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INDUSTRIAL TOOLS

holmatro
mastering power

WE HELP MAKE THE WORLD MOVE FORWARD

Supporting the green energy transition, enabling civil engineering companies to build roads, bridges or moving buildings, helping to place trains back on track, reducing downtime for production facilities and make working with high pressure hydraulics safer. In all these applications, and more, our equipment & service are key to "*help make the world move forward*".

For more tools and information, please visit Holmatro.com

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Founded in 1967, Holmatro Industrial Equipment is worth over +55 years of experience with high pressure hydraulic tools & systems. We are proud that after all this time we are still a **MADE in The Netherlands** company with inhouse research & development, engineering and production. We aim to provide you with the most safe, reliable, durable and ergonomic solution for your application, delivering high-quality products, excellent service and great customer care.

LIFTING

The publication provided to you is our Industrial Tools catalogue. It contains a large number of high-pressure hydraulic (lifting) tools.

Our range of cylinders, pumps, hoses and system components offers you flexibility and controlled power, from 5 to 300 tons. All tools are designed to generate safe & controlled power in various industrial applications. Whether it's maintenance and repair, production, heavy lifting, transportation, shipbuilding, civil engineering, construction, installation, tank construction, repair, Offshore Wind installation, transport, mining, or oil & gas projects, our equipment ensures optimal performance and reliability.

HEAVY LIFTING & TRANSPORTATION

In the domain of heavy lifting and transportation, we understand that controlled power is of the essence. That's why our Heavy Lifting & Transportation solutions are built to be safe, reliable, and user-friendly. Whether it involves lifting, lowering, pushing, pulling, or skidding, our systems are designed to move with your projects, ensuring efficient and secure handling of heavy loads.

We also offer you hydraulic tools & systems for:

CUTTING

Holmatro is a worldwide known expert in hydraulic Cutting Tools. Our Industrial Cutting Tools are specially designed for continuous use in a heavy-duty environment, with the user in mind; safe & ergonomic. The main application focus of our Industrial Cutting Tools lies in the field of recycling, demolition, production and decommissioning. Their efficiency and reliability make them indispensable for tackling challenging cutting tasks.

OFFSHORE WIND SYSTEMS & SERVICES

Over the last 15 years, Holmatro Industrial Equipment has built a proven track record providing various solutions for the Offshore Wind Industry. In our way of work, partnership is key. Most projects were developed & executed in close cooperation with the developer, engineering companies and installation contractors Besides hydraulic solutions to level and fixate wind turbine foundations, such as transition pieces and jackets, we have supplied various systems in the field of cutting, sea fastening, deck handling and skidding solutions.

RERAILING

We are worth over +55 years of experience in designing, developing & producing high-pressure hydraulic tools & systems for both the Industrial and Rescue market. We constantly challenge ourselves to deliver innovative, reliable, and safe solutions to our customers. This drive led us to explore the world of rerailing, where we seek to utilize our knowledge and expertise to perform this crucial task with enhanced safety, efficiency, and control, ultimately bringing more cost-effectiveness to operations.

HOLMATRO PARTNER NETWORK

At Holmatro Industrial Equipment, we believe in the power of joint success. growing together by means of **Partnership**, supported by our **Partner Program**. Combining our +55 years of experience in high-pressure hydraulics with knowledge and expertise of the local market, we can form a winning team. We are proud of our network of dedicated local partners; they give excellent support to our customers with their expertise and knowledge of their market.

'Holmatro and Fyns Kran Udstyr A/S has a partnership for many years. We are very happy to have a partnership with a very serious and dedicated company like Holmatro. We have chosen a partnership with Holmatro because they deliver top quality products which is a perfect match with the other products in our large product portfolio of lifting gear.'

Torben Wiberg, Product Manager, Fyns Kran Udstyr A/S

'The Holmatro's Premium Service center helps Mennens Groningen to be successful! Not only in selling high-pressure hydraulic tools, but also in being a true, reliable partner for our customers. A big advantage of the Holmatro Premium Service Center is the way how we test; dynamic testing in a controlled environment. This results in a safer way of working for both our employees and customers, leading to more long-term relationships.'

David Posthumus, Director of Mennens Groningen

HOLMATRO PREMIUM SERVICE PROGRAM

When working in demanding circumstances with high pressure hydraulics, safety for your employees & customers should always come first. Correct & periodic maintenance can prevent unnecessary damages, costs, and unsafe situations. This is why we offer you a complete service program for high pressure hydraulic tools to ensure safety and increase the lifespan of your tools.

How we test

Holmatro' s years of experience has learned there is only one correct way to determine if a hydraulic system is safe to use: dynamic testing. Dynamic testing involves simulating a maximum use situation of the hydraulic cylinder over the complete stroke in a controlled environment.

By doing so, any hidden defects can be identified early on, ensuring the reliability, safety, & lifespan of your tools.

- This testing method is specifically designed for high-pressure hydraulics exceeding 500 Bar / 7250 psi
- With a safety margin of 105% over the system's maximum pressure.

How we train

Working with high pressure hydraulics comes with great responsibility. For you as an employer, it is important to inform and train your employees and keep them safe. We help you understand the risks related to high-pressure hydraulics, with on- and offline tools. Not only to help keep your employees safe, but also meet your legal obligations.

BASIC KNOWLEDGE OF HYDRAULICS

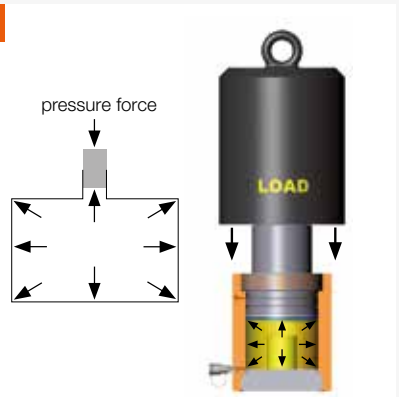
Pascal's law

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

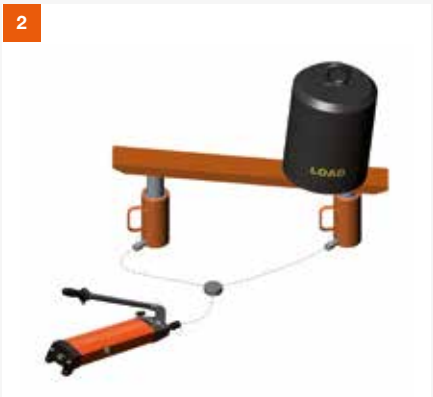
According to Pascal's law, the oil flow always chooses the line of least resistance in a hydraulic system. This means that when using several hydraulic cylinders, each cylinder lifts at its own speed. When the cylinders have the same capacity, they will first start moving at the point of the lightest load and last at the point of the heaviest load (**2**).

A FlowPanel™ 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 (**3**).

1



2



3

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	**=**	**hydraulic operating pressure**	**x**	**effective pressure area of the plunger**
N		N/cm²		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.

Recommended total cylinder capacity

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

Oil volume of a cylinder; the volume in cm³ required for achieving the full stroke of the cylinder. For oil volume specifications see section 'Hydraulic cylinders'.

NB. For double-acting cylinders: Reduce the volume above the plunger section with the volume under the plunger section.

Required operating speed

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

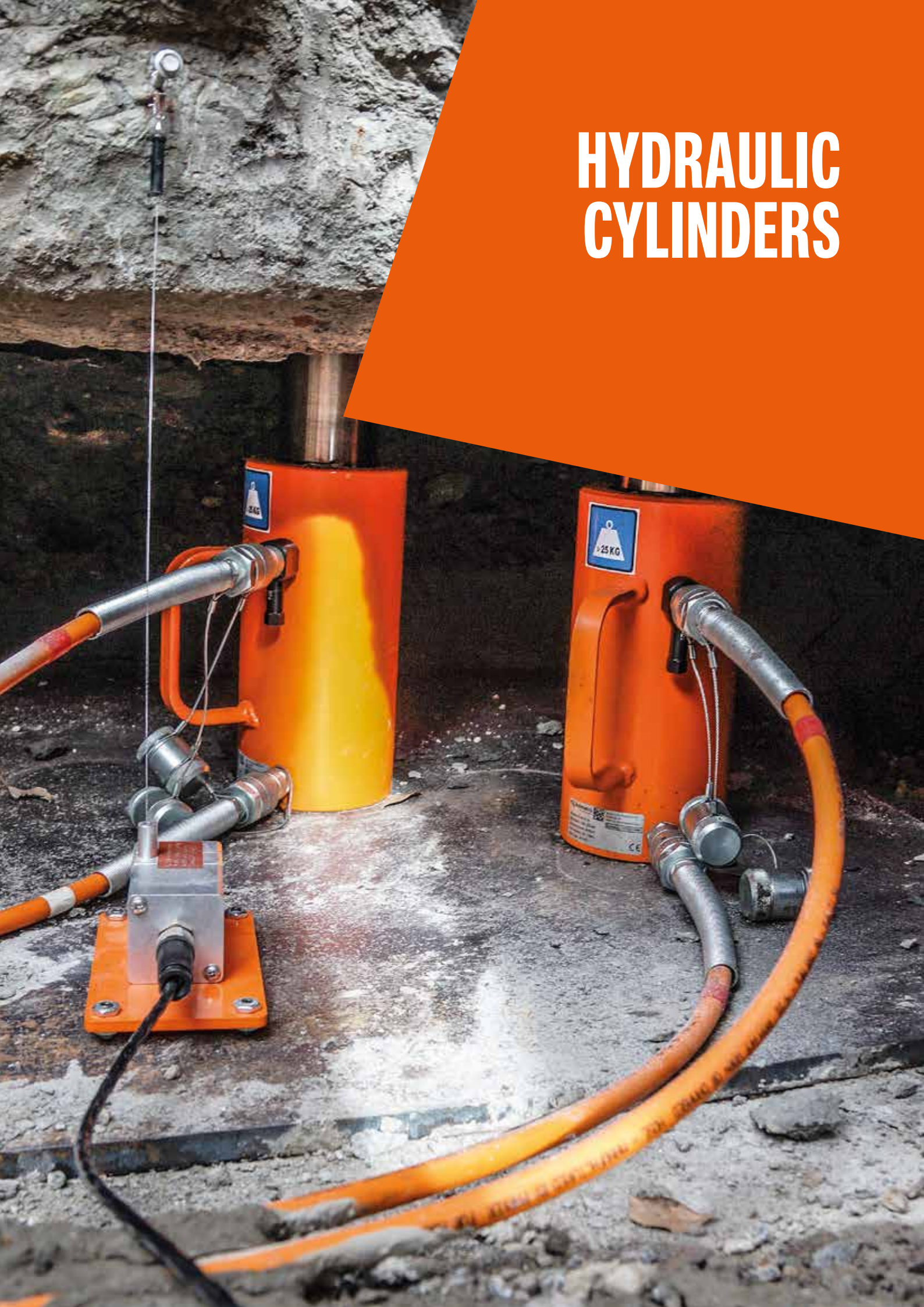
- Operating speed; with hand/foot pumps: the number of pump strokes required for fully pumping out the cylinder. With motor pumps: the number of minutes required for fully pumping out the cylinder.
- Oil volume of cylinders; with hand/foot pumps: the volume in cm³ required for achieving the full cylinder 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 plunger 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', for the output of your pump.

Important conversion factors

1	bar	=	1,10197	kg/cm²
1	bar	=	14,504	psi
1	bar	=	100	kPa
1	bar	=	0,1	MPa
1	bar	=	10	N/cm²
1	ton	=	9,80665	kN
1	ton	=	9806,65	N
1	ton	=	1000	kg
1	cm²	=	0,155	in²
1	cm³	=	0,06102	in³
1	cm³	=	0,001	l
1	kgf	=	9,8066	N
1	kg	=	2,2046	lb

1	kg/cm²	=	0,98066	bar
1	psi	=	0,0689	bar
1	kPa	=	0,01	bar
1	MPa	=	10	bar
1	N/cm²	=	0,1	bar
1	kN	=	0,1020	ton
1	N	=	0,0001	ton
1	kg	=	0,001	ton
1	in²	=	6,4516	cm²
1	in³	=	16,3881	cm³
1	l	=	1000	cm³
1	N	=	0,1020	kgf
1	lb	=	0,4536	kg

HYDRAULIC CYLINDERS



COMPOSING A HYDRAULIC CYLINDER SYSTEM

3-step plan

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**?
- 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 or hydraulic?
- Is lifting in **one or more steps** possible?

See 'Selection list cylinders'

Step 2
Select the proper pump

Considerations:
- **Select** from hand, foot, pneumatically, electrically or petrol driven pumps.
- **Hand / foot pumps**: with a double-acting cylinder (hydraulic return), mount a double-acting valve on your hand pump (only possible with PA *8 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?
- Select a **pump output** corresponding with the required operating speed.

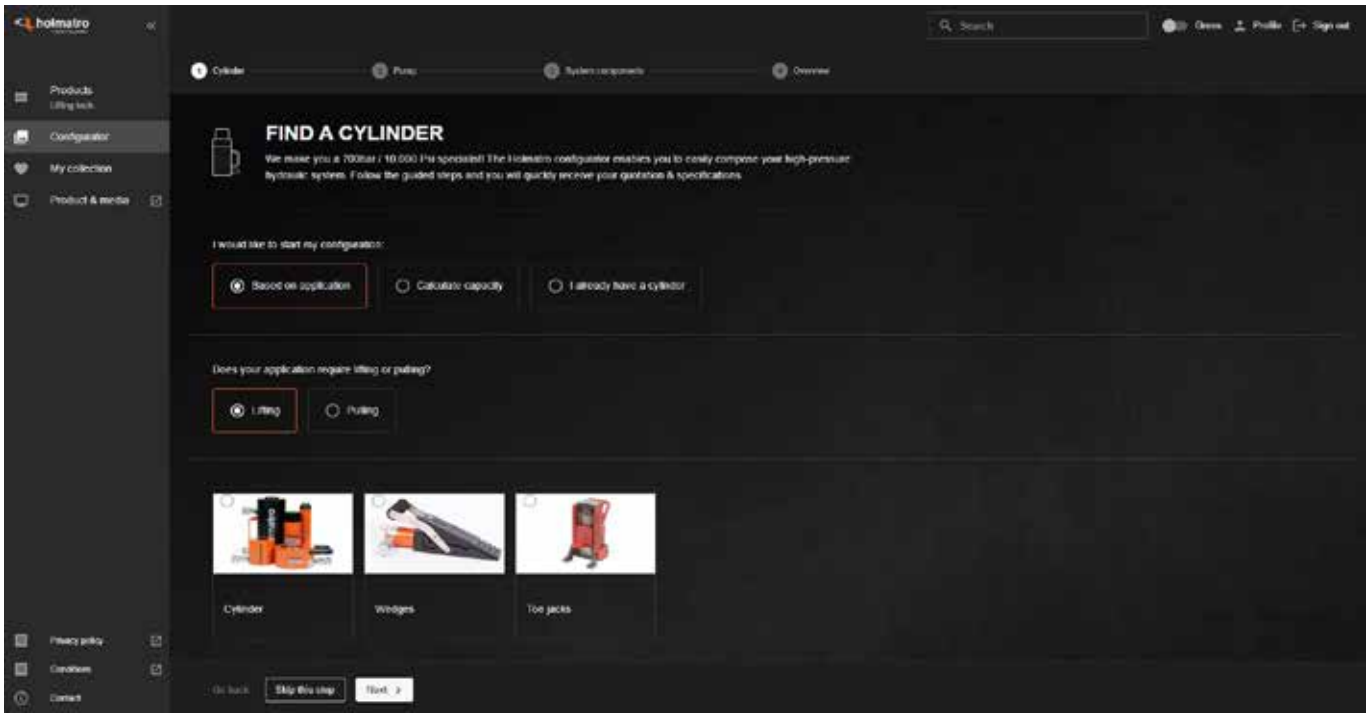
See section 'Hydraulic pumps'

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 **FlowPanel™** 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'

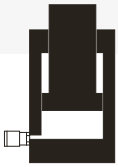
Prefer guided sales with our hydraulic system configurator?
Our myHolmatro portal is available for Partner support.



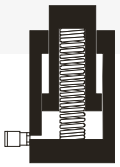
HOLMATRO CYLINDERS

With the Holmatro hydraulic cylinders, pumps and system components, we offer you flexibility and controlled power, from 5 to 300 tons. All Holmatro Industrial Tools are designed to generate safe & controlled power in various industrial applications, such as maintenance and repair, production, heavy lifting & transportation, shipbuilding, civil engineering, construction & installation, tank construction & repair, offshore wind installation & transport, construction & installation, mining and oil & gas.
To ensure safety and increase lifespan of the tools we support you with our Premium Service Program.

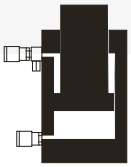
Our 700 Bar / 10.000 psi cylinders are available in 3 different return types:



Gravity return *(e.g. HJ 50 / G 30)*
Return of the plunger by means of the load or another external force.



Spring return *(e.g. HGC 25 / S 25)*
Return of the plunger by means of a spring integrated in the cylinder.



Hydraulic return *(e.g. HAC 50 / H 10)*
Return of the plunger by means of hydraulic pressure. A.k.a. 'double-acting' cylinders.

Cylinder types

With +55 years of experience, we are the specialist for high-pressure hydraulic cylinders 700 Bar / 10.000 psi. Our Holmatro Industrial Tools offer you a range of cylinders (jacks) for various applications, enabling lifting, lowering, pushing, pulling, pressing or spreading.

Holmatro Multi-Purpose (General) Cylinders (HGC) – spring return
The Holmatro Multi (General) Purpose Cylinders offer a wide range of capabilities with lifting capacities spanning from 5 to 100 tons and stroke lengths varying between 50 and 250 mm. These versatile cylinders are suitable for diverse applications, making them a reliable choice for lifting, pushing, pulling, and pressing tasks in various industrial settings. With convenient mounting options, installation is streamlined and secure. Additionally, models with lifting capacities up to 50 tons come equipped with an internal plunger thread, enhancing their usability and functionality.

Holmatro Flat Cylinders (HFC) – spring return
Cylinders with a very low construction height and a lifting capacity of 5 up to 100 tons. Specially designed to address challenges posed by limited insertion space. These cylinders boast a remarkably low construction height while providing a robust lifting capacity ranging from 5 to 100 tons.

Holmatro Short stroke Cylinders (HSC) – spring return
Our Holmatro Short Stroke Cylinders are specially designed for general lifting activities, offering a unique combination of key features to enhance performance and versatility. Their low construction height makes them an ideal choice for applications with restricted vertical space, ensuring easy insertion and operation.

Holmatro Aluminum Cylinders (HAC) – spring & hydraulic return

Holmatro Aluminum Cylinders (HAC) offer the best of both worlds, being over 50% lighter than their steel counterparts while retaining equal robustness. With a lifting capacity ranging from 20 to 150 tons and a stroke length between 50 and 150 mm, these cylinders are perfectly suited for lifting activities that require frequent cylinder movement, where their low weight becomes essential. Holmatro Aluminum Cylinders provide the ideal solution for achieving optimal performance and efficiency in various industrial lifting operations.

Holmatro Aluminum Hollow plunger Cylinders (HAHC) – spring & hydraulic return

Holmatro Aluminum Hollow Plunger Cylinders (HAHC) offer versatility with a unique hollow plunger design that facilitates efficient pushing and pulling operations. Specifically developed for pulling tasks, these cylinders work seamlessly with pulling rods, enhancing their pulling capabilities. Up to 60% ligther compared to the steel variant, making them the ideal choice for optimizing productivity and efficiency in various industrial operations.

Holmatro Hollow plunger Cylinders (HHJ) – gravity, spring & hydraulic return

Cylinders with a hollow plunger for both pushing and pulling, with a capacity of 5 up to 110 tons and a stroke length varying between 25 and 150 mm. The unique hollow plunger design that facilitates efficient pushing and pulling operations. Specifically developed for pulling tasks, these cylinders work seamlessly with pulling rods, enhancing their pulling capabilities.

Holmatro High tonnage Cylinders – (HJ) gravity & hydraulic return

Holmatro High Tonnage Cylinders (Jacks) are powerful hydraulic tools tailored for heavy lifting activities in industrial settings. With a lifting capacity ranging from 50 to 300 tons and an adjustable stroke length between 50 and 300 mm, these cylinders deliver substantial power and strength to easily handle demanding lifting tasks.

Holmatro Locknut Cylinders – (HLC) gravity & hydraulic return

With a lifting capacity of 50 up to 250 tons and a stroke length between 50 and 300 mm, Holmatro Locknut Cylinders (HLC) offer a powerful hydraulic solution with mechanical load locking capabilities, ensuring secure and sustained load support for various industrial applications. They are designed with a smart return-plunger, resulting in minimal height difference compared to the gravity return locknut cylinders, ensuring efficient and space-saving operations. Holmatro Locknut Cylinders (HLC) are your go-to solution for demanding industrial lifting tasks, guaranteeing exceptional performance, reliability, and safe load support through their mechanical load locking feature.

Holmatro Telescopic Cylinders (HFJ) – gravity return

Holmatro Telescopic Cylinders present an exceptionally low construction height and boast two different capacities and stroke lengths within a single unit, providing versatility and adaptability for various lifting activities.

Holmatro Pulling Cylinders (HPJ) – spring return

Holmatro Pulling Cylinders are specialized hydraulic tools designed for efficient pulling tasks. With a pulling capacity ranging from 11 to 60 tons and a stroke length of 150 mm, these cylinders provide the necessary power and extension for pulling heavy objects towards each other or performing precise leveling operations.

CYLINDER SELECTION LIST

capacity	stroke		closed height		Ø hole in plunger		return	type	material	model	art no	page
tons	mm	in	mm	in	mm	in						
5	15	0,6	44	1,7			spring	flat	steel	**HFC 5 S 1.5**	100.112.291	23
	25	1	87	3,4	17	0,7	spring	hollow plunger	steel	**HHJ 5 S 2.5**	100.111.002	34
	50	2	130	5,1			spring	multi purpose	steel	**HGC 5 S 5**	100.112.212	17
	75	3	155	6,1			spring	multi purpose	steel	**HGC 5 S 7.5**	100.112.213	17
	125	4,9	206	8,1			spring	multi purpose	steel	**HGC 5 S 12.5**	100.112.215	17
	175	6,9	268	10,6			spring	multi purpose	steel	**HGC 5 S 17.5**	100.112.216	17
10	15	0,6	46	1,8			spring	flat	steel	**HFC 10 S 1.5**	100.112.292	23
	21/ 20		49	1,9			gravity	telescopic	steel	**HFJ 10/30 G 4**	100.111.005	45
	50	2	100	3,9			spring	short stroke	steel	**HSC 10 S 5**	100.112.300	25
	50	2	122	4,8			spring	multi purpose	steel	**HGC 10 S 5**	100.112.219	17
	100	3,9	172	6,8			spring	multi purpose	steel	**HGC 10 S 10**	100.112.220	17
	150	5,9	240	9,4			spring	multi purpose	steel	**HGC 10 S 15**	100.112.221	18
	200	7,9	290	11,4			spring	multi purpose	steel	**HGC 10 S 20**	100.112.222	18
	250	9,8	340	13,4			spring	multi purpose	steel	**HGC 10 S 25**	100.112.223	18
12	50	2	156	6,1	21	0,8	spring	hollow plunger	steel	**HHJ 12 S 5**	100.111.021	34
15	50	2	148	5,8			spring	multi purpose	steel	**HGC 15 S 5**	100.112.228	18
	100	3,9	198	7,8			spring	multi purpose	steel	**HGC 15 S 10**	100.112.229	18
	150	5,9	265	10,4			spring	multi purpose	steel	**HGC 15 S 15**	100.112.230	18
	200	7,9	315	12,4			spring	multi purpose	steel	**HGC 15 S 20**	100.112.231	18
	250	9,8	365	14,4			spring	multi purpose	steel	**HGC 15 S 25**	100.112.232	18
17	50	2	192	7,6	27	1,1	spring	hollow plunger	steel	**HHJ 17 S 5**	100.112.023	34
20	15	0,6	55	2,2			spring	flat	steel	**HFC 20 S 1.5**	100.112.293	23
	50	2	103	4,1			spring	short stroke	steel	**HSC 20 S 5**	100.112.301	25
	50	2	182	7	27	1,1	spring	hollow plunger	steel	**HHJ 20 S 5**	100.112.033	34
	50	2	170	6,7	27	1,1	spring	hollow plunger	aluminum	**HAHC 20 S 5**	100.112.366	30
	56/ 55		140				gravity	telescopic	steel	**HJ 20/50 G 11**	100.112.103	45
	50	2	164	6,5			spring	standard	aluminum	**HAC 20 S 5**	100.112.267	26
	100	3,9	214	8,4			spring	standard	aluminum	**HAC 20 S 10**	100.112.265	26
	150	5,9	264	10,4			spring	standard	aluminum	**HAC 20 S 15**	100.112.261	26
	150	5,9	389	15,3	27	1,1	spring	hollow plunger	steel	**HHJ 20 S 15**	100.112.030	34
	150	5,9	310	12,2	27	1,1	spring	hollow plunger	aluminum	**HAHC 20 S 15**	100.112.368	30
	250	9,8	429	16,9	27	1,1	spring	hollow plunger	aluminum	**HAHC 20 S 25**	100.112.370	30
25	50	2	165	6,5			spring	multi purpose	steel	**HGC 25 S 5**	100.112.237	18
	100	3,9	215	8,5			spring	multi purpose	steel	**HGC 25 S 10**	100.112.238	18
	150	5,9	265	10,4			spring	multi purpose	steel	**HGC 25 S 15**	100.112.239	18
	200	7,9	315	12,4			spring	multi purpose	steel	**HGC 25 S 20**	100.112.240	18
	250	9,8	374	14,7			spring	multi purpose	steel	**HGC 25 S 25**	100.112.241	19
30	15	0,6	60	2,4			spring	flat	steel	**HFC 30 S 1.5**	100.112.295	23
	50	2	106	4,2			spring	short stroke	steel	**HSC 30 S 5**	100.112.302	25
	50	2	182	7,2			spring	standard	aluminum	**HAC 30 S 5**	100.112.269	26
	50	2	197	7,8			hydraulic	standard	aluminum	**HAC 30 H 5**	100.122.086	28
	50	2	120	4,7	33	1,3	gravity	hollow plunger	steel	**HHJ 30 G 5**	100.111.053	37
	50	2	185	7,3	34	1,3	spring	hollow plunger	aluminum	**HAHC 30 S 5**	100.112.371	31
	75	3	226	8,9	33	1,3	spring	hollow plunger	steel	**HHJ 30 S 7.5**	100.112.055	35
	100	3,9	232	9,1			spring	standard	aluminum	**HAC 30 S 10**	100.112.268	26
	100	3,9	247	9,7			hydraulic	standard	aluminum	**HAC 30 H 10**	100.122.085	28
	150	5,9	282	11,1			spring	standard	aluminum	**HAC 30 S 15**	100.112.262	26
	150	5,9	297	11,7			hydraulic	standard	aluminum	**HAC 30 H 15**	100.122.080	28
30	150	5,9	285	11,2	33	1,3	hydraulic	hollow plunger	steel	**HHJ 30 H 15**	100.122.045	36
	150	5,9	362	14,3	33	1,3	spring	hollow plunger	steel	**HHJ 30 S 15**	100.112.034	35
	150	5,9	325	12,8	34	1,3	spring	hollow plunger	aluminum	**HAHC 30 S 15**	100.112.373	31
	250	9,8	450	17,7	34	1,3	spring	hollow plunger	aluminum	**HAHC 30 S 25**	100.112.375	31
35	50	2	184	7,2			spring	multi purpose	steel	**HGC 35 S 5**	100.112.245	19
	100	3,9	234	9,2			spring	multi purpose	steel	**HGC 35 S 10**	100.112.246	19
	150	5,9	284	11,2			spring	multi purpose	steel	**HGC 35 S 15**	100.112.247	19
	200	7,9	334	13,2			spring	multi purpose	steel	**HGC 35 S 20**	100.112.248	19

capacity	stroke		closed height		Ø hole in plunger		return	type	material	model	art no	page
tons	mm	in	mm	in	mm	in						
45	150	5,9	388	15,3	39	1,5	spring	hollow plunger	steel	**HHJ 45 S 15**	100.112.061	35
50	15	0,6	71	2,8			spring	flat	steel	**HFC 50 S 1.5**	100.112.296	24
	50	2	117	4,6			spring	short stroke	steel	**HSC 50 S 5**	100.112.303	25
	50	2	208	8,2			hydraulic	lock nut	steel	**HLC 50 H 5**	100.122.123	43
	50	2	176	6,9			spring	multi purpose	steel	**HGC 50 S 5**	100.112.249	19
	50	2	183	7,2			spring	standard	aluminum	**HAC 50 S 5**	100.112.271	27
	50	2	201	7,9			hydraulic	standard	aluminum	**HAC 50 H 5**	100.122.095	28
	60	2,4	142	5,6			gravity	high tonnage	steel	**HJ 50 G 6**	100.112.073	38
	100	3,9	226	8,9			spring	multi purpose	steel	**HGC 50 S 10**	100.112.250	19
	100	3,9	233	9,2			spring	standard	aluminum	**HAC 50 S 10**	100.112.270	27
	100	3,9	251	9,9			hydraulic	standard	aluminum	**HAC 50 H 10**	100.122.108	28
	150	5,9	276	10,9			spring	multi purpose	steel	**HGC 50 S 15**	100.112.251	19
	150	5,9	282	11,1			gravity	high tonnage	steel	**HJ 50 G 15**	100.112.035	38
	150	5,9	282	11,1			hydraulic	high tonnage	steel	**HJ 50 H 15**	100.122.002	40
	150	5,9	283	11,1			spring	standard	aluminum	**HAC 50 S 15**	100.112.263	27
	150	5,9	301	11,9			hydraulic	standard	aluminum	**HAC 50 H 15**	100.122.097	28
	150		307				gravity	lock nut	steel	**HJ 50 G 15 SN**	100.082.001	42
	150	5,9	327	12,9			hydraulic	lock nut	steel	**HLC 50 H 15**	100.122.124	43
	200	7,9	236	12,8			spring	multi purpose	steel	**HGC 50 S 20**	100.112.252	19
	250	9,8	376	14,8			spring	multi purpose	steel	**HGC 50 S 25**	100.112.253	19
	300	11,8	463	18,2			gravity	high tonnage	steel	**HJ 50 G 30**	100.112.036	38
	300	11,8	463	18,2			hydraulic	high tonnage	steel	**HJ 50 H 30**	100.122.022	40
	300	11,8	498	19,6			hydraulic	lock nut	steel	**HLC 50 H 30**	100.122.125	43
60	50	2	243	9,6	56	2,2	spring	hollow plunger	aluminum	**HAHC 60 S 5**	100.112.376	31
	75	3	272	10,7	45	1,8	spring	hollow plunger	steel	**HHJ 60 S 7.5**	100.112.081	35
	150	5,9	363	14,3	56	2,2	spring	hollow plunger	steel	**HAHC 60 S 15**	100.112.378	31
	200	7,9	334	13,2	45	1,8	hydraulic	hollow plunger	aluminum	**HHJ 60 H 20**	100.122.031	36
	250	9,8	518	20,4	56	2,2	spring	hollow plunger	aluminum	**HAHC 60 S 25**	100.112.380	31
75	15	0,6	80	3,1			spring	flat	steel	**HFC 75 S 1.5**	100.112.297	24
	150	5,9	285	11,2			spring	multi purpose	steel	**HGC 75 S 15**	100.112.255	20
	350	13,8	485	19,1			spring	multi purpose	steel	**HGC 75 S 35**	100.112.256	20
100	15	0,6	90	3,5			spring	flat	steel	**HFC 100 S 1.5**	100.112.298	24
	50	2	141	5,6			spring	short stroke	steel	**HSC 100 S 5**	100.112.304	25
	50	2	170	6,7			hydraulic	high tonnage	steel	**HJ 100 H 5**	100.122.009	40
	50	2	218	8,6			spring	multi purpose	steel	**HGC 100 S 5**	100.112.257	20
	50	2	225	8,9			spring	standard	aluminum	**HAC 100 S 5**	100.112.273	27
	50	2	246	9,7			hydraulic	standard	aluminum	**HAC 100 H 5**	100.122.094	29
	50	2	248	9,8			hydraulic	lock nut	steel	**HLC 100 H 5**	100.122.126	43
	50	2	229	9	80	3,1	hydraulic	hollow plunger	aluminum	**HAHC 100 H 5**	100.112.381	32
	60	2,4	157	6,2			gravity	high tonnage	steel	**HJ 100 G 6**	100.112.093	38
	100	3,9	268	10,6			spring	multi purpose	steel	**HGC 100 S 10**	100.112.258	20
	100	3,9	275	10,8			spring	standard	aluminum	**HAC 100 S 10**	100.112.272	27
	100	3,9	296	11,7			hydraulic	standard	aluminum	**HAC 100 H 10**	100.122.109	29
	150	5,9	309	12,2			gravity	high tonnage	steel	**HJ 100 G 15**	100.112.039	38
	150	5,9	309	12,2			hydraulic	high tonnage	steel	**HJ 100 H 15**	100.122.052	40
	150	5,9	318	12,5			spring	multi purpose	steel	**HGC 100 S 15**	100.112.259	20
	150		323				gravity	lock nut	steel	**HJ 100 G 15 SN**	100.082.000	42
	150	5,9	325	12,8			spring	standard	aluminum	**HAC 100 S 15**	100.112.264	27
	150	5,9	346	13,6			hydraulic	standard	aluminum	**HAC 100 H 15**	100.122.107	29
	150	5,9	370	14,6			hydraulic	lock nut	aluminum	**HLC 100 H 15**	100.122.127	43
	150	5,9	329	13	80	3,1	hydraulic	hollow plunger	aluminum	**HAHC 100 H 15**	100.112.383	32
	200	7,9	395	15,6	54	2,1	hydraulic	hollow plunger	steel	**HHJ 100 H 20**	100.122.053	36
	250	9,8	418	16,5			spring	multi purpose	steel	**HGC 100 S 25**	100.112.260	20
	250	9,8	429	16,9	80	3,1	hydraulic	hollow plunger	aluminum	**HAHC 100 H 25**	100.112.385	32

CYLINDER SELECTION LIST

capacity	stroke		closed height		Ø hole in plunger		return	type	material	model	art no	page
tons	mm	in	mm	in	mm	in						
	300	11,8	497	19,6			gravity	high tonnage	steel	**HJ 100 G 30**	100.112.040	38
	300	11,8	497	19,6			hydraulic	high tonnage	steel	**HJ 100 H 30**	100.122.054	40
	300	11,8	546	21,5			hydraulic	lock nut	steel	**HLC 100 H 30**	100.122.128	43
110	50	3	315	12,4	80	3,1	spring	hollow plunger	steel	**HHJ 110 S 7.5**	100.112.101	35
150	50	2	248	9,8			hydraulic	standard	aluminum	**HAC 150 H 5**	100.122.075	29
	50	2	275	10,8			hydraulic	lock nut	steel	**HLC 150 H 5**	100.122.129	44
	50	2	247	9,7	80	3,1	hydraulic	hollow plunger	aluminum	**HAHC 150 H 5**	100.112.386	33
	100	3,9	298	11,7			hydraulic	standard	aluminum	**HAC 150 H 10**	100.122.074	29
	150	5,9	317	12,5			gravity	high tonnage	steel	**HJ 150 G 15**	100.112.046	39
	150	5,9	317	12,5			hydraulic	high tonnage	steel	**HJ 150 H 15**	100.122.061	41
	150	5,9	348	13,7			hydraulic	standard	aluminum	**HAC 150 H 15**	100.122.073	29
	150		363				gravity	lock nut	steel	**HJ 150 G 15 SN**	100.112.136	42
	150	5,9	400	15,7			hydraulic	lock nut	steel	**HLC 150 H 15**	100.122.130	43
	150	5,9	347	13,7	80	3,1	spring	hollow plunger	aluminum	**HAHC 150 H 15**	100.112.388	33
	250	9,8	447	17,6	80	3,1	hydraulic	hollow plunger	aluminum	**HAHC 150 H 25**	100.112.390	33
	300	11,8	502	19,8			gravity	high tonnage	steel	**HJ 150 G 30**	100.112.047	39
	300	11,8	502	19,8			hydraulic	high tonnage	steel	**HJ 150 H 30**	100.122.062	41
	300	11,8	580	22,8			hydraulic	lock nut	steel	**HLC 150 H 30**	100.122.131	44
200	150	5,9	327	12,9			gravity	high tonnage	steel	**HJ 200 G 15**	100.112.048	39
	150	5,9	327	12,9			hydraulic	high tonnage	steel	**HJ 200 H 15**	100.122.071	41
	300	11,8	507	20			gravity	high tonnage	steel	**HJ 200 G 30**	100.112.049	39
	300	11,8	507	20			hydraulic	high tonnage	steel	**HJ 200 H 30**	100.122.072	41
250	50	2	317	12,5			hydraulic	lock nut	steel	**HLC 250 H 5**	100.122.132	44
	150		385				gravity	lock nut	steel	**HJ 250 G 15 SN**	100.112.083	42
	150	5,9	444	17,5			hydraulic	lock nut	steel	**HLC 250 H 15**	100.122.133	44
	300	11,8	625	24,6			hydraulic	lock nut	steel	**HLC 250 H 30**	100.122.134	44
300	150	5,9	382	15			gravity	high tonnage	steel	**HJ 300 G 15**	100.112.050	39
	150	5,9	382	15			hydraulic	high tonnage	steel	**HJ 300 H 15**	100.122.084	41
	300	11,8	547	21,5			gravity	high tonnage	steel	**HJ 300 G 30**	100.112.099	39
	300	11,8	547	21,5			hydraulic	high tonnage	steel	**HJ 300 H 30**	100.122.083	41

MULTI-PURPOSE CYLINDERS

spring return

Features & benefits

- Duplex power coating makes the plunger corrosion-resistant; the hard chrome top layer protects the plunger against scratches and prevents the adhesion of objects such as welding spatters (**Image 1**)
- Duo power ring; a combination of a superior seal and an extremely strong composite bearing for a longer life span (**Image 2**)
- Thread protector protects the thread won the cylinder housing (**Image 3**)
- XL saddle+; QPQ saddle protects the plunger against corrosion and limits undesired eccentric loads (**Image 4**)

Optional

- Tilting saddle

Standard supplied with

- Collar thread and base mounting holes
- Internal plunger thread on all models to 50 tons
- High flow female coupler A118
- Flat saddle

specifications		HGC 5 S 5	HGC 5 S 7.5	HGC 5 S 12.5	HGC 5 S 17.5	HGC 10 S 5	HGC 10 S 10
art no		100.112.212	100.112.213	100.112.215	100.112.216	100.112.219	100.112.220
max. working pressure	bar/Mpa	720/72	720/72	720/72	720/72	720/72	720/72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**5**	**5**	**5**	**5**	**10**	**10**
stroke	**mm**	**50**	**75**	**125**	**175**	**50**	**100**
	in	**2,0**	**3,0**	**4,9**	**6,9**	**2,0**	**3,9**
closed height	**mm**	**130**	**155**	**206**	**268**	**122**	**172**
	in	**5,1**	**6,1**	**8,1**	**10,6**	**4,8**	**6,8**
diameter	mm	40	40	40	40	60	60
	in	1,6	1,6	1,6	1,6	2,4	2,4
capacity	kN/t	51/5.2	51/5.2	51/5.2	51/5.2	100/10.2	100/10.2
effective pressure area	cm^2	7.1	7.1	7.1	7.1	13.9	13.9
	in^2	1,1	1,1	1,1	1,1	2,2	2,2
required oil content (effective)	cc	35	53	88	124	69	139
	oz	1,2	1,8	3,0	4,2	2,3	4,7
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	1.3	1.5	1.8	2.3	2.5	3.4
	lb	2,9	3,3	4,0	5,1	5,5	7,5

specifications		HGC 10 S 15	HGC 10 S 20	HGC 10 S 25	HGC 15 S 5	HGC 15 S 10	HGC 15 S 15
art no		100.112.221	100.112.222	100.112.223	100.112.228	100.112.229	100.112.230
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**10**	**10**	**10**	**15**	**15**	**15**
stroke	**mm**	**150**	**200**	**250**	**50**	**100**	**150**
	in	**5,9**	**7,9**	**9,8**	**2,0**	**3,9**	**5,9**
closed height	**mm**	**240**	**290**	**340**	**148**	**198**	**265**
	in	**9,4**	**11,4**	**13,4**	**5,8**	**7,8**	**10,4**
diameter	mm	60	60	60	70	70	70
	in	2,4	2,4	2,4	2,8	2,8	2,8
capacity	kN/t	100 / 10.2	100 / 10.2	100 / 10.2	171 / 17.4	171 / 17.4	171 / 17.4
effective pressure area	cm^2	13.9	13.9	13.9	23.8	23.8	23.8
	in^2	2,2	2,2	2,2	3,7	3,7	3,7
required oil content (effective)	cc	208	277	346	119	238	356
	oz	7,0	9,4	11,7	4,0	8,0	12,0
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	4.6	5.5	6.4	3.9	4.9	6.4
	lb	10,1	12,1	14,1	8,6	10,8	14,1

specifications		HGC 15 S 20	HGC 15 S 25	HGC 25 S 5	HGC 25 S 10	HGC 25 S 15	HGC 25 S 20
art no		100.112.231	100.112.232	100.112.237	100.112.238	100.112.239	100.112.240
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**15**	**15**	**25**	**25**	**25**	**25**
stroke	**mm**	**200**	**250**	**50**	**100**	**150**	**200**
	in	**7,9**	**9,8**	**2,0**	**3,9**	**5,9**	**7,9**
closed height	**mm**	**315**	**365**	**165**	**215**	**265**	**315**
	in	**12,4**	**14,4**	**6,5**	**8,5**	**10,4**	**12,4**
diameter	mm	70	70	85	85	85	85
	in	2,8	2,8	3,3	3,3	3,3	3,3
capacity	kN/t	171 / 17.4	171 / 17.4	239 / 24.4	239 / 24.4	239 / 24.4	239 / 24.4
effective pressure area	cm^2	23.8	23.8	33.2	33.2	33.2	33.2
	in^2	3,7	3,7	5,1	5,1	5,1	5,1
required oil content (effective)	cc	475	594	166	332	498	664
	oz	16,1	20,1	5,6	11,2	16,8	22,5
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	7.4	8.4	6.4	8.0	9.7	11.3
	lb	16,3	18,5	14,1	17,6	21,4	24,9

specifications		HGC 25 S 25	HGC 35 S 5	HGC 35 S 10	HGC 35 S 15	HGC 35 S 20
art no		100.112.241	100.112.245	100.112.246	100.112.247	100.112.248
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**25**	**35**	**35**	**35**	**35**
stroke	**mm**	**250**	**50**	**100**	**150**	**200**
	in	**9,8**	**2,0**	**3,9**	**5,9**	**7,9**
closed height	**mm**	**374**	**184**	**234**	**284**	**334**
	in	**14,7**	**7,2**	**9,2**	**11,2**	**13,2**
diameter	mm	85	100	100	100	100
	in	3,3	3,9	3,9	3,9	3,9
capacity	kN/t	239 / 24.4	362 / 36.9	362 / 36.9	362 / 36.9	362 / 36.9
effective pressure area	cm^2	33.2	50.3	50.3	50.3	50.3
	in^2	5,1	7,8	7,8	7,8	7,8
required oil content (effective)	cc	830	251	503	754	1005
	oz	28,1	8,5	17	25,5	34,0
connection		A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single
return type		spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel
weight, ready for use	kg	13.3	9.3	11.4	13.5	15.5
	lb	29,3	20,5	25,1	29,8	34,2

specifications		HGC 50 S 5	HGC 50 S 10	HGC 50 S 15	HGC 50 S 20	HGC 50 S 25
art no		100.112.249	100.112.250	100.112.251	100.112.252	100.112.253
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**50**	**50**	**50**	**50**	**50**
stroke	**mm**	**50**	**100**	**150**	**200**	**250**
	in	**2**	**3,9**	**5,9**	**7,9**	**9,8**
closed height	**mm**	**176**	**226**	**276**	**326**	**376**
	in	**6,9**	**8,9**	**10,9**	**12,8**	**14,8**
diameter	mm	127	127	127	127	127
	in	5,0	5,0	5,0	5,0	5,0
capacity	kN/t	510 / 52	510 / 52	510 / 52	510 / 52	510 / 52
effective pressure area	cm^2	70.9	70.9	70.9	70.9	70.9
	in^2	11,0	11,0	11,0	11,0	11,0
required oil content (effective)	cc	354	709	1063	1418	1772
	oz	12,0	24,0	35,9	47,9	59,9
connection		A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single
return type		spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel
weight, ready for use	kg	15.1	18.9	22.6	26.4	30.1
	lb	33,3	41,7	49,8	58,2	66,4

specifications		HGC 75 S 15	HGC 75 S 35	HGC 100 S 5	HGC 100 S 10	HGC 100 S 15	HGC 100 S 25
art no		100.112.255	100.112.256	100.112.257	100.112.258	100.112.259	100.112.260
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**75**	**75**	**100**	**100**	**100**	**100**
stroke	**mm**	**150**	**350**	**50**	**100**	**150**	**250**
	in	**5,9**	**13,8**	**2,0**	**3,9**	**5,9**	**9,8**
closed height	**mm**	**285**	**485**	**218**	**268**	**318**	**418**
	in	**11,2**	**19,1**	**8,6**	**10,6**	**12,5**	**16,5**
diameter	mm	147	147	175	175	175	175
	in	5,8	5,8	6,9	6,9	6,9	6,9
capacity	kN/t	748 / 76.3	748 / 76.3	1031 / 105.1	1031 / 105.1	1031 / 105.1	1031 / 105.1
effective pressure area	cm^2	103.9	103.9	143.1	143.1	143.1	143.1
	in^2	16,1	16,1	22,2	22,2	22,2	22,2
required oil content (effective)	cc	1558	3635	716	1431	2147	3579
	oz	52,7	122,9	24,2	48,4	72,6	121,0
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		multi purpose	multi purpose	multi purpose	multi purpose	multi purpose	multi purpose
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	30.9	50.0	35.3	42.2	50.0	64.1
	lb	68,1	110,2	77,8	93,0	110,1	141,3

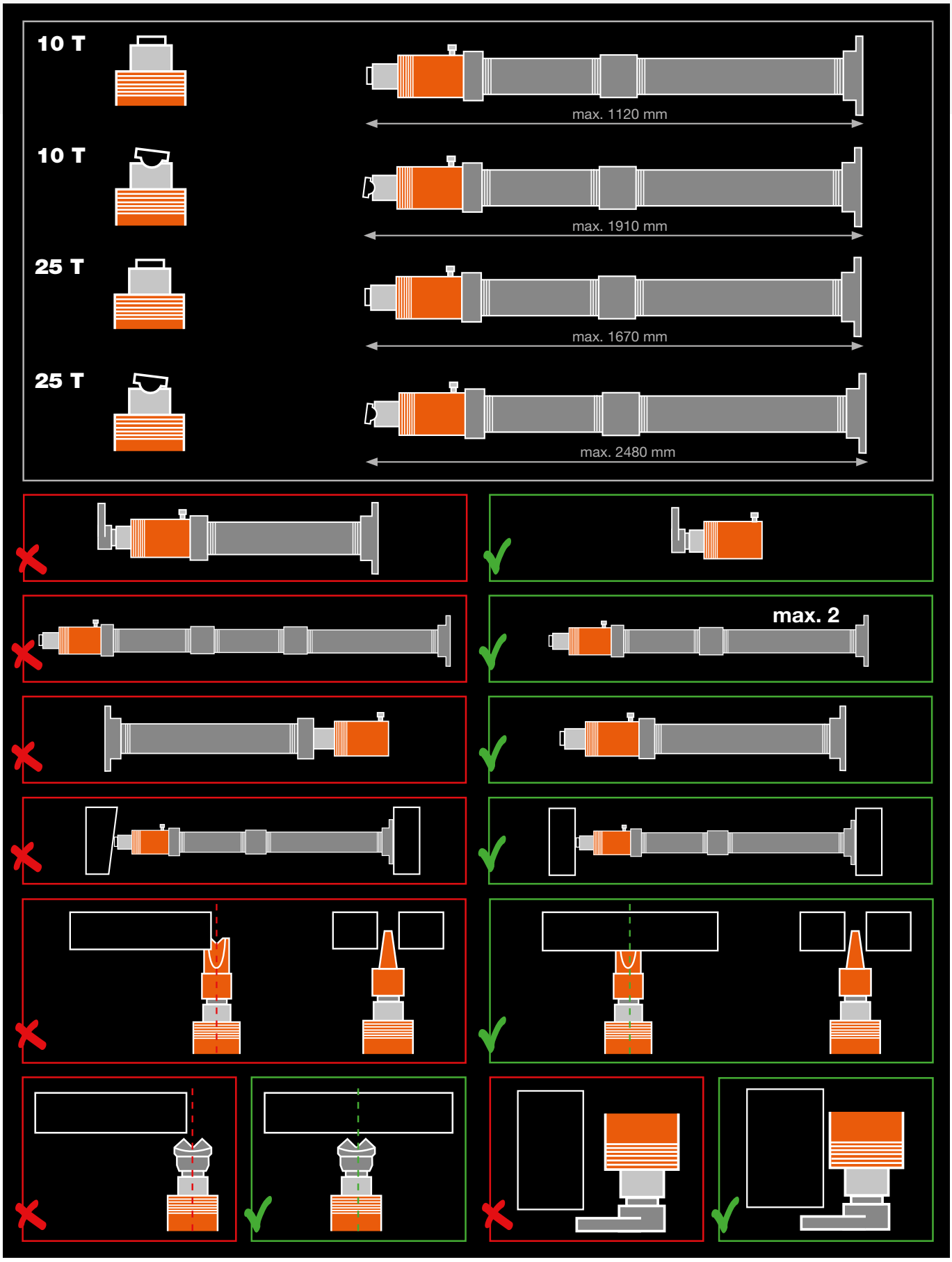
accessories cylinders		max. pressure	5 ton	10 ton	15 ton	25 ton	35 ton	50 ton	75 ton	100 ton
		bar / Mpa								
	tilting saddle	720 / 72	100.182.151	100.182.152	100.182.153	100.182.154	100.182.155	100.182.156	100.182.160	100.182.150
	aluminum groundplate	720 / 72	100.003.004	100.003.004	100.003.005	100.003.005				
	welding flange	720 / 72	100.182.189	100.182.190		100.182.193		100.182.194		
			100.181.419	100.181.522		100.181.572		100.181.591		
	bottom plug	720 / 72		100.181.519		100.181.569				
	adapter on plunger	360 / 36		100.002.964		100.002.965				
	cross head	360 / 36		100.002.966						
	cross head	360 / 36				100.002.967				
	extension tube 125 mm	360 / 36		100.002.984						
	extension tube 250 mm	360 / 36		100.002.985		100.002.986				
	extension tube 500 mm	360 / 36		100.002.987		100.002.988				
	extension tube 750 mm	360 / 36		100.002.989		100.002.990				
	base plate	360 / 36		100.002.978		100.002.979				
	wedge tip	360 / 36		100.002.968						
	connection nipple	360 / 36		100.002.982		100.002.983				
	adapter under cylinderbody	360 / 36		100.002.969		100.002.970				
	socket	360 / 36		100.002.980		100.002.981				
	plunger toe	144 / 14.4		100.002.992						
	cylinderbody toe	144 / 14.4		100.002.992						
				100.002.993						

NPT thread 60°		NPT 1/8–27	NPT 1/4–18	NPT 3/8–18	NPT 1/2–14	NPT 3/4–14	NPT 1–11 1/2	NPT 1 1/4-11 1/2	NPT 1 1/2-11 1/2	NPT 2-11 1/2	NPT 2 1/2-8
Ø D		10	14	17	21	27	33	42	48	60	73
depth min.	mm	4,5	6	6,5	8,5	9	10,5	11	11	12	17,5
depth max.	mm	6,5	10	10	13,5	13,5	17	18	18	19	28,5

The HGC accessories allow you to enhance the capabilities of your 10/15/25 ton HGC cylinders and are specially designed to ensure safety, stability, increased height, and improved gripping, enabling you to adapt the cylinders for a wide variety of applications.

! Make sure to consult the user manual before fitting cylinder accessories to the cylinders.

! The maximum working pressure and total construction length is restricted when applying cylinder accessories, as per the overview.


10 T
max. 1120 mm
10 T
max. 1910 mm
25 T
max. 1670 mm
25 T
max. 2480 mm
max. 2

FLAT CYLINDERS
spring return

Features & benefits

- Compact, flat version, efficient in case of limited insertion space
- Stroke of 15 mm / 0,6 in on all models

Standard supplied with

- Standard provided with fixing holes for easy assembly
- Dirt scraper ring
  - Protects against pollution
  - Increases the life span
- Superior seal for an excellent static and dynamic sealing
- Splined plunger, no saddle needed
- High flow female coupler A118

specifications		HFC 5 S 1.5	HFC 10 S 1.5	HFC 20 S 1.5	HFC 30 S 1.5
art no		100.112.291	100.112.292	100.112.293	100.112.295
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
tonnage	**t**	**5**	**10**	**20**	**30**
stroke	**mm**	**15**	**15**	**15**	**15**
	in	**0,6**	**0,6**	**0,6**	**0,6**
closed height	**mm**	**44**	**46**	**55**	**60**
	in	**1,7**	**1,8**	**2,2**	**2,4**
diameter	mm	60	85	100	116
	in	2,4	3,3	3,9	4,6
capacity	kN/t	50.9 / 5.2	99.8 / 10.2	203.6 / 20.8	318.1 / 32.4
effective pressure area	cm^2	7.1	13.9	28.3	44.2
	in^2	1,1	2,2	4,4	6,9
required oil content (effective)	cc	11	28.8	42.4	66.3
	oz	0,4	1,0	1,4	2,2
connection		A 118	A 118	A 118	A 118
cylinder type		flat	flat	flat	flat
acting type		single	single	single	single
return type		spring	spring	spring	spring
material		steel	steel	steel	steel
weight, ready for use	kg	1.0	1.6	2.9	4.2
	lb	1,0	3,5	6,4	9,3

specifications		HFC 50 S 1.5	HFC 75 S 1.5	HFC 100 S 1.5
art no		100.112.296	100.112.297	100.112.298
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**50**	**75**	**100**
stroke	**mm**	**15**	**15**	**15**
	in	**0,6**	**0,6**	**0,6**
closed height	**mm**	**71**	**80**	**90**
	in	**2,8**	**3,1**	**3,5**
diameter	mm	140	165	190
	in	5,5	6,5	7,5
capacity	kN/t	510.4 / 52	747.9 / 76.3	1030.5 / 105.1
effective pressure area	cm^2	70.9	103.9	143.1
	in^2	11,0	16,1	22,2
required oil content (effective)	cc	106	156	215
	oz	3,6	5,3	7,3
connection		A 118	A 118	A 118
cylinder type		flat	flat	flat
acting type		single	single	single
return type		spring	spring	spring
material		steel	steel	steel
weight, ready for use	kg	7.0	11.0	18.1
	lb	15,4	24,3	39,9

SHORT STROKE CYLINDERS
spring return

Features & benefits

- Compact version, efficient in case of limited insertion space
- Stroke of 50 mm / 2 in on all models

Standard supplied with

- Dirt scraper ring
  - Protects against pollution
  - Increases the life span
- Superior seal for an excellent static and dynamic sealing
- Splined plunger, no saddle needed
- High flow female coupler A118

specifications		HSC 10 S 5	HSC 20 S 5	HSC 30 S 5	HSC 50 S 5	HSC 100 S 5
art no		100.112.300	100.112.301	100.112.302	100.112.303	100.112.304
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**10**	**20**	**30**	**50**	**100**
stroke	**mm**	**50**	**50**	**50**	**50**	**50**
	in	**2,0**	**2,0**	**2,0**	**2,0**	**2,0**
closed height	**mm**	**100**	**103**	**106**	**117**	**141**
	in	**3,9**	**4,1**	**4,2**	**4,6**	**5,6**
diameter	mm	70	98	104	128	173
	in	2,8	3,9	4,1	5,0	6,8
capacity	kN/t	99.8 / 10.2	203.6 / 20.8	318.1 / 32.4	510.4 / 52	1030.6 / 105.1
effective pressure area	cm^2	13.9	28.3	44.2	70.9	143.1
	in^2	2,2	4,4	6,9	11,0	22,2
required oil content (effective)	cc	69.3	141.4	221	354	716
	oz	2,3	4,8	7,5	12,0	24,2
connection		A 118	A 118	A 118	A 118	A 118
cylinder type		short stroke	short stroke	short stroke	short stroke	short stroke
acting type		single	single	single	single	single
return type		spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel
weight, ready for use	kg	2.9	5.5	6.1	9.7	22.2
	lb	6,4	12,1	13,4	21,4	48,9

ALUMINUM CYLINDERS
spring return

Aluminum versus steel: aluminum cylinders offer an easy to handle alternative to steel. They should last a lifetime of use in average heavy duty lifting applications.

Features & benefits

- Up to 50% lighter compared to steel cylinders - easy & ergonomic
- Duo power ring; a combination of a superior seal and an extremely strong composite bearing for a longer life span
- XL saddle optimally protects the plunger and guides the load as effectively as possible
- The plunger is coated with a hardened anodized layer, which makes it extremely wear & corrosion resistant

Optional

- Tilting saddle

Standard supplied with

- High flow female coupler A118
- Flat saddle
- Larger cylinders are equipped with handles for easy carrying and positioning

specifications		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		100.112.267	100.112.265	100.112.261	100.112.269	100.112.268	100.112.262
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**20**	**20**	**20**	**30**	**30**	**30**
stroke	**mm**	**50**	**100**	**150**	**50**	**100**	**150**
	in	**2,0**	**3,9**	**5,9**	**2,0**	**3,9**	**5,9**
closed height	**mm**	**164**	**214**	**264**	**182**	**232**	**282**
	in	**6,5**	**8,4**	**10,4**	**7,2**	**9,1**	**11,1**
diameter	mm	82	82	82	106	106	106
	in	3,2	3,2	3,2	4,2	4,2	4,2
capacity	kN/t	204 / 20.8	204 / 20.8	204 / 20.8	318.1 / 32.4	318.1 / 32.4	318.1 / 32.4
effective pressure area	cm^2	28.3	28.3	28.3	44.2	44.2	44.2
	in^2	4,4	4,4	4,4	6,9	6,9	6,9
required oil content (effective)	cc	141	283	424	221	442	663
	oz	4,8	9,6	14,3	7,5	14,9	22,4
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		standard	standard	standard	standard	standard	standard
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
weight, ready for use	kg	2.6	3.2	3.9	4.7	5.9	7.0
	lb	5,7	7,1	8,6	10,4	13,0	15,4

specifications		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		100.112.271	100.112.270	100.112.263	100.112.273	100.112.272	100.112.264
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**50**	**50**	**50**	**100**	**100**	**100**
stroke	**mm**	**50**	**100**	**150**	**50**	**100**	**150**
	in	**2,0**	**3,9**	**5,9**	**2,0**	**3,9**	**5,9**
closed height	**mm**	**183**	**233**	**283**	**225**	**275**	**325**
	in	**7,2**	**9,2**	**11,1**	**8,9**	**10,8**	**12,8**
diameter	mm	130	130	130	189	189	189
	in	5,1	5,1	5,1	7,4	7,4	7,4
capacity	kN/t	510.4 / 52	510.4 / 52	510.4 / 52	1030.6 / 105.1	1030.6 / 105.1	1030.6 / 105.1
effective pressure area	cm^2	70.9	70.9	70.9	143	143	143
	in^2	11,0	11,0	11,0	22,2	22,2	22,2
required oil content (effective)	cc	354	709	1063	716	1431	2147
	oz	12,0	24,0	35,9	24,2	48,4	72,6
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		standard	standard	standard	standard	standard	standard
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
weight, ready for use	kg	6.9	8.3	9.6	17.8	20.9	24.1
	lb	15,2	18,3	21,2	39,2	46,1	53,1

ALUMINUM CYLINDERS
hydraulic return

Aluminum versus steel: aluminum cylinders offer an easy to handle alternative to steel. They should last a lifetime of use in average heavy duty lifting applications.

Features & benefits

- Up to 50% lighter compared to steel cylinders - easy & ergonomic
- Duo power ring; a combination of a superior seal and an extremely strong composite bearing for a longer life span
- XL saddle optimally protects the plunger and guides the load as effectively as possible
- The plunger is coated with a hardened anodized layer, which makes it extremely wear & corrosion resistant
- Safety valve for protection against overpressure on return side

Optional

- Tilting saddle

Standard supplied with

- High flow female coupler A118
- Flat saddle
- Larger cylinders are equipped with handles for easy carrying and positioning

specifications		HAC 30 H 5	HAC 30 H 10	HAC 30 H 15	HAC 50 H 5	HAC 50 H 10	HAC 50 H 15
art no		100.122.086	100.122.085	100.122.080	100.122.095	100.122.108	100.122.097
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**30**	**30**	**30**	**50**	**50**	**50**
stroke	**mm**	**50**	**100**	**150**	**50**	**100**	**150**
	in	**2,0**	**3,9**	**5,9**	**2,0**	**3,9**	**5,9**
closed height	**mm**	**197**	**247**	**297**	**201**	**251**	**301**
	in	**7,8**	**9,7**	**11,7**	**7,9**	**9,9**	**11,9**
diameter	mm	125	125	125	145	145	145
	in	4,9	4,9	4,9	5,7	5,7	5,7
capacity	kN/t	318.1 / 32.4	318.1 / 32.4	318.1 / 32.4	510.4 / 52	510.4 / 52	510.4 / 52
effective pressure area (press)	cm^2	44.2	44.2	44.2	70.9	70.9	70.9
	in^2	6,9	6,9	6,9	11,0	11,0	11,0
effective pressure area (retract)	cm^2	11	11	11	32.4	32.4	32.4
	in^2	1,7	1,7	1,7	5,0	5,0	5,0
required oil content (press)	cc	221	442	663	354	709	1063
	oz	7,5	15,9	22,5	12,0	23,9	35,9
required oil content (retract)	cc	55	110	165	162	324	486
	oz	1,9	3,7	5,6	5,5	11,0	16,4
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		standard	standard	standard	standard	standard	standard
acting type		double	double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
weight, ready for use	kg	6.9	8.5	10.2	9.5	11.5	13.3
	lb	15,2	18,7	22,5	20,9	25,4	29,3

specifications		HAC 100 H 5	HAC 100 H 10	HAC 100 H 15	HAC 150 H 5	HAC 150 H 10	HAC 150 H 15
art no		100.122.094	100.122.109	100.122.107	100.122.075	100.122.074	100.122.073
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**100**	**100**	**100**	**150**	**150**	**150**
stroke	**mm**	**50**	**100**	**150**	**50**	**100**	**150**
	in	**2,0**	**3,9**	**5,9**	**2,0**	**3,9**	**5,9**
closed height	**mm**	**246**	**296**	**346**	**248**	**298**	**348**
	in	**9,7**	**11,7**	**13,6**	**9,8**	**11,7**	**13,7**
diameter	mm	195	195	195	235	235	235
	in	7,7	7,7	7,7	9,3	9,3	9,3
capacity	kN/t	1030.6 / 105.1	1030.6 / 105.1	1030.6 / 105.1	1539.5 / 157	1539.5 / 157	1539.5 / 157
effective pressure area (press)	cm^2	143.1	143.1	143.1	213.8	213.8	213.8
	in^2	22,2	22,2	22,2	33,1	33,1	33,1
effective pressure area (retract)	cm^2	56.5	56.5	56.5	91.1	91.1	91.1
	in^2	8,8	8,8	8,8	14,1	14,1	14,1
required oil content (press)	cc	716	1431	2147	1069	2138	3207
	oz	24,2	48,4	72,6	36,1	72,3	108,4
required oil content (retract)	cc	283	565	848	456	911	1367
	oz	9,6	19,1	28,7	15,4	30,8	46,2
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		standard	standard	standard	standard	standard	standard
acting type		double	double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
weight, ready for use	kg	19.7	23.0	26.9	27.7	32.3	38.0
	lb	43,4	50,7	59,1	61,1	71,2	83,8

ALUMINUM HOLLOW PLUNGER CYLINDERS
spring return

Aluminum versus steel: aluminum cylinders offer an easy to handle alternative to steel. They should last a lifetime of use in average heavy duty lifting applications.

Features & benefits

- Up to 60% lighter compared to steel cylinders - easy & ergonomic
- Compact design and a lower build-in
- Suitable for pulling, lifting, tensioning in all positions
- Duo power ring; a combination of a superior seal and an extremely strong composite bearing for a longer life span
- The plunger is coated with a hardened anodized layer, which makes it extremely wear & corrosion resistant

Standard supplied with

- High flow female coupler A118
- Hollow saddle; prevents damage to the plunger
- Larger cylinders are equipped with foldable handles for easy carrying and positioning

specifications		HAHC 20 S 5	HAHC 20 S 15	HAHC 20 S 25
art no		100.112.366	100.112.368	100.112.370
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**20**	**20**	**20**
stroke	**mm**	**50**	**150**	**250**
	in	**2,0**	**5,9**	**9,8**
closed height	**mm**	**170**	**310**	**429**
	in	**6,7**	**12,2**	**16,9**
center hole diameter	**mm**	**27**	**27**	**27**
	in	**1,1**	**1,1**	**1,1**
capacity	kN/t	208 / 21.2	208 / 21.2	208 / 21.2
effective pressure area	cm^2	28.9	28.9	28.9
	in^2	4,5	4,5	4,5
required oil content (effective)	cc	144	433	721
	oz	4,9	14,6	24,4
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		single	single	single
return type		spring	spring	spring
material		aluminum	aluminum	aluminum
weight, ready for use	kg	3.4	5.5	7.1
	lb	7,5	12,1	15,7

specifications		HAHC 30 S 5	HAHC 30 S 15	HAHC 30 S 25
art no		100.112.371	100.112.373	100.112.375
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**30**	**30**	**30**
stroke	**mm**	**50**	**150**	**250**
	in	**2,0**	**5,9**	**9,8**
closed height	**mm**	**185**	**325**	**450**
	in	**7,3**	**12,8**	**17,7**
center hole diameter	**mm**	**34**	**34**	**34**
	in	**1,3**	**1,3**	**1,3**
capacity	kN/t	343 / 35	343 / 35	343 / 35
effective pressure area	cm^2	47.7	47.7	47.7
	in^2	7,4	7,4	7,4
required oil content (effective)	cc	238	715	1192
	oz	8,0	24,2	40,3
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		single	single	single
return type		spring	spring	spring
material		aluminum	aluminum	aluminum
weight, ready for use	kg	6.1	9.5	12.6
	lb	13,4	20,9	27,8

specifications		HAHC 60 S 5	HAHC 60 S 15	HAHC 60 S 25
art no		100.112.376	100.112.378	100.112.380
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**60**	**60**	**60**
stroke	**mm**	**50**	**150**	**250**
	in	**2,0**	**5,9**	**9,8**
closed height	**mm**	**243**	**363**	**518**
	in	**9,6**	**14,3**	**20,4**
center hole diameter	**mm**	**56**	**56**	**56**
	in	**2,2**	**2,2**	**2,2**
capacity	kN/t	606 / 61.8	606 / 61.8	606 / 61.8
effective pressure area	cm^2	84.2	84.2	84.2
	in^2	13,1	13,1	13,1
required oil content (effective)	cc	421	1263	2105
	oz	14,2	42,7	71,2
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		single	single	single
return type		spring	spring	spring
material		aluminum	aluminum	aluminum
weight, ready for use	kg	15.5	21.8	29
	lb	34,2	48,1	63,9

ALUMINUM HOLLOW PLUNGER CYLINDERS

hydraulic return

Aluminum versus steel: aluminum cylinders offer an easy to handle alternative to steel. They should last a lifetime of use in average heavy duty lifting applications.

Features & benefits

- Up to 60% lighter compared to steel cylinders - easy & ergonomic
- Compact design and a lower build-in
- Suitable for pulling, lifting, tensioning in all positions
- Duo power ring; a combination of a superior seal and an extremely strong composite bearing for a longer life span
- The plunger is coated with a hardened anodized layer, which makes it extremely wear & corrosion resistant
- Safety valve for protection against overpressure on return side

Standard supplied with

- High flow female coupler A118
- Hollow saddle; prevents damage to the plunger
- Larger cylinders are equipped with foldable handles for easy carrying and positioning

Hydraulic pumps	50
Hydraulic hoses	68
System components	74

specifications		HAHC 100 H 5	HAHC 100 H 15	HAHC 100 H 25
art no		100.112.381	100.112.383	100.112.385
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**100**	**100**	**100**
stroke	**mm**	**50**	**150**	**250**
	in	**2,0**	**5,9**	**9,8**
closed height	**mm**	**229**	**329**	**429**
	in	**9,0**	**13,0**	**16,9**
center hole diameter	**mm**	**80**	**80**	**80**
	in	**3,1**	**3,1**	**3,1**
capacity (press)	kN/t	1029 / 104.9	1029 / 104.9	1029 / 104.9
capacity (retract)	kN/t	431 / 43.9	431 / 49.9	431 / 49.9
effective pressure area (press)	cm^2	142.9	142.9	142.9
	in^2	22,1	22,1	22,1
effective pressure area (retract)	cm^2	59.9	59.9	59.9
	in^2	9,3	9,3	9,3
required oil content (press)	cc	715	2144	3574
	oz	24,2	72,5	120,9
required oil content (retract)	cc	299	898	1497
	oz	10,1	30,4	50,6
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		double	double	double
return type		hydraulic	hydraulic	hydraulic
material		aluminum	aluminum	aluminum
weight, ready for use	kg	28.2	39.7	51.2
	lb	62,2	87,5	112,9

specifications		HAHC 150 H 5	HAHC 150 H 15	HAHC 150 H 25
art no		100.112.386	100.112.388	100.112.390
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**150**	**150**	**150**
stroke	**mm**	**50**	**150**	**250**
	in	**2,0**	**5,9**	**9,8**
closed height	**mm**	**247**	**347**	**447**
	in	**9,7**	**13,7**	**17,6**
center hole diameter	**mm**	**80**	**80**	**80**
	in	**3,1**	**3,1**	**3,1**
capacity (press)	kN/t	1531 / 156.1	1531 / 156.1	1531 / 156.1
capacity (retract)	kN/t	852 / 86.9	852 / 86.9	852 / 86.9
effective pressure area (press)	cm^2	212.7	212.7	212.7
	in^2	33,0	33,0	33,0
effective pressure area (retract)	cm^2	118,4	118,4	118,4
	in^2	18,4	18,4	18,4
required oil content (press)	cc	1063	3190	5316
	oz	35,9	107,9	179,8
required oil content (retract)	cc	592	1776	2960
	oz	20,0	60,1	100,1
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		double	double	double
return type		hydraulic	hydraulic	hydraulic
material		aluminum	aluminum	aluminum
weight, ready for use	kg	41	56	71
	lb	90,4	123,5	156,5

HOLLOW PLUNGER CYLINDERS

spring return

Features & benefits

- Suitable for pulling, lifting, tensioning in all positions
- Protected against ejection of the plunger
- Hollow saddle; prevents damage to the plunger

Standard supplied with

- High flow female coupler A118
- Hollow saddle (with the exception of the HHJ5S2.5, HHJ12S5 and HHJ12S15)
  cylinders

specifications		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
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**5**	**12**	**12**	**17**	**20**	**20**
stroke	**mm**	**25**	**50**	**150**	**50**	**50**	**150**
	in	**1,0**	**2,0**	**5,9**	**2,0**	**2,0**	**5,9**
closed height	**mm**	**87**	**156**	**298**	**192**	**182**	**389**
	in	**3,4**	**6,1**	**11,7**	**7,6**	**7,0**	**15,3**
center hole diameter	**mm**	**17**	**21**	**21**	**27**	**27**	**27**
	in	**0,7**	**0,8**	**0,8**	**1,1**	**1,1**	**1,1**
capacity	kN/t	54.3 / 5.5	126.7 / 12.9	126.7 / 12.9	169.6 / 17.3	223.9 / 22.8	239.9 / 22.8
effective pressure area	cm^2	7.5	17.6	17.6	23.6	31.1	31.1
	in^2	1,2	2,7	2,7	3,7	4,8	4,8
required oil content (effective)	cc	19	88	264	118	156	467
	oz	0,6	3,0	8,9	4,0	5,3	15,8
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger	hollow plunger	hollow plunger	hollow plunger
acting type		single	single	single	single	single	single
return type		spring	spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	1.9	6.3	11.0	7.3	8.6	18.0
	lb	4,2	13,9	24,3	16,1	19,0	39,7

specifications		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		100.112.055	100.112.034	100.112.061	100.112.081	100.112.101
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**30**	**30**	**45**	**60**	**110**
stroke	**mm**	**75**	**150**	**150**	**75**	**75**
	in	**3,0**	**5,9**	**5,9**	**3,0**	**3,0**
closed height	**mm**	**226**	**362**	**388**	**272**	**315**
	in	**8,9**	**14,3**	**15,3**	**10,7**	**12,4**
center hole diameter	**mm**	**33**	**33**	**39**	**45**	**80**
	in	**1,3**	**1,3**	**1,5**	**1,8**	**3,1**
capacity	kN/t	293.7 / 29.9	293.7 / 29.9	453.5 / 46.2	610.4 / 62.2	1107.8 / 113
effective pressure area	cm^2	40.8	40.8	63	84.8	153.9
	in^2	6,3	6,3	9,8	13,1	23,9
required oil content (effective)	cc	306	612	945	636	1155
	oz	10,3	20,7	32,0	21,5	39,1
connection		A 118	A 118	A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger	hollow plunger	hollow plunger
acting type		single	single	single	single	single
return type		spring	spring	spring	spring	spring
material		steel	steel	steel	steel	steel
weight, ready for use	kg	15.0	25.0	35.5	34.5	78.3
	lb	33,1	55,1	78,3	76,1	172,6

HOLLOW PLUNGER CYLINDERS

hydraulic return

Features & benefits

- Suitable for pulling, lifting, tensioning in all positions
- Protected against ejection of the plunger
- Hollow saddle; prevents damage to the plunger
- Protected against over pressure on return side; A418 valve

Standard supplied with

- High flow female coupler A118 on inlet port
- High flow female coupler with pressure relief valve A418 on outlet port
- Hollow saddle

specifications		HHJ 30 H 15	HHJ 60 H 20	HHJ 100 H 20
art no		100.122.045	100.122.031	100.122.053
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**30**	**60**	**100**
stroke	**mm**	**150**	**200**	**200**
	in	**5,9**	**7,9**	**7,9**
closed height	**mm**	**285**	**334**	**395**
	in	**11,2**	**13,2**	**15,6**
center hole diameter	**mm**	**33**	**45**	**54**
	in	**1,3**	**1,8**	**2,1**
capacity (press)	kN/t	293.7 / 29.9	610.4 / 62.2	1018.5 / 103.9
capacity (retract)	kN/t	131 / 13.4	452.4 / 46.1	706.9 / 72.1
effective pressure area (press)	cm^2	40.8	84.4	141.5
	in^2	6,3	13,1	21,9
effective pressure area (retract)	cm^2	18.2	62.8	98.2
	in^2	2,8	9,7	15,2
required oil content (press)	cc	613	1696	2830
	oz	20,7	57,3	95,7
required oil content (retract)	cc	274	1256	1964
	oz	9,3	42,5	66,4
connection		A 118	A 118	A 118
cylinder type		hollow plunger	hollow plunger	hollow plunger
acting type		double	double	double
return type		hydraulic	hydraulic	hydraulic
material		steel	steel	steel
weight, ready for use	kg	23.0	40.0	78.0
	lb	50,7	88,2	172,0

HOLLOW PLUNGER CYLINDERS

gravity return

Features & benefits

- Compact
- Suitable for pulling, lifting, tensioning in all positions
- Protected against ejection of the plunger
- Hollow saddle; prevents damage to the plunger

Standard supplied with

- High flow female coupler A118

specifications		HHJ 30 G 5
art no		100.111.053
max. working pressure	bar/Mpa	720 / 72
	psi	10.443
tonnage	**t**	**30**
stroke	**mm**	**50**
	in	**2,0**
closed height	**mm**	**120**
	in	**4,7**
center hole diameter	**mm**	**33**
	in	**1,3**
capacity	kN/t	293.7 / 29.9
effective pressure area	cm^2	40.8
	in^2	6,3
required oil content (effective)	cc	204
	oz	6,9
connection		A 118
cylinder type		hollow plunger
acting type		single
return type		gravity
material		steel
weight, ready for use	kg	10.0
	lb	22,0

HIGH TONNAGE CYLINDERS

gravity return

Features & benefits

- Flat saddle; prevents damage to the plunger, easy to replace with tilting saddle

Standard supplied with

- High flow female coupler A118
- Flat saddle

Optional

- Tilting saddle

specifications		HJ 50 G 6	HJ 50 G 15	HJ 50 G 30	HJ 100 G 6	HJ 100 G 15	HJ 100 G 30
art no		100.112.073	100.112.035	100.112.036	100.112.093	100.112.039	100.112.040
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**50**	**50**	**50**	**100**	**100**	**100**
stroke	**mm**	**60**	**150**	**300**	**60**	**150**	**300**
	in	**2,4**	**5,9**	**11,8**	**2,4**	**5,9**	**11,8**
closed height	**mm**	**142**	**282**	**463**	**158**	**309**	**497**
	in	**5,6**	**11,1**	**18,2**	**6,2**	**12,2**	**19,6**
diameter	mm	130	130	130	185	178	178
	in	5,1	5,1	5,1	7,3	7,3	7,3
capacity	kN/t	510.3 /52	510.3 /52	510.3 /52	1029.3 / 105	1029.3 / 105	1029.3 / 105
effective pressure area	cm^2	70.9	70.9	70.9	143	143	143
	in^2	11,0	11,0	11,0	22,2	22,2	22,2
required oil content (effective)	cc	425	1064	2127	860	2145	4290
	oz	14,4	36,0	71,9	29,1	72,5	145,1
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		high tonnage	high tonnage	high tonnage	high tonnage	high tonnage	high tonnage
acting type		single	single	single	single	single	single
return type		gravity	gravity	gravity	gravity	gravity	gravity
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	12.5	27.0	39.5	29.0	51.0	82.0
	lb	27,6	59,5	87,1	63,9	112,4	180,8

specifications		HJ 150 G 15	HJ 150 G 30	HJ 200 G 15	HJ 200 G 30	HJ 300 G 15	HJ 300 G 30
art no		100.112.046	100.112.047	100.112.048	100.112.049	100.112.050	100.112.099
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**150**	**150**	**200**	**200**	**300**	**300**
stroke	**mm**	**150**	**300**	**150**	**300**	**150**	**300**
	in	**5,9**	**11,8**	**5,9**	**11,8**	**5,9**	**11,8**
closed height	**mm**	**317**	**502**	**327**	**507**	**382**	**547**
	in	**12,5**	**19,8**	**12,9**	**20,0**	**15,0**	**21,5**
diameter	mm	227	227	261	261	316	316
	in	8,9	8,9	10,3	10,3	12,4	12,4
capacity	kN/t	1538.9 / 156.9	1538.9 / 156.9	2040.6 / 208.1	2040.6 / 208.1	2933 / 299.1	2933 / 299.1
effective pressure area	cm^2	213.8	213.8	283.5	283.5	415	415
	in^2	33,1	33,1	43,9	43,9	64,3	64,3
required oil content (effective)	cc	3207	6414	4253	8505	6225	12450
	oz	108,4	216,9	143,8	287,6	210,5	421,0
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		high tonnage	high tonnage	high tonnage	high tonnage	high tonnage	high tonnage
acting type		single	single	single	single	single	single
return type		gravity	gravity	gravity	gravity	gravity	gravity
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	74.6	125.3	120.0	184.0	238.0	257.0
	lb	164,5	276,2	264,6	405,7	524,7	566,6

HIGH TONNAGE CYLINDERS

hydraulic return

Features & benefits

- Flat saddle; prevents damage to the plunger, easy to replace with tilting saddle
- Protected against over pressure on return side; A418 valve

Standard supplied with

- High flow female coupler A118
- Flat saddle

Optional

- Tilting saddle

specifications		HJ 50 H 15	HJ 50 H 30	HJ 100 H 5	HJ 100 H 15	HJ 100 H 30
art no		100.122.002	100.122.022	100.122.009	100.122.052	100.122.054
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**50**	**50**	**100**	**100**	**100**
stroke	**mm**	**150**	**300**	**50**	**150**	**300**
	in	**5,9**	**11,8**	**2,0**	**5,9**	**11,8**
closed height	**mm**	**282**	**463**	**170**	**309**	**497**
	in	**11,1**	**18,2**	**6,7**	**12,2**	**19,6**
diameter	mm	130	130	178	178	178
	in	5,1	5,1	7,0	7,0	7,0
capacity	kN/t	510.3 /52	510.3 /52	1029.3 / 105	1029.3 / 105	1029.3 / 105
effective pressure area (press)	cm^2	70.9	70.9	143	143	143
	in^2	11,0	11,0	22,2	22,2	22,2
effective pressure area (retract)	cm^2	20.6	20.6	56.6	56.6	56.6
	in^2	3,2	3,2	8,8	8,8	8,8
required oil content (press)	cc	1064	2127	716	2145	4290
	oz	36,0	71,9	24,2	72,5	145,1
required oil content (retract)	cc	309	620	283	848	1695
	oz	10,4	21,0	9,6	28,7	57,3
connection		A 118	A 118	A 118	A 118	A 118
cylinder type		high tonnage	high tonnage	high tonnage	high tonnage	high tonnage
acting type		double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		steel	steel	steel	steel	steel
weight, ready for use	kg	27.0	44.0	29.0	53.0	85.0
	lb	59,5	97,0	63,9	116,8	187,4

specifications		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
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**150**	**150**	**200**	**200**	**300**	**300**
stroke	**mm**	**150**	**300**	**150**	**300**	**150**	**300**
	in	**5,9**	**11,8**	**5,9**	**11,8**	**5,9**	**11,8**
closed height	**mm**	**317**	**502**	**327**	**507**	**382**	**547**
	in	**12,5**	**19,8**	**12,9**	**20,0**	**15,0**	**21,5**
diameter	mm	227	227	261	261	316	316
	in	8,9	8,9	10,3	10,3	12,4	12,4
capacity	kN/t	1538.9 / 156.9	1538.9 / 156.9	2040.6 / 208.1	2040.6 / 208.1	2933 / 299.1	2933 / 299.1
effective pressure area (press)	cm^2	213.8	213.8	283.5	283.5	415.5	415.5
	in^2	33,1	33,1	43,9	43,9	64,4	64,4
effective pressure area (retract)	cm^2	110	110	82.5	82.5	131.9	131.9
	in^2	17,1	17,1	12,8	12,8	20,4	20,4
required oil content (press)	cc	3207	6414	4253	8505	6225	12450
	oz	108,4	216,9	143,8	287,6	210,5	421,0
required oil content (retract)	cc	1650	3300	1238	2475	1965	3930
	oz	55,8	111,6	41,9	83,7	66,4	132,9
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		high tonnage	high tonnage	high tonnage	high tonnage	high tonnage	high tonnage
acting type		double	double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	76.0	128.0	121.0	186.0	240.0	360.0
	lb	167,6	282,2	266,8	410,1	529,1	793,7

LOCKNUT CYLINDERS
gravity return

Features & benefits

- Mechanical load locking; safe way of working with sustained load
- Suitable for lifting, tensioning in all positions
- Flat saddle; prevents damage to the plunger, easy to replace with tilting saddle

Standard supplied with

- High flow female coupler A118
- Flat saddle

Optional

- Tilting saddle

specifications		HJ 50 G 15 SN	HJ 100 G 15 SN	HJ 150 G 15 SN	HJ 250 G 15 SN
art no		100.082.001	100.082.000	100.112.136	100.112.083
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
tonnage	**t**	**50**	**100**	**150**	**250**
stroke	**mm**	**150**	**150**	**150**	**150**
	in	**5,9**	**5,9**	**5,9**	**5,9**
closed height	**mm**	**307**	**323**	**363**	**385**
	in	**12,1**	**12,7**	**14,3**	**15,2**
diameter	mm	135	190	212	300
	in	5,3	7,5	8,3	11,8
capacity	kN/t	510.3 / 52	1029.3 / 105	1538.9 / 159.9	2493.8 /254.3
effective pressure area	cm^2	70.9	143	213.8	340.6
	in^2	11,0	22,2	33,1	52,8
required oil content (effective)	cc	1065	2150	3207	5195
	oz	36,0	72,7	108,4	175,7
connection		A 118	A 118	A 118	A 118
cylinder type		lock nut	lock nut	lock nut	lock nut
acting type		single	single	single	single
return type		gravity	gravity	gravity	gravity
material		steel	steel	steel	steel
weight, ready for use	kg	34.0	71.0	101.0	180.0
	lb	75,0	156,5	222,7	396,8

LOCKNUT CYLINDERS
hydraulic return

Features & benefits

- Double-acting for controlled lifting and lowering
- Extreme low closed height and a maximum side load resistance of 10%.
- Integrated safety valves for protection against overpressure on return side
- Multiple-start and rounded thread on plunger for a quicker positioning of the locknut and easy dirt removal
- Hard chromed cylinder wall for optimal wear resistance and corrosion protection
- QPQ treated mechanical locknut with optimized grip and 4 tommy Bar holes for easy locking and unlocking
- XL Saddle+: QPQ tilting saddle protects the plunger and limits eccentric loads
- Cover plate for keeping water and dirt out of the cylinder when it is stored

Standard supplied with

- High flow female coupler A118
- Tilting saddle

Hydraulic pumps	50
Hydraulic hoses	68
System components	74

specifications		HLC 50 H 5	HLC 50 H 15	HLC 50 H 30	HLC 100 H 5	HLC 100 H 15	HLC 100 H 30
art no		100.122.123	100.122.124	100.122.125	100.122.126	100.122.127	100.122.128
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**60**	**60**	**60**	**100**	**100**	**100**
stroke	**mm**	**50**	**150**	**300**	**50**	**150**	**300**
	in	**2,0**	**5,9**	**11,8**	**2,0**	**5,9**	**11,8**
closed height	**mm**	**208**	**327**	**498**	**248**	**370**	**546**
	in	**8,2**	**12,9**	**19,6**	**9,8**	**146,0**	**21,5**
diameter	mm	130	130	130	160	160	160
	in	5,1	5,1	5,1	6,3	6,3	6,3
max. side-load resistance	%	10	10	10	10	10	10
capacity	kN/t	578 / 58.9	578 / 58.9	578 / 58.9	1001 / 102.1	1001 / 102.1	1001 / 102.1
effective pressure area (press)	cm^2	80.3	80.3	80.3	139	139	139
	in^2	12,4	12,4	12,4	21,5	21,5	21,5
effective pressure area (retract)	cm^2	16.7	16.7	16.7	25.9	25.9	25.9
	in^2	2,6	2,6	2,6	4,0	4,0	4,0
required oil content (press)	cc	401	1204	2408	695	2084	4168
	oz	13,6	40,7	81,4	23,5	70,5	14,9
required oil content (retract)	cc	318	954	1909	566	1696	3391
	oz	2,8	8,5	16,9	4,4	13,2	26,3
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		lock nut	lock nut	lock nut	lock nut	lock nut	lock nut
acting type		double	double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	19.5	29.5	44.0	35.0	50.0	72.5
	lb	43,0	65,0	97,0	77,2	110,2	159,8

specifications		HLC 150 H 5	HLC 150 H 15	HLC 150 H 30	HLC 250 H 5	HLC 250 H 15	HLC 250 H 30
art no		100.122.129	100.122.130	100.122.131	100.122.132	100.122.133	100.122.134
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
tonnage	**t**	**150**	**150**	**150**	**250**	**250**	**250**
stroke	**mm**	**50**	**150**	**300**	**50**	**150**	**300**
	in	**2,0**	**5,9**	**11,8**	**2,0**	**5,9**	**11,8**
closed height	**mm**	**275**	**400**	**580**	**317**	**444**	**625**
	in	**10,8**	**15,7**	**22,8**	**12,5**	**17,5**	**24,6**
diameter	mm	194	194	194	245	245	245
	in	7,6	7,6	7,6	9,6	9,6	9,6
max. side-load resistance	%	10	10	10	10	10	10
capacity	kN/t	1544 / 157.4	1544 / 157.4	1544 / 157.4	2586 / 263.7	2586 / 263.7	2586 / 263.7
effective pressure area (press)	cm^2	214.3	214.3	214.3	358.9	358.9	358.9
	in^2	33,2	33,2	33,2	55,6	55,6	55,6
effective pressure area (retract)	cm^2	37.7	37.7	37.7	75.6	75.6	75.6
	in^2	5,8	5,8	5,8	11,7	11,7	11,7
required oil content (press)	cc	1051	3154	6308	1795	5384	10768
	oz	35,5	106,6	213,3	60,7	182,1	364,1
required oil content (retract)	cc	883	2649	5299	1417	4251	8502
	oz	5,7	17,0	34,1	12,8	38,3	76,7
connection		A 118	A 118	A 118	A 118	A 118	A 118
cylinder type		lock nut	lock nut	lock nut	lock nut	lock nut	lock nut
acting type		double	double	double	double	double	double
return type		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
material		steel	steel	steel	steel	steel	steel
weight, ready for use	kg	56.3	79.0	112.9	103.0	144.0	203.0
	lb	124,1	174,2	248,9	227,1	317,5	447,5

TELESCOPIC CYLINDERS
gravity return

Features & benefits
- Compact
- Lightweight

Standard supplied with
- High flow female coupler A118
- 2-stage plunger
- HFJ 10/30 G 4 contains a 30 cm connecting hose with anti-kink spring
- HJ 20/50 G 11 contains a flat saddle

Hydraulic pumps	50
Hydraulic hoses	68
System components	74

specifications		HFJ 10/30 G 4	HJ 20/50 G 11
art no		100.111.005	100.112.103
max. working pressure	bar/Mpa	720 / 72	720 / 72
	psi	10.443	10.443
tonnage	**t**	**10**	**20**
stroke	**mm**	**41**	**111**
	in	**1,6**	**4,4**
stroke 1st plunger	**mm**	**21**	**56**
	in	**0,8**	**2,2**
stroke 2nd plunger	**mm**	**20**	**55**
	in	**0,8**	**2,2**
closed height	**mm**	**49**	**140**
	in	**1,9**	**5,5**
diameter	mm	120	125
	in	4,7	4,9
capacity 1st plunger	kN/t	318 / 32.4	510 / 52
capacity 2nd plunger	kN/t	99.7 / 10.2	203.5 / 20.8
effective pressure area 1st plunger	cm^2	44.2	70.8
	in^2	6,9	11,0
effective pressure area 2nd plunger	cm^2	13.9	28.3
	in^2	2,2	4,4
required oil content (effective)	cc	118	554
	oz	4,0	18,7
connection		A 118	A 118
hose		yes	no
cylinder type		telescopic	telescopic
acting type		single	single
return type		gravity	gravity
material		steel	steel
weight, ready for use	kg	4.5	12.5
	lb	9,9	27,6

PULLING CYLINDERS
spring return

Features & benefits
- Suitable for pulling, lifting, tensioning in all positions
- Protected against over pressure; A418 valve

Standard supplied with
- High flow female coupler A118, with pressure relief valve A418

Required accessories
- 2 pcs. of pulling eyes
- 2 pcs. of clevis eyes

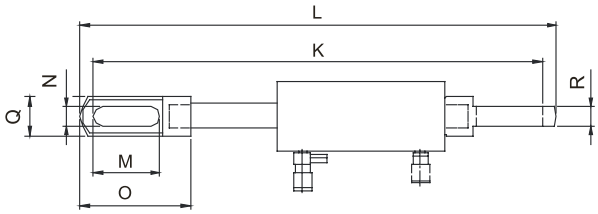
Optional accessories
- 1 pcs of protection spring

Hydraulic pumps	50
Hydraulic hoses	68
System components	74

specifications		HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15
art no		100.131.001	100.131.011	100.131.021
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
tonnage	**t**	**11**	**30**	**60**
stroke	**mm**	**150**	**150**	**150**
	in	**5,9**	**5,9**	**5,9**
retracted length*	**mm**	**320**	**470**	**530**
	in	**12,6**	**18,5**	**20,9**
capacity	kN/t	113 / 11.5	298.7 / 30.5	610.4 / 62.2
effective pressure area	cm^2	15.7	41.5	84.8
	in^2	2,4	6,4	13,1
required oil content (effective)	cc	236	623	1272
	oz	8,0	21,1	43,0
connection		A 118	A 118	A 118
cylinder type		pulling	pulling	pulling
acting type		single	single	single
return type		spring	spring	spring
material		steel	steel	steel
weight, ready for use	kg	11.5	26.0	45.0
	lb	25,4	57,3	99,2

* Excl. eyes

pulling eyes



specifications		HPJ 11 S 15	HPJ 30 S 15	HPJ 60 S 15
art no		100.181.051	100.181.051	100.181.052
dimension K	mm	760	890	1000
dimension L	mm	810	940	1080
dimension M	mm	120	120	150
dimension N	mm	35	35	45
dimension O	mm	200	200	260
dimesnion Q	mm	70	70	115
dimesnion R	mm	35	35	40

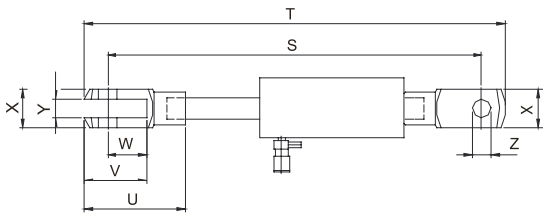
Features & benefits

- Machined from solid steel
- Chemical blacked coating

Additional information

To be ordered separately,
2 pieces per cylinder required

clevis eyes



specifications		HPJ 11 S 15	HPJ 30 S 15
art no		100.181.056	100.181.057
dimension S	mm	650	828
dimension T	mm	730	916
dimension U	mm	160	188
dimension V	mm	100	116
dimension W	mm	60	72
dimesnion X	mm	60	70
dimesnion Y	mm	30	36
dimesnion Z	mm	30	35

Features & benefits

- Machined from solid steel
- Complete with pin and quick lock ring
- Specially suitable for use with slings

Additional information

To be ordered separately,
2 pieces per cylinder required

protection springs

specifications	HPJ 11/30 S 15	HPJ 60 S 15
art no	100.581.160	100.581.161

Features & benefits

- Protects the plunger against dirt and welding spots

Additional information

To be ordered separately,
1 piece per cylinder required

SADDLES FOR CYLINDERS
tilting saddles

Features & benefits

- Prevents side load on the cylinders up to a maximum angle of 5°
- Hardened material

Tilting saddles - Multi-purpose Cylinders - HGC

		TS HGC 5	TS HGC 10	TS HGC 15	TS HGC 25
art no		100.182.151	100.182.152	100.182.153	100.182.154
cylinder tonnage	t	5	10	15	25
diameter	mm	20	30	30	45
additional height (vs flat saddle)	mm	5	5	5	7

		TS HGC 35	TS HGC 50	TS HGC 75	TS HGC 100
art no		100.182.155	100.182.156	100.182.160	100.182.150
cylinder tonnage	t	35	50	75	100
diameter	mm	45	70	70	105
additional height (vs flat saddle)	mm	7	9	9	12

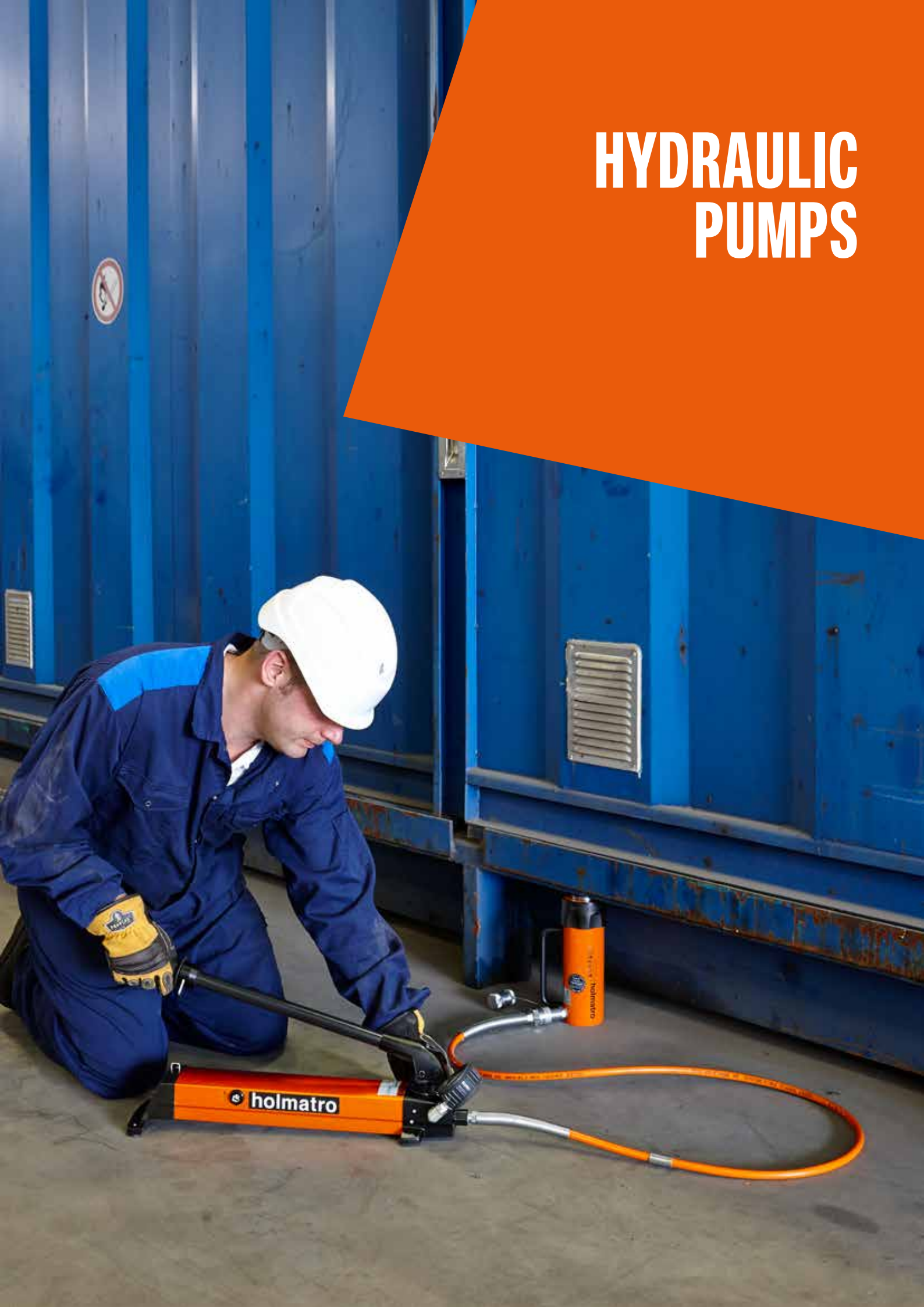
Tilting saddles - Aluminum Cylinders - HAC

		TS HAC 20	TS HAC 30	TS HAC 50	TS HAC 100	TS HAC 150
art no		100.182.164	100.182.163	100.182.165	100.182.159	100.182.161
cylinder tonnage	t	20	30	50	100	150
diameter	mm	45	45	70	105	105
additional height (vs flat saddle)	mm	8	8	9	12	12

Tilting saddles - High Tonnage Cylinders - HJ & Locknut cylinders - HJ ... SN

		S 50 TN	S 100 TN	S 200 TN
art no		100.181.043	100.181.044	100.999.040
cylinder tonnage	t	50	100	200
diameter	mm	65	90	140
additional height (vs flat saddle)	mm	11	11	23

HYDRAULIC PUMPS



HYDRAULIC PUMPS

Holmatro offers you various types of pump units to operate your hydraulic (lifting) system in a safe & controlled way. We are available to help you choose the right pump unit & assembly for your application.

Holmatro Compact Air Pump

Our Compact air pump is a small, lightweight, air driven solution to control your hydraulic system. Foot operated, ideal for pulling or pressing.

Holmatro Compact Electric Pump

The Holmatro Compact Electric Pump is the smallest electrical pump unit in our program, designed to be highly portable and convenient for in-field use and maintenance locations. Its compact size and lightweight construction make it an ideal choice for easy transportation and maneuverability. The pump is pendant-controlled, providing user-friendly operation, and can be used in both horizontal and vertical orientations, offering flexibility in different working environments.

Holmatro Hand & Foot pumps

The Holmatro PA handpump range offers you a compact, ergonomic and efficient pump unit with a high oil output in both first and second stage and adjustable release valve. Ideal for smaller set-ups, with one cylinder. For full control and flexible, long term use make sure to add a pressure gauge-set. For set-up with double acting tools, we have an additional control valve available for you.

Holmatro vari pumps: Electric & Petrol pumps

Holmatro offers you a various range of pump units, 115V, 230V, 400V or petrol driven, suitable for any lifting application. The mix & match system allows for easy assembly of the pump with hydraulic components like pressure gauges and control valves, enabling customization to meet your specific needs.

The unique Holmatro M304 SADA switch equips your pump for both single & double acting use, allowing it to efficiently handle a wide range of hydraulic tasks.

With Holmatro vari pumps, you get a comprehensive and adaptable solution to power your hydraulic tools, ensuring optimal performance and efficiency for a variety of lifting and industrial applications.

COMPACT AIR PUMP

Features & benefits

- Lightweight
- Ideal for pulling, pressing
- Safe: when the air pressure is lost, the oil pressure is maintained
- Low-noise: built-in silencer
- Stops automatically when the maximum pressure is reached

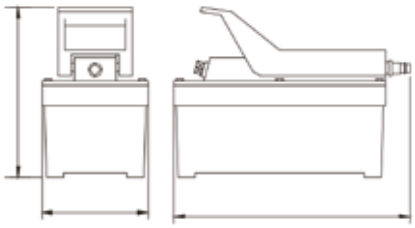
Standard supplied with

- Compressed air connector

Additional information

To have a safe and controlled system, assemble you Compact electric pump with advised components:

- Pressure gauge plug-in set - (art. No. 100.181.215) including connection couplers male (A119) and female (A118)



Hydraulic hoses	68
System components	74

specifications		AHS 1400 FS
art no		100.602.001
max. working pressure	bar/Mpa	720 / 72
	psi	10.443
output unloaded	cc/min	960
	cu. in./min.	139.236,2
output loaded	cc/min	410
	cu. in./min.	59.465,50
air consumption unloaded	l/min	700
	gpm	184,9
air consumption loaded	l/min	580
	gpm	153,2
capacity oil tank (effective)	cc	1400
	oz	47,3
max. air pressure	bar/Mpa	8.5 / 0.8
connection		3/8" NPT female
operator type		air
suitable for (tool type)		single acting
weight, ready for use	kg	6.5
	lb	14,3
temperature range	°C	-20 + 55
dimension (AxBxC)	mm	282 x 128 x 200
	in	11.1 x 5 x 7.9

COMPACT ELECTRIC PUMP

Features & benefits

- Ideal for small spaces
- Lightweight
- Can be used both horizontally and vertically
- Suitable for single-acting tools and cylinders

Standard supplied with

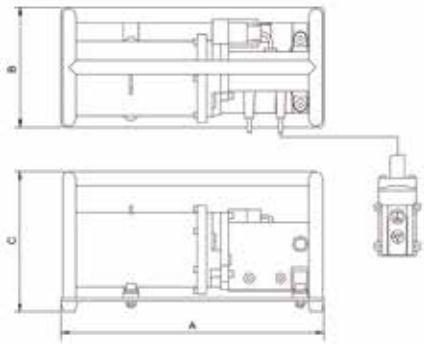
- Waterproof (IP 54) Pendant Control with 2.3 m long electric cord

Additional information

To have a safe and controlled system, assemble you Compact electric pump with advised components:

- Option 1: gauge set EHW 1650 (art no 100.182.158)
- Option 2: needle valve + gauge set EHW 1650 (art no 100.182.162)

With option 2 (needle valve) the pump is suitable for lifting applications



Hydraulic hoses	68
System components	74

specifications		EHW 1650 RC
art no		100.551.001
max. working pressure	bar/Mpa	720 / 72
	psi	10.443
first stage output / min.	cc	2000
	oz	67,60
second stage output / min.	cc	250
	oz	8,50
capacity oil tank (effective)	cc	1650
	oz	55,8
connection		3/8" NPT female
engine		230 VAC - 0.35 kW - 50 Hz - 1 Ph
charge remote control	V	15
weight, ready for use	kg	11.6
	lb	25,6
dimension (AxBxC)	mm	416 x 190 x 222
	in	16.4 x 7.5 x 8.7

HAND & FOOT PUMPS

Features & benefits

- Ergonomic design (**Image 1 & 2**)
- Lightweight; easy to carry and operate
- Low operating force required; minimal user effort
- Push & Unlock pump handle lock (**Image 3**)
- Service- and maintenance-friendly
- High oil output; quicker action both in the first and second stage
- Accurately adjustable pressure release valve (**Image 4**)
- Pressure gauge connection on the pump block (**Image 5**)
- Oil level glass in the tank; check the oil level in both horizontal and vertical position (**Image 6**)
- Integrated filler funnel; top up oil easily and quickly without extra accessories (**Image 7**)

Additional information

To have a safe and controlled system, assemble you PA handpump with advised components:

- Option 1: pressure gauge set (art. No. 100.181.214) + standard hose, mounted directly to the pump
- Option 2: pressure gauge set (art. No. 100.181.214) + VL extension hose mounted to the pump with nipple/ connector (150.581.218) and male coupler (100.181.119)

Using a PA handpump in combination with double acting cylinders (hydraulic return)?

- Choose a PA18, 38 or 58 handpump
- Add a VM 43 L control valve to create a plug & play double acting system

Why add a pressure gauge?

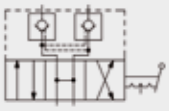
- To measure the pressure in the system and for safety reasons.

Why use a VL hose instead of a standard hose?

- Easier to store and clean; benefits the lifespan
- Multi-functional for future use

Hydraulic hoses 68
System components 74

specifications		PA 04 H 2	PA 09 H 2	PA 18 H 2	PA 38 H 2	PA 58 H 2	PA 18 F 2
art no		100.142.033	100.142.034	100.142.035	100.142.037	100.142.038	100.142.036
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	400	900	1800	3800	5800	1800
	oz	13,5	30,4	60,9	128,5	196,1	60,9
capacity oil tank	**cc**	**500**	**1000**	**1990**	**4150**	**6150**	**1990**
	oz	**16,9**	**33,8**	**67,3**	**140,3**	**208,0**	**67,3**
first stage output (per stroke)	**cc**	**18.4**	**22**	**42.8**	**42.8**	**50.5**	**42.8**
	oz	**0,62**	**0,74**	**1,45**	**1,45**	**1,71**	**1,45**
second stage output (per stroke)	**cc**	**1.4**	**2.1**	**3.1**	**3.1**	**4**	**3.1**
	oz	**0,05**	**0,07**	**0,10**	**0,10**	**0,14**	**0,10**
first stage press range	bar/Mpa	0-45 / 0-4.5	0-45 / 0-4.5	0-45 / 0-4.5	0-45 / 0-4.5	0-45 / 0-4.5	0-45 / 0-4.5
second stage pressure range	bar/Mpa	45-720 / 4.5-72	45-720 / 4.5-72	45-720 / 4.5-72	45-720 / 4.5-72	45-720 / 4.5-72	45-720 / 4.5-72
max. operating force	kg	32.0	33.0	35.0	35.0	34.0	37.0
	lb	70,5	72,8	77,2	77,2	75,0	91,6
connection		3/8" NPT female	3/8" NPT female	3/8" NPT female	3/8" NPT female	3/8" NPT female	3/8" NPT female
operator type		hand	hand	hand	hand	hand	**foot**
double acting optional		**no**	**no**	**yes**	**yes**	**yes**	**yes**
weight, ready for use	kg	3.4	4.7	7.6	11.4	14.6	8.3
	lb	7,5	10,4	16,8	25,1	32,2	18,3
dimension A	mm	434	619	700	700	897	724
	in	17,1	24,4	27,6	27,6	35,3	28,5
dimension B	mm	135	135	169	183	182	169
	in	5,3	5,3	6,7	7,2	7,2	6,7
dimension C	mm	165	170	175	175	185	167
	in	6,5	6,7	6,9	6,9	7,3	6,6

control valve	hydraulic diagram	description	model	art no
		Control valve • Suitable for double-acting tools • Handle stops in each position • With pressure controlled non-return valves for securing the load • 4-way, 3-position • Connection: 3/8" NPT female (2x) • Max. working pressure: 720 bar	VM 43 L	100.182.175

pressure gauges	description	model	art no
	Pressure gauge set (Ø 60) - PA pump 04/09 • 0-720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 63 mm • Including rubber protection cover • Connection: ¼" NPT male	-	100.182.213
	Pressure gauge set (Ø 60) - PA pump 18/38/58 • 0-720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 63 mm • Including rubber protection cover • Connection: ¼" NPT male	-	100.182.214
	Pressure gauge set (Ø 100) - PA pump • 0-720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 100 mm • Including rubber protection cover • Connection: 1x 3/8" NPT female and 1x 3/8" NPT male	-	100.182.215
	Pressure gauge set (Ø 60) - VM 43 L valve • 0-720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 63 mm • Including rubber protection cover • Connection: ¼" NPT male	-	100.182.216
	Pressure gauge plug-in set Ø100mm A111 • 0-720 bars • Connection: couplers A 118 - A 119	A 111 U	100.582.111

Our pressure gauges are available with Bar / psi scale.

ELECTRIC & PETROL VARI PUMPS CONFIGURATOR

Step 1

Select the power source

- Electric motor (115V -1ph - 50Hz)
- Electric motor (115V -1ph - 60Hz)
- Electric motor (230V -1ph- 50Hz)
- Electric motor (400V -3ph- 50Hz)
- Electric motor (460V -3ph- 60Hz)
- Petrol engine

Step 2

Select pump type

- 1-stage
- 2-stage for higher operating speed

Step 3

Select the correct content for the oil tank

Step 4

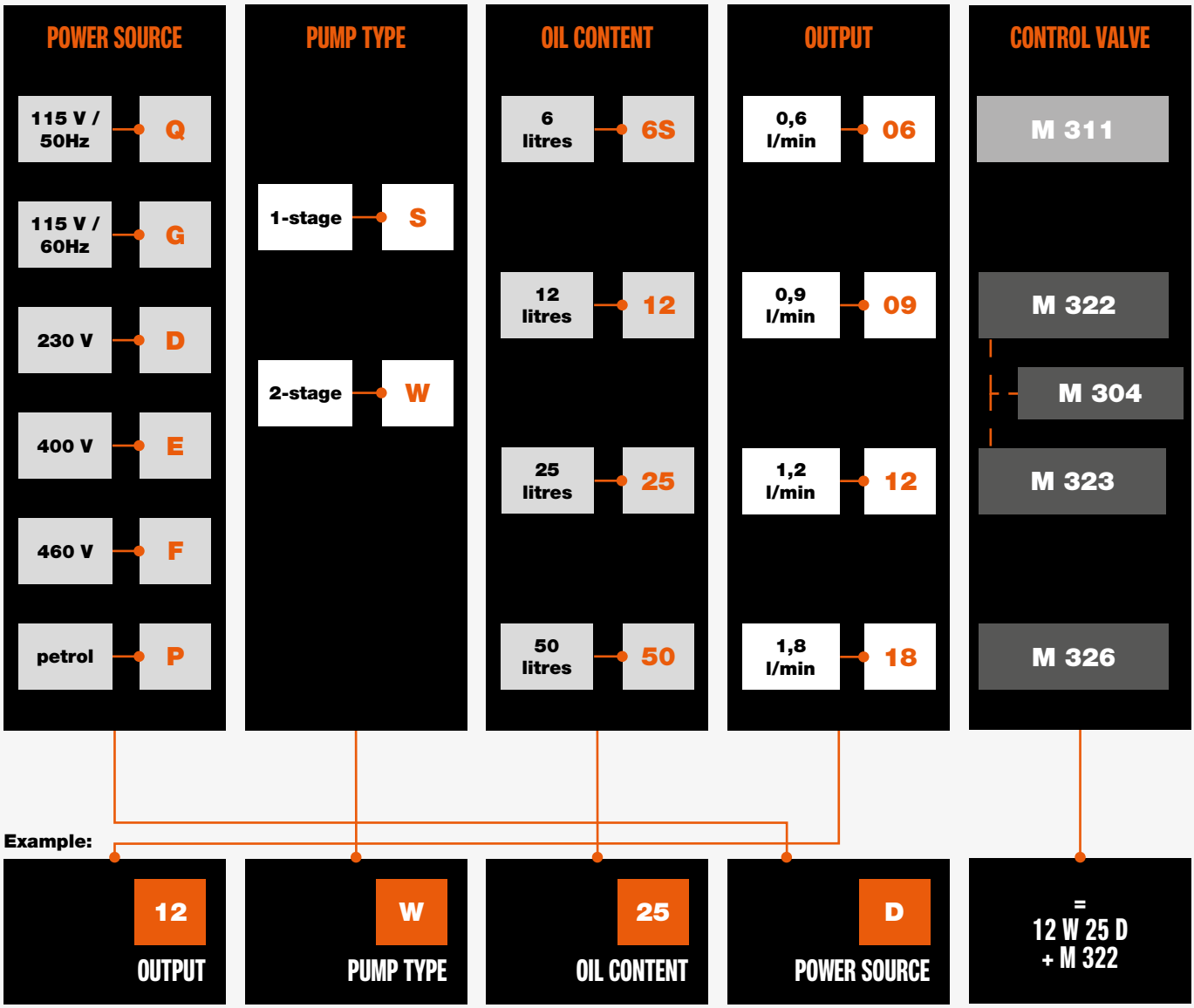
Select the correct pump output in litres per minute (second stage speed)

Step 5

Select the correct control valve (for twin pumps 2 valves required)

For single-acting tools:
- M 311 (hand operation)

For double-acting tools:
- M 322 (hand operation)
- M 323 (hand operation with deathman's handle)
- M 304 Sada Switch (single acting and double acting in one valve. Only in combination with M322 or M323)
- M 326 (electromagnetic operation)



VARI PUMPS

electric - 230V - 1-stage

Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

specifications		06 S 06 D	06 S 12 D	12 S 06 D	12 S 12 D
art no		100.152.012	100.152.013	100.152.020	100.152.021
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	12000	6000	12000
	oz	202,9	405,8	202,9	405,8
first stage output / min.	cc	600	600	1200	1200
	oz	20,3	20,3	40,6	40,6
first stage pressure range	bar/Mpa	0-720 / 0-72	0-720 / 0-72	0-720 / 0-72	0-720 / 0-72
	psi	0 - 10.443	0 - 10.443	0 - 10.443	0 - 10.443
operator type		electric motor	electric motor	electric motor	electric motor
engine		**230 VAC - 1.1 kW - 50 Hz - 1 Ph**	**230 VAC - 1.1 kW - 50 Hz - 1 Ph**	**230 VAC - 1.5 kW - 50 Hz - 1 Ph**	**230 VAC - 1.5 kW - 50 Hz - 1 Ph**
weight, ready for use	kg	36.0	44.0	38.0	46.0
	lb	79,4	97,0	83,8	101,4
dimensions (LxWxH)	mm	400 x 300 x 411	400 x 300 x 541	400 x 300 x 411	400 x 320 x 541
	in	15.7 x 11.8 x 16.2	15.7 x 11.8 x 21.3	15.7 x 11.8 x 17.4	15.7 x 126 x 21.3

VARI PUMPS

electric - 230V - 2-stage

Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

specifications		12 W 06 D	12 W 25 D	12 W 50 D
art no		100.152.033	100.152.035	100.152.036
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	25000	50000
	oz	202,9	845,4	1690,7
first stage output / min.	cc	3200	3200	3200
	oz	108,2	108,2	108,2
second stage output / min.	cc	1200	1200	1200
	oz	40,6	40,6	40,6
first stage pressure range	bar/Mpa	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20
	psi	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200-720 / 0-72	200-720 / 0-72	200-720 / 0-72
	psi	2901 - 10443	2901 - 10443	2901 - 10443
operator type		electric motor	electric motor	electric motor
engine		**230 VAC - 1.5 kW - 50 Hz - 1 Ph**	**230 VAC - 1.5 kW - 50 Hz - 1 Ph**	**230 VAC - 1.5 kW - 50 Hz - 1 Ph**
weight, ready for use	kg	40.0	67.0	96.0
	lb	88,2	147,7	211,6
dimensions (LxWxH)	mm	400 x 300 x 411	500 x 380 x 541	500 x 380 x 676
	in	15.7 x 11.8 x 17.4	19.7 x 15 x 21.3	19.7 x 15 x 26.6

VARI PUMPS

electric - 400V - 1-stage

Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

specifications		12 S 06 E	12 S 12 E	18 S 25 E	18 S 50 E
art no		100.152.046	100.152.047	100.152.051	100.152.052
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	12000	25000	50000
	oz	202,9	405,8	845,4	1690,7
first stage output / min.	cc	1200	1200	1800	1800
	oz	40,6	40,6	60,9	60,9
first stage pressure range	bar/Mpa	0-720 / 0-72	0-720 / 0-72	0-720 / 0-72	0-720 / 0-72
	psi	0 - 10.443	0 - 10.443	0 - 10.443	0 - 10.443
operator type		electric motor	electric motor	electric motor	electric motor
engine		**400 VAC - 1.5 kW - 50 Hz - 3 Ph**	**400 VAC - 1.5 kW - 50 Hz - 3 Ph**	**400 VAC - 2.2 kW - 50 Hz - 3 Ph**	**400 VAC - 2.2 kW - 50 Hz - 3 Ph**
weight, ready for use	kg	35.0	43.0	64.0	94.0
	lb	77,2	94,8	141,1	207,2
dimensions (LxWxH)	mm	400 x 300 x 441	400 x 300 x 541	500 x 380 x 541	500 x 380 x 676
	in	15.7 x 11.8 x 17.4	15.7 x 11.8 x 21.3	19.7 x 15 x 21.3	19.7 x 15 x 26.6

VARI PUMPS

electric - 400V - 2-stage

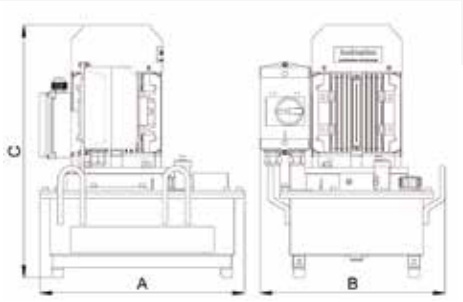
Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

specifications		12 W 25 E	12 W 50 E	18 W 25 E	18 W 50 E
art no		100.152.064	100.152.065	100.152.067	100.152.068
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
		10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	25000	50000	25000	50000
	oz	845,4	1690,7	845,4	1690,7
first stage output / min.	cc	3200	3200	5000	5000
	oz	108,2	108,2	169,1	169,1
second stage output / min.	cc	1200	1200	1800	1800
	oz	40,6	40,6	60,9	60,9
first stage pressure range	bar/Mpa	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20
	psi	0 - 2901	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200-720 / 0-72	200-720 / 0-72	200-720 / 0-72	200-720 / 0-72
	psi	2901 - 10443	2901 - 10443	2901 - 10443	2901 - 10443
operator type		electric motor	electric motor	electric motor	electric motor
engine		**400 VAC - 1.5 kW - 50 Hz - 3 Ph**	**400 VAC - 1.5 kW - 50 Hz - 3 Ph**	**400 VAC - 2.2 kW - 50 Hz - 3 Ph**	**400 VAC - 2.2 kW - 50 Hz - 3 Ph**
weight, ready for use	kg	64.0	94.0	96.0	96.0
	lb	141,1	207,2	211,6	211,6
dimensions (LxWxH)	mm	500 x 380 x 541	500 x 380 x 676	500 x 380 x 676	500 x 380 x 676
	in	19.7 x 15 x 21.3	19.7 x 15 x 26.6	19.7 x 15 x 26.6	19.7 x 15 x 26.6

VARI PUMPS NA
electric



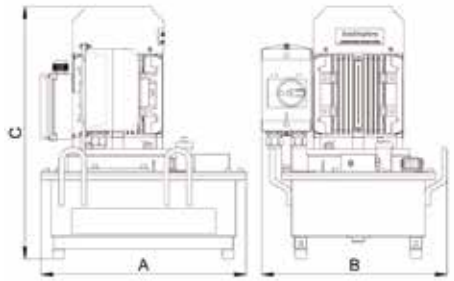
Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

		115V - 1 stage	115V - 1 stage	115V - 2 stage	115V - 2 stage	460V - 2 stage
		06 S 06 G	12 S 12 G	12 W 06 G	12 W 25 G	18 W 25 F
art no		101.003.026	101.003.029	101.003.027	101.003.028	101.003.030
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	12000	6000	25000	25000
	oz	202,9	845,4	202,9	845,4	845,4
number of outputs		1	1	1	1	2
number of stages		1	1	2	2	1
first stage output / min.	cc	600	1100	3100	3100	4700
	oz	20,3	37,2	104,8	104,8	158,9
second stage output / min.	cc	_	_	1100	1100	1700
	oz	_	_	37,2	37,2	57,5
first stage pressure range	bar/Mpa	0 - 200 / 0 - 20	0 - 200 / 0 - 20	0 - 200 / 0 - 20	0 - 200 / 0 - 20	0 - 200 / 0 - 20
	psi	0 - 2901	0 - 2901	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200 - 720 / 20 - 72	200 - 720 / 20 - 72	200 - 720 / 20 - 72	200 - 720 / 20 - 72	200 - 720 / 20 - 72
	psi	2901 - 10443	2901 - 10443	2901 - 10443	2901 - 10443	2901 - 10443
operator type		electric motor	electric motor	electric motor	electric motor	electric motor
engine		**115 VAC - 1.5 kW - 60 Hz - 1 Ph**	**115 VAC - 1.5 kW - 60 Hz - 1 Ph**	**115 VAC - 1.5 kW - 60 Hz - 1 Ph**	**115VAC - 1.5 kW - 60 Hz - 1 Ph**	**460 VAC - 2.2 kW - 60 Hz - 3 Ph**
speed	rpm	3600	3600	3600	3600	3600
weight, ready for use	kg	36,0	46,0	40,0	67,0	96,0
	lb	79	101,0	88,0	147,0	211,0
dimensions (AxBxC)	mm	400 x 362 x 493	400 x 403 x 593	400 x 362 x 493	500 x 400 x 593	500 x x400 x 593
	in	15.8 x 14.3 x 19.4	15.8 x 15.9 x 23.3	15.8 x 14.3 x 19.4	19.7 x 15.8 x 23.3	19.7 x 15.8 x 23.3

VARI PUMPS UK
electric



Features & benefits

- 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 (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

		115V - 1 stage	115V - 1 stage	115V - 2 stage	115V - 2 stage
		06 S 06 Q	**12 S 12 Q**	**12 W 06 Q**	**12 W 25 Q**
art no		101.003.036	101.003.037	101.003.038	101.003.039
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	6000	25000	12000
	oz	202,9	845,4	202,9	845,4
number of outputs		1	1	1	1
number of stages		1	1	2	2
first stage output / min.	cc	600	1100	3100	3100
	oz	20,3	37,2	104,8	104,8
second stage output / min.	cc	_	_	1100	1100
	oz	_	_	37,2	37,2
first stage pressure range	bar/Mpa	0 - 200 / 0 - 20	0 - 200 / 0 - 20	0 - 200 / 0 - 20	0 - 200 / 0 - 20
	psi	0 - 2901	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200 - 720 / 20 - 72	200 - 720 / 20 - 72	200 - 720 / 20 - 72	200 - 720 / 20 - 72
	psi	2901 - 10443	2901 - 10443	2901 - 10443	2901 - 10443
operator type		electric motor	electric motor	electric motor	electric motor
engine		**115 VAC - 1.5 kW - 50 Hz - 1 Ph**	**115 VAC - 1.5 kW - 50 Hz - 1 Ph**	**115 VAC - 1.5 kW - 50 Hz - 1 Ph**	**115 VAC - 1.5 kW - 50 Hz - 1 Ph**
speed	rpm	2800	2800	2800	2800
weight, ready for use	kg	36,0	46,0	40,0	67,0
	lb	79	101,0	88,0	147,0
dimensions (AxBxC)	mm	400 x 362 x 471	400 x 403 x 571	400 x 362 x 471	500 x 400 x 571
	in	15.8 x 14.3 x 18.5	15.8 x 15.9 x 23.5	15.8 x 14.3 x 18.5	19.7 x 15.8 x 23.5

VARI PUMPS

electric - petrol - 2-stage - 4 stroke

Features & benefits

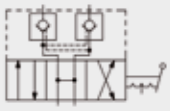
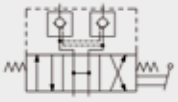
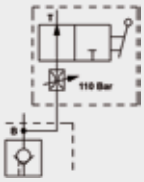
- Safe
  - In case of a power failure, the oil pressure is maintained
  - Protected against pressure drop by pressure-controlled non-return valve
- Excluding single-acting (M 311) or double acting (M 322) control valve

Create more flexibility for future use? By adding a M304 SADA (Single Acting / Double Acting) M 304 switch your pump is able to control both single & double acting cylinders.

EU		12 W 6 SP	18 W 25 P	18 W 50 P
art no		101.002.021	101.002.023	101.002.025
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	25000	50000
	oz	202,9	845,4	1690,7
first stage output / min.	cc	3600	5700	5700
	oz	121,7	192,7	192,7
second stage output / min.	cc	1300	2000	2000
	oz	44,0	67,6	67,6
first stage pressure range	bar/Mpa	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20
	psi	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200-720 / 20-72	200-720 / 20-72	200-720 / 20-72
	psi	2901 - 10443	2901 - 10443	2901 - 10443
operator type		petrol engine	petrol engine	petrol engine
engine		**4 stroke - 4.2 HP - 3.1 kW**	**4 stroke - 4.2 HP - 3.1 kW**	**4 stroke - 4.2 HP - 3.1 kW**
weight, ready for use	kg	33.0	61.0	91.0
	lb	81,6	143,3	209,4
dimensions (LxWxH)	mm	470 x 346 x 472	500 x 400 x 572	500 x 400 x 716
	in	18.5 x 13.6 x 18.6	19.7 x 15.7 x 22.5	19.7 x 15.7 x 28.2

NA		12 W 6 SP	18 W 25 P	18 W 50 P
art no		101.002.026	101.002.030	101.002.028
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	25000	50000
	oz	202,9	845,4	1690,7
first stage output / min.	cc	3600	5700	5700
	oz	121,7	192,7	192,7
second stage output / min.	cc	1300	2000	2000
	oz	44,0	67,6	67,6
first stage pressure range	bar/Mpa	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20
	psi	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200-720 / 20-72	200-720 / 20-72	200-720 / 20-72
	psi	2901 - 10443	2901 - 10443	2901 - 10443
operator type		petrol engine	petrol engine	petrol engine
engine		4 stroke - 4.2 HP - 3.1 kW	4 stroke - 4.2 HP - 3.1 kW	4 stroke - 4.2 HP - 3.1 kW
weight, ready for use	kg	32.0	60.0	90.0
	lb	81,6	143,3	209,4
dimensions (LxWxH)	mm	530 x 370 x 464	554 x 400 x 564	554 x 400 x 700
	in	18.5 x 13.6 x 18.6	19.7 x 15.7 x 22.5	19.7 x 15.7 x 28.2

ASIA		12 W 6 SP	18 W 25 P	18 W 50 P
art no		101.002.113	101.002.119	101.002.114
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
capacity oil tank (effective)	cc	6000	25000	50000
	oz	202,9	845,4	1690,7
first stage output / min.	cc	3600	5700	5700
	oz	121,7	192,7	192,7
second stage output / min.	cc	1300	2000	2000
	oz	44,0	67,6	67,6
first stage pressure range	bar/Mpa	0-200 / 0-20	0-200 / 0-20	0-200 / 0-20
	psi	0 - 2901	0 - 2901	0 - 2901
second stage pressure range	bar/Mpa	200-720 / 20-72	200-720 / 20-72	200-720 / 20-72
	psi	2901 - 10443	2901 - 10443	2901 - 10443
operator type		petrol engine	petrol engine	petrol engine
engine		4 stroke - 4.2 HP - 3.1 kW	4 stroke - 4.2 HP - 3.1 kW	4 stroke - 4.2 HP - 3.1 kW
weight, ready for use	kg	33.0	61.0	91.0
	lb	81,6	143,3	209,4
dimensions (LxWxH)	mm	470 x 346 x 472	500 x 400 x 572	500 x 400 x 716
	in	18.5 x 13.6 x 18.6	19.7 x 15.7 x 22.5	19.7 x 15.7 x 28.2

vari pumps	hydraulic diagram	description	model	art no
		Control valve – Single acting • Suitable for single-acting tools • Handle stops in each position • 3-way, 3-position • Not in combination with a vari pump model (name) starting with 18 W • Connection 3/8” NPT female thread (2x) • Max. working pressure: 720 bar	M 311	100.181.311
		Control valve – Double acting • Suitbale for double-acting tools • Handle stops in each position • With pressure-controlled non-return valves for securing the load • 4-way, 3-position • Connection: 3/8” NPT female (2x) • Max. working pressure: 720 bar	M 322	100.181.322
		Control valve – Double acting (dead men’s function) • Suitable for double-acting tools • Handle with dead man’s function, automatically goes to “O” position • With pressure-controlled non-return valves for securing the load • 4-way, 3-position • Connection: 3/8” NPT female (2x) • Max. working pressure: 720 bar	M 323	100.181.323
		Remote control valve – Double acting • 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 non-return valves for securing the load • 3-position, 4-way valve • Connection: 3/8” NPT female (2x) • Remote control, art no 100.151.060 (to be ordered separately). 4 buttons (on, off, lift and lower) • Max. working pressure: 720 bar	M 326	100.182.321
		Single/double acting valve (SADA) • For assembly on the varipump underneath a double-acting valve (M 322, M 323) • This valve makes it possible to drive both single and double acting tools with just one pump • Switch with A + B function (double-acting) or A (single-acting) • Max. working pressure: 720 bar	M 304	100.172.051

adaptors	description	model	art no
	Pressure gauge connector (for vari pumps) • Suitable for single-acting control Valve M 311 • Provided with: 1 x 3/8” NPT female, 1 x 3/8” NPT male and ½” NPT female for pressure gauge • Pressure gauge can be placed in an angle of 45° using Elbow, art no 100.581.240 • Max. working pressure: 720 bar	A 108	100.181.108
	Pressure gauge connection block (for vari pumps) • Suitable for double-acting control valves M 322, M 323 and M 324 • Supplies pressure to port A or B, dependent on which is highest • Provided with: 1 x ½” NPT female • Max. working pressure: 720 bar	M 308	100.182.308

vari pumps	description	model	art no
	Pressure Control Valve • For mounting unto the Pump or unto the connecting plate M 302 (below the connecting block M 301 or below the Valves M 311, M 322, M 323 • Pressure adjustable between 20 and 720 Bars • Max. working pressure: 720 bar	M 303	100.181.303
	Protection frame (for vari pumps)	-	100.151.056
	Cover plate *for protection frame* (for vari pumps)	-	100.151.040

pressure gauges	description	model	art no
	Pressure gauge Ø 100mm • 0 - 720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 100 mm • Connection: ½" NPT male	A 500	100.582.500
	Pressure gauge Ø 60mm - A 500 - **bar / psi** • 0 - 720 bars / 0 – 10443 psi • Pointer damped with glycerine • Stainless steel • Housing Ø 100 mm • Connection: ½" NPT male	A 500	101.003.024
	Rubber protection cover Ø100mm • Suitable for Ø 100 mm pressure gauges	-	350.581.160
	Pressure gauge Ø 60mm • 0 - 720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 60 mm • Connection: ¼" NPT male	A 150	100.581.036
	Pressure gauge Ø 100mm - A 500 - **bar / psi** • 0 - 720 bars / 0 – 10443 psi • Pointer damped with glycerine • Stainless steel • Housing Ø 100 mm • Connection: ½" NPT male	A 150	101.003.023
	Rubber protection cover Ø 60mm • Suitable for Ø 60 mm pressure gauges	-	350.581.152
	Digital pressure gauge • 0 - 1000 Bars • Peak pressure memory • Connection: ¼" BSP male	-	150.581.091

HYDRAULIC SYSTEM COMPONENTS

SINGLE HOSES

When working with high pressure hydraulics 700 Bar / 10.000 psi safety comes first. All Holmatro hoses are suitable for 700Bar working pressure. Our hoses are designed on a 4:1 safety ratio, resulting in a 10 year lifespan. All hoses are individually tested during the production proces.

Make sure to always have a pressure relief tool available with you!

Features & benefits

- Suitable for high pressure hydraulics / max 720Bar working pressure
- Anti-kink spring on both sides

Standard supplied with

- Hose connection A = 3/8” NPT male
- Hose connection B = 3/8” NPT male
- Already filled with oil

specifications		H 1 SO	H 2 SO	H 3 SO	H 5 SO	H 10 SO
art no		100.571.101	100.571.102	100.571.103	100.571.105	100.571.110
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
color		orange	orange	orange	orange	orange
hose connection A		3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male
hose connection B		3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male
length	m	1	2	3	5	10
	ft	3	7	10	16	33

STANDARD HOSES

When working with high pressure hydraulics 700 Bar / 10.000 psi safety comes first. All Holmatro hoses are suitable for 700Bar working pressure. Our hoses are designed on a 4:1 safety ratio, resulting in a 10 year lifespan. All hoses are individually tested during the production proces.

Make sure to always have a pressure relief tool available with you!

Features & benefits

- Suitable for high pressure hydraulics / max 720Bar working pressure
- Anti-kink spring on both sides

Standard supplied with

- Hose connection A = 3/8” NPT male
- Hose connection B = A 119 male coupler
- Already filled with oil

specifications		H 1 SOU	H 2 SOU	H 3 SOU	H 5 SOU	H 10 SOU
art no		100.572.101	100.572.102	100.572.103	100.572.105	100.572.110
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
color		orange	orange	orange	orange	orange
hose connection A		3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male	3/8” NPT male
hose connection B		A 119	A 119	A 119	A 119	A 119
length	m	1	2	3	5	10
	ft	3	7	10	16	33

EXTENSION HOSES

When working with high pressure hydraulics 700 Bar / 10.000 psi safety comes first. All Holmatro hoses are suitable for 700Bar working pressure. Our hoses are designed on a 4:1 safety ratio, resulting in a 10 year lifespan. All hoses are individually tested during the production proces.

Make sure to always have a pressure relief tool available with you!

Holmatro hose suitable for 720 Bar / 10.000 psi equipped with both male and female couplers. **This way, you can always connect hoses and easily extend you hose lengths.**

Features & benefits

- Suitable for high pressure hydraulics / max 720Bar working pressure
- Anti-kink spring on both sides

Standard supplied with

- Hose connection A = A 118 female coupler
- Hose connection B = A 119 male coupler
- Already filled with oil

specifications		VL 1 SOU	VL 2 SOU	VL 3 SOU	VL 5 SOU	VL 10 SOU
art no		100.572.301	100.572.302	100.570.294	100.572.305	100.572.310
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
color		orange	orange	orange	orange	orange
hose connection A		A 119	A 119	A 119	A 119	A 119
hose connection B		A 118	A 118	A 118	A 118	A 118
length	m	1	2	3	5	10
	ft	3	7	10	16	33

specifications		VL 15 SOU	VL 20 SOU
art no		100.572.315	100.572.320
max. working pressure	bar/Mpa	720 / 72	720 / 72
	psi	10.443	10.443
color		orange	orange
hose connection A		A 119	A 119
hose connection B		A 118	A 118
length	m	15	20
	ft	49	66

couplers	description	model	art no
	Female coupler incl. dust cover • Connection: 3/8” NPT, male • Fits: A 119 • Max. working pressure: 720 bar	A 118	100.181.118
	Male coupler incl. dust cover • Connection: 3/8” NPT, female • Fits: A 118, A 134 N and A 418 • Max. working pressure: 720 bar	A 119	100.181.119
	Female coupler incl. pressure release valve • Adjusted to ca. 750 Bars • Connection: 3/8” NPT, male • Fits: A 119 • Max. working pressure: 720 bar	A 418	100.181.418
	Female coupler incl. non return valve • Suitable for hose rupture security • Not to be used with double-acting systems • Connection: 3/8” NPT, male • Fits: A 119 • Max. working pressure: 720 bar	A 134 N	100.181.434
	Dust cap – female coupler • With fixing thread • Fits: A 118 • Max. working pressure: 720 bar	A 118 SK	100.181.828
	Dust cap – male coupler • With fixing thread • Fits: A 119 • Max. working pressure: 720 bar	A 119 SK	100.181.829
	Pressure release valve – female • For reducing any remnant pressure • Suitable for: A 118 • Max. working pressure: 720 bar	A 118	100.181.840
	Pressure release valve – male • For reducing any remnant pressure • Suitable for: A 119 • Max. working pressure: 720 bar	A 119	100.181.841

FLOWPANELS
(valve blocks)

Control your hydraulic system with the utmost precision

To measure the pressure in your system & easily control a hydraulic system with multiple cylinders, add a Holmatro FlowPanel (valve block, manifold) to your system set-up. Even the heaviest loads can be controlled extremely effectively. For the purpose of ergonomics, the FlowPanel can be assemblied on top of your electrical pump unit (vari pump).

Features & benefits

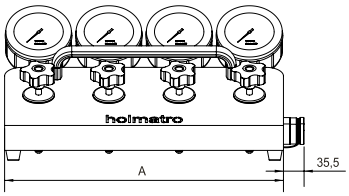
- Excellent control over your load; extremely accurate regulation of oil flow under high pressure
- Regulator valves with comfortable rotary knobs
- Carry-handle positioned above center of gravity

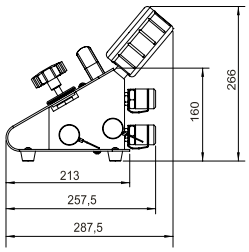
Additional information

- Bar / psi pressure gauges that are easy to read; 45 degrees angle
- Installation on vari pump with use of Assembly set FlowPanel
  art. No 100.182.111: for single acting
  art. No 100.181.112: for double acting

Standard supplied with

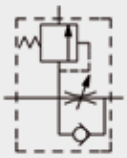
- Couplers
- Gauges 100 mm Ø





single acting		HMS 2	HMS 4	HMS 6
art no		100.172.050	100.172.047	100.172.054
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
number of outlet ports		2	4	6
couplers		yes	yes	yes
pressure gauges		yes	yes	yes
weight, ready for use	kg	9.0	17.8	26.6
	lb	19,8	39,2	58,6
dimension A	mm	238	480	722
	in	9,4	18,9	28,4

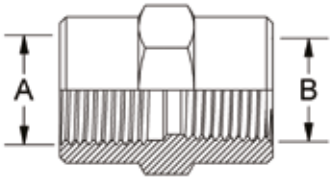
double acting		HMD 2	HMD 4	HMD 6
art no		100.172.044	100.172.041	100.172.057
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443
number of outlet ports		2	4	6
couplers		yes	yes	yes
pressure gauges		yes	yes	yes
weight, ready for use	kg	10.0	19.4	29.1
	lb	22	43,4	64,2
dimension A	mm	238	480	722
	in	9,4	18,9	28,4

valves	hydraulic diagram	description	model	art no
		Needle valve • For accurate control of the oil flow, also under maximum pressure • **Connection: 3/8” NPT female (2x)** • Max. working pressure: 720 bar	A 109 N	100.581.609
		Needle valve • For accurate control of the oil flow, also under maximum pressure • **Connection: 3/8” NPT male and 3/8” NPT female** • Max. working pressure: 720 bar	A 130	100.181.130
		Ball valve • Very suitable for quick shut-off valve (open-close) • Can be operated under maximum pressure • Connection: 3/8” NPT female (2x) • Max. working pressure: 720 bar	A 195	100.581.200
		Breaking safety / load security valve • 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 • Max. working pressure: 720 bar	A 110	100.181.110
		Female coupler incl. non return valve • Suitable for hose rupture security • Not to be used with double-acting systems • Connection: 3/8” NPT, male • Fits: A 119 • Max. working pressure: 720 bar	A 134 N	100.181.434
		Non return valve • Spring-loaded • Connection: 3/8” NPT male (2x) • Max. working pressure: 720 bar	A 209	100.581.209

accessories hydraulics	description	model	art no
	Manifold A 125 - 3/8" NPT female (5X) • Max. working pressure: 720 bar	A 125	100.181.125
	T-Piece - 3/8" NPT female (3X) • Max. working pressure: 720 bar	-	100.001.010
	Connection block Y - 3/8" NPT female (3X) • Max. working pressure: 720 bar	-	100.182.104
	Cross piece - 3/8" NPT female (4x) • Max. working pressure: 720 bar	-	100.581.139
	Elbow - 45° - 1/2" NPT female - 1/2" NPT male • Max. working pressure: 720 bar	-	100.581.240
	Elbow - 45° - 3/8" NPT female - 3/8" NPT male • Max. working pressure: 720 bar	-	100.581.114
	Elbow - 90° - 3/8" NPT female - 3/8" NPT male • Max. working pressure: 720 bar	-	100.581.113
	Elbow - 90° - 3/8" NPT male (2X) • Max. working pressure: 720 bar	-	100.581.213
	Elbow - 90° - 1/4" NPT female swivel nut - 1/4" NPT male • Max. working pressure: 720 bar	-	150.581.219
	Tube connector - 12MM - 3/8" NPT male • Max. working pressure: 720 bar	-	100.581.136
	90° tube connector - 12MM - 3/8" NPT male • Max. working pressure: 720 bar	-	100.581.137

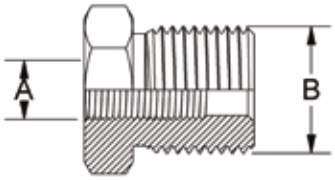
accessories hydraulics	description	model	art no
	Filler plug- 3/8" NPT male • Max. working pressure: 720 bar	-	100.581.105
	4 pins spanner set • Max. working pressure: 720 bar	-	100.581.132
	Multiseal M12 • Max. working pressure: 720 bar	-	190.593.275
	Multiseal 1/4" BSP • Max. working pressure: 720 bar	-	150.581.230
	Multiseal M14 • Max. working pressure: 720 bar	-	190.593.075
	Multiseal M18 • Max. working pressure: 720 bar	-	100.581.158

connection socket



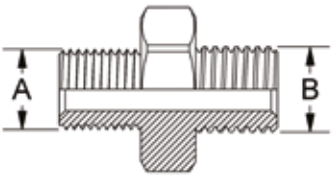
specifications		connection socket	connection socket	connection socket	connection socket	connection socket
art no		100.581.238	150.581.228	100.181.227	100.581.102	100.181.228
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443
thread A		1/4" NPT	1/4" NPT	1/4" BSP	3/8" NPT	3/8" NPT
thread B		1/4" NPT	1/4" BSP	M18 x 1.5	3/8" NPT	M18 x 1.5

reducing bushing



specifications		reducing bushing	reducing bushing	reducing bushing	reducing bushing
art no		100.581.128	150.581.085	100.581.103	100.581.133
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443
thread A		1/4" NPT	1/8" BSP	3/8" NPT	3/8" NPT
thread B		3/8" NPT	1/2" BSP	1/2" NPT	3/4" NPT

nipple

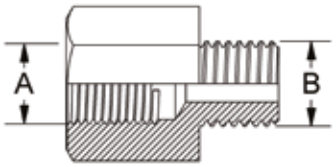


specifications		nipple	nipple	nipple	nipple	nipple	nipple
art no		110.013.004	100.581.239	150.581.244	150.581.227	150.581.218	110.013.044
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
thread A		1/8” NPT	1/4” NPT	1/4” NPT	1/4” NPT	1/4” BSP	1/4” BSP
thread B		3/8” NPT	1/4” NPT	3/8” NPT	1/4” BSP	3/8” NPT	M12 x 1.75

specifications		nipple	nipple	nipple	nipple	nipple	nipple
art no		150.581.216	100.581.211	100.181.156	110.013.005	100.581.101	100.181.151
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
thread A		1/4” BSP	1/4” BSP	1/4” BSP	1/4” BSP	3/8” NPT	3/8” NPT
thread B		1/4” BSP	M14 x 1.5	M14 x 2	M10 x 1	3/8” NPT	M14 x 2

specifications		nipple	nipple
art no		150.581.087	150.581.088
max. working pressure	bar/Mpa	720 / 72	720 / 72
	psi	10.443	10.443
thread A		1/2” BSP	1/2” BSP
thread B		3/8” NPT	1/2” NPT

connector



specifications		connector	connector	connector	connector	connector	connector
art no		100.181.223	150.000.398	100.581.235	100.181.159	100.181.047	150.581.217
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
thread A		1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" NPT	3/8" NPT
thread B		1/4" NPT	3/8" NPT	3/8" BSP	M14 x 2	M10 x 1	1/4" BSP

specifications		nipple	nipple	nipple	nipple	nipple	nipple
art no		100.581.107	100.181.153	100.581.104	100.181.129	150.581.058	100.181.154
max. working pressure	bar/Mpa	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72	720 / 72
	psi	10.443	10.443	10.443	10.443	10.443	10.443
thread A		3/8" NPT	3/8" NPT	1/2" NPT	M14 x 1.5	M14 x 1.5	M18 x 1.5
thread B		1/4" NPT	M14 x 2	3/8" NPT	3/8" NPT	1/4" BSP	3/8" NPT

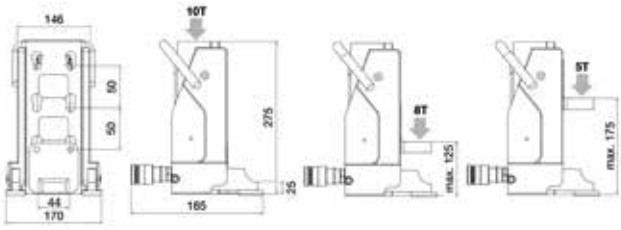
specifications		connector
art no		100.181.157
max. working pressure	bar/Mpa	720 / 72
	psi	10.443
thread A		M18 x 1.5
thread B		1/4" BSP

oils	description	model	art no
	Hydraulic oil ECO Power, DIN 51524.3 HVLP, bottle 1 litre • Standard oil for **all Holmatro motor pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 36 - 1L	180.000.857
	Hydraulic oil ECO Power, DIN 51524.3 HVLP, bottle 5 litres • Standard oil for **all Holmatro motor pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 36 - 5L	180.000.815
	Hydraulic oil ECO Power, DIN 51524.3 HVLP, drum 60 litres • Standard oil for **all Holmatro motor pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 36 - 60L	130.103.025
	Hydraulic oil ECO Power, DIN 51524.3 HVLP, drum 208 litres • Standard oil for **all Holmatro motor pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 36 - 208L	180.001.543
	Hydraulic oil ECO Power, DIN 51524.3 HVLP, bottle 1 litre • Standard oil for **all Holmatro tools and hand pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 15 - 1L	100.581.051
	Hydraulic OIL ECO Power, DIN 512524.3 HVLP, bottle of 5 litres • Standard oil for **all Holmatro tools and hand pumps** • Fully mineral oil • Optimum lubricating properties • Excellent protection against wear and corrosion • Up to 3x longer service life than the leading hydraulic oils	ISO VG 15 - 5L	100.581.055
	Motor oil, API SJ/CH-4, bottle 0.6 litre • Very good detergent and dispersant • Optimum protection against wear, corrosion and foam • High and stable viscosity • Low sulphate ash content	0 W 30	150.581.103

OTHER (LIFTING) TOOLS

TOE JACK MACHINE LIFTING
spring return

To lift heavy machinery. Ideal for lifting, moving heavy equipment with a limited space.



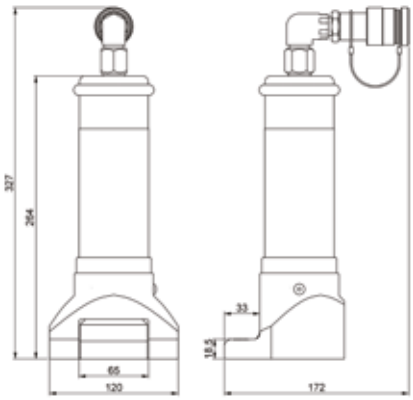
Features & benefits

- Toe height adjustable in 3 positions: 25, 100 and 175 mm
- Protected against ejection of the plunger
- Telescopic support legs
- Duplex Power Coating makes the plunger corrosion-resistant
- Duo Power Ring; seal and bearing for long life span

specifications		HMJ 10 S 15 U
art no		100.062.004
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**10**
min. insertion space	**mm**	
	in	
stroke	**mm**	**145**
	in	**5,7**
closed height	mm	275
	in	10,8
capacity (head)	kN/t	100 / 10.2
capacity (toe), min.	kN/t	49 / 5
capacity (toe), max.	kN/t	78.5 / 8
required oil content (effective)	cc	208
	oz	1,2
return type		spring
connection		A 118
weight, ready for use	kg	18.5
	lb	2,9

TOE JACK
spring return

To lift heavy machinery. Ideal for lifting, moving heavy equipment with a limited space.



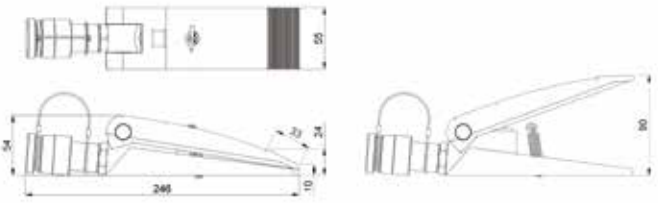
Features & benefits

- 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°

specifications		TJ 8 S 13
art no		100.112.102
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**8**
stroke	**mm**	**130**
	in	**5,1**
closed height	**mm**	**319**
	in	**12,6**
capacity (toe), min.	kN/t	88.3 / 9
required oil content (effective)	cc	207
	oz	7,0
return type		spring
connection		A 118
weight, ready for use	kg	6.5
	lb	14,3

WEDGE
spring return

Holmatro hydraulic wedges, otherwise known as spreaders or lifting wedges, are used to lift heavy loads or to separate parts of a construction from one another. The shape of the hydraulic wedge makes it possible to use it with a minimal insertion space (6 to 9 mm). There are hydraulic (lifting) wedges that only lift vertically and wedges that can be used in all positions. Hydraulic wedges are lightweight and compact and can therefore be used in small spaces where it is not possible to use other lifting mechanisms.



Features & benefits

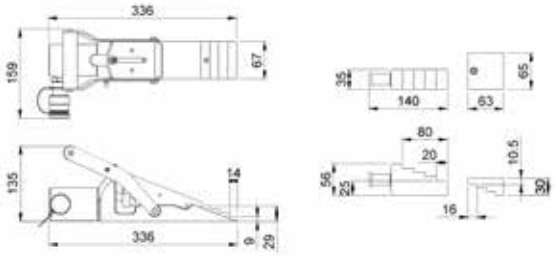
- Compact
- Lightweight
- Anti-skid profile on wedge arms
- Usable in all positions

specifications		HW 1000
art no		100.562.009
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**1**
min. insertion space	**mm**	**15**
	in	**0,6**
lifting stroke	**mm**	**90**
	in	**3,5**
max. spreading force	kN/t	156.6 / 16
required oil content (effective)	cc	75
	oz	0,3
return type		spring
weight, ready for use	kg	8.8
	lb	4,6

VERTICAL LIFTING WEDGE

spring return

Holmatro hydraulic wedges, otherwise known as spreaders or lifting wedges, are used to lift heavy loads or to separate parts of a construction from one another. The shape of the hydraulic wedge makes it possible to use it with a minimal insertion space (5 to 10 mm). There are hydraulic (lifting) wedges that only lift vertically and wedges that can be used in all positions. Hydraulic wedges are lightweight and compact and can therefore be used in small spaces where it is not possible to use other lifting mechanisms.



Features & benefits

- 100% vertical lifting movement; prevents misalignment of the load
- Automatic mechanical retraction of lifting plate
- Minimum insertion space of 9 mm
- Vertical lifting stroke of 20 mm at each step

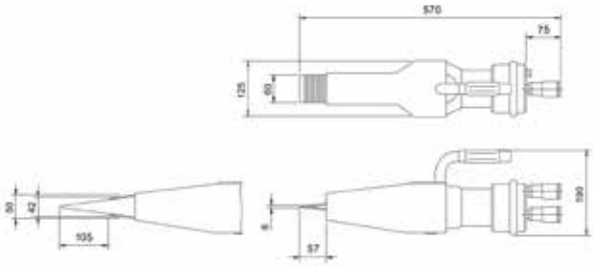
Standard supplied with

- Safety block
- Step block
- Grease pistol
- Grease cartridge Molycote®
- Plastic carrying / storage box

specifications		HVLW 16 S 2
art no		100.112.104
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**16**
min. insertion space	**mm**	**9**
	in	**0,4**
lifting stroke	**mm**	**20**
	in	**0,8**
max. spreading force	kN/t	156.6 / 16
required oil content (effective)	cc	75
	oz	2,5
return type		spring
weight, ready for use	kg	8.8
	lb	19,4

WEDGE
hydraulic return

Holmatro hydraulic wedges, otherwise known as spreaders or lifting wedges, are used to lift heavy loads or to separate parts of a construction from one another. The shape of the hydraulic wedge makes it possible to use it with a minimal insertion space (5 to 10 mm). There are hydraulic (lifting) wedges that only lift vertically and wedges that can be used in all positions. Hydraulic wedges are lightweight and compact and can therefore be used in small spaces where it is not possible to use other lifting mechanisms.



Features & benefits

- Minimum insertion space of 6 mm
- Compact construction
- Low weight
- Anti-skid profile on wedge arms
- Usable in all positions

specifications		HWJ 25 U
art no		100.102.021
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**24**
min. insertion space	**mm**	**6**
	in	**0,2**
lifting stroke	**mm**	**51**
	in	**2,0**
max. spreading force	kN/t	235.4 / 24
required oil content (press)	cc	328
	oz	11,1
required oil content (retract)	cc	217
	oz	7,0
return type		hydraulic
weight, ready for use	kg	8.1
	lb	17,9

MECHANICAL JACKS
cast iron

Holmatro's range of mechanical tools is produced to withstand tough operating conditions over long periods of time. The sustainable cast iron construction makes the tools suitable for use during welding work and for use under water. Despite these rough conditions, the tools are extremely maintenance-friendly. The parts are practically wear-resistant and the cast iron construction is dust proof. The self-locking property of the fully closed ratchet mechanism prevents entrance of the plunger under the pressure of heavy loads, thus making it even safer during use.

Features & benefits

- Made of cast iron; resistant to continuous heavy operating conditions
- Unique ratchet handle for engagement both wheel and plunger
- Self-locking; for safe working
- Robust; can be used close to welding works and under water
- Low maintenance

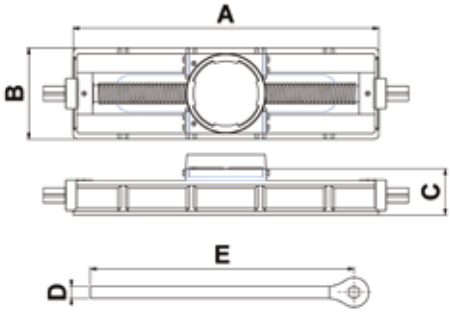
Standard supplied with

- Handle Bar

specifications		JJ 1015	JJ 1513	JJ 2513	JJ 3513	JJ 5013
art no		200.401.001	200.401.011	200.401.021	200.401.031	200.401.041
tonnage	**t**	**10**	**15**	**25**	**35**	**50**
stroke	**mm**	**150**	**125**	**125**	**130**	**130**
	in	5,9	4,9	4,9	5,1	5,1
closed height	**mm**	**280**	**255**	**255**	**280**	**290**
	in	11,0	10,0	10,0	11,0	11,4
capacity	kN/t	98.1 / 10	147.2 / 15	245.3 / 25	343.4 / 35	490.5 / 50
material		cast iron	cast iron	cast iron	cast iron	cast iron
weight, ready for use	kg	12.0	12.0	16.0	24.0	31.0
	lb	26,5	26,5	35,3	52,9	68,3

TRAVERSING BEDS
cast iron

Mechanical traversing beds for mechanical jacks. Suitable for smooth horizontal movement of heavy loads.



Features & benefits

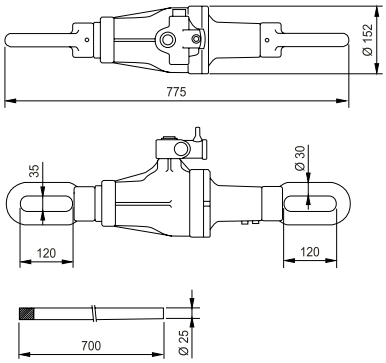
- Made of cast iron; resistant to continuous heavy operating conditions
- Screw shaft and handle bar; for easy operating
- Self-locking; for safe working
- Robust; can be used close to welding works and under water
- Low maintenance

specifications		TB 2530	TB 5045
art no		200.102.010	200.102.015
suitable for jack		JJ 2513	JJ 5013
max. horizontal displacement	mm	300	450
	in	11,8	18
material		cast iron	cast iron
weight, ready for use	kg	25.0	66.0
	lb	55,1	145,5
dimension A	mm	470	670
	in	18,5	26,4
dimension B	mm	185	220
	in	7,3	8,7
dimension C	mm	90	128
	in	3,5	5,0
dimension D	mm	30	30
	in	1,2	1,2
dimension E	mm	600	600
	in	23,6	23,6

MECHANICAL PULLING JACK

cast iron

The Pulling Jack is part of Holmatro's range of mechanical tools and is produced to withstand tough operating conditions over long periods. The durable cast iron construction makes the tools suitable for use during welding work and under water. Despite these rough conditions, the tools are extremely maintenance-friendly. The parts are particularly wear-resistant and the cast iron construction is dust proof. The self-braking property of the fully closed ratchet mechanism prevents entrance of the plunger under the pressure of heavy loads, thus making it even safer during use.



Features & benefits

- Made of cast iron; resistant to continuous heavy operating conditions
- Unique ratchet handle for engagement both wheel and plunger
- Self-locking; for safe working
- Robust; can be used close to welding works and under water
- Low maintenance

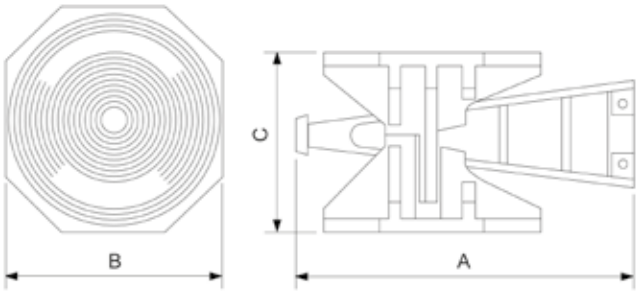
Standard supplied with

- Handle Bar

specifications		PL 2510
art no		200.421.001
tonnage	**t**	**25**
stroke	**mm**	**100**
	in	**3,9**
retracted length	mm	775
	in	30,5
capacity	kN/t	245.3 / 25
material		cast iron
weight, ready for use	kg	32.0
	lb	70,5

SHIP WEDGES

Holmatro ship wedges are made of cast iron and used at shipyards to support a ship during a longer period. They're resistant to welding work and need little maintenance. The quick release ship wedges can support a static load of 50 tons and 80 tons, releasing is possible even when they are overloaded. The construction of the wedge makes it possible to release them with a single hammer-blow.



Features & benefits

- Unloads in one go with maximum load
- Robust; resistant to continuous heavy operating conditions
- Can be used close to welding works
- Low maintenance

specifications		W 50	W 80
art no		500.501.050	500.501.080
max. height	mm	225	340
	oz	8,9	13,4
min. height	mm	200	275
	oz	7,9	10,8
capacity	**kN/t**	**490.5 / 50**	**784.8 / 80**
weight, ready for use	kg	29.0	64.5
	lb	63,9	142
dimension (AxBxC)	mm	390 x 255 x 200	570 x 345 x 275
	in	15.4 x 10 x 7.9 in	22.4 x 13.6 x 10.8 in

MULTI-PURPOSE CYLINDER SET

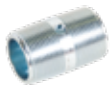
HIK set

A comprehensive maintenance package consisting of a range of Industrial hydraulic tools & accessories. This pre-defined set empowers you to effortlessly configure a unique tool for a multitude of applications, including lifting, lowering, pushing, pulling, pressing, and spreading.

Additional information

Consult the user manual before fitting cylinder accessories to these cylinders. The maximum working pressure and total construction length is restricted when using cylinder accessories.

specifications		HIK 10 M
art no		100.062.003
return type		spring
material		steel
weight, ready for use	kg	44.0
	lb	97
dimension A	mm	782
	in	30,8
dimension B	mm	287
	in	11,3
dimension C	mm	171
	in	6,7

tools	description	model	art no	#
	Holmatro Multipurpose Cylinder – HGC High quality Multi Purpose Cylinder. Fitted with unique features that considerably lengthen its life span and service life. Offers appropriate solutions for the most varied applications. Holmatro Multi Purpose Cylinders are available in different capacities and with different stroke lengths.	HGC 10 S 5	100.112.219	2
	Holmatro Multipurpose Cylinder – HGC High quality Multi Purpose Cylinder. Fitted with unique features that considerably lengthen its life span and service life. Offers appropriate solutions for the most varied applications. Holmatro Multi Purpose Cylinders are available in different capacities and with different stroke lengths.	HGC 10 S 15	100.112.221	1
	Hydraulic wedge, spring return • To lift a load from a flat surface where there is a minimum insertion space available • Highly suitable to carry out maintenance in places that are difficult to access • Applications: lifting machines, dismantling and assembly, adjustment and alignment	HW 1000	100.562.009	1
	Extension tube • Suitable for HGC 10 cylinders • Length: 125 mm • Thread size: 1¼" NPT male (2x) • Max. working pressure: 360 bar	125 - HGC 10	100.002.984	4
	Extension tube • Suitable for HGC 10 cylinders • Length: 250 mm • Thread size: 1¼" NPT male (2x) • Max. working pressure: 360 bar	250 - HGC 10	100.002.985	1
	Extension tube • Suitable for HGC 10 cylinders • Length: 500 mm • Thread size: 1¼" NPT male (2x) • Max. working pressure: 360 bar	500 - HGC 10	100.002.987	1
	Extension tube • Suitable for HGC 10 cylinders • Length: 750 mm • Thread size: 1¼" NPT male (2x) • Max. working pressure: 360 bar	750 - HGC 10	100.002.989	1
	Connection socket • To connect 2 extension tubes • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female (2x) • Max. working pressure: 360 bar	HGC 10	100.002.980	1
	Connection nipple • To connect accessories to cylinders • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT male (2x) • Max. working pressure: 360 bar	HGC 10	100.002.982	1
	Round base plate • To mount on bottom side of cylinder • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female • Max. working pressure: 360 bar	HGC 10	100.002.978	1

parts	description	model	art no	#
	Cross head • To provide better grip • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female • Max. working pressure: 360 bar	HGC 10	100.002.966	1
	Wedge head • For spreading • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female • Max. working pressure: 360 bar	HGC 10	100.002.968	1
	Cylinder toe • Suitable for HGC 10 cylinders • Thread size: 2¼"-14 UNS female • Max. working pressure: 144 bar	HGC 10	100.002.992	1
	Plunger toe • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female • Max. working pressure: 144 bar	HGC 10	100.002.991	1
	Cylinder body adapter • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT female • Max. working pressure: 360 bar • Standard supplied with 2x bolt M8x16	HGC 10	100.002.969	1
	Plunger Adapter • Suitable for HGC 10 cylinders • Thread size: 1¼" NPT male - 1"-8 UNC male • Max. working pressure: 360 bar	HGC 10	100.002.964	1
	PA handpump The PA 04 H 2 is the most compact, single acting, 2 stage hand pump in the hand pump range. The pump is ergonomically designed, has a robust, compact construction, is service- and maintenance-friendly and combines a low operating force with a high oil output. This all combined with a range of handy features makes this pump a worthwhile asset for you and your tools. This pump is ideal when you are working with smaller hydraulic tools and you want to profit from a very high oil output in the first stage (up to 45 bar) to speed things up.	PA 04 H 2	100.142.033	1
	Hose with male coupler – 2 meters	H 2 SOU	100.572.102	1
	Pressure gauge set (Ø 60) - PA pump 04/09 • 0-720 bars • Pointer damped with glycerine • Stainless steel • Housing Ø 63 mm • Including rubber protection cover • Connection: ¼" NPT male	-	100.182.213	1
	Steel storage case – HIK set	-	150.581.001	1

HEAVY LIFTING & TRANS-PORTATION

RING CLIMBING CYLINDER SET

We aim to provide our customers with the best suitable and safe solution for their applications. Our Ring Climbing Cylinder set is the perfect example of product development, based on customer needs. In this case; the need for a safer, ergonomic and time efficient solution to handle heavy loads, in locations with limited access.

Features & benefits

- The Ring climbing cylinder sets allow you to execute challenging lifting operations, in limited space.
- Safely achieve a lifting height of up to 600mm
- Less need for stacking wood, filler blocks
- Small footprint
- Light weight; ergonomic
- Lifting & securing the load; safe

specifications		HARC 100H13
art no		101.003.014
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**100**
stroke	**mm**	**130**
	in	**5,1**
closed height	**mm**	**300**
	in	**11,8**
capacity	kN/t	1030,6/ 105,1
effective pressure area (press)	cm^2	143,1
	in^2	22,2
effective pressure area (retract)	cm^2	56,5
	in^2	8,8
required oil content (press)	cc	1860
	oz	62,9
required oil content (retract)	cc	735
	oz	24,9
connection		A 118
cylinder type		ring climbing
acting type		double
return type		hydraulic
material		aluminum
weight, ready for use	kg	23
	lb	50,7

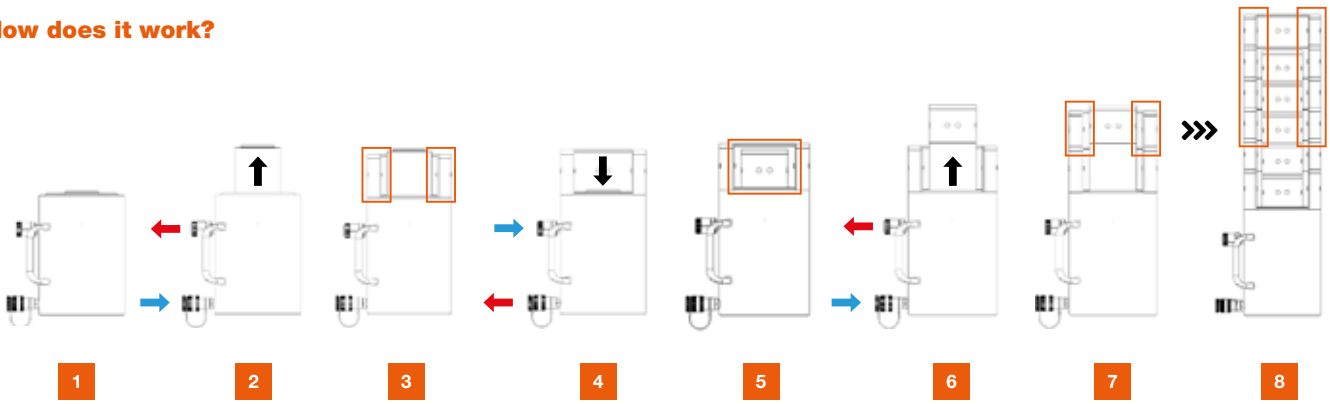
stacking rings		Filling height	Art. no.	Reg. qty.
	Stacking ring, anodize black	100	101.001.625	6

Insert blocks		Filling height		reg. qty.
	Start -> Start Insert block, andodize clear	80	101.002.966	1
	Insert block, anodize black	100	101.002.965	4

Acc			reg. qty.
	Fork; to safely place the stacking rings	150.001.856	1

We advise 4 sets + 1 spare set (to avoid down time).

How does it work?



Feedback from our customers:

"This product enables us to safe a lot of handling and support material time."

"Best Holmatro product ever!"

"Light weight and very user friendly. Really ergonomic."

"These sets are always in use."

"ROI is lower due to quicker way of working compared to standard climbing cylinders."

"The ideal hydraulic system to unload from SPMT to foundation."

The sets were designed & developed in close cooperation with heavy lifting specialist Mammoet;
"We regularly carry out projects for an energy producer where we have to replace 3 transformers. This means we have to move 6 transformers in a few days, according to a schedule agreed in advance with the customer". He concluded, "Holmatro's lightweight aluminum cylinders significantly reduce physical labor, making work much more enjoyable, resulting in a positive effect on health, ergonomics and safety. But it also saves a lot of time. Holmatro's aluminum cylinders are also regularly used in other projects where there is no time pressure". (Jaap Jan den Boer, project supervisor Mammoet)

SKIDDING SYSTEMS

User-friendly, modular skidding systems for the horizontal movement of heavy loads

Holmatro's Skidding Systems provide reliable and effective solutions for transporting industrial objects of exceptional sizes and weights to their intended locations. With the flexibility and strength of these modular systems, moving heavy loads becomes a manageable and efficient process, offering an alternative to traditional crane-based operations. Thanks to the user friendly modular construction of both systems they are easy to adapt to each load size and project.

200-ton Skidding System – Light weight

This system is exceptionally lightweight and designed for loads up to 200 tons. It boasts an impressively low construction height and consists of lightweight components. Set up can easily be done by two persons; no need for additional lifting tools like a forklift. The 200-ton Skidding System is ideal for moving objects in situations with limited insertion space.

400-ton Skidding System

The 400-ton Skidding System is extremely robust and capable of handling heavy loads, making it suitable for moving very large and heavy objects, such as large transformers. This system's strength ensures smooth and efficient movement even for highly challenging tasks.

Features & benefits

- Each system consists of a set of tracks, beams and push-pull units with a push-pull cylinder.
- The load rests on the beams, which move horizontally in the tracks.
- The tracks are fitted with extremely low-friction sliding pads.
- The beams are connected to the push-pull units, with equal pushing and pulling capacity.
- This allows the system to perform both actions safely and in a controlled manner.
- The push-pull units are connected to a hydraulic pump via hoses.
- This powerful Twin pump has two equal oil flows that can be controlled independently.

Pieterjan Van Iseghem, Managing Director Heavy Lifting & Handling:
"The destination in Stonehaven could only be reached via a poorly accessible, narrow and very steep slope. We even had to get the assistance of a dumper truck for the last bit of transportation. Eventually the transformer was unloaded at the right place and positioned on the foundation provided by using cylinders and Holmatro's Skidding System. Without this system we would not have been able to carry out the job so safely and controlled."

SKIDDING SYSTEM - 200 TON
light weight

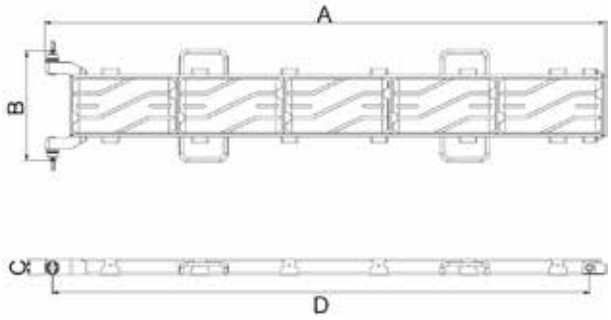
Holmatro's light weight skidding system offers an extremely lightweight, fast and easy to set up solution for the horizontal movement of objects and installations with exceptional sizes and low insertion space. Due to its weight and ergonomic design the light weight skidding system can easily be handled & positioned by just one or two persons, without the need for a forklift or use of extra equipment. Changing the push or pull direction can be done in a split of a second! The maximum capacity of the system is 200 tons, assuming two skidding units are used as described in the advised starter kit.

Features & benefits

- 200-ton capacity: **2 X 100 ton**
- **Extreme low construction height**; total height is *only* 56 mm / 2.20 inches
  - allows for efficient operation in spaces with limited insertion space.
- Lightweight components with optimally placed grips
  - **Easy to carry, handle, position and assemble by one or two persons** (no forklift needed)
  - Reduces the physical burden
  - Maximum performance at a minimum weight
- **Modular system**
  - Easy to adapt to different load sizes and projects
  - Plug and play; easy to assemble without the use of extra equipment
- Push-pull unit equipped with **equal capacity for both pushing and pulling**;
  - Ability to push or pull the load into position, instead of only pushing
  - Accurate control in both directions
- **Quick Direction Change:** the system's handle allows for a swift change of direction, enabling seamless switching between push and pull directions. **Without repositioning!**
- With an **internal return line** in the push-pull cylinder,
  - The risk of damage to the line is reduced
  - Maintaining equal hose length for ingoing and outgoing oil.
- The push-pull cylinder comes with **integrated safety features**, providing protection against overpressure for enhanced safety during operation.
- High beams form fit the standard beams; in case of loads whereby the contact surface not entirely fits on the front side of the push-pull unit
  - Total load is optimally spread across the entire system
- **Low Sliding Resistance:** sliding pads with an extremely low friction coefficient minimize sliding resistance between tracks and beams, allowing smooth movement during skidding operations.

On the next pages, you will find Holmatro's advised startket kit for 200-tons light weight skidding system.

skid track - 100t - 1800mm
8 pcs

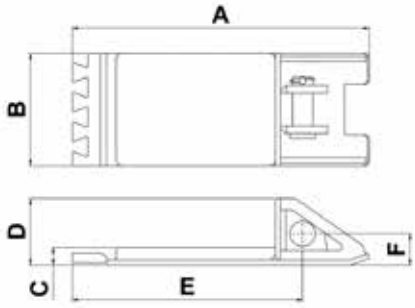


specifications		ST-LW
art no		101.001.843
weight, ready for use	kg	37.5
	lb	82.7

Technical drawing dimensions		
dimension A	mm	1877
	in	73.9
dimension B	mm	385
	in	15.2
dimension C	mm	50
	in	2
dimension D	mm	1800
	in	70.9

Features & benefits
- Length 1800 mm, only 37,5 kg
- Easy set-up by means of snaplocks; no bolts or other tools required
- Easy to replace sliding pads

skid push / pull bracket - 100t
2 pcs



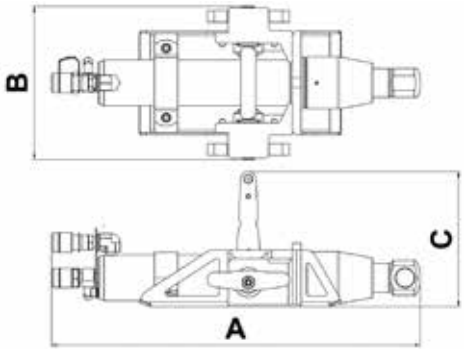
specifications		SPPB-LW
art no		100.003.315
weight, ready for use	kg	9.5
	lb	20.9

Technical drawing dimensions		
dimension A	mm	472
	in	18.6
dimension B	mm	179
	in	7
dimension C	mm	28
	in	1.1
dimension D	mm	106
	in	4.2
dimension E	mm	366
	in	14.4
dimension F	mm	50
	in	2

Features & benefits
- Interlocks without need of bolts or other tools
- Low height
- Made out of stainless steel

skid push / pull unit - 100t

2 pcs



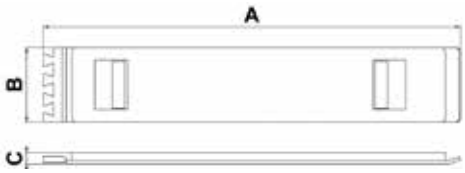
specifications		SPPU-LW
art no		100.003.366
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**10**
stroke	**mm**	**330**
	in	**13**
capacity (press)	kN/t	101.3 / 10.3
capacity (retract)	kN/t	93.9 / 9.6
effective pressure area (press)	cm^2	32.66
effective pressure area (retract)	cm^2	13.54
required oil content (press)	cc	1078
	oz	36.5
required oil content (retract)	cc	447
	oz	15.1
acting type		double
return type		hydraulic
material		steel
weight, ready for use	kg	26.0
	lb	57.3

Technical drawing dimensions		
dimension A	mm	637
	in	25.1
dimension B	mm	264
	in	10.4
dimension C	mm	233
	in	9.2

Features & benefits

- Light weight; only 26 kg
- Easy pinn connection to push/pull bracket
- Quick direction change without repositioning; just flip the lever/handle!
- Internal return line
- Equal pushing & pulling capacity

skid beam - 100t - 1000mm
2 pcs

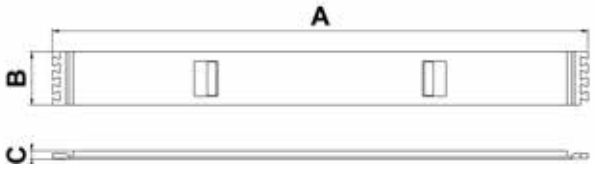


specifications		SB-LW 1
art no		100.003.311
weight, ready for use	kg	15.5
	lb	34.2

Technical drawing dimensions		
dimension A	mm	1005
	in	39.6
dimension B	mm	179
	in	7
dimension C	mm	28
	in	1.1

Features & benefits
- Interlocks without need of bolts or other tools
- Low height
- Made out of (low friction) stainless steel

skid beam - 100t - 1800mm
2 pcs

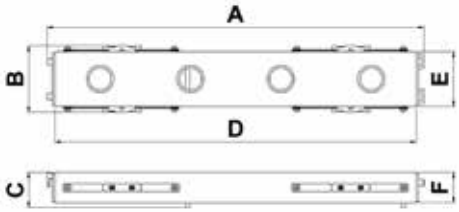


specifications		SB-LW 1.8
art no		100.003.313
weight, ready for use	kg	28.5
	lb	62.8

Technical drawing dimensions		
dimension A	mm	1805
	in	71.1
dimension B	mm	179
	in	7
dimension C	mm	28
	in	1.1

Features & benefits
- Interlocks without need of bolts or other tools
- Low height
- Made out of (low friction) stainless steel

skid high beam - 100t - 1200mm
(optional) 2 pcs



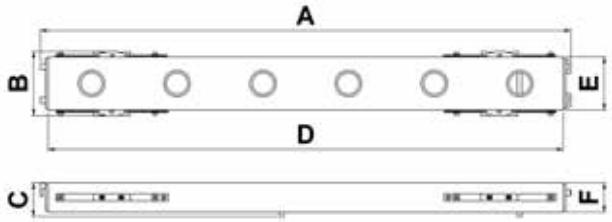
specifications		SHB-LW 1.2
art no		100.003.427
weight, ready for use	kg	31.0
	lb	34.2

Technical drawing dimensions		
dimension A	mm	1236
	in	48.7
dimension B	mm	250
	in	9.8
dimension C	mm	115
	in	4.5
dimension D	mm	1184
	in	46.6
dimension E	mm	180
	in	7.1
dimension F	mm	100
	in	3.9

Features & benefits

- Form fit the standard beams (art. No. 100.003.311)
- For even load distribution

skid high beam - 100t - 1800mm
(optional) 2 pcs



specifications		SHB-LW 1.8
art no		100.003.418
weight, ready for use	kg	44.4
	lb	97.9

Technical drawing dimensions		
dimension A	mm	1796
	in	70.7
dimension B	mm	250
	in	9.8
dimension C	mm	115
	in	4.5
dimension D	mm	1744
	in	68.7
dimension E	mm	180
	in	7.1
dimension F	mm	100
	in	3.9

Features & benefits

- Form fit the standard beams (art. No. 100.003.313)
- For even load distribution

twinpump - 09 T 12 E - trolley 1 pcs

Standard supplied with

- Double acting valves (2x)
- Pressure gauges (2x)
- Couplers
- Pump Trolley

specifications		09 T 12 E / 09 T 12 F*
art no		100.152.220 / 101.003.032*
max. working pressure	bar/mpa	720 / 72
	psi	10.443
capacity oil tank (effective)	cc	7000
	oz	236,7
number of outputs		2
number of stages		1
first stage output / min.	cc	900
	oz	30,4
first stage pressure range	bar/mpa	0 - 720 / 0 - 72
	psi	0 - 10.443

* E = 400V - 50 Hz - 3 Ph, F = 460V - 60 Hz - 3 Ph

specifications		09 T 12 E / 09 T 12 F*
operator type		electric motor
engine		400 VAC - 2.2 kW - 50 Hz - 3 Ph 460 VAC - 2.2 kW - 60 Hz - 3 Ph*
speed	rpm	1450
weight, ready for use	kg	120,0
	lb	264,6
dimensions (LxWxH)	mm	700 x 700 x 1390
	in	27.6 x 27.6 x 54.7

Features & benefits

- Split flow pump; 2 equal flows for both sides
- Easy, ergonomic transport thanks to the included trolley

extension hose - with couplers - VL 20 SOU - 20m

4 pcs

specifications		VL 20 SOU
art no		100.572.320
max. working pressure	bar/mpa	720 / 72
	psi	10.443
color		orange
hose connection A		A 119
hose connection B		A 118
length	m	20
	ft	66

Safety factors / tests	
hydraulic safety ratio hose	4:1

skid track storage frame - 100t

1 pcs

specifications	STSF-LW
art no	100.182.390

Features & benefits

- Equipped for storage of 10 tracks per frame
- Easy to store after use; stackable with forklift

skid spare sliding pad - 100t

5 pcs per track

specifications	model
art no	101.001.842

Features & benefits

- Including ‘sloping entry side’ to ensure a fluent load transition
- The grooves in the pads were designed to act both as a dirt drain & wear indicator
- Low friction coefficient of 0.1
- Excellent resistance against indentations

SKIDDING SYSTEM - 400 TON

Holmatro's 400-ton Skidding System consists of robust, shock-resistant parts. The maximum capacity of the system is 400 tons, assuming two skidding units are used. The total construction height is 244 mm (9.61 inches) and can carry loads over a relatively large unsupported span when the surface is uneven. The Skidding System is driven by a powerful hydraulic twin (split flow) pump.

Our tracks, with a standard length of 2 meters, are easy to connect to each other using steel pins (no bolted connections). Extremely rigid steel beams with a stainless steel sliding surface are placed in the tracks, which reduces the resistance on the tracks and the chance of bending due to small loads to virtually zero. The push-pull units are fitted with easily dismantled wings that allow the push or pull direction of the system to be changed quickly. The cylinders in the push-pull units are connected with hydraulic hoses to a powerful hydraulic pump.

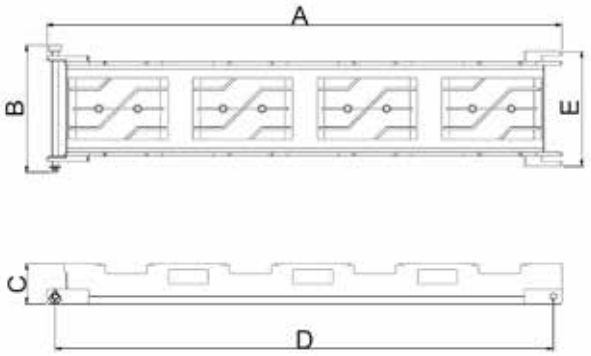
Features & benefits

- 400-ton capacity: **2 X 200 ton**
- Extremely rigid beams; does not bend with small loads
- **Modular system**
  - Easy to adapt to different load sizes and projects
  - Plug and play; easy to assemble without the use of extra equipment
- Push-pull cylinder with **equal capacity for both pushing and pulling**
  - Ability to push or pull the load into position, instead of only pushing
  - Accurate control in both directions
- Demountable wings; allows for a swift change of direction, enabling seamless switching between push and pull directions. **Without repositioning!**
- The push-pull cylinder comes with **integrated safety features**, providing protection against overpressure for enhanced safety during operation.
- **Low Sliding Resistance:** sliding pads with an extremely low friction coefficient minimize sliding resistance between tracks and beams, allowing smooth movement during skidding operations.

On the next pages, you will find Holmatro's advised startket kit for 400-tons light weight skidding system.

skid track - 200t - 2000mm

8 pcs



specifications		ST-S
art no		101.001.829
weight, ready for use	kg	160.0
	lb	352.7

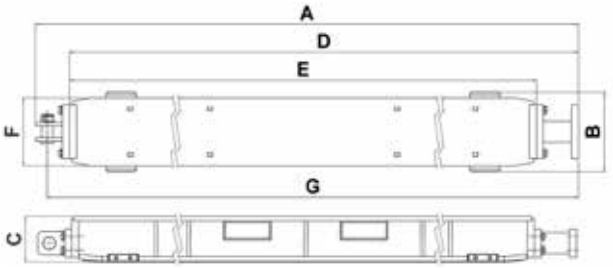
Technical drawing dimensions		
dimension A	mm	2068
	in	81.4
dimension B	mm	510
	in	20.1
dimension C	mm	162
	in	6.4
dimension D	mm	2000
	in	78.7
dimension E	mm	460
	in	18.1

Features & benefits

- Easy set-up by means of pins; no bolts or other tools required
- Equipped with lifting slots for fork lifts
- Easy to replace sliding pads

skid beam - 200t - 2995mm

2 pcs



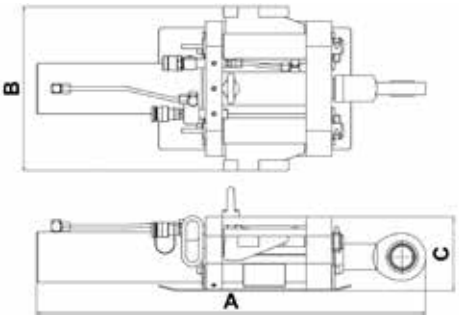
specifications		SB-S
art no		100.002.526
weight, ready for use	kg	416.0
	lb	917.1

Technical drawing dimensions		
dimension A	mm	3045
	in	119.9
dimension B	mm	340
	in	13.4
dimension C	mm	195
	in	7.7
dimension D	mm	2900
	in	114.2
dimension E	mm	2720
	in	107.1
dimension F	mm	290
	in	11.4
dimension B	mm	2995
	in	117.9

Features & benefits

- Easy connection to push-pull unit; no tools required
- Equipped with lifting slots for fork lifts
- Extension with more beams possible

skid push / pull unit - 200t
2 pcs



specifications		SPPU-S
art no		100.002.510
max. working pressure	bar/mpa	720 / 72
	psi	10.443
tonnage	**t**	**26**
stroke	**mm**	**520**
	in	**20,5**
capacity (press)	kN/t	255 / 26
capacity (retract)	kN/t	267 / 27.2
effective pressure area (press)	cm^2	56.7
effective pressure area (retract)	cm^2	37.1
required oil content (press)	cc	2950
	oz	99,8
required oil content (retract)	cc	1929
	oz	65,2
acting type		double
return type		hydraulic
material		steel
weight, ready for use	kg	114
	lb	251,3

Technical drawing dimensions		
dimension A	mm	926
	in	36,5
dimension B	mm	390
	in	15,4
dimension C	mm	175
	in	6,9

Features & benefits

- Easy pin connection to the beam
- Equal pushing & pulling capacity
- Swift change of direction thanks to demountable wings. **Without repositioning!**

twinpump - 09 T 12 E - trolley 1 pcs

Standard supplied with

- Double acting valves (2x)
- Pressure gauges (2x)
- Couplers
- Pump Trolley

specifications		09 T 12 E / 09 T 12 F*
art no		100.152.220 / 101.003.032*
max. working pressure	bar/mpa	720 / 72
	psi	10.443
capacity oil tank (effective)	cc	7000
	oz	236,7
number of outputs		2
number of stages		1
first stage output / min.	cc	900
	oz	30,4
first stage pressure range	bar/mpa	0 - 720 / 0 - 72
	psi	0 - 10.443

* E = 400V - 50 Hz - 3 Ph, F = 460V - 60 Hz - 3 Ph

specifications		09 T 12 E / 09 T 12 F*
operator type		electric motor
engine		400 VAC - 2.2 kW - 50 Hz - 3 Ph 460 VAC - 2.2 kW - 60 Hz - 3 Ph*
speed	rpm	1450
weight, ready for use	kg	120,0
	lb	264,6
dimensions (LxWxH)	mm	700 x 700 x 1390
	in	27.6 x 27.6 x 54.7

Features & benefits

- Split flow pump; 2 equal flows for both sides
- Easy, ergonomic transport thanks to the included trolley

extension hose - with couplers - VL 20 SOU - 20m

4 pcs

specifications		VL 20 SOU
art no		100.572.320
max. working pressure	bar/mpa	720 / 72
	psi	10.443
color		orange
hose connection A		A 119
hose connection B		A 118
length	m	20
	ft	66

Safety factors / tests	
hydraulic safety ratio hose	4:1

skid track storage frame - 200t
1 pcs

specifications	STSF-S
art no	100.003.255

Features & benefits
- Equipped for storage of 8 tracks per frame
- Easy to store after use; stackable with forklift

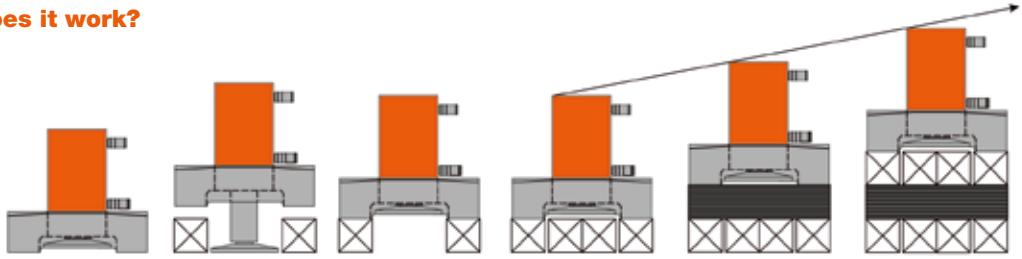
skid spare sliding pad - 200t
4 pcs per track

specifications	model
art no	101.000.497

Features & benefits
- Including ‘sloping entry side’ to ensure a fluent load transition
- The grooves in the pads were designed to act both as a dirt drain & wear indicator
- Low friction coefficient of 0.1
- Excellent resistance against indentations

STEP JACK

How does it work?



Working principle of step jack system

A step jack is a hydraulic cylinder, fitted with a square foot plate, which can be supported by wooden beams. By stacking beams and operating the cylinder, objects can be lifted and supported up to heights of 2-3 meters.

There are two types of step jack configurations which are commonly used for storage tank lifting: A circular and a 4-quadrant setup.

An Holmatro (oil) storage tank lifting system usually contains:

- a set of Step jacks
- a set of hydraulic hoses
- 400V hydraulic pump unit (high oil tank capacity)
- 4-way FlowPanels (Manifold, valve block) assembled on the pump.

A step jack system will preferably be equipped with flat-face hydraulic quick couplers. These couplers provide a secure quick connection and are easy to clean, because of their flat connecting surface. The required hoses can be supplied in two different colours: orange for the pressure side and green for the return side. All orange hoses will be fitted with male couplers and all green hoses will be fitted with female couplers. This ensures an easy, user friendly & safe connection of all hoses and components.

Feel free to contact our sales team for more information.

DO YOU FEEL THE PRESSURE TO WORK SAFE?

Working with 700bar is not to be taken lightly. The Holmatro Testteam gives an animated look on working with high pressure hydraulics. How powerful are hydraulic systems? Where do you have to pay attention to? And how do you identify possible risks? Check out our Testteam videos!

INFERIOR FITTINGS AT 720 BAR

THE POWER OF HYDRAULICS

ALUMINIUM VERSUS STEEL

720 BAR OIL INJECTION CAUSED BY DAMAGED HOSE

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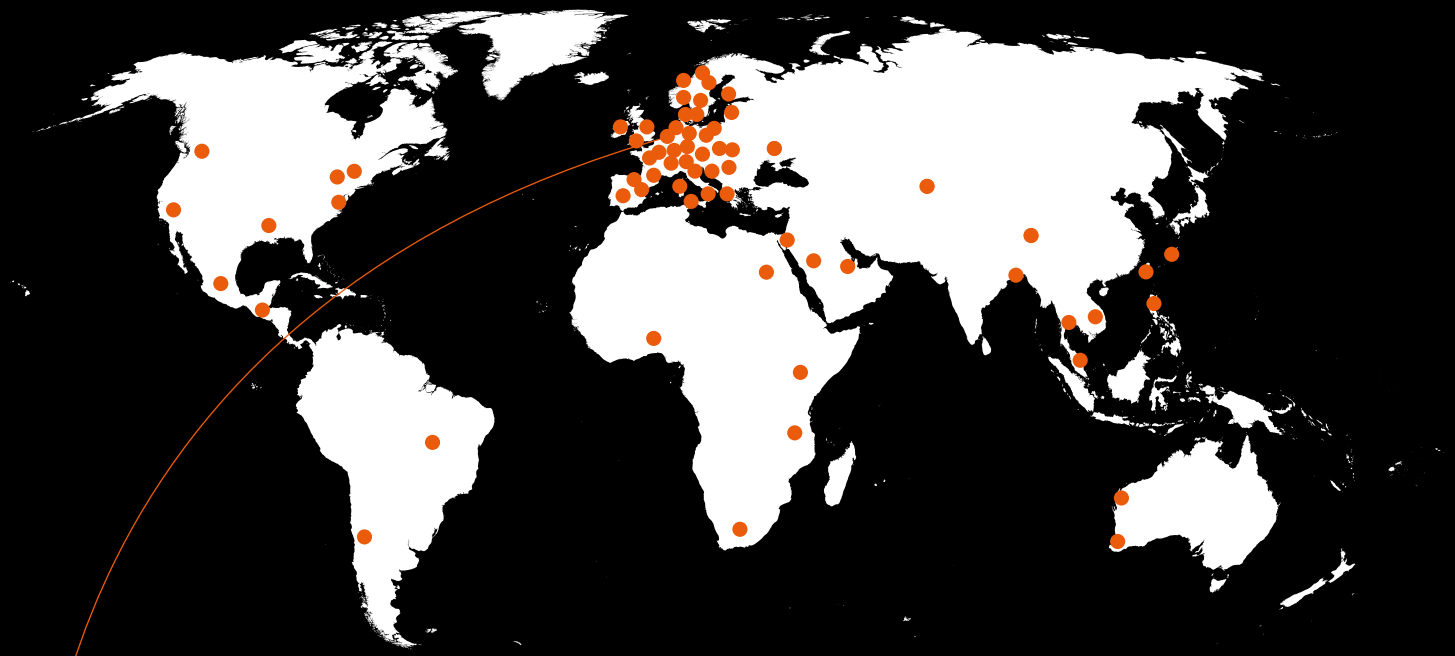

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