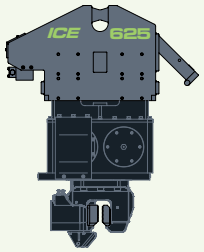
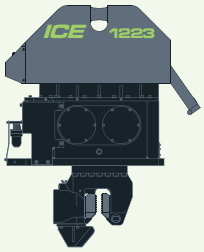
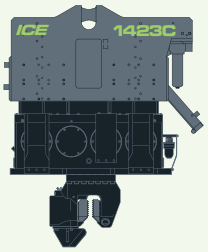
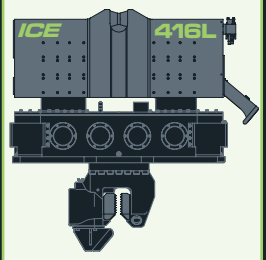
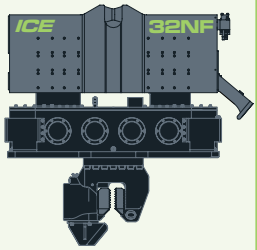
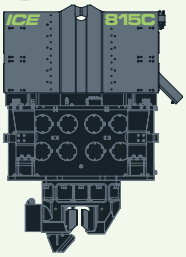
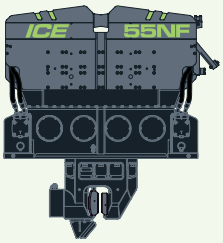
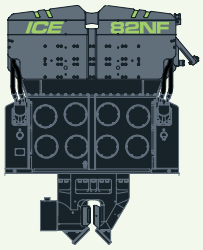
ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibratory Hammer Product Range

ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibratory Hammers Normal & High Frequency

	625	1223	1423C	416L
				
Eccentric moment kgm	6.0	11.5	14.0	23.0
Max. centrifugal force kN	410	670	812	645
Max. frequency rpm	2500	2300	2300	1600
Max. amplitude *) mm	17.5	16.4	16.5	19.6
Max. static line pull kN	120	240	240	400
Max. oil flow L/min	201	326	370	359
Dynamic weight *) kg	685	1400	1700	2350
Total weight *) kg	1210	2145	2750	3900
L x W x H *) mm	1520 x 646 x 1293	1810 x 452 x 1390	1919 x 625 x 1620	2546 x 490 x 1566
Recommend. power pack	200 series	400 series	400 series	400 series
Recommended clamp	60TU	100TU	100TU	100TU

	32NF	815C	55NF	82NF
				
Eccentric moment kgm	32.0	46.0	54.0	81.0
Max. centrifugal force kN	955	1250	1710	2570
Max. frequency rpm	1650	1570	1700	1700
Max. amplitude *) mm	27.2	23.3	30.1	30.4
Max. static line pull kN	400	400	800	800
Max. oil flow L/min	370	610	617	800
Dynamic weight *) kg	2350	3950	3580	5400
Total weight *) kg	4600	7450	5700	7900
L x W x H *) mm	2546 x 490 x 1566	2700 x 920 x 2595	2540 x 790 x 1944	2580 x 790 x 2480
Recommend. power pack	400 series	600 series	600 series	900 series
Recommended clamp	130TU	160TU	200TU	320TU

	1412C
Eccentric moment kgm	110.0
Max. centrifugal force kN	2300
Max. frequency rpm	1380
Max. amplitude *) mm	34.9
Max. static line pull kN	800 (1200 optional)
Max. oil flow L/min	830
Dynamic weight *) kg	6400
Total weight *) kg	10750
L x W x H *) mm	2680 x 1080 x 3588
Recommend. power pack	900 series
Recommended clamp	320TU

*) EXCLUDING CLAMP & HOSES

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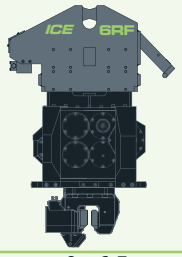
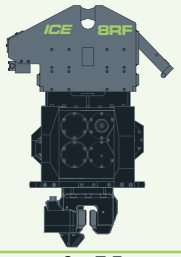
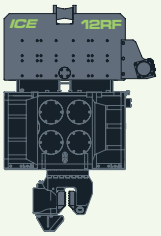
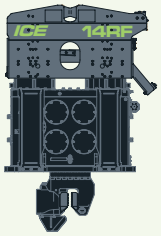
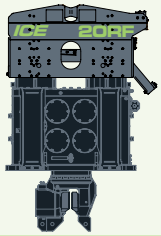
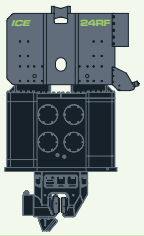
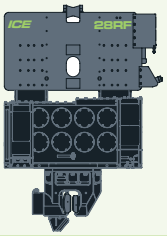
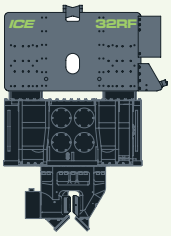
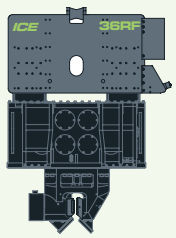
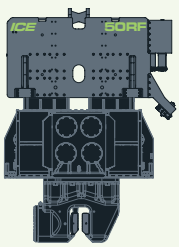
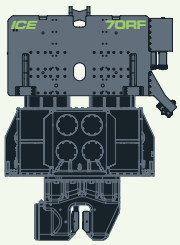
Vibratory Hammers Resonance Free

	6RF	8RF	12RF	14RF
				
Eccentric moment kgm	0 - 6.5	0 - 7.5	0 - 12.0	0 - 14.0
Max. centrifugal force kN	0 - 377	0 - 435	0 - 700	0 - 812
Max. frequency rpm	2300	2300	2300	2300
Max. amplitude *) mm	0 - 14.6	0 - 15.2	0 - 17.0	0 - 11.4
Max. static line pull kN	120	120	250	240
Max. oil flow L/min	138	185	261	375
Dynamic weight *) kg	955	985	1450	2460
Total weight *) kg	1485	1515	2390	3560
L x W x H *) mm	1530 x 595 x 1514	1530 x 595 x 1514	1559 x 673 x 1595	1854 x 638 x 2008
Recommend. power pack	200 series	200 series	300 series	400 series
Recommended clamp	60TU	60TU	100TU	100TU

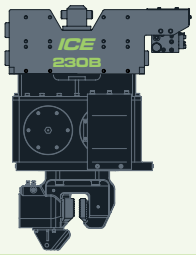
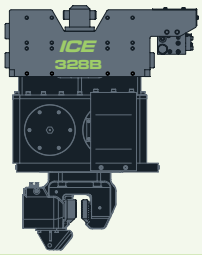
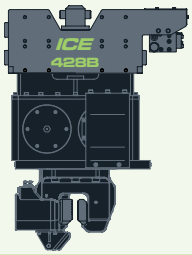
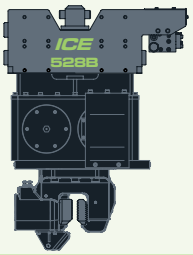
	20RF	24RF	28RF	32RF
				
Eccentric moment kgm	0 - 19.0	0 - 24.0	0 - 28.0	0 - 32.0
Max. centrifugal force kN	0 - 1100	0 - 1400	0 - 1600	0 - 1856
Max. frequency rpm	2300	2300	2300	2300
Max. amplitude *) mm	0 - 14.9	0 - 14.0	0 - 14.0	0 - 15.0
Max. static line pull kN	240	400	400	500
Max. oil flow L/min	498	493	590	740
Dynamic weight *) kg	2550	3500	3900	4300
Total weight *) kg	3650	5960	5900	6750
L x W x H *) mm	1854 x 638 x 2008	1937 x 740 x 2445	2332 x 785 x 2402	2384 x 825 x 2352
Recommend. power pack	500 series	500 series	600 series	800 series
Recommended clamp	130TU	200TU	200TU	320TU

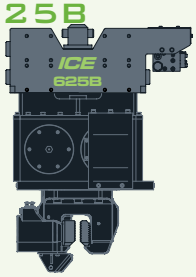
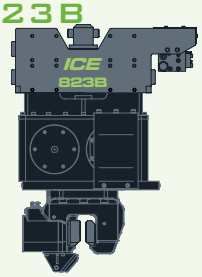
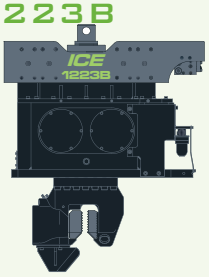
	36RF	50RF	70RF
			
Eccentric moment kgm	0 - 35.0	0 - 50.0	0 - 70.0
Max. centrifugal force kN	0 - 2030	0 - 2900	0 - 3070
Max. frequency rpm	2300	2300	2000
Max. amplitude *) mm	0 - 16.0	0 - 15.0	0 - 21.0
Max. static line pull kN	500	800	800
Max. oil flow L/min	1012	1380	1580
Dynamic weight *) kg	4400	6600	6800
Total weight *) kg	6800	10000	10200
L x W x H *) mm	2384 x 825 x 2352	2883 x 985 x 2835	2883 x 985 x 2835
Recommend. power pack	1000 series	1400 series	1600 series
Recommended clamp	320TU	350T	350T

*) EXCLUDING CLAMP & HOSES

ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibratory Hammers Excavator Mounted

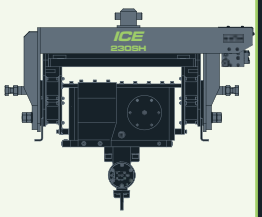
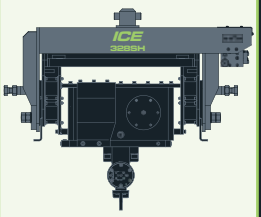
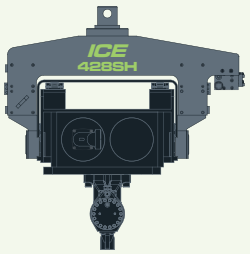
	230B	328B	428B	528B
				
Eccentric moment kgm	2.2	3.2	4.6	5.6
Max. centrifugal force kN	220	275	344	481
Max. frequency rpm	3000	2800	2800	2800
Max. amplitude **) mm	6.1	8.6	10.2	12.3
Max. static line pull kN	120	120	120	120
Max. oil flow L/min	90	110	170	170
Dynamic weight **) kg	720	740	900	910
Total weight **) kg	1080	1090	1280	1290
L x W x H **) mm	1128 x 520 x 980	1128 x 520 x 980	1128 x 646 x 980	1128 x 646 x 980
Recommended clamp	40TU	40TU	60TU	60TU

	625B	823B	1223B
			
Eccentric moment kgm	6.0	8.0	11.5
Max. centrifugal force kN	411	465	670
Max. frequency rpm	2500	2300	2300
Max. amplitude **) mm	13.2	17.0	12.2
Max. static line pull kN	120	120	180
Max. oil flow L/min	201	185	326
Dynamic weight **) kg	910	940	1890
Total weight **) kg	1300	1310	2380
L x W x H **) mm	1128 x 646 x 980	1128 x 646 x 980	1540 x 435 x 1170
Recommended clamp	60TU	60TU	100TU

**) INCLUDING CLAMP

ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibratory Hammers Excavator Mounted with Swivel Head

	230SH	328SH	428SH	528SH
				
Eccentric moment kgm	2.2	3.2	4.0	5.6
Max. centrifugal force kN	220	275	345	481
Max. frequency rpm	3000	2800	2800	2800
Max. amplitude **) mm	6.1	8.6	8.9	12.4
Max. static line pull kN	100	100	120	120
Max. oil flow L/min	90	110	170	170
Dynamic weight **) kg	720	740	900	900
Total weight **) kg	1270	1280	1460	1460
L x W x H **) mm	1838 x 642 x 1405	1838 x 642 x 1405	1600 x 848 x 1604	1600 x 848 x 1604
Recommended clamp	40TU	40TU	60TU	60TU

	625SH	823SH
Eccentric moment kgm	6.0	8.0
Max. centrifugal force kN	410	465
Max. frequency rpm	2500	2300
Max. amplitude **) mm	12.9	17.0
Max. static line pull kN	120	120
Max. oil flow L/min	200	185
Dynamic weight **) kg	930	940
Total weight **) kg	1480	1490
L x W x H **) mm	1600 x 848 x 1604	1600 x 848 x 1604
Recommended clamp	60TU	60TU

A quick indication of which hammer can be used on which excavator, can be realized by using the following rules of the thumb.

1 Flow excavator
The flow of the excavator has to be at least 1.4 times the required flow of the vibratory hammer.

2 Power excavator
The required power of the excavator has to be at least 1.5 times the power of the vibratory hammer

Amplitude during vibration of hammer and sheetpile:

$$\text{Amplitude} = \frac{2000 \times \text{Eccentric moment}}{\text{Dynamic weight incl. clamp + weight sheetpile}}$$

Example:
ICE 416L vibratory hammer + sheetpile (2000 kg)

$$\text{Amplitude} = \frac{2000 \times 23}{2840 + 2000} = 9.5 \text{ mm}$$

Centrifugal force in case of a different frequency

$$\text{Centrifugal force} = 0.011 \times (\text{frequency})^2 \times \text{Eccentric moment}$$

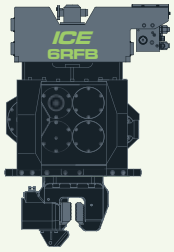
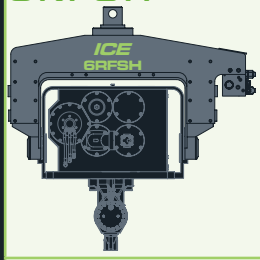
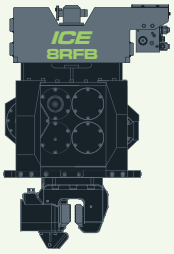
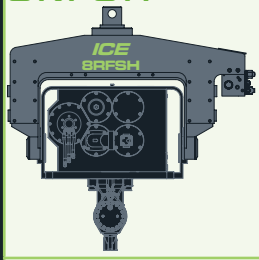
Example:
ICE 416L vibratory hammer working with a frequency of 1400 rpm (in stead of 1600 rpm)

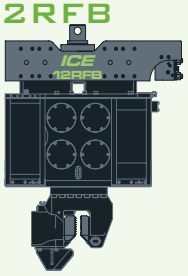
$$\text{Centrifugal force} = 0.011 \times 1400^2 \times 23 = 495880 \text{ N} = 496 \text{ KN}$$

**) INCLUDING CLAMP

ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibbratory Hammers Resonance Free Excavator Mounted

	6RFB	6RFSH	8RFB	8RFSH
				
Eccentric moment kgm	0 - 6.5	0 - 6.5	0 - 7.5	0 - 7.5
Max. centrifugal force kN	0 - 380	0 - 380	0 - 435	0 - 435
Max. frequency rpm	2300	2300	2300	2300
Max. amplitude **) mm	0 - 10.7	0 - 10.6	0 - 12.1	0 - 12.0
Max. static line pull kN	120	120	120	120
Max. oil flow L/min	138	138	185	185
Dynamic weight **) kg	1210	1225	1235	1255
Total weight **) kg	1490	1900	1510	1930
L x W x H **) mm	1158 x 595 x 1711	1750 x 848 x 1662	1158 x 595 x 1711	1750 x 848 x 1662
Recommended clamp	60TU	60TU	60TU	60TU

	12RFB
	
Eccentric moment kgm	0 - 12.0
Max. centrifugal force kN	0 - 700
Max. frequency rpm	2300
Max. amplitude **) mm	0 - 12.4
Max. static line pull kN	250
Max. oil flow L/min	261
Dynamic weight **) kg	1940
Total weight **) kg	2225
L x W x H **) mm	1572 x 675 x 1500
Recommended clamp	100TU

**) INCLUDING CLAMP

ICE
INTERNATIONAL CONSTRUCTION EQUIPMENT

Vibbratory Hammers
Excavator Mounted EMV-series

	4EMV	6EMV	9EMV
Eccentric moment kgm	4.3	5.9	8.9
Max. centrifugal force kN	371	407	519
Max. frequency rpm	2800	2500	2300
Max. amplitude **) mm	9.7	13.0	19.1
Max. static line pull kN	120	120	120
Max. oil flow L/min	167	201	214
Dynamic weight **) kg	890	910	930
Total weight **) kg	1060	1080	1100
L x W x H *) mm	1000 x 612 x 1328	1000 x 612 x 1328	1000 x 612 x 1328
Recommended clamp	included	included	included

Free hanging hammers have an eccentric moment ranging from 6 to 110 kgm. Suitable for hammering pipe/casing diameters up to 3800 mm. Also perfect for vibrating sheet piles and H & I profile beams.

The excavator mounted hammers have an eccentric moment ranging from 0.5 to 18 kgm. An excellent choice for driving and extracting sheet piles and H & I beams.

Using the swivel head option enables you to directly lift the piles from a horizontal to a vertical position and immediately start driving.

**) including clamp

ICE
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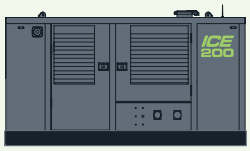
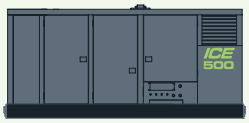
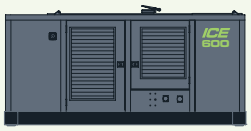
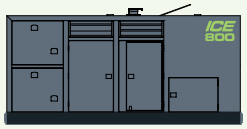
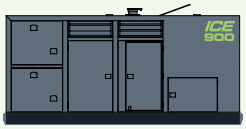
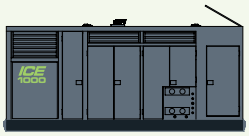
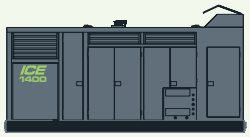
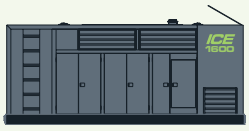
Power Packs

		200 Series	300 Series	400 Series	500 Series
					
Diesel engine		Caterpillar	Volvo	Caterpillar	Volvo
Max. power	kW/HP	168/225	252/343	242/329	395/537
Max. frequency	rpm	2100	1800	2200	1800
Working pressure	bar	350	350	350	350
Max. oil flow	l/min	295	350	400	500
Weight	kg	3750	4300	6000	5800
L x W x H	mm	3200 x 1540 x 1700	3600 x 1500 x 1800	4000 x 1650 x 2085	4325 x 1650 x 2075

		600 Series	800 Series	900 Series	1000 Series
					
Diesel engine		Caterpillar	Volvo	Volvo	2x Volvo
Max. power	kW/HP	403/548	565/768	565/768	790/1074
Max. frequency	rpm	2100	1800	1800	1800
Working pressure	bar	350	350	350	350
Max. oil flow	l/min	670	800	900	1000
Weight	kg	7600	8500	9700	11000
L x W x H	mm	4500 x 1740 x 2250	4820 x 1800 x 2345	5060 x 1800 x 2345	5075 x 2340 x 2345

		1400 Series	1600 Series
			
Diesel engine		2x Volvo	2x Volvo
Max. power	kW/HP	898/1222	1130/1536
Max. frequency	rpm	1800	1800
Working pressure	bar	350	350
Max. oil flow	l/min	1400	1600
Weight	kg	13100	16500
L x W x H	mm	5075 x 2340 x 2490	5820 x 2500 x 2530

The ICE Power Packs could be equipped with various engine and pump combinations. Contact your ICE representative for other specifications than mentioned in this product range

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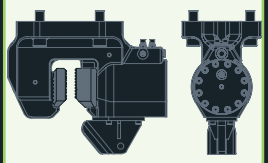
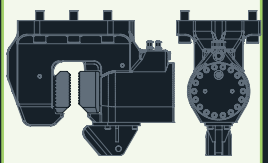
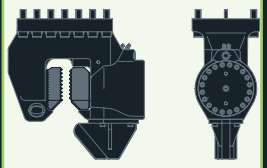
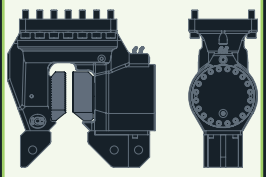
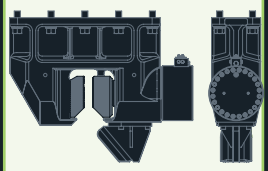
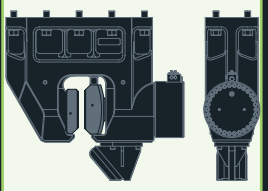
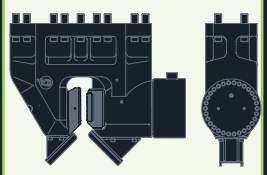
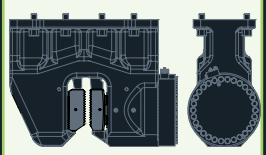
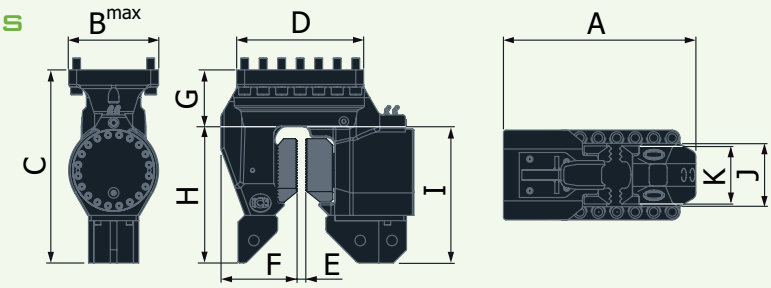
Universal Clamps

		40TU	60TU	100TU	130TU
					
Clamp type		universal & sheet pile	universal & sheet pile	universal & sheet pile	universal & sheet pile
Clamping force	kN	400	600	1000	1300
Working pressure	bar	320	320	320	320
Weight	kg	165	250	490	610
L x W x H	mm	537 x 200 x 437	615 x 230 x 497	686 x 310 x 705	730 x 340 x 730

		160TU	200TU	320TU	350T
					
Clamp type		universal & sheet pile	universal & sheet pile	universal & sheet pile	universal & sheet pile
Clamping force	kN	1600	2000	3200	3500
Working pressure	bar	320	320	320	300
Weight	kg	1100	1300	2500	2400
L x W x H	mm	1138 x 340 x 894	1143 x 360 x 1046	1363 x 460 x 1097	1240 x 540 x 940

Dimensions



Clamp model	Clamping force	Operating pressure	Weight	A	B	C	D	E	F	G	H	I	J	K
ICE 40TU	400 kN	320 bar	165 kg	537	200	437	375	0 - 30	199	125	195	312	150	130
ICE 60TU	600 kN	320 bar	250 kg	615	230	497	415	0 - 32	232	150	238	347	180	175
ICE 100TU	1000 kN	320 bar	490 kg	686	310	705	480	0 - 45	265	200	315	505	210	190
ICE 130TU	1300 kN	320 bar	610 kg	730	340	730	480	0 - 40	289	215	515	515	245	220
ICE 160TU	1600 kN	320 bar	1100 kg	1138	340	894	935	0 - 55	462	318	350	576	305	245
ICE 200TU	2000 kN	320 bar	1300 kg	1143	360	1046	940	0 - 57	464	375	425	671	340	340
ICE 320TU	3200 kN	320 bar	2500 kg	1363	460	1097	1100	0 - 62	550	410	682	682	460	400
ICE 350T	3500 kN	320 bar	2400 kg	1240	540	940	1100	0 - 37	541	425	515	515	400	400

ICE
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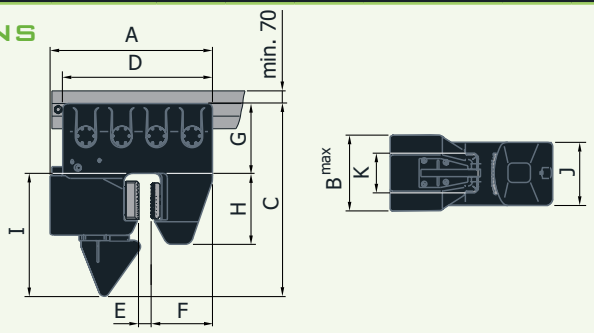
Caisson Clamps

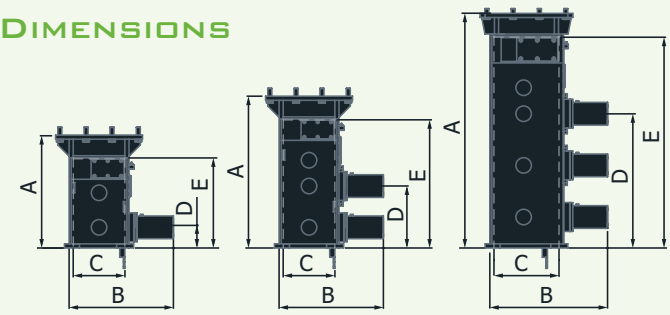
Dimensions



Clamp model	Clamping force	Operating pressure	Weight	A	B	C	D	E	F	G	H	I	J	K
ICE 55TC	550 kN	300 bar	310 kg	500	320	450	420	0 - 35	136	250	200	200	270	95
ICE 81TC	800 kN	320 bar	480 kg	611	300	775	440	0 - 40	225	275	315	500	272	135
ICE 100TC	1000 kN	300 bar	690 kg	638	395	555	573	0 - 53	225	260	295	295	300	130
ICE 125TC	1250 kN	300 bar	900 kg	681	400	647	585	0 - 47	258	347	300	300	372	150
ICE 150TC	1500 kN	300 bar	1300 kg	798	420	750	665	0 - 58	303	420	330	330	330	180
ICE 200TC	2000 kN	320 bar	1350 kg	915	430	1092	840	0 - 54	354	396	400	696	355	200

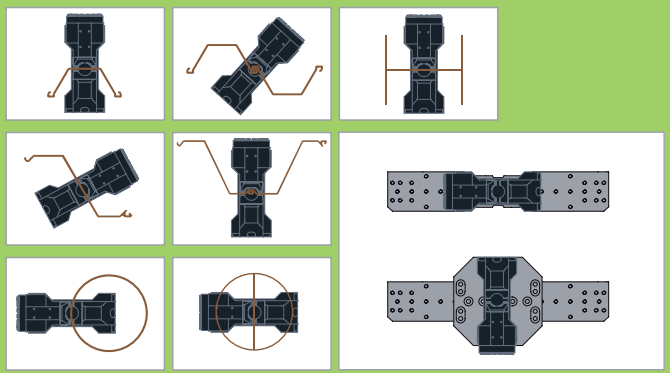
Pile Clamps

Dimensions

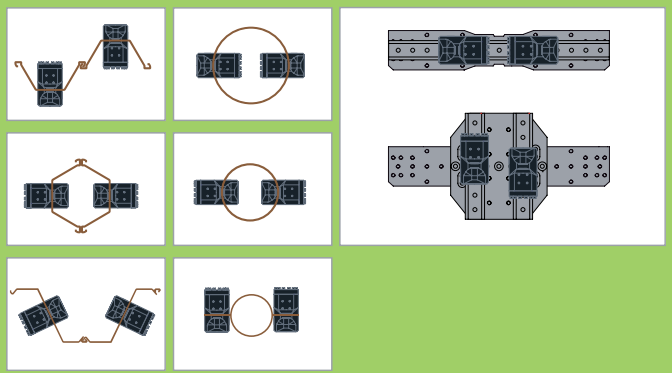


Clamp model	Clamping force	Operating pressure	Weight	A	B	C	D	E
ICE 60TP	600 kN	300 bar	1240 kg	1130	1045	420	240	629
ICE 120TP	1200 kN	300 bar	1650 kg	1470	1045	420	600	969
ICE 180TP	1800 kN	300 bar	2820 kg	2275	1145	520	1300	1749

Universal Clamps



Caisson Clamps



ICE

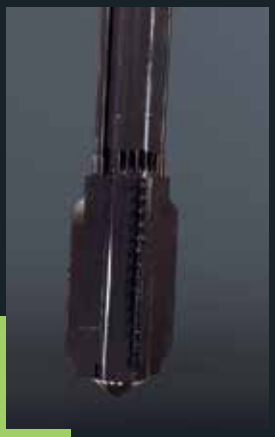
INTERNATIONAL CONSTRUCTION EQUIPMENT

Since 1977 International Construction Equipment bv in the Netherlands offers a wide range of high end vibratory hammers. In the field, they're known for their reliability and power. It doesn't matter what you are hammering because our hammers can be equipped with a wide range of wood, universal, pile and caisson clamps. Of course all our products are CE certified.

Depending on the application, you can choose from a variety of hammers in normal and high frequency models. For sites where the surrounding soil is not allowed to vibrate such as in urban areas or in the vicinity of old buildings, there are resonance-free hammers.

From vibratory hammers to DOP pumps. From augers to impact hammers. For every type of equipment, we provide an extensive range of products, including accessories. The advantage of this line of products is their interchangeability. And the fact that they all provide optimum performance with one and the same power source: the ICE powerpack.

The Comprehensive Range of ICE products



ICE

INTERNATIONAL CONSTRUCTION EQUIPMENT

Lelystraat 49
3364 AH Sliedrecht
The Netherlands
T: +31 (0)184 410 333
F: +31 (0)184 411 368
info@ice-holland.com
www.ice-holland.com

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