

GS-HYDRO

FLARING & GROOVING MACHINES



GS-PIPING WITHOUT WELDING™



General Information

GS-Hydro supplies or rents a range of high quality flaring and grooving machines specially designed for prefabrication of hydraulic and other piping systems. Machines are available from light-duty, portable machines to workshop and heavy-duty factory type machines. For larger projects a mobile workshop with all necessary machines is available by request.

Main index

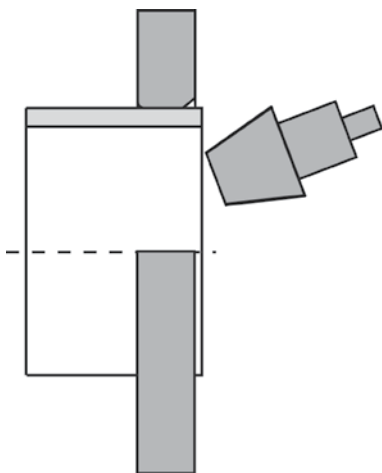
Flaring technology	4
Portable flaring machines	5
Workshop flaring machines.....	6
Factory flaring machines.....	7
Automatic working circuit flaring machines.....	8
Grooving machines	9
Workshop container	10

Flaring

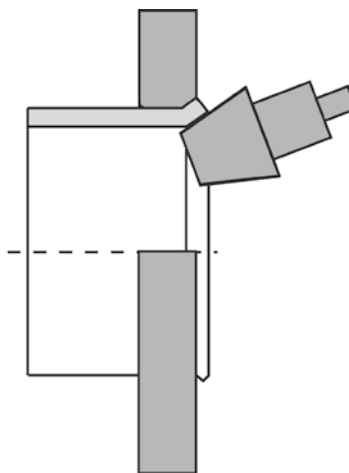
GS-flaring technology

GS-Hydro has developed a number of machines designed for cold flaring of tubes and pipes from 6 to 608 mm in diameter. The machines are suitable for the flaring of a wide range of materials including carbon and stainless steel, copper-nickel etc.

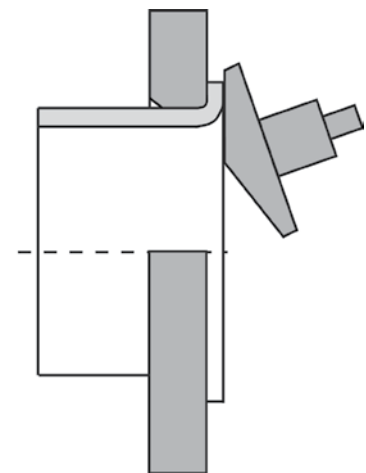
All the machines use a 'rolling cone' method to achieve a perfect surface finish which is suitable for JIC-37° and GS-37° and GS-90° Flare Flange Systems.



1. Flaring starts by clamping the pipe or tube in the correct size dies, and applying a small amount of oil or grease.



2. The 37° cone rotates around a central axis as it is pushed against the tube or pipe and this process flares out the tube or pipe into the die.



3. To make a 90° flare a different tool flattens out the 37° flare.

GS-Flaring machines are available from light, portable machines to heavy-duty factory-type machines for the flaring of the following tube and pipe sizes:

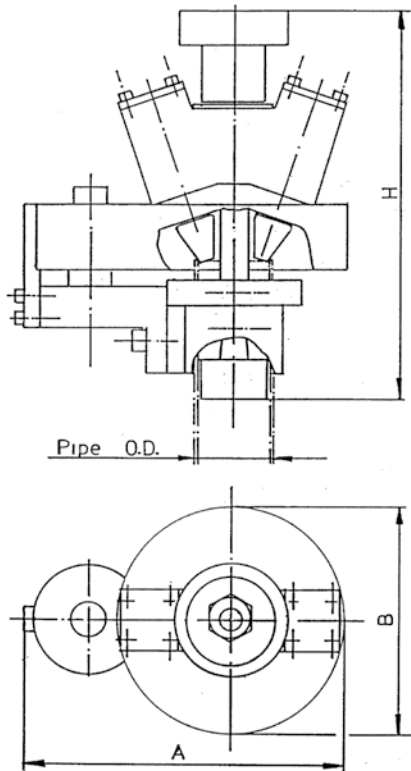
Portable	O.D. x maximum wall thickness
GSP-Machines	57–368 mm x 9 mm (37°), 57–368 mm x 5.5 mm (90°)
Workshop	
FlarePower 60	6–60 mm x 5 mm
FlarePower 170 S/E	6–170 mm x 7 mm
FlarePower 275 E	6–275 mm x 8 mm
Factory	
GSF-220N-F/FHD	20–220 mm x 8 mm
GSF-400N-E	133–406 mm x 8.8 mm
GSF-600N-E	250–608 mm x 11 mm

Portable flaring machines

GSP-Flaring Machines

The portable GSP-machines will permit on-site production of flange collars (37° and 90°) for both installation and repair jobs. These lightweight machines are operated by air and are thus ideal to work in fire-protected areas in offshore or similar applications.

GSP-machines can flare various pipe materials: Carbon steel, stainless steel and Cu/Ni.



Dimensions for GSP-machines

Model	O.D.	A	B	H	Max. W.T.
GSP 60-A	57.0/60.0/60.3	230	170	290	3.0
GSP 90-A	73.0/76.1/88.9	280	190	300	3.9
GSP 115-A	114.3/115.0	320	250	310	5.5
GSP 168.3-A	159.0/168.3	360	290	330	5.5
GSP 220-A	219.1/220.0	420	350	340	6.0
GSP 273-A	267.0/273.0	480	420	360	6.5
GSP 324-A	323.9	520	450	390	5.5
GSP 368-A	355.6/368.0	510	500	390	5.5
GSP 406-A	406.4	Available on request.			

Workshop flaring machines

GS-FlarePower -series

GS-Hydro offers a range of three different FlarePower-machines, designed for cold flaring of tubes and pipes from 6 mm up to 275 mm in outside diameter. FlarePower-machines are suitable for 37° and 90° flaring of a wide range of materials, including carbon steel, stainless steel and copper-nickel alloys. All machines are using the "rolling-cone" method in order to achieve perfect surface finish to JIC-37° fittings and GS-37°/GS-90° Flare Flange connections.



GS-FlarePower 60-S

Type:
 60-S Standard (hand pump)
 60-S/Air Air driven



GS-FlarePower 170-EH

Type:
 170-S Standard (hand pump)
 170-C Standard (hand pump) on wagon
 170-EH Electro hydraulic
 170-EHC Electro hydraulic and with hydraulic clamping



GS-FlarePower 275-EHC

Type:
 275-EH Electro hydraulic
 275-EHC Electro hydraulic and with hydraulic clamping

GS-Flaring Machine	GS-FlarePower 60	GS-FlarePower 170	GS-FlarePower 275
Size range • Tube or pipe max. O.D. • Max. wall thickness	60 mm 6 mm	170 mm 7 mm	275 mm 9 mm
Power supply	Standard electric motor, 230 V 1-phase, 230 V or 400 V 3-phase, 50 or 60 Hz	Standard electric motor, 230 V 1-phase, 230 V or 400 V 3-phase, 50 or 60 Hz	Standard electric motor, 230 V 1-phase, 230 V or 400 V 3-phase, 50 or 60 Hz
Dimensions (approx.) • Overall length • Width • Height	680 mm 370 mm 410 mm	1000 mm 700 mm 1300 mm	1000 mm 700 mm 1500 mm
Weight	kg	500 kg	kg

Factory flaring machines

GSF-series

The GSF range of flaring machines have been developed for heavy duty flaring of larger tube and pipe sizes in carbon steel, stainless steel and copper alloys.

The GSF 220-N/-HD is utilised for 37° and 90° flaring of tubes and pipes from 20 to 220 mm in diameter. The controls of the machine are easy to use and a gauge shows the flaring pressure. A full set of flaring cones is located on the machine.

The flaring head and power unit can easily be separated allowing easy transportation. Additionally, by connecting the units with hydraulic hoses flaring can be carried out in hazardous areas such as on an oil drilling rig.

The GSF 400-N-E and GSF 600-N-E machines are larger and heavier in order to cope with cold flaring of tubes and pipes with diameters as large as 400 mm and 600 mm respectively.



GSF 220-N/-HD



GSF 400-N-E



GSF 600-N-E

GS-Flaring Machine	GSF 220-N/-HD	GSF 400-N-E	GSF 600-N-E
Size range • Tube or pipe O.D. • Wall thickness	20–220 mm < 9 mm	133–406 mm < 10 mm	250 – 608 mm < 11 mm
Power supply	Standard electric motor 380 V, three-phase, 3 kW	Standard electric motor 380 V, three-phase, 8 kW	Standard electric motor 380 V, three-phase, 8 kW
Operation	Hydraulic	Hydraulic	Hydraulic
Dimensions (approx.) • Overall length • Width • Height	900 mm 500 mm 1400 mm	1510 mm 790 mm 1740 mm	1900 mm 1130 mm 1630 mm
Weight	650 kg	2000 kg	3000 kg

GSF-flaring machines with automatic working circuit

Automatic working circuit -series

GS-Hydro's GSF 28-A, GSF 42-A and GSF 65-A are flaring machines with automatic working circuit and touch panel programming. Those machines are designed for serial production, and it is very easy to achieve perfect sealing surface into various piping materials.

Flaring operation is done by using GS-Hydro's rolling cone method. This ensures exact, defect free and mirror like sealing surface. All power functions are electro controlled, and because of universal stopper adjustment this machine can be used also for other types of pipe connections than GS-37° flare only.



GSF 28-A



GSF 42-A

Machine Type	GSF 28-A	GSF 42-A	GSF 65-A
Pipe O.D. range	6...28 mm	6...42 mm	6...65 mm
Max. Pipe wall thickness	2.5 mm / St.52 or AISI 316L	4 mm / St.52 or AISI 316L	5 mm / St.52 or AISI 316L
Working circuit	4--8 seconds	4...10 seconds	6...12 seconds
Length/width/height	1200/900/1300 mm	1800/900/1700 mm	2200/800/1800 mm
Weight	300 kg	350 kg	900 kg
Power supply	400 V / 50 Hz / 16 A	400 V / 50 Hz / 16 A	400 V / 50 Hz / 16 A
Power	1.5 kW	3 kW	4 kW
Operating / working pressure	250 bar / 200 bar	250 bar / 200 bar	250 bar / 200 bar

Grooving machines

Portable Grooving Machine "TTS"

TTS split frame machines are having a light aluminium body, which is very rigid as well as stable for the machining operations. The light weight and split frame makes it very practical to use in tight places and under on-site conditions. All machines are available with in-line or right angle pneumatic or electrically driven motors.



Machine sizes and respective tube sizes	
Machine Type	Pipe O.D. [mm]
TTS NG 73	21.3 – 60.3
TTS NG 127	66 – 114.3
TTS NG 168	115 – 150
TTS NG 219	168.3 – 190
TTS NG 273	219.1 – 250

Workshop Grooving Lathe

Grooving Master lathe GM 150

- Equipped with D'Andrea machining head TA220
- Grooving up to pipe OD 150 mm

This machine can groove tube sizes from OD 26 to 150 mm

Weight: 2300kg

Length: 2.10m

Height: 1.65m

Width: 1.00m

To be rented with supervisor.



Workshop container

THE WORKSHOP CONTAINER CONSISTS OF:

- 1 off Overhead Grane
- 1 off Grooving Machine Lathe for 1/2" to 8" and 66 to 220 mm pipe.
- 1 off Cold Saw
- 1 off High pressure Washer

Total weight: 7000 kg

The container can be rented on a daily basis.

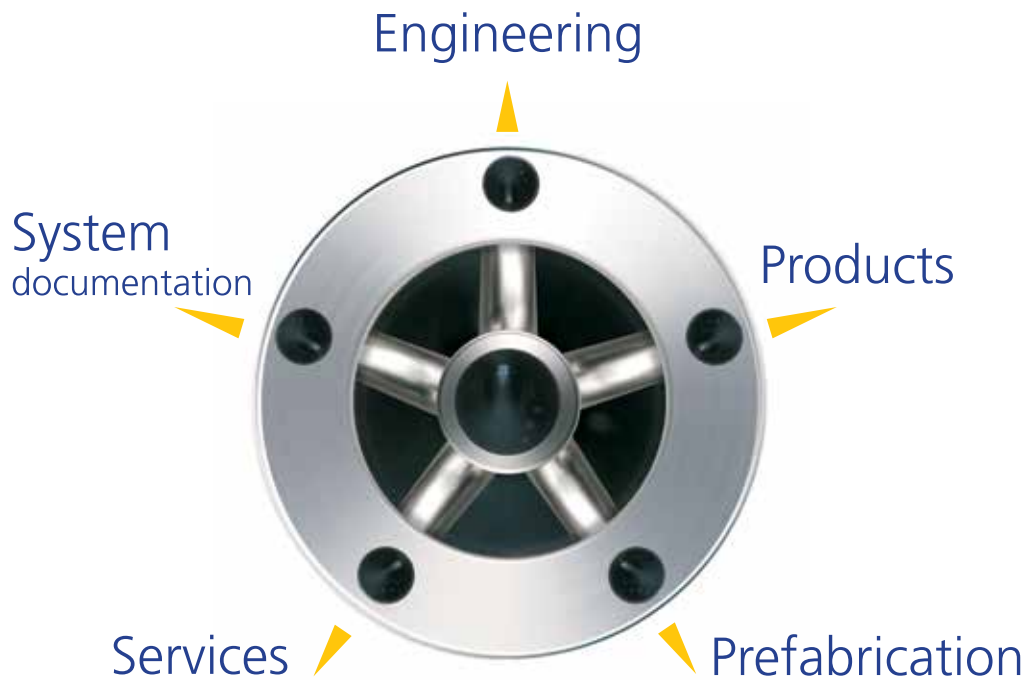
Other machines on request.





GS-Hydro is the original provider of non-welded piping solutions with numerous benefits for a wide variety of demanding applications. We create value together with our customers by providing innovative fluid transfer solutions which enable safe operation, reduced environmental impact and lower total cost of ownership. We deliver our piping and hose solutions globally in more than twenty-five countries through own companies and partners.

GS-Hydro system offering



8990306612 Product Offering Flaring and Grooving Machines, January 2015



sales@gshydro.com
www.gshydro.com



GS-HYDRO

END FORMING MACHINES



GS-PIPING WITHOUT WELDING™



Main index

Reshaping machine	4
Pre-assembly machines	5
Deburring machines.....	6
Tube cutting machines.....	7
Cleaning system.....	8

Reshaping machine

M-WF 385Xplus

Walform machine

Tube diameter range6–42 mm
 Capacity of oil tank.....6 l
 Maximum hydraulic pressure.....650 bar
 Dimensions (LxWxH)990x850x275 mm
 Weight.....290 kg
 Power requirements.....2.8 kW



- Reshaping without internal support
- Reshaping with internal support

Reshaper for WALFORMplus steel St 37.4/52.4

Tube O.D. [mm]	Wall Thickness [mm]								
	1	1.5	2	2.5	3	3.5	4	5	6
	Reference								
6	612 284	615 820							
8	612 555	615 821	615 822						
10	612 557	615 823	615 824	615 825	615 826				
12	612 559	615 827	615 830	615 831	615 832				
15		615 833	615 836	615 839					
16			615 842	615 845	615 848		615 849		
18			615 850	615 853	615 856				
20			615 857	615 860	615 863		615 864		
22			615 865	615 995	615 868	615 869			
25			615 870	615 873	615 876	615 877	615 878	615 994	
28			615 879	615 882	615 885	615 888			
30				615 889	615 892		615 895		615 896
35					615 897		615 900	615 901	
38					615 902		615 905	615 906	615 907
42					615 908	615 911	615 914		

Reshaper for WALFORMplus stainless steel 1.4571

Tube O.D. [mm]	Wall Thickness [mm]								
	1	1.5	2	2.5	3	3.5	4	5	6
	Reference								
6	612 284	615 917							
8	612 903	615 918							
10	612 904	615 919							
12	612 560	615 920	615 921						
15		615 922	615 925						
16			615 928	615 931	615 934				
18			615 935	615 938	615 941				
20			615 942	615 945	615 948				
22			615 949	615 952	615 955				
25				615 956	615 959		615 960		
28			615 961	615 964	615 967				
30				615 970	615 973		615 976	615 977	
35					615 978		615 981	615 982	
38					615 983		615 986	615 989	615 990*
42					615 991				

Pre-assembly machines

Tractopress

Cutting ring assembly device w/ autom. pressure adj.

Features/Equipment

- Compact and rugged table-top unit for mobile and flexible use
- Assembly of most customary single-bite and double-bite cutting rings
- Proof and leakage-free assembling due to automatic pressure adjustment
- Integrated cooling for hydraulic oil
- Short assembling times of only few seconds
- Short set-up time when changing the tube diameter

Options

- Storage box for clear depositing of the tools (assembling connections and counter-support plates)



Pre-assembling machine PACE1PRESS

- Light, but extremely powerful. Designed for hydraulic and sprinkler pipes (also High Fog) installations.
- Easy and simple to use: Socket change and pressure adjustment take just few seconds.
- Easy to move around with the shoulder strap, that also reduces stress on arms.
- Revolutionary technology protected by several global patents.



Technical Data	
Tube diameter range	6–42 mm
Hydraulics	3.7 l/min.
Capacity of oil tank	3 l
Max. hydraulic pressure	200 bar
Feed rate of the piston	9.3 mm/sec.
Dimensions (LxWxH)	450x250x450 mm
Weight	Approx. 50 kg
Power requirement	1.1 kW

Technical specifications	
Battery operated	
Voltage	18 V
Weight	7 kg
Pipe diameter	min. Ø6 mm, max. Ø42 mm

Deburring machines

Tubograt 48/60

Internal and external deburring device for tubes

Features

- Compact and rugged table-top unit for mobile and flexible utilisation
- Special deburring tools made from HSS (high-speed steel) for Tubograt 48/60
- Clean internal and external deburring due to the fixed rotation speed of the deburring tools
- Integrated collecting box for metal chips
- User-friendly and easy to service



Tubograt 48



Tubograt 60

Technical Data	Tubograt 48	Tubograt 60
Tube diameter range	6–48 mm	20–60 mm
Tool rotation speed	180 min.	140 min /280 min
Dimensions (WxHxD)	440x250x310	510x265x375
Weight, approx.	21 kg	33 kg
Operating voltage	400V 50Hz 3Ph	400V 50Hz 3Ph
Power requirement	0.12kW	0.37kW

Tube cutting machines

Perfect 250

The saws is manufactured to EEC rules, equipped with a "cooling system", automatic pump and a "closed" cooling liquid tank.

The machines require limited floor space.

Maximum sawing angle 45°.

Operating voltage 230/400V 50Hz 3Ph.

Recommended used in repair shops and in smaller workshops.



Type	Max. O.D. tube	Saw blade	Saw blade speed	Power requirement	Weight	Dimensions (LxWxH)
P250	80 mm	250x2x32	2 speed 52/104	1/0.8 kW	73 kg	700x850x400 mm
P275	90 mm	275x2x32	2 speed 33/66	1.3/1.1 kW	112 kg	850x970x500 mm
P300	102 mm	300x2x32	2 speed 33/66	2/1.5 kW	135 kg	1050x990x500 mm

H250

- Compact bench mounted or portable saw for cutting small to medium size tube.
- Adjustable twin clamping system provides a clean cut even at 45°
- Manual quick adjustment of the head when cutting 0°
- A pump provides a continuous flow of coolant from the base tank (S225 got patented mechanical low-consumption lubrication)
- Complete protection is provided by the special cover and adjustable devices.
- Fully equipped with tool bag containing special tools required for adjustments and maintenance.



Type	Max. O.D. tube	Saw blade	Saw blade speed	Power requirement	Weight	Dimensions (LxWxH)
S225	70 mm	225x2x32	2 speed 56/112	1.2/0.8 kW	48 kg	650x300x720 mm
H250	80 mm	250x2x40	2 speed 50/100	1.4/1.1 kW	70 kg	700x420x800 mm
H300	95 mm	315x2.5x40	2 speed 45/90	1.4/1.1 kW	140 kg	750x450x900 mm

Cleaning system

Jet Cleaner

For tubes and hoses

System is based on mechanical cleaning by "shooting" a polymer foam plug through pipes and hoses with compressed air. The cleaning plugs is approx. 20% larger than the i.d. of the hose/pipe. The compressed plug will rotate, -and absorb, "on it's way", dirt and other impurities from the inside walls on tubes/hoses. When repeating this operation twice, a normal cleanliness-requirement is will be achieved.

Recommended air pressure: 6-8 bar (dry air)

Jetcleaner part no. 201, combined machine
 Jet Tube Kit, incl. 15 pcs. nozzles for pipe, complete with case.
 Case for hose and pipe nozzles, part no. 204.
 Table holder, part no. 205.
 Adaptor for pipe nozzle, part no. 300.



Gun part no. 201
 Capacity pipes – 6–60 mm o.d.



A case with 5 nozzles for pipes (6–42 mm)

Part No	Pipe nozzle dimension	Part No	Pipe nozzle dimension
Jet-0610	6x1 mm	Jet-2525	25x2.5 mm
Jet-0615	6x1.5 mm	Jet-2530	25x3 mm
Jet-0810	8x1 mm	Jet-2540	25x4 mm
Jet-0815	8x1.5 mm	Jet-2820	28x2 mm
Jet-1010	10x1 mm	Jet-2830	28x3 mm
Jet-1015	10x1.5 mm	Jet-3020	30x2 mm
Jet-1020	10x2 mm	Jet-3030	30x3 mm
Jet-1215	12x1.5 mm	Jet-3040	30x4 mm
Jet-1220	12x2 mm	Jet-3520	35x2 mm
Jet-1515	15x1.5 mm	Jet-3530	35x3 mm
Jet-1520	15x2 mm	Jet-3830	38x3 mm
Jet-1620	16x2 mm	Jet-3840	38x4 mm
Jet-1625	16x2.5 mm	Jet-3850	38x5 mm
Jet-1815	18x1.5 mm	Jet-4220	42x2 mm
Jet-1820	18x2 mm	Jet-4230	42x3 mm
Jet-2020	20x2 mm	Jet-4240	42x4 mm
Jet-2025	20x2.5 mm	Jet-5030	50x3 mm
Jet-2030	20x3 mm	Jet-5050	50x5 mm
Jet-2215	22x1.5 mm	Jet-6030	60x3 mm
Jet-2220	22x2 mm	Jet-6050	60x5 mm
Jet-2520	25x2 mm		

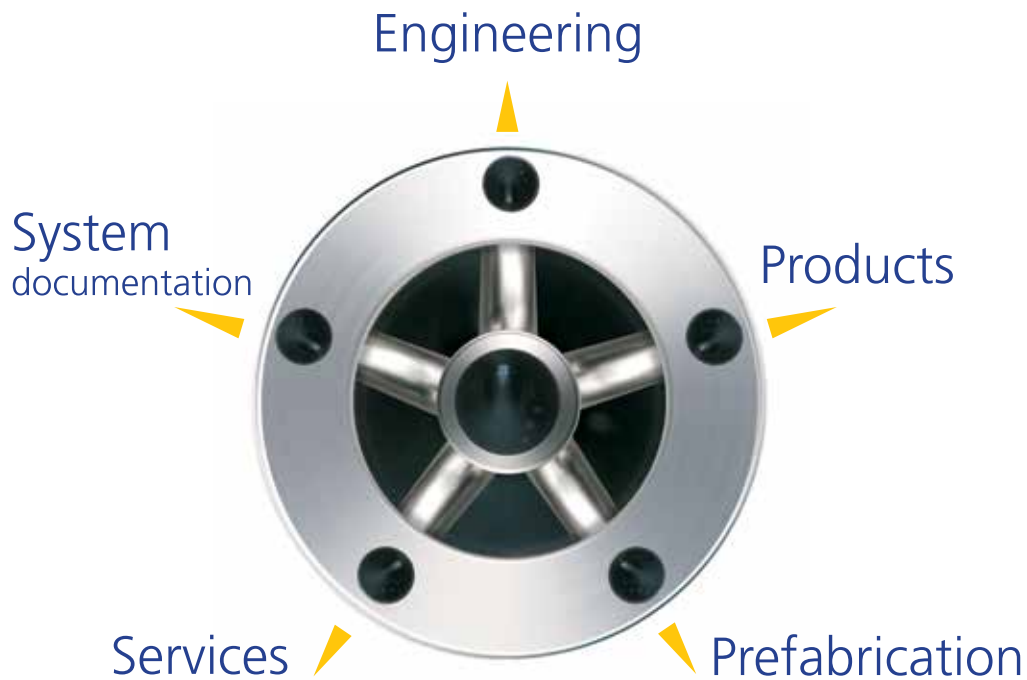
Cleaning Plugs for Pipes/Tubes

Plug No	Hose i.d. [mm]	Standard pcs/bag
135-04	3	300
135-05	4	300
135-07	5	300
135-08	6	300
135-09	7	300
135-10	8	300
135-12	9	300
135-14	10–11	300
135-16	12	300
135-18	13–14	300
135-20	15	300
135-22	16–17	100
135-25	18	100
135-26	19	100
135-28	20–21	100
135-30	22–23	100
135-33	24–25	100
135-35	26–27	50
135-38	28	50
135-40	29–31	50
135-45	32–35	50
135-50	36–40	50
135-55	41–45	50
135-60	46–50	50
135-65	51–55	50



GS-Hydro is the original provider of non-welded piping solutions with numerous benefits for a wide variety of demanding applications. We create value together with our customers by providing innovative fluid transfer solutions which enable safe operation, reduced environmental impact and lower total cost of ownership. We deliver our piping and hose solutions globally in more than twenty-five countries through own companies and partners.

GS-Hydro system offering



8990306613 Product Offering End Forming Machines, January 2015



sales@gshydro.com
www.gshydro.com




GS-Hydro
presents:

GS-HAMMER Flushing Unit



Powered by: **HYDROMEGA**[®]

 **GS-Hydro**

 **INTERPUMP**
FLUID SOLUTIONS


GS-Hydro

Background

- Technology first developed and patented in the 90s by the owner and founder of Hydromega.
- Until recently used exclusively by Hydromega for services in Poland and Europe.
- Reworked and improved during the last 25 years, till the present, flawless design.
- Now, thanks to cooperation with GS-Hydro and Interpump group, available worldwide commercially.



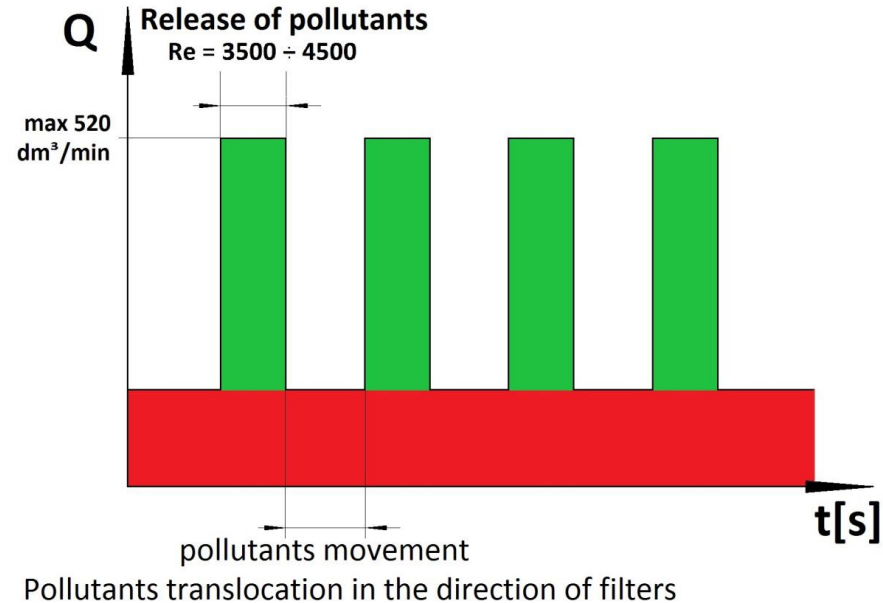
Main advantages of GS Hammer technology

- Flushing pipelines with constant-pulsatory method
- High efficiency of flushing
- High purity class of the entire pipeline
- Low power consumption
- Portable size
- **Four models, suitable for any of your needs!**



Constant-pulsatory flushing technology

- Traditional flushing requires high flow and constant pressure, which translates into size of the machine and power consumption, among other things.
- Constant-pulsatory technology does not require high flow for cleaning. Once the pressure is built, the machine temporarily accelerates flow, creating a bubble that goes through the pipeline while removing any contaminations, moving them towards filters.



Supreme efficiency

- Constant-pulsatory flushing method has proven time and again to be the fastest and most efficient way of cleaning pipelines.
- The purity class achievable through GS-Hammer can reach Class 3, according to NAS 1638.
- Depending on the type and quantity of contamination, the GS-Hammer can clean a complete pipeline even twice as fast, as the traditional method.



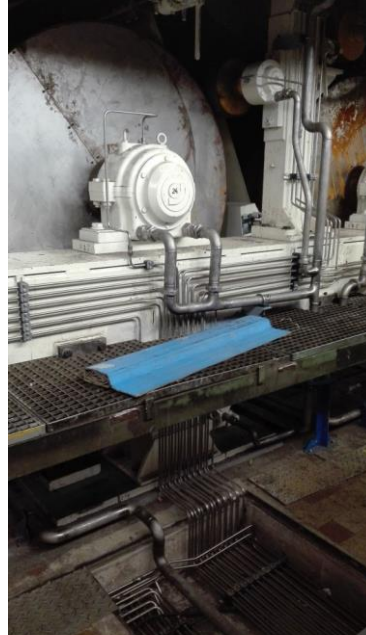
Low power consumption and high accessibility

- Since application of constant – pulsatory method does not require high performance motors and pumps, the energy requirements are also much less demanding, saving you money and decreasing environmental impact.
- As a consequence of smaller components, GS-Hammer Units are much more mobile than traditional flushing units, with all the models being transportable via forklift.



Applications

- Flushing of hydraulic installations:
 - ✓ land-based industries
 - ✓ marine and offshore applications
- Transfer of oil
- Pressure tests

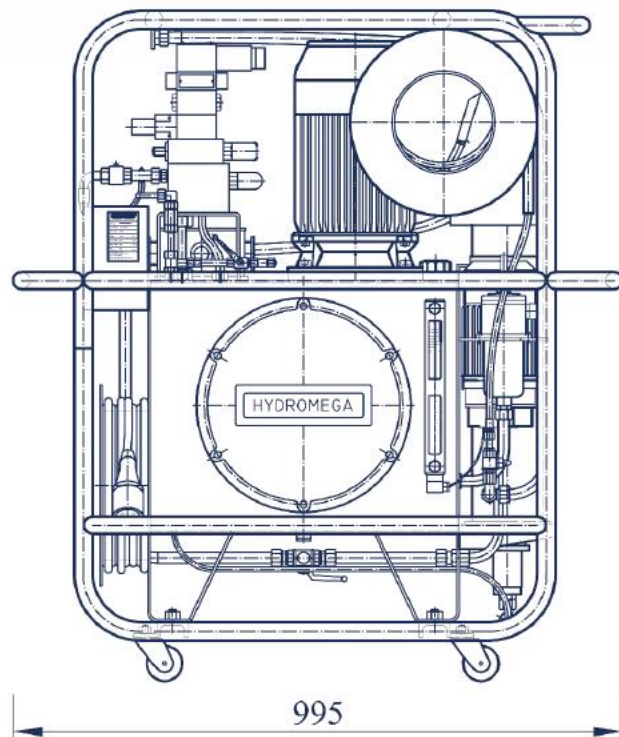


GS-HAMMER 50

Parameter	Value	
Power	5,5* [kW]	0,75** [kW]
Pressure test	25 [MPa]	
Diameters of flushed pipelines	8–22 [mm]	
Oil tank capacity	63 [dm ³]	
Filtration accuracy	5–10 [μm]	
Rated voltage	3×400 [V]/50 [Hz]	
External dimensions (l/w/h)	995/465/1120	

*Power of electric main motor and pulsatory circuit pump

** Power of electric motor of by-pass circuit pump



GS-HAMMER 250

Parameter	Value	
Power	18,5* [kW]	1,1** [kW]
Pressure test	48 [MPa]	
Diameters of flushed pipelines	8–18 [mm]	20–42 [mm]
Oil tank capacity	160 [dm ³]	
Filtration accuracy	5–10 [μm]	
Rated voltage	3×400 [V]/50 [Hz]	
External dimensions (l/w/h)	1300/900/1400	

*Power of electric main motor and pulsatory circuit pump

** Power of electric motor of by-pass circuit pump



GS-HAMMER 500 – the most versatile option

Parameter	Value		
Power	7,5* [kW]	7,5** [kW]	0,55*** [kW]
Pressure test	48 [MPa]		
Diameters of flushed pipelines	8–18 [mm]	20–114 [mm]	
Oil tank capacity	250 [dm3]		
Filtration accuracy	5–10 [μ m]		
Rated voltage	3×400 [V]/50 [Hz]		
External dimensions (l/w/h)	1590/950/1665		

*Power of electric main motor

** Power of electric pulsatory circuit pump

*** Power of electric by-pass circuit pump



GS-HAMMER 1000

Parameter	Value		
Power	22* [kW]	11** [kW]	4*** [kW]
Pressure test	48 [MPa]		
Diameters of flushed pipelines	8–18 [mm]	20–100 [mm]	100-168 [mm]
Oil tank capacity	600 [dm3]		
Filtration accuracy	5–10 [μm]		
Rated voltage	3×400 [V]/50 [Hz]		
External dimensions (l/w/h)	2120/1370/1840		

* Power of electric main motor

** Power of electric pulsatory circuit pump

*** Power of electric by-pass circuit pump





**The best flushing technology
now available to you!**

Contact us at:

GS-Hydro Sp. z o.o.

ul. Gołębia 11

81-185 Gdynia

Tel.: +48 58 78 202 20/21

Fax: +48 58 78 202 22

e-mail: sekretariat@gshydro.com

<http://www.gshydro.com/pl>

Sales:

handlowy@gshydro.com

Projects and services:

krzysztof.bychowski@gshydro.com

