENSIONS (mm) b	f	WEIGHT (kg) per 100 pieces
3/8	12	8	1.53
1/2	16	11	3.11
3/4	17	14	5.42
1	20	15	10.63

J51 Elbow
PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/8	16	3.66
1/4	21	4.94
3/8	25	7.00
1/2	28	11.47
3/4	33	13.26
1	38	29.21
1 1/4	45	41.20
1 1/2	50	57.32
2	58	79.10

J53 M & F Elbow
PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	c	WEIGHT (kg) per 100 pieces
1/4	21	30	4.50
3/8	24	37	7.00
1/2	29	41	10.46
3/4	33	48	16.27
1	38	54	24.83
1 1/4	44	62	45.68
1 1/2	49	68	60.26
2	60	76	92.03

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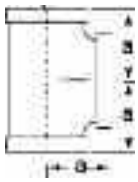
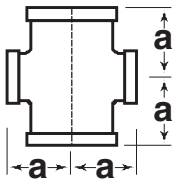
Bronze

J61 Tee
PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	19	6.76
3/8	22	9.26
1/2	26	14.31
3/4	33	22.80
1	38	37.37
1 1/4	45	71.17
1 1/2	50	84.91
2	58	119.58

J71 Cross
PN16

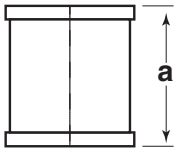


FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/2	27	18.69

Bronze

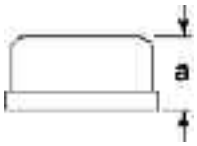
J76 Socket PN16

Parallel thread to BS 2779 (ISO 228-1)



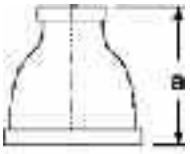
FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/8	21	2.48
1/4	25	4.08
3/8	28	5.27
1/2	34	7.21
3/4	39	10.29
1	42	15.45

J85 Cap PN16



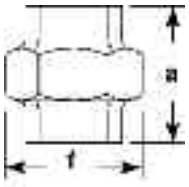
FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
1/4	17	2.69
3/8	22	5.76
1/2	26	5.46
3/4	26	9.14
1	32	14.55

J79 Reducing Socket PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	WEIGHT (kg) per 100 pieces
3/8 x 1/4	26	4.68
1/2 x 3/8	34	5.87
3/4 x 1/2	37	9.82
1 x 1/2	44	14.69
1 x 3/4	44	15.88

J256 Union PN16



FITTING SIZE (inch)	DIMENSIONS (mm) a	f	WEIGHT (kg) per 100 pieces
1/2	42	42	22.37
3/4	47	49	29.14
1	52	57	42.35
1 1/4	56	69	67.18
1 1/2	62	76	86.31
2	65	92	135.45

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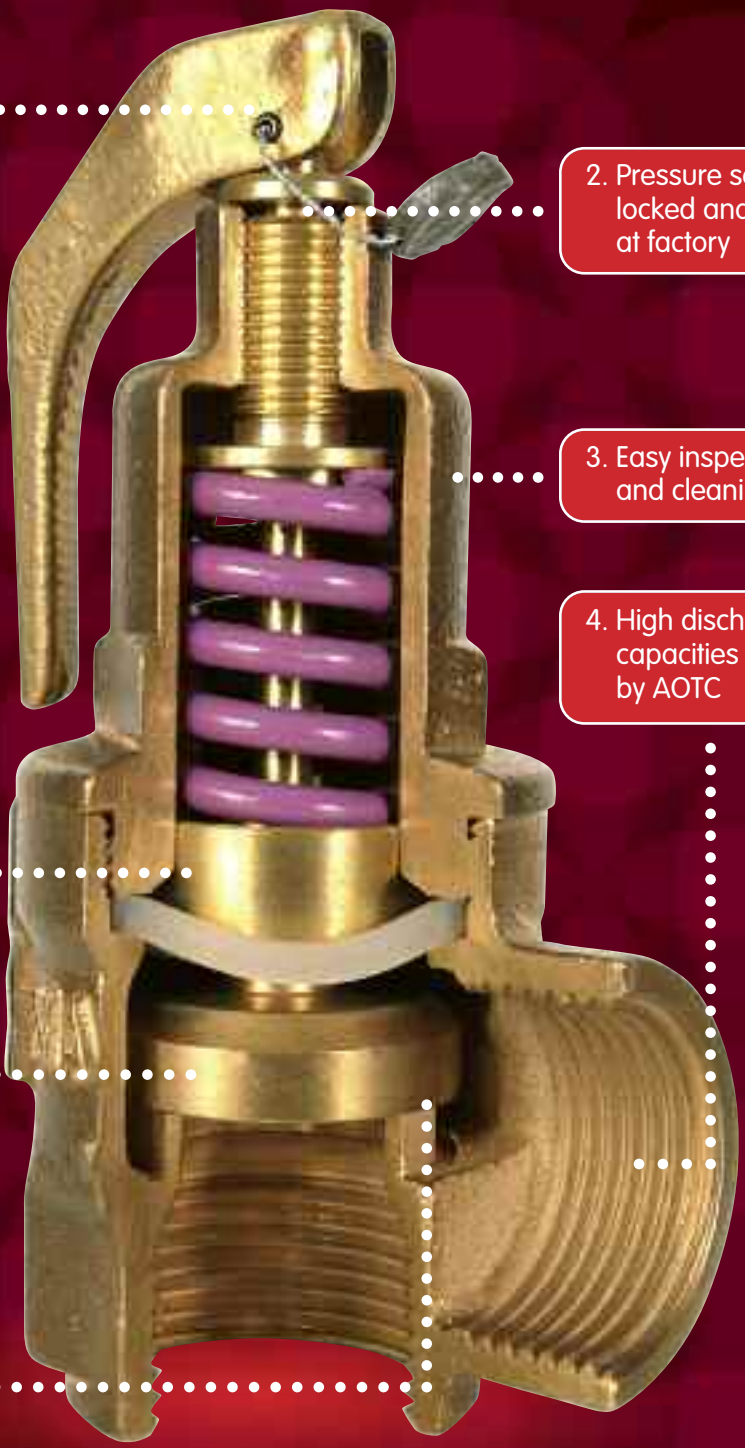
Project Gallery

S Shand-Brown

Project: Brierley Hill Medical Centre, West Midlands
Client: Dudley South Primary Care Trust and Infracare
Architect: Steffian Bradley Associates
Consulting Engineer: Elementa Consulting
Contractor: Carillion Planned Maintenance
Distributor: Pipe Centre, Nottingham
Specification: Crane Fluid Systems - ProBalance balancing valves

Construction of the 11,000sq m Brierley Hill Medical Centre, which will provide 21st-century healthcare facilities for Dudley Primary Care Trust, has begun. Installed with a low energy M&E package, half the building will be naturally ventilated and the other half will rely on traditional HVAC systems. Over 1,200 Crane ProBalance valves will control the heating and chilled water flow through fan coil units within the five storey building.
Crane's ProBalance bronze balancing valves use fixed orifice technology to ensure fast commissioning and enhanced regulating performance. The compact design means they take up less space and the integral orifice reduces the need for on-site jointing, resulting in reduced installation costs for the contractor.

Designed and tested to BS 6769 with third party certified discharge capacities, NABIC valves are manufactured under the ISO 9001 quality assurance system. Every valve is tested before dispatch to ensure that high product quality is maintained.



1. Safe Manual Testing
2. Pressure setting locked and sealed at factory
3. Easy inspection and cleaning
4. High discharge capacities certified by AOTC
5. Resilient PFTE seating design
6. High degree of seat tightness
7. Diaphragm protected working parts

TECHNICAL HELPLINE: +44 (0)1744 458615
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NABIC™

WRAS APPROVED PRODUCT

Fig. 542 Safety Relief Valve

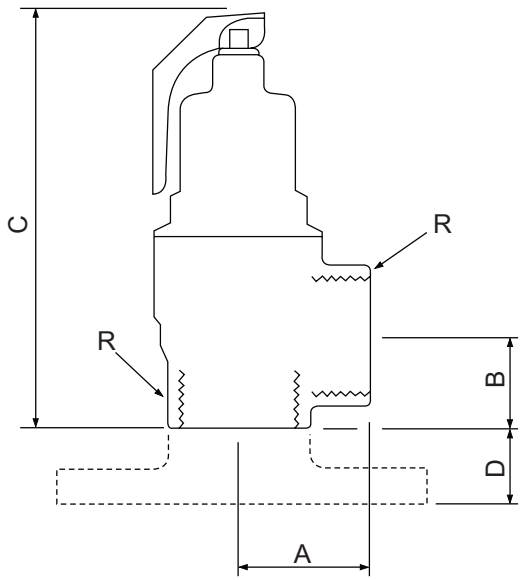
The figure 542 Safety Valve is an extremely versatile valve, suitable for use on hot water, steam or air. Although designed primarily for the protection of hot water boilers, its wide range of applications makes it an ideal valve for stocking as a general purpose safety valve. They are ideal for pump relief, bypass relief, outside installations and on cold water mains to protect from PRV failure.


Fig. 542

Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Suitable for hot water, steam and air
- Diaphragm protected working parts
- Safe manual testing
- Easy inspection and cleaning
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Capacities certified by AOTC
- UKWFBS listed
- Padlock available
- Body material - Gunmetal
- WRAS approved

Dimensional Drawing



Pressure/Temperature Ratings

MAX SET PRESSURE	10.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)	D (mm)
15	1/2	30	23	113	-
20	3/4	34	23	118	-
25	1	39	27	132	-
32	1 1/4	46	33	153	27
40	1 1/2	54	38	198	27
50	2	64	46	236	27
65	2 1/2	76	55	275	28
80	3	90	65	335	31

NABIC™

Fig. 542L Pressure Relief Valve

NABIC Pressure Relief Valves are intended for use where pressure tightness is required on the discharge side of the valve. They are ideal for pump relief, bypass relief and on outside installations.


Fig. 542L

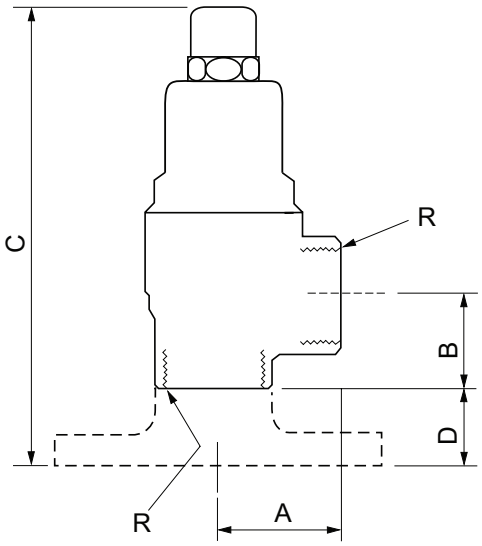
Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Suitable liquids and gases
- Top guided working parts
- Pressure tight on discharge side
- Designed and tested to BS 6759
- Flanged inlets available
- Body material - Gunmetal

Pressure/Temperature Ratings

MAX SET PRESSURE	10.5 bar
MAX TEMPERATURE	195°C

Dimensional Drawing



Dimensions

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)	D (mm)
15	1/2	30	23	113	-
20	3/4	34	23	118	-
25	1	39	27	132	-
32	1 1/4	46	33	180	27
40	1 1/2	54	38	224	26
50	2	64	46	263	27
65	2 1/2	76	55	303	28
80	3	90	65	366	31

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Fig. 500T Combined Pressure and Temperature Relief Valve

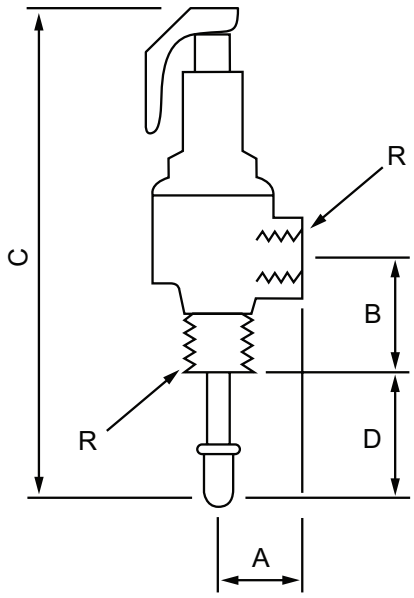
The figure 500T Combined Pressure and Temperature Relief Valve has been designed for use on unvented hot water supply systems, where protection against excess temperature is required in addition to pressure protection. Pressure and temperature elements of the valve operate independently, thereby providing dual safety protection in the one valve.


Fig. 500T

Features & Benefits

- Resilient soft seating design
- High discharge capacity
- Powerful thermostat
- Dual safety protection
- Diaphragm protected working parts
- Safe manual testing
- Easy inspection and cleaning
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Body material - Gunmetal

Dimensional Drawing



Pressure/Temperature Ratings

MAX SET PRESSURE	12.5 bar
MAX TEMPERATURE	95°C
MAX WORKING TEMPERATURE	75°C

Dimensions

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)	D (mm)
15	3/4	34	48	230	81
20	1	39	47	240	81
25	1 1/4	45	56	260	81
32	1 1/2	54	62	350	127
40	2	64	71	400	127
50	2 1/2	76	82	430	127

NABIC™

WRAS APPROVED PRODUCT

Fig. 500 High Lift Safety Valve

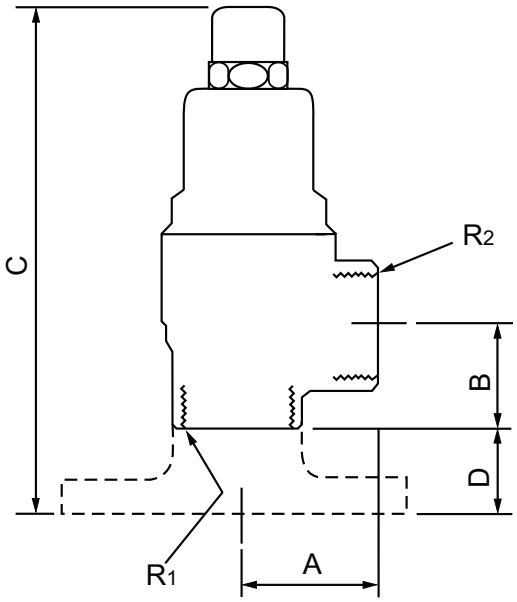
This valve has been designed primarily for use on unvented hot water heating systems, where a high capacity, emergency steam relief capability is required. High capacity and resilient PTFE seating, also make it ideal for steam, air and inert gas applications.


Fig. 500

Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Suitable for hot water, steam and air
- High discharge capacity
- Diaphragm protected working parts
- Safe manual testing
- Easy inspection and cleaning
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Capacities certified by AOTC
- WRAS approved
- UKWFBS listed
- Padlock available
- Body material - Gunmetal

Dimensional Drawing



Pressure/Temperature Ratings

MAX SET PRESSURE	12.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R1 BSP	R2 BSP	A (mm)	B (mm)	C (mm)	D (mm)
10	3/8	1/2	26	21	101	-
15	1/2	3/4	33	20	120	-
20	3/4	1	39	24	134	28
25	1	1 1/4	45	30	155	30
32	1 1/4	1 1/2	54	36	201	30
40	1 1/2	2	64	41	241	32
50	2	2 1/2	76	47	267	36
65	2 1/2	3	90	60	330	36

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NABIC™

Fig. 500L Pressure Relief Valve

NABIC Pressure Relief Valves are intended for use where pressure tightness is required on the discharge side of the valve. They are ideal for pump relief, bypass relief, outside installations, and on cold water mains to protect from PRV failure.

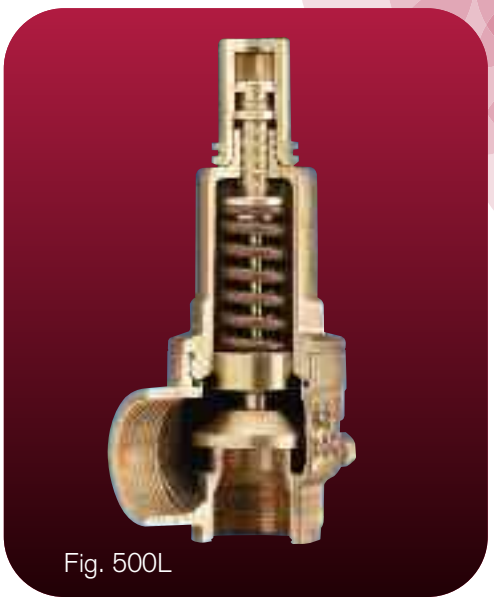


Fig. 500L

Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Suitable for liquids and gases
- Top guided working parts
- Pressure tight on discharge side
- Designed and tested to BS 6759
- Flanged inlets available
- Body material - Gunmetal

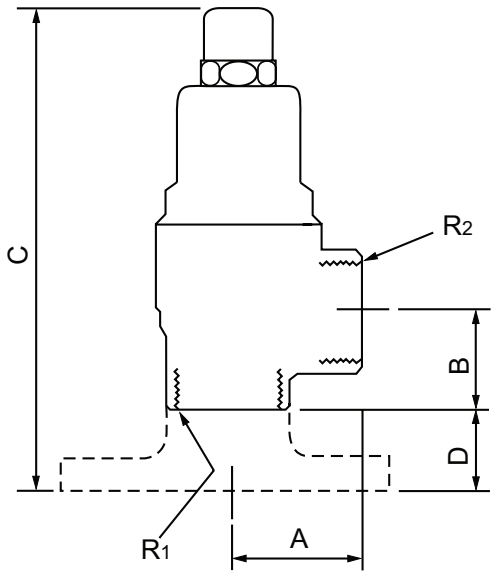
Pressure/Temperature Ratings

MAX SET PRESSURE	12.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R1 BSP	R2 BSP	A (mm)	B (mm)	C (mm)	D (mm)
10	3/8	1/2	26	21	101	-
15	1/2	3/4	33	20	120	-
20	3/4	1	39	24	162	28
25	1	1 1/4	45	30	185	30
32	1 1/4	1 1/2	54	36	229	28
40	1 1/2	2	64	41	273	32
50	2	2 1/2	76	47	303	36
65	2 1/2	3	90	60	366	36

Dimensional Drawing



NABIC™

Fig. 500SS Pressure Relief Valve

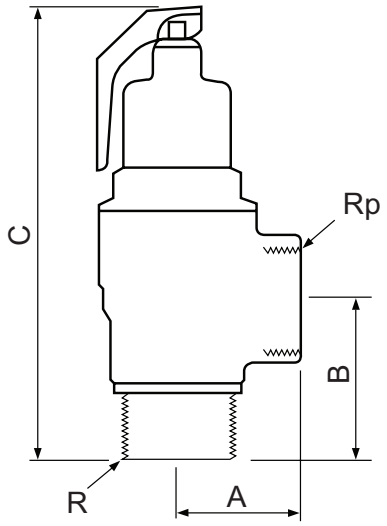
This version of the figure 500 has been produced for applications where the properties of stainless steel are required for the service fluid being used but the working environment does not necessitate a full stainless steel valve. It can be supplied with a test lever or as a sealed dome version to suit customer requirements.


Fig. 500SS

Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Easy inspection and cleaning
- Top guided working parts
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Capacities certified by AOTC
- Wetted parts - Stainless steel
- Body material - Gunmetal

Dimensional Drawing



Pressure/Temperature Ratings

MAX SET PRESSURE	12.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R BSP	Rp BSP	A (mm)	B (mm)	C (mm)
15	3/4	3/4	34	46	141
20	1	1	39	54	159
25	1 1/4	1 1/4	46	63	183
32	1 1/2	1 1/2	54	68	228
40	2	2	64	81	271
50	2 1/2	2 1/2	76	95	315
65	3	3	90	110	380

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NABIC™

Fig. 520 Double Spring Safety Valve

The figure 520 High Lift Safety Valve has been designed and tested to BS 6759. Based on the proven design of figure 500 Safety Value, the high capacity and resilient PTFE seating make figure 520 ideal for steam, hot water, air and inert gas applications.

Fig. 520

Features & Benefits

- Resilient PTFE seating design
- High degree of seat tightness
- Suitable for hot water, steam and air
- High discharge capacity
- Diaphragm protected working parts
- Safe manual testing
- Easy inspection and cleaning
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Separate outlets reduce effects of backpressure
- Body material - Gunmetal

Pressure/Temperature Ratings

MAX SET PRESSURE	12.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)	D (mm)
65	2	350	152	64	175
80	$2^1/2$	390	166	76	195
100	3	480	205	90	210

Dimensional Drawing

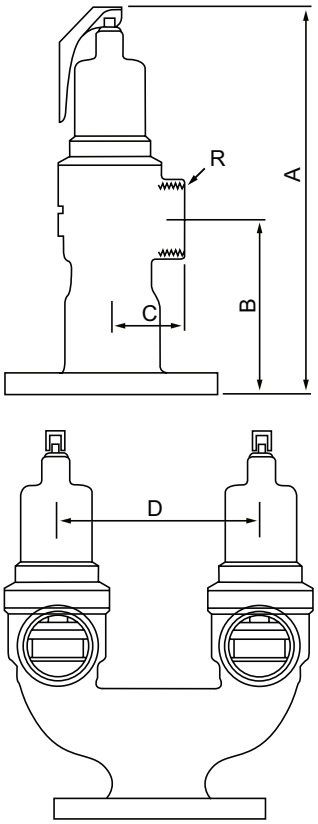

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Fig. 255 Reduced Pressure Zone Anti-Pollution Valves

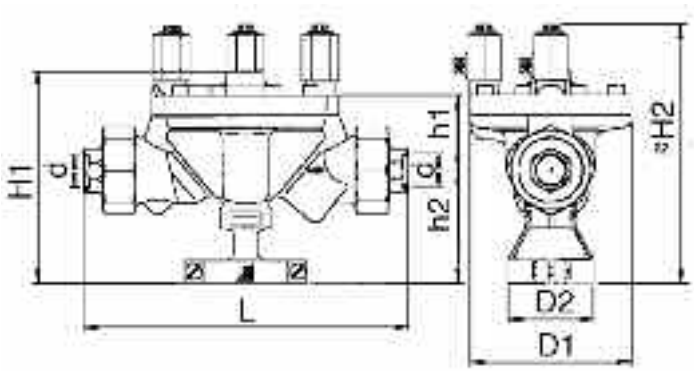
The RPZ Anti-Pollution valve is a type BA safety device used to prevent contamination of drinking water through siphoning or backflow up to class 4 fluid category. They are particularly suitable for industrial and commercial applications and can also be used for supplies to buildings within the scope of the water regulations.

Fig. 255

Features & Benefits

- Manufactured in accordance with EN 1717
- Risk of legionella is reduced as water storage is not required
- Bolted cover is removable and gives unrestricted access to the internal components
- A compact version of figure 255 Anti-Pollution Valve is available in two sizes, DN10 and DN15
- Complete with three test sample points for checking pressure and a drain water connection
- Body material - Gunmetal
- Check valves - Plastic
- Seals - EPDM
- A flanged version is also available

Dimensional Drawing



Pressure/Temperature Ratings

MAX SET PRESSURE	10 bar
MAX TEMPERATURE	60°C
MIN WORKING PRESSURE	1 bar

Dimensions

	SIZE	UNITS	DN15	DN20	DN25	DN32	DN40	DN50
CONNECTION	d		Rp 1/2"	Rp 3/4"	Rp 1"	Rp 1 1/4"	Rp 1 1/2"	Rp 2"
LENGTH	L	mm	210	210	216	285	287	297
HEIGHT	H1	mm	137	137	137	188	188	188
HEIGHT	H2	mm	166	166	166	214	214	214
HEIGHT	h1	mm	48.5	48.5	48.5	73	73	73
HEIGHT	h2	mm	72.5	72.5	72.5	96	96	96
WIDTH	D1	mm	103	103	103	148	148	148
DRAIN	D2	mm	50	50	50	75	75	75
Kv - VALUE		m^3/h	3.05	4.90	7.88	16.1	29.5	33.2

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WRAS APPROVED PRODUCT
(Fig 256A only)

Fig. 256A & 256B Pipe Interrupter

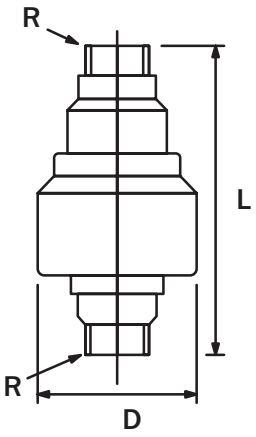

Fig. 256A

The figure 256A is classified as a DC type suitable for protecting up to fluid category 5. Incorporating ventilation ports that are totally unrestricted and permanent, water is guided past these air vents using a venturi type nozzle. As they are constantly open to atmosphere, this stops siphonage and allows the escape of water in the event of backflow.

The figure 256B is classified as a DB type suitable for protecting up to fluid category 4. This device has a moving element which seals the ventilation gaps during normal flow conditions. When negative pressures occur on the inlet side which could cause siphonage, the membrane retracts seals the flow ports and simultaneously vents the outlet side of the pipe interrupter.


Fig. 256B

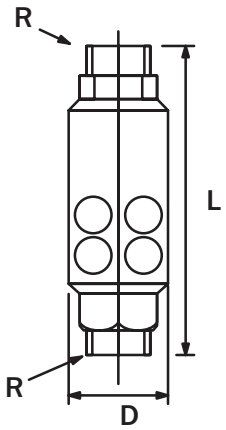
Dimensional Drawing



Features & Benefits

- Fig. 256A is WRAS approved for use with potable water
- A special DN15'S' version of Fig. 256A is available for low flow conditions
- Body material - Brass
- Fig. 256A Venturi nozzle - Plastic
  Fig. 256B Internals - Plastic
- Fig. 256A & 256B O-Ring seals - EPDM
  Fig. 256B Membrane - Silicon rubber

Dimensional Drawing



Dimensions 256A

SIZE DN	R BSP	L	D	Kv
10	3/8	83.5	30	0.33
15S	1/2	83	30	0.33
15	1/2	91	43.5	0.9
20	3/4	88	43.5	1.14

Dimensions 256B

SIZE DN	R BSP	L	D	Kv
10M	3/8	89	29	0.26
15M	1/2	89	29	0.26
20M	3/4	89	29	0.61
15F	1/2	82	29	0.26
20F	3/4	68	29	1.61

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Fig. 503 Three Way Vent Valve

The figure 503 Three Way Valve has been designed for use on vented hot water systems, to ensure there is a permanent connection from the boiler or calorifier to atmosphere. Fitting a figure 503 allows the use of a single common vent pipe, and permits continued operation of the system whilst maintenance is carried out on an individual unit.


Fig. 503

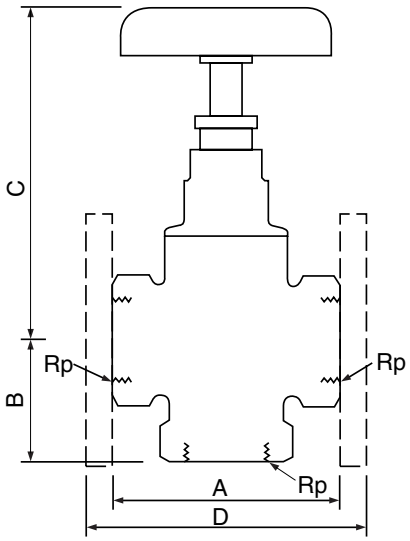
Features & Benefits

- Boiler connection permanently open
- Minimum water loss on changeover
- Inline servicing
- Dezincification resistant materials
- Cassette construction
- Body material - Gunmetal

Pressure/Temperature Ratings

MAX SET PRESSURE	7 bar
MAX TEMPERATURE	93°C

Dimensional Drawing



Dimensions

SIZE DN	Rp BSP	A (mm)	B (mm)	C (mm)	D (mm)
20	3/4	70	38	92	-
25	1	84	48	145	-
32	1 1/4	98	65	150	-
40	1 1/2	114	72	170	-
50	2	140	78	190	-
63	2 1/2	170	114	220	180

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Fig. 175 Three Way Vent Cock

The figure 175 Three Way Vent Cock has been designed for use on vented hot water systems, to ensure there is a permanent connection from the boiler or calorifier to atmosphere. Fitting a figure 175 allows the use of a single common vent pipe, and permits continued operation of the system whilst maintenance is carried out on an individual unit.

Fig. 175

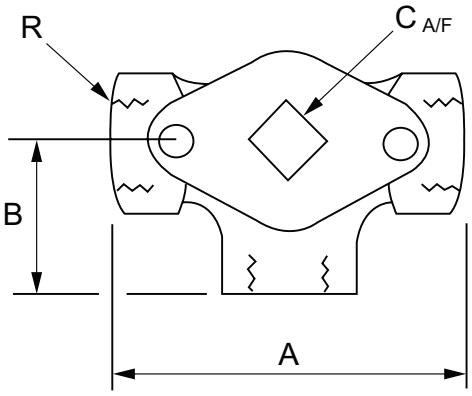
Features & Benefits

- Boiler connection permanently open
- No water loss on changeover
- Ninety degree operation
- Dezincification resistant materials
- Body material - Gunmetal

Pressure/Temperature Ratings

MAX SET PRESSURE	7 bar
MAX TEMPERATURE	100°C

Dimensional Drawing



Dimensions & Weights

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)	WEIGHT (kg)
20	3/4	95	38	15	1.4
25	1	108	46	18	2.0
32	1 1/4	127	59	22	3.2
40	1 1/2	146	67	27	4.8
50	2	165	78	38	8.2
65	2 1/2	181	89	44	11.3
65	-	205	89	44	16

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WRAS APPROVED PRODUCT
(Fig 568 only)

Fig. 568 & 568SS Anti-Vacuum Valve

Figure 568 Anti-Vacuum Valves are used to protect drying cylinders, calorifiers and tankers from collapse due to internal vacuum. They are also used on steam systems, to assist condensate drainage and to prevent suction of contents from vats. Vacuum valves are normally fitted vertically at the top of the vessel or pipeline being protected. Horizontal revolving cylinders however should have a figure 568 fitted at each end, diametrically opposite one another.


Fig. 568


Fig. 568SS

Features & Benefits

- PTFE or Viton to metal seating design which provides excellent seat tightness
- Fig. 568 is WRAS approved for use on potable water
- The strengthened body complete with taper thread ensures a tight seal between the vessel and valve
- Body material - 568 - Gunmetal
- Body material - 568SS - Stainless steel

Air (l/sec)

VACUUM PRESSURE mbar	DN15	DN20	DN25	DN32	DN40	DN50
250	2	5	10	21	32	52
500	3	9	17	32	53	71

Note: To assist selection, reference should be made to BS 853 clause 10.7

Pressure/Temperature Ratings

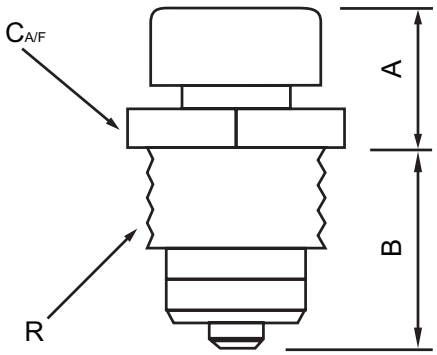
MAX SET PRESSURE	13.5 bar
MAX TEMPERATURE	195°C

Dimensions

SIZE DN	R BSP	A (mm)	B (mm)	C (mm)
15	1/2	23	35	24
20	3/4	25	36	30
25	1	27	39	36
32	1 1/4	33	43	46
40	1 1/2	39	53	52
50	2	37	57	65

Note: Flow areas available on request.

Dimensional Drawing



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Project Gallery

S Shand-Brown

Project: St Pancras Renaissance Hotel, London
Client: Marriott Hotels
Contractor: EMCOR UK
Distributor: BSS Ltd, Kings Cross
Specification: NABIC Figure 500 High Lift Safety Valves

NABIC Figure 500 valves have been installed in the plant rooms of the new St Pancras Renaissance Hotel which opened in May 2011. The safety valves are connected to all of the building's five boilers, helping to provide hot water to taps throughout the hotel, which is seven storeys high. The Figure 500 is WRAS approved and designed for used on unvented hot water systems, where a high-capacity emergency steam relief capability is required.

The hotel, originally built as The Midland Grand Hotel in 1873, has been rejuvenated by the Marriott Hotel Chain and consists of 207 bedrooms, 38 suites, 9 meeting rooms, a restaurant, health club and spa. It also has direct access to the concourse of the newly developed St Pancras Station.

Plant Room Valves

Automatic Air Eliminators and Boiler Vent Valves

With a proven track record for high quality, Brownall offers an exclusive range of Automatic Air Eliminators (AAE) covering low, medium and high pressure applications, complemented by the three-way vent valves and vent cocks for boilers.

Offering efficient performance, the Brownall range removes inevitable and potentially dangerous air trapped in the system. Air eliminators are suitable for use with water, glycol, aviation fuel, diesel and light oils.

Installed at the highest point of the fluid carrying system, the trapped air will enter the float chamber of the air eliminator. This reduces the float buoyancy and allows air to escape through the outlet orifice.

To complement the AAE, the univent and vent cocks are installed to provide a direct connection from the boiler to the atmosphere. Designed to simplify the venting process, for single or multi point boiler and calorifier installations, the range offers savings in time and costs. Bronze body parts enable the range to operate in high-turbulence aerated hot water, which can be a very corrosive environment.

All the above make Brownall the number one choice with professional building services, consulting engineers and specifying authorities.

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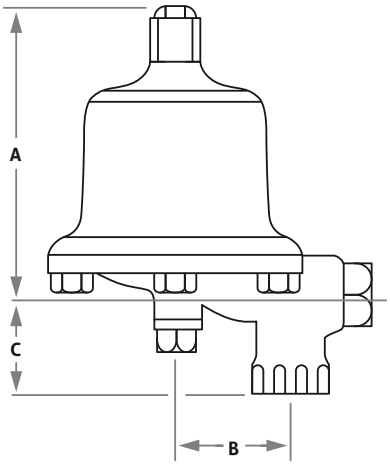
Automatic Air Eliminators

Type	Part No.	Details
Type A	AE-A	Vertical Inlet. Available Special Order
Type B	AE-B	Vertical Inlet with Integral Lockshield Isolating Valve
Type C	AE-C	Vertical Inlet with Integral Lockshield Isolating Valve & Check Valve
Type D	AE-D	Side Inlet Available Special Order
Type MPHW	AE-MPHW-015	Vertical Inlet with Integral Lockshield Isolating Valve
Type HPHW	AE-HPHW-F	BST'F' Vertical Inlet with Integral Lockshield Isolating Valve
Type HPHW	AE-HPHW-H	BST'H' Vertical Inlet with Integral Lockshield Isolating Valve
Type HPHW	AE-HPHW-16	PN16 Vertical Inlet with Integral Lockshield Isolating Valve
Type HPHW	AE-HPHW-150	Class 150 vertical inlet with Integral Lockshield Isolating Valve

AAE - Standard Pressure Applications - Type A, B, C and D



Type	A	B	C	Weight kg
A	102	43	35	1.25
B	102	43	35	1.28
C	108	43	35	1.28

Technical Data

Connections Inlet: BS EN 10226-1:2004 – Rp 1/2 (Female)
Outlet: BS EN ISO 228-1:2003 – G 3/8 (Male)

Pressure Rating Up to 10 bar (150 lbf/in^2)
Non-Shock

Temp Rating Up to 93°C (200°F)

Recommended Min. Working Pressure 0.15 bar (5ft effective head)

Materials of Construction

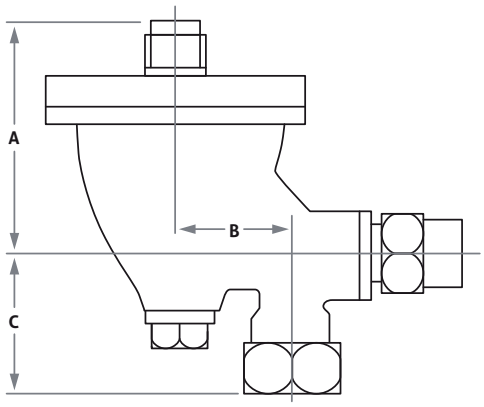
Body and Dome Bronze (Gunmetal)

Spindle and Seating Stainless Steel

Valve PTFE Needle

Float Stainless Steel

AAE - Medium Pressure



Type	A	B	C	Weight kg
MPHW	108	43	41	2.4

Technical Data

Connections Inlet: BS EN 10226-1:2004 – Rp 1/2 (Female)
Outlet: BS EN ISO 228-1:2003 – G 3/8 (Male)

Pressure Rating Up to 7 bar (100 lbf/in²)

Temp Rating Up to 149°C (300°F)

Recommended Min. Working Pressure 0.15 bar (5ft effective head)

Materials of Construction

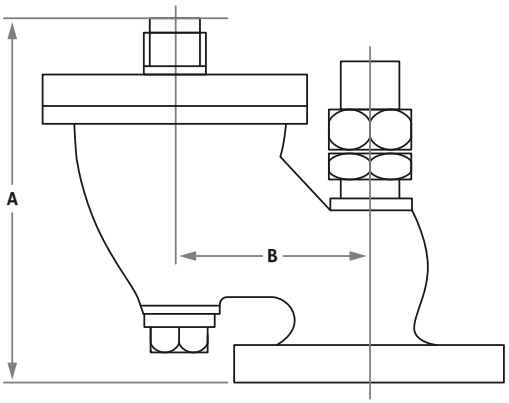
Body and Dome Bronze (Gunmetal)

Spindle and Seating Stainless Steel

Valve Monel

Float Nickel Alloy, Silver Brazed

AAE - High Pressure



Type	A	B	Weight kg
BST 'F'	152	83	3.85
BST 'H'	152	83	3.85
PN16	152	83	3.85
Class 150	152	83	3.85

Technical Data

Connections: Inlet: BS 10 Table F or H 1/2 (Flanged)
Can be supplied drilled to PN16 or ANSI Class 150
Outlet: BS EN ISO 228-1:2003 – G 3/8 (Male)

Pressure Rating HPHW/F 10.5 bar (150 ibf/in²)
HPHW/H 17 bar (250 ibf/in²)

Temp Rating HPHW/F 182°C (360°F)
HPHW/H 204°C (400°F)

Recommended Min. Working Pressure 0.15 bar (5ft effective head)

Materials of Construction

Body and Dome Bronze (Gunmetal)

Spindle and Seating Stainless Steel

Valve Monel

Float Nickel Alloy, Silver Brazed

Service Kits (Float Assembly) Types A, B (AE-SP-ABD) and C (AE-SP-C)

Types B and C Automatic Air Eliminators are manufactured with in-built isolating valves which, when closed, allow the dome to be removed and the float assembly replaced, allowing rapid in-situ servicing.

Type A and D require an additional isolating valve on the inlet, to isolate it from the system prior to removing the float assembly.

AE-SP-BC isolator kit available for types B & C air eliminators. AE-SP-MPHW Service kit is available for types MHPW and HPHW air eliminators.

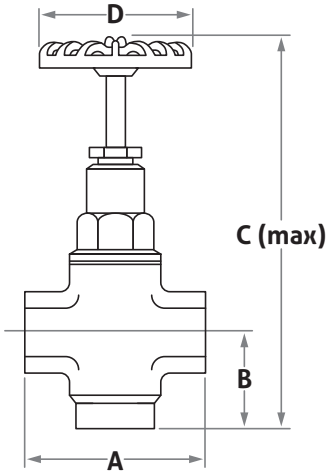
Service kits comprise of a float assembly (inc. needle and spindle), seat, washer and retaining screws.

Fig. 1688
Three-way Univent

Figure 1688, Three-way Univent is designed for use on vented hot water systems to ensure that there is always a direct connection from the boiler/calorifier to the atmosphere. Made from body materials resistant to stress corrosion cracking, it can be used for single or multi-boiler installations.

In-line servicing, using Univent replacement cartridges, allows valve maintenance to be carried out without disturbing the pipework.

The Univent can be opened and closed using the integral handwheel. To close the drain port and open the vent, turn the handwheel clockwise to its full travel. Turn the handwheel anti-clockwise to open the drain and close the vent.



Technical Data

Max pressure: 7 bar

Max temperature: 93°C

Connections: BS EN 10226-1:2004 – Rp (Female)

Materials:

Body: Bronze (Gunmetal)

Head: Bronze (Gunmetal)

Trim: Brass

Spindle: Brass bar

Renewable Seat: EPDM

Nominal Size	Product Code	A	B	C (max)	D	Weight kg
25mm (1")	UV-1688-025D	96	47	200	89	1.83
32mm (1¼")	UV-1688-032D	118	63	237	102	2.93
40mm (1½")	UV-1688-040D	144	74	269	127	4.39
50mm (2")	UV-1688-050D	160	79	283	152	6.10
65mm (2½")	UV-1688-065D	190	115	395	200	14.25

Univent Replacement Cartridge (Fig. 1688 only)

Replacement cartridges for the Three-way Univent valve allow rapid in-situ servicing.

Size	Product Code
25mm (1")	UV-SP-1688-025
32mm (1¼")	UV-SP-1688-032
40mm (1½")	UV-SP-1688-040
50mm (2")	UV-SP-1688-050
65mm (2½")	UV-SP-1688-065

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Fig. 1988
Three-way Vent Cocks

Figure 1988 is resistant to stress corrosion cracking and used on single, multi-boiler or calorifier installations. Fitting a Three-way Vent Cock ensures a constant connection from the boiler or calorifier to the atmosphere.

Levers are available as an optional extra.

Technical Data

Max pressure: 7 bar

Max temperature: 93°C

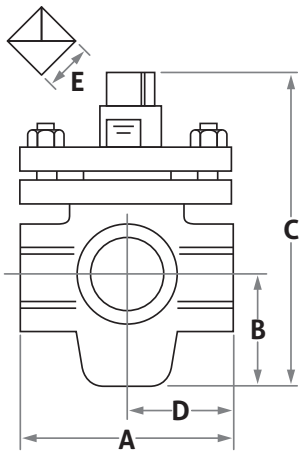
Connections: BS EN 10226-1:2004 – Rp (Female)

Materials

Body: Bronze (Gunmetal)

Plug: Bronze (Gunmetal)

Gland: Bronze (Gunmetal)



Normal Size	Product Code	A	B	C	D	E
25mm (1")	VCN-LA-025	90	43	132	45	18
32mm (1¼")	VCN-LA-032	122	48	155	56	20
40mm (1½")	VCN-LC-040	143	57	177	68	25
50mm (2")	VCN-LC-050	165	66	204	80	36

Valve Levers

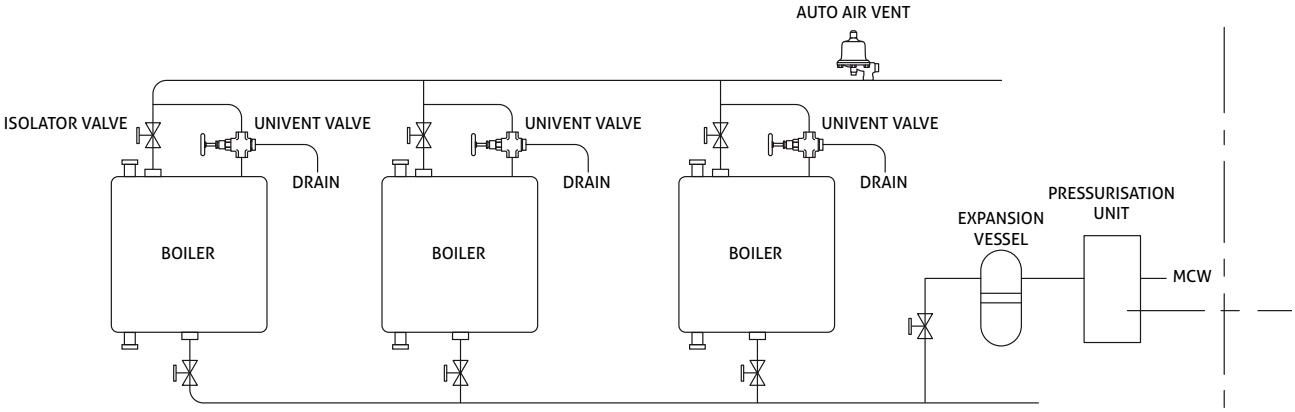
Size	Product Code
25mm (1")	VC-LA-025
32mm (1¼")	VC-LA-032
40mm (1½")	VC-LC-040
50mm (2")	VC-LC-050

Typical Multi-Boiler System incorporating Brownall Univents/Vent Cocks Fig. 1688/1988

The use of screw-down valves for multi-boiler hot water installations can allow the use of a single vent pipe to serve any number of boilers. No boiler in the system can be left in an unvented condition irrespective of the selected settings of the valves.
At all times the vent valve ensures a full bore exit from the boiler to atmosphere.

In operation, clockwise turning of the handwheel closes the drain and opens the vent. Anti-clockwise rotation of the handwheel opens the drain and closes the vent.

Note: The diagram shown is schematic and is not intended as a guide to the installation of the vent valves. It is essential that vent valves are fitted in accordance with the manufacturer's recommendations and comply with Health and Safety regulations etc.



Project Gallery

Copyright of MoD

Project: HMS Queen Elizabeth Royal Navy Carrier
Specification: Brownall Plant Room Valves

Project Gallery

Project: Holiday Inn MediaCityUK, Salford
Contractor: W H Good Group
Distributor: Ashworth
Specification: Crane Fluid Systems' Z3000 Dominators

Dominators from Crane Fluid Systems have been installed in the HVAC system of the newly constructed Holiday Inn which forms part of MediaCityUK in Manchester. The glass-fronted, 16-floor hotel boasts 218 ensuite bedrooms, a restaurant, bar and conferencing facilities, all of which are serviced by a state-of-the-art air conditioning system incorporating Z3000 Dominator flow management modules. In 2012, the Holiday Inn was awarded gold in the Green Tourism Business Scheme.

C Allison

As part of the first phase of MediaCityUK's construction, the Holiday Inn sits in the Studio block, overlooking the Manchester Ship Canal. Phase 1, which involved regenerating 36 acres of former docklands into a home for the UK's digital and creative multimedia industry, was completed in 2011 and is now home to BBC North, the University of Salford and Satellite Information Services.

WRc Evaluation and Testing Centre

The WRc Evaluation and Testing Centre is responsible for the Water Regulations Advisory Scheme, with testing and approval of water fittings meeting the requirements of the United Kingdom Water Regulations/Bylaws (Scotland).

Valves for use in public water supply systems and domestic situations must not contravene the United Kingdom Water Regulations. Valves which are designated WRAS Approved Product and listed in the Water Fittings and Materials Directory will not contravene those bylaws.

Many Crane Fluid Systems valves have been tested and certified as being WRAS Approved Products and are listed in the Water Fittings and Materials Directory.

The Kitemark

The Kitemark is a registered trademark owned by British Standards Institution and may only be used by manufacturers who are approved licensees and whose products fully comply with the individual product standards.

Annual product audits and regular surveillance visits by BSI ensure continuing compliance with specification requirements and confirm acceptable Quality Systems to BS EN ISO 9001:2008.

Firm of Assessed Capability

BS EN/ISO 9000 is the reference Standard for Quality Systems.

Pressure Equipment Directive

All Crane Fluid Systems products have been assessed in accordance with the Pressure Equipment Directive (PED) 97/23/EC and the Pressure Equipment Regulations 1999 No. 2001. Each product has been classified into a conformity assessment category based on the intended fluid contents – gas or liquid, the classification of the intended fluid contents – Group 1 or Group 2, and the maximum allowable pressure and the nominal size (DN).

Crane products fall into either the 'Sound Engineering Practice' (SEP), Category 1, Category 2 or Category 3. According to the directive, products classified as 'SEP' shall not be CE marked. Category 1 products will bear the CE mark and those products classified as Categories 2 and 3 will bear the CE mark plus the number 0086. The number 0086 is that of the British Standards Institute who Crane have chosen as their 'Notified Body' to monitor their quality assurance system as required by the directive.

TMV3- Build Cert

TMV3 approval is targeted at the Healthcare and Commercial thermostatic sector and uses the NHS specification D 08 as a basis for the thermostatic valves performance tests.

CE Mark

The symbol shown is the European mark for product certification.

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ISSUE ONE 04.2012