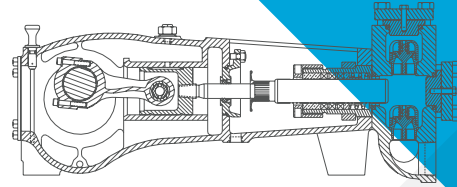


# APLEX SERIES SC-45(L)(H) TRIPLEX PLUNGER PUMPS



### INTERMITTENT DUTY ONLY

No. of plungers .....	3
Maximum rated speed .....	600 rpm
Stroke length .....	2.25 in. 57.15 mm
Maximum rated power .....	60 hp 44.7 kW
Maximum rod load .....	5280 lbs. 23.44 kN
Weight SC-45 .....	430 lbs.
SC-45L .....	463 lbs.
SC-45H .....	475 lbs.

### ENGLISH UNITS

### SC-45

PUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX. PSI	*GALLON PER REV.	200 US GPM	300 US GPM	400 US GPM	500 US GPM	600 US GPM
1.875	2.500	1912	0.0807	16.1	24.2	32.3	40.3	48.4
1.750	2.500	2195	0.0703	14.1	21.1	28.1	35.1	42.2
1.625	2.500	2546	0.0606	12.1	18.2	24.2	30.3	36.4
1.500	2.500	2988	0.0516	10.3	15.5	20.7	25.8	31.0
hp REQUIRED @ rpm **				20.0	30.0	40.0	50.0	60.0

### METRIC UNITS

### SC-45

PUNGER SIZE MM	STUFFING BOX BORE MM	MAX. PRESS. BAR	*LITERS PER REV.	250 RPM LPM	350 RPM LPM	450 RPM LPM	550 RPM LPM	650 RPM LPM
47.6	63.5	131.8	0.3055	61.1	91.7	122.2	152.8	183.3
44.5	63.5	151.3	0.2611	52.2	78.3	104.4	130.6	156.7
41.3	63.5	175.5	0.2294	45.9	68.8	91.8	114.7	137.6
38.1	63.5	206.0	0.1953	39.1	58.6	78.1	97.7	117.2
kW REQUIRED @ rpm				14.9	22.3	29.8	37.3	44.7

### ENGLISH UNITS

### SC-45L

PUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX. PSI	*GALLON PER REV.	200 US GPM	300 US GPM	400 US GPM	500 US GPM	600 US GPM
2.250	2.875	1330	0.1162	23.2	34.9	46.5	58.1	69.7
2.125	2.875	1491	0.1036	20.7	31.1	41.5	51.8	62.2
2.000	2.875	1683	0.0918	18.4	27.5	36.7	45.9	55.1
hp REQUIRED @ rpm **				20.0	30.0	40.0	50.0	60.0

### METRIC UNITS

### SC-45L

PUNGER SIZE MM	STUFFING BOX BORE MM	MAX. PRESS. BAR	*LITERS PER REV.	250 RPM LPM	350 RPM LPM	450 RPM LPM	550 RPM LPM	650 RPM LPM
57.2	73.0	91.7	0.4399	88.0	132.0	176.0	220.0	263.9
54.0	73.0	102.8	0.3922	78.4	117.7	156.9	196.1	235.3
50.8	73.0	116.0	0.3475	69.5	104.3	139.0	173.8	208.5
kW REQUIRED @ rpm				14.9	22.3	29.8	37.3	44.7

### ENGLISH UNITS

### SC-45H

PUNGER SIZE IN.	STUFFING BOX BORE IN.	MAX. PSI	*GALLON PER REV.	200 US GPM	300 US GPM	400 US GPM	500 US GPM	600 US GPM
1.375	2.250	3556	0.0434	8.7	13.0	17.4	21.7	26.0
1.250	2.250	4302	0.0359	7.2	10.8	14.3	17.9	21.5
1.125	1.750	5000	0.0290	5.8	8.7	11.6	14.5	17.4
hp REQUIRED @ rpm **				20.0	30.0	40.0	50.0	60.0

### METRIC UNITS

### SC-45H

PUNGER SIZE MM	STUFFING BOX BORE MM	MAX. PRESS. BAR	*LITERS PER REV.	200 RPM LPM	300 RPM LPM	400 RPM LPM	500 RPM LPM	600 RPM LPM
34.9	57.2	245.2	0.1643	32.9	49.3	65.7	82.2	98.6
31.8	57.2	296.6	0.1359	27.2	40.8	54.4	68.0	81.5
28.6	57.2	344.7	0.1098	22.0	33.0	44.0	54.9	65.9
kW REQUIRED @ rpm				14.9	22.3	29.8	37.3	44.7

$$\text{Ihp} = \frac{\text{USGPM} \times (\text{Discharge psig} - 1/2 \text{ Suction psig})}{1542}$$

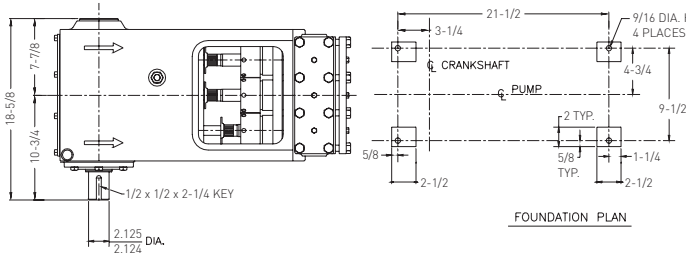
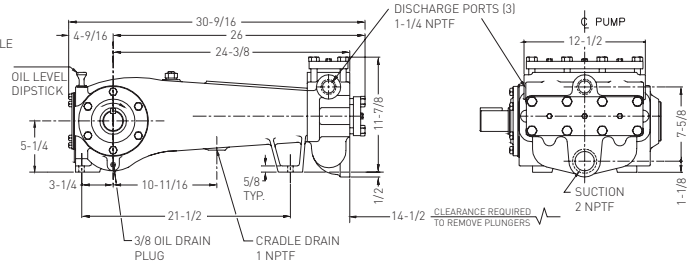
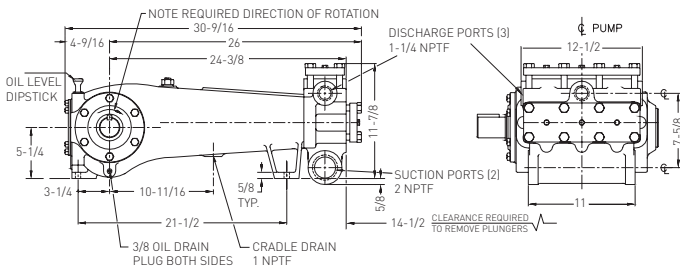
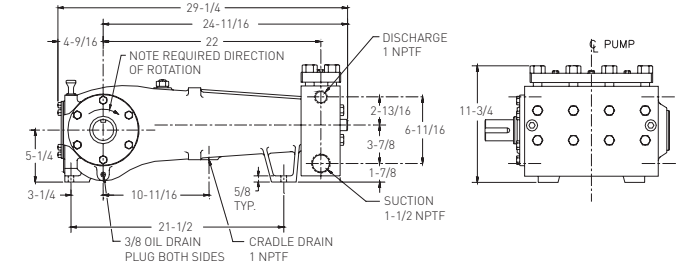
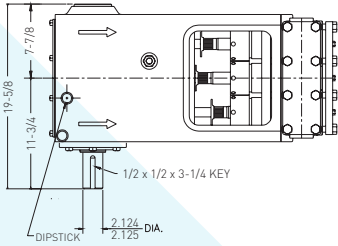
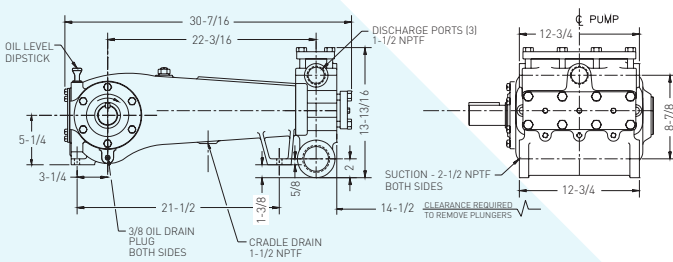
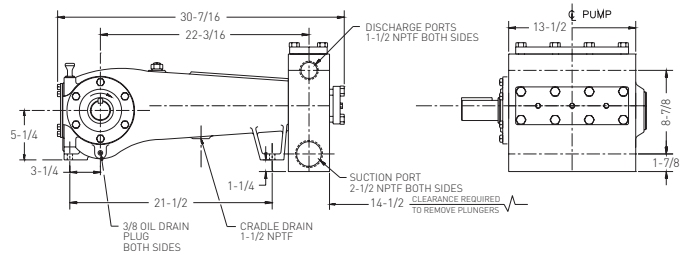
$$\text{Ikw} = \frac{\text{M}^3/\text{HR} \times (\text{Discharge Bar} - 1/2 \text{ Suction Bar})}{32.4}$$

$$\text{PUMP RPM} = \frac{\text{USGPM Desired}}{\text{USG per Revolution of Selected Plunger}}$$

$$\text{PUMP RPM} = \frac{\text{M}^3/\text{HR Desired}}{\text{M}^3 \text{ per Revolution of Selected Plunger}}$$

# APLEX SERIES - SC-45(L)(H) TRIPLEX PLUNGER PUMP

## SC-45 Triplex Pump (Measurements shown in inches)

**SC-45(H)**

**SC-45 Series**

**SC-45**
**SC-45**

**SC-45H**

**SC-45L**

**SC-45L**

**SC-45L**


## APLEX SERIES - SC-45(L)(H) TRIPLEX PLUNGER PUMP

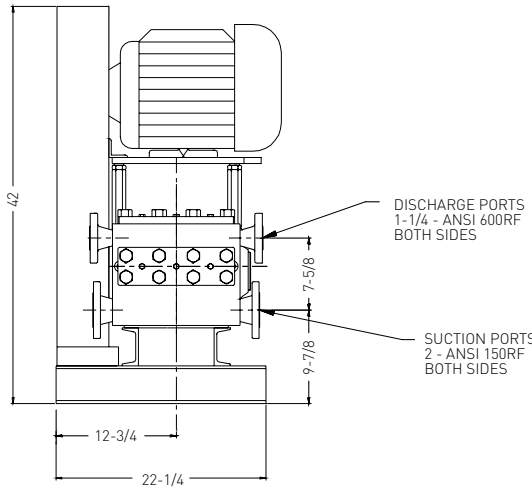
### POWER END ENGINEERING DATA

Max. Input Power @ Speed .....	60 HP @ 600 rpm
Rated Plunger Load .....	5,280 lbs.
Minimum Speed .....	100 rpm
Oil Capacity .....	5 U.S. Qts.
Power End Oiling System .....	Splash & Scoop
Power Frame, One-Piece .....	Cast Iron
Crosshead, Full Cylindrical .....	Cast Iron
Crosshead, Dia. x Length.....	3-1/4 x 3-5/8 in.
Crankshaft .....	Ductile Iron
Crankshaft Diameters:	
At Tapered Roller Bearings .....	3.06 in.
At Crankpin Bearings .....	2-1/4
Crosshead (Wrist) Pin, Case-Hardened and Ground .....	AI SI 8620
Main Bearings, Tapered Roller .....	Timken
Crankpin Bearings, Precision Automotive .....	Babbitt-Lined
Extension (Pony) Rod Integral w/ Plungers.....	316 S.ST.
Connecting Rod, Automotive Type .....	Ductile Iron
Average Crosshead Speed @ 600 rpm .....	225 fpm
Minimum Life Expectancy, Main Bearings, L <sub>10</sub> .....	15,000+ hr.

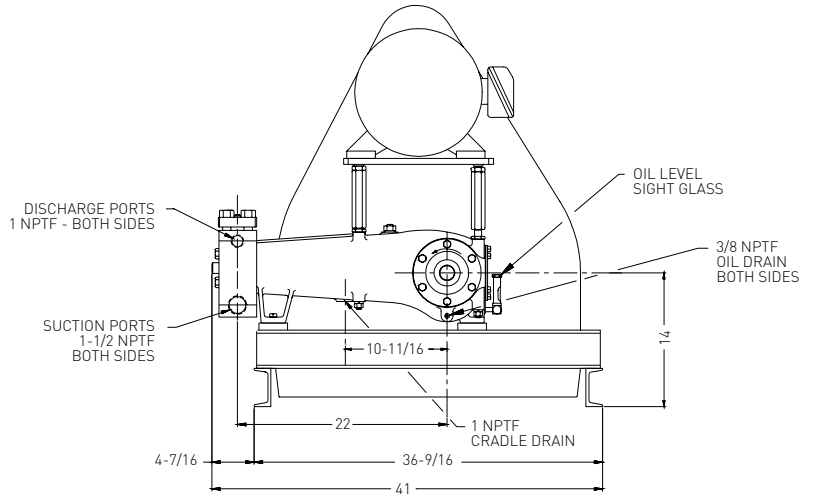
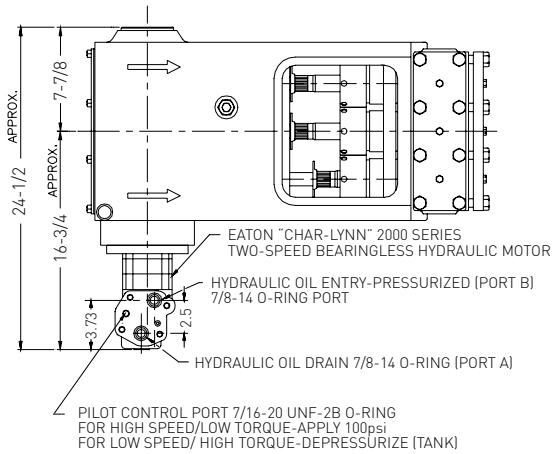
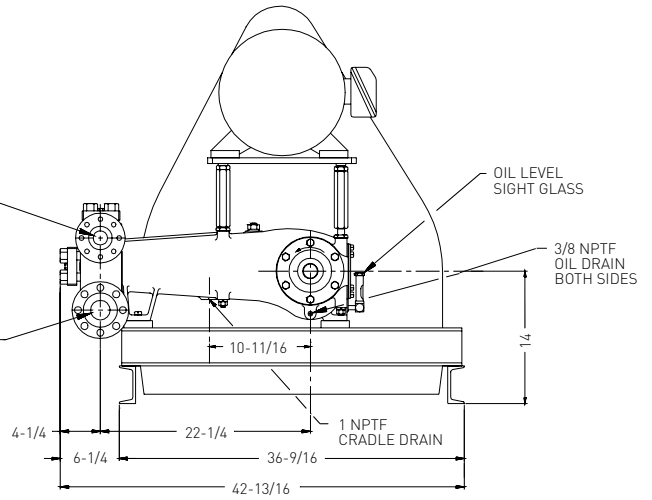
### LIQUID END ENGINEERING DATA

Max. Working Pressure	SC-45 .....	3,000 psi
	SC-45L .....	1,683 psi
	SC-45H .....	5,000 psi
Hydrostatic Test	SC-45.....	4,500 psi
	SC-45L.....	2,500 psi
	SC-45H .....	7,500 psi
Liquid End Materials, A.S.T.M.		
Ductile Iron SC-45(L) .....	A536 80-55-06	
Nickel Aluminum Bronze SC-45 .....	B148 C955	
Carbon Steel SC-45(L)(H).....	Various Grades	
Stainless Steel SC-45(L)(H).....	Various Grades	
Plunger Type Rokide (Chromium Oxide-Coated).....	Tungsten Carbide, Ceramic and other types also available	
Piston Cup SC-45L .....	HSN and Aramid Fiber	
Liner SC-45L .....	White Ceramic	
Stuffing boxes, Field-Removable and Replaceable .....	Various Grades Carbon Steel & SST	
Packing Types Available:		
Gland-loaded, Non-Adjustable SC-45(L).....	Style 838	
Spring-loaded, Braided PTFE coating and Aramid Fiber .....	Style 140, 141, 8921K	
Spring-loaded, cup-type .....	Style 120X	
Valve Cover and Cyl. Head Plugs .....	316 S.ST.	
Retainer Plates, Steel, A.S.T.M. ....	A36	
Seals, Stuffing Boxes, Valve Covers .....	Nitrile	
Valve Type:		
Dual Stem-Guided.....	17-4PH S.ST.	
Disc Type, SC-45 (H) .....	Acetal	
Disc Type .....	SST	
Abrasion Resistant .....	17-4PH S.ST.	
Valve Spring Material .....	Inconel	
Valve Seat, Liquid Passage Area		
Disc Valves, (Acetal or S.S.) SC-45 .....	1.4 sq.in.	
SC-45L .....	2.3 sq. in.	
SC-45H.....	0.573 sq.in.	
Dual Stem-Guided Valve .....	.958 sq.in.	
Avg. Liquid Velocity @ 600 RPM		
thru Disc Valves SC-45 .....	7.40 fps	
thru A/R Valves SC-45 .....	11.14 fps	
thru Disc Valves SC-45L .....	6.5 fps	
thru Abrasion Resistant Valves SC-45L .....	11.0 fps	
thru Suction Manifold		
SC-45.....	4.94 fps	
SC-45L.....	4.5 fps	
SC-45H .....	4.73 fps	
thru Discharge Manifold		
SC-45 .....	12.6 fps	
SC-45L .....	12.6 fps	
SC-45H.....	10.64 fps	

### SC-45 Series



### SC-45 Series



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