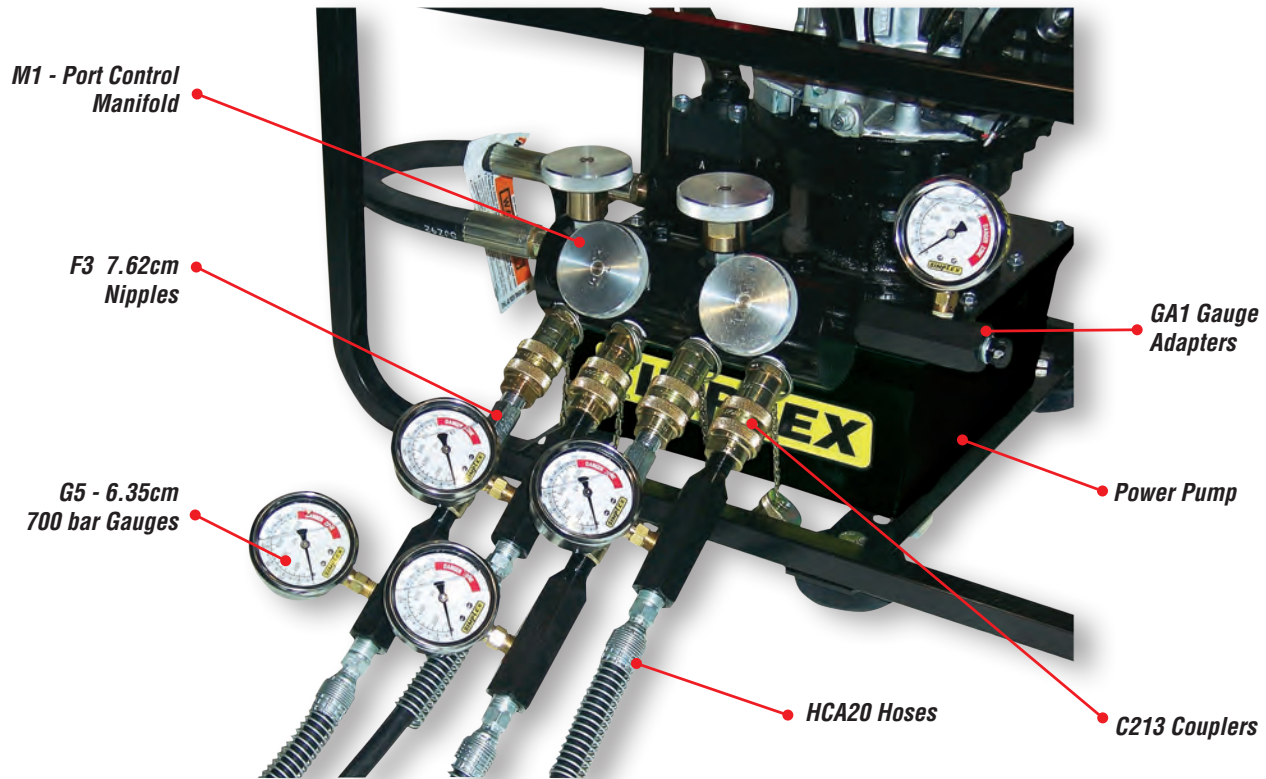


SYSTEM ACCESSORIES





Pump with 4 Port Manifold Shown

PRODUCT LINE OVERVIEW

► **Increase Your System Visibility**

Monitor your system pressure and load by incorporating SIMPLEX liquid filled gauges in your hydraulic circuit. Also, SIMPLEX offers digital gauges to meet any demanding requirement for accuracy.

► **Increase Your System Control**

Take advantage of the wide selection of configured inline system valves to maximize individual tool speed for safe and efficient control.

► **Load Holding**

Add additional backup safety with the SIMPLEX V10E or V10EC load holding valve at each cylinder. Whether you need to throttle down the load or free flow in one direction, these compact and highly effective valves offer the flexibility and additional control needed at any jobsite.

► **Flexibility**

Select from a large assortment of SIMPLEX forged 700 bars fittings to customize your plumbing configurations to your individual requirements.

► **Easy Setup**

Simplify transport and setup of system arrangement with SIMPLEX 700 bars hydraulic hoses configured with quick disconnect couplers.

2, 3 And 4 Way Control Valves



The 2 and 3 way valves are used to operate single acting cylinders and tools. The 4 way version is used to operate double acting cylinders or tools.

In-Line Valves



Maximize the control and safety factor of your system arrangement with our in-line valves.

Manifolds



Manifolds are the central component of your system arrangement. Precision control needle valves and 3/8" ports are standard. Manifolds can be connected together to accommodate any size system.

Couplers / Fittings



These couplers & fittings provide maximum fluid flow and are plated to resist corrosion. The no-spill style coupler is utilized where safety and environmental needs are a demand.

Gauges



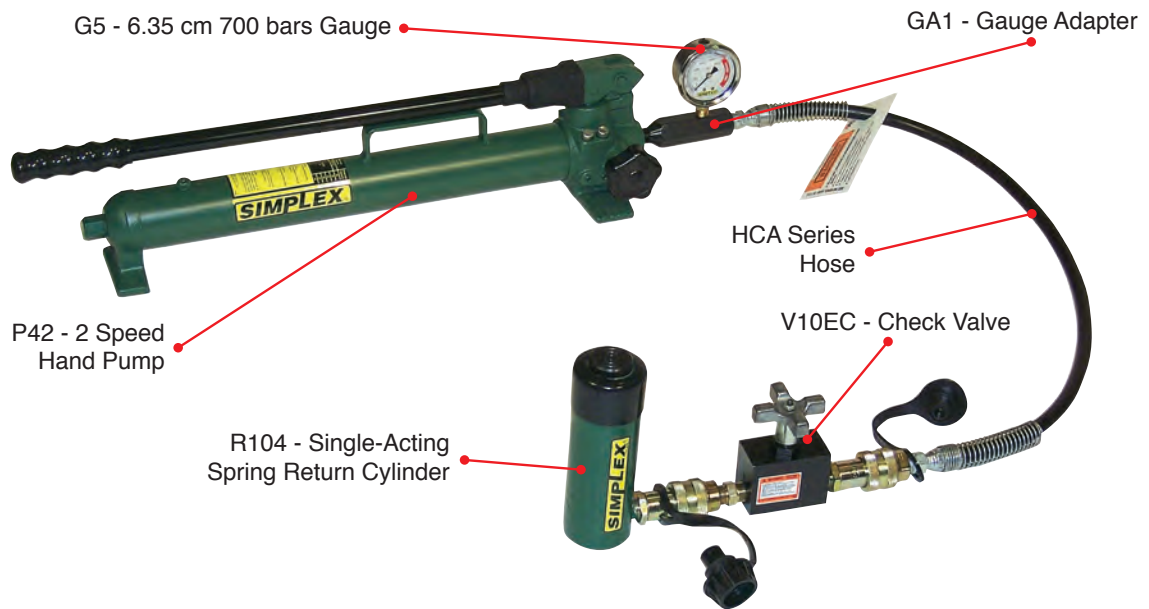
These analog and digital gauges give the operator a window to the system. Select from PSI or tonnage readings to meet your specific requirements. Simplex high pressure gauges offer reliability along with durability.

Hoses

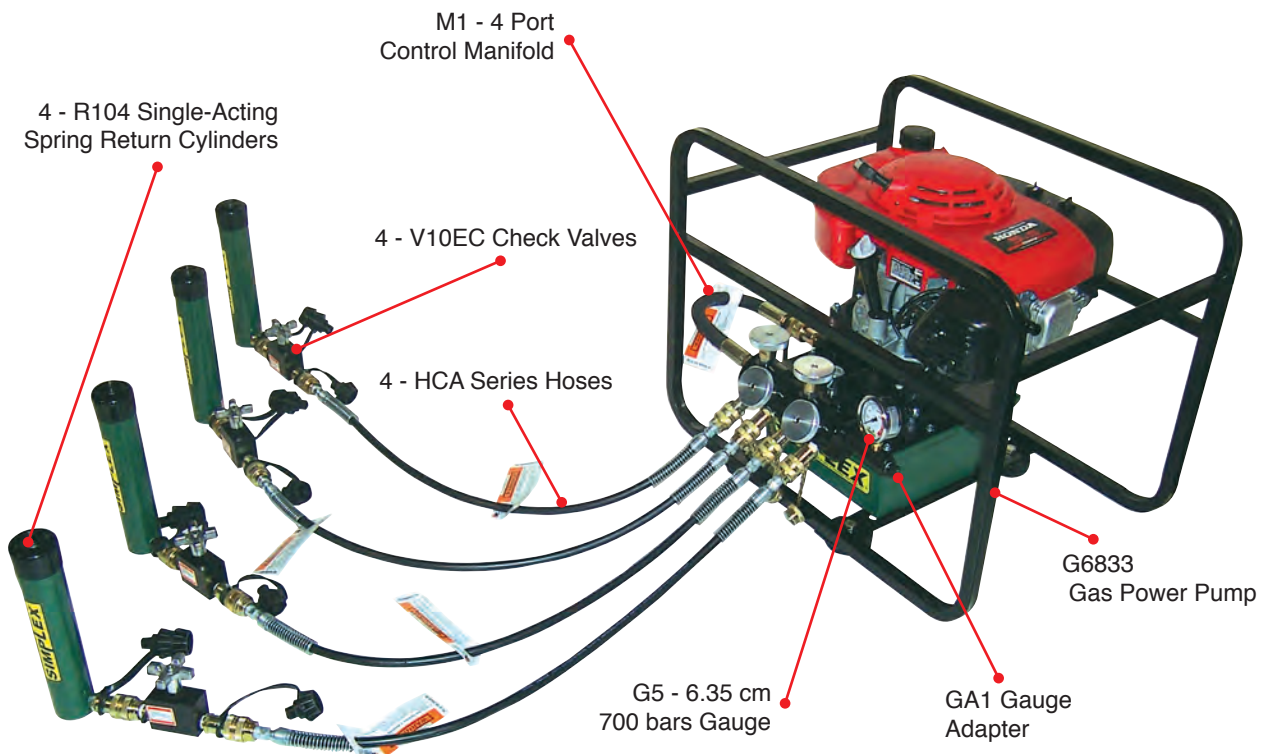



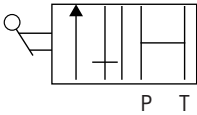
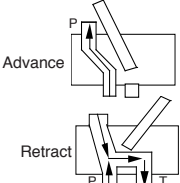

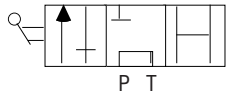
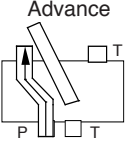

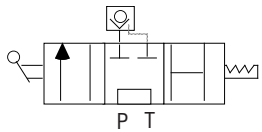
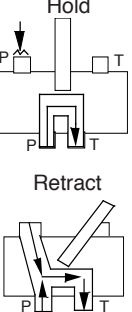

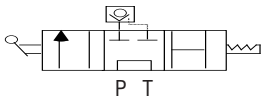
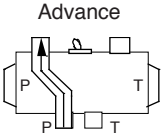

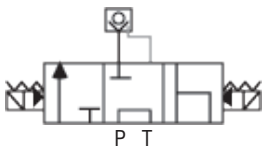
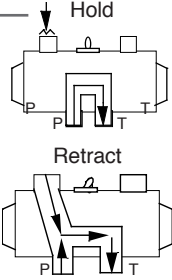

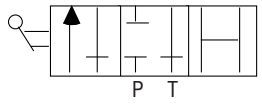
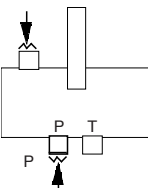

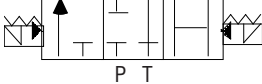
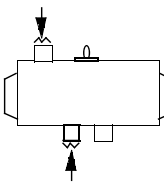
HD rubber and non-conductive thermo-plastic style hoses are ideal for demanding and continuous operation with up to a 4:1 safety factor.


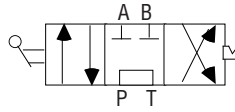
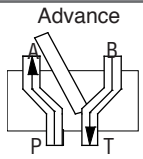
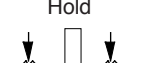
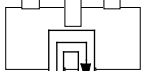
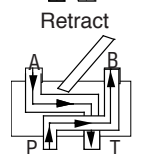

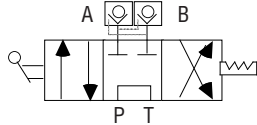
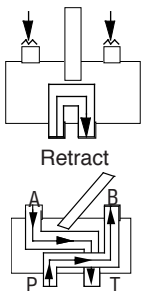

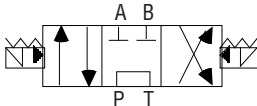
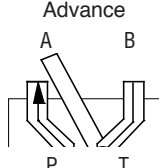

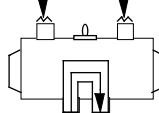

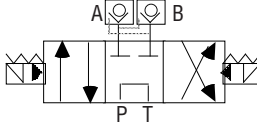
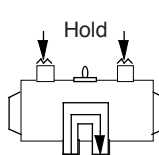
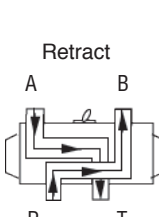

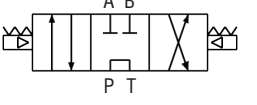
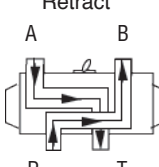

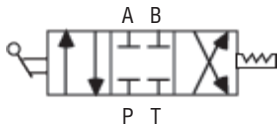
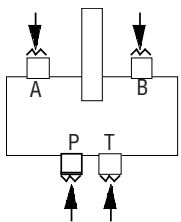

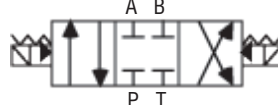
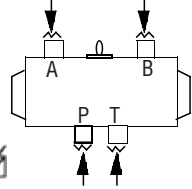
Detailed example of a 1 point lift, manually driven with check valve


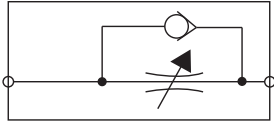

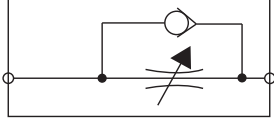

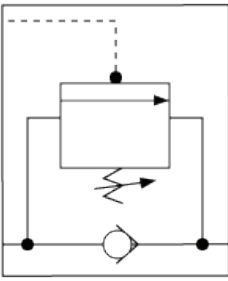

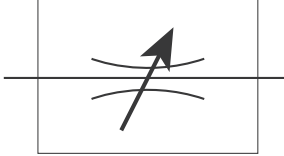

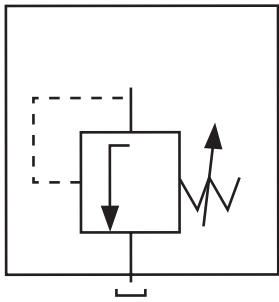

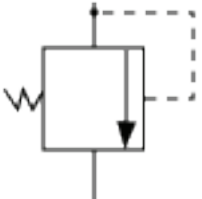



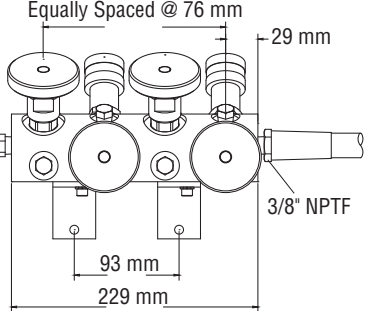

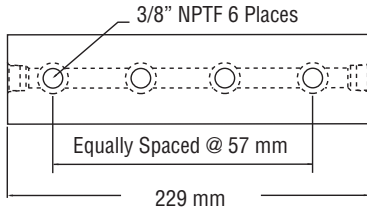

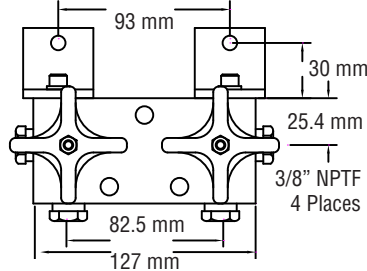

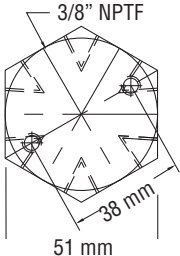

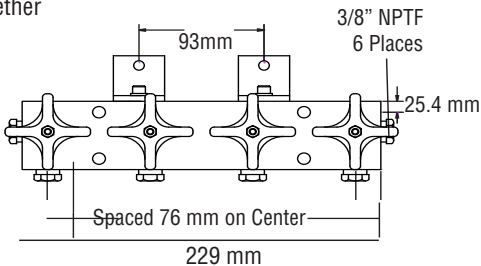
Detailed example of a 4 point lift, gas driven with M1 manifold & check valves



Model	Description	Hydraulic Schematic	Functional Flow Schematic
	Pump mounted, 2 position, 2 way valve is ideal for pressing, punching, crimping, staking or pulling applications when load holding is not needed.		
	Pump mounted, 3 position, 3 way valve is commonly used with single-acting cylinders for lifting applications or production work. The center position holds the load with the pump motor on or off.		
	Pump mounted, 3 position, 3 way valve is the same as VP3, but with a built in pilot check valve. The VPL3 provides positive load holding in the center position, and will not allow pressure drop while shifting. Recommended for prestressing, post tensioning and precision holding applications.		
	Pump mounted, electric solenoid actuated, 3 position, 3 way valve with remote pendant switch allows remote operation of system directional control. For 230V, Use Model Number VPS32		
	Pump mounted, electric solenoid actuated, 3 position, 3 way valve with remote pendant switch is the same as the VPS31, but with a built in pilot operated check valve. The VPSL31 provides positive load holding in the center position, and will not allow pressure drop while shifting. For 230V, Use Model Number VPSL32		
Remote Mounted Valves - For Single Acting Cylinders & Tools			
	VRM3 is remote mounted, manual valve, 3 position, 3 way tandem center. (reference VP3 schematic) VR3CC is remote mounted, manual valve, 3 position, 3 way closed center.		
	VRS31 is remote mounted, solenoid valve, 3 position, 3 way tandem center. (reference VPS31 schematic) For 230V, Use Model Number VRS32 VRS31CC is remote mounted, solenoid valve, 3 position, 3 way closed center. For 230V, Use Model Number VRS32CC		




Model	Description	Hydraulic Schematic	Functional Flow Schematic
	VP4 Pump mounted, 3 position, 4 way valve is used with double-acting cylinders and tools. This valve controls direction of oil for advancing, holding & retracting. The center position holds the load with the pump motor running or off.		 Advance  Hold  Retract 
	VPL4 Pump mounted, 3 position, 4 way valve is the same as VP4, but with a built in pilot check valve. The VPL4 provides positive load holding in the center position, and will not allow pressure drop while shifting. Recommended for prestressing and precision holding applications.		
	VPS41 Pump mounted, electric solenoid actuated, 3 position, 4 way valve with remote pendant switch. Same as VP4, but allows remote operation of directional control. <i>For 230V, Use Model Number VPS42</i>		 Advance  Retract 
	VPSL41 Pump mounted, electric solenoid actuated, 3 position, 4 way valve with remote pendant switch functions the same as VPS41, but with a built in pilot operated check valve. The VPSL41 provides positive load holding in the center position, and will not allow pressure drop while shifting. <i>For 230V, Use Model Number VPSL42</i>		 Retract 
	VPA4 Pump mounted, air solenoid actuated, 3 position, 4 way valve with remote pendant switch. Same as VP4, but allows remote operation of directional control.		
Remote Mounted Valves - For Double Acting Cylinders & Tools			
	VR4 & VR4CC VR4 is remote mounted, manual valve, 3 position, 4 way tandem center. (reference VP4 schematic) VR4CC is remote mounted, manual valve, 3 position, 4 way closed center.		
	VRS41 & VRS41CC VRS41 is remote mounted, solenoid valve, 3 position, 4 way tandem center. (reference VPS41 schematic) <i>For 230V, Use Model Number VRS42</i> VRS41CC is remote mounted, solenoid valve, 3 position, 4 way closed center. <i>For 230V, Use Model Number VRS42CC</i>		

Model	Description	Hydraulic Schematic
	<p>Check Valve automatically locks load in raised position as plunger is being extended. Protects against dropping the load due to pressure loss. Required for multiple cylinder lifting from one source. (Includes F1 - 3/8" porting Hex Nipple).</p>	
	<p>Check Valve is a V10E with polarized high flow couplers for direct, rapid mounting to cylinder couplers.</p>	
	<p>Over Center Check Valve can be mounted at the cylinder to hold the load in the event of system failure. Unlike other piloted check valves, the V2 provides controlled retraction without "chatter". Note: When used in multiple cylinder systems, contact Simplex for minimum pump requirements.</p>	
	<p>Shut-Off Valve is a needle-type valve for sustained load-holding and flow control. Use for positive shut-off or throttling. (3/8" porting NPTF)</p>	
	<p>In-line Adjustable Relief Valve is for in-line mounting into hydraulic systems. Accurately controls maximum pressure from 700 bars. Turn handle until gauge indicates desired working pressure - tighten lock nut. Valve automatically opens and bypasses excess flow from system when preset pressure is reached. (Includes tubing & fittings).</p>	
	<p>Safety Relief Valve threads into top port of double-acting cylinders, or inline on hydraulic systems, for protection against over pressurizing. Pressure rating is set to 724.12 bars. (3/8" porting NPTF) 3/8"m - 3/8" f</p>	

Model	Description	Technical Specifications
	<p>Pump Mounted 4 Cylinder Control Manifold Kit: The M1 control manifold incorporates (4) station shut-off/flow control valves, 45.72 cm hose, gauge port, (4) high flow couplers and pump mounting hardware. Two or more manifolds can be coupled together for larger systems. For replacement hose order #89521</p>	
	<p>Pump Mounted 4 Cylinder Manifold Kit: The M2 manifold includes 45.72 cm hose and pump mounting hardware. Two or more manifolds can be coupled together for larger systems. For replacement hose order #89521</p>	
	<p>Pump Mounted 2 Cylinder Control Manifold Kit: The M2A control manifold incorporates (2) station shut-off/flow control valves. Two or more manifolds can be coupled together for larger systems.</p>	
	<p>6 Port Inline Hex Manifold: The M3 inline hex manifold features (6) - 3/8" NPTF threaded ports & mounting holes.</p>	
	<p>Pump Mounted 4 Cylinder Control Manifold Kit: The M4A control manifold incorporates (4) station shut-off/flow control valves. Two or more manifolds can be coupled together for larger systems.</p>	




1/4" NPTF HIGH - FLOW COUPLERS

For use on smaller tools, pumps and any tool with 1/4" threads. These couplers are plated to resist corrosion. Cylinder Half Couplers have male 1/4" NPTF threads; Hose Half Couplers have female 1/4" NPTF threads.

Model	Description
 CT201	Ram Coupler Half with Dust Cap
 CT202	Hose Coupler Half with Dust Cap
 CT200	Ram & Hose Coupler Set with 2 Dust Caps





1/4" NPTF FLUSH FACE / NO SPILL COUPLERS - *FOR BOLTING PRODUCTS*

Unique flush face design features push to connect operation with an auto lock sleeve on the CT211, and non-spill "dry" disconnect operation. Easy cleaning minimizes system contamination. This coupler should be used wherever oil spillage constitutes a safety or environmental hazard. Couplers have 1/4" NPTF threads.

Model	Description
 CT210	Hose Coupler Half with Dust Cap
 CT211	Ram Coupler Half with Dust Cap
 CT212	Coupler Complete with 2 Dust Caps





3/8" NPTF HIGH - FLOW COUPLERS





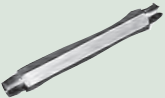





These premium grade couplers provide maximum fluid flow and are plated to resist corrosion. Cylinder Half Couplers have male 3/8" NPTF threads & high strength rubber dust caps; Hose Half Couplers have female 3/8" NPTF threads.

Model	Description
 <p>C213</p>	Hose Coupler Half with Dust Cap
 <p>C211</p>	Ram Coupler Half with Dust Cap
 <p>C209</p>	Coupler Set Complete with 2 Dust Caps
 <p>CR215</p>	Dust Cap

3/8" NPTF FLUSH FACE / NO SPILL COUPLERS

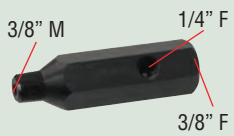
Unique flush face design features push to connect operation with a sleeve lock, and non-spill "dry" disconnect operation. Easy cleaning minimizes system contamination. This coupler should be used wherever oil spillage constitutes a safety or environmental hazard. Couplers have 3/8" NPTF threads.

Model	Description
 <p>C513</p>	Hose Coupler Half
 <p>C511</p>	Ram Coupler Half
 <p>C509</p>	Coupler Set Complete with 2 Dust Caps
 <p>C515 C516</p>	Dust Cap Hose Half - Male Dust Cap Ram Half - Female

Model	Description	Model	Description
 F1	Hex Nipple 3/8" M NPTF Threads	 F10	Reducer Fitting 3/8" M to 1/4" F NPTF Threads
 F3	76.2 mm Nipple 3/8" M NPTF Threads	 F11	Tee 3/8" F NPTF Threads
 F6	152.4 mm Nipple 3/8" M NPTF Threads	 F13	Coupling 3/8" F NPTF Threads
 F7	90° Elbow 3/8" F NPTF Threads	 F15	Cross Fitting 3/8" F NPTF Threads
 F9	90° St. Elbow 3/8" M - 3/8" F NPTF Threads	 F17	Reducer Fitting 1/4" M to 3/8" F NPTF Threads

All fittings above are rated for 700 bars, and are engraved for added safety and readability.

Gauge Adapter



Model#
GA1
Order#
18977

Gauge Adapter Simplifies Your Connection Point

Simplex Hydraulic Oil

Special, high pressure formulated, premium grade oil for all Simplex hydraulic products. High viscosity index ensures maximum lubricity over a wide range of operating temperatures.



AO1 1 Gallon

AO5 5 Gallons

AO55 55 Gallons

Viscosity Index - 100 Minimum

Vis, Ssu @ 100° F - 150 - 155

Vis, Ssu @ 210° F - 45 - 50


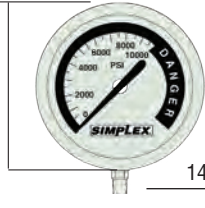

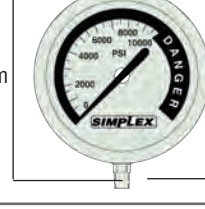

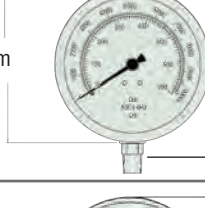




Vis, Ssu @ 0° F - < 15,000

Pour Point - -50° F

Flash Point - 400° F

Analine Point - 204.8° F

Includes: Anti-Foam, Anti-Rust And Low Temperature Additives

Model	Description	Dimensions
 <p>Model# G5 Order# 18905</p>	<ul style="list-style-type: none"> ▶ Liquid filled dampens needle vibration. ▶ Reads both PSI and Bar ▶ 1% full scale accuracy. ▶ 50 bar increments up to 700 bars ▶ Stainless steel casing. 	 <p>63.5 mm 14.2 mm Square 1/4" NPT</p>
 <p>Model# G6 Order# 18906</p>	<ul style="list-style-type: none"> ▶ 700 to 1035 bars warning zone. ▶ The calibrated scale reads from 0-700 bars ▶ Reads both PSI and Bar ▶ Liquid filled dampens needle vibration. ▶ 1% full scale accuracy. ▶ Large easy to read 10.16 cm face. ▶ Rubber blowout plugs for safety. ▶ Stainless steel casing. 	 <p>101.6 mm 22 mm Hex 1/4" NPT</p>
 <p>G7</p>	<ul style="list-style-type: none"> ▶ 700 to 1035 bars warning zone. ▶ The calibrated scale reads from 0-700 bars ▶ Reads both PSI and Bar ▶ Liquid filled dampens needle vibration. ▶ 1% full scale accuracy. ▶ Large easy to read 10.16 cm face. 	 <p>101.6 mm 1/4" NPT</p>
 <p>GD1</p>	<ul style="list-style-type: none"> ▶ Designed for high cycle pressure applications ▶ Self powered Lithium batteries. ▶ Full 4 digit display. ▶ + / - .25% full scale accuracy. ▶ 10 million cycle life minimum. ▶ Stainless steel sensor that is vibration & shock resistant. ▶ The calibrated scale reads from 0-700 bars 	 <p>67.5 mm 15.7 mm 1/4" NPT</p>
 <p>GD2</p>	<ul style="list-style-type: none"> ▶ 1.9 cm characters and 270° bar graph "analog" readout. ▶ Splash proof phenolic housing. ▶ + / - .25% full scale accuracy. ▶ Keypad enable/disable of peak high or peak low hold. ▶ Stainless steel sensor that is vibration & shock resistant. ▶ The calibrated scale reads from 0-700 bars 	 <p>138.4 mm 33.7 mm 22 mm Flats 1/4" NPT</p>







System Accessories

SCALED TONNAGE GAUGES FOR SIMPLEX CYLINDERS







Model	Cylinder Tonnage (kN)	Diameter (mm)	Applicable Cylinder Series
GT5	44.5, 89, 133.4	101.6	R5, R10, R15, RFS10, RLS101, RDA1010
GT20	177.9, 444.8		RLS201, RLS502, RLS1002, RFS20, RFS50, RFS100
GT25	222.4, 489.3, 889.6		R25, R55, RDA55, R100
GT30	266.9, 444.8, 889.6		R308, RLS302, RFS30, RLN30, RLN50, RLN100, RLR306, RLR50, RLR100
GT100	1334.5, 1779.3		RDA100, RDA200, RFS150, RLN150, RLN200, RLR150, RLR200
GT150	889.6, 1334.5, 1779.3		RDA150
GTH12	106.7, 177.9, 266.9		RC12, RC20, RC30, RCD30
GTH60	533.8, 889.6, 1334.5		RC60, RC1003, RCD6010, RCD100, RCD1505



HA & HCA Industrial Grade .25" I.D. series hoses are rated at 700 bars operating pressure and 1380 bar minimum burst pressure. This hose is the recommended choice for hand pump & cylinder sets, as well as a wide range of other intermittent applications. ▼





Model	Length (m)	Hose Ends		I.D. (mm)
HA3	0.9	 3/8" NPTF Male	 3/8" NPTF Male	6.4 mm
HA6	1.8			
HA10	3.0			
HA20	6.1			
HA36	11.0			
HA50	15.2			
HCA3	0.9	 3/8" NPTF Male	 C213 Coupler*	
HCA6	1.8			
HCA10	3.0			
HCA20	6.1			
HCA36	11.0	 C213 Coupler*	 C213 Coupler*	
HCA50	15.2			

High Flow HD & HDC .38" I.D. series hoses are recommended to achieve higher retraction speeds and minimal flow restrictions. These heavy duty hoses are rated at 700 bars with a minimum burst pressure of 2070 bars. ▼







Model	Length (m)	Hose Ends		I.D. (mm)
HD3	0.9	 3/8" NPTF Male	 3/8" NPTF Male	9.7 mm
HD6	1.8			
HD10	3.0			
HD20	6.1			
HD50	15.2			
HDC3	0.9	 3/8" NPTF Male	 C213 Coupler*	
HDC6	1.8			
HDC10	3.0			
HDC20	6.1			
HDC50	15.2	 C213 Coupler*	 C213 Coupler*	

*All hoses with couplers include CR215 Dust Cap.





Non-Conductive Thermo Plastic HR & HRC series hoses are for those special applications where non-conductivity is a must. The HR & HRC series hose operates at 700 bars working and 2750 bars burst, (4:1 safety factor). Light weight and durable, the multi-layered design complies with M.H.I. I.J.100 hose specifications. Orange in color, the HR and HRC are easily identified from standard conductive hoses. ▼

Model	Length (m)	Hose Ends		I.D.(mm)
HR3	0.9	 3/8" NPTF Male	 3/8" NPTF Male	6.4 mm
HR6	1.8			
HR10	3.0			
HR20	6.1			
HRC3	0.9	 3/8" NPTF Male	 C213 Coupler*	
HRC6	1.8			
HRC10	3.0			
HRC20	6.1			

Thermo-Plastic HP & HPC series hoses are recommended for demanding applications. Along with their distinctive green color, the HP & HPC series hoses boast a 700 bars working, 2750 bars minimum burst, (4:1 safety factor) and a tough polyurethane outer cover that resists abrasion and wear. Well suited for continuous duty, the reinforced polyester and carbon steel wire design contributes to low volume expansion, minimized fatigue and enhanced system efficiencies. ▼

Model	Length (m)	Hose Ends		I.D. (mm)
HP3	0.9	 3/8" NPTF Male	 3/8" NPTF Male	6.4 mm
HP6	1.8			
HP10	3.0			
HP20	6.1			
HP36	11.0			
HP50	15.2			
HPC3	0.9	 3/8" NPTF Male	 C213 Coupler*	
HPC6	1.8			
HPC10	3.0			
HPC20	6.1			
HPC36	11.0	 C213 Coupler*	 C213 Coupler*	
HPC50	15.2			

Heavy Duty HE & HEC series hoses are for demanding and continuous duty applications that require 700 bars working and 2750 bars burst, (4:1 safety factor) but where rubber coated, steel wire braid design is preferred. These hoses are well suited in operating temperatures up to 150° F. ▼

Model	Length (m)	Hose Ends		I.D.(mm)
HE6	1.8	 3/8" NPTF Male	 3/8" NPTF Male	6.4 mm
HE10	3.0			
HE20	6.1			
HEC6	1.8	 3/8" NPTF Male	 C213 Coupler*	
HEC10	3.0			
HEC20	6.1			

*All hoses with couplers include CR215 Dust Cap.