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HYDRAULIC HAND PUMPS

SERIES 500/550

Technical specifications and dimensions shown in the diagrams:

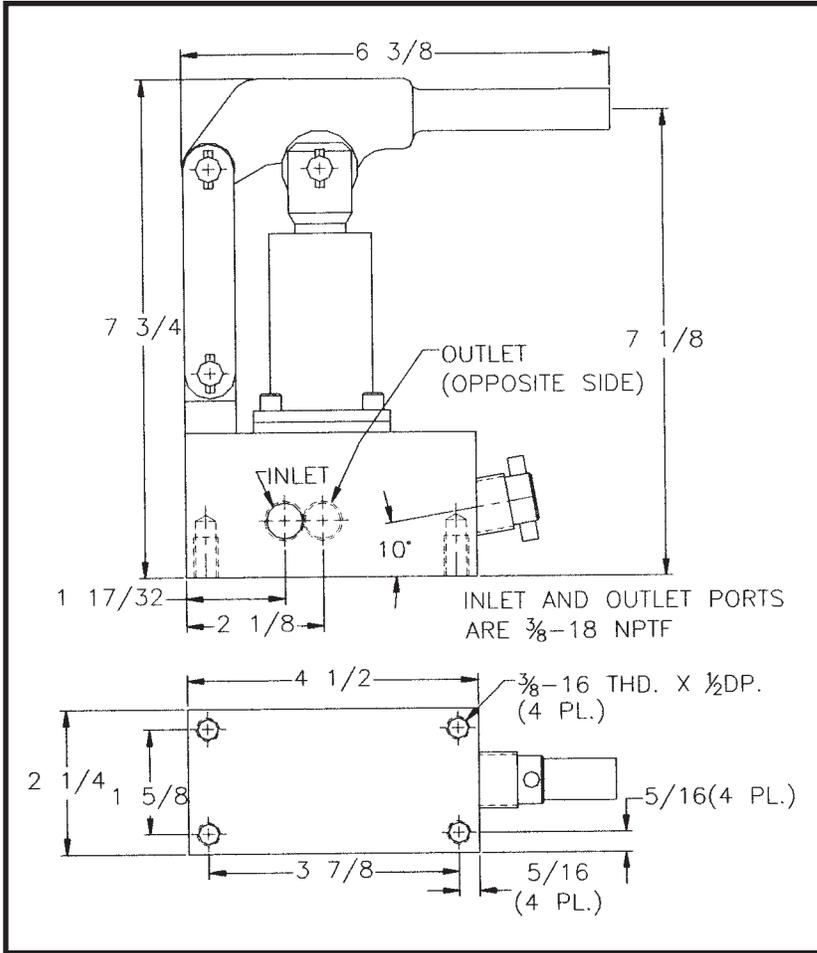
- Outlet ports: 1/4" NPT (4 PL.)
- Dimensions: 3 7/8", 5/16" (4 PL.), 7 1/8" E)
- Pressure apply pedal: 12 1/4"
- Pressure release pedal: 2 1/4"
- Relief valve: 3/8" NPT O1
- Outlet ports: 1/4" NPT (4 PL.)
- Dimensions: 3/8-18 x 3 DEEP TYP 4 PLACES, 3-7/8", 2" MAX.
- Dimensions: 3.88", .31", 1.5", 2.13"
- Dimensions: 3/8-16 UNC-2B x .5DP TYPICAL 8 PLACES, .88 TYP.
- Dimensions: 1/8" NPT COMMON OUTLET PORT, 1/8" NPT OUTLET PORT
- Dimensions: 7 1/8" E)
- Dimensions: 5/16" (4 PL.)
- Dimensions: 3 7/8", 5/16" (4 PL.)

TWO STAGE PUMPS

The series 550/55R two-stage modular hydraulic hand pumps are designed for use with an external hydraulic reservoir. The two-stage, or "HI-LOW", feature allows the operator to displace a larger amount of fluid at lower pressures. It automatically shifts over to a smaller displacement for higher pressures. This feature dramatically reduces cycle times, and number of strokes required, for many applications.

The 550 series pumps are designed for use in systems that utilize an external relief valve.

The 55R series pumps incorporate a factory set, tamper resistant relief valve for those applications where an external relief is impractical or undesirable.



STANDARD FEATURES INCLUDE:

- * All Steel construction for rugged use. (The low-pressure tube is hard coat anodized aluminum)
- * All o-rings – no fiber or metal gaskets to leak.
- * Self-retained release screw that cannot be accidentally removed.
- * Heat-treated pins and linkages for extended life.
- * Ground pistons to prevent seal extrusion.
- * Nitrotec treated pistons for corrosion resistance.
- * 500 psig standard cross-over between large and small bores.

OPTIONAL FEATURES INCLUDE:

- * Optional seals for pumping alternate fluids.
- * Manifold mounting for inlet and/or outlet.
- * Operating handle length – 18 or 36 inches for various handle forces.
- * Custom designs for your particular application requirements.

Two Stage Example:

550 - 12 5 B - 24 - XXXX

Series: 550=Without Relief **55R=With Relief**

Low Pressure Bore in Eighths **12**

High Pressure Bore in Eighths **5**

Seals: **B**=Buna, **V**=Viton, **E**=EPR

Handle Length: **24**" is standard

Relief Setting PSI Omit for 550 Series **XXXX**

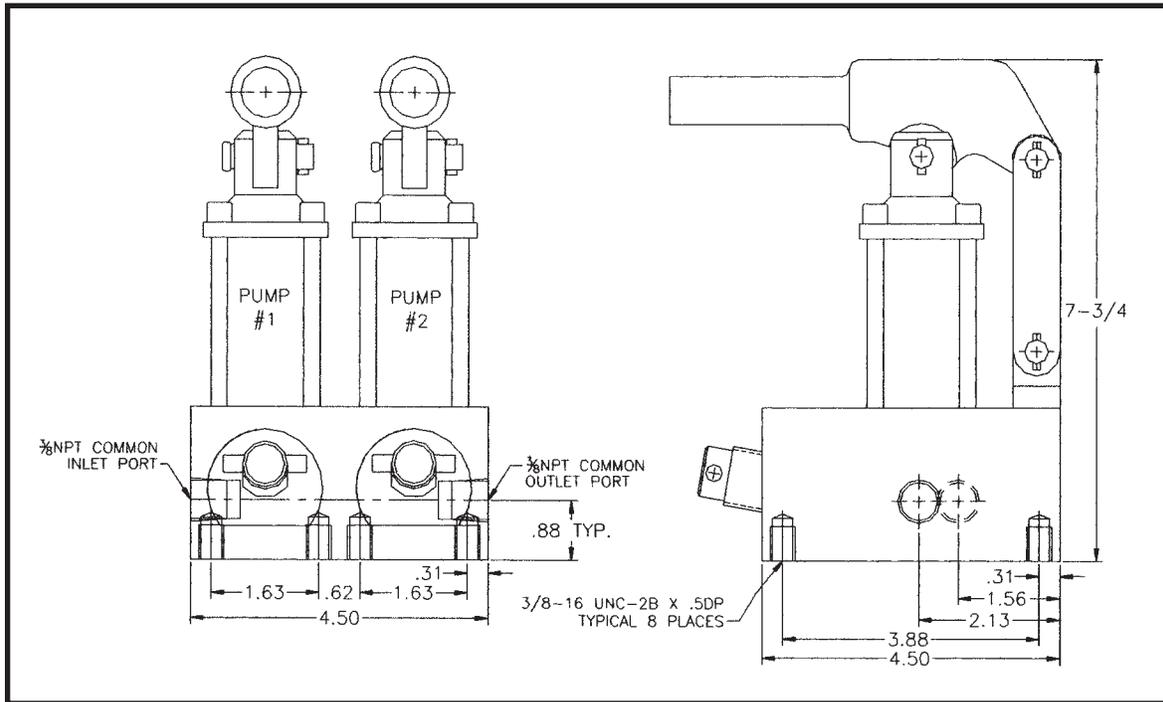
Model Number	Maximum Rated Pressure	Low Pressure Piston Diameter	High Pressure Piston Diameter	Cubic Inches/Stroke		Weight
				Low Pressure	High Pressure	
550-124	5000	1-1/2	1/2	2.1	.26	12
550-125	5000	1-1/2	5/8	2.1	.40	12
550-126	3500	1-1/2	3/4	2.1	.58	12

- WARNING -

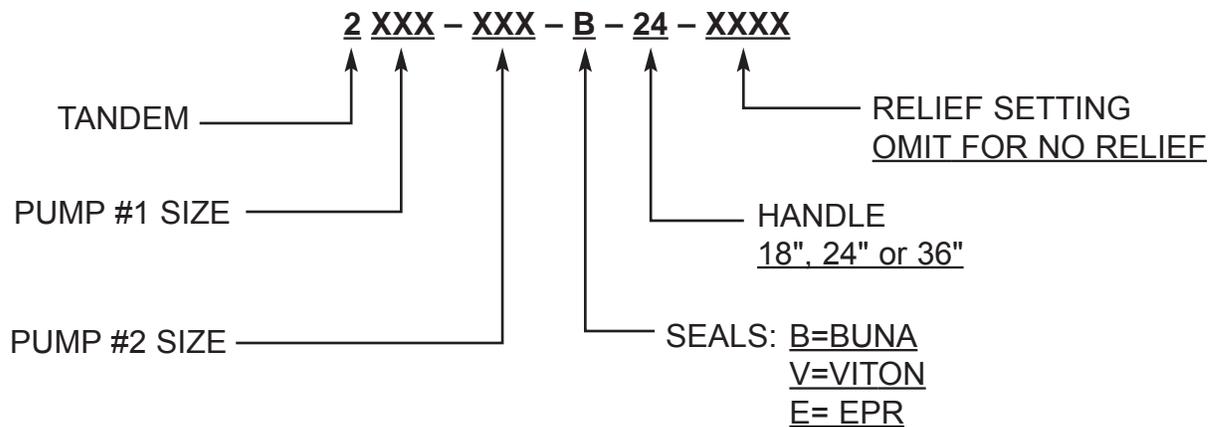
NO internal relief valve is supplied with these pumps unless ordered as an OPTION. Therefore, for safety purposes, it is necessary to plumb a relief valve, on the outlet of these pumps, which is appropriately set below the lowest maximum rating of any system component.

TANDEM PUMPS

Tandem configuration pumps combine any two modular pumps into a single unit. This configuration can yield up to three different displacements and is available with common or separate inlets and outlets. Reservoirs and mounting plates can be added to complete the package. All of the same standard and optional features from the 500/550 series are included in the tandem pumps. A special handle assembly is provided as standard to operate both pumps or just one. Triple and quadruple units are also available consult the factory for details.



ORDERING INFORMATION

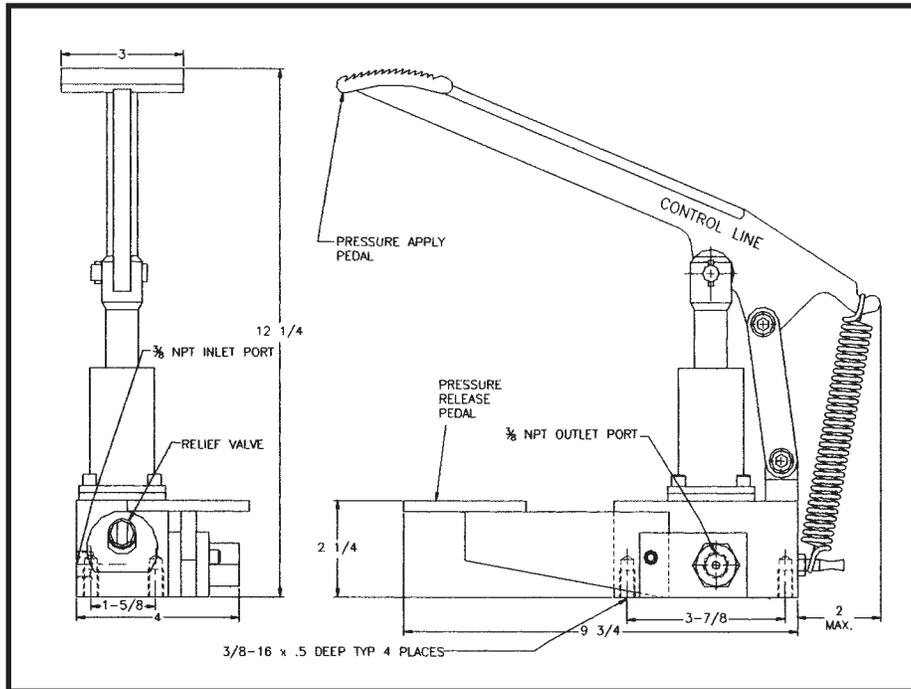


Standard sizes are 030 for 3/8, 040 for 1/2", 050 for 5/8", 060 for 3/4", 080 for 1", 120 for 1-1/2", 124 -125-126 are for two stage configurations. Any two size pumps can be combined, maximum pressure rating is a function of the final configuration, consult engineering for rating. When operated together the displacements and handle forces are cumulative, add for total displacement and force.

Standard configuration is for a common inlet and common outlet, if required a common inlet with separate outlets is available – consult factory.

FOOT OPERATED PUMPS

The 60R/65R Series foot operated hydraulic pumps extend the range of operation for those applications where a hand pump is not ergonomic or practical. Any of the single stage pump 1/2" bore and greater or two-stage pump configurations can be incorporated into the foot pump and where necessary a reservoir can be included to complete the package. As standard the foot-operated pump utilizes one pedal to pump and a separate pedal to release pressure. A relief valve is also standard for foot-operated pumps. Displacements are the same as hand operated pumps, pedal forces and maximum rated pressures are shown below.



ORDERING INFORMATION

6 XX - XXXB - FF - XXXX

FOOT PUMP ———— ↑

PUMP TYPE ———— ↑

0R = SINGLE STAGE

5R = TWO-STAGE

RELIEF SETTING ———— ↑

FOOT OPERATED BOTH PEDALS ———— ↑

SEALS:

B=BUNA

V=VITON

E= EPR

PUMP SIZE:

040 = 1/2" 124 = 1-1/2 X 1/2

050 = 5/8" 125 = 1-1/2 X 5/8

060 = 3/4" 126 = 1-1/2 X 3/4

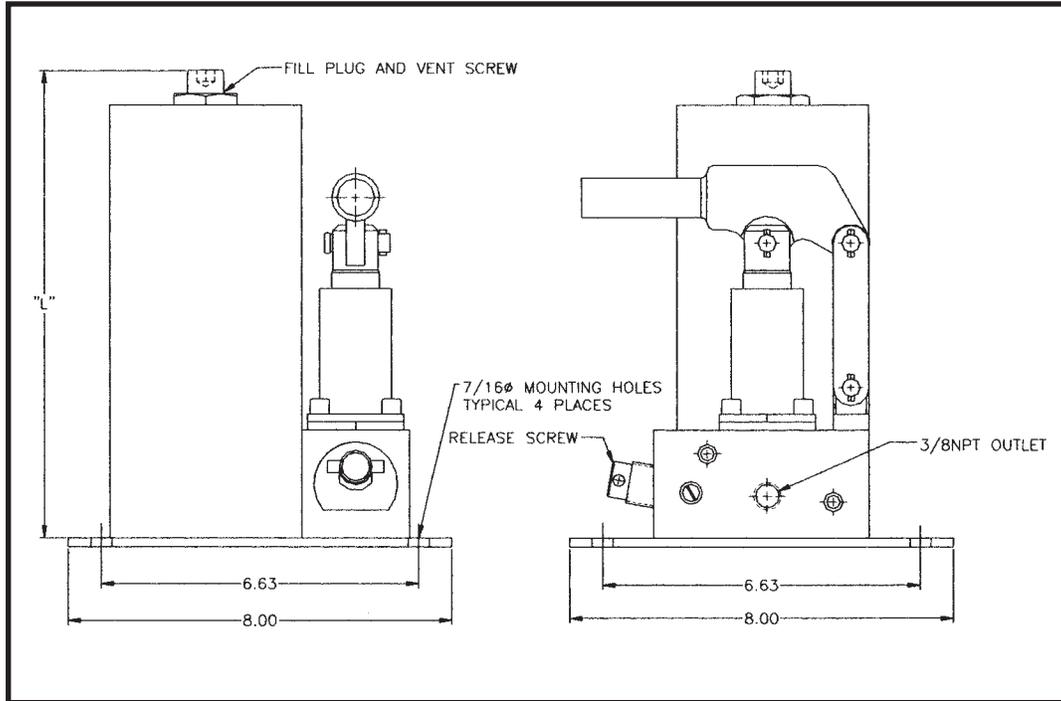
080 = 1"

120 = 1-1/2"

MODEL NUMBER	MAXIMUM RATED PRESSURE	PISTON DIAMETER	PEDAL FORCE PER 100PSI	WEIGHT
60R-040	5000	1/2	2.8	16
60R-050	2500	5/8	4.4	16
60R-060	1750	3/4	6.4	16
60R-080	1000	1	11.4	16
60R-120	500	1-1/2	21.4	17
65R-124	5000	1-1/2 x 1/2	2.8	17
65R-125	2500	1-1/2 x 5/8	4.4	17
65R-126	1750	1-1/2 x 3/4	6.4	17

PUMP & RESERVOIR ASSEMBLIES

The unique all bolt together construction of Control Line pump and reservoir assemblies offer the design engineer the most flexible package to meet most all application needs. Any of the single stage or two-stage pumps can be incorporated, as standard, tandem pumps with reservoirs are available as special order products. The all steel modular construction extends the heavy duty, rugged construction of the pumps into the complete hydraulic power source. Since the units bolt together we can modify any one of the components to meet your application requirements while utilizing standard parts for overall cost savings.



"L" = 7-3/4" for the 80 cubic inch reservoir and 13-1/2" for the 160 cubic inch size, consult the factory for custom size reservoir requirements.

ORDERING INFORMATION

1 XXX - XXX X B - 24 - XXXX

PUMP & RESERVOIR

PUMP TYPE

500, 50R, 550, 55R, 60R, 65R

PUMP SIZE

030,040,050,060,080,120,124,125,126

RELIEF SETTING
OMIT FOR NO RELIEF

HANDLE

18", 24", 36" OR "FF" FOR FOOT PUMP

SEAL TYPE

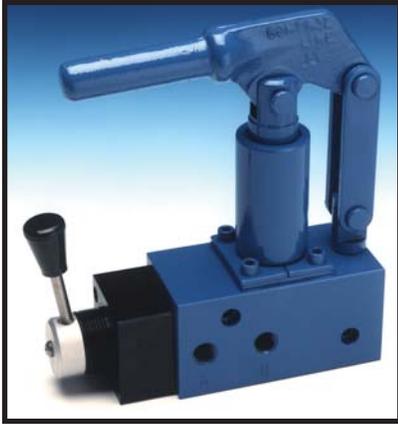
B= BUNA, V=VITON, E=EPR

RESERVOIR CAPACITY

A= 80 Cubic inch, B= 160 Cubic inch, X= Special

Standard units are shipped without oil and unpainted. Units should be mounted with the fill plug up as shown, the vent screw must be open during operation to prevent malfunction.

MODIFIED PRODUCTS

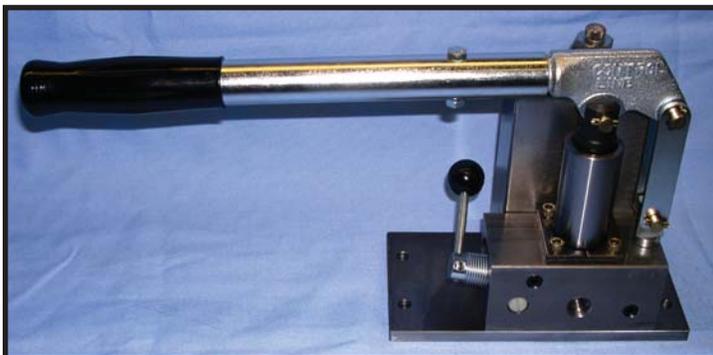


The hand pump with integral 4-way directional control valve incorporates a near zero leak shear seal manual type valve. The 4-way valve can control double acting cylinders or two separate cylinders from one pump. This style of pump can also include a reservoir and base plate to complete the hydraulic power package. There are several configurations for the 4-way including open center, closed center and tandem center. Contact our engineering department with your application specifics.

The integrated package shown at the right is an example of a standard pump manifold mounted to a custom base plate and special reservoir. Completing the package is a two-stage telescopic cylinder assembly. Since the assembly bolts together any one of the components could be changed to a different unit to create a new configuration for similar applications. The modular building style also makes service easier for the field personnel.



The modified pump shown on the left was designed to meet challenging specifications for a customer that required a custom adjustable operating handle interface, non-standard port sizes and a special design for the release screw. We are able to incorporate all of the customer requirements into the final unit so that no field modifications are needed. This saves OEM and user customers both time and money.



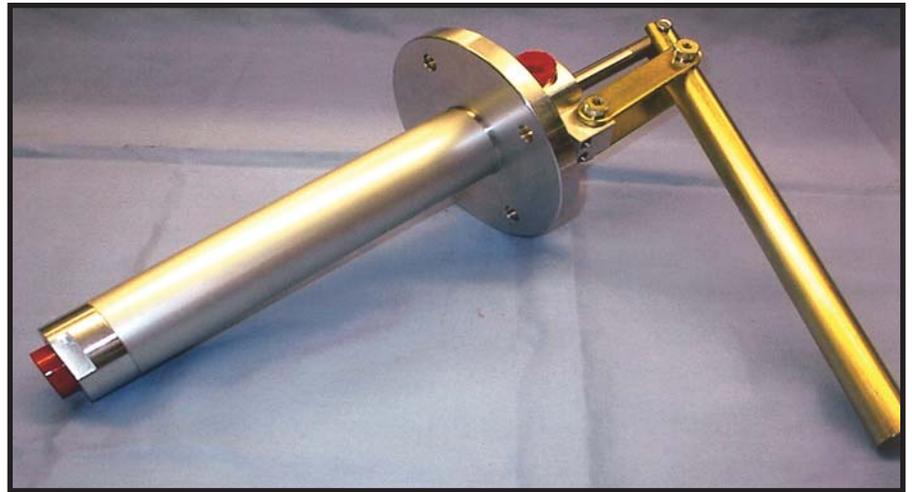
The package shown at the left is a modified pump and reservoir assembly. The customer needed a mount for mount interchange for an existing unit, so we provided a custom base plate, reservoir and also provided them with special plating on the linkage assembly. Our package reduced the number of strokes required for their application by 75%, improving overall efficiency.

CUSTOM PRODUCTION



The pump shown on the left is a custom built all Stainless Steel, double acting unit built for use on offshore equipment in a marine environment as the emergency power source used to open or close watertight passage doors. This pump features a displacement of over 4 cubic inches per complete stroke and is rated for 1000PSI service. Oversize internal passages and ports allow for maximum fluid displacement in an application where output flow is critical.

The pump on the right is a special fluid transfer style unit made from aluminum and zinc plated steel. Designed for use in transferring fluid from a portable fluid service cart to the reservoirs onboard mobile equipment. The handle force, displacement and seal compatibility are key to this type of application.



**CONSULT THE FACTORY AT THE NUMBERS
BELOW FOR OTHER CUSTOM UNITS**



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