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Spool Valve motors incorporate the proven orbit motor principle to provide high torque at low speeds.

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# Spool Valve Motors

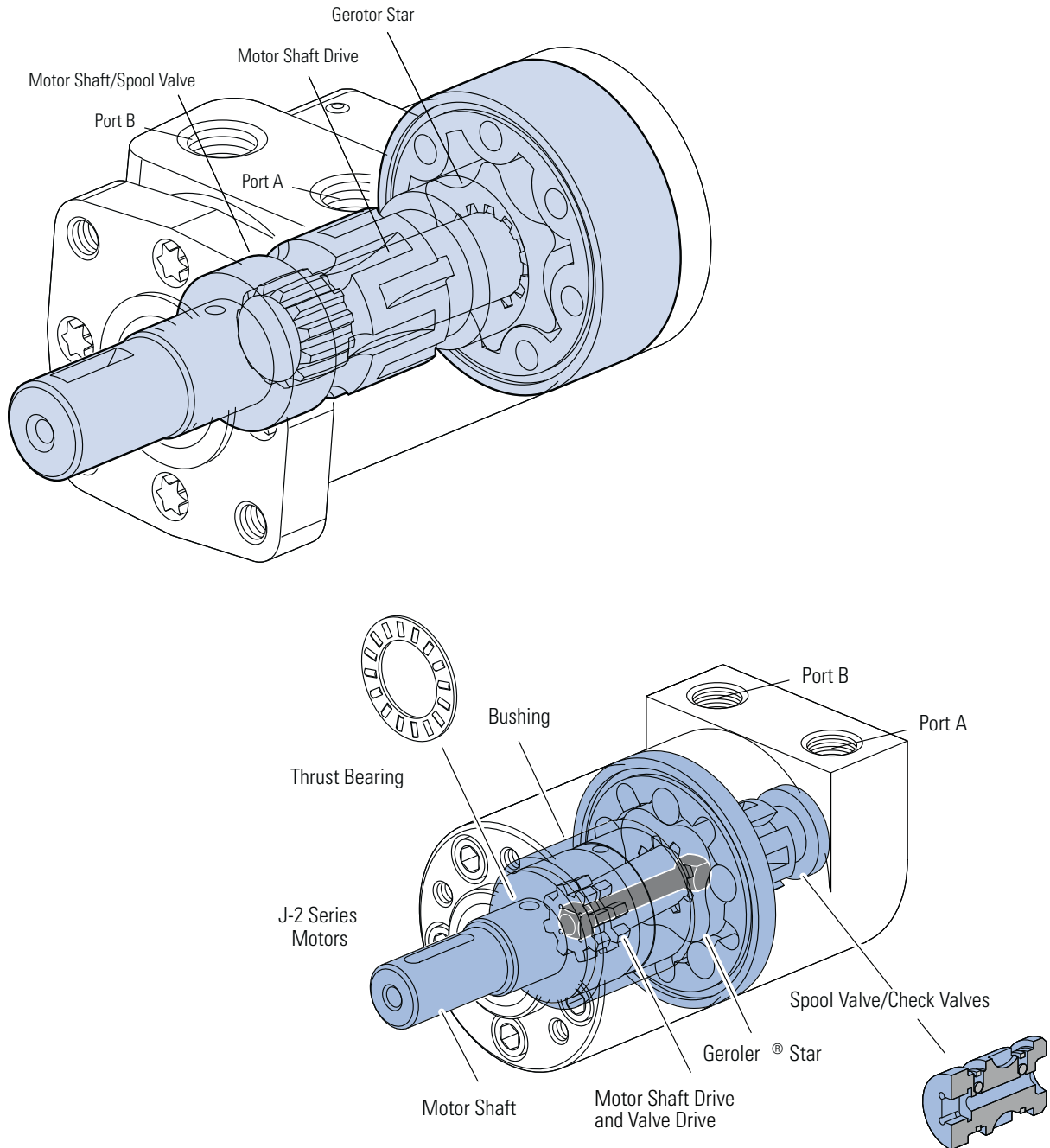
## Highlights

## Product Description

Char-Lynn spool valve motors distribute pressurized fluid into and out of the Orbit gear set (Gerotor or Geroler) via valve slots integrated into the output shaft. The spool valve motors incorporate both valving and hydrodynamic journal bearings into a common shaft design. The valve section (spool valve) can be optimized for low flow, low speed needs using a low speed spool option to enhance smooth running performance.

These motors incorporate the proven orbit motor principle to provide high torque at low speeds.

Motor shaft rotation can be instantly reversed by changing direction of input/output flow while generating equal torque in either direction. The displacements available provide a wide variety of speeds and torques from any spool valve motor series.



# Features, Benefits, and Applications

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## Features

- Proven Orbit Motor Principle
- Hydrodynamic Journal Bearings
- Constant Clearance Geroler
- Three-Zone Pressure Design
- Reduced drive running-angle
- High-pressure seals
- Modular design

## Benefits

- Compact, powerful package
- Infinite bearing life (at rated loads)
- High efficiency
- Increases shaft seal & bearing life
- Smooth operation, increases drive life
- Reduces leakage
- Design flexibility
- Economically tailored solutions

## Applications

- Harvesters
- Augers
- Spreaders
- Machine tools
- Conveyors
- Winches
- Turf care equipment
- Food processing
- Aerial Work Platforms
- Anywhere a compact drive with high output torque is needed

## Design Features

Spool valve technology is typically used where compact, economical solutions are most needed. Spool valve motors use a spool valve to precisely time and control flow through the orbit gear set (Gerotor or Geroler). Inlet flow is directed into and out of the orbit set via slots in the spool and passages through the motor housing. The result is a very cost-effective compact package suited to many application requirements. The three

primary components in the motor are the orbit star, drive and output shaft. H, S and T Series incorporate the spool valve and hydrodynamic bearings in the motor shaft. The W series is similar except a ball bearing is used for the front bearing for increased side-load capacity. Due to its compact size and high speed capability, the J Series is unique and utilizes a separate dedicated spool and spool valve drive. All motors utilize Eaton's

constant-clearance Geroler technology except the H Series, which continues to use the time-proven H motor gerotor set. These motors all use a three-zone pressure design consisting of three unique pressure areas: 1) inlet, 2) return, 3) case. This provides the capability to limit motor case pressure and allows the use of several case pressure options for extended shaft seal and thrust bearing life.

Below is a quick-guide to help select the proper motor for your application:

### MOTOR QUICK-GUIDE (BASED ON MAXIMUM CONTINUOUS RATINGS)

Series	Output Torque Nm [lb-in]	Pressure bar [psi]	Flow lpm [gpm]	Side Load kg [lbs]
J Series	62 [550]	140 [2030]	21 [5.5]	196 [430]
H Series	407 [3607]	124 [1800]	57 [15]	635 [1400]
S Series	430 [3800]	135 [2000]	55 [15]	635 [1400]
T Series	450 [4000]	155 [2250]	55 [15]	635 [1400]
W Series	410 [3625]	165 [2400]	68 [18]	845 [1900]

\* The above are provided as guidelines only. Actual ratings vary depending on final motor configuration

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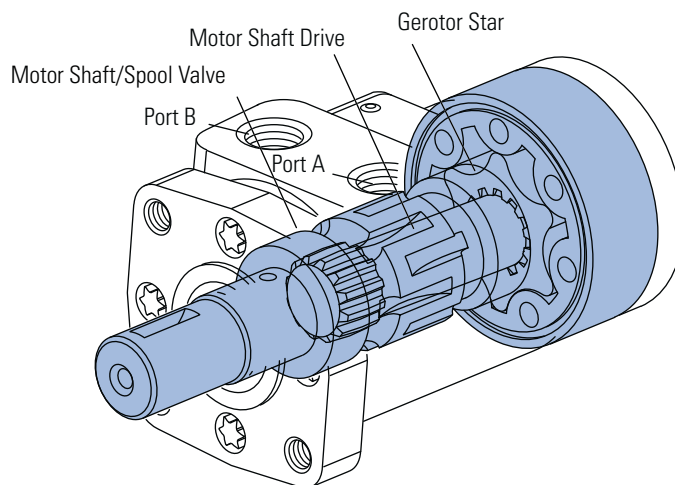
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# H Series (101-)

## Highlights



### Description

Designed for medium duty applications, these motors use industry-proven spool valve technology combined with state-of-the-art gerotors. In addition, a wide variety of mounting flanges, shafts, Ports and valving options provide design flexibility. Direction of shaft rotation and shaft speed can be controlled easily and smoothly throughout the speed range of the motor, and equipment can be driven direct, eliminating costly mechanical components.

### Specifications

Gerotor Element	13 Displacements
Flow l/min [GPM]	57 [15] Continuous***
	76 [20] Intermittent**
Speed	Up to 1100 RPM
Pressure bar [PSI]	125 [1800] Cont.***
	165 [2400] Inter.**
Torque Nm [lb-in]	407 [3604] Cont.***
	520 [4600] Inter.**

\*\*\* Continuous—(Cont.) Continuous rating, motor may be run continuously at these ratings.

\*\* Intermittent—(Inter.) Intermittent operation, 10% of every minute.

### Features:

- Time-tested Char-Lynn drive set
- Three moving components (gerotor-star, drive, and shaft)
- Optimized drive running angle
- Three-zone pressure design (inlet, return and case)
- Variety of displacements, shafts and mounts
- Special options to meet customer needs

### Benefits:

- High efficiency
- Powerful compact package
- Design flexibility
- Extended leak-free performance

### Applications:

- Agricultural augers, harvesters, seeders
- Car wash brushes
- Food processing
- Railroad maintenance equipment
- Machine tools
- Conveyors
- Industrial sweepers and floor polishers
- Saw mill works
- Turf equipment
- Concrete and asphalt equipment
- Skid steer attachments
- Many more



Conveyer



Combine



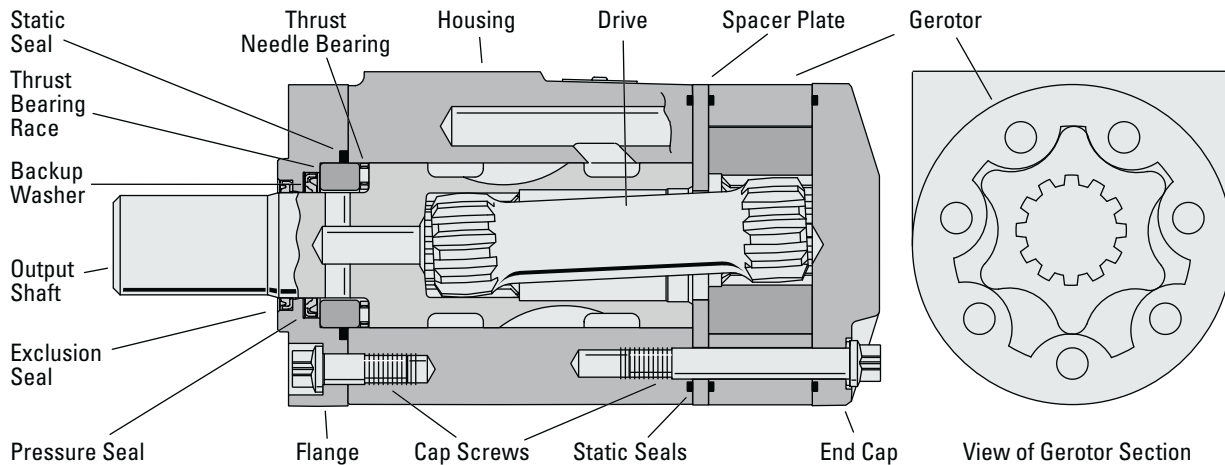
Sweeper



Salt and Sand Spreader

# H Series (101-)

## Specifications



### SPECIFICATION DATA – H MOTORS

Displ. cm <sup>3</sup> /r [in <sup>3</sup> /r]		36 [2.2]	46 [2.8]	59 [3.6]	74 [4.5]	97 [5.9]	120 [7.3]	146 [8.9]	159 [9.7]	185 [11.3]	231 [14.1]	293 [17.9]	370 [22.6]	739 [45.1]
Max. Speed (RPM) @ Continuous Flow		1021	969	953	760	585	469	385	353	304	243	192	152	74
Flow LPM [GPM]	Continuous	38 [10]	45 [12]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]	57 [15]
	Intermittent	38 [10]	53 [14]	64 [17]	68 [18]	68 [18]	76 [20]	76 [20]	76 [20]	76 [20]	76 [20]	76 [20]	76 [20]	76 [20]
Torque Nm [lb-in]	Continuous	56 [497]	73 [650]	91 [802]	118 [1044]	155 [1368]	192 [1699]	221 [1954]	233 [2059]	265 [2343]	302 [2669]	351 [3110]	407 [3604]	389 [3440]
	Intermittent	75 [668]	99 [876]	122 [1076]	158 [1401]	207 [1829]	257 [2278]	300 [2653]	319 [2824]	356 [3151]	415 [3671]	466 [4121]	484 [4283]	520 [4600]
Min. Starting Torque @ Int. Pressure Nm [lb-in]	@ Cont. Pressure	46 [410]	59 [520]	76 [670]	95 [840]	124 [1100]	154 [1360]	176 [1560]	186 [1650]	211 [1870]	238 [2110]	282 [2500]	330 [2920]	316 [2800]
	@ Int. Pressure	63 [560]	81 [720]	104 [920]	130 [1150]	171 [1510]	2102 [1860]	46 [2180]	262 [2320]	293 [2590]	339 [3000]	388 [3430]	408 [3610]	434 [3840]
Pressure ΔBar [Δ PSI]	Continuous	124 [1800]	124 [1800]	124 [1800]	124 [1800]	124 [1800]	124 [1800]	117 [1700]	114 [1650]	110 [1600]	100 [1450]	93 [1350]	86 [1250]	41 [600]
	Intermittent	165 [2400]	165 [2400]	165 [2400]	165 [2400]	165 [2400]	165 [2400]	159 [2300]	155 [2250]	148 [2150]	138 [2000]	124 [1800]	103 [1500]	55 [800]
End Ported Units Only														
Δ Bar [Δ PSI]	Cont. Pressure	83 [1200]	83 [1200]	76 [1100]	76 [1100]	76 [1100]	69 [1000]	69 [1000]	69 [1000]	62 [900]	55 [800]	48 [700]	57 [825]	27 [396]
	Intermittent	117 [1700]	117 [1700]	110 [1600]	110 [1600]	110 [1600]	103 [1500]	103 [1500]	103 [1500]	91 [1400]	90 [1300]	83 [1200]	68 [990]	36 [528]
Weight kg [lb]		5,1 [11.2]	5,1 [11.2]	5,2 [11.5]	5,2 [11.5]	5,4 [11.8]	5,5 [12.1]	5,6 [12.4]	5,7 [12.5]	5,8 [12.8]	6,0 [13.3]	6,3 [14.0]	6,7 [14.7]	8,4 [18,6]

A simultaneous maximum torque and maximum speed NOT recommended.

#### Note:

To assure best motor life, run motor for approximately one hour at 30% of rated pressure before application to full load. Be sure motor is filled with fluid prior to any load applications.

#### Note:

Δ pressure is derated for end ported units.

#### Maximum Inlet Pressure:

172 Bar [2500 PSI] without regard to Δ Bar [Δ PSI] and/or back pressure ratings or combination thereof.

6B splined or Tapered shafts are recommended whenever operation above 282 NM [2500 lb-in] of torque, especially for those applications subject to frequent reversals.

#### Δ Pressure:

The true Δ bar [Δ PSI] difference between inlet port and outlet port

#### Continuous Rating:

Motor may be run continuously at these ratings

#### Intermittent Operation:

10% of every minute

#### Recommended Fluids:

Recommended Fluids — Premium quality, anti-wear type hydraulic oil. Minimum oil viscosity (at operating temperature) should be the highest of the following:

$$100 \text{ SUS or } \left[ \frac{300 \times \text{Bar}}{\text{RPM}} = \text{SUS} \right]$$

$$\frac{20 \times \text{PSI}}{\text{RPM}} = \text{SUS} \left. \right]$$

#### Recommended System Operating Temp.:

-34°C to 82°C [-30°F to 180°F]

#### Recommended Filtration:



per ISO Cleanliness Code 4406, level 20/18/13

# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

 Continuous  
 Intermittent

36 cm<sup>3</sup>/r [2.2 in<sup>3</sup>/r]  
Δ Pressure Bar [PSI]  
Continuous

		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	Max. Continuous	Max. Intermittent
		14	28	41	55	69	83	97	110	124	[2400]	165
Flow LPM [GPM]	[2]	[49]	[103]	[162]	[189]	[270]	[325]	[379]	[432]	[489]	[650]	73
	7.6	6 204	12 201	18 198	21 194	31 189	37 184	43 177	49 170	55 162	122	
	[4]	[47]	[106]	[160]	[191]	[274]	[327]	[384]	[439]	[495]	[654]	74
	15.1	5 408	12 407	18 402	22 399	31 394	37 387	43 381	50 373	56 365	323	
	[6]	[44]	[102]	[158]	[188]	[272]	[328]	[383]	[440]	[496]	[661]	75
22.7	5 613	12 612	18 609	21 604	31 599	37 591	43 586	50 576	56 565	523		
[8]	[40]	[97]	[153]	[184]	[270]	[326]	[383]	[440]	[497]	[668]	75	
30.3	5 817	11 817	17 814	21 807	31 799	37 793	43 785	50 776	56 762	721		
[10]	[36]	[90]	[148]	[180]	[265]	[322]	[380]	[438]	[495]	[664]	75	
37.9	4 1021	10 1021	17 1015	20 1008	30 1001	36 991	43 981	49 969	56 959	920		



46 cm<sup>3</sup>/r [2.8 in<sup>3</sup>/r]  
Δ Pressure Bar [PSI]  
Continuous

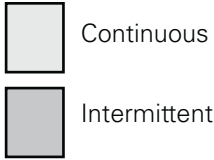
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	Max. Continuous	Max. Intermittent
		14	28	41	55	69	83	97	110	124	[2400]	165
Flow LPM [GPM]	[2]	[64]	[136]	[212]	[284]	[355]	[426]	[497]	[567]	[641]	[852]	96
	7.6	7 161	15 158	24 156	32 153	40 148	48 145	56 139	64 133	72 127	95	
	[4]	[61]	[139]	[209]	[286]	[359]	[429]	[503]	[576]	[649]	[857]	97
	15.1	7 323	16 320	24 316	32 314	41 310	48 304	57 300	65 293	73 287	253	
	[6]	[58]	[134]	[207]	[282]	[356]	[430]	[502]	[577]	[650]	[867]	98
22.7	7 486	15 481	23 479	32 475	40 471	49 464	57 461	65 453	73 444	410		
[8]	[52]	[128]	[200]	[276]	[354]	[428]	[502]	[577]	[651]	[876]	99	
30.3	6 648	14 643	23 640	31 635	40 628	48 623	57 617	65 610	74 599	566		
[10]	[47]	[118]	[194]	[269]	[347]	[423]	[498]	[575]	[649]	[871]	98	
37.9	5 808	13 803	22 798	30 793	39 787	48 779	56 771	65 761	73 753	722		
[12]	[36]	[109]	[188]	[260]	[340]	[417]	[492]	[567]	[643]	[864]	98	
45.4	4 969	12 964	21 960	29 952	38 946	47 938	56 931	64 922	73 914	877		
Max. Intermittent	[14]	[25]	[98]	[175]	[249]	[327]	[404]	[484]	[559]	[634]		
	53.0	3 1127	11 1123	20 1115	28 1108	37 1100	46 1093	55 1086	63 1079	72 1068		

# H Series (101-)

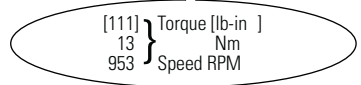
## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.



		59 cm <sup>3</sup> /r [3.6 in <sup>3</sup> /r]										
		Δ Pressure Bar [PSI]										
		Continuous										
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	[1800]	
		14	28	41	55	69	83	97	110	124	[2400]	
											165	
Flow LPM [GPM]	[2]	[79] 9 127	[169] 19 125	[260] 29 123	[305] 34 121	[437] 49 117	[526] 59 114	[616] 70 109	[704] 80 103	[796] 90 96	[1055] 119 65	
	[4]	[76] 9 254	[168] 19 254	[257] 29 251	[307] 35 249	[441] 50 246	[529] 60 241	[620] 70 236	[710] 80 230	[800] 90 224	[1065] 120 193	
	[6]	[73] 8 381	[161] 18 381	[252] 28 380	[303] 34 377	[439] 50 373	[529] 60 368	[618] 70 364	[709] 80 358	[802] 91 349	[1069] 121 319	
	[8]	[64] 7 508	[151] 17 508	[243] 27 508	[294] 33 504	[428] 48 500	[519] 59 496	[609] 69 491	[701] 79 484	[794] 90 476	[1076] 122 446	
	[10]	[57] 6 635	[141] 16 635	[234] 26 634	[283] 32 630	[419] 47 626	[512] 58 621	[602] 68 614	[693] 78 608	[786] 89 601	[1071] 121 571	
	[12]	[45] 5 762	[131] 15 762	[227] 26 762	[274] 31 757	[409] 46 753	[505] 57 747	[593] 67 741	[684] 77 734	[778] 88 728	[1058] 120 694	
	[14]	[33] 4 889	[118] 13 889	[213] 24 887	[266] 30 882	[396] 45 877	[492] 56 872	[583] 66 866	[676] 76 860	[770] 87 851	[1055] 119 813	
	Max. Continuous	[15]	[29] 3 953	[111] 13 953	[205] 23 951	[260] 29 945	[389] 44 940	[486] 55 935	[576] 65 929	[670] 76 921	[765] 86 913	[1055] 119 872
	Max. Intermittent	[20]	[17] 2 1080	[98] 11 1080	[192] 22 1077	[252] 28 1071	[377] 43 1067	[475] 54 1062	[567] 64 1055	[660] 75 1049	[757] 86 1040	



		74 cm <sup>3</sup> /r [4.5 in <sup>3</sup> /r]										
		Δ Pressure Bar [PSI]										
		Continuous										
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	[1800]	
		14	28	41	55	69	83	97	110	124	[2400]	
											165	
Flow LPM [GPM]	[2]	[103] 12 101	[220] 25 99	[339] 38 98	[454] 51 96	[569] 64 93	[685] 77 90	[801] 91 86	[916] 103 81	[1036] 117 76	[1373] 155 51	
	[4]	[99] 11 203	[219] 25 201	[335] 38 199	[457] 52 197	[574] 65 194	[689] 78 191	[808] 91 187	[925] 105 182	[1042] 118 177	[1386] 157 153	
	[6]	[94] 11 305	[210] 24 303	[328] 37 301	[451] 51 298	[571] 65 296	[689] 78 292	[805] 91 288	[924] 104 283	[1044] 118 276	[1392] 157 252	
	[8]	[86] 10 406	[196] 22 404	[319] 36 402	[438] 49 399	[558] 63 396	[676] 76 393	[793] 90 388	[913] 103 383	[1033] 117 377	[1401] 158 352	
	[10]	[74] 8 507	[183] 21 505	[310] 35 502	[422] 48 499	[545] 62 496	[667] 75 492	[784] 89 486	[903] 102 482	[1024] 116 476	[1394] 158 452	
	[12]	[58] 7 608	[171] 19 606	[295] 33 603	[408] 46 600	[533] 60 596	[657] 74 591	[773] 87 587	[891] 101 581	[1013] 114 576	[1377] 156 549	
	[14]	[43] 5 709	[154] 17 706	[277] 31 702	[396] 45 698	[515] 58 694	[640] 72 691	[760] 86 686	[880] 99 681	[1002] 113 674	[1374] 155 643	
	Max. Continuous	[15]	[36] 4 760	[145] 16 757	[268] 30 753	[387] 44 749	[506] 57 744	[632] 71 740	[750] 85 735	[873] 99 729	[996] 113 723	[1373] 155 690
	Max. Intermittent	[20]	[14] 2 904	[121] 14 902	[233] 26 898	[351] 40 895	[482] 54 891	[609] 69 887	[725] 82 882	[856] 97 877	[981] 111 869	





# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

 Continuous  
 Intermittent

		97 cm <sup>3</sup> /r [5.9 in <sup>3</sup> /r] Δ Pressure Bar [PSI] Continuous								Max. Continuous	Max. Intermittent
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	[2400]
		14	28	41	55	69	83	97	110	124	165
Flow LPM [GPM]	[2] 7,6	[134] 15 78	[292] 33 76	[442] 50 75	[593] 67 73	[746] 84 71	[899] 102 68	[1054] 119 65	[1209] 137 61	[1365] 154 55	[1806] 204 33
	[4] 15,1	[131] 15 156	[281] 32 155	[436] 49 153	[596] 67 151	[750] 85 149	[903] 102 147	[1059] 120 143	[1212] 137 139	[1367] 154 134	[1828] 207 113
	[6] 22,7	[126] 14 234	[269] 30 233	[425] 48 231	[588] 66 230	[747] 84 228	[900] 102 224	[1054] 119 221	[1206] 136 217	[1368] 155 210	[1823] 206 189
	[8] 30,3	[110] 12 312	[246] 28 311	[408] 46 310	[566] 64 308	[718] 81 305	[873] 99 303	[1023] 116 300	[1177] 133 295	[1339] 151 291	[1829] 207 269
	[10] 37,9	[96] 11 390	[231] 26 389	[392] 44 387	[539] 61 385	[699] 79 383	[859] 97 377	[1005] 114 376	[1156] 131 373	[1318] 149 368	[1821] 206 346
	[12] 45,4	[77] 9 468	[218] 25 467	[378] 43 465	[522] 59 463	[681] 77 460	[844] 95 457	[990] 112 453	[1142] 129 449	[1301] 147 445	[1792] 202 421
	[14] 53,0	[60] 7 546	[197] 22 544	[358] 40 542	[513] 58 539	[662] 75 537	[828] 94 535	[973] 110 531	[1131] 128 526	[1293] 146 521	[1776] 201 499
	Max. Continuous 56,8	[52] 6 585	[189] 21 583	[346] 39 581	[495] 56 578	[651] 74 575	[819] 93 573	[963] 109 569	[1126] 127 564	[1286] 145 559	[1778] 201 536
	Max. Intermittent 75,7	[25] 3 701	[157] 18 700	[311] 35 697	[455] 51 694	[625] 71 691	[790] 89 688	[941] 106 684	[1110] 125 681	[1272] 144 674	

[189] } Torque [lb-in]  
 21 } Nm  
 583 } Speed RPM

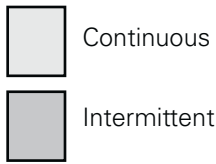
		120 cm <sup>3</sup> /r [7.3 in <sup>3</sup> /r] Δ Pressure Bar [PSI] Continuous								Max. Continuous	Max. Intermittent
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1800]	[2400]
		14	28	41	55	69	83	97	110	124	165
Flow LPM [GPM]	[2] 7,6	[162] 18 62	[357] 40 61	[544] 61 61	[736] 83 59	[927] 105 58	[1116] 126 55	[1305] 147 53	[1498] 169 49	[1687] 191 45	[2231] 252 26
	[4] 15,1	[160] 18 125	[348] 39 124	[539] 61 123	[736] 83 121	[930] 105 120	[1119] 126 119	[1316] 149 116	[1506] 170 114	[1698] 192 110	[2268] 256 90
	[6] 22,7	[155] 18 188	[338] 38 187	[530] 60 186	[729] 82 185	[923] 104 183	[1116] 126 180	[1310] 148 178	[1500] 169 175	[1699] 192 170	[2271] 257 152
	[8] 30,3	[139] 16 250	[319] 36 250	[515] 58 249	[710] 80 247	[901] 102 245	[1094] 124 243	[1283] 145 241	[1476] 167 237	[1673] 189 233	[2278] 257 216
	[10] 37,9	[121] 14 313	[303] 34 312	[497] 56 311	[686] 78 309	[883] 100 308	[1081] 122 306	[1267] 143 302	[1460] 165 300	[1655] 187 296	[2268] 256 278
	[12] 45,4	[102] 12 375	[288] 33 374	[480] 54 373	[664] 75 371	[862] 97 370	[1060] 120 367	[1246] 141 365	[1440] 163 361	[1640] 185 358	[2232] 252 338
	[14] 53,0	[78] 9 438	[263] 30 437	[458] 52 435	[652] 74 433	[841] 95 431	[1041] 118 430	[1228] 139 427	[1420] 160 423	[1616] 183 419	[2213] 250 401
	Max. Continuous 56,8	[67] 8 469	[253] 29 468	[446] 50 466	[632] 71 464	[828] 94 462	[1030] 116 460	[1214] 137 458	[1411] 159 454	[1608] 182 450	[2205] 249 430
	Max. Intermittent 75,7	[20] 2 626	[202] 23 624	[384] 43 621	[581] 66 618	[778] 88 617	[971] 110 614	[1169] 132 611	[1356] 153 609	[1559] 176 606	

# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.



		146 cm <sup>3</sup> /r [8.9 in <sup>3</sup> /r] Δ Pressure Bar [PSI] Continuous									Max. Continuous	Max. Intermittent
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1700]	[2300]	
		14	28	41	55	69	83	97	110	117	159	
Flow LPM [GPM]	[2] 7,6	[198] 22 51	[435] 49 50	[664] 75 50	[897] 101 49	[1130] 128 47	[1361] 154 45	[1591] 180 43	[1827] 206 40	[1942] 219 39	[2611] 295 24	
	[4] 15,1	[196] 22 103	[424] 48 102	[657] 74 101	[898] 101 99	[1133] 128 99	[1365] 154 97	[1604] 181 95	[1836] 207 93	[1954] 221 92	[2648] 299 78	
	[6] 22,7	[189] 21 154	[412] 47 153	[646] 73 152	[889] 100 151	[1125] 127 150	[1361] 154 148	[1598] 181 146	[1829] 207 143	[1951] 220 141	[2653] 300 128	
	[8] 30,3	[169] 19 205	[389] 44 205	[628] 71 204	[866] 98 203	[1098] 124 201	[1333] 151 200	[1564] 177 197	[1799] 203 195	[1919] 217 193	[2649] 299 180	
	[10] 37,9	[148] 17 257	[369] 42 256	[605] 68 255	[836] 94 253	[1076] 122 252	[1318] 149 251	[1544] 174 248	[1780] 201 246	[1899] 215 244	[2789] 315 231	
	[12] 45,4	[125] 14 308	[351] 40 307	[586] 66 306	[810] 92 305	[1051] 119 303	[1293] 146 301	[1519] 172 299	[1756] 198 296	[1878] 212 295	[2606] 294 281	
	[14] 53,0	[95] 11 359	[321] 36 358	[558] 63 357	[795] 90 355	[1026] 116 354	[1290] 146 352	[1497] 169 350	[1731] 196 347	[1851] 209 346	[2580] 292 331	
	Max. Continuous 56,8	[82] 9 85	[308] 35 384	[544] 61 383	[771] 87 381	[1010] 114 379	[1256] 142 378	[1480] 167 375	[1720] 194 373	[1840] 208 371	[2569] 290 356	
	Max. Intermittent 75,7	[24] 3 513	[246] 28 512	[468] 53 509	[708] 80 507	[948] 107 506	[1184] 134 504	[1425] 161 501	[1653] 187 499	[1780] 201 498		

		159 cm <sup>3</sup> /r [9.7 in <sup>3</sup> /r] Δ Pressure Bar [PSI] Continuous									Max. Continuous	Max. Intermittent
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[1650]	[2250]	
		14	28	41	55	69	83	97	110	134	155	
Flow LPM [GPM]	[2] 7,6	[209] 24 47	[465] 53 46	[715] 81 46	[973] 110 45	[1228] 139 44	[1478] 167 42	[1724] 195 40	[1981] 224 38	[2046] 231 37	[2764] 312 23	
	[4] 15,1	[210] 24 94	[460] 52 94	[710] 80 93	[971] 110 91	[1229] 139 91	[1480] 167 90	[1745] 197 89	[1996] 226 87	[2059] 233 87	[2813] 318 76	
	[6] 22,7	[205] 23 141	[454] 51 141	[704] 80 140	[965] 109 139	[1216] 137 138	[1477] 167 136	[1738] 196 134	[1991] 225 132	[2055] 232 132	[2824] 319 119	
	[8] 30,3	[186] 21 188	[440] 50 188	[693] 78 187	[951] 107 186	[1205] 136 185	[1461] 165 183	[1716] 194 181	[1973] 223 179	[2038] 230 178	[2808] 317 166	
	[10] 37,9	[164] 19 235	[422] 48 234	[671] 76 234	[930] 105 232	[1189] 134 232	[1451] 164 230	[1702] 192 228	[1965] 219 226	[2032] 230 225	[2789] 315 213	
	[12] 45,4	[144] 16 282	[404] 46 281	[652] 74 281	[900] 102 279	[1163] 131 279	[1421] 161 277	[1674] 189 275	[1937] 219 273	[2004] 226 272	[2770] 313 260	
	[14] 53,0	[109] 12 330	[374] 42 329	[623] 70 328	[883] 100 327	[1140] 129 325	[1396] 158 323	[1653] 187 322	[1900] 215 319	[1963] 222 319	[2727] 308 306	
	Max. Continuous 56,8	[92] 10 353	[359] 41 352	[612] 69 351	[861] 97 350	[1123] 127 348	[1381] 156 347	[1633] 185 345	[1886] 213 343	[1950] 220 342	[2712] 306 330	
	Max. Intermittent 75,7	[26] 3 471	[268] 30 470	[510] 58 467	[772] 87 465	[1034] 117 464	[1290] 146 462	[1553] 175 460	[1802] 204 458	[1865] 211 458		



# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

	Continuous
	Intermittent

### 185 cm<sup>3</sup>/r [11.3 in<sup>3</sup>/r]

Δ Pressure Bar [PSI]

Continuous

Max. Continuous

Max. Intermittent

		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1600]	[2150]
		14	28	41	55	69	83	97	110	148
Flow LPM [GPM]	[2]	[257]	[554]	[847]	[1150]	[1447]	[1739]	[2035]	[2320]	[3103]
	7,6	29 40	63 40	96 39	130 38	163 37	196 36	230 33	262 29	351 12
	[4]	[254]	[546]	[845]	[1145]	[1448]	[1744]	[2049]	[2343]	[3147]
	15,1	29 81	62 81	95 80	129 79	164 78	197 77	232 76	265 74	356 63
	[6]	[246]	[540]	[834]	[1137]	[1434]	[1736]	[2036]	[2337]	[3151]
	22,7	28 121	61 121	94 120	128 120	162 119	196 117	230 115	264 112	356 100
	[8]	[224]	[520]	[820]	[1117]	[1414]	[1716]	[2014]	[2315]	[3133]
	30,3	25 162	59 162	93 161	126 160	160 159	194 157	228 155	262 152	354 140
	[10]	[202]	[499]	[793]	[1095]	[1394]	[1699]	[1997]	[2299]	[3112]
	37,9	23 202	56 202	90 201	124 201	158 200	192 198	226 196	260 193	352 181
[12]	[176]	[475]	[767]	[1063]	[1368]	[1664]	[1969]	[2268]	[3088]	
45,4	20 243	54 242	87 242	120 241	155 241	188 240	222 236	256 234	349 222	
[14]	[140]	[443]	[735]	[1035]	[1340]	[1637]	[1936]	[2227]	[3051]	
53,0	16 283	50 283	83 282	117 281	151 280	185 279	219 277	252 274	345 262	
Max. Continuous	[15]	[120]	[425]	[719]	[1014]	[1320]	[1618]	[1914]	[2205]	[3023]
56,8	14 304	48 303	81 302	115 301	149 300	183 299	216 297	249 294	342 283	
Max. Intermittent	[20]	[27]	[321]	[612]	[911]	[1211]	[1504]	[1795]		
75,7	3 405	36 404	69 402	103 401	137 400	170 398	203 397			

### 231 cm<sup>3</sup>/r [14.1 in<sup>3</sup>/r]

Δ Pressure Bar [PSI]

Continuous

Max. Continuous

Max. Intermittent

		[200]	[400]	[600]	[800]	[1000]	[1200]	[1400]	[1450]	[2000]
		14	28	41	55	69	83	97	100	138
Flow LPM [GPM]	[2]	[338]	[707]	[1074]	[1456]	[1827]	[2192]	[2572]	[2657]	
	7,6	38 32	80 32	121 31	165 30	206 30	248 28	291 26	300 25	
	[4]	[328]	[695]	[1076]	[1447]	[1827]	[2201]	[2577]	[2669]	[3671]
	15,1	37 65	79 65	122 64	163 63	206 62	249 62	291 60	302 60	415 50
	[6]	[317]	[687]	[1057]	[1434]	[1811]	[2186]	[2555]	[2650]	[3668]
	22,7	36 97	78 97	119 97	162 96	205 95	247 94	289 92	299 91	414 80
	[8]	[289]	[659]	[1038]	[1406]	[1777]	[2160]	[2531]	[2625]	[3644]
	30,3	33 130	74 130	117 130	159 129	201 128	244 127	286 124	297 124	412 112
	[10]	[265]	[631]	[1004]	[1381]	[1751]	[2131]	[2510]	[2602]	[3608]
	37,9	30 162	71 162	113 162	156 162	198 160	241 158	284 156	294 156	408 145
[12]	[230]	[599]	[968]	[1345]	[1722]	[2088]	[2480]	[2571]	[3571]	
45,4	26 195	68 195	109 194	152 194	195 193	236 192	280 189	290 189	403 178	
[14]	[191]	[563]	[927]	[1299]	[1686]	[2058]	[2428]	[2519]	[3532]	
53,0	22 227	64 227	105 227	147 226	190 226	233 224	274 222	285 221	399 212	
Max. Continuous	[15]	[167]	[538]	[904]	[1279]	[1661]	[2030]	[2404]	[2493]	[3488]
56,8	19 243	61 243	102 243	145 242	188 242	229 240	272 238	282 238	394 229	
Max. Intermittent	[20]	[29]	[411]	[785]	[1152]	[1520]	[1877]	[2222]	[2318]	
75,7	3 324	46 324	89 323	130 322	172 322	212 320	251 319	262 318		

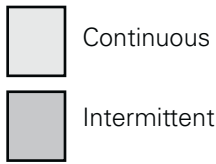


# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.



		293 cm <sup>3</sup> /r [17.9 in <sup>3</sup> /r]						Max. Continuous	Max. Intermittent
		Δ Pressure Bar [PSI]							
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1350]	[1800]
		14	28	41	55	69	83	93	124
Flow LPM [GPM]	[2]	[427]	[893]	[1361]	[1829]	[2293]	[2672]	[2977]	
	7,6	48 26	101 25	154 25	207 24	259 22	302 16	336 13	
	[4]	[419]	[886]	[1362]	[1833]	[2305]	[2771]	[3110]	[4107]
	15,1	47 51	100 51	154 51	207 50	260 49	313 47	351 44	464 22
	[6]	[402]	[872]	[1342]	[1819]	[2291]	[2757]	[3098]	[4121]
	22,7	45 77	99 77	152 76	206 76	259 74	312 71	350 68	466 54
	[8]	[367]	[838]	[1316]	[1785]	[2252]	[2723]	[3070]	[4086]
	30,3	41 102	95 102	149 102	202 101	254 100	308 98	347 95	462 84
	[10]	[332]	[803]	[1276]	[1749]	[2215]	[2684]	[3034]	[4061]
	37,9	38 128	91 128	144 128	198 127	250 126	303 123	343 120	459 108
[12]	[289]	[760]	[1230]	[1706]	[2177]	[2634]	[2989]	[4012]	
45,4	33 153	86 153	139 153	193 153	246 151	298 149	338 146	453 135	
[14]	[241]	[712]	[1176]	[1650]	[2126]	[2592]	[2935]	[3963]	
53,0	27 179	80 179	133 179	186 179	240 177	293 175	332 172	448 161	
Max. Continuous	[15]	[211]	[683]	[1149]	[1623]	[2096]	[2558]	[2905]	[3914]
	56,8	24 192	77 192	130 192	183 191	237 190	289 188	328 174	442 174
Max. Intermittent	[20]	[43]	[527]	[1001]	[1463]	[1919]	[2375]	[2720]	
	75,7	5 256	60 256	113 255	165 255	217 254	268 252	307 249	

		370 cm <sup>3</sup> /r [22.6 in <sup>3</sup> /r]						Max. Continuous	Max. Intermittent			739 cm <sup>3</sup> /r [45.1 in <sup>3</sup> /r]			Max. Continuous	Max. Intermittent	
		Δ Pressure Bar [PSI]										Δ Pressure Bar [PSI]					
		[200]	[400]	[600]	[800]	[1000]	[1200]	[1250]	[1500]			[200]	[400]	[600]	[800]		
		14	28	41	55	69	83	86	103			14	28	41	55		
Flow LPM [GPM]	[2]	[537]	[1121]	[1715]	[2285]	[2862]						[2]	[1080]	[2250]	[3440]	[4570]	
	7,6	61 20	127 20	194 20	258 19	323 16						7,6	122 10	254 10	389 10	516 9	
	[4]	[532]	[1123]	[1715]	[2308]	[2893]	[3467]	[3604]	[4274]			[4]	[1070]	[2250]	[3440]	[4600]	
	15,1	60 40	127 40	194 40	261 39	327 38	392 36	407 35	483 27			15,1	121 20	254 20	389 19	520 18	
	[6]	[508]	[1100]	[1693]	[2294]	[2884]	[3458]	[3598]	[4283]			[6]	[1020]	[2200]	[3390]	[4590]	
	22,7	57 61	124 61	191 61	259 60	326 58	391 55	407 53	484 47			22,7	115 30	249 30	383 29	519 27	
	[8]	[463]	[1060]	[1661]	[2255]	[2840]	[3414]	[3557]	[4254]			[8]	[ 945]	[2135]	[3330]	[4515]	
	30,3	52 81	120 81	188 81	255 80	321 79	386 76	402 74	481 68			30,3	107 40	241 40	376 39	510 37	
	[10]	[414]	[1017]	[1613]	[2203]	[2788]	[3363]	[3506]	[4212]			[10]	[ 840]	[2050]	[3250]	[4430]	
	37,9	47 101	115 101	182 101	249 101	315 99	380 96	396 94	476 88			37,9	95 50	232 50	367 48	501 46	
[12]	[363]	[960]	[1553]	[2152]	[2737]	[3305]	[3446]	[4152]			[12]	[ 740]	[1945]	[3130]	[4320]		
45,4	41 121	108 121	175 121	243 121	309 119	373 116	389 115	469 109			45,4	84 60	220 59	354 58	488 55		
[14]	[303]	[897]	[1484]	[2086]	[2667]	[3246]	[3386]	[4092]			[14]	[ 630]	[1820]	[3005]	[4195]		
53,0	34 142	101 142	168 142	236 142	301 140	367 137	383 136	462 130			53,0	71 69	206 68	340 68	474 66		
Max. Continuous	[15]	[266]	[862]	[1452]	[2050]	[2630]	[3206]	[3347]	[4054]			Max. Continuous	[ 540]	[1735]	[2905]	[4130]	
	56,8	30 152	97 152	164 152	232 152	297 150	362 148	378 147	458 140			56,8	61 74	196 74	328 73	467 72	
Max. Intermittent	[20]	[61]	[671]	[1269]	[1847]	[2410]	[2987]	[3119]			Max. Intermittent	[ 20]	[ 143]	[1350]	[2565]	[3705]	
	75,7	7 202	76 202	143 202	209 202	272 202	337 199	352 198			75,7	16 99	153 98	290 97	419 96		



# H Series (101-)

## Dimensions

(Refer to pages B-4-19 thru B-4-22 for shaft and port dimensions.)

## Standard Rotation Viewed from Shaft End

Port A Pressurized — CW

Port B Pressurized — CCW

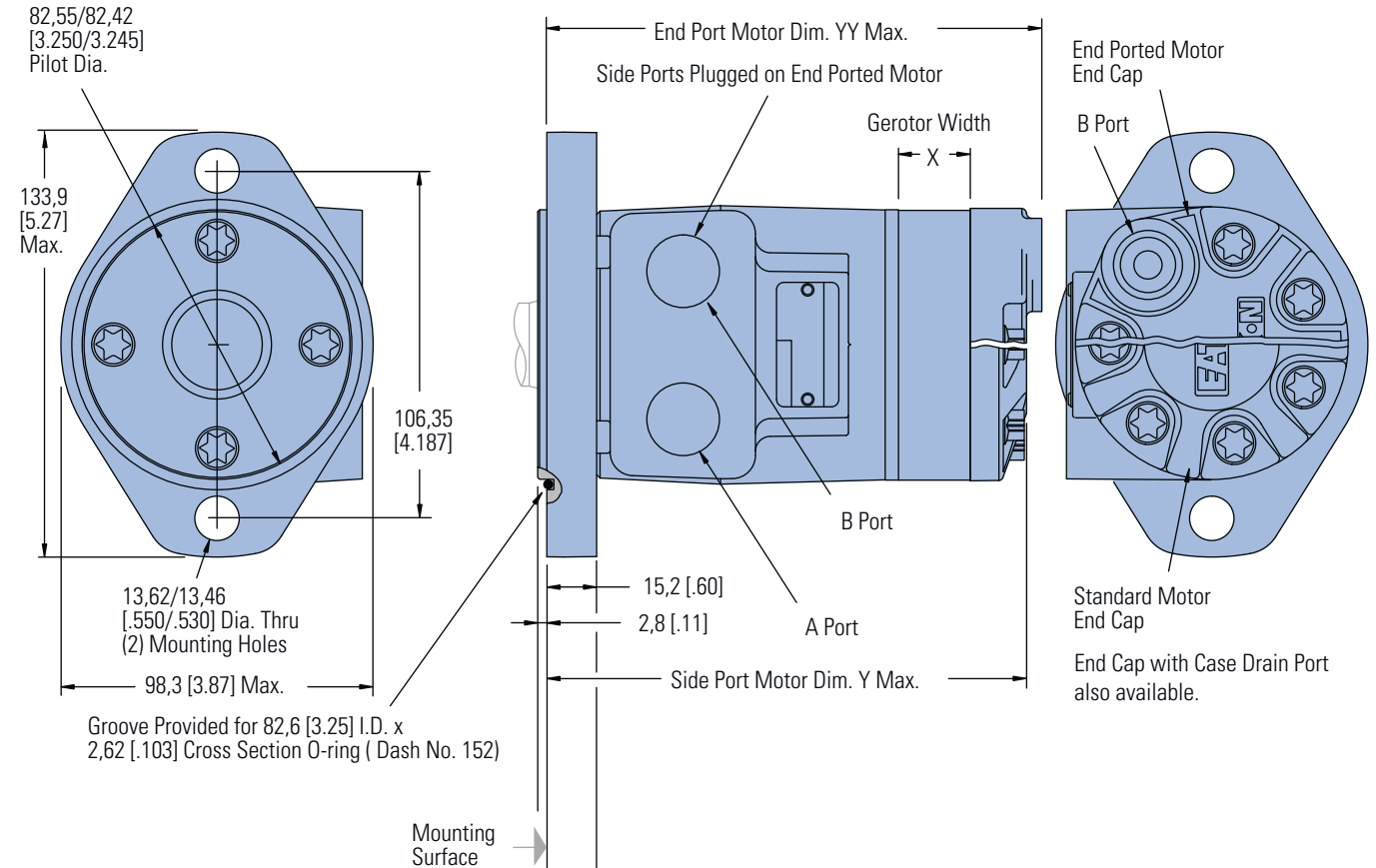
## Note:

Mounting surface flatness requirement is  $\nabla$ , 13 mm [.005 inch] Max.

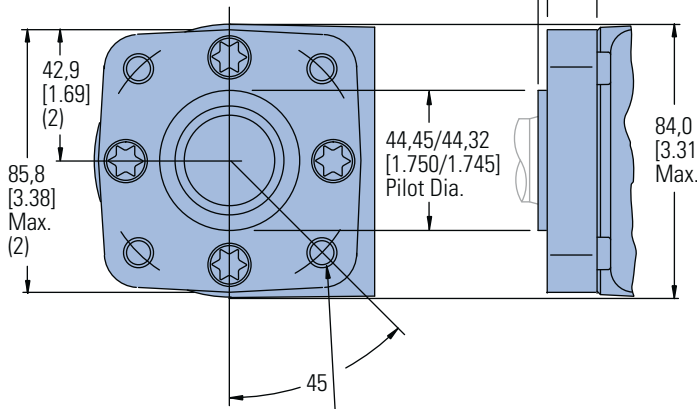
## Note:

End ported motor pressure is derated. Reference page B-2-2 for ratings.

## 2 Bolt Flange



## 4 Bolt Flange



3/8-16 UNC (15,2 [.60] Max. Bolt Thread Engagement ) Mounting Holes (4) Equally Spaced on 82,6 [3.25] Dia. Bolt Circle or M10 x 1,5 (15,2 [.60] Max. Bolt Thread Engagement ) Mounting Holes (4) Equally Spaced on 82,6 [3.25] Dia. Bolt Circle

## 2 AND 4 BOLT FLANGE

Displacement cm <sup>3</sup> /r [in <sup>3</sup> /r]	X mm [inch]	Y mm [inch]	YY mm [inch]
36 [ 2.2]	6,4 [ .25]	132,1 [5.20]	138,5 [5.45]
46 [ 2.8]	6,4 [ .25]	132,1 [5.20]	138,5 [5.45]
59 [ 3.6]	10,2 [ .40]	135,9 [5.35]	142,3 [5.60]
74 [ 4.5]	10,2 [ .40]	135,9 [5.35]	142,3 [5.60]
97 [ 5.9]	13,2 [ .52]	139,0 [5.47]	145,3 [5.72]
120 [ 7.3]	16,5 [ .65]	142,3 [5.60]	148,6 [5.85]
146 [ 8.9]	20,1 [ .79]	145,8 [5.74]	152,2 [5.99]
159 [ 9.7]	21,9 [ .86]	147,6 [5.81]	154,0 [6.06]
185 [11.3]	25,4 [1.00]	151,2 [5.95]	157,5 [6.20]
231 [14.1]	31,8 [1.25]	157,5 [6.20]	
293 [17.9]	40,4 [1.59]	166,2 [6.54]	
370 [22.6]	50,8 [2.00]	176,6 [6.95]	
739 [45.1]	101,6 [4.00]	227,4 [8.95]	

# H Series (101-)

## Product Numbers

Use digit prefix —101- plus four digit number from charts for complete product number—Example 101-1001. Orders will not be accepted without three digit prefix.

### 2 Bolt Flange

SHAFT	PORT SIZE	DISPL. cm <sup>3</sup> /r [in <sup>3</sup> /r] / PRODUCT NUMBER													
		36 [ 2.2]	46 [ 2.8]	59 [ 3.6]	74 [ 4.5]	97 [ 5.9]	120 [ 7.3]	146 [ 8.9]	159 [ 9.7]	185 [11.3]	231 [14.1]	293 [17.9]	370 [22.6]	740 [45.0]	
.1 in. Straight w/Woodruff key	7/8-14 O-Ring	101-1700	-1033	-1701	-1034	-1035	-1702	-1703	-1036	-1037	-1038	-1039	-1040	—	
	1/2 NPTF	101-1704	-1025	-1705	-1026	-1027	-1706	-1707	-1028	-1029	-1030	-1031	-1032	—	
	Manifold*	101-1708	-1041	-1709	-1042	-1043	-1710	-1711	-1044	-1045	-1046	-1047	-1048	—	
1 in. SAE 6B Splined	7/8-14 O-Ring	101-1721	-1081	-1722	-1082	-1083	-1723	-1724	-1084	-1085	-1086	-1087	-1088	—	
	1/2 NPTF	101-1725	-1073	-1726	-1074	-1075	-1727	-1728	-1076	-1077	-1078	-1079	-1080	—	
	Manifold*	101-1729	-1089	-1730	-1090	-1091	-1731	-1732	-1092	-1093	-1094	-1095	-1096	—	
1 in. Straight w/ .31 Dia. Crosshole	7/8-14 O-Ring	101-1796	-1797	-1798	-1799	-1800	-1801	-1802	-1803	—	—	—	—	—	
	1/2 NPTF	101-1804	-1805	-1806	-1807	-1808	-1870	-1809	-1810	—	—	—	—	—	
	Manifold*	101-1811	-1812	-1813	-1814	-1815	-1816	-1817	-1818	—	—	—	—	—	
1 in. Straight w/ .40 Dia. Crosshole	7/8-14 O-Ring	101-1819	-1323	-1820	-1324	-1325	-1821	-1822	-1326	—	—	—	—	—	
	1/2 NPTF	101-1823	-1319	-1824	-1320	-1825	-1826	-1827	-1828	—	—	—	—	—	
	Manifold*	101-1829	-1463	-1830	-1831	-1832	-1833	-1834	-1871	—	—	—	—	—	

101-1834

### 4 Bolt Flange

SHAFT	PORT SIZE	DISPL. cm <sup>3</sup> /r [in <sup>3</sup> /r] / PRODUCT NUMBER													
		36 [ 2.2]	46 [ 2.8]	59 [ 3.6]	74 [ 4.5]	97 [ 5.9]	120 [ 7.3]	146 [ 8.9]	159 [ 9.7]	185 [11.3]	231 [14.1]	293 [17.9]	370 [22.6]	740 [45.0]	
1 in. Straight w/ Woodruff key O-Ring	7/8-14 O-Ring	101-1749	-1009	-1750	-1010	-1011	-1751	-1752	-1012	-1013	-1014	-1015	-1016	—	
	1/2 NPTF	101-1753	-1001	-1754	-1002	-1003	-1755	-1756	-1004	-1005	-1006	-1007	-1008	—	
	Manifold*	101-1757	-1017	-1758	-1018	-1019	-1759	-1760	-1020	-1021	-1022	-1023	-1024	—	
1 in. SAE 6B Splined	7/8-14 O-Ring	101-1761	-1057	-1762	-1058	-1059	-1872	-1763	-1060	-1061	-1062	-1063	-1064	—	
	1/2 NPTF	101-1764	-1049	-1765	-1050	-1051	-1766	-1767	-1052	-1053	-1054	-1055	-1056	—	
	Manifold*	101-1768	-1065	-1769	-1066	-1067	-1770	-1771	-1068	-1069	-1070	-1071	-1072	—	
1 in. Straight w/ .31 Dia. Crosshole	7/8-14 O-Ring	101-1835	-1836	-1837	-1838	-1839	-1840	-1841	-1842	—	—	—	—	—	
	1/2 NPTF	101-1843	-1497	-1844	-1449	-1352	-1845	-1846	-1847	—	—	—	—	—	
	Manifold*	101-1848	-1466	-1849	-1459	-1850	-1851	-1852	-1853	—	—	—	—	—	
1 in. Straight w/ .40 Dia. Crosshole	7/8-14 O-Ring	101-1854	-1311	-1855	-1856	-1857	-1858	-1859	-1860	—	—	—	—	—	
	1/2 NPTF	101-1861	-1313	-1862	-1312	-1314	-1863	-1864	-1315	—	—	—	—	—	
	Manifold*	101-1865	-1305	-1866	-1306	-1307	-1867	-1868	-1869	—	—	—	—	—	

101-1868

### 4 Bolt Flange with Corrosion Protection

SHAFT	PORT SIZE	DISPL. cm <sup>3</sup> /r [in <sup>3</sup> /r] / PRODUCT NUMBER													
		36 [ 2.2]	46 [ 2.8]	59 [ 3.6]	74 [ 4.5]	97 [ 5.9]	120 [ 7.3]	146 [ 8.9]	159 [ 9.7]	185 [11.3]	231 [14.1]	293 [17.9]	370 [22.6]	740 [45.0]	
1 in. Straight w/ Woodruff Key	1/2 NPTF	101-2032	-2014	-2093	-2027	-2013	-2094	-2095	-2015	-2028	-2029	-2030	-2031	—	
	Manifold*		-2067							-2068	-2069				

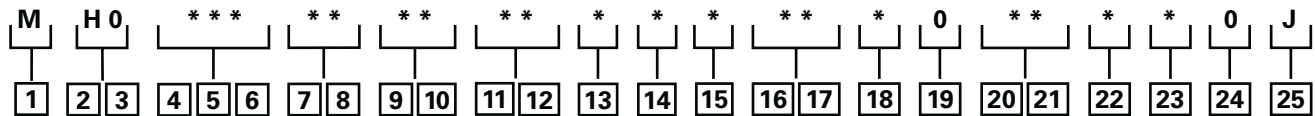
\*Manifold product numbers shown are for motors with four 5/16-18 port face mounting threads. Manifold, manifold mounting O-Rings and bolts are NOT included.

For H Series Motors with a configuration Not Shown in the charts above: Use the model code system on page B-2-11 to specify the product in detail.

# H Series (101-)

## Model Code

The following 25-digit coding system has been developed to identify all of the configuration options for the H motor. Use this model code to specify a motor with the desired features. All 25-digits of the code must be present when ordering. You may want to photocopy the matrix below to ensure that each number is entered in the correct box.



B-2

### 1 Product

M - Motor

### 2, 3 Series

H0 - H Motor

### 4, 5, 6 Displacement cm<sup>3</sup>/r [in<sup>3</sup>/r]

022 - 36 [2.2]†

028 - 46 [2.8]

035 - 58 [3.5]†

045 - 74 [4.5]

059 - 96 [5.9]

073 - 120 [7.3]

089 - 146 [8.9]

097 - 159 [9.7]

113 - 185 [11.3]

141 - 231 [14.1]

179 - 294 [17.9]

226 - 370 [22.6]

451 - 739 [45.1]

†The H Series motors with displacement code "022" or "035" must also specify free running gerotor (option "AA" in position 11,12).

### 7, 8 Mounting Type

**AA - 2 Bolt (Standard)**  
82.50 [3.248] Dia. x 3.05 [.120] Pilot, 13.59 [.535] Dia. Mounting Holes on 106.35 [4.187] Dia. B.C.

**BA - 4 Bolt (Standard)**  
44.40 [1.748] Dia. x 3.05 [.120] Pilot, .375-16 UNC-2B Mounting Holes on 82.55 [3.250] Dia. B.C.

CA - 2 Bolt (Standard)  
82.50 [3.248] Dia. x 6.10 [.240] Pilot, 10.41 [.410] Dia. Mounting Holes on 106.35 [4.187] Dia. B.C. (SAE A)

DD - 2 Bolt (Standard)  
101.60 [4.000] Dia. x 6.10 [.240] Pilot, 14.35 [.565] Dia. Mounting Holes on 146.05 [5.750] Dia. B.C. (SAE B)

**FA - 4 Bolt (Standard)**  
44.40 [1.748] Dia. x 3.05 [.120] Pilot, M10 x 1.5-6H Mounting Holes on 82.55 [3.250] Dia. B.C.

GA - 4 Bolt (Round) 82.50 [3.248] Dia. x 6.35 [.250] Pilot, 19.05 [.750] Dia. Mounting Holes on 109.48 [4.310] Dia. B.C.

MA - 2 Bolt (Standard)  
82.50 [3.248] Dia. x 8.13 [.320] Pilot, 13.59 [.535] Dia. Mounting Holes on 106.35 [4.187] Dia. B.C., w/o O-ring Groove

### 9, 10 Output Shaft

**01 - 25.4 [1.00] Dia. Straight, Woodruff Key, .250-20 UNC-2B Hole in Shaft End**

**02 - 25.4 [1.00] Dia. SAE 6B Spline, .250-20 UNC-2B Hole in Shaft End**

07 - 25.4 [1.00] Dia. Straight, 8.03 [.316] Dia. Cross Hole 11.2 [.44] from End, 5.6 [.22] Extra Length

**08 - 25.4 [1.00] Dia. Straight, 10.31 [.406] Dia. Cross Hole 15.7 [.62] from End, .250-20 UNC-2B Hole in Shaft End**

**16 - 22.22 [.875] Dia. SAE 13 Tooth Spline (SAE B)**

17 - 22.22 [.875] Dia. Straight, 6.4 [.25] x 19.0 [.75] Square Key (SAE B)

18 - 25.4 [1.00] Dia. Tapered, Woodruff Key and Nut, 34.92 [1.375] Taper Length

**24 - 25.00 [.984] Dia. Straight, 8.00 [.315] KEY, M8 x 1.25-6H Hole in Shaft End**

39 - 25.00 [.984] Dia. Straight (k6), 8.00 [.315] Key, M8 x 1.25-6H Hole in Shaft End

### 11, 12 Ports

**AA - .875-14 UNF-2B SAE O-Ring Ports**

**AB - .500-14 NPTF Dry Seal Pipe Thread Ports**

**AC - Manifold Ports (.3125-18 UNC-2B Mounting Holes)**

AD - Manifold Ports (M8 x 1.25-6H Mounting Holes)

**AF - G 1/2 BSP Straight Thread Ports**

EB†† - End Ports: .750-16 UNF-2B SAE O-Ring Ports

EC†† - End Ports: G 1/2 BSP Straight Thread Ports

†† Note: End ported motor pressure is derated. Reference page B-2-2 for ratings.

### 13 Case Flow Options

0 - None

**1 - .4375-20 UNF-2B SAE O-Ring Port (End Cap)**

**2 - G 1/4 BSP Straight THD Port (End Cap)**

**A - Internal Check Valves**

### 14 Gerotor Options

0 - None

A - Free Running

### 15 Shaft Options

0 - None

N - Electroless Nickel Plated

### 16, 17 Seal Options

**00 - Standard Seals**

02 - Seal Guard

03 - Viton Seals

**04 - Viton Shaft Seal**

05 - Vented Two-Stage Seal

**07 - High Pressure Shaft Seal**

### 18 Speed Sensor Options

0 - None

A - Digital Speed Pickup

(15 Pulse), No Lead Wire with M12 Connector (A=Power, B=Common, C=Signal)

B - Magnetic Speed Pickup (60 Pulse by Quadrature), No Lead Wire with M12 Connector (A=Power, B=Common, C=Signal)

### 19 Manifold Block Options

0 - None

\* - Contact your Eaton Sales Representative for available options.

### 20, 21 Special Features (Hardware)

**00 - None**

AB - Low Speed Valving

SS - Stainless Steel Flange Bolts

### 22 Special Features (Assembly)

0 - None

1 - Reverse Rotation

2 - Flange Rotated 90°

### 23 Paint/ Special Packaging

0 - No Paint

**A - Low Gloss Black Primer**

D - Environmental Coated Gloss White

F - Environmental Coated Black

### 24 Eaton Assigned Code when Applicable

0 - Assigned Code

### 25 Eaton Assigned Design Code

J - Nine (9)

Feature in bold are preferred and allow for shorter lead time.