

AIR OPERATED NON-LUBRICATED HYDRAULIC PUMP D-5 SERIES

SC Hydraulic Engineering is continuing to meet the demands of a changing market.

We strive to broaden our line of products without sacrificing the quality and longevity for which we have established an UN-equaled reputation.

We proudly present our new Non-lube version of our long established 10-5 and 10-6 series of high-pressure air-driven liquid pumps.

These new configurations represent the result of extensive testing under rigorous conditions.

While maintaining our long established profile, we have re-designed our cycling mechanism to allow optimum performance without any external lubricator.

The new model designations will include the actual ratio of each pump. A pump rated at 1,000 psig will have a number 10 as its suffix number reflecting a 10:1 ratio. Similarly, a pump ending in 35 is a 35:1 ratio pump rated at 3,500 psig.

The prices for Non-lube “D” series pumps will be **identical** to their lubed models, “10-5” and “10-6”. The performance curves and the pressure / flow data will also remain the same for both the “D” series and the “10-5” and “10-6” series.



Instructions for New Nomenclature

New “D” series of pumps. (“D”ry, non-lubricated)
The new non-lubricated pumps will all have the “D” to designate the Basic configuration which replaces the old familiar “10”.

SC will continue to use the “5” and “6” as prefixes to maintain series identification.

The various modifications will continue to have zeroes as spaces to include allowances for designations meeting specific requirements.

Nomenclature Examples New Models

Series Designation with Standard Model.

D-5000B35

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D-5 Series
0 Buna N seals Air Section
0 Buna N seals Hydraulic Section
0 Standard Pump (no modifications)
B Bronze Hydraulic Section
35:1 Ratio

Series Designation with Modifications

D-5VEBS35

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D-5 Series
V Viton Seals Air Section
E EPR Seals Hydraulic Section
B Bottom Inlet (modification)
S Stainless Steel Hydraulic Section
35:1 Ratio

Model Selection Table

Prefix: Series Identification

D-5 “5” Series
D-6 “6” Series

Table 1: Seal compound option air-drive section

0 Buna N (Standard)
V Viton

Table 2: Seal compound hydraulic section

0 Buna N (Standard)
E EPR
V Viton

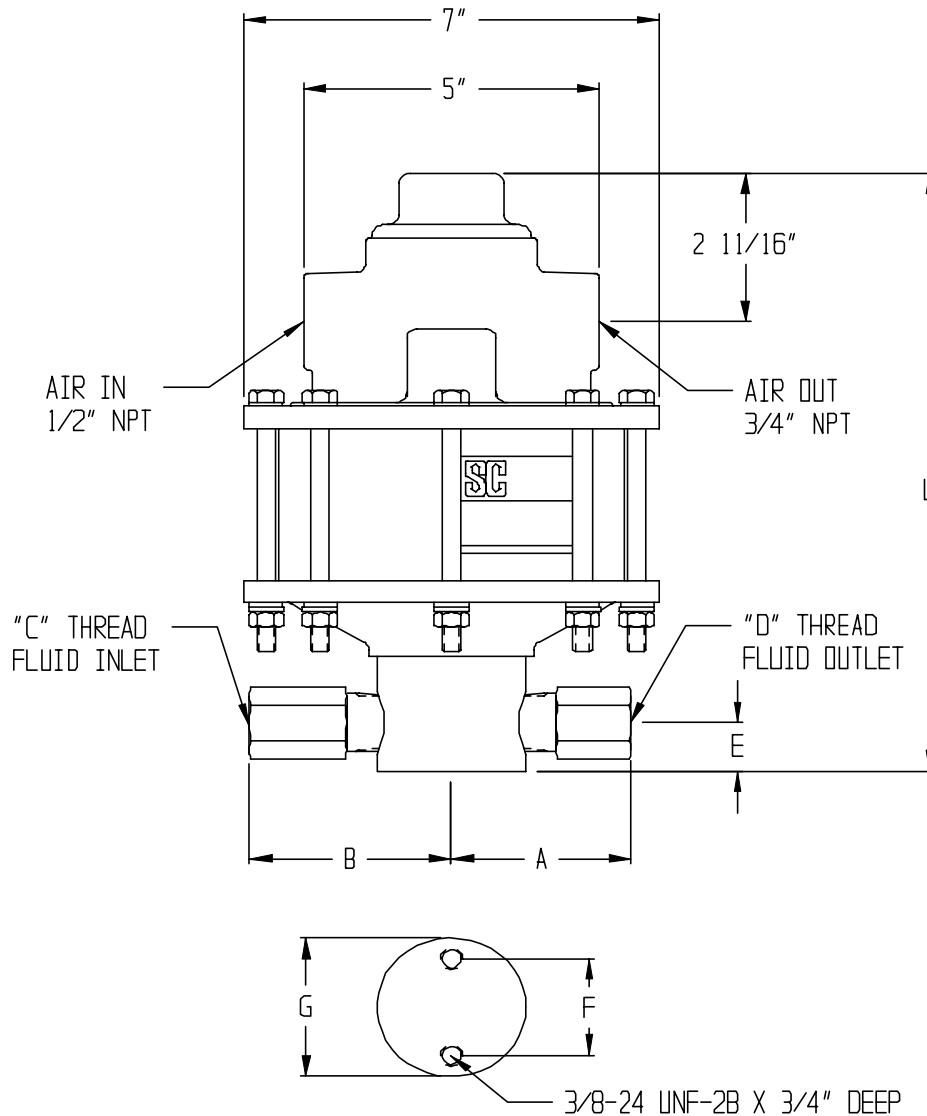
Table 3: Modifications

0 Standard pump
A “A” modification
B Bottom inlet
D Bottom inlet-heavy duty
E Bottom inlet “A” modification
G Isolator-heavy duty
H Heavy duty
J Bottom inlet “K” modification
K “K” modification
M Bottom inlet “A” and “K” modification
N Isolator “A” modification
P Isolator “K” modification
Q Isolator “A” and “K” modification
R Isolator
S Heavy duty “K” modification
U Heavy duty-Bottom inlet “K” modification
V Heavy duty-Isolator “K” modification

Table 4: Materials of construction Hydraulic Sect.

S Stainless Steel
B Aluminum Bronze (replaces “W”)
C Carbon Steel
(not available as standard, Consult factory)

AIR OPERATED NON-LUBRICATED HYDRAULIC PUMP D-5 SERIES



D-5 Series Ratio No.	L	A	B	C NPTF	D NPTF	E	F	G
5	13 1/8	3 1/2	4 3/4	1	1/2	1 1/8	2 3/8	3 1/8
10 thru 20	12 5/16	3	4	1	1/2	1	1 3/4	2 1/2
25 thru 105	10 7/8	3	3 3/8	1/2	1/2	7/8	1 3/4	2 1/2
140 thru 440	11 1/4	2 1/2	2 5/16	3/8	3/8	7/8	1 3/4	2 1/2
555	11 3/16	3 3/4	2 1/8	3/8	9/16-18	1	1 3/4	2 1/2

D-5 Series Mounting Dimensions in Inches

D-5 Series Approximate Air to Hydraulic Pressure Ratios Static Conditions

D-5 Series Ratio	Air Pressure (PSI)									
	10	20	30	40	50	60	70	80	90	100
5	30	75	130	175	220	270	320	370	415	465
10	80	180	285	385	490	590	690	795	900	1,000
12	90	200	340	450	560	700	850	980	1,100	1,225
20	145	330	525	700	925	1,100	1,300	1,500	1,700	1,900
25	200	475	750	1,000	1,300	1,550	1,800	2,000	2,350	2,625
30	225	525	875	1,150	1,500	1,775	2,050	2,350	2,700	3,075
35	250	600	1,000	1,400	1,775	2,125	2,475	2,825	3,200	3,625
55	400	1,000	1,700	2,200	2,900	3,400	4,000	4,600	5,200	5,800
70	500	1,175	1,950	2,600	3,350	4,100	4,900	5,600	6,350	7,000
85	800	1,700	2,600	3,400	4,400	5,100	6,000	6,900	7,800	8,600
105	900	2,000	3,150	4,200	5,400	6,400	7,450	8,500	9,700	10,700
140	1,100	2,400	3,900	5,400	6,900	8,300	9,800	11,200	12,600	14,000
195	1,400	3,250	5,250	7,250	9,250	11,250	13,250	15,000	17,000	18,750
280	2,250	4,000	7,750	10,500	13,500	16,250	18,750	21,500	24,500	27,500
440	5,000	8,000	12,500	16,500	21,000	25,500	30,000	34,000	38,000	42,500
555	6,250	12,500	18,750	25,000	31,250	37,500	43,750	47,500	51,250	55,000

Note: When operating from 0 to rated hydraulic pressure, air consumption will be approx. 28 scfm of free air at 100 psi input. At lower air pressures and higher hydraulic pressure air consumption will reduce proportionately.

D-5 Series Measurements

D-5 Series Model (Ratio)	Hydraulic Piston Diameter (inches)	Hydraulic Piston Area (Sq.inches)	Volume Per Stroke (Cubic inches)
5	2.3750	4.430	5.540
10	1.6250	2.070	2.590
12	1.5000	1.770	2.210
20	1.1875	1.110	1.390
25	1.0000	0.785	0.981
30	0.9375	0.689	0.861
35	0.8750	0.601	0.751
55	0.6875	0.371	0.464
70	0.6250	0.307	0.384
85	0.5625	0.248	0.310
105	0.5000	0.196	0.245
140	0.4375	0.150	0.188
195	0.3750	0.110	0.138
280	0.3125	0.077	0.096
440	0.2500	0.049	0.061
555	0.2187	0.038	0.048

Additional Information on “D” Series Pumps

Please find the following information for:

Circuit Diagram
Cutaway Drawing
Special and Modified Pumps
Performance Curves

Available in the 10-5 and 10-6 **Technical Data Areas**.

All of the above information for the 10-5 and 10-6 is identical to the D-5 and D-6.