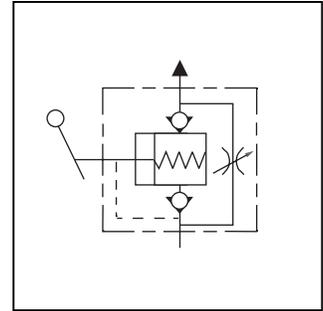


## General Description

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.



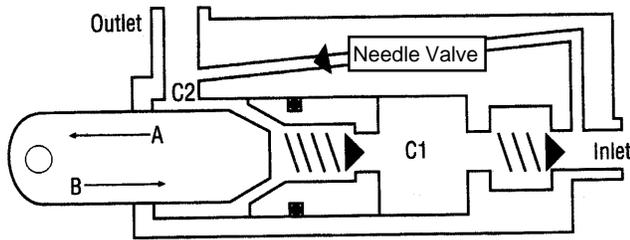
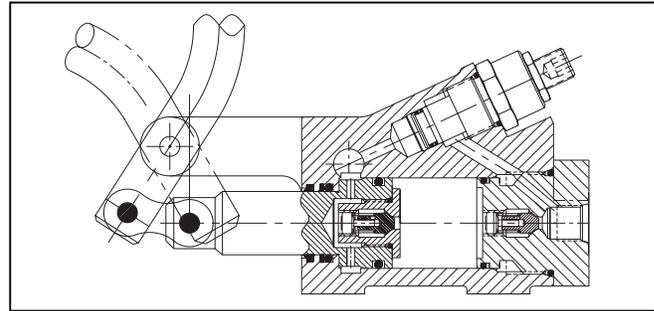
## Operation

### 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

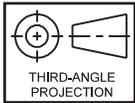
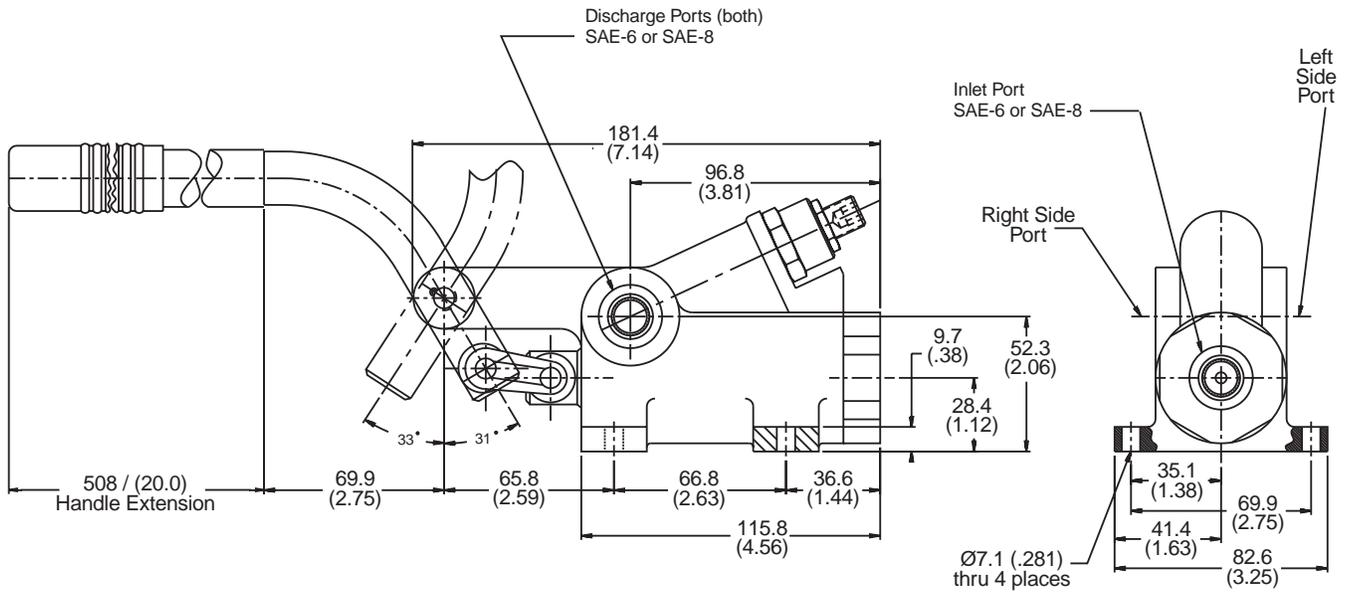
- Lightweight, double-acting hand pump delivers 33 cc (2 cu. in.) per cycle, 2 strokes
- Needle valve cartridge is a dependable, proven component that will allow the bleed-off of a circuit back to tank
- Provides long maintenance-free service for any application where auxiliary hydraulic power is required

## Specifications

<b>Operating Pressure Range</b>	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	<b>Materials: Body</b>	Aluminum alloy
		<b>Piston Handle Extension</b>	Steel
<b>Displacement</b>	33 cc (2 cu. in.) per cycle 2 strokes	<b>Poppets</b>	Stainless steel type 303
<b>Operating Temperature Range</b>	-40°C to 121°C (-40°F to 250°F)	<b>Springs</b>	Stainless steel Type AMS5688
<b>Operating Arc</b>	60°	<b>O-Rings</b>	Synthetic rubber
<b>Fluids</b>	Hydraulic oil	<b>Backup Rings</b>	PTFE
<b>Sizes</b>	SAE 6, SAE 8	<b>Scraper</b>	Synthetic rubber
<b>Type Ports</b>	SAE	<b>Molded Seal</b>	Synthetic rubber
<b>Mounting</b>	Flanges (4) with 7 mm dia. (.281 in. dia.) holes	<b>Handle</b>	Extension furnished 508 mm (20 in.) long. Total 578 mm (22.75 in.)
		<b>Needle Valve Cartridge</b>	Steel

### Dimensions

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



### Ordering Information

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

Code	Description
06	SAE port
08	SAE port

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.)