

Holmatro

industrial tools



 **holmatro**
mastering power

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Mastering power

Holmatro products are eventually about the principle that only controlled power can be used in an effective way. We have expressed this vision in the slogan 'mastering power' and this applies to all three of the companies that together form the Holmatro Group. Industrial Equipment is about applying and mastering high pressure power in heavy industrial applications. With Rescue Equipment it is a matter of life and death to work in a controlled, precise and well-thought-out way with the proper equipment. With Marine Equipment it is all a matter of mastering and controlling natural forces.

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Innovation is the driving force of Holmatro. By being innovative and developing new markets we can count on a long-term, steady growth. Our house style and accommodation have developed along recently as well. A logical next step is the product catalogue. In view of the enormous growth of the Internet, we thought that the previous edition would be the last printed catalogue. Now this medium turns out to be very suitable for quick information, for downloading and possibly also for retrieving a copy of this easy to use analogue compilation.

As specialists in hydraulic power we always focus on you, the user. Therefore, I and all employees of Holmatro Industrial Equipment are pleased to present you our full range of industrial tools. We hope that through this product catalogue we can be of even better service to you.

Your valuable ideas with respect to new products and applications have inspired us through the years. This is why I invite you again to think along with us about the development and improvement of industrial tools. I am convinced that bundling our forces will lead to the best results with the eventual common objective of 'mastering power'.

I am looking forward to receiving your response!

J.J. Meijer, B.Sc.
CEO



Holmatro, founded in the Netherlands in 1967, originally traded in high-pressure hydraulic tools for the shipbuilding industry. Nowadays, Holmatro develops, manufactures and delivers hydraulic products that are used by various customer groups all over the world.

The Holmatro group consists of three divisions:

- **Holmatro Rescue Equipment B.V.** is global market leader in the area of rescue tools that are renowned for their high quality and performance. The hydraulic cutters, spreaders, rams, pumps, etc. are used by, among others, fire departments, land and air force, marine, mine rescue teams, police, first-aid services and USAR teams.
- **Holmatro Marine Equipment B.V.** focuses on on-board hydraulic systems for yachts. These ensure management and control of the strong forces of nature on the rigging. This division also manufactures hydraulic emergency cutters and a wide range of winches for both classic and modern yachts.
- **Holmatro Industrial Equipment B.V.** is a specialist in the area of high-pressure hydraulic, pneumatic and mechanical tools. The three main segments are cylinders and pumps for generating and controlling precision power in a broad range of industrial applications, cutters for recycling and demolition works and foundry wedges for the metal industry.

Holmatro products are innovative, high quality and above all effective under the most diverse conditions. Having offices in the Netherlands, the USA and Poland and an extensive dealer network, we are fully focused on finding result-oriented solutions for specific markets and applications.

Our experience and our technical knowledge enable us to provide you with expert advice with respect to our products and their applications. All Holmatro tools are developed, manufactured and maintained in conformity with the highest quality and reliability standards. As they must be resistant to the most extreme conditions, our products are thoroughly tested before they can be used in practice. They must comply with the strictest quality standards of durability, side load, mechanical distortion and overpressure.

World-wide spread Holmatro dealers are committed to the same quality standard. Our dealers that are fully trained in our own training centre guarantee you optimum service and advice.

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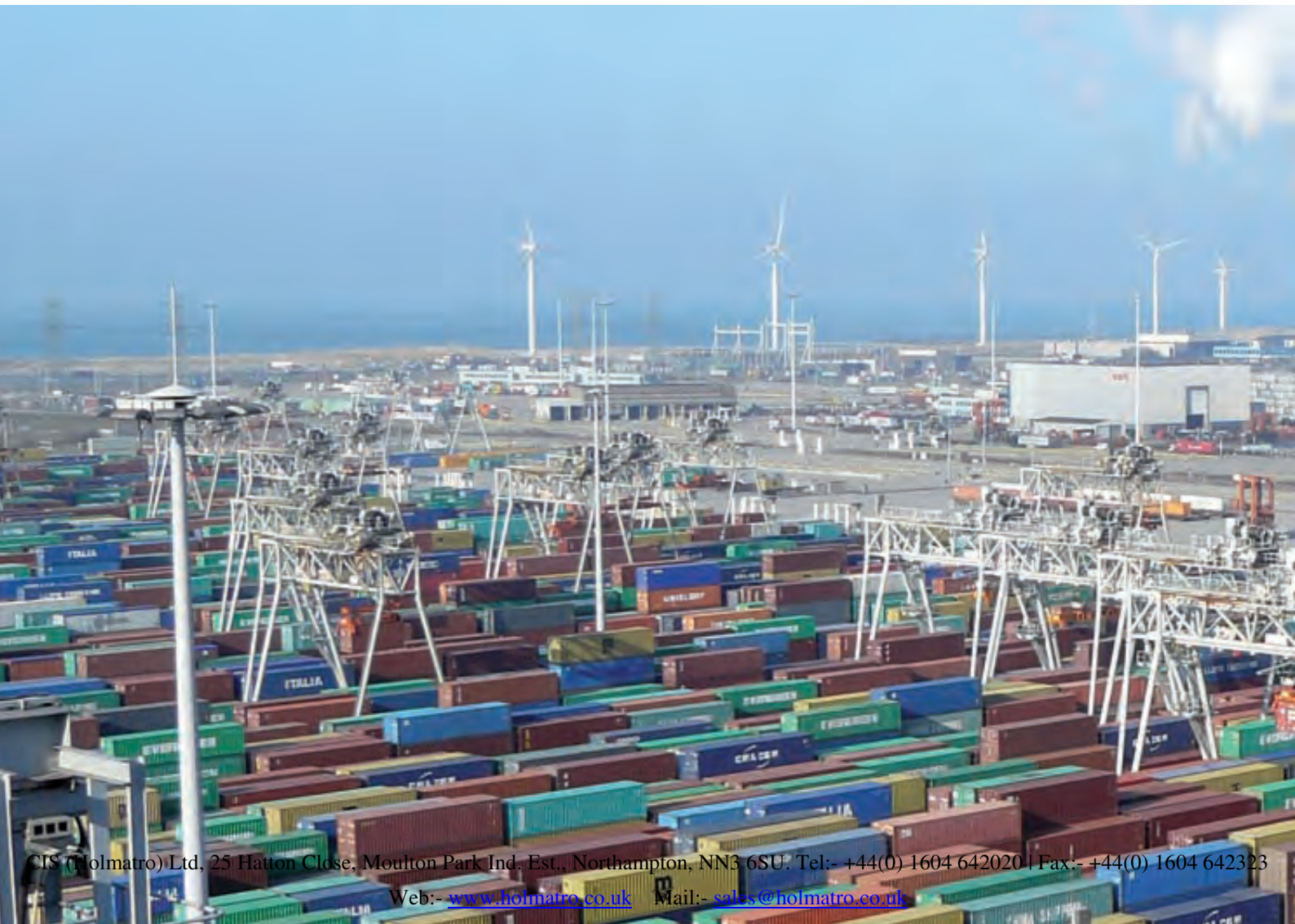


World-wide applications

The product range of Holmatro Industrial Equipment includes a broad range of tools for industrial lifting, bending, pulling, cutting, crushing and spreading. Our tools have been especially developed for markets, such as recycling and industrial cutting, ship building and repair, foundries, the petrochemical and nuclear industry, the construction industry, special transport and maintenance. These pages show some of the possible applications of our high-pressure hydraulic, pneumatic and mechanical tools. Actually, there are many more applications and new applications are added on a daily basis.









Pascal's law

Pressure applied at any point upon a confined liquid is transmitted undiminished in all directions. (Fig. 1 and 2).

Figure 1

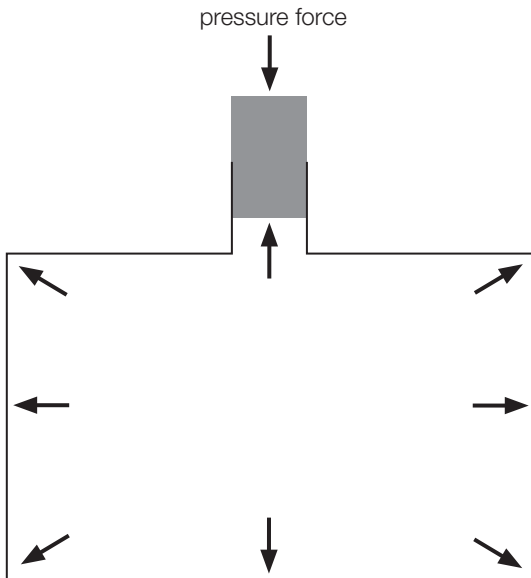
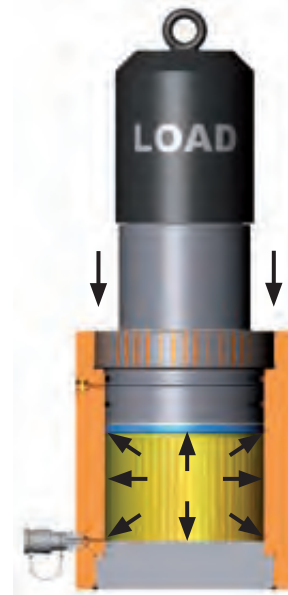


Figure 2



According to Pascal's law, the oil flow always chooses the line of least resistance in a hydraulic system. This means that when using several hydraulic cylinders, each cylinder lifts at its own speed. When the cylinders have the same capacity, they will first start moving at the point of the lightest load and last at the point of the heaviest load (Fig. 3).

A valve block must be added to the lifting system to make sure that the oil flow can be controlled such, that all cylinders operate evenly and the load can be lifted horizontally (Fig. 4).

Figure 3



Figure 4



Recommended total cylinder capacity

In connection with various uncertainties as mentioned below, Holmatro recommends a system with sufficient extra capacity:

- the exact weight of the load
- the spreading of the load among the cylinders
- possible moving of the load in case of calamities



→ **Symmetric load:**

Recommended total cylinder capacity = 1.5 x load



→ **Asymmetric load:**

Recommended total cylinder capacity = 2 x load

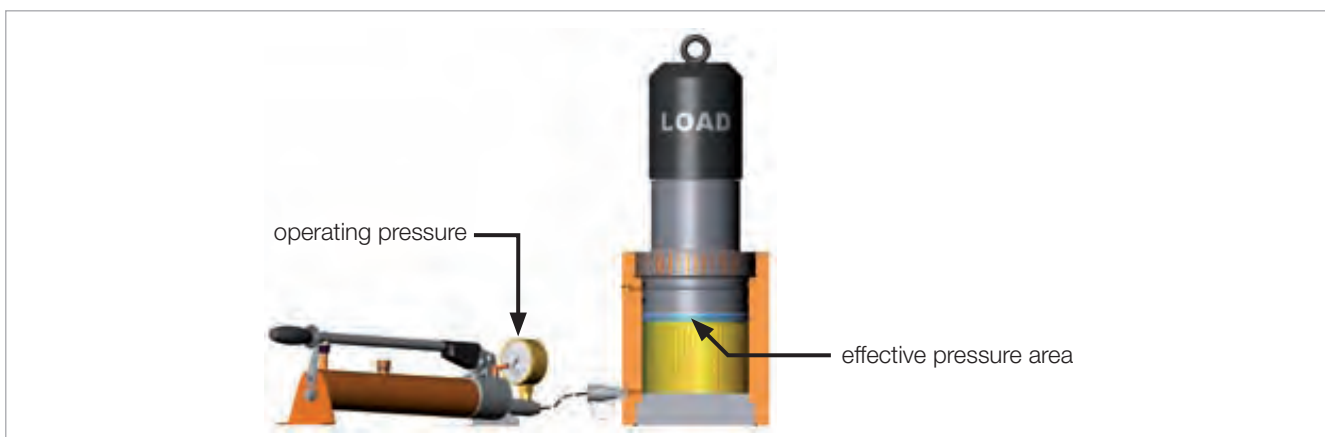
Force of a cylinder

The force (capacity) generated by a cylinder is equal to the hydraulic pressure multiplied by the effective pressure area of the plunger.

Force (N) = hydraulic operating pressure (N/cm²) x effective pressure area of the plunger (cm²).

F	=	P	x	A
P	=	F	/	A
A	=	F	/	P

This formula can be used for determining the force, pressure or the area when two out of three variables are known.



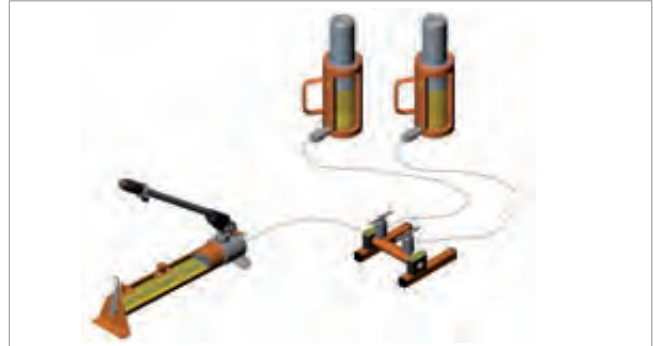
Minimum effective tank volume of pump

Minimum effective tank volume of pump = (oil volume of cylinder 1 + 2 + ...) x 1,2 (safety margin)

Oil volume of cylinder:

The volume in cm³ required for achieving the full stroke of the cylinder. For further specification see section 'Hydraulic cylinders', page 15.

NB. With double-acting cylinders deduct the volume above the piston part from the volume below the piston part.



Required operating speed

Operating speed = $\frac{\text{oil volume of cylinders 1 + 2 + ...}}{\text{pump output}}$

Operating speed:

With hand/foot pumps: the number of pump strokes required for fully pumping out the cylinder. With motor pumps: the number of minutes required for fully pumping out the cylinder.

Oil volume of cylinders:

With hand/foot pumps: the volume in cm³ required for achieving the full cylinder stroke. With motor pumps: the volume in litres required for achieving the full cylinder stroke. See table on product pages.

NB. When two figures are given, only take the value for below or above the piston part.

Pump output:

With hand/foot pumps: the output of the pump in cm³/stroke. With motor pumps: the output of the pump in l/min. See tables in section 'Hydraulic pumps', page 93 for the output of your pump.

Important conversion factors

1	bar	=	1,10197	kg/cm ²
1	bar	=	14,504	psi
1	bar	=	100	kPa
1	bar	=	0,1	MPa
1	bar	=	10	N/cm ²
1	ton	=	9,80665	kN
1	ton	=	9806,65	N
1	ton	=	1000	kg
1	cm ²	=	0,155	in ²
1	cm ³	=	0,06102	in ³
1	cm ³	=	0,001	l
1	kgf	=	9,8066	N
1	kg	=	2,2046	lb

1	kg/cm ²	=	0,98066	bar
1	psi	=	0,0689	bar
1	kPa	=	0,01	bar
1	MPa	=	10	bar
1	N/cm ²	=	0,1	bar
1	kN	=	0,1020	ton
1	N	=	0,0001	ton
1	kg	=	0,001	ton
1	in ²	=	6,4516	cm ²
1	in ³	=	16,3881	cm ³
1	l	=	1000	cm ³
1	N	=	0,1020	kgf
1	lb	=	0,4536	kg

Hydraulic cylinders



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Step 1: select one or more cylinders

Considerations:

- what is the weight of the load to be lifted?
- what is the total recommended cylinder capacity? (see page 13)
- with how many cylinders must/can the load be lifted?
- what capacity for each cylinder is required then?
- what is the required stroke length of the cylinder?
- what is the required closed height (overall dimensions) of the cylinder?
- how must the plunger return; gravity, spring, pneumatic or hydraulic?

See 'Cylinder selection table', page 23.

Step 2: select the proper pump

Considerations:

- select from hand , foot , pneumatically, electrically, petrol or diesel driven pumps
- hand / foot pumps: with a double-acting cylinder (hydraulic return), mount a double-acting valve on your hand pump (only possible with H/FTW *800 B models)
- Vari pumps: dependent on whether you use a single- or double-acting cylinder, mount a single-acting or double-acting valve on the Vari pump
- what minimum tank volume of the pump is required? (see page 14)
- select a pump output corresponding with the required operating speed (see page 14)

See section 'Hydraulic pumps', page 93.

Step 3: select the accessories you need

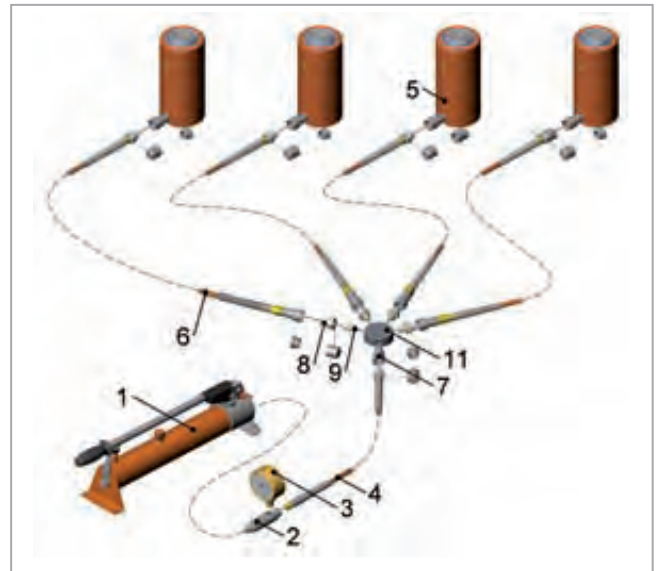
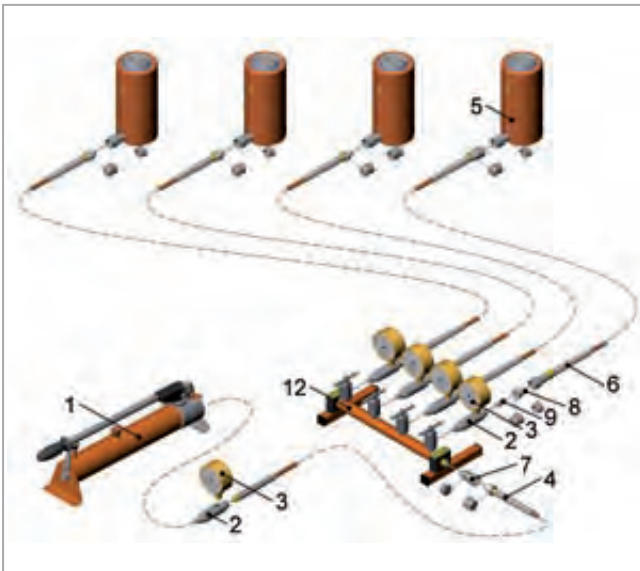
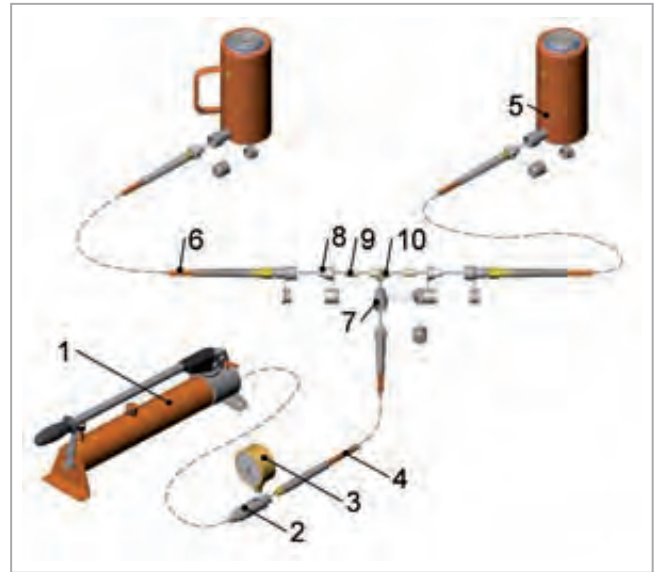
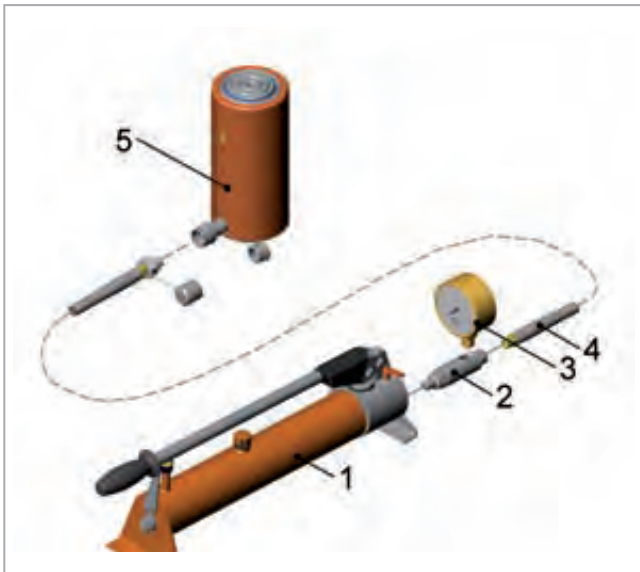
Considerations:

- choose the correct number of hoses that you need and the required length. Take the required (safe) distance between cylinders and operation (pump and/or valve block) into account
- when the system contains several cylinders controlled by one pump, we recommend you to install a valve block between the cylinders and the pump for accurate control of the oil flow to the cylinders
- select any necessary couplers, pressure gauges, valves and / or assembly material

See section 'System components', page 109.

Any questions? Our sales department will answer them with pleasure!

The next page shows four examples of a hydraulic cylinder system.



Composition of hydraulic cylinder system



no	description	art no	page
1.	hand pump HTW 1800 B	100.141.005	96
2.	pressure gauge connecting block A 108	100.181.108	113
3.	pressure gauge A 500	100.582.500	112
4.	hydraulic hose H 2 SOU	100.572.102	110
5.	single-acting cylinder		
6.	hydraulic hose VL 5 SOU	100.572.305	110
7.	High Flow coupler, female, A 118	100.181.118	111
8.	High Flow coupler, male, A 119	100.181.119	111
9.	nipple 3/8" NPT, male	100.581.101	118
10.	T-piece	100.581.106	117
11.	manifold	100.181.125	117
12.	valve block SMV 4	100.182.324	114

The Holmatro product range includes over 100 different cylinders in 15 different types and 4 different return types. A short explanation about the standard return types and the models will be given below.

Various return types

Gravity return

Return of the plunger by means of the load or another external force.

Spring return

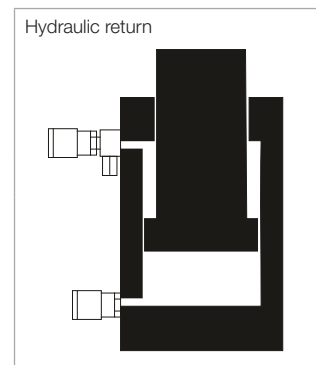
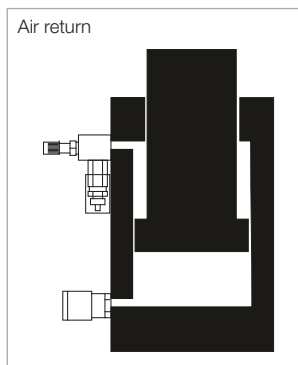
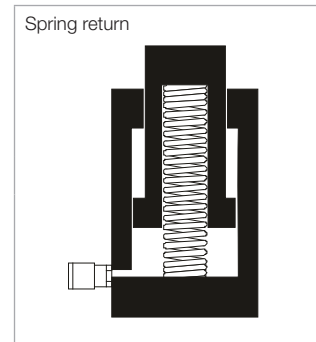
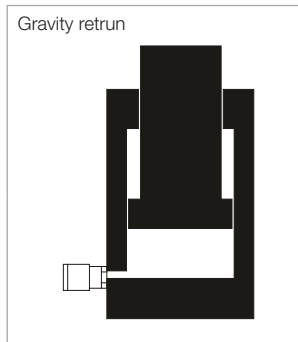
Return of the plunger by means of a spring integrated in the cylinder.

Air return

Return of the plunger by means of a chamber filled with compressed air (6 bar) in the cylinder.

Hydraulic return

Return of the plunger by means of hydraulic pressure. Cylinders in which the plunger hydraulically extends and returns are also called 'double-acting' cylinders.



Various cylinder types

Aluminium cylinders - spring return

Cylinders with up to 50% less weight than the steel equivalent, with a lifting capacity of 20 to 100 tons and a stroke length varying between 50 and 150 mm. Very suitable for lifting activities requiring frequently moving the cylinder, making a low weight essential.



Aluminium cylinders - air return

Cylinders with unique air return by means of compressed air (6 bar), 50% less weight than steel cylinders and a lifting capacity of 50 tons. Very suitable for lifting activities requiring frequently moving the cylinder, making a low weight essential.



Flat cylinders - short stroke, gravity return

Cylinders with a very low construction height and a lifting capacity of 5 - 150 tons. Especially developed for, among other things, adjusting heavy engines, machines, presses, etc.



Telescopic cylinders - gravity return

Cylinders with a very low construction height, two different capacities and stroke lengths in one cylinder. Very suitable for various adjustment activities.



Short stroke cylinders - spring return

Cylinders with a short stroke and a low construction height and a lifting capacity of 10 - 50 tons. Very suitable for general lifting activities.



Cylinders (standard) - gravity return

Cylinders with a lifting capacity of 10 - 500 tons and a stroke length varying between 50 and 300 mm. Suitable for normal to heavy lifting activities.



Locknut cylinders - gravity return

Cylinders with mechanical load locking, a lifting capacity of 10 - 500 tons and a stroke length of 150 mm. Suitable for sustained load because of mechanical load locking.



Cylinders (standard) - spring return

Cylinders with a lifting capacity of 50 - 100 tons and a stroke length varying between 50 and 250 mm. Suitable for normal to heavy lifting activities.



Cylinders (standard) - hydraulic return

Cylinders with a lifting capacity of 50 - 500 tons and a stroke length varying between 50 and 300 mm. Very suitable for heavy lifting activities.



Assembly cylinders - spring return

Cylinders specifically for assembly into a construction with a lifting capacity of 5 - 25 tons and a stroke length varying between 50 and 350 mm. Especially developed for integration in a construction using the screw thread on the housing. Adjustable to the working conditions using the mounting and/or welding rings.

**Construction cylinders - spring return**

Cylinders especially for use in combination with extension pipes and accessories, with a lifting capacity of 10 - 25 tons and a stroke length varying between 60 and 250 mm. These cylinders can be extended using pipes. Various accessories are available. This cylinder type is also suitable for assembly into a construction.

**Construction cylinders - hydraulic return**

Cylinders especially for use in combination with extension pipes and accessories, with a lifting capacity of 10 - 25 tons and a stroke length varying between 150 and 250 mm. These cylinders can be extended using pipes. Various accessories are available. This cylinder type is also suitable for assembly into a construction.

**Hollow plunger cylinders - spring return**

Cylinders with hollow plunger for both pushing and pulling, with a capacity of 5 - 110 tons and a stroke length varying between 25 and 150 mm. Especially developed for pulling using pulling rods.

**Hollow plunger cylinders - hydraulic return**

Cylinders with hollow plunger for both pushing and pulling, with a capacity of 30 - 100 tons and a stroke length varying between 100 and 200 mm. Especially developed for pulling using pulling rods.

**Pulling cylinders - spring and hydraulic return**

Cylinders with a pulling capacity of 11 - 100 tons and a stroke length of 150 mm. Especially developed for, among other things, pulling heavy objects towards each other.



Step-cylinders - hydraulic return

Cylinders with a step plate and enlarged saddle, a capacity of 25 - 300 tons and a stroke length varying between 125 and 200 mm. Especially developed for situations requiring vertically moving a load over quite a large distance. The cylinder moves up along with the load, thus increasing the stability while lifting.



Custom-made cylinders

Holmatro has a proven ability to deal with special projects. Except for the standard cylinders, you can also contact us for custom-made solutions. Examples of this are:

- other stroke length
- other overall height
- other return type
- other surface treatment
- other type of material
- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- etc.



Selection list cylinders


tonnage	closed height	stroke length	return	type	model	art no	page
t	mm	mm					
5	46	15	gravity	flat	HFJ 5 G 1.5	100.111.001	32
	157	75	spring	assembly	HTJ 5 S 7.5	100.112.003	54
	202	120	spring	assembly	HTJ 5 S 12	100.112.004	54
10	49	41 / 20	gravity	telescopic	HFJ 10/30 G 4	100.111.005	36
	52	15	spring	flat	HFJ 10 G 1.5	100.111.011	32
	107	25	spring	standaard	HJ 10 S 2.5	100.112.007	37
	110	50	gravity	standard	HJ 10 G 5	100.112.012	38
	135	50	spring	assembly	HTJ 10 S 5	100.112.020	54
	185	100	spring	assembly	HTJ 10 S 10	100.112.015	54
	202	60	spring	construction	HCJ 10 S 6	100.112.062	58
	255	150	spring	assembly	HTJ 10 S 15 C	100.112.022	54
	270	150	gravity	lock nut	HJ 10 G 15 SN	100.082.003	44
	292	150	spring	construction	HCJ 10 S 15	100.112.063	58
	305	200	spring	assembly	HTJ 10 S 20	100.112.097	54
	338	150	hydraulic	construction	HCJ 10 H 15	100.122.066	60
398	250	spring	construction	HCJ 10 S 25	100.112.064	58	
20	54	15	gravity	flat	HFJ 20 G 1.5	100.111.031	32
	102	50	gravity	standard	HJ 20 G 5	100.112.032	38
	140	111 / 55	gravity	telescopic	HJ 20/50 G 11	100.112.103	36
	164	50	spring	aluminium	HAC 20 S 5	100.112.150	26
	214	100	spring	aluminium	HAC 20 S 10	100.112.149	26
	264	150	spring	aluminium	HAC 20 S 15	100.112.137	26
25	116	25	spring	standaard	HJ 25 S 2.5	100.112.008	37
	137	50	spring	assembly	HTJ 25 S 5	100.112.098	56
	187	100	spring	assembly	HTJ 25 S 10	100.112.042	56
	237	150	spring	assembly	HTJ 25 S 15 C	100.112.026	56
	283	150	gravity	lock nut	HJ 25 G 15 SN	100.082.002	44
	323	150	spring	construction	HCJ 25 S 15	100.112.065	58
	350	150	hydraulic	construction	HCJ 25 H 15	100.122.067	60
	360	250	spring	assembly	HTJ 25 S 25	100.112.027	56
	460	350	spring	assembly	HTJ 25 S 35	100.112.028	56
	450	250	hydraulic	construction	HCJ 25 H 25	100.122.068	60
30	33	5	gravity	flat	HFJ 30 G 0.5	100.111.051	32
	48	15	gravity	flat	HFJ 30 G 1.5	100.111.052	32
	120	60	gravity	standard	HJ 30 G 6	100.112.054	38
	182	50	spring	aluminium	HAC 30 S 5	100.112.156	26
	232	100	spring	aluminium	HAC 30 S 10	100.112.155	26
	282	150	spring	aluminium	HAC 30 S 15	100.112.143	26
50	45	5	gravity	flat	HFJ 50 G 0.5	100.111.071	32
	134	25	spring	standard	HJ 50 S 2.5	100.112.009	37
	142	60	gravity	standard	HJ 50 G 6	100.112.073	38
	150	61	air	aluminium	HLJ 50 A 6	100.112.060	30
	152	50	spring	standard	HJ 50 S 5	100.112.072	46
	183	50	spring	aluminium	HAC 50 S 5	100.112.154	28
	196	104	air	aluminium	HLJ 50 A 10	100.112.059	30
	206	100	spring	standard	HJ 50 S 10	100.112.077	46
	233	100	spring	aluminium	HAC 50 S 10	100.112.153	28
	257	150	spring	standard	HJ 50 S 15	100.112.074	46
	282	150	gravity	standard	HJ 50 G 15	100.112.035	38
	282	150	hydraulic	standard	HJ 50 H 15	100.122.002	48

tonnage	closed height	stroke length	return	type	model	art no	page
t	mm	mm					
	283	150	spring	aluminium	HAC 50 S 15	100.112.144	28
	307	150	gravity	lock nut	HJ 50 G 15 SN	100.082.001	44
	363	250	spring	standard	HJ 50 S 25	100.112.076	46
	463	300	gravity	standard	HJ 50 G 30	100.112.036	38
	463	300	hydraulic	standard	HJ 50 H 30	100.122.022	48
75	347	150	gravity	standard	HJ 75 G 15	100.112.037	40
	347	150	hydraulic	standard	HJ 75 H 15	100.122.003	48
	497	300	gravity	standard	HJ 75 G 30	100.112.038	40
	497	300	hydraulic	standard	HJ 75 H 30	100.122.004	48
100	64	5	gravity	flat	HFJ 100 G 0.5	100.111.091	34
	74	15	gravity	flat	HFJ 100 G 1.5	100.111.092	34
	158	60	gravity	standard	HJ 100 G 6	100.112.093	40
	162	50	spring	standard	HJ 100 S 5	100.112.094	46
	170	50	hydraulic	standard	HJ 100 H 5	100.122.009	48
	226	100	spring	standard	HJ 100 S 10	100.112.096	46
	228	50	spring	aluminium	HAC 100 S 5	100.112.152	28
	278	100	spring	aluminium	HAC 100 S 10	100.112.151	28
	309	150	gravity	standard	HJ 100 G 15	100.112.039	40
	309	150	hydraulic	standard	HJ 100 H 15	100.122.052	48
	312	150	spring	standard	HJ 100 S 15	100.112.095	46
	323	150	gravity	lock nut	HJ 100 G 15 SN	100.082.000	44
	328	150	spring	aluminium	HAC 100 S 15	100.112.142	28
	497	300	gravity	standard	HJ 100 G 30	100.112.040	40
	497	300	hydraulic	standard	HJ 100 H 30	100.122.054	48
150	80	15	gravity	flat	HFJ 150 G 1.5	100.111.111	34
	317	150	gravity	standard	HJ 150 G 15	100.112.046	40
	317	150	hydraulic	standard	HJ 150 H 15	100.122.061	50
	363	150	gravity	lock nut	HJ 150 G 15 SN	100.112.136	44
	502	300	gravity	standard	HJ 150 G 30	100.112.047	40
	502	300	hydraulic	standard	HJ 150 H 30	100.122.062	50
250	385	150	gravity	lock nut	HJ 250 G 15 SN	100.112.083	44
200	327	150	gravity	standard	HJ 200 G 15	100.112.048	42
	327	150	hydraulic	standard	HJ 200 H 15	100.122.071	50
	507	300	gravity	standard	HJ 200 G 30	100.112.049	42
	507	300	hydraulic	standard	HJ 200 H 30	100.122.072	50
300	382	150	gravity	standard	HJ 300 G 15	100.112.050	42
	382	150	hydraulic	standard	HJ 300 H 15	100.122.084	50
	547	300	gravity	standard	HJ 300 G 30	100.112.099	42
	547	300	hydraulic	standard	HJ 300 H 30	100.122.083	50
400	402	150	gravity	standard	HJ 400 G 15	100.112.100	42
	402	150	hydraulic	standard	HJ 400 H 15	100.122.091	52
	572	300	gravity	standard	HJ 400 G 30	100.112.056	42
	572	300	hydraulic	standard	HJ 400 H 30	100.122.092	52
500	442	150	gravity	standard	HJ 500 G 15	100.112.139	42
	442	150	hydraulic	standard	HJ 500 H 15	100.122.043	52
	587	300	gravity	standard	HJ 500 G 30	100.112.138	42
	587	300	hydraulic	standard	HJ 500 H 30	100.122.038	52

Selection list hollow plunger cylinders



tonnage	Ø hole in plunger	closed height	stroke length	return	type	model	art no	page
t	mm	mm	mm					
5	17	87	25	spring	hollow plunger	HHJ 5 S 2.5	100.111.002	64
12	21	156	50	spring	hollow plunger	HHJ 12 S 5	100.111.021	64
	21	298	150	spring	hollow plunger	HHJ 12 S 15	100.111.029	64
17	27	195	50	spring	hollow plunger	HHJ 17 S 5	100.112.023	64
20	27	182	50	spring	hollow plunger	HHJ 20 S 5	100.112.033	64
	27	389	150	spring	hollow plunger	HHJ 20 S 15	100.112.030	64
30	33	120	50	gravity	hollow plunger	HHJ 30 G 5	100.111.053	66
	33	226	75	spring	hollow plunger	HHJ 30 S 7.5	100.112.055	66
	33	362	150	spring	hollow plunger	HHJ 30 S 15	100.112.034	66
	33	285	150	hydraulic	hollow plunger	HHJ 30 H 15	100.122.045	68
45	39	388	150	spring	hollow plunger	HHJ 45 S 15	100.112.061	66
60	45	272	75	spring	hollow plunger	HHJ 60 S 7.5	100.112.081	66
	45	334	200	hydraulic	hollow plunger	HHJ 60 H 20	100.122.031	68
100	54	265	100	hydraulic	hollow plunger	HHJ 100 H 10	100.122.051	68
	54	395	200	hydraulic	hollow plunger	HHJ 100 H 20	100.122.053	68
110	80	315	75	spring	hollow plunger	HHJ 110 S 7.5	100.112.101	66



Aluminium cylinders - spring return - ≥ 20 ton

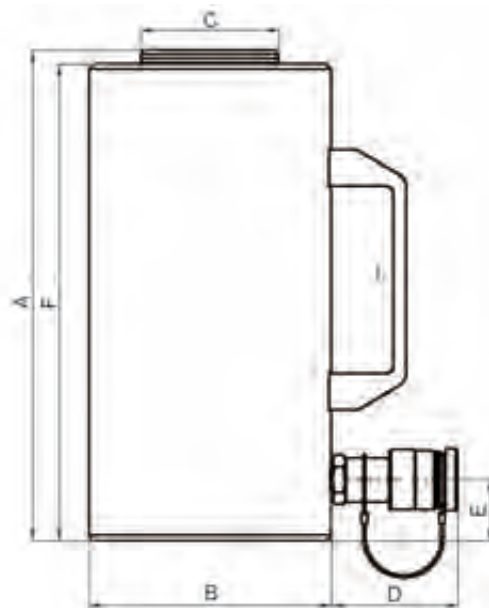


model	HAC 20 S 5	HAC 20 S 10	HAC 20 S 15	HAC 30 S 5	HAC 30 S 10	HAC 30 S 15
art no	100.112.150	100.112.149	100.112.137	100.112.156	100.112.155	100.112.143
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	20	20	20	30	30	30
stroke length mm	50	100	150	50	100	150
closed height mm	164	214	264	182	232	282
capacity kN/t	204 / 20.8	204 / 20.8	204 / 20.8	301 / 30.7	301 / 30.7	301 / 30.7
oil content cm ³	142	283	424	209	418	629
effective pressure area cm ²	28.3	28.3	28.3	41.9	41.9	41.9
weight kg	3.1	3.9	4.6	4.8	6.0	7.0
maintenance set art no	100.013.099	100.013.099	100.013.099	100.013.106	100.013.106	100.013.106
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTW 1800 B
pressure gauge model	A 501	A 501	A 501	A 510	A 510	A 510

Aluminium cylinders - spring return - ≥ 20 ton (dimensions)



model	HAC 20 S 5	HAC 20 S 10	HAC 20 S 15	HAC 30 S 5	HAC 30 S 10	HAC 30 S 15
A mm	164	214	264	182	232	282
B mm	90	90	90	108	108	108
C mm	50	50	50	60	60	60
D mm	75	75	75	73	73	73
E mm	26	26	26	35	35	35
F mm	157	207	257	177	227	277
l ₂	-	l ₂	l ₂	-	l ₂	l ₂



Specifications / important properties ↓

- up to 50% less weight than steel models
 - easy to move and to position
- carrying handles on almost all models
- corrosion-resistant
- composite bearings
 - prevent metal-to-metal contact
 - extend the life time
 - resistant to side-loads of up to 10%
- usable in all positions
- protected against ejection of the plunger
- dirt scraper ring
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- steel plate for protection of the cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HAC 20 S 5



HAC 30 S 10



Detail plunger HAC 30 S 10

Aluminium cylinders - spring return - ≥ 50 ton

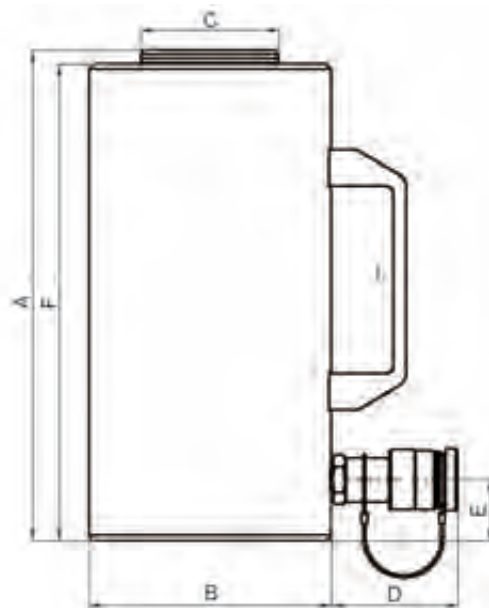


model	HAC 50 S 5	HAC 50 S 10	HAC 50 S 15	HAC 100 S 5	HAC 100 S 10	HAC 100 S 15
art no	100.112.154	100.112.153	100.112.144	100.112.152	100.112.151	100.112.142
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	50	50	50	100	100	100
stroke length mm	50	100	150	50	100	150
closed height mm	183	233	283	228	278	328
capacity kN/t	510 / 52	510 / 52	510 / 52	1031 / 105.2	1031 / 105.2	1031 / 105.2
oil content cm ³	355	709	1063	716	1432	2147
effective pressure area cm ²	70.9	70.9	70.9	143.1	143.1	143.1
weight kg	8.1	9.9	11.6	19.7	23.3	26.9
maintenance set art no	100.013.108	100.013.108	100.013.108	100.013.116	100.013.116	100.013.116
recommended pump model	HTS 550 A	HTW 1800 B	HTW 1800 B	HTW 1800 B	HTW 1800 B	HTW 2800 B
pressure gauge model	A 503	A 503	A 503	A 504	A 504	A 504

Aluminium cylinders - spring return - ≥ 50 ton (dimensions)



model	HAC 50 S 5	HAC 50 S 10	HAC 50 S 15	HAC 100 S 5	HAC 100 S 10	HAC 100 S 15
A mm	183	233	283	228	278	328
B mm	140	141	140	200	200	200
C mm	80	80	80	105	105	105
D mm	73	73	73	73	73	73
E mm	35	35	35	45	45	45
F mm	175	225	275	217	267	317
l ₂	-	l ₂	l ₂	l ₂	l ₂	l ₂ (2x)



Specifications / important properties ↓

- up to 50% less weight than steel models
 - easy to move and to position
- carrying handles on almost all models
- corrosion-resistant
- composite bearings
 - prevent metal-to-metal contact
 - extend the life time
 - resistant to side-loads of up to 10%
- usable in all positions
- protected against ejection of the plunger
- dirt scraper ring
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- steel plate for protection of the cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HAC 50 S 5



HAC 100 S 15



Detail plunger HAC 30 S 10

Aluminium cylinders - air return

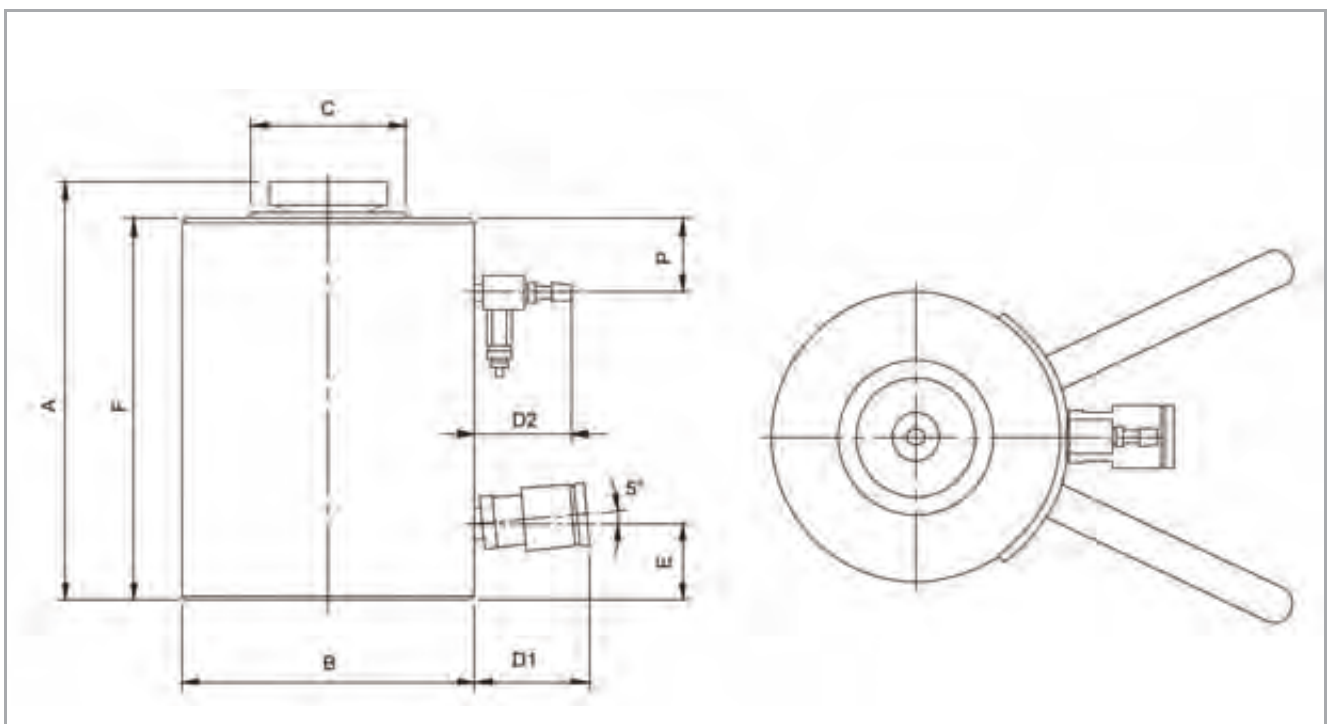


model	HLJ 50 A 6	HLJ 50 A 10
art no	100.112.060	100.112.059
working pressure bars/Mpa	720 / 72	720 / 72
tonnage t	50	50
stroke length mm	61	104
closed height mm	150	196
capacity kN/t	510.3 / 52	510.3 / 52
oil content cm ³	432	737
effective pressure area cm ²	70.9	70.9
weight kg	7	9
maintenance set art no	100.123.012	100.123.012
recommended pump model	HTS 550 A	HTW 1800 B
pressure gauge model	A 503	A 503

Aluminium cylinders - air return (dimensions)



model	HLJ 50 A 6	HLJ 50 A 10
A	mm 150	196
B	mm 145	145
C	mm 80	80
D ₁ /D ₂	mm 70 / 60	70 / 60
E	mm 28	28
F	mm 132	178
P	mm 30	30



Specifications / important properties ↓

- air return
 - by means of compressed air (6 bars)
 - overpressure protection
- 50% less weight than steel cylinders
- easy to move with two standard carrying handles
- corrosion-resistant
- usable in all positions
- standard with tilting saddle for oblique load
- protected against ejection of the plunger

Available on request ↓

- cylinders manufactured in conformity with customer specifications

Hydraulic pumps
Hydraulic hoses
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HLJ 50 A 6



HLJ 50 A 10



Detail air-filling valve with pressure relief valve



Detail standard tilting saddle

Flat cylinders - gravity return - ≥ 5 ton



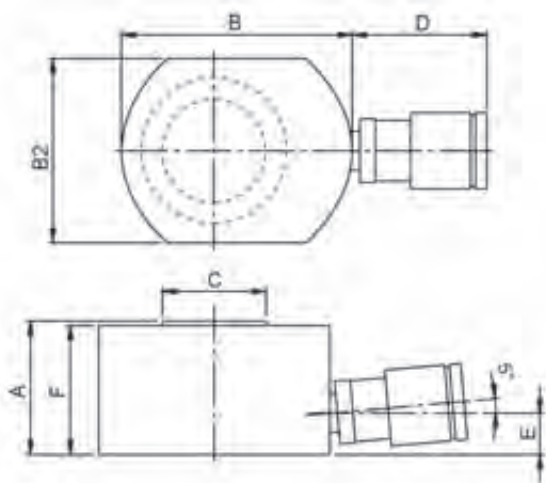
model		HFJ 5 G 1.5	HFJ 10 G 1.5	HFJ 20 G 1.5	HFJ 30 G 0.5	HFJ 30 G 1.5	HFJ 50 G 0.5
art no		100.111.001	100.111.011	100.111.031	100.111.051	100.111.052	100.111.071
working pressure	bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage	t	5	10	20	30	30	50
stroke length	mm	15	15	15	5	15	5
closed height	mm	46	52	54	33	48	45
capacity	kN/t	47.5 / 4.8	99.3 / 10.1	203.7 / 20.8	318.2 / 32.4	318.2 / 32.4	494.5 / 50.4
oil content	cm ³	10	21	42	22	66	34
effective pressure area	cm ²	6.6	13.8	28.3	44.2	44.2	68.7
weight	kg	1.1	1.9	3	3.4	4.7	7.2
maintenance set	art no	100.113.001	100.113.081	100.113.241	100.013.251	100.013.251	100.013.331
recommended pump	model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge	model	A 501	A 501	A 501	A 502	A 502	A 503

Flat cylinders - gravity return - ≥ 5 ton (dimensions)

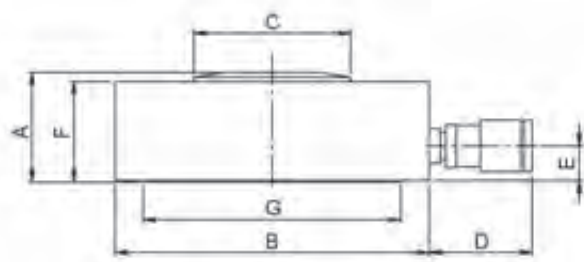


model		HFJ 5 G 1.5	HFJ 10 G 1.5	HFJ 20 G 1.5	HFJ 30 G 0.5	HFJ 30 G 1.5	HFJ 50 G 0.5
A	mm	46	52	54	33	48	45
B/B ₂	mm	Ø60 / 46	Ø80 / 60	Ø100 / 80	120	120	158
C	mm	20	30	45	60	60	75
D	mm	70	70	70	380	380	380
E	mm	18	20	20	15	18	18
F	mm	46	50	52	33	48	45
G	mm	-	-	-	95	95	125

(1) ≥ 5 ton (2) ≥ 30 ton



1



2

Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- spherical plunger
 - prevents point load when the load is slightly tilted
 - prevents damaging the cylinder and dangerous situations
- dirt scraper ring

Available on request ↓

- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Hydraulic pumps

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Hydraulic hoses

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Pressure gauges

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HFJ 5 G 1.5



HFJ 10 G 1.5



HFJ 30 G 0.5



Detail spherical plunger

Flat cylinders - gravity return - ≥ 100 ton

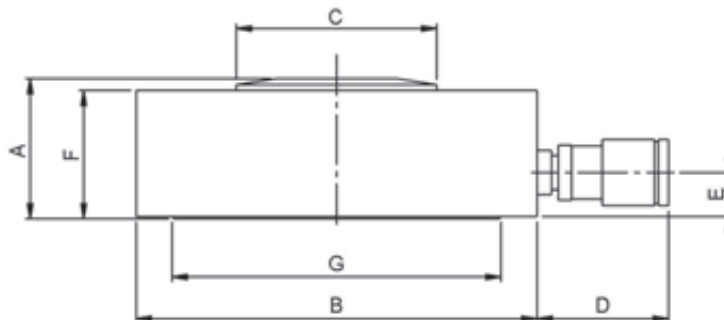


model	HFJ 100 G 0.5	HFJ 100 G 1.5	HFJ 150 G 1.5
art no	100.111.091	100.111.092	100.111.111
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72
tonnage t	100	100	150
stroke length mm	5	15	15
closed height mm	64	74	80
capacity kN/t	1029.3 / 105	1029.3 / 105	1538.9 / 157.0
oil content cm ³	72	215	321
effective pressure area cm ²	143	143	213.8
weight kg	15.5	18	28
maintenance set art no	100.013.451	100.013.451	100.113.781
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge model	A 504	A 504	A 504

Flat cylinders - gravity return - ≥ 100 ton (dimensions)



model	HFJ 100 G 0.5	HFJ 100 G 1.5	HFJ 150 G 1.5
A mm	64	74	80
B mm	200	200	250
C mm	100	100	120
D mm	80	80	80
E mm	23	23	25
F mm	64	74	80
G mm	165	165	200



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- spherical plunger
 - prevents point load when the load is slightly tilted
 - prevents damaging the cylinder and dangerous situations
- dirt scraper ring

Available on request ↓

- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Hydraulic pumps

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Hydraulic hoses

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Pressure gauges

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HFJ 100 G 0.5



HFJ 100 G 1.5

Telescopic cylinders - gravity return



model	HFJ 10/30 G 4	HJ 20/50 G 11
art no	100.111.005	100.112.103
working pressure bars/Mpa	720 / 72	720 / 72
tonnage t	10	20
stroke length mm	41 / 20	111 / 55
closed height mm	49	140
capacity kN	99.7 / 318.0	203.5 / 510.0
capacity t	10.1 / 32.4	20.7 / 52.0
oil content cm ³	118	554
effective pressure area cm ²	13.9 / 44.2	28.3 / 70.8
weight kg	4.5	12.5
maintenance set art no	100.113.010	100.119.225
recommended pump model	HTS 550 A	HTW 1800 B
pressure gauge model	A 500	A 500

(1) HFJ 10/30 G 4 (2) HJ 20/50 G 11



Specifications / important properties



- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger

Available on request



- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HFJ 10/30 G 4



HJ 20/50 G 11

Short stroke cylinders - spring return


model	HJ 10 S 2.5	HJ 25 S 2.5	HJ 50 S 2.5
art no	100.112.007	100.112.008	100.112.009
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72
tonnage t	10	25	50
stroke length mm	25	25	25
closed height mm	107	116	134
capacity kN/t	99.3 / 10.1	238.9 / 24.4	510.3 / 52
oil content cm ³	35	83	177
effective pressure area cm ²	13.8	33.2	70.9
weight kg	2.2	4.4	12.3
maintenance set art no	100.113.121	100.113.301	100.113.561
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge model	A 501	A 502	A 503

(1) HJ 10 S 2.5 (2) HJ 25 S 2.5 (3) HJ 50 S 2.5


Specifications / important properties


- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- dirt scraper ring
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request


- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 10 S 2,5



HJ 50 S 2,5

Cylinders - gravity return - ≥ 10 ton

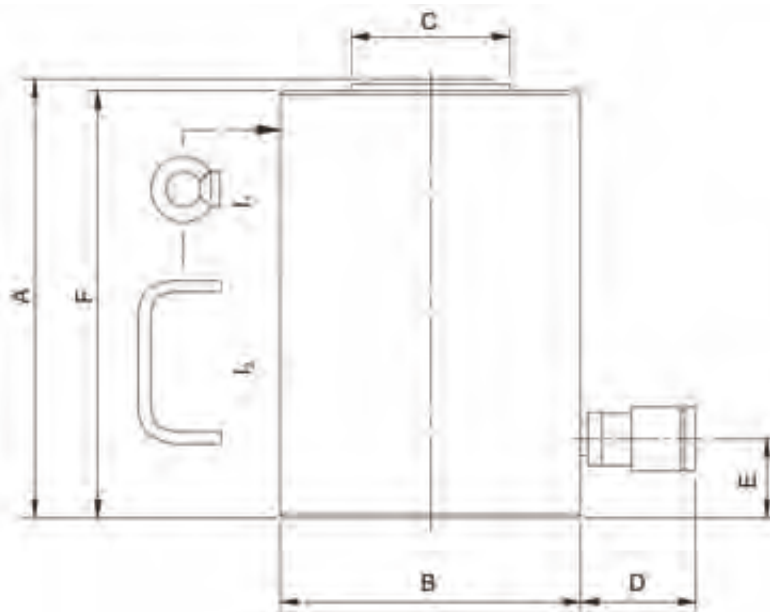


model	HJ 10 G 5	HJ 20 G 5	HJ 30 G 6	HJ 50 G 6	HJ 50 G 15	HJ 50 G 30
art no	100.112.012	100.112.032	100.112.054	100.112.073	100.112.035	100.112.036
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	10	20	30	50	50	50
stroke length mm	50	50	60	60	150	300
closed height mm	110	102	120	142	282	463
capacity kN/t	99.3 / 10.1	203.7 / 20.8	318.2 / 32.4	510.3 / 52	510.3 / 52	510.3 / 52
oil content cm ³	69	141	265	425	1064	2127
effective pressure area cm ²	13.8	28.3	44.2	70.9	70.9	70.9
weight kg	2.4	3.8	6	12.5	27	39.5
maintenance set art no	100.113.121	100.113.241	100.113.461	100.113.561	100.123.061	100.123.061
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTW 1800 B	HTW 2800 B
pressure gauge model	A 501	A 501	A 502	A 503	A 503	A 503

Cylinders - gravity return - ≥ 10 ton (dimensions)



model	HJ 10 G 5	HJ 20 G 5	HJ 30 G 6	HJ 50 G 6	HJ 50 G 15	HJ 50 G 30
A mm	110	102	120	463	142	282
B mm	60	86	102	130	130	130
C mm	38	45	55	80	80	80
D mm	90	70	70	70	70	70
E mm	20	15	15	38	20	25
F mm	100	95	113	456	135	275
l ₁ /l ₂	-	-	-	l ₂	-	l ₂



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 10 G 5



HJ 50 G 15



Detail saddle seating in plunger head

Cylinders - gravity return - ≥ 75 ton

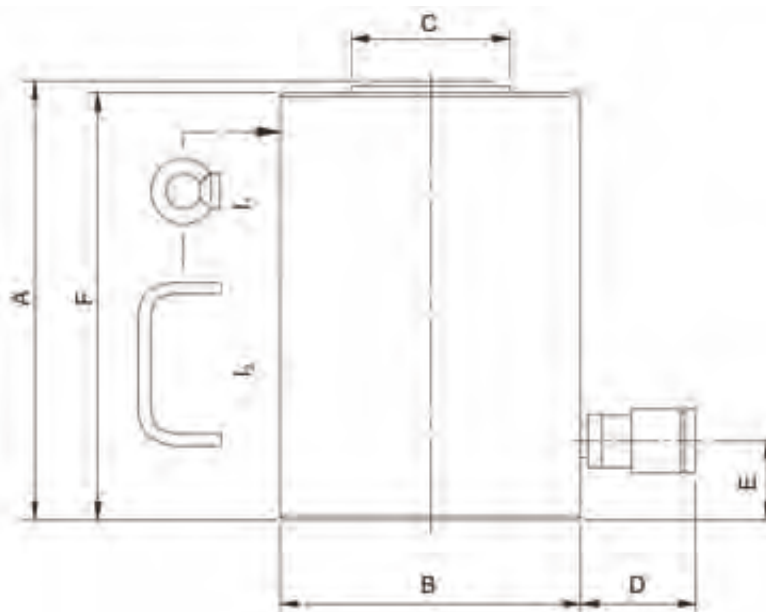


model	HJ 75 G 15	HJ 75 G 30	HJ 100 G 6	HJ 100 G 15	HJ 100 G 30	HJ 150 G 15	HJ 150 G 30
art no	100.112.037	100.112.038	100.112.093	100.112.039	100.112.040	100.112.046	100.112.047
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	75	75	100	100	100	150	150
stroke length mm	150	300	60	150	300	150	300
closed height mm	347	497	158	309	497	317	502
capacity kN/t	747.9 / 76.3	747.9 / 76.3	1029.3 / 105	1029.3 / 105	1029.3 / 105	1538.9 / 157	1538.9 / 157
oil content cm ³	1559	3117	860	2145	4290	3207	6414
effective pressure area cm ²	103.9	103.9	143	143	143	213.8	213.8
weight kg	46	63	29	51	82	74.6	125.3
maintenance set art no	100.123.101	100.123.101	100.113.701	100.123.141	100.123.141	100.123.201	100.123.201
recommended pump model	HTW 1800 B	HTW 5800 B	HTW 1800 B	HTW 2800 B	HTW 5800 B	HTW 5800 B	HTW 8800 B
pressure gauge model	A 503	A 503	A 504	A 504	A 504	A 504	A 504

Cylinders - gravity return - ≥ 75 ton (dimensions)



model	HJ 75 G 15	HJ 75 G 30	HJ 100 G 6	HJ 100 G 15	HJ 100 G 30	HJ 150 G 15	HJ 150 G 30
A	mm 347	497	497	158	309	317	502
B	mm 156	156	178	185	178	227	227
C	mm 80	80	105	105	105	115	115
D	mm 70	70	70	70	70	70	70
E	mm 47	47	52	27	52	57	57
F	mm 340	490	490	151	302	310	495
l ₁ /l ₂	l ₁	l ₁	l ₂	l ₁	l ₁	l ₁	l ₁



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 100 G 6



HJ 100 G 6



Cylinders - gravity return - ≥ 200 ton

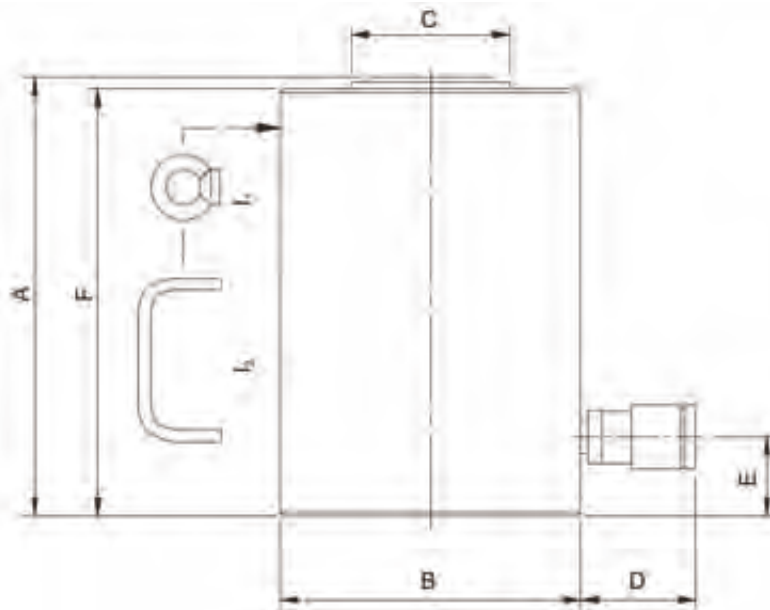


model	HJ 200 G 15	HJ 200 G 30	HJ 300 G 15	HJ 300 G 30	HJ 400 G 15	HJ 400 G 30	HJ 500 G 15	HJ 500 G 30
art nr	100.112.048	100.112.049	100.112.050	100.112.099	100.112.100	100.112.056	100.112.139	100.112.138
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	200	200	300	300	400	400	500	500
stroke length mm	150	300	150	300	150	300	150	300
closed height mm	327	507	382	547	402	572	442	587
capacity kN/t	2040.6 / 208	2040.6 / 208	2933 / 299	2933 / 299	3750 / 382	3750 / 382	4994 / 509	4994 / 509
oil content cm ³	4253	8505	6225	12450	7950	15900	10605	21210
effective pressure area cm ²	283.5	283.5	415	415	530	530	707	707
gewicht kg	120	184	238	257	322	408	386	511
maintenance set art no	100.123.241	100.123.241	100.123.281	100.123.281	100.123.007	100.123.007	100.123.008	100.123.008
recommended pump model	HTW 5800 B	Vari pump	Vari pump	Vari pump	Vari pump	Vari pump	Vari pump	Vari pump
pressure gauge model	A 505	A 505	A 505	A 505	A 506	A 506	A 506	A 506

Cylinders - gravity return - ≥ 200 ton (dimensions)



model	HJ 200 G 15	HJ 200 G 30	HJ 300 G 15	HJ 300 G 30	HJ 400 G 15	HJ 400 G 30	HJ 500 G 15	HJ 500 G 30
A mm	327	507	382	547	402	572	442	587
B mm	261	261	316	316	358	358	412	412
C mm	160	160	190	190	200	200	210	210
D mm	70	70	70	70	70	70	70	70
E mm	60	60	70	70	76	76	85	85
F mm	320	500	370	540	395	565	435	580
l ₁ /l ₂	l ₁	l ₁	l ₁	l ₁	l ₁	l ₁	l ₁	l ₁



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 300 G 15



Detail saddle seating in plunger head

Locknut cylinders - gravity return

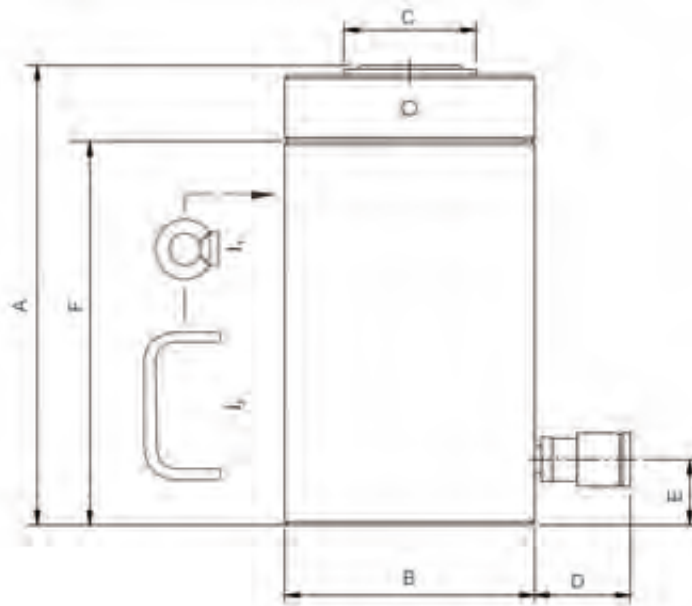


model	HJ 10 G 15 SN	HJ 25 G 15 SN	HJ 50 G 15 SN	HJ 100 G 15 SN	HJ 150 G 15 SN	HJ 250 G 15 SN
art no	100.082.003	100.082.002	100.082.001	100.082.000	100.112.136	100.112.083
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	10	25	50	100	150	250
stroke length mm	150	150	150	150	150	150
closed height mm	270	283	307	323	363	385
capacity kN/t	99.3 / 10.1	238.9 / 24.4	510.3 / 52	1029.3 / 105	1538.9 / 157	2493.8 / 254
oil content cm ³	210	498	1065	2150	3207	5195
effective pressure area cm ²	13.8	33.2	70.9	143	213.8	340.6
weight kg	5.9	14	34	71	101	180
maintenance set art no	100.083.013	100.083.014	100.083.015	100.083.012	100.013.084	100.013.138
recommended pump model	HTS 550 A	HTS 550 A	HTW 1800 B	HTW 2800 B	Vari pump	Vari pump
pressure gauge model	A 501	A 502	A 503	A 504	A 504	A 500

Locknut cylinders - gravity return (dimensions)



model	HJ 10 G 15 SN	HJ 25 G 15 SN	HJ 50 G 15 SN	HJ 100 G 15 SN	HJ 150 G 15 SN	HJ 250 G 15 SN
A mm	270	283	307	323	363	385
B mm	60	90	135	190	212	300
C mm	42	65	95	135	165	210
D mm	70	70	70	70	70	70
E mm	25	25	25	25	35	40
F mm	242	257	272	287	305	330
l ₁ /l ₂	-	l ₂	l ₂	l ₁	l ₁	l ₁



Specifications / important properties ↓

- usable in all positions
- safe because of mechanical load locking
- suitable for sustained load
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 10 G 15 SN



HJ 50 G 15 SN



Locknut on plunger for mechanical load locking

Cylinders - spring return

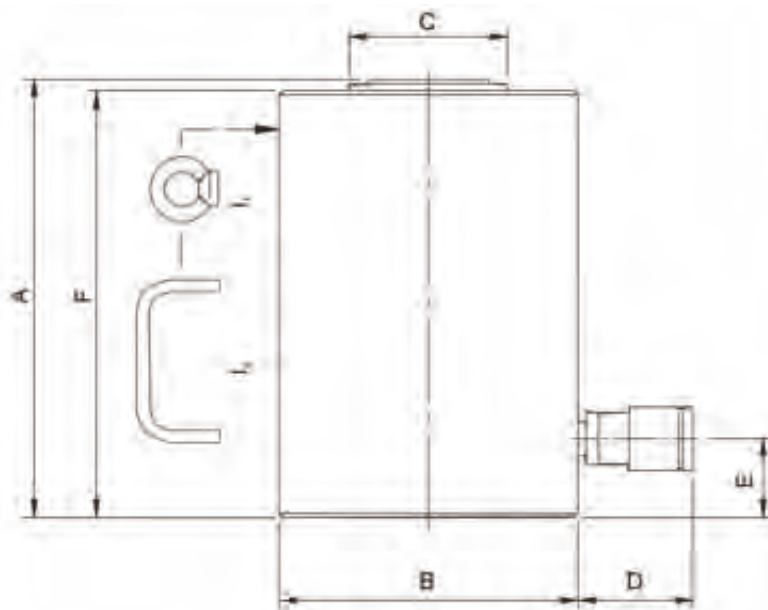


model	HJ 50 S 5	HJ 50 S 10	HJ 50 S 15	HJ 50 S 25	HJ 100 S 5	HJ 100 S 10	HJ 100 S 15
art no	100.112.072	100.112.077	100.112.074	100.112.076	100.112.094	100.112.096	100.112.095
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	50	50	50	50	100	100	100
stroke length mm	50	100	150	250	50	100	150
closed height mm	152	206	257	363	162	226	312
capacity kN/t	510.3 / 52	510.3 / 52	510.3 / 52	510.3 / 52	1029.30 / 105	1029.3 / 105	1029.3 / 105
oil content cm ³	354	709	1064	1773	715	1430	2145
effective pressure area cm ²	70.9	70.9	70.9	70.9	143	143	143
weight kg	14	17.4	22	30	29	40	55
maintenance set art no	100.113.561	100.113.561	100.113.561	100.113.561	100.113.721	100.113.721	100.113.721
recommended pump model	HTS 550 A	HTW 1800 B	HTW 1800 B	HTW 2800 B	HTW 1800 B	HTW 1800 B	HTW 2800 B
pressure gauge model	A 503	A 503	A 503	A 503	A 504	A 504	A 504

Cylinders - spring return (dimensions)



model	HJ 50 S 5	HJ 50 S 10	HJ 50 S 15	HJ 50 S 25	HJ 100 S 5	HJ 100 S 10	HJ 100 S 15
A	152	206	257	363	162	226	312
B	130	130	130	130	185	185	185
C	80	80	80	80	105	105	105
D	70	70	70	70	70	70	70
E	35	35	35	38	27	27	55
F	145	200	250	356	155	220	305
l ₁ /l ₂	-	-	l ₂	l ₂	l ₂	l ₁	l ₁



Specifications / important properties ↓

- compact
- usable in all positions
- protected against ejection of the plunger
- dirt scraper ring
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 50 S 15



HJ 100 S 15



Cylinders - hydraulic return - ≥ 50 ton



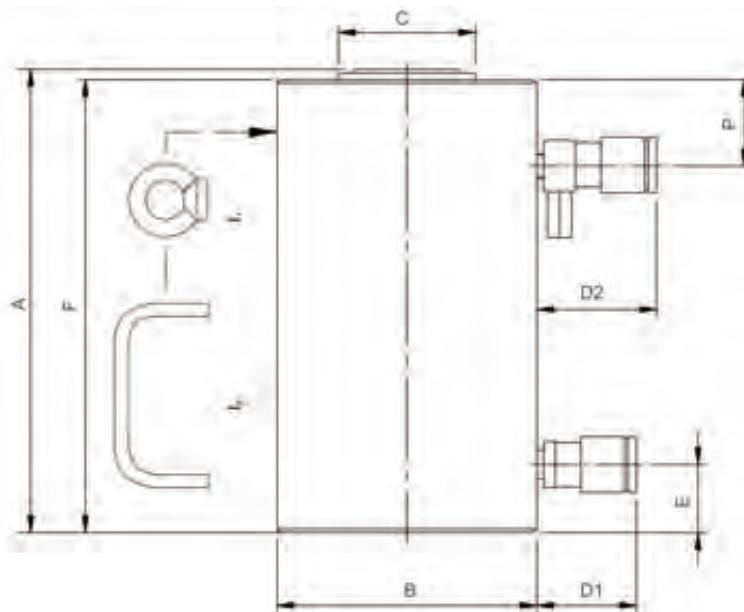
model	HJ 50 H 15	HJ 50 H 30	HJ 75 H 15	HJ 75 H 30	HJ 100 H 5	HJ 100 H 15	HJ 100 H 30
art no	100.122.002	100.122.022	100.122.003	100.122.004	100.122.009	100.122.052	100.122.054
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	50	50	75	75	100	100	100
stroke length mm	150	300	150	300	50	150	300
closed height mm	282	463	347	497	170	309	497
capacity kN/t	510.3 / 52	510.3 / 52	747.9 / 76.3	747.9 / 76.3	1029.3 / 105	1029.3 / 105	1029.3 / 105
oil content* cm ³	1064 / 309	2127 / 620	1559 / 755	3117 / 1509	716 / 283	2145 / 848	4290 / 1695
effective pressure area* cm ²	70.9 / 20.6	70.9 / 20.6	103.9 / 53.6	103.9 / 53.6	143.0 / 56.6	143.0 / 56.6	143.0 / 56.6
weight kg	27	44	46	63	29	53	85
maintenance set art no	100.123.061	100.123.061	100.123.101	100.123.101	100.123.141	100.123.141	100.123.141
recommended pump model	HTW 1800 B	HTW 1800 B	HTW 1800 B	HTW 2800 B	HTW 1800 B	HTW 1800 B	HTW 5800 B
pressure gauge model	A 503	A 503	A 503	A 503	A 504	A 504	A 504

Cylinders - hydraulic return - ≥ 50 ton (dimensions)



model	HJ 50 H 15	HJ 50 H 30	HJ 75 H 15	HJ 75 H 30	HJ 100 H 5	HJ 100 H 15	HJ 100 H 30
A	mm 282	463	347	497	163	309	497
B	mm 130	130	156	156	178	178	178
C	mm 80	80	80	80	105	105	105
D ₁ /D ₂	mm 70 / 85	70 / 85	70 / 85	70 / 85	70 / 85	70 / 85	70 / 85
E	mm 25	38	47	47	27	52	52
F	mm 275	456	340	490	163	302	490
l ₁ /l ₂	l ₂	l ₂	l ₂	l ₁	l ₁	l ₁	l ₁
P	mm 70	70	83	83	52	52	70

* = press / retract



Specifications / important properties ↓

- usable in all positions
- protected against ejection of the plunger
- protected against overpressure on return side
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 50 H 30



HJ 100 H 15



Pressure relief valve prevents dangerous situations in case of incorrectly connected cylinders

Cylinders - hydraulic return - ≥ 150 ton



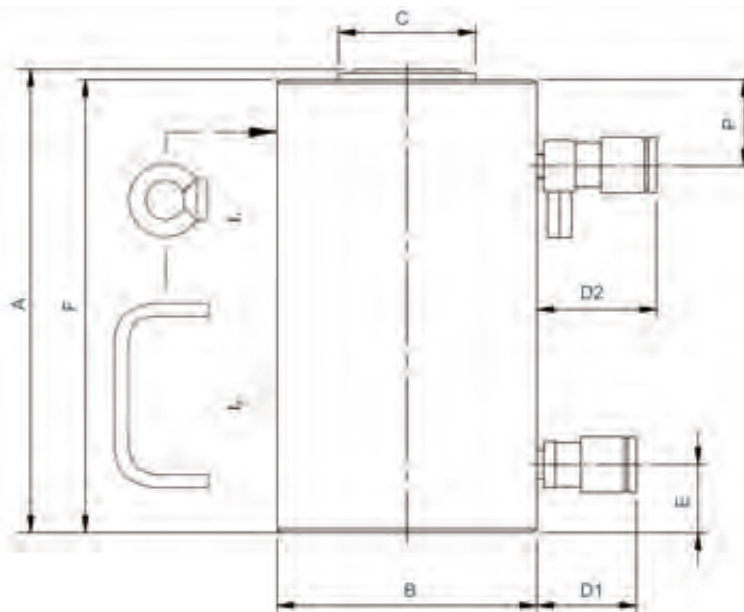
model	HJ 150 H 15	HJ 150 H 30	HJ 200 H 15	HJ 200 H 30	HJ 300 H 15	HJ 300 H 30
art no	100.122.061	100.122.062	100.122.071	100.122.072	100.122.084	100.122.083
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	150	150	200	200	300	300
stroke length mm	150	300	150	300	150	300
closed height mm	317	502	327	507	382	547
capacity kN/t	1538.9 / 157	1538.9 / 157	2040.6 / 208	2040.6 / 208	2933 / 299	2933 / 299
oil content* cm ³	3207 / 1650	6414 / 3300	4253 / 1238	8505 / 2475	6225 / 1965	12450 / 3930
effective pressure area* cm ²	213.8 / 110	213.8 / 110	283.5 / 82.5	283.5 / 82.5	415.5 / 131.9	415.5 / 131.9
weight kg	76	128	121	186	240	360
maintenance set art no	100.123.201	100.123.201	100.123.241	100.123.241	100.123.006	100.123.006
recommended pump model	HTW 2800 B	HTW 5800 B	HTW 5800 B	HTW 8800 B	Vari pump	Vari pump
pressure gauge model	A 504	A 504	A 505	A 505	A 505	A 505

Cylinders - hydraulic return - ≥ 150 ton (dimensions)



model	HJ 150 H 15	HJ 150 H 30	HJ 200 H 15	HJ 200 H 30	HJ 300 H 15	HJ 300 H 30
A mm	317	502	327	507	382	547
B mm	227	227	261	261	316	316
C mm	115	115	160	160	190	190
D ₁ /D ₂ mm	70 / 85	70 / 85	70 / 85	70 / 85	70 / 85	70 / 85
E mm	57	57	60	60	80	80
F mm	310	495	320	500	370	540
l ₁ /l ₂	l ₁	l ₁	l ₁	l ₁	l ₁	l ₁
P mm	55	70	60	70	75	75

* = press / retract



Specifications / important properties ↓

- usable in all positions
- protected against ejection of the plunger
- protected against overpressure on return side
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 100 H 30



HJ 300 H 15



Pressure relief valve prevents dangerous situations in case of incorrectly connected cylinders

Cylinders - hydraulic return - ≥ 400 ton



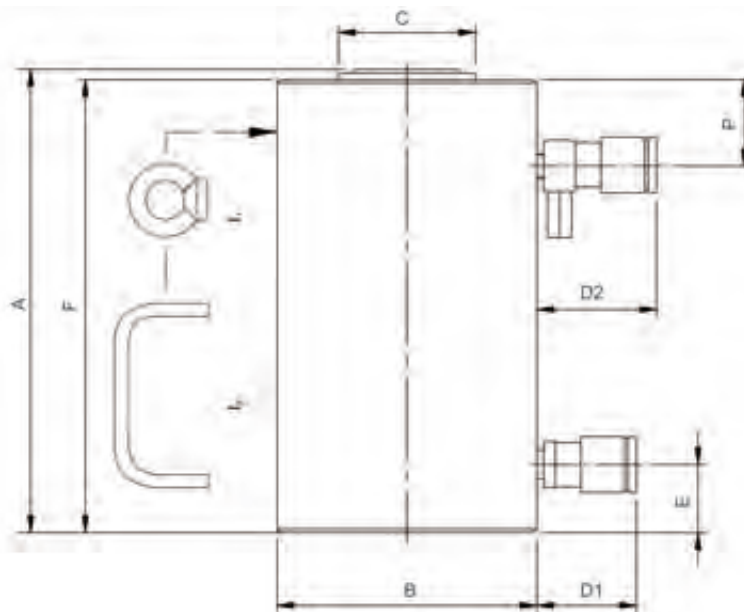
model	HJ 400 H 15	HJ 400 H 30	HJ 500 H 15	HJ 500 H 30
art no	100.122.091	100.122.092	100.122.043	100.122.038
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	400	400	500	500
stroke length mm	150	300	150	300
closed height mm	402	572	442	587
capacity kN/t	3750 / 382	3750 / 382	4994 / 509	4994 / 509
oil content* cm ³	7950 / 3238	15900 / 6476	10605 / 5400	21210 / 10800
effective pressure area* cm ²	530.9 / 216.7	530.9 / 216.7	707 / 360.3	707 / 360.3
weight kg	325	413	390	520
maintenance set art no	100.123.007	100.123.007	100.123.008	100.123.008
recommended pump model	Vari pump	Vari pump	Vari pump	Vari pump
pressure gauge model	A 506	A 506	A 506	A 506

Cylinders - hydraulic return - ≥ 400 ton (dimensions)



model	HJ 400 H 15	HJ 400 H 30	HJ 500 H 15	HJ 500 H 30
A	402	572	442	587
B	358	358	412	412
C	200	200	210	210
D ₁ /D ₂	70 / 85	70 / 85	70 / 85	70 / 85
E	76	76	85	85
F	395	565	435	580
l ₁ /l ₂	l ₁	l ₁	l ₁	l ₁
P	80	80	90	90

* = press / retract



Specifications / important properties ↓

- usable in all positions
- protected against ejection of the plunger
- protected against overpressure on return side
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HJ 300 H 15



HJ 300 H 15



Pressure relief valve prevents dangerous situations in case of incorrectly connected cylinders

Assembly cylinders - spring return - ≥ 5 ton

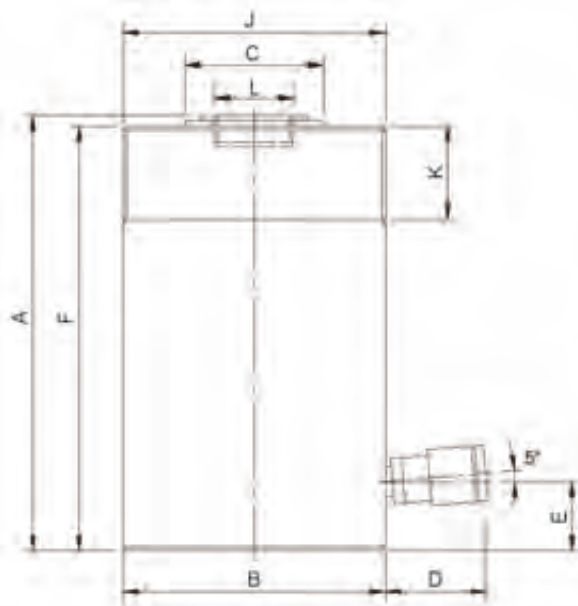


model		HTJ 5 S 7.5	HTJ 5 S 12	HTJ 10 S 5	HTJ 10 S 10	HTJ 10 S 15 C	HTJ 10 S 20
art no		100.112.003	100.112.004	100.112.020	100.112.015	100.112.022	100.112.097
working pressure	bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage	t	5	5	10	10	10	10
stroke length	mm	75	120	50	100	150	200
closed height	mm	157	202	135	185	255	305
capacity	kN/t	47.5 / 4.8	47.5 / 4.8	99.3 / 10.1	99.3 / 10.1	99.3 / 10.1	99.3 / 10.1
oil content	cm ³	50	80	69	138	207	276
effective pressure area	cm ²	6.6	6.6	13.8	13.8	13.8	13.8
weight	kg	1.5	1.7	2.6	3.6	4.7	5.7
maintenance set	art no	100.113.021	100.113.021	100.113.121	100.113.121	100.113.121	100.113.121
recommended pump	model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge	model	A 501	A 501	A 501	A 501	A 501	A 501

Assembly cylinders - spring return - ≥ 5 ton (dimensions)



model		HTJ 5 S 7.5	HTJ 5 S 12	HTJ 10 S 5	HTJ 10 S 10	HTJ 10 S 15 C	HTJ 10 S 20
A	mm	157	202	135	185	255	305
B	mm	40	40	60	60	60	60
C	mm	25	25	38	38	38	38
D	mm	70	70	70	70	70	70
E	mm	20	20	20	20	20	20
F	mm	150	195	125	175	245	295
J	mm	M40 x 1.5	M40 x 1.5	M60 x 2	M60 x 2	M60 x 2	M60 x 2
K	mm	22	22	30	30	30	30
L	mm	-	-	M25 x 1.5	M25 x 1.5	M25 x 1.5	M25 x 1.5



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
 - on cylinder housing
 - in plunger head (except HTJ 5 S 7.5 and HTJ 5 S 12)
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

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HTJ 5 S 7.5



HTJ 10 S 10



HTJ model with threads on the cylinder housing and in the plunger head



Sleeve for screw thread protection

Assembly cylinders - spring return - 25 ton

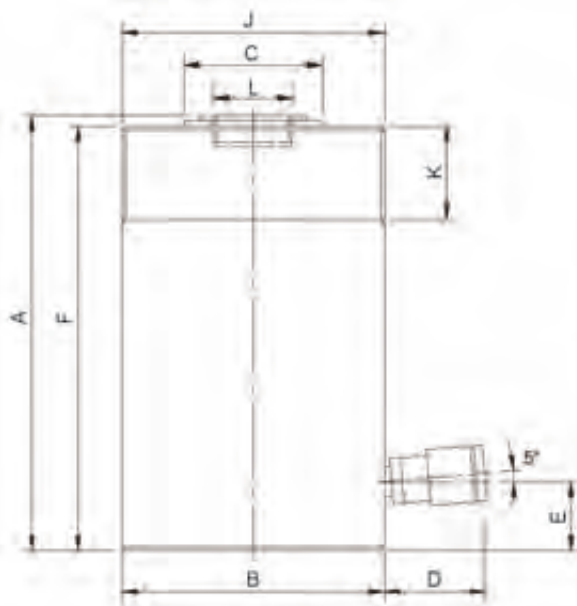


model	HTJ 25 S 5	HTJ 25 S 10	HTJ 25 S 15 C	HTJ 25 S 25	HTJ 25 S 35
art no	100.112.098	100.112.042	100.112.026	100.112.027	100.112.028
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	25	25	25	25	25
stroke length mm	50	100	150	250	350
closed height mm	137	187	237	360	460
capacity kN/t	238.9 / 24.4	238.9 / 24.4	238.9 / 24.4	238.9 / 24.4	238.9 / 24.4
oil content cm ³	166	332	498	830	1162
effective pressure area cm ²	33.2	33.2	33.2	33.2	33.2
weight kg	5.2	6.8	8.5	12.7	17.5
maintenance set art no	100.113.301	100.113.301	100.113.301	100.113.301	100.113.301
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A	HTW 1800 B	HTW 1800 B
pressure gauge model	A 502	A 502	A 502	A 502	A 502

Assembly cylinders - spring return - 25 ton (dimensions)



model	HTJ 25 S 5	HTJ 25 S 10	HTJ 25 S 15 C	HTJ 25 S 25	HTJ 25 S 35
A	mm 137	mm 187	mm 237	mm 360	mm 460
B	mm 85	mm 85	mm 85	mm 85	mm 85
C	mm 55	mm 55	mm 55	mm 55	mm 55
D	mm 70	mm 70	mm 70	mm 70	mm 70
E	mm 20	mm 20	mm 20	mm 20	mm 20
F	mm 130	mm 180	mm 230	mm 353	mm 453
J	mm M85 x 2	mm M85 x 2	mm M85 x 2	mm M85 x 2	mm M85 x 2
K	mm 42	mm 42	mm 42	mm 42	mm 42
L	mm M36 x 1.6	mm M36 x 1.6	mm M36 x 1.6	mm M36 x 1.6	mm M36 x 1.6



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- standard fixing thread
 - on cylinder housing
 - in plunger head
- flat saddle
 - prevents damage to the plunger
 - easy to replace with tilting saddle

Available on request ↓

- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Assembly / welding rings	pag. 63
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HTJ 25 S 10



HTJ model with threads on the cylinder housing and in the plunger head



Sleeve for screw thread protection

Construction cylinders - spring return

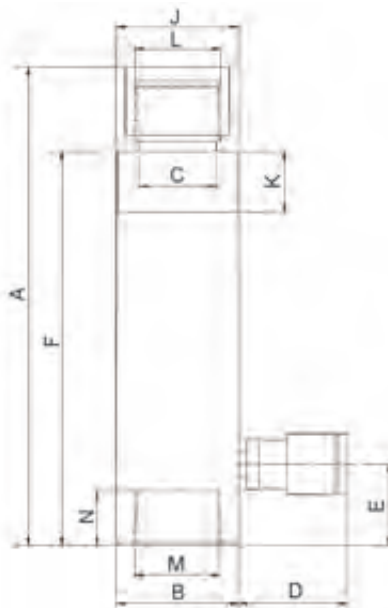


model	HCJ 10 S 6	HCJ 10 S 15	HCJ 10 S 25	HCJ 25 S 15
art no	100.112.062	100.112.063	100.112.064	100.112.065
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	10	10	10	25
stroke length mm	60	150	250	150
closed height mm	202	292	398	323
capacity kN/t	99.3 / 10.1	99.3 / 10.1	99.3 / 10.1	238.9 / 24.4
oil content cm ³	83	207	345	498
effective pressure area cm ²	13.8	13.8	13.8	33.2
weight kg	3.5	5.1	7.2	10.5
maintenance set art no	100.113.121	100.113.121	100.113.121	100.113.301
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge model	A 501	A 501	A 501	A 502

Construction cylinders - spring return (dimensions)



model	HCJ 10 S 6	HCJ 10 S 15	HCJ 10 S 25	HCJ 25 S 15
A	mm 202	292	398	323
B	mm 60	60	60	85
C	mm 38	38	38	55
D	mm 70	70	70	70
E	mm 40	40	39	42
F	mm 155	245	351	260
J	mm M60 x 2	M60 x 2	M60 x 2	M85 x 2
K	mm 30	30	30	42
L	1¼" NPT	1¼" NPT	1¼" NPT	2" NPT
M	1¼" NPT	1¼" NPT	1¼" NPT	2" NPT
N	mm 27	27	27	27



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- screw-on saddle
 - prevents damage to the plunger
 - easy to replace
- standard fixing thread
 - on plunger head
 - on cylinder housing
 - in cylinder bottom
 - designed for maximum cylinder load

Available on request ↓

- cylinders manufactured in conformity with customer specifications

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HCJ 10 S 6



HCJ 25 S 25



Fixing thread in cylinder bottom



HCJ with fixing thread on plunger head and on cylinder housing

Construction cylinders - hydraulic return



model		HCJ 10 H 15	HCJ 25 H 15	HCJ 25 H 25
art no		100.122.066	100.122.067	100.122.068
working pressure	bars/Mpa	720 / 72	720 / 72	720 / 72
tonnage	t	10	25	25
stroke length	mm	150	150	250
closed height	mm	338	350	450
capacity lifting	kN/t	99.3 / 10.1	238.9 / 24.4	238.9 / 24.4
capacity pulling	kN/t	48.9 / 5	48.9 / 5	124.5 / 12.7
oil content*	cm ³	207 / 102	498 / 260	829 / 432
effective pressure area*	cm ²	13.8 / 6.8	33.2 / 17.3	33.2 / 17.3
weight	kg	6.1	12.7	18.2
maintenance set	art no	100.123.001	100.123.025	100.123.025
recommended pump	model	HTW 1800 B	HTW 1800 B	HTW 1800 B
pressure gauge	model	A 501	A 502	A 502

Construction cylinders - hydraulic return (dimensions)



model		HCJ 10 H 15	HCJ 25 H 15	HCJ 25 H 25
A	mm	338	350	450
B	mm	60	85	85
C	mm	30	45	45
D ₁ /D ₂	mm	70 / 85	70 / 85	70 / 85
E	mm	40	56	56
F	mm	287	297	397
l ₁ /l ₂		-	-	l ₂
J	mm	M60 x 2	M85 x 2	M85 x 2
K	mm	30	40	40
L		1¼" NPT	2" NPT	2" NPT
M		1¼" NPT	2" NPT	2" NPT
N	mm	27	27	27
P	mm	48	60	60



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- protected against ejection of the plunger
- screw-on saddle
 - prevents damage to the plunger
 - easy to replace
- standard fixing thread
 - on plunger head
 - on cylinder housing
 - in cylinder bottom
 - designed for maximum cylinder load

Available on request ↓

- cylinders manufactured in conformity with customer specifications

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HCJ 10 H 15



HCJ 25 H 15



Fixing thread in cylinder bottom

Construction cylinder set



no	description	model	art no	quantity
	construction cylinder set, consists of:	HIK 10 U	100.062.002	
1	construction cylinder, spring return	HCJ 10 S 6	100.112.062	1
2	construction cylinder, spring return	HCJ 10 S 15	100.112.063	1
3	hydraulic wedge	HW 1000	100.562.009	1
4	extension pipe, length 125 mm	10 A1	100.181.501	1
5	extension pipe, length 250 mm	10 A2	100.181.502	1
6	extension pipe, length 500 mm	10 A3	100.181.503	1
7	extension pipe, length 750 mm	10 A4	100.101.504	1
8	connection socket	10 B	100.101.510	2
9	double nipple	10 G	100.181.515	2
10	round base plate	10 C	100.181.512	2
11	cross head	10 H	100.181.516	2
12	wedge head	10 P	100.581.525	1
13	cylinder toe	10 E	100.581.515	1
14	plunger toe	10 F	150.581.662	1
15	hand pump fitted with item no 16	HTS 550 A	100.541.022	1
16	hydraulic hose, length 2 m	H 2 SOU	100.572.102	1
17	steel storage case	-	150.581.001	1
18	screw-on saddle	10 D	100.181.091	2

Specifications / important properties



- construction cylinder:
 - spring return
 - compact and lightweight
 - usable in all positions
 - protected against ejection of the plunger
- weight of total set incl. storage box: 35 kg

Available on request



- cylinders manufactured in conformity with customer specifications

Construction cylinders

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Accessories construction cylinders

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HIK 10 U



Attachments


image	description	cylinder capacity 10 ton	cylinder capacity 25 ton
	screw-on saddle	1¼" NPT female model: 10 D art no 100.181.091	2" NPT female model: 24 D art no 100.181.092
	round base plate	1¼" NPT female model: 10 C art no 100.181.512	2" NPT female model: 25 C art no 100.181.561
	cross head	1¼" NPT female model: 10 H art no 100.181.516	2" NPT female model: 25 H art no 100.181.368
	bottom plug	1¼" NPT male model: 10 K art no 100.181.519	2" NPT male model: 25 K art no 100.181.569
	extension pipe	1¼" NPT male (2x) L = 125 mm, model: 10 A1, art no 100.181.501 L = 250 mm, model: 10 A2, art no 100.181.502 L = 500 mm, model: 10 A3, art no 100.181.503 L = 750 mm, model: 10 A4, art no 100.181.504	2" NPT male (2x) - L = 250 mm, model: 25 A2, art no 100.181.551 L = 500 mm, model: 25 A3, art no 100.181.552 L = 750 mm, model: 25 A4, art no 100.181.553
	connector	snaplock (2x) to connect two extension pipes model: 10 V, art no 100.181.530	-
	bodemstuk	1¼" NPT male - snaplock bottom piece between cylinder base and extension pipe model: 10 W, art no 100.181.531	-
	connection socket	1¼" NPT female (2x) model: 10 B art no 100.181.510	2" NPT female (2x) model: 25 B art no 100.181.560
	connection nipple	1¼" NPT male (2x) model: 10 G art no 100.181.515	2" NPT male (2x) model: 25 G art no 100.181.565
	plunger toe	1¼" NPT female, capacity max. 5 ton model: 10 F art no 150.581.662	-
	cylinder toe	M60 x 2 female, capacity max. 5 ton model 10 E art no 100.581.515	-
	wedge head	1¼" NPT female model 10 P art no 100.581.525	-

Assembly / welding rings


image	5 ton	10 ton	25 ton	50 ton
	M40 x 1.5 Ø68 x 22 mm art no 100.181.491	M60 x 2 Ø103 x 30 mm art no 100.181.522	M85 x 2 Ø137 x 42 mm art no 100.181.572	M130 x 2 Ø188 x 50 mm art no 100.181.591

Hollow plunger cylinders - spring return - ≥ 5 ton



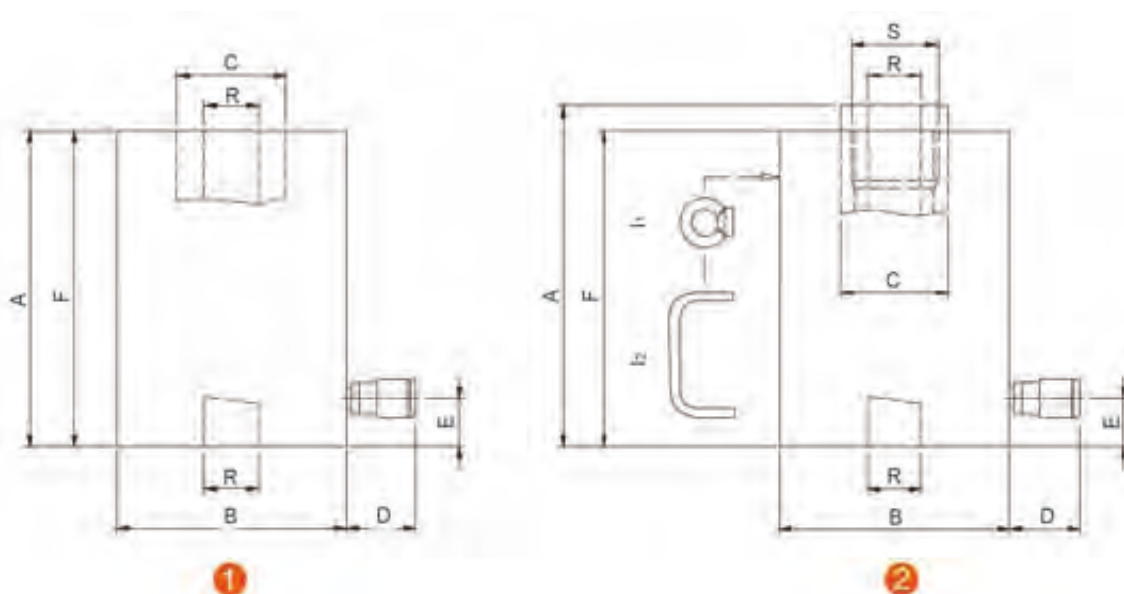
model		HHJ 5 S 2.5	HHJ 12 S 5	HHJ 12 S 15	HHJ 17 S 5	HHJ 20 S 5	HHJ 20 S 15
art no		100.111.002	100.111.021	100.111.029	100.112.023	100.112.033	100.112.030
working pressure	bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage	t	5	12	12	17	20	20
stroke length	mm	25	50	150	50	50	150
closed height	mm	87	156	298	195	182	389
return		spring	spring	spring	spring	spring	spring
capacity	kN/t	54.3 / 5.5	126.7 / 12.9	126.7 / 12.9	169.6 / 17.3	223.9 / 22.8	223.9 / 22.8
oil content	cm ³	19	88	264	118	156	467
effective pressure area	cm ²	7.5	17.6	17.6	23.6	31.1	31.1
weight	kg	1.9	6.3	11	7.3	8.6	18
maintenance set	art no	100.113.061	100.113.221	100.113.221	100.113.015	100.113.281	100.113.281
recommended pump	model	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge	model	A 507	A 507	A 507	A 500	A 507	A 507

Hollow plunger cylinders - spring return - ≥ 5 ton (dimensions)



model		HHJ 5 S 2.5	HHJ 12 S 5	HHJ 12 S 15	HHJ 17 S 5	HHJ 20 S 5	HHJ 20 S 15
A	mm	87	156	298	195	182	389
B	mm	60	86	86	90	100	100
C	mm	28	40	40	46	50	50
D	mm	90	90	90	90	90	90
E	mm	24	27	27	31	31	31
F	mm	87	156	298	187	170	377
l ₁ /l ₂	-	-	-	-	-	-	l ₂
R	mm	17	21	21	27	27	27
S	mm	-	-	-	M38 x 1.5	M38 x 1.5	M38 x 1.5

(1) models without saddle (2) models with saddle



Specifications / important properties ↓

- compact
- usable in all positions
- protected against ejection of the plunger
- hollow saddle (HHJ 17 S 5, HHJ 20 S 5 en HHJ 20 S 15)
 - prevents damage to the plunger
 - easy to replace with threaded or flat saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Accessories ↓

- saddles: hollow, threaded and flat saddles
- accessories: tension rods and nuts

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HHJ 5 S 2.5



HHJ 17 S 5



Hollow plunger HHJ 30 S 7.5



HHJ 30 S 7.5 with threaded saddle + tension rod

Hollow plunger cylinders - spring return - ≥ 30 ton



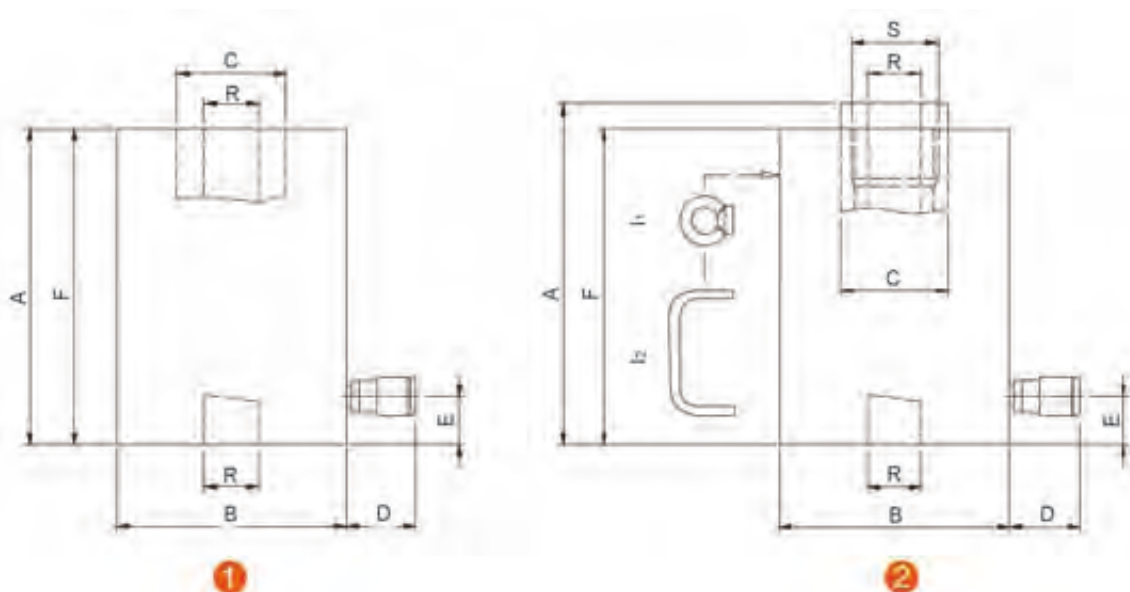
model		HHJ 30 G 5	HHJ 30 S 7.5	HHJ 30 S 15	HHJ 45 S 15	HHJ 60 S 7.5	HHJ 110 S 7.5
art no		100.111.053	100.112.055	100.112.034	100.112.061	100.112.081	100.112.101
working pressure	bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
tonnage	t	30	30	30	45	60	110
stroke length	mm	50	75	150	150	75	75
closed height	mm	120	226	362	388	272	315
return		gravity	spring	spring	spring	spring	spring
capacity	kN/t	293.7 / 30	293.7 / 30	293.7 / 30	453.5 / 46.2	610.4 / 62.2	1107.8 / 113
oil content	cm ³	204	306	612	945	636	1155
effective pressure area	cm ²	40.8	40.8	40.8	63	84.8	153.9
weight	kg	10	15	25	35.5	34.5	78.3
maintenance set	art no	100.113.441	100.113.481	100.113.825	100.113.501	100.113.641	100.113.761
recommended pump	model	HTS 550 A	HTS 550 A	HTW 1800 B	HTW 1800 B	HTW 1800 B	HTW 1800 B
pressure gauge	model	A 508	A 508	A 508	A 508	A 508	A 509

Hollow plunger cylinders - spring return - ≥ 30 ton (dimensions)



model		HHJ 30 G 5	HHJ 30 S 7.5	HHJ 30 S 15	HHJ 45 S 15	HHJ 60 S 7.5	HHJ 110 S 7.5
A	mm	120	226	362	388	272	315
B	mm	118	118	120	140	166	238
C	mm	70	60	60	65	80	130
D	mm	90	90	90	70	70	70
E	mm	33	33	32	36	41	40
F	mm	120	214	350	376	257	295
l ₁ /l ₂	-	-	-	l ₁	l ₂	l ₂	l ₁
R	mm	33	33	33	39	45	80
S	mm	-	M50 x 1.5	M50 x 1.5	M54 x 1.5	M65 x 1.5	M105 x 2

(1) models without saddle (2) models with saddle



Specifications / important properties ↓

- compact
- usable in all positions
- protected against ejection of the plunger
- hollow saddle (HHJ 17 S 5, HHJ 20 S 5 en HHJ 20 S 15)
 - prevents damage to the plunger
 - easy to replace with threaded or flat saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Accessories ↓

- saddles: hollow, threaded and flat saddles
- accessories: tension rods and nuts

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HHJ 30 G 5



HHJ 110 S 7.5



HHJ 30 S 7.5 with threaded saddle + tension rod

Hollow plunger cylinders - hydraulic return

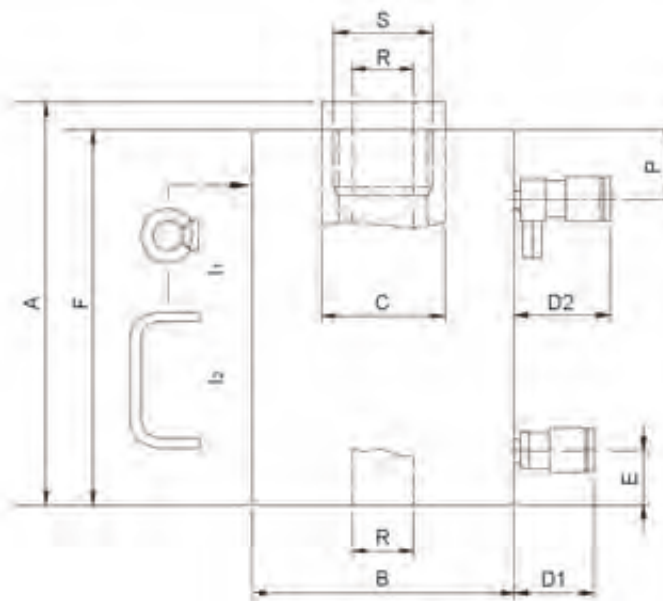


model	HHJ 30 H 15	HHJ 60 H 20	HHJ 100 H 10	HHJ 100 H 20
art no	100.122.045	100.122.031	100.122.051	100.122.053
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
tonnage t	30	60	100	100
stroke length mm	150	200	100	200
closed height mm	285	334	265	395
capacity lifting kN/t	293.7 / 30	610.4 / 62.2	103.9 / 1018.5	103.9 / 1018.5
capacity pulling kN/t	131 / 13.4	452.4 / 46.1	72 / 706.9	72 / 706.9
oil content* cm ³	613 / 274	1696 / 1256	1415 / 982	2830 / 1964
effective pressuyre area* cm ²	40.8 / 18.2	84.8 / 62.8	141.5 / 98.2	141.4 / 98.2
weight kg	23	40	53	78
maintenance set art no	100.013.081	100.123.081	100.123.121	100.123.121
recommended pump model	HTW 1800 B	HTW 1800 B	HTW 1800 B	HTW 1800 B
pressure gauge model	A 508	A 508	A 509	A 509

Hollow plunger cylinders - hydraulic return (dimensions)



model	HHJ 30 H 15	HHJ 60 H 20	HHJ 100 H 10	HHJ 100 H 20
A	mm 285	334	265	395
B	mm 120	166	210	210
C	mm 70	80	100	100
D	mm 70 / 85	70 / 85	70 / 85	70 / 85
E	mm 40	41	52	52
F	mm 275	319	245	375
l ₁ /l ₂	l ₂	l ₂	l ₁	l ₁
P	mm 50	39	55	75
R	mm 33	45	54	54
S	mm M50 x 1.5	M65 x 1.5	M72 x 2	M72 x 2



Specifications / important properties ↓

- compact
- usable in all positions
- protected against ejection of the plunger
- hollow saddle (with the exception of HHJ 30 G 5)
 - prevents damage to the plunger
 - easy to replace with threaded or flat saddle

Available on request ↓

- fixing thread on cylinder housing
- fixing holes in cylinder bottom
- cylinders manufactured in conformity with customer specifications

Accessories ↓

- saddles: hollow, threaded and flat saddles
- accessories: tension rods and nuts

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HHJ 60 H 20



HHJ 60 H 20



HHJ 60 H 20 with hollow saddle



HHJ 30 S 7.5 with threaded saddle + tension rod

Tension rods

for cylinder	HHJ 12	HHJ 20	HHJ 30	HHJ 45	HHJ 60	HHJ 100	HHJ 110
model	HTB 12	HTB 20	HTB 30	HTB 45	HTB 60	HTB 110	HTB 110
art no	100.581.021	100.581.002	100.581.003	100.581.022	100.581.004	100.581.005	100.581.005
type of thread	¾" - 10 UNC	1" - 8 UNC	1¼" - 7 UNC	1½" - 8 UN	1" - 8 UN	2" - 8 UN	2" - 8 UN

Nuts

for cylinder	HHJ 12	HHJ 20	HHJ 30	HHJ 45	HHJ 60	HHJ 100	HHJ 110
model	NUT 12	NUT 20	NUT 30	NUT 45	NUT 60	NUT 110	NUT 110
art no	100.581.021	100.581.002	100.581.003	100.581.022	100.581.004	100.581.005	100.581.005
type of thread	¾" - 10 UNC	1" - 8 UNC	1¼" - 7 UNC	1½" - 8 UN	1" - 8 UN	2" - 8 UN	2" - 8 UN

Specifications / important properties

- high-quality tension rods and nuts
- standard length 1000 mm
- material: chrome-molybdenum steel ASTM A 193/B7, DIN 42CrMo4
- tensile strength: 863 N/mm²
- yield limit: 726 N/mm²

Available on request

- different lengths
- different screw-thread sizes

Tension rods + nuts

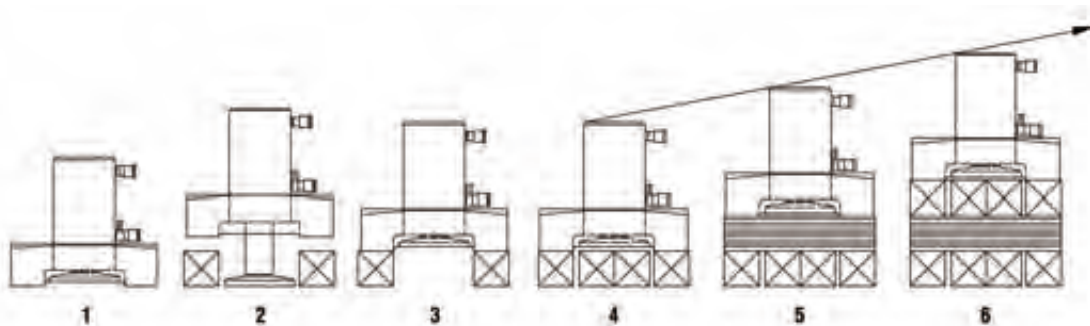


Step cylinders



model	customer-specific
art no	customer-specific
working pressure bars/Mpa	720 /72
tonnage t	25 - 300
stroke length mm	125 - 200
return	hydraulic
capacity kN	238.9 - 2933
capacity t	24.4 - 299
material	steel / aluminium
recommended pump model	Vari pump

Operating principle step cylinders



Specifications / important properties



- double-acting
- protected against ejection of the plunger
- lightweight construction, high lifting capacity

Available on request



- step cylinders with different:
 - tonnage
 - stroke length
 - step plate dimensions
- tilting saddle

Hydraulic pumps
Hydraulic hoses
Pressure gauges

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Step cylinder

Pulling cylinders - spring or hydraulic return



model	HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15	HPJ 100 H 15
art no	100.131.001	100.131.011	100.131.021	100.131.031
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
tonnage* t	11 / -	30 / -	60 / -	100 / 130
stroke length mm	150	150	150	150
return	spring	spring	spring	hydraulic
capacity pulling kN/t	113 / 11.5	298.7 / 30.5	610.4 / 62.2	953.7 / 97.3
capacity lifting kN/t	- / -	- / -	- / -	1271.9 / 129.7
oil content* cm ³	236 / -	623 / -	1272 / -	1988 / 2651
effective pressure area* cm ²	15.7 / -	41.5 / -	84.8 / -	132.5 / 176.7
weight kg	11.5	26	45	75
maintenance set art no	100.133.001	100.133.051	100.133.101	100.133.151
recommended pump model	HTW 300 B	HTW 1800 B	EHW 1650 RC	HTW 1800 B
pressure gauge model	A 510	A 510	A 510	A 510

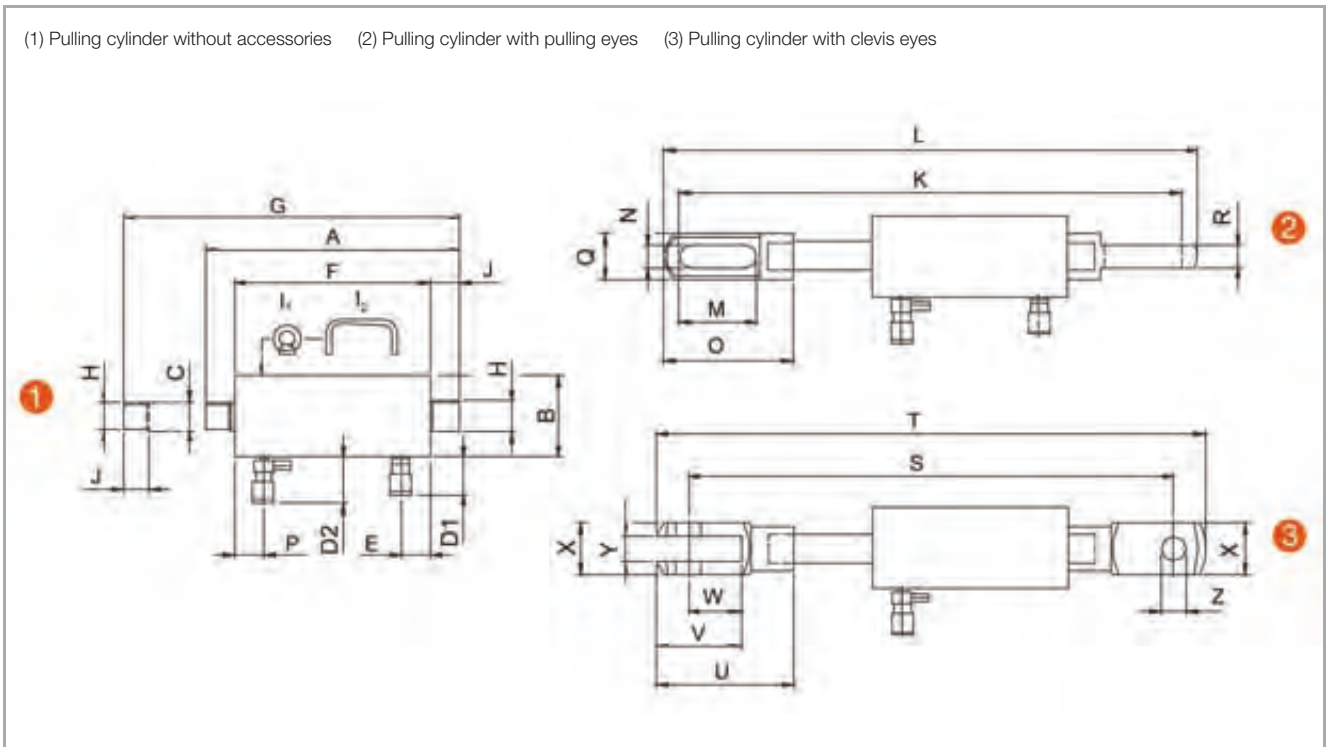
Pulling cylinders - spring or hydraulic return (dimensions)



model	HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15	HPJ 100 H 15
A	mm 320	470	530	440
B	mm 92	118	157	210
C	mm 40	40	60	75
D ₁ /D ₂	mm - / 85	- / 85	- / 85	70 / 85
E	mm -	-	-	57
F	mm 250	380	400	310
G	mm 470	620	680	590
H	mm M38 x 1.5	M38 x 1.5	M54 x 1.5	M72 x 2
I ₁ /I ₂	-	-	-	I ₁
J	mm 30	40	60	60

* = pull / push

(1) Pulling cylinder without accessories (2) Pulling cylinder with pulling eyes (3) Pulling cylinder with clevis eyes



Accessories


model		HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15	HPJ 100 H 15
pulling eye	art no	100.181.051	100.181.051	100.181.052	100.181.053
clevis eye	art no	100.181.056	100.181.057	-	-
protection spring*	art no	100.581.160	100.581.160	100.581.161	100.581.162

Accessories (dimensions)


model		HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15	HPJ 100 H 15
K	mm	760	890	1000	990
L	mm	810	940	1080	1110
M	mm	35	35	40	50
N	mm	120	120	150	200
O	mm	35	35	45	45
P	mm	38	44	52	57
Q	mm	200	200	260	320
R	mm	70	70	115	135
S	mm	650	828	-	-
T	mm	730	916	-	-
U	mm	160	188	-	-
V	mm	100	116	-	-
W	mm	60	72	-	-
X	mm	60	70	-	-
Y	mm	30	36	-	-
Z	mm	30	35	-	-

* = 30 mm less stroke length

Specifications / important properties


- compact
- usable in all positions
- protected against ejection of the plunger
- protected against overpressure

Available on request


- fixing thread on cylinder housing
- cylinders manufactured in conformity with customer specifications

Accessories


- pulling and clevis eyes (to be ordered separately, 2 pieces per cylinder)
- protection spring (to be ordered separately)

Hydraulic pumps
Hydraulic hoses
Pressure gauges

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HPJ 11 S 15 with pulling eyes + protection spring



HPJ 30 S 15 with clevis eyes + protection spring

Flat saddles for perpendicular loads



capacity cylinder	t	20	30	50	100
model		SA 20 FN	SA 30 FN	SA 50 FN	SA 100 FN
art no		100.000.646	100.000.672	100.000.678	100.000.663
diameter (G)	mm	50	60	80	105

Stainless steel tilting saddles for loads at a maximum angle of 5°



capacity cylinder	t	20	30	50	100
model		SA 20 TN SS	SA 30 TN SS	SA 50 TN SS	SA 100 TN SS
art no		160.000.339	160.000.550	160.000.537	160.000.525
diameter (G)	mm	45	65	65	90
additional closed height over flat saddle	mm	10	11	11	23

Specifications / important properties



- flat saddles
 - for perpendicular load
 - hardened
 - O-ring fastening
 - anti-skid grooves
- stainless steel tilting saddles
 - for load to a maximum angle of 5°
 - hardened
 - O-ring fastening
 - anti-skid grooves

(1) flat saddle (2) tilting saddle



Hollow saddles


capacity cylinder	t	17 / 20	30	45	60	100	110	110
model		S 20 A	S 35 A	S 45 A	S 60 A	S 100 A	S 110 A	S 110 SP
art no		100.181.011	100.181.014	100.181.017	100.181.020	100.181.023	100.181.026	100.181.029
diameter (G)	mm	48	58	63	78	95	125	125
diameter (R)	mm	27	33	39	45	54	80	54

Thread saddles


capacity cylinder	t	17 / 20	30	45	60	100	110	110
model		S 20 C	S 35 C	S 45 C	S 60 C	S 100 C	S 110 C	-
art no		100.181.013	100.181.016	100.181.019	100.181.022	100.181.025	100.181.028	-
diameter (G)	mm	48	58	63	78	95	125	-
diameter (R)	mm	1" - 8 UNC	1¼" - 7 UNC	1½" - 8 UN	1" - 8 UN	2" - 8 UN	2" - 8 UN	-

Flat saddles


capacity cylinder	t	17 / 20	30	45	60	100	110	110
model		S 20 B	S 35 B	S 45 B	S 60 B	S 100 B	S 110 B	-
art no		100.181.012	100.181.015	100.181.018	100.181.021	100.181.024	100.181.027	-
diameter (G)	mm	48	58	63	78	95	125	-

Specifications / important properties


- hollow saddle
 - standard mounted on hollow plunger cylinders
 - perfect to combine with tension rods and nuts
- threaded saddle
 - perfect to combine with tension rods
- flat saddle
 - allows for incidental use as normal cylinder

Available on request


- different hole sizes in hollow saddles
- different screw-thread sizes in threaded saddles

(1) hollow saddle (2) threaded saddle (3) flat saddle



Flat saddles for perpendicular loads

capacity cylinder	t	5	10	20 / 25 / 30	50 / 75	100 / 150	200	300 / 400 / 500
model		S 5 FN	S 10 FN	S 25 FN	S 50 FN	S 100 FN	S 200 FN	S 500 FN
art no		100.181.031	100.181.032	100.181.033	100.181.034	100.181.035	100.181.036	100.181.037
diameter (G)	mm	20	38	35	65	90	140	170

Tilting saddles for loads at a maximum angle of 5°

capacity cylinder	t	5	10	20 / 25 / 30	50 / 75	100 / 150	200	300 / 400 / 500
model		-	S 10 TN	S 25 TN	S 50 TN	S 100 TN	S 200 TN	S 500 TN
art no		-	100.181.041	100.181.042	100.181.043	100.181.044	100.999.040	100.999.232
diameter (G)	mm	-	35	45	65	90	140	180
additional closed height over flat saddle	mm	-	17	10	11	11	23	38

Specifications / important properties

- flat saddles
 - for perpendicular load
 - hardened
 - snap-lock fastening except S 200 FN and S 500 FN (bolt fastening)
 - anti-skid grooves
- tilting saddles
 - for load to a maximum angle of 5°
 - hardened
 - snap-lock fastening except S 200 TN en S 500 TN (bolt fastening)
 - anti-skid grooves

(1) flat saddle (2) tilting saddle



Hydraulic hand tools



32
36
41

1"1/4
1"7/16
1"5/8
1"13/16
2"
INCH

Puller sets - spring return



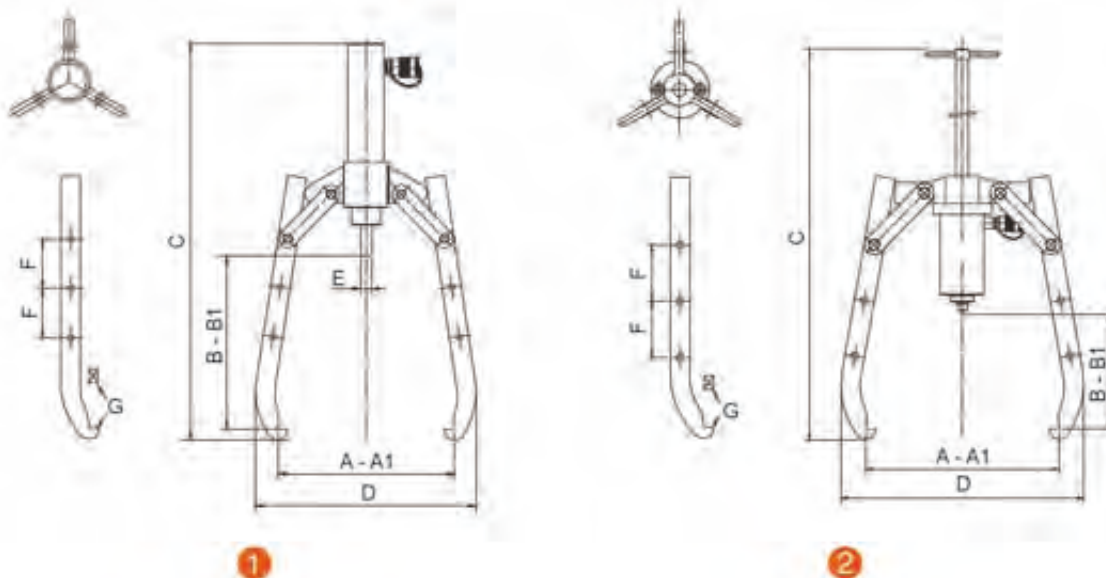
model	HP 5	HP 10	HP 17	HP 30
art no	100.562.001	100.562.002	100.562.003	100.562.004
A (min. / max.)	mm 30 / 150	50 / 295	80 / 390	100 / 485
B (min. / max.)	mm 50 / 150	130 / 290	10 / 240	60 / 310
C (max.)	mm 350	660	950	1200
D (max.)	mm 200	375	490	630
E	mm 16	19	-	-
F	mm 50	80	115	125
G	mm 20 x 7	25 x 15	32 x 18	40 x 22
weight excl. cylinder	kg 2.2	8.5	18.5	36.5
required cylinder	model HTJ 5 S 12	HCJ 10 S 15	HHJ 17 S 5	HHJ 30 S 7.5
weight incl. cylinder	kg 4	13.5	27.5	51

Required cylinders - spring return



model	HTJ 5 S 12	HCJ 10 S 15	HHJ 17 S 5	HHJ 30 S 7.5
art no	100.112.004	100.112.063	100.112.023	100.112.055
working pressure	bars/Mpa 720 / 72	720 / 72	720 / 72	720 / 72
tonnage	t 5	10	17	30
stroke length	mm 120	150	50	75
closed height	mm 202	292	195	226
capacity	kN/t 47.5 / 48	99.3 / 10.1	169.6 / 17.3	293.7 / 30
oil content	cm ³ 80	207	118	306
effective pressure area	cm ² 6.6	13.8	23.6	40.8
weight	kg 1.7	5.1	7.3	15
maintenance set	art no 100.113.021	100.113.121	100.113.015	100.113.481
recommended pump	model HTS 550 A	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge	model A 501	A 501	A 500	A 508

(1) HP 5 / HP 10 (2) HP 17 / HP 30



Specifications / important properties ↓

- adjustable for broad range of pulleys
- compact and lightweight
- usable in all positions
- the required cylinders for each puller set must be ordered separately!

Available on request ↓

- cylinders manufactured in conformity with customer specifications

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HP 5



HP 17

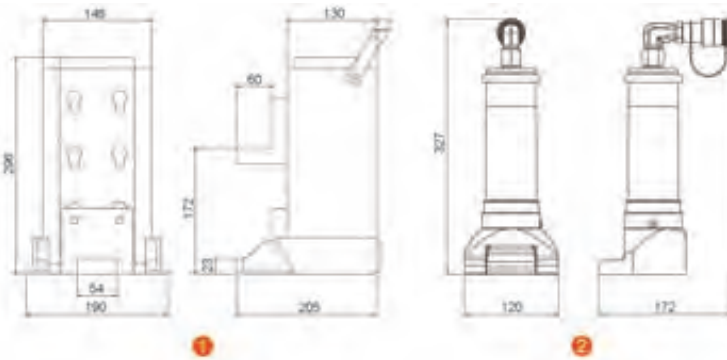


Toe cylinders - spring return



model	HMJ 10 S 15 U	TJ 8 S 13
art no	100.569.002	100.112.102
working pressure bars/Mpa	720 / 72	720 / 72
tonnage t	10	8
stroke length mm	150	130
closed height mm	280	319
capacity (head) kN/t	99.3 / 10.1	- / -
capacity (toe) kN/t	65 / 6 t/m 98 / 9	88.3 / 8.4
oil content cm ³	208	207
weight kg	17.2	6.5
maintenance set art no	100.113.121	150.013.936
recommended pump model	HTS 550 A	HTS 550 A
pressure gauge model	A 501	A 501

(1) HMJ 10 S 15 U (2) TJ 8 S 13



Specifications / important properties



- HMJ 10 S 15 U
 - toe height adjustable in 3 positions: 23, 92 and 172 mm
 - protected against ejection of the plunger
 - telescopic support legs
- TJ 8 S 13
 - anti-skid profile on the toe
 - usable in all positions
 - compact construction, low weight
 - minimum tip clearance 18.5 mm
 - toe can be rotated 360°

Available on request



- cylinders manufactured in conformity with customer specifications

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HMJ 10 S 15 U

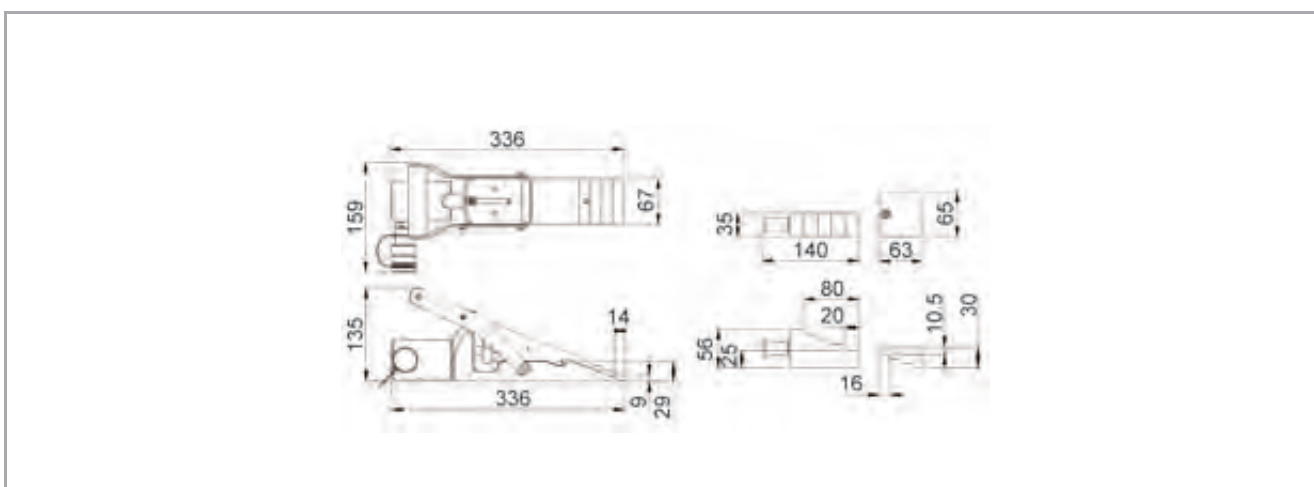


TJ 8 S 13

Verticale lifting wedge - spring return



model	HVLW 16 S 2	
art no	100.112.104	
working pressure bars/Mpa	720 / 72	
tonnage t	16	
min. insertion space mm	10	
lifting stroke mm	19	
spreading force kN/t	156.6 / 16	
oil content cm ³	75	
weight kg	8.8	
maintenance set art no	100.113.121	
recommended pump model	HTS 550 A	
pressure gauge model	A 500	



Specifications / important properties



- 100% vertical lifting movement
 - prevents misalignment of load
- automatic mechanical retraction of lifting plate
- minimum tip clearance (10 mm)
- vertical lifting stroke of 19 mm at each step
- standard delivered in plastic carrying box, including:
 - safety block
 - step block
 - grease pistol
 - grease cartridge Molycote

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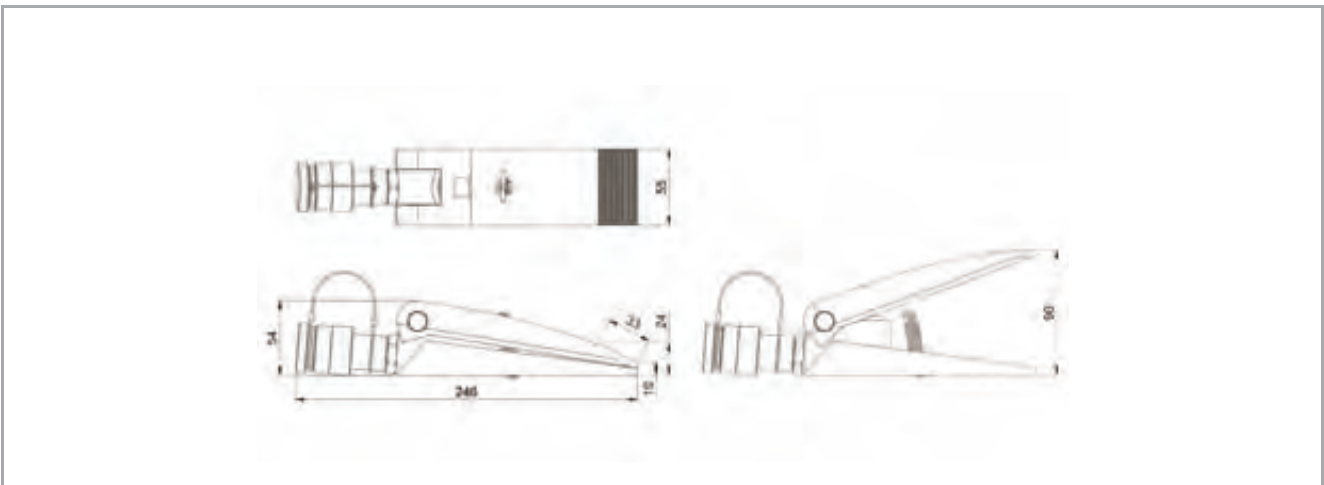
HVLW 16 S 2



HVLW 16 S 2 in case

Wedge - spring return

model	HW 1000	
art no	100.562.009	
working pressure bars/Mpa	720 / 72	
tonnage t	1	
min. insertion space mm	16	
lifting stroke mm	98	
spreading force kN/t	10 / 1.1	
oil content cm ³	10	
weight kg	2.1	
maintenance set art no	150.563.075	
recommended pump model	HTS 550 A	
pressure gauge model	A 500	

**Specifications** / important properties

- compact
- lightweight
- anti-skid profile on wedge arms
- usable in all positions

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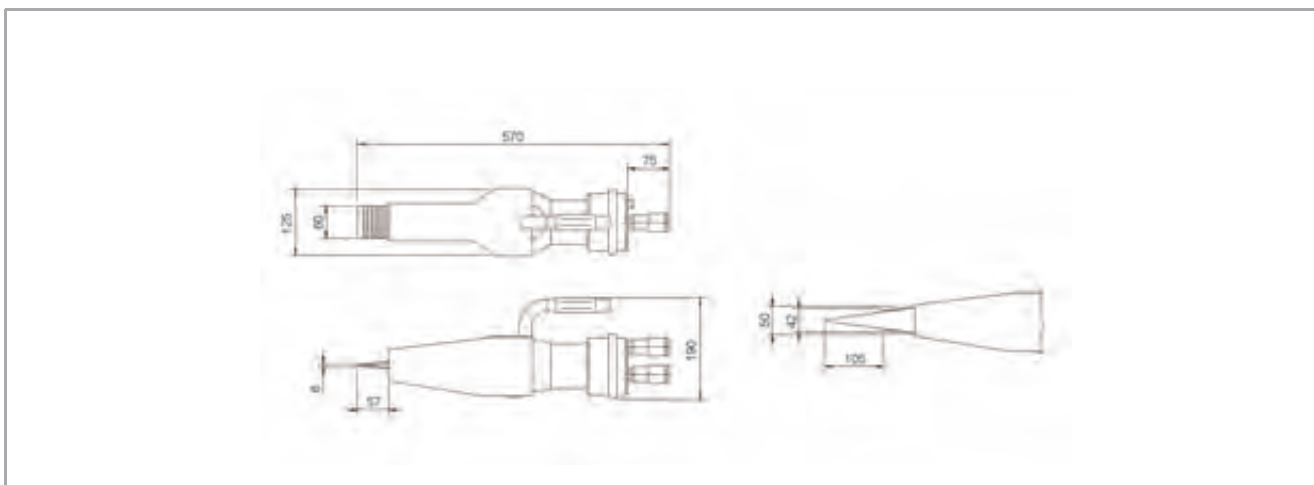
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HW 1000

Wedge - hydraulic return ↓

model	HWJ 25 U	
art no	100.102.021	
working pressure bars/Mpa	720 / 72	
tonnage t	25	
min. insertion space mm	5	
lifting stroke mm	50	
spreading force kN/t	235.4 / 24	
oil content press cm ³	328	
oil content retract cm ³	217	
weight kg	8.1	
maintenance set art no	100.103.081	
recommended pump model	HTW 1800 B + M 321	
pressure gauge model	A 500	



Specifications / important properties ↓

- minimum tip clearance (5 mm)
- compact construction
- low weight
- anti-skid profile on wedge blades
- usable in all positions

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HWJ 25 U

Flange spreaders - spring return

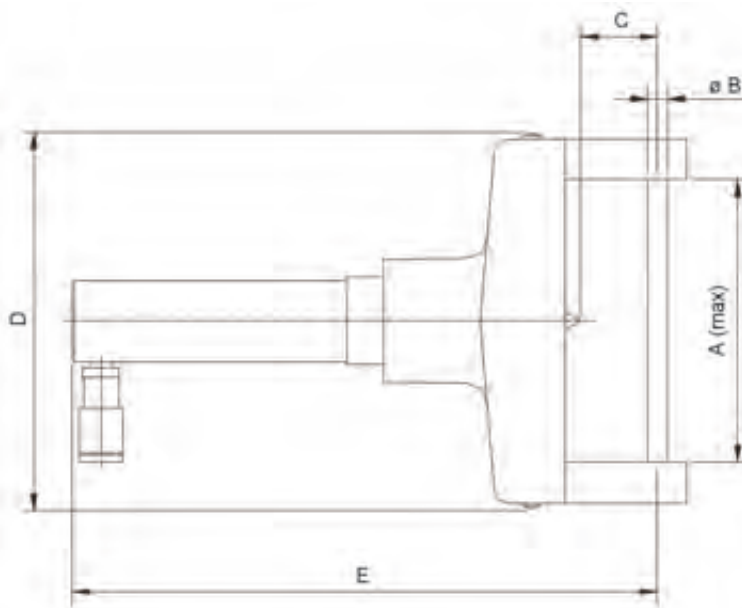


model	FLS 85 NU	FLS 170 NU	FLS 210 NU
art no	100.102.001	100.102.011	100.102.004
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72
spreading force 60° wedge kN/t	34.3 / 3.5	34.3 / 3.5	34.3 / 3.5
spreading force 30° wedge kN/t	73.5 / 7.5	73.5 / 7.5	73.5 / 7.5
flange opening 60° wedge min	3 mm	3 mm	3 mm
flange opening 60° wedge max	32 mm	32 mm	32 mm
flange opening 30° wedge min	2 mm	2 mm	2 mm
flange opening 30° wedge max	25 mm	25 mm	25 mm
oil content cm ³	50	50	50
weight incl. case kg	6.3	9.5	11
weight spreader kg	4.5	8	9.5
maintenance set art no	100.113.021	100.113.021	100.113.021
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A
pressure gauge model	A 500	A 500	A 500

Flange spreaders - spring return (dimensions)



model	FLS 85 NU	FLS 170 NU	FLS 210 NU
A mm	85	170	210
B mm	15	20	30
C mm	30	32.5	75
D mm	128	208	255
E mm	263	266	348



Specifications / important properties ↓

- standard delivered with 60° spreading wedge
- safe
 - no flying off parts or sparks
- compact and lightweight
- easy to use
- two or more can be used for a more equal distribution of forces
- standard delivered in plastic carrying box, including:
 - high-grade grease Molycote

Available on request ↓

- spreading wedge with 30° angle for:
 - FLS 85 NU, art no 100.103.009
 - FLS 170 NU, art no 100.103.018
- flange spreader with opening larger than 210 mm

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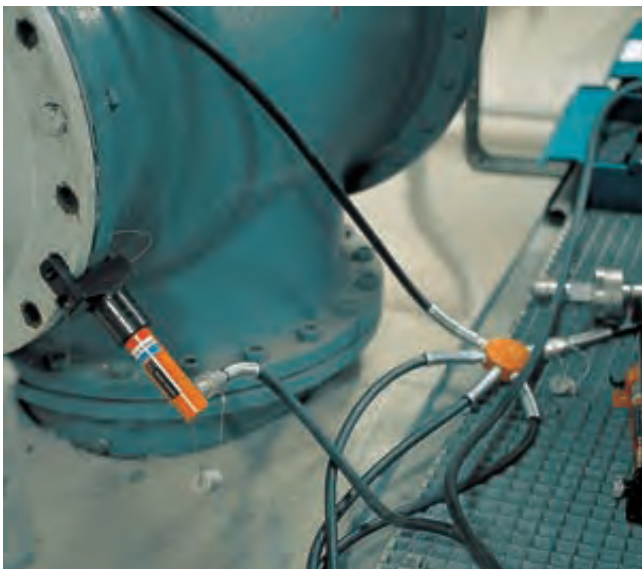
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FLS 85 NU



FLS 170 NU



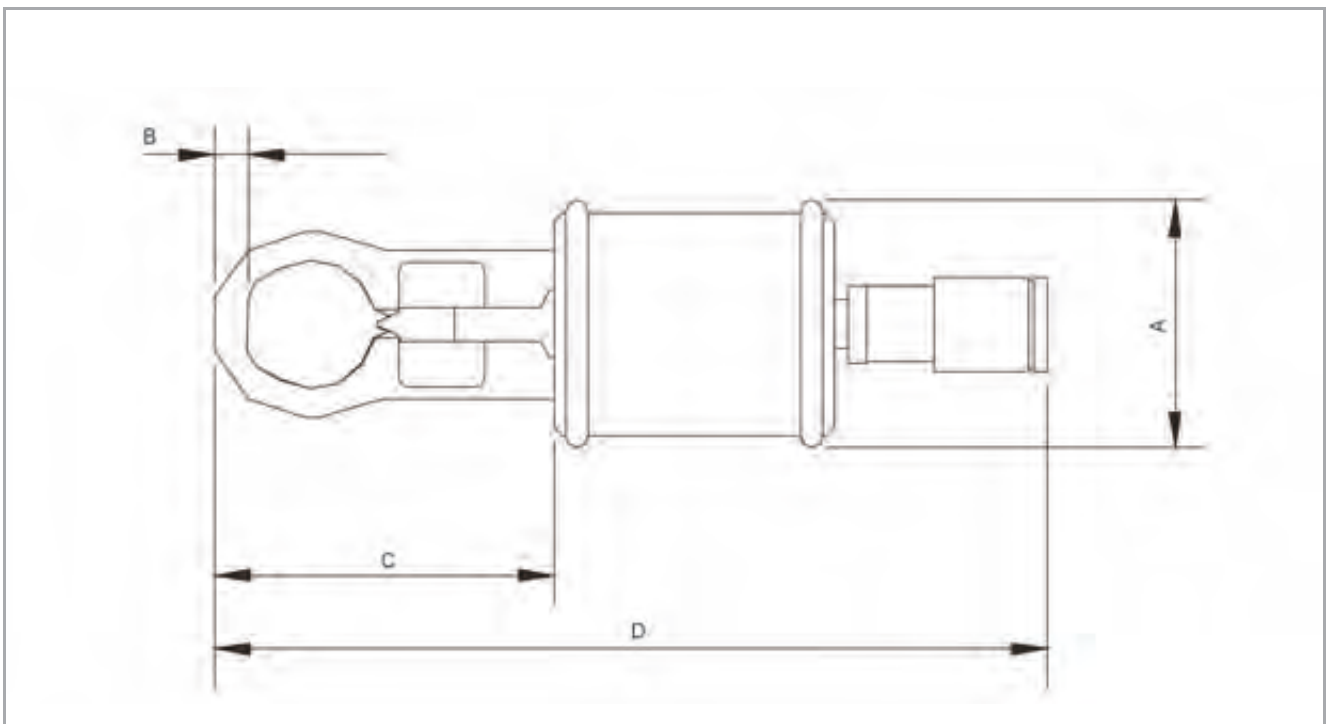
FLS 210 NU

Nut splitters - spring return

model	HNC 1536 NU		HNC 3250 U	
art no	100.102.009		100.102.006	
working pressure	bars/Mpa	720 / 72	720 / 72	
splitting capacity	kN/t	148 / 15	316 / 32	
min. reach bolt	met. size	M12 (½")	M22 (7/8")	
min. reach bolt	hex. size	19 mm (¾")	32 mm (1¼")	
max. reach category 8 bolt	met. size	M24 (7/8")	M33 (1¼")	
max. reach category 8 bolt	hex.size	36 mm (1 7/16")	50 mm (2")	
max. reach 2H bolt	met. size	M20 (¾")	M33 (1¼")	
max. reach 2H bolt	hex. size	30 mm (1¼")	50 mm (2")	
oil content	cm ³	32	57	
weight incl. case	kg	4.2	8.6	
weight tool	kg	2.9	7.2	
maintenance set	art no	100.103.035	100.103.059	
recommended pump	model	HTS 550 A	HTS 550 A	

Nut splitters - spring return (dimensions)

model	HNC 1536 NU		HNC 3250 U	
A	mm	86	118	
B	mm	11	19	
C	mm	104 / 117	139 / 148	
D	mm	277 / 290	321 / 330	
thickness cutting head	mm	23	33	



Specifications / important properties ↓

- compact
- lightweight
- usable in all positions
- safe
 - no flying off parts or sparks
- adjustable blade
 - prevents damage to the thread
- standard delivered in plastic carrying box, including:
 - high-grade grease Molycote
 - spare blade

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HNC 1536 NU



HNC 3250 U

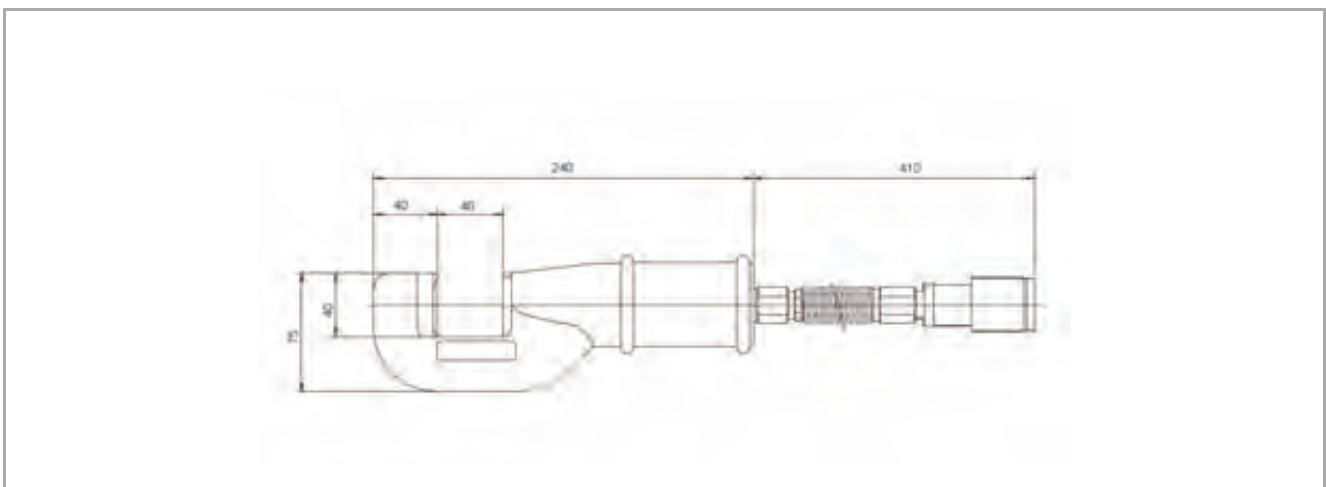


HNC 3250 U with adjustable head

Mini cutter - spring return



model	HMC 8 U	
art no	100.102.032	
working pressure bars/Mpa	720 / 72	
max. cutting force kN/t	78.5 / 8	
max. blade opening mm	40	
max. Ø reinforcing steel mm	16	
capacity steel strip mm	35 x 4	
oil content cm ³	43	
weight kg	3	
maintenance set art no	150.013.178	
recommended pump model	HTS 550 A	



Specifications / important properties



- compact
- lightweight
- convenient in small spaces and at difficultly accessible places
- spark-free
 - safe alternative for grinding

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HMC 8 U



HMC 8 U detail

Steel cable cutters - spring return



model	HWC 16 U	HWC 20 U	HWC 32 U
art no	100.522.016	100.522.020	100.522.032
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72
capacity kN/t	54.3 / 5.5	152.9 / 15.6	261.5 / 26.6
max. blade opening Ø	20 mm	50 mm	32 mm
capacity steel cable 6x7 Ø	16 mm	25 mm	32 mm
capacity steel cable 6x12 Ø	20 mm	30 mm	32 mm
capacity steel cable 6x19 Ø	20 mm	30 mm	32 mm
capacity solid steel Ø	16 mm	22 mm	25 mm
capacity reinforcing steel Ø	13 mm	19 mm	25 mm
oil content cm ³	18	120	135
weight kg	2.3	8.5	7.5
maintenance set art no	100.523.001	100.523.101	100.523.201
recommended pump model	HTS 550 A	HTS 550 A	HTS 550 A

(1) HWC 16 U (2) HWC 20 U (3) HWC 32 U



Specifications / important properties



- compact
- lightweight
- spark-free
 - safe alternative for grinding
- quick and reliable
- usable in all positions
- hardened blade that can be sharpened

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HWC 16 U



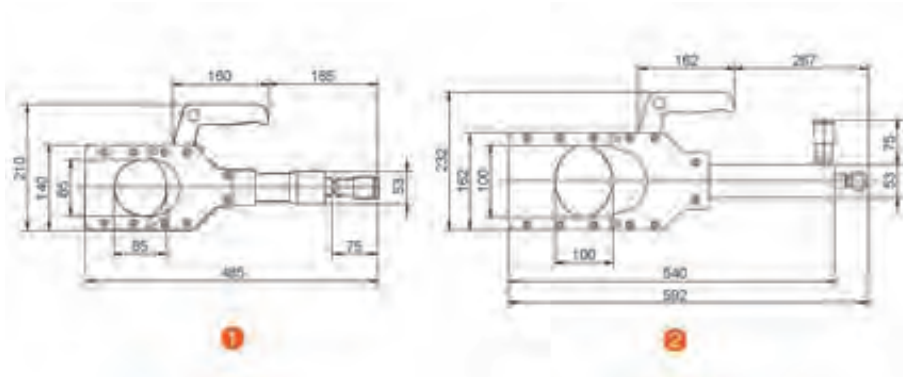
HWC 32 U

Power cable cutters - spring return



model	HCC 85 U	HCC 100 U
art no	100.522.085	100.522.100
working pressure bars/Mpa	720 / 72	720 / 72
capacity kN/t	50.9 / 5.2	90.5 / 9.2
max. blade opening Ø	85 mm	100 mm
capacity ground cable Ø	50 mm	75 mm
capacity telephone cable Ø	85 mm	100 mm
oil content cm ³	65	140
weight kg	6.2	12.5
maintenance set art no	100.523.301	100.523.401
recommended pump model	HTS 550 A	HTS 550 A

(1) HCC 85 U (2) HCC 100 U



Specifications / important properties



- compact
- lightweight
- spark-free
 - safe alternative for grinding
- quick and reliable
- usable in all positions
- hardened blade that can be sharpened

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HCC 85 U

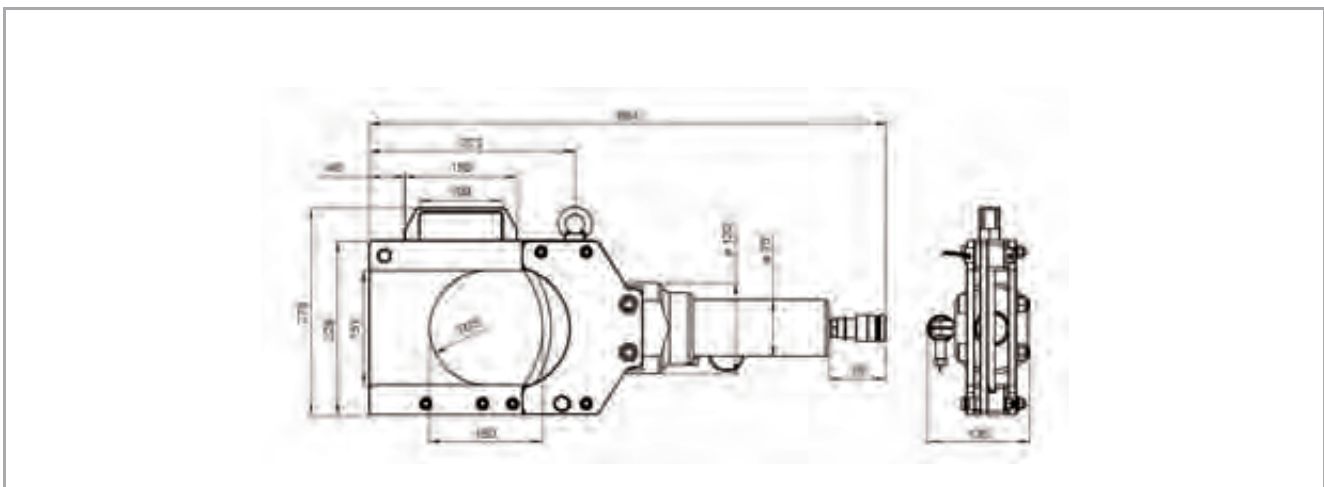


HCC 100 U

Power cable cutters - hydraulic return



model	HCC 150	
art no	100.522.150	
working pressure bars/Mpa	720 / 72	
capacity kN/t	203.6 / 20.8	
max. blade opening Ø	150 mm	
capacity ground cable Ø	140 mm	
capacity telephone cable Ø	150 mm	
oil content press cm ³	452	
oil content retract cm ³	209	
weight kg	24.9	
maintenance set art no	100.013.041	
recommended pump model	HTW 1800 B + M 321	



Specifications / important properties



- compact
- lightweight
- spark-free
 - safe alternative for grinding
- quick and reliable
- usable in all positions
- hardened blade that can be sharpened

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HCC 150 U

Pipe squeezer - spring return 

model	HPS 60 AU
art no	100.102.019
working pressure bars/Mpa	720 / 72
squeezing force kN/t	152.9 / 15.6
max. Ø pipe (external) mm	60
max. wall thickness pipe mm	4
oil content cm ³	130
weight kg	8.6
maintenance set art no	150.563.310
recommended pump model	HTS 550 A

**Specifications** / important properties 

- compact
- lightweight
- jaw with quick-lock ring

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HPS 60 AU

Hydraulic pumps



Hand pumps - single-acting

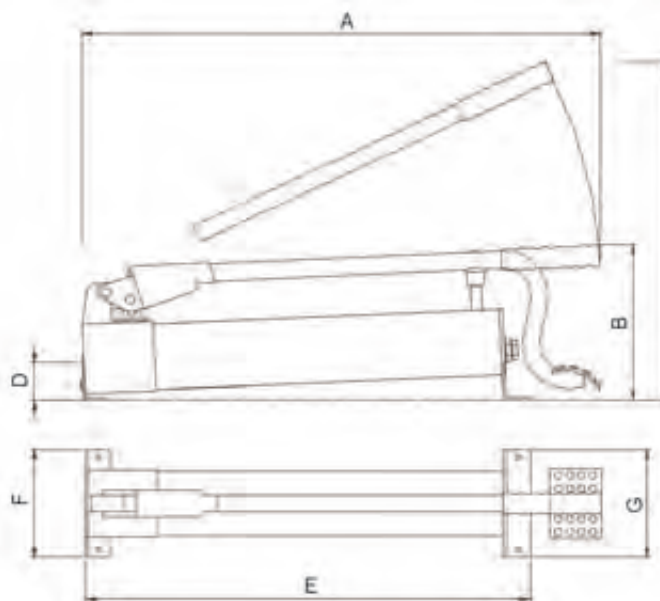


model	HTS 550 A	HTW 300 B	HTW 700 A	HTW 2200 A
art no	100.541.022	100.441.003	100.441.013	100.542.003
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
max. operating force kg	50	36.5	52	40
output 1 st stage cm ³ /stroke	3	5	11	13
output 2 nd stage cm ³ /stroke	-	1	2	2.5
max. pressure 1 st stage bars	720	30	30	30
effective oil content cm ³	550	300	700	2200
weight incl. oil kg	6	4	8	13.3
maintenance set art no	150.113.251	100.443.066	100.443.494	100.543.100

Hand pumps - single-acting (dimensions)



model	HTS 550 A	HTW 300 B	HTW 700 A	HTW 2200 A
A	540	500	600	730
B	135	115	170	215
C	450	435	600	675
D	42	25	53	52
E	475	375	480	625
F	135	90	135	145
G	100	70	115	105



Specifications / important properties ↓

- 1-stage pumps:
 - suitable for small volumes
 - low speed
 - low costs
- 2-stage pumps:
 - suitable for large volumes
 - with low pressure up to 9 x faster than 1-stage pumps
 - automatic change over from first to second stage
- compact and lightweight
- little maintenance
- large oil output per stroke
- provided with dipstick
- connection: 3/8" NPT, female
- base plate standard with HTW 2200 A

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HTS 550 A



HTW 300 B



HTW 700 A



HTW 2200 A

Hand / foot pumps - single- or double-acting

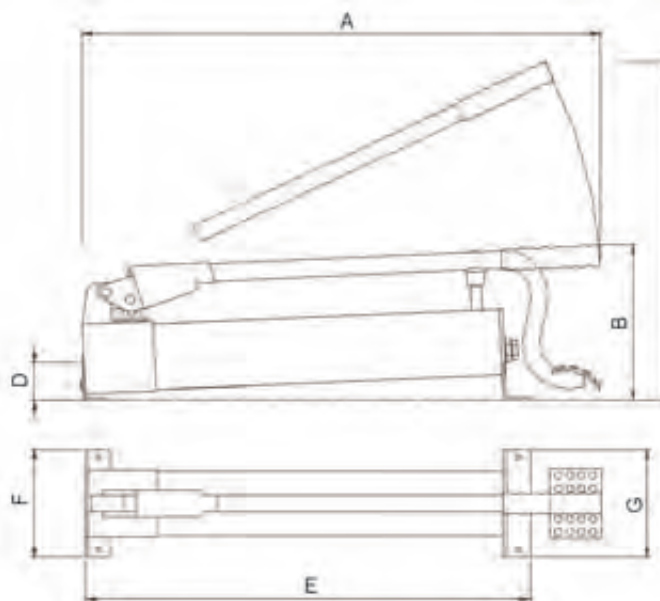


model	H/FTW 1800 B	H/FTW 2800 B	H/FTW 5800 B	H/FTW 8800 B
art no	100.141.005/008	100.141.002/009	100.141.004/010	100.141.006/007
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
max. operating force kg	36	36	36	36
output 1 st stage cm ³ /stroke	28	28	28	28
output 2 nd stage cm ³ /stroke	2.3	2.3	2.3	2.3
max. pressure 1 st stage bars	45	45	45	45
effective oil content cm ³	1800	2800	5800	8800
weight incl. oil kg	9.3	11.5	15	22.5
maintenance set art no	150.113.254	150.113.254	150.113.254	150.113.254

Hand / foot pumps - single- or double-acting (dimensions)



model	H/FTW 1800 B	H/FTW 2800 B	H/FTW 5800 B	H/FTW 8800 B
A mm	690	690	690	690
B mm	215	215	215	215
C mm	640	640	640	640
D mm	57	57	57	57
E mm	590	590	590	590
F mm	140	140	180	235
G mm	140	140 <td 180	235	



Specifications / important properties ↓

- standard suitable for single-acting tools and cylinders
- when double-acting valve mounted, suitable for double-acting tools and cylinders
- compact and lightweight
- low maintenance
- suitable for large volumes
- low force required while pumping
 - first stage becomes entirely pressureless after switching to second stage
- automatic change over from first to second stage
- large oil output per stroke
- provided with dipstick
- connection: 3/8" NPT, female

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Accessories ↓

- double-acting valve M 321, art no 100.181.321
- base plate for single-acting pumps, art no 150.143.001
- base plate for double-acting pumps, art no 100.143.150



HTW 1800 B



FTW 1800 B



HTW 2800 B



HTW 8800 B

Compact electric pump - single-acting - 2-stage ↓

model	EHW 1650 RC
art no	100.551.001
working pressure bars/Mpa	720 / 72
output 1 st stage l/min	2
output 2 nd stage l/min	0.25
effective oil content l	1.65
motor	0.35 kW - 230 V - 50/60 Hz
max. power motor watt	350
charge remote control V	15
weight kg	11.6
dimensions (lxwxh) mm	416x190x222
maintenance set art no	100.553.116
option 1	Needle valve for controlled oil return. Consisting of needle valve (art no 100.181.130), connecting block (art no 100.183.340), nipple (art no 100.183.341) and plug (art no 100.581.105).
option 2	Pressure gauge for reading the pressure. Consisting of pressure gauge (art no 100.581.036), pressure gauge protection cover (art no 350.581.152), connecting block (art no 100.183.340), nipple (art no 100.183.341) and reducing bush (art no 100.581.128).
option 3	Needle valve and pressure gauge. Consisting of needle valve (art no 100.181.130), 2x connecting block (art no 100.183.340), nipple (art no 100.183.341), nipple (art no 100.581.101), pressure gauge (art no 100.581.036), pressure gauge protection cover (art no 350.581.152), reducing bush (art no 100.581.128) and plug (art no 100.581.105).

Specifications / important properties ↓

- usable at any place because of compact construction
- lightweight
- for both horizontal and vertical use
- perfectly suitable for cable cutters and nut crackers
- suitable for single-acting tools and cylinders
- connection: 3/8" NPT, female
- standard with waterproof remote control with 2.3 m long electric cord

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EHW 1650 RC

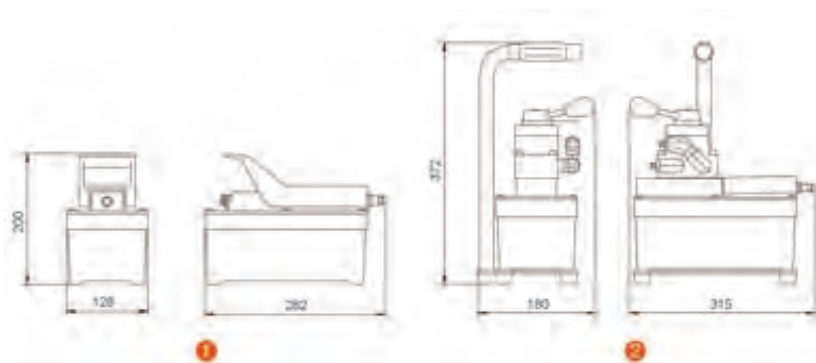


EHW 1650 RC + option 3

Compact air pumps - single- or double-acting


model	AHS 1400 FS	AHS 1400 D
art no	100.602.001	100.602.002
working pressure bars/Mpa	720 / 72	720 / 72
suitable for	single-acting tools	double-acting tools
air pressure bars	0 - 8.5	0 - 8.5
output unloaded l/min	0.96	0.96
output loaded l/min	0.41	0.41
air consumption unloaded l/min	700	700
air consumption loaded l/min	580	580
effective oil content l	1.4	1.4
weight kg	6.5	9.6
maintenance set art no	100.603.001	100.603.001

(1) AHS 1400 FS (2) AHS 1400 D


Specifications / important properties


- usable at any place because of compact construction
- lightweight
- safe
 - when the air pressure is lost, the oil pressure is maintained (AHS 1400 FS)
- spark-free
 - suitable for explosive rooms
- low-noise because of built-in silencer
- energy-saving
 - stops as soon as the maximum pressure has been reached
- AHS 1400 D unsuitable for lifting
- connection: 3/8" NPT, female

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AHS 1400 FS



AHS 1400 D

Vari pumps - 230 V - 1-stage - 50 Hz - 1 ph ↓

model	06 S 6 SD	06 S 12 D	09 S 6 SD	09 S 12 D	09 S 25 D	09 S 50 D
art no	100.152.012	100.152.013	100.152.015	100.152.016	100.152.017	100.152.018
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 720 bars l/min	0.6	0.6	0.9	0.9	0.9	0.9
effective oil content l	6	12	6	12	25	50
power kW	1.1	1.1	1.1	1.1	1.1	1.1
speed rpm	1450	1450	1450	1450	1450	1450
weight kg	36	44	38	46	65	95
dimensions (lxwxh) mm	400x300x441	400x300x541	400x300x441	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063

model	12 S 6 SD	12 S 12 D	12 S 25 D	12 S 50 D
art no	100.152.020	100.152.021	100.152.022	100.152.023
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
output < 720 bars l/min	1.2	1.2	1.2	1.2
effective oil content l	6	12	25	50
power kW	1.5	1.5	1.5	1.5
speed rpm	2850	2850	2850	2850
weight kg	38	46	65	95
dimensions (lxwxh) mm	400x300x441	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063

Specifications / important properties ↓

- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request ↓

- larger tank
- other voltages / frequencies
- EC model for use in combination with M 324 electric valve. Contact our sales department for additional information.

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Electro motor Vari pump (6 l tank) + M 323 valve



Electro motor Vari pump (25 l tank) + carrying handles set + M 323 valve

Vari pumps - 230 V - 2-stage - 50 Hz - 1 ph ↓

model	06 W 6 SD	06 W 12 D	09 W 6 SD	09 W 12 D	09 W 25 D	09 W 50 D
art no	100.152.025	100.152.026	100.152.028	100.152.029	100.152.030	100.152.031
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	1.6	1.6	2.5	2.5	2.5	2.5
output > 200 bars l/min	0.6	0.6	0.9	0.9	0.9	0.9
effective oil content l	6	12	6	12	25	50
power kW	1.1	1.1	1.1	1.1	1.1	1.1
speed rpm	1450	1450	1450	1450	1450	1450
weight kg	38	46	40	48	67	96
dimensions (lxwxh) mm	400x300x441	400x300x541	400x300x441	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052

model	12 W 6 SD	12 W 12 D	12 W 25 D	12 W 50 D
art no	100.152.033	100.152.034	100.152.035	100.152.036
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	3.2	3.2	3.2	3.2
output > 200 bars l/min	1.2	1.2	1.2	1.2
effective oil content l	6	12	25	50
power kW	1.5	1.5	1.5	1.5
speed rpm	2850	2850	2850	2850
weight kg	40	48	67	96
dimensions (lxwxh) mm	400x300x441	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052

Specifications / important properties ↓

- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request ↓

- larger tank
- other voltages / frequencies
- EC model for use in combination with M 324 electric valve. Contact our sales department for additional information.

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Electro motor Vari pump (25 l tank) + M 323 valve



Electro motor Vari pump (50 l tank) + M 323 valve

Vari pumps - 400 V - 1-stage - 50 Hz - 3 ph



model	06 S 6 SE	06 S 12 E	09 S 6 SE	09 S 12 E	09 S 25 E	09 S 50 E	12 S 6 SE	12 S 12 E
art no	100.152.038	100.152.039	100.152.041	100.152.042	100.152.043	100.152.044	100.152.046	100.152.047
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
outlut < 720 bars l/min	0.6	0.6	0.9	0.9	0.9	0.9	1.2	1.2
effective oil content l	6	12	6	12	25	50	6	12
power kW	1.1	1.1	1.1	1.1	1.1	1.1	1.5	1.5
speed rpm	1450	1450	1450	1450	1450	1450	2850	2850
weight kg	33	41	36	44	63	93	35	43
dimensions (lxwxh) mm	400x300x441	400x300x541	400x300x441	400x300x541	500x380x541	500x380x676	400x300x441	400x300x541
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063

model	12 S 25 E	12 S 50 E	18 S 12 E	18 S 25 E	18 S 50 E
art no	100.152.048	100.152.049	100.152.050	100.152.051	100.152.052
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
outlut < 720 bars l/min	1.2	1.2	1.8	1.8	1.8
effective oil content l	25	50	12	25	50
power kW	1.5	1.5	2.2	2,2	2.2
speed rpm	2850	2850	2850	2850	2850
weight kg	62	92	45	64	94
dimensions (lxwxh) mm	500x380x541	500x380x676	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063

Specifications / important properties



- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request



- larger tank
- other voltages / frequencies
- EC model for use in combination with M 324 electric valve. Contact our sales department for additional information.

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Electro motor Vari pump (6 l tank) + M 323 valve



Electro motor Vari pump (25 l tank) + carrying handle set + M 323 valve

Vari pumps - 400 V - 2-stage - 50 Hz - 3 ph


model	06 W 6 SE	06 W 12 E	09 W 6 SE	09 W 12 E	09 W 25 E	09 W 50 E	12 W 6 SE	12 W 12 E
art no	100.152.054	100.152.055	100.152.057	100.152.058	100.152.059	100.152.060	100.152.062	100.152.063
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	1.6	1.6	2.5	2.5	2.5	2.5	3.2	3.2
output > 200 bars l/min	0.6	0.6	0.9	0.9	0.9	0.9	1.2	1.2
effective oil content l	6	12	6	12	25	50	6	12
power kW	1.1	1.1	1.1	1.1	1.1	1.1	1.5	1.5
speed rpm	1450	1450	1450	1450	1450	1450	2850	2850
weight kg	35	43	38	46	65	95	37	45
dimensions (lxwxh) mm	400x300x441	400x300x541	400x300x441	400x300x541	500x380x541	500x380x676	400x300x441	400x300x541
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052

model	12 W 25 E	12 W 50 E	18 W 12 E	18 W 25 E	18 W 50 E
art no	100.152.064	100.152.065	100.152.066	100.152.067	100.152.068
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	3.2	3.2	5	5	5
output > 200 bars l/min	1.2	1.2	1.8	1.8	1.8
effective oil content l	25	50	12	25	50
power kW	1.5	1.5	2.2	2.2	2.2
speed rpm	2850	2850	2850	2850	2850
weight kg	64	94	47	66	96
dimensions (lxwxh) mm	500x380x541	500x380x676	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052

Specifications / important properties


- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request


- larger tank
- other voltages / frequencies
- EC model for use in combination with M 324 electric valve. Contact our sales department for additional information.

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Electro motor Vari pump (25 l tank) + M 323 valve



Electro motor Vari pump (50 l tank) + M 323 valve

Vari pumps - twin - 400 V - 1-stage - 50 Hz - 3 ph ↓

model	06 T 6 SE	06 T 12 E	09 T 12 E	09 T 25 E	09 T 50 E
art no	100.152.070	100.152.071	100.152.072	100.152.073	100.152.074
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 720 bars l/min	2 x 0.6	2 x 0.6	2 x 0.9	2 x 0.9	2 x 0.9
effective oil content l	6	12	12	25	50
power kW	1.5	1.5	2.2	2.2	2.2
speed rpm	1450	1450	1450	1450	1450
weight kg	40	47	52	71	100
dimensions (lxwxh) mm	400x300x441	400x300x541	400x300x541	500x380x541	500x380x676
maintenance set art no	100.153.033	100.153.033	100.153.033	100.153.033	100.153.033

Specifications / important properties ↓

- pump with 2 separate outlets
- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request ↓

- larger tank
- other voltages / frequencies
- EC model for use in combination with M 324 electric valve. Contact our sales department for additional information.

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Electro motor Vari pump - twin (6 l tank) + 2x M 323 valve

Vari pumps - air - 1-stage - 8 bars


model	12 S 6 SA	12 S 12 A	12 S 25 A	12 S 50 A	18 S 12 A	18 S 25 A	18 S 50 A
art no	100.162.018	100.162.019	100.162.020	100.162.022	100.162.023	100.162.024	100.162.025
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 720 bars l/min	1.3	1.3	1.3	1.3	2	2	2
oil content effective l	6	12	25	50	12	25	50
speed kW	3	3	3	3	3	3	3
air consumption m ³ /min	3.7	3.7	3.7	3.7	3.7	3.7	3.7
weight kg	33	41	60	89	42	62	91
dimensions (lxwxh) mm	400x300x348	400x300x448	500x380x448	500x380x583	400x300x448	500x380x448	500x380x583
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063

Vari pumps - air - 2-stage - 8 bars


model	12 W 6 SA	12 W 12 A	12 W 25 A	12 W 50 A	18 W 12 A	18 W 25 A	18 W 50 A
art no	100.162.027	100.162.028	100.162.029	100.162.030	100.162.032	100.162.033	100.162.034
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	3.6	3.6	3.6	3.6	5.7	5.7	5.7
output > 200 bars l/min	1.3	1.3	1.3	1.3	2	2	2
effective oil content l	6	12	25	50	12	25	50
power kW	3	3	3	3	3	3	3
air consumption m ³ /min	3.7	3.7	3.7	3.7	3.7	3.7	3.7
weight kg	35	43	62	91	44	63	93
dimensions (lxwxh) mm	400x300x348	400x300x448	500x380x448	500x380x583	400x300x448	500x380x448	500x380x583
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052

Specifications / important properties


- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request


- larger tank

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Air motor Vari pump (6 l tank), protection frame, cover plate + M 311 valve

Vari pumps - petrol - 1-stage - 4 stroke ↓

model	12 S 6 SP	12 S 12 P	12 S 25 P	12 S 50 P	18 S 12 P	18 S 25 P	18 S 50 P
art no	100.162.002	100.162.003	100.162.004	100.162.005	100.162.006	100.162.007	100.162.008
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 720 bars l/min	1.3	1.3	1.3	1.3	2	2	2
effective oil content l	6	12	25	50	12	25	50
speed kW	3.1	3.1	3.1	3.1	3.1	3.1	3.1
weight kg	35	43	62	91	44	64	93
dimensions (lxwxh) mm	400x300x462	400x300x562	500x380x562	500x380x697	400x300x562	500x380x562	500x380x697
maintenance set art no	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063	100.153.063

Vari pumps - petrol - 2-stage - 4 stroke ↓

model	12 W 6 SP	12 W 12 P	12 W 25 P	12 W 50 P	18 W 12 P	18 W 25 P	18 W 50 P
art no	100.162.010	100.162.011	100.162.012	100.162.013	100.162.014	100.162.015	100.162.016
working pressure bars/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
output < 200 bars l/min	3.6	3.6	3.6	3.6	5.7	5.7	5.7
output > 200 bars l/min	1.3	1.3	1.3	1.3	2	2	2
oli content effective l	6	12	25	50	12	25	50
power kW	3.1	3.1	3.1	3.1	3.1	3.1	3.1
weight kg	37	45	64	93	46	65	95
dimensions (lxwxh) mm	400x300x462	400x300x562	500x380x562	500x380x697	400x300x562	500x380x562	500x380x697
maintenance set art no	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052	100.153.052

Specifications / important properties ↓

- high operating speed
- safe
 - in case of a power failure, the oil pressure is maintained
 - protected against pressure drop by pressure-controlled non-return valve
- excluding single-acting or double-acting control valve
- various accessories available

Available on request ↓

- larger tank

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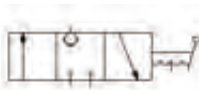
Petrol motor Vari pump (6 l tank) + M 322 valve



Petrol motor Vari pump (12 l tank) + M 322 valve


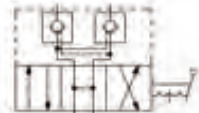



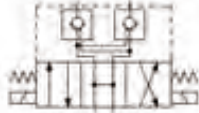

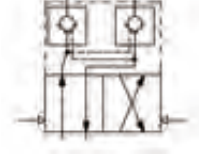
Control valves - single-acting



image	hydraulic diagram	description	model	art no
		<p>control valve</p> <ul style="list-style-type: none"> • suitable for single acting tools • handle stops in each position • 3-position 3-way valve • connection 3/8" NPT female <p>maintenance set, art no 100.183.094</p>	M 311	100.181.311










Control valves - double-acting



image	hydraulic diagram	description	model	art no
		<p>control valve</p> <ul style="list-style-type: none"> • suitable for double acting tools • handle stops in each position • with pressure-controlled non-return valves for securing the load • 3-position 4-way valve • connection 3/8" NPT female <p>maintenance set, art no 100.183.095</p>	M 322	100.181.322
		<p>control valve</p> <ul style="list-style-type: none"> • suitable for double acting tools • handle with dead man's function, automatically goes to the 0-position • with pressure-controlled non-return valves for securing the load • 3-position 4-way valve • connection 3/8" NPT female <p>maintenance set, art no 100.183.096</p>	M 323	100.181.323
		<p>control valve</p> <ul style="list-style-type: none"> • only suitable in combination with EC-version Vari pumps. Contact our sales department for additional information. • suitable for double-acting tools • valve with electromagnetic control (24 VDC) • with pressure-controlled non-return valves for securing the load • 3-position 4-way valve • connection 3/8" NPT female • remote control <p>remote control, art no 100.151.060</p> <ul style="list-style-type: none"> • 4 buttons: on, off, lower and lift 	M 324	100.181.324
		<p>control valve</p> <ul style="list-style-type: none"> • suitable for double-acting tools • valve with air control • only suitable in combination with air-powered Vari pumps • with pressure-controlled non-return valves for securing the load • 2-position 4-way valve • connection 3/8" NPT female • remote controlled <p>remote control, art no 100.161.004</p> <ul style="list-style-type: none"> • 2 buttons: lift and lower 	M 325	100.181.325

Accessories



image	description	model	art no
	connecting block <ul style="list-style-type: none"> for mounting couplers or hoses to be mounted on the pump when using connecting plate M 302 instead of control valve provided with pressure relief valve connection: 1/4" BSP female (2x), 3/8" NPT female (1x) mounting of pressure gauge A 500 possible using nipple 100.581.104 mounting of pressure gauge A 150 possible using nipple 100.581.128 	M 301 B	100.182.088
	connecting plate <ul style="list-style-type: none"> for remote or separately from the pump placing of the valves M 311, M 322, M 323, M 324 or M 325 (if necessary combined with pressure control valve M 303) connection: 1/4" BSP female 	M 302	100.181.302
	pressure control valve (shown in combination with M 322) <ul style="list-style-type: none"> for mounting unto the pump or unto the connecting plate M 302 (below the connecting block M 301 B or below the valves M 311, M 322, M 323, M 324 or M 325) pressure adjustable between 20 and 700 bars 	M 303	100.181.303
	protection frame for 6, 12, 25 and 50 litre pumps	-	100.151.056
	cover plate for protection frame	-	100.151.040
	carrying handle set for 6 and 12 litre pumps	-	100.151.053
	carrying handle set for 25 litre pumps	-	100.151.054
	carriage frame for 25 and 50 litre pumps	-	100.151.039
	set of wheels for 6, 12, 25 and 50 litre pumps	-	100.151.038
	silencer for air Vari pumps	HSR 0.5 U	100.182.015
	air treatment set for air Vari pump (separately delivered)	A 181 U	100.582.181
	air treatment set for air Vari pump (to be mounted)	-	100.161.003

System components



Single hoses - 720 bars



model	H 1 SO	H 2 SO	H 3 SO	H 4 SO	H 5 SO	H 6 SO	H 8 SO	H 10 SO	H 15 SO	H 20 SO
art no	100.571.101	100.571.102	100.571.103	100.571.104	100.571.105	100.571.106	100.571.108	100.571.110	100.571.115	100.571.120
length	m 1	2	3	4	5	6	8	10	15	20

Standard hoses - 720 bars



model	H 1 SOU	H 2 SOU	H 3 SOU	H 4 SOU	H 5 SOU	H 6 SOU	H 8 SOU	H 10 SOU	H 15 SOU	H 20 SOU
art no	100.572.101	100.572.102	100.572.103	100.572.104	100.572.105	100.572.106	100.572.108	100.572.110	100.572.115	100.572.120
length	m 1	2	3	4	5	6	8	10	15	20

Extension hoses - 720 bars



model	VL 1 SOU	VL 2 SOU	VL 5 SOU	VL 10 SOU	VL 15 SOU	VL 20 SOU
art no	100.572.301	100.572.302	100.572.305	100.572.310	100.572.315	100.572.320
length	m 1	2	5	10	15	20

Specifications / important properties



- single hoses with:
 - 3/8" NPT male screw thread on both sides
 - anti-kink springs on both sides
 - 4:1 safety ratio
 - colour: orange
- standard hoses provided with:
 - idem single hoses
 - coupler male, A 119 on 1 side
- extension hoses with:
 - idem single hoses
 - coupler male, A 119 on 1 side
 - coupler female, A 118 on the other side

Available on request



- different lengths
- other colour

(1) single hose (2) standard hose (3) extension hose



1

2

3

Standard industry couplers - 720 bars


image	description	model	art no
	High Flow coupler, female, including steel dust cap <ul style="list-style-type: none"> • connection: 3/8" NPT, male • fits: A 119 	A 118	100.181.118
	High Flow coupler, male, including steel dust cap <ul style="list-style-type: none"> • connection: 3/8" NPT, female • fits: A 118, A 134N and A 418 	A 119	100.181.119
	High Flow coupler, female, like A 118, with built-in pressure relief valve <ul style="list-style-type: none"> • adjusted to ca. 750 bars • fits: A 119 	A 418	100.181.418
	High Flow coupler, female, like A 118, with built-in non-return valve <ul style="list-style-type: none"> • suitable for hose rupture security • not to be used with double-acting systems • fits: A 119 	A 134 N	100.181.434
	loose steel dust cap <ul style="list-style-type: none"> • with fixing thread • fits: A 118 	A 118 SK	100.181.828
	loose steel dust cap <ul style="list-style-type: none"> • with fixing thread • fits: A 119 	A 119 SK	100.181.829
	relief valve <ul style="list-style-type: none"> • for reducing any remnant pressure • suitable for: A 118 	-	100.181.840
	relief valve <ul style="list-style-type: none"> • for reducing any remnant pressure • suitable for A 119 	-	100.181.841

Pressure gauges - 720 bars



image	description	model	art no
	universal pressure gauge <ul style="list-style-type: none"> • 0 - 720 bars • housing Ø 100 mm • connection: ½" NPT male 	A 500	100.582.500
	rubber protection cover <ul style="list-style-type: none"> • suitable for Ø 100 mm pressure gauges 	-	350.581.160
	pressure gauge plug-in set <ul style="list-style-type: none"> • connection: couplers A 118 - A 119 	A 111 U	100.582.111
	pressure gauge <ul style="list-style-type: none"> • 0 - 720 bars • housing Ø 60 mm • connection: ¼" NPT male 	A 150	100.581.036
	rubber protection cover <ul style="list-style-type: none"> • suitable for Ø 60 mm pressure gauges 	-	350.581.152
	pressure gauge digital <ul style="list-style-type: none"> • 0 - 720 bars • peak pressure memory • connection: 1/4" BSP male 	-	150.581.091





Pressure gauges with scale division in ton - 720 bars



pressure gauge	pressure gauge	1 st scale from - to	1 st scale division per mark	2 nd scale from - to	2 nd scale division per mark	3 rd scale from - to	3 rd scale division per mark	4 th scale from - to	4 th scale division per mark
model	art no	t	kg	t	kg	t	kg	t	kg
A 501	100.582.501	0 - 5	100	0 - 11	200	0 - 21	500	-	-
A 502	100.582.502	0 - 25	500	0 - 33	500	0 - 51	1000	-	-
A 503	100.582.503	0 - 52	1000	0 - 77	1000	-	-	-	-
A 504	100.582.504	0 - 105	2000	0 - 160	2000	-	-	-	-
A 505	100.582.505	0 - 210	5000	0 - 305	5000	-	-	-	-
A 506	100.582.506	0 - 509	10000	0 - 382	10000	-	-	-	-
A 507	100.582.507	0 - 6	100	0 - 13	200	0 - 23	500	-	-
A 508	100.582.508	0 - 30	500	0 - 47	1000	0 - 63	1000	0 - 113	2000
A 509	100.582.509	0 - 63	1000	0 - 104	2000	-	-	-	-
A 510	100.582.510	0 - 12	200	0 - 31	500	0 - 63	2000	0 - 98	2000

pressure gauge adaptors - 720 bars



image	description	model	art no
	<p>pressure gauge connecting block</p> <ul style="list-style-type: none"> • suitable for single-acting hand pumps • provided with: 1 x 3/8" NPT female, 1 x 3/8" NPT male and 1/2" NPT female for pressure gauge • pressure gauge can be placed in an angle of 45° using elbow art no 100.581.240 	A 108	100.181.108
	<p>pressure gauge connecting block for H/FTW *800 pumps</p> <ul style="list-style-type: none"> • suitable for double-acting control valve M 321 • supplies pressure to port A or B, dependent on mounting • provided with: 1 x 1/2" NPT female 	M 306	100.182.306
	<p>pressure gauge connecting block for H/FTW *800 pumps</p> <ul style="list-style-type: none"> • suitable for double-acting control valve M 321 • supplies pressure to port A or B, dependent on which is highest • provided with: 1 x 1/2" NPT female 	M 307	100.182.307
	<p>pressure gauge for Vari pumps</p> <ul style="list-style-type: none"> • suitable for double-acting control valves M 322, M 323, M 324 and M 325 • supplies pressure to port A or B, dependent on which is highest • provided with: 1 x 1/2" NPT female 	M 308	100.182.308

Specifications / important properties



- pressure gauges:
 - pointer damped with glycerine
 - stainless steel
 - protection cover available for all models (except digital pressure gauge)



A 108 + A 500 + hose mounted on pump



Pump + M 321 + M 307 + A 500 (seperate: M 306 + A 500)

Manifolds - single-acting - 720 bars ↓

model	SM 2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10
art no	100.182.312	100.182.313	100.182.314	100.182.315	100.182.316	100.182.317	100.182.318	100.182.319	100.182.320
outlet ports	2	3	4	5	6	7	8	9	10
A mm	235	360	485	610	730	860	985	1110	1235

Manifolds - double-acting - 720 bars ↓

model	DM 2	DM 3	DM 4	DM 5	DM 6	DM 7	DM 8	DM 9	DM 10
art no	100.182.332	100.182.333	100.182.334	100.182.335	100.182.336	100.182.337	100.182.338	100.182.339	100.182.340
outlet ports	2	3	4	5	6	7	8	9	10
A mm	235	360	485	610	730	860	985	1110	1235

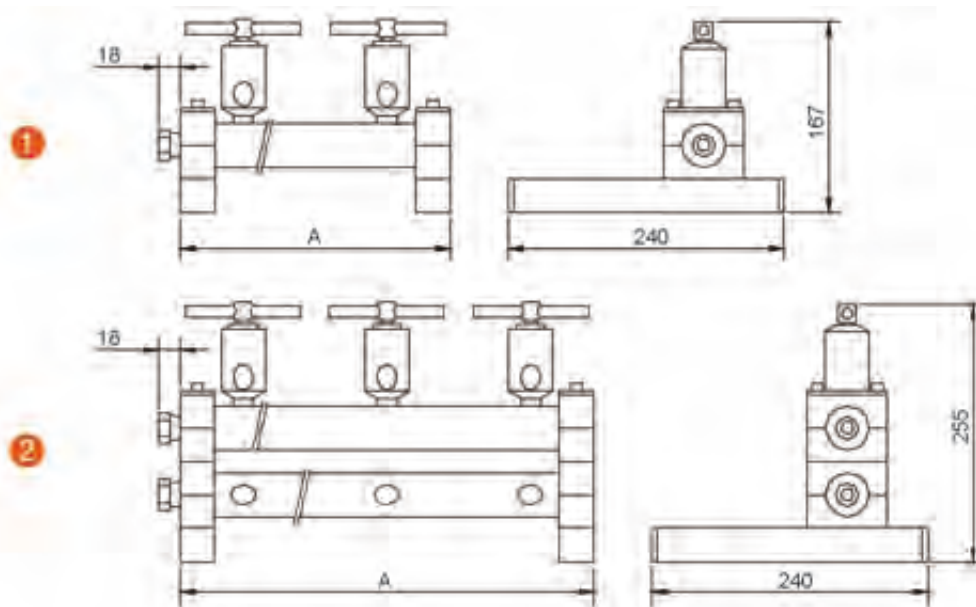
Valve blocks - single-acting - 720 bars ↓

model	SMV 2	SMV 3	SMV 4	SMV 5	SMV 6	SMV 7	SMV 8	SMV 9	SMV 10
art no	100.182.322	100.182.323	100.182.324	100.182.325	100.182.326	100.182.327	100.182.328	100.182.329	100.182.330
outlet ports	2	3	4	5	6	7	8	9	10
A mm	235	360	485	610	730	860	985	1110	1235

Valve blocks - double-acting - 720 bars ↓

model	DMV 2	DMV 3	DMV 4	DMV 5	DMV 6	DMV 7	DMV 8	DMV 9	DMV 10
art no	100.182.342	100.182.343	100.182.344	100.182.345	100.182.346	100.182.347	100.182.348	100.182.349	100.182.350
outlet ports	2	3	4	5	6	7	8	9	10
A mm	235	360	485	610	730	860	985	1110	1235

(1) SMV (x) single-acting (2) DMV (x) double-acting



Specifications / important properties ↓

- for accurate control of the oil flow, also under maximum pressure (SMV and DMV)
- compact, stable construction
- for single-acting or double-acting systems
- connections: 3/8" NPT, female

Available on request ↓

- can be mounted on the protection frame of the Vari pumps

Hydraulic hoses	pag. 110
Couplers	pag. 111
Pressure gauges	pag. 112



SMV 4 and couplers



DMV 4, couplers, pressure gauges and pressure gauge protection covers



Valves - 720 bars


image	hydraulic scheme	description	model	art no
		needle valve <ul style="list-style-type: none"> • for more accurate control of the oil flow, also under maximum pressure • connection: 3/8" NPT female (2x) 	A 109 N	100.581.609
		ball valve <ul style="list-style-type: none"> • very suitable for quick shut-off valve (open-close) • can be operated under maximum pressure • connection: 3/8" NPT female (2x) 	A 195	100.581.200
		needle valve, as mounted on valve blocks <ul style="list-style-type: none"> • for accurate control of the oil flow, also under maximum pressure • connection: 3/8" NPT male and 3/8" NPT female 	A 130	100.181.130
		breaking safety (load security) valve <ul style="list-style-type: none"> • protects against sudden pressure drop in the supply pipe, for example in case of hose rupture • to be mounted between pump and cylinder as close to the cylinder as possible • provided with pressure relief valve, set at 830 bars • while pumping: valve closed, safety valve active • for relief: open valve, safety valve not active • connection: 3/8" NPT female and 3/8" NPT male 	A 110	100.181.110
		High Flow coupler, female, like A 118, with built-in non-return valve <ul style="list-style-type: none"> • suitable for hose rupture security • not to be used with double-acting systems • fits: A 119 	A 134 N	100.181.434
		non-return valve <ul style="list-style-type: none"> • spring-loaded • connection: 3/8" NPT male (2x) 	A 209	100.581.209
		pressure relief valve <ul style="list-style-type: none"> • set to 750 bars • connection: 1x 3/8" NPT female and 1x 3/8" NPT male 	A 135	100.181.135

Accessories hydraulics - 720 bars

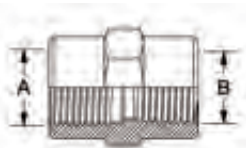
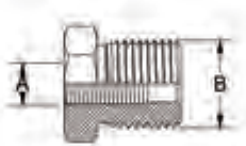







no	description	art no
	45° elbow with 1x 1/2" NPT (T) female and 1x 1/2" NPT (T) male	100.581.240
1	adjustable pin key, complete with 4 pairs of exchangeable pins	100.581.132
2	cross piece with 4x 3/8" NPT (T) female	100.581.139
3	T-piece with 3x 3/8" NPT (T) female	100.581.106
4	swivel connector with 1x 3/8" NPT (T) male and 1x 3/8" NPT (C) female	100.581.115
5	90° elbow with 1x 3/8" NPT (T) female and 1x 3/8" NPT (T) male	100.581.113
6	90° elbow with 2x 3/8" NPT (T) male	100.581.213
7	45° elbow with 1x 3/8" NPT (T) female and 1x 3/8" NPT (T) male	100.581.114
8	90° bend with 1x 1/4" BSP (C) female swivel nut and 1x 1/4" BSP (V) male	150.581.219
9	straight tube coupling for 12 mm tube with 3/8" NPT (T) male	100.581.136
10	90° tube coupling for 12 mm tube with 3/8" NPT (T) male	100.581.137
11	plug with 3/8" NPT (T)	100.581.105
12	sealing ring for M12 (V)	190.593.275
	sealing ring for 1/4" BSP (V)	150.581.230
	sealing ring for M14 (V)	190.593.075
	sealing ring for M18 (V)	100.581.158
13	manifold, model A 125, with 5 interconnected ports with 3/8" NPT female	100.181.125
T = Teflon seal V = flat seal C = cone seal		








Assembly materials - 720 bars



image	type	thread A	thread B	art no
	connection socket	1/4" NPT (T) 1/4" NPT (T) 1/4" BSP (V) 3/8" NPT (T) 3/8" NPT (T)	1/4" NPT (T) 1/4" BSP (V) M18x1.5 (V) 3/8" NPT (T) M18x1.5 (V)	100.581.238 150.581.228 100.181.227 100.581.102 100.181.228
	reducing bushing	1/4" NPT (T) 3/8" NPT (T) 3/8" NPT (T) 1/8" BSP (V)	3/8" NPT (T) 1/2" NPT (T) 3/4" NPT (T) 1/2" BSP (V)	100.581.128 100.581.103 100.581.133 150.581.085
	nipple	1/8" NPT (V) 1/4" NPT (T) 1/4" NPT (T) 1/4" BSP (V) 1/4" BSP (V) 1/4" BSP (V) 1/4" BSP (V/C) 1/4" BSP (V) 3/8" NPT (T) 3/8" NPT (T) 3/8" NPT (T) 1/2" BSP (V) 1/4" BSP (V) 1/4" NPT (T) 3/8" NPT (T) 1/2" BSP (V) 1/4" NPT (T)	1/4" BSP (V) 1/4" BSP (V) M14x1,5 (V) M12x1,75 (V) M14x1,5 (V/C) M14x2 (V) 1/4" BSP (V/C) 3/8" NPT (T) 3/8" NPT (T) M14x2 (V) 1/2" NPT (T) M10x1 (V) 3/8" NPT (T) 3/8" BSP 3/8" NPT (V) 1/4" NPT(T)	110.013.004 150.581.227 100.581.226 110.013.044 100.581.211 100.181.156 150.581.216 150.581.218 100.581.101 100.181.151 150.581.088 110.013.005 150.581.244 100.581.233 150.581.087 100.581.239
	connector	1/4" BSP (V) 1/4" BSP (V) 1/4" BSP (V) 3/8" NPT (T) 3/8" NPT (T) 3/8" NPT (T) 1/4" NPT (T) M14x1,5 (V) M14x1.5 (V) M18x1.5 (V) M18x1.5 (V) 3/8" NPT (T) 1/4" BSP (V)	1/4" NPT (T) 3/8" BSP (C) M14 x 2 (V) 1/4" BSP (V) 1/4" NPT(T) M14 x 2 (V) 3/8" NPT (T) 3/8" NPT (T) 1/4" BSP (V) 3/8" NPT (T) 1/4" BSP (V) 3/8" NPT (T) 1/4" BSP (V) M10x1 (V) 3/8" NPT (T)	100.181.223 100.581.235 100.181.159 150.581.217 100.581.107 100.181.153 100.581.104 100.181.129 150.581.058 100.181.154 100.181.157 100.181.047 150.000.398
		T = teflon seal	V = flat seal	C = cone seal

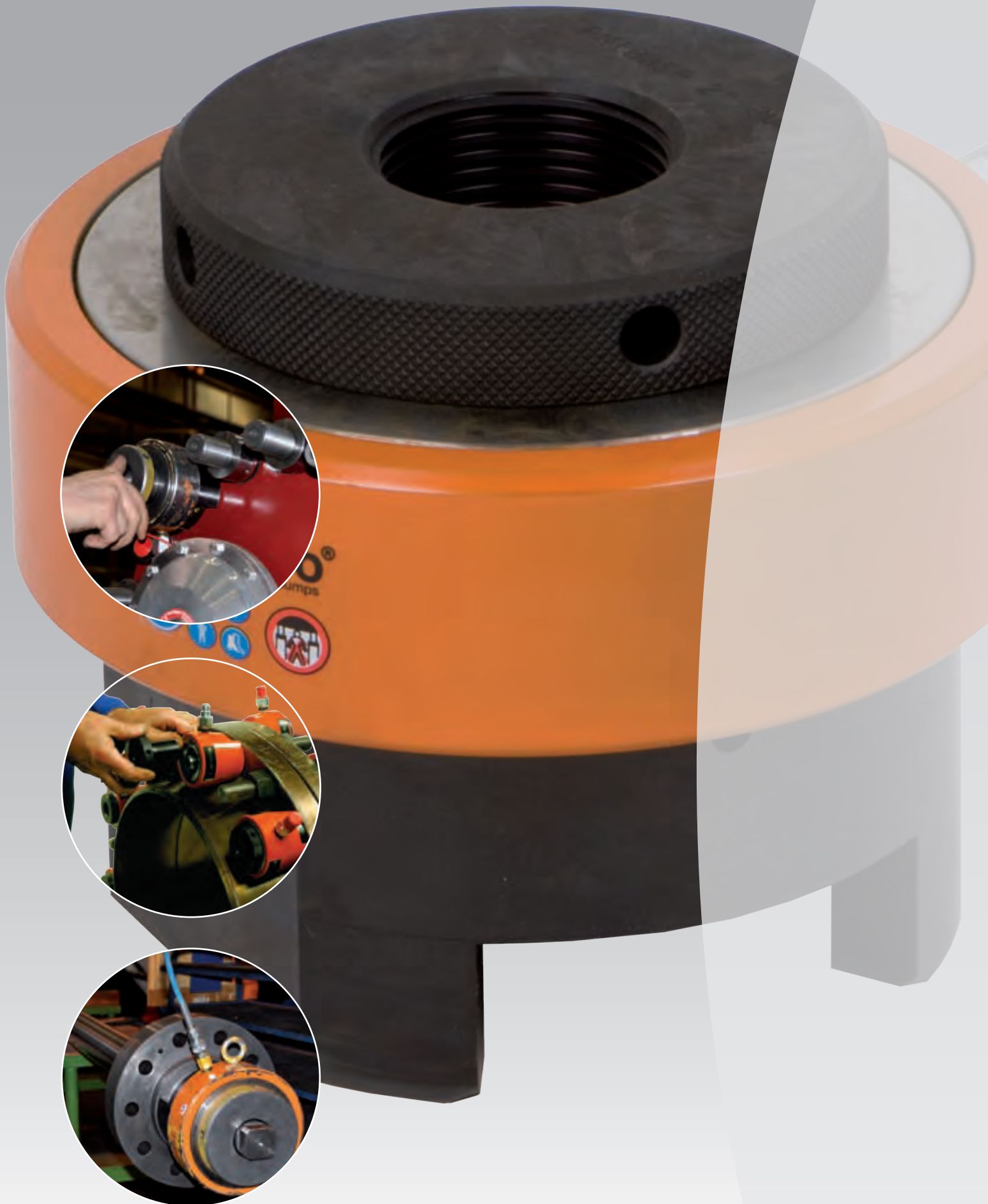
Oils ↓		
image	description	art no
	hydraulic oil ECO Power ISO VG 36, DIN 51524.3 HVLP, bottle 1 litre	180.000.857
	hydraulic oil ECO Power ISO VG 36, DIN 51524.3 HVLP, bottle 5 litres	180.000.815
	hydraulic oil ECO Power ISO VG 36, DIN 51524.3 HVLP, drum 60 litres	130.103.025
	hydraulic oil ECO Power ISO VG 15, DIN 51524.3 HVLP, bottle 1 litres	100.581.051
	hydraulic oil ECO Power ISO VG 15, DIN 51524.3 HVLP, bottle 5 litres	100.581.055
	motor oil 10 W 30, API SJ/CH-4, bottle 0.6 litre	150.581.103



Lubricants ↓		
image	description	art no
	<p>Molykote grease paste</p> <ul style="list-style-type: none"> • for mounting and lapping of metal parts • tube 100 g 	100.581.081
	<p>high-quality Molykote grease</p> <ul style="list-style-type: none"> • for metal/metal combinations at slow to fast movements with medium to heavy load • cartridge 400 g 	100.581.082
	<p>brake cleaner (degreasant) Motip</p> <ul style="list-style-type: none"> • for cleaning and pre-treatment of surfaces • spray can 500 ml 	170.000.252
	<p>Teflon lubricating oil Sir John</p> <ul style="list-style-type: none"> • high-quality lubricant and maintenance oil • spray can 400 ml 	150.581.095
	<p>anti-friction coating Bel Ray</p> <ul style="list-style-type: none"> • dry spray coating for protection under dusty, dirty and abrasive conditions • spray can 400 ml 	150.581.093



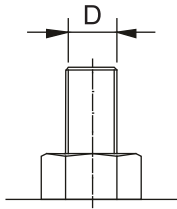
Tensioning hydraulics



6-step plan for selection of stud tension cylinders

Step 1

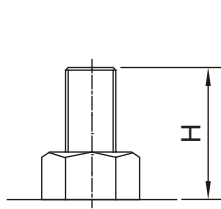
cylinder selection by bolt diameter



stud tension cylinder	bolt diameter - through to	
	mm	inch
HHX 14	M20 - M22	3/4 - 7/8
HHX 22	M24 - M28	1 - 1 1/8
HHX 35	M30 - M34	1 1/4 - 1 3/8
HTX 50	M36 - M40	1 1/2 - 1 5/8
HTX 70	M42 - M46	1 3/4 - 1 7/8
HTX 100	M48 - M56	2 - 2 1/4
HTX 150	M60 - M68	2 1/2 - 2 3/4
HTX 180	M72 - M76	2 3/4 - 3
HTX 220	M76 - M80	3 - 3 1/4
HTX 260	M80 - M85	3 1/4 - 3 1/2

Step 2

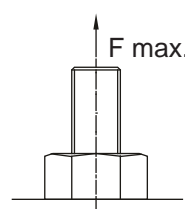
check height of threaded rod



minimum height of threaded rod above flange
mm
28 + D
30 + D
35 + D
55 + D
65 + D
70 + D
90 + D
90 + D
85 + D
105 + D

Step 3

check stud tension force



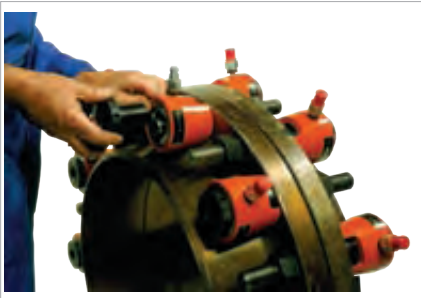
max. pulling force	
ton	kN
14	140
22	221
35	352
50	501
70	702
100	999
150	1500
180	1803
220	2174
260	2601

Step 4

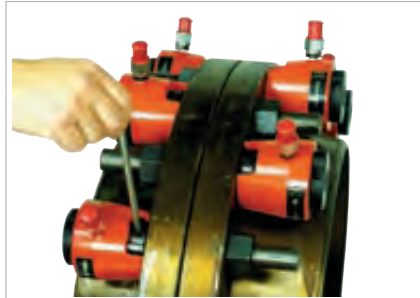
check cylinder dimensions

see table stud tension cylinders, pages 124 and 125

Stud tension cylinder system



Placing cylinder and pulling nut over nut socket and bolt.



The tommy bar makes the nut socket (and therefore the nut) turn very easily.



A complete set-up in which a cylinder has been placed on every bolt (so-called 100% occupation).

6-step plan for selection of stud tension cylinders

Step 5

assembly of a stud tension cylinder

stud tension cylinder		cylinder bridge		pulling nut*		nut socket**		tommy bar	
model	art no	model	art no	model		model		art no	ø mm
HHX 14	110.011.101	-	-	PN 14 + DRAAD		NS 14 + SLW		110.181.090	6
HHX 22	110.011.002	-	-	PN 22 + DRAAD		NS 22 + SLW		110.181.091	8
HHX 35	110.011.012	-	-	PN 35 + DRAAD		NS 35 + SLW		110.181.091	8
HTX 50	110.011.121	BR 50	110.181.151	PN 50 + DRAAD		NS 50 + SLW		110.181.091	8
HTX 70	110.011.131	BR 70	110.181.152	PN 70 + DRAAD		NS 70 + SLW		110.181.092	10
HTX 100	110.011.141	BR 100	110.181.153	PN 100 + DRAAD		NS 100 + SLW		110.181.092	10
HTX 150	110.011.151	BR 150	110.181.154	PN 150 + DRAAD		NS 150 + SLW		110.181.093	12
HTX 180	110.011.161	BR 180	110.181.155	PN 180 + DRAAD		NS 180 + SLW		110.181.093	12
HTX 220	110.011.171	BR 220	110.181.156	PN 220 + DRAAD		NS 220 + SLW		110.181.093	12
HTX 260	110.011.181	BR 260	110.181.157	PN 260 + DRAAD		NS 260 + SLW		110.181.094	16

* THREAD = thread type x pitch (e.g. M36 x 4)

** SLW = key size of nut (e.g. SLW 50)

Step 6

additional items for connection or operation, based on the n-number of cylinders that will be used in a coupled situation

no	description	mention with order
n	connection pieces	connection pieces A 240 U, art no 110.582.240
n-1	hoses between the cylinders	e.g. hose, model X 1.2 MU, art no 110.572.012 (for further specifications see section 'Pumps and hoses', page 127).
2	hoses to pump and pressure gauge	e.g. hose, model X 3 MU, art no 110.572.030 (for further specifications see section 'Pumps and hoses', page 127).
1	pump (hand or foot operated)	e.g. hand pump, model HTWX 1800 BU, art no 110.142.003 (for further specifications see section 'Pumps and hoses', page 127).
1	pressure gauge	pressure gauge A 148 U, art no 110.582.348 (for further specifications see section 'Couplers and accessories', page 128)

Recommendation with respect to the number of cylinders to be used: the best result is achieved with a 100% occupation. This implies that every threaded rod is provided with a stud tension cylinder and is tensioned simultaneously. Lower occupation is possible. However, increasingly make sure that the force is evenly increased in steps along the contour of the object to be tensioned.

Stud tension cylinders - including cylinder bridge ↓

model	HHX 14		HHX 22	HHX 35
art no	110.011.101		110.011.002	110.011.012
working pressure bars/Mpa	1000 / 100		1000 / 100	1000 / 100
capacity kN/t	140 / 14.3		221 / 22.5	352 / 35.9
stroke length mm	8		8	8
oil content cm ³	11.2		17.7	28.2
incl. coupler	A 239 male		A 239 male	A 239 male
maintenance set art no	110.013.081		110.013.001	110.013.011

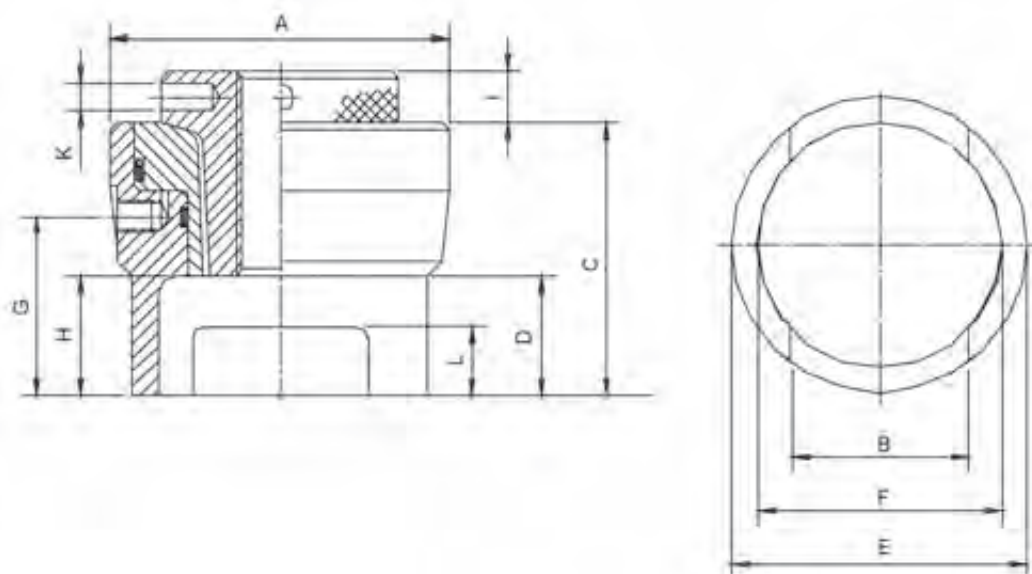
Stud tension cylinders - including cylinder bridge (dimensions) ↓

model	HHX 14		HHX 22	HHX 35
A mm	70		90	100
B mm	36		47	52
C mm	85		80	80
D mm	28		30	35
E mm	56		76	87
F mm	47		60	72
G mm	58		53	52.5
H mm	28		30	35
K mm	6		8	8
L mm	20		20	20

Accessories ↓

model	HHX 14		HHX 22	HHX 35
pulling nut model	PN 14		PN 22	PN 35
nut socket model	NS 14		NS 22	NS 35
tommy bar art no	110.181.090		110.181.091	110.181.091

Stud tension cylinders including cylinder bridge



Stud tension cylinders - excluding cylinder bridge


model	HTX 50	HTX 70	HTX 100	HTX 150	HTX 180	HTX 220	HTX 260
art no	110.011.121	110.011.131	110.011.141	110.011.151	100.011.161	110.011.171	110.011.181
working pressure bars/Mpa	1000 / 100	1000 / 100	1000 / 100	1000 / 100	1000 / 100	1000 / 100	1000 / 100
capacity kN/t	501 / 51.1	702 / 71.6	999 / 101.8	1500 / 152.9	1803 / 183.8	2174 / 221.6	2601 / 265.1
stroke length mm	12	12	12	12	12	12	12
oil content cm ³	60.2	84.2	120	180	216	261	312
incl. coupler	A 239 male	A 239 male	A 239 male	A 239 male	A 239 male	A 239 male	A 239 male
maintenance set art no	110.013.021	110.013.031	110.013.041	110.013.051	110.013.061	110.013.091	110.013.071

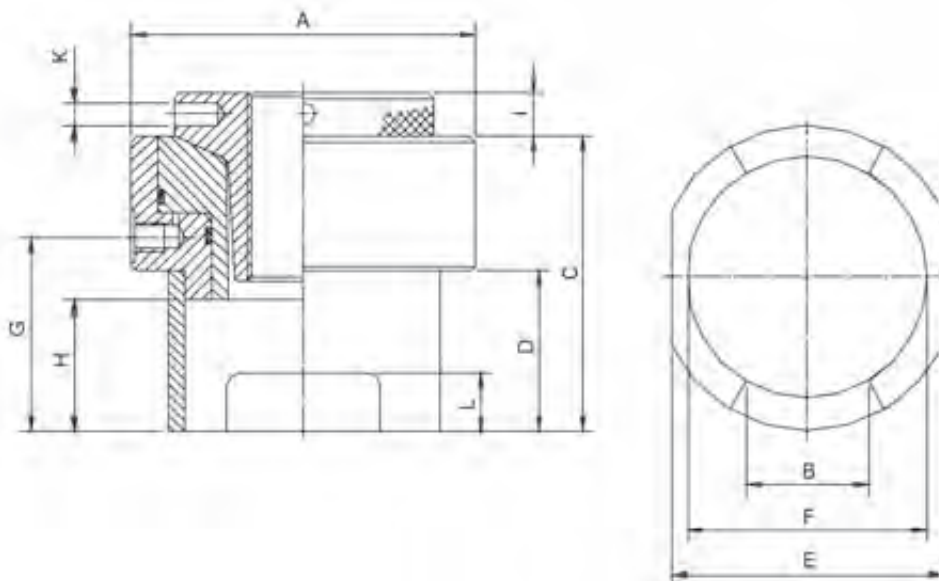
Stud tension cylinders - exclusive cylinder bridge (dimensions)


model	HTX 50	HTX 70	HTX 100	HTX 150	HTX 180	HTX 220	HTX 260
A mm	119	139	166	203	220	248	270
B mm	60	56	65	79	85	92	99
C mm	102	107	120	139	150	165	195
D mm	55	60	70	85	90	95	115
E mm	96	111	125	154	174	186	228
F mm	83	94	112	136	148	156	170
G mm	67	72	82	98	103	110	128
H mm	45	50	60	75	80	85	105
K mm	8	10	10	12	12	12	16
L mm	20	25	30	35	40	40	40

Accessories


model	HTX 50	HTX 70	HTX 100	HTX 150	HTX 180	HTX 220	HTX 260
cylinder bridge art no	110.181.151	110.181.152	110.181.153	110.181.154	110.181.155	110.181.156	110.181.157
pulling nut model	PN 50	PN 70	PN 100	PN 150	PN 180	PN 220	PN 260
nut socket model	NS 50	NS 70	NS 100	NS 150	NS 180	NS 220	NS 260
tommy bar art no	110.181.091	110.181.092	110.181.092	110.181.093	110.181.093	110.181.093	110.181.094

Stud tension cylinders excluding cylinder bridge



Specifications / important properties



- HHX cylinders standard provided with cylinder seat
- HHX cylinders standard not provided with cylinder seat, see accessories
- compact and lightweight
- usable in all positions
- high-quality and refined chrome nickel steel
- automatically locking quick coupler
- pulling nut is manufactured in conformity with customer specifications based on exact thread and bolt dimensions
- nut socket is manufactured in conformity with customer specifications based on exact key size of the nut
- advantages compared with traditional stud tensioning methods
 - the effects of friction are negligible; higher accuracy when tightening the bolt
 - time-saving; several cylinders can be coupled for simultaneously tensioning several bolt connections

Available on request



- stud tension cylinders manufactured in conformity with customer specifications
- extended pulling nut
- heightened or lowered bridges (HTX)

Pumps	pag. 127
Hydraulic hoses	pag. 127
Couplers	pag. 128
Accessories	pag. 128



HHX 22 + pulling nut



HHX 35 + pulling nut



HTX 100 + cylinder seat + pulling nut



HTX 100 + cylinder seat

Pumps - 2-stage - single-acting ↓

type	hand pump	foot pump
model	HTWX 1800 BU	FTWX 1800 BU
art no	110.142.003	110.142.004
working pressure bars/Mpa	1000 / 100	1000 / 100
max. operating force kg	36	36
output 1 st stage cm ³ /stroke	28	28
output 2 nd trap cm ³ /stroke	1.6	1.6
max. pressure 1 st stage bars	45	45
effective oil content cm ³	1800	1800
weight incl. oil kg	9.3	10.2
incl. coupler	A 238 female	A 238 female
maintenance set art no	110.143.007	110.143.007

Single hoses 1000 bars ↓

model	X 1.2 M	X 3 M	X 5 M
art no	110.571.012	110.571.030	110.571.050
length m	1.2	3	5
connection	¼" BSP male (2x)	¼" BSP male (2x)	¼" BSP male (2x)

Extension hoses 1000 bars ↓

model	X 1.2 MU	X 3 MU	X 5 MU
art no	110.572.012	110.572.030	110.572.050
length m	1.2	3	5
connection	A 239 male (2x)	A 239 male (2x)	A 239 male (2x)

Specifications / important properties ↓





- pumps:
 - suitable for large volumes
 - low power required while pumping; first stage will be fully pressureless after switch to second stage
 - automatic transition from first to second stage
 - large oil output per stroke
 - provided with dipstick
- hydraulic hoses:
 - anti-kink springs on both sides
 - 4:1 safety ratio
 - colour: blue



HTWX 1800 BU



Couplers



image	description	model	art no
	quick coupler, female, including aluminium dust cap <ul style="list-style-type: none"> • connection: 1/4" BSP female • fits: A 239 	A 238	150.581.238
	as A 238, but with extra lock ring	A 240	150.581.240
	quick coupler, male, including aluminium dust cap <ul style="list-style-type: none"> • connection: 1/4" BSP female • fits: A 238 and A 240 	A 239	150.581.239
	2 aluminium dust caps, 1 male and 1 female <ul style="list-style-type: none"> • fits: A 238, A 239 and A 240 	-	150.152.010

Accessories



image	description	model	art no
	pressure gauge, 0-1000 bars, including protection frame <ul style="list-style-type: none"> • pressure gauge Ø 162 mm • including quick coupler female, A 238 	A 148 U	110.582.348
	coupling piece <ul style="list-style-type: none"> • including quick coupler female, A 238 (3x) 	A 240 U	110.582.240

Propeller set



Cylinders



model	HY 100 G 1 U		HY 100 G 3.5 U
art no	120.012.001		120.012.011
working pressure bars/Mpa	2000 / 200		2000 / 200
capacity kN/t	1000.5 / 102		1000.5 / 102
oil content cm ³	50		176
effective pressure area cm ²	50.27		50.27
weight kg	6		8.1
incl. coupler	Y 218 female (2x)		Y 218 female (2x)
maintenance set art no	120.403.001		120.013.001
A mm	49		85
B mm	25		24

Selection chart max. number of cylinders for propeller shaft diameter 200 until 550 mm

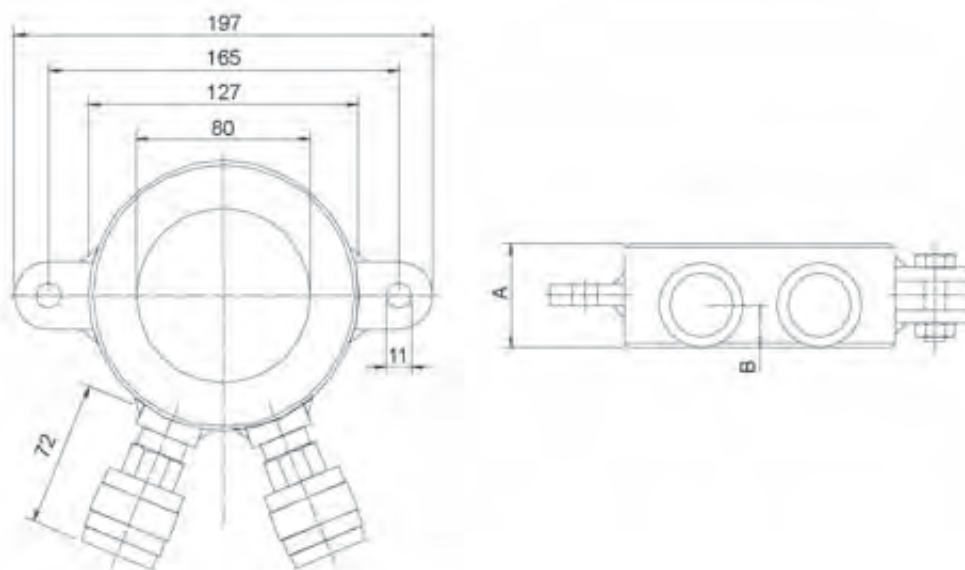


propeller shaft dia. mm	200	250	300	350	400	450	500	550
propeller shaft dia. inch	8	10	12	14	16	18	20	22
max. number of cylinders	7	8	9	10	11	12	13	14
max. available force ton	700	800	900	1000	1100	1200	1300	1400
max. available force kN	6867	7848	8829	9810	10791	11772	12753	13734

Selection chart max. number of cylinders for propeller shaft diameter 600 t/m 1000 mm



propeller shaft dia. mm	600	650	700	750	800	850	900	950	1000
propeller shaft dia. inch	24	26	28	30	32	34	36	38	40
max. number of cylinders	15	15	16	17	18	19	20	21	22
max. available force t	1500	1500	1600	1700	1800	1900	2000	2100	2200
max. available force kN	14715	14715	15696	16677	17658	18639	19650	20601	21582



Specifications / important properties ↓

- compact
- lightweight
- can be adjusted to fit each propeller shaft diameter by coupling using connecting plates

Available on request ↓

- cylinders manufactured in conformity with customer specifications

Pumps	pag. 132
Hydraulic hoses	pag. 133
Couplers	pag. 134
Accessories	pag. 134



HY 100 G 1 U



HY 100 G 1 U



Pumps - 2-stage - single-acting 

model	HTWY 2300 U
art no	120.442.001
working pressure bars/Mpa	2000 / 200
max. operating force kg	36
output 1 st trap cm ³ /stroke	31
output 2 nd stage cm ³ /stroke	1.6
max. pressure 1 st stage bars	30
effective oil content cm ³	2300
weight incl. oil kg	16
incl. coupler	Y 218 female
maintenance set art no	120.443.001

Specifications / important properties 

- compact and lightweight
- low maintenance
- suitable for large volumes
- automatic transition from first to second stage
- large pump output per stroke
- provided with dipstick



HTWY 2300 U

Single hoses 2000 bars ↓

model	Y 1.5 MK	Y 3 MK	Y 5 MK
art no	120.571.115	120.571.130	120.571.150
length m	1.5	3	5
connection	M14 x 1.5 swivel (2x)	M14 x 1.5 swivel (2x)	M14 x 1.5 swivel (2x)

Extension hoses 2000 bars ↓

model	Y 1.5 MKU	Y 3 MKU	Y 5 MKU
art no	120.572.115	120.572.130	120.572.150
length m	1.5	2	5
connection	Y 219 male (2x)	Y 219 male (2x)	Y 219 male (2x)

Specifications / important properties ↓

- single hoses with:
 - M14 x 1.5 swivel connection on both sides
 - threefold safety
 - colour: blue
- extension hoses with:
 - coupler male, Y 219 on both sides
 - threefold safety
 - colour: blue



Y 3 MK



Y 3 MKU

Couplers and accessories



image	description	model	art no
	coupler, female, including steel dust cap <ul style="list-style-type: none"> • connection: M22 x 1.5 male • fits: Y 219 	Y 218	120.481.218
	coupler, male, including steel dust cap <ul style="list-style-type: none"> • connection: M22 x 1.5 female • fits: Y 218 	Y 219	120.481.219
	nipple <ul style="list-style-type: none"> • connection: M14 x 1.5 male - M22 x 1.5 male • for mounting Y 219 or Y 218 on loose hose 	-	120.181.201
	pressure gauge, 0-2000 bars, including protection frame <ul style="list-style-type: none"> • pressure gauge Ø 162 mm • including coupler female, Y 218 (included) 	Y 220 U	120.182.220
	rotation elbow <ul style="list-style-type: none"> • including coupler male, Y 219 en coupler female Y 218 	Y 215 U	120.182.215
	connecting plate <ul style="list-style-type: none"> • centre to centre size: 84 mm 	Y 200	120.481.200
	suspension hook	Y 205	120.181.205

Mechanical tools



Mechanical jacks							↓
model	JJ 1015	JJ 1513	JJ 2513	JJ 3513	JJ 5013	JJ 10011	
art no	200.401.001	200.401.011	200.401.021	200.401.031	200.401.041	200.401.051	
tonnage t	10	15	25	35	50	100	
closed height mm	280	255	255	280	290	310	
stroke length mm	150	125	125	130	130	105	
base Ø mm	108	113	127	147	166	235	
capacity kN/t	98.1 / 10	147.2 / 15	245.3 / 25	343.4 / 35	490.5 / 50	981.0 / 100	
handle bar Ø x length mm	25 x 600	25 x 710	25 x 900	32 x 1000	32 x 1200	32 x 1500	
weight kg	12	12	16	24	31	72	
maintenance set art no	200.403.001	200.403.001	200.403.201	200.403.301	200.403.301	200.403.501	

Specifications / important properties ↓

- safe
 - self-locking
- usable in all positions
- robust
 - resistant to continuous heavy operating conditions
- can be used close to welding works
- can be used under water
- low maintenance



JJ 1513



JJ 2513

Mechanical pulling jack ↓

model	PL 2510	
art no	200.421.001	
tonnage	t	25
length retracted plunger	mm	775
stroke length	mm	100
capacity	kN/t	245.3 / 25
handle bar Ø x length	mm	25 x 700
weight	kg	32

Specifications / important properties ↓

- safe
 - self-locking
- usable in all positions
- robust
 - resistant to sustained heavy operating conditions
- for use at places where welding takes place
- suitable for use under water
- low maintenance



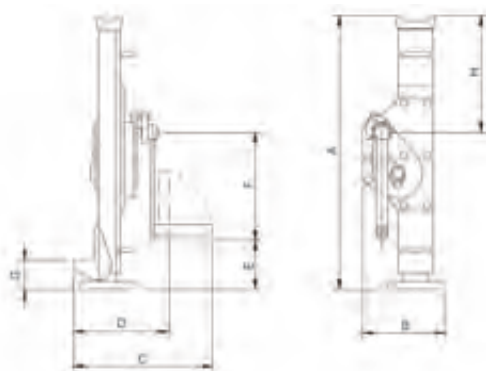
PL 2510

Rack jacks - standard construction height ↓

model	1500 LA	1500 LB	3000 LA	3000 LB	5000 LA	5000 LB	10000 LA	10000 LB
art no	210.301.015	210.301.115	210.301.030	210.301.130	210.301.050	210.301.150	210.301.100	210.301.200
capacity	kN/t 14.7 / 1.5	14.7 / 1.5	29.4 / 3	29.4 / 3	49 / 5	49 / 5	98 / 10	98 / 10
lifting height	mm 350	350	350	350	350	350	300	300
weight	kg 13	13	20	20	27	27	42	42

Rack jacks - standard construction height (dimensions) ↓

model	1500 LA	1500 LB	3000 LA	3000 LB	5000 LA	5000 LB	10000 LA	10000 LB
A	mm 725	725	725	725	725	725	800	800
B	mm 140	140	190	190	210	210	255	255
C	mm 290	290	310	310	330	330	475	475
D	mm 190	190	210	210	230	230	275	275
E	mm 100	100	100	100	100	100	100	100
F	mm 265	265	265	265	265	265	320	320
G	mm 65	65	70	70	75	75	80	80



Specifications / important properties ↓

- LA-series: model with safety crank and snap handle
- LB-series: model with ratchet safety crank and snap handle
- robust
 - resistant to continuous heavy operating conditions
- usable everywhere
- lifting points on head and hook
- usable in all positions
- folding rotating grip
- low maintenance



1500 LA/LB



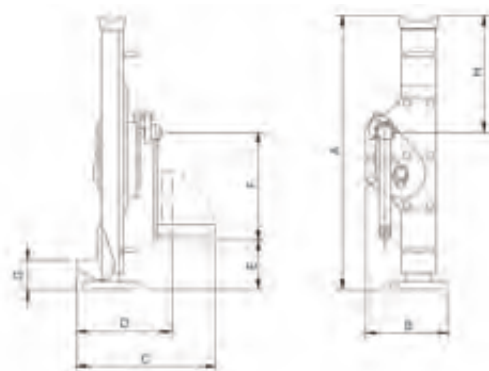
Rack jack detail

Rack jacks - reduced construction height


model	1500 KA	1500 KB	3000 KA	3000 KB	5000 KA	5000 KB	10000 KA	10000 KB
art no	210.301.215	210.301.315	210.301.230	210.301.330	210.301.250	210.301.350	210.301.300	210.301.400
capacity kN/t	14.7 / 1.5	14.7 / 1.5	29.4 / 3	29.4 / 3	49 / 5	49 / 5	98 / 10	98 / 10
lifting height mm	250	250	275	275	300	300	300	300
weight kg	11	11	18	18	24	24	38	38

Rack jacks - reduced construction height (dimensions)


model	1500 KA	3000 KA	5000 KA	10000 KA	1500 KB	3000 KB	5000 KB	10000 KB
A mm	565	607	612	655	565	607	612	655
B mm	147	192	208	245	147	192	208	245
C mm	292	335	360	545	292	335	360	545
D mm	200	240	260	300	200	240	260	300
E mm	72	76	96	90	72	76	96	90
F mm	212	250	248	305	212	250	248	305
G mm	84	80	72	95	84	80	72	95


Specifications / important properties


- LA-series: model with safety crank and snap handle
- LB-series: model with ratchet safety crank and snap handle
- robust
 - resistant to continuous heavy operating conditions
- usable everywhere
- lifting point on head and hook
- usable in all positions
- folding rotating grip
- low maintenance



1500 KA/KB



Rack jack detail

Schip wedges



model		W 50	W 80
art no		500.501.050	500.501.080
static load capacity	kN/t	490.5 / 50	784.8 / 80
max. height	mm	225	340
min. height	mm	190	275
dimensions	mm	245 x 255	320 x 345
weight	kg	29	64,5

Specifications / important properties



- unloads in one go with maximum load
- robust
 - resistant to continuous heavy operating conditions
- can be used close to welding works
- low maintenance



W 50

Launching a ship sideways in an extremely controlled way is possible with the help of Holmatro's custom-made hydraulic cylinder sets. One set consists of a cylinder with an electric quick relief valve, a hand pump with a pressure gauge and a 5 m hose, and a 5 l tank with a large diameter connecting hose. 4, 6, 8 or more of these sets are required for launching, dependent on the conditions and the dimensions of the ship.

The procedure

Before launching the ship, all supporting materials, such as ship wedges, are taken away. The ship then rests only on a few 'carriages' fixed between two supporting points using pumped-out cylinders. Each cylinder has been connected to a tank by means of a large diameter hose. The system is kept under pressure by keeping the quick relief valves on the cylinders closed.

The launch is started by opening all relief valves at the same time from a safe distance. The hydraulic oil then flows from the cylinders into the tanks. The ship starts moving at this moment. While the cylinder plungers return by the weight and fall over within a few seconds, the ship evenly slides safely into the water.

Specifications / important properties



- operating pressure 720 bar (72 Mpa)
- capacity in conformity with customer specifications
- stroke length in conformity with customer specifications
- other pump types available apart from hand pump
- each cylinder is equipped with an electric valve



Ship launching set

Steel wire pullers



model	S 7	S 15	S 35
art no	410.999.004	410.301.013	410.301.035
capacity lifting kN/t	7.3 / 0.75	14.7 / 1.5	29.4 / 3
capacity pulling kN/t	12.2 / 1.2	24.5 / 2.5	49 / 5
dimensions mm	500 x 250 x 100	620 x 300 x 150	720 x 320 x 140
weight excl. steel wire kg	8	17	27
steel wire with hook art no	410.999.006	410.381.013	410.381.035
steel wire Ø mm	9	11.6	16
steel wire length m	20	20	20
breaking load steel wire kg	4800	7700	15300
shear pin art no	410.303.247 (2x)	410.303.050 (3x)	410.303.150 (1x)

Specifications / important properties



- safe
 - break pin
- compact and lightweight
- easy operation
- telescopic lever

Available on request



- longer steel thread with safety hook



S 35 + 20 meter steel thread

Ratched lever hoists including chain


model	LA 0.75 U	LA 1.5 U	LA 3 U	LA 6 U
art no	410.601.000	410.601.001	410.601.002	410.601.003
capacity kN/t	7.4 / 0.75	14.7 / 1.5	29.4 / 3	58.8 / 6
standard lifting height m	1.5	1.5	1.5	1.5
standard length of load chain m	1.7	1.75	1.8	3.6
load chain link mm	6.3 x 19	7.1 x 21	10 x 30	10 x 30
load chain art no	490.501.011	490.501.032	490.501.111	490.501.111
min. distance between the hooks mm	300	375	450	625
length of operating handle mm	300	300	400	400
pulling force on the handle at full load kg	14	16	21	23
weight kg	6.5	10	18	32

Ratched lever hoists excluding chain


model	LA 0.75	LA 1.5	LA 3	LA 6
art no	410.611.000	410.611.001	410.611.002	410.611.003
capacity kN/t	7.4 / 0.75	14.7 / 1.5	29.4 / 3	58.8 / 6
load chain link mm	6.3 x 19	7.1 x 21	10 x 30	10 x 30
load chain art no	490.501.011	490.501.032	490.501.111	490.501.111
min. distance between the hooks mm	300	375	450	625
length of operating handle mm	300	300	400	400
pulling force on the handle at full load kg	14	16	21	23
weight kg	6.5	10	18	32

Specifications / important properties


- closed hoist housing
 - protected against dirt and dust
- strong and wear-resistant
 - light metal housing with cast-in steel chain guide
- compact and lightweight
- needle bearings for smooth operation and a long life
- two safety hooks
- complies with all known safety requirements

Available on request


- longer load chain



LA 3 U

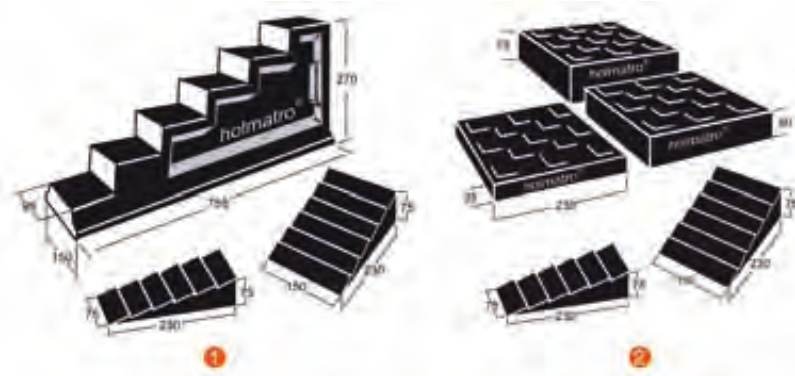


Chocks and blocks



discription	step chock	lock block (low)	lock block (medium)	lock block (high)	wedge (small)	wedge (large)
art no	150.563.060	150.563.061	150.563.071	150.563.073	150.563.049	150.563.050
weight kg	7	1	2	3	0.5	1
set A, art no 150.562.010	2x	-	-	-	2x	2x
set B, art no 150.562.004	-	2x	2x	2x	2x	2x

(1) Chocks and blocks set A (2) Chocks and blocks set B



Specifications / important properties



- environment-friendly
 - recycled polyethylene and 100% reusable
- longer life than hardwood, does not splinter
- made in one piece, practically indestructible
- lightweight, floats on water
- non-absorbing
 - water and oil repellent
- stackable
- anti-skid because of unique profile
- flexible under pressure, extra grip
- high allowed area pressure: 100 kg/cm² in all directions
- temperature range loaded: -20°C to +50°C



Chocks and blocks set A



Chocks and blocks set B

Lifting bags



model	HLB 1	HLB 3	HLB 5	HLB 10	HLB 12	HLB 18
art no	350.321.003	350.321.004	350.321.006	350.321.007	350.321.008	350.321.009
working pressure bars/Mpa	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8
max. lifting capacity kN	10	35	50	100	120	180
max. lifting capacity t	1	3.7	5.1	10.2	12.2	18.3
max. inflation height mm	80	130	150	215	225	240
dimensions (lxb) mm	150 x 150	228 x 228	270 x 270	380 x 380	408 x 408	660 x 360
weight kg	0.6	1.5	2	3.8	5	6.8
thickness incl. profile mm	22	22	22	25	25	25
air content (8 bars) l	6.3	16.2	22.5	76.5	90	171
water content (8 bars) l	0.7	1.8	2.5	8.5	10	19
bursting pressure bars	> 32	> 32	> 32	> 32	> 32	> 32
connection	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female
air coupler art no	390.511.155	390.511.155	390.511.155	390.511.155	390.511.155	390.511.155

Lifting bags



model	HLB 20	HLB 24	HLB 29	HLB 32	HLB 40	HLB 67
art no	350.321.010	350.321.012	350.321.017	350.321.013	350.321.014	350.321.015
working pressure bars/Mpa	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8	8 / 0.8
max. lifting capacity kN	200	240	300	320	400	670
max. lifting capacity t	20.3	24.4	30.6	32.6	40.7	68
max. inflation height mm	290	215	348	380	405	520
dimensions (lxb) mm	508 x 508	310 x 1000	611 x 611	658 x 658	714 x 714	908 x 908
weight kg	6.7	9.5	9.8	13	15.1	23.5
thickness incl. profile mm	25	25	25	25	25	25
air content (8 bars) l	189	216	373.5	450	558	1206
water content (8 bars) l	21	24	41.5	50	62	134
bursting pressure bars	> 32	> 32	> 32	> 32	> 32	> 32
connection	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female	1/8" NPT female
air coupler art no	390.511.155	390.511.155	390.511.155	390.511.155	390.511.155	390.511.155



Specifications / important properties ↓

- standard delivered with quick coupler male
- the maximum effective lifting power is achieved with minimum inflation height; the higher the lifting bag is inflated, the further the lifting power decreases (see lifting capacity / height diagrams).
- small dimensions
 - compact when empty
 - unique lowered plug-in edges
- made from nitril rubber enforced with aramid (NBR)
 - very flexible, adapts to the surface
 - maximum grip on any base
 - proven durability
 - low maintenance
- even spreading of pressure force
- suitable for many applications
 - good alternative for traditional mechanical systems
 - easy to install under all conditions
 - works with air (alternatives: water and oil)
- carrying straps on HLB 40 and HLB 67

Available on request ↓

- lifting capacity / height diagrams per model

Lifting capacity / height diagrams	pag. 148
Hoses	pag. 149
Control valves	pag. 149
Accessories	pag. 149
Air control sets	pag. 150



HLB 1



HLB 18



HLB 67



Diagram 1 - HLB 1 up to 3

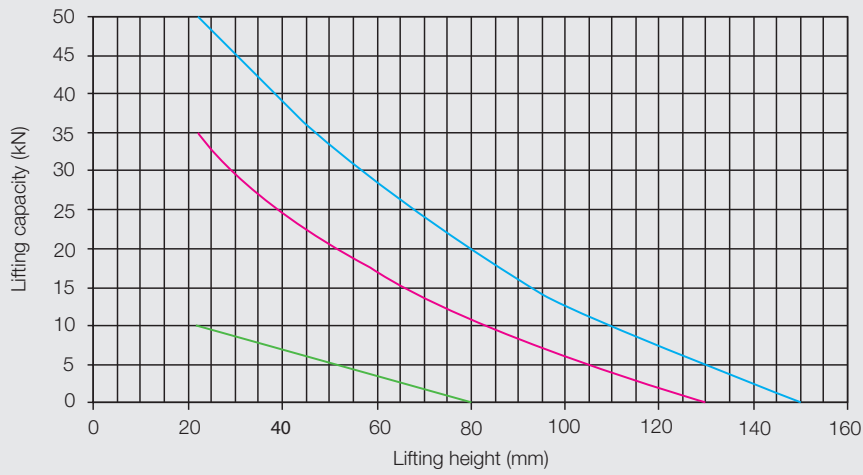


Diagram 2 - HLB 10 up to 20

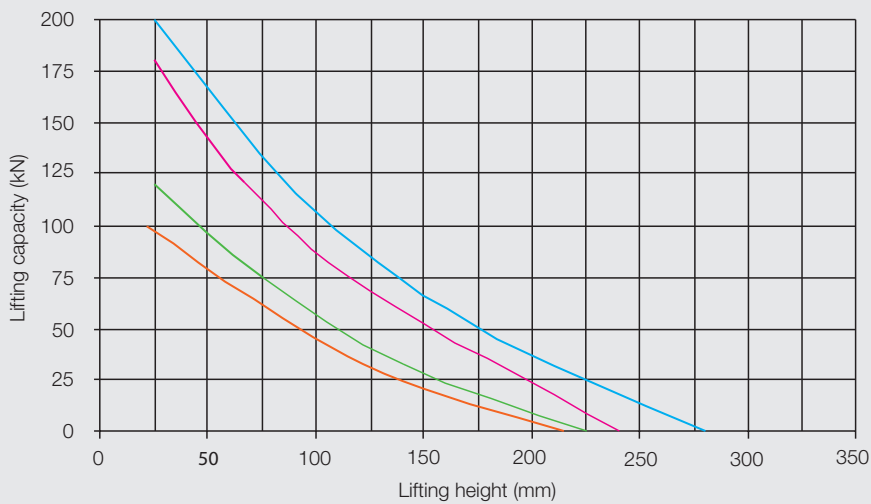
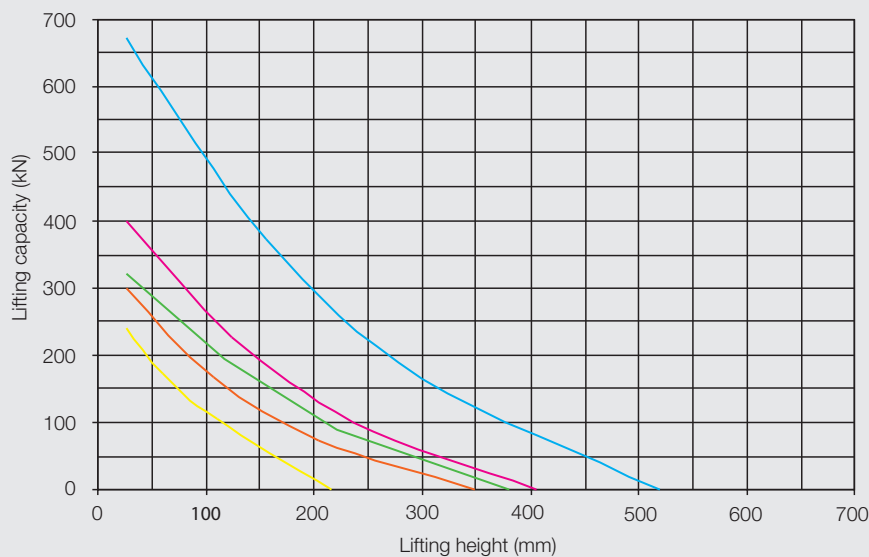


Diagram 3 - HLB 24 up to 67



Hoses


model	AH 5 YU	AH 5 BU	AH 5 RU	AH 10 YU	AH 10 BU	AH 10 RU
art no	350.572.006	350.572.007	350.572.008	350.572.009	350.572.011	350.572.012
length m	5	5	5	10	10	10
colour	yellow	blue	red	yellow	blue	red

Operating valves


description	model	art no
control unit (single), for the control of one lifting bag, safety valve set at 8.5 bars	SCV 10 U	350.582.042
control unit (double), for the control of two lifting bags, safety valves set at 8.5 bars	DCV 10 U	350.582.034
control unit (triple), for the control of three lifting bags, safety valves set at 8.5 bars	TCV 10 U	350.582.059
control unit (double), for the control of four lifting bags, safety valves set at 8.5 bars	QCV 10 U	350.582.060
synthetic control box (bars), for the control of two lifting bags, safety valves set at 8.5 bars	HDC 10 AU	350.182.003
synthetic control box (Mpa), for the control of two lifting bags, safety valves set at 8.5 bars	HDC 10 AJU	350.182.004

Accessories


description	model	art no
shut-off hose with safety valve set at 8.5 bars	-	350.582.035
air bottle 6 L, 200 bars	-	350.581.086
air bottle 6 L, 300 bars	-	350.581.096
connection piece for 2 air bottles 200 bars	-	350.582.420
connection piece for 2 air bottles 300 bars	-	350.582.430
pressure reducer for both 200 and 300 bars, 5/8" DIN	PRV 823 AU	350.182.002
air adapter set for connection on various air sources; delivered in synthetic carrying/storage box	UAS 10	350.582.050

Various accessories



Air control sets lifting bags



description	model	art no
air control set 200 bars, consists of: <ul style="list-style-type: none"> • pressure reducer PRV 823 AV • synthetic control box HDC 10 AU • shut-off hose (2x) • hose AH 5 RU • hose AH 5 BU • connection piece 200 bars • synthetic carrying/storage box 	HCS 10 U	350.582.435
air control set 200 bars, consists of: <ul style="list-style-type: none"> • pressure reducer PRV 823 AV • control unit (double) DCV 10 U • shut-off hose (2x) • hose AH 5 RU • hose AH 5 BU • connection piece 200 bars • synthetic carrying/storage box 	DCS 10 U	350.582.436
air control set 300 bars, consists of: <ul style="list-style-type: none"> • pressure reducer PRV 823 AV • synthetic control box HDC 10 AU • shut-off hose (2x) • hose AH 5 RU • hose AH 5 BU • connection piece 300 bars • synthetic carrying/storage box 	HCS 10 U	350.582.038
air control set 300 bars, consists of: <ul style="list-style-type: none"> • pressure reducer PRV 823 AV • control unit (double) DCV 10 U • shut-off hose (2x) • hose AH 5 RU • hose AH 5 BU • connection piece 300 bars • synthetic carrying/storage box 	DCS 10 U	350.582.039

HCS 10 U



Flow stoppers


model	OLS 100/200	OLS 200/400	OLS 300/600	OLS 500/1000
art no	360.311.002	360.311.004	360.311.006	360.311.010
working pressure bars	3	3	3	3
min. bursting pressure bars	9	9	9	9
max. counterpressure bars	1	1	1	1
smallest diameter mm	95	180	290	460
largest diameter mm	200	400	600	1000
length mm	500	500	700	1000
air content l	20	65	197	653
weight kg	2	4	9	20

Flow stoppers - accessories


description	model	art no
air hose, 3 meter	AH 3 MGU	360.582.004
air hose, 5 meter	AH 5 MGU	360.582.002
air hose, 10 meter	AH 10 MGU	360.582.003
control valve (single), safety valve set at 3 bars	SCV 3 U	360.582.007
air bottle 6 L, 200 bars	-	350.581.086
air bottle 6 L, 300 bars	-	350.581.096
connection piece for 2 air bottles 200 bars	-	350.582.420
connection piece for 2 air bottles 300 bars	-	350.582.430
pressure reducer for both 200 and 300 bars, 5/8" DIN	PRV 823 AU	350.182.002

Specifications / important properties


- resistant to high counter pressure
 - suitable for many applications
- nitril rubber enforced with aramid (NBR)
 - high tensile strength
 - low permeability
 - resistant to weather influences, acids, oil and petrol
- operating temperatures -30°C to +80°C
- hot-galvanised suspension eyes
- brass connecting plate vulcanized



OLS-series + accessories

Welding vapour extractor ↓

model	HAM 125	
art no	310.011.125	
working pressure	bars	4 - 10
air displacement capacity	m ³ /min.	32 (at 8 bars) / 30 (at 6 bars)
air consumption at full load	m ³ /min.	1.2
noise level at max. capacity	dB	76
weight	kg	3

Welding vapour extractor - accessories ↓

description	model	art no
hose pillar 3/8" NPT-13mm	B 155	390.511.005
harmonica hose, Ø 125 mm, length 7.5 meter	H 125 7.5	310.571.126
hose clamp, Ø 125 mm	B 215	390.521.041
ventilator hose, Ø 50 mm, length 5 meter	H 125 5	310.571.050
hose clamp, Ø 50 mm	B 325	390.521.040
manifold, 3 x Ø 50 mm	B 322	310.081.001
mouthpiece, rectangular	B 323	310.581.001
mouthpiece, round	B 324	310.581.002

Specifications / important properties ↓

- operation according to the venturi principle
- no moving or wearing parts
- safe; non-explosive
- lightweight
- easy to handle
- continuously regulated suction force by varying the operating pressure
- low-noise, only 76 dB at max. power
- starts and stops immediately



HAM 125



HAM 125 + H 125 7.5

Hydraulic cutters



Mobile

The mobile cutters have been especially designed for use in the field. Here think of cleaning up old pipes (e.g. at petrol stations), demolishing buildings, cutting electricity and telephone cables, etc. With this model the accent is on mobility. The tools have been made from high-quality aluminium, making the cutters powerful and yet very light. Also the pumps, in electric or petrol version, have been developed especially for mobile use. They are compact and lightweight. This allows for doing jobs at difficultly accessible locations.

A complete mobile cutter set consists of a mobile cutter (pages 156 and 157), a mobile pump (page 160) and a hose (page 163). Various accessories for the set are available as well (pages 164 and 165).



Stationary













The stationary cutters have been developed especially for continuous use. Here think for instance of production processes in which repetitive operations (cutting, crushing or tearing) must take place at fixed places along the line. With this model the accent is on durability (high load frequency) and ergonomics (long-lasting physical load). These cutters have been made from high-quality steel. The weight increase compared with the mobile aluminium version is compensated by a balancer (see picture). The hydraulic pump has been adjusted to the requirements of continuous use. A complete stationary cutter set consists of a stationary cutter (pages 158 and 159), a stationary pump (page 161) and a hose (page 163). Various accessories for the set are available as well (pages 164 and 165).



What blade type is most appropriate for your application? Look for your application in the table below and find the corresponding blade type. In case of doubt, please contact your Holmatro contact person.

Important: the different blades are exchangeable, extra hardened and can be sharpened.

Applications	Blade type	Description of blade
Cable recycling and production: telephone cables, underground cables, electrical cables and steel cables.	10 cable	Blade with special blade guide
Vehicle recycling: catalysts, exhausts, doors, A and B styles, (hollow) gear shafts, motor supports, steering columns, bumpers, bullbars and carrying arms. Demolition: round bar, tube profiles, frame, construction materials, wood, roots (trees), fuel pipes, heating pipes, small cables. Foundry: remove risers and supply ducts of aluminium castings.	20 short	Generally short, parrot beak
Vehicle recycling: catalysts, exhausts, doors, A and B styles, (hollow) gear shafts, motor supports, steering columns, bumpers, bullbars and carrying arms. Demolition: round bar, tube profiles, frame, construction materials, wood, roots (trees), fuel pipes, heating pipes, small cables. Foundry: remove risers and supply ducts of aluminium castings.	30 standard	Generally standard blade
Recycling of refrigerators and other white goods: remove compressors, cables, profiles. Demolition: steel plate, strip material, angle steel	40 straight	Toothed blade with spreading function
Recycling of refrigerators and other white goods: remove compressors, cables, profiles. Demolition: steel plate, strip material, angle steel	60 combi	Toothed blade with spreading and squeezing points
Demolition: scrap, strips, profiles, frames, etc.	70 GP	Toothed blade with parrot beak

Blade types	ICU 05	ICU 10 / 20	ICU 40
10 cable			
20 short			
30 standard			
40 straight			
60 combi			
70 GP			

Mobile cutters - ICU 05 

model	ICU 05 A 10	ICU 05 A 30	ICU 05 A 70
art no	170.012.052	170.012.051	170.012.015
blade type	10 cable	30 standard	70 GP
working pressure bars/Mpa	500 / 50	500 / 50	500 / 50
blade opening mm	95	98	142
cutting force kN/t	104 / 10.6	124 / 12.6	176 / 18.0
spreading force kN/t	-	-	-
weight kg	10.3	9.4	9.5
dimensions (lxwxh) mm	630x210x170	580x210x170	602x210x170
temperature reach °C	-20 +80	-20 +80	-20 +80
oil content cm ³	37	37	37

Specifications / important properties 

- lightweight, user-friendly and ergonomic
- fast for an efficient (production) process
- various blade types available
 - cutting capacities up to 18 ton
 - quickly and easily exchangeable
- safe
 - dead man's function
 - guarded moving parts

Available on request 

- ICU 5 cutter with blade type 60 combi (toothed with spreading and squeezing points)
- cutters manufactured in conformity with customer specifications

Accessories 

- torque wrench for central bolt
- service set (complete) in plastic carrying box
- pressure gauge connection set for checking the operating pressure
- leather protection sleeve for couplers between cutter and hose
- lubricants
- trolley, crane and balancers

Mobile pumps

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Hoses

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ICU 05 A 10



ICU 05 A 30

Mobile cutters - ICU 10 and ICU 40

model	ICU 10 A 10	ICU 10 A 20	ICU 10 A 30	ICU 10 A 40	ICU 40 A 20	ICU 40 A 30
art no	170.012.001	170.012.002	170.012.003	170.012.004	170.012.042	170.012.047
blade type	10 cable	20 short	30 standard	40 straight	20 short	30 standard
working pressure bars/Mpa	500 / 50	500 / 50	500 / 50	500 / 50	500 / 50	500 / 50
blade opening mm	134	140	158	296 / 305	102	181
cutting force kN/t	242 / 24.6	234 / 23.9	246 / 25.1	264 / 26.9	594 / 60.6	644 / 65.7
spreading force kN/t	-	-	-	92 / 9.4	-	-
weight kg	17.3	15.5	15.3	15.4	19	19.4
dimensions (lxwxh) mm	735x230x177	671x230x177	696x230x177	739x230x177	720x270x218	775x270x218
temperature reach °C	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80
oil content cm ³	84	84	84	84	163	163

Specifications / important properties

- lightweight, user-friendly and ergonomic
- fast for an efficient (production) process
- various blade types available
 - cutting capacities up to 65.7 ton
 - quickly and easily exchangeable
- safe
 - dead man's function
 - guarded moving parts

Available on request

- ICU 10 cutter with blade type 60 combi (toothed with spreading and squeezing points)
- ICU 10 cutter with blade type 70 GP (toothed with parrot beak)
- cutters manufactured in conformity with customer specifications

Accessories

- torque wrench for central bolt
- service set (complete) in plastic carrying box
- pressure gauge connection set for checking the operating pressure
- leather protection sleeve for couplers between cutter and hose
- lubricants
- trolley, crane and balancers

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ICU 10 A 30



ICU 40 A 30

Stationary cutters - ICU 20


model	ICU 20 S 10	ICU 20 S 20	ICU 20 S 30	ICU 20 S 40	ICU 20 S 70
art no	170.012.005	170.012.006	170.012.007	170.012.008	170.012.018
blade type	10 cable	20 short	30 standard	40 straight	70 GP
working pressure bars/Mpa	500 / 50	500 / 50	500 / 50	500 / 50	500 / 50
blade opening mm	134	140	158	296 / 305	236 / 312
cutting force kN/t	242 / 24.6	234 / 23.9	246 / 25.1	264 / 26.9	264 / 26.9
spreading force kN/t	-	-	-	92 / 9.4	91 / 90.3
cutting force kN/t	-	-	-	-	-
weight kg	28.5	26.7	26.6	26.6	27.3
dimensions (lxwxh) mm	692x361x312	628x361x312	651x361x312	639x361x312	707x361x312
temperatue reach °C	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80
oil content cm ³	84	84	84	84	84

Stationary cutters - ICU 20 - horizontal assembled blades

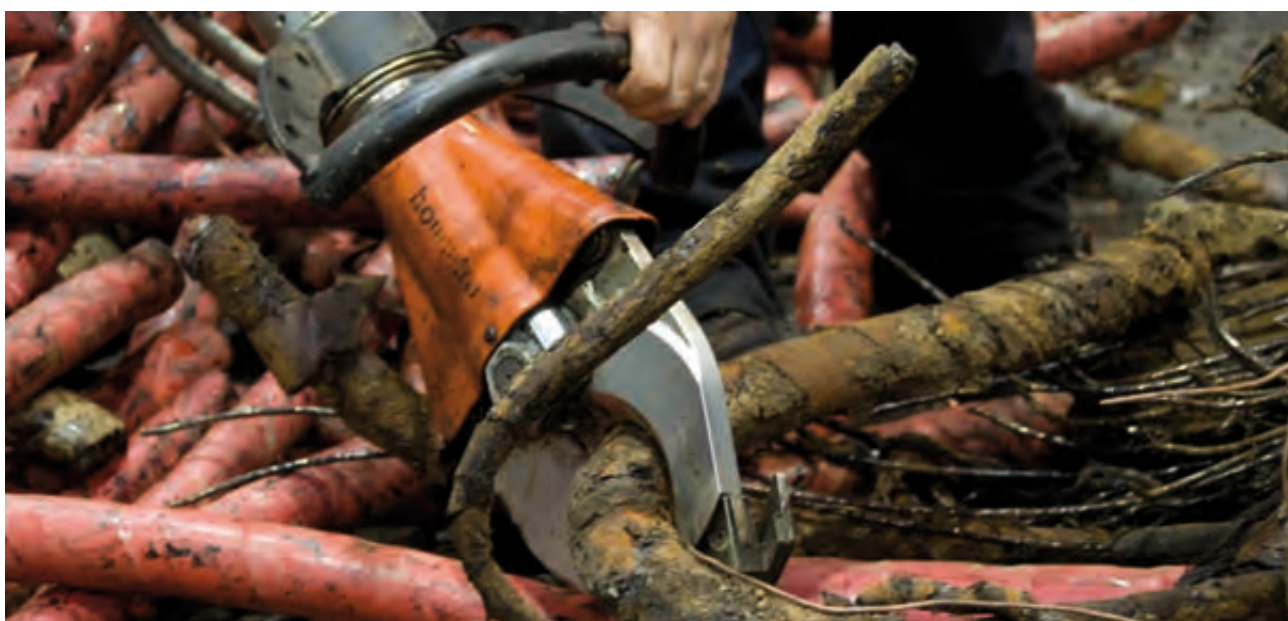

model	ICU 20 SH 10	ICU 20 SH 20	ICU 20 SH 30	ICU 20 SH 40	ICU 20 SH 70
art no	170.012.019	170.012.020	170.012.021	170.012.022	-

Stationary cutters - ICU 20 - two hand operation


model	ICU 20 ST 10	ICU 20 ST 20	ICU 20 ST 30	ICU 20 ST 40	ICU 20 ST 70
art no	170.012.026	170.012.027	170.012.028	170.012.029	-

Stationary cutters - ICU 20 - horizontal assembled blades and two hand operation


model	ICU 20 STH 10	ICU 20 STH 20	ICU 20 STH 30	ICU 20 STH 40	ICU 20 STH 70
art no	170.012.033	170.012.034	170.012.035	170.012.036	-



Specifications / important properties ↓

- user-friendly and ergonomic rotating mechanism
- fast for an efficient (production) process
- various blade types available
 - cutting capacities up to 26.9 ton
 - quickly and easily exchangeable
- safe
 - two-hand operation (ICU 20 ST and ICU 20 STH)
 - dead man's function
 - guarded moving parts

Available on request ↓

- ICU 20 cutter with blade type 60 combi (toothed with spreading and squeezing points)
- ICU 20 SH/ST/STH cutter with blade type 70 GP (toothed with parrot beak)
- cutters manufactured in conformity with customer specifications

Accessories ↓

- torque wrench for central bolt
- service set (complete) in plastic carrying box
- pressure gauge connection set for checking the operating pressure
- leather protection sleeve for couplers between cutter and hose
- lubricants
- trolley, crane and balancers

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ICU 20 S 10



ICU 20 S 20



ICU 20 S 30



ICU 20 STH 40

Mobile pumps for mobile cutters



model	IPU-M 2035 DRU	IPU-M 2035 PRU	IPU-M 06 W 6 SQ	IPU-M 06 W 6 SD	IPU-M 12 W 6 SD
art no	170.152.007	170.152.034	170.152.010	170.152.020	170.152.039
motor	electric 0.9 kW - 230 V - 50 Hz - 1 Ph	petrol 2.9 hp - 2.1 kW - 4 takt	electric 1.1 kW - 110 V - 50 Hz - 1 Ph	electric 1.1 kW - 230 V - 50 Hz - 1 Ph	electric 1.5 kW - 230 V - 50 Hz - 1 Ph
working pressure bars/Mpa	500 / 50	500 / 50	500 / 50	500 / 50	500 / 50
output < 200 bars l/min	2.4	2.4	1.6	1.6	3.2
output > 200 bars l/min	0.7	0.7	0.6	0.6	1.2
effective oil content l	2	2	6	6	6
weight kg	27.5	26	45	45	47
dimensions (lxwxh) mm	405x325x375	405x345x430	462x339x470	462x339x470	462x339x470

Options for mobile pump IPU-M 06 / 12



description	art no
protection frame	100.151.056
covering plate for protection frame	100.151.040
carrying handles	100.151.053
NB. the above options are not possible in combination with transport carriage 170.182.003	

Specifications / important properties



- compact and lightweight
- 2-stage pump for higher operating speed
- durable, low maintenance
- standard provided with protection frame (IPU-M 2035 DRU / PRU)
- various options for IPU-M 06 / 12

Available on request



- larger tank
- other voltages / frequencies

Accessories



- IPU-M 06 / 12
 - protection frame
 - cover plate for protection frame
 - carrying handles



IPU-M 2035 DRU



IPU-M 12 W 6 SD + carrying handles

Stationary pumps for stationary cutters


model	IPU-S 12 W 50 D	IPU-S 12 W 25 E	IPU-S 12 W 50 E	IPU-S 18 W 25 E	IPU-S 18 W 50 E
art no	170.152.011	170.152.002	170.152.003	170.152.004	170.152.005
motor	electric 1.5 kW - 230 V - 50 Hz - 1 Ph	electric 1.5 kW - 400 V - 50 Hz - 3 Ph	electric 1.5 kW - 400 V - 50 Hz - 3 Ph	electric 2.2 kW - 400 V - 50 Hz - 3 Ph	electric 2.2 kW - 400 V - 50 Hz - 3 Ph
working pressure bars/Mpa	500 / 50	500 / 50	500 / 50	500 / 50	500 / 50
output < 200 bars l/min	3.2	3.2	3.2	5	5
output > 200 bars l/min	1.2	1.2	1.2	1.8	1.8
effective oil content l	50	25	50	25	50
weight kg	117	85	115	87	117
dimensions (lxwxh) mm	528x400x909	528x400x774	528x400x909	528x400x774	528x400x909

Specifications / important properties


- 2-stage pump for higher operating speed
- durable, low maintenance
- safe
 - protected against pressure drop by non-return valve in return port (prevents rebound when spreading)
 - in case of power failure, the system will become pressureless

Available on request


- larger tank
- other voltages / frequencies



IPU-S 12 W 25 E



IPU-S 12 W 50 E

Pumps - extremely durable 

for cutter type	mobile	stationary	stationary
model	IPU-M 32 S 25 E	IPU-S 32 S 25 E	IPU-S 32 S 50 E
art no	170.152.503	170.152.500	170.152.501
motor	electric 2.2 kW - 400 V - 50 Hz - 3 Ph	electric 2.2 kW - 400 V - 50 Hz - 3 Ph	electric 2.2 kW - 400 V - 50 Hz - 3 Ph
working pressure bars/Mpa	350 / 35	350 / 35	350 / 35
output < 350 bars l/min	3.2	3.2	3.2
effective oil content l	25	25	50
weight kg	72	85	115
dimensions (lwxhx) mm	528x400x651	528x400x774	528x400x909

Specifications / important properties 

- especially for applications in which speed is more important than capacity
- lower operating pressure
 - 30% cutting force decrease
 - higher output (3.2 l/min. continuously)
- extremely durable, low maintenance
- safe
 - protected against pressure drop by non-return valve in return port (prevents rebound when spreading)
 - in case of power failure, the system will become pressureless

Available on request 

- larger tank
- other voltages / frequencies



IPU-M 32 S 25 E



IPU-S 32 S 50 E

Hoses for mobile cutters


model	IVL 3 SOU	IVL 5 SOU	IVL 10 SOU	IVL 15 SOU	IVL 20 SOU	IVL 25 SOU
art no	100.570.050	100.570.001	100.570.002	100.570.003	100.570.004	100.570.005
length	m 3	5	10	15	20	25

Hoses for stationary cutters


model	IVL 5 SOU-EK	IVL 10 SOU-EK	IVL 20 SOU-EK
art no	170.570.001	170.570.002	170.570.014
length	m 5	10	20

Specifications / important properties


- hoses for mobile cutters
 - 4:1 safety ratio
 - anti-kink springs on both sides
 - complete with couplers
- hoses for stationary cutters
 - 4:1 safety ratio
 - anti-kink springs on both sides
 - complete with couplers
 - standard with protection sleeves for hoses and couplers
 - with 12V cable for electrical push-button operation of cutter

Available on request


- different lengths
- other colour



IVL 10 SOU



IVL 10 SOU-EK

Service tools



for model	ICU 05	ICU 10 / 20	ICU 40
torque wrench set for central bolt	-	170.182.001	-
torque wrench	150.581.671	150.581.671	150.581.671
ring spanner hex. size 36 for torque wrench	170.182.005	-	-
ring spanner hex. size 41 for torque wrench	-	170.183.001	-
ratched head for torque wrench	-	-	150.581.672
cap hex. size 41 for torque wrench	-	-	150.581.691
service set (complete), in synthetic case	170.013.025	170.013.017	-
pressure gauge set for checking working pressure	170.182.006	170.182.006	170.182.006
leather protection cover for connections between cutter and hose	130.183.012	130.183.012	130.183.012

Lubricants



description	art no
lubricants set, consists of:	170.013.021
• high-grade grease, 400 g	100.581.082
• brake cleaner (degreaser) Motip, 500 ml	170.000.252
• Teflon spray Sir John, 400 ml	150.581.095

Service set (complete), lubricant set, torque wrench and 2x ring spanner



Transport systems ↓

description	max. carrying capacity	art no
carriage for transport of a mobile cutter, pump and hose	-	170.182.003
crane for suspension of a mobile or stationary cutter dimensions: <ul style="list-style-type: none"> • bottom plate: 1000 x 1000 mm • total length: 3190 mm • height of suspension point: 2700 mm • arm length: 2000 mm 	50 kg	130.182.199

Suspension systems ↓

description	max. carrying capacity	art no
balancer for mobile cutter (ICU 05)	7-10 kg	100.182.044
balancer for mobile cutter (ICU 10 / 40)	15-20 kg	130.182.039
balancer for stationary cutter (ICU 20)	25-30 kg	130.581.000

Specifications / important properties ↓

- transport carriage:
 - for a complete mobile set consisting of cutter, pump and hose; quickly and easily moveable by one person
 - with pneumatic tyres: suitable for inside and outside, suitable for various floor and terrain conditions
- crane:
 - provides a suspension point for your cutter where and when required. You are not dependent on existing suspension points or systems
 - with adjustable feet, can always be levelled
- balancer:
 - for virtually weightless operation of the cutter



Carriage



Stationary cutter fastened to crane by means of a balancer

Mini cutter



model	ICU 02 A 40	
art no	170.012.091	
working pressure bars/Mpa	350 / 35	
blade type	40 straight	
blade opening mm	42	
cutting force kN/t	63 / 6.4	
spreading force kN/t	15 / 1.5	
weight excl. hose kg	3.2	
weight incl. hose kg	7.3	
weight, in practice kg	4.5	
dimensions (lxwxh) mm	755x69x116	
temperature range °C	-20 +80	
oil content cm ³	12	
including	5 meter hose	

Pump



model	IPU-S 12 S 6 E	
art no	170.152.504	
motor	electric, 1.5 kW - 400 V - 50 Hz - 3 Ph	
working pressure bars / Mpa	350 / 35	
output < 350 bars l/min	1.2	
effective oil content l	6	
weight kg	50	
dimensions (lxwxh) mm	528x400x651	



Specifications / important properties



- developed for continuous use
- lightweight, easy to move and transport
- ergonomic (cutter)
 - low load on wrists, muscles and lower back
- high operation speed possible because of quick hydraulic pump
- safe
 - dead man's function (cutter)
 - two-hand operation (cutter)



ICU 02 A 40



ICU 02 A 40 detail head



IPU-S 12 S 6 E

The cutting tools of Holmatro Industrial Equipment have been developed especially for markets such as recycling, demolition, nuclear industry, foundry and the construction industry. Our experience is demonstrated in the technical expertise required in order to be able to provide you with adequate solutions for almost every cutting application.

Car recycling / disassembly

Thanks to the low weight and the specific blade design, Holmatro's mobile cutters are extremely suitable for recycling cars. The lightest cutter weighs only 9.4 kg and the special U-shaped blades pull the material towards the strongest point of the cutter. This makes these blades particularly suitable for cutting catalysis, exhausts, doors, A and B styles, (hollow) gear shafts, motor supports, steering columns, bumpers, bullbars and carrying arms.



Cable recycling / production

Cutting cables (underground, telephone, electrical and steel cables) is a profession. These cables usually consist of numerous small fibres that often accidentally come between the blades when cutting. This does not only affect the cutting capacity of the cutter, it also shortens its life. Holmatro has developed a number of special cable blades with blade guide for cutting these types of cables. The blade guide makes sure that the blades cut straight in relation to each other; they cannot be pushed apart.



White goods recycling

For recycling white goods such as refrigerators and freezers, Holmatro has developed a special cutter with a double function. The straight blades of this cutter have cutting teeth. Besides, the compressor can easily be removed because of the spreading function without having to change the tools. The spreading function also pushes away material in order to create space for cutting pipes and cables.



Demolition

The materials, buildings and constructions that you come across in demolition works are very diverse. The Holmatro cutters with short and standard blades are extremely suitable for demolition applications involving very diverse materials. The standard blade is ideal for cutting larger materials. The U-shape of the blade pulls the material towards the strongest point of the cutter. The short blade is specifically suitable for applications with little space that nevertheless require much cutting power.



Electrohydraulic cutters



Reinforcing steel cutters



model	TBC-16E1	TSC-20E1	TSC-32E1
art no	220.000.001	220.000.003	220.000.005
cutting principle	obtuse	shove off	shove off
connection	230 V - 50 Hz - 1150 W	230 V - 50 Hz - 1150 W	230 V - 50 Hz - 1150 W
capacity reinforcing steel Ø	16 mm	20 mm	32 mm
cutting force kN/t	98 / 10	294 / 30	490 / 50
weight kg	9.1	14	27
dimensions (lxwxh) mm	520x120x130	450x140x235	560x335x180

Specifications / important properties



- quick and easy operation
 - one-hand operation
 - automatic return
- safe
 - no sparks
 - no danger of fire
- low-noise compared with grinding
- exchangeable, durable blades

Available on request



- extra hardened blades for TBC-16E1
 - top blade, art no 220.200.003
 - bottom blade, art no 220.200.004



TBC-16E1



TSC-32E1

Prestressing strand cutter 

model	TST-19E1
art no	220.000.006
cutting principle	shove off
connection	230 V - 50 Hz - 1150 W
capacity strands	Ø 19 mm
cutting force	kN/t 294 / 30
weight	kg 14.8
dimensions (lxwxh)	mm 450x140x235

Specifications / important properties 

- quick and easy operation
 - one-hand operation
 - automatic return
- maximum control because of hydraulic operation
- safe
 - turned strands do not fray
- exchangeable, durable blades



TST-19E1

Multifunctional tool 

type	drive module		
model	TI-20E		
art no	220.000.009		
connection	230 V - 50 Hz - 1150 W		
cylinder capacity	kN/t	294 / 30	
weight	kg	13.7	
dimensions (lxwxh)	mm	385x240x180	

Multifunctional tool accessories 

type	knife head	cutting head	bending head	cutting head
model	TS-14	TS-20	TBE-20	TS-18
art no	220.100.001	220.100.002	220.100.004	220.100.005
cutting principle	obtuse	shove off	-	shove off
capacity reinforcing steel	∅ 14 mm	20 mm	20 mm	-
capacity strands	∅ -	-	-	18 mm
weight	kg 4.9	4.7	5.3	3.6
dimensions (lxwxh)	mm 230x110x110	135x112x118	193x90x110	140x110x120

Specifications / important properties 

- four different exchangeable heads available for TI-20E
- quick and easy operation
 - one-hand operation
 - automatic return
- maximum control because of hydraulic operation
- low-noise compared with grinding
- safe
 - no sparks
 - no danger of fire
 - turned strands do not fray (TS 18)



TI-20E with four exchangeable heads

Hydraulic crushers



Crusher		↓
model	ICR 20	
art no	220.000.012	
working pressure bars/Mpa	720 / 72	
blade opening mm	217	
squeezing force kN/t	68.7 / 7	
max. crush thickness mm	200	
weight kg	21.5	
dimensions (lxwxh) mm	860x440x210	
temperature range °C	-20 +80	
oil content cm ³	132	

Specifications / important properties ↓

- standard delivered with pointed tip
- for concrete walls with a maximum thickness of 200 mm
- ergonomic
- good alternative for pneumatic hammer
 - low-noise, ideal for in-house renovations
 - clean, causes very little dust
 - does not vibrate and does not cause shocks

Available on request ↓

- wedge tip for more accurate break (2 pieces required), art no 220.100.016

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ICR 20

Pump		↓
model	IPU-M 12 W 6 SD	
art no	170.152.039	
motor	electric, 1.5 kW - 230 V - 50 Hz - 1 Ph	
working pressure bars/Mpa	500 / 50	
output < 200 bars l/min	3.2	
output > 200 bars l/min	1.2	
effective oil content l	6	
weight kg	47	
dimensions (lxwxh) mm	462x339x470	

Options for pump IPU-M 12 W 6 SD		↓
description	art no	
protection frame	100.151.056	
covering plate for protection frame	100.151.040	
carrying handles	100.151.053	
NB. the above options are not possible in combination with transport carriage 170.182.003		

Specifications / important properties ↓

- compact and lightweight
- 2-stage pump for higher operating speed
- durable, low maintenance
- various options possible

Available on request ↓

- larger tank
- other voltages / frequencies

Accessories ↓

- protection frame
- cover plate for protection frame
- carrying handles



IPU-M 12 W 6 SD, protection frame + cover plate



IPU-M 12 W 6 SD + carrying handles

Hoses



model	IVL 3 SOU	IVL 5 SOU	IVL 10 SOU	IVL 15 SOU	IVL 20 SOU	IVL 25 SOU
art no	100.570.050	100.570.001	100.570.002	100.570.003	100.570.004	100.570.005
length	m 3	5	10	15	20	25

Transport systems



description	max. carrying capacity	art no
carriage for transport of a crusher, pump and hose	-	170.182.003
crane for suspension of a crusher dimensions: • bottom plate: 1000 x 1000 mm • total length: 3190 mm • height of suspension point: 2700 mm • arm length: 2000 mm	50 kg	130.182.199
balancer for crusher	15-20 kg	130.182.039

Specifications / important properties



- hoses:
 - 4:1 safety ratio
 - anti-kink springs on both sides
 - complete with couplers
- transport carriage:
 - for a complete set consisting of crusher, pump and hose; quickly and easily moveable by one person
 - with pneumatic tyres: suitable for inside and outside, suitable for various floor and terrain conditions
- crane:
 - provides a suspension point for your crusher where and when required. You are not dependent on existing suspension points or systems
 - with adjustable feet, can always be levelled
- balancer:
 - for virtually weightless operation of the crusher

Available on request



- hoses:
 - different lengths
 - other colour



IVL 10 SOU

Hydraulic spreaders



Spreader		↓
model	ISU 20	
art no	170.102.005	
working pressure bars/Mpa	500 / 50	
spreading opening mm	557	
spreading force kN/t	41.2 / 4.2	
squeezing force kN/t	28.7 / 2.9	
weight kg	30.5	
dimensions (lxwxh) mm	852x358x359	
temperature reach °C	-20 +80	
oil content cm ³	144	

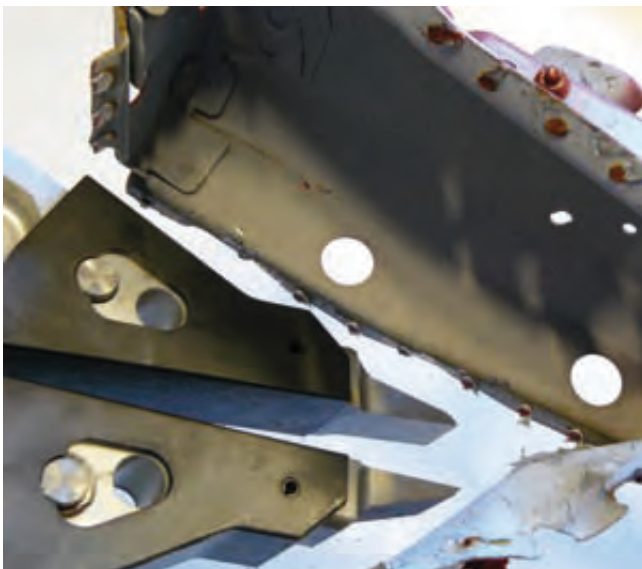
Specifications / important properties ↓

- for destructive testing of the welding points of bodyworks or body parts
- standard delivered with spreading tip 30 - 0 mm plug-in (2 pieces)
- quick for an efficient (production) process
- ergonomic
 - equipped with user-friendly rotating mechanism
- safe
 - dead man's function
 - two-hand operation

Available on request ↓

- spreading tip 30 - 4 mm plug-in (2 pieces required), art no 170.000.003

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ISU 20

Pump		↓
model	IPU-S 09 S 25 E	
art no	170.152.032	
motor	electric, 1.1 kW - 400 V - 50 Hz - 3 Ph	
working pressure bars/Mpa	500 / 50	
output < 500 bars l/min	0.9	
effective oil content l	25	
weight kg	72	
dimensions (lxwxh) mm	500x380x770	

Specifications / important properties ↓

- 2-stage pump for higher operating speed
- durable, low maintenance
- safe
 - protected against pressure drop by non-return valve in return port (prevents rebound when spreading)
 - in case of power failure, the system will become pressureless

Available on request ↓

- larger tank
- other voltages / frequencies



IPU-S 09 S 25 E



Hoses



model	IVL 5 SOU-EK	IVL 10 SOU-EK	IVL 20 SOU-EK
art no	170.570.001	170.570.002	170.570.014
length	m 5	10	20

Transport systems



description	max. carrying capacity	art no
crane for suspension of a spreader dimensions: <ul style="list-style-type: none"> • bottom plate: 1000 x 1000 mm • total length: 3190 mm • height of suspension point: 2700 mm • arm length: 2000 mm 	50 kg	130.182.199
balancer for spreader	30-35 kg	130.581.001

Specifications / important properties



- hoses:
 - 4:1 safety ratio
 - anti-kink springs on both sides
 - complete with couplers
 - standard with protection sleeves for hoses and couplers
 - with 12V cable for electrical push-button operation of cutter
- crane:
 - provides a suspension point for your spreader where and when required. You are not dependent on existing suspension points or systems
 - with adjusting feet, can always be levelled
- balancer:
 - for virtually weightless operation of the spreader

Available on request



- hoses:
 - different lengths
 - other colour



IVL 10 SOU-EK



Spreader fastened to crane by means of balancer

Hydraulic **foundry wedges**



Foundry wedges



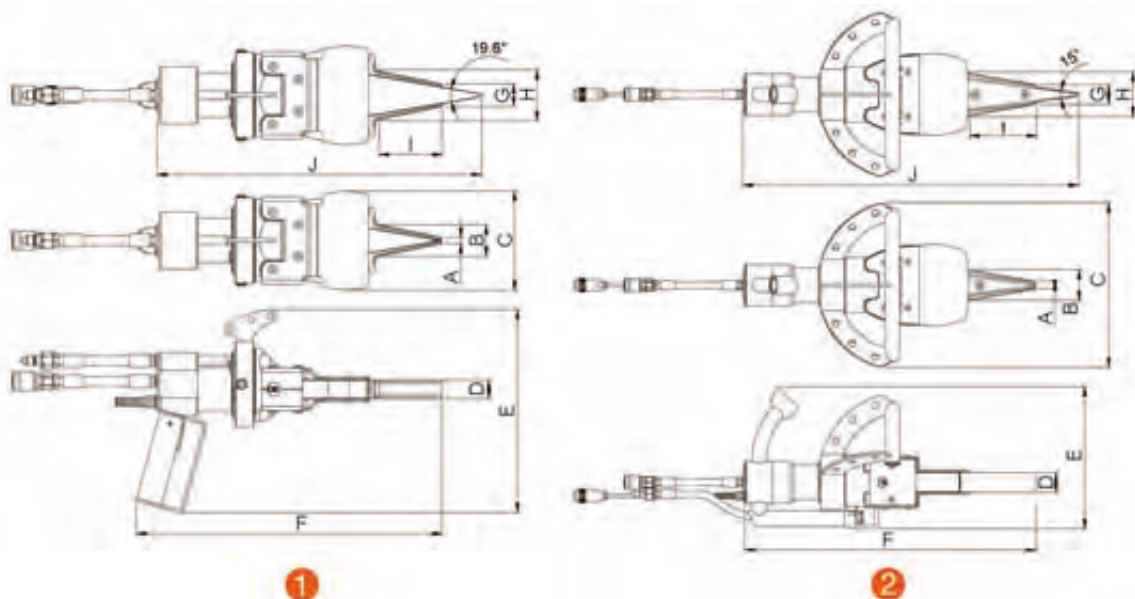
model	HFW 926	HFW 1226	HFW 1518	HFW 2426	HFW 3018
art no	130.102.005	130.102.000	130.102.002	130.102.004	130.102.006
working pressure bars/Mpa	200 / 20	200 / 20	200 / 20	200 / 20	200 / 20
spreading force kN/t	86 / 8.5	120 / 12	150 / 15	242 / 24	300 / 30
min. insertion mm	10	18	21	30	30
effective spreading mm	26	26	18	26	18
wedge angle	19.6°	15°	10°	15°	10°
wedge travel mm	75	100	100	100	100
weight kg	19.6	32	37.5	40	45

Foundry wedges (dimensions)



model	HFW 926	HFW 1226	HFW 1518	HFW 2426	HFW 3018
A mm	10	18	21	30	30
B mm	50	60	82	78	126
C mm	156	362	362	362	362
D mm	30	44	44	50	50
E mm	298	301	301	301	301
F mm	475	657	778	657	789
G mm	36	44	39	56	48
H mm	76	92	100	104	144
I mm	100	130	249	130	278
J mm	550	757	878	757	889

1) HFW 926 2) HFW 1226, HFW 1518, HFW 2426, HFW 3018



Specifications / important properties ↓

- user-friendly
 - compact
 - push-button operation
 - fully rotating for optimum positioning
 - avoids heavy physical strain
- high number of spreading cycles per minute, high operation speed
- powerful
- safe
 - clean, predictable 'break'
 - protection cover
 - minimised number of moving parts
- low maintenance
 - durable wedge blades
 - wedge blades can be removed within 30 seconds
- standard delivered with service set
 - anti-friction coating Bel Ray (400 ml)
 - hand nut, T-grip (2 pieces)
 - service instructions (plasticized)

Available on request ↓

- HFW 926 with top handle
- wedge blades manufactured in conformity with customer specifications

Pumps
Accessories

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HFW 926



HFW 1518



HFW 1226



HFW 3018

Pump		↓
model	200 S 50 EN	
art no	130.152.001	
motor	electric, 7.5 kW - 400 V - 50 Hz - 3 Ph - 1450 rpm	
working pressure bars/Mpa	200 / 20	
output < 200 bars l/min	20.88	
effective oil content l	50	
weight kg	190	
dimensions (lxwxh) mm	800x580x930	
including	10 meter hose	

Specifications / important properties ↓

- high operating speed
- cycle counter
- oil level indicator
- oil temperature indicator
- air / oil cooler
- switch for wedge maintenance

Available on request ↓

- foot pedal (electrical), art no 130.182.426
 - for foot operation of your foundry wedge
 - replaces the electrical push-button operation of the foundry wedge



Pump 200 S 50 E



Foot pedal (electrical)

Accessories



description	max. carrying capacity	art no
crane for suspension of a foundry wedge dimensions: • bottom plate: 1000 x 1000 mm • total length: 3190 mm • height of suspension point: 2700 mm • arm length: 2000 mm	50 kg	130.182.199
balancer for HFW 926	15-20 kg	130.182.039
balancer for HFW 1226	30-35 kg	130.581.001
balancer for HFW 1518 and HFW 2426	35-45 kg	130.581.003
balancer for HFW 3018	45-55 kg	130.182.039
service set consists of: • anti friction coating Bel Ray (400 ml) • hand nut, T-grip (2 pieces) • service instructions (plasticized)	-	130.013.001



Foundry wedge fastened to crane by means of balancer



Service set



Power is nothing
if not mastered



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