

TG Hydraulic Torque Motor



Type		TG 195	TG 240	TG 280	TG 405	TG 475	TG 530	TG 625
Geometric displacement (ccm)		196	228	296	405	462	540	647
Weight (kg)		12,3	12,4	13	13,7	14	14,6	15,5
Max speed (RPM)	Cont.	330	290	250	185	160	140	115
	Int.	425	350	315	220	195	170	138
Max torque (Nm)	Cont.	530	700	810	1010	1085	980	1015
	Int.	600	790	930	1180	1180	1240	1250
	Peak	750	980	1120	1360	1260	1380	1380
Max output (kW)	Cont.	15,5	17,5	18	15,5	14,5	11,5	10
	Int.	18	20	21	18	16,5	15	12
Max pressure drop (Bar)	Cont.	205	205	205	190	175	140	120
	Int.	240	240	240	225	190	175	155
	Peak	276	276	276	250	205	205	175
Max flow (L/min)	Cont.	70	75	80	75	75	75	75
	Int.	85	90	95	90	90	90	90

*Continuous pressure:Max.value of operating motor continuously

*Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C . Performance data is typical.

TG series torque motor adapt the advanced Gerolore gear set, designed with disc distribution flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

CHARACTERISTICS FEATURES

- Advanced manufacturing devices for the Gerolore gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offer capacities of high pressure and high torque in the wide of applications.
- Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- The new series motor is suitable for vehicles with greater loads and pressure drop.

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PERFORMANCE DATA

TG 195

Pressure (MPa)

		Pressure (MPa)								Max.cont.	Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24		
Flow (L/min)	2	39 8	88 4	132 4	286 3	370 2					
	4	42 16	85 14	188 13	270 11	361 10	427 9	506 6			
	8	43 35	90 32	192 29	291 28	367 27	450 25	529 23	600 19		
	15	38 74	92 71	196 68	298 64	381 60	462 58	530 55	602 50		
	25		82 124	188 121	283 117	377 113	456 108	528 103	605 92		
	34		79 170	183 169	270 167	362 160	447 154	515 146	591 135		
	45			163 223	259 218	352 212	441 208	510 199	593 189		
	53			149 260	256 258	350 254	440 248	501 241	582 230		
	60			132 299	248 292	336 284	432 276	497 272	575 263		
	68			120 336	230 332	330 327	412 319	486 310	570 301		
	75			108 375	208 372	311 365	403 358	480 350			
	85				184 425	280 420	380 411	462 390			

TG 240

Pressure (MPa)

		Pressure (MPa)								Max.cont.	Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24		
Flow (L/min)	2	44 6	90 4	182 3	291 2	374 1					
	4	48 15	100 13	216 11	310 11	405 9	484 7	549 3			
	8	50 31	104 29	212 27	320 25	421 23	518 20	603 16	700 10		
	15	44 63	106 61	207 58	318 55	426 52	529 47	623 41	712 34		
	25		101 103	209 100	324 96	428 92	532 87	620 81	705 71		
	34		88 145	205 143	316 139	421 133	522 126	623 120	702 109		
	45			186 192	294 187	422 182	507 176	595 170	688 160		
	53			175 226	290 221	393 215	496 208	584 203	678 194		
	60			152 256	270 253	390 248	485 242	569 235	661 222		
	68			140 292	265 288	351 283	482 278	563 273	642 256		
	75			124 324	235 321	344 316	448 308	552 300			
	85			207 366	335 360	442 351	546 338				

TG 280

Pressure (MPa)

		Pressure (MPa)								Max.cont.	Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24		
Flow (L/min)	2	50 3	93 1								
	4	62 11	141 10	294 9	429 8	502 7	618 4				
	8	63 22	147 21	298 20	432 19	565 16	667 13	761 9	819 5		
	15	66 48	144 47	305 45	427 43	568 39	671 33	810 28	894 20		
	25	59 82	138 81	289 80	420 76	552 71	676 64	791 56	932 44		
	34	48 113	130 112	297 110	393 107	562 102	689 96	805 86	926 73		
	45		96 150	268 149	385 148	527 143	636 135	753 124	880 112		
	53		76 177	242 176	383 175	524 173	631 165	758 152	900 138		
	60		64 200	225 199	362 198	506 193	627 186	753 174	892 162		
	68			200 225	333 224	470 222	630 212	750 201	882 194		
	75			178 251	322 250	464 247	610 240	741 232	870 215		
	85			140 285	316 284	455 278	570 270	728 257			
	95			106 316	260 314	431 311	552 307	700 292			

TG 405

Pressure (MPa)

		Pressure (MPa)								Max.cont.	Peak
		1.75	3.5	7	10.5	14	17.5	19	22.5		
Flow (L/min)	2	85 3	170 2								
	4	90 8	182 7	368 6	540 5	715 4	885 3				
	8	93 17	190 16	385 15	575 14.4	750 13	895 10	950 9	1155 7		
	15	88 36	180 35	380 34	575 33	750 31	905 28	980 24	1165 20		
	25	88 60	180 59	380 58	575 56	750 53	915 49	1010 44	1165 40		
	34	75 83	165 83	365 82	560 81	750 77	915 72	1000 68	1180 60		
	45		150 110	350 110	545 109	735 106	900 102	980 94	1165 86		
	53		125 130	330 129	525 128	720 125	885 120	960 112	1150 100		
	60		100 147	305 147	505 146	680 145	860 142	940 138	1125 130		
	68			275 167	480 167	660 164	845 158	925 150	1100 140		
	75			250 184	455 183	635 180	820 176	900 170	1065 158		
	85			225 209	415 208	600 206	785 202	865 194			
	90			160 220	365 218	575 216	770 210				

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PERFORMANCE DATA

TG 475

		Pressure (MPa)					
		1.75	3.5	7	10.5	14	17.5
		Max. cont. Peak					
		1.75	3.5	7	10.5	14	17.5
Flow (L/min)	2	93	186				
		2	1				
4		98	202	405	608	805	
		7	6	5	5	4	
8		98	206	430	652	844	1005
		15	14	13	13	12	10
15		94	202	441	654	875	1056
		31	30	28	28	26	23
25		94	202	441	654	875	1056
		52	51	48	45	43	39
34		75	180	420	660	850	1085
		72	71	68	65	61	55
45			144	380	627	835	1062
			96	95	93	90	84
53			116	346	573	795	1008
			113	112	111	107	102
60			82	318	539	790	975
			128	128	127	124	119
68			58	272	520	740	955
			146	145	144	141	136
75				230	480	702	920
				161	160	158	153
85				200	454	662	876
				182	180	177	168
90				150	378	615	840
				194	193	190	182

TG 625

		Pressure (MPa)					
		1.75	3.5	7	10.5	12	15.5
		Max. cont. Max. int. Peak					
		1.75	3.5	7	10.5	12	15.5
Flow (L/min)	2	119	230				
		2	1				
4		135	268	552	805	940	
		5	5	4	4	3	
8		145	285	574	825	955	1255
		11	11	10	10	9	7
15		140	280	595	875	982	1276
		22	22	21	21	20	16
25		130	275	590	886	1005	1302
		37	36	36	35	34	30
34		115	260	580	890	1015	1310
		51	51	50	49	47	44
45			235	555	870	995	1280
			69	68	67	66	63
53			200	520	850	975	1250
			80	80	79	78	76
60			170	490	825	935	1215
			91	91	90	89	88
68			145	430	775	880	1185
			104	103	102	101	99
75				420	730	855	1130
				114	113	112	110
83				380	660	795	
				130	129	128	
90				290	585	730	
				138	137	136	

TG 530

		Pressure (MPa)					
		1.75	3.5	7	10.5	14	17.5
		Max. cont. Max. int.					
		1.75	3.5	7	10.5	14	17.5
Flow (L/min)	2	105	198				
		2	2				
4		125	231	470	688	932	1136
		6	5	5	4	4	3
8		134	238	496	749	966	1175
		13	13	12	11	11	8
15		122	230	505	750	981	1218
		27	26	26	25	24	21
25		100	225	500	774	986	1220
		44	43	42	41	39	35
34		80	212	481	748	977	1243
		62	61	60	58	54	49
45			173	437	714	936	1190
			82	82	81	79	75
53			142	416	678	938	1170
			97	97	96	94	89
60			106	380	664	896	1158
			110	110	109	108	106
68			85	357	616	870	1108
			125	124	124	123	120
75				318	600	826	1100
				138	137	135	132
85				292	538	780	
				154	153	152	
90				214	486	755	
				169	168	168	

Torque (N·m) 486
Speed (rpm) 168

cont.
int.

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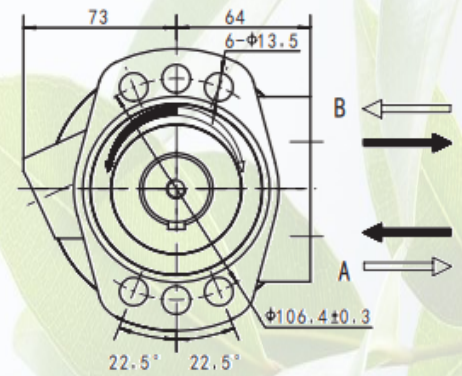
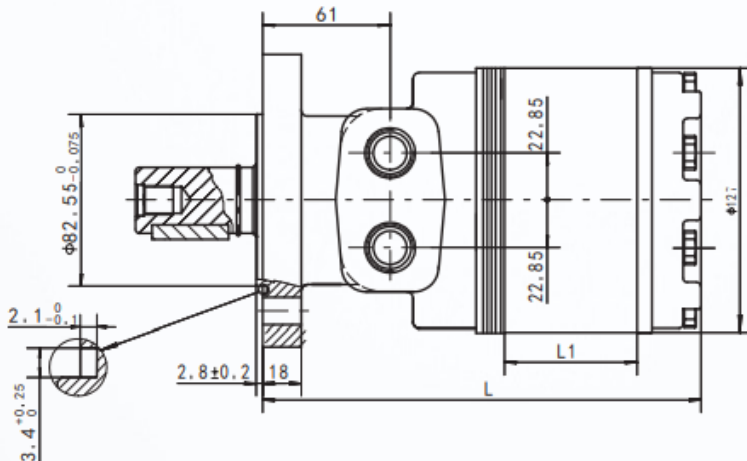
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OVERVIEW DRAWING

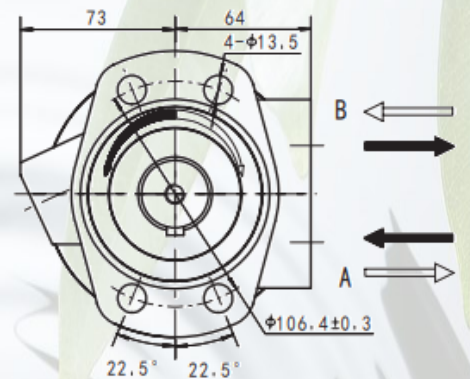
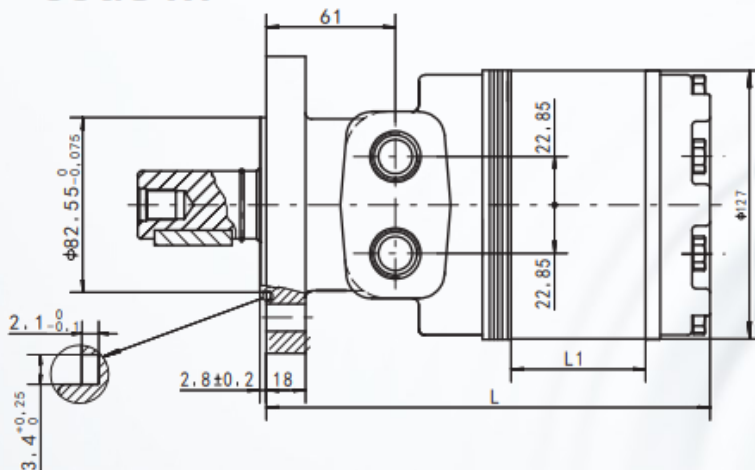
Code E

Magneto Mount 6-Hole



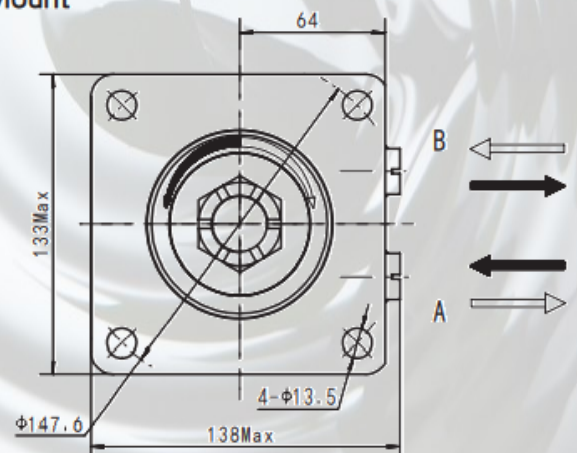
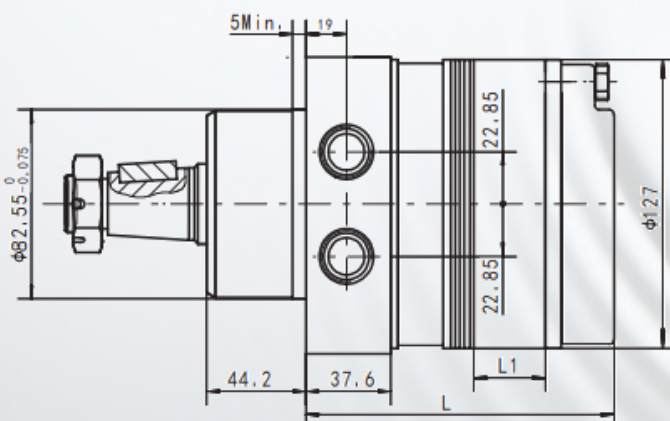
Code M

Magneto Mount 4-Hole



Code H

Wheel Mount



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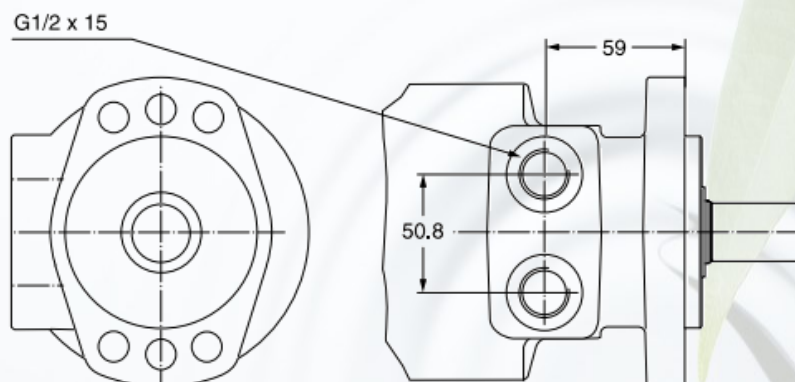


OVERWIEV DRAWING - continued

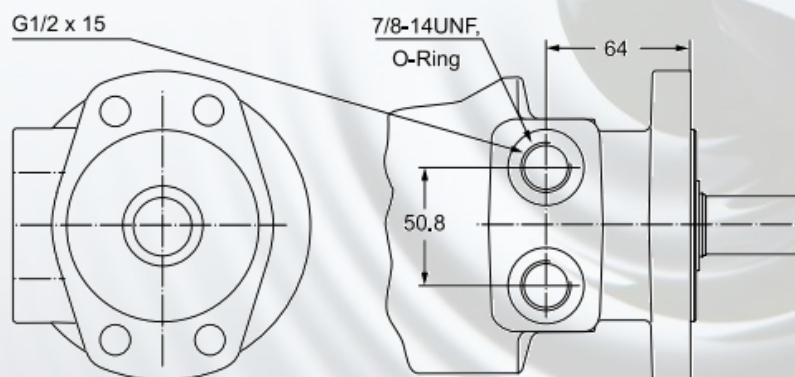
LENGTH (mm)	TG 195	TG240	TG 280	TG 405	TG 475	TG 530	TG 625
CODE E - L1	17	19,5	25,5	35,5	39,4	47,3	57
CODE E - L	163,5	163,5	172	182	186	194	204
CODE M - L1	17	19,5	25,5	35,5	39,4	47,3	57
CODE M - L	163,5	163,5	172	182	186	194	204
CODE H - L1	17	19,5	25,4	35,5	39,4	47,3	57
CODE H - L	125,5	125,5	134,5	144	148	156	166

PORTS

Code W



Code W



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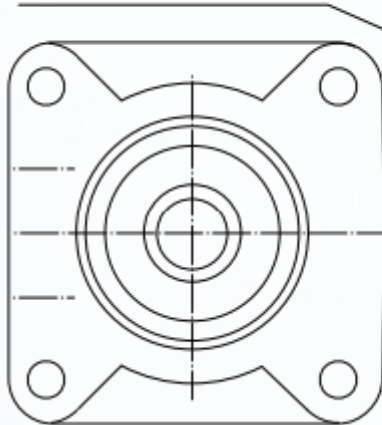
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PORTS - continued

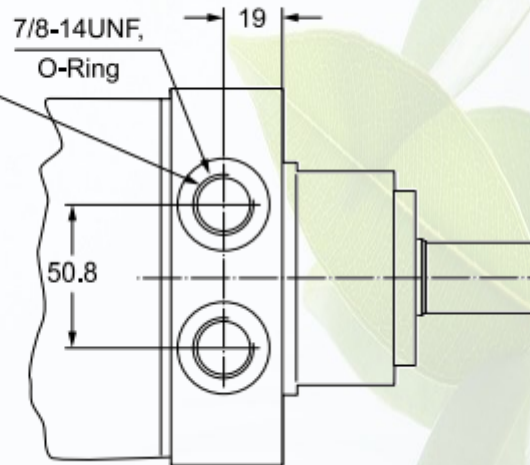
Code W

G1/2 x 15



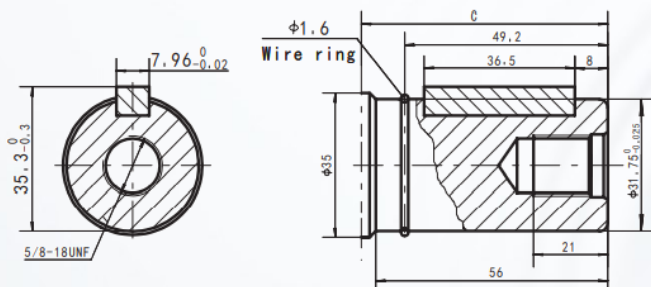
Code V

7/8-14UNF,
O-Ring



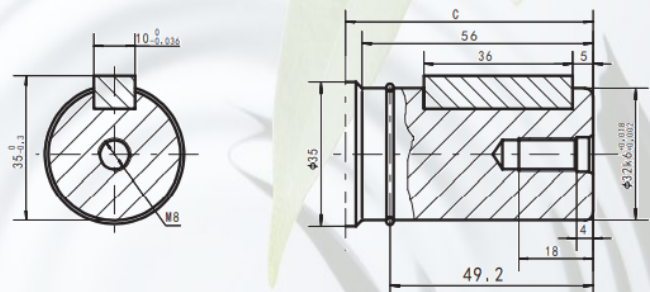
SHAFT EXTENSIONS

Shaft 45



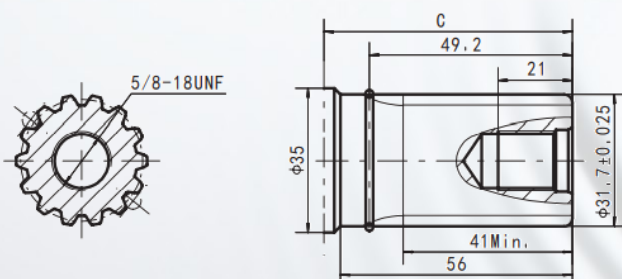
Shaft G2: Cylindrical shaft $\varnothing 31.75$
Parallel key 7.96x7x36.5

Shaft 46



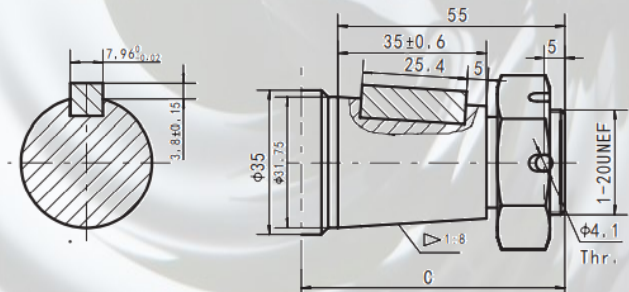
Shaft B1: Cylindrical shaft $\varnothing 32$
Parallel key 10x8x36

Shaft 44



Shaft FD1: Splined 14-DP12/24
Flat root side fit
to fit ANSI B92.1 1996

Shaft 08



Shaft T4: Cone-shaft $\varnothing 31.75$
Parallel key 7.96x7.96x25.4
Tightening torque: 200±10Nm

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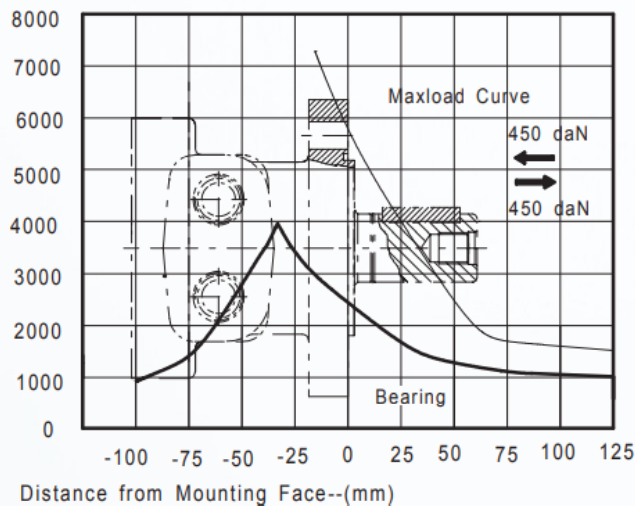
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AXIAL AND RADIAL FORCES

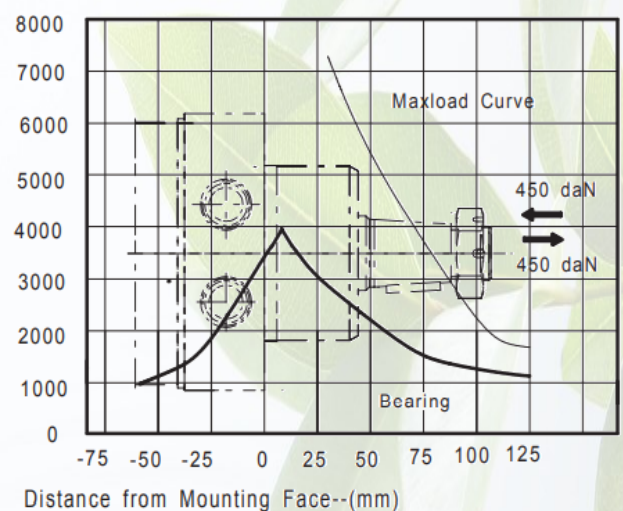
Code E,M mount

Side Load-(daN)



Code W - wheel mount

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L_{10} bearing life at 12×10^6 revolutions.

The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

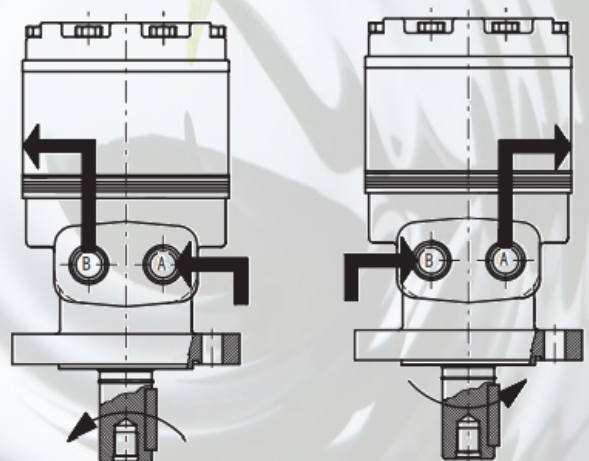
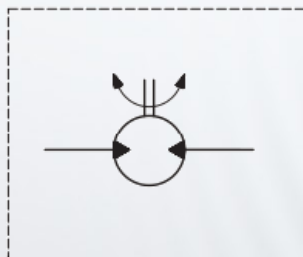
STANDARD DIRECTION OF SHAFT ROTATION

Direction of shaft rotation: Reverse timed

When facing shaft end of motor, shaft to rotate:

Clockwise when port "B" is pressurized.

Counter-clockwise when port "A" is pressurized.



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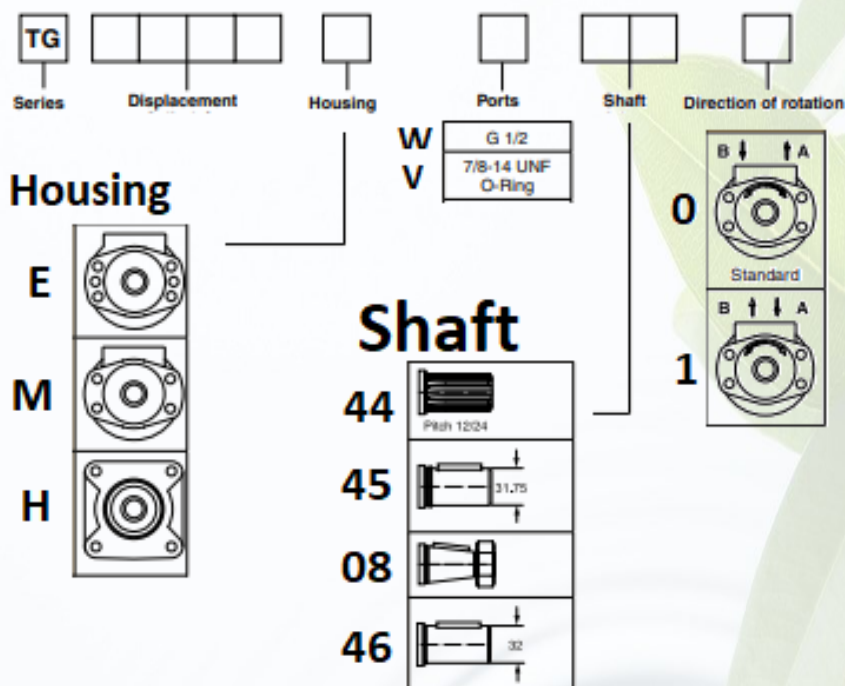
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ORDERING CODE



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