

▼ Shown from left to right: P77, P80, P84, P801, P39



- Reduced handle effort and ergonomic grip for less operator fatigue
- Two-speed operation for fast and easy operation (except P39)
- Vent free reservoir eliminates spills
- Quick grip handle allows for easy transport
- Integral reservoir over-pressurization protection
- All steel construction, chrome plated plunger and wiper system for durable, long lasting performance
- 4-way valving on P84 and P464 for operation of double-acting cylinders.

▼ In the absence of a power supply, the P80 Hand Pump offers a powerful solution. Alternatively, a battery-powered cordless pump can be used.



The Solution for Tough Jobs



Two-Speed Pumps

Recommended for applications where cylinder plunger must advance rapidly to load contact, and applications where greater oil capacities are required, such as multiple cylinder hook-ups.



Foot Pump Conversion Kits

Convert your P39, P77, P80 or P801 to foot power with the PC11 Kit. Includes instructions for easy conversion.



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 150



4-Way Control Valve

P84 and P464 feature a manual 4-way control valve, designed for use with one double-acting or two single-acting cylinders. For system

set-up information:

Page: 404

Pump Type	Usable Oil Capacity (cm ³)	Model Number	Pressure Rating ²⁾ (bar)		Oil Displacement per Stroke (cm ³)		Max. Handle Effort (kg)
			1 st stage	2 nd stage	1 st stage	2 nd stage	
Single	672	P39	-	700	-	2,46	39
	672	P77	34	700	16,39	2,46	40
Two-Speed	2200	P80 ¹⁾	34	700	16,39	2,46	35
	4100	P801	34	700	16,39	2,46	35
	2200	P84 ³⁾	34	700	16,39	2,46	35
	7423	P462	14	700	126,20	4,75	49
	7423	P464 ³⁾	14	700	126,20	4,75	49

¹⁾ Available as a set, see note on next page.

²⁾ Contact Enerpac for applications where operating pressure is less than 10% of pressure rating.

³⁾ P84 and P464 are for use with double-acting cylinders.

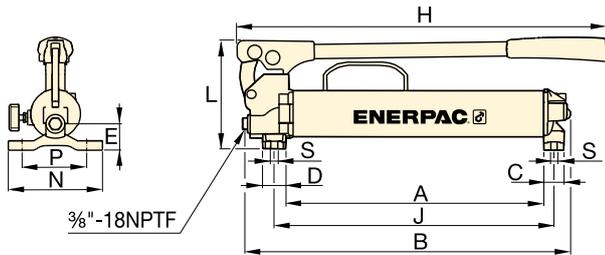
ULTIMA Steel Hand Pumps



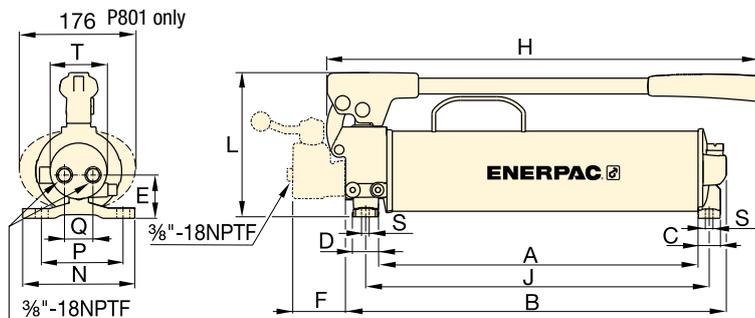
Speed Chart

To determine how a specific pump will operate your cylinder, see the Pump-Cylinder Speed Chart in the 'Yellow Pages'.

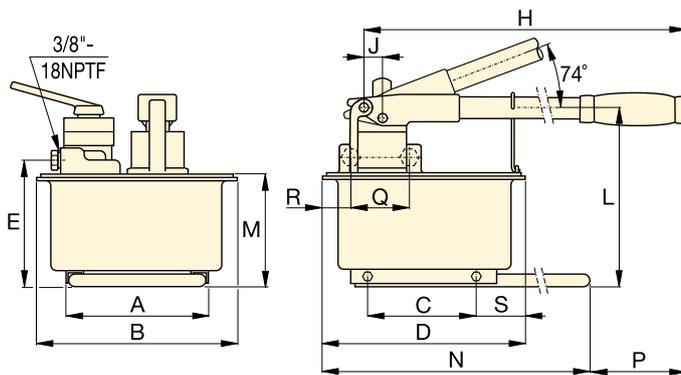
Page: 409



P39, P77



P80, P801, P84



P462, P464

P Series



Reservoir Capacity:

672 - 7423 cm³

Flow at Rated Pressure:

2,46 - 4,75 cm³/stroke

Maximum Operating Pressure:

700 bar



Extra Capacity Hand Pumps

P462 and **P464** feature extra large reservoirs and high first-stage flow rate. These pumps are ideally suited for powering high-capacity cylinders.



Pump-Cylinder Sets

The **P80** is also available as **complete set** (pump, cylinder, gauge, couplers and hose) for your ordering convenience.

Page: 6



Cylinder Matching Chart

For help in selecting the correct hand pump for your application, please refer to the Cylinder Matching Chart located in the 'Yellow Pages'.

Page: 402

Piston Stroke	Dimensions (mm)																Model Number	
	(mm)	A	B	C	D	E	F	H	J	L	M	N	P	Q	R	S		T
25,4	383	480	30	35	37	-	550	416	163	-	140	111	-	-	8,4	-	6,2	P39
25,4	391	487	30	35	47	-	550	424	163	-	140	111	-	-	8,4	-	7,1	P77
25,4	428	511	30	35	55	-	579	460	195	-	150	121	42	-	8,4	74	10,7	P80¹⁾
25,4	428	511	30	35	55	-	579	460	195	-	150	121	42	-	8,4	74	14,1	P801
25,4	428	510	30	35	55	70	579	460	195	-	150	121	38	-	8,4	74	11,8	P84³⁾
38,1	210	308	163	320	195	-	671	25	270	175	650	92	-	-	80	-	27,7	P462
38,1	210	308	163	320	195	-	671	25	270	175	650	92	89	68	80	-	27,7	P464³⁾

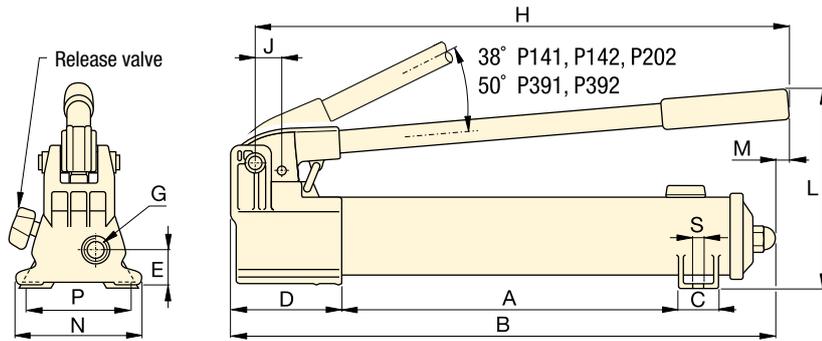
Lightweight Hand Pumps



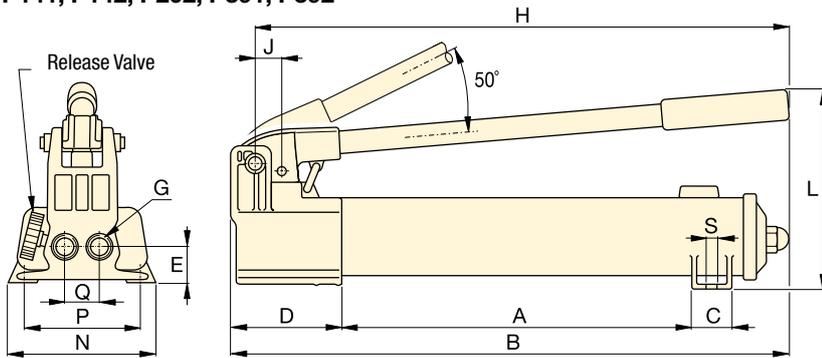
Pump-Cylinder Sets

All pumps marked with an * are available as sets (pump, cylinder, gauge, couplers and hose) for your ordering convenience.

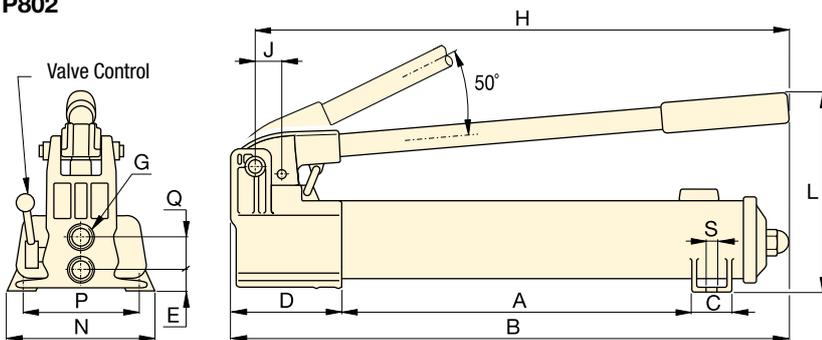
Page: 6



P141, P142, P202, P391, P392



P802



P842

P Series



Reservoir Capacity:

327 - 2540 cm³

Flow at Rated Pressure:

0,90 - 2,47 cm³/stroke

Operating Pressure:

700 bar



Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system, specify only genuine Enerpac hydraulic hoses.

Page: 136



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 150



Foot Pump P392FP

For handsfree operation the lightweight and robust P392FP Foot Pump is the perfect choice.

Page: 85

Piston Stroke	Dimensions (mm)															Model Number
	(mm)	A	B	C	D	E	G	H	J	L	M	N	P	Q	S	
12,7	185	336	28	85	28	1/4"-18 NPTF	319	19	143	-	95	80	-	7	2,4	P141
25,4	344	533	36	99	33	3/8"-18 NPTF	522	30	177	16	120	-	-	-	4,1	P391
12,7	185	336	28	85	28	1/4"-18 NPTF	319	19	143	-	95	80	-	7	2,4	P142 ¹⁾
12,7	344	509	36	85	28	1/4"-18 NPTF	400	19	144	16	95	-	-	-	3,4	P202
25,4	344	533	36	99	33	3/8"-18 NPTF	522	30	177	16	120	-	-	-	4,1	P392 ¹⁾
25,4	337	552	45	133	35	3/8"-18 NPTF	527	30	228	-	181	153	35	10	8,2	P802
25,4	337	552	45	133	20	3/8"-18 NPTF	527	30	228	-	181	153	36	10	10,0	P842 ³⁾

- These are just a few basic system possible with HI-POWER hydraulic components.
- Countless applications are possible: In presses, for lifting or jacking applications or in production or maintenance setups.
- The pump shown is a typical hydraulic unit. Electric or air driven pump are available.

1
HI-POWER Cylinder
Applies hydraulic force.

2
HI-POWER Pump
Provides hydraulic flow.

3
HI-POWER Hose
Transports hydraulic fluid.

4
HI-POWER Quick Coupling
“Hose half” and “cylinder half” couplings are used for quick connection and fluid flow check when separated.

5
HI-POWER Gauge
To Monitor pressure of the cylinder circuit.

6
HI-POWER Gauge Adaptor
For quick and easy gauge installation.

7
HI-POWER Manifold
Allows distribution of hydraulic fluid from one power source to several cylinder.

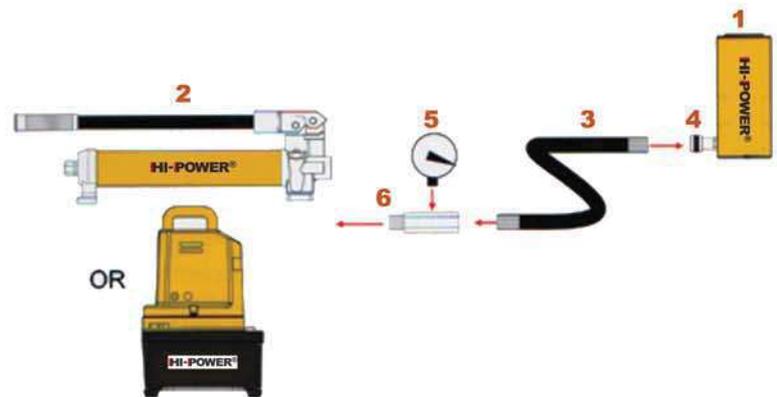
8
HI-POWER Needle Valve
Regulates the flow of hydraulic fluid to or from the cylinder such as V80.

9
HI-POWER Safety Holding Valve
Controls load descent in lifting applications such as V-66.

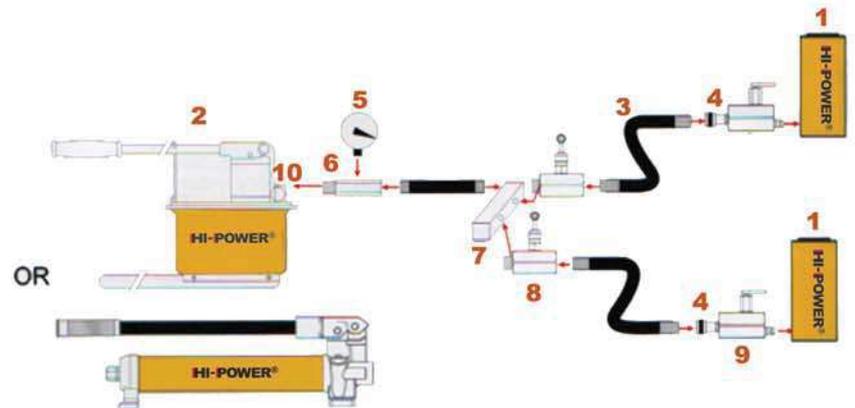
10
HI-POWER Control Valve
4-way direction by double-acting
3-way direction by single-action.

Basic System Set-up

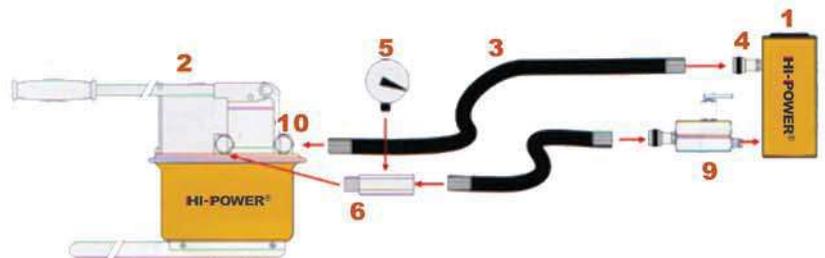
Single-acting push application



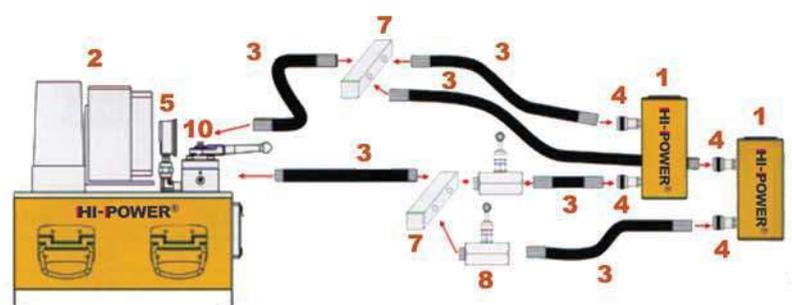
Two point lifting set-up using single-acting cylinder



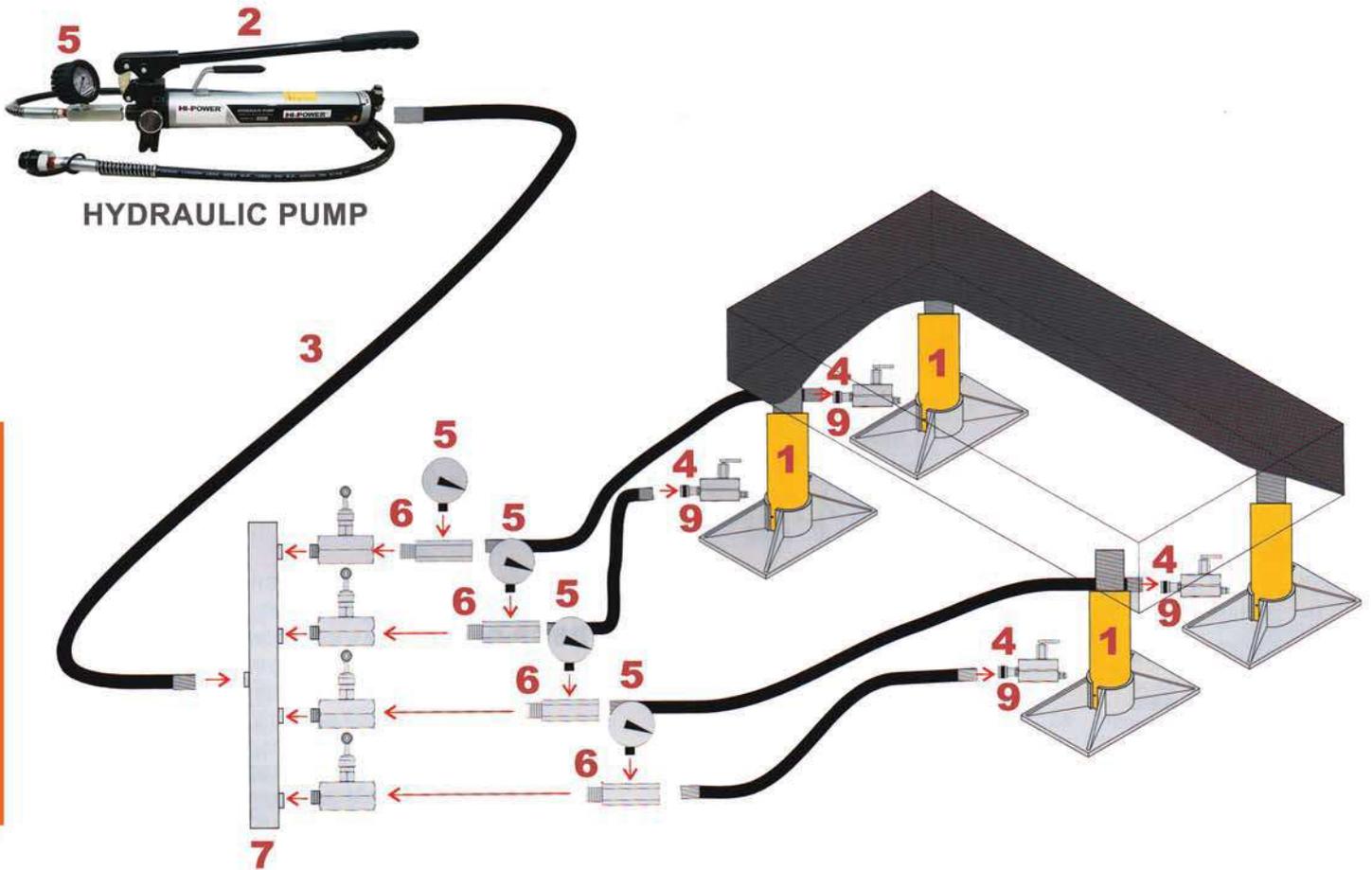
Double-acting cylinder set-up



Two point set-up with Double-acting cylinder



Single-acting push application

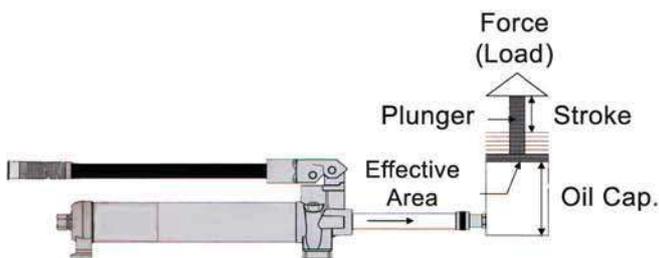


Selection

Flow = is created by the pump

Pressure = is created by resistance to flow

This resistance is usually the result of a load.



$$\text{Force (metric tons)} = \frac{\text{Cyl. Eff. Area (cm}^2\text{)} \times \text{Working pressure (Hydraulic Pump) (bar / kgf/cm}^2\text{)}}{1000\text{kg}}$$

$$\text{Extended Height (in)} = \text{Cyl. Stroke (in)} + \text{Cyl. Collapsed Height (in)}$$

$$\text{Cyl. oil Cap. (in}^3\text{)} = \text{Cyl. Eff. Area (in}^2\text{)} \times \text{Cyl. Stroke (in)}$$

$$\text{Usable oil (system) (in}^3\text{)} = \text{Cyl. Eff. Cap. (in}^3\text{)} \times \text{Quantity of Cyl. In system}$$

$$\text{Speed (Cyl. Plg.) (Sec/in)} = \frac{\text{Cyl. Eff. Area (in}^2\text{)}}{\text{Pump flow per minute (in}^3\text{ / min)}} \times 60\text{sec}$$



H-Series, High Pressure Hydraulic Hoses

▼ Shown from top to bottom: HC-7206, HC-7210 and HC-9206



- Crimped-on rubber strain relief for improved life and durability on all models.

Thermo-plastic Hoses (700-Series)

- For demanding applications, featuring a 4:1 design factor
- Maximum working pressure of 700 bar
- Two layers of steel wire braids
- Outside jacket is polyurethane, to provide maximum abrasion resistance
- Exhibits low volumetric expansion under pressure to enhance overall system efficiency

Heavy-duty Rubber Hoses (900-Series)

- The most complete offering: 35 models up to 15 metres in length
- Rubber coated with two layers of steel wire braids
- Designed to comply with Material Handling Institute IJ-100 hose specification
- Flexible, with little “memory”, is the best choice for long hose runs.

▼ To prevent back pressure and to increase cylinder retraction speed, when using long hoses with single-acting cylinders, the Enerpac HC-7300-Series of hoses with increased internal diameter is the best choice.



Emphasize Safety and Quality



To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

WARNING !

- Do not exceed 700 bar maximum pressure.
- Do not handle hoses which are under pressure.

More safety instructions in our ‘Yellow pages’.

Page: 274

▼ Hose End Couplings

1/4" NPTF	
3/8" NPTF	
A-604	
A-630	
AH-604	
AH-630	
C-604	
CH-604	

High Pressure Hydraulic Hoses



Hose Oil Capacity

When using greater hose lengths, it is sometimes necessary to fill the pump reservoir after filling the hoses.

To determine the hose oil capacity, use the following:

For 6,4 mm inside diameter hoses:

Capacity (cm³) = 32,17 x Length (m)

For 9,7 mm inside diameter hoses:

Capacity (cm³) = 73,90 x Length (m)

H700 H900 Series



Inside Diameter:

6,4 - 9,7 mm

Hose Length:

0,6 - 15 m

Maximum Operating Pressure:

700 bar

Internal Diameter (mm)	Hose End Assemblies and Couplers *		Hose Length (m)	H700-Series Thermo-Plastic		H900-Series Heavy-Duty Rubber		
	End one	End two		Model Number	⚖️ (kg)	Model Number	⚖️ (kg)	
6,4	1/4" NPTF		-	-	-	H-9206Q	1,2	
			-	-	-	H-9206S	1,2	
		A-630	1,8	HB-7206QB	1,1	HB-9206QB	1,4	
			-	-	-	HB-9206Q	1,3	
		CH-604	1,8	HC-7206Q	1,0	HC-9206Q	1,4	
	3/8" NPTF			0,6	H-7202	0,5	H-9202	0,7
				0,9	H-7203	0,7	H-9203	0,9
				1,8	H-7206	0,9	H-9206	1,2
				3,0	H-7210	1,4	H-9210	1,8
				6,1	H-7220	2,8	H-9220	3,6
				9,1	H-7230	4,5	H-9230	5,9
				15,0	H-7250	7,0	H-9250	10,0
		A-604		-	-	-	-	-
				1,8	HA-7206B	1,1	HA-9206B	1,5
				-	-	-	HA-9210B	2,0
		AH-604		-	-	-	-	-
				-	-	-	HA-9203	1,0
				1,8	HA-7206	1,0	HA-9206	1,3
				3,0	HA-7210	1,5	HA-9210	1,9
				1,8	HB-7206	1,0	HB-9206	1,3
				0,9	HC-7203B	1,0	HC-9203B	1,3
				1,8	HC-7206B	1,3	HC-9206B	1,7
	C-604		3,0	HC-7210B	1,8	HC-9210B	2,3	
			0,9	HC-7203	0,8	HC-9203	1,0	
		1,8	HC-7206	1,0	HC-9206	1,4		
CH-604		3,0	HC-7210	1,5	HC-9210	2,0		
		6,1	HC-7220	2,9	HC-9220	3,8		
		1,8	HC-7206C	1,1	HC-9206C	1,4		
CH-604	CH-604		1,8	HC-7206C	1,1	HC-9206C	1,4	
			15	HC-7250C	7,0	HC-9250C	9,1	
9,7	3/8" NPTF	3/8" NPTF	1,8	H-7306	1,6	H-9306	2,1	
			3,0	H-7310	2,4	H-9310	3,2	
			6,1	H-7320	4,5	H-9320	5,9	
			9,1	H-7330	7,3	H-9330	9,5	
			15	H-7350	11,5	H-9350	15,0	
	CH-604	CH-604		1,8	HC-7306	1,7	HC-9306	2,2
				3,0	HC-7310	2,5	HC-9310	3,3

* For technical information on couplers see next page.



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 134



Torque Wrench Hoses

Use Enerpac twin safety hoses with double-acting wrenches to ensure the integrity of your hydraulic system.

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Fittings

For additional fittings see the fitting page of the System Components section.

Page: 127



Premium Hydraulic Oil

Use only genuine Enerpac hydraulic oil. Wrong fluid can destroy seals and pump and will render your warranty null and void your guarantee.

Page: 126

HI-POWER® ACCESSORIES Max. Working Pressure, 700 bar

HI-POWER® HIGH-PRESSURE HYDRAULIC HOSE w.p. 10000 psi at b.p. Pressure 20000 psi

- Heavy-duty hoses rated at 700 bar, meet IJ-100 specifications
- Hoses are black rubber coated with two layers of steel braided reinforcement, I/D of 1/4"
- Flexible hoses with rubber guards at both ends to protect the adapters. Available to spacial lengths upon request.

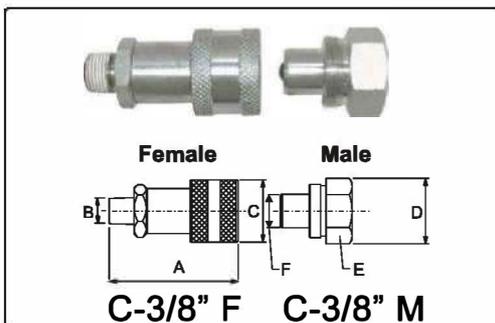
HI-POWER®



SH-9206



SH-7206



C-3/8" F C-3/8" M

Type	Hose END		Length (mm)	TUBE INTERNAL DIAMETER ID (mm)
	End one	End two		
Rubber				
SH-9201	3/8" NPTF	3/8" NPTF	600	6,4
SH-9202	3/8" NPTF	3/8" NPTF	900	6,4
SH-9203	3/8" NPTF	3/8" NPTF	1500	6,4
SH-9206	3/8" NPTF	3/8" NPTF	2000	6,4
SH-9209	3/8" NPTF	3/8" NPTF	2400	6,4
SH-9210	3/8" NPTF	3/8" NPTF	3000	6,4
SH-9212	3/8" NPTF	3/8" NPTF	3600	6,4
SH-9215	3/8" NPTF	3/8" NPTF	4500	6,4
SH-9220	3/8" NPTF	3/8" NPTF	6000	6,4
SH-9301	3/8" NPTF	3/8" NPTF	600	9,4 high flow
SH-9302	3/8" NPTF	3/8" NPTF	900	9,4 high flow
SH-9303	3/8" NPTF	3/8" NPTF	1500	9,4 high flow
SH-9306	3/8" NPTF	3/8" NPTF	1800	9,4 high flow
SH-9309	3/8" NPTF	3/8" NPTF	2400	9,4 high flow
SH-9310	3/8" NPTF	3/8" NPTF	3000	9,4 high flow
SH-9312	3/8" NPTF	3/8" NPTF	3600	9,4 high flow
SH-9315	3/8" NPTF	3/8" NPTF	4500	9,4 high flow
SH-9320	3/8" NPTF	3/8" NPTF	6000	9,4 high flow
Polyurethane				
SH7201	3/8" NPTF	3/8" NPTF	600	6,4
SH7203	3/8" NPTF	3/8" NPTF	1000	6,4
SH7206	3/8" NPTF	3/8" NPTF	2000	6,4
SH7210	3/8" NPTF	3/8" NPTF	3000	6,4
SH7215	3/8" NPTF	3/8" NPTF	4500	6,4
SH7220	3/8" NPTF	3/8" NPTF	6000	6,4
Couplers				
C-3/8" MF	3/8" NPTF	3/8" NPTF	Female & Male Coupler	
C-3/8" F	3/8" NPTF	3/8" NPTF	Female Coupler	
C-3/8" M	3/8" NPTF	3/8" NPTF	Male Coupler	

HI-POWER® COUPLER SETS

- HI-POWER QUICK COUPLER
- All couplers are rated to 700 bar, and have an anti-leak mechanism that works in either low-and/or high-pressure conditions.



C-3/8" MF



C-3/8" F



C-3/8" M

Model Number	Female Model	Male Model	Dimension(mm)					
			A	B	C	D	E	F
C-3/8" MF	C-3/8" F	C-3/8" M	72	3/8"-18NPTF/PT	35	37	32	φ 19.05(3/4")

HI-POWER® Gauge Adaptor 700 Bar

HI-POWER HI-Quality # HGA-4 NEW
Durable & Easy to mounting for pressure gauge
HI-POWER Female ports for hose or coupler,
male screw port for pump or cylinder,
upper port for gauge connection.

HGA-4 NEW



GA-45GC



▼ Shown from left to right: G4089L, G2535L, G4040L



Glycerine-Filled (G-Series)

- Dual scale reading calibrated in bar and psi
- All pressure sensing parts sealed and dampened by glycerine for long life
- Includes safety blow-out disk and pressure equalizing membrane
- Gauge snubbers or needle valves recommended for high-cycle applications.

High-Cycle Dry Gauges (H-Series)

- Dual scale reading calibrated in bar and psi
- Ideal for use in many applications, specifically for high-cycle and harsh environments
- Gauge snubbers or needle valves recommended to shut-off gauge when not in use.



Visual Reference of System Pressure



Gauge Adaptor Assembly

45° Angled gauge adaptor **GA45GC** for easier gauge reading.

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Gauge Adaptor

For easy gauge installation into almost any system, Enerpac offers a complete line of gauge adaptors.

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Snubber Valve V91

Infinitely adjustable for metering oil out of a gauge. The V91 Snubber Valve is also suitable as a shut-off valve to protect the gauge during

high cycle applications.

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◀ When lifting or pressing, always use a gauge. A gauge is your 'window' to the system. It lets you see what's going on.

Hydraulic Pressure Gauges



CAUTION! When lifting or pressing, always use a gauge

Do not override factory setting of relief valves. Always use a gauge to check system pressure. A gauge is your 'window' to the system. It lets you see what's going on. See our Safety Instructions.

Page: 400

G, H Series



Pressure Range:

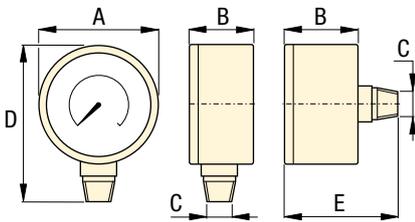
0 - 1000 bar

Face Diameter:

63 - 100 mm

Accuracy, % of full scale:

± 1,0 - 1,5%



Size (mm)	Connection	Dimensions (mm)				
		A	B	C	D	E
63	Lower Mount	63	37	¼" NPTF	84	–
69	Center Rear	69	32	¼" NPTF	–	55
100	Lower Mount	100	29	¼" NPTF	121	–
100	Lower Mount	100	49	½" NPTF	136	–

Note: dimensions for reference only.



Maximum Indicator Pointer

Indicator retains peak reading of pressure or force generated by the system.

Can easily be installed on GP and H-Series ø 100 mm gauges. Order model nr: **BSA881**.

▼ SELECTION CHART

Gauge Series	Pressure Range		Model Number				Major Graduation	Minor Graduation	Major Graduation	Minor Graduation				
			ø 63 ¼" NPTF Lower Mount	ø 63 ¼" NPTF Center Rear	ø 100 ¼" NPTF Lower Mount	ø 100 ½" NPTF Lower Mount								
	bar	psi	Accuracy: ± 1,5 %		Accuracy: ± 1,0 %		bar		psi					
			ø 63	ø 100	ø 63	ø 100	ø 63	ø 100	ø 63	ø 100				
G-Series	0-7	0-100	G2509L	–	–	–	1	–	0,01	–	10	–	2	–
	0-11	0-160	G2510L	–	–	–	1	–	0,02	–	10	–	2	–
	0-14	0-200	G2511L	–	–	–	1	–	0,02	–	50	–	5	–
	0-20	0-300	G2512L	–	–	–	5	–	0,50	–	50	–	5	–
	0-40	0-600	G2513L	–	–	–	10	–	1	–	100	–	10	–
	0-70	0-1.000	G2514L	G2531R	–	–	10	–	1	–	100	–	20	–
	0-140	0-2.000	G2515L	–	–	–	10	–	5	–	500	–	50	–
	0-200	0-3.000	G2516L	–	–	–	50	–	5	–	500	–	50	–
	0-400	0-6.000	G2517L	G2534R	–	–	100	–	10	–	1000	–	100	–
	0-700	0-10.000	G2535L	G2537R	G4088L	G4039L	100	100	10	10	2000	1000	200	100
0-1000	0-15.000	G2536L	G2538R	G4089L	G4040L	100	100	20	20	3000	3000	200	200	
H-Series	0-700	0-10.000	–	–	H4049L	H4071L	–	100	–	10	–	1000	–	100

Pressure Gauge 700 Bar, 10000 psi
Glycerine filled pressure gauge 1000 Bar
Material : SUS stainless steel

HG-2535L

Applications

- For measuring points with high dynamic pressure loads or vibrations
- FOR Hydraulic HI-POWER System Max. Pressure 1000 Bar , 14500 psi

Special features

- Vibration and shock resistant
- Especially sturdy design
- Scale ranges up to 0 700 bar & 0 10000 psi

Description

MODEL : HG-2535L

Nominal size in mm

FACE DIA : 2 1/2 inch (63.5 mm.)

Accuracy

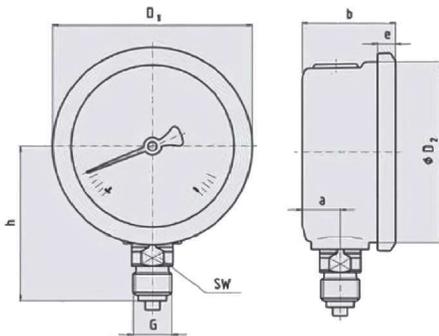
+/- 1%

Scale ranges

BAR : 0 200 bar 700 bar
 PSI : 0 5000 psi 10000 psi

MODEL : HG-2535L Dimensions in mm

Lower mount (LM)



Process connection

SUS Stainless Steel Thread
 lower mount (LM)
 CONNECTION PORT SIZE : 1/4 NPT



Permissible temperature

Ambient: -20 ... +60 °C
 Medium: +60 °C maximum

Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C):
 Max. ±0.4 %/10 K of the span

Ingress protection

IP 65 per EN 60529 / IEC 529
 Refer to ASME-B40.100, EN837-2



HI-POWER

HI-POWER®

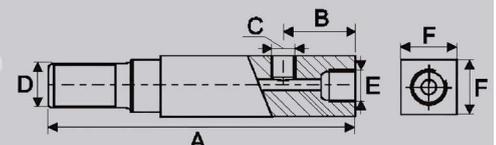
MODEL	DIMENSIONS (mm)							Weight in kg		
	a	b ± 0.5	b ₂ ± 0.5	D ₁	D ₂	e	G	h ± 1	SW	
HG-2535L	13	44	79	80	80	5.5	1/4 NPT	60	14	0.40 kgs.

MODEL	Gauge port C(NPTF)	Male end D(NPTF)	Female end E(NPTF)	DIMENSIONS (mm)					
				A	B	C	D	E	F
HGA-4	1/4	3/8	3/8	133	48	1/4NPTF	3/8NPTF	3/8NPTF	32

HI-POWER® Gauge Adaptor 700 Bar

HI-POWER HI-Quality # HGA-4 NEW
 Durable & Easy to mounting for pressure gauge
 HI-POWER Female ports for hose or coupler ,
 male screw port for pump or cylinder ,
 upper port for gauge connection.

HGA-4 NEW



▼ Shown from top to bottom: HC7206, HC7210, HC9206



- Vinyl strain relief guard on both ends of hose to improve life and durability on all models
- Maximum working pressure of 10,000 psi.

Thermo-Plastic Safety Hoses (H700-Series)

- For demanding applications, featuring a 4:1 safety factor
- Outside jacket is polyurethane, to provide maximum abrasion resistance
- Exhibits low volumetric expansion under pressure to enhance overall system efficiency.

Heavy-Duty Rubber Hoses (H900-Series)

- The most complete offering: 35 models up to 50 feet in length
- Rubber coated with two layers of steel wire braids
- Designed to comply with Material Handling Institute IJ100 hose specification
- Flexible, with little “memory”, is the best choice for long hose runs.

▼ To prevent back pressure and to increase cylinder retraction speed, when using long hoses with single-acting cylinders, the Enerpac HC7300-Series of hoses with increased internal diameter is the best choice.



Safety and Quality



To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

WARNING !

- Do not exceed 10,000 psi maximum pressure.
- Do not handle hoses which are under pressure.

More safety instructions in our ‘Yellow pages’.

Page: 400

▼ Hose End Couplings

1/4" NPTF	
3/8" NPTF	
A604	
A630	
AH604	
AH630	
C604	
CH604	

High-Pressure Hydraulic Hoses



Hose Oil Capacity

When using greater hose lengths, it is sometimes necessary to fill the pump reservoir after filling the hoses.

To determine the hose oil capacity, use the following:

For 0.25" internal diameter hoses:

$$\text{Capacity (in}^3\text{)} = .59 \times \text{Length (ft)}$$

For 0.38" internal diameter hoses:

$$\text{Capacity (in}^3\text{)} = 1.36 \times \text{Length (ft)}$$

For USA & Latin-America only

Internal Diameter (in)	Hose End Assemblies and Couplers *		Hose Length (ft)	700-Series Model Number Thermo-Plastic Hoses	Weight (lbs)	900-Series Model Number Heavy-Duty Rubber Hoses	Weight (lbs)	
	End one	End two						
0.25	1/4" NPTF	1/4" NPTF	6	-		H9206Q	2.6	
		3/8" NPTF	6	-		H9206S	2.6	
		A630	6	HB7206QB	2.4	HB9206QB	3.1	
		AH630	6	-		HB9206Q	2.9	
		CH604	6	HC7206Q	2.3	HC9206Q	3.0	
	3/8" NPTF	-	-	2	H7202	1.2	H9202	1.6
				3	H7203	1.5	H9203	1.9
				6	H7206	2.0	H9206	2.6
				10	H7210	3.0	H9210	3.9
				20	H7220	6.2	H9220	8.0
				30	H7230	10.0	H9230	13.0
				50	H7250	15.4	H9250	22.0
				A604	6	HA7206B	2.5	HA9206B
		10	-		-	HA9210B	4.5	
		-	-		-	-	-	
		AH604	3		-	-	HA9203	2.1
			6		HA7206	2.2	HA9206	2.9
		AH630	10	HA7210	3.2	HA9210	4.2	
	6		HB7206	2.2	HB9206	2.9		
	3		HC7203B	2.2	HC9203B	2.9		
	C604	6	HC7206B	2.8	HC9206B	3.7		
		10	HC7210B	3.9	HC9210B	5.0		
	CH604	3	HC7203	1.7	HC9203	2.2		
		6	HC7206	2.3	HC9206	3.0		
		10	HC7210	3.3	HC9210	4.3		
		20	HC7220	6.4	HC9220	8.3		
	CH604	CH604	6	HC7206C	2.4	HC9206C	3.1	
			20	HC7220C	6.6	HC9220C	9.7	
50			HC7250C	15.4	HC9250C	20.0		
0.38	3/8" NPTF	-	6	H7306	3.5	H9306	4.6	
			10	H7310	10	H9310	7.0	
			20	H7320	5.4	H9320	13.0	
			30	H7330	10.0	H9330	21.0	
			50	H7350	16.2	H9350	4.9	
	CH604	-	6	HC7306	3.4	HC9306	7.3	
			10	HC7310	5.6	HC9310	-	
			20	HC7320	11.2	-	-	
			-	-	-	-	-	

* For technical information on couplers see next page.

H700 H900 Series



Internal Diameter:

0.25 - 0.38 inch

Length:

2 - 50 feet

Maximum Operating Pressure:

10,000 psi



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 150



Torque Wrench Hoses

Use Enerpac twin safety hoses with double-acting wrenches to ensure the integrity of your hydraulic system.

Page: 255



Fittings

For additional fittings see the fitting page of the System Components section.

Page: 141



Premium Hydraulic Oil

Use only genuine Enerpac Hydraulic Oil. The use of any other fluid will render your Enerpac warranty null and void.

Page: 140

▼ Shown from top to bottom: P802, P842, P202, P142



- Lightweight and compact design
- Durable glass-filled nylon reservoir and nylon encapsulated aluminium pump base for maximum corrosion resistance
- Two-speed operation reduces handle strokes by as much as 78% over single-speed pumps
- Lower handle effort to minimize operator fatigue
- Integral 4-way valve on P842 for operation of double-acting cylinders
- Handle lock and lightweight construction for easy carrying
- Large oil capacities to power a wide range of cylinders or tools
- Non-conductive fiberglass handle for improved operator safety
- Internal pressure relief valve for overload protection.

▼ Cylinder-pump set SCR254H used to support the construction while monitoring pressure and load with the gauge.



Exclusively from Enerpac



Cylinder Matching Chart

For help in selecting the correct hand pump for your application, please refer to the Cylinder Matching Chart located in the 'Yellow Pages'.

Page: 402



Speed Chart

To determine how a specific pump will operate your cylinder, see the Pump-Cylinder Speed Chart in the 'Yellow Pages'.

Page: 409



Tank Kits:

When a return-to-tank port is required, the Tank Kits provide a 7/16"-20 UN port at the rear of the reservoir.

PC20	Fits P141, P142
PC25	Fits P202, P391, P392



Premium Hydraulic Oil

Use only genuine Enerpac Hydraulic Oil. The use of any other fluid will render your Enerpac warranty null and void.

Page: 140

Pump Type	Usable Oil Capacity (cm ³)	Model Number	Pressure Rating ²⁾ (bar)		Oil Displacement per Stroke (cm ³)		Max. Handle Effort (kg)
			1 st stage	2 nd stage	1 st stage	2 nd stage	
Single-Speed	327	P141	-	700	-	0,90	32,7
	901	P391	-	700	-	2,47	38,6
Two-Speed	327	P142 ¹⁾	13	700	3,62	0,90	35,4
	901	P202	13	700	3,62	0,90	28,6
	901	P392 ¹⁾	13	700	11,26	2,47	42,2
	2540	P802	27	700	39,33	2,47	43,1
	2540	P842 ³⁾	27	700	39,33	2,47	43,1

¹⁾ Available as set, see note on next page. P392 also available in Power Box Set (page 11).

²⁾ Contact Enerpac for applications where operating pressure is less than 10% of pressure rating.

³⁾ P842 for use with double-acting cylinders

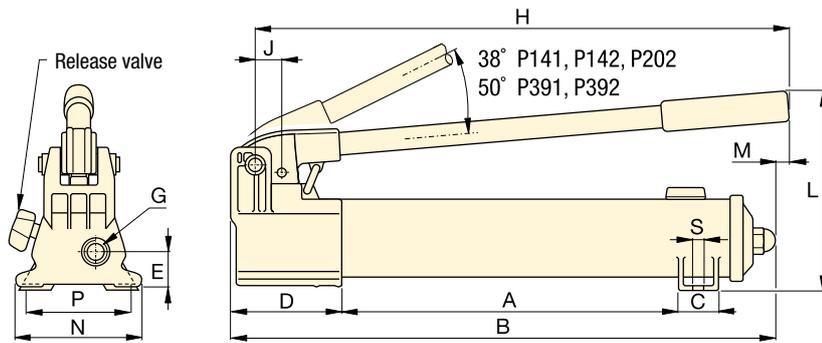
Lightweight Hand Pumps



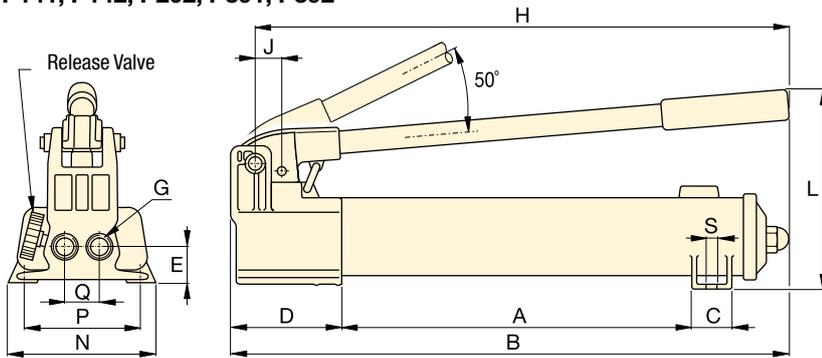
Pump-Cylinder Sets

All pumps marked with an * are available as sets (pump, cylinder, gauge, couplers and hose) for your ordering convenience.

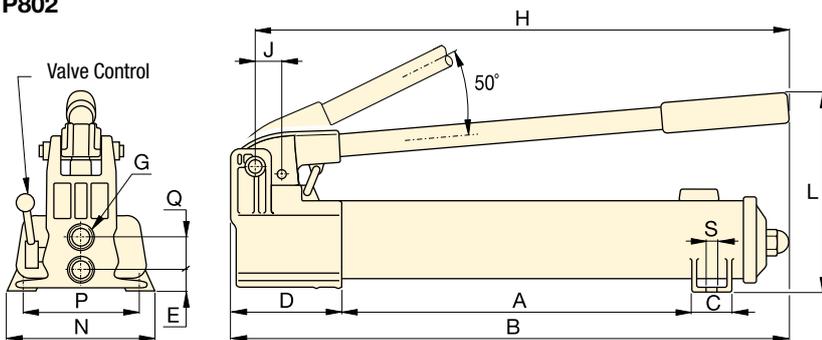
Page: 6



P141, P142, P202, P391, P392



P802



P842

P Series



Reservoir Capacity:

327 - 2540 cm³

Flow at Rated Pressure:

0,90 - 2,47 cm³/stroke

Operating Pressure:

700 bar



Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system, specify only genuine Enerpac hydraulic hoses.

Page: 136



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 150



Foot Pump P392FP

For handsfree operation the lightweight and robust P392FP Foot Pump is the perfect choice.

Page: 85

Piston Stroke	Dimensions (mm)															Model Number
	(mm)	A	B	C	D	E	G	H	J	L	M	N	P	Q	S	
12,7	185	336	28	85	28	¼"-18 NPTF	319	19	143	-	95	80	-	7	2,4	P141
25,4	344	533	36	99	33	¾"-18 NPTF	522	30	177	16	120	-	-	-	4,1	P391
12,7	185	336	28	85	28	¼"-18 NPTF	319	19	143	-	95	80	-	7	2,4	P142 ¹⁾
12,7	344	509	36	85	28	¼"-18 NPTF	400	19	144	16	95	-	-	-	3,4	P202
25,4	344	533	36	99	33	¾"-18 NPTF	522	30	177	16	120	-	-	-	4,1	P392 ¹⁾
25,4	337	552	45	133	35	¾"-18 NPTF	527	30	228	-	181	153	35	10	8,2	P802
25,4	337	552	45	133	20	¾"-18 NPTF	527	30	228	-	181	153	36	10	10,0	P842 ³⁾

▼ Shown from left to right: P77, P80, P84, P801, P39



- Reduced handle effort and ergonomic grip for less operator fatigue
- Two-speed operation for fast and easy operation (except P39)
- Vent free reservoir eliminates spills
- Quick grip handle allows for easy transport
- Integral reservoir over-pressurization protection
- All steel construction, chrome plated plunger and wiper system for durable, long lasting performance
- 4-way valving on P84 and P464 for operation of double-acting cylinders.

▼ In the absence of a power supply, the P80 Hand Pump offers a powerful solution. Alternatively, a battery-powered cordless pump can be used.



The Solution for Tough Jobs



Two-Speed Pumps

Recommended for applications where cylinder plunger must advance rapidly to load contact, and applications where greater oil capacities are required, such as multiple cylinder hook-ups.



Foot Pump Conversion Kits

Convert your P39, P77, P80 or P801 to foot power with the PC11 Kit. Includes instructions for easy conversion.



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

Page: 150



4-Way Control Valve

P84 and P464 feature a manual 4-way control valve, designed for use with one double-acting or two single-acting cylinders. For system

set-up information:

Page: 404

Pump Type	Usable Oil Capacity (cm ³)	Model Number	Pressure Rating ²⁾ (bar)		Oil Displacement per Stroke (cm ³)		Max. Handle Effort (kg)
			1 st stage	2 nd stage	1 st stage	2 nd stage	
Single	672	P39	-	700	-	2,46	39
	672	P77	34	700	16,39	2,46	40
Two-Speed	2200	P80 ¹⁾	34	700	16,39	2,46	35
	4100	P801	34	700	16,39	2,46	35
	2200	P84 ³⁾	34	700	16,39	2,46	35
	7423	P462	14	700	126,20	4,75	49
	7423	P464 ³⁾	14	700	126,20	4,75	49

¹⁾ Available as a set, see note on next page.

²⁾ Contact Enerpac for applications where operating pressure is less than 10% of pressure rating.

³⁾ P84 and P464 are for use with double-acting cylinders.

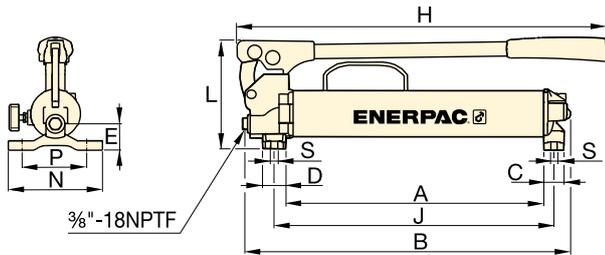
ULTIMA Steel Hand Pumps



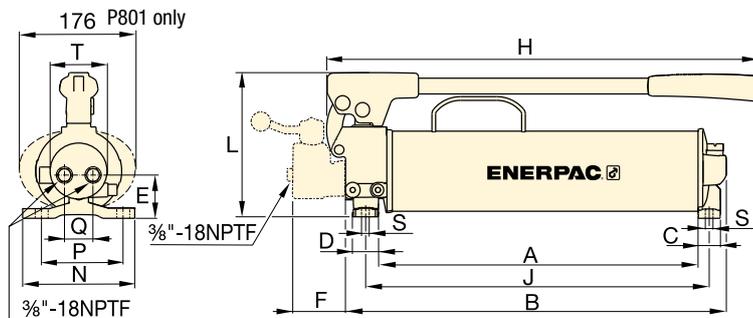
Speed Chart

To determine how a specific pump will operate your cylinder, see the Pump-Cylinder Speed Chart in the 'Yellow Pages'.

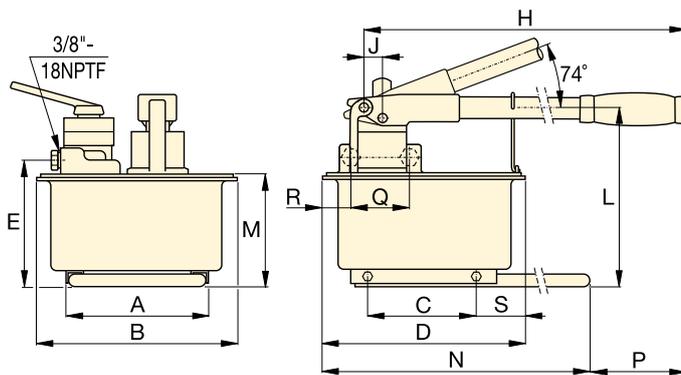
Page: 409



P39, P77



P80, P801, P84



P462, P464

P Series



Reservoir Capacity:

672 - 7423 cm³

Flow at Rated Pressure:

2,46 - 4,75 cm³/stroke

Maximum Operating Pressure:

700 bar



Extra Capacity Hand Pumps

P462 and P464 feature extra large reservoirs and high first-stage flow rate. These pumps are ideally suited for powering high-capacity cylinders.



Pump-Cylinder Sets

The P80 is also available as **complete set** (pump, cylinder, gauge, couplers and hose) for your ordering convenience.

Page: 6



Cylinder Matching Chart

For help in selecting the correct hand pump for your application, please refer to the Cylinder Matching Chart located in the 'Yellow Pages'.

Page: 402

Piston Stroke	Dimensions (mm)																Model Number	
	(mm)	A	B	C	D	E	F	H	J	L	M	N	P	Q	R	S		T
25,4	383	480	30	35	37	-	550	416	163	-	140	111	-	-	8,4	-	6,2	P39
25,4	391	487	30	35	47	-	550	424	163	-	140	111	-	-	8,4	-	7,1	P77
25,4	428	511	30	35	55	-	579	460	195	-	150	121	42	-	8,4	74	10,7	P80¹⁾
25,4	428	511	30	35	55	-	579	460	195	-	150	121	42	-	8,4	74	14,1	P801
25,4	428	510	30	35	55	70	579	460	195	-	150	121	38	-	8,4	74	11,8	P84³⁾
38,1	210	308	163	320	195	-	671	25	270	175	650	92	-	-	80	-	27,7	P462
38,1	210	308	163	320	195	-	671	25	270	175	650	92	89	68	80	-	27,7	P464³⁾

- These are just a few basic system possible with HI-POWER hydraulic components.
- Countless applications are possible: In presses, for lifting or jacking applications or in production or maintenance setups.
- The pump shown is a typical hydraulic unit. Electric or air driven pump are available.

HI-POWER Cylinder
Applies hydraulic force.

1

HI-POWER Pump
Provides hydraulic flow.

2

HI-POWER Hose
Transports hydraulic fluid.

3

HI-POWER Quick Coupling
“Hose half” and “cylinder half” couplings are used for quick connection and fluid flow check when separated.

4

HI-POWER Gauge
To Monitor pressure of the cylinder circuit.

5

HI-POWER Gauge Adaptor
For quick and easy gauge installation.

6

HI-POWER Manifold
Allows distribution of hydraulic fluid from one power source to several cylinder.

7

HI-POWER Needle Valve
Regulates the flow of hydraulic fluid to or from the cylinder such as V80.

8

HI-POWER Safety Holding Valve
Controls load descent in lifting applications such as V-66.

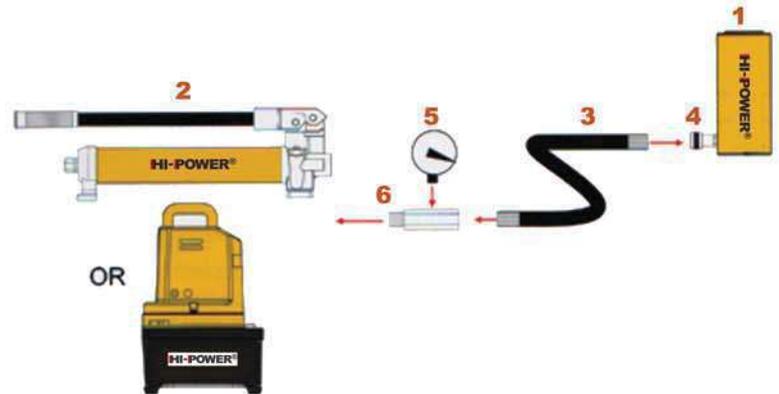
9

HI-POWER Control Valve
4-way direction by double-acting
3-way direction by single-action.

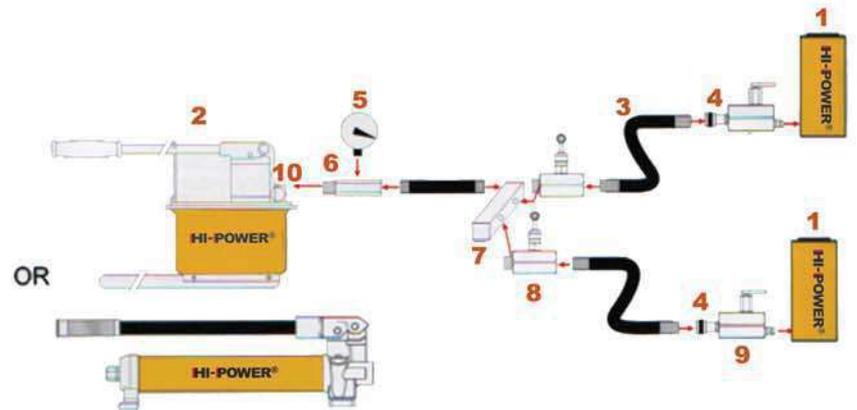
10

Basic System Set-up

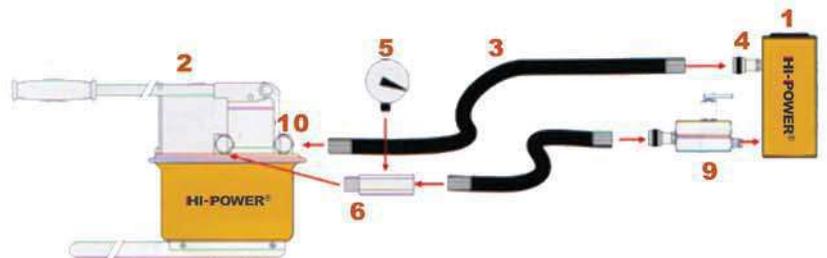
Single-acting push application



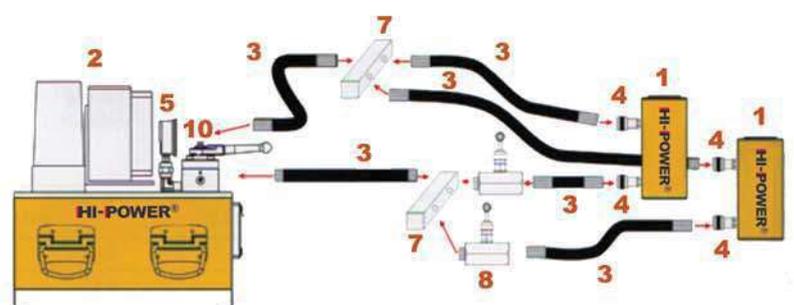
Two point lifting set-up using single-acting cylinder



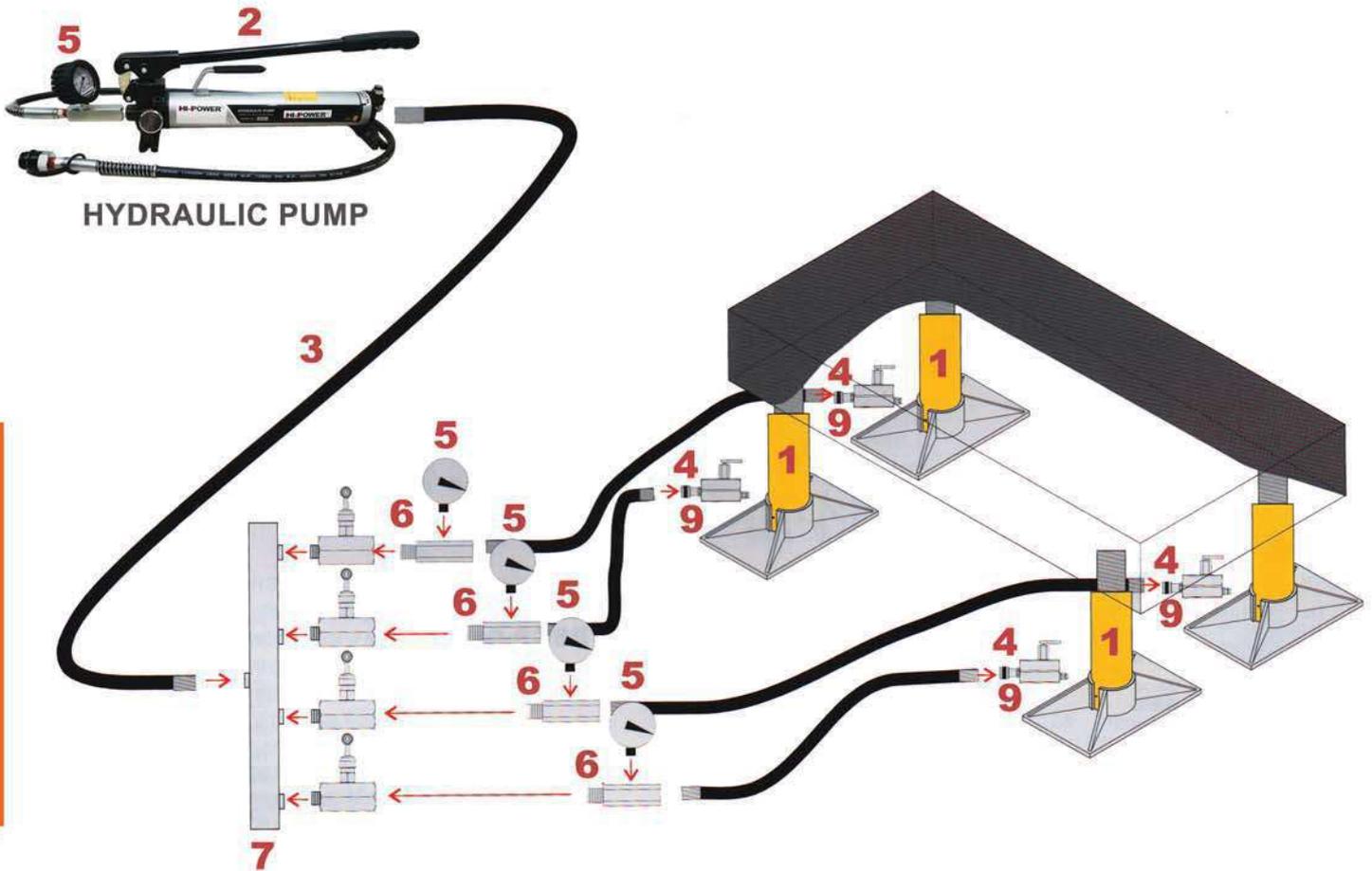
Double-acting cylinder set-up



Two point set-up with Double-acting cylinder



Single-acting push application



Selection

Flow = is created by the pump

Pressure = is created by resistance to flow

This resistance is usually the result of a load.

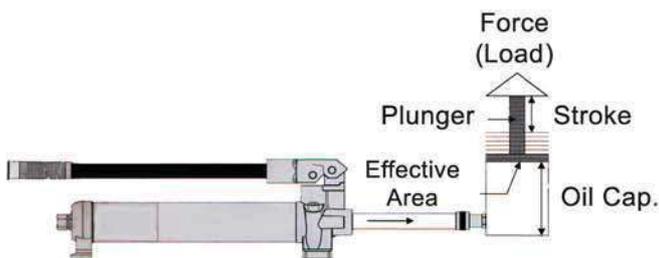
$$\text{Force (metric tons)} = \frac{\text{Cyl. Eff. Area (cm}^2\text{)} \times \text{Working pressure (Hydraulic Pump) (bar / kgf/cm}^2\text{)}}{1000\text{kg}}$$

$$\text{Extended Height (in)} = \text{Cyl. Stroke (in)} + \text{Cyl. Collapsed Height (in)}$$

$$\text{Cyl. oil Cap. (in}^3\text{)} = \text{Cyl. Eff. Area (in}^2\text{)} \times \text{Cyl. Stroke (in)}$$

$$\text{Usable oil (system) (in}^3\text{)} = \text{Cyl. Eff. Cap. (in}^3\text{)} \times \text{Quantity of Cyl. In system}$$

$$\text{Speed (Cyl. Plg.) (Sec/in)} = \frac{\text{Cyl. Eff. Area}}{\text{Pump flow per minute (in}^3\text{ / min)}} \times 60\text{sec}$$



H-Series, High Pressure Hydraulic Hoses

▼ Shown from top to bottom: HC-7206, HC-7210 and HC-9206



- Crimped-on rubber strain relief for improved life and durability on all models.

Thermo-plastic Hoses (700-Series)

- For demanding applications, featuring a 4:1 design factor
- Maximum working pressure of 700 bar
- Two layers of steel wire braids
- Outside jacket is polyurethane, to provide maximum abrasion resistance
- Exhibits low volumetric expansion under pressure to enhance overall system efficiency

Heavy-duty Rubber Hoses (900-Series)

- The most complete offering: 35 models up to 15 metres in length
- Rubber coated with two layers of steel wire braids
- Designed to comply with Material Handling Institute IJ-100 hose specification
- Flexible, with little “memory”, is the best choice for long hose runs.

▼ To prevent back pressure and to increase cylinder retraction speed, when using long hoses with single-acting cylinders, the Enerpac HC-7300-Series of hoses with increased internal diameter is the best choice.



Emphasize Safety and Quality



To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

WARNING !

- Do not exceed 700 bar maximum pressure.
- Do not handle hoses which are under pressure.

More safety instructions in our ‘Yellow pages’.

Page: 274

▼ Hose End Couplings

1/4" NPTF	
3/8" NPTF	
A-604	
A-630	
AH-604	
AH-630	
C-604	
CH-604	

High Pressure Hydraulic Hoses



Hose Oil Capacity

When using greater hose lengths, it is sometimes necessary to fill the pump reservoir after filling the hoses.

To determine the hose oil capacity, use the following:

For 6,4 mm inside diameter hoses:

Capacity (cm³) = 32,17 x Length (m)

For 9,7 mm inside diameter hoses:

Capacity (cm³) = 73,90 x Length (m)

H700 H900 Series



Inside Diameter:

6,4 - 9,7 mm

Hose Length:

0,6 - 15 m

Maximum Operating Pressure:

700 bar

Internal Diameter (mm)	Hose End Assemblies and Couplers *		Hose Length (m)	H700-Series Thermo-Plastic		H900-Series Heavy-Duty Rubber			
	End one	End two		Model Number	(kg)	Model Number	(kg)		
6,4	1/4" NPTF		-	-	-	H-9206Q	1,2		
			-	-	-	H-9206S	1,2		
		A-630	1,8	HB-7206QB	1,1	HB-9206QB	1,4		
			-	-	-	HB-9206Q	1,3		
		CH-604	1,8	HC-7206Q	1,0	HC-9206Q	1,4		
	3/8" NPTF			0,6	H-7202	0,5	H-9202	0,7	
				0,9	H-7203	0,7	H-9203	0,9	
				1,8	H-7206	0,9	H-9206	1,2	
				3,0	H-7210	1,4	H-9210	1,8	
				6,1	H-7220	2,8	H-9220	3,6	
				9,1	H-7230	4,5	H-9230	5,9	
				15,0	H-7250	7,0	H-9250	10,0	
		A-604		-	-	-	-	-	
				1,8	HA-7206B	1,1	HA-9206B	1,5	
				-	-	-	HA-9210B	2,0	
		AH-604		-	-	-	-	-	
				-	-	-	-	-	
				-	-	-	HA-9203	1,0	
				1,8	HA-7206	1,0	HA-9206	1,3	
				3,0	HA-7210	1,5	HA-9210	1,9	
				1,8	HB-7206	1,0	HB-9206	1,3	
			C-604		0,9	HC-7203B	1,0	HC-9203B	1,3
					1,8	HC-7206B	1,3	HC-9206B	1,7
					3,0	HC-7210B	1,8	HC-9210B	2,3
			CH-604		0,9	HC-7203	0,8	HC-9203	1,0
		1,8		HC-7206	1,0	HC-9206	1,4		
		3,0		HC-7210	1,5	HC-9210	2,0		
		6,1		HC-7220	2,9	HC-9220	3,8		
CH-604	CH-604		1,8	HC-7206C	1,1	HC-9206C	1,4		
			15	HC-7250C	7,0	HC-9250C	9,1		
9,7	3/8" NPTF	3/8" NPTF		1,8	H-7306	1,6	H-9306	2,1	
				3,0	H-7310	2,4	H-9310	3,2	
				6,1	H-7320	4,5	H-9320	5,9	
				9,1	H-7330	7,3	H-9330	9,5	
				15	H-7350	11,5	H-9350	15,0	
		CH-604		1,8	HC-7306	1,7	HC-9306	2,2	
				3,0	HC-7310	2,5	HC-9310	3,3	

* For technical information on couplers see next page.



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

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Torque Wrench Hoses

Use Enerpac twin safety hoses with double-acting wrenches to ensure the integrity of your hydraulic system.

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Fittings

For additional fittings see the fitting page of the System Components section.

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Premium Hydraulic Oil

Use only genuine Enerpac hydraulic oil. Wrong fluid can destroy seals and pump and will render your warranty null and void your guarantee.

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HI-POWER® ACCESSORIES Max. Working Pressure, 700 bar

HI-POWER® HIGH-PRESSURE HYDRAULIC HOSE w.p. 10000 psi at b.p. Pressure 20000 psi

- Heavy-duty hoses rated at 700 bar, meet IJ-100 specifications
- Hoses are black rubber coated with two layers of steel braided reinforcement, I/D of 1/4"
- Flexible hoses with rubber guards at both ends to protect the adapters. Available to special lengths upon request.

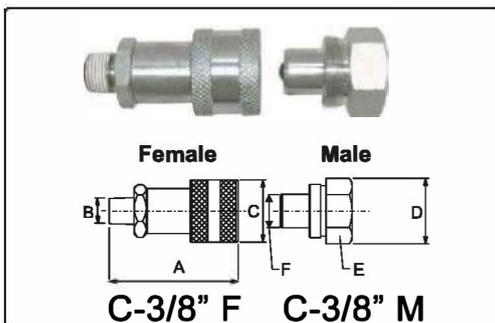
HI-POWER®



SH-9206



SH-7206



C-3/8" F C-3/8" M

Type	Hose END		Length (mm)	TUBE INTERNAL DIAMETER ID (mm)
	End one	End two		
Rubber				
SH-9201	3/8" NPTF	3/8" NPTF	600	6,4
SH-9202	3/8" NPTF	3/8" NPTF	900	6,4
SH-9203	3/8" NPTF	3/8" NPTF	1500	6,4
SH-9206	3/8" NPTF	3/8" NPTF	2000	6,4
SH-9209	3/8" NPTF	3/8" NPTF	2400	6,4
SH-9210	3/8" NPTF	3/8" NPTF	3000	6,4
SH-9212	3/8" NPTF	3/8" NPTF	3600	6,4
SH-9215	3/8" NPTF	3/8" NPTF	4500	6,4
SH-9220	3/8" NPTF	3/8" NPTF	6000	6,4
SH-9301	3/8" NPTF	3/8" NPTF	600	9,4 high flow
SH-9302	3/8" NPTF	3/8" NPTF	900	9,4 high flow
SH-9303	3/8" NPTF	3/8" NPTF	1500	9,4 high flow
SH-9306	3/8" NPTF	3/8" NPTF	1800	9,4 high flow
SH-9309	3/8" NPTF	3/8" NPTF	2400	9,4 high flow
SH-9310	3/8" NPTF	3/8" NPTF	3000	9,4 high flow
SH-9312	3/8" NPTF	3/8" NPTF	3600	9,4 high flow
SH-9315	3/8" NPTF	3/8" NPTF	4500	9,4 high flow
SH-9320	3/8" NPTF	3/8" NPTF	6000	9,4 high flow
Polyurethane				
SH7201	3/8" NPTF	3/8" NPTF	600	6,4
SH7203	3/8" NPTF	3/8" NPTF	1000	6,4
SH7206	3/8" NPTF	3/8" NPTF	2000	6,4
SH7210	3/8" NPTF	3/8" NPTF	3000	6,4
SH7215	3/8" NPTF	3/8" NPTF	4500	6,4
SH7220	3/8" NPTF	3/8" NPTF	6000	6,4
Couplers				
C-3/8" MF	3/8" NPTF	3/8" NPTF	Female & Male Coupler	
C-3/8" F	3/8" NPTF	3/8" NPTF	Female Coupler	
C-3/8" M	3/8" NPTF	3/8" NPTF	Male Coupler	

HI-POWER® COUPLER SETS

- HI-POWER QUICK COUPLER
- All couplers are rated to 700 bar, and have an anti-leak mechanism that works in either low-and/or high-pressure conditions.



C-3/8" MF



C-3/8" F



C-3/8" M

Model Number	Female Model	Male Model	Dimension(mm)					
			A	B	C	D	E	F
C-3/8" MF	C-3/8" F	C-3/8" M	72	3/8"-18NPTF/PT	35	37	32	φ 19.05(3/4")

HI-POWER® Gauge Adaptor 700 Bar

HI-POWER HI-Quality # HGA-4 NEW
Durable & Easy to mounting for pressure gauge
HI-POWER Female ports for hose or coupler,
male screw port for pump or cylinder,
upper port for gauge connection.

HGA-4 NEW



GA-45GC



▼ Shown from left to right: G4089L, G2535L, G4040L



Glycerine-Filled (G-Series)

- Dual scale reading calibrated in bar and psi
- All pressure sensing parts sealed and dampened by glycerine for long life
- Includes safety blow-out disk and pressure equalizing membrane
- Gauge snubbers or needle valves recommended for high-cycle applications.

High-Cycle Dry Gauges (H-Series)

- Dual scale reading calibrated in bar and psi
- Ideal for use in many applications, specifically for high-cycle and harsh environments
- Gauge snubbers or needle valves recommended to shut-off gauge when not in use.



Visual Reference of System Pressure



Gauge Adaptor Assembly

45° Angled gauge adaptor **GA45GC** for easier gauge reading.

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Gauge Adaptor

For easy gauge installation into almost any system, Enerpac offers a complete line of gauge adaptors.

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Snubber Valve V91

Infinitely adjustable for metering oil out of a gauge. The V91 Snubber Valve is also suitable as a shut-off valve to protect the gauge during

high cycle applications.

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◀ When lifting or pressing, always use a gauge. A gauge is your 'window' to the system. It lets you see what's going on.

Hydraulic Pressure Gauges



CAUTION! When lifting or pressing, always use a gauge

Do not override factory setting of relief valves. Always use a gauge to check system pressure. A gauge is your 'window' to the system. It lets you see what's going on. See our Safety Instructions.

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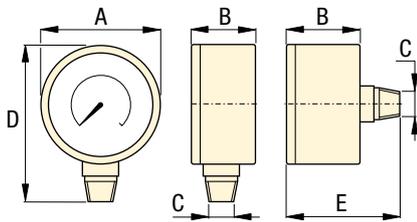
G, H Series



Pressure Range:
0 - 1000 bar

Face Diameter:
63 - 100 mm

Accuracy, % of full scale:
± 1,0 - 1,5%



Size (mm)	Connection	Dimensions (mm)				
		A	B	C	D	E
63	Lower Mount	63	37	1/4" NPTF	84	-
69	Center Rear	69	32	1/4" NPTF	-	55
100	Lower Mount	100	29	1/4" NPTF	121	-
100	Lower Mount	100	49	1/2" NPTF	136	-

Note: dimensions for reference only.



Maximum Indicator Pointer
Indicator retains peak reading of pressure or force generated by the system.

Can easily be installed on GP and H-Series ø 100 mm gauges. Order model nr: **BSA881**.

▼ SELECTION CHART

Gauge Series	Pressure Range		Model Number				Major Graduation	Minor Graduation	Major Graduation	Minor Graduation				
			ø 63 1/4" NPTF Lower Mount	ø 63 1/4" NPTF Center Rear	ø 100 1/4" NPTF Lower Mount	ø 100 1/2" NPTF Lower Mount								
			Accuracy: ± 1,5 %		Accuracy: ± 1,0 %		bar		psi					
	bar	psi	ø 63	ø 100	ø 63	ø 100	ø 63	ø 100	ø 63	ø 100				
G-Series	0-7	0-100	G2509L	-	-	-	1	-	0,01	-	10	-	2	-
	0-11	0-160	G2510L	-	-	-	1	-	0,02	-	10	-	2	-
	0-14	0-200	G2511L	-	-	-	1	-	0,02	-	50	-	5	-
	0-20	0-300	G2512L	-	-	-	5	-	0,50	-	50	-	5	-
	0-40	0-600	G2513L	-	-	-	10	-	1	-	100	-	10	-
	0-70	0-1.000	G2514L	G2531R	-	-	10	-	1	-	100	-	20	-
	0-140	0-2.000	G2515L	-	-	-	10	-	5	-	500	-	50	-
	0-200	0-3.000	G2516L	-	-	-	50	-	5	-	500	-	50	-
	0-400	0-6.000	G2517L	G2534R	-	-	100	-	10	-	1000	-	100	-
	0-700	0-10.000	G2535L	G2537R	G4088L	G4039L	100	100	10	10	2000	1000	200	100
0-1000	0-15.000	G2536L	G2538R	G4089L	G4040L	100	100	20	20	3000	3000	200	200	
H-Series	0-700	0-10.000	-	-	H4049L	H4071L	-	100	-	10	-	1000	-	100

Pressure Gauge 700 Bar, 10000 psi
Glycerine filled pressure gauge 1000 Bar
Material : SUS stainless steel

HG-2535L

Applications

- For measuring points with high dynamic pressure loads or vibrations
- FOR Hydraulic HI-POWER System Max. Pressure 1000 Bar , 14500 psi

Special features

- Vibration and shock resistant
- Especially sturdy design
- Scale ranges up to 0 700 bar & 0 10000 psi

Description

MODEL : HG-2535L

Nominal size in mm

FACE DIA : 2 1/2 inch (63.5 mm.)

Accuracy

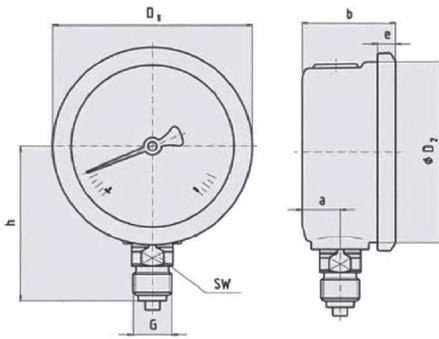
+/- 1%

Scale ranges

BAR : 0 200 bar 700 bar
 PSI : 0 5000 psi 10000 psi

MODEL : HG-2535L Dimensions in mm

Lower mount (LM)



Process connection

SUS Stainless Steel Thread
 lower mount (LM)
 CONNECTION PORT SIZE : 1/4 NPT



Permissible temperature

Ambient: -20 ... +60 °C
 Medium: +60 °C maximum

Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C):
 Max. ±0.4 %/10 K of the span

Ingress protection

IP 65 per EN 60529 / IEC 529
 Refer to ASME-B40.100, EN837-2



HI-POWER

HI-POWER®

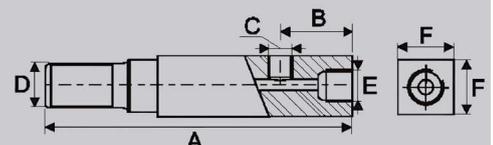
MODEL	DIMENSIONS (mm)							Weight in kg		
	a	b ± 0.5	b ₂ ± 0.5	D ₁	D ₂	e	G	h ± 1	SW	
HG-2535L	13	44	79	80	80	5.5	1/4 NPT	60	14	0.40 kgs.

MODEL	Gauge port C(NPTF)	Male end D(NPTF)	Female end E(NPTF)	DIMENSIONS (mm)					
				A	B	C	D	E	F
HGA-4	1/4	3/8	3/8	133	48	1/4NPTF	3/8NPTF	3/8NPTF	32

HI-POWER® Gauge Adaptor 700 Bar

HI-POWER HI-Quality # HGA-4 NEW
 Durable & Easy to mounting for pressure gauge
 HI-POWER Female ports for hose or coupler ,
 male screw port for pump or cylinder ,
 upper port for gauge connection.

HGA-4 NEW



▼ Shown from top to bottom: HC7206, HC7210, HC9206



- Vinyl strain relief guard on both ends of hose to improve life and durability on all models
- Maximum working pressure of 10,000 psi.

Thermo-Plastic Safety Hoses (H700-Series)

- For demanding applications, featuring a 4:1 safety factor
- Outside jacket is polyurethane, to provide maximum abrasion resistance
- Exhibits low volumetric expansion under pressure to enhance overall system efficiency.

Heavy-Duty Rubber Hoses (H900-Series)

- The most complete offering: 35 models up to 50 feet in length
- Rubber coated with two layers of steel wire braids
- Designed to comply with Material Handling Institute IJ100 hose specification
- Flexible, with little “memory”, is the best choice for long hose runs.

▼ To prevent back pressure and to increase cylinder retraction speed, when using long hoses with single-acting cylinders, the Enerpac HC7300-Series of hoses with increased internal diameter is the best choice.



Safety and Quality



To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

WARNING !

- Do not exceed 10,000 psi maximum pressure.
- Do not handle hoses which are under pressure.

More safety instructions in our 'Yellow pages'.

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▼ Hose End Couplings

1/4" NPTF	
3/8" NPTF	
A604	
A630	
AH604	
AH630	
C604	
CH604	

High-Pressure Hydraulic Hoses



Hose Oil Capacity

When using greater hose lengths, it is sometimes necessary to fill the pump reservoir after filling the hoses.

To determine the hose oil capacity, use the following:

For 0.25" internal diameter hoses:

$$\text{Capacity (in}^3\text{)} = .59 \times \text{Length (ft)}$$

For 0.38" internal diameter hoses:

$$\text{Capacity (in}^3\text{)} = 1.36 \times \text{Length (ft)}$$

For USA & Latin-America only

Internal Diameter (in)	Hose End Assemblies and Couplers *		Hose Length (ft)	700-Series Model Number Thermo-Plastic Hoses	⚖️ (lbs)	900-Series Model Number Heavy-Duty Rubber Hoses	⚖️ (lbs)			
	End one	End two								
0.25	1/4" NPTF	1/4" NPTF	6	-		H9206Q	2.6			
		3/8" NPTF	6	-		H9206S	2.6			
		A630	6	HB7206QB	2.4	HB9206QB	3.1			
		AH630	6	-		HB9206Q	2.9			
		CH604	6	HC7206Q	2.3	HC9206Q	3.0			
	3/8" NPTF	-	-	2	H7202	1.2	H9202	1.6		
				3	H7203	1.5	H9203	1.9		
				6	H7206	2.0	H9206	2.6		
				10	H7210	3.0	H9210	3.9		
				20	H7220	6.2	H9220	8.0		
				30	H7230	10.0	H9230	13.0		
				50	H7250	15.4	H9250	22.0		
				A604	-	-	-	-	-	-
		6	HA7206B				2.5	HA9206B	3.2	
		10	-		-	HA9210B	4.5			
		AH604	-		-	-	-	-	-	-
						3	-	-	HA9203	2.1
						6	HA7206	2.2	HA9206	2.9
						10	HA7210	3.2	HA9210	4.2
				6		HB7206	2.2	HB9206	2.9	
	AH630	-	-	3	HC7203B	2.2	HC9203B	2.9		
				6	HC7206B	2.8	HC9206B	3.7		
				10	HC7210B	3.9	HC9210B	5.0		
	CH604	-	-	3	HC7203	1.7	HC9203	2.2		
				6	HC7206	2.3	HC9206	3.0		
				10	HC7210	3.3	HC9210	4.3		
				20	HC7220	6.4	HC9220	8.3		
	CH604	CH604	CH604	6	HC7206C	2.4	HC9206C	3.1		
20				HC7220C	6.6	HC9220C	9.7			
50				HC7250C	15.4	HC9250C	20.0			
0.38	3/8" NPTF	3/8" NPTF	6	H7306	3.5	H9306	4.6			
			10	H7310	10	H9310	7.0			
			20	H7320	5.4	H9320	13.0			
			30	H7330	10.0	H9330	21.0			
			50	H7350	16.2	H9350	4.9			
		CH604	-	-	6	HC7306	3.4	HC9306	7.3	
					10	HC7310	5.6	HC9310	-	
					20	HC7320	11.2	-	-	

H700 H900 Series



Internal Diameter:

0.25 - 0.38 inch

Length:

2 - 50 feet

Maximum Operating Pressure:

10,000 psi



GA45GC Gauge Adaptor

Protect yourself from system overloading by simply ordering one part number for a pre-assembled gauge, adaptor block and coupler.

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Torque Wrench Hoses

Use Enerpac twin safety hoses with double-acting wrenches to ensure the integrity of your hydraulic system.

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Fittings

For additional fittings see the fitting page of the System Components section.

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Premium Hydraulic Oil

Use only genuine Enerpac Hydraulic Oil. The use of any other fluid will render your Enerpac warranty null and void.

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* For technical information on couplers see next page.