

DR Series

Medium Duty Hydraulic Motor



DR (All Series)

For Medium Duty Applications

OVERVIEW

Due to its case drain design, the DR Series motor is an excellent medium size motor for applications with high-duty cycles or frequent direction reversal. The case drain design produces a number of benefits including reduction of pressure on the shaft seal and the ability to provide a cooling loop for the system. The case flow also lubricates the vital drive components, extending motor life. An internal drain option is also available. A laminated manifold and three-zone orbiting valve are used to produce higher overall efficiencies and more usable power. A steel faced seal in the orbiting valve also reduces the risk of the seal extruding or melting, which is possible in competitive designs.

FEATURES / BENEFITS

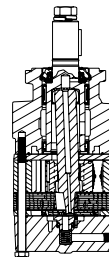
- Four Bearing Options allow load carrying capabilities of motor to be matched to application.
- Heavy-Duty Drive Link is the most durable in its class and receives case flow lubrication for reduced wear and increased life.
- Three-Zone Orbiting Valve precisely meters oil to produce exceptional volumetric efficiency.
- Rubber Energized Steel Face Seal does not extrude or melt under high pressure or high temperature.
- Standard Case Drain increases shaft seal life by reducing pressure on seal.

TYPICAL APPLICATIONS

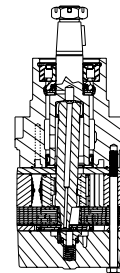
Medium-duty wheel drives, augers, mixers, winch drives, swing drives, grapple heads, feed rollers, broom drives, chippers, mining equipment, forestry equipment and more

SERIES DESCRIPTIONS

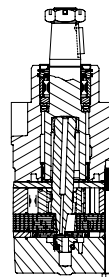
600 - Hydraulic Motor
Standard



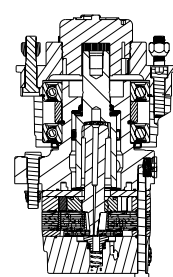
620 - Hydraulic Motor
With Medium Duty Bearing



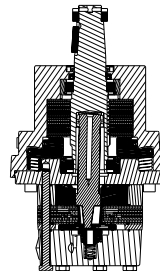
630 - Hydraulic Motor
With Heavy Duty Bearing



640 - Hydraulic Motor
With Wheel Hub



610 - Hydraulic Motor
With Integral Hydraulic Brake



SPECIFICATIONS

CODE	Displacement cm ³ [in ³ /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
200	204 [12.4]	470	560	95 [25]	114 [30]	554 [4900]	644 [5700]	207 [3000]	241 [3500]	276 [4000]
260	261 [15.9]	360	440	95 [25]	114 [30]	745 [6590]	859 [7600]	207 [3000]	241 [3500]	276 [4000]
300	300 [18.3]	320	380	95 [25]	114 [30]	842 [7450]	972 [8600]	207 [3000]	241 [3500]	276 [4000]
350	348 [21.2]	270	320	95 [25]	114 [30]	972 [8600]	1107 [9800]	207 [3000]	241 [3500]	276 [4000]
375	375 [22.8]	250	300	95 [25]	114 [30]	1085 [9600]	1243 [11000]	207 [3000]	241 [3500]	276 [4000]
470	465 [28.3]	200	240	95 [25]	114 [30]	1107 [9800]	1316 [11650]	172 [2500]	207 [3000]	241 [3500]
540	536 [32.7]	180	210	95 [25]	114 [30]	1034 [9150]	1277 [11300]	138 [2000]	172 [2500]	207 [3000]
750	748 [45.6]	130	150	95 [25]	114 [30]	1040 [9200]	1390 [12300]	103 [1500]	138 [2000]	172 [2500]

► Performance data is typical. Performance of production units varies slightly from one motor to another. See page 10.03 for additional information on product testing. Running at intermittent ratings should not exceed 10% of every minute of operation.

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DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
200		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
204 cm ³ [12.4 in ³] / rev		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	38 [335] 7	77 [683] 4						
	4 [1]	39 [342] 16	85 [748] 15	174 [1543] 13	258 [2284] 9	329 [2913] 5			
	8 [2]	38 [339] 35	90 [795] 34	178 [1579] 32	271 [2396] 28	361 [3192] 23	454 [4016] 16	519 [4594] 11	562 [4977] 3
	15 [4]	36 [323] 73	85 [749] 72	178 [1576] 69	283 [2506] 64	378 [3346] 57	459 [4059] 54	555 [4909] 44	636 [5625] 35
	23 [6]		78 [690] 110	177 [1562] 106	273 [2413] 101	362 [3202] 97	462 [4085] 89	551 [4880] 80	645 [5711] 70
	30 [8]		74 [654] 148	172 [1518] 145	268 [2368] 141	357 [3156] 133	469 [4154] 126	558 [4936] 117	653 [5778] 105
	38 [10]			168 [1491] 184	260 [2301] 178	349 [3091] 174	444 [3933] 167	541 [4783] 156	638 [5646] 144
	45 [12]			156 [1381] 221	255 [2256] 215	350 [3096] 209	450 [3985] 204	542 [4793] 199	634 [5607] 179
	53 [14]			150 [1332] 259	251 [2219] 254	330 [2919] 250	435 [3850] 241	526 [4653] 231	638 [5643] 213
	61 [16]			133 [1180] 297	241 [2129] 293	336 [2970] 286	430 [3803] 278	522 [4616] 276	613 [5423] 256
	68 [18]			122 [1082] 335	227 [2012] 332	328 [2899] 325	417 [3692] 319	510 [4510] 310	602 [5329] 298
	76 [20]			112 [993] 372	214 [1897] 371	309 [2732] 365	401 [3547] 356	496 [4391] 348	587 [5198] 337
	83 [22]				199 [1757] 409	303 [2680] 404	384 [3401] 396	493 [4358] 384	579 [5121] 374
Max. Max. Inter. Cont.	91 [24]				184 [1625] 447	285 [2526] 443	380 [3366] 433	474 [4192] 423	562 [4970] 417
	95 [25]				166 [1472] 465	277 [2453] 461	367 [3244] 454	463 [4101] 443	560 [4953] 432
	114 [30]					219 [1935] 558	332 [2934] 553		
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐							
Theoretical Torque - Nm [lb-in]		56 [494]	112 [987]	223 [1975]	335 [2962]	446 [3949]	558 [4936]	669 [5924]	781 [6911]
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]									
		Pressure - bar [psi]						Max. Cont.	Max. Inter.
260		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
261 cm ³ [15.9 in ³] / rev		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	47 [417] 5	109 [962] 4						
	4 [1]	51 [454] 13	110 [972] 11	238 [2104] 9	355 [3139] 8	460 [4074] 5			
	8 [2]	52 [462] 28	113 [1004] 27	242 [2145] 25	367 [3244] 22	485 [4292] 18	603 [5334] 14	715 [6323] 11	
	15 [4]	49 [430] 57	111 [985] 54	239 [2115] 51	367 [3247] 51	491 [4343] 45	619 [5474] 41	746 [6598] 36	859 [7600] 30
	23 [6]	44 [391] 87	107 [950] 86	234 [2067] 83	364 [3225] 78	487 [4311] 72	617 [5458] 67	738 [6530] 60	854 [7557] 54
	30 [8]		100 [884] 115	228 [2016] 113	355 [3146] 107	478 [4230] 103	612 [5418] 95	733 [6487] 89	868 [7677] 82
	38 [10]		90 [797] 145	220 [1947] 143	348 [3080] 138	468 [4143] 132	605 [5351] 123	734 [6498] 115	852 [7541] 107
	45 [12]		84 [748] 174	212 [1877] 172	340 [3011] 168	463 [4094] 162	596 [5272] 152	722 [6390] 143	845 [7481] 133
	53 [14]		71 [631] 203	205 [1813] 201	330 [2921] 198	452 [4004] 185	587 [5195] 179	706 [6244] 173	846 [7491] 163
	61 [16]			191 [1688] 231	317 [2807] 228	444 [3927] 223	574 [5077] 214	703 [6221] 203	824 [7291] 196
	68 [18]			174 [1540] 261	305 [2698] 256	429 [3798] 251	560 [4952] 246	690 [6111] 230	815 [7214] 220
	76 [20]			156 [1383] 290	289 [2558] 289	418 [3700] 282	544 [4817] 268	675 [5977] 262	810 [7166] 247
	83 [22]			143 [1270] 319	275 [2431] 317	405 [3585] 313	533 [4717] 300	659 [5828] 293	787 [6961] 277
Max. Max. Inter. Cont.	91 [24]			131 [1158] 348	255 [2253] 346	387 [3421] 342	515 [4554] 333	613 [5421] 322	769 [6805] 311
	95 [25]				239 [2115] 362	373 [3301] 357	505 [4471] 348	628 [5559] 342	772 [6832] 328
	114 [30]				157 [1388] 434	298 [2637] 432	426 [3768] 427		
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐							
Theoretical Torque - Nm [lb-in]		72 [633]	143 [1266]	286 [2532]	429 [3798]	572 [5064]	715 [6330]	858 [7596]	1001 [8861]
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. See page 10.03 for additional information on product testing.

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		Pressure - bar [psi]							Max. Cont.	Max. Inter.	
300		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]		
300 cm ³ [18.3 in ³] / rev									Intermittent Ratings - 10% of Operation		
Flow - lpm [gpm]	Max. Max. Inter. Cont.	Torque - Nm [lb-in], Speed rpm									Theoretical rpm
		58 [509]	117 [1039]	253 [2236]						7	
		58 [517]	122 [1081]	266 [2353]	384 [3396]	509 [4501]	633 [5599]			13	
		58 [516]	128 [1134]	267 [2360]	404 [3572]	553 [4893]	683 [6045]	813 [7198]	917 [8112]	26	
		56 [491]	132 [1173]	274 [2425]	417 [3691]	553 [4890]	703 [6225]	836 [7397]	962 [8513]	51	
		53 [466]	123 [1092]	269 [2384]	406 [3590]	559 [4949]	701 [6207]	831 [7356]	954 [8445]	76	
		44 [386]	117 [1036]	256 [2263]	419 [3710]	548 [4847]	707 [6256]	846 [7485]	974 [8619]	101	
			107 [947]	251 [2222]	390 [3448]	561 [4961]	691 [6119]	836 [7396]	976 [8637]	127	
			95 [841]	238 [2108]	400 [3538]	529 [4685]	696 [6160]	833 [7371]	969 [8573]	152	
			84 [748]	232 [2053]	366 [3237]	530 [4688]	676 [5978]	825 [7302]	964 [8533]	177	
			71 [629]	217 [1920]	370 [3277]	508 [4494]	654 [5786]	803 [7104]	952 [8428]	202	
			202 [1792]	339 [2996]	503 [4448]	645 [5712]	781 [6914]	933 [8253]		228	
			184 [1631]	326 [2887]	467 [4129]	635 [5619]	772 [6831]	927 [8205]		253	
			164 [1449]	308 [2726]	446 [3943]	604 [5346]	745 [6592]	896 [7926]		278	
			147 [1304]	286 [2535]	437 [3871]	580 [5137]	723 [6401]	861 [7620]		303	
		116 [1024]	291 [2574]	441 [3902]	575 [5085]	707 [6255]	848 [7500]	316			
114 [30]			204 [1805]	347 [3067]	499 [4416]			379			
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐									
Theoretical Torque - Nm [lb-in]											
25.4 [1.000]		82 [729]	165 [1457]	329 [2914]	494 [4371]	659 [5828]	823 [7285]	988 [8742]	1152 [10199]		
mm [in]		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]									
		Pressure - bar [psi]							Max. Cont.	Max. Inter.	
350		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]		
348 cm ³ [21.2 in ³] / rev									Intermittent Ratings - 10% of Operation		
Flow - lpm [gpm]	Max. Max. Inter. Cont.	Torque - Nm [lb-in], Speed rpm									Theoretical rpm
		69 [606]	140 [1243]	262 [2318]						6	
		75 [660]	153 [1350]	309 [2733]	454 [4014]					11	
		75 [667]	158 [1395]	325 [2880]	489 [4326]	647 [5727]	784 [6937]	917 [8119]		22	
		73 [648]	159 [1405]	333 [2943]	502 [4443]	677 [5988]	830 [7342]	984 [8704]	1123 [9935]	44	
		67 [594]	152 [1346]	328 [2901]	502 [4439]	670 [5926]	841 [7444]	1010 [8940]	1155 [10220]	66	
		56 [494]	143 [1268]	317 [2808]	494 [4368]	678 [6002]	833 [7376]	1018 [9010]	1172 [10367]	88	
			129 [1141]	305 [2700]	477 [4219]	655 [5798]	830 [7345]	994 [8801]	1159 [10260]	109	
			121 [1068]	291 [2578]	465 [4113]	641 [5672]	817 [7231]	991 [8766]	1169 [10342]	131	
			103 [907]	275 [2437]	452 [4001]	630 [5572]	815 [7212]	972 [8604]	1162 [10284]	153	
			85 [755]	258 [2281]	431 [3818]	609 [5390]	790 [6991]	983 [8696]	1141 [10099]	175	
			66 [587]	246 [2174]	432 [3823]	583 [5161]	768 [6800]	944 [8355]	1131 [10012]	197	
			223 [1969]	391 [3459]	568 [5026]	750 [6637]	925 [8186]	1101 [9742]		218	
			193 [1704]	372 [3293]	545 [4825]	724 [6408]	909 [8049]	1092 [9666]		240	
			169 [1492]	349 [3085]	537 [4755]	698 [6179]				262	
		325 [2874]	507 [4491]	687 [6082]				273			
114 [30]			255 [2258]	429 [3796]	605 [5354]			327			
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐									
Theoretical Torque - Nm [lb-in]											
39.4 [1.553]		95 [844]	191 [1688]	381 [3376]	572 [5064]	763 [6752]	954 [8439]	1144 [10127]	1335 [11815]		
mm [in]		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]									

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DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
375		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
375 cm ³ [22.8 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	69 [611]							
	4 [1]	74 [651]	161 [1425]	330 [2920]	494 [4369]	653 [5783]	823 [7283]		
	8 [2]	76 [676]	173 [1527]	354 [3133]	518 [4582]	685 [6065]	860 [7611]	1021 [9038]	
	15 [4]	73 [649]	158 [1399]	350 [3098]	535 [4731]	706 [6250]	883 [7814]	1032 [9130]	1191 [10541]
	23 [6]	66 [588]	159 [1407]	346 [3058]	547 [4841]	712 [6300]	899 [7956]	1080 [9561]	1231 [10898]
	30 [8]	57 [502]	147 [1301]	337 [2980]	537 [4749]	700 [6192]	898 [7948]	1088 [9628]	1236 [10941]
	38 [10]		134 [1190]	323 [2856]	510 [4512]	694 [6139]	887 [7849]	1066 [9437]	1246 [11029]
	45 [12]		124 [1097]	309 [2730]	496 [4385]	679 [6009]	883 [7817]	1073 [9493]	1244 [11010]
	53 [14]		109 [961]	290 [2563]	477 [4217]	680 [6016]	854 [7556]	1041 [9214]	1230 [10888]
	61 [16]		82 [728]	267 [2362]	453 [4005]	637 [5641]	846 [7489]	1041 [9209]	1209 [10702]
	68 [18]			248 [2198]	434 [3842]	619 [5474]	812 [7190]	1002 [8864]	1148 [10161]
	76 [20]			229 [2026]	416 [3685]	600 [5309]	790 [6994]	979 [8664]	1145 [10137]
	83 [22]			199 [1764]	385 [3406]	572 [5065]	761 [6738]	953 [8435]	1111 [9834]
	91 [24]			168 [1490]	362 [3204]	566 [5007]	731 [6471]		
	95 [25]			243	521	554 [4905]	721 [6384]		
Max. Max. Inter. Cont.	114 [30]				261 [2314]	440 [3891]	623 [5514]		
					303	301	300		
Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐									
Theoretical Torque - Nm [lb-in]		103 [908]	205 [1815]	410 [3631]	615 [5446]	821 [7261]	1026 [9076]	1231 [10892]	1436 [12707]
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]									
		Pressure - bar [psi]						Max. Cont.	Max. Inter.
470		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	
465 cm ³ [28.3 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	92 [815]	195 [1723]	374 [3306]					
	4 [1]	109 [967]	188 [1661]	418 [3701]	615 [5447]				
	8 [2]	99 [875]	217 [1924]	440 [3892]	668 [5910]	871 [7709]	1066 [9436]	1227 [10855]	
	15 [4]	93 [825]	213 [1887]	441 [3906]	688 [6086]	907 [8027]	1131 [10008]	1343 [11886]	
	23 [6]	85 [751]	200 [1771]	434 [3841]	686 [6074]	906 [8017]	1141 [10098]	1362 [12056]	
	30 [8]	72 [635]	186 [1645]	422 [3738]	659 [5834]	889 [7871]	1142 [10106]	1352 [11963]	
	38 [10]	53 [472]	169 [1493]	404 [3579]	639 [5657]	874 [7734]	1115 [9871]	1351 [11958]	
	45 [12]		152 [1348]	402 [3561]	608 [5377]	855 [7563]	1111 [9836]	1340 [11861]	
	53 [14]		133 [1175]	364 [3221]	598 [5292]	833 [7374]	1090 [9643]	1319 [11673]	
	61 [16]		103 [910]	333 [2947]	569 [5037]	803 [7110]	1063 [9410]	1294 [11450]	
	68 [18]		75 [661]	305 [2701]	555 [4908]	764 [6765]	1021 [9033]	1267 [11214]	
	76 [20]			281 [2489]	507 [4490]	745 [6597]	985 [8719]	1236 [10940]	
	83 [22]			227 [2011]	473 [4189]	714 [6322]	948 [8391]	1182 [10462]	
	91 [24]			193 [1705]	432 [3827]	687 [6079]	915 [8093]		
	95 [25]			194	423 [3743]	651 [5759]	896 [7928]		
Max. Max. Inter. Cont.	114 [30]				321 [2840]	538 [4761]	784 [6938]		
					244	242	238		
Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐									
Theoretical Torque - Nm [lb-in]		127 [1127]	255 [2253]	509 [4506]	764 [6760]	1018 [9013]	1273 [11266]	1528 [13519]	
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]									
Rotor Width		39.4 [1.553]							
mm [in]									

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DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]				Max. Cont.	Max. Inter.
540		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]
536 cm ³ [32.7 in ³] / rev		Intermittent Ratings - 10% of Operation					
Flow - lpm [gpm]	2 [0.5]	108 [953] 3	215 [1900] 2				
	4 [1]	107 [946] 6	225 [1995] 6	476 [4212] 5	710 [6284] 5	920 [8138] 3	4
	8 [2]	113 [998] 13	241 [2133] 12	498 [4403] 11	748 [6620] 11	980 [8674] 9	8
	15 [4]	115 [1014] 28	242 [2137] 27	508 [4491] 26	779 [6893] 25	1038 [9188] 24	15
	23 [6]	102 [902] 42	234 [2067] 42	505 [4465] 40	771 [6821] 38	1019 [9022] 36	29
	30 [8]	89 [792] 56	222 [1962] 56	494 [4373] 55	764 [6759] 52	1020 [9029] 48	43
	38 [10]	71 [630] 70	201 [1782] 70	477 [4224] 68	750 [6639] 66	1016 [8994] 62	57
	45 [12]	47 [417] 84	188 [1661] 84	455 [4027] 84	729 [6455] 81	1001 [8858] 76	71
	53 [14]		158 [1397] 98	430 [3803] 97	702 [6214] 96	995 [8803] 89	85
	61 [16]		132 [1170] 113	403 [3564] 112	670 [5930] 110	944 [8353] 106	99
	68 [18]		97 [856] 127	366 [3236] 127	640 [5664] 126	935 [8276] 120	114
	76 [20]		63 [554] 141	335 [2962] 140	604 [5345] 139	878 [7767] 135	128
	83 [22]			303 [2680] 155	562 [4972] 153	838 [7420] 152	142
	91 [24]			242 [2141] 169	522 [4622] 167	813 [7194] 164	156
	95 [25]			226 [1998] 176	490 [4338] 175	772 [6832] 174	170
	114 [30]			98 [864] 211	380 [3365] 210	659 [5834] 209	177
							212
Max. Max. Inter. Cont.		Overall Efficiency - 70 - 100% 40 - 69% 0 - 39%					
Rotor Width		Theoretical Torque - Nm [lb-in]					
45.5 [1.791]		147 [1302]	294 [2604]	588 [5207]	883 [7811]	1177 [10414]	1471 [13018]
mm [in]		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]					
		Pressure - bar [psi]				Max. Cont.	Max. Inter.
750		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	
748 cm ³ [45.6 in ³] / rev		Intermittent Ratings - 10% of Operation					
Flow - lpm [gpm]	2 [0.5]	126 [1118] 1	277 [2450] 1				3
	4 [1]	156 [1378] 4	287 [2537] 3	627 [5552] 3	922 [8155] 2		6
	8 [2]	153 [1357] 9	322 [2853] 9	664 [5873] 8	986 [8722] 7	1308 [11579] 6	11
	15 [4]	148 [1312] 20	327 [2898] 19	686 [6071] 18	1027 [9085] 17	1374 [12161] 16	21
	23 [6]	139 [1230] 30	323 [2860] 29	691 [6113] 28	1040 [9200] 27	1393 [12328] 25	31
	30 [8]	123 [1085] 40	306 [2712] 40	681 [6026] 39	1040 [9207] 36	1380 [12211] 34	41
	38 [10]	99 [874] 50	291 [2571] 49	666 [5897] 48	1035 [9162] 47	1399 [12382] 45	51
	45 [12]	75 [664] 60	274 [2423] 59	643 [5688] 58	1018 [9012] 57	1392 [12318] 55	61
	53 [14]	46 [408] 70	239 [2113] 70	616 [5451] 69	996 [8814] 68	1372 [12146] 64	71
	61 [16]		190 [1682] 81	575 [5089] 80	958 [8479] 78	1327 [11742] 76	82
	68 [18]		150 [1325] 91	535 [4738] 90	921 [8150] 88	1299 [11494] 86	92
	76 [20]		107 [949] 101	486 [4298] 100	878 [7771] 100	1253 [11090] 97	102
	83 [22]			449 [3978] 111	822 [7273] 110	1198 [10598] 108	112
	91 [24]			384 [3401] 121	761 [6736] 120	1143 [10117] 117	122
	95 [25]			369 [3268] 126	737 [6523] 125	1111 [9830] 124	127
	114 [30]			116 [1025] 151	494 [4374] 149		152
Max. Max. Inter. Cont.		Overall Efficiency - 70 - 100% 40 - 69% 0 - 39%					
Rotor Width		Theoretical Torque - Nm [lb-in]					
63.5 [2.501]		205 [1815]	410 [3631]	821 [7261]	1231 [10892]	1641 [14522]	
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. See page 10.03 for additional information on product testing.

DR Series

Medium Duty Hydraulic Motor



DR (All Series) For Medium Duty Applications

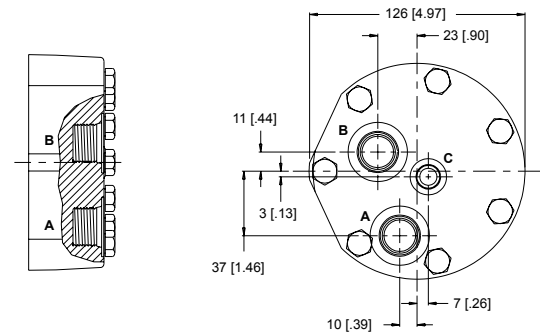
PORTING

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

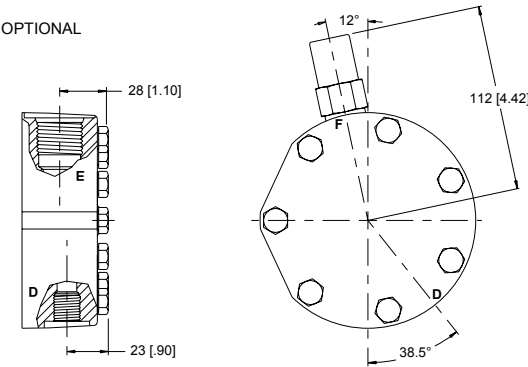
END PORTED - OFFSET

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

STANDARD



OPTIONAL

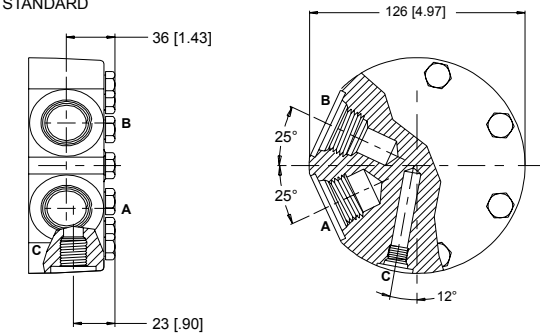


D: Internal Drain E: 10 Series/2-Way Valve Cavity 7/8-14 UNF F: Valve Cartridge Installed

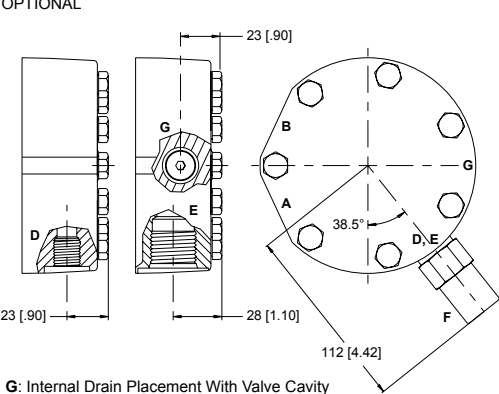
SIDE PORTED - RADIAL

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

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

DR Series

Medium Duty Hydraulic Motor



DR (All Series) For Medium Duty Applications

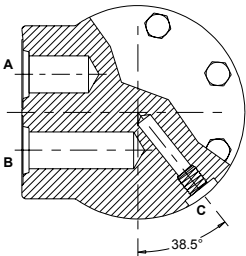
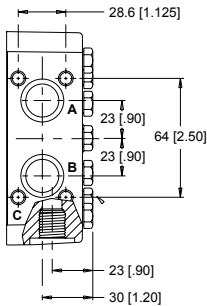
PORTING

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

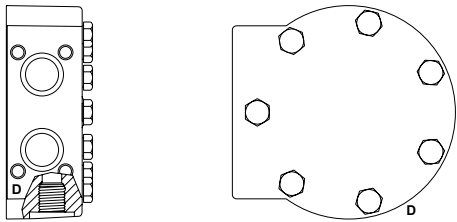
SIDE PORTED - MANIFOLD ALIGNED

- 3
- Main Ports **A, B:** 11/16" Drilled
Drain Port **C:** 7/16-20 UNF

STANDARD



OPTIONAL



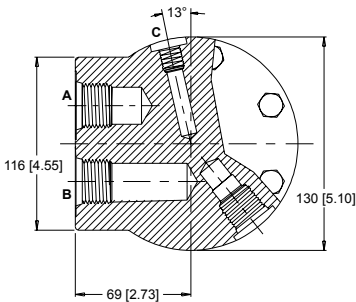
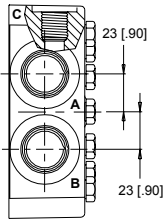
D: Internal Drain

SIDE PORTED - ALIGNED

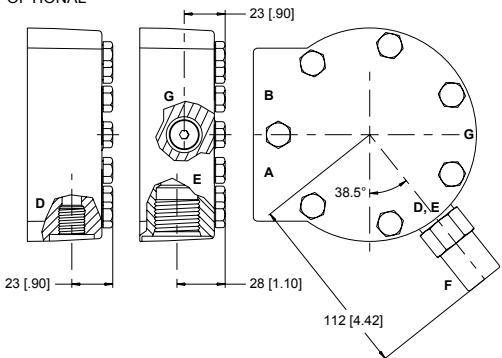
- 6
- Main Ports **A, B:** 1 1/16-20 UN
Drain Port **C:** 7/16-20 UNF

- 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

DR Series

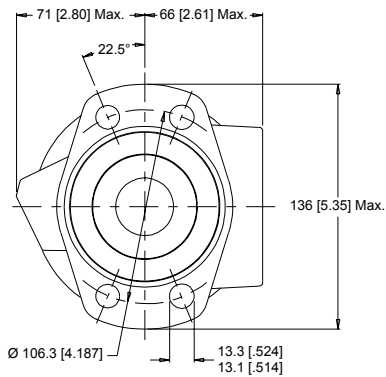
Medium Duty Hydraulic Motor



DR (600 Series) Hydraulic Motor

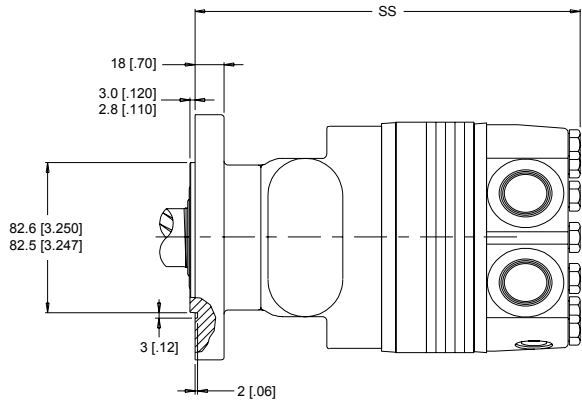
HOUSINGS

4-HOLE, MAGNETO MOUNT

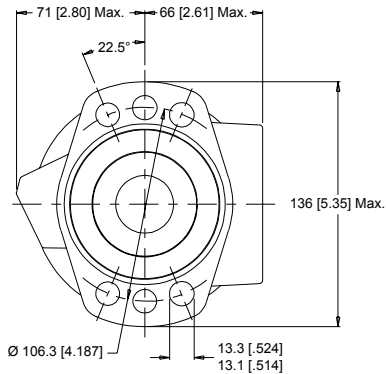


► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

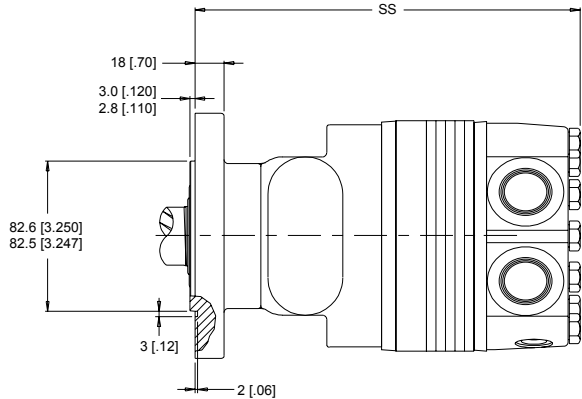
A2 End Ports A8 Side Ports



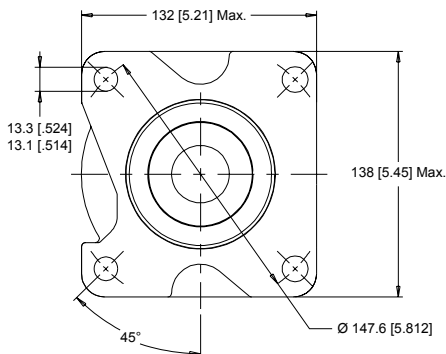
6-HOLE, SAE A MOUNT



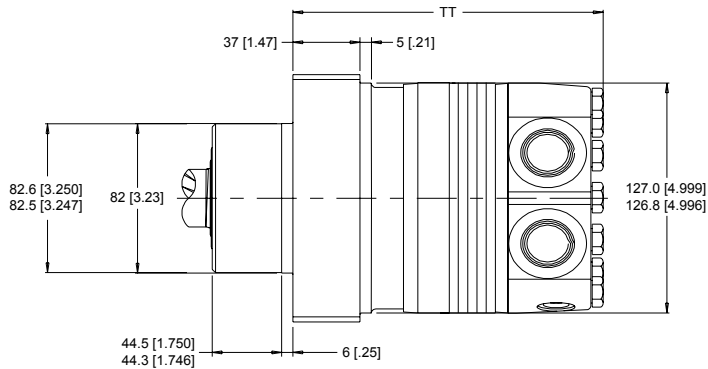
A4 End Ports A9 Side Ports



4-HOLE, WHEEL MOUNT



W2 End Ports W8 Side Ports



► Dimensions SS & TT are charted on page 10.121. Porting options listed on pages 10.118-10.119.

DR Series

Medium Duty Hydraulic Motor



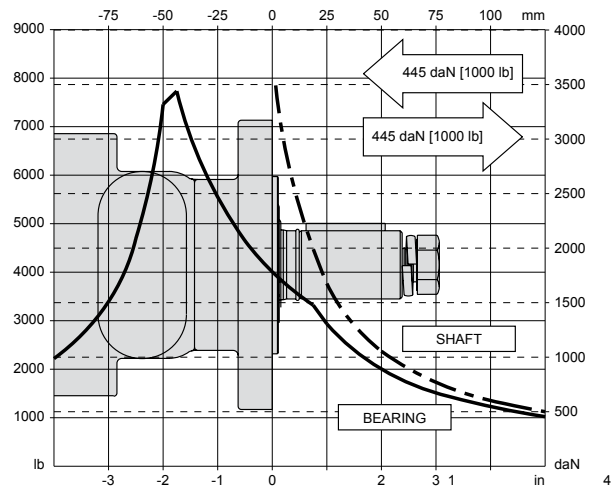
DR (600 Series) Hydraulic Motor

TECHNICAL INFORMATION

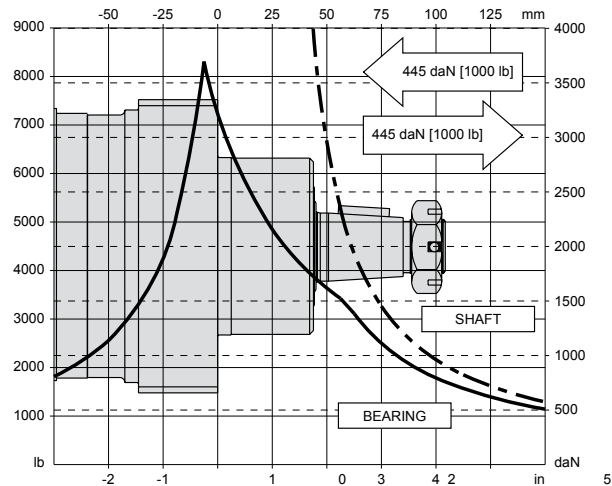
ALLOWABLE SHAFT LOAD / BEARING CURVE

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 10.04.

MAGNETO & SAE A MOUNTS



WHEEL MOUNTS



LENGTH & WEIGHT CHART

Dimensions SS & TT are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 10.120.

SS	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	205 [8.08]	208 [8.19]	15.9 [35.0]
260	210 [8.26]	213 [8.37]	16.3 [36.0]
300	213 [8.39]	216 [8.50]	16.6 [36.6]
350	227 [8.95]	230 [9.06]	17.8 [39.2]
375	219 [8.75]	222 [8.75]	17.1 [37.8]
470	227 [8.95]	230 [9.06]	17.8 [39.2]
540	233 [9.18]	236 [9.29]	18.3 [40.3]
750	251 [9.89]	254 [10.00]	19.7 [43.5]

TT	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	163 [6.42]	166 [6.53]	13.4 [29.6]
260	168 [6.61]	171 [6.72]	13.9 [30.6]
300	171 [6.74]	174 [6.85]	14.6 [32.2]
350	185 [7.29]	188 [7.40]	15.7 [34.7]
375	177 [6.99]	180 [7.10]	15.2 [33.4]
470	185 [7.29]	188 [7.40]	15.7 [34.7]
540	191 [7.53]	194 [7.64]	16.2 [35.8]
750	209 [8.24]	212 [8.35]	17.7 [39.1]

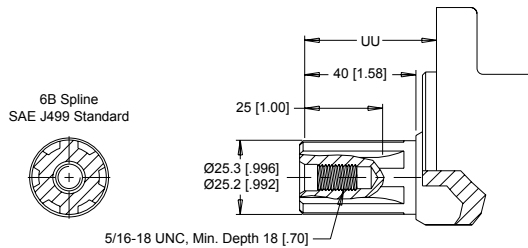
► All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.



DR (600 Series)
Hydraulic Motor

SHAFTS

02 1" 6B Spline

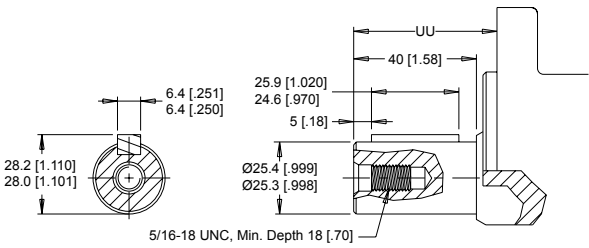


Max. Torque: 678 Nm [6000 lb-in]

03 1" 6B Spline Extended

10 1" Straight

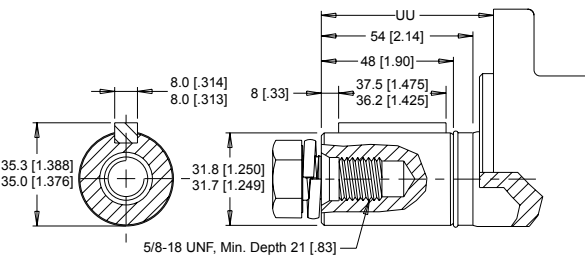
15 1" Straight Extended



Max. Torque: 655 Nm [5800 lb-in]

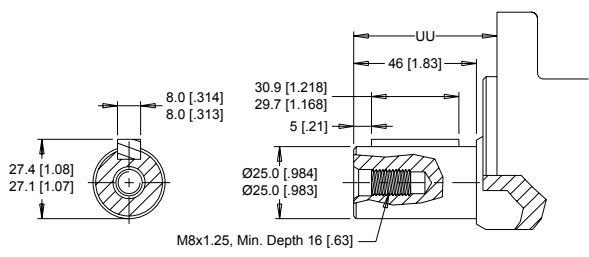
07 1-1/4" Straight Extended

20 1-1/4" Straight



Max. Torque: 1200 Nm [10600 lb-in]

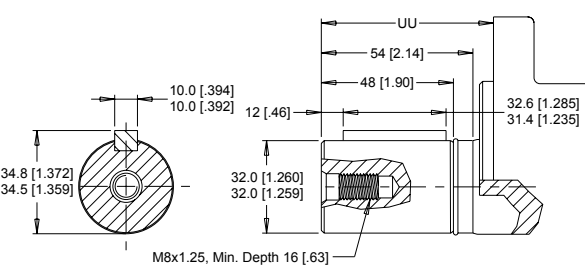
12 25mm Straight



Max. Torque: 678 Nm [6000 lb-in]

08 32mm Straight Extended

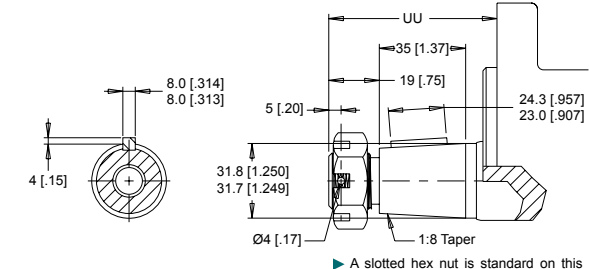
21 32mm Straight



Max. Torque: 1200 Nm [10600 lb-in]

22 1-1/4" Tapered

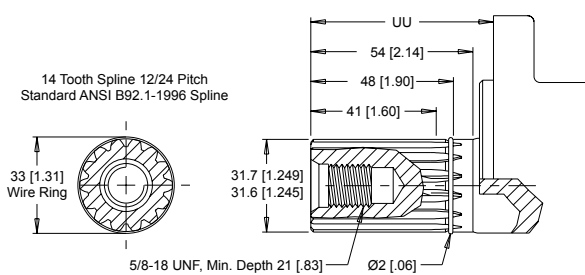
25 1-1/4" Tapered Extended



Max. Torque: 1200 Nm [10600 lb-in]

09 14 Tooth Spline Extended

23 14 Tooth Spline



Max. Torque: 1200 Nm [10600 lb-in]

MOUNTING / SHAFT LENGTH CHART

Dimension UU is the overall distance from the motor mounting surface to the end of the shaft and is referenced on detailed shaft drawings above.

UU #	Magneto & A Mounts mm [in]	Wheel Mounts mm [in]
02	50 [1.97]	91 [3.60]
03	76 [3.01]	118 [4.64]
07	88 [3.45]	129 [5.09]
08	88 [3.45]	129 [5.09]
09	88 [3.45]	129 [5.09]
10	50 [1.97]	91 [3.60]
12	56 [2.21]	98 [3.84]
15	76 [3.01]	118 [4.64]
20	61 [2.41]	103 [4.05]
21	61 [2.41]	103 [4.05]
22	66 [2.58]	107 [4.22]
23	61 [2.41]	103 [4.05]
25	92 [3.62]	134 [5.26]

Shaft lengths vary ± 0.8 mm [.030 in]

DR Series

Medium Duty Hydraulic Motor



DR (600 Series)

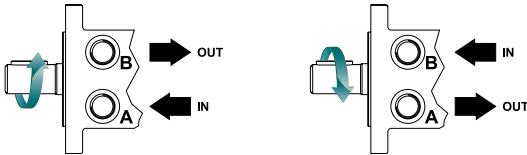
Hydraulic Motor

ORDERING INFORMATION

1		2		3a			

1. CHOOSE SERIES DESIGNATION

600 Standard Motor



► The 600 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm ³ /rev [12.4 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
350	348 cm ³ /rev [21.2 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]

3a. SELECT MOUNT TYPE

▼ END MOUNTS

A2	4-Hole, Magneto Mount
A4	6-Hole, SAE A Mount
W2	4-Hole, Wheel Mount

▼ SIDE MOUNTS

A8	4-Hole, Magneto Mount
A9	6-Hole, SAE A Mount
W8	4-Hole, Wheel Mount

3b. SELECT PORT SIZE

▼ END PORT OPTIONS

1	7/8-14 UNF Offset
----------	-------------------

▼ SIDE PORT OPTIONS

2	G 3/4, Radial
3	11/16" Hole, Aligned Manifold
5	1 1/16-20 UN, Radial
6	1 1/16-20 UN, Aligned
7	G 3/4, Radial

► Speed sensor option is not available on wheel mounts.

4. SELECT A SHAFT OPTION

02	1" 6B Spline	15	1" Straight Extended
03	1" 6B Spline Extended	20	1-1/4" Straight
07	1-1/4" Straight Extended	21	32mm Straight
08	32mm Straight Extended	22	1-1/4" Tapered
09	14 Tooth Spline Extended	23	14 Tooth Spline
10	1" Straight	25	1-1/4" Tapered Extended
12	25mm Straight		

► Extended shafts are designed for use with one of the speed sensor options listed in STEP 7.

3b		4		5	6	7	8

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

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

8. SELECT A MISCELLANEOUS OPTION

AA	None
AB	Internal Drain
AC	Freeturning Rotor
AD	Internal Drain & Freeturning Rotor

DR Series

Medium Duty Hydraulic Motor



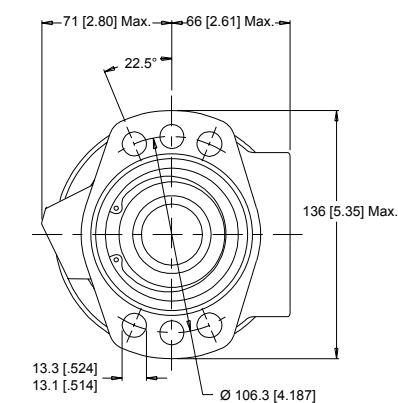
DR (620 Series) Hydraulic Motor With Medium Duty Bearing

HOUSINGS

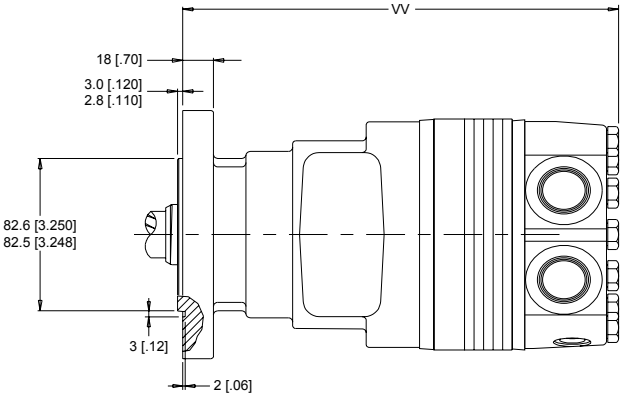
6-HOLE, SAE A MOUNT

A4 End Ports **A9** Side Ports

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



► Porting options listed on pages 10.94-10.95.

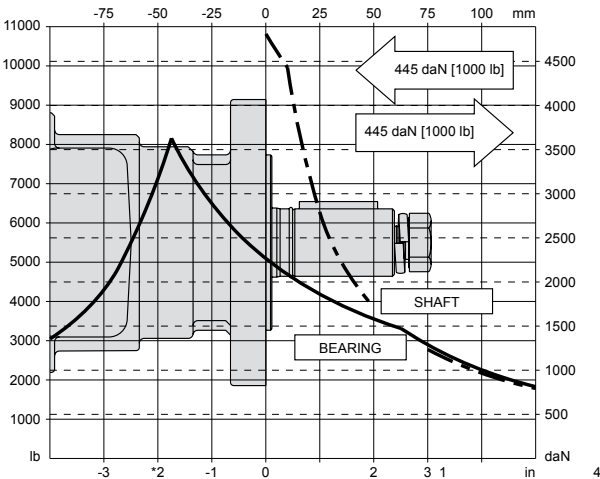


TECHNICAL INFORMATION

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 10.04.

SAE A MOUNTS



LENGTH & WEIGHT CHART

Dimension VV is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed above.

VV	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	231 [9.08]	234 [9.19]	16.1 [35.4]
260	235 [9.27]	238 [9.38]	16.2 [35.6]
300	239 [9.40]	242 [9.51]	16.9 [37.2]
350	253 [9.95]	256 [10.06]	18.0 [39.6]
375	245 [9.65]	248 [9.76]	17.4 [38.3]
470	253 [9.95]	256 [10.06]	18.0 [39.6]
540	259 [10.19]	262 [10.30]	18.5 [40.7]
750	277 [10.90]	280 [11.01]	20.0 [44.0]

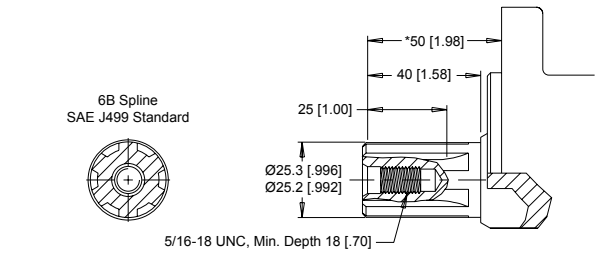
► All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.



DR (620 Series)
Hydraulic Motor With Medium Duty Bearing

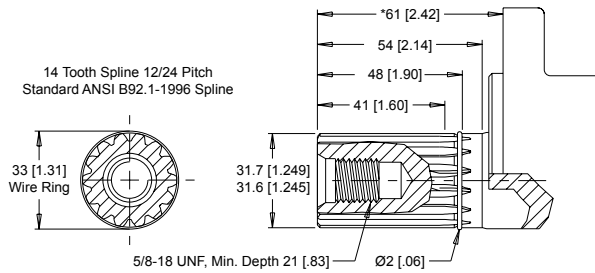
SHAFTS

03 1" 6B Spline



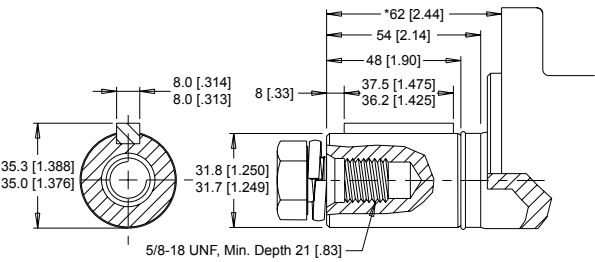
Max. Torque: 678 Nm [6000 lb-in]

09 14 Tooth Spline



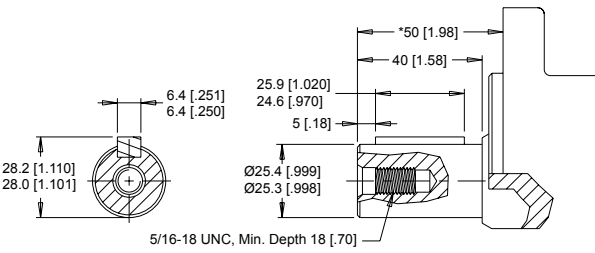
Max. Torque: 1200 Nm [10600 lb-in]

07 1-1/4" Straight



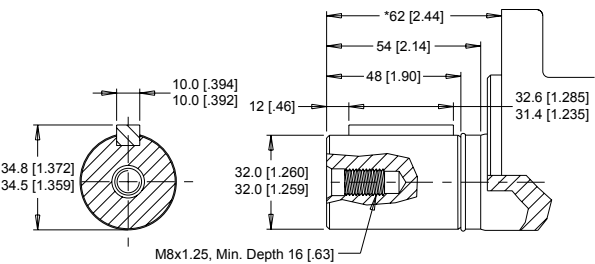
Max. Torque: 1200 Nm [10600 lb-in]

15 1" Straight



Max. Torque: 655 Nm [5800 lb-in]

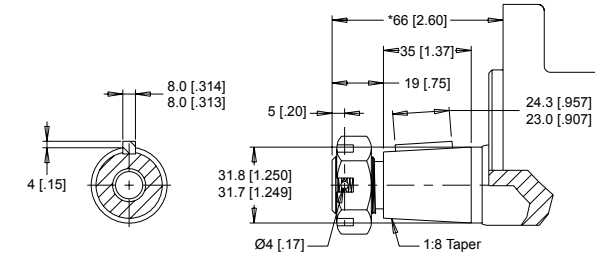
08 32mm Straight



Max. Torque: 1200 Nm [10600 lb-in]

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

25 1-1/4" Tapered



Max. Torque: 1200 Nm [10600 lb-in]

► A slotted hex nut is standard on this shaft. Dimensional details & additional options are listed on page 10.08.

DR Series

Medium Duty Hydraulic Motor



DR (620 Series)

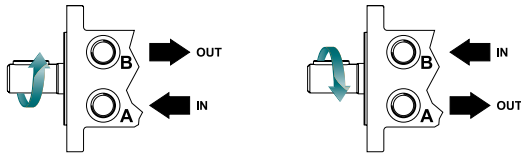
Hydraulic Motor With Medium Duty Bearing

ORDERING INFORMATION

1			2			3a	

1. CHOOSE SERIES DESIGNATION

620 Hydraulic Motor With Medium Duty Bearing



► The 620 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm ³ /rev [12.4 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
350	348 cm ³ /rev [21.2 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]

3a. SELECT MOUNT TYPE

▼ END MOUNTS

A4 6-Hole, SAE A Mount

▼ SIDE MOUNTS

A9 6-Hole, SAE A Mount

3b. SELECT PORT SIZE

▼ END PORT OPTIONS

1 7/8-14 UNF Offset

▼ SIDE PORT OPTIONS

- 2** G 3/4, Radial
- 3** 11/16" Hole, Aligned Manifold
- 5** 1 1/16-20 UN, Radial
- 6** 1 1/16-20 UN, Aligned
- 7** G 3/4, Radial

4. SELECT A SHAFT OPTION

03	1" 6B Spline	09	14 Tooth Spline
07	1-1/4" Straight	15	1" Straight
08	32mm Straight	25	1-1/4" Tapered

3b		4		5	6	7	8

5. SELECT A PAINT OPTION

- A** Black
- B** Black, Unpainted Mounting Surface
- Z** No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

- A** Standard
- B** Lock Nut
- C** Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

- AA** None
- AB** Internal Drain
- AC** Freeturning Rotor
- AD** Internal Drain & Freeturning Rotor

DR Series

Medium Duty Hydraulic Motor



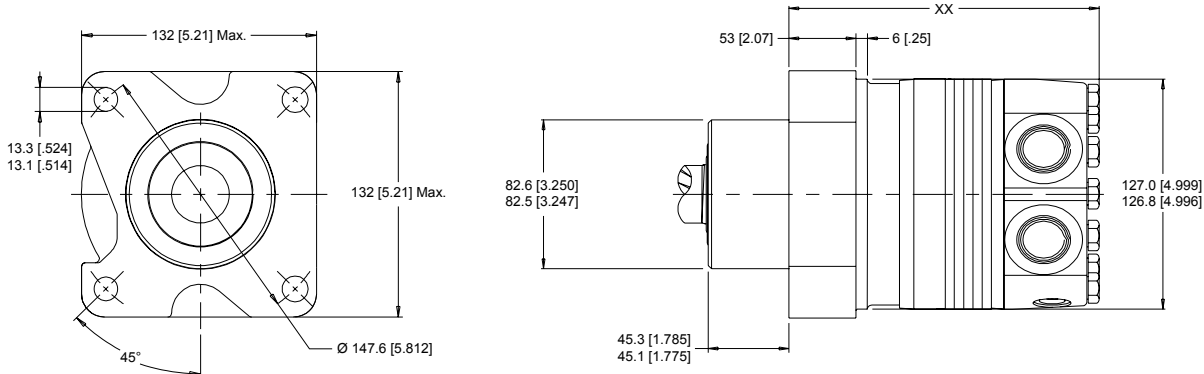
DR (630 Series) Hydraulic Motor With Heavy Duty Bearing

HOUSINGS

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

4-HOLE, WHEEL MOUNT

W2 End Ports **W8** Side Ports



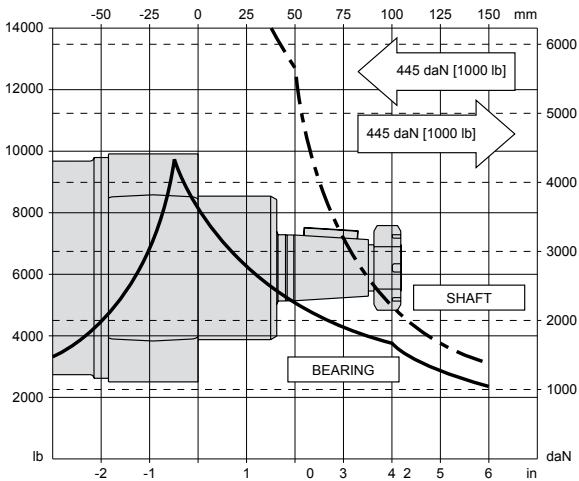
► Porting options listed on pages 10.94-10.95.

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 10.04.

WHEEL MOUNTS



LENGTH & WEIGHT CHART

Dimension XX is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed above.

XX	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	199 [7.75]	202 [7.86]	17.5 [38.5]
260	204 [8.04]	207 [8.15]	17.9 [39.5]
300	207 [8.17]	210 [8.28]	18.2 [40.1]
350	221 [8.72]	224 [8.83]	19.3 [42.6]
375	214 [8.42]	217 [8.53]	18.7 [41.2]
470	221 [8.72]	224 [8.83]	19.3 [42.6]
540	227 [8.96]	230 [9.07]	19.8 [43.7]
750	245 [9.67]	248 [9.78]	21.3 [47.0]

► All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

DR Series

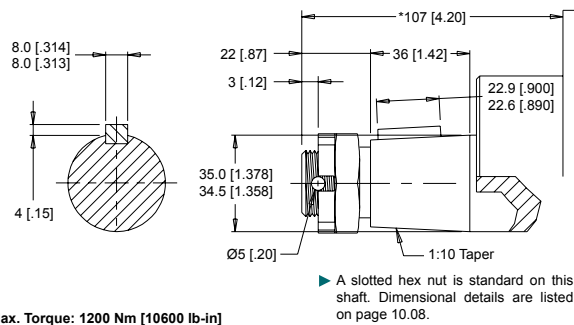
Medium Duty Hydraulic Motor



DR (630 Series) Hydraulic Motor With Heavy Duty Bearing

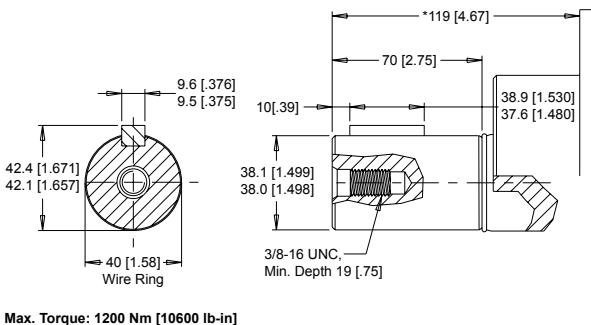
SHAFTS

28 35mm Tapered



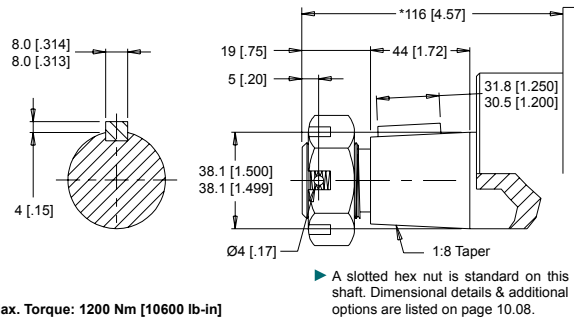
Max. Torque: 1200 Nm [10600 lb-in]

30 1-1/2" Straight



Max. Torque: 1200 Nm [10600 lb-in]

31 1-1/2" Tapered



Max. Torque: 1200 Nm [10600 lb-in]

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

DR Series

Medium Duty Hydraulic Motor



DR (630 Series) Hydraulic Motor With Heavy Duty Bearing

ORDERING INFORMATION

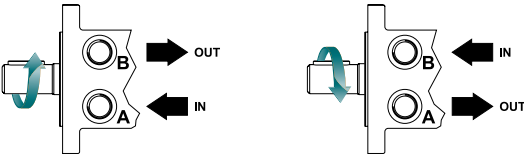
1

2

3a

1. CHOOSE SERIES DESIGNATION

630 Hydraulic Motor With Heavy Duty Bearing



► The 630 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm ³ /rev [12.4 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
350	348 cm ³ /rev [21.2 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]

3a. SELECT MOUNT TYPE

- ▼ END MOUNTS
- W2** 4-Hole, Wheel Mount
- ▼ SIDE MOUNTS
- W8** 4-Hole, Wheel Mount

3b. SELECT PORT SIZE

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

4. SELECT A SHAFT OPTION

- 28** 35mm Tapered
- 30** 1-1/2" Straight
- 31** 1-1/2" Tapered

3b

4

5

6

7

8

5. SELECT A PAINT OPTION

- A** Black
- B** Black, Unpainted Mounting Surface
- Z** No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

- A** Standard
- B** Lock Nut
- C** Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

- AA** None
- AB** Internal Drain
- AC** Freeturning Rotor
- AD** Internal Drain & Freeturning Rotor

DR Series

Medium Duty Hydraulic Motor

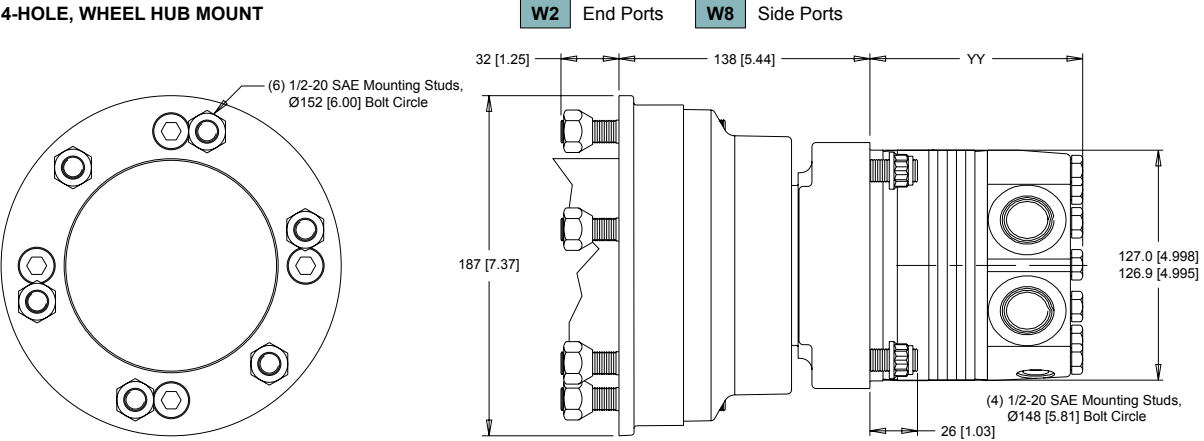


DR (640 Series) Hydraulic Motor With Wheel Hub

HOUSINGS

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

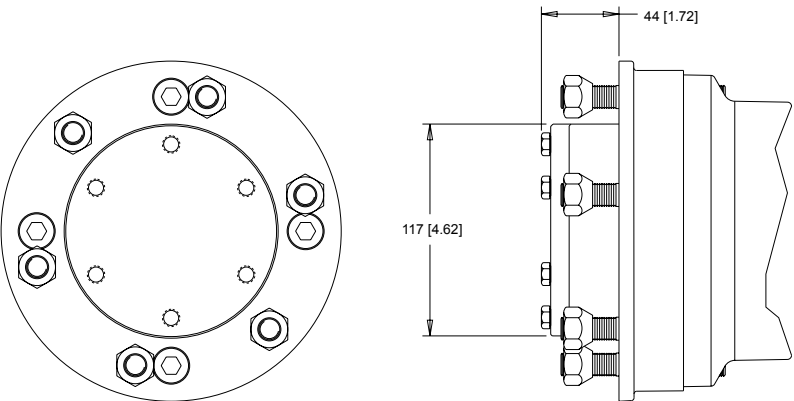
4-HOLE, WHEEL HUB MOUNT



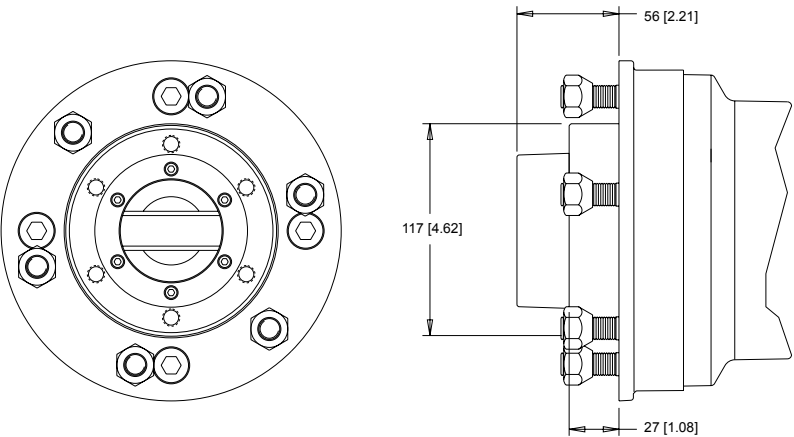
► Dimension YY is charted on page 10.107. Porting options listed on pages 10.94-10.95.

HUB OPTION DETAILS

STANDARD HUB



LOCKING HUB



DR Series

Medium Duty Hydraulic Motor



DR (640 Series) Hydraulic Motor With Wheel Hub

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 10.04.

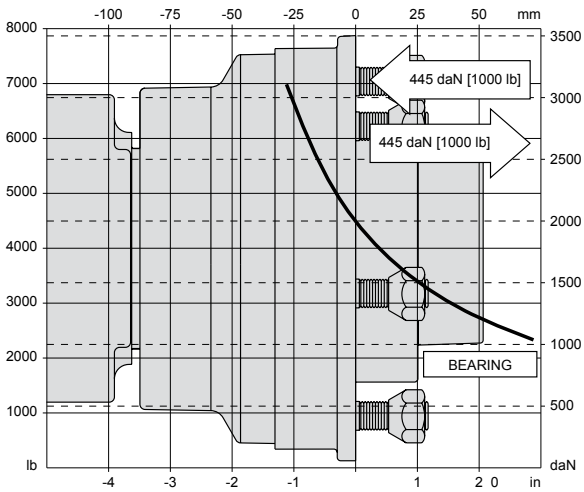
LENGTH & WEIGHT CHART

Dimension YY is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 10.106.

YY	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	109 [4.31]	112 [4.42]	24.4 [53.9]
260	114 [4.50]	117 [4.61]	24.8 [54.7]
300	117 [4.63]	120 [4.74]	25.2 [55.5]
350	131 [5.18]	134 [5.29]	26.3 [57.9]
375	124 [4.88]	127 [4.99]	25.7 [56.7]
470	131 [5.18]	134 [5.29]	26.3 [57.9]
540	138 [5.42]	141 [5.53]	26.8 [59.1]
750	156 [6.21]	159 [6.24]	28.2 [62.2]

► All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

WHEEL HUB MOUNTS



ORDERING INFORMATION

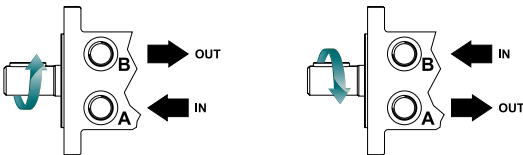
1

2

3a

1. CHOOSE SERIES DESIGNATION

640 Hydraulic Motor With Wheel Hub



► The 640 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm ³ /rev [12.4 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
350	348 cm ³ /rev [21.2 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]

3a. SELECT MOUNT TYPE

- ▼ END MOUNTS
- W2** 4-Hole, Wheel Mount
- ▼ SIDE MOUNTS
- W8** 4-Hole, Wheel Mount

3b. SELECT PORT SIZE

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

4. SELECT A SHAFT OPTION

61 6-Bolt Wheel Flange

3b

4

5

6

7

8

5. SELECT A PAINT OPTION

- A** Black
- Z** No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

- A** Standard
- H** Locking Hub

8. SELECT A MISCELLANEOUS OPTION

- AA** None
- AB** Internal Drain
- AC** Freeturning Rotor
- AD** Internal Drain & Freeturning Rotor

DR Series

Medium Duty Hydraulic Motor



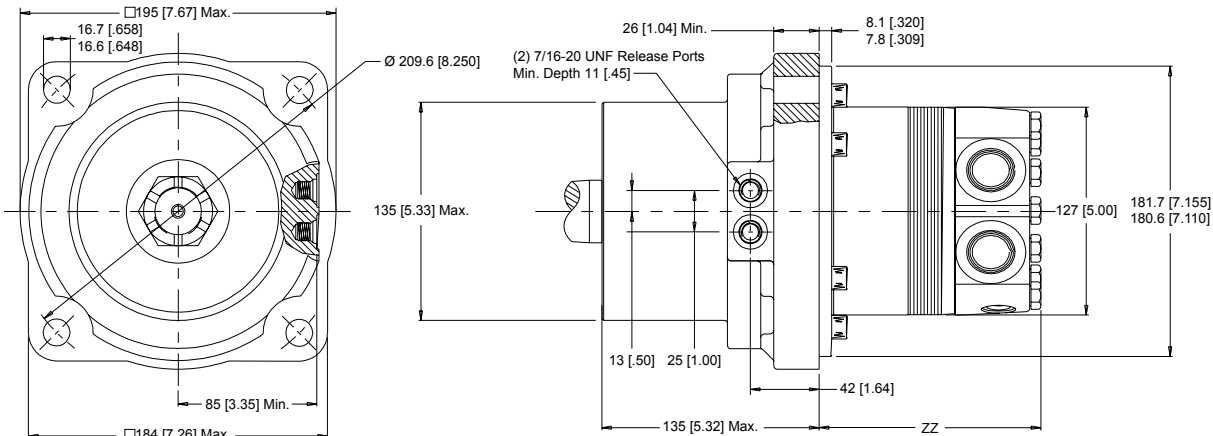
DR (610 Series) Hydraulic Motor With Integral Spring Applied, Hydraulic Released Brake

HOUSINGS

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

4-HOLE, WHEEL BRAKE MOUNT

W2 End Ports **W8** Side Ports



► Porting options listed on pages 10.94-10.95.

TECHNICAL INFORMATION

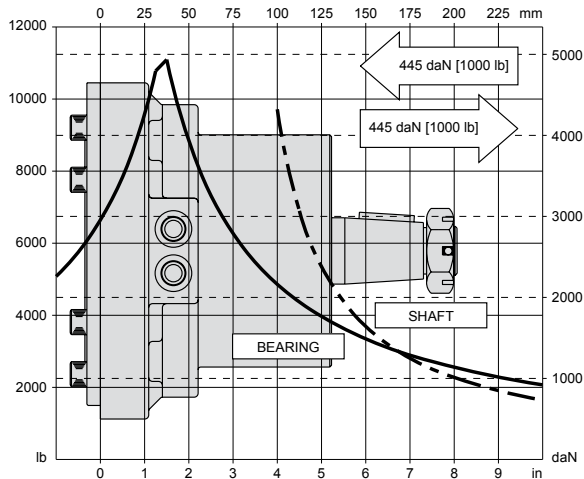
ALLOWABLE SHAFT LOAD / BEARING CURVE

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 10.04.

SPECIFICATIONS

Rated brake torque..... 1582 Nm [14000 lb-in]
Initial release pressure19 bar [275 psi]
Full release pressure33 bar [475 psi]
Maximum release pressure207 bar [3000 psi]
Release volume..... 13-16 cm³ [0.8 - 1.0 in³]

WHEEL BRAKE MOUNTS



LENGTH & WEIGHT CHART

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

ZZ	Endcovers on pg. 195	Endcovers on pg. 196	Weight
#	mm [in]	mm [in]	kg [lb]
200	104 [4.11]	107 [4.22]	26.5 [58.4]
260	109 [4.30]	112 [4.41]	26.9 [59.4]
300	112 [4.43]	115 [4.54]	27.2 [60.0]
350	126 [4.98]	129 [5.09]	28.3 [62.5]
375	119 [4.68]	122 [4.79]	27.7 [61.1]
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 [66.9]

► 610 series motor/brake weights can vary $\pm$ 1kg [2lb] depending on model configurations such as housing, shaft, endcover, options etc.

DR Series

Medium Duty Hydraulic Motor

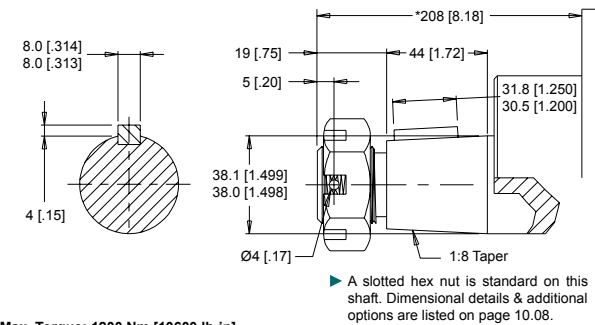


DR (610 Series)

Hydraulic Motor With Integral Spring Applied, Hydraulic Released Brake

SHAFTS

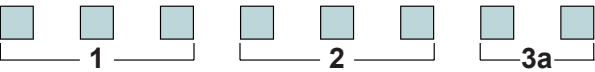
31 1-1/2" Tapered



Max. Torque: 1200 Nm [10600 lb-in]

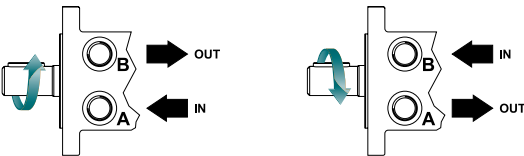
► Shaft lengths vary ± 0.8 mm [.030 in.]

ORDERING INFORMATION



1. CHOOSE SERIES DESIGNATION

610 Hydraulic Motor With Integral Hydraulic Brake



► The 610 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm ³ /rev [12.4 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
350	348 cm ³ /rev [21.2 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]

3a. SELECT MOUNT TYPE

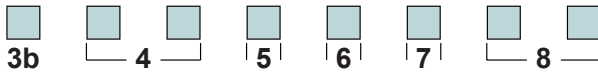
- ▼ END MOUNTS
- W2** 4-Hole, Wheel Mount
- ▼ SIDE MOUNTS
- W8** 4-Hole, Wheel Mount

3b. SELECT PORT SIZE

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

4. SELECT A SHAFT OPTION

31 1-1/2" Tapered



5. SELECT A PAINT OPTION

- A** Black
- Z** No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

- A** Standard
- C** Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

- AA** None
- AC** Freeturning Rotor