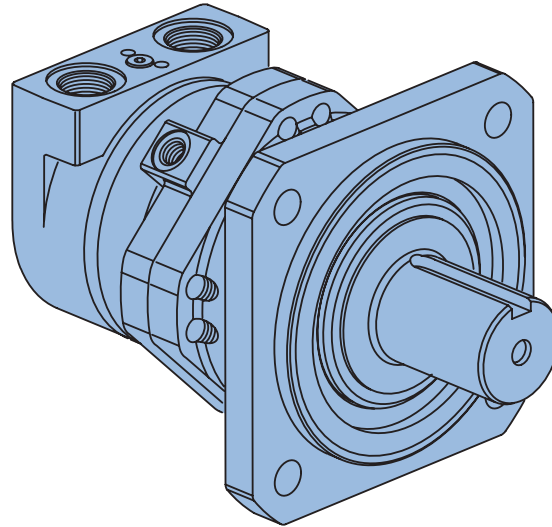


# VIS 45 Series

## Highlights



### Description

The VIS 45 is the most powerful motor in the VIS Series product line. Maximum continuous output torque capability is rated to 4520 Nm [40,000 lb-in.] with a displacement range from 630cc to 1560cc per revolution. VIS 45 motors can be run up to 170 LPM [45 GPM] with pressure capability up to 310 bar [4500 PSI]. The motor utilizes patented VIS technology with improved high-strength Geroler, optimized drive geometry, and two-piece pre-loaded balance plate for increased starting efficiency, reduced leakage and higher back pressure capacity.

### VIS 45 Motors

Geroler Element	5 Displacements
Flow l/min [GPM]	170 [45] Continuous 189 [50] Intermittent
Speed	Up to 284 RPM
Pressure bar [PSI]	310 [4500] Cont. 345 [5000] Inter. 380 [5500] Peak
Torque Nm [lb - in]	4520 [40000] Cont. 5650 [50000] Inter.

### Features

- Patented VIS Geroler technology
- Three moving components: (Geroler, star, drive, and output shaft)
- Two-piece pre-loaded pressure balance plate
- Variety of optional features including two-speed option, and case flow solutions for both closed-loop and open-loop applications.

### Benefits

- Extremely compact powerful package
- Increased torque capability
- Greatest horsepower density in the VIS motor line
- High efficiency
- Quiet, smooth operation
- Reliable performance
- Design Flexibility

### Applications

- Traction Drives
- Skid Steer loaders
- Grapples
- Excavator Swing Drives
- Marine & Military Winches
- Utility Reels
- Harvesters
- Snow Grooming Equipment
- Trenchers
- Piggy-back Forklifts
- Industrial Machine Tools
- Truck Grapples
- Wood Processing – Saw Mills
- Augers



Auger



Skid Steer



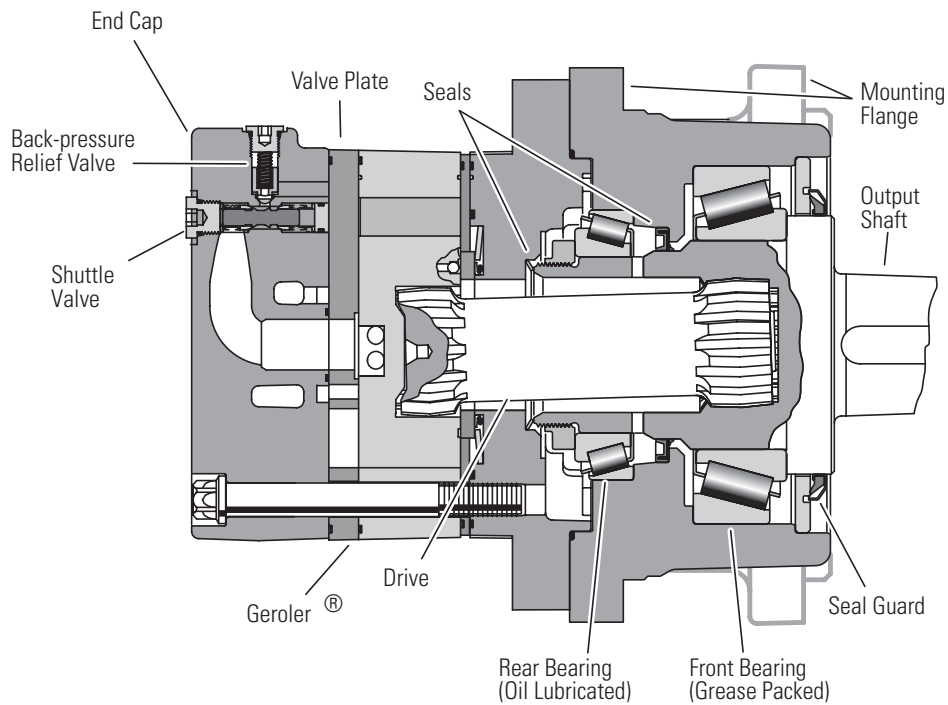
Injector



Port Equipment

# VIS 45 Series

## Specifications



### SPECIFICATION DATA – VIS 45 SERIES MOTORS

Displ. cm <sup>3</sup> /r [in <sup>3</sup> /r]		630 [38.6]	805 [48.6]	990 [60.5]	1245 [76.0]	1560 [95.0]
Max. Speed (RPM) @ Flow	Continuous	256	198	164	129	104
	Intermittent	284	220	183	143	115
Flow l/min [GPM]	Continuous	170 [45]	170 [45]	170 [45]	170 [45]	170 [45]
	Intermittent	189 [50]	189 [50]	189 [50]	189 [50]	189 [50]
Torque Nm [lb-in]	Continuous	2963 [26080]	3555 [31460]	4052 [35860]	4520 [40000]	4520 [40000]
	Intermittent	3111 [27530]	3722 [32940]	4549 [40269]	5376 [47592]	5650 [50000]
Pressure Δ bar [Δ PSI]	Continuous	310 [4500]	310 [4500]	258 [3740]	205 [2975]	164 [2380]
	Intermittent	345 [5000]	345 [5000]	322 [4675]	256 [3720]	205 [2975]
	Peak	379 [5500]	379 [5500]	379 [5500]	308 [4465]	246 [3570]
Weight kg [lb]	Standard or Wheel Mount Bearingless	53,8 [118.7]	55,2 [121.6]	56,7 [125.0]	58,7 [129.4]	61,2 [134.9]
	Two-speed Standard or Wheel Mount Two-speed Bearingless	28,3 [62.3]	29,6 [65.2]	31,1 [68.6]	33,1 [73.0]	35,6 [78.5]
Weight kg [lb]	Two-speed Standard or Wheel Mount	58,5 [128.9]	59,8 [131.8]	61,3 [135.2]	63,3 [139.6]	65,8 [145.1]
	Two-speed Bearingless	32,9 [72.5]	34,2 [75.4]	35,7 [78.8]	37,7 [83.2]	40,2 [88.7]

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.

#### Maximum Inlet Pressure:

400 bar [5800 PSI]  
Do Not Exceed A Pressure Rating (for displacement size see chart above).

#### Return Pressure (Back-Pressure):

Minimum – 3,5 bar [50 PSI]  
Maximum – 21 bar [300 PSI]

#### Note:

Return (back-pressure) must be 3,5 bar [50 PSI] greater than the case pressure, except with open loop circuit.

#### Δ Pressure:

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

#### Case Pressure:

Minimum – No Pressure  
Maximum – 3,5 bar [50 PSI]

#### Note:

The case must be full when the motor is operating. A case drain is recommended.

#### Continuous Rating:

Motor may be run continuously at these ratings

#### Intermittent Operation:

10% of every minute

#### Peak Operation:

1% of every minute

#### Recommended Fluids:

Premium quality, anti-wear type hydraulic oil with a viscosity of not less than 70 SUS at operating temperature.

#### Recommended System Operating Temp.:

-34°C to 82°C [-30°F to 180°F]

#### Recommended Filtration:

Per ISO Cleanliness Code, 4406: 20/18/13

#### Shuttle:

Standard

#### Back-Pressure Relief Valve:

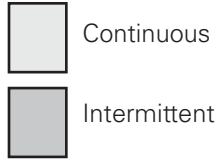
Required for closed loop circuit.

# VIS 45 Series

## Performance Data

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

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



### 805 cm³/r [48.6 in³/r]

□ Pressure Bar [PSI]

	250	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
	15	35	70	105	140	170	205	240	275	310	345
4	1600	3350	7180	10670	13480	16640	19680	21740	25860	28500	31720
15	181	379	811	1206	1523	1880	2224	2457	2922	3221	3584
8	1620	3380	7240	10730	13740	16920	19950	22160	25920	28970	32200
15	183	382	818	1212	1553	1912	2254	2504	2929	3274	3639
30	38	36	35	34	34	34	34	34	32	31	29
12	1640	3310	7180	10770	14170	17290	20730	23270	26340	29420	32470
45	185	374	811	1217	1601	1954	2342	2630	2976	3324	3669
16	1660	3220	7010	10680	14290	17710	21240	24170	26830	30340	32940
61	188	364	792	1207	1615	2001	2400	2731	3032	3428	3722
20	1600	3110	6840	10380	14000	17290	20990	24490	27270	31390	
76	181	351	773	1173	1582	1954	2372	2767	3082	3547	
24	1560	3030	6750	10250	13830	17340	21110	24450	27620	31460	
91	176	342	763	1158	1563	1959	2385	2763	3121	3555	
28		2720	6560	10190	13780	17390	21090	24360	27420	31238	
106		307	741	1151	1557	1965	2383	2753	3098	3529	
32		2620	6330	10000	13480	17070	20730	24180	27270	31064	
121		296	715	1130	1523	1929	2342	2732	3082	3509	
36		147	140	139	137	137	135	135	134	127	
136		2620	5910	9480	13140	16640	20200	23570	26910	30646	
40		296	668	1071	1485	1880	2283	2663	3041	3462	
151		165	158	156	154	154	152	152	150	143	
45			5390	9220	12790	16120	19700	23080	26343	30019	
170			609	1042	1445	1822	2226	2608	2976	3391	
50			175	173	171	171	169	169	167	159	
189			5150	8970	12450	15780	19420	22650	25848	29462	
			582	1014	1407	1783	2194	2559	2920	3328	
			198	196	193	193	191	191	189	179	
			4770	8610	12140	15380	19180	22440			
			539	973	1372	1738	2167	2536			
			220	217	215	215	212	212			

### 630 cm³/r [38.6 in³/r]

□ Pressure Bar [PSI]

	250	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
	15	35	70	105	140	170	205	240	275	310	345
4	1270	2710	5530	8250	10300	12900	15540	17720	20820	23640	25740
15	144	306	625	932	1164	1458	1756	2002	2353	2671	2909
8	1290	2720	5580	8290	10490	13110	15760	18070	21000	24100	26070
30	146	307	631	937	1185	1481	1781	2042	2373	2723	2946
12	1310	2670	5440	8320	10820	13400	16370	18970	21230	24540	26840
45	148	302	615	940	1223	1514	1850	2144	2399	2773	3033
16	1320	2600	5400	8250	10910	13730	16780	19710	21970	24870	27530
61	149	294	610	932	1233	1551	1896	2227	2483	2810	3111
20	1290	2500	5270	8020	10690	13400	16730	20020	22320	25420	
76	146	283	596	906	1208	1514	1890	2262	2522	2872	
24	1240	2440	5200	7920	10560	13430	16700	19970	22610	25730	
91	140	276	588	895	1193	1518	1887	2257	2555	2907	
28		2190	5050	7870	10520	13480	16660	19860	22450	26080	
106		247	571	889	1189	1523	1883	2244	2537	2963	
32		160	160	157	157	155	150	146	143	136	
121		2110	4870	7720	10300	13230	16370	19720	22320	25986	
36		238	550	872	1164	1495	1850	2228	2522	2936	
136		182	182	180	180	177	172	166	164	156	
40			4150	7120	9760	12490	15560	18820	21600	25185	
151			469	805	1103	1411	1758	2127	2441	2845	
45			228	224	224	221	214	208	204	194	
170			3970	6930	9500	12230	15340	18470	21207	24742	
50			449	783	1074	1382	1733	2087	2396	2795	
189			256	252	252	249	241	234	229	218	
			3680	6660	9270	11920	15150	18300			
			416	753	1048	1347	1712	2068			
			284	280	280	276	268	259			

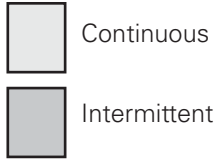


# VIS 45 Series

## Performance Data

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

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



### 990 cm³/r [60.5 in³/r]

□ Pressure Bar [PSI]

	250	500	1000	1500	2000	2500	3000	3500	4000	4500	4750
	15	35	70	105	140	170	205	240	275	310	330
4	2000	4100	8630	12620	16050	20080	24150	28320	32590	35150	37040
	226	463	975	1426	1814	2269	2729	3200	3683	3972	4186
15	15	15	15	15	14	14	14	13	12	11	10
8	2020	4130	8700	12740	16350	20420	24480	28400	32850	35670	37250
	228	467	983	1440	1848	2307	2766	3209	3712	4031	4209
30	30	30	29	29	29	28	28	27	25	25	24
12	2050	4050	8630	12780	16870	20860	25440	28550	32920	35860	37630
	232	458	975	1444	1906	2357	2875	3226	3720	4052	4252
45	45	45	44	44	43	43	41	41	41	40	39
16	2070	3940	8420	12680	17010	21380	26070	29660	33020	36620	38439
	234	445	951	1433	1922	2416	2946	3352	3731	4138	4342
61	61	60	58	58	58	57	55	55	54	53	52
20	2000	3800	8220	12330	16660	20860	25760	30060	33550	37880	39766
	226	429	929	1393	1883	2357	2911	3397	3791	4280	4492
76	76	75	73	73	72	71	69	69	68	66	64
24	1950	3700	8120	12180	16460	20890	25820	30090	33990	38366	40269
	220	418	918	1376	1860	2361	2918	3400	3841	4334	4549
91	91	90	88	88	86	85	83	83	82	80	78
28		3320	7880	12100	16400	20990	25890	29900	33750	39106	39995
		375	890	1367	1853	2372	2926	3379	3814	4280	4518
106		105	102	102	101	99	97	97	95	92	90
32		3210	7610	11870	16050	20600	25440	29680	33550	37890	39766
		363	860	1341	1814	2328	2875	3354	3791	4280	4492
121		120	117	117	115	114	110	110	109	106	103
36		3200	7100	11260	15640	20080	24800	28930	32716	36936	38759
		362	802	1272	1767	2269	2802	3269	3696	4173	4379
136		135	131	131	130	128	124	124	123	119	116
40			6480	10950	15220	19460	24170	28330	32023	36155	37935
			732	1237	1720	2199	2731	3201	3618	4084	4286
151			146	146	144	142	138	138	137	133	130
45			6190	10650	14810	19040	23830	27952	31599	35679	37432
			699	1203	1674	2152	2693	3158	3570	4031	4229
170			164	164	162	160	155	155	154	149	145
50			5740	10230	14450	18570	23540				
			649	1156	1633	2098	2660				
189			183	183	180	178	173				

### 1245 cm³/r [76.0 in³/r]

□ Pressure Bar [PSI]

	250	500	1000	1500	2000	2500	3000	3500	4000	4250
	15	35	70	105	140	170	205	240	275	295
4	2160	4800	9960	15150	20200	26450	30670	39180	42800	43220
	244	542	1125	1712	2283	2989	3466	4427	4836	4884
15	12	11	11	11	11	10	10	9	9	9
8	2250	4830	10370	15760	22010	27180	33330	39840	43660	44400
	254	546	1172	1781	2487	3071	3766	4502	4934	5017
30	24	23	22	22	21	20	20	19	19	19
12	2400	5390	10910	17290	22780	28470	34170	40140	44160	47220
	271	609	1233	1954	2574	3217	3861	4536	4990	5336
45	36	33	33	32	32	32	32	31	31	30
16	2410	5150	10930	16970	22880	28600	33900	39500	44510	47592
	272	582	1235	1918	2585	3232	3831	4464	5030	5376
61	48	46	45	44	43	43	43	42	41	40
20	2350	4890	10650	16470	21960	27450	33130	37710	43890	46933
	266	553	1203	1861	2481	3102	3744	4261	4960	5302
76	60	59	57	56	56	56	55	55	54	52
24	2190	4760	10460	15920	21230	26530	32320	37680	42670	45673
	247	538	1182	1799	2399	2998	3652	4258	4822	5156
91	72	70	68	67	67	67	66	66	65	63
28	1990	4260	10070	15860	21200	26420	32480	37500	42464	45418
	225	481	1138	1792	2396	2985	3670	4238	4797	5131
106	85	82	80	78	78	78	77	77	76	74
32		4100	9770	15410	20770	26300	31920	37240	42167	45103
		463	1104	1741	2347	2972	3607	4208	4764	5095
121		94	91	90	89	89	88	88	87	84
36		4090	9060	14650	20060	25670	31110	36295	41087	43955
		462	1024	1655	2267	2901	3515	4100	4642	4966
136		106	103	101	101	100	99	99	98	95
40			8300	14150	19570	24900	30320	35373	40034	42836
			938	1599	2211	2814	3426	3996	4523	4839
151			114	113	112	111	110	110	108	105
45			8100	13970	19310	24610	29972	34967	39570	42343
			915	1579	2182	2781	3686	3950	4470	4783
170			129	127	126	125	124	124	122	118
50			7900	13790	19050	24310				
			893	1558	2153	2747				
189			143	141	140	139				

[18570] Torque [lb-in]  
2098 } Nm  
178 Speed RPM

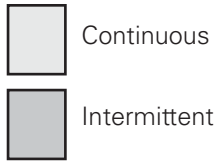
# VIS 45 Series

1560 cm<sup>3</sup>/r [95.0 in<sup>3</sup>/r]

## Performance Data

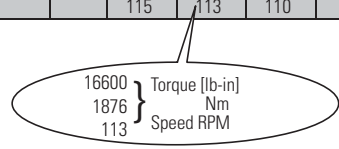
Motors run with high efficiency in all areas designated with a number for torque and speed. For best motor life select a motor to run with a torque and speed range shown in the light shaded area.

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



□ Pressure Bar [PSI]

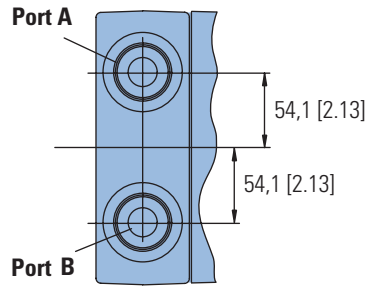
Flow LPM [GPM]	250	500	1000	1500	2000	2500	3000	3500	4000
	15	35	70	105	140	170	205	240	275
4	2700	5670	11910	18520	24910	30860	37610	42320	48366
15	305	641	1346	2093	2815	3487	4250	4782	5464
8	2810	5910	12400	19260	25590	31740	39310	44150	50457
30	318	668	1401	2176	2892	3587	4442	4989	5700
12	3010	6300	13040	20490	26600	33070	39880	46670	53337
45	340	712	1474	2315	3006	3737	4506	5274	6025
16	3020	6300	13360	20740	27270	33950	40450	48630	55577
61	341	712	1510	2344	3082	3836	4571	5495	6279
20	2930	6150	13200	20490	27110	34830	39820	47662	54470
76	331	695	1492	2315	3063	3936	4500	5384	6154
24	2780	5910	12880	19750	26930	34390	39310	47300	54057
91	314	668	1455	2232	3043	3886	4442	5343	6107
28	58	56	55	54	53	50	47	44	44
106		5310	12500	19630	26600	33950	38740	46635	53297
		600	1413	2218	3006	3836	4378	5268	6021
		66	64	63	62	59	55	52	52
32		5120	12070	19260	26260	33510	38180	45982	52550
121		579	1364	2176	2967	3787	4314	5195	5937
		75	74	72	70	67	62	58	58
36		5100	11270	18270	25590	33070	37652	45366	
136		576	1274	2065	2892	3737	4254	5125	
		85	83	81	79	76	70	66	
40			10280	17760	24910	32630	37124	44750	
151			1162	2007	2815	3687	4194	5055	
			92	90	88	84	78	73	
45			9820	17280	24240	31793	36119	43577	
170			1110	1953	2739	3592	4080	4923	
			104	101	99	95	87	82	
50			9100	16600	23650				
189			1028	1876	2672				
			115	113	110				



# VIS 45 Series

## Dimensions

### Standard Mount

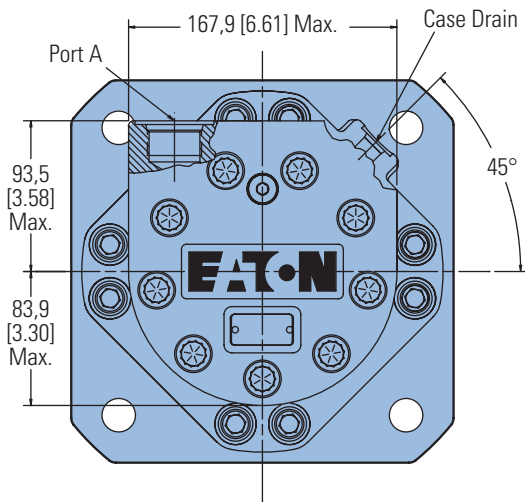
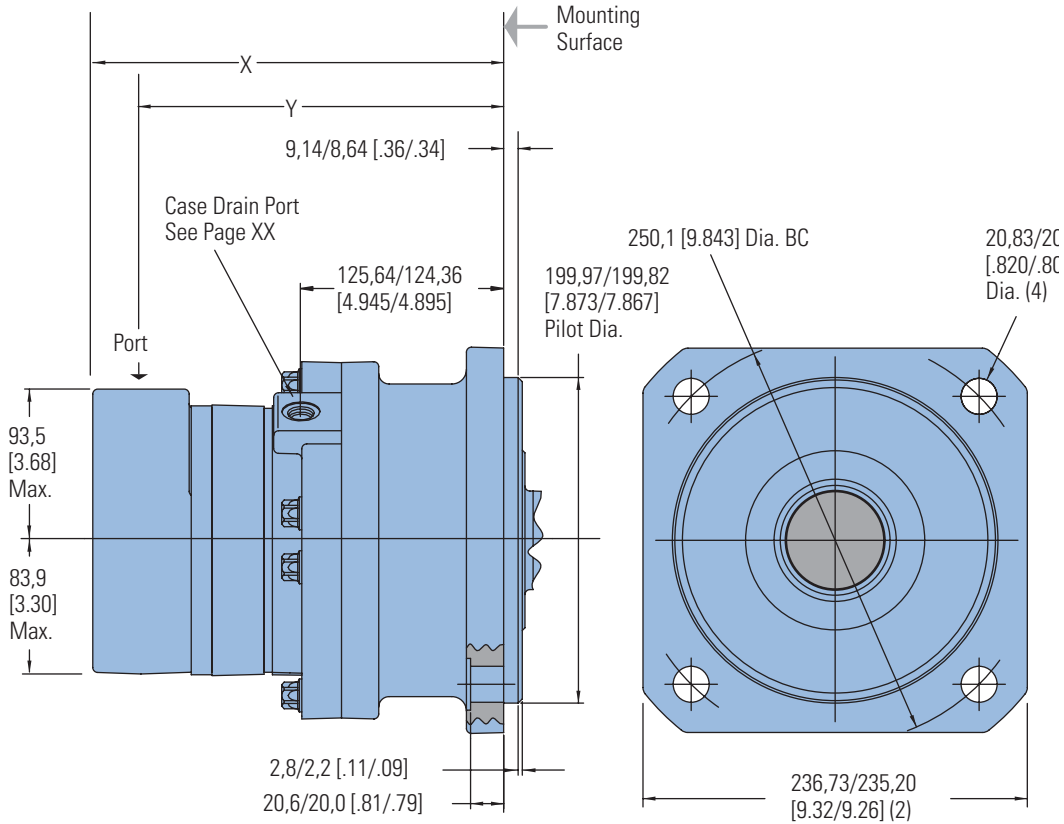


## Ports

- 1-5/16-12 UN-2B SAE O-ring Ports (2)
- 9/16-18 UNF-2B SAE O-ring Case Drain Port (1)
- Or G 1 (BSP) O-ring Ports (2)
- G 1/4 (BSP) O-ring Case Drain Port (1)

## Standard Rotation Viewed from Shaft End

- Port A Pressurized — CW
- Port B Pressurized — CCW



## STANDARD MOTORS

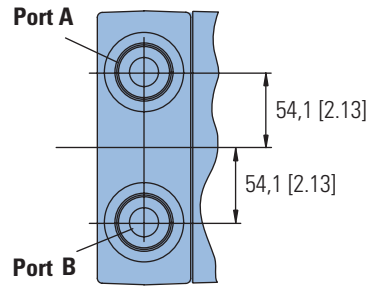
Displacement cm <sup>3</sup> /r [in <sup>3</sup> /r]	X Max. mm [inch]	Y mm [inch]
630 [38.6]	260,9 [10.27]	228,6 [ 9.00]
805 [48.6]	271,3 [10.68]	239,0 [ 9.41]
990 [60.5]	283,7 [11.17]	251,5 [ 9.90]
1245 [76.0]	299,7 [11.80]	267,7 [10.54]
1560 [95.0]	319,5 [12.58]	287,5 [11.32]



# VIS 45 Series

Dimensions

Wheel Mount



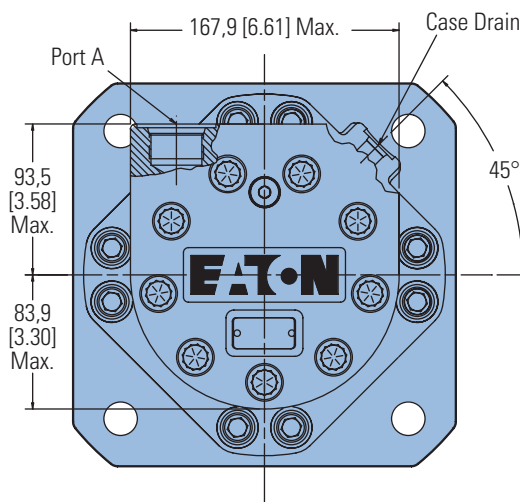
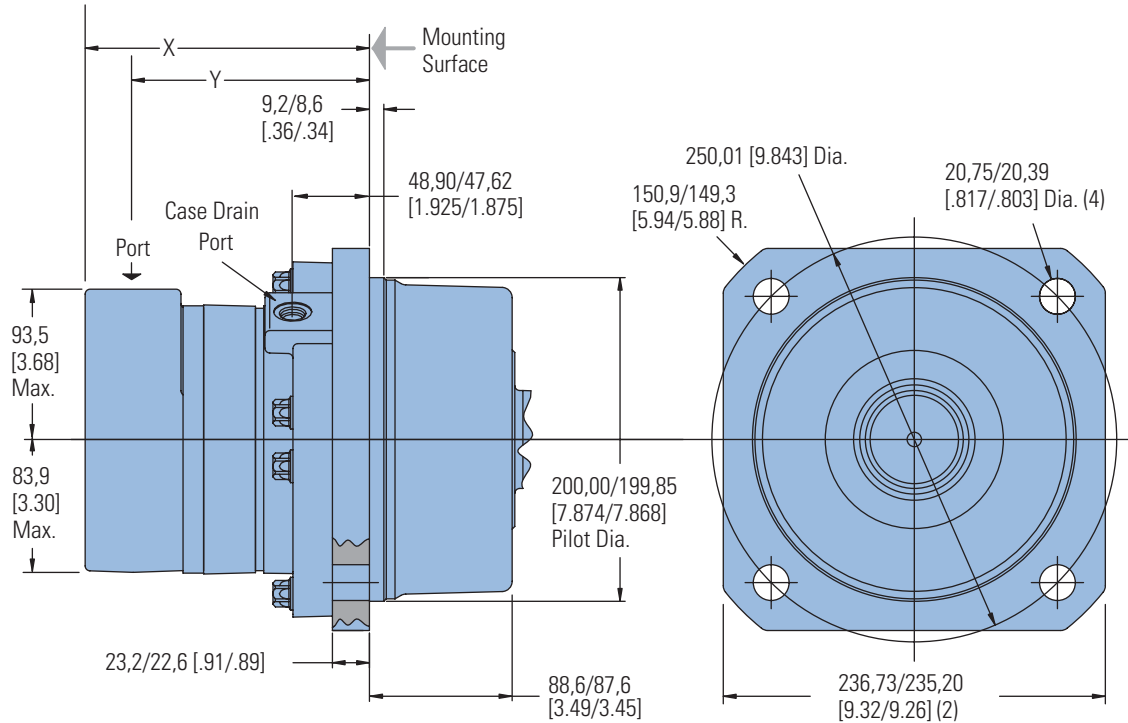
## Ports

- 1-5/16-12 UN-2B SAE O-ring Ports (2)
- 9/16-18 UNF-2B SAE O-ring Case Drain Port (1)
- Or G 1 (BSP) O-ring Ports (2)
- G 1/4 (BSP) O-ring Case Drain Port (1)

## Standard Rotation Viewed from Shaft End

Port A Pressurized — CW

Port B Pressurized — CCW

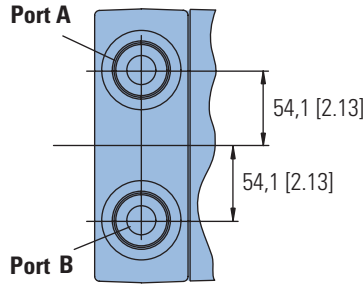


## WHEEL MOTORS

Displacement cm <sup>3</sup> /r [in <sup>3</sup> /r]	X Max. mm [inch]	Y mm [inch]
630 [38.6]	184,2 [7.25]	151,9 [5.98]
805 [48.6]	194,6 [7.66]	162,3 [6.39]
990 [60.5]	207,0 [8.15]	174,8 [6.88]
1245 [76.0]	223,0 [8.78]	191,0 [7.52]
1560 [95.0]	242,8 [9.56]	210,8 [8.30]

# VIS 45 Series

Dimensions  
Bearingless



## Ports

- 1-5/16-12 UN-2B SAE O-ring Ports (2)
- 9/16-18 UNF-2B SAE O-ring Case Drain Port (1)
- Or G 1 (BSP) O-ring Ports (2)
- G 1/4 (BSP) O-ring Case Drain Port (1)

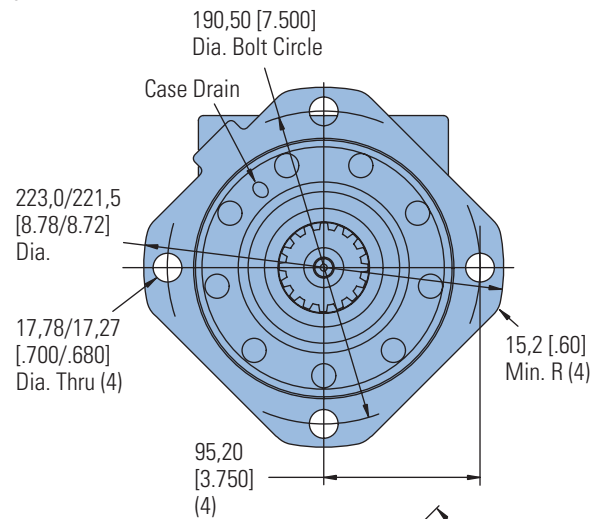
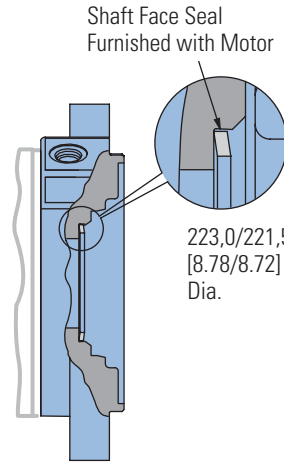
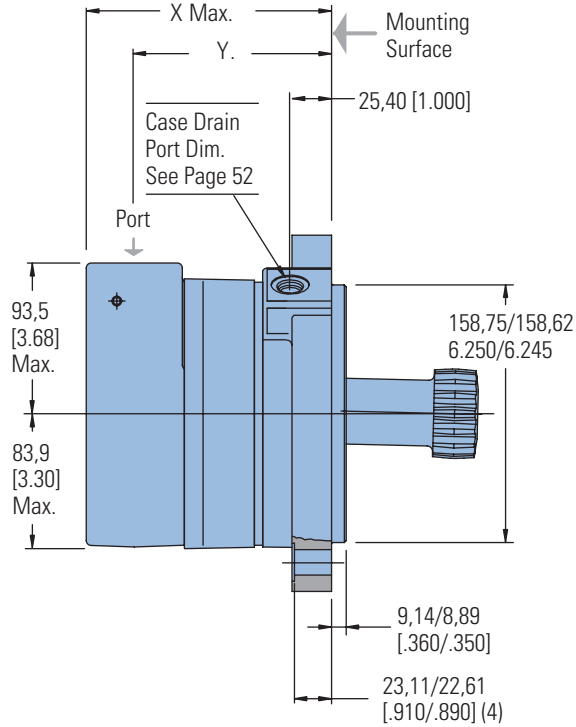
## Standard Rotation Viewed from Drive End

- Port A Pressurized — CW
- Port B Pressurized — CCW

For VIS 45 bearingless motor application information, contact your Eaton representative (mating coupling blanks available from Eaton Hydraulics).

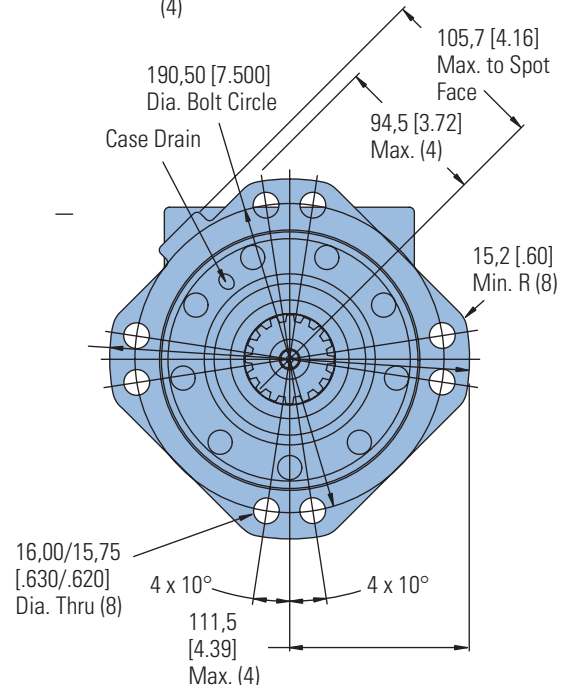
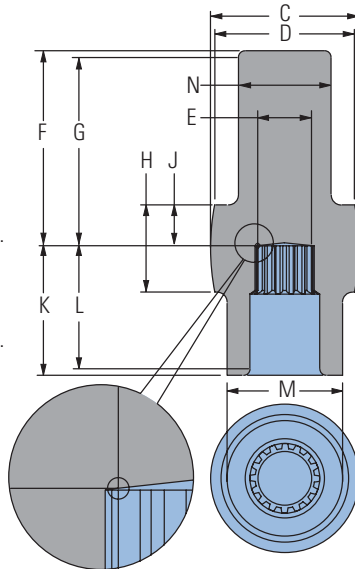
### Note:

After machining blank, part must be hardened per Eaton specification.



## Mating Coupling Blank Eaton Part No. 13521-003

- C** 116,3 [ 4.58 ] Dia. Max.
- D** 111,8 [ 4.40 ] Dia. Min.
- E** 37,64 [ 1.482 ] Dia.
- F** 136,7 [ 5.38 ] Max.
- G** 131,6 [ 5.18 ] Min. Full Form Dia.
- H** 64,8 [ 2.55 ]
- J** 26,4 [ 1.04 ]
- K** 109,7 [ 4.32 ] Max.
- L** 104,6 [ 4.12 ] Min. Full Form Dia.
- M** 92,58 [ 3.645 ] Dia.
- N** 73,28 [ 2.885 ] Dia.



## BEARINGLESS MOTORS

Displacement cm <sup>3</sup> /r [in <sup>3</sup> /r]	X mm [inch]	Y mm [inch]
630 [38.6]	161,5 [6.36]	130,3 [5.13]
805 [48.6]	172,5 [6.79]	141,2 [5.56]
990 [60.5]	184,4 [7.26]	153,4 [6.04]
1245 [76.0]	200,7 [7.90]	169,7 [6.68]
1560 [95.0]	220,5 [8.68]	189,5 [7.46]

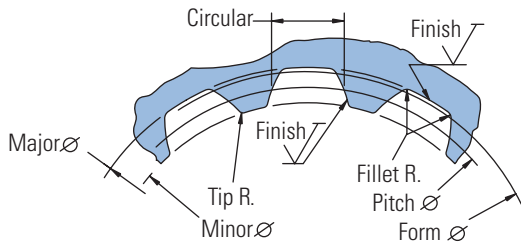
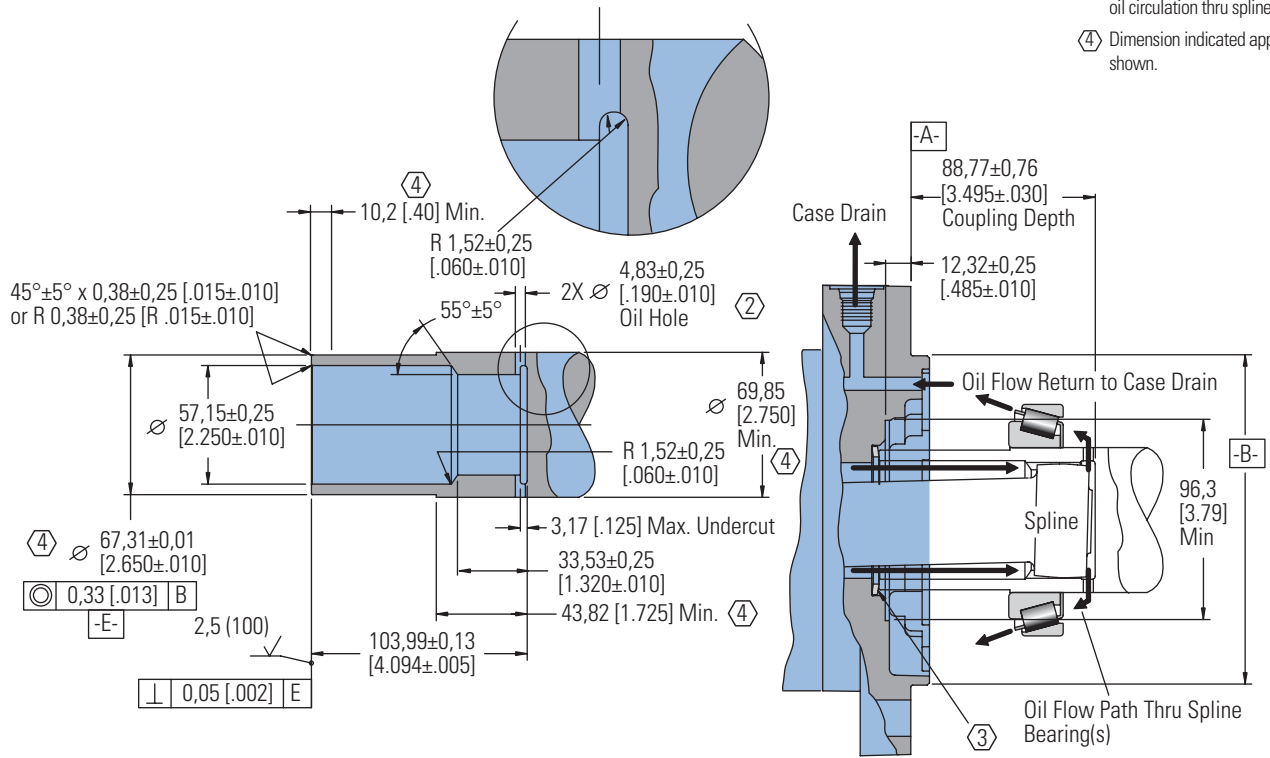


# VIS 45 Series

## Installation Information

### Bearingless

- 1 Internal spline in mating part to be per spline data. Specification material to be ASTM A304, 8620H carburize to a hardness of 59-62 HRC with case depth (to 50HRC) of 0,76 -1,27 [.030 -.050]. Dimensions apply after heat treat.
- 2 Mating part to have critical dimensions as shown. Oil holes must be provided and open for proper oil circulation.
- 3 Seal to be furnished with motor for proper oil circulation thru splines.
- 4 Dimension indicated applies within area shown.



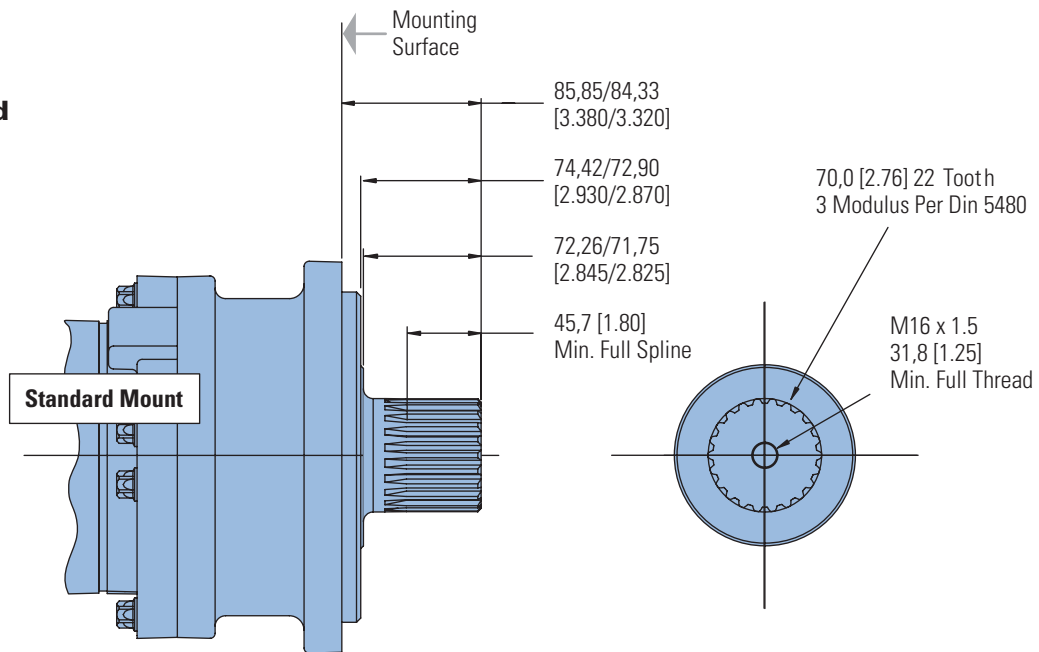
Spline Pitch.....	8/16
Pressure Angle.....	30°
Number of teeth.....	16
Class of Fit.....	Ref. 5
Type of Fit.....	Side
Pitch Diameter.....	Ref. 50,8000 [2.000000] $\text{Ⓞ} 0,33$ [.013] B
Base Diameter.....	Ref. 43,994090032 [1.7320508]
Major Diameter.....	56,34 ± 0,15 [2.218 ± .006]
Min. Minor Diameter.....	48,44 ± 0,08 [1.907 ± .003]
Form Diameter, Min.....	55,22 [2.174]
Fillet Radius.....	1,02 ± 0,25 [.040 ± .010]
Tip Radius.....	0,38 ± 0,13 [.015 ± .005]
Finish.....	1,6 (63)
Involute Profile Variation.....	+0,000 -0,025 [+ .0000 - .0010]
Total Index Variation.....	0,041 [.0016]
Lead Variation.....	0,015 [.0006]
Circular Space Width:	
Maximum Actual.....	6,180 [.2433]
Minimum Effective.....	6,048 [.2381]
Maximum Effective.....	Ref. 6,099 [.2401]
Minimum Actual.....	Ref. 6,114 [.2407]
Dimension Between Two Pins.....	Ref. 42,659 ± 0,05 [1.6795 ± .0020]
Pin Diameter.....	6,223 [.2450]

# VIS 45 Series

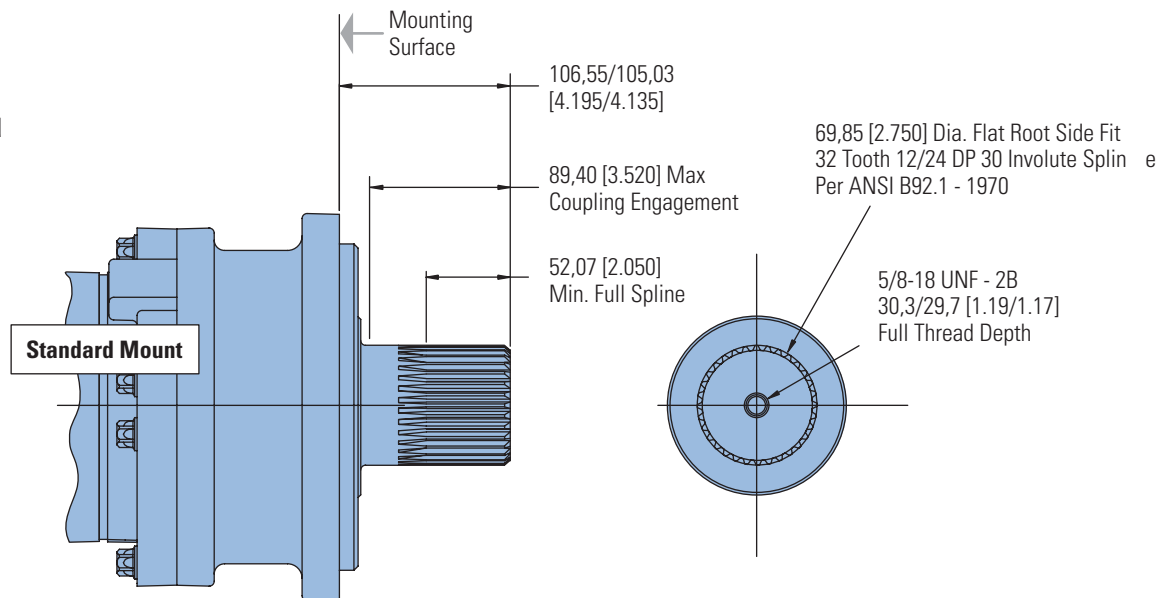
## Dimensions Shafts

### Splined

#### 70 mm 22 Tooth Splined



#### 2-3/4 Inch 32 Tooth Splined

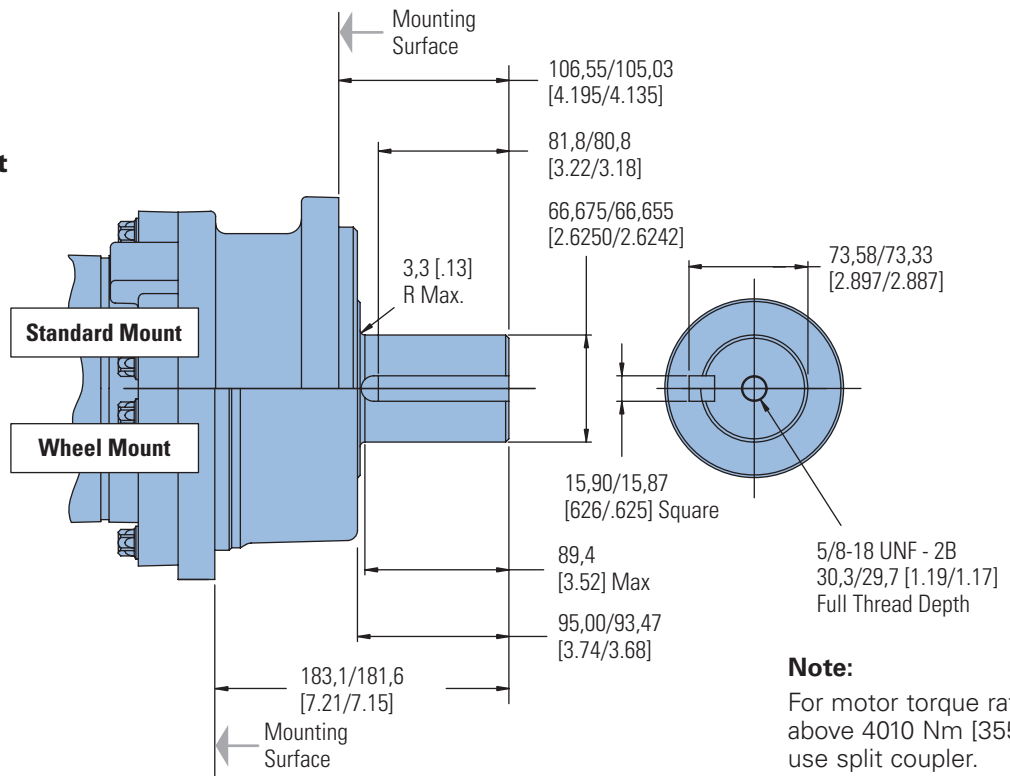


# VIS 45 Series

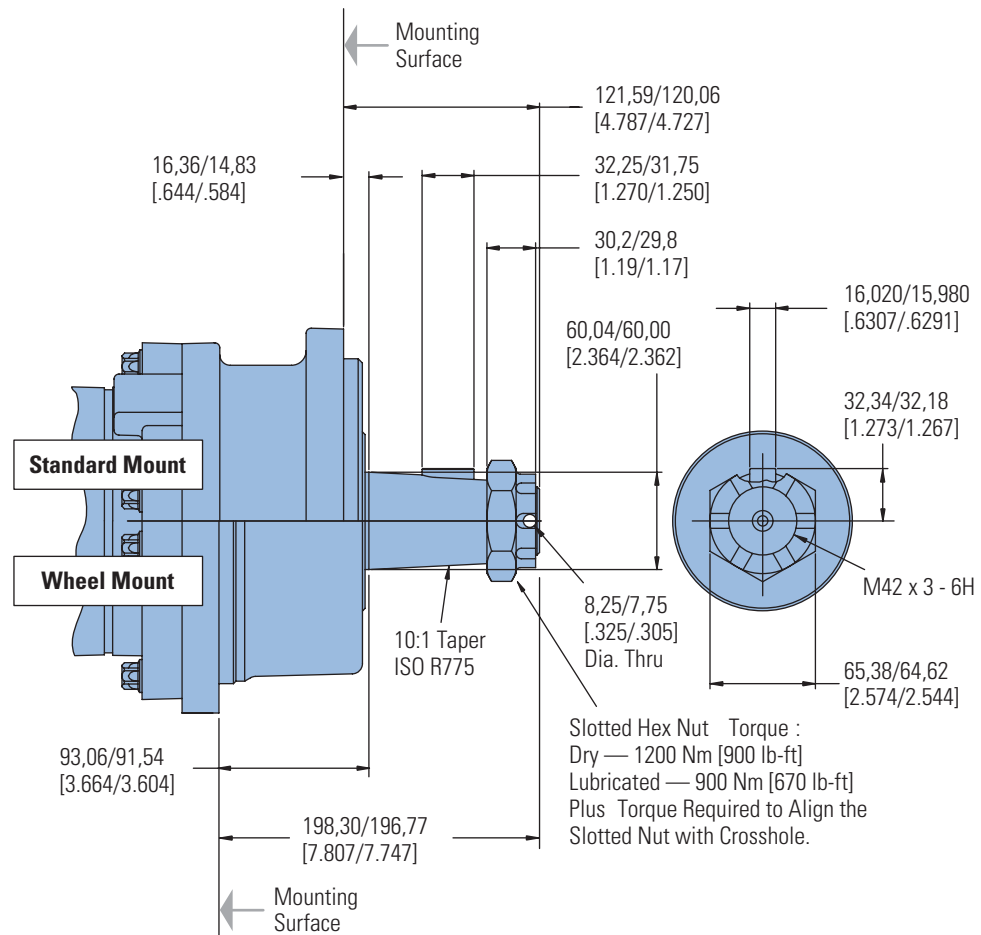
## Dimensions Shafts

Keyed

### 2-5/8 Inch Straight



### 60 mm Tapered



# VIS 45 Series

## Side Load Capacity

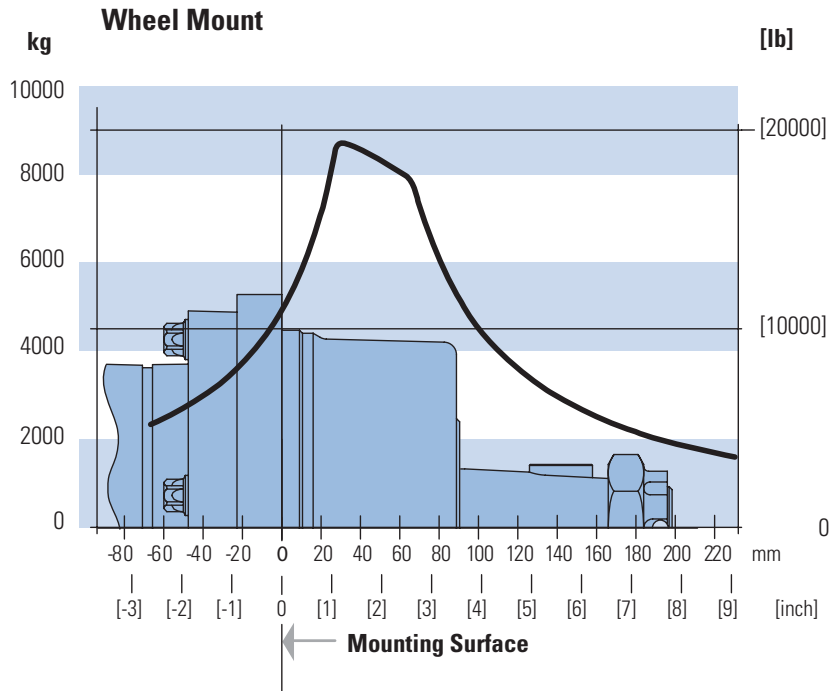
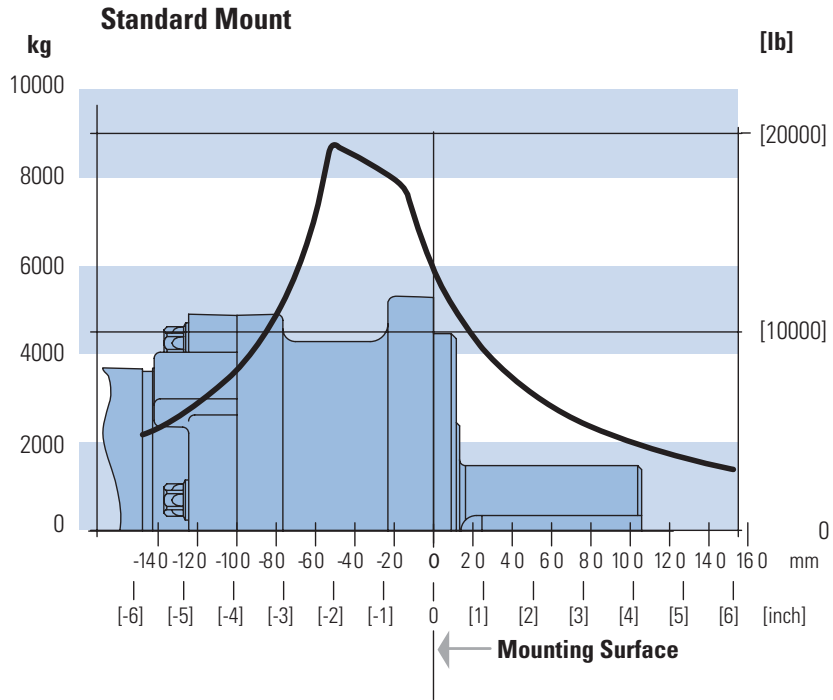
These curves indicate the radial load capacity on the motor shaft(s) at various locations.

**The curve is based on B 10 bearing life (2000 hours or 12,000,000 shaft revolutions at 100 RPM) at rated output torque.**

To determine radial load at speeds other than 100 RPM, multiply the load values given on the bearing curve by the factors in the chart below.

RPM	Multiplication Factor
50	1.23
100	1.00
200	0.81
300	0.72
400	0.66
500	0.62
600	0.58
700	0.56
800	0.54

For 3,000,000 shaft revolutions or 500 hours — Increase these shaft loads 52%.



# VIS 45 Series

Product Numbers

Closed Loop

Use three-digit prefix (155-, 156-, or 157-) plus four-digit number from charts for complete product number (ex: 157-0034).

**Orders will not be accepted without the three-digit prefix.**

## SAE

MOUNTING	SHAFT	PORT SIZE	DISPL. cm <sup>3</sup> /r [in <sup>3</sup> /r] / PRODUCT NUMBER				
			630 [38.6]	805 [48.6]	990 [60.5]	1245 [76.0]	1560 [95.0]
Standard	2-5/8 inch Straight	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	155-0107	-0108	-0109	-0110	-0111
	60 mm Tapered	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	155-0114	-0115	-0116	-0117	-0118
	70 mm 22 Tooth Splined	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	155-0121	-0122	-0123	-0124	-0125
	2-3/4 inch 32 Tooth Splined	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	155-0128	-0085	-0129	-0130	-0131
Wheel	2-5/8 inch Straight	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	156-0039	-0040	-0041	-0042	-0043
	60 mm Tapered	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	156-0046	-0047	-0048	-0049	-0050
Bearingless	(8 Bolt)	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	157-0066	-0067	-0068	-0069	-0070
	(4 Bolt)	1-5/16-12 UNF O-ring (2) 9/16-18 UNC Drain Port (1)	157-0004	-	-	-	-

157-0004

## ISO

MOUNTING	SHAFT	PORT SIZE	DISPL. cm <sup>3</sup> /r [in <sup>3</sup> /r] / PRODUCT NUMBER				
			630 [38.6]	805 [48.6]	990 [60.5]	1245 [76.0]	1560 [95.0]
Standard	2-5/8 inch Straight	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	155-0134	-0135	-0136	-0137	-0138
	60 mm Tapered	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	155-0141	-0142	-0143	-0144	-0145
	70 mm 22 Tooth Splined	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	155-0148	-0149	-0150	-0151	-0152
	2-3/4 inch 32 Tooth Splined	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	155-0155	-0156	-0157	-0158	-0159
Wheel	2-5/8 inch Straight	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	156-0053	-0054	-0055	-0056	-0057
	60 mm Tapered	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	156-0060	-0061	-0062	-0063	-0064
Bearingless	(8 Bolt)	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	157-0074	-0075	-0076	-0077	-0078
	(4 Bolt)	G 1 (BSP) (2) G 1/4 (BSP) Drain Port (1)	157-0081	-	-	-	-

157-0081

### Note:

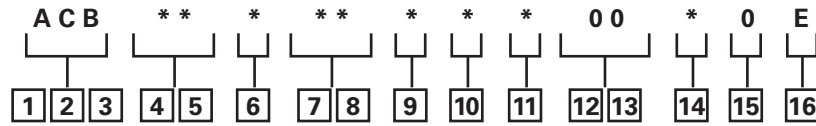
The product numbers on this page are for motors used in closed loop circuits. They include a back-pressure relief valve that is set at 15,2 bar [220 PSI].

- A case drain is required for all closed loop VIS motor applications.
- The maximum case pressure for the VIS motor is 3,5 bar [50 PSI].

# VIS 45 Series

## Model Code

The following 16 - digit coding system has been developed to identify all of the configuration options for the VIS 45 motor. Use this model code to specify a motor with the desired features. All 16 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.



**1, 2, 3 Product Series**  
**ACB** – VIS 45 Motor

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

**39** – 630 [38.6]  
**49** – 805 [48.6]  
**60** – 990 [60.5]  
**76** – 1245 [76.0]  
**95** – 1500 [95.0]

**6 Mounting Type**

**A** – 4 Bolt Bearingless  
 158,70 [6.250] Pilot Dia.  
 With 9,07 [.355] Pilot Length  
 and 17,53 [.690] Dia holes  
 on 190,50 [7.500] Dia. B. C.  
 - Max. Torque Allowed 3615  
 Nm [32000 lb - in] (Displ.  
 Code 32, 35, 39 Only)

**C** – 8 Bolt Bearingless  
 158,70 [6.250] Pilot Dia.  
 With 9,07 [.355] Pilot Length  
 and 17,53 [.690] Dia holes  
 on 190,50 [7.500] Dia. Bolt  
 Circle

**D** – 4 Bolt Wheel Mount  
 200,0 [7.87] Pilot Dia. With  
 9,0 [.35] Pilot Length and  
 20,57 [.810] Dia. Holes on  
 250,0 [9.84] Dia. Bolt Circle

**H** – 4 Bolt Standard Mount  
 200,0 [7.87] Pilot Dia. With  
 9,0 [.35] Pilot Length and  
 20,57 [.810] Dia. Holes on  
 250,00 [9.84] Dia. Bolt Circle

**7, 8 Output Shaft**

**00** – None (Bearingless)

**05** – 2-5/8 inch Dia. Straight  
 Shaft with 5/8-18 UNF-2B  
 Thread in End and 15,88  
 [.625] Sq. X 81,3 [3.20]  
 Straight Key

**06** – 70 mm Dia. 22 Tooth  
 3 Modulus Splined Shaft Per  
 DIN 5480 with M16 X 1,5  
 Thread in End

**08** – 2-3/4 inch Dia. Flat  
 Root Side Fit 32 Tooth 12/24  
 DP 30°. Involute Spline with  
 5/8-18 UNF-2B Thread in End

**09** – 60 mm Dia. 10:1  
 Tapered Shaft Per ISO R775  
 with M42 x 3 - 6H Threaded  
 Shaft End, 16W x 10H x 32L  
 [.630W x .394H x 1.260L]

**9 Ports**

**A** – 1-5/16-12 UN-2B O-ring  
 Port, Accepts Fittings for  
 SAE J1926/1

**B** – G 1 (BSP) Ports, Accepts  
 Fittings with Elastomeric or  
 Deformable Metallic Sealing  
 Member Per DIN 3852

**10 Case Flow Options**

**B** – Check valve with  
 leakage orifice, no case  
 drain (for Open Loop only)

**D** – Shuttle Valve with Side  
 Facing 9/16-18 UNF-2B,  
 O-ring Port Case Drain,  
 Accepts Fittings for SAE  
 J1926/1, Case Drain  
 Required

**H** – Shuttle Valve with Side  
 Facing G 1/4 (BSP) Port  
 Case Drain, Case Drain  
 Required

**11 Back-Pressure Relief**

**0** – None (for Open Loop  
 Only)

**1** – Set at 15,2 bar [220 psi]  
 (for Servo Pumps)

**3** – Set at 4,5 bar [65 psi]  
 (for Manual Pumps)

**4** – Set at 20,7 bar [300 PSI]  
 (for High Pressure Servo  
 Pumps)

**12, 13 Special Features**

**00** – None

**14 Paint/ Special  
 Packaging**

**0** – Primer, Individual Box

**A** – Low Gloss Black Primer,  
 Individual Box

**B** – No Paint, Bulk Box  
 Option

**C** – Low Gloss Black Primer,  
 Bulk Box Option

**15 Eaton Assigned  
 Code when Applicable**

**0** – Assigned Code

**16 Eaton Assigned  
 Design Code**

**E** – Assigned Design Code