

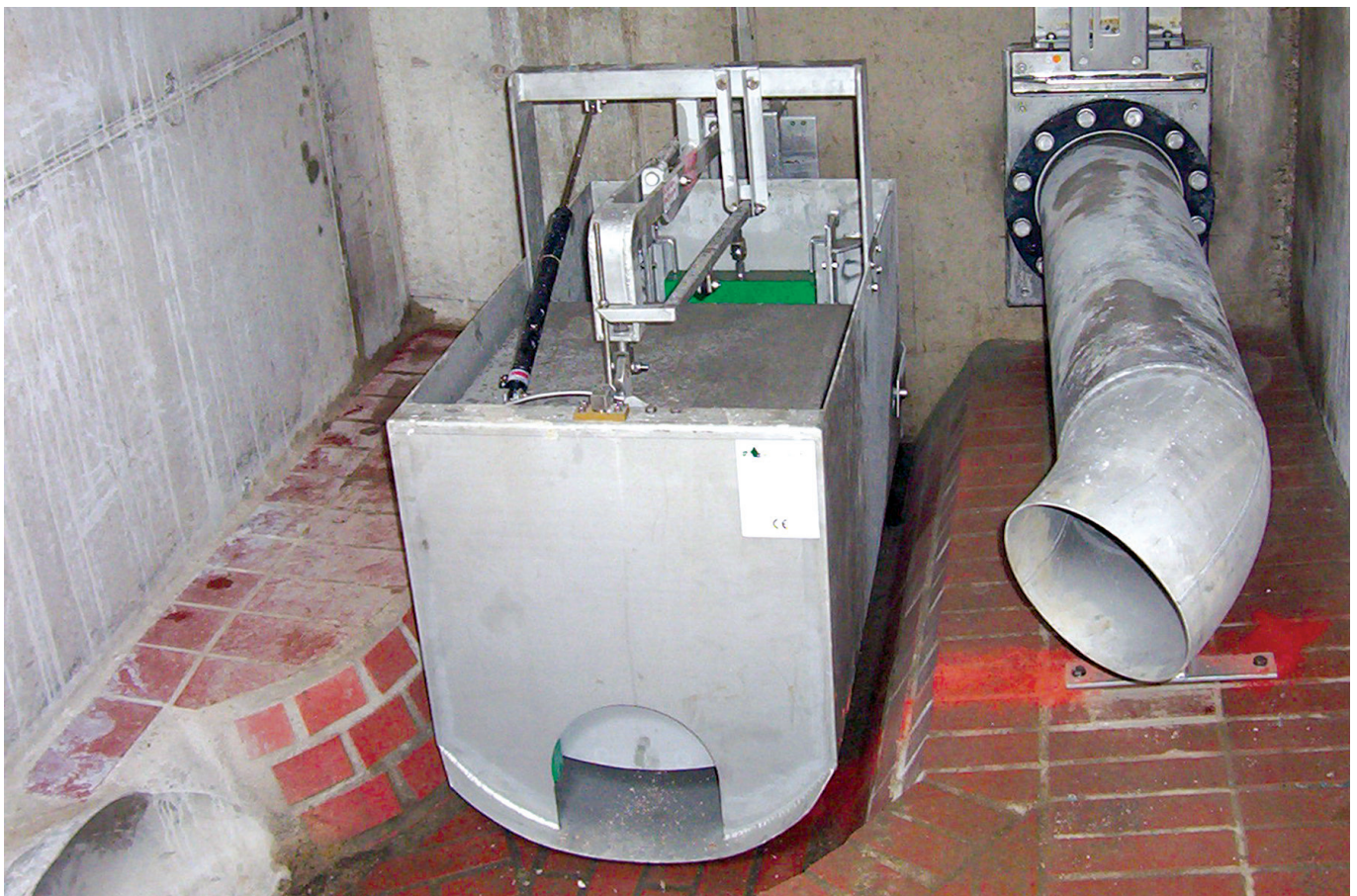
## Alpheus AT Regulator

### Key Features & Benefits:

- Provides sewer flow control.
- Installed on upstream (inlet) of chamber.
- In-line version available.
- Automatic blockage release function available.
- Maintains flow rate during head variation.
- Aperture can be fully opened from surface.
- Robust construction in either grade 304 or 316L stainless steel.

### How We Create Value:

- Reduces downstream flood risk.
- Enables attenuation systems to be ready for next storm quickly.
- Utilisation of upstream sewer volumes.
- Optimises capacity of system
- Minimises upstream storage
- Reduces cost of upstream attenuation.
- Reduces 'drain down time' of attenuation systems.



## Alpheus AT Regulator

The Alpheus AT is a standard model mechanical regulator. This unit does not require external power sources and is manufactured from high quality stainless steel for a durable life. This unit is installed on the chamber inlet (semi-dry Installation), and can be installed in new construction or retro fitted within existing chambers. This unit can also be fitted with an inlet and outlet flanged pipe to enable installation within a pipeline (dry Installation).

### Operation:

During dry weather the aperture is open to the extent of the required design point and is free of obstruction. The internal control float is at rest inside the unit.

During storm conditions, the water level rises causing the internal float to rise, this in turn transmits this movement to the rear aperture shutter, which reduces the area of orifice limiting the flow into the unit. The outlet shutter is set in a position determined by the required maximum pass forward flow (PFF). This outlet plate can be adjusted, if required, providing flow adjustment of  $\pm 30\%$  from design point.

Nominal Size DN	Maximum Head m	Flow From l/s	To l/s	S.W.	Foul	Min water head to activate Auto blockage release function.
100	4	2	10	Yes	No	550 mm
150	4	7	26	Yes	No	550 mm
200	4	10	48	Yes	Yes	550 mm
250	4	20	82	Yes	Yes	600 mm
300	4	35	128	Yes	Yes	650 mm
350	4	60	185	Yes	Yes	750 mm
400	4	80	256	Yes	Yes	850 mm
450	4	140	340	Yes	Yes	1100 mm
500	4	210	438	Yes	Yes	1100 mm

### Auto blockage Release Function:

It is possible that during regulation blockage could occur at the inlet control plate and would prevent flow into the unit. In this case, the water inside the unit will continue to drain out of the outlet, which in turn would allow the internal float to lower itself. As the float lowers the inlet control plate rises, releasing the debris causing the blockage at the inlet.

Should there be a blockage inside the unit, the water level within the unit will rise, this raises the internal float which in turn closes the inlet shutter and opens the outlet shutter. As the outlet shutter opens, the blockage is released. Once released the unit will return to control.

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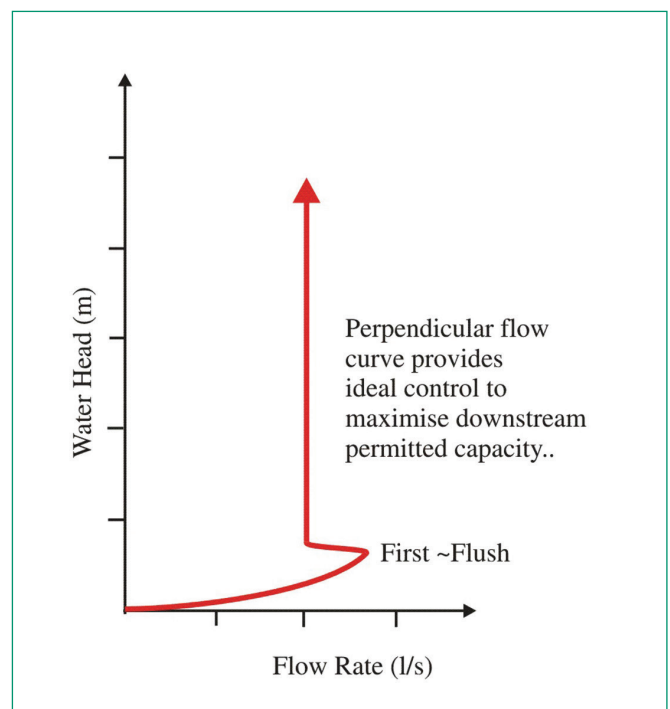
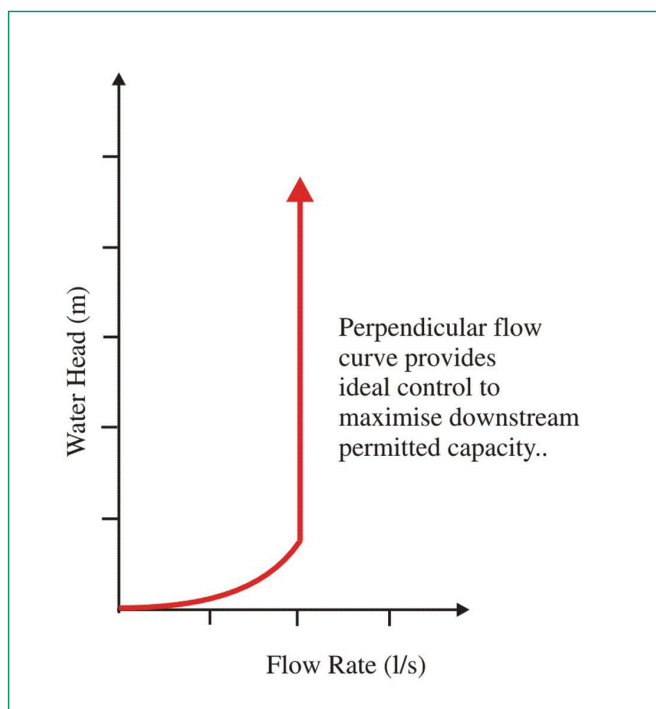
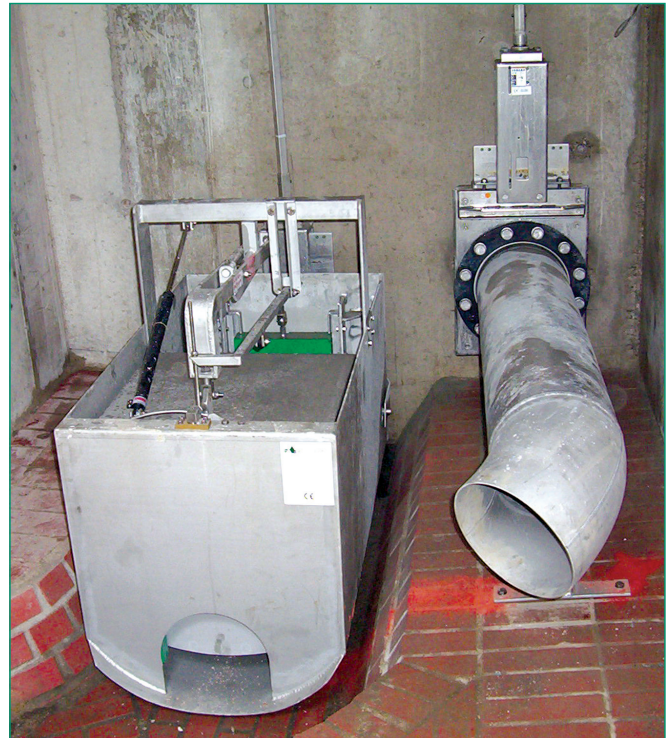
### By-Pass System:

Where it is desirable to provide a by-pass system this can be provided as shown on the adjacent picture. A penstock is mounted on the chamber wall with a din flange fixing enabling a section of pipework to be installed to discharge the flow in front of the control unit.

### Flow Characteristics:

The Alpheus AT unit is mostly supplied to provide a constant Pass Forward Flow (PFF) downstream. This maximises the downstream permissible capacity and minimises upstream retention; both volume and retention time. This gives a head discharge detailed below:

First Flush ability allows the immediate rush of debris to pass forward before the regulator takes over control. This can be particularly useful at CSO chambers to enable gross solids to pass forward before the system surcharges and overflows.



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Nominal Size	L Standard Model	LA	LG	Width B	H1	Height H2	H3	Weight
DN	mm	mm	mm	mm	mm	mm	mm	Kg
100	1192	130	1062	594	644	945	60	110
150	1192	130	1062	594	644	945	60	110
200	1192	130	1062	594	644	945	60	110
250	1292	130	1162	624	700	1020	70	160
300	1507	245	1262	707	750	1030	70	210
350	1592	245	1347	753	850	1170	70	260
400	1785	285	1500	862	950	1196	80	300
450	1900	300	1600	944	1200	1566	80	580
500	1900	300	1600	944	1200	1566	90	580

