

# System

## System Components

From the simplest to the most complex hydraulic system, Enerpac's system components help you complete your design. Gauges, pressure switches, couplers and hoses are simple but necessary items for any hydraulic system, and Enerpac can provide the full range.










## Technical support

- Safety instructions
- Basic hydraulic information
- Advanced hydraulic technology
- FMS (Flexible Machining Systems) technology
- Conversion charts and hydraulic symbols

 197 ▶

# components

	▼ series	▼ page	
Pressure switches	IC, PB PSCK	188	
Digital pressure gauges	DG	189	
Pressure gauges	G	190	
Gauge accessories	GA, GS NV, FM	191	
Manifolds, couplers, hoses, tubing	A, AH/R HLS, H, T	192	
High pressure filters, hydraulic oil	FL, HF	193	
High pressure fittings	BFZ, FZ	194-196	

Shown: PSCK-8, IC-51



**Enerpac remote mounted pressure switches monitor the hydraulic system to determine any change of pressure. The signal can then be used to control the pump, or other peripheral devices.**

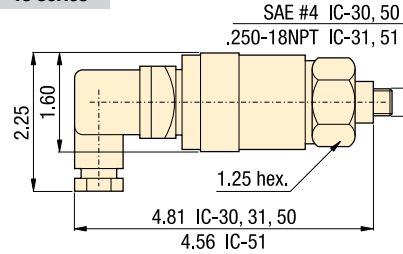
### IC-series

The IC-series electrical pressure switches provide pressure readings for monitoring and/or control of hydraulic system pressure in workholding systems.

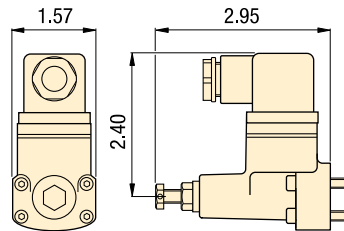
## Reliable electrical control of hydraulic power

- Compact design minimizes space requirements on fixture
- Switch is easily adjustable to meet system requirements

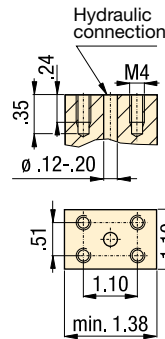
### IC series



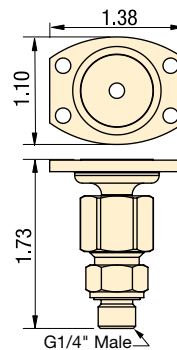
### PSCK-8, 9



### mounting dimensions



### PB-4



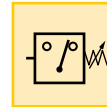
■ *Integrated in your hydraulic system, the pressure switch can be used to automate your clamping cycles.*



**Pressure: 500-7500 psi**

**Accuracy: 2%**

- (E)** Presostatos
- (F)** Pressostats
- (D)** Druckschalter



## Options

### Fittings



194 ▶

### Gauges



190 ▶

## Important

**Do not exceed the maximum pressure.**

## Product selection

Adjustable pressure range	Electrical specifications	Model number	Deadband	Switch point repeatability	Oil port	lb
psi	at 50/60 Hz		psi	% of range		
<b>▼ Electrical pressure switches</b>						
500-3500	125 VAC @ 5 A	<b>IC-30</b>	100 - 500	+ /-2	SAE #4	1.0
500-3500	125 VAC @ 5 A	<b>IC-31</b>	100 - 500	+ /-2	.250-18 NPT	1.0
3000-7500	125 VAC @ 5 A	<b>IC-50</b>	250 - 800	+ /-2	SAE #4	1.0
3000-7500	125 VAC @ 5 A	<b>IC-51</b>	250 - 800	+ /-2	.250-18 NPT	1.0
1450-5000	115 VAC @ 2 A	<b>PSCK-8</b>	250 - 800	+ /-2	Manifold mount	0.8
290-3045	115 VAC @ 2 A	<b>PSCK-9</b>	250 - 800	+ /-2	Manifold mount	0.8
-	-	<b>PB-4</b>	-	-	G 1/4"	.25

Collet-Lok® product line  
 Swing clamps  
 Work supports  
 Linear clamps  
 Power sources  
 Valves  
 Pallet components  
 System components

Pressure: 0-20,000 psi

Accuracy: ± 0.25%

Voltage: 3 VDC (battery)

- E** Manómetros digitales
- F** Manomètres digitaux
- D** Digitale Manometer

## Options

### Fittings

194 ▶



### Gauge adaptors

190 ▶



## Important

Do not exceed the maximum pressure.

Gauges can be easily installed into the hydraulic system using GA-3 gauge adaptor.

191 ▶

### Protective cover included

Fits over face of gauge for protection in harsh environments.

## Easy and precise pressure monitoring

### DGR-2

- Rated for system pressure up to 20,000 psi
- Displays in multiple units: psi, bar, mPA, kg/cm<sup>2</sup> (user selectable)
- Zero reset – ensures that gauge reads actual system pressure
- Batteries included, condition indicator on readout
- IP65 rated case design
- Shut off selectable – menu driven
- UL listed, CE and RoHS compliant

Shown: DGR-2



DGR-1B

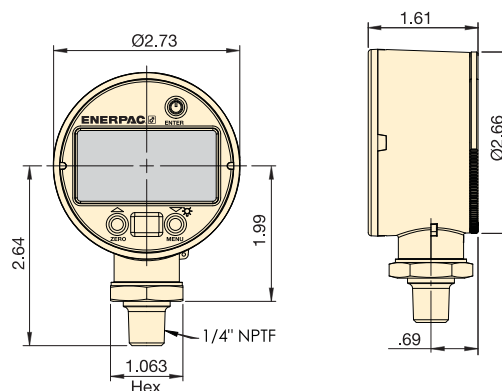
▶ Enerpac digital pressure gauges offer greater accuracy and are easier to read than conventional dial gauges, greatly enhancing your ability to monitor and control hydraulic system pressure.

### DGR-2 Remote Operation

Battery operated for additional flexibility. Includes maximum and minimum pressure capture.

### Back-lit Readout

Back-lit readout allows easy reading in less than ideal lighting.



## Product selection

Pressure rating		Model	Pressure rating		Pressure rating		Pressure rating		Pressure rating
psi			bar		MPa		Kg/cm <sup>2</sup>		lbs
Range	Resolution		Range	Resolution	Range	Resolution	Range	Resolution	
0-20,000	1	<b>DGR-2</b>	0-1380	0.1	0-140	0.01	0-1400	0.1	0.5

Shown: GS-2, G-2512L, GS-3



## Enerpac gauges provide a safe and inexpensive monitoring system for your hydraulic circuit

### Highly reliable and accurate pressure sensing

- $\pm 1.5\%$  accuracy of full scale
- All pressure sensing parts sealed and dampened by glycerine for long life
- Includes safety blow-out disk and pressure equalizing membrane to prevent overpressurization
- Copper alloy, coiled safety Bourdon tube for 1000 psi and higher
- Dual psi and bar scale readings, 2.5 inch gauge face

### Gauge accessories for easy installation

- Needle valves providing positive shut-off
- 303 stainless steel stem (NV-251)
- Snubber valves to control pressure surges between gauge and hydraulic system
- Gauge adaptors – male end screws into pump or cylinder, female port accepts hose or coupler, the third port is for gauge connection
- FM-25NG for panel mounting of 2.50 inch diameter gauges

### Product selection

Pressure gauge mounting style	Pressure range		Model number	PSI graduation		Bar graduation		A in	B in	D in	G
	psi	bar		Major psi	Minor psi	Major bar	Minor bar				
<b>▼ Pressure gauge – Lower mount</b>											
	0-100	0-7	<b>G-2509L</b>	10	2	1	0,01	3.31	1.46	2.50	1/4" NPT
	0-160	0-11	<b>G-2510L</b>	10	2	1	0,02	3.31	1.46	2.50	1/4" NPT
	0-200	0-14	<b>G-2511L</b>	50	5	1	0,02	3.31	1.46	2.50	1/4" NPT
	0-300	0-20	<b>G-2512L</b>	50	5	5	0,05	3.31	1.46	2.50	1/4" NPT
	0-600	0-40	<b>G-2513L</b>	100	10	10	1	3.31	1.46	2.50	1/4" NPT
	0-1000	0-70	<b>G-2514L</b>	100	20	10	1	3.31	1.46	2.50	1/4" NPT
	0-2000	0-140	<b>G-2515L</b>	500	50	10	2	3.31	1.46	2.50	1/4" NPT
	0-3000	0-200	<b>G-2516L</b>	500	50	50	5	3.31	1.46	2.50	1/4" NPT
	0-6000	0-400	<b>G-2517L</b>	1000	100	100	10	3.31	1.46	2.50	1/4" NPT
	0-10,000	0-700	<b>G-2535L</b>	2000	200	100	10	3.31	1.46	2.50	1/4" NPT
	0-1000	0-70	<b>G-2514SL</b>	100	20	10	1	3.66	1.23	2.50	SAE#4
	0-3000	0-200	<b>G-2516SL</b>	500	50	50	5	3.66	1.23	2.50	SAE#4
	0-6000	0-400	<b>G-2517SL</b>	1000	100	100	10	3.66	1.23	2.50	SAE#4
	0-10,000	0-700	<b>G-2535SL</b>	2000	200	100	10	3.66	1.23	2.50	SAE#4
<b>▼ Pressure gauge – Rear mount</b>											
	0-1000	0-70	<b>G-2531R</b>	100	20	10	1	2.48	1.46	2.50	1/4" NPT
	0-6000	0-400	<b>G-2534R</b>	1000	100	100	10	2.48	1.46	2.50	1/4" NPT
	0-10,000	0-700	<b>G-2537R</b>	2000	200	100	10	2.48	1.46	2.50	1/4" NPT
	0-1000	0-70	<b>G-2531SR</b>	100	20	10	1	2.46	1.23	2.50	SAE #4
	0-3000	0-200	<b>G-2533SR</b>	500	50	50	5	2.46	1.23	2.50	SAE #4
	0-6000	0-400	<b>G-2534SR</b>	1000	100	100	10	2.46	1.23	2.50	SAE #4
	0-10,000	0-700	<b>G-2537SR</b>	2000	200	100	10	2.46	1.23	2.50	SAE #4
	0-1000	0-70	<b>1531R</b>	100	20	10	1	1.99	0.98	1.50	1/8" NPT
	0-3000	0-200	<b>1533R</b>	500	100	50	10	1.99	0.98	1.50	1/8" NPT
	0-6000	0-400	<b>1534R</b>	1000	100	100	10	1.99	0.98	1.50	1/8" NPT
	0-10,000	0-700	<b>1537R</b>	2000	200	100	10	1.99	0.98	1.50	1/8" NPT

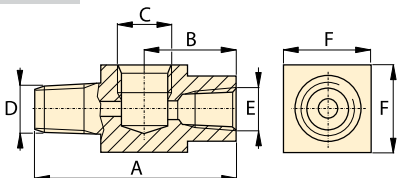
Collet-Lok® product line  
 Swing clamps  
 Work supports  
 Linear clamps  
 Power sources  
 Valves  
 Pallet components  
 System components

Pressure: 0-10,000 psi

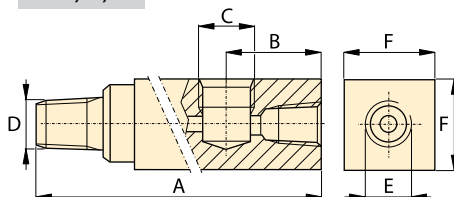
Accuracy: 1.5% /full scale

Gauge face: ø 2.5 inch

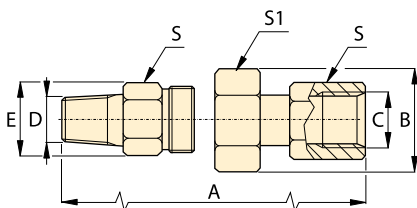
GA-1



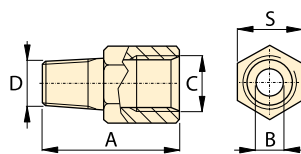
GA-2, -3, -4



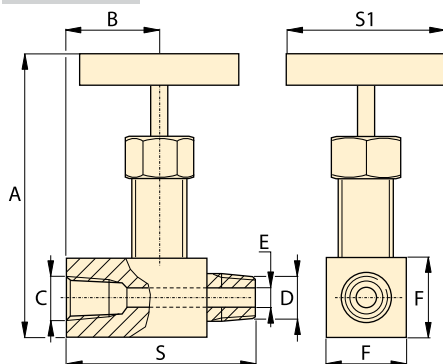
GA-918



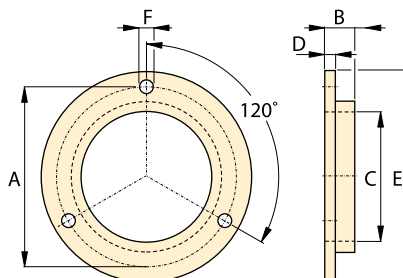
GS-2, -3



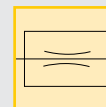
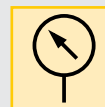
NV-251, V-91



FM-25NG



- E** Manómetros
- F** Manomètres
- D** Manometer



**Options**

Hoses and couplers

192 ▶



Digital gauges

189 ▶



Pressure switches

188 ▶



V-10 Auto Damper® valve

157 ▶



**Important**

Do not exceed maximum pressure.

Gauge snubbers or needle valves are recommended for high cycle applications.

Do not keep gauges under permanent pressure. The use of shut-off valves is recommended.

For basic system set-up information, refer to our "Yellow Pages" section.

202 ▶

**Product dimensions** in inches [ ]

Gauge port NPT	Max. pressure psi	Model number	Dimensions							
			A	B	C	D	E	F	S	S1
<b>▼ Gauge adaptors</b>										
1/2"	10,000	<b>GA-1</b>	2.81	1.24	1/2"NPT	3/8"NPT	3/8"NPT	1.25	-	-
1/2"	10,000	<b>GA-2</b>	6.10	1.38	1/2"NPT	3/8"NPT	3/8"NPT	1.25	-	-
1/4"	10,000	<b>GA-3</b>	5.25	1.38	1/4"NPT	3/8"NPT	3/8"NPT	1.25	-	-
1/2"	10,000	<b>GA-4</b>	4.38	1.38	1/2"NPT	1/4"NPT	3/8"NPT	1.25	-	-
<b>▼ Swivel gauge adaptor</b>										
1/2"	10,000	<b>GA-918</b>	2.25	1.72	1/2"NPT	1/2"NPT	1.30	-	1.13	1.50
<b>▼ Gauge shut-off valves</b>										
1/4"	10,000	<b>NV-251</b>	2.25	1.14	1/4"NPT	1/4"NPT	.17	.75	2.25	2.50
1/2"	10,000	<b>V-91</b>	3.50	1.25	1/2"NPT	1/2"NPT	.19	1.25	2.50	2.50
<b>▼ Gauge snubber valves</b>										
1/4"	5000	<b>GS-2</b>	1.63	.018	1/4"NPT	SAE #4	-	-	.75	-
1/4"	5000	<b>GS-3</b>	1.63	.018	1/4"NPT	G1/4"	-	-	.75	-
<b>▼ Flange mounting for panel mounting of G series gauges</b>										
-	-	<b>FM-25NG</b>	2.95	.17	2.51	.07	3.35	.14	-	-

# Manifolds, couplers, hoses, tubing

Shown: HLS, HF, AH, AR, FL, T, A-series



**Use genuine Enerpac manifolds, couplers, hoses and tubings to connect your workholding cylinders or fixtures to the hydraulic power source.**

## A series, Manifolds

For multiple hydraulic line connections at one central location directing oil to or from a pressure source.

## AH/AR series, Couplers

Quick disconnect low leakage couplers for easy connection of hydraulic circuits.

## HLS series, Hoses

High pressure hydraulic hoses, featuring a heavy-duty protective plastic coating.

## T-series, Tubing

High pressure steel tubing, available in 5 ft. lengths.

## Manifolds

- Easy to connect
- Mounting holes on all models

## Couplers

- Spee-D-Coupler® design allows cylinder to be connected and disconnected in seconds
- For more safety: couplers cannot be connected or disconnected while under hydraulic pressure

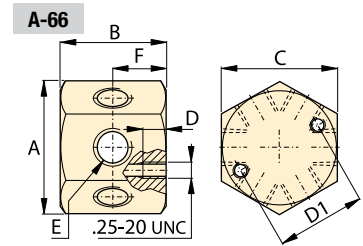
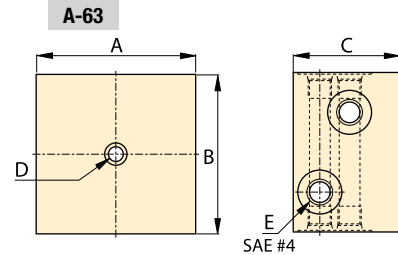
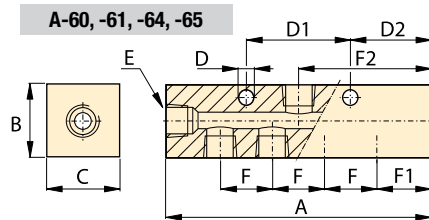
## Hydraulic hoses and tubings

- Heavy-duty coating for abrasion resistance
- Resistant against mineral based hydraulic oil as well as water glycols
- High pressure steel tubing for permanent installations

## Important

**Do not exceed the maximum pressure.**

**Inspect hoses and tubing frequently and replace as required.**



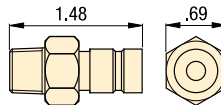
## Manifolds dimensions in inches [ ]

Number of ports	Model number	A	B	C	D	D1	D2	E	F	F1	F2	Weight lbs
2 x 4	A-63	3.00	3.00	2.00	.25	-	-	SAE #4	-	-	-	2.0
5	A-60	3.50	1.25	1.25	.28	1.50	1.00	SAE #4	1.50	1.00	1.75	1.0
7	A-61	6.50	1.25	1.25	.28	1.50	1.25	SAE #4	1.00	1.25	3.25	1.4
7	A-64	7.00	1.25	1.25	.25	3.00	1.25	.375-18 NPT	1.50	1.25	3.50	3.3
7	A-65	14.5	1.25	1.25	.25	8.00	1.25	.375-18 NPT	4.00	1.25	7.25	6.1
6	A-66	2.30	1.63	2.00	.52	1.50	-	.375-18 NPT	-	-	-	1.8

## Couplers

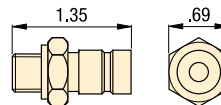
### AH-650

Male coupler half  
.250-18 NPT



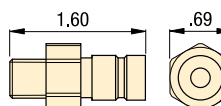
### AH-652

Male coupler half  
G1/4" BSPP



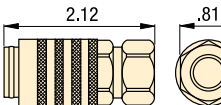
### AH-654

Male coupler half  
SAE #4 .437-20 UNF



### AR-650

Female coupler half  
.250-18 NPT



## Hoses

Length ft	Model number	Internal diameter in	Maximum pressure psi
<b>▼ 1/4", 37° flare</b>			
1	HLS-512	.19	5000
2	HLS-524	.19	5000
3	HLS-536	.19	5000
4	HLS-548	.19	5000
5	HLS-560	.19	5000
10	HLS-5120	.19	5000
<b>▼ 3/8" NPT</b>			
3	H-9203	.25	10,000
6	H-9206	.25	10,000
10	H-9210	.25	10,000

## Tubing

Length ft	Model number	Internal diameter in	External diameter in	Max. pressure psi
5	T-2560	.152	.25	5000

## Options

### Fittings

194 ▶



Collet-Lok® product line  
Swing clamps  
Work supports  
Linear clamps  
Power sources  
Valves  
Pallet components  
System components

## High-pressure filters

- Keep your hydraulic system clean
- Pleated stainless steel wire mesh screen construction provides large filter area in a compact size
- Rated for full system pressure up to 5000 psi
- Bi-directional design allows filtration of oil in either flow direction
- Two piece body construction for easy replacement of filter elements
- High flow rates are obtainable with a minimum pressure drop
- Threaded port connections on each end simplify installation

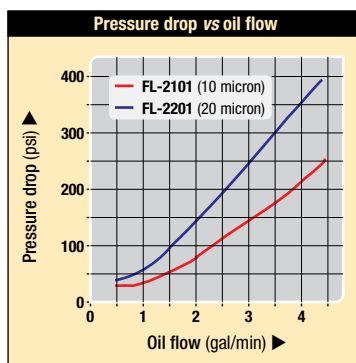
## Hydraulic oil

- Ensures effective lubricity
- Protects essential parts

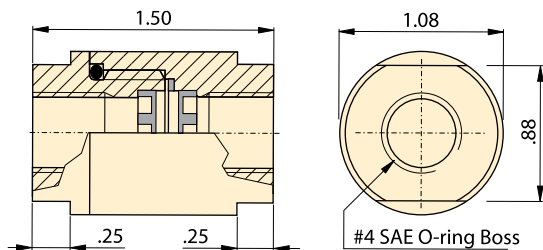
## Filtration

**20 micron filter** provides the longest service life before element replacement

**10 micron filter** recommended for more sensitive hydraulic components



### FL series



## High in line pressure filters

Model number	Filtration		Filter element set	lbs
	Nominal	Absolute		
FL-2101	10	25	FL-2101K	.4
FL-2201	20	40	FL-2201K	.4

## Hydraulic oil

Contents	Model number	Specifications	
		genuine Enerpac hydraulic oil	
Gal			
.25	HF-100	0 °F	<12,000 S.U.S
1	HF-101	100 °F	150/165 S.U.S
5	HF-102	210 °F	42/45 S.U.S
55	HF-104	Flash, C.O.C.	400°F
		Pour point	-25°F
		Aniline point	210/220 °F

Note: Viscosity index: 100 min

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- E** Mangueras, Filtros Acoplamientos, Aceite
- F** Flexibles, Filtres Raccords, Huile
- D** Schläuche, Filter Kupplungen, Öl

## High-pressure filters

Compact in line high pressure filters prevent chips and debris that have entered the hydraulic fluid system from damaging hydraulic system components.

## Hydraulic oil

Use only genuine Enerpac hydraulic oil to guarantee optimal performance and long life of your hydraulic equipment.

## Options

### Fittings

 194



## Important

**Do not exceed the maximum pressure.**

Hydraulic power is distributed by manifolds and transported by hoses and tubing.





Shown: FZ-2052, FZ-2054, FZ-2023



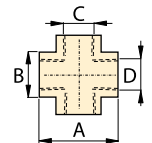
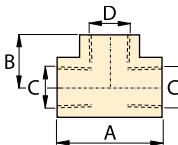
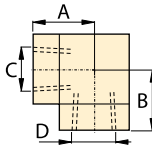
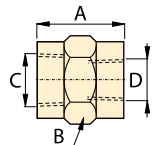
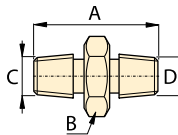
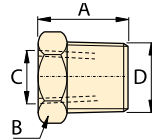
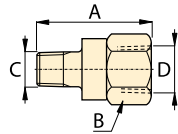
**Fitting** are used to connect all cylinders, components, power sources, tubes, gauges and hoses in a hydraulic system. Enerpac fittings provide flexible, safe and leak-free connections.

## Proper connection for hydraulic components

- Male and female NPT, SAE, BSPP threaded fittings in common sizes allow easy connection of all components.
- BFZ and FZ-1000 models are 10,000 psi maximum pressure
- FZ-2000 models are 5000 psi maximum pressure

## Product selection

From	To	Max. pressure psi	Model number	Dimensions in inches			
				A	B	C	D
<b>▼ Adapters</b>							
<b>Female Male</b>							
1/4" NPT	1/8" NPT	10,000	<b>FZ-1642</b>	1.21	3/4"	1/8"-27 NPT	1/4"-18 NPT
3/8" NPT	1/4" NPT	10,000	<b>FZ-1055</b>	1.44	7/8"	1/4"-18 NPT	3/8"-18 NPT
1/2" NPT	1/4" NPT	10,000	<b>FZ-1633</b>	1.69	1-1/8"	1/4"-18 NPT	1/2"-14 NPT
1/2" NPT	3/8" NPT	10,000	<b>FZ-1634</b>	1.69	1-1/8"	3/8"-18 NPT	1/2"-14 NPT
<b>▼ Reducers</b>							
<b>Female Male</b>							
1/4" NPT	3/8" NPT	10,000	<b>FZ-1630</b>	.86	3/4"	1/4"-18 NPT	3/8"-18 NPT
1/4" NPT	1/2" NPT	10,000	<b>FZ-1661</b>	1.11	7/8"	1/4"-18 NPT	1/2"-14 NPT
SAE #6	SAE #8	5000	<b>FZ-2029</b>	1.38	1-1/16"	9/16"-18	3/4"-16
<b>▼ NPT Male Nipples</b>							
1/4" NPT	1/4" NPT	10,000	<b>FZ-1608</b>	1.45	5/8"	1/4"-18 NPT	1/4"-18 NPT
3/8" NPT	3/8" NPT	10,000	<b>FZ-1617</b>	1.45	3/4"	3/8"-18 NPT	3/8"-18 NPT
3/8" NPT	3/8" NPT	10,000	<b>FZ-1619</b>	2.00	3/4"	3/8"-18 NPT	3/8"-18 NPT
3/8" NPT	G1/4"	10,000	<b>BFZ-305</b>	1.42	3/4"	3/8"-18 NPT	G1/4"-19
<b>▼ NPT Female Connectors</b>							
1/4" NPT	1/4" NPT	10,000	<b>FZ-1605</b>	1.13	3/4"	1/4"-18 NPT	1/4"-18 NPT
3/8" NPT	1/4" NPT	10,000	<b>FZ-1615</b>	1.13	7/8"	3/8"-18 NPT	1/4"-18 NPT
3/8" NPT	3/8" NPT	10,000	<b>FZ-1614</b>	1.13	7/8"	3/8"-18 NPT	3/8"-18 NPT
1/2" NPT	3/8" NPT	10,000	<b>FZ-1625</b>	1.50	1-1/8"	1/2"-14 NPT	3/8"-18 NPT
<b>▼ NPT Elbows</b>							
1/4" NPT	1/4" NPT	10,000	<b>FZ-1638</b>	.88	3/4"	1/4"-18 NPT	1/4"-18 NPT
3/8" NPT	3/8" NPT	10,000	<b>FZ-1610</b>	1.02	7/8"	3/8"-18 NPT	3/8"-18 NPT
<b>▼ NPT Tee</b>							
1/4" NPT	1/4" NPT	10,000	<b>FZ-1637</b>	1.76	3/4"	1/4"-18 NPT	1/4"-18 NPT
3/8" NPT	3/8" NPT	10,000	<b>FZ-1612</b>	2.04	7/8"	3/8"-18 NPT	3/8"-18 NPT
<b>▼ NPT Cross</b>							
3/8" NPT	3/8" NPT	10,000	<b>FZ-1613</b>	2.04	7/8"	3/8"-18 NPT	3/8"-18 NPT



Multiple hydraulic line connections are easily installed with Enerpac fittings and manifolds.



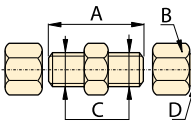
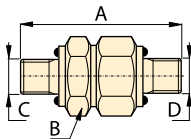
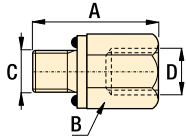
Collet-Lok® product line  
 Swing clamps  
 Work supports  
 Linear clamps  
 Power sources  
 Valves  
 Pallet components  
 System components

 **Product selection**

From	To	Max. pressure psi	Model number	Dimensions in inches			
				A	B	C	D

▼ **Adapters**

Male	Female	Max. pressure psi	Model number	A	B	C	D
1/8" NPT	SAE #4	5000	FZ-2075	1.21	11/16"	1/8"-27 NPT	1/4"-18 NPT
1/4" NPT	SAE #4	5000	FZ-2042	1.31	11/16"	1/4"-18 NPT	7/16"-20
1/4" NPT	G1/4"	10,000	BFZ-16411	1.38	3/4"	1/4"-18 NPT	G1/4"
SAE #4	1/8" NPT	5000	FZ-2008	1.00	9/16"	7/16"-20	1/8"-27 NPT
SAE #4	1/4" NPT	5000	FZ-2007	1.16	3/4"	7/16"-20	1/4"-18 NPT
SAE #2	SAE #4	5000	FZ-2022	1.03	11/16"	5/16"-24	7/16"-20
SAE #6	1/4" NPT	5000	FZ-2056	1.16	3/4"	9/16"-18	1/4"-18 NPT
SAE #8	1/4" NPT	5000	FZ-2067	1.13	7/8"	3/4"-16	1/4"-18 NPT
SAE #8	3/8" NPT	5000	FZ-2069	1.28	7/8"	3/4"-16	3/8"-18 NPT
G 1/8"	1/8" NPT	5000	FZ-2055	.97	5/8"	G 1/8"-28	1/8"-27 NPT
G 1/8"	1/4" NPT	5000	FZ-2060	1.28	3/4"	G 1/8"-28	1/4"-18 NPT
G 1/8"	#4 SAE	5000	FZ-2066	1.00	11/16"	G 1/8"-28	7/16"-20
G 1/4"	1/4" NPT	5000	FZ-2023	1.28	3/4"	G 1/4"-19	1/4"-18 NPT
G 1/4"	#4 SAE	5000	FZ-2065	1.11	3/4"	G 1/4"-19	7/16"-20



▼ **Straight union**

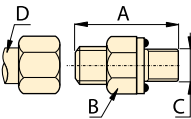
SAE #4	SAE #4	5000	FZ-2005	1.27	9/16"	7/16"-20	7/16"-20
SAE #6	SAE #6	5000	FZ-2028	1.41	11/16"	9/16"-18	9/16"-18
SAE #8	SAE #8	5000	FZ-2040	1.56	7/8"	3/4"-16	3/4"-16

▼ **Straight union to tube ends**

ø.25	ø.25	5000	FZ-2033*	1.38	1/2"	7/16"-20	ø.25
ø.25	ø.25	5000	FZ-2013**	2.03	1/2"	7/16"-20	ø.25

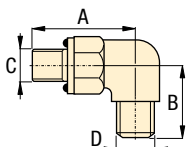
▼ **Adaptors to tube end**

Male	Tube size	Max. pressure psi	Model number	A	B	C	D
1/8" NPT	ø.25	5000	R-1054*	1.22	1/2"	1/8"-27 NPT	ø.25
1/4" NPT	ø.25	5000	FZ-2020*	1.42	9/16"	1/4"-18 NPT	ø.25
1/4" NPT	ø.375	5000	FZ-2072*	1.43	5/8"	1/4"-18 NPT	ø.375
1/4" NPT	ø.25	5000	FZ-2012**	1.32	9/16"	1/4"-18 NPT	ø.25
3/8" NPT	ø.25	5000	FZ-2061*	1.44	3/4"	3/8"-18 NPT	ø.25
3/8" NPT	ø.375	5000	FZ-2068*	1.44	3/4"	3/8"-18 NPT	ø.375
SAE #2	ø.25	5000	FZ-2025*	1.02	9/16"	5/16"-24	ø.25
SAE #4	ø.25	5000	FZ-2019*	1.23	9/16"	7/16"-20	ø.25
SAE #4	ø.25	5000	FZ-2001**	1.13	9/16"	7/16"-20	ø.25
SAE #6	ø.25	5000	FZ-2059*	1.28	11/16"	9/16"-18	ø.25
SAE #8	ø.25	5000	FZ-2039*	1.38	7/8"	3/4"-16	ø.25
SAE #8	ø.375	5000	FZ-2070*	1.38	7/8"	3/4"-16	ø.375
G1/8"	ø.25	5000	FZ-2053*	1.18	14 mm	G1/8"-28	ø.25
G1/4"	ø.25	5000	FZ-2054*	1.37	19 mm	G1/4"-19	ø.25
G1/4"	ø.375	5000	FZ-2064*	1.38	19 mm	G1/4"-19	ø.375






▼ **Elbow to tube end**

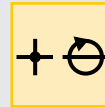
Male	Tube size	Max. pressure psi	Model number	A	B	C	D
1/8" NPT	ø.25	5000	FZ-2074*	0.78	7/16"	1/8"-27 NPT	ø.25
1/4" NPT	ø.25	5000	FZ-2073*	1.09	9/16"	1/4"-18 NPT	ø.25
1/4" NPT	ø.25	5000	FZ-2076**	1.09	9/16"	1/4"-18 NPT	ø.25
1/4" NPT	ø.375	5000	FZ-2081*	1.09	9/16"	1/4"-18 NPT	ø.375
3/8" NPT	ø.25	5000	FZ-2082*	1.22	3/4"	3/8"-18 NPT	ø.25
3/8" NPT	ø.375	5000	FZ-2083*	1.22	3/4"	3/8"-18 NPT	ø.375
SAE #2	ø.25	5000	FZ-2024*	0.92	7/16"	5/16"-24	ø.25
SAE #4	ø.25	5000	FZ-2035*	1.03	9/16"	7/16"-20	ø.25
SAE #4	ø.25	5000	FZ-2002**	1.03	9/16"	7/16"-20	ø.25
SAE #8	ø.375	5000	FZ-2071*	1.45	7/8"	3/4"-16	ø.375
G1/8"	ø.25	5000	FZ-2051*	1.03	14mm	G1/8"-28	ø.25
G1/4"	ø.25	5000	FZ-2052*	1.25	19mm	G1/4"-19	ø.25
ø.25	ø.25	5000	FZ-2014**	0.89	9/16"	ø.25	ø.25



\*Flared  
\*\*Flareless


Pressure: 0-10,000 psi  
Threads: NPT, SAE, BSPP  
For tubing: .25 in/.375 in/8mm

-  Acoplamiento
-  Raccords
-  Verschraubungen




 **Options**

**Gauges**



190 ▶

**Manifolds, couplers, hoses, tubing**



192 ▶

 **Important**

**Do not exceed the maximum pressure.**

**Use fittings and tubing in high cycle applications and areas having excessive heat or weld splatter.**

**To seal NPT threads use anaerobic thread sealers or Teflon paste. Apply Teflon tape one thread from the end of the fitting, to prevent it from winding up in the hydraulic system.**

High pressure hydraulic fittings allow connection of many components with minimum effort.

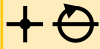


Pressure: 0-5000 psi

Threads: NPT, SAE, BSPP

For tubing: .25 in/.375 in/8mm

- E** Acoplamiento
- F** Raccords
- D** Verschraubungen



## Options

Manifolds, couplers, hoses, tubing

192 ▶



## Important

**Do not exceed maximum pressure.**

**Use fittings and tubing in high cycle applications and areas having excessive heat or weld splatter.**

High pressure fittings enable the design of hydraulic systems to meet a variety of applications.



99-080

## Product selection

From	To	Max. pressure psi	Model number	Dimensions in inches			
				A	B	C	D
<b>▼ Swivel banjo BSPP to tube</b>							
<b>Male Tube size</b>							
G1/4"	ø 8mm	10,000	<b>BFZ-307**</b>	1.14	19mm	G1/4"-19	ø 8mm
<b>▼ Swivel T-banjo BSPP to tube</b>							
<b>Male Tube size</b>							
G 1/4"	ø 8mm	10,000	<b>BFZ-309**</b>	1.14	19mm	G 1/4"-19	ø 8mm
<b>▼ Union tee</b>							
ø.25	ø.25	5000	<b>FZ-2021*</b>	1.78	9/16"	7/16"-20	ø.25
ø.25	ø.25	5000	<b>FZ-2015**</b>	1.78	9/16"	7/16"-20	ø.25
<b>▼ Branch tee</b>							
<b>Male Tube size</b>							
SAE #4	ø.25	5000	<b>FZ-2036*</b>	1.78	9/16"	7/16"-20	ø.25
SAE #4	ø.25	5000	<b>FZ-2004**</b>	1.78	9/16"	7/16"-20	ø.25
<b>▼ Union cross</b>							
ø.25	ø.25	5000	<b>FZ-2034*</b>	1.78	9/16"	7/16"-20	ø.25
ø.25	ø.25	5000	<b>FZ-2016**</b>	1.78	9/16"	7/16"-20	ø.25
<b>▼ SAE Plug</b>							
SAE #4		5000	<b>FZ-2006</b>	.11	.56	7/16"-20	
SAE #6		5000	<b>FZ-2003</b>	.19	.69	9/16"-18	
<b>▼ SAE Hex Plug</b>							
SAE #8		5000	<b>FZ-2041</b>	.80	7/8"	3/4"-16	
<b>▼ Nut and Sleeve for Tubing</b>							
ø.25		5000	<b>FZ-2037*</b>	.62	9/16"	37°	ø.25
<b>▼ Cap for Tubing</b>							
ø.25		5000	<b>FZ-2038*</b>	.62	9/16"	37°	ø.25
ø.25		5000	<b>FZ-2017**</b>	.60	9/16"		ø.25
ø.375		5000	<b>FZ-2011*</b>	.73	11/16"	37°	ø.375

\*Flared

\*\*Flareless

