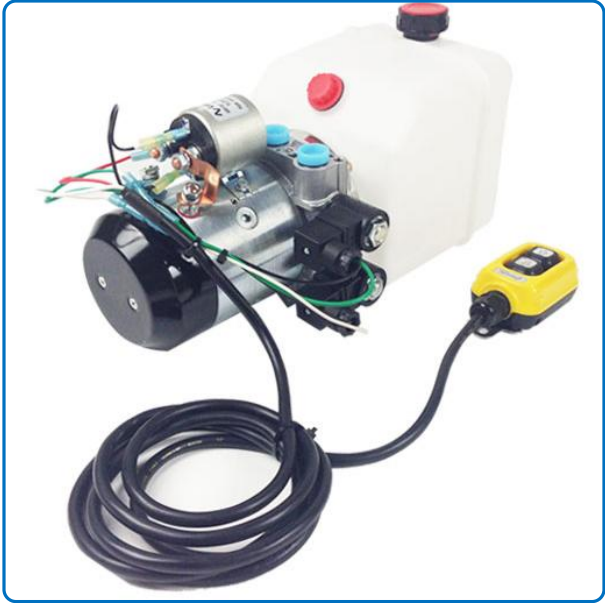
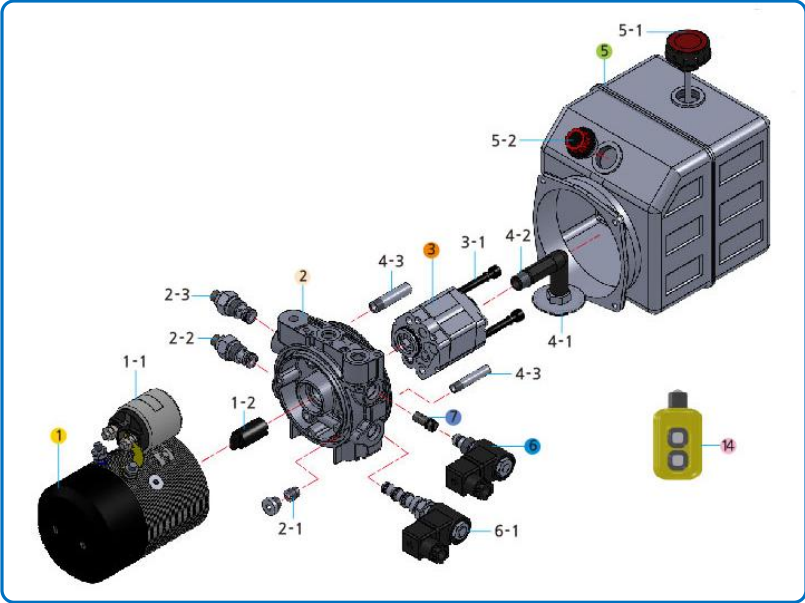
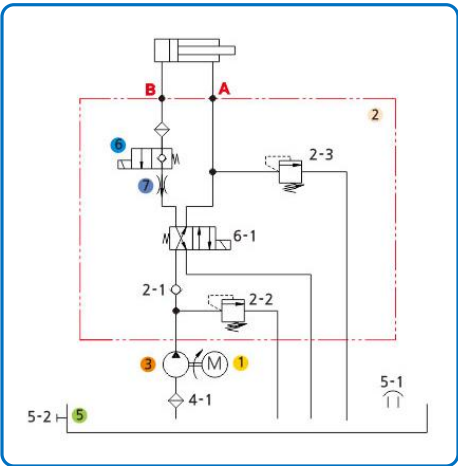


HYDRAULIC

MINI POWER PACKS

PRE-BUILT POWER PACK REFERENCE



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<u>Pre-Built Units:</u>	
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• POWER UNIT ONLY

V000

• SINGLE ACTING

V001

V002

• DOUBLE ACTING DUMP HOIST

V006

• DOUBLE ACTING TILT BED

V014

• DOUBLE ACTING BALE SPIKE

V014

V005

• DOUBLE ACTING TRAILER JACK

V014

V015

• DOUBLE ACTING OUTRIGGER

V014

V015

• BACK UP POWER PACK

V111

• CABLE REEL TRAILER

V005

V015

• SINGLE – DOUBLE ACTING DO3 VALVE

V008

• DUAL – DOUBLE ACTING DO3 VALVE

V011

• SNOW PLOW UNIT

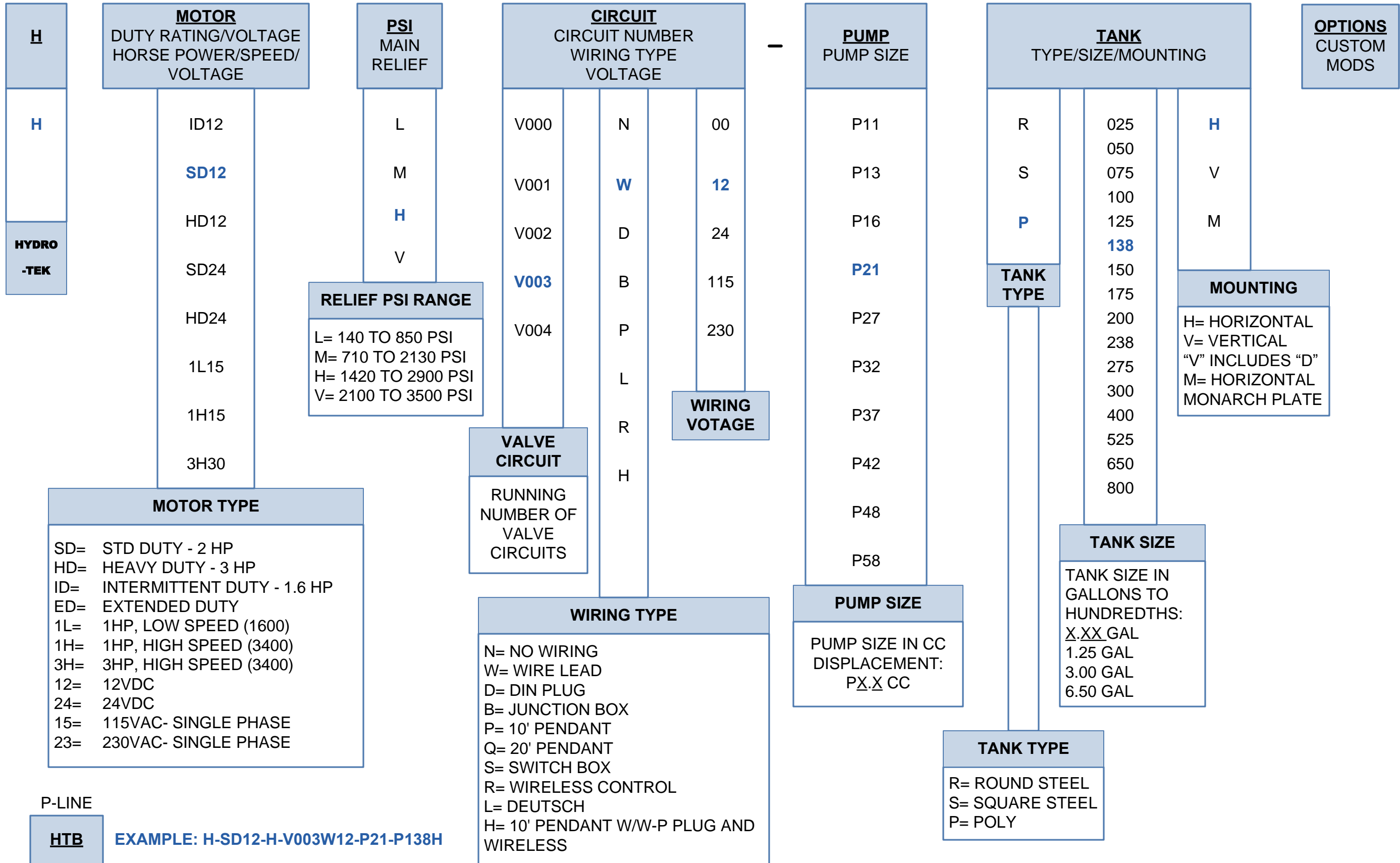
V112

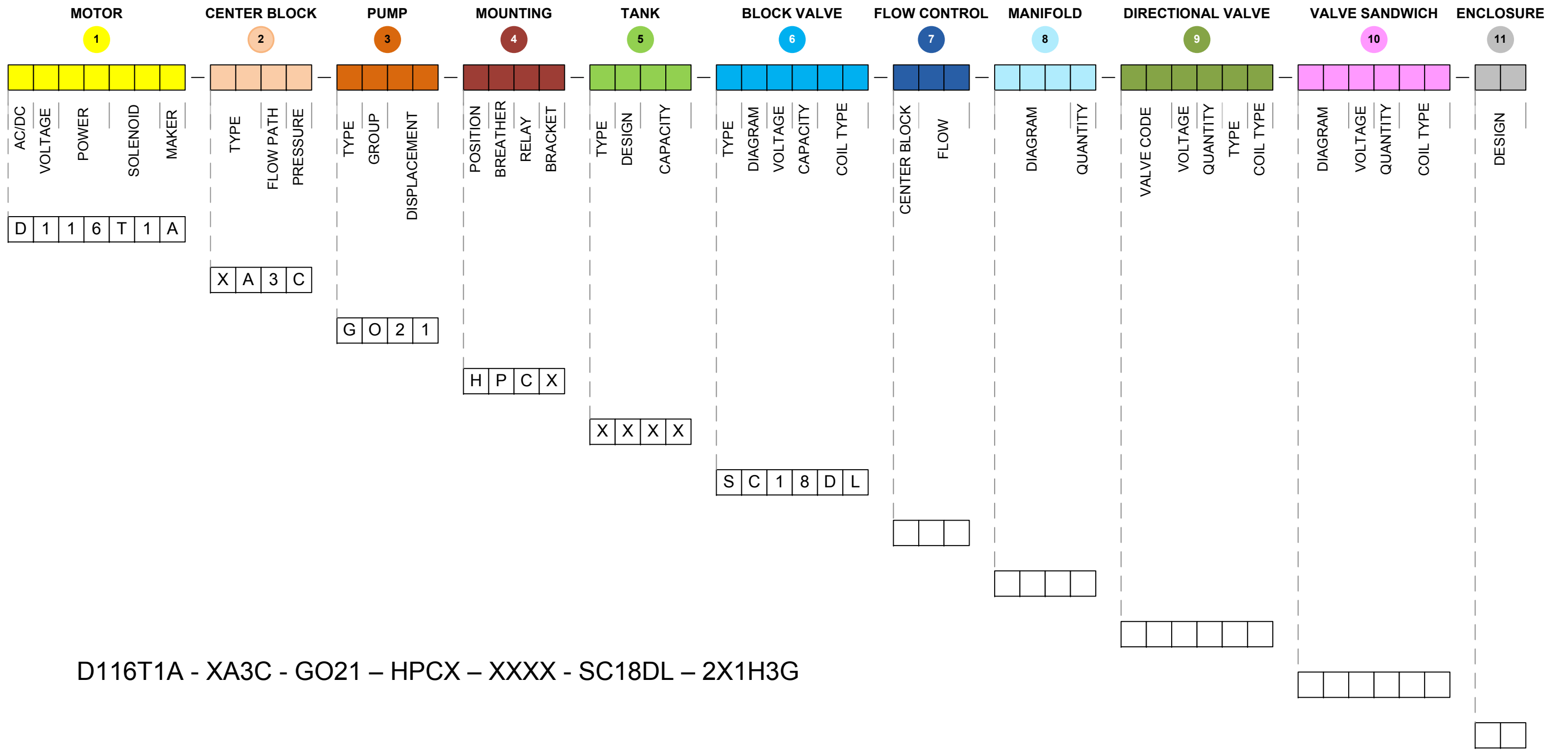
PREBUILT MODEL CODE BREAKDOWN

P-Line	INPUT POWER	MOTOR SIZE	CENTER BLOCK	PSI RANGE	VALVE OPERATION	VALVE PATH	PUMP SIZE	TANK SIZE IN LITERS	TANK TYPE	MOUNT	OPTIONS
HTU	1	16	XA3	C	N	N	O21	XX	SR	H	P
	1	16	XO1	B	S	2	O11	01	SR	D	P
	2	20	XO2	C	M	3	O16	02	SS	H	FC
		22	XA3	L	N	4	O21	03	PS	V	SB
		30	XA4				O23	04			
			XA5				O27	05	NN		
			XA6				O32	06			
			XA7				O37	07	SR=STEELROUND		
			XA8				O42	08	SS=STEELSQUARE		
			XO9				O48	09	PS=POLYSQUARE		
		DO11				O58	11	NN=NOTANK			
		SCB33				O70	12		D=DIAGONAL		
		FR				O80	15		H=HORIZONTAL		
						O98	20		V=VERTICAL		
							25			P=PENDANT	
							30			FC=FLOWCONTROL	
							50			SB=SWITCHBOX	
							NN				

B = 700 - 2100 PSI	S = SOLENOID
C = 1400 - 3500 PSI (STD)	M = MANUAL
L = 50 - 145 PSI	N = NO VALVE
	N = NO VALVE INSTALLED
	2 = 2 WAY
	3 = 3 WAY
	4 = 4 WAY

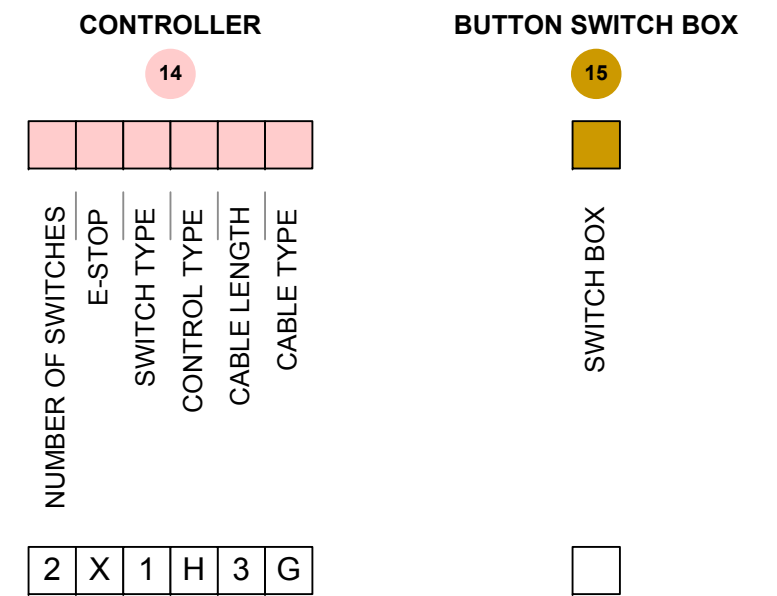
DO = CARTRIDGE VALVE CENTER BLOCK	PUMP SIZE
SCB = CUSTOM BAR STOCK CENTER BLOCK	O21-STD
FR = PUMP / MOTOR ONLY	





D116T1A - XA3C - GO21 - HPCX - XXXX - SC18DL - 2X1H3G

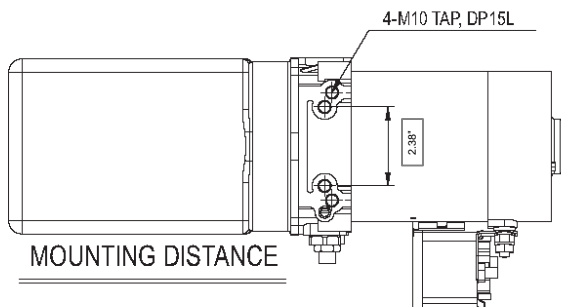
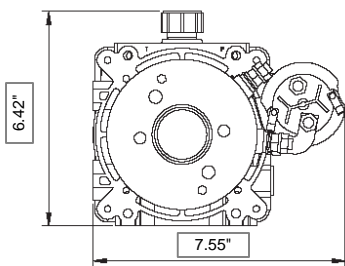
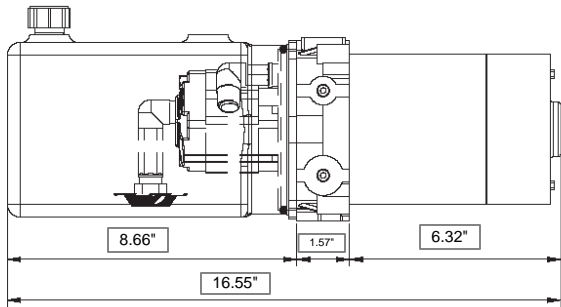
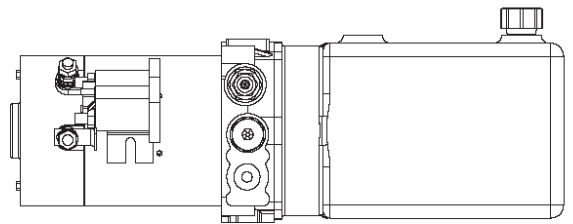
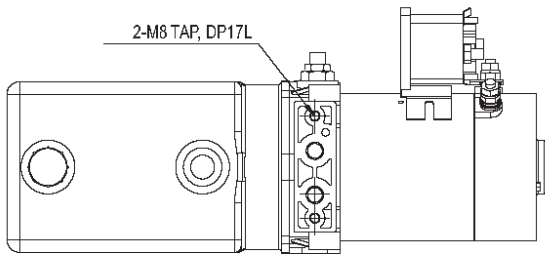
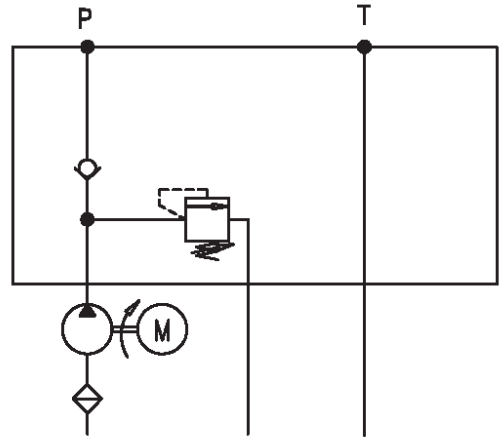
DC-20SF



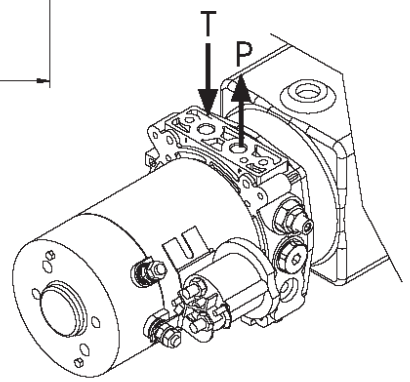
1097092 116XA1CNN/02103PSH (.75 GAL TANK)
1056585 116XA1CNN/021XXXXH (LESS TANK)

- STD DUTY 12 VDC MOTOR
- .128 CID PUMP (2.1 CC)
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- NO VALVES
- HORIZONTAL PLUMBING WITH POLY 3/4 GAL TANK OR NO TANK

CENTER BLOCK PRE-MACHINED FOR MANIFOLD VALVE BLOCK MOUNTING



METRIC MOUNTING
BOLT KIT:
1009653 M10X18



NOTE
P, T PORT : SAE #6

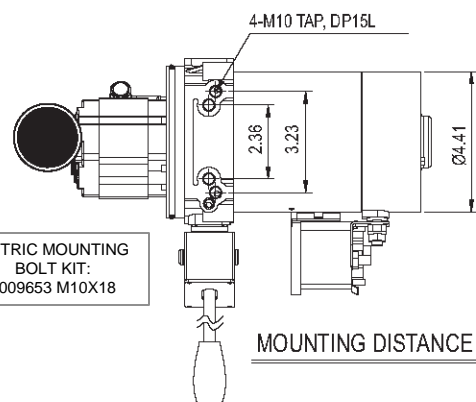
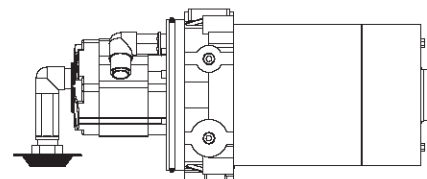
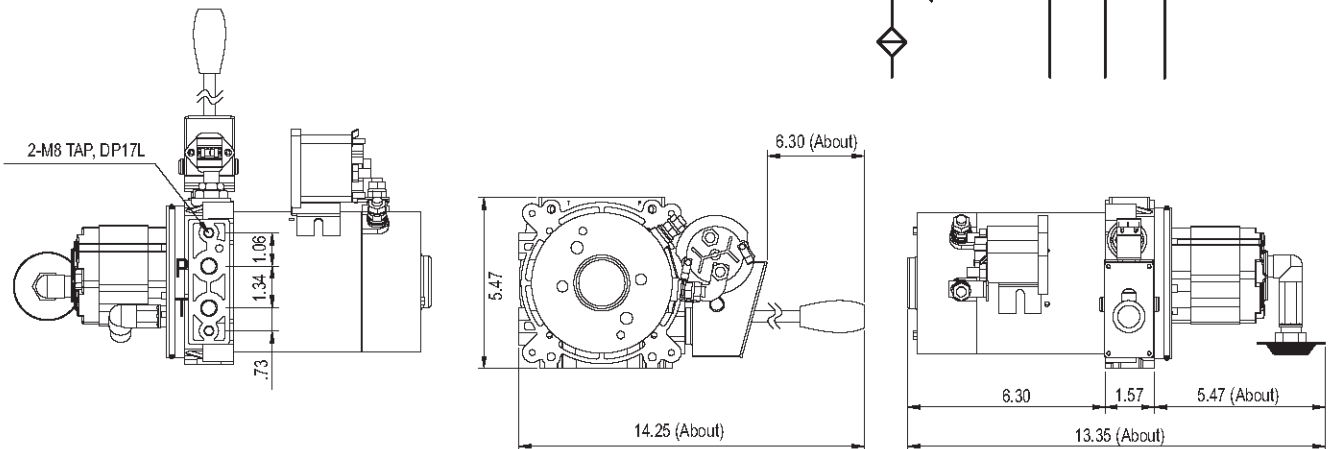
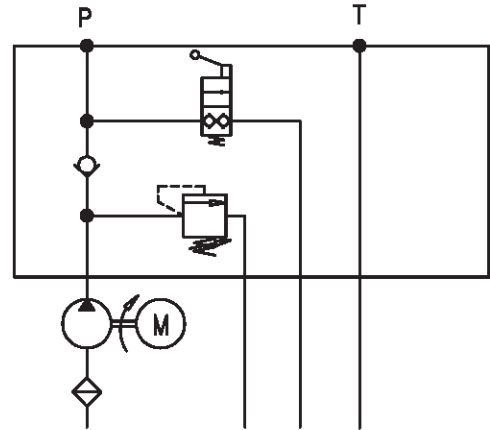
1056590 116XO9CM3/021XXXH (LESS TANK)

1009386 116XO9CM3/02105PXHSB (1.38 GAL POLY TANK AND SHORT BOOT OPTION)

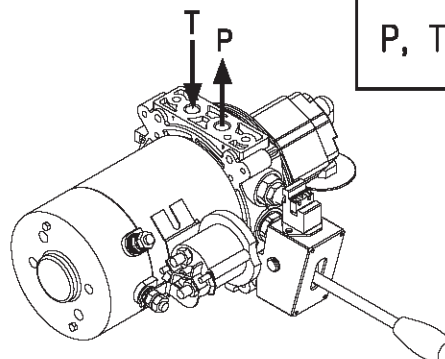
- STD DUTY 12 VDC MOTOR
- .128 CID PUMP (2.1 CC)
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- MANUAL LEVER SA CONTROL VALVE
- HORIZONTAL PLUMBING WITH POLY 1.38 GAL TANK OR NO TANK

CENTER BLOCK PRE-MACHINED FOR MANIFOLD VALVE BLOCK MOUNTING

SHORT BOOTED HANDLE SUPPLIED ON 1009386

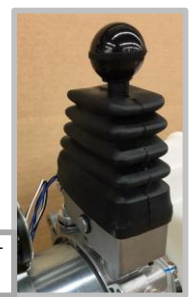


METRIC MOUNTING BOLT KIT: 1009653 M10X18



NOTE
P, T PORT : SAE #6

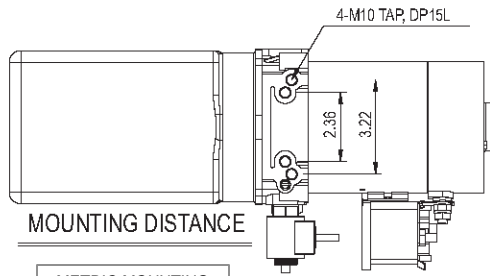
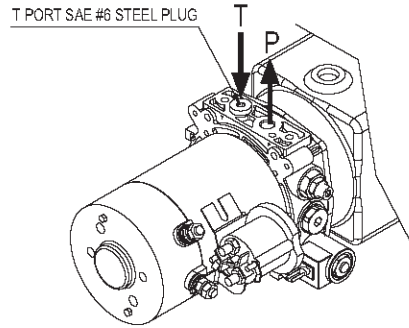
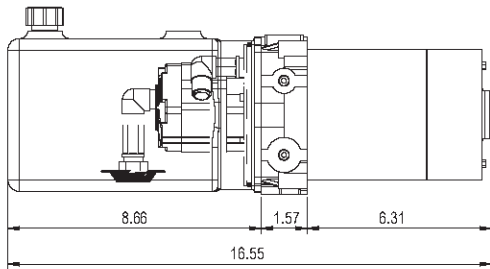
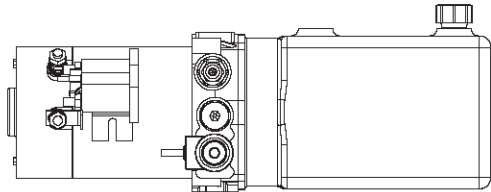
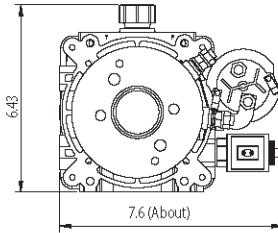
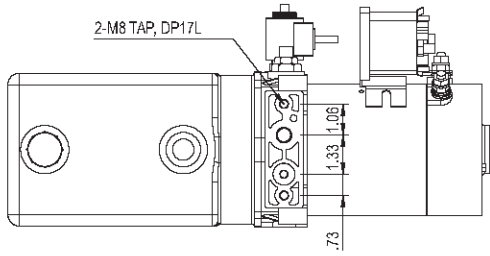
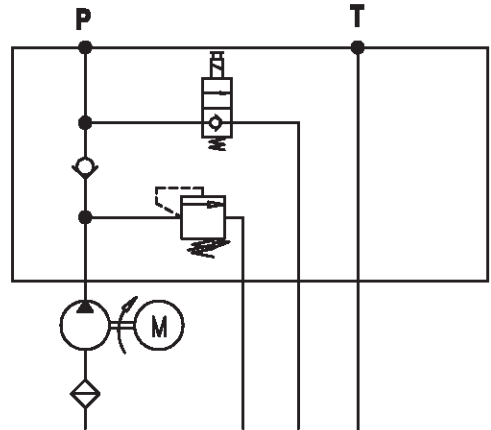
SB - SHORT BOOT OPTION



1097091 116XA3CS3/02103PSHP (.75 GAL POLY TANK)
1056584 116XA3CS3/021XXXXH (LESS TANK)

- STD DUTY 12 VDC MOTOR
- .128 CID PUMP (2.1 CC)
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- SOLENOID POPPET TYPE SA CONTROL VALVE
- 10' 2 BUTTON PENDANT
- HORIZONTAL PLUMBING WITH POLY 1.38 GAL TANK OR NO TANK

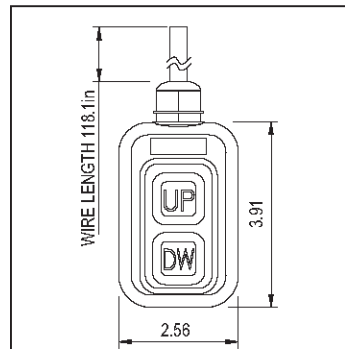
CENTER BLOCK PRE-MACHINED FOR MANIFOLD VALVE BLOCK MOUNTING



MOUNTING DISTANCE
 METRIC MOUNTING BOLT KIT:
 1009653 M10X18

NOTE
P, T PORT : SAE #6

1052051 2X1H3G 10' PENDANT



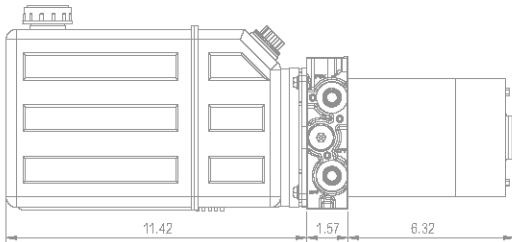
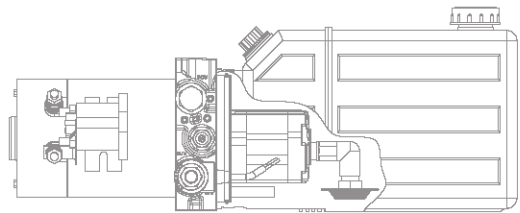
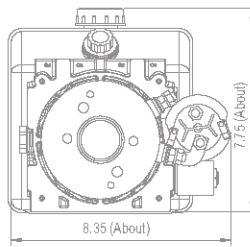
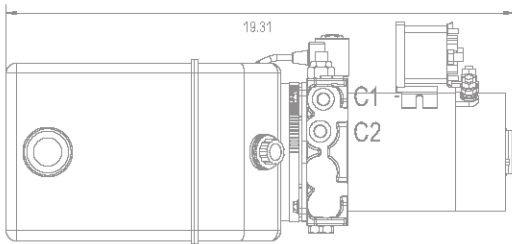
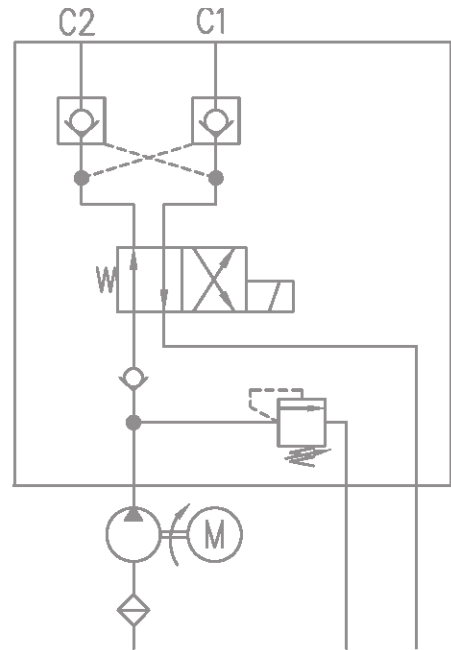
HOIST BUTTON SWITCH 2 BUTTON DOUBLE ACTING

116DO11CS4/02105PSHP
116DO11CS4/021XXXHP (Less Tank)

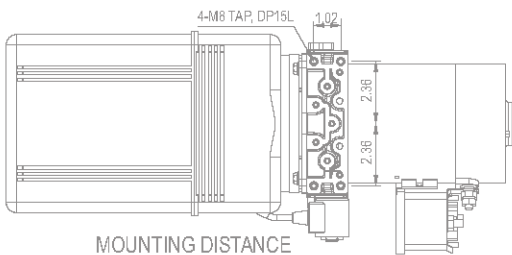
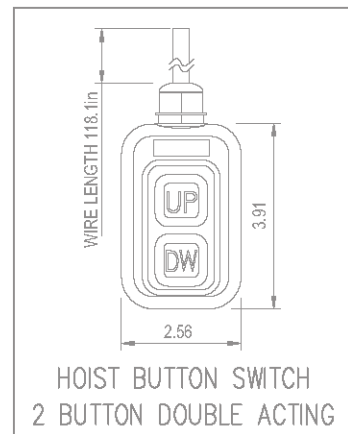
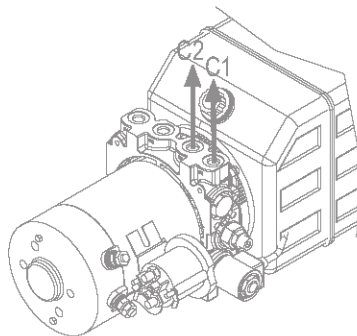
- STD DUTY 12VDC MOTOR
- .128 CI / 2.1 CC PUMP
- 2500 PSI ADJ. PRESSURE
- CHECK VALVE AND P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, SINGLE SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 5 LITER TANK

OBSOLETE!

REPLACED BY:
1068060
SEE NEXT PAGE>>>>



OBSOLETE!



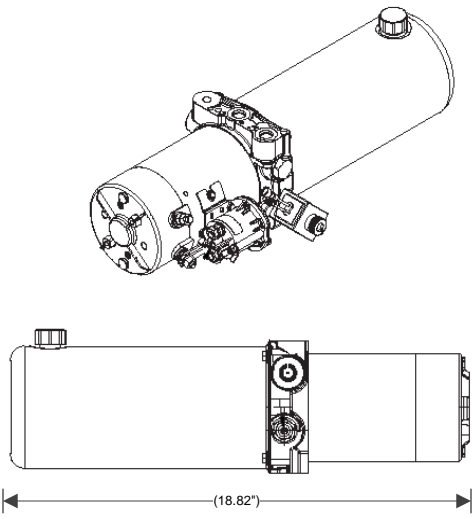
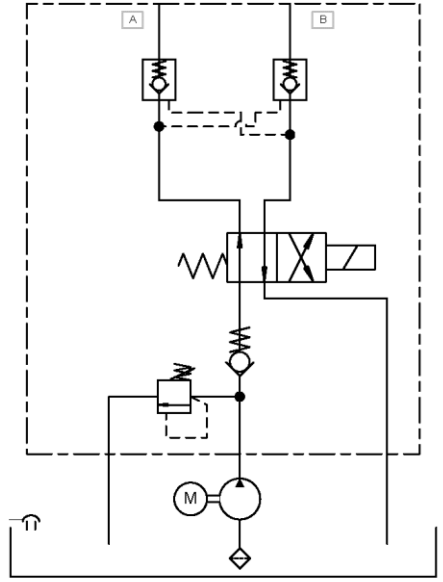
MOUNTING DISTANCE

Note: Mounting Brackets H & B will not fit this unit.

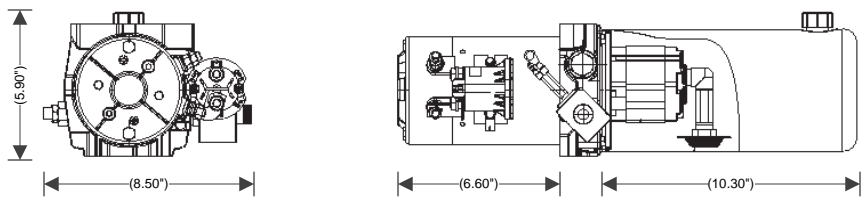
NOTE
C1, C2 PORT : SAE #6

1068060 - HSD12HV005W12-P21R075H (No Pendant)

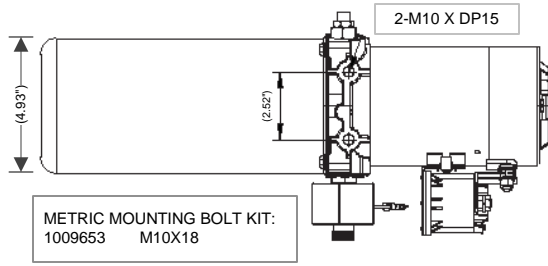
- 2.0 HP 12VDC MOTOR
- .125 CID / 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE AND P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, SINGLE COIL SOLENOID VALVE
- HORIZONTAL PLUMBING W/ RD STEEL 3/4 GAL TANK



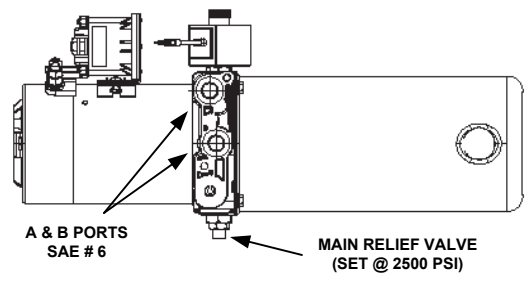
DIMENSIONS



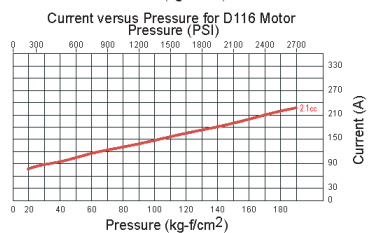
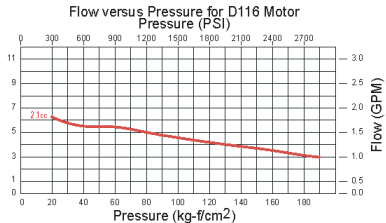
MOUNTING SPECIFICATION



METRIC MOUNTING BOLT KIT:
1009653 M10X18

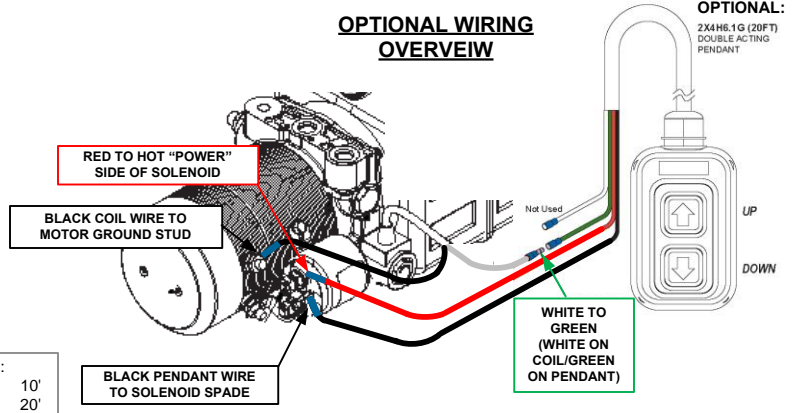


PERFORMANCE DATA



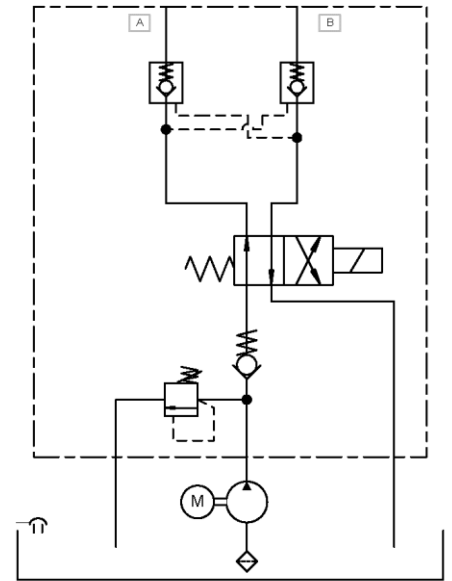
OPTIONAL PENDANTS:
1052052 2X4H3G 10'
1096955 2X4H6.1G 20'

OPTIONAL WIRING OVERVIEW

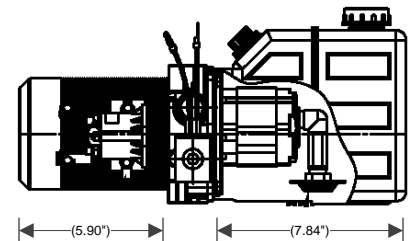
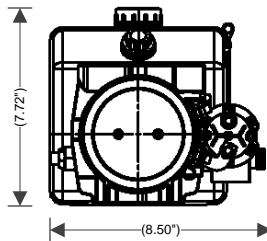
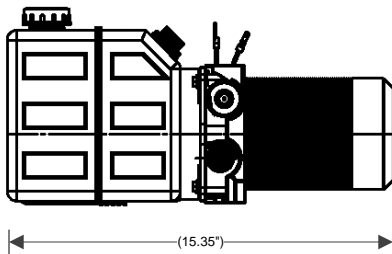


1068056 - HID12HV005W12-P16P100H (No Pendant)
 1068055 - HID12HV005Q12-P16P100H (20' Pendant)

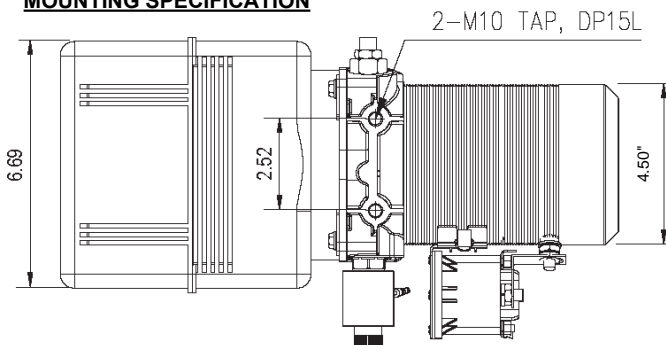
- 1.6 HP 12VDC MOTOR
- .097 CID / 1.6 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, SINGLE COIL SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 1 GAL TANK
- LOWER AMP DRAW = LONGER BATTERY LIFE



DIMENSIONS

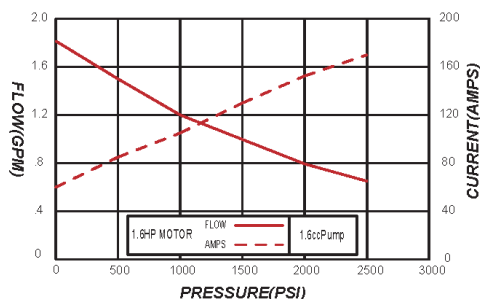


MOUNTING SPECIFICATION

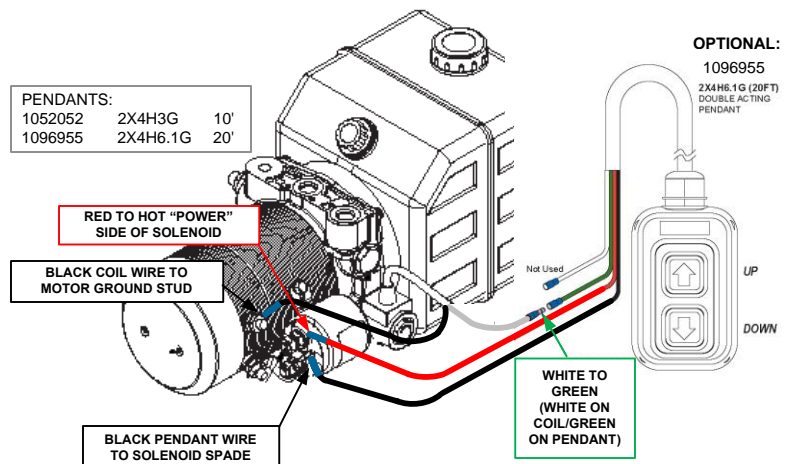


MOUNTING BOLT KIT:
 M10X18
 #1009653

PERFORMANCE DATA



WIRING OVERVIEW

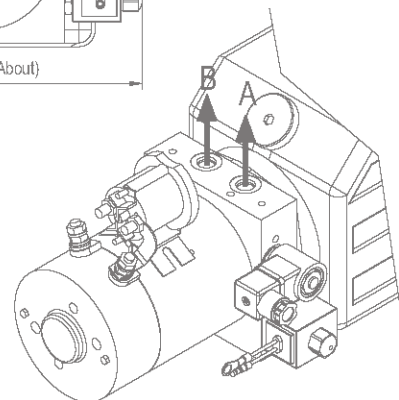
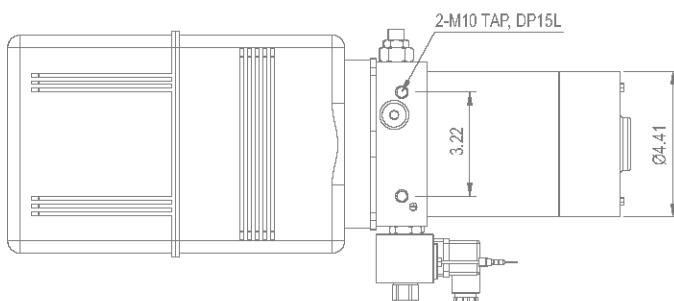
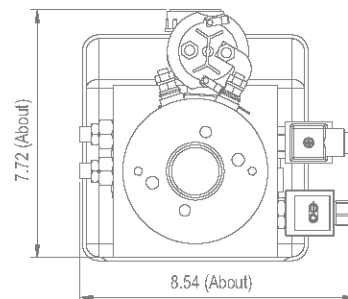
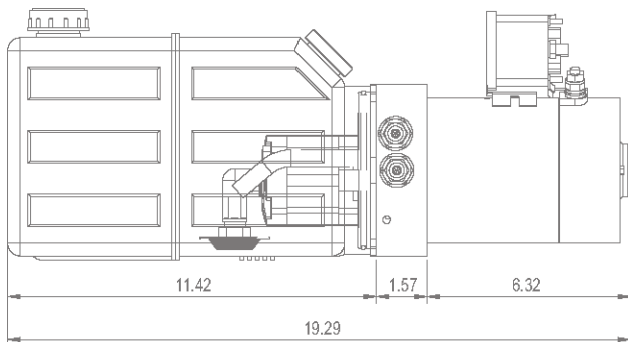
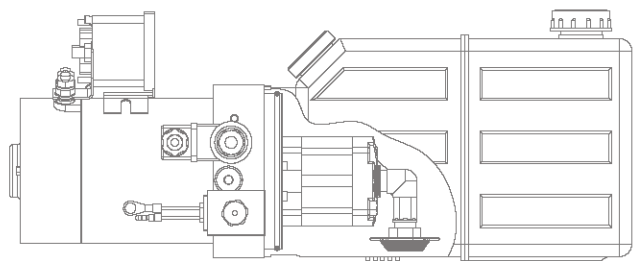
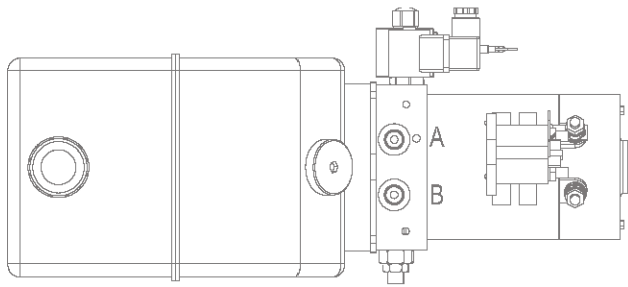
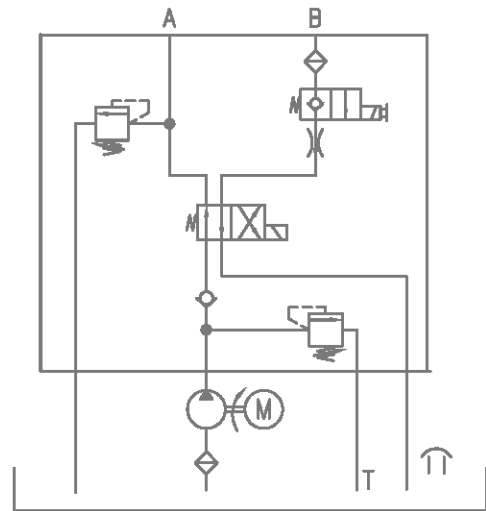


1056583 116SCB33S4/02105PSHFC
(Dump Trailer)

- STD DUTY 12VDC MOTOR
- .128 CI / 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE, 1500 PSI A-PORT RELIEF, 2.1 GPM FLOW CONTROL ON B PORT
- DOUBLE ACTING, DOUBLE SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 5 LITER TANK

REPLACED BY:
1068062
HSD12HV006W12-P21P138H

SEE NEXT PAGE>>>>>>



NOTE

P, T PORT : SAE #6

Note: Mounting Brackets H & B
will not fit this unit.

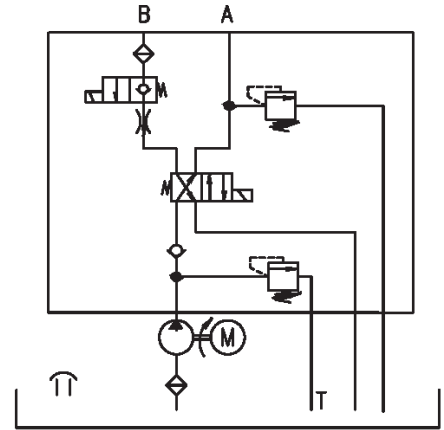
1068062 - HSD12HV006W12-P21P138H (No Pendant)

1068061 - HSD12HV006Q12-P21P138H (20' Pendant)

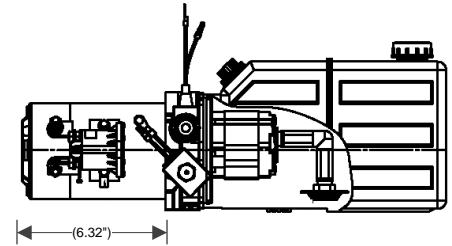
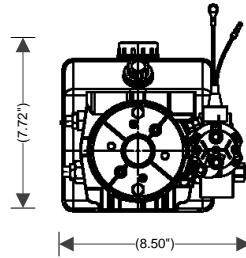
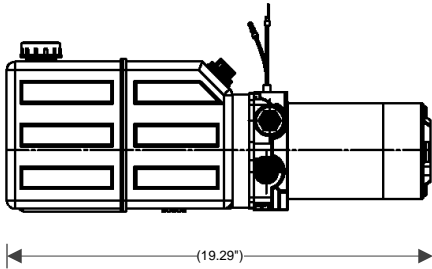
- 2 HP 12VDC MOTOR
- .128 CID / 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE AND 500 PSI ADJ A-PORT RELIEF
- 2 GPM PSI COMP FLOW CONTROL ON "B" PORT
- DOUBLE ACTING, 2 SOLENOID VALVES
- HORIZONTAL PLUMBING W/ POLY 1.38 GAL TANK

THIS UNIT SUPERSEDES:

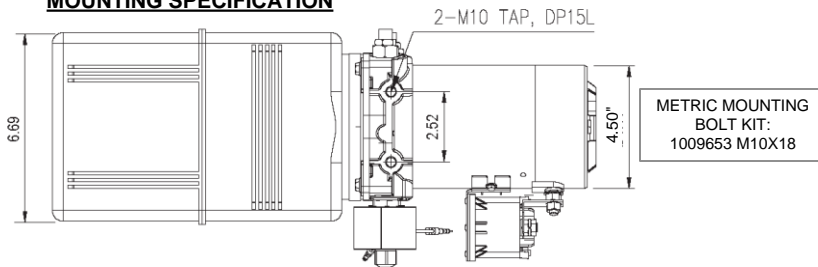
1056583 116SCB33S4/02105PSHFC



DIMENSIONS

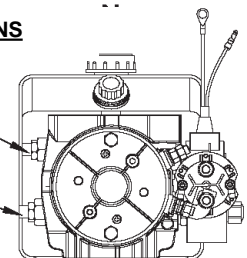


MOUNTING SPECIFICATION



RELIEF LOCATIONS

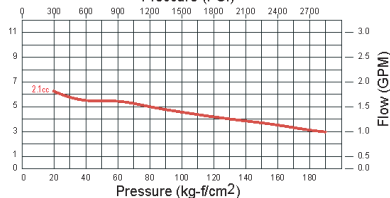
- A-PORT RELIEF VALVE
(Set @ 500 psi adjustable from 500 to 850 psi)
- MAIN RELIEF VALVE
(Set @ 2500 psi adjustable from 2100 to 3000 psi)



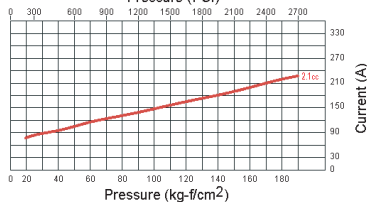
PERFORMANCE DATA

PUMP CHARACTERISTICS

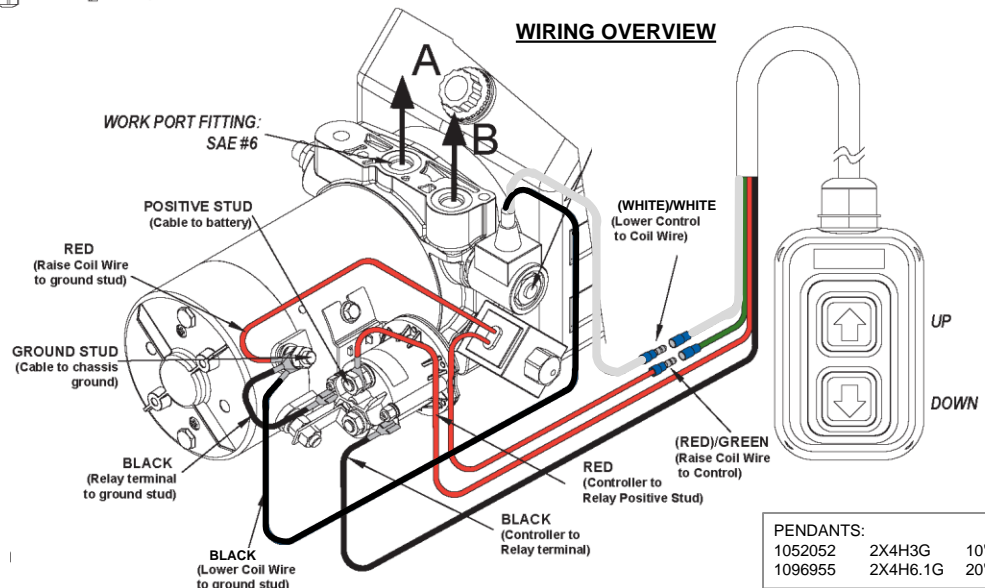
Flow versus Pressure for D116 Motor Pressure (PSI)



Current versus Pressure for D116 Motor Pressure (PSI)



WIRING OVERVIEW

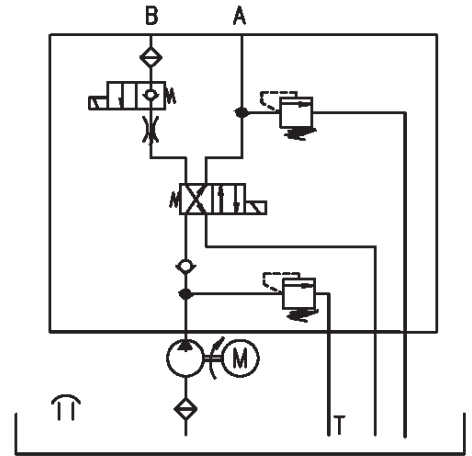


PENDANTS:		
1052052	2X4H3G	10'
1096955	2X4H6.1G	20'

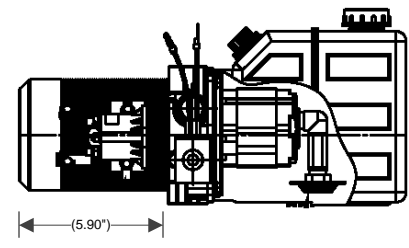
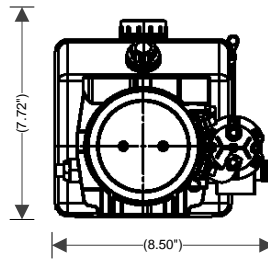
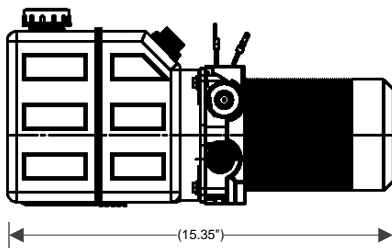
1068058 - HID12HV006W12-P16P100H (No Pendant)

1068057 - HID12HV006Q12-P16P100H (20' Pendant)

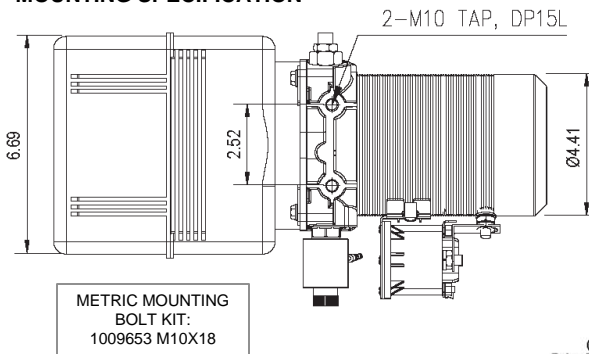
- 1.6 HP 12VDC MOTOR
- .097 CID / 1.6 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE AND 500 PSI ADJ A-PORT RELIEF
- 2 GPM PSI COMP FLOW CONTROL ON "B" PORT
- DOUBLE ACTING, 2 SOLENOID VALVES
- HORIZONTAL PLUMBING W/ POLY 1 GAL TANK
- LOWER AMP DRAW = LONGER BATTERY LIFE
- WITH OR WITHOUT 2 BUTTON 10' OR 20' PENDANT



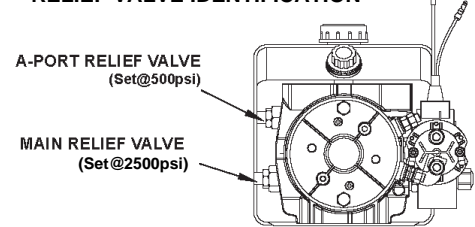
OVERALL DIMENSIONS



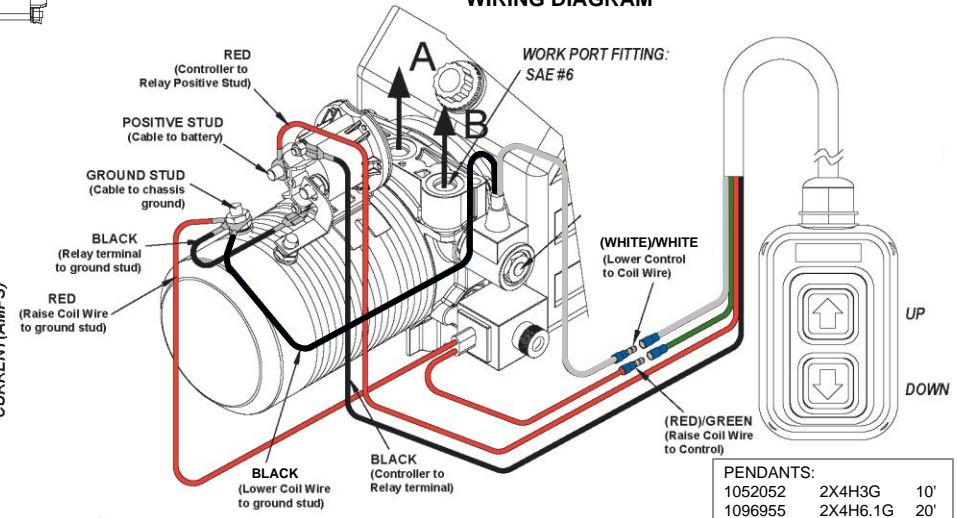
MOUNTING SPECIFICATION



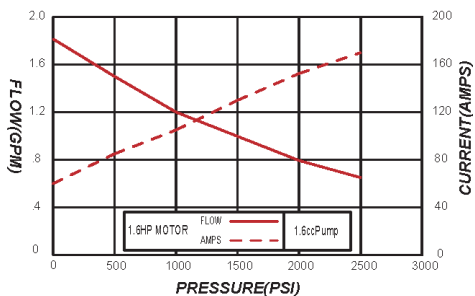
RELIEF VALVE IDENTIFICATION



WIRING DIAGRAM



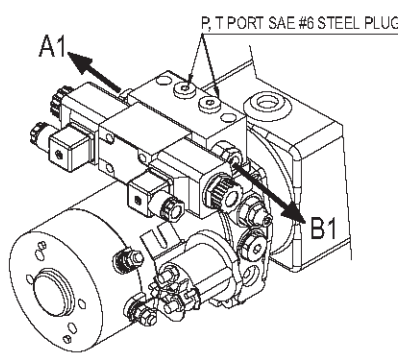
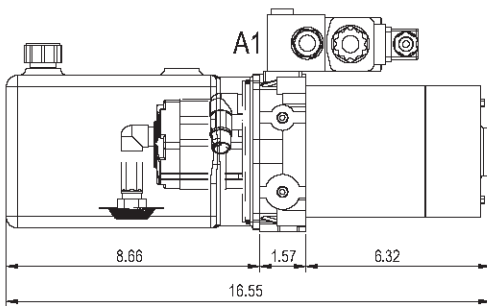
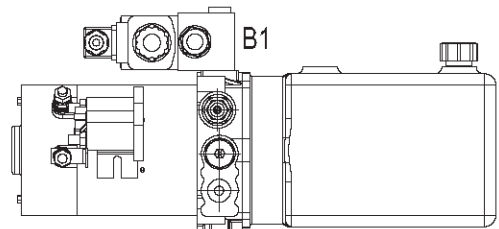
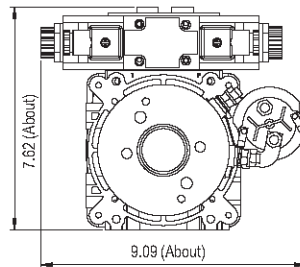
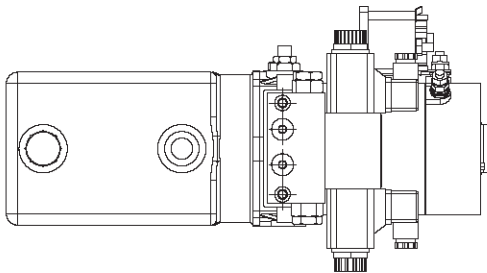
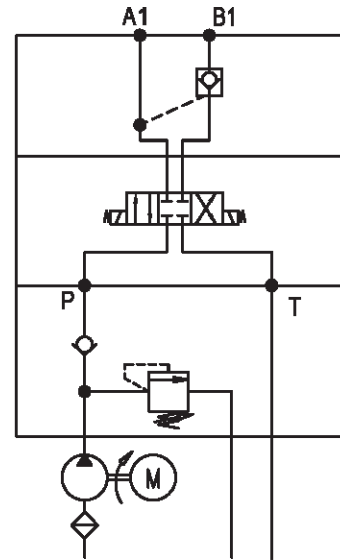
PUMP/MOTOR PERFORMANCE



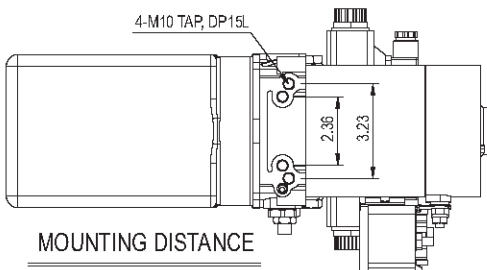
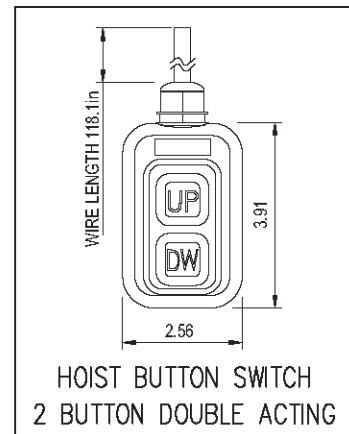
PENDANTS:		
1052052	2X4H3G	10'
1096955	2X4H6.1G	20'

1097093 116XA1CS4/02103PSPHP (.75 GAL TANK)
 1056587 116XA1CS4/021XXXXHP (LESS TANK)

- STD DUTY 12VDC MOTOR
- .128 CID, 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- P.O. CHECK ON "B" PORT
- DOUBLE ACTING SOLENOID VALVE
- 10' 2 BUTTON PENDANT
- HORIZONTAL PLUMBING WITH .75 GAL POLY TANK OR NO TANK



PENDANTS:		
1052052	2X4H3G	10'
1096955	2X4H6.1G	20'



MOUNTING DISTANCE

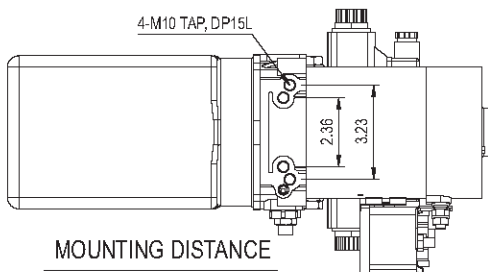
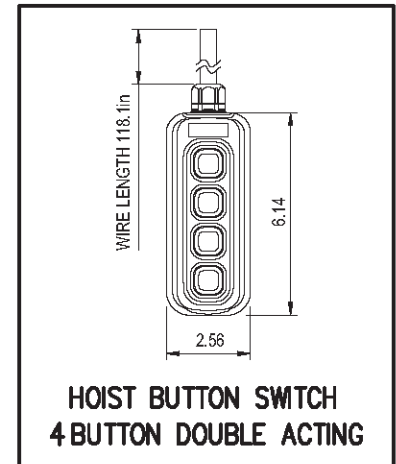
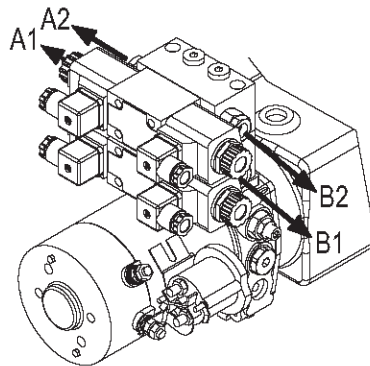
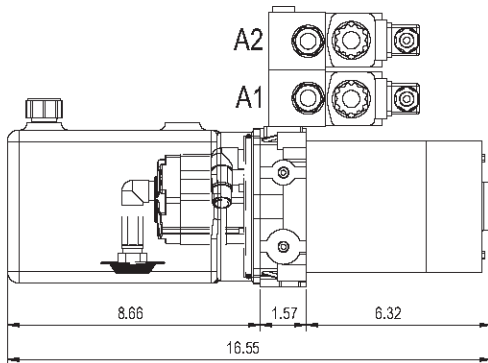
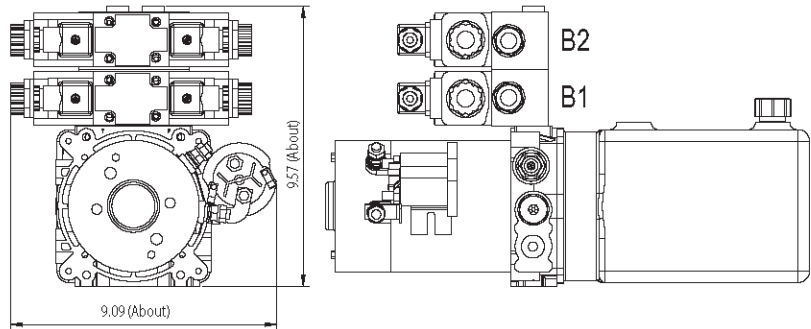
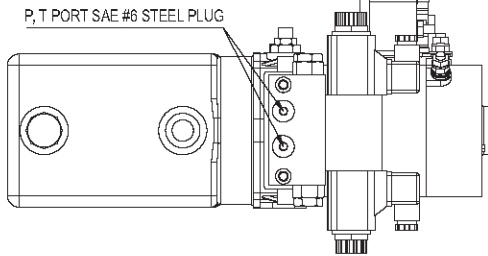
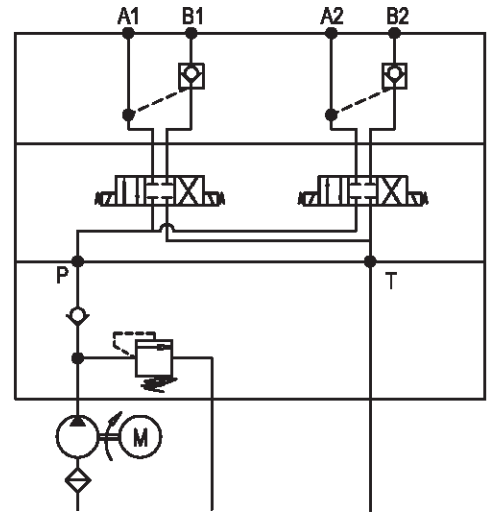
NOTE
A1, B1 PORT : SAE #6

Note: Wire Kit # K-HT-DIN-1
Required to Complete Pendant
Connection. K-HT-DIN-1 KIT: 1023291

METRIC MOUNTING BOLT KIT:
1009653 M10X18

1097094 116XA1CS44/02103PSPHP (.75 GAL TANK)
1056589 116XA1CS44/021XXXXHP (LESS TANK)

- STD DUTY 12VDC MOTOR
- .128 CID, 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- 2- P.O. CHECK ON "B" PORT
- 2- DOUBLE ACTING SOLENOID VALVE
- 10' 4 BUTTON PENDANT
- HORIZONTAL PLUMBING WITH .75 GAL POLY TANK OR NO TANK



NOTE
A1, A2, B1, B2 PORT
: SAE #6

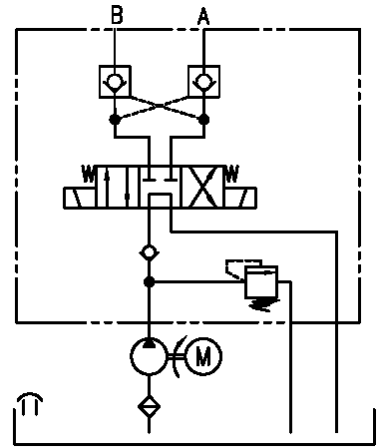
Note: Wire Kit # K-HT-DIN-2
Required to Complete Pendant
Connection. K-HT-DIN-2 KIT: 1023462

METRIC MOUNTING BOLT KIT:
1009653 M10X18

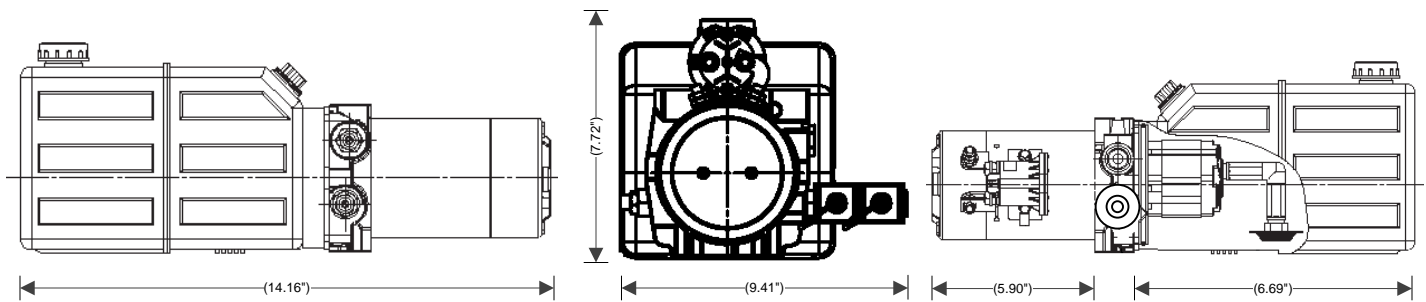
PENDANTS:
1052104 4X5H3G 10'
1073286 4X5H6.1G 20'

1116842 - HSD12HV014Q12-P21P138H (20' Pendant)

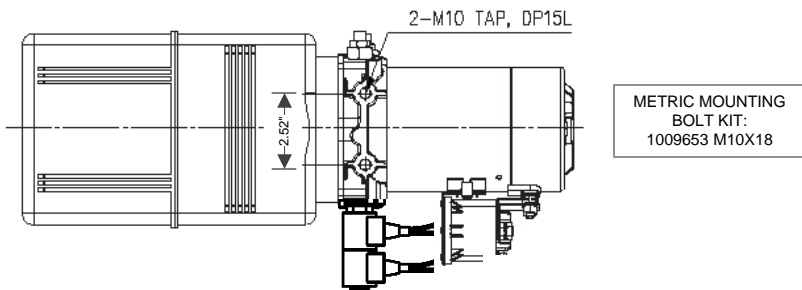
- TA8 SERIES DOUBLE ACTING CENTER BLOCK
- 2 HP 12VDC MOTOR
- .128 CID / 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE AND P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, DUAL COIL SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 1-3/8 GAL TANK
- 2 BUTTON PENDANT W/ 20' CABLE



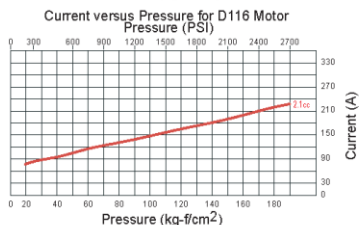
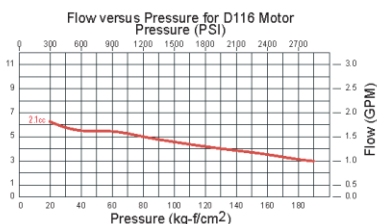
DIMENSIONS



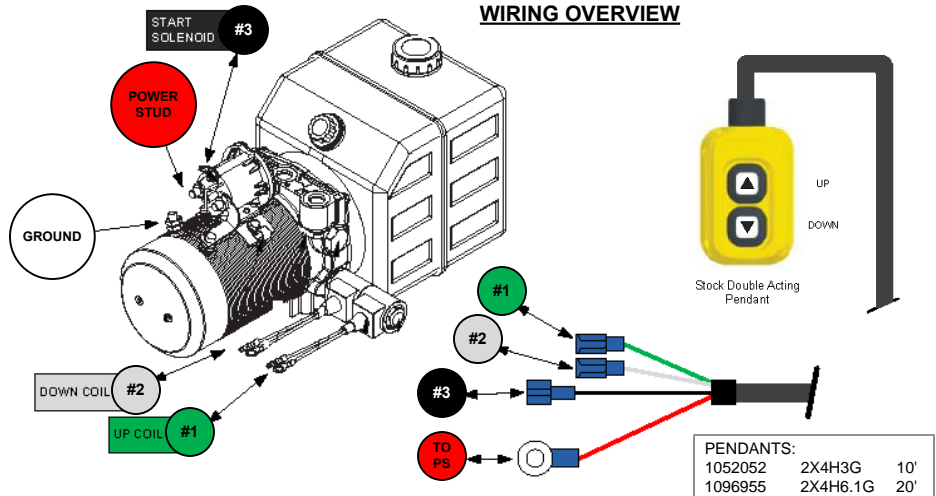
MOUNTING SPECIFICATION



PERFORMANCE DATA

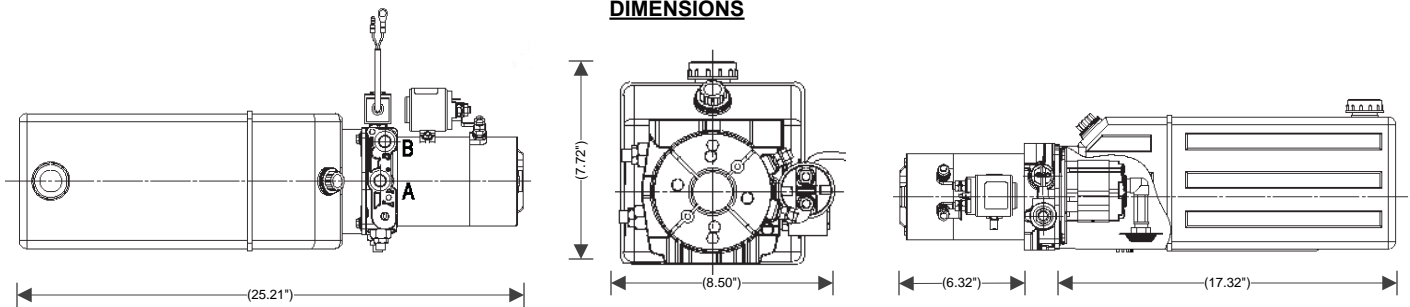
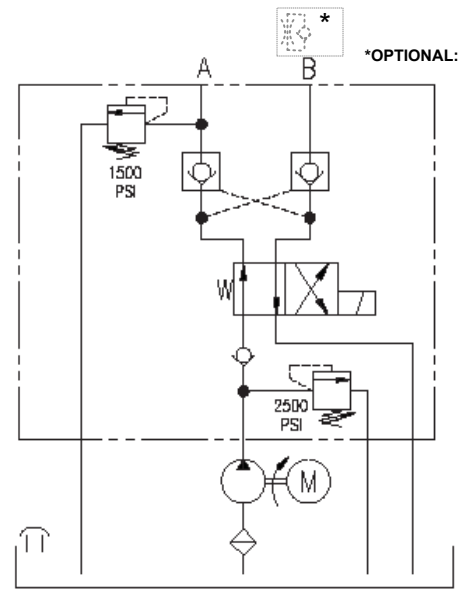


WIRING OVERVIEW

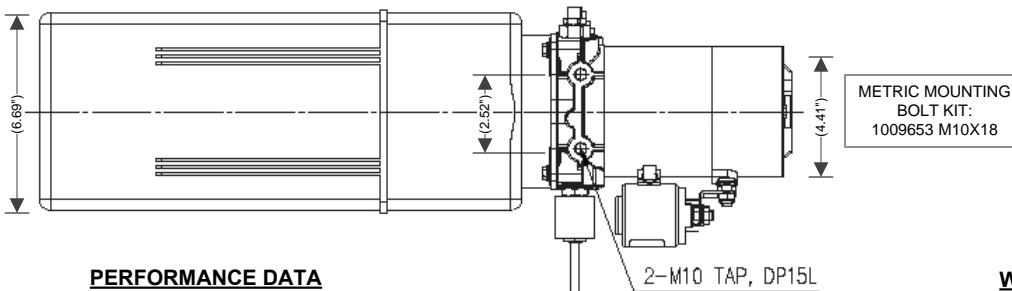


1116920 - HSD12HV015Q12-P20P200H (20' Pendant)

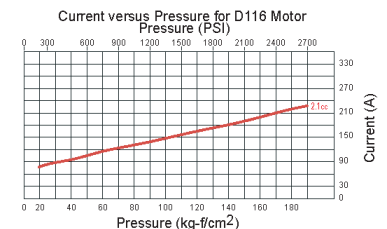
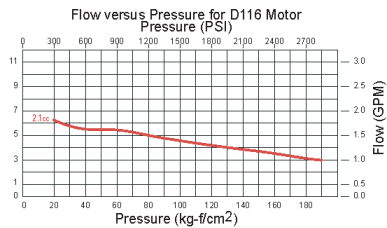
- TA9 SERIES DOUBLE ACTING CENTER BLOCK
- 2 HP 12VDC MOTOR
- .128 CID / 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- 1500 PSI ADJ RELIEF ON "A" PORT ONLY
- CHECK VALVE
- P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, SINGLE COIL SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 2 GAL TANK
- 2 BUTTON PENDANT W/ 20' CABLE
- * "B" PORT FLOW CONTROL OPTION #1068073



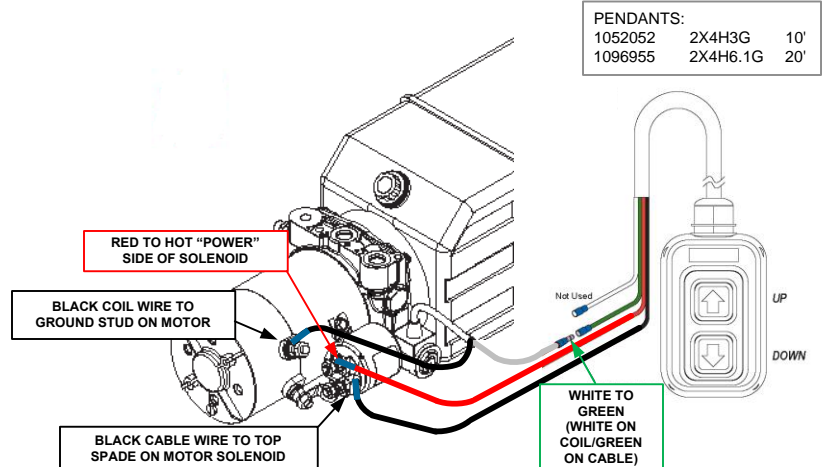
MOUNTING SPECIFICATION



PERFORMANCE DATA

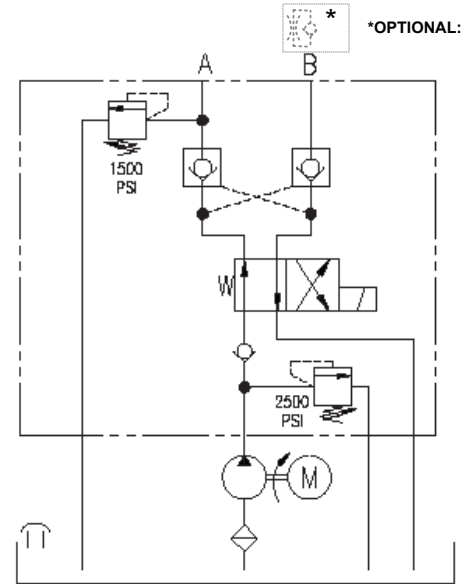


WIRING OVERVIEW

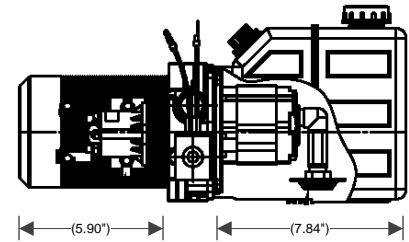
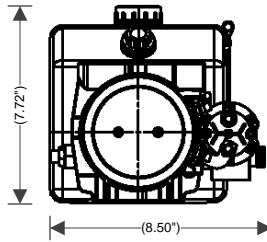
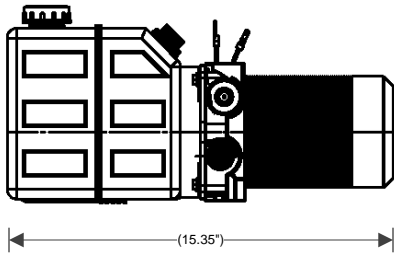


1116919 - HID12HV015W12-P16P100H (No Pendant)
 1116918 - HID12HV015Q12-P16P100H (20' Pendant)

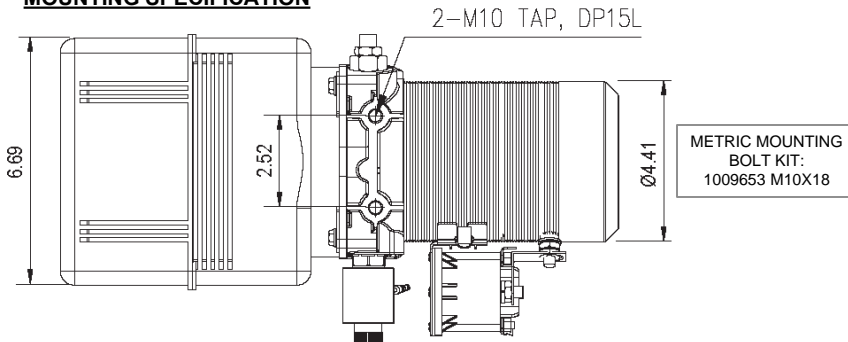
- TA9 SERIES DOUBLE ACTING CENTER BLOCK
- 1.6 HP 12VDC MOTOR
- .097 CID / 1.6 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- 1500 PSI ADJ RELIEF ON "A" PORT ONLY
- CHECK VALVE
- P.O. CHECKS ON WORK PORTS
- DOUBLE ACTING, SINGLE COIL SOLENOID VALVE
- HORIZONTAL PLUMBING W/ POLY 1 GAL TANK
- LOWER AMP DRAW = LONGER BATTERY LIFE
- * "B" PORT FLOW CONTROL OPTION #1068073



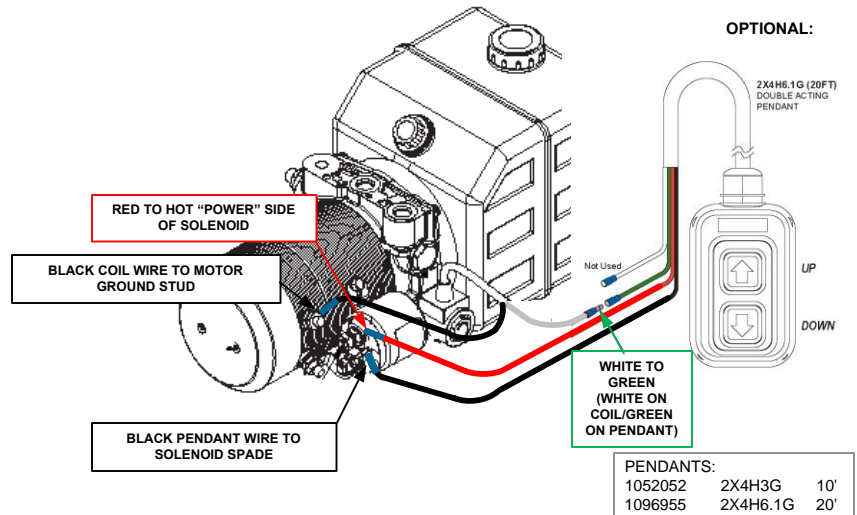
DIMENSIONS



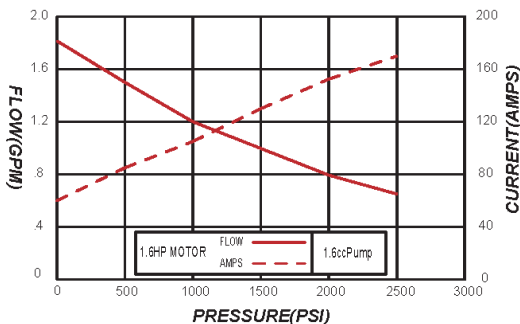
MOUNTING SPECIFICATION



WIRING OVERVIEW

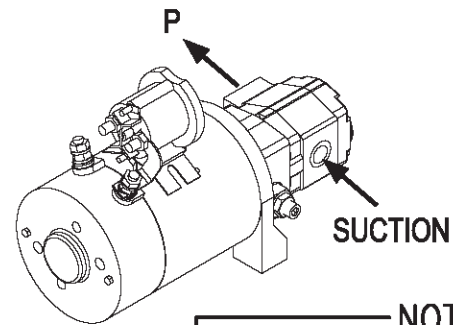
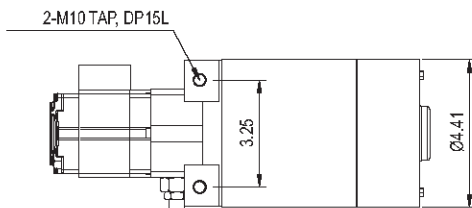
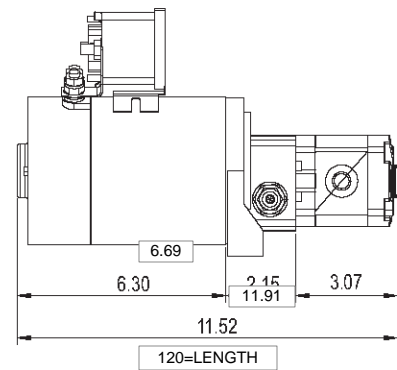
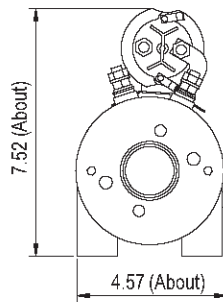
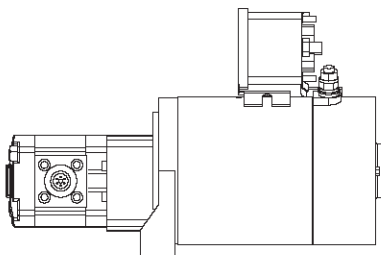
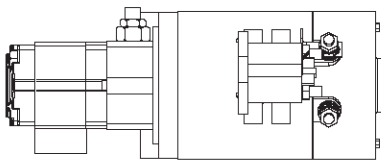
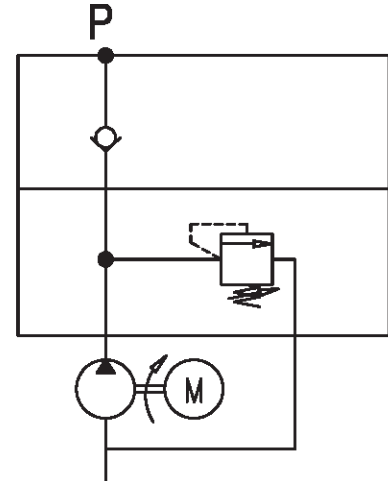


PERFORMANCE DATA



1071251 120FR/021NFM
1056582 116FR/021NFM

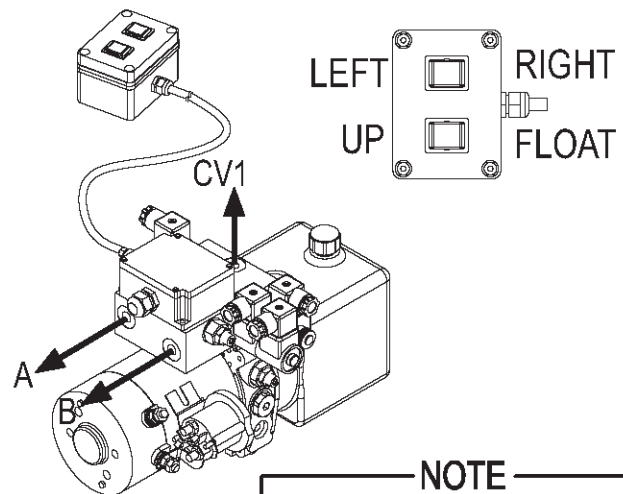
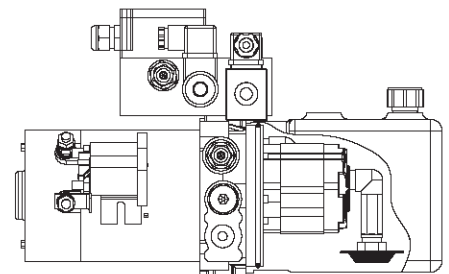
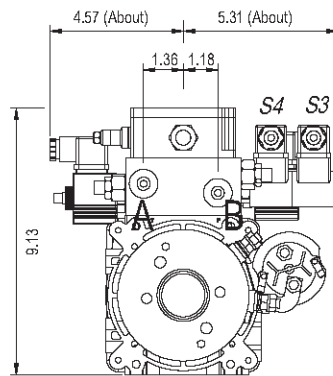
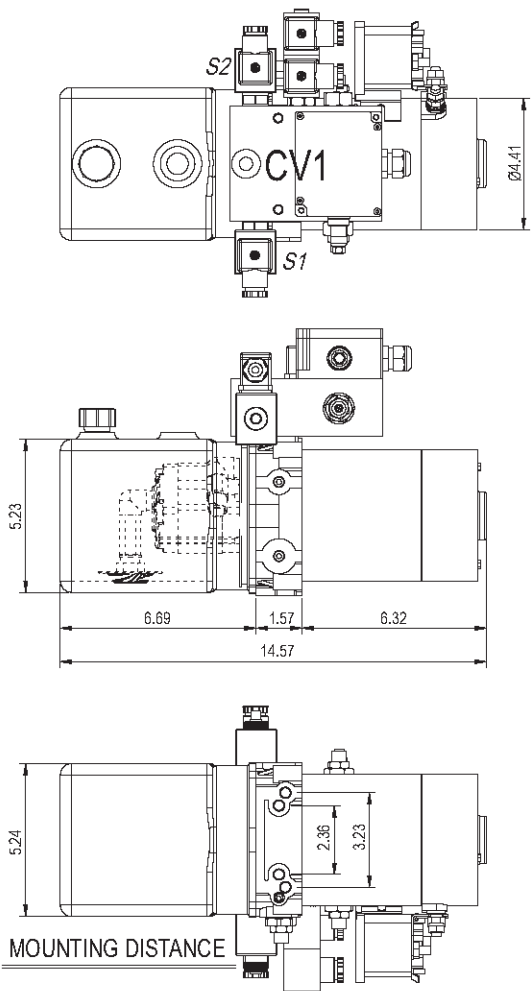
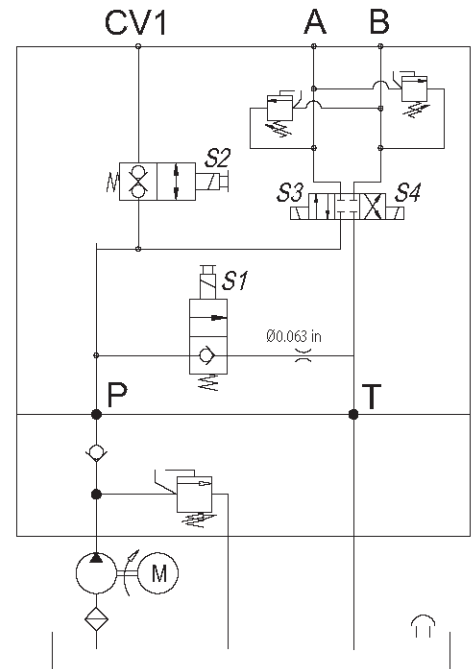
- HD AND STD DUTY 12VDC MOTOR
- .128 CID, 2.1 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- NO VALVES
- BACKUP POWER UNIT (NO PLUMBING)



NOTE
SUCTION, P PORT : SAE #6

1056586 116XA1CS34/016021PSHSB

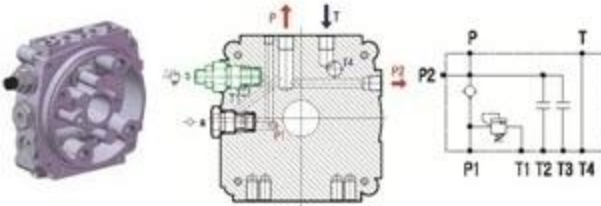
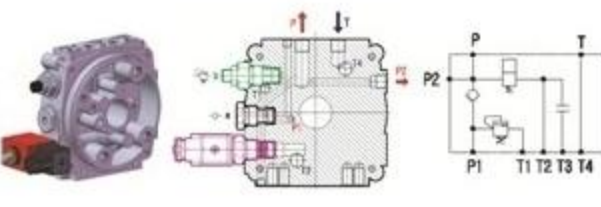
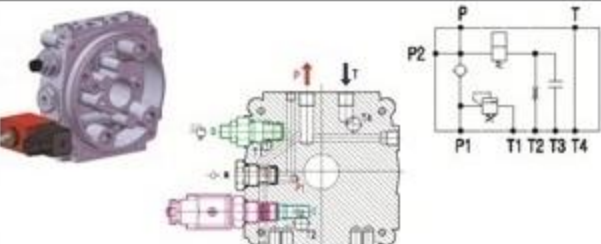
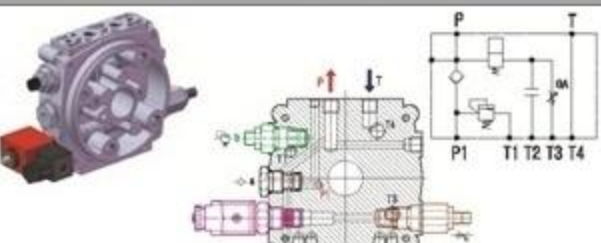

- STD DUTY 12VDC MOTOR
- .097 CID, 1.6 CC PUMP
- 2500 PSI ADJ MAIN RELIEF
- CHECK VALVE
- SINGLE ACTING DOUBLE BLOCKING VALVE
- DOUBLE ACTING SOLENOID VALVE
- DUAL CROSSOVER RELIEF ON PLOW ANGLE
- 10' CABLE ON SWITCH BOX
- HORIZONTAL PLUMBING WITH .50 GAL POLY TANK



METRIC MOUNTING BOLT KIT:
1009653 M10X18

NOTE
CV1, A, B PORT : SAE #6

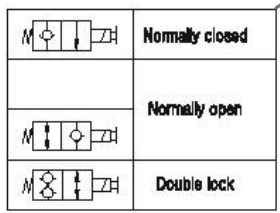
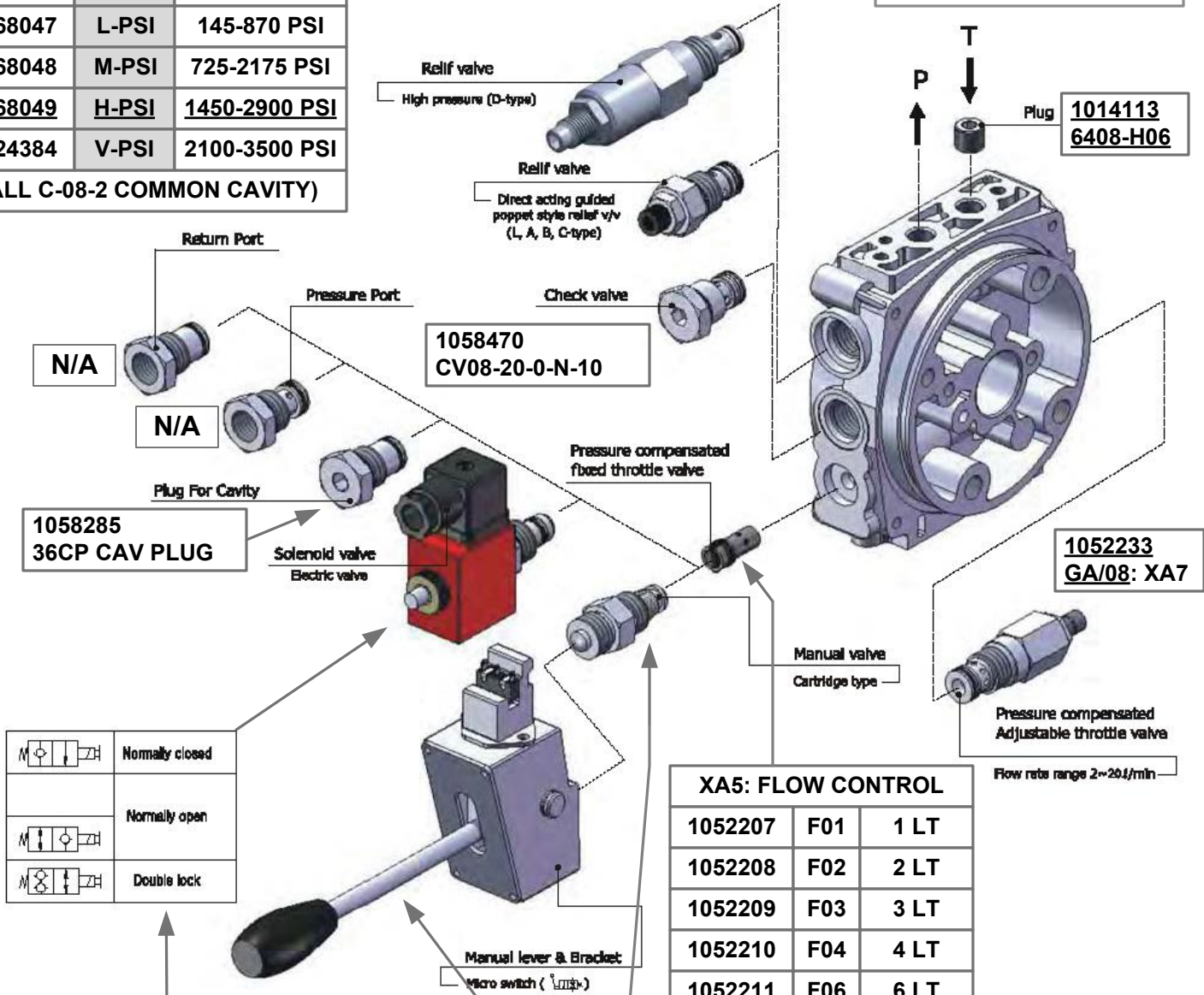
XA SERIES SINGLE ACTING CENTER BLOCK QUICK REFERENCE

Single Acting Center Block Number	Circuit Description	Sample Model View
<p style="text-align: center;">XA1</p> <p style="text-align: center;">CIRCUIT V000</p>	<p style="text-align: center;">Pressure and Tank: Main Relief and Isolation Check Valves Only No Control Valves</p>	
<p style="text-align: center;">XA3</p> <p style="text-align: center;">CIRCUIT V002</p>	<p style="text-align: center;">SA Cylinder Load Holding: 2W/2P SA Circuit</p>	
<p style="text-align: center;">XA5</p> <p style="text-align: center;">CIRCUIT V003</p>	<p style="text-align: center;">Single Acting Load Holding: 2W/2P SA Circuit Pressure Comp Flow Control On Lowering</p>	
<p style="text-align: center;">XA7</p> <p style="text-align: center;">CIRCUIT V004</p>	<p style="text-align: center;">Single Acting Load Holding: 2W/2P SA Circuit Adj. Pressure Comp Flow Control On Lowering</p>	
<p style="text-align: center;">XA9</p> <p style="text-align: center;">CIRCUIT V001</p>	<p style="text-align: center;">Single Acting Load Holding: 2W/2P SA Circuit Manual Lever Control</p>	

XA SERIES SINGLE ACTING CENTER BLOCK OVERVIEW

ALL XA: MAIN RELIEF VALVES		
AX#	DESC	PSI RANGE
1068047	L-PSI	145-870 PSI
1068048	M-PSI	725-2175 PSI
<u>1068049</u>	<u>H-PSI</u>	<u>1450-2900 PSI</u>
1124384	V-PSI	2100-3500 PSI
(ALL C-08-2 COMMON CAVITY)		

XA1, XA3, XA5, XA7, XA9 CENTERBLOCK REFERENCE



XA5: FLOW CONTROL		
1052207	F01	1 LT
1052208	F02	2 LT
1052209	F03	3 LT
1052210	F04	4 LT
1052211	F06	6 LT
<u>1052212</u>	<u>F08</u>	<u>8 LT</u>
1052215	F10	10 LT
1052217	F12	12 LT

2 POS – 2 WAY SOLENOID VALVES		
AX#	CODE	DESC
<u>1052453</u>	<u>SV08-20DM</u>	<u>N-C POPPET XA3,5,7</u>
1073355	SV08-23S	N-O POPPET
1052455	SV08-28DP	N-C DBL BLOCK
(ALL C-08-2 COMMON CAVITY)		

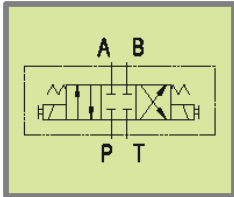
SOLENOID VALVE COILS				
VALVE	12 VDC	DESC	24 VDC	DESC
<u>SVO8-20DM</u>	<u>1094298</u>	<u>21W W/L</u>	1052156	16W DIN
SV08-23S	1094298	21 W/L	1052156	16W DIN
SV08-28DP	1052455	22W DIN	1052157	22W DIN
1021697		DC DIN PLUG		

UNDERLINED: STANDARD ITEMS

XA CENTER BLOCK DO3 VALVE QUICK REFERENCE

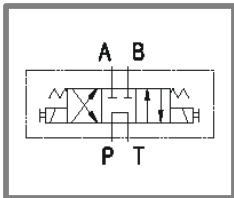
DO3 VALVES WITH DIN PLUG WIRING CONNECTORS

KA



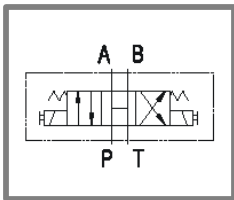
AX#	VOTAGE	CODE
<u>1100233</u>	<u>12VDC</u>	<u>KA11D</u>
1052275	24VDC	KA211D

KC



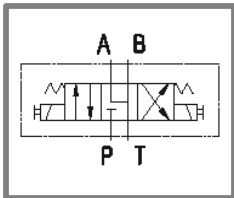
1052279	12VDC	KC111D
N/A	24VDC	KC211D

KO

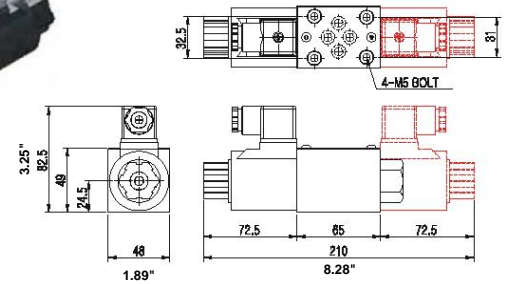


1052298	12VDC	KO111D
1052299	24VDC	KO211D

KP

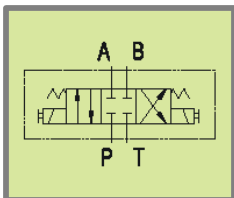


1052304	12VDC	KP111D
1052305	24VDC	KP211D



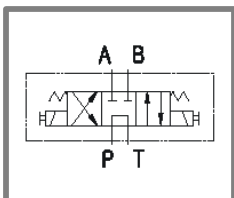
DO3 VALVES WITH BOX WIRING CONNECTOR

KA

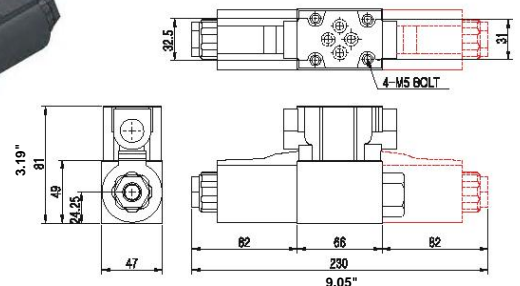
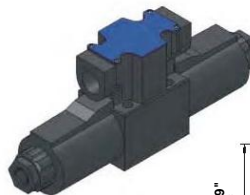


1009629	12VDC	KA111B
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KC



1052278	12VDC	KC111B
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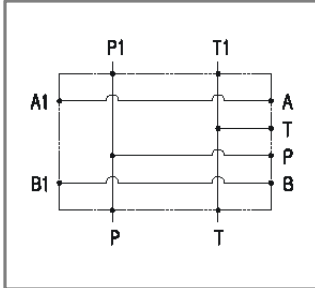
STANDARD

ALL VALVES HAVE 4MM ISO MOUNTING BOLTS!

XA CENTER BLOCK DO3 MANIFOLD ADAPTER QUICK REFERENCE

DO3 MANIFOLD ADAPTERS WITHOUT CHECKS

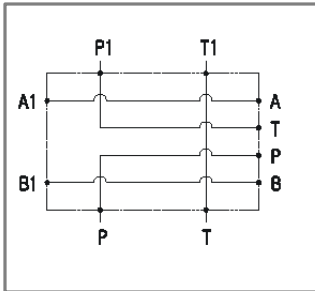
BY3



AX#	DESC	CODE
1052124	PARALLEL	BY31/600



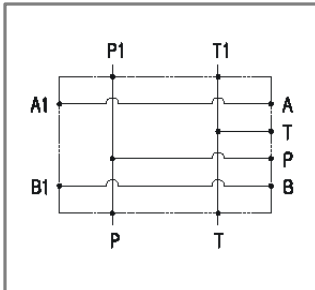
BY2



1052123	SERIES	BY21/600
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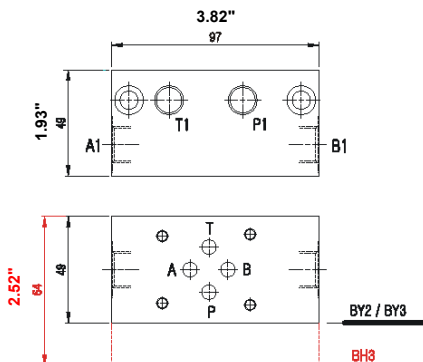
BH3



1052118	PARALLEL	BH31/600
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RAISES VALVE BY .59" FOR CLEARANCE

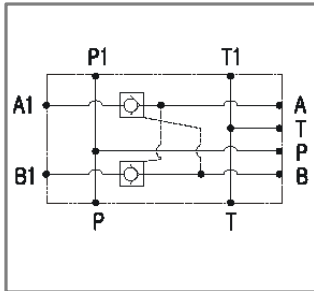


PORTS ALL SAE #6

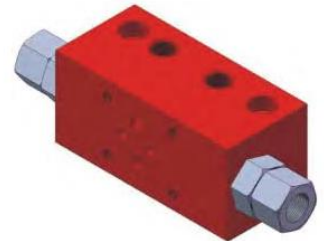
XA CENTER BLOCK DO3 MANIFOLD ADAPTER QUICK REFERENCE

DO3 MANIFOLD ADAPTERS WITH P.O. CHECKS

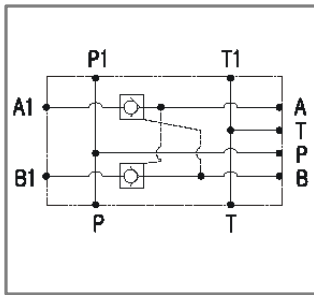
BY4



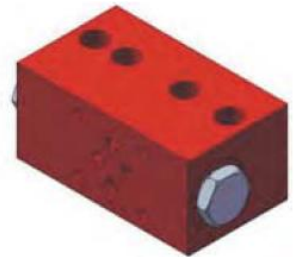
AX#	DESC	CODE
1052125	PARALLEL	BY41/600
DUAL 3:1 P.O. CHECKS		



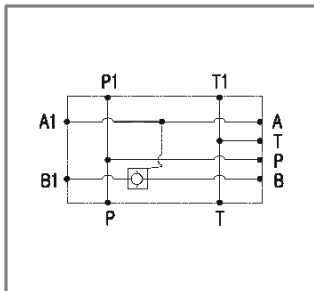
BYF



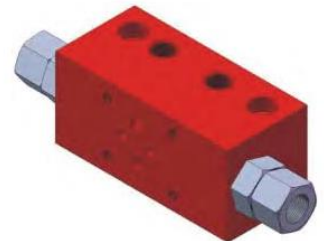
AX#	DESC	CODE
1052128	PARALLEL	BYF1/600
DUAL 3:1 P.O. CHECKS		



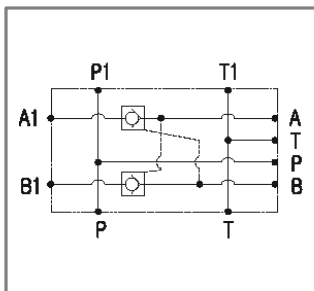
BY8



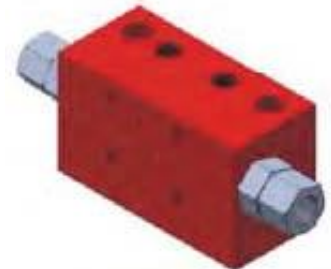
AX#	DESC	CODE
1096958	PARALLEL	BY81/600
"B" PORT ONLY 3:1 P.O. CHECK		



BH4

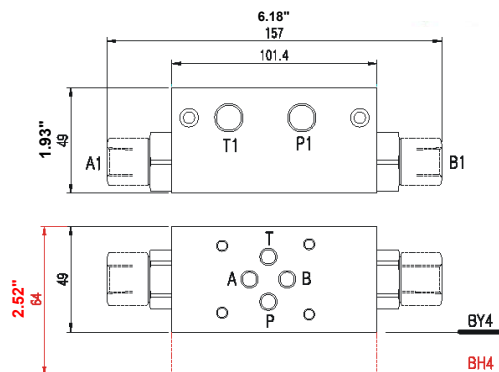


AX#	DESC	CODE
1052119	PARALLEL	BH41/600
DUAL 3:1 P.O. CHECKS		



RAISES VALVE BY .59" FOR CLEARANCE

STANDARD

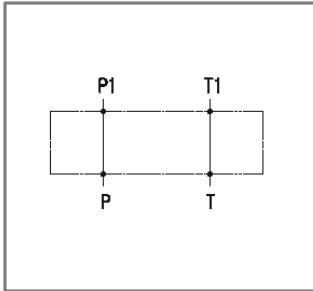


PORTS ALL SAE #6

XA CENTER BLOCK DO3 MANIFOLD ADAPTER QUICK REFERENCE

DO3 MANIFOLD SPACERS

BY6

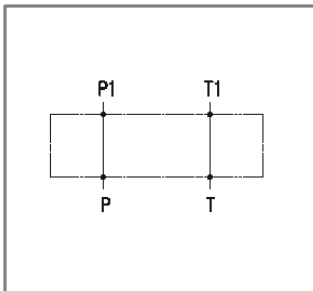


**RAISES VALVE BY
.39" FOR CLEARANCE**

AX#	DESC	CODE
1052127	PARALLEL	BY61/600

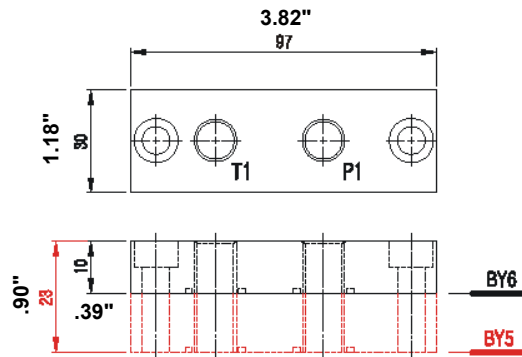


BY5



**RAISES VALVE BY
.90" FOR CLEARANCE**

AX#	DESC	CODE
1052126	PARALLEL	BY51/600



**NOTE: TO RAISE HORIZONTAL DO3 POSITION
REQUIRES SPECIAL MOUNTING BOLTS.
PLEASE CONTACT "HYDRO-TEK" PRODUCT
SUPPORT FOR ASSISTANCE WITH SELECTION!**

STACKING MANIFOLD BLOCK

DO3 VALVE CALLOUT

INSERT AX NUMBER

OF VALVES

INSERT AX NUMBER

V - 4

BOLTS:
1081265
M8 X 200MM
2 EACH

V - 3

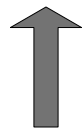
BOLTS:
1020625
M8 X 150MM
2 EACH

V - 2

BOLTS:
1052061
M8 X 100MM
2 EACH

V - 1

BOLTS:
1118016
M8 X 50MM
2 EACH



**STANDARD
49mm
BLOCK
BOLTS**

1052124	BY31/600		PARALLEL
1052125	BY41/600		END PORT DUAL PO CHECK (PARALLEL)
1052128	BYF1/600		SIDE PORT DUAL PO CHECK (PARALLEL)
1096958	BY81/600		END PORT B PORT PO CHECK (PARALLEL)
1052123	BY21/600		SERIES (MUST INCLUDE PATH BACK TO TANK!)
<u>UNDERLINED</u> NUMBER = STANDARD PRE-BUILT VALVES			

VOLTS	A B	A B	A B	A B
	P T	P T	P T	P T
	KA	KP	KC	KO
12	<u>1100223</u>	1052304	1052279	1052298
24	1052275	1052305	NA	1052299
<u>UNDERLINED</u> NUMBER = STANDARD PRE-BUILT VALVES				

NOTE: ONLY USE ONE VALVE IF KC/KO CODES ON PARALLEL OR USE SERIES BLOCKS

2 HOLES = M8-1.25 – 15MM DEEP

199 IN LBS TORQUE

NO WASHERS!

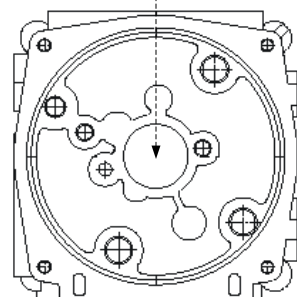
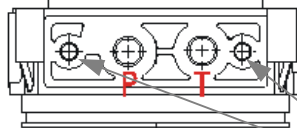
NOTE: VALVES LAY OVER MOTOR!

REFER TO DATA SHEETS FOR FURTHER COMPONENT INFORMATION!

MAIN RELIEF SETTING: _____

BLOCK "P" & "T" NEED PLUGS!
2 – 1014113 (6408-H06)

ALL PORTS ARE SAE #6



TA SERIES DOUBLE ACTING CENTER BLOCK QUICK REFERENCE

Double Acting
Center Block
Series Number

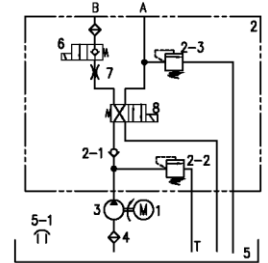
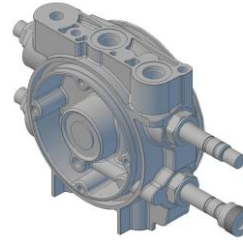
Circuit
Description

Sample
Model
View

TA1

CIRCUIT V006

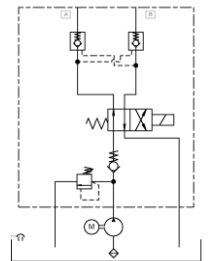
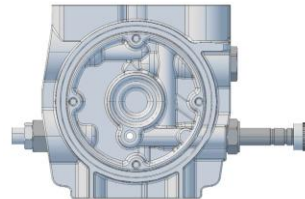
DA Dump Bed:
4W/2P DA Circuit
2W/2P Holding Valve
Down Side: Low PSI
Relief - Pressure Comp
Flow Control



TA3

CIRCUIT V005

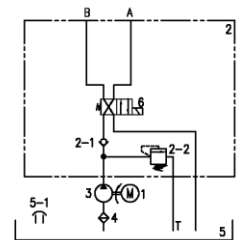
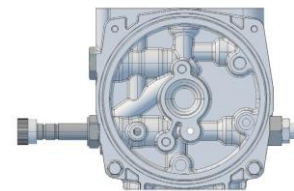
DA Cylinder
Load Holding In
Both Directions:
4W/2P DA Circuit
Dual PO Check



TA7

CIRCUIT V013

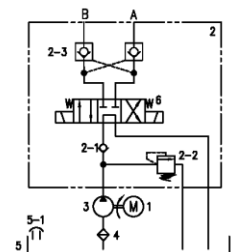
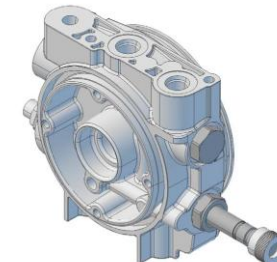
Double Acting Only
No Load Holding:
4W/2P DA Circuit



TA8

CIRCUIT V014

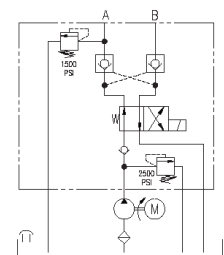
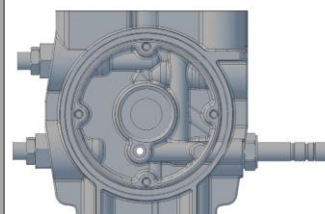
DA Cylinder Load Holding
In Both Directions Center
Positive Stop Position:
4W/3P DA Circuit
W/Dual PO Check



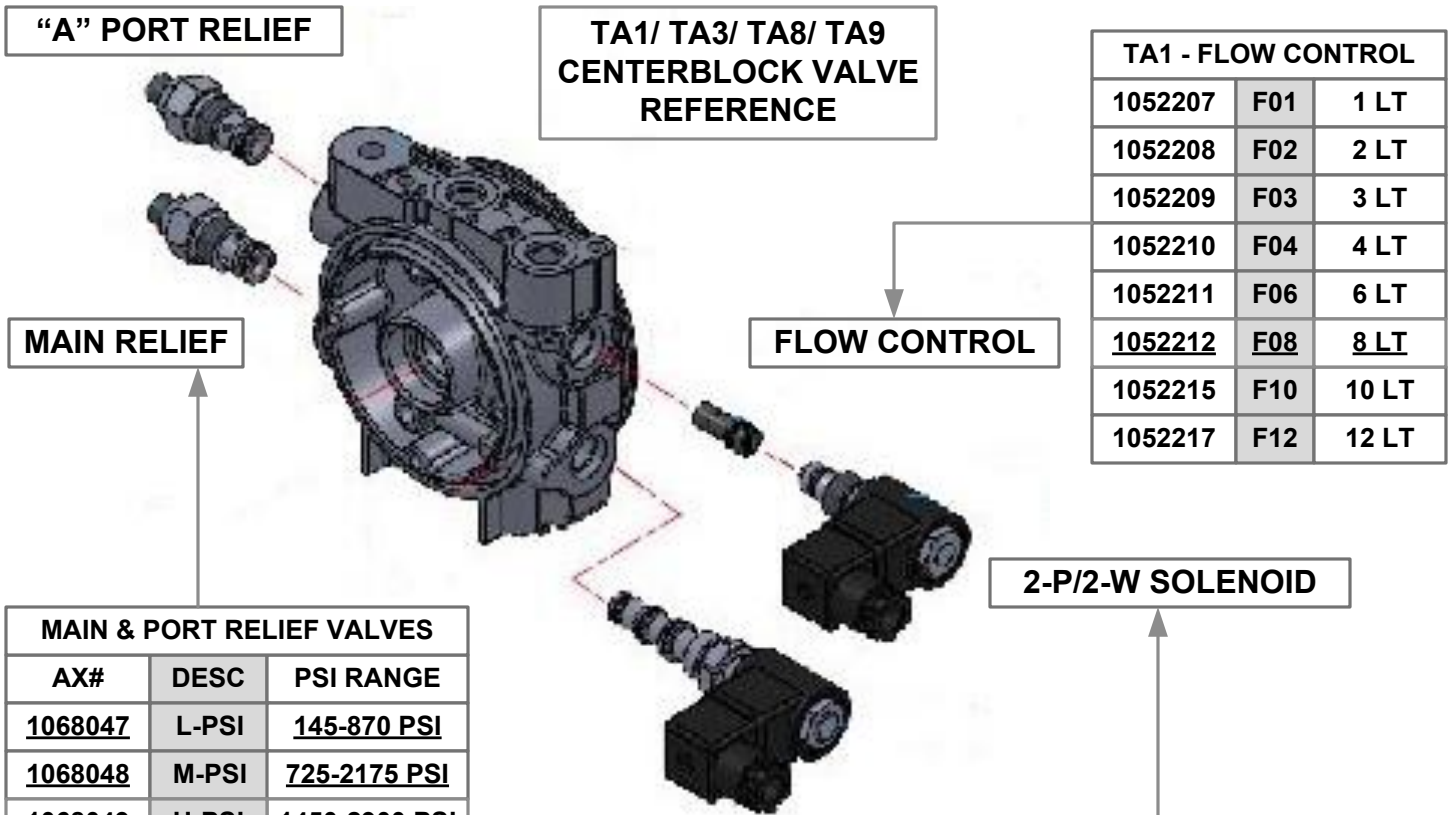
TA9

CIRCUIT V015

DA Cylinder
Load Holding In
Both Directions:
4W/2P DA Circuit
Dual PO Check
"A" Port Relief



TA SERIES DOUBLE ACTING CENTER BLOCK OVERVIEW



TA1 - FLOW CONTROL		
1052207	F01	1 LT
1052208	F02	2 LT
1052209	F03	3 LT
1052210	F04	4 LT
1052211	F06	6 LT
<u>1052212</u>	<u>F08</u>	<u>8 LT</u>
1052215	F10	10 LT
1052217	F12	12 LT

MAIN & PORT RELIEF VALVES		
AX#	DESC	PSI RANGE
<u>1068047</u>	L-PSI	<u>145-870 PSI</u>
<u>1068048</u>	M-PSI	<u>725-2175 PSI</u>
<u>1068049</u>	H-PSI	<u>1450-2900 PSI</u>
1124384	V-PSI	2100-3500 PSI
(ALL C-08-2 COMMON CAVITY)		

2 POS – 4 WAY SOLENOID VALVES		
AX#	CODE	USED
<u>1112183</u>	<u>HB08-42</u>	TA3, TA9
<u>1056057</u>	<u>HD08-42</u>	TA1
3 POS – 4 WAY SOLENOID VALVES		
<u>1056056</u>	<u>SC08-43</u>	TA8
(ALL C-08-4 COMMON CAVITY)		

2 POS – 2 WAY SOLENOID VALVES		
AX#	CODE	USED
<u>1052453</u>	<u>SV08-20DM</u>	TA1
(C-08-2 COMMON CAVITY)		

SOLENOID VALVE COILS				
VALVE	12 VDC	DESC	24 VDC	DESC
SV08-20DM	<u>1094298</u>	<u>21W W/L - RD</u>	1052156	16W DIN
HB08-42	<u>1094298</u>	<u>21W W/L - RD</u>	1052156	16W DIN
SC08-43 X 2	<u>1094298</u>	<u>21W W/L - RD</u>	1052156	16W DIN
HD08-42	<u>1079430</u>	<u>22W W/L - SQ</u>	1052157	22W DIN
W/L: WIRE LEAD, RD: ROUND, SQ: SQUARE, DIN: DIN PLUG				

UNDERLINE = STD

INTERMITTENT DUTY MOTOR (D112XXA)

1079429

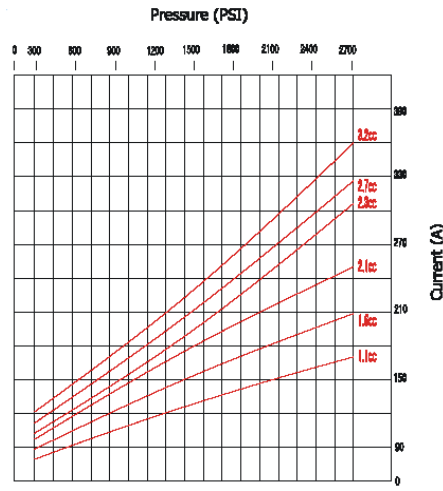
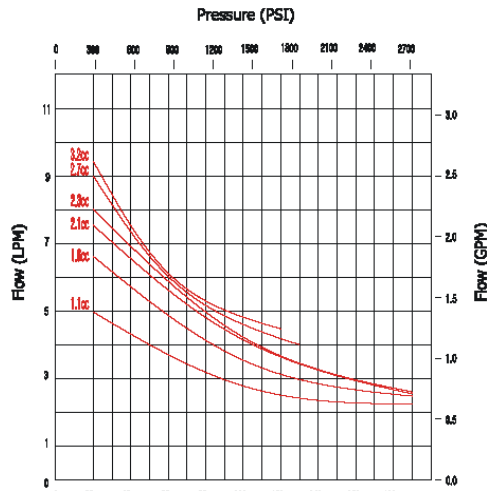
400037

VOLTAGE (V) 12VDC

POWER (W) 1200W

RATED CURRENT (A) 180A

DUTY CYCLE (S2= min / S3=%) 2 min / 4.5% ED



STANDARD DUTY MOTOR (D116XXA)

1052167

412197

VOLTAGE (V) 12VDC

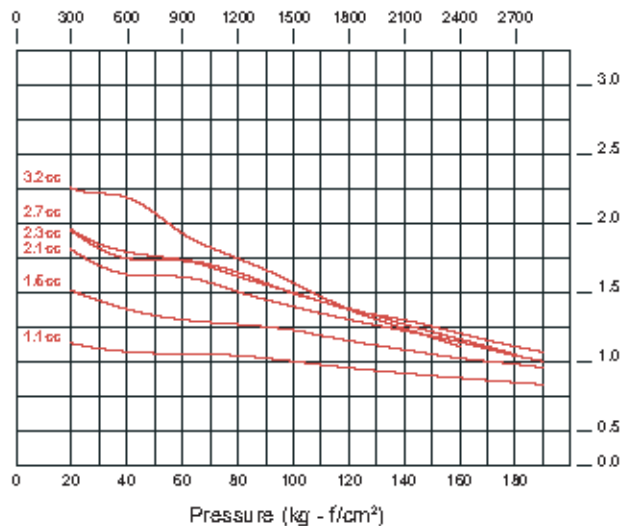
POWER (W) 1600W

RATED CURRENT (A) 209A

DUTY CYCLE (S2= min / S3=%) 4 min / 8% ED

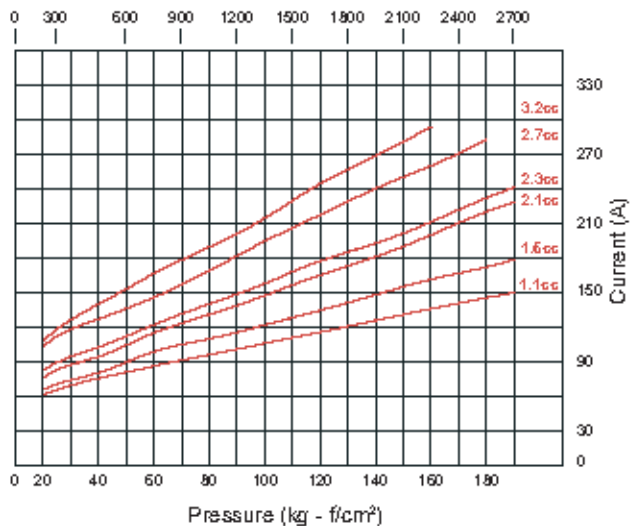


Flow Versus Pressure for D116 Motor
Pressure (PSI)



Test Fluid
95°F

Current Versus Pressure for D116 Motor
Pressure (PSI)



HEAVY DUTY MOTOR (D120XXA)

1052168 412252

VOLTAGE (V) 12VDC

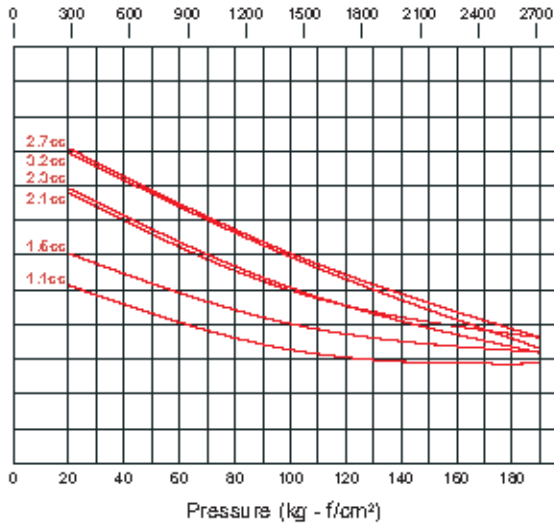
POWER (W) 2000W

RATED CURRENT (A) 225A

DUTY CYCLE (S2= min / S3=%) 7.5 min / 20% ED

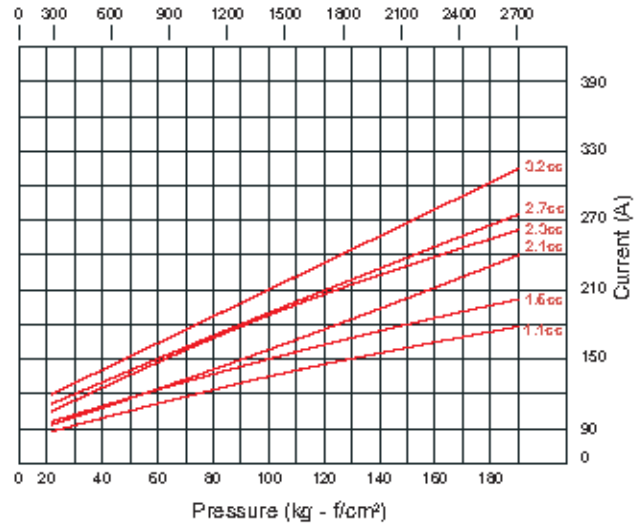


Flow Versus Pressure for D120 Motor
Pressure (PSI)



Test Fluid
95°F

Current Versus Pressure for D120 Motor
Pressure (PSI)



STANDARD DUTY MOTOR (D222XXA)

1052172 412251

VOLTAGE (V) 24VDC

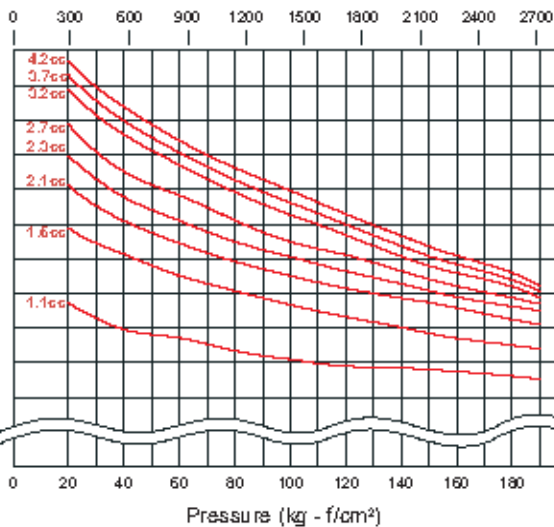
POWER (W) 2200W

RATED CURRENT (A) 110A

DUTY CYCLE (S2= min / S3=%) 2 min / 7.5% ED

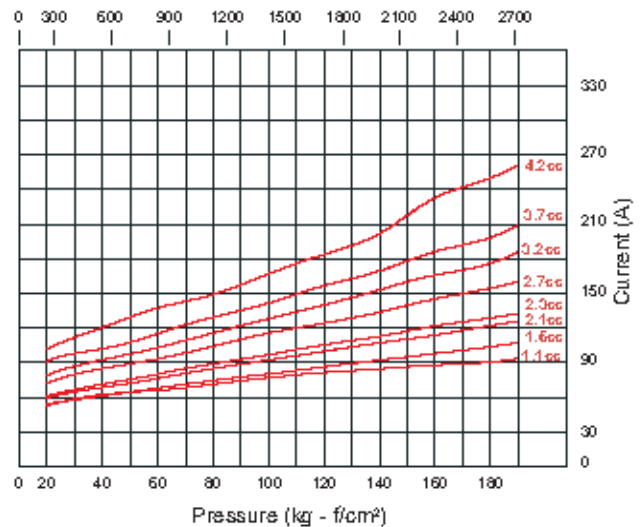


Flow Versus Pressure for D222 Motor
Pressure (PSI)



Test Fluid
95°F

Current Versus Pressure for D222 Motor
Pressure (PSI)



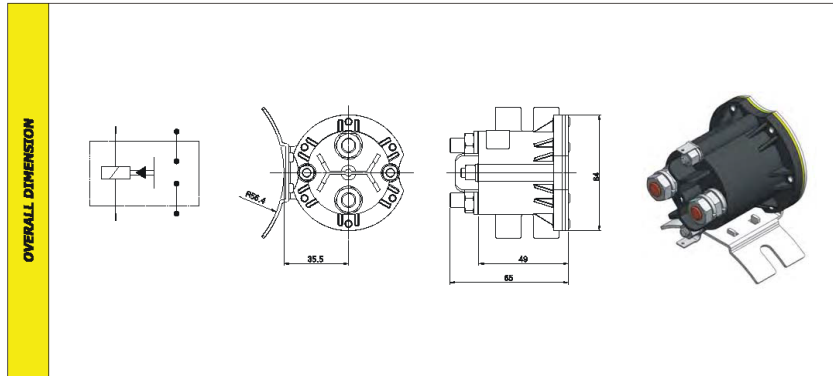
MOTOR ACCESSORIES

1052459	T1
1052462	T2

1052317	K-T1
1052318	K-T2

KITS INCLUDE SOLENOID, MOUNTING BOLTS, COPPER BUSS BRACKET AND GROUND WIRE

TECHNICAL DATA	CODE	VOLTAGE	Max. ON TIME	RESISTIVE LOAD CARRY	INTERRUPT AMPERE	PEAK INDUCTIVE INRUSH AMPERE	ELECTRICAL CYCLE LIFE
	T1	12V	6 min	150A	250A	800	100,000
	T2	24V	6 min	150A	250A	800	60,000



1052057	400475
1052056	400447
1052102	412360

MOUNTING BOLTS FOR SOLENOID
COPPER BUSS BAR (D116/D120/D222 MOTORS)
SOLENOID GROUND WIRE (FEMALE SPADE X RING TERMINAL, 4" LOA)



1025988	401099
1052056	400447

GROUNDING STRAP (SILVER BRADED) 4 GA, 8" LOA
BLACK POWER CABLE, 4 GA, 8" LOA



1058606	416857
1099853	21004

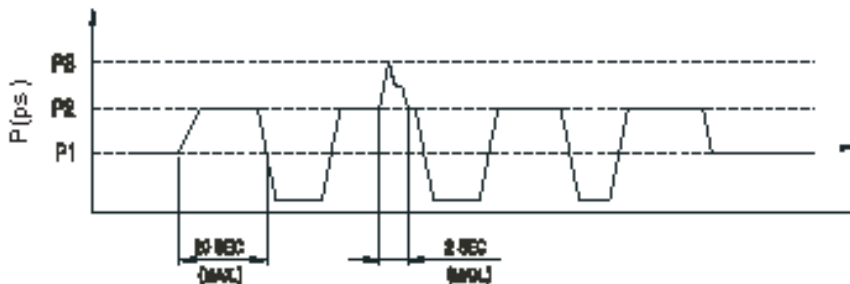
POLY MOTOR/SOLENOID COVER (REQUIRES ZIP TIE)
30" ZIP TIE HD BLACK (COVER RETAINER)



- COVERS THE MOTOR SOLENOID, WIRE CONNECTIONS, POWER AND GROUND STUDS FROM THE ELEMENTS AND INADVERTENT CONTACT
- WIRE ACCESS KNOCK-OUTS INCLUDED
- WORKS WITH ANY STANDARD 4.5" DIAMETER MOTOR
- LOW COST PROTECTION

GEAR PUMPS

AX#	CID	MODEL NO.	PRESSURE P1 / P2 / P3	AX#	BOLTS#	AX#	KIT#
1052240	.067	GO11	3300 / 3600 / 3900	1052060	400731 X 75L		NA
1009631	.079	GO13	3300 / 3600 / 3900	1052060	400731 X 75L		NA
1052241	.097	GO16	3300 / 3600 / 3900	1052060	400731 X 75L	1052286	K-GO16N
1052242	.128	GO21	3300 / 3600 / 3900	1052058	400601 X 80L	1052287	K-GO21N
1052243	.140	GO23	3300 / 3600 / 3900	1052058	400601 X 80L	1052288	K-GO23N
1052244	.164	GO27	3300 / 3600 / 3900	1052058	400601 X 80L	1052288	K-GO27N
1052245	.195	GO32	3000 / 3300 / 3600	1052075	401231 X 85L	1052290	K-GO32A
1052246	.225	GO37	3000 / 3300 / 3600	1052075	401231 X 85L	1052291	K-GO37B
1052247	.256	GO42	3000 / 3300 / 3600	1052076	401232 X 90L	1052292	K-GO42N
1052248	.292	GO48	2750 / 3000 / 3300	1052076	401232 X 90L	1052293	K-GO48B
1052249	.353	GO58	2750 / 3000 / 3300	1052077	401233 X 95L	1052249	K-GO58B



P3 = Peak Max. Pressure
 P1 = Continuous Max. Pressure
 P2 = Intermittent Max. Pressure



GEAR PUMPS

COUPLING NUMBER APPLICATION GUIDE:

CP01 **1073324** **44.5 MM = 1.75" LONG**

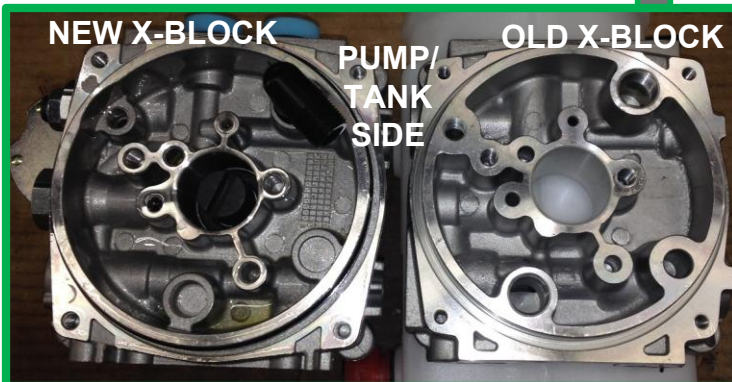
USED WITH:

- ALL NEW T SERIES: TA1, TA3, TA8 AND TA9 SERIES D-A CENTER BLOCKS
- OLD STYLE XO CENTER BLOCKS (PUMP MOUNT FLUSH TO FACE OF BLOCK)



CP1

NEW AND OLD X BLOCK INTERNAL CHANGES



NEW TA SERIES CENTER BLOCK

CP03 **1052159** **35.5 MM = 1.39" LONG**

USED WITH:

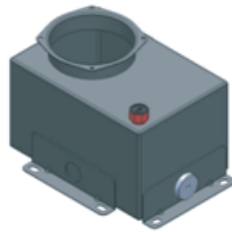
- ALL NEW XA CENTER BLOCKS (THESE CENTER BLOCKS HAVE A RECESSED PUMP MOUNTING LOCATION)



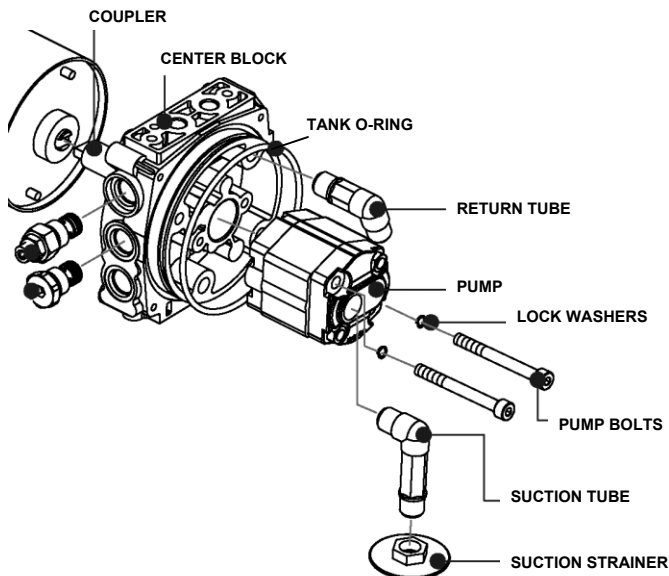
CP3

TANKS - OVERVIEW

- Tanks are available in Round Steel, Square Steel and Square Poly
- There are tanks that are only Horizontal, Vertical or Diagonal orientation (H or V/D)
- Some can be set-up for Horizontal, Vertical and Diagonal orientation (H & V/D)
- To do so requires different suction and return tubes; 90 degree used for Horizontal and straight tubes are used for Vertical and Diagonal
- Some configurations will require Suction & Return Tube Modification
- All Pre-Built units are ordered in as Horizontal
- A variety of sizes in both 90 degree and straight suction and return tubes are available

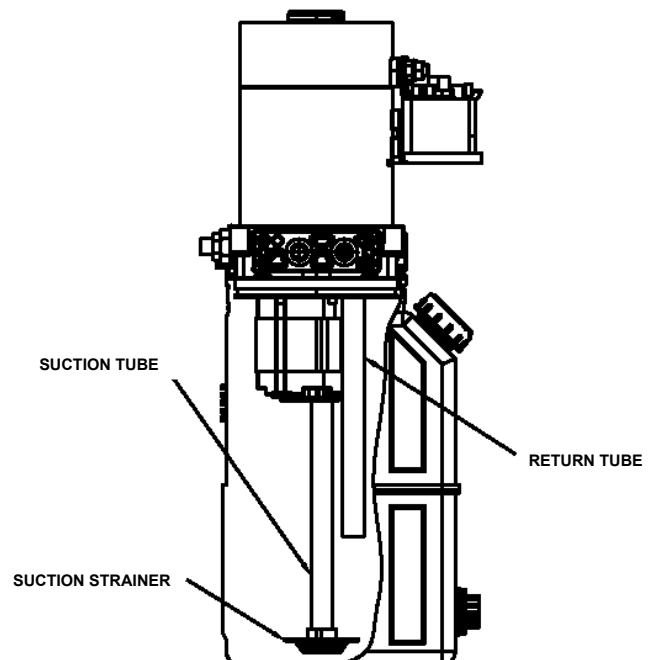
HORIZONTAL TANK
"H" TYPEVERTICAL TANK
"V" TYPEDIAGONAL TANK
"D" TYPE

TYPICAL HORIZONTAL PLUMBING LAYOUT




- SUCTION STRAINER IS NEAR BOTTOM OF TANK
- STRAINER DOES NOT HIT BOTTOM OF TANK
- RETURN TUBE BELOW LOWEST OIL LEVEL

TYPICAL VERTICAL PLUMBING LAYOUT

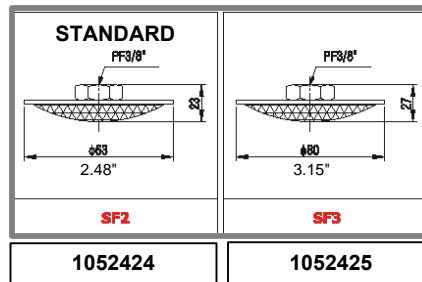


TANKS - OVERVIEW

BREATHERS

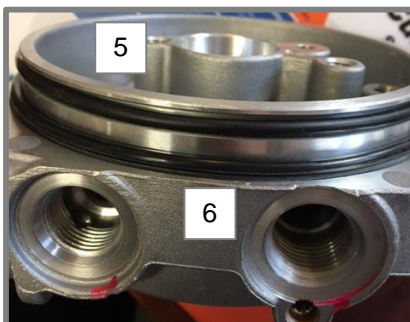
					
PF 3/8"	PF 1/2"	PF 3/4"	PF 3/8" Oil check type	PF 1/2" Oil check type	PF 3/4" Oil check type
AB04	AB05	AB06	AB14	AB15	AB16
1052105	1052106	SEE AB16	1052107	1052108	1073344

SUCTION STRAINERS



TANK ACCESSORIES

#	AX #	PART #	DESCRIPTION	USAGE NOTES
1	1052062	400740 KIT=4	6 X10 MM FLANGE HEAD BOLTS	ALL STEEL & .25 TO .75 GAL POLY TANKS
2	1091095	MFBZ-6-16	6 X16 MM FLANGE HEAD BOLTS	1 TO 2 GAL POLY TANKS
3	1052101	412322	TANK FLANGE PLATES	1 TO 2 GAL POLY TANKS
4	1052099	411752	TANK NECK CLAMP	1 TO 2 GAL POLY TANKS
5	1052072	401009	TANK O-RING	ALL TANKS
6	1024182	AS568A-248	SECOND TANK ORING	ONLY PXS03 TANK WITH BEVEL NECK
7	1052120	BRACKET-B	MOUNTING BRACKET 1.18" TALL	1 TO 2 GAL STEEL ROUND TANKS
8	1052121	BRACKET-H	MOUNTING BRACKET 1.77" TALL	ONLY XR11 ROUND STEEL TANK
9	1009653	M10X18	MOUNTING BOLT KIT	USE WITH BRACKETS AND ALL MOUNTING



POLY TANKS

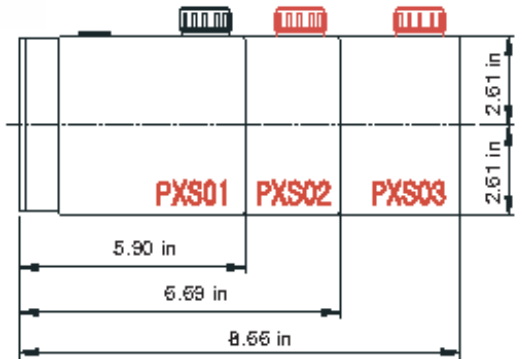
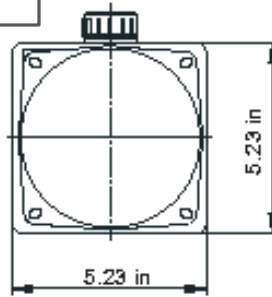
.25 to .75 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1052382	PXS01	HORIZONTAL TANK ONLY	.25 / .21 GAL
1052308	K-PXS01H	HORIZONTAL TANK KIT	.25 / .21 GAL
1052383	PXS02	HORIZONTAL TANK ONLY	.50 / .30 GAL
1052309	K-PXS02H	HORIZONTAL TANK KIT	.50 / .30 GAL
1052384	PXS03	HORIZONTAL TANK ONLY	.75 / .50 GAL
1052310	K-PXS03H	HORIZONTAL TANK KIT	.75 / .50 GAL



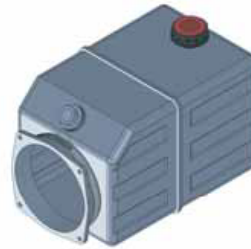
BREATHER:
1052108 (AB15)
TANK BOLT KIT:
(400740)

SUCTION TUBE:
1052445 (SP8)
RETURN TUBE:
1052442 (SP5)



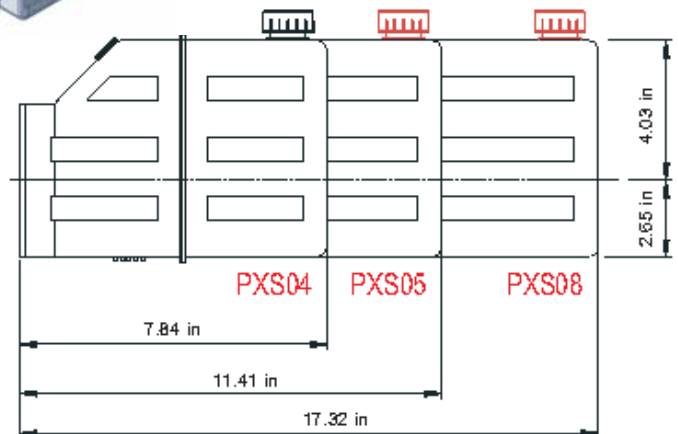
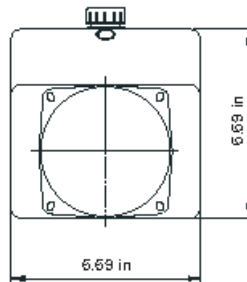
1 to 2 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1020621	PXS04	HORIZONTAL TANK ONLY	1 / .55 GAL
1025910	K-PXS04H	HORIZONTAL TANK KIT	1 / .55 GAL
1052385	PXS05	HORIZONTAL TANK ONLY	1.38 / 1.27 GAL
1052312	K-PXS05H	HORIZONTAL TANK KIT	1.38 / 1.27 GAL
1052386	PXS08	HORIZONTAL TANK ONLY	2 / 1.90 GAL
1052314	K-PXS08H	HORIZONTAL TANK KIT	2 / 1.90 GAL



BREATHER:
1073344 (AB16)
TANK BOLTS:
1091095 (MFBZ-6-16)
TANK PLATES:
1052101 (412322)
STEEL CLAMP:
1052099 (411752)

SUCTION TUBE:
1052445 (SP8)
RETURN TUBE:
1052442 (SP5)



1 to 2 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1025909	K-PXS04D	DIAGONAL TANK KIT	1 / .55 GAL
1052311	K-PXS05D	DIAGONAL TANK KIT	1.38 / 1.27 GAL
1052313	K-PXS08D	DIAGONAL TANK KIT	2 / 1.90 GAL

ALWAYS MEASURE SUCTION AND RETURN TUBES
BEFORE INSTALLATION TO ENSURE PROPER FIT!

BREATHER:
1073344 (AB16)
TANK BOLTS:
1091095 (MFBZ-6-16)
TANK PLATES:
1052101 (412322)
STEEL CLAMP:
1052099 (411752)

SUCTION TUBE:
PXS04: 1052443 (SP6)
PXS05: 1052443 (SP6)
ADD 3" EXTENSION
PXS08: 1052444 (SP7)
RETURN TUBE:
PXS04: 1052407 (RP2)
PXS05: 1052408 (RP3)
CUT 9"
PXS08: 1052408 (RP3)



ROUND STEEL TANKS

.25 to .75 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1052512	XR01H	HORIZONTAL TANK ONLY	.25 / .23 GAL
1052319	K-XR01H	HORIZONTAL TANK KIT	.25 / .23 GAL
1052513	XR01V	VERTICAL TANK ONLY	.25 / .23 GAL
1052320	K-XR01V	VERTICAL TANK KIT	.25 / .23 GAL
1052514	XR02H	HORIZONTAL TANK ONLY	.50 / .44 GAL
1052321	K-XR02H	HORIZONTAL TANK KIT	.50 / .44 GAL
1052515	XR02V	VERTICAL TANK ONLY	.50 / .44 GAL
1052322	K-XR02V	VERTICAL TANK KIT	.50 / .44 GAL
1052516	XR03H	HORIZONTAL TANK ONLY	.75 / .58 GAL
1052323	K-XR03H	HORIZONTAL TANK KIT	.75 / .58 GAL
1052517	XR03V	VERTICAL TANK ONLY	.75 / .58 GAL
1052324	K-XR03V	VERTICAL TANK KIT	.75 / .58 GAL

1 to 2 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1052519	XR04H	HORIZONTAL TANK ONLY	1 / .79 GAL
1052326	K-XR04H	HORIZONTAL TANK KIT	1 / .79 GAL
1052518	XR04D	DIAGONAL TANK ONLY	1 / .75 GAL
1052325	K-XR04D	DIAGONAL TANK KIT	1 / .75 GAL
1052522	XR05H	HORIZONTAL TANK ONLY	1.32 / 1.05 GAL
1052329	K-XR05H	HORIZONTAL TANK KIT	1.32 / 1.05 GAL
1052521	XR05D	DIAGONAL TANK ONLY	1.32 / 1.03 GAL
1052328	K-XR05D	DIAGONAL TANK KIT	1.32 / 1.03 GAL
1052525	XR06H	HORIZONTAL TANK ONLY	1.58 / 1.32 GAL
1052332	K-XR06H	HORIZONTAL TANK KIT	1.58 / 1.32 GAL
1052524	XR06D	DIAGONAL TANK ONLY	1.58 / 1.45 GAL
1052331	K-XR06D	DIAGONAL TANK KIT	1.58 / 1.45 GAL
1052527	XR08H	HORIZONTAL TANK ONLY	2.11 / 1.58 GAL
1052334	K-XR08H	HORIZONTAL TANK KIT	2.11 / 1.58 GAL
1052526	XR08D	DIAGONAL TANK ONLY	2.11 / .30 GAL
1052333	K-XR08D	DIAGONAL TANK KIT	.50 / .30 GAL

BREATHERS:
1052106 (AB05)
1052108 (AB15)
TANK BOLT KIT:
1052062 (400740)

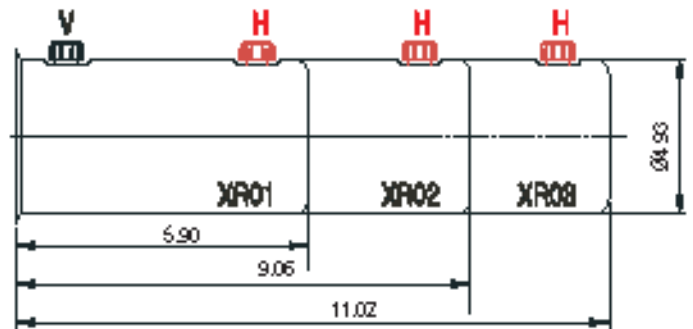
HORIZONTAL:
SUCTION TUBE:
1052445 (SP8)
RETURN TUBE:
1052442 (SP5)

VERTICAL:
SUCTION TUBE:
RETURN TUBE:
USE UNIVERSAL
TUBE KIT

HORIZONTAL



VERTICAL



ALWAYS MEASURE SUCTION AND RETURN TUBES BEFORE INSTALLATION TO ENSURE PROPER FIT!

H-BREATHERS:
1052106 (AB05)
1052108 (AB15)
TANK BOLT KIT:
1052062 (400740)

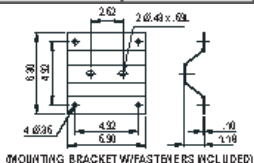
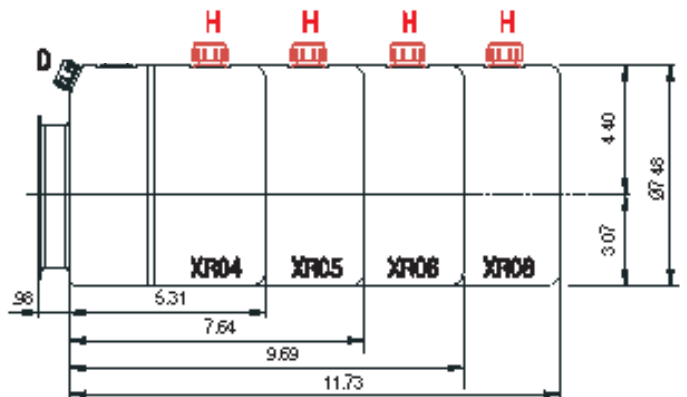
D-BREATHERS
1052105 (AB04)
1052107 (AB14)
USE UNIVERSAL
TUBING KIT

D-BREATHERS
1052105 (AB04)
1052107 (AB14)
USE UNIVERSAL
TUBING KIT

HORIZONTAL



DIAGONAL



1 TO 2 GAL RD STEEL TANKS
MUST USE "B" BRACKET!
BRACKET #: 1052120
BRACKET BOLT KIT #: 1009653

ROUND STEEL TANKS

3 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052529	XR11	TANK ONLY	2.90 / 2.50 GAL
1052337	K-XR11H	HORIZONTAL TANK KIT	2.90 / 2.50 GAL
1052336	K-XR11D	DIAGONAL TANK KIT	2.90 / 2.72 GAL

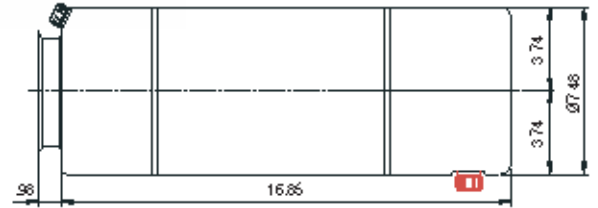
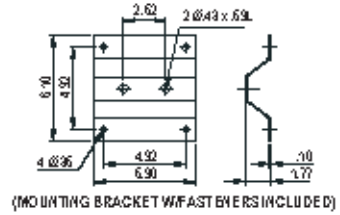
MUST USE "H" BRACKET!
BRACKET #: 1052121
BRACKET BOLT KIT #: 1009653

H-BREATHERS:
 1052106 (AB05)
 1052108 (AB15) DIPSTICK
 TANK BOLT KIT:
 1052062 (400740)

SUCTION TUBE:
 1052438 (SP1)
 RETURN TUBE:
 1052440 (SP3)

D-BREATHERS:
 1052105 (AB04)
 1052107 (AB14) DIPSTICK
 TANK BOLT KIT:
 1052062 (400740)

SUCTION TUBE:
 1052444 (SP7)
 RETURN TUBE:
 1052408 (RP3)

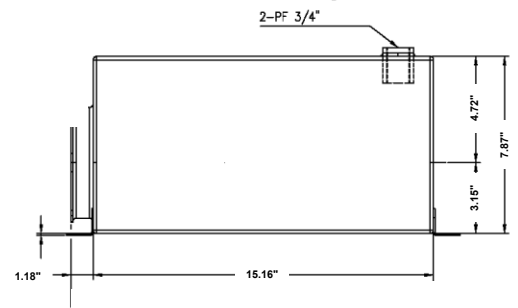
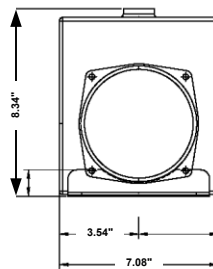
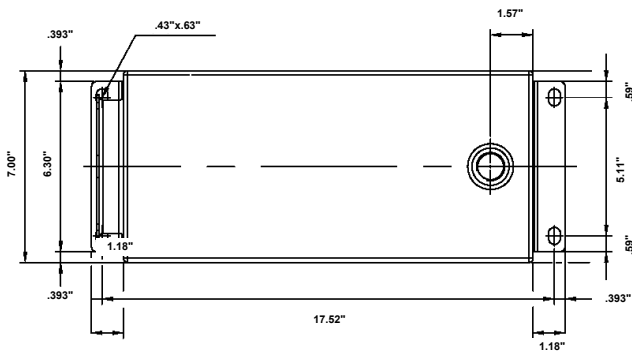
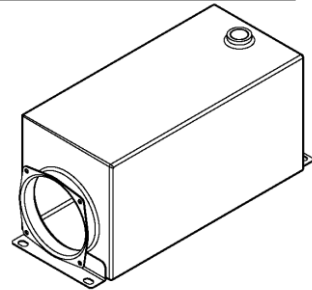


SQUARE STEEL TANKS

3 GAL		NEW!	
AX #	PART #	DESCRIPTION	SIZE / USABLE
1120691	XS12/290	HORIZONTAL TANK ONLY	3.25 / 2.60 GAL
NA	NA	HORIZONTAL TANK KIT	3.25 / 2.60 GAL

BREATHER INCLUDED:
 1073344 (AB16)
 TANK BOLT KIT:
 1052062 (400740)

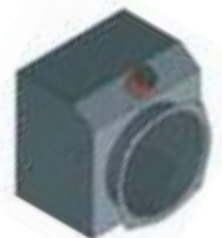
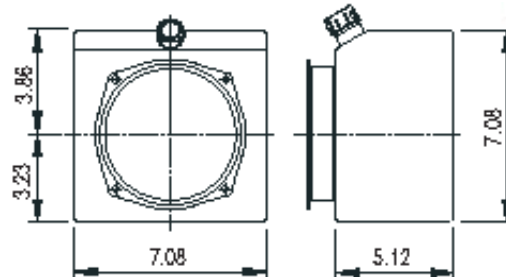
SUCTION TUBE:
 1052438 (SP1)
 RETURN TUBE:
 1052440 (SP3)



1 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052530	XS04	HORIZONTAL TANK ONLY	1.05 / .74 GAL
1052338	K-XS04D	HORIZONTAL TANK KIT	1.05 / .74 GAL

D-BREATHERS:
 1052106 (AB05)
 1052108 (AB15)
 TANK BOLT KIT:
 1052062 (400740)

SUCTION TUBE:
 1052445 (SP8)
 RETURN TUBE:
 1052442 (SP5)

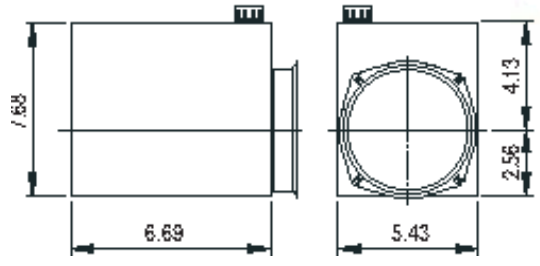


SQUARE STEEL TANKS

1 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052531	XS05	TANK ONLY	1.32 / 1.14 GAL
1052339	K-XS05H	HORIZONTAL TANK KIT	1.32 / 1.14 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
TANK BOLT KIT

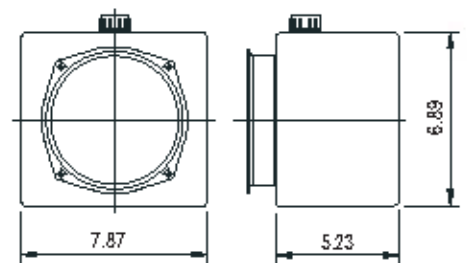
SUCTION TUBE: SP8
1052445
RETURN TUBE: SP5
1052442



1 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052530	XS05S	HORIZONTAL TANK ONLY	1.32 / 1.13 GAL
1052338	K-XS05SH	HORIZONTAL TANK KIT	1.32 / 1.13 GAL

1052105 (AB04)
1052107 (AB14)
BREATHERS
1052062
TANK BOLT KIT

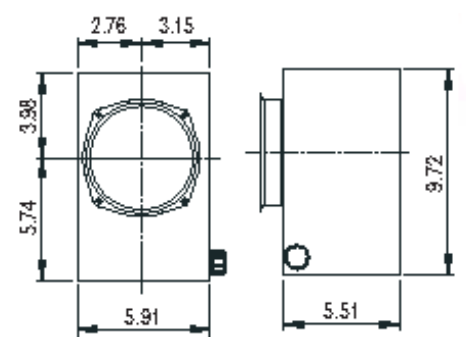
SUCTION TUBE: SP2
1052439
RETURN TUBE: SP5
1052442



1 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052533	XS06S	HORIZONTAL TANK ONLY	1.58 / 1.10 GAL
1052341	K-XS06H	HORIZONTAL TANK KIT	1.58 / 1.10 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
TANK BOLT KIT

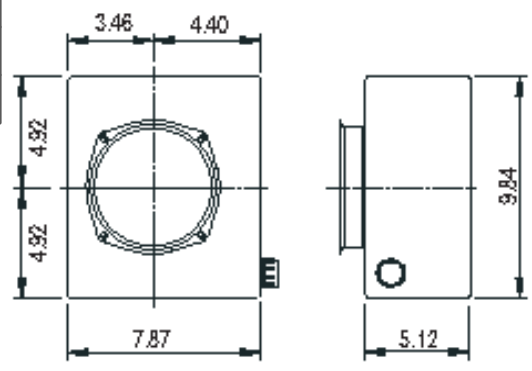
SUCTION TUBE: SP8
1052445
RETURN TUBE: SP5
1052442



1 GAL			
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052534	XS07S	HORIZONTAL TANK ONLY	1.85 / 1.24 GAL
1052342	K-XS07H	HORIZONTAL TANK KIT	1.85 / 1.24 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
TANK BOLT KIT

SUCTION TUBE: SP2
1052439
RETURN TUBE: SP5
1052442



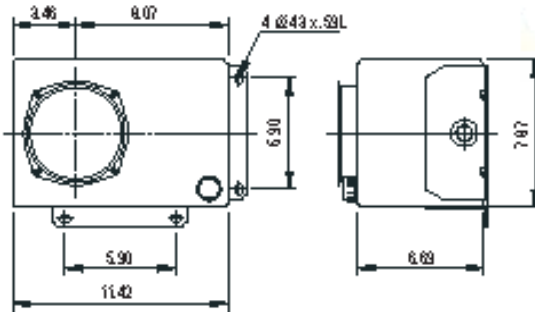
SQUARE STEEL TANKS

2 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1052535	XS09	VERTICAL TANK ONLY	2.38 / 1.82 GAL
1052343	K-XS09V	VERTICAL TANK KIT	2.38 / 1.82 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
BOLT KIT

1052069
PLUG



3 - 4 GAL

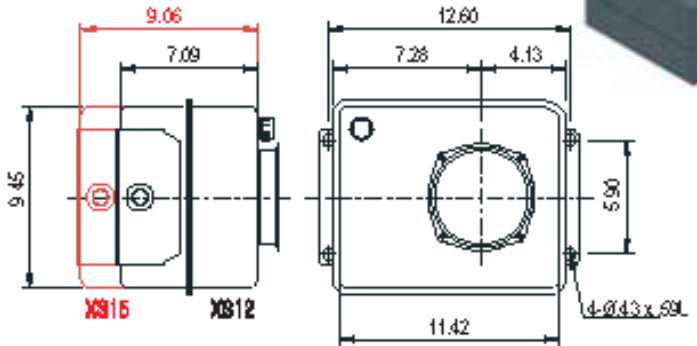
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052536	XS12	VERTICAL TANK ONLY	3.17 / 2.40 GAL
1052344	K-XS12V	VERTICAL TANK KIT	3.17 / 2.40 GAL
1052537	XS15	VERTICAL TANK ONLY	3.96 / 3.22 GAL
1052345	K-XS15V	VERTICAL TANK KIT	3.96 / 3.22 GAL

XS12 ONLY!
SUCTION TUBE: SP6
1052443
RETURN TUBE: RP2
1052407

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
BOLT KIT

XS15 ONLY!
SUCTION TUBE: SP6
1052443
RETURN TUBE: RP2
1052407

1052069
PLUG

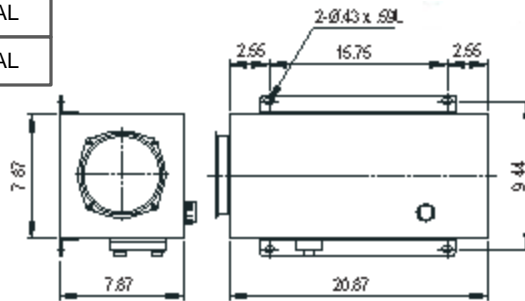


5 GAL

AX #	PART #	DESCRIPTION	SIZE / USABLE
1052538	XS20	HORIZONTAL TANK ONLY	5.28 / 4.22 GAL
1052346	K-XS20H	HORIZONTAL TANK KIT	5.28 / 4.22 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
BOLT KIT

SUCTION TUBE: SP1
1052438
RETURN TUBE: SP4
1052441

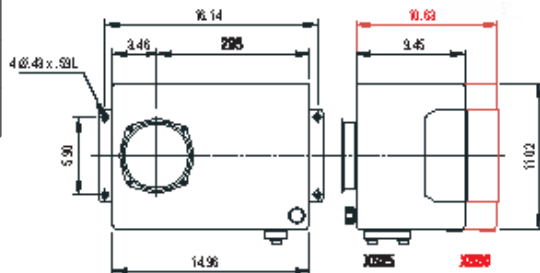


SIGHT GAUGE
INCLUDED!

6 - 8 GAL

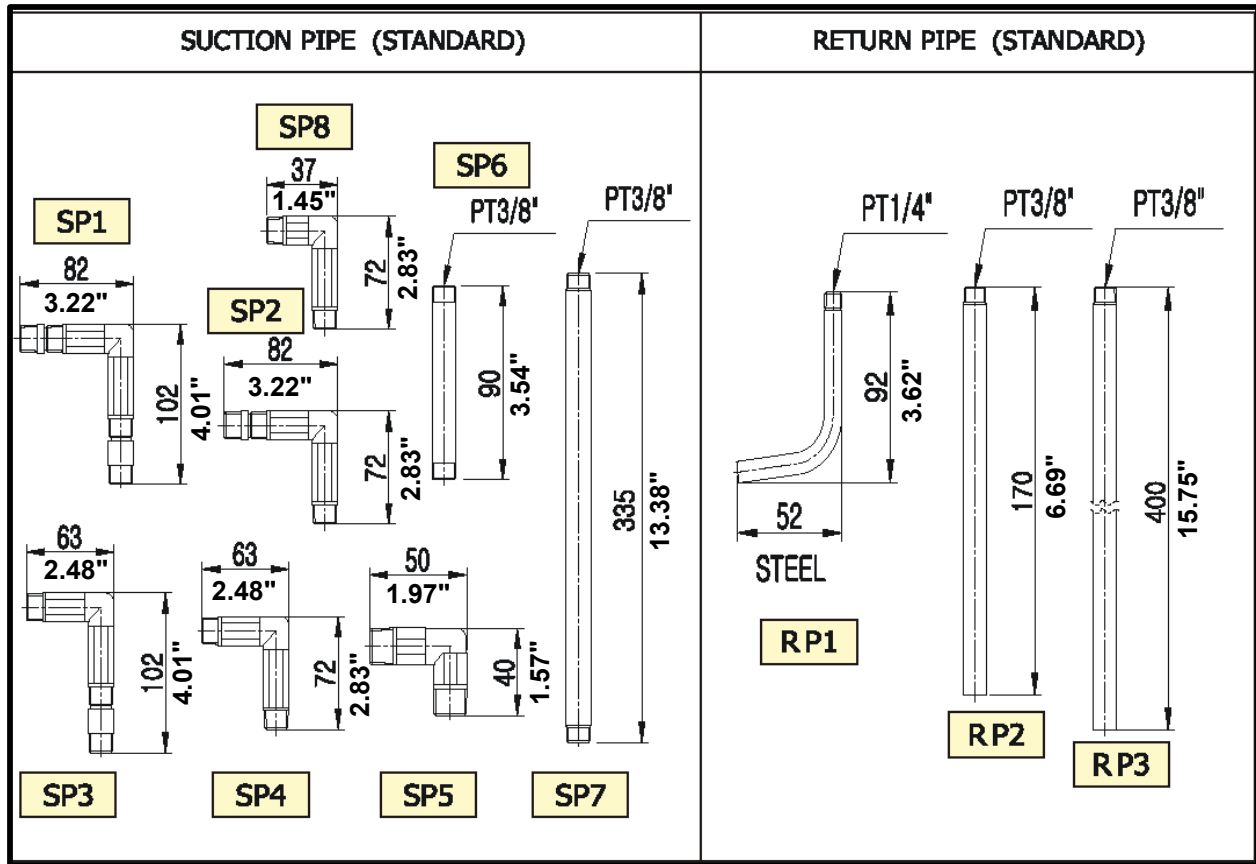
AX #	PART #	DESCRIPTION	SIZE / USABLE
1052539	XS25	VERTICAL TANK ONLY	6.60 / 5.81 GAL
1052347	K-XS25V	VERTICAL TANK KIT	6.60 / 5.81 GAL
1052540	XS30	VERTICAL TANK ONLY	7.93 / 6.86 GAL
1052348	K-XS30V	VERTICAL TANK KIT	7.93 / 6.86 GAL

1052106 (AB05)
1052108 (AB15)
BREATHERS
1052062
BOLT KIT



SIGHT GAUGE
INCLUDED!

TANKS - OVERVIEW



AX #	PART #	DIMENSION	DESCRIPTION
1052438	SP1	3.22" X 4.01" X 3/8 NPT	90 DEG, HORIZONTAL, SUCTION/RETURN, CUT
1052439	SP2	3.22" X 2.83" X 3/8 NPT	90 DEG, HORIZONTAL, SUCTION/RETURN, CUT
1052440	SP3	2.48" X 4.01" X 3/8 NPT	90 DEG, HORIZONTAL, SUCTION/RETURN, CUT
1052441	SP4	2.48" X 2.83" X 3/8 NPT	90 DEG, HORIZONTAL, SUCTION/RETURN
1052442	SP5	1.97" X 1.57" X 3/8 NPT	90 DEG. HORIZONTAL. SUCTION/RETURN STD
1052443	SP6	3.54" X 3/8 NPT	SHORT STRAIGHT SUCTION, VERTICAL
1052444	SP7	13.38" X 3/8 NPT	LONG STRAIGHT SUCTION, VERTICAL
1052445	SP8	1.45" X 2.83" X 3/8 NPT	90 DEG. HORIZONTAL. STD SUCTION/RETURN
1052407	RP2	6.69" X 3/8"	SHORT POLY RETURN, VERTICAL
1052408	RP3	15.75" X 3/8"	LONG POLY RETURN, VERTICAL

STANDARD IN PRE-BUILT UNITS

PENDANT CONTROLS

SINGLE ACTING

10' 2 BUTTON / 3-WIRE:
1052051 2X1H3G



REFERENCE WITH CABLE UP!

- (RED) TO POWER STUD ON STARTER SOLENOID
- (BLACK) TO MALE SPADE CONNECTOR ON STARTER SOLENOID
- (WHITE) TO SOLENOID VALVE COIL FOR DOWN (FEMALE BULLET)

DOUBLE ACTING

10' 2 BUTTON / 4-WIRE:
1052052 2X4H3G

20' 2 BUTTON / 4 WIRE:
1096955 2X4H6.1G

1023291 K-HT-DIN-1
INSTALL ON DO3 VALVE



REFERENCE WITH CABLE UP!

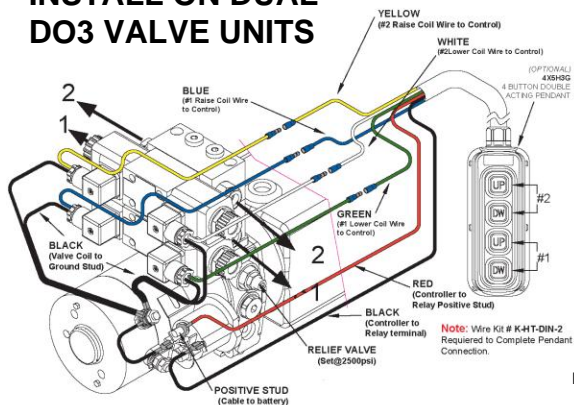
- (RED) TO POWER STUD ON STARTER SOLENOID
- (BLACK) TO MALE SPADE CONNECTOR ON STARTER SOLENOID
- (GREEN) TO SOLENOID VALVE COIL FOR UP (FEMALE BULLET)
- (WHITE) TO SOLENOID VALVE COIL FOR DOWN (FEMALE BULLET)

DUAL DOUBLE ACTING

10' 4 BUTTON / 6-WIRE:
1052104 4X5H3G

20' 4 BUTTON / 6-WIRE:
1073286 4X5H6.1G

1023462 K-HT-DIN-2
INSTALL ON DUAL
DO3 VALVE UNITS



REFERENCE WITH CABLE UP!

- (RED) TO POWER STUD ON STARTER SOLENOID
- (BLACK) TO MALE SPADE CONNECTOR ON STARTER SOLENOID
- (YELLOW) TO #2 SOLENOID VALVE COIL FOR UP (FEMALE BULLET)
- (WHITE) TO #2 SOLENOID VALVE COIL FOR DOWN (FEMALE BULLET)
- (BLUE) TO #1 SOLENOID VALVE COIL FOR UP (FEMALE BULLET)
- (GREEN) TO #1 SOLENOID VALVE COIL FOR DOWN (FEMALE BULLET)

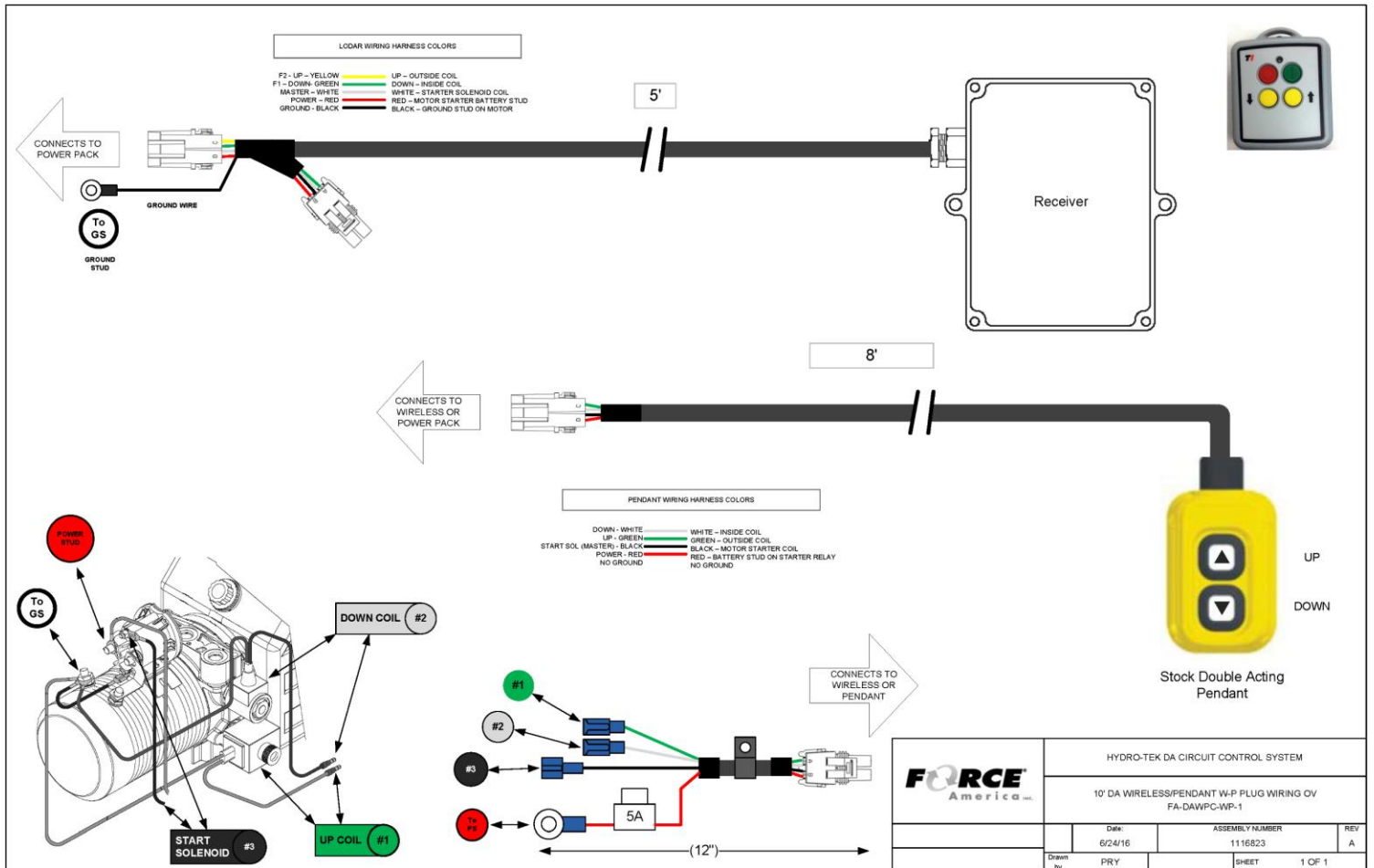
V#2

V#1

WIRELESS / PENDANT CONTROLS

1116823 FA-DAWPC-WP-1
DOUBLE ACTING WIRELESS/PENDANT
CONTROL PACKAGE

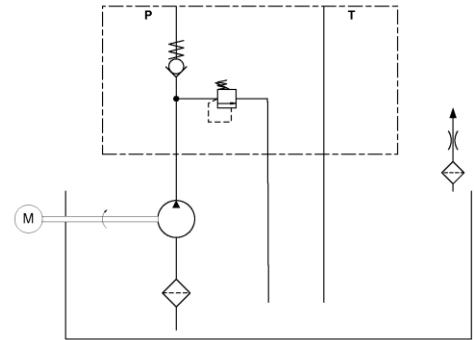
- 2 BUTTON WIRELESS CONTROL
- 2 BUTTON 10' WIRED PENDANT
- CONTROLS ALL SINGLE AND DOUBLE ACTING SOLENOID UNITS
- PLUG AND RUN!



HYDRO-TEK DA CIRCUIT CONTROL SYSTEM			
10' DA WIRELESS/PENDANT W-P PLUG WIRING OV FA-DAWPC-WP-1			
Date	ASSEMBLY NUMBER	REV	
6/24/16	1116823	A	
Drawn by	PRY	SHEET	1 OF 1

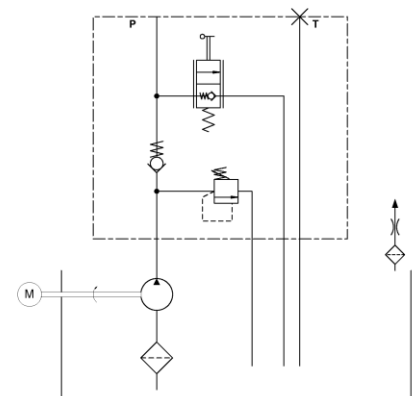
V000**PUMP ONLY**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- NO DIRECTIONAL CONTROL VALVE

CENTER BLOCK CIRCUIT # XA1**V001****SINGLE ACTING - CARTRIDGE VALVE**

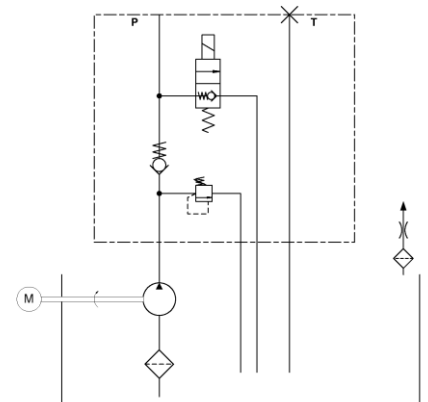
- MAIN RELIEF
- ISOLATION CHECK VALVE
- LEVER OPERATED POPPET VALVE

POWER UP/HOLD/ GRAVITY DOWN

CENTER BLOCK CIRCUIT # XA9**V002****SINGLE ACTING - CARTRIDGE VALVE**

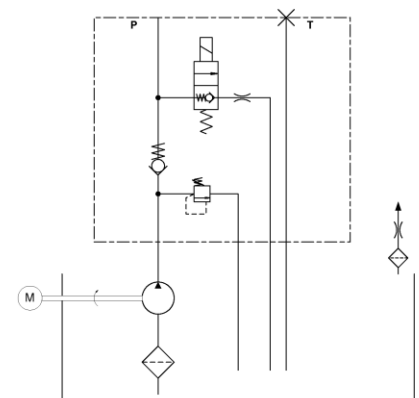
- MAIN RELIEF
- ISOLATION CHECK VALVE
- SOLENOID OPERATED POPPET TYPE VALVE

POWER UP/HOLD/ GRAVITY DOWN

CENTER BLOCK CIRCUIT # XA3**V003****SINGLE ACTING - CARTRIDGE VALVE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- FIXED PRESSURE COMPENSATED FLOW CONTROL (.25 TO 2.5 GPM)
- SOLENOID OPERATED POPPET TYPE VALVE

POWER UP/HOLD/ CONTROLLED-GRAVITY DOWN

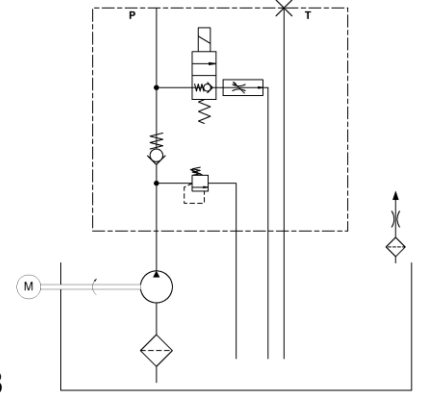
CENTER BLOCK CIRCUIT # XA5

V004**SINGLE ACTING - CARTRIDGE VALVE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- EXTERNALLY ADJUSTABLE PRESSURE COMPENSATED FLOW CONTROL
- SOLENOID OPERATED POPPET TYPE VALVE

POWER UP/HOLD/ GRAVITY DOWN - CONTROLLED RATE OF DESCENT

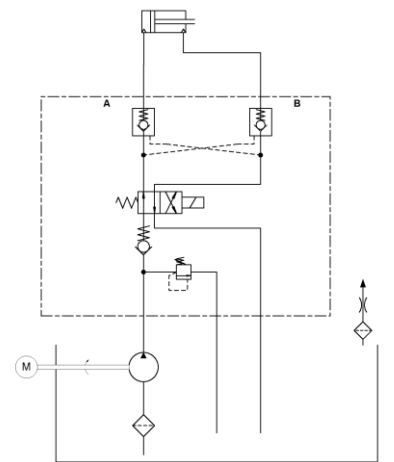
CENTER BLOCK CIRCUIT # XA8

**V005****DOUBLE ACTING - CARTRIDGE VALVE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- DUAL PO CHECK ON "A" & "B" PORTS
- 2 POSITION/ 4 WAY SOLENOID VALVE

POWER OUT/HOLD/ POWER IN

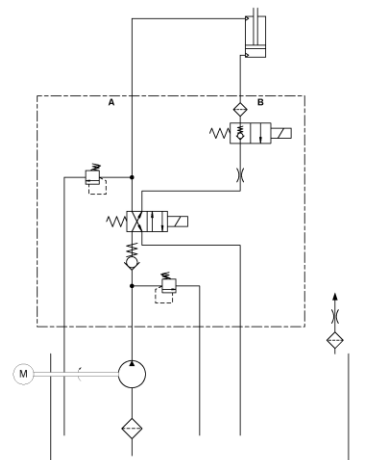
CENTER BLOCK CIRCUIT # TA3

**V006****DOUBLE ACTING - CARTRIDGE VALVE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- FIXED PRESSURE COMPENSATED FLOW CONTROL ON "B" PORT SIDE
- "A" PORT DOWN SIDE PORT RELIEF
- "B" PORT SOLENOID POPPET HOLDING VALVE
- 2 POSITION/ 4 WAY SOLENOID VALVE

POWER UP/HOLD/ POWER DOWN - CONTROLLED RATE OF DESCENT

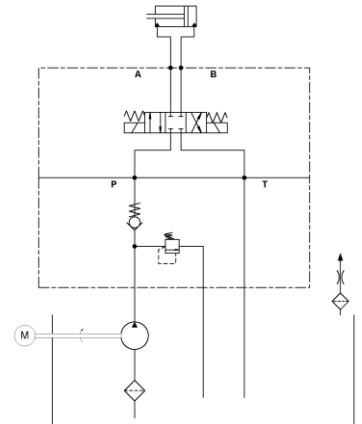
CENTER BLOCK CIRCUIT # TA1



V007**DOUBLE ACTING – MANIFOLD TYPE**

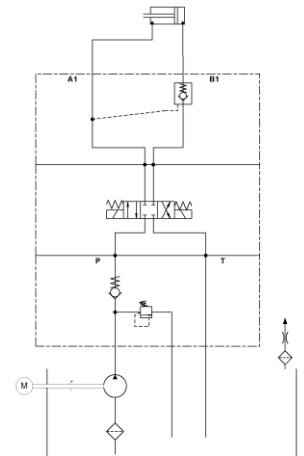
- MAIN RELIEF
- ISOLATION CHECK VALVE
- DO3 3 POSITION / 4 WAY SOLENOID VALVE

POWER OUT/HOLD/ POWER IN

CENTER BLOCK CIRCUIT #XA1**V008****DOUBLE ACTING – MANIFOLD TYPE**

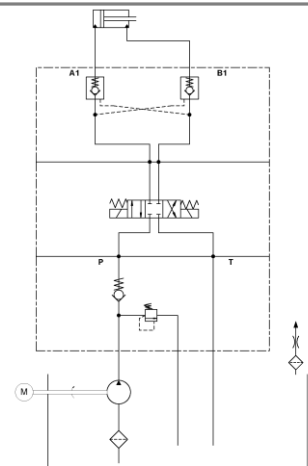
- MAIN RELIEF
- ISOLATION CHECK VALVE
- DO3 3 POSITION / 4 WAY SOLENOID VALVE
- SINGLE PO CHECK ON "B" PORT ONLY

POWER UP/HOLD/ POWER DOWN

CENTER BLOCK CIRCUIT #XA1**V009****DOUBLE ACTING – MANIFOLD TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- DO3 3 POSITION / 4 WAY SOLENOID VALVE
- DUAL PO CHECK ON "A" & "B" PORTS

POWER UP/HOLD/ POWER DOWN

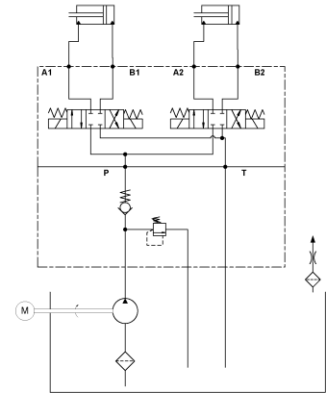
CENTER BLOCK CIRCUIT #XA1

V010**DUAL DOUBLE ACTING – MANIFOLD TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- DUAL DO3 3 POSITION/ 4 WAY SOLENOID VALVE

DUAL POWER OUT/HOLD/ POWER IN

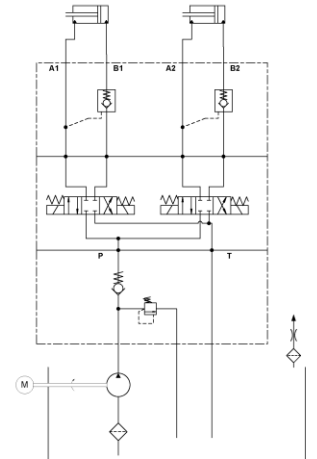
CENTER BLOCK CIRCUIT # XA1

**V011****DUAL DOUBLE ACTING – MANIFOLD TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- DUAL DO3 3 POSITION/ 4 WAY SOLENOID VALVE
- SINGLE P.O. CHECK ON "B" PORT BOTH VALVES

POWER UP/HOLD/ POWER DOWN

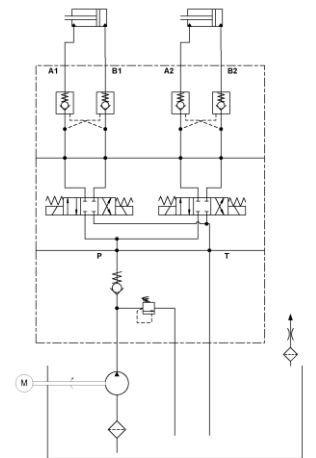
CENTER BLOCK CIRCUIT # XA1

**V012****DUAL DOUBLE ACTING – MANIFOLD TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- DUAL DO3 3 POSITION/ 4 WAY SOLENOID VALVE
- DUAL P.O. CHECK ON "A" & "B" PORT BOTH VALVES

DUAL POWER UP/HOLD/ POWER DOWN

CENTER BLOCK CIRCUIT # XA1

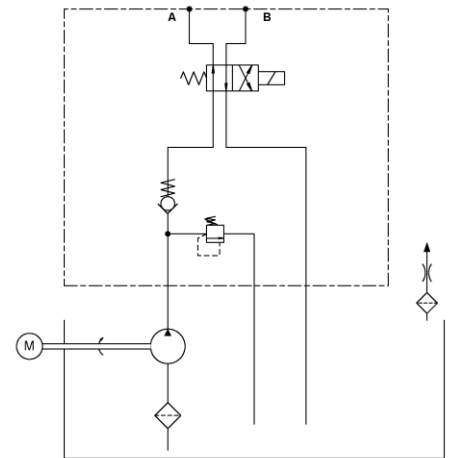


V013**DOUBLE ACTING – CARTRIDGE TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- 2 POSITION/ 4 WAY SOLENOID VALVE

DUAL POWER UP/NO HOLD/ POWER DOWN

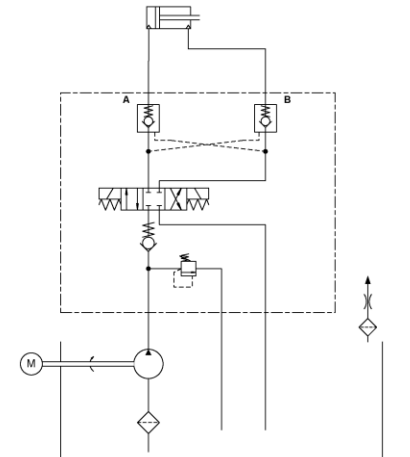
CENTER BLOCK CIRCUIT #TA7
ALTERNATIVE OPTION: #XA1 + C11966

**V014****DOUBLE ACTING – CARTRIDGE TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- 3 POSITION/ 4 WAY SOLENOID VALVE
- DUAL P.O. CHECK ON "A" & "B" PORT

POWER UP/HOLD/ POWER DOWN

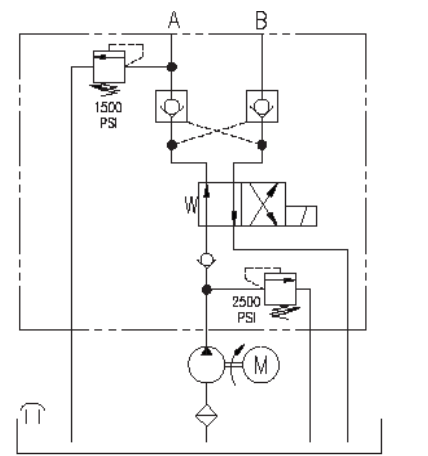
CENTER BLOCK CIRCUIT #TA8

**V015****DOUBLE ACTING – CARTRIDGE TYPE**

- MAIN RELIEF
- ISOLATION CHECK VALVE
- 2 POSITION/ 4 WAY SOLENOID VALVE
- DUAL P.O. CHECK ON "A" & "B" PORT
- RELIEF VALVE ON "A" PORT ONLY

DUAL POWER UP/HOLD/ POWER DOWN

CENTER BLOCK CIRCUIT #TA9



TORQUE SPECIFICATIONS

Bolt Name	Comment	Torque Kgf.cm	Torque In.pds
One Group Pump Bolts	Bolts pump to center block	230 kgf.cm	199 in.lbs.
22 mm valves	GA flow control	250 kgf.cm	216 in. lbs.
24 mm valves	Solenoid, relief, check	400 kg.cm	347 in. lbs.
Coil Nuts	Cartridge valves	50 kgf.cm	43 in. lbs.
S/W terminal		70 kgf.cm	60 in. lbs.
Motor bolts	DC motor to center block	70 kgf.cm	60 in. lbs.
Directional valve	Valve to center block	230 kgf.cm	199 in.lbs.
P & T Port Plugs		200 kgf.cm	173 in. lbs.
Tank bolts	Tank to center block	120 kgf.cm	103 in. lbs.

METRIC TO STANDARD CONVERSION VALUES**Millimeters to Inches**

Millimeters _____ X 0.0393 = _____ Inches

Liters to Gallons

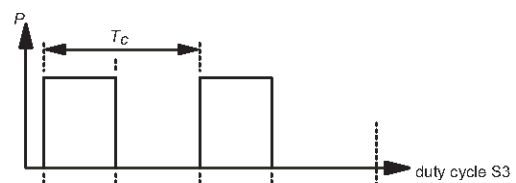
Liters _____ X 0.264 = _____ Gallons

kgf.cm² to psi

kg/cm² _____ X 14.2 = _____ psi

DUTY CYCLE INFORMATION**S2: Absolute Continuous On-Time.**

Indicates how long a motor can be run continuously before it must be allowed to cool back to ambient temperature.

**S3: Percentage On-Time.**

Based on a 5 minute duty cycle; it indicates the duty cycle (percent of on vs percent of off) the motor can be run continuously without overheating the motor.