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KTI Hydraulics Inc., was established in 1997. The vision of our two founders, George King and Robert W. Habermann, was the KTI design philosophy for the original Universal Manifold® concept.

This concept has inherent integral features that are incorporated in the machined Universal Manifold®. It weighs less than 2 pounds, has eighteen basic hydraulic circuits, allows the use of an assortment of optional pumps with different displacements, a selection of reservoirs with different capacities and will mount to both AC and DC electric motors.

The basic four cavities ("H" concept) uses SAE O-ring cap plugs, cavity plugs or self contained functional cartridge valves. This hardware assortment allows the design to achieve any one of the six basic single acting hydraulic circuits.

An external mounting surface is also incorporated in the machined Universal Manifold® design. It allows for custom multiple valve circuits to be mounted on the basic power unit. Preformed cavities allow the use of hexagon or square steel nuts to lock the body in place for aluminum to aluminum retention.

In 2002, the Universal Manifold® II was conceived and developed for double acting applications. This design complemented the Universal Manifold® I design. The two designs greatly expanded our circuit selection. In 2004, the Universal Manifold® III was developed for dual double acting applications. Then it was adopted for standard snow plow circuit w/power angling, crossover relief & lift check, lower w/ float function. From the snow plow circuit, we were able to design a Double Acting & Single Acting Function in one manifold without requiring additional hydraulic manifold.

All KTI hydraulics power units are 100% fully inspected to stringent test specifications. The tests insure to our customers that they will receive reliable, high quality hydraulic power systems that will perform to our design specifications.



How to order AC and DC Power Units

Circuit 1

A) 101

B) 102

G) 102A RV ONLY

H) 102B CV ONLY

C) 103

R) 103A

D) 104A

E) 104B

F) 105

I) 106

K) 108

L) 109

M) 110

N) 111

Q) 114

S) 114A

Y) 114B

Z) 114C

AA) 114D

T) 208

U) 211

V) 215

X) 216

Pump
2 in³/r
M) PL-0.63 (0.0383)
L) PL-0.80 (0.0543)
B) PL-1.20 (0.0775)
C) PL-1.60 (0.1013)
D) PL-2.10 (0.1324)
N) PL-2.50 (0.1525)
E) PL-2.70 (0.1709)
G) PL-3.20 (0.2026)
H) PL-4.20 (0.2625)
I) PL-5.10 (0.3113)

J) PL-6.00 (0.3681)

Motor 3 A) 12V DC, 4.5" OD 2 term B) 12V DC, 3.0" OD 1 term C) 24V DC, 4.5" OD 2 term D) 0.5HP/1PH/115-230/TEFC/1750 RPM E) 0.5HP/3PH/230-460/TEFC/1750 RPM H) 1.0HP/1PH/115-230/TEFC/1750-3450 RPM I) 1.0HP/3PH/230-460/TEFC/1750-3450 RPM O) 1.5HP/1PH/115-230/TEFC/1750-3450 RPM T) 1.5HP/3PH/230-460/TEFC/1750 RPM L) 2.0HP/1PH/115-230/TEFC/1750-3450 RPM M)2.0HP/3PH/230-460/TEFC/1750-3450 RPM J) 3.0HP/1PH/230/TEFC/3450 RPM K) 3.0HP/3PH/230-460/TEFC/3450 RPM S) 5 HP/1PH/230/ODP/3450 RPM V) 5 HP/3PH/230-460/ODP/3450 R) 12/24V DC, 5.0" OD 2 term, OEFC

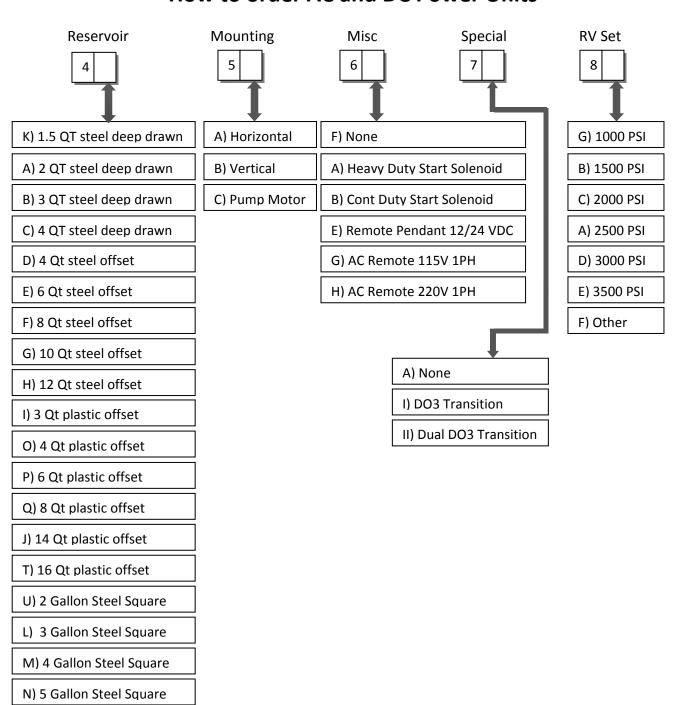
NOTE: 36/48VDC MOTOR AVAILABLE, PLEASE CONSULT FACTORY



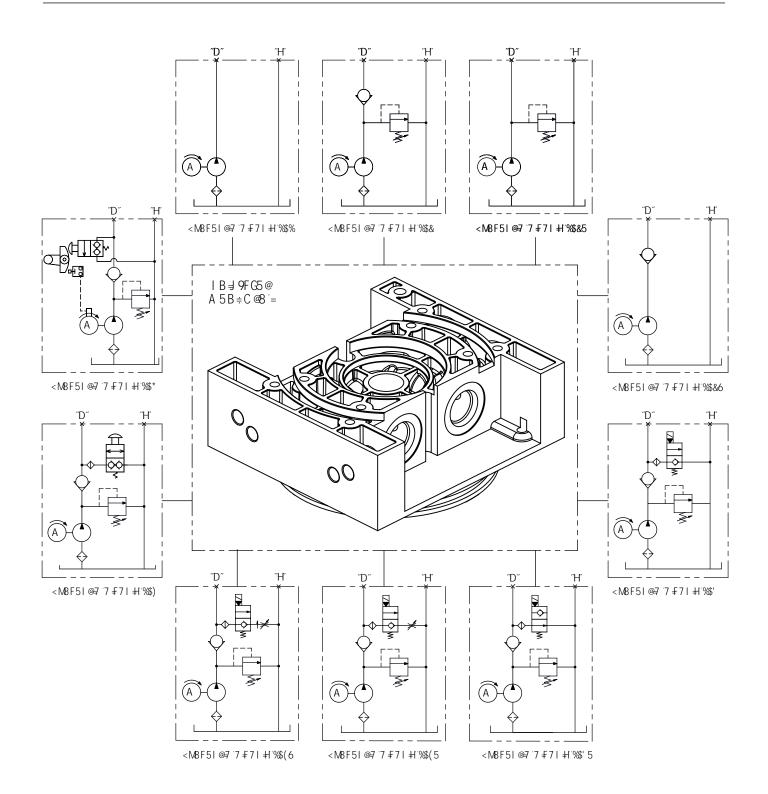
V) 7 Gallon Steel Square

2621 S Daimler St Santa Ana, Ca 92705 Tel. (949) 752-8818, Fax (949) 756-1520 www.ktihydraulicsinc.com

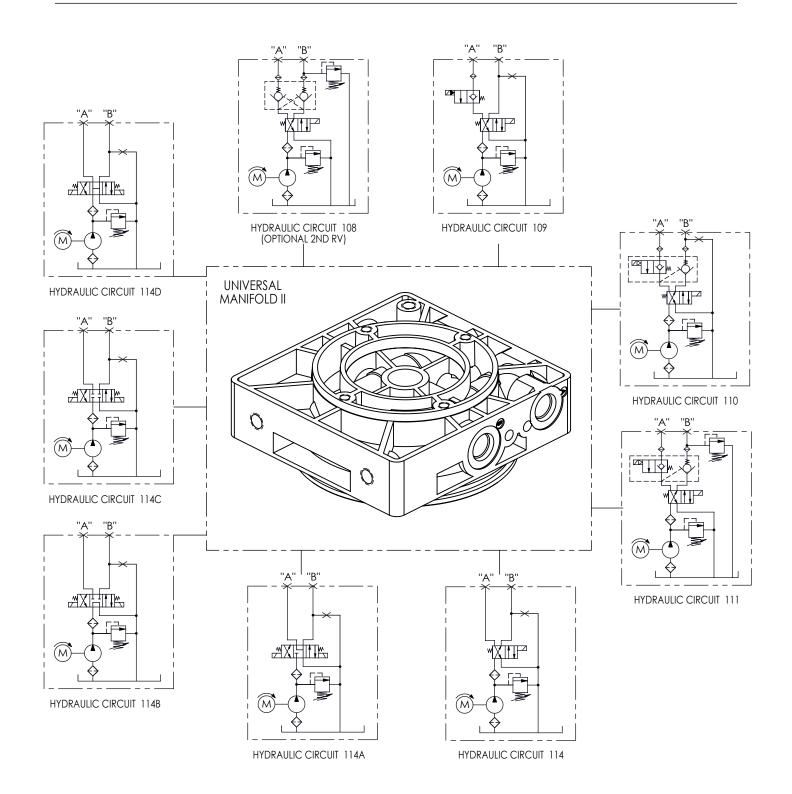
How to order AC and DC Power Units



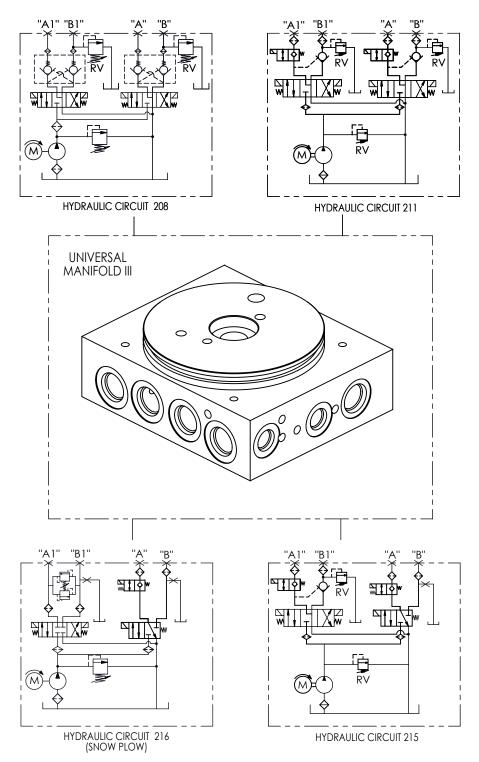






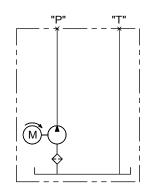






NOTES: INTEGRATE ANY 2 CIRCUITS FROM PREVIOUS PAGE

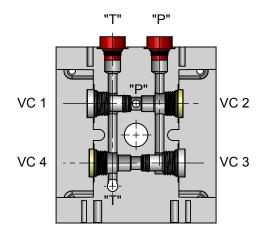


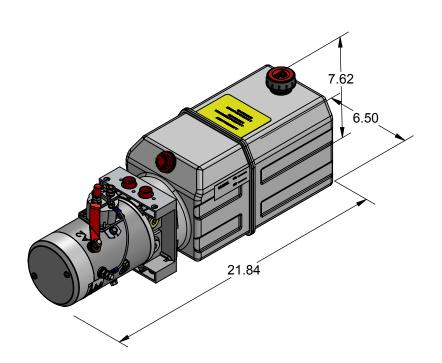


DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 101. Most basic of all circuits. Motor, KTI Universal Manifold I®, Pump, Tank, no valves. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 101



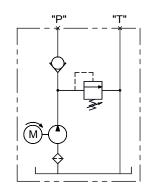


CAVITY 1: VALVE CAVITY PLUG CAVITY 2: VALVE PLUG CAVITY 3: VALVE CAVITY PLUG CAVITY 4: VALVE PLUG AS SHOWN: MOTOR: 12V DC MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 101:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
OD 5.0" 12/24V DC 1/2 HP5 HP AC	1 1 1 1 6.0 0.3681	STEEL RESERVOIR 1.5 QT7 GALLON	MISC DC START SWITCH



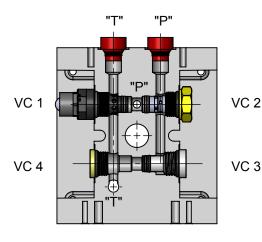


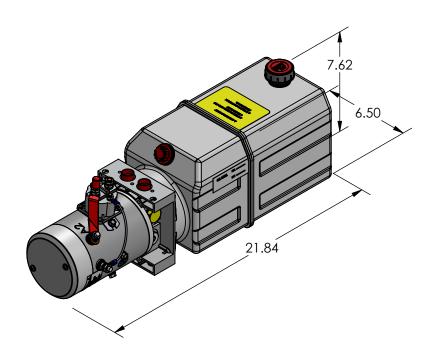
DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 102. Base "P" & "T" power unit.

Motor, KTI Universal Manifold I® (with cartridge check and cartridge relief valve), Pump, Tank. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 102





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: VALVE CAVITY PLUG CAVITY 4: VALVE PLUG

AS SHOWN: MOTOR: 12V DC

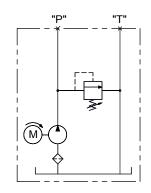
MANIFOLD: KTI UNIVERSAL MANIFOLD I®.

PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 102:

MOTOR PUMP RESERVOIR MOUNTING OD 3.0" 12V DC OD 4.5" 12/24V DC OD 5.0" 12/24V DC ΙN³ PLASTIC RESERVOIR HORIZONTAL PL0.0384 3 QT----14 QT **VERTICAL** 0.6 STEEL RESERVOIR 1.5 QT----7 GALLON 1/2 HP--5 HP AC **MISC** 6.0 0.3681 DC START SWITCH

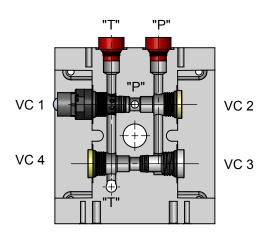


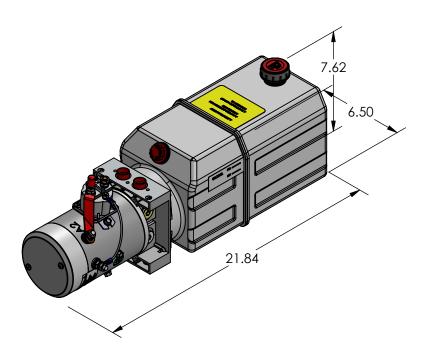


DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 102A.
Base "P" & "T" power unit.
Motor, KTI Universal Manifold I® (with cartridge relief valve), Pump, Tank. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 102A





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: VALVE PLUG CAVITY 3: VALVE CAVITY PLUG CAVITY 4: VALVE PLUG

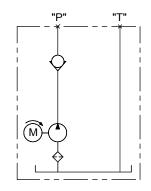
AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 102A:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
OD 5.0" 12/24V DC	1 1		
1/2 HP5 HP AC	1 1	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7 GALLON	DC START SWITCH

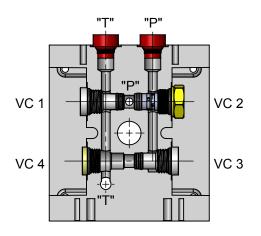


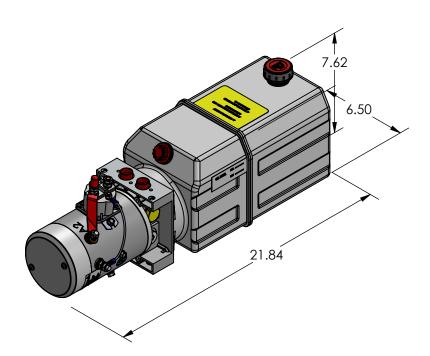


DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 102B.
Base "P" & "T" power unit.
Motor, KTI Universal Manifold I® (with cartridge check valve), Pump, Tank. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 102B





CAVITY 1: VALVE CAVITY PLUG CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: VALVE CAVITY PLUG CAVITY 4: VALVE PLUG

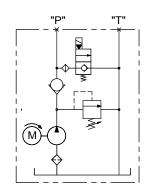
AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 102B:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.038	3 QT14 QT	VERTICAL
OD 5.0" 12/24V DC	1 1		
1/2 HP5 HP AC	1 1	STEEL RESERVOIR	MISC
	6.0 0.36	81 1.5 QT7 GALLON	DC START SWITCH





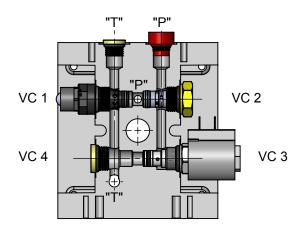
DESCRIPTION:

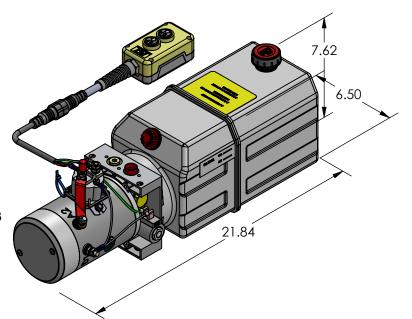
KTI Universal Manifold I, Hydraulic Circuit 103. Base lift, check, and lowering circuit power unit.

Motor, KTI Universal Manifold I® (with cartridge relief valve, cartridge check valve, cartridge NC 2 way poppet valve), Pump, Tank.

"P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 103





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: NC 2W2P SOLENOID VALVE CAVITY 4: VALVE PLUG

AS SHOWN:

MOTOR: 12V DC MANIFOLD: KTI UNIVERSAL MANIFOLD I®.

PUMP: PL SERIES

RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 103:

MOTOR OD 3.0" 12V DC OD 4.5" 12/24V DC OD 5.0" 12/24V DC 1/2 HP--5 HP AC

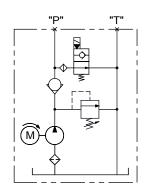
PUMP IN³ PL0.6 0.0384 6.0 0.3681

RESERVOIR PLASTIC RESERVOIR 3 QT----14 QT

STEEL RESERVOIR 1.5 QT----7 GALLON **MOUNTING HORIZONTAL VERTICAL**

MISC DC START SWITCH REMOTE PENDANT





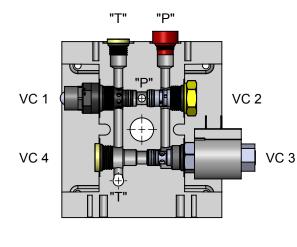
DESCRIPTION:

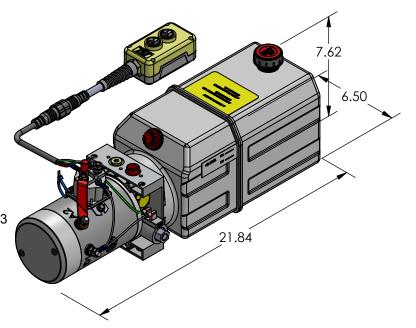
KTI Universal Manifold I, Hydraulic Circuit 103A. Base lift, check, and lowering circuit power unit.

Motor, KTI Universal Manifold I® (with cartridge relief valve, cartridge check valve, cartridge NO 2 way poppet valve), Pump, Tank.

"P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 103A





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: NO 2W2P SOLENOID VALVE CAVITY 4: VALVE PLUG

MOTOD

AS SHOWN:

MOTOR: 12V DC
MANIFOLD: KTI UNIVERSAL MANIFOLD I®.
PUMP: PL SERIES

DECEDVAID

RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 103A:

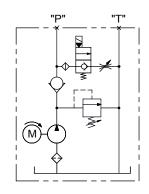
MOTOR	PUNP	KESEKVUIK
OD 3.0" 12V DC	PL IN³	PLASTIC RESERVOIR
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT
OD 5.0" 12/24V DC	I I	
1/2 HP5 HP AC	1 1	STEEL RESERVOIR
	6.0 0.3681	1.5 QT7 GALLON

DIIMD

MOUNTING **HORIZONTAL VERTICAL**

DC START SWITCH REMOTE PENDANT



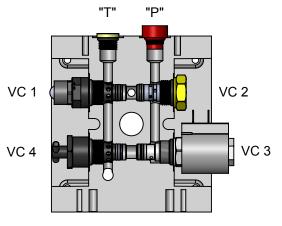


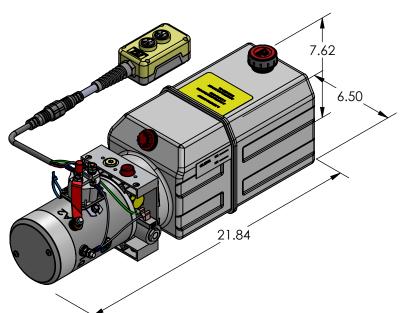
DESCRIPTION:

KTI Universal Manifold I. Hydraulic Circuit 104A. Base lift, check, and lowering with adjustable return flow power unit.

Motor, KTI Universal Manifold I® (with cartridge relief valve, cartridge check valve, cartridge NC 2 way valve, and adjustable flow control valve), Pump, Tank. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 104A





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: NC 2W2P SOLENOID VALVE

CAVITY 4: ADJUSTABLE FLOW CONTROL VALVE

AS SHOWN:

MOTOR: 12V DC MANIFOLD: KTI UNIVERSAL MANIFOLD I®.

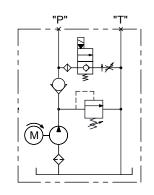
PUMP: PL SERIES

RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 104A:

MOTOR PUMP RESERVOIR MOUNTING OD 3.0" 12V DC OD 4.5" 12/24V DC OD 5.0" 12/24V DC PL IΝ³ PLASTIC RESERVOIR **HORIZONTAL** 0.0384 3 QT----14 QT VERTICAL 0.6 1/2 HP--5 HP AC STEEL RESERVOIR **MISC** DC START SWITCH 6.0 0.3681 1.5 QT----7 GALLON REMOTE PENDANT

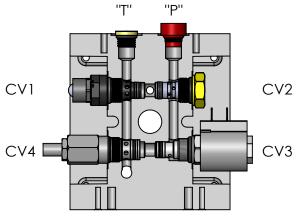


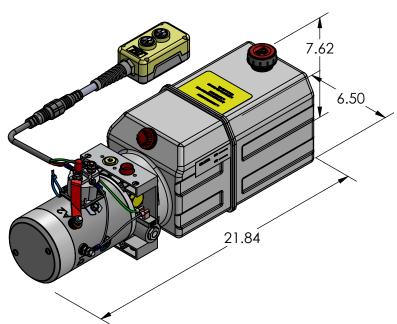


DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 104B. Base lift,check, and lowering with fully adjustable pressure compensated return flow power unit. Motor, KTI Universal Manifold I® (with cartridge relief valve, cartridge check valve, cartridge NC 2 way valve, and pressure compensated adjustable flow control valve), Pump, Tank. "P" & "T" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 104B





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: NC 2W2P SOLENOID VALVE CAVITY 4: PRESSURE COMPENSATED ADJUSTABLE FLOW CONTROL **VALVE**

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

HYDRAULIC CIRCUIT 104B:

MOTOR OD 3.0" 12V DC OD 4.5" 12/24V DC OD 5.0" 12/24V DC 1/2 HP--5 HP AC

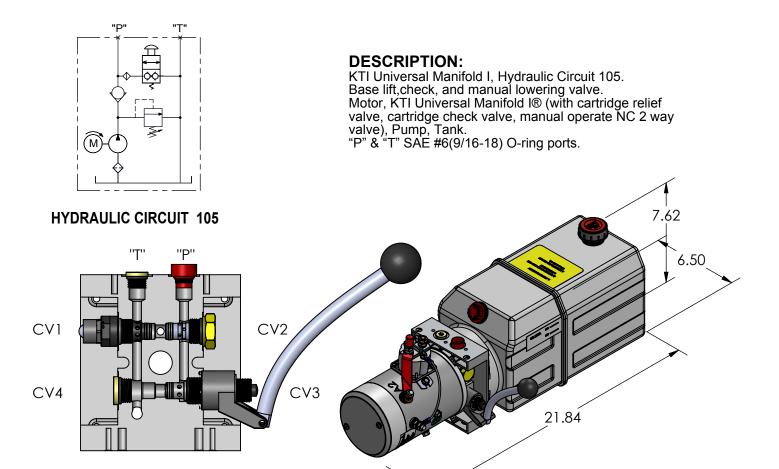
PUMP PLIN³ 0.0384 0.6 6.0 0.3681

RESERVOIR PLASTIC RESERVOIR 3 QT----14 QT

STEEL RESERVOIR 1.5 QT----7 GALLON **MOUNTING HORIZONTAL VERTICAL**

DC START SWITCH REMOTE PENDANT





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: MANUAL LOWERING VALVE CAVITY 4: VALVE PLUG

DIIMD

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

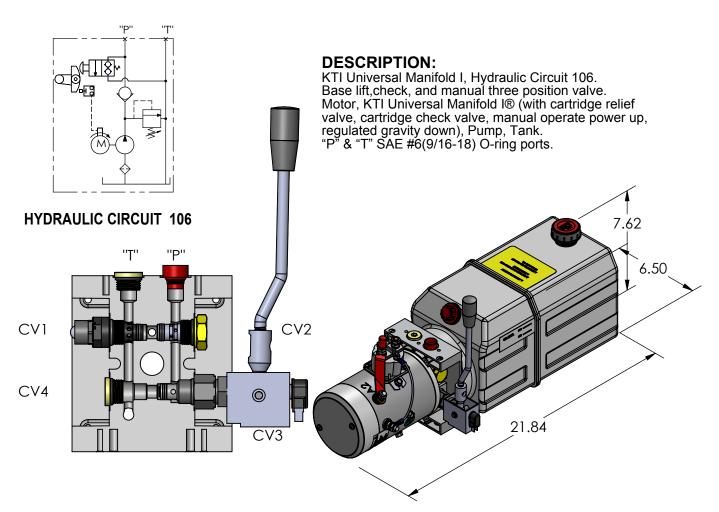
MOUNTING

HYDRAULIC CIRCUIT 105:

MOTOR	PUMP	KESEKVUIK	MOONTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
OD 5.0" 12/24V DC	1 1		
1/2 HP5 HP AC	1 1	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7 GALLON	DC START SWITCH

DESERVAIR





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: CARTRIDGE CHECK VALVE CAVITY 3: MANUAL OPERATE POWER UP, GRAVITY DOWN VALVE

DIIMD

CAVITY 4: VALVE PLUG

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD I®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

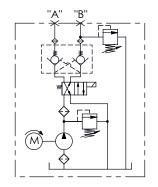
MOUNTING

HYDRAULIC CIRCUIT 106:

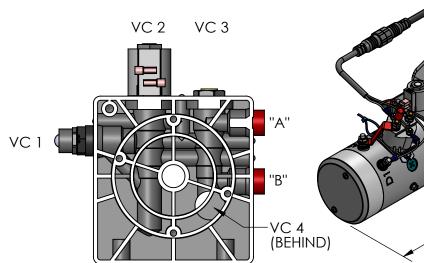
MOTOR	PUMP	KESEKVUIK	MOONTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
OD 5.0" 12/24V DC	1 1		
1/2 HP5 HP AC	1 1	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7 GALLON	DC START SWITCH

DESERVAIR





HYDRAULIC CIRCUIT 108 (OPTIONAL 2ND RV)



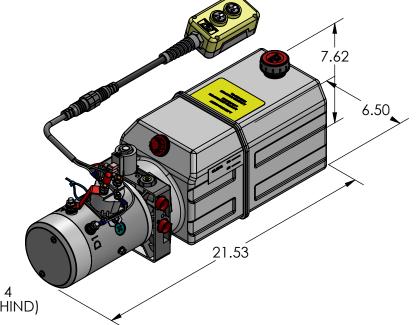
CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W2P DIRECTION VALVE

CAVITY 3: DUAL PILOT OPERATED CHECK

CAVITY 4: (OPTIONAL 2ND RELIEF VALVE)

DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 108. Double acting circuit for power up, power down operation. Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w2p valve, dual pilot operated check valve, optional secondary relief valve), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.



AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

HYDRAULIC CIRCUIT 108:

MOTOR PUMP OD 3.0" 12V DC OD 4.5" 12/24V DC PL0.6 6.0

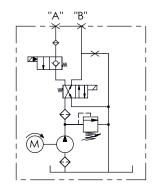
IΝ³ 0.0384 0.3681 1.5 QT----7 GALLON

RESERVOIR PLASTIC RESERVOIR 3 QT----14 QT STEEL RESERVOIR

MOUNTING HORIZONTAL VERTICAL

DC START SWITCH REMOTE PENDANT

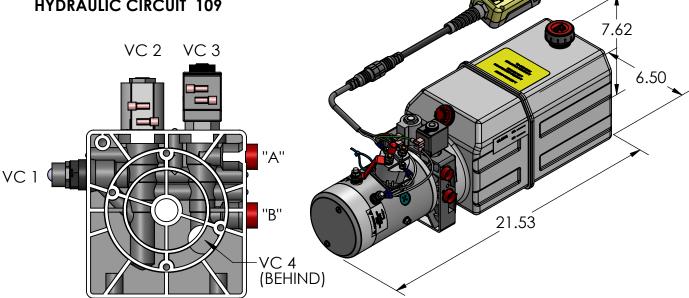




DESCRIPTION:

KTI Universal Manifold I, Hydraulic Circuit 109.
Double acting circuit for power up, power down operation.
Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w2p valve, NC 2w valve), Pump, Tank.
"A" & "B" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 109



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W2P DIRECTION VALVE CAVITY 3: NC 2W VALVE CAVITY 4: PLUG

DIIMD

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

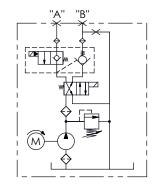
MACHINITING

HYDRAULIC CIRCUIT 109:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384 I I	3 QT14 QT	VERTRICAL
	i i	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7 GALLON	DC START SWITCH REMOTE PENDANT

DECEDIA

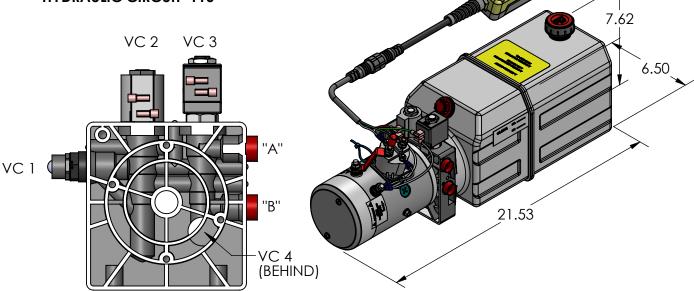




DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 110.
Double acting circuit for power up, power down operation.
Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w2p valve, KTI proprietary load holding valve), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 110



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W2P DIRECTION VALVE

CAVITY 3: KTI PROPRIETARY LOAD HOLDING

DIIMD

CAVITY 4: PLUG

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

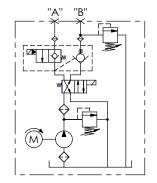
MACHINITING

HYDRAULIC CIRCUIT 110:

OD 3.0" 12V DC OD 4.5" 12/24V DC	PUMP PL IN ³ 0.6 0.0384	PLASTIC RESERVOIR 3 QT14 QT	HORIZONTAL VERTICAL
	6.0 0.3681	STEEL RESERVOIR 1.5 QT7 GALLON	MISC DC START SWITCH REMOTE PENDANT

DECEDIA





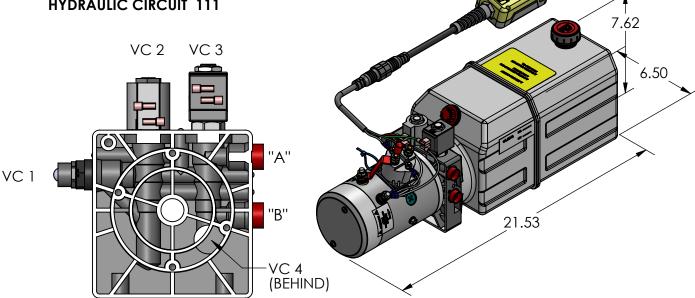
DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 111.

Double acting circuit for power up, power down operation.

Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w2p valve, KTI proprietary load holding valve, secondary relief valve), Pump, Tank.
"A" & "B" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 111



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W2P DIRECTION VALVE

CAVITY 3: KTI PROPRIETARY LOAD HOLDING

VALVE

CAVITY 4: 2ND RELIEF VALVE

AS SHOWN: MOTOR: 12V DC

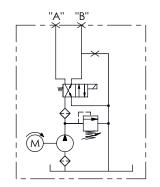
MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

HYDRAULIC CIRCUIT 111:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384 I I	3 QT14 QT	VERTICAL
	1 1	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7 GALLON	DC START SWITCH REMOTE PENDANT

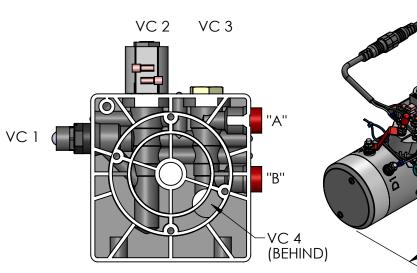


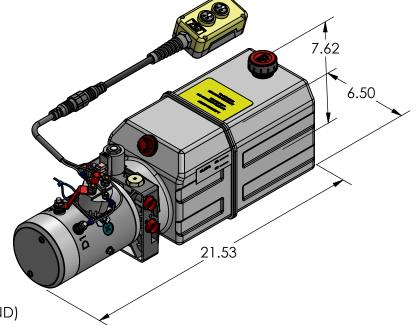


DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 114.
Double acting circuit for power up, power down operation.
Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w2p valve, 4w cavity plug), Pump, Tank.
"A" & "B" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 114





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W2P DIRECTION VALVE CAVITY 3: 4W CAVITY PLUG CAVITY 4: PLUG

AS SHOWN: MOTOR: 12V DC

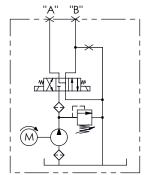
MANIFOLD: KTI UNIVERSAL MANIFOLD II®.
PUMP: PL SERIES
RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

HYDRAULIC CIRCUIT 114:

MOTOR	PUMP	RESERVOIR	MOUNTING
OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
	!!!	OTEEL DECEDITOR	14100
	I I	STEEL RESERVOIR	MISC
	6.0 0.3681	1.5 QT7GALLON	DC START SWITCH
			REMOTE PENDANT



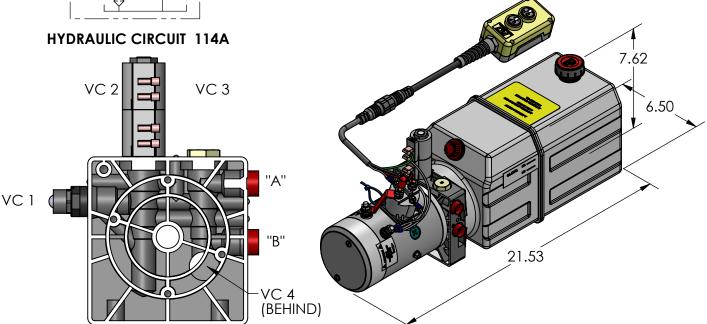


DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 114A.

Double acting circuit for power up, power down operation.

Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w3p valve, 4w cavity plug), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W3P MOTOR CENTER VALVE CAVITY 3: 4W CAVITY PLUG CAVITY 4: PLUGGED

DIIMD

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

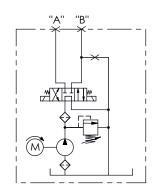
MACHINITING

HYDRAULIC CIRCUIT 114A:

OD 3.0" 12V DC OD 4.5" 12/24V DC	PUMP PL IN ³ 0.6 0.0384	PLASTIC RESERVOIR 3 QT14 QT	HORIZONTAL VERTICAL
	6.0 0.3681	STEEL RESERVOIR 1.5 QT7 GALLON	MISC DC START SWITCH REMOTE PENDANT

DECEDIA

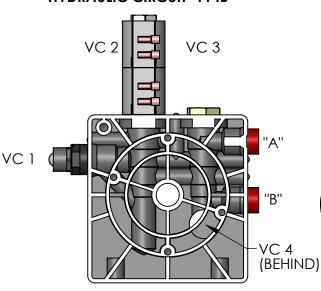


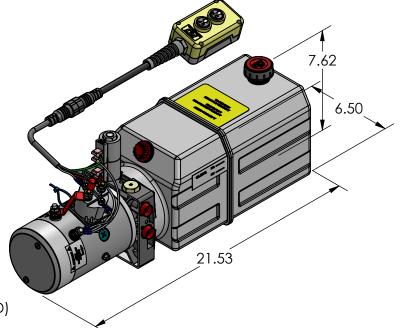


DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 114B. Double acting circuit for power up, power down operation. Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w3p valve, 4w cavity plug), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.

HYDRAULIC CIRCUIT 114B





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W3P TANDEM CENTER VALVE CAVITY 3: 4W CAVITY PLUG CAVITY 4: PLUGGED

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

HYDRAULIC CIRCUIT 114B:

MOTOR OD 3.0" 12V DC OD 4.5" 12/24V DC

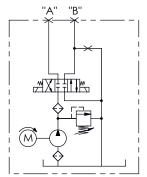
PUMP PLIΝ³ 0.0384 0.6 0.3681 6.0

RESERVOIR PLASTIC RESERVOIR 3 QT----14 QT

STEEL RESERVOIR 1.5 QT----7 GALLON **MOUNTING HORIZONTAL VERTICAL**

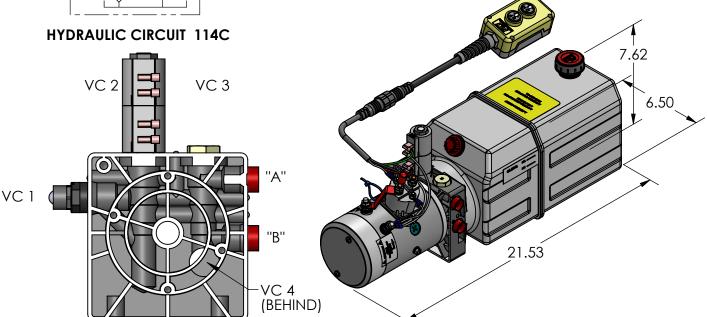
DC START SWITCH REMOTE PENDANT





DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 114C.
Double acting circuit for power up, power down operation.
Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w3p valve, 4w cavity plug), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W3P CLOSE CENTER VALVE CAVITY 3: 4W CAVITY PLUG CAVITY 4: PLUGGED

DIIMD

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

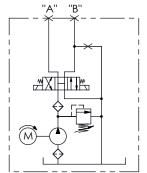
MACHINITING

HYDRAULIC CIRCUIT 114C:

OD 3.0" 12V DC OD 4.5" 12/24V DC	PUMP PL IN ³ 0.6 0.0384	PLASTIC RESERVOIR 3 QT14 QT	HORIZONTAL VERTICAL
	6.0 0.3681	STEEL RESERVOIR 1.5 QT7 GALLON	MISC DC START SWITCH REMOTE PENDANT

DECEDIA



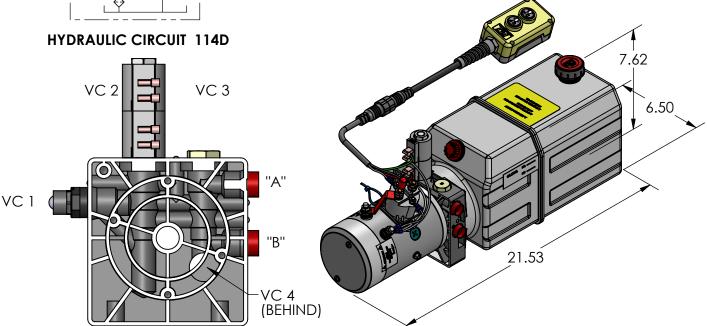


DESCRIPTION:

KTI Universal Manifold II, Hydraulic Circuit 114D.

Double acting circuit for power up, power down operation.

Motor, KTI Universal Manifold II® (with cartridge relief valve, 4w3p valve, 4w cavity plug), Pump, Tank. "A" & "B" SAE #6(9/16-18) O-ring ports.



CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: 4W3P OPEN CENTER VALVE CAVITY 3: 4W CAVITY PLUG CAVITY 4: PLUGGED

DIIMD

MOTOD

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI UNIVERSAL MANIFOLD II®. PUMP: PL SERIES RESERVOIR: 6 QT PLASTIC

2 BUTTON REMOTE PENDANT W/QD

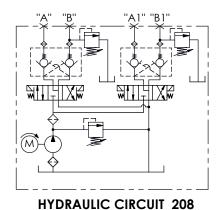
MOUNTING

HYDRAULIC CIRCUIT 114D:

OD 3.0" 12V DC	PL IN ³	PLASTIC RESERVOIR	HORIZONTAL
OD 4.5" 12/24V DC	0.6 0.0384	3 QT14 QT	VERTICAL
	6.0 0.3681	STEEL RESERVOIR 1.5 QT7 GALLON	MISC DC START SWITCH REMOTE PENDANT

DESERVAIR

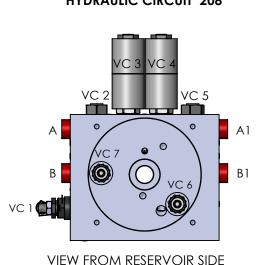


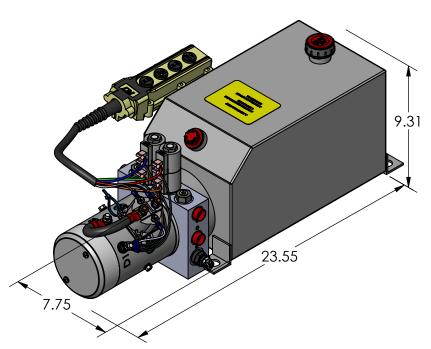


DESCRIPTION:

KTI Universal Manifold III, Hydraulic Circuit 208. Dual double acting circuit for dual independent double acting operation.

Motor, KTI Manifold® (with cartridge relief valve, dual pilot operated check valve, 4w3p motor center cartridge solenoid valve, secondary relief valve), Pump, Tank. "A" & "B" "A1" & "B1" SAE #6(9/16-18) O-ring ports.





CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: DUAL PILOT OPERATED CHECK VALVE CAVITY 3: 4W3P MOTOR CENTER VALVE CAVITY 4: 4W3P MOTOR CENTER VALVE CAVITY 5: DUAL PILOT OPERATED CHECK VALVE

CAVITY 6: 2ND RELIEF VALVE

CAVITY 7: 2ND RELIEF VALVE

AS SHOWN: MOTOR: 12V DC

MANIFOLD: KTI MANIFOLD III®.

PUMP: PL SERIES RESERVOIR: 12 QT STEEL **4 BUTTON REMOTE PENDANT**

HYDRAULIC CIRCUIT 208:

MOTOR OD 3.0" 12V DC OD 4.5" 12/24V DC

PUMP ΙN³ PL0.6 0.0384 6.0 0.3681

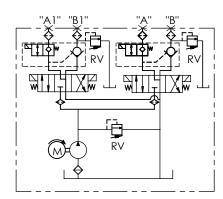
RESERVOIR PLASTIC RESERVOIR 3 QT----14 QT STEEL RESERVOIR

1.5 QT----7 GALLON

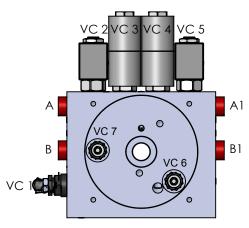
MOUNTING **HORIZONTAL** VERTICAL

DC START SWITCH REMOTE PENDANT





HYDRAULIC CIRCUIT 211



VIEW FROM RESERVOIR SIDE

CAVITY 1: CARTRIDGE RELIEF VALVE CAVITY 2: KTI PROPRIETARY LOAD

HOLDING VALVE CAVITY 3: 4W3P MOTOR CENTER, CARTRIDGE SOLENOID VALVE

CAVITY 4: 4W3P MOTOR CENTER, CARTRIDGE SOLENOID VALVE

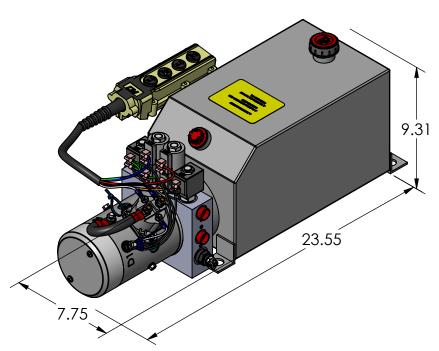
CAVITY 5: KTI PROPRIETARY LOAD

HOLDING VALVE **CAVITY 6: 2ND RELIEF VALVE CAVITY 7: 2ND RELIEF VALVE**

DESCRIPTION:

KTI Universal Manifold III, Hydraulic Circuit 211. Dual double acting circuit for dual independent double acting operation.

Motor, KTI Manifold® (with cartridge relief valve, KTI proprietary load holding valve, 4w3p motor center cartridge solenoid valve, secondary relief valve), Pump, Tank. "A" & "B" "A1" & "B1" SAE #6(9/16-18) O-ring ports.



AS SHOWN:

MOTOR: 12V DC

MANIFOLD: KTI MANIFOLD III®. PUMP: PL SERIES RESERVOIR: 12 QT STEEL **4 BUTTON REMOTE PENDANT**

HYDRAULIC CIRCUIT 211:

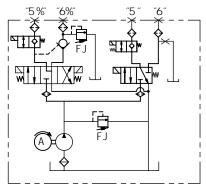
MOTOR OD 3.0" 12V DC OD 4.5" 12/24V DC

PUMP IN^3 0.6 0.0384 6.0 0.3681 **RESERVOIR** PLASTIC RESERVOIR 3 QT----14 QT STEEL RESERVOIR

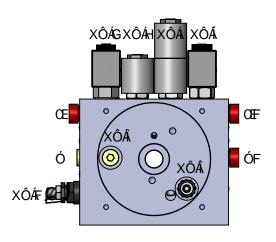
MOUNTING HORIZONTAL VERTICAL

MISC DC START SWITCH 1.5 QT----7 GALLON REMOTE PENDANT





PŸÖÜŒNŠÓÓÓÖÓVAVÁŒFÍ



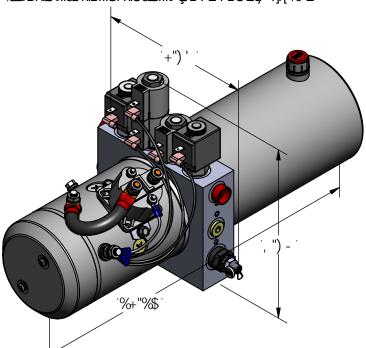
XOÒY ÁQÜUT ÁÜ ÒÙ ÒÜXU OÜ ÁÙ OÖ Ò

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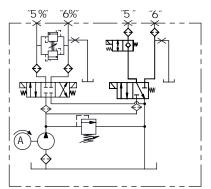


ŒÙÂÙPUY ÞK TUVUÜKÆGXÁÖÔ T Œ ŒU ŠÖKŚVŒT Œ ŒU ŠÖÍ ÁŒE ÚWT ÚKÚ ŠÁJÒÜÕÒÙ ÜÒÙÒÜXUÕÜKÉÁĴVÁJVÒÒŠ

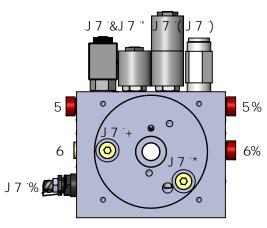
PŸÖÜŒNŠŒÁÔŒJÔWQYÁŒFÍK

A CHCF: WWW WWW IS A DAWWWW WWW IS GO F J C F : WWW WWW CI BHB;
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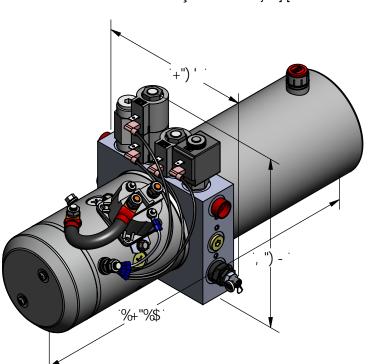
J⇒K: FCA F9G9FJC FG-89

ÔŒXQYŸÆKÔŒÏVÜÕÕÕÁÜÒŠÒØÁXŒŠXÒ ÔŒXQYŸÆKŶÕÁGYŒŸÁXŒŠXÒ ÔŒXQYÄKÁ YŒJÁJÚUUŠÁYŸÚÒÁÔŒÏVÜÕÕÕ ÁWWWWWWÜUŠÒÞUŌÁXŒŠXÒ ÔŒXQYÄ KÁ YHÚÆŠUÙÒÆÕÒÞVÒÜÁJÚUUŠÁYŸÚÒÁ ÁWWWWWOŒÏVÜÕÕÕÁJUŠÒÞUÖÁXŒŠXÒ ÔŒXQYÄ KŒËRNŮVŒŚŎÆÖÖÒŌVŒJÞŒŠÆ AWWWWWOŒĴÜÖÖÓVŒJÞŒŚÁJŎŠÒØÁXŒŠXÒÁ ÔŒXQYÄ KÁJŠWÕ ÔŒXQYÄ KÁJŠWÕ

89G7F-DH-CB.

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CEÙÁÙPUY ÞK TUVUÜKÁFGXÁÖÔ TŒÞŒYUŠÖKÁSVŒÍ ŒÞŒYUŠÖÍ ÁŒŒÈ ÚWTÚKÁÚŠÁÙÒÜÖÒÙ ÜÒÙÒÜXUŌÜKKŒÁŨVÁÙVÒÒŠ

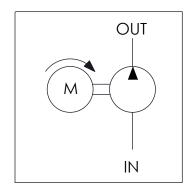
PŸÖÜŒNŠŒÁÔŒJÔWQYÁŒFÎK

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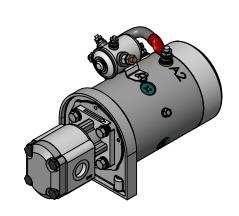


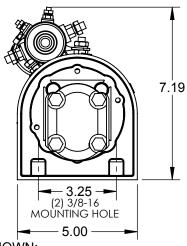
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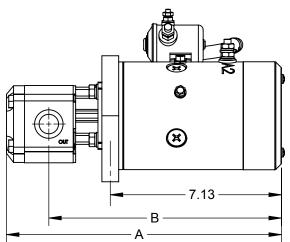
KTI 12/24V DC AUXILIARY PUMP & MOTOR ASSEMBLY.



HYDRAULIC CIRCUIT







AS SHOWN:

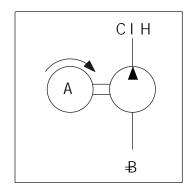
MOTOR: 12/24V DC 4.5" DIAMETER MOTOR STARTER: CONTINUOUS DUTY START SOLENOID PUMP: STN PRESSURE LOADED GEAR PUMP

12V DC MODEL NUMBER	24V DC MODEL NUMBER	PUMP DISPL. in³/r (mL/r)	DIM A (IN)	DIM B (IN)	INLET	OUTLET
DC 4002	DC 4012	0.083 (1.36)	15.33	9.75		
DC 4003	DC 4013	0.125 (2.05)	15.41	9.79		
DC 4004	DC 4014	0.167 (2.74)	15.49	9.84	SAE #10 7/8-14	SAE #8 3/4-16
DC 4005	DC 4015	0.209 (3.24)	15.57	9.87	,,,,,,,,	,
DC 4006	DC 4016	0.250 (4.10)	15.64	9.91		

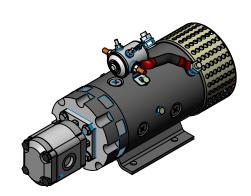


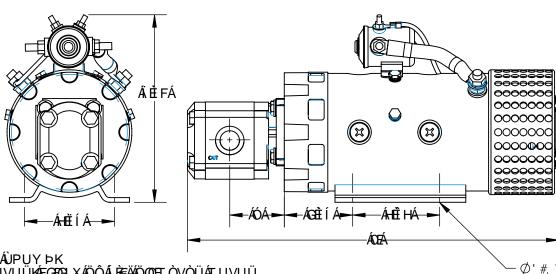
> A CIBHB; < C @9G

89G7F=DH-CB. SVOÁFGENI XÁÖÔÁOEWÝ CŠODEÜ ŸÁÚWT ÚÁBÁT U VU ÜÁOEÙ Ù ÒT Ó ŠŸÈ



< M8 F 5 I @7 7 F 7 I +H





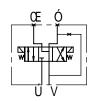
CEJÁJPUY ÞK TUVU ÜKÁFGÆÐI XÁÖÓÁ REÄKÖKÖÐF ÖVÖÜÁTUVUÜ ÜVCEÜVÒÜKÁÖU ÞVOÞWUWÙÖWWYÁJVŒÜVÁJUŠÒÞU ØÖAAAAAAAA ÚWTÚKÁJVÞÁJÜÖÙÜWÜÖÆSUCEÖÖÖÁÖÖŒJÁJWTÚ

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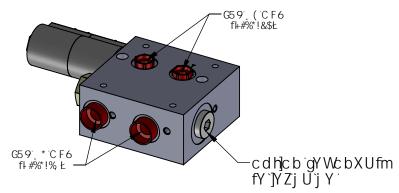


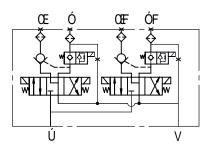
89G7F=DH=CB.

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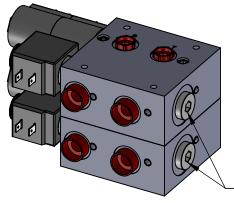


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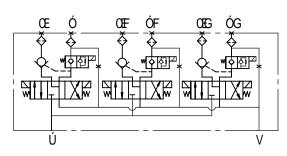




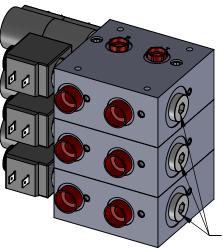
ÇGDÁ, HjÁ, [d; Á&^} ợ; Á&æddãa*^Án[|^}[ãa Áşædç^ Ĉjād; kÁ, HjÁ&|[•^Á&^} ợ; Á&æddãa*^Áşædç^D ÇGDÆSVÆJ; []; ãvæd; ÁjæåA@|åðj*Áşædç^



cdh]cbgYWcbXUfm fY`]YZjU`jY



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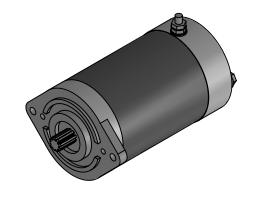


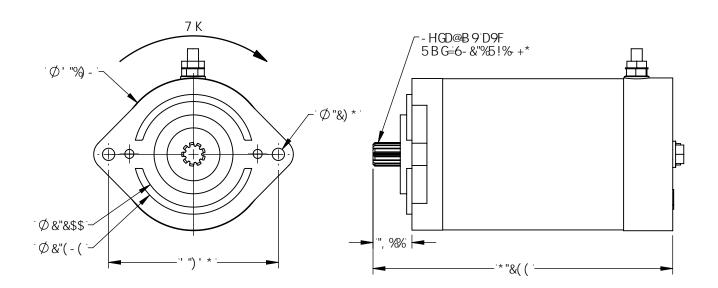
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89G7F=DH=CB.
HÄÁUËDÄÚÖÜT ŒPÒÞVÁT ŒÕÞÒVÁT UVUÜÁY QYPÁÙÚŒPÒÁÙPŒØVĚÁVPQÙÁT UVUÜÁQÙÁÒÝÔÒŠŠÒÞVÁØUÜÁ
ŒVÒÜT QVVÒÞVÁÖWWŸÁŒPÖÁŠUY ÁÚÜÒÙÙWÜÒÁŒÚÚŠÓÔŒVQUÞÈ

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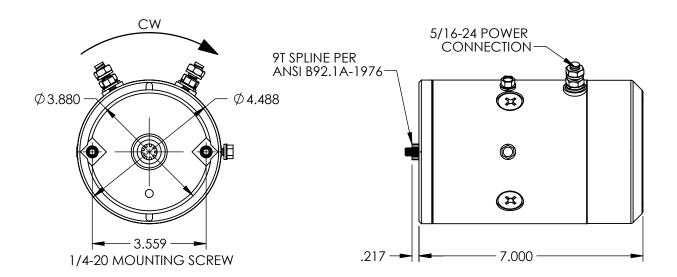
DESCRIPTION:

4.5" O.D. 4 FIELDS, SERIES WOUND, HEAVY DUTY 12V & 24V DC ELECTRIC MOTOR.

PERFORMANCE					
TORQUE	IN/LB	20	80		
VOLTAGE	VOL	12.1	11.9		
CURRENT	AMP	128	269		
SPEED	RPM	4291	2232		
POWER	W	1015	2113		

PERFORMANCE					
TORQUE	IN/LB	20	80		
VOLTAGE	VOL	24	23.7		
CURRENT	AMP	60	143		
SPEED	RPM	4635	2458		
POWER	W	1097	2324		



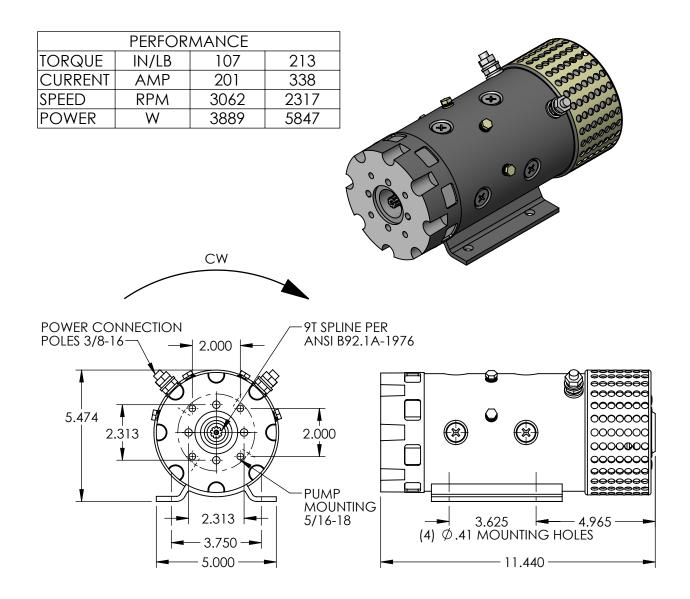


NOTE: IP65 12VDC MOTOR AVAILABLE, PLEASE CONSULT WITH FACTURY.



DESCRIPTION:

5.0" O.D. HEAVY DUTY, OPEN END FAN COOLED, 12V & 24V DC ELECTRIC MOTOR. THIS IS FOR CONTINUOUS DUTY, HIGH PRESSURE APPLICATION.





DESCRIPTION:

KTI Hydraulics Inc uses US made motors for our AC power units. The available power range is from 0.5 HP to 3 HP; single phase to three phase; 1750 to 3450 rpm; 115V, 208V, 230V, 480V AC; 56 frame, C-face, 5/8" dia keyed shaft, CW rotation; Open Drip Proof (ODP), and Totally Enclosed Fan Cooled (TEFC).



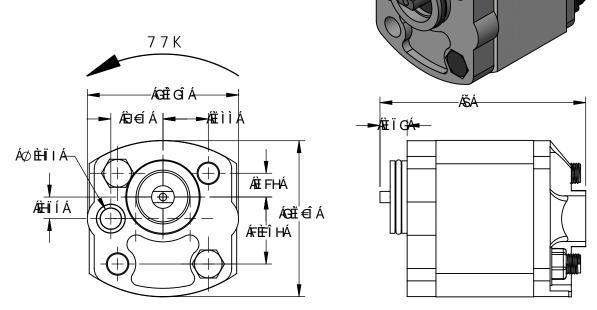
KTI P/N	HP	Phz	RPM	Volt	Hz	Enclosure
4920-25	0.5	1	1725	115/208-230	60	TEFC
4920-64	0.5	1	1725	110/208-230	60	TEFC
4920-68	0.75	1	1725	115/208-230	60	ODP
4920-69	0.75	1	1725	115/208-230	60	ODP
4920-44	1	1	1750	115/208-230	60	TEFC
4920-72	1	1	1725	115/230	60	ODP
4920-28	1.5	1	1725	115/208-230	60	TEFC
4920-58	1.5	1	1725	115/208-230	60	TEFC
4920-75	2	1	1750	110/208-230	60	TEFC
4920-54	1	1	3450	115/208-230	60	TEFC
4920-80	1	1	3450	115/208-230	60	TEFC
4920-67	1.5	1	3450	115/208-230	60	TEFC
4920-46	2	1	3450	115/208-230	60	TEFC
4920-51	3	1	3450	208-230	60	TEFC
4920-87	5	1	3450	230	60	DP



KTI P/N	HP	Phz	RPM	Volt	Hz	Enclosure
4920-41	0.5	3	1750	208/230-460	60	TEFC
4920-65	0.5	3	1800	575	60	TEFC
4920-76	1	3	1800	208/230-460	60	TEFC
4920-77	1	3	1800	575	60	TEFC
4920-59	1.5	3	1725	208/230-460	60	TEFC
4920-36	2	3	1750	208/230-460	60	TEFC
4920-71	2	3	1740	208/230-460	60	TEFC
4920-57	1	3	3450	208/230-460	60	TEFC
4920-81	1	3	3450	208/230-460	60	TEFC
4920-73	1	3	3450	575	60	TEFC
4920-34	2	3	3450	208/230-460	60	TEFC
4920-70	2	3	3450	208/230-460	60	TENV
4920-35	3	3	3450	208/230-460	60	TEFC



89G7F=DH=CB.

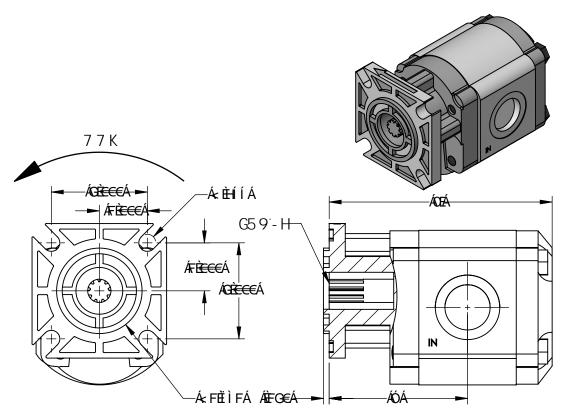


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ÚŠËEÈ€	€ÈÉÍI	G€€££GJ€€€	GÌ⊕ÐÐÎF	HÈĤ
ÚŠËĖ€	€ÈÏÏ	G€€££GJ€€€	GÌ⊕ÐÐÍF	HÈG
ÚŠËFĚ€	€ŒJ€	G€€££GJ€€€	Ğl⊕Ðl€ÎF	HÈÍ
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ÚŠËŒĖ€	€ÈÏ€	G€€££GJ€€€	GÌ⊕ÐÐÎF	HĒÎ
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ÚÒÜØUÜT ŒPÔÒK FIXÖÒÙŠŒÔÒT ÒÞVKÁ€ÈEHÌ ËEÈHÎÌÁAJ ÐÈ ŒĂY UÜSŒPÕÁJÜÒÙÙWÜÒKÁG€€€ÁŰÙŒAT ŒYÁJÜÒÙÙWÜÒKÁJ€€€ÁÚÙŒE HÄÜUVŒVŒPŌÁÖÖJÖÔVOUÞKÔUWÞVÒÜÔŠUÔSYŌJÒÈ



89G7F_DHCB.



D5FH	8 €D@5 7 9A 9BH	DF 9GGI F	9fbUf#DG±	5fBŁ	6f⊮£	-B.@9H	C I H@9H
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ÚÒÜØUÜT ŒÞÔÒK

FRÖÐUSÓÐÖT ÓÞVKÆÐE HÆÐE ÆÐE

CÆY UÜSOÞÖAJÜÖÙÜWÜÖKGJ€ÆÄÜÜÖÐT OÐ ÁJÜÖÙÙWÜÖKÁ € €ÁÚÙŒ

HÆJUVOÐ Ø ÁJÚÖÖÖKG€€Ð €€€Á] { È

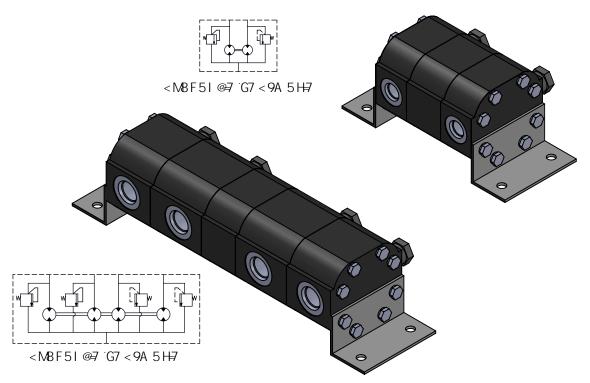
LÆY UÜSOÞÖ ÁJÚÖÖÖKG€€Ð €€€Á] { È

I ĂÜUVŒVŒ ŐÁÖÖÖÖVOUÞKŐUWÞVÖÜÔŠUÔSY ÒÒÈ



89G7F=DH=CB.

SVOÁP^ 妿ĕ |ææ ÁÐ &ÈÁØÖŒÁ^¦æð•Á*^ædÁc]^Á|[Áã ãçãã^¦•ÈÁV@••^Á|[Áã ãçãã^¦•Áæà^•Á;ā*|^Á@ 妿ĕ |ææÁ§] ˇdÊÁæàå^•Ás@Á; ˇd¸ ŏÁş d[ÁGÁ;!Á;[¦^Ár¸ ˇæþÁsã&š ãæ ÈÐQ ơ*¦ææ°ååÁ^]@ææ³å *Áçæbç^ÁærÁcæàåæååÁ;}Áæd|ÁØÖŒÁ⅓|¸ÁådåæååA°}•È

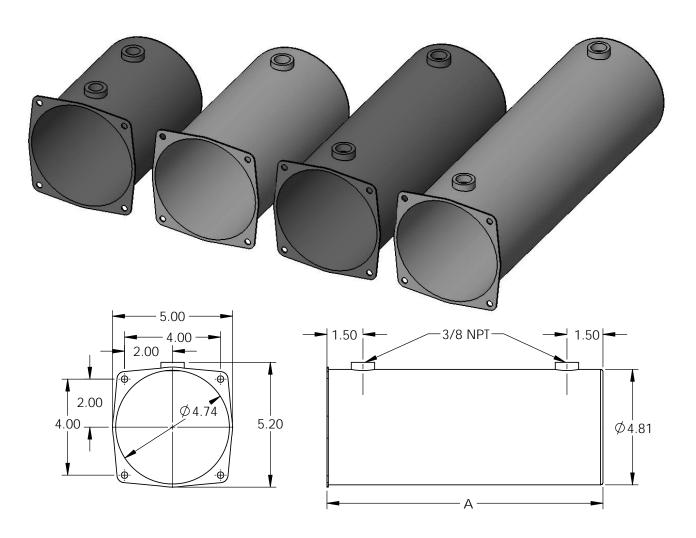


	SVÁPŸÖÜŒNŠÓÁMPÔÁØÖŒÆŠUYÁÖOXÓÖÖÜÙ						
ÚŒÜVÁÞUÈ	ÖĞÜÜĞĞĞÖT ÖÞVÁ ÜĞÜÄÜĞÖVQUÞ	TOPÁ OPŠÒVÁ ØŠUY	ÙVŒÞÖŒÜÖÂ ŒPŠÒVÁ ØŠUY	N TOLÝ (Ó). OD-ŠÒVÁ ØŠUY	T ŒÝŒ UWVŠÒVÁ ÚÜÒÙÙWÜÒ		ÜVÙ
	Ф	ÏÍ€ÁÜÚT <i>Á</i> OD-ÐT	∖FÍ€€ÁÜÚTÁ OpET	H€€€ÁÜÚTÁ OÞÐT	ÚÙQ	ÙŒÒÁ OÞŠÒV	ÙŒÒÁ UWŚÒV
ØÖOHGÜFEÜ ØÖOHGÜGEFÜ ØÖOHGÜHEEÜ	€ŒJI €ŒJI	F€Î FJJ GJF	GFF HJI I I G	I GG I JÎ FFÎ I		HÐËFÎ	J⊕rîËrì
		HJÏ I I II I I H	Î JI Î JÎ FFÎ Î	FÍÌJ FÍJ€ GHG	HÎ GÍ	ΪÐŒΠ	HĐËFÎ
ØOOH ÜHEÜ	∉H ∉HG €EJI	I€ HJÎ ÎÎG	FÎ FÎ Î JÎ FFÎ I	HGGJ FIIJ GHGJ		HÐËFÎ	JÐFÎËFÌ
ØOŒÜİEÜ ØOŒÜİEÜ ØOŒÜİEÜ	€EG €EG €EH J €EH J	Î JÎ Î JÎ FÎ Î	FijJ FiJ€ GHG HGGJ	HFÎÎ HÎÎF IÎÎÎ	H€IÎ	ΪÐŒΊ	HÐËFÎ

BCH9G CHx9F DCFHGAPG5J 5=65669 žD695097 CBG 6HK +k: 57 HCFM

DESCRIPTION:

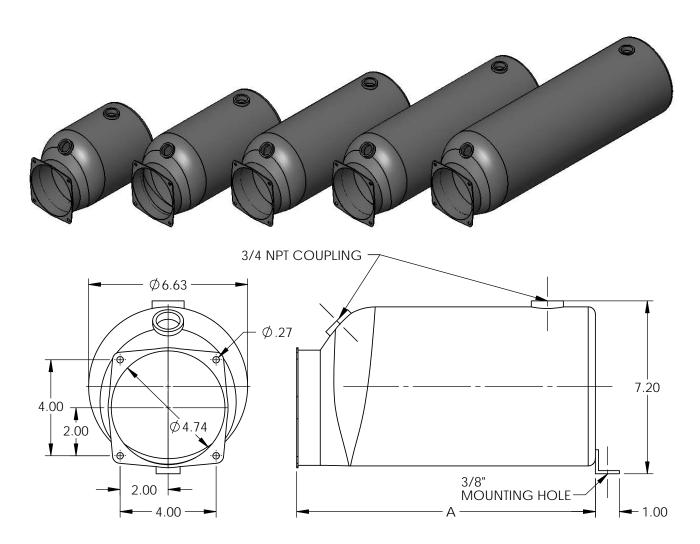
KTI Hydraulics Inc steel, deep drawn reservoir, black powder coated finish.



KTI HYDRAULIC INC DEEP DRAW STEEL RESERVOIRS					
PART NO.	USABLE VOLUME	LENGTH "A"			
8080-21	1.5 QT	6.25			
8080-2	2 QT	8.38			
8080-3	3 QT	11.5			
8080-4	4 QT	14.88			

DESCRIPTION:

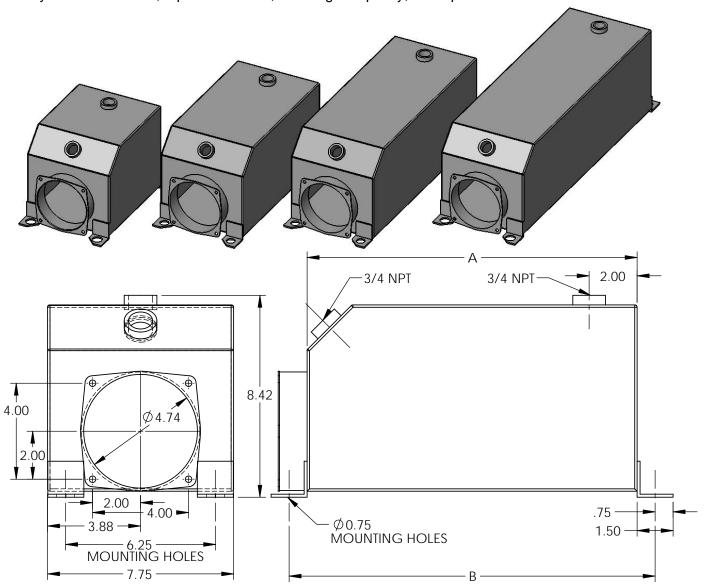
KTI Hydraulics Inc steel, offset reservoir, black powder coated finish.



KTI HYDRAULIC INC STEEL OFFSET RESERVOIRS					
PART NO.	USABLE VOLUME	LENGTH "A"			
8080-5	4 QT	9.13			
8080-6	6 QT	12.50			
8080-8	8 QT	15.88			
8080-10	10 QT	19.25			
8080-12	12 QT	22.63			

DESCRIPTION:

KTI Hydraulics Inc steel, square reservoir, with larger capacity, black powder coated finish.

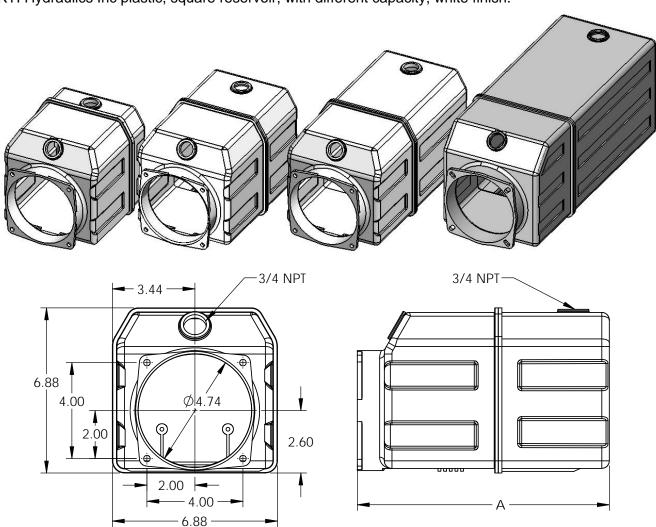


KTI HYDRAULIC INC STEEL SQUARE RESERVOIRS					
PART NO.	USABLE VOLUME	LENGTH "A"	LENGTH "B"		
8080-8-S	8 QT	9.24	10.74		
8080-13	12 QT	13.75	15.25		
8080-16	16 QT	18.50	20.00		
8080-20	20 QT	22.88	24.38		



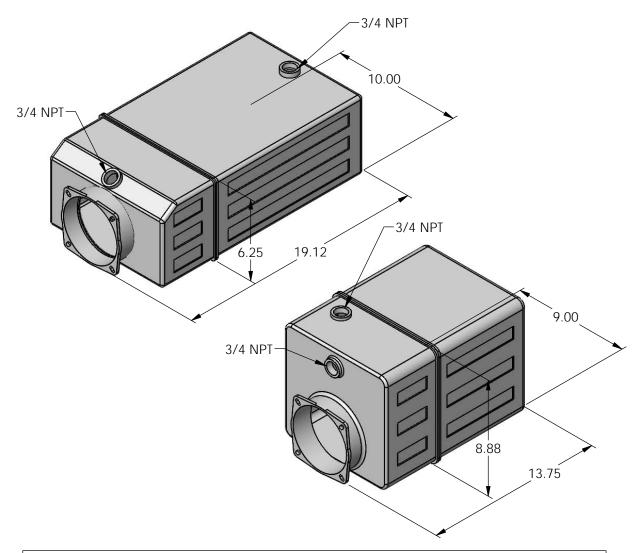
DESCRIPTION:

KTI Hydraulics Inc plastic, square reservoir, with different capacity, white finish.



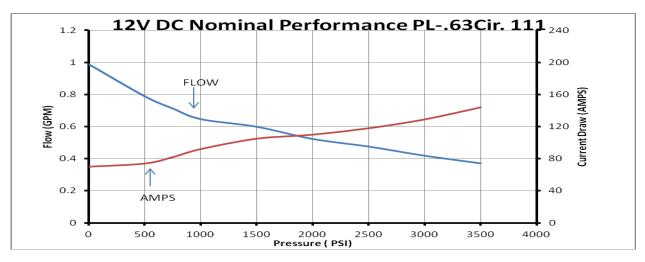
KTI HYDRAULIC INC PLASTIC SQUARE RESERVOIRS					
PART NO.	USABLE VOLUME	LENGTH "A"			
8181-35	3 QT	8.00			
8181-5	4 QT	10.50			
8181-6	6 QT	13.25			
8282-8	8 QT	17.31			
8181-14	14 QT	24.88			
8282-16	16 QT	27.50			

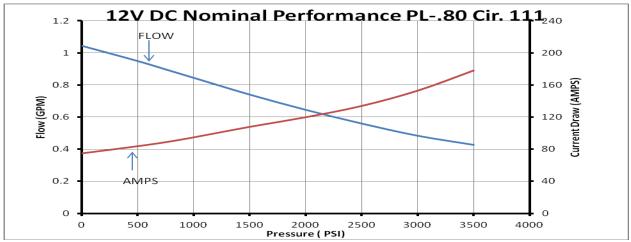
DESCRIPTION:KTI Hydraulics Inc plastic, square reservoir, with large capacity, white finish.

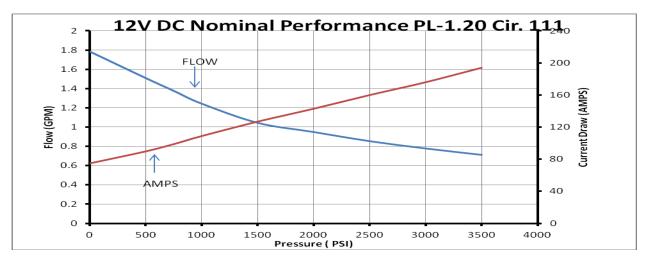


KTI HYDRAULIC INC PLASTIC RESERVOIRS				
PART NO.	USABLE VOLUME			
8383-16	15 QT			
8484-16	12.25 QT			

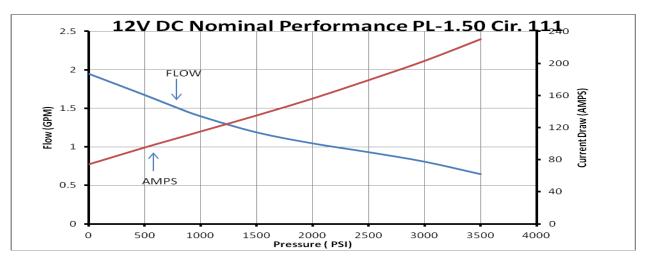


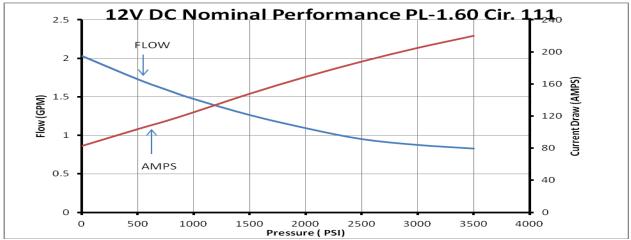


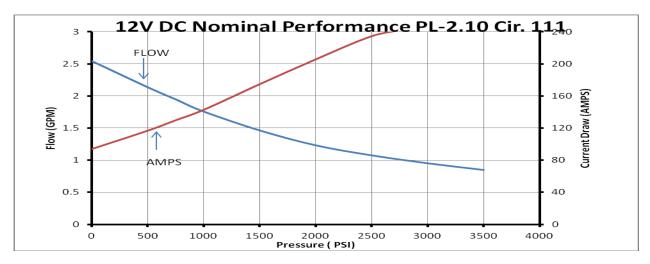




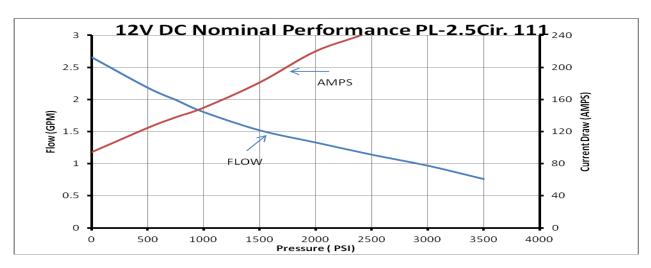


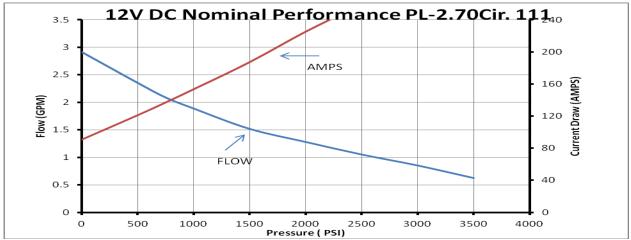


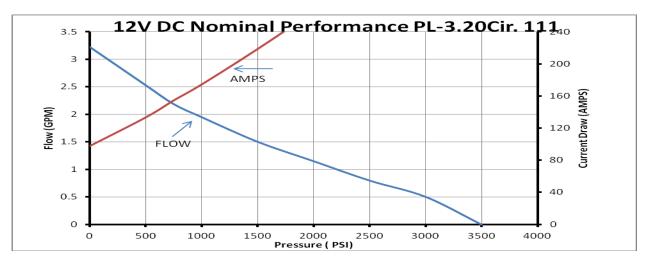




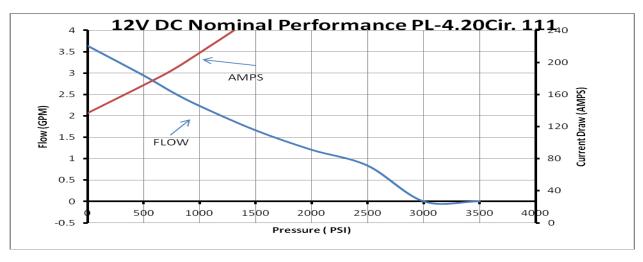


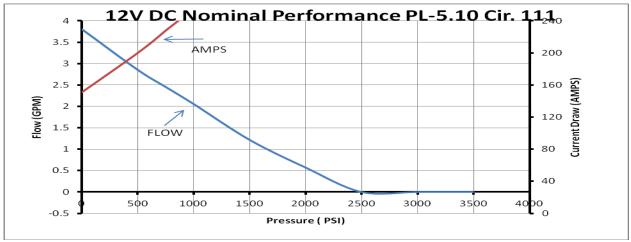


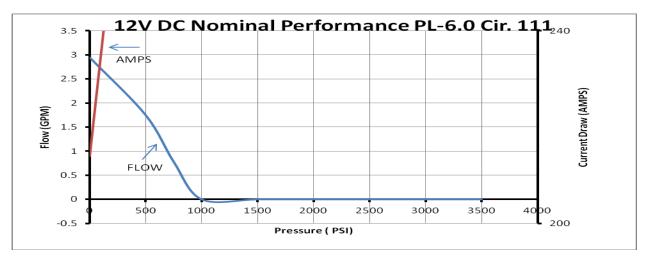




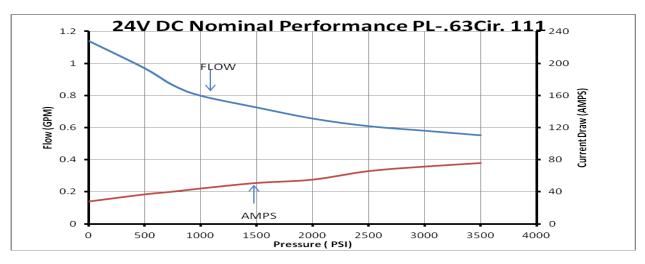


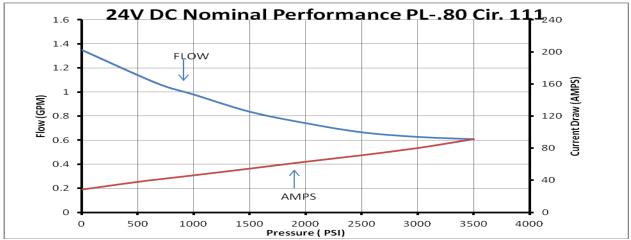


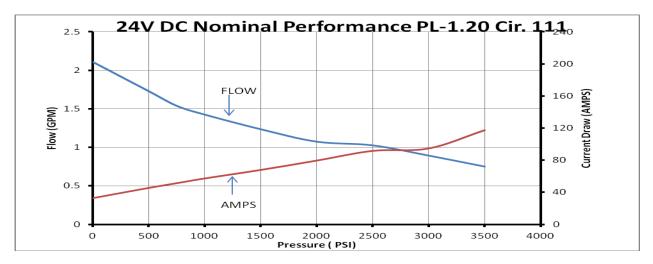




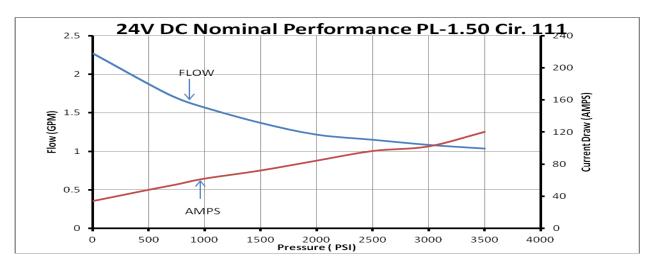


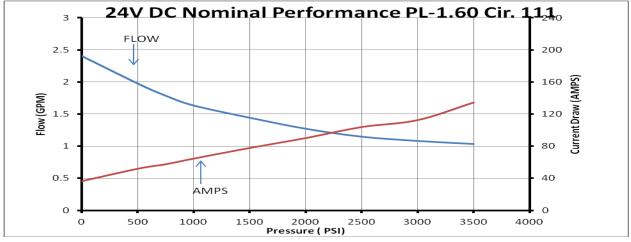


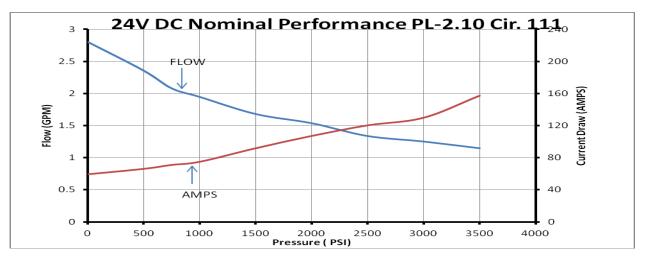




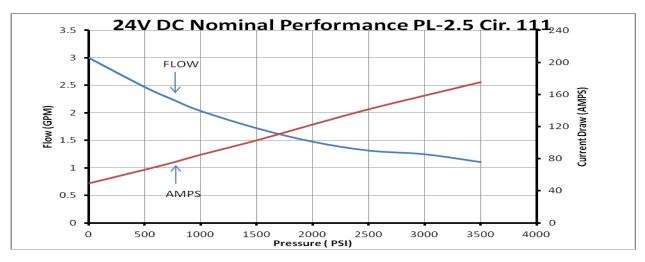


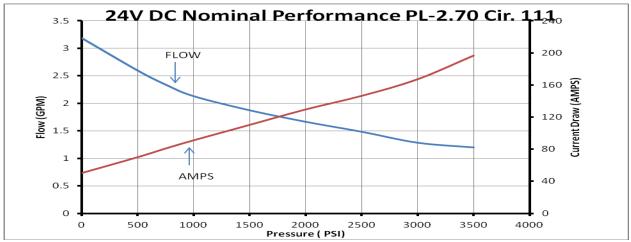


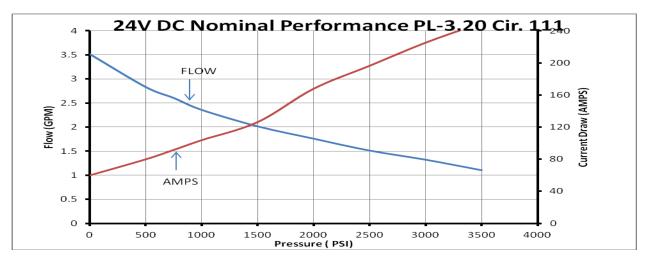




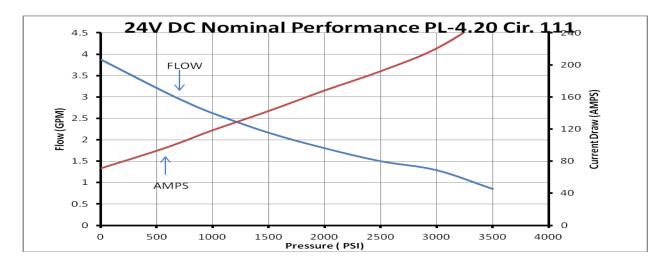














INSTALLATION RECOMMENDATIONS

- 1) To avoid contamination, do not remove plastic port plugs until fittings are to be installed.
- 2) Power Unit mounting flange must make full contact with equipment mount; do not use the mounting bolts to force alignment of the power unit on to the equipment mount.
- 3) If pump fails to prime, remove Cartridge Check Valve and start the power unit until hydraulic oil flows from the valve cavity and reinstall the Cartridge Check Valve. (does not apply to double acting units)
- 4) Fluid temperature should not exceed 150°F, System reliability and component service life will be reduced.

INLET CONDITIONS

1) Positive pressure must be available at the pump inlet while it is operating, overrunning load can cause the pump to cavitate. Consult the factory for inlet pressure requirements and speed limitation.

FILTRATION

1) For maximum pump and system component life, the system should be protected from contamination at a level not to exceed 125 particles greater than 10 microns per milliliter of fluid (SAE Class 4 / ISO 16/13).

SERVICE

- 1) Clean fluid essential to system reliability and longer component service life.
- 2) It is recommended that for every 4,000 operating hours or once a year, whichever occurs first, the air filter/ breather cap and suction strainer should be replaced or thoroughly cleaned.
- 3) Every 4,000 operating hours, or once a year, whichever occurs first. Drain hydraulic oil from reservoir and remove reservoir from Manifold (end plate). Use WD-40 or similar product to wipe down and remove all debris inside the reservoir, also check the magnet for signs of metal particles. Lubricate reservoir O-ring with hydraulic fluid to remount the reservoir. Insure reservoir O-ring is not pinched or pushed out of groove during installation.
- 4) For TEFC motors, remove fan casing and wipe fan blade and casing.
- 5) For other service, please consult factory for proper procedures.



Fluid Recommendations

KTI Hydraulics Inc. recommends using a premium hydraulic oil to ensure optimum performance and system life.

Select oil that has anti-wear properties, rust and oxidation inhibitors, foam inhibitors and good stability. Examples of premium grade hydraulic oils: Chevron Rando HDZ, Mobil DTE 10, and DTE 20 series, AMSOIL, and Shell Tellus.

Automotive Transmission Oils are acceptable under normal conditions.

Aviation Oils such as Valvoline ROYCO series or Mobil Aero HF or HFA may be used in **prolonged & extreme cold** environments.

Do Not Use Biodegradable Hydraulic Fluid. Do Not Mix Oils.

Ambient Temperature Range	ISO Viscosity Grade
- 20°F to + 32°F	15
$(-29^{\circ}C to + 0^{\circ}C)$	
+ 14°F to + 120°F	22, 32, ATF
(- 10°C to + 49°C)	

Do not operate Power Unit above recommended Fluid Temperature Range.

Premium hydraulic oil with proper ISO Viscosity Grade and additives such as Chevron EP,

Mobile DTE 10, DTE 20 series, or Shell Tell us would be acceptable.

In Most Applications Use ATF Dextron III

KTI Hydraulics Inc. Limited Warranty

KTI Hydraulics warrants its products free from defects in material, workmanship and design. The period of warranty for DC units is (2) two years and AC units is (1) year after the date of manufacture. Under no circumstances is there any warranty of fitness for a particular use.

KTI hydraulics cannot and does not accept responsibilities for any of its products that have been subjected to improper installation, application, negligence, tampering or abuse. All repairs must be authorized by KTI Hydraulics to reduce the risk of voiding the warranty. KTI Hydraulics liability warranty shall extend only to replacement or repair, f.o.b. KTI.

KTI Hydraulics makes no other warranties, expressed or implied, and is not responsible for any consequential damages resulting from use by any buyer or user. KTI Hydraulics Inc.'s liability is limited to the value of the product sold or obligated repair or replacement of a defective part.

For warranty request and repair please contact KTI Hydraulics Customer Service.

Power units without model & serial numbers will not be covered under warranty. When calling, please have the model and serial number of the power unit available to facilitate your request.



KTI Hydraulics Inc Limited Warranty and Return Goods Authorization (RGA) Procedures

KTI Hydraulics warrants its product free from defects in material, workmanship, and design for a period of two years after date of Manufacture on DC Units and one year from date of manufacturer on AC Units. Under no circumstances is there any warranty of fitness for a particular use and KTI Hydraulics cannot and does not accept responsibilities of any type or any of it's products that have been subjected to improper installation, improper application, negligence, tampering or abuse. All repairs must be authorized by factory to reduce the risk of voiding the warranty. KTI Hydraulics' liability warranty shall extend only to replacement or correction, f.o.b. KTI hydraulics. We make no other warranties, expressed or implied, and are not responsible for any consequential damages resulting from use by any buyer or user, our liability being limited to the value of product sold, or obligated to repair or replace a defective part.

For warranty information or warranty request please contact Customer Service.

Power units without model number & serial number will not be covered under warranty, when calling please have model number and serial number of the power unit.

Return Goods Authorization (RGA) Procedures:

The following requirements must be met by Buyer to return goods for warranty inspection.

- 1) Warranty request must be made via written / e-mail / voice by Buyer to KTI Hydraulics, Inc. with following information:
 - a. KTI Hydraulics Model Number / P/N & Serial Number.
 - b. If lacking Model or Serial Number, It is possible to cross reference through buyer's P.O or KTI Hydraulics Invoice Number.
 - c. Quantities of unit/s under question.
 - d. Reason for return defect, warranty, or repair & suspected reasons for failure.
- 2) KTI Hydraulics, Inc will issue a RGA number and fax a RGA form with this number to the Buyer. All corresponding paper work will reference this RGA number.
- 3) All RGA numbers are effective 60 days from the issuing date. Buyer has the responsibility to insure proper documentation (item d), proper packaging and ship on prepaid basis unless obtaining prior written authorization from KTI Hydraulics. Return goods shipped to KTI freight collect, or C.O.D. will result in KTI Hydraulics, Inc.'s refusal of said shipment. Return goods received by KTI Hydraulics after the 60 days will be subject to repair and repair charges. KTI Hydraulics will take possession of said return goods when it arrives at KTI Hydraulics, Inc. premise in good order. KTI Hydraulics will refuse any returned goods shipment if it contains power units or parts not manufactured or sold by KTI Hydraulics, Inc. KTI Hydraulics will not be responsible for any extraneous parts that are not manufactured or sold by KTI Hydraulics, Inc.
- 4) All return goods are subject to KTI Hydraulics, Inc. incoming inspection.