



whitedriveproducts



## SERIES

- 700 -
- 710 -
- 740 -



**HEAVY DUTY**  
Hydraulic Motor & Brake

**DT**

# DT (All Series)

For Heavy Duty Applications

## OVERVIEW

The most amazing aspect of the DT Series motor is its huge torque potential from its relatively small size. The DT Series motor is capable of producing output torque comparable to competitive designs, but from a package that is both shorter and lighter. The savings in space and weight in no way compromises durability, as the motor uses massive shafts, bearings and drive links to transmit the torque produced by this powerful package. The use of a case drain allows reduced pressure on the shaft seal while maintaining drive-line lubrication for maximum motor life. Standard mounting and shaft options offer interchangeability with competitive designs. An internal drain option is also available.

## FEATURES / BENEFITS

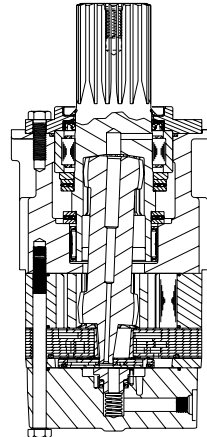
- Heavy-Duty Roller Bearing supports high side loads and receives forced lubrication for cooling and increased life.
- Compact Housing contributes to high power-to-weight ratio of motor and offers front and rear mounting flanges.
- Heavy-Duty Drive Link receives forced lubrication for long life and is capable of extreme duty cycles.
- Roller Stator® Motor available in displacements up to 2093 cm<sup>3</sup> [127.7 in<sup>3</sup>] for high torque output.
- Three-Zone Orbiting Valve precisely meters oil to produce exceptional volumetric efficiencies.

## TYPICAL APPLICATIONS

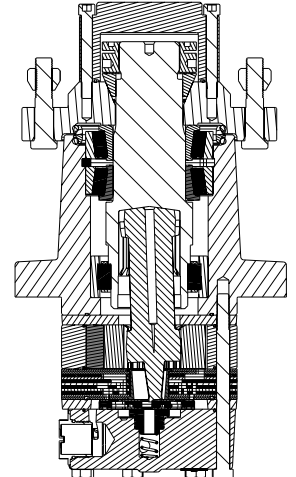
Heavy-duty wheel drives, augers, mixers, pumping units, conveyors, boring machines, rotators, mining equipment, forestry equipment and more and more

## SERIES DESCRIPTIONS

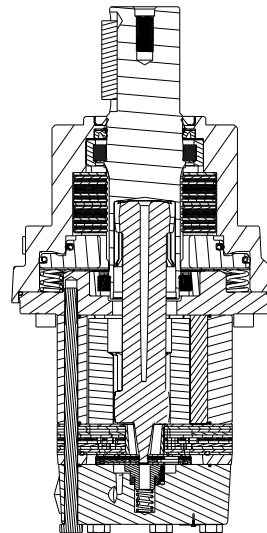
700 - Hydraulic Motor  
Standard



740 - Hydraulic Motor  
With Wheel Hub



710 - Hydraulic Motor  
With Integral Hydraulic Brake



## SPECIFICATIONS

CODE	Displacement cm <sup>3</sup> [in <sup>3</sup> /rev]	Max. Speed rpm		Max. Flow lpm [gpm]		Max. Torque Nm [lb-in]		Max. Pressure bar [psi]		
		cont.	inter.	cont.	inter.	cont.	inter.	cont.	inter.	peak
300	300 [18.3]	320	380	95 [25]	114 [30]	819 [7250]	955 [8450]	207 [3000]	241 [3500]	259 [3750]
375	374 [22.8]	250	300	95 [25]	114 [30]	1045 [9250]	1127 [9975]	207 [3000]	224 [3250]	241 [3500]
470	464 [28.3]	200	240	95 [25]	114 [30]	1071 [9475]	1390 [12300]	172 [2500]	224 [3250]	241 [3500]
540	536 [32.7]	180	210	95 [25]	114 [30]	1277 [11300]	1525 [13500]	172 [2500]	207 [3000]	241 [3500]
750	747 [45.6]	130	150	95 [25]	114 [30]	1780 [15750]	2090 [18500]	172 [2500]	207 [3000]	241 [3500]
930	929 [56.7]	100	120	95 [25]	114 [30]	1780 [15750]	2141 [18950]	138 [2000]	172 [2500]	207 [3000]
1K1	1047 [63.9]	90	110	95 [25]	114 [30]	1915 [16950]	2316 [20500]	138 [2000]	172 [2500]	207 [3000]
1K5	1495 [91.2]	60	70	95 [25]	114 [30]	2090 [18500]	2316 [20500]	103 [1500]	121 [1750]	138 [2000]
2K1	2093 [127.7]	40	50	95 [25]	114 [30]	2661 [23550]	3342 [29580]	103 [1500]	121 [1750]	138 [2000]



DISPLACEMENT PERFORMANCE

Table for 300 cm³ displacement. Includes pressure (17-241 psi), torque (2-114 Nm), and speed (2-114 rpm) data. Includes overall efficiency chart and rotor width (25.4 mm).

Overall Efficiency chart and Rotor Width table for 300 cm³ displacement. Efficiency ranges from 0-39% to 70-100%. Rotor width is 25.4 mm.

Table for 375 cm³ displacement. Includes pressure (17-224 psi), torque (65-304 Nm), and speed (2-304 rpm) data. Includes overall efficiency chart and rotor width (31.8 mm).

Overall Efficiency chart and Rotor Width table for 375 cm³ displacement. Efficiency ranges from 0-39% to 70-100%. Rotor width is 31.8 mm.

Performance data is typical. Performance of production units varies slightly from one motor to another.

**DISPLACEMENT PERFORMANCE**

		Pressure - bar [psi]						Max. Cont.		Max. Inter.		
<b>470</b>		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	224 [3250]			
465 cm <sup>3</sup> [28.3 in <sup>3</sup> ] / rev												
Torque - Nm [lb-in], Speed rpm <span style="float: right;">Intermittent Ratings - 10% of Operation</span>												
Flow - lpm [gpm]	2 [0.5]	86 [762] 3	201 [1780] 2	401 [3553] 2							Theoretical rpm	
	4 [1]	92 [817] 7	195 [1728] 7	406 [3597] 6	610 [5395] 5	806 [7137] 4						5
	8 [2]	94 [835] 15	199 [1761] 15	418 [3702] 14	631 [5580] 13	832 [7365] 11	1042 [9226] 9	1239 [10961] 8				9
	15 [4]	92 [815] 32	202 [1784] 32	426 [3769] 60	646 [5717] 28	849 [7513] 24	1066 [9430] 23	1272 [11256] 21	1381 [12217] 19			17
	23 [6]	82 [729] 48	203 [1799] 47	423 [3744] 46	647 [5725] 43	855 [7565] 39	1070 [9473] 36	1275 [11287] 34	1365 [12083] 32			33
	30 [8]	67 [595] 65	185 [1641] 64	414 [3663] 63	642 [5683] 60	867 [7671] 54	1078 [9538] 47	1300 [11508] 46	1398 [12367] 44			49
	38 [10]	52 [459] 81	170 [1503] 80	399 [3532] 79	630 [5573] 78	857 [7584] 69	1077 [9531] 63	1283 [11352] 61	1393 [12323] 58			66
	45 [12]		153 [1354] 97	380 [3366] 96	613 [5422] 93	842 [7454] 88	1072 [9488] 77	1302 [11523] 74	1394 [12334] 68			82
	53 [14]		127 [1121] 114	359 [3173] 113	591 [5229] 110	823 [7282] 104	1057 [9350] 97	1270 [11242] 89	1392 [12318] 85			98
	61 [16]		100 [888] 160	335 [2964] 129	564 [4993] 127	798 [7061] 119	1030 [9118] 114	1254 [11101] 108	1369 [12118] 102			115
	68 [18]		67 [595] 146	304 [2689] 145	535 [4734] 143	765 [6772] 137	1003 [8875] 132	1229 [10877] 120	1348 [11926] 114			131
	76 [20]			274 [2428] 162	504 [4458] 160	733 [6485] 155	965 [8536] 148	1197 [10592] 139	1318 [11668] 136			147
	83 [22]			226 [2003] 178	458 [4050] 175	691 [6118] 172	928 [8215] 165	1150 [10181] 156	1266 [11200] 154			164
	91 [24]			176 [1554] 194	415 [3670] 192	669 [5917] 190	885 [7833] 183					180
95 [25]				389 [3442] 203	632 [5589] 198	867 [7676] 190				196		
114 [30]				277 [2451] 243	514 [4549] 240	755 [6684] 235				205		

Rotor Width

39.4 [1.553]

mm [in]

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

127 [1127]	255 [2253]	509 [4506]	764 [6760]	1018 [9013]	1273 [1126]	1528 [13519]	1655 [14646]
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Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

Pressure - bar [psi] Max. Cont. Max. Inter.

**540**

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]
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536 cm<sup>3</sup> [32.7 in<sup>3</sup>] / rev

		Pressure - bar [psi]						Max. Cont.		Max. Inter.		
<b>540</b>		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]				
536 cm <sup>3</sup> [32.7 in <sup>3</sup> ] / rev												
Torque - Nm [lb-in], Speed rpm <span style="float: right;">Intermittent Ratings - 10% of Operation</span>												
Flow - lpm [gpm]	2 [0.5]	103 [908] 2	215 [1607] 2	421 [3722] 1							Theoretical rpm	
	4 [1]	104 [917] 6	228 [2016] 5	454 [4015] 4	666 [5897] 3	874 [7730] 1						4
	8 [2]	108 [954] 13	231 [2043] 12	474 [4191] 11	704 [6231] 9	925 [8190] 5	1153 [10201] 4					8
	15 [4]	102 [906] 27	232 [2052] 26	503 [4448] 24	756 [6692] 21	994 [8799] 18	1221 [10806] 15	1461 [12930] 13				15
	23 [6]	98 [866] 42	230 [2038] 41	498 [4404] 39	766 [6774] 36	1023 [9049] 30	1268 [11225] 27	1494 [13219] 24				29
	30 [8]	84 [744] 56	213 [1883] 55	484 [4280] 53	754 [6669] 49	1032 [9130] 42	1273 [11262] 38	1524 [13486] 34				43
	38 [10]	63 [561] 70	195 [1727] 69	466 [4122] 68	737 [6519] 64	1006 [8903] 57	1285 [11374] 49	1532 [13556] 46				57
	45 [12]	42 [373] 84	179 [1586] 83	444 [3928] 82	717 [6349] 76	984 [8710] 72	1274 [11277] 65	1518 [13436] 57				71
	53 [14]		146 [1295] 97	421 [3722] 95	694 [6139] 93	964 [8529] 87	1253 [11091] 80	1512 [13381] 70				85
	61 [16]		116 [1025] 113	391 [3460] 111	663 [5865] 108	930 [8230] 103	1206 [10675] 97	1479 [13086] 84				99
	68 [18]		90 [798] 127	356 [3153] 125	629 [5563] 123	900 [7969] 116	1192 [10550] 107	1451 [12841] 100				114
	76 [20]		56 [498] 141	330 [2923] 139	595 [5265] 137	887 [7850] 133	1158 [10250] 123	1421 [12578] 114				128
	83 [22]			278 [2464] 155	549 [4859] 153	822 [7271] 148	1121 [9919] 136	1388 [12283] 133				142
	91 [24]			243 [2154] 169	508 [4494] 166	794 [7024] 164	1054 [9325] 156					156
95 [25]			220 [1948] 176	486 [4299] 174	762 [6741] 169	1025 [9075] 163				170		
114 [30]			90 [800] 211	366 [3237] 210	638 [5649] 207	920 [8144] 203				177		

Rotor Width

45.5 [1.791]

mm [in]

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

147 [1302]	294 [2604]	588 [5207]	883 [7811]	1177 [10414]	1471 [13018]	1765 [15621]
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Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.



DISPLACEMENT PERFORMANCE

<b>750</b>	Pressure - bar [psi]						Max. Cont.	Max. Inter.
	17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	
748 cm <sup>3</sup> [45.6 in <sup>3</sup> ] / rev								Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm							Theoretical rpm
	2 [0.5]	144 [1276] 1	290 [2566] 1					
4 [1]	154 [1367] 4	323 [2863] 3	669 [5917] 2	931 [8242] 2				6
8 [2]	162 [1435] 9	341 [3015] 9	712 [6302] 7	1021 [9038] 6	1305 [11550] 3			11
15 [4]	158 [1400] 19	348 [3080] 19	723 [6399] 17	1082 [9578] 15	1402 [12410] 11			21
23 [6]	144 [1273] 30	331 [2927] 29	714 [6317] 27	1083 [9583] 24	1433 [12678] 20	1744 [15430] 16		31
30 [8]	126 [1116] 40	328 [2900] 39	697 [6167] 37	1072 [9486] 34	1451 [12843] 25	1769 [15658] 20		41
38 [10]	104 [922] 50	291 [2574] 50	675 [5976] 47	1055 [9334] 44	1445 [12785] 36	1786 [15805] 28	2076 [18373] 19	51
45 [12]	77 [682] 60	269 [2382] 59	655 [5792] 58	1032 [9136] 54	1431 [12668] 49	1786 [15801] 36	2094 [18528] 30	61
53 [14]	46 [410] 70	239 [2116] 69	627 [5545] 68	1003 [8880] 65	1407 [12451] 59	1767 [15634] 45	2099 [18578] 37	71
61 [16]		201 [1780] 81	584 [5164] 79	971 [8592] 76	1345 [11907] 70	1743 [15422] 57	2065 [18271] 44	82
68 [18]		161 [1421] 91	545 [4819] 90	928 [8209] 86	1306 [11556] 80	1709 [15120] 69		92
76 [20]		120 [1058] 101	497 [4395] 100	863 [7635] 97	1260 [11154] 90			102
83 [22]			444 [3926] 110	831 [7351] 108	1213 [10737] 101			112
91 [24]			389 [3447] 121	785 [6947] 117	1196 [10581] 111			122
95 [25]			368 [3255] 126	757 [6697] 124	1144 [10126] 120			127
114 [30]			205 [1813] 151	613 [5428] 149	979 [8665] 146			152

► Performance data is typical. Performance of production units varies slightly from one motor to another.

Rotor Width

63.5 [2.501]
mm [in]

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

205 [1815]	410 [3631]	821 [7261]	1231 [10892]	1641 [14522]	2051 [18153]	2462 [21783]
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Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

Pressure - bar [psi]						Max. Cont.	Max. Inter.
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<b>930</b>	17 [250]	35 [500]	52 [750]	69 [1000]	86 [1250]	104 [1500]	121 [1750]	138 [2000]	155 [2250]	173 [2500]
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929 cm<sup>3</sup> [56.7 in<sup>3</sup>] / rev Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm										Theoretical rpm	
	2 [0.5]	180 [1590] 1	387 [3423] 1	607 [5368] 1	801 [7089] 1							
4 [1]	196 [1734] 4	418 [3696] 3	653 [5780] 3	864 [7649] 3	1067 [9447] 3	1294 [11451] 3						5
8 [2]	205 [1816] 8	442 [3907] 7	680 [6015] 7	877 [7764] 7	1117 [9886] 6	1510 [13365] 5						9
15 [4]	198 [1753] 16	432 [3825] 16	664 [5878] 15	906 [8021] 15	1121 [9924] 15	1556 [13769] 13	1730 [15306] 11					17
23 [6]	185 [1633] 24	420 [3719] 24	651 [5765] 24	908 [8034] 24	1123 [9935] 23	1543 [13651] 20	1794 [15873] 18	1981 [17532] 16				25
30 [8]	162 [1438] 32	404 [3576] 31	636 [5624] 30	893 [7900] 30	1107 [9800] 29	1581 [13988] 27	1776 [15716] 24	1985 [17570] 22	2105 [18632] 17			33
38 [10]	125 [1109] 40	368 [3253] 40	626 [5536] 39	845 [7476] 38	1087 [9620] 38	1497 [13251] 36	1736 [15364] 31	1956 [17306] 28	2153 [19054] 24			41
45 [12]	91 [807] 48	341 [3018] 47	578 [5111] 46	815 [7213] 45	1072 [9487] 44	1525 [13492] 41	1713 [15159] 36	1946 [17222] 33	2133 [18873] 32			49
53 [14]	35 [310] 57	290 [2565] 56	533 [4715] 55	765 [6772] 54	1024 [9059] 52	1487 [13155] 49	1727 [15287] 45	1945 [17216] 43	2168 [19188] 36			58
61 [16]		239 [2118] 64	484 [4281] 63	726 [6429] 62	959 [8488] 61	1450 [12830] 57	1696 [15008] 54	1925 [17039] 50	2140 [18934] 46			66
68 [18]		205 [1811] 72	440 [3891] 72	701 [6202] 70	920 [8143] 69	1422 [12580] 65	1643 [14538] 64	1893 [16741] 58	2105 [18625] 55			74
76 [20]		150 [1325] 81	409 [3616] 80	632 [5590] 79	801 [7091] 78	1505 [12135] 75	1599 [14148] 72	1859 [16454] 67	2060 [18230] 63			82
83 [22]		99 [875] 89	336 [2977] 88	581 [5139] 87	837 [7403] 86	1305 [11553] 83	1561 [13816] 80	1799 [15918] 77	2025 [17925] 71			90
91 [24]			282 [2497] 97	501 [4438] 96	766 [6778] 94	1266 [11201] 92	1489 [13179] 89	1752 [15505] 86	1969 [17427] 82			98
95 [25]			241 [2137] 101	496 [4389] 100	722 [6390] 100	1214 [10743] 96	1454 [12863] 93	1727 [15286] 89	1956 [17309] 84			102
114 [30]			66 [582] 122	300 [2652] 121	532 [4711] 120	781 [6914] 118	1044 [9235] 116	1271 [11248] 116				123

Rotor Width

78.9 [3.106]
mm [in]

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

255 [2257]	510 [4514]	765 [6771]	1020 [9029]	1275 [11286]	1530 [13543]	1785 [15800]	2040 [18057]	2296 [20314]	2551 [22572]
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Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]



**DISPLACEMENT PERFORMANCE**

		Pressure - bar [psi]							Max. Cont.	Max. Inter.		
<b>1K1</b>		17 [250]	35 [500]	52 [750]	69 [1000]	86 [1250]	104 [1500]	121 [1750]	138 [2000]	155 [2250]	173 [2500]	
1047 cm <sup>3</sup> [63.9 in <sup>3</sup> ] / rev												
Torque - Nm [lb-in], Speed rpm												
Flow - lpm [gpm]	2 [0.5]	217 [1918]	455 [4026]	671 [5940]	890 [7879]							2
	4 [1]	206 [1821]	498 [4410]	706 [6251]	935 [8273]	1189 [10518]						4
	8 [2]	224 [1985]	498 [4407]	754 [6672]	983 [8700]	1222 [10810]	1428 [12635]					8
	15 [4]	224 [1980]	472 [4180]	754 [6669]	1011 [8946]	1262 [11169]	1486 [13147]	1697 [15014]				15
	23 [6]	170 [1500]	487 [4314]	739 [6538]	1020 [9023]	1238 [10956]	1501 [13286]	1695 [14998]	1914 [16936]			22
	30 [8]	164 [1451]	431 [3814]	709 [6270]	970 [8580]	1241 [10986]	1481 [13106]	1727 [15280]	1942 [17185]	2144 [18971]		29
	38 [10]	129 [1143]	401 [3546]	675 [5975]	944 [8356]	1208 [10688]	1455 [12879]	1714 [15168]	1919 [16982]	2145 [18983]		37
	45 [12]	98 [871]	359 [3176]	624 [5526]	894 [7915]	1148 [10163]	1420 [12569]	1693 [14981]	1893 [16756]	2133 [18879]	2311 [20456]	44
	53 [14]	44 [390]	312 [2761]	580 [5129]	851 [7535]	1122 [9933]	1383 [12237]	1612 [14263]	1856 [16424]	2098 [18569]	2327 [20596]	51
	61 [16]		251 [2220]	516 [4569]	776 [6871]	1062 [9402]	1320 [11678]	1587 [14045]	1837 [16261]	2082 [18426]	2291 [20275]	58
	68 [18]		190 [1678]	458 [4053]	706 [6252]	1002 [8869]	1272 [11252]	1552 [13738]	1794 [15877]	2051 [18147]	2275 [20130]	66
	76 [20]		117 [1033]	390 [3453]	652 [5774]	930 [8227]	1187 [10502]	1596 [12874]	1723 [15246]	2001 [17705]	2228 [19716]	73
	83 [22]		50 [444]	310 [2741]	569 [5034]	847 [7493]	1113 [9846]	1380 [12214]	1650 [14599]	1927 [17055]	2138 [18924]	80
	91 [24]			210 [1862]	491 [4346]	755 [6677]	1018 [9007]	1288 [11398]	1557 [13777]	1827 [16164]	2101 [18591]	87
95 [25]			185 [1635]	463 [4096]	710 [6281]	963 [8519]	1232 [10901]	1497 [13247]	1790 [15844]	2028 [17950]	91	
114 [30]				202 [1789]	477 [4217]	730 [6460]	1013 [8962]	1237 [10947]			109	

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

88.9 [3.502]	287 [2544]	575 [5088]	862 [7631]	1150 [10175]	1437 [12719]	1725 [15263]	2012 [17807]	2300 [20350]	2587 [22894]	2874 [25438]
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mm [in]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

Pressure - bar [psi] Max. Cont. Max. Inter.

		Pressure - bar [psi]							Max. Cont.	Max. Inter.	
<b>1K5</b>		17 [250]	35 [500]	52 [750]	69 [1000]	86 [1250]	104 [1500]	121 [1750]			
1495 cm <sup>3</sup> [91.2 in <sup>3</sup> ] / rev											
Torque - Nm [lb-in], Speed rpm											
Flow - lpm [gpm]	2 [0.5]	305 [2703]	648 [5736]								2
	4 [1]	336 [2978]	693 [6128]	1011 [8942]							3
	8 [2]	351 [3106]	729 [6454]	1085 [9597]	1364 [12072]						6
	15 [4]	331 [2925]	712 [6304]	1116 [9879]	1491 [13191]	1771 [15668]					11
	23 [6]	297 [2629]	681 [3023]	1088 [9632]	1464 [12952]	1770 [15662]					16
	30 [8]	247 [2183]	640 [5662]	1038 [9188]	1430 [12655]	1793 [15864]	2123 [18786]				21
	38 [10]	197 [1740]	583 [5159]	1001 [8860]	1377 [12189]	1749 [15479]	2090 [18498]				26
	45 [12]	131 [1157]	531 [4695]	940 [8315]	1330 [11770]	1702 [15066]	2041 [18059]	2329 [20613]			31
	53 [14]	67 [594]	484 [4282]	869 [7689]	1267 [11217]	1642 [14532]	1990 [17612]	2300 [20353]			36
	61 [16]		391 [3457]	769 [6805]	1172 [10374]	1567 [13866]	1914 [16941]	2258 [19986]			41
	68 [18]		294 [2602]	686 [6072]	1076 [9523]	1489 [13177]	1846 [16334]	2188 [19366]			46
	76 [20]		182 [1607]	614 [5435]	988 [8746]	1392 [12320]	1743 [15429]	2301 [18553]			51
	83 [22]		87 [770]	487 [4310]	872 [7720]	1283 [11356]	1632 [14442]	2021 [17883]			56
	91 [24]			456 [4032]	749 [6632]	1146 [10143]	1533 [13570]	1872 [16568]			61
95 [25]			293 [2589]	704 [6232]	1052 [9313]	1465 [12961]	1843 [16306]			64	
114 [30]				246 [2174]	645 [5711]	1047 [9265]				76	

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

127.1 [5.003]	410 [3631]	821 [7261]	1231 [10892]	1641 [14522]	2051 [18153]	2462 [21783]	2872 [25414]
---------------	------------	------------	--------------	--------------	--------------	--------------	--------------

mm [in]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.



**DISPLACEMENT PERFORMANCE**

<b>2K1</b>	Pressure - bar [psi]					Max. Cont.	Max. Inter.
	17 [250]	35 [500]	52 [750]	69 [1000]	86 [1250]	104 [1500]	121 [1750]

2094 cm<sup>3</sup> [127.7 in<sup>3</sup>] / rev

Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
	438 [3878] 0.8	892 [7894] 0.8	1398 [12375]	1980 [17520]	2390 [21152]	2668 [23613]	Theoretical rpm	
2 [0.5]								
4 [1]	440 [3891] 1	922 [8162] 1	1398 [12375] 1				2	
8 [2]	460 [4073] 3	956 [8458] 3	1460 [12923] 3				4	
15 [4]	443 [3920] 7	963 [8525] 7	1491 [13192] 6	1980 [17520] 6			8	
23 [6]	402 [3560] 10	924 [8179] 10	1470 [13012] 10	1963 [17370] 9			11	
30 [8]	337 [2985] 14	884 [7824] 14	1425 [12613] 14	1920 [16995] 13	2390 [21152] 9	2668 [23613] 8	15	
38 [10]	275 [2431] 17	814 [7205] 17	1350 [11944] 16	1869 [16538] 16	2343 [20733] 13	2663 [23564] 9	19	
45 [12]	173 [1535] 21	723 [6398] 21	1262 [11171] 21	1795 [15886] 20	2286 [20232] 17	2665 [23588] 12	22	
53 [14]	66 [587] 25	619 [5479] 24	1155 [10221] 24	1702 [15063] 23	2206 [19519] 21	2637 [23333] 13	26	
61 [16]		496 [4391] 28	1018 [9009] 28	1587 [14046] 27	2107 [18645] 26	2574 [22777] 20	29	
68 [18]		368 [3257] 32	910 [8052] 32	1466 [12973] 31	1980 [17527] 30	2471 [21866] 26	33	
76 [20]		225 [1991] 36	755 [6686] 36	1304 [11537] 36	1859 [16449] 35	2359 [20878] 30	37	
83 [22]		71 [628] 39	622 [5507] 39	1171 [10367] 39	1682 [14885] 38	2212 [19575] 36	40	
91 [24]			429 [3794] 43	984 [8704] 43	1544 [13665] 42	2067 [18291] 40	44	
95 [25]			354 [3129] 45	891 [7883] 45	1428 [12636] 45	1971 [17445] 43	46	
114 [30]				430 [3803] 54	959 [8485] 54	1492 [13207] 53	55	

**Rotor Width**

177.9 [7.003]
---------------

mm [in]

Overall Efficiency - 70 - 100%  40 - 69%  0 - 39%

Theoretical Torque - Nm [lb-in]

574 [5084]	1149 [10167]	1723 [15251]	2298 [20334]	2872 [25418]	3447 [30502]	4021 [35585]
------------	--------------	--------------	--------------	--------------	--------------	--------------

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another

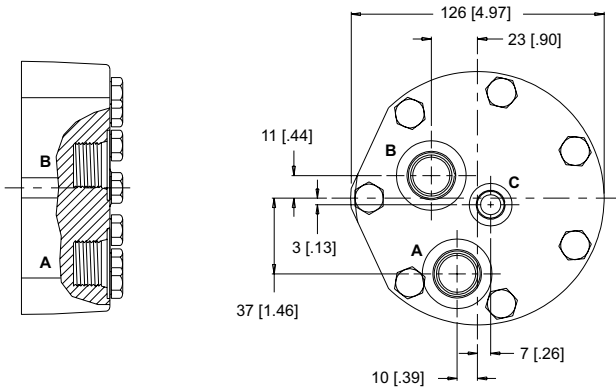
**PORTING**

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

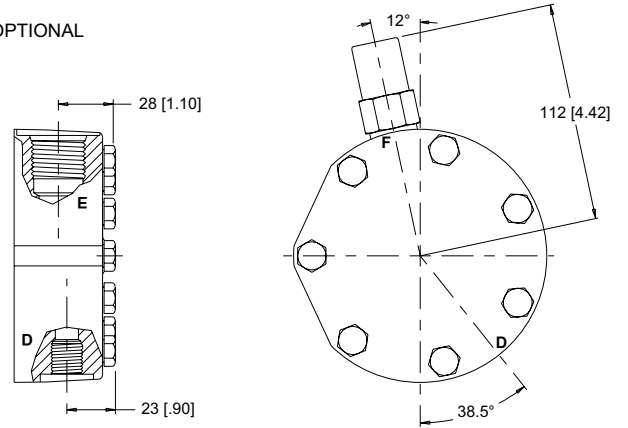
**END PORTED - OFFSET**

- 1** Main Ports **A, B:** 7/8-14 UNF  
Drain Port **C:** 7/16-20 UNF

STANDARD



OPTIONAL



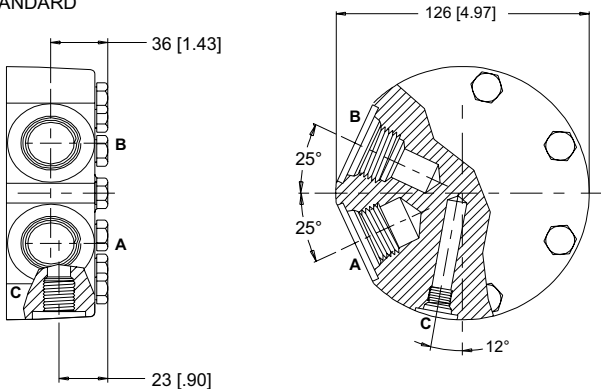
D: Internal Drain E: 10 Series/2-Way Valve Cavity 7/8-14 UNF F: Valve Cartridge Installed

**SIDE PORTED - RADIAL**

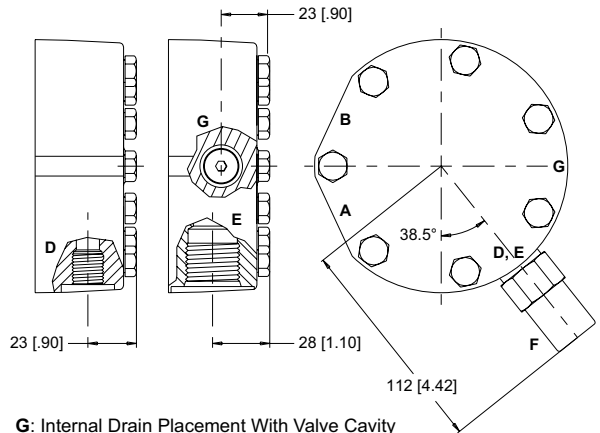
- 2** Main Ports **A, B:** G 3/4  
Drain Port **C:** G 1/4

- 5** Main Ports **A, B:** 1 1/16-20 UN  
Drain Port **C:** 7/16-20 UNF

STANDARD



OPTIONAL



D: Internal Drain E: 10 Series/2-Way Valve Cavity 7/8-14 UNF F: Valve Cartridge Installed G: Internal Drain Placement With Valve Cavity



**PORTING**

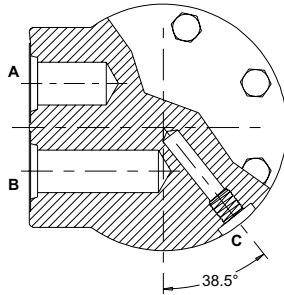
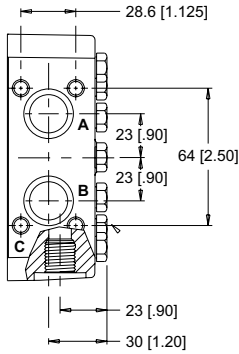
► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

**SIDE PORTED - MANIFOLD ALIGNED**

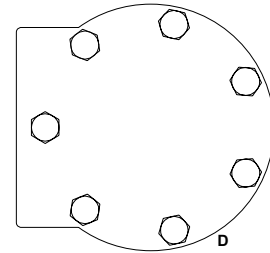
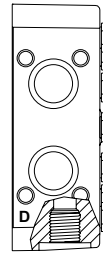
**3**

Main Ports **A, B:** 11/16" Drilled  
Drain Port **C:** 7/16-20 UNF

STANDARD



OPTIONAL



D: Internal Drain

**SIDE PORTED - ALIGNED**

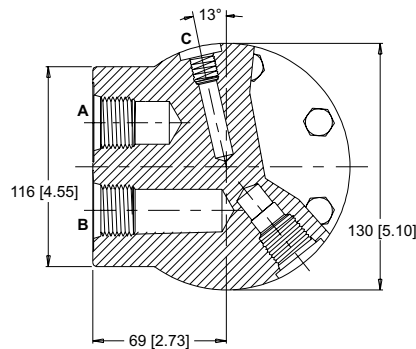
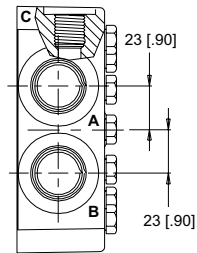
**6**

Main Ports **A, B:** 1 1/16-20 UN  
Drain Port **C:** 7/16-20 UNF

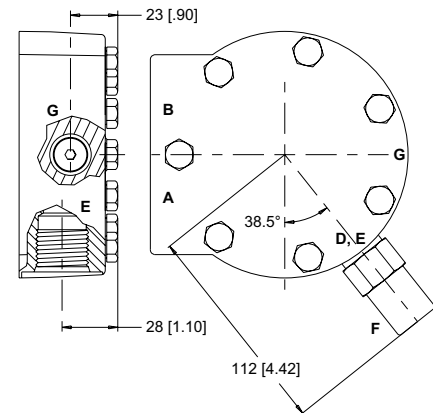
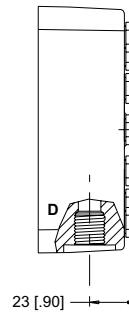
**7**

Main Ports **A, B:** G 3/4  
Drain Port **C:** G 1/4

STANDARD



OPTIONAL



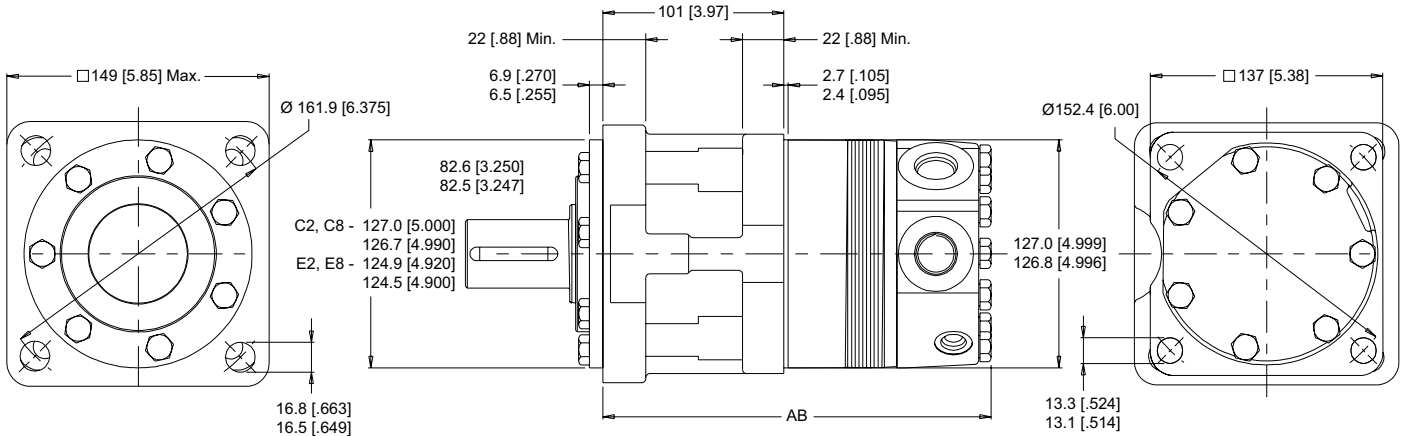
D: Internal Drain E: 10 Series/2-Way Valve Cavity 7/8-14 UNF F: Valve Cartridge Installed G: Internal Drain Placement With Valve Cavity

**HOUSINGS**

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

**4-HOLE, SAE C MOUNT**

**C2** End Ports    **C8** Side Ports    **E2** End Ports    **E8** Side Ports



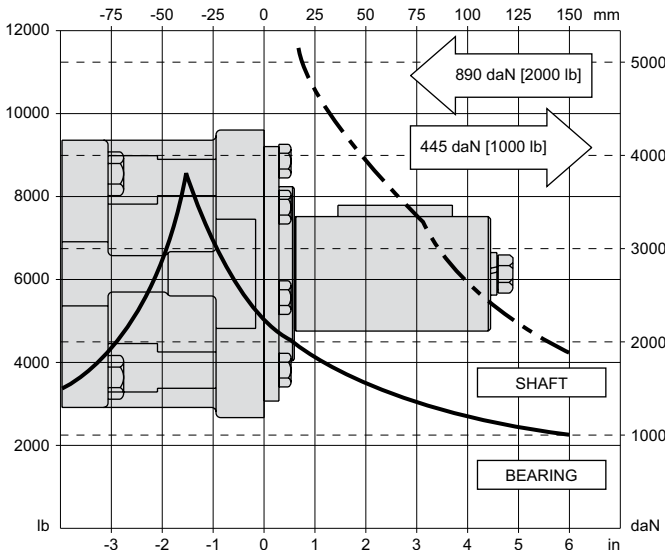
► Porting options listed on pages 8-9.

**TECHNICAL INFORMATION**

**ALLOWABLE SHAFT LOAD / BEARING CURVE**

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an  $L_{10}$  life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table below.

**SAE C MOUNTS**



**LENGTH & WEIGHT CHART**

Dimension AB is the overall motor length from the rear of the motor to the mounting surface.

AB #	Endcovers on pg. 8	Endcovers on pg. 9	Weight
	mm [in]	mm [in]	kg [lb]
300	206 [8.14]	209 [8.25]	20.2 [44.6]
375	213 [8.39]	216 [8.50]	20.8 [45.8]
470	220 [8.69]	223 [8.80]	21.4 [47.1]
540	227 [8.93]	230 [9.04]	21.9 [48.2]
750	245 [9.64]	248 [9.75]	23.3 [51.3]
930	260 [10.24]	263 [10.35]	24.4 [53.8]
1K1	270 [10.64]	273 [10.75]	25.3 [55.7]
1K5	308 [12.14]	311 [12.25]	28.3 [62.5]
2K1	359 [14.14]	362 [14.25]	32.3 [71.3]

► All DT series motor weights can vary  $\pm 1.4$  kg [3 lb] depending on model configurations such as housing, shaft, endcover, options etc.

**BEARING LOAD MULTIPLICATION FACTOR TABLE**

RPM	FACTOR	RPM	FACTOR
50	1.23	500	0.62
100	1.00	600	0.58
200	0.81	700	0.56
300	0.72	800	0.50
400	0.66		

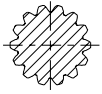


**SHAFTS**

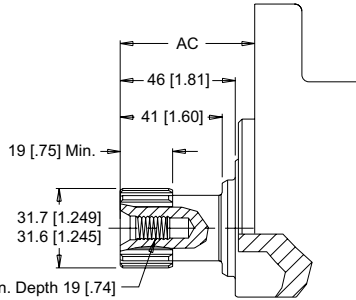
**09** 14 Tooth Spline Extended

**23** 14 Tooth Spline

14 tooth 12/24 Pitch  
Std. ANSI B92.1-1996 Spline



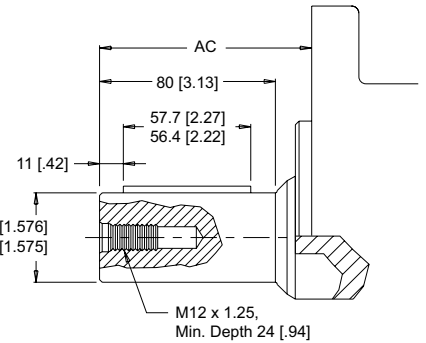
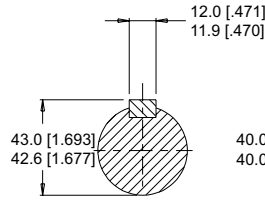
3/8-16 UNC, Min. Depth 19 [.74]



Max. Torque: 2070 Nm [18400 lb-in]

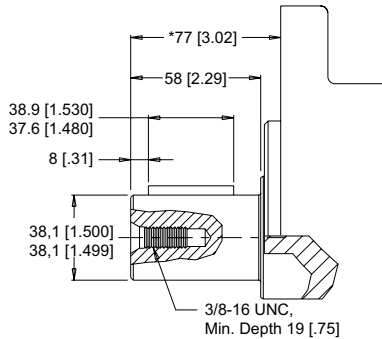
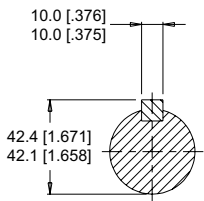
**36** 40mm Straight

**54** 40mm Straight Extended



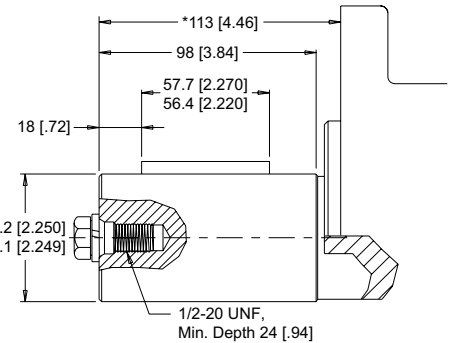
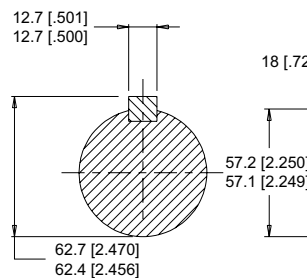
Max. Torque: 2700 Nm [24000 lb-in]

**30** 1-1/2" Straight



Max. Torque: 2230 Nm [19800 lb-in]

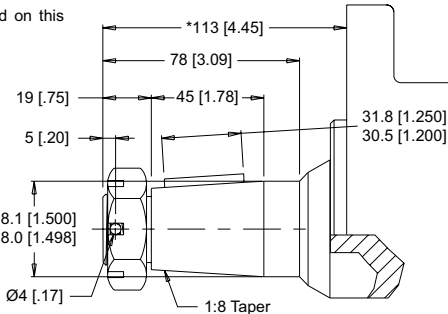
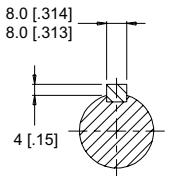
**40** 2-1/4" Straight



Max. Torque: 2700 Nm [24000 lb-in]

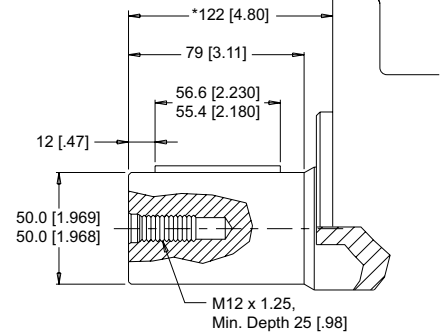
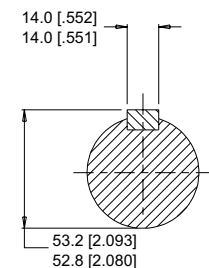
**31** 1-1/2" Tapered

▶ A slotted hex nut is standard on this shaft.



Max. Torque: 2250 Nm [19900 lb-in]

**41** 50mm Straight

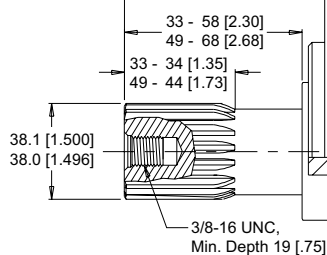
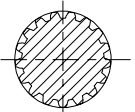


Max. Torque: 2700 Nm [24000 lb-in]

**33** 17 Tooth Spline

**49** 17 Tooth Spline Extended

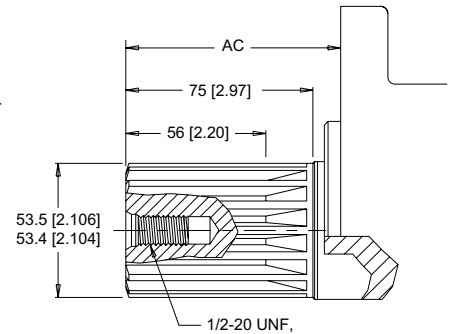
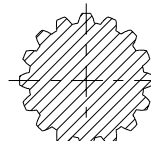
17 tooth 12/24 Pitch  
SAE Std. Spline



**42** 16 Tooth Spline

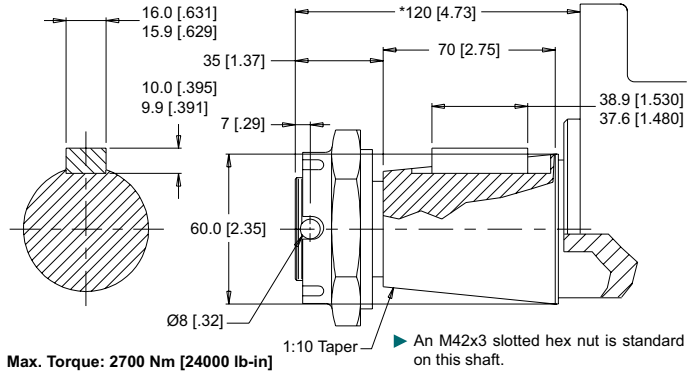
**48** 16 Tooth Spline Extended

16 tooth 8/16 Pitch  
Std. ANSI B92.1-1996 Spline -  
Deviates From Standard

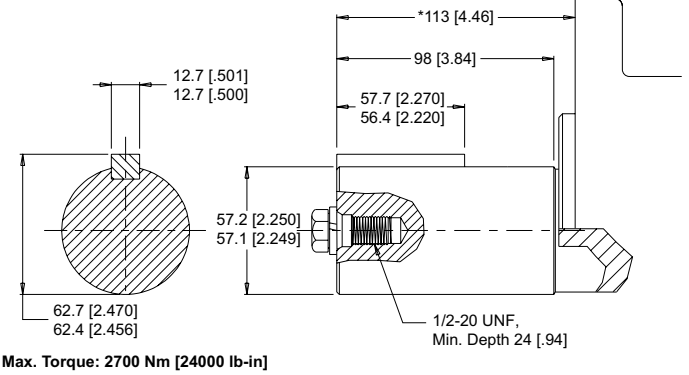


**SHAFTS**

**45** 60mm Tapered



**47** 2-1/4" Straight



**MOUNTING / SHAFT LENGTH CHART**

Dimension AC is the overall distance from the motor mounting surface to the end of the shaft and is referenced on detailed shaft drawings on page 11.

► Shaft lengths vary ± 0.8 mm [.030 in.]

AC #	Length mm [in]	AC #	Length mm [in]
09	86 [3.38]	42	91 [3.57]
23	56 [2.19]	48	121 [4.77]
33	68 [2.69]	49	99 [3.89]
36	113 [4.45]	54	121 [4.78]

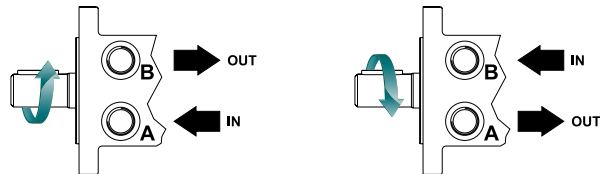


**ORDERING INFORMATION**



**1. CHOOSE SERIES DESIGNATION**

**700** Standard Motor



► The 700 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

**2. SELECT A DISPLACEMENT OPTION**

<b>300</b>	300 cm <sup>3</sup> /rev [18.3 in <sup>3</sup> /rev]	<b>930</b>	929 cm <sup>3</sup> /rev [56.7 in <sup>3</sup> /rev]
<b>375</b>	374 cm <sup>3</sup> /rev [22.8 in <sup>3</sup> /rev]	<b>1K1</b>	1047 cm <sup>3</sup> /rev [63.9 in <sup>3</sup> /rev]
<b>470</b>	464 cm <sup>3</sup> /rev [28.3 in <sup>3</sup> /rev]	<b>1K5</b>	1495 cm <sup>3</sup> /rev [91.2 in <sup>3</sup> /rev]
<b>540</b>	536 cm <sup>3</sup> /rev [32.7 in <sup>3</sup> /rev]	<b>2K1</b>	2093 cm <sup>3</sup> /rev [127.7 in <sup>3</sup> /rev]
<b>750</b>	747 cm <sup>3</sup> /rev [45.6 in <sup>3</sup> /rev]		

**3a. SELECT MOUNT TYPE**

<b>▼ END MOUNTS</b>	
<b>C2</b>	SAE C Mount (5" Pilot)
<b>E2</b>	SAE C Mount (125mm Pilot)
<b>▼ SIDE MOUNTS</b>	
<b>C8</b>	SAE C Mount (5" Pilot)
<b>E8</b>	SAE C Mount (125mm Pilot)

**3b. SELECT PORT SIZE**

<b>▼ END PORT OPTIONS</b>	
<b>1</b>	7/8-14 UNF Offset
<b>▼ SIDE PORT OPTIONS</b>	
<b>2</b>	G 3/4, Radial
<b>3</b>	11/16" Hole, Aligned Manifold
<b>5</b>	1 1/16-20 UN, Radial
<b>6</b>	1 1/16-20 UN, Aligned
<b>7</b>	G 3/4, Radial

**4. SELECT A SHAFT OPTION**

<b>09</b>	14 Tooth Spline Extended	<b>41</b>	50mm Straight
<b>23</b>	14 Tooth Spline	<b>42</b>	16 Tooth Spline
<b>30</b>	1-1/2" Straight	<b>45</b>	60mm Tapered
<b>31</b>	1-1/2" Tapered	<b>47</b>	2-1/4" Straight
<b>33</b>	17 Tooth Spline	<b>48</b>	16 Tooth Spline Extended
<b>36</b>	40mm Straight	<b>49</b>	17 Tooth Spline Extended
<b>40</b>	2-1/4" Straight	<b>54</b>	40mm Straight Extended

► The #47 and extended shafts are designed for use with one of the speed sensor options listed in STEP 7.

**5. SELECT A PAINT OPTION**

<b>A</b>	Black
<b>B</b>	Black, Unpainted Mounting Surface
<b>Z</b>	No Paint

**6. SELECT A VALVE CAVITY / CARTRIDGE OPTION**

<b>A</b>	None	<b>F</b>	121 bar [1750 psi] Relief
<b>B</b>	Valve Cavity Only	<b>G</b>	138 bar [2000 psi] Relief
<b>C</b>	69 bar [1000 psi] Relief	<b>J</b>	173 bar [2500 psi] Relief
<b>D</b>	86 bar [1250 psi] Relief	<b>L</b>	207 bar [3000 psi] Relief
<b>E</b>	104 bar [1500 psi] Relief		

► Valve cavity is not available on port option 3.

**7. SELECT AN ADD-ON OPTION**

<b>A</b>	Standard
<b>B</b>	Lock Nut
<b>C</b>	Solid Hex Nut
<b>W</b>	Speed Sensor, Dual, 4-Pin Male Weatherpack Connector
<b>X</b>	Speed Sensor, Dual, 4-Pin M12 Male Connector
<b>Y</b>	Speed Sensor, Single, 3-Pin Male Weatherpack Connector
<b>Z</b>	Speed Sensor, Single, 4-Pin M12 Male Connector

**8. SELECT A MISCELLANEOUS OPTION**

<b>AA</b>	None
<b>AB</b>	Internal Drain
<b>AC</b>	Freeturning Rotor
<b>AD</b>	Internal Drain & Freeturning Rotor

# DT (740 Series)

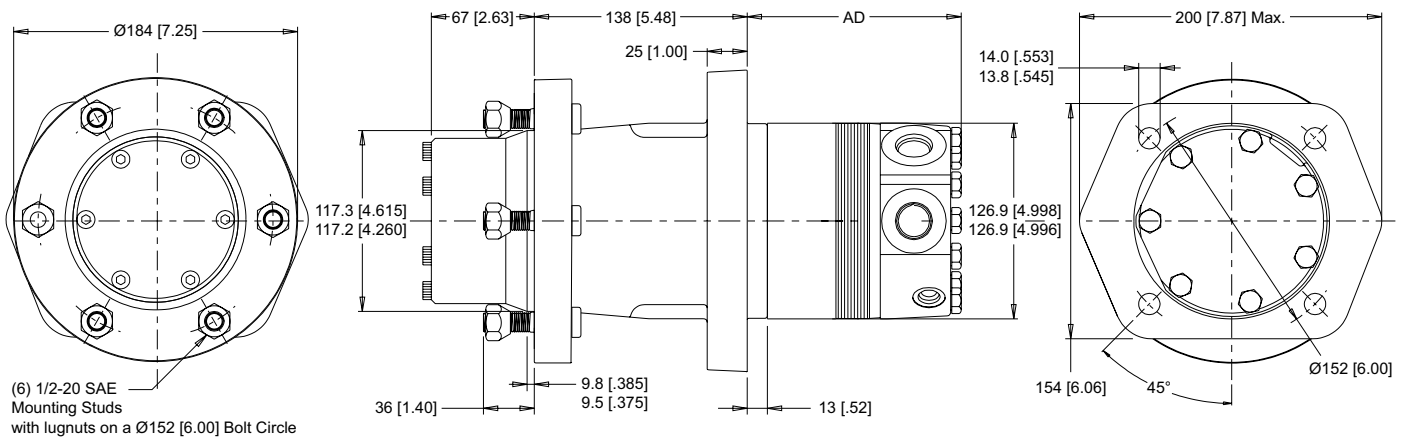
## Hydraulic Motor With Wheel Hub

### HOUSINGS

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

#### 4-HOLE, WHEEL HUB MOUNT

**W2** End Ports    **W8** Side Ports



► Porting options listed on pages 8-9.

### TECHNICAL INFORMATION

#### ALLOWABLE SHAFT LOAD / BEARING CURVE

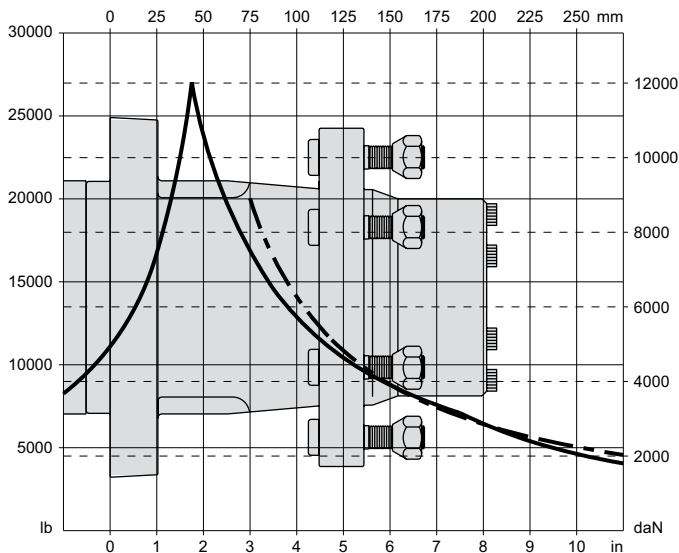
The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an  $L_{10}$  life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

#### LENGTH & WEIGHT CHART

Dimension AD is the overall motor length from the rear of the motor to the mounting surface.

AD #	Endcovers on pg. 8	Endcovers on pg. 9	Weight
	mm [in]	mm [in]	kg [lb]
300	117 [4.63]	120 [4.74]	28.4 [62.6]
375	124 [4.88]	127 [4.99]	28.9 [63.8]
470	131 [5.18]	134 [5.29]	29.5 [65.1]
540	137 [5.42]	140 [5.53]	30.0 [66.2]
750	155 [6.13]	158 [6.24]	31.4 [69.2]
930	171 [6.73]	174 [6.84]	32.6 [71.8]
1K1	181 [7.13]	184 [7.24]	33.4 [73.7]
1K5	219 [8.63]	222 [8.74]	36.5 [80.5]
2K1	270 [10.63]	273 [10.74]	40.5 [89.3]

#### WHEEL HUB MOUNTS

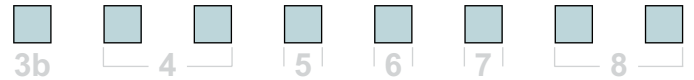
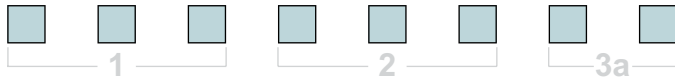


► All DT series motor weights can vary  $\pm 1.4$  kg [3 lb] depending on model configurations such as housing, shaft, endcover, options etc.



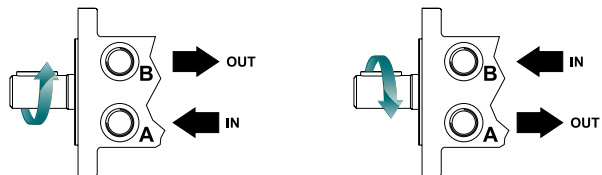


**ORDERING INFORMATION**



**1. CHOOSE SERIES DESIGNATION**

**740** Hydraulic Motor With Wheel Hub



► The 740 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

**2. SELECT A DISPLACEMENT OPTION**

<b>300</b>	300 cm <sup>3</sup> /rev [18.3 in <sup>3</sup> /rev]	<b>930</b>	929 cm <sup>3</sup> /rev [56.7 in <sup>3</sup> /rev]
<b>375</b>	374 cm <sup>3</sup> /rev [22.8 in <sup>3</sup> /rev]	<b>1K1</b>	1047 cm <sup>3</sup> /rev [63.9 in <sup>3</sup> /rev]
<b>470</b>	464 cm <sup>3</sup> /rev [28.3 in <sup>3</sup> /rev]	<b>1K5</b>	1495 cm <sup>3</sup> /rev [91.2 in <sup>3</sup> /rev]
<b>540</b>	536 cm <sup>3</sup> /rev [32.7 in <sup>3</sup> /rev]	<b>2K1</b>	2093 cm <sup>3</sup> /rev [127.7 in <sup>3</sup> /rev]
<b>750</b>	747 cm <sup>3</sup> /rev [45.6 in <sup>3</sup> /rev]		

**3a. SELECT MOUNT TYPE**

- ▼ END MOUNTS
- W2** Wheel Hub Mount
- ▼ SIDE MOUNTS
- W8** Wheel Hub Mount

**3b. SELECT PORT SIZE**

- ▼ END PORT OPTIONS
- 1** 7/8-14 UNF Offset
- ▼ SIDE PORT OPTIONS
- 2** G 3/4, Radial
- 5** 1 1/16-20 UN, Radial

**4. SELECT A SHAFT OPTION**

**61** 6-Bolt Wheel Flange

**5. SELECT A PAINT OPTION**

- A** Black
- Z** No Paint

**6. SELECT A VALVE CAVITY / CARTRIDGE OPTION**

<b>A</b>	None	<b>F</b>	121 bar [1750 psi] Relief
<b>B</b>	Valve Cavity Only	<b>G</b>	138 bar [2000 psi] Relief
<b>C</b>	69 bar [1000 psi] Relief	<b>J</b>	173 bar [2500 psi] Relief
<b>D</b>	86 bar [1250 psi] Relief	<b>L</b>	207 bar [3000 psi] Relief
<b>E</b>	104 bar [1500 psi] Relief		

**7. SELECT AN ADD-ON OPTION**

- A** Standard

**8. SELECT A MISCELLANEOUS OPTION**

- AA** None
- AC** Freeturning Rotor

# DT (710 Series)

Hydraulic Motor With Integral Spring Applied, Hydraulic Released Brake

whitedriveproducts

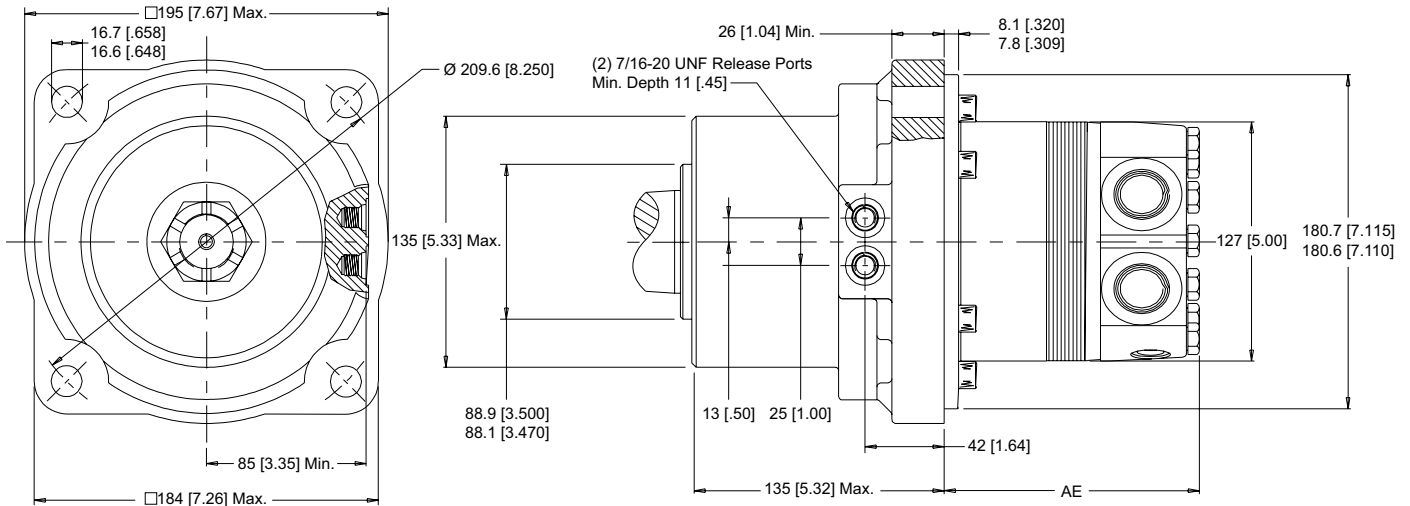


## HOUSINGS

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [0.005].

### 4-HOLE, WHEEL BRAKE MOUNT

**W2** End Ports    **W8** Side Ports



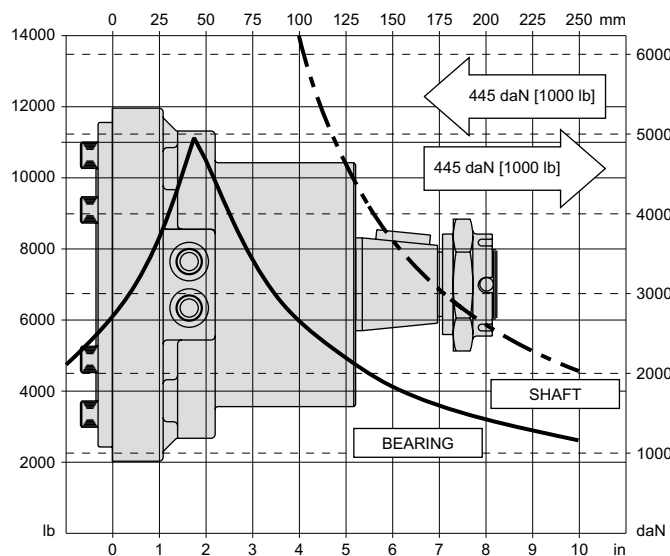
► Porting options listed on pages 8-9.

## TECHNICAL INFORMATION

### ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an  $L_{10}$  life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

### WHEEL BRAKE MOUNTS



### SPECIFICATIONS

Rated brake torque..... 1582 Nm [14000 lb-in]  
 Initial release pressure .....19 bar [275 psi]  
 Full release pressure .....33 bar [475 psi]  
 Maximum release pressure .....207 bar [3000 psi]  
 Release volume..... 13-16 cm<sup>3</sup> [0.8 - 1.0 in<sup>3</sup>]

► The DT 710 series motor/brakes are available with different holding torque specifications. For additional information please contact White Drive Products Customer Service & Technical Support or your local White Drive Products' distributor.

### LENGTH & WEIGHT CHART

Dimension AE is the overall motor length from the rear of the motor to the mounting surface.

AE	Endcovers on pg. 8	Endcovers on pg. 9	Weight
#	mm [in]	mm [in]	kg [lb]
300	112 [4.43]	115 [4.54]	27.2 [60.0]
375	119 [4.68]	122 [4.79]	27.8 [61.2]
470	126 [4.98]	129 [5.09]	28.3 [62.5]
540	132 [5.22]	135 [5.33]	28.8 [63.6]
750	150 [5.93]	153 [6.04]	30.3 [66.7]
930	166 [6.53]	169 [6.64]	31.4 [69.2]
1K1	176 [6.93]	179 [7.04]	32.2 [71.1]
1K5	214 [8.43]	217 [8.54]	35.3 [77.9]
2K1	265 [10.43]	268 [10.54]	39.3 [86.7]

► All DT series motor weights can vary  $\pm 1.4$  kg [3 lb] depending on model configurations such as housing, shaft, endcover, options etc.



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