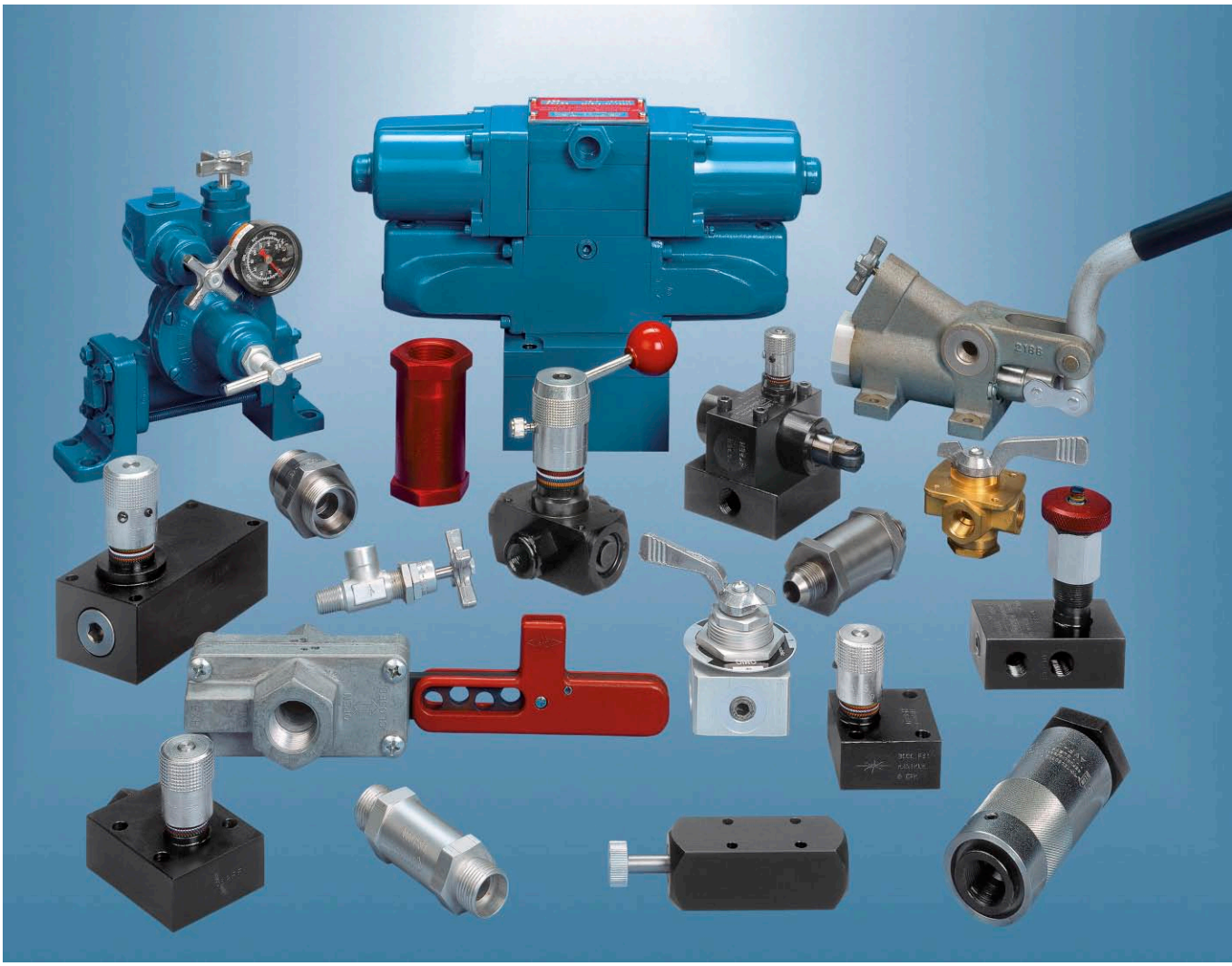
Republic/Manatrol

Hydraulic and Pneumatic Control Valves

Catalog HY14-3000/US



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Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

Accessories

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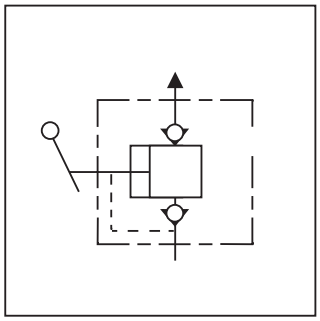
General Description

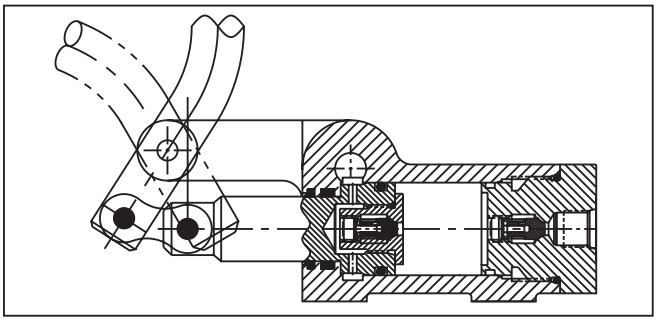
Series 910 hand pumps are double-acting providing primary, backup or emergency hydraulic power. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source. They can be mounted in any position.

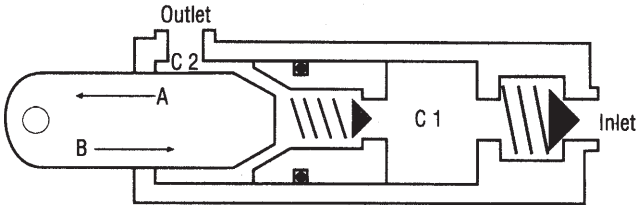


Operation

Piston Stroke — Direction A
Chamber C1 draws in fluid through INLET while chamber C2 discharges fluid through OUTLET.

Piston Stroke — Direction B
Volume in chamber C1 is transferred to chamber C2. Since chamber C2 holds half the volume of chamber C1, half of the fluid in chamber C2 is discharged through the OUTLET port.





Features

- Lightweight, double-acting hand pump delivers 33 cc (2 cu. in.) per cycle, 2 strokes.
- Provides long maintenance-free service for any. application where auxiliary hydraulic power is required.

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Specifications

Operating Pressure Range	0 to 103 Bar (1500 PSI) 1500 PSI based on 29 kg (64 lbs.) handle force at 578 mm (22.75 in.) handle/arm length
Displacement	33 cc (2 cu. in.) per cycle 2 strokes
Operating Temperature Range	-40°C to 121°C (-40°F to 250°F)
Operating Arc	60°
Fluids	Hydraulic oil
Sizes	IST 6, IST 8
Type Ports	IST
Mounting	Flanges (4) with 7 mm dia (.281 in. dia.) holes

Materials:	
Body	Aluminum alloy
Piston **Handle Extension**	Steel
Poppets	Stainless steel type 303
Springs	Stainless steel Type AMS5688
O-Rings	Synthetic rubber
Backup Rings	PTFE
Scraper	Synthetic rubber
Molded Seal	Synthetic rubber
Handle	Extension furnished 508 mm (20 in.) long. Total 578 mm (22.75 in.)

Ordering Information

910	–		D	2	B	C
Hand Pump		Size and Type	Materials	O-Ring	Discharge Port Location	Design Series

Code	Description
6	IST* port
8	IST* port

* IST, military straight thread port, SAE compatible.

Code	Description
D	Aluminum Alloy

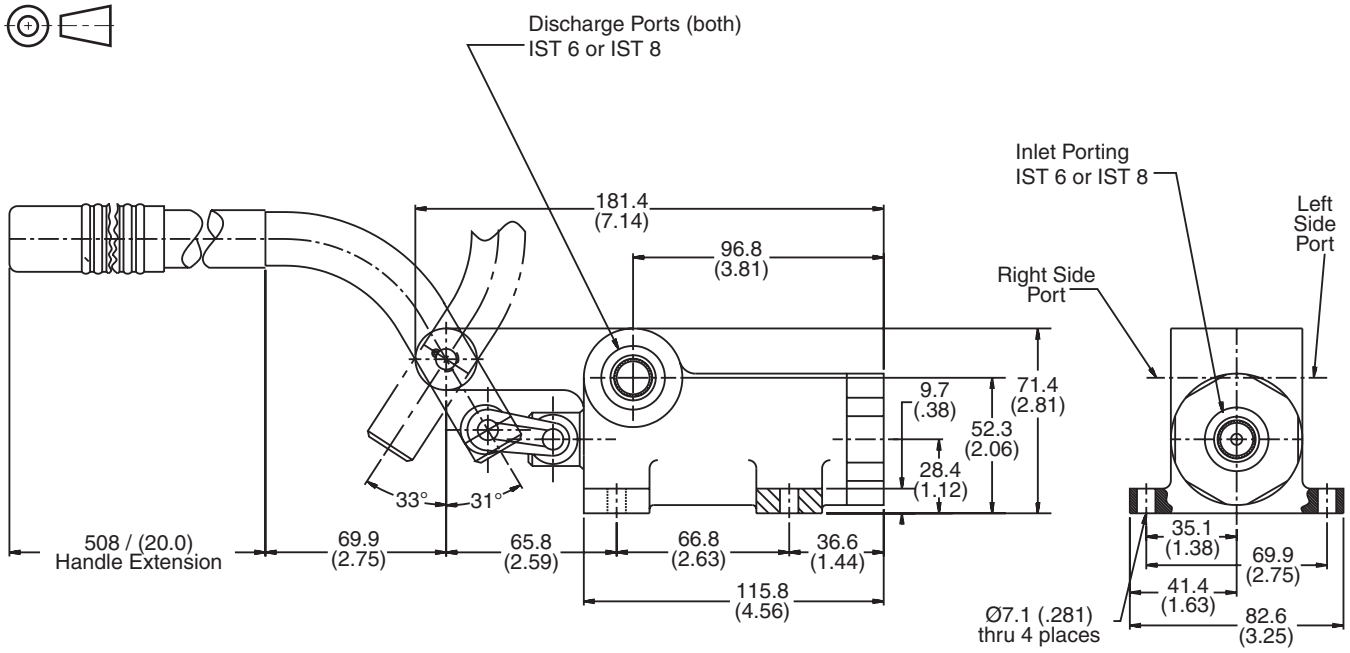
Code	Description
2	Nitrile

Code	Description
B	Both Sides*

Weight: 2.3 kg (5 lbs.)

Dimensions

Inch equivalents for millimeter dimensions are shown in (**)



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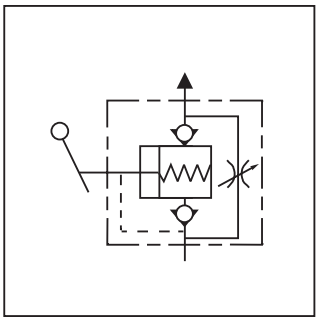
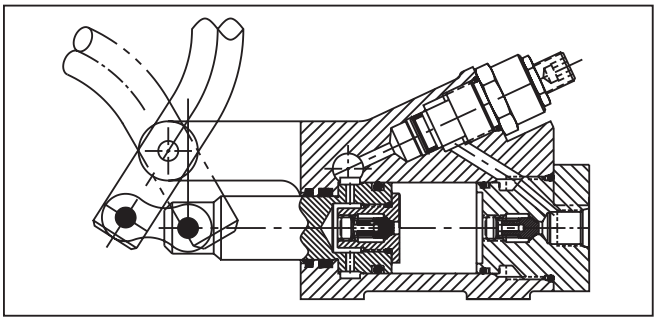
General Description

Series 910N hand pumps are double-acting with needle valve providing primary, backup or emergency hydraulic power. Series 910N incorporates a cartridge needle valve that provides an easy method of bleeding an actuator or system back to tank. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source. They can be mounted in any position.

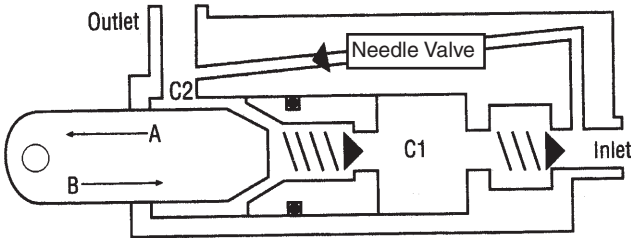




Operation

Piston Stroke — Direction A
Chamber C1 draws in fluid through INLET while chamber C2 discharges fluid through OUTLET.

Piston Stroke — Direction B
Volume in chamber C1 is transferred to chamber C2. Since chamber C2 holds half the volume of chamber C1, half of the fluid in chamber C2 is discharged through the OUTLET port.



Features

- Lightweight, double-acting hand pump delivers 33 cc (2 cu. in.) per cycle, 2 strokes.
- Needle valve cartridge is a dependable, proven. component that will allow the bleed-off of a circuit back to tank.
- Provides long maintenance-free service for any application where auxiliary hydraulic power is required.

Specifications

Operating Pressure Range	0 to 103 Bar (1500 PSI) 1500 PSI based on 29 kg (64 lbs.) handle force at 578 mm (22.75 in.) handle/arm length	**Materials: Body**	Aluminum alloy
		Piston Handle Extension	Steel
Displacement	33 cc (2 cu. in.) per cycle 2 strokes	**Poppets**	Stainless steel type 303
		Springs	Stainless steel Type AMS5688
Operating Temperature Range	-40°C to 121°C (-40°F to 250°F)	**O-Rings**	Synthetic rubber
Operating Arc	60°	**Backup Rings**	PTFE
Fluids	Hydraulic oil	**Scraper**	Synthetic rubber
Sizes	IST 6, IST 8	**Molded Seal**	Synthetic rubber
Type Ports	IST	**Handle**	Extension furnished 508 mm (20 in.) long. Total 578 mm (22.75 in.)
Mounting	Flanges (4) with 7 mm dia. (.281 in. dia.) holes	**Needle Valve Cartridge**	Steel

Ordering Information

910N		D	2	B	C
Hand Pump with Needle Valve	Size and Type	Materials	O-Ring	Discharge Port Location	Design Series

Code	Description
6	IST* port
8	IST* port

* IST, military straight thread port, SAE compatible.

Code	Description
D	Aluminum Alloy

Code	Description
2	Nitrile

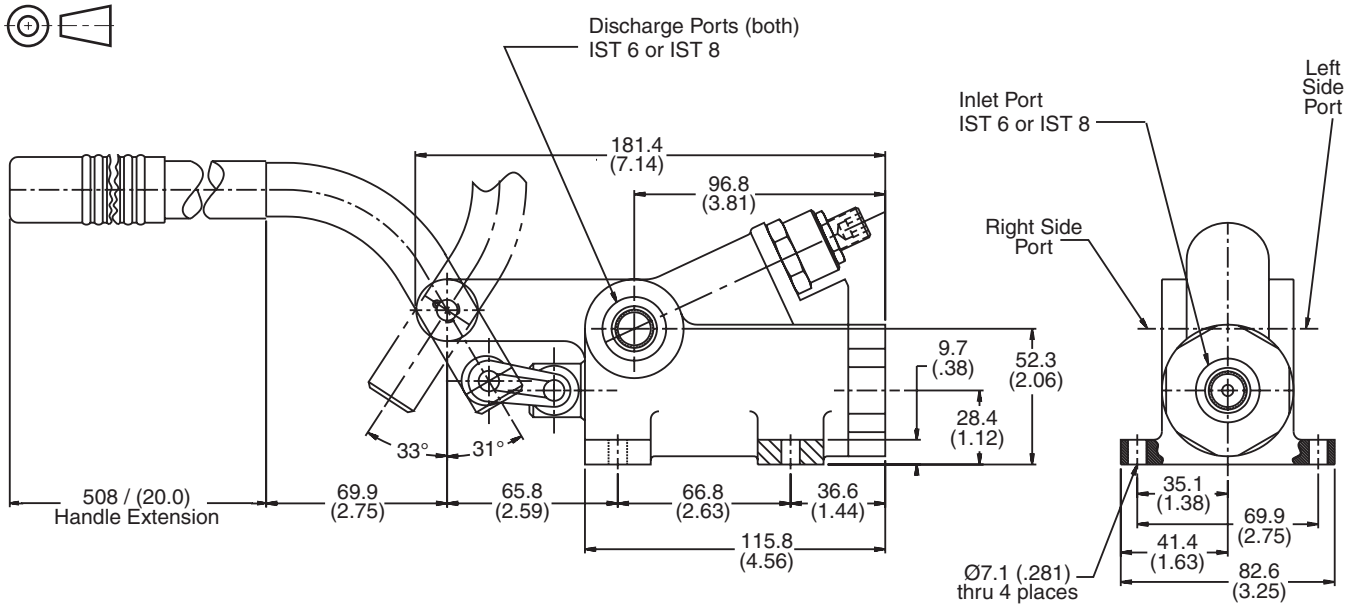
Code	Description
B	Both Sides*

* Note: one port to be plugged at installation.

Weight: 2.7 kg (6 lbs.)

Dimensions

Inch equivalents for millimeter dimensions are shown in (**)

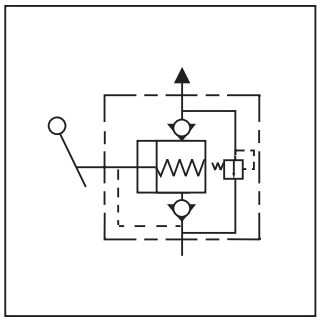


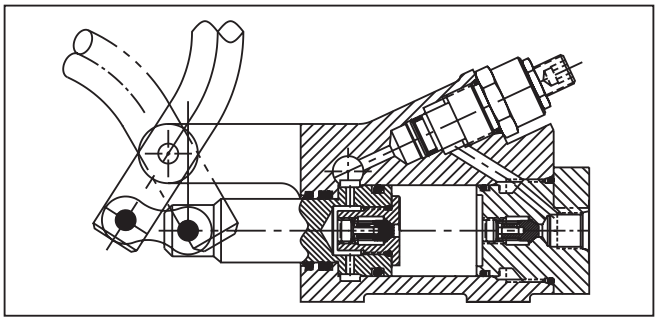
3000-G1.p65, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series 910R hand pumps are double-acting with relief valve providing primary, backup or emergency hydraulic power. Series 910R incorporates a cartridge relief that provides a smooth, quick unloading of the pump should the system become overloaded. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source. They can be mounted in any position.

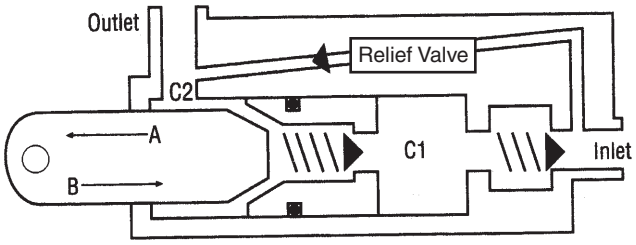




Operation

Piston Stroke — Direction A
Chamber C1 draws in fluid through INLET while chamber C2 discharges fluid through OUTLET.

Piston Stroke — Direction B
Volume in chamber C1 is transferred to chamber C2. Since chamber C2 holds half the volume of chamber C1, half of the fluid in chamber C2 is discharged through the OUTLET port.



Features

- Lightweight, double-acting hand pump delivers 33 cc (2 cu. in.) per cycle, 2 strokes.
- Relief valve cartridge is a dependable, proven component that will protect any circuit from over pressurizing and adjustable from 6.8 to 103 Bar (100 to 1500 PSI).
- Provides long maintenance-free service for any application where auxiliary hydraulic power is required.

Specifications

Operating Pressure Range	0 to 103 Bar (1500 PSI) 1500 PSI based on 29 kg (64 lbs.) handle force at 578 mm (22.75 in.) handle/arm length	**Materials:** **Body**	Aluminum alloy
		Piston **Handle Extension**	Steel
Displacement	33 cc (2 cu. in.) per cycle 2 strokes	**Poppets**	Stainless steel type 303
		Springs	Stainless steel Type AMS5688
Operating Temperature Range	-40°C to 121°C (-40°F to 250°F)	**O-Rings**	Synthetic rubber
Operating Arc	60°	**Backup Rings**	PTFE
Fluids	Hydraulic oil	**Scraper**	Synthetic rubber
Sizes	IST 6, IST 8	**Molded Seal**	Synthetic rubber
Type Ports	IST	**Handle**	Extension furnished 508 mm (20 in.) long. Total 578 mm (22.75 in.)
Mounting	Flanges (4) with 7 mm dia. (.281 in. dia.) holes	**Relief Valve Cartridge**	Steel

Ordering Information

910R		D	2	B	C
Hand Pump with Relief Valve	Size and Type	Materials	O-Ring	Discharge Port Location	Design Series

Code	Description
6	IST* port
8	IST* port

* IST, military straight thread port, SAE compatible.

Code	Description
D	Aluminum Alloy

Code	Description
2	Nitrile

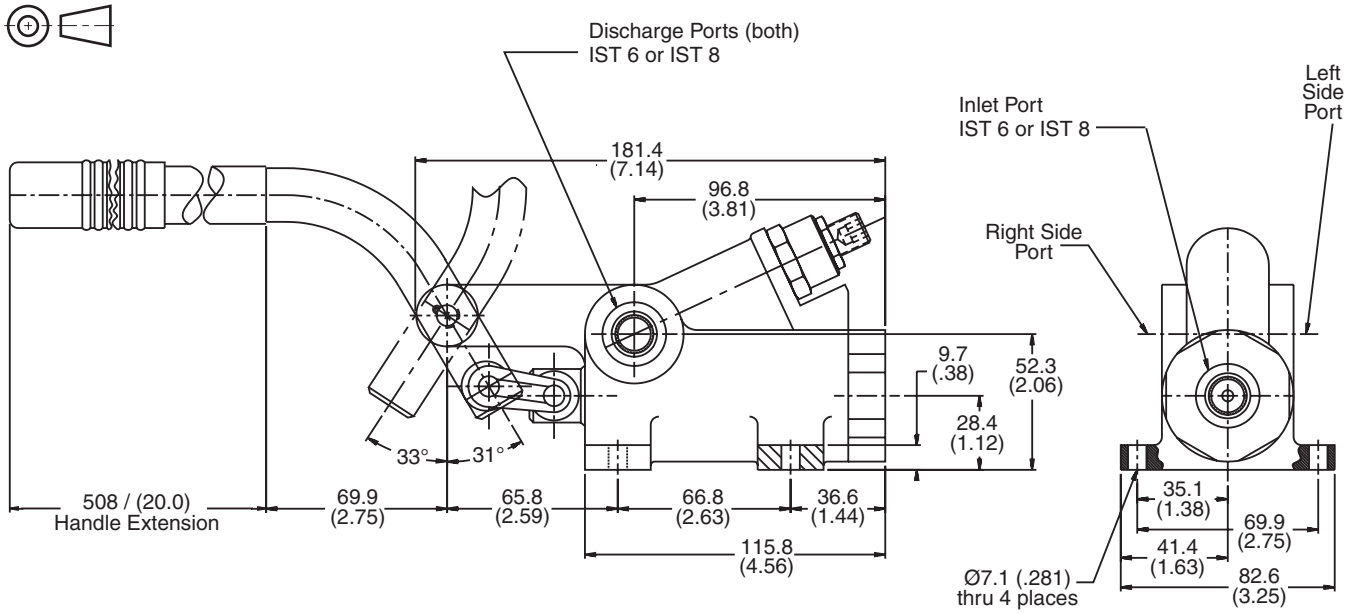
Code	Description
B	Both Sides*

* Note: one port to be plugged at installation.

Weight: 2.7 kg (6 lbs.)

Dimensions

Inch equivalents for millimeter dimensions are shown in (**)



3000-G1.p65, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series 913 hand pumps are single-acting providing primary, backup, or emergency hydraulic power. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source. Series 913 hand pumps have two stages. The first stage allows a large volume to be pumped so that a cylinder or actuator quickly moves into its working position. At the second stage, the hand pump sequences to a lower volume at higher pressures.

Features

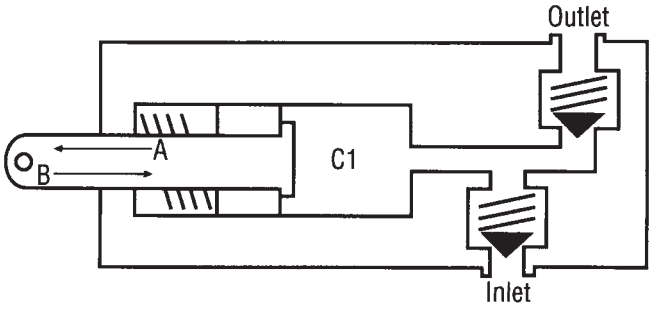
- When first stage reaches 0.7 Bar (10 PSI) maximum, pump autaomatically sequences to a lower volume at pressures up to 345 Bar (5000 PSI).

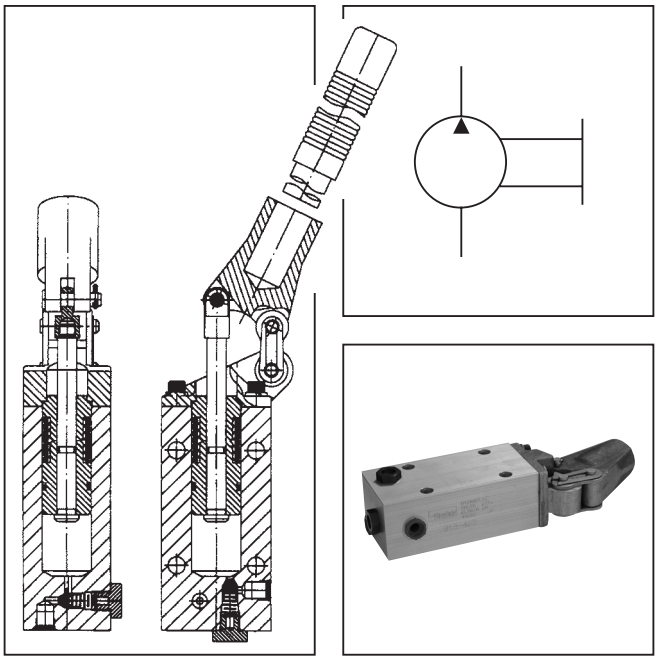
Operation

Piston Stroke — Direction A
Piston draws in fluid through INLET, charging chamber C1.

Piston Stroke — Direction B
Stage 1 (to 10 PSI): Volume C1 discharged through OUTLET.

Stage 2 (over 20 PSI): Build up of pressure in system causes piston to remain in retracted position (shown), and plunger moves forward, discharging low volume through OUTLET at high pressure. Piston remains in retracted position on next A stroke.





Specifications

Service App.	Hydraulic oil	
Pressure Range	Working:	0 - 345 Bar (0 - 5000 PSI) [345 Bar (5000 PSI] based on 50 lb. handle load at 23 in.]
Sizes	IST	4
Ports	IST	Internal straight threads
Type	Single-acting	
Mounting	Holes (4) through, 9.9 mm (0.390 in.) dia.	
Displacement	16.4 cc - 0.7 Bar (1 cu. in. - 10 PSI 3.1 cc - 345 Bar (0.19 cu. in. - 5000 PSI)	
Material	Body	Aluminum alloy
	Piston, Plunger	416 Stainless steel
	Springs	Stainless steel
	O-rings	Synthetic rubber
	Back-up rings	PTFE
Operating Arc	55°	
Handle	Not furnished. Available on special order	
Temperature Range	-40°C to +121°C (-40°F to +250°F)	

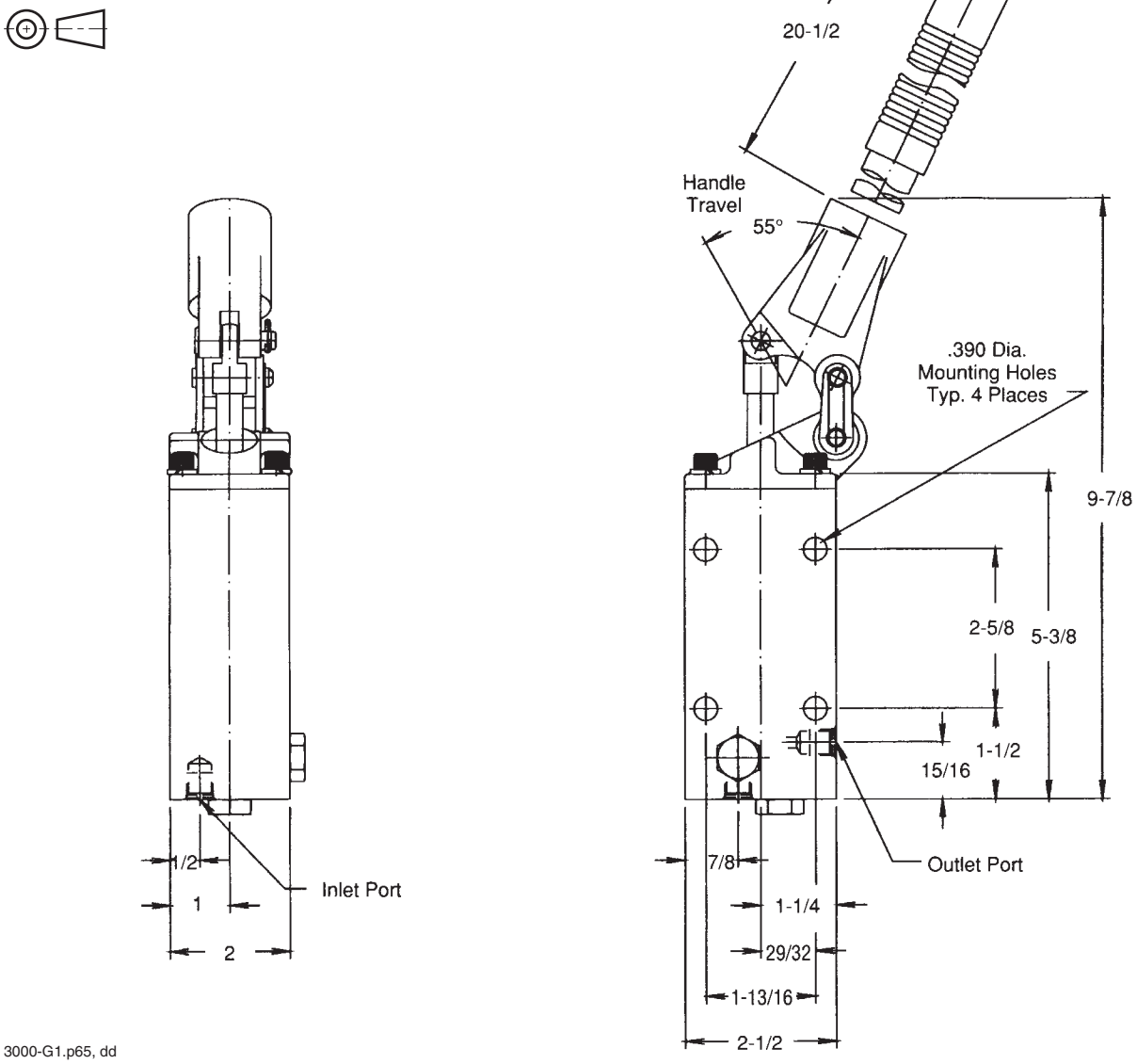
Ordering Information

913	-4	D	2
Catalog Number	**Size and Type Ports**	**Materials**	**O-Ring Code**
913 2-Stage Hand Pump	4 IST 04 SAE	**D** Aluminum Alloy	**2** Nitrile

Weight: 1.6 kg (3.5 lbs.)

Dimensions

Shown in inches.

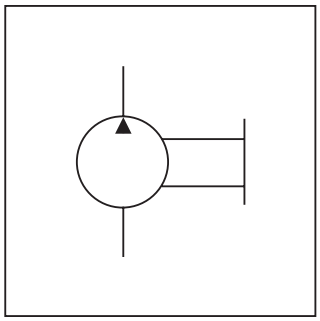


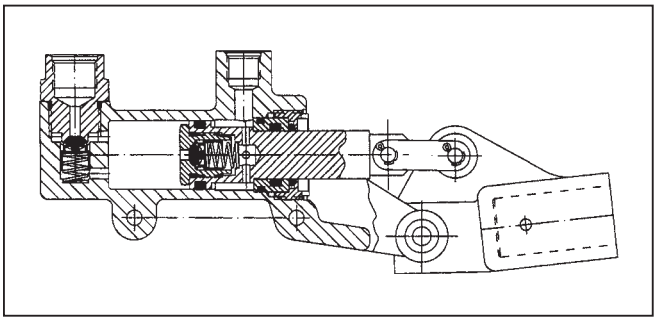
3000-G1.p65, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series 914 hand pumps are double-acting providing primary, backup, or emergency hydraulic power. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source.





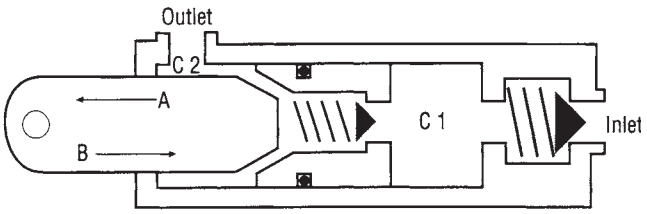
Features

- Integral resilient seated valves prevent backflow during operation.

Operation

Piston Stroke — Direction A
Chamber C1 draws in fluid through INLET while chamber C2 discharges fluid through OUTLET.

Piston Stroke — Direction B
Volume in chamber C1is transferred to chamber C2. Since chamber C2 holds half the volume of chamber C1, half of the fluid in chamber C2 is discharged through the OUTLET port.



Specifications

Service App.	Hydraulic oil	
Pressure Range	Working:	0 - 103.5 Bar (0 - 1500 PSI) [103.5 Bar (1500 PSI) based on 60 lb. handle load at 22 1/2 in.]
	Proof:	155.3 Bar (2250 PSI)
	Burst:	258.8 Bar (3750 SPI)
Sizes	IST IST	8 (inlet) 6 (outlet)
Ports	IST	Internal straight threads, AND10050
Type	Double-acting	
Mounting	Holes (2) through, 6.5 mm (0.257 in.) dia.	
Displacement	20.5 to 24.6 cc (1.25 to 1.50 cu. in.) per cycle (2 strokes)	
Material	Body	Aluminum alloy
	Piston	Steel
	Poppets	303 Stainless steel
	Springs	AMS5688 Stainless steel
	Molded seals	Synthetic rubber
	Back-up rings	PTFE
	Scraper	Brass
	O-rings	Synthetic rubber
Operating Arc	60° maximum	
Handle	Not furnished. Available on special order	
Temperature Range	-54°C to +121°C (-65°F to +250°F)	

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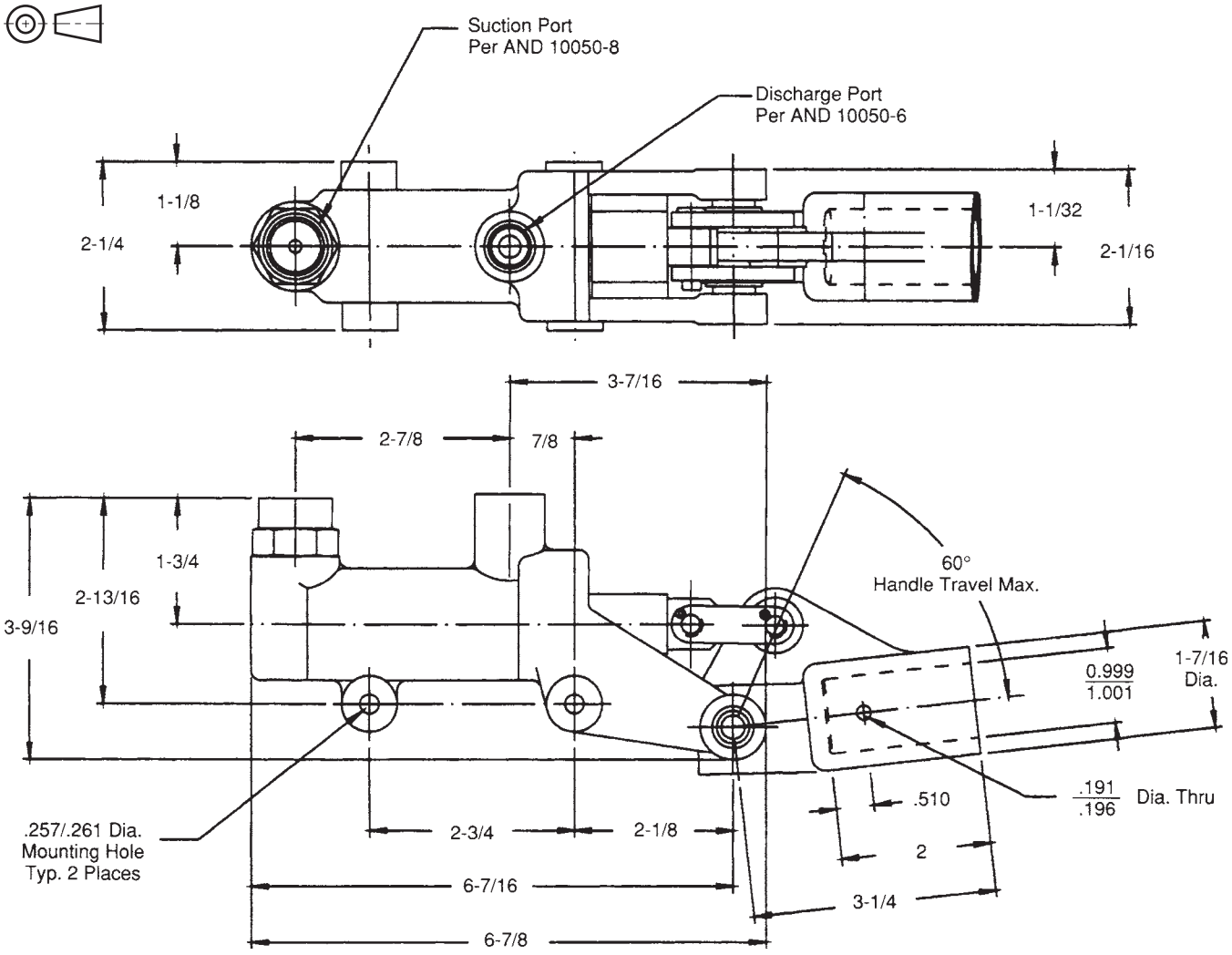
Ordering Information

914	-8	D	27
Catalog Number	**Size and Type Ports**	**Materials**	**O-Ring Code**
914 Hand Pump to 1500 P.S.I.	8 IST Inlet 6 IST Outlet	**D** Aluminum Alloy	**27** MIL-P-25732

Weight: 1.0 kg (2.3 lbs.)

Dimensions

Shown in inches.



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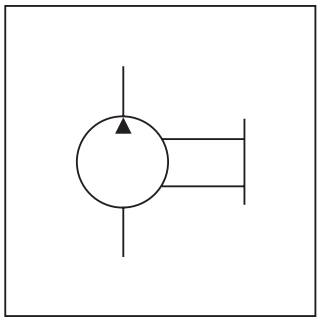
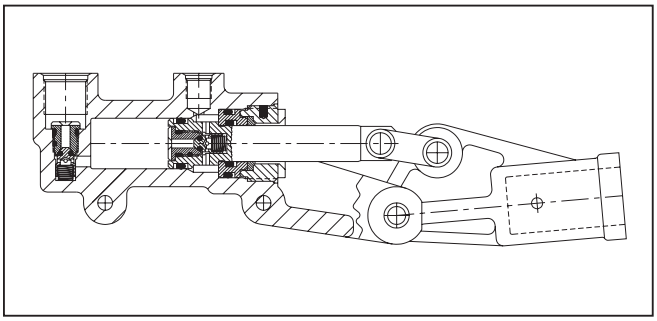
General Description

Series 915 hand pumps are double-acting providing primary, backup, or emergency hydraulic power. The hand pumps can be utilized anywhere; at any time, that hydraulic power is required, since the hand pump does not require an electrical or mechanical power source.





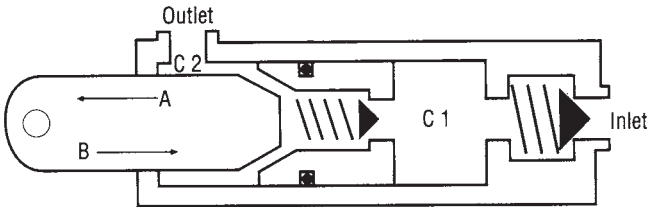
Features

- Integral resilient seated valves prevent backflow during operation.

Operation

Piston Stroke — Direction A
Chamber C1 draws in fluid through INLET while chamber C2 discharges fluid through OUTLET.

Piston Stroke — Direction B
Volume in chamber C1 is transferred to chamber C2. Since chamber C2 holds half the volume of chamber C1, half of the fluid in chamber C2 is discharged through the OUTLET port.



Specifications

Service App.	Hydraulic oil	
Pressure Range	Working:	0 - 207 Bar (0 - 3000 PSI) [207 Bar (3000 PSI) based on 60 lb. handle load at 22 1/2 in.]
	Proof:	310.5 Bar (4500 PSI)
	Burst:	517.5 Bar (7500 PSI)
Sizes	IST IST	8 (inlet) 4 (outlet)
Ports	IST	Internal straight threads, 915-8D27 (AND10050), 916-8D27 (MS33649)
Type	Double-acting	
Mounting	Holes (2) through, 6.5 mm (0.257 in.) dia.	
Displacement	11.5 cc (0.7 cu. in.) per cycle (2 strokes)	
Material	Body	Aluminum alloy
	Piston Rod	420 Stainless steel
	Poppets	303 Stainless steel
	Springs	18-8 Stainless steel
	Molded seals	Synthetic rubber
	Back-up rings	PTFE
	Scraper	Brass
	O-rings	Synthetic rubber
Operating Arc	60°	
Handle	Not furnished.	
Temperature Range	-54°C to +121°C (-65°F to +250°F)	

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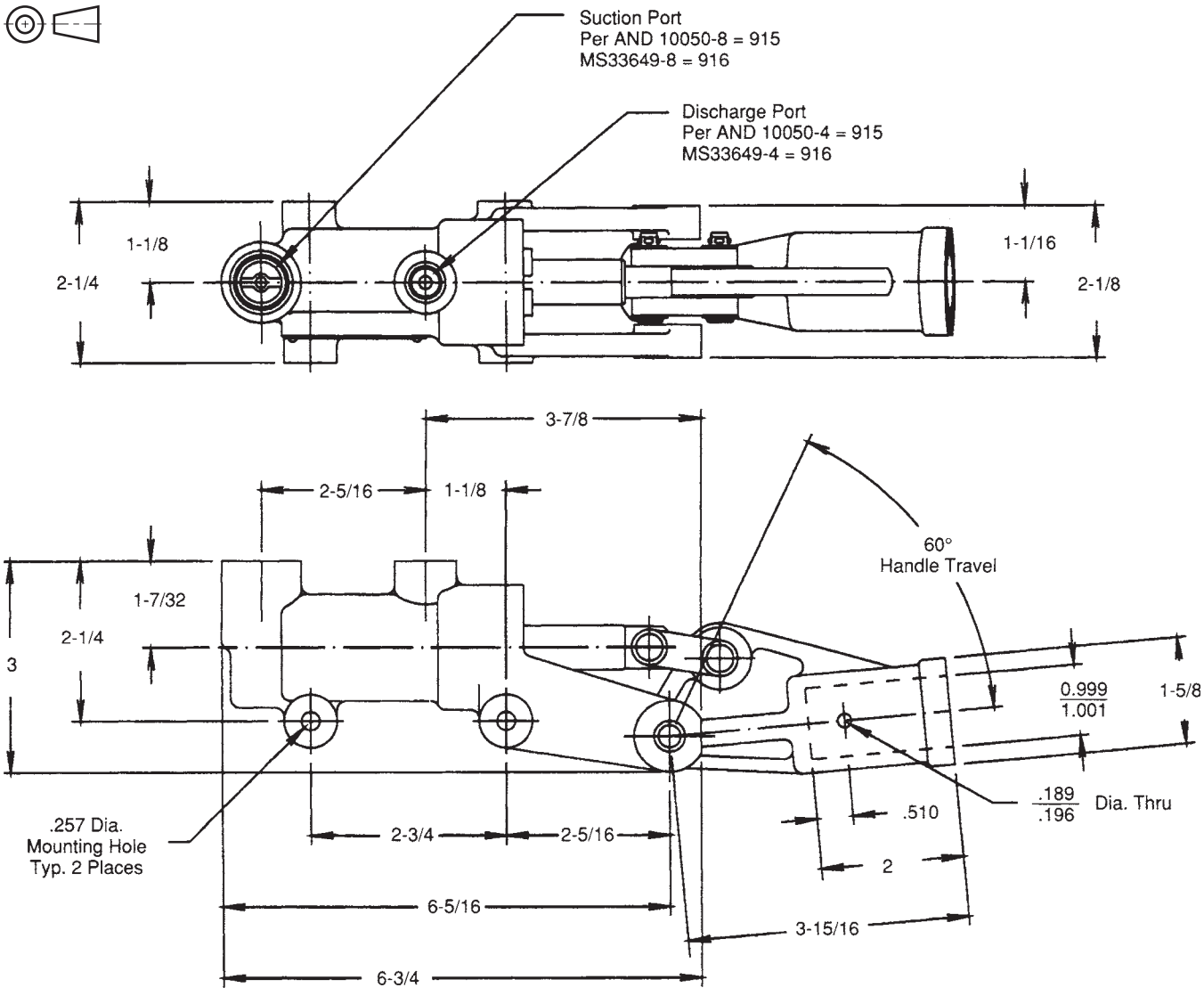
Ordering Information

915 or 916	-8	D	27
Catalog Number	Size and Type Ports	Materials	O-Ring Code
	8 IST Inlet 4 IST Outlet	D Aluminum Alloy	27 MIL-P-25732

Weight: 1.0 kg (2.1 lbs.)

Dimensions

Shown in inches.

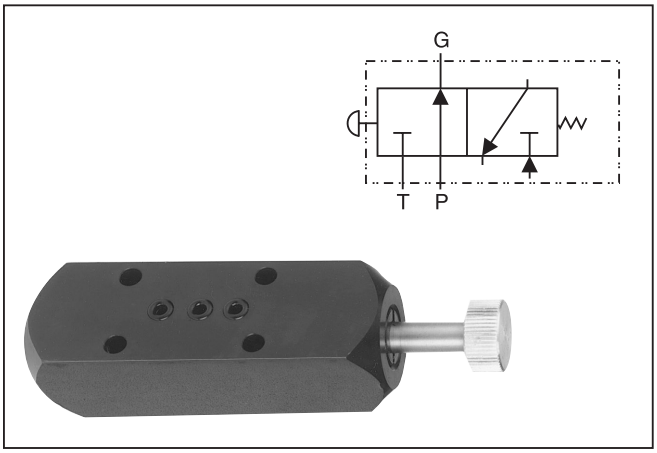


3000-G1.p65, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series GTS gage isolator valves have a push-to-read knob that delivers instant pressure to the gage, yet totally isolates the gage from the fluid line until the knob is pressed. When the knob is released, a spring-loaded spool closes instantly and drains all fluid from the gage back into the reservoir. A hardened steel spool custom-fitted to the all-steel valve body minimizes leakage and maintenance. Partial snubbing action in the valve protects the gage from surge damage when the actuating knob is pushed. Suitable for line pressures up to 207 Bar (3000 PSI) maximum.



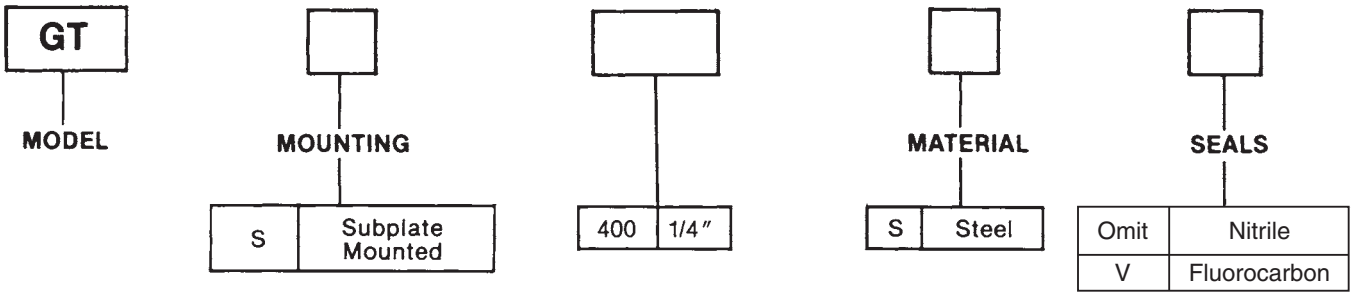
Features

- Partial snubbing action protects the gage from surge damage.
- Has a hardened steel spool.

Specifications

Port Size	NPTF 1/4"
Mounting	Subplate

Ordering Information



Weight: 1.1 lbs. (5.0 Kg)

Bolt Kits

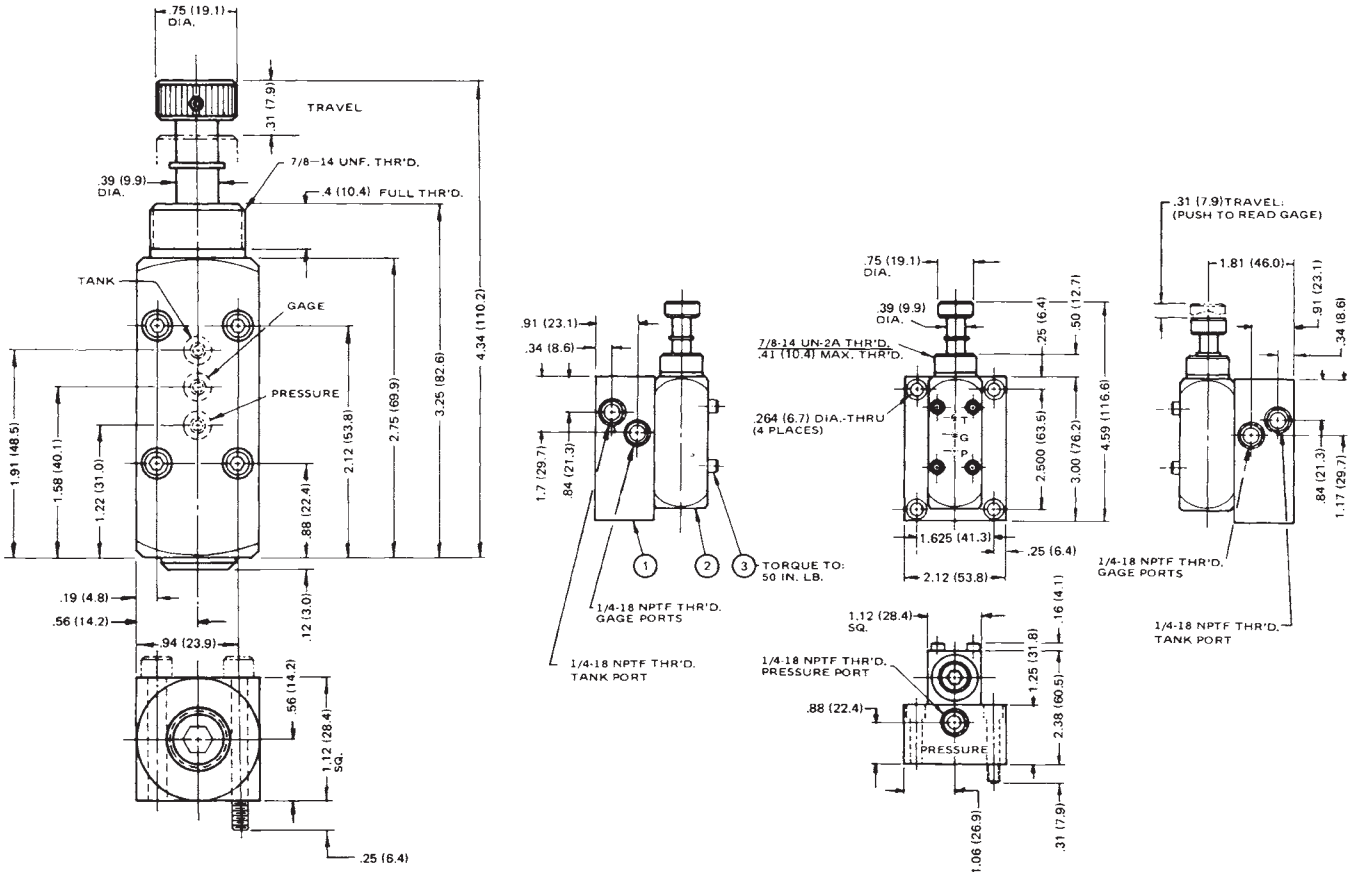
Valve	Bolt Kit	Bolt Specification*	Bolt Torque
GTS 400	BK13	8-32 x 1-3/8″	50 IN.-LBS.–STEEL MANIFOLDS 35 IN.-LBS.–ALUMINUM MANIFOLDS

*Use SAE Grade 8 or Better

Millimeter equivalents for inch dimensions are shown in (**)

Model GTS400S*1*

Manifold mounted, push to read Isolator Valve



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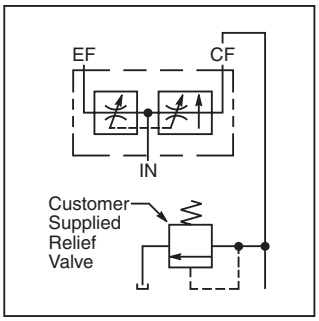
General Description

Series MFB flow control valves are designed for applications where it is necessary to supply flow from a single pump to two separate circuits (Snow plow attachment and a dump body). One of the two circuits will be the primary circuit and receive priority flow from the Series MFB valve. Any excess flow above the priority requirement is available to a second circuit.



Features

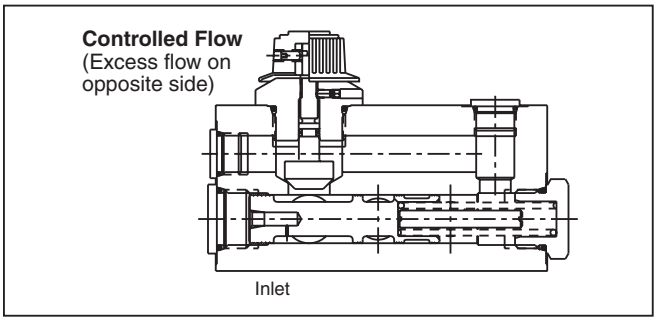
- Hardened parts provide long life.
- In-line mounting.
- When reverse flow is applied from the priority port, the valve acts as a fixed orifice.
- Dial style knob provides an easy adjustable method for setting flow rate.

Operation

Series MFB flow controls use a control orifice in a spring-biased, compensated spool to supply a priority flow requirement. Any flow over and above the priority flow will be directed to a bypass port. The priority flow is fully compensated, meaning that as load pressure at the priority port changes, the priority flow will change to meet that requirement.

If the pump supply is less than required for the priority circuit, all flow will go to the priority circuit, and none will be diverted to the excess flow port.

This valve can also be used as a restrictive-type, pressure compensated flow control by plugging the excess flow port.



Caution: If the priority flow port is totally blocked, the compensator spool shifts completely to block the bypass port thus closing the valve completely. If a fixed displacement pump is being used in this type of application, there must be a relief mounted between the pump and the Series MFB flow control valve.

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Specifications

Maximum Inlet Flow	MFB-025 – 93.75 LPM (25 GPM) MFB-050 – 187.5 LPM (50 GPM)	**Operating Temp. Range (Ambient)**	-31.7°C to +121.1°C (-25°F to +250°F) (Fluorocarbon Seals Only)
Maximum Control Flow	MFB-025 – 56.25 LPM (15 GPM) MFB-050 – 56.25 LPM (15 GPM)	**Internal Material**	Steel
Operating Press.	210 Bar (3000 PSI)	**Body Material**	Steel (chromate plated)
Flow Accuracy	±10%	**Filtration**	ISO code 16/13 SAE Class 4 or better
Compensator Bias Spring	6.2 Bar (90 PSI) Differential	**Mounting**	In-line (no restrictions)

Ordering Information

MFB — [ ] — [ ] **P** **AP** — **K** — [ ]

- **MFB**: Mobile Flow Control in Body
- [ ]: Nominal Inlet Flow

Code	Flow
025	56.25 LPM (15 GPM)
050	56.25 LPM (15 GPM)

- **P**: Priority Flow
- **AP**: Style

Code	Description
AP	Adjustable Priority

- **K**: Knob

Code	Style
K	Knob

- [ ]: Porting

MFB-025		MFB-050	
Code	**Type**	**Code**	**Type**
06	3/8″ NPTF	12	3/4″ NPTF
52	SAE – 8	54	SAE – 12
		56	SAE – 16

Weight:

MFB-025, MFB-050 2.7 kg (6.0 lbs.)

3000-G1.p65, dd

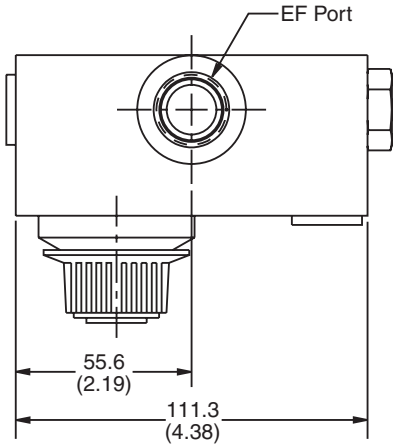
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

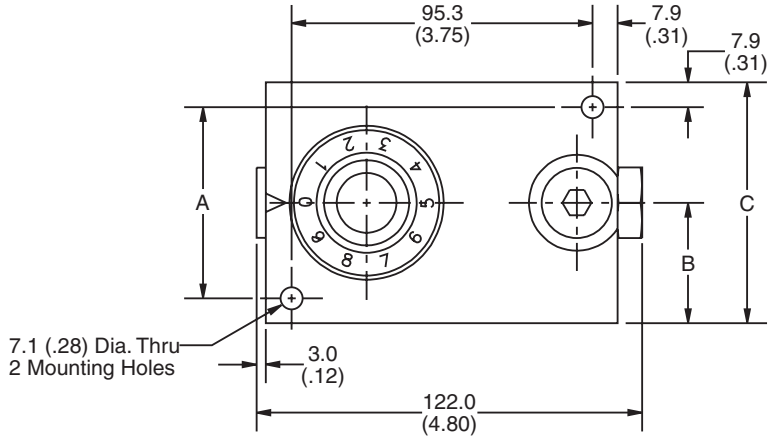
Inch equivalents for millimeter dimensions are shown in (**)

	A	B	C
MFB-025	34.9 (1.38)	25.4 (1.00)	50.8 (2.00)
MFB-050	60.5 (2.38)	38.1 (1.50)	76.2 (3.00)

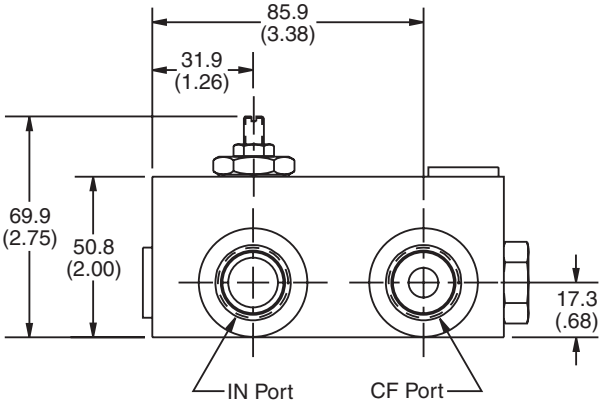
	Code	"EF" Port	"IN" Port	"CF" Port
MFB-025	06	3/8″ NPTF	3/8″ NPTF	3/8″ NPTF
	52	#8 SAE	#8 SAE	#8 SAE
MFB-050	12	3/4″ NPTF	3/4″ NPTF	3/4″ NPTF
	54	#12 SAE	#12 SAE	#12 SAE
	56	#16 SAE	#16 SAE	#12 SAE

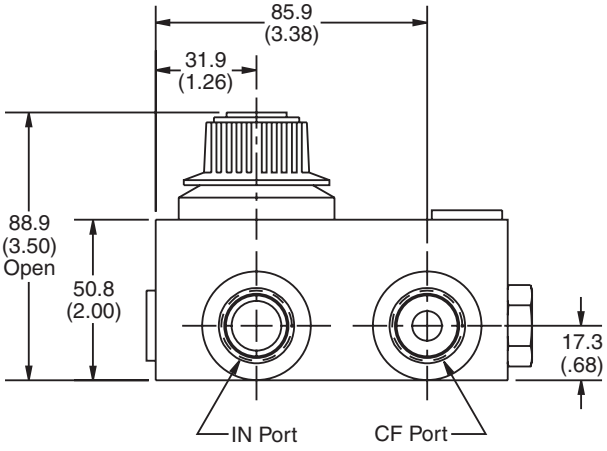
Knob Adjustable





Stem Adjustable





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