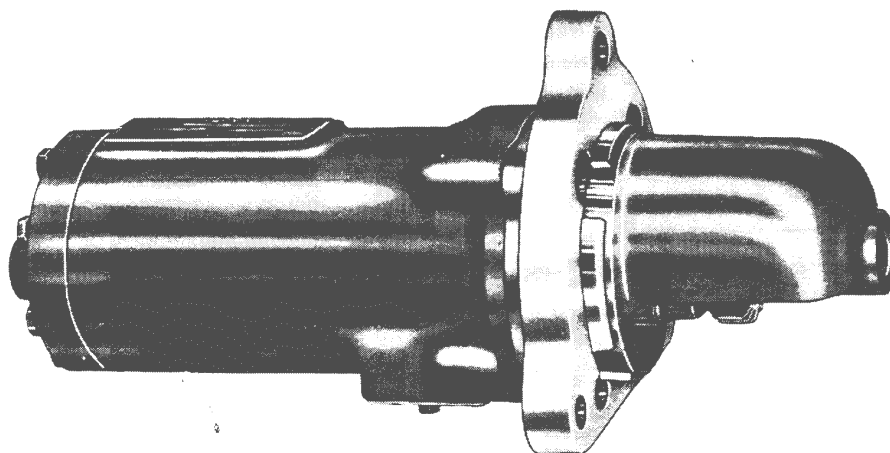
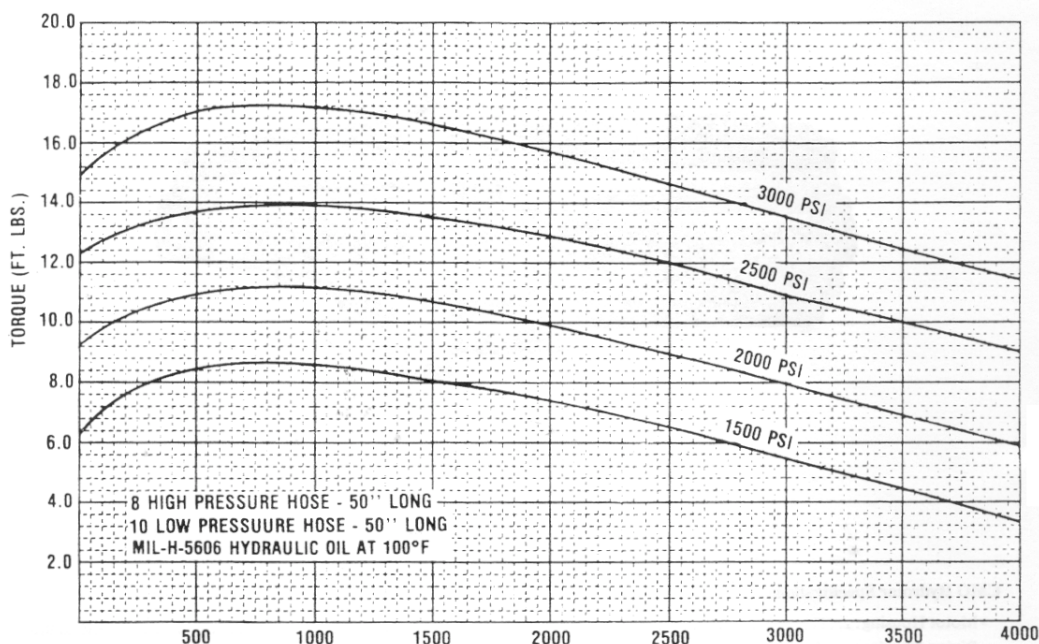


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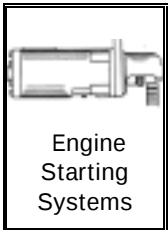


CMO Hydrotor Specifications

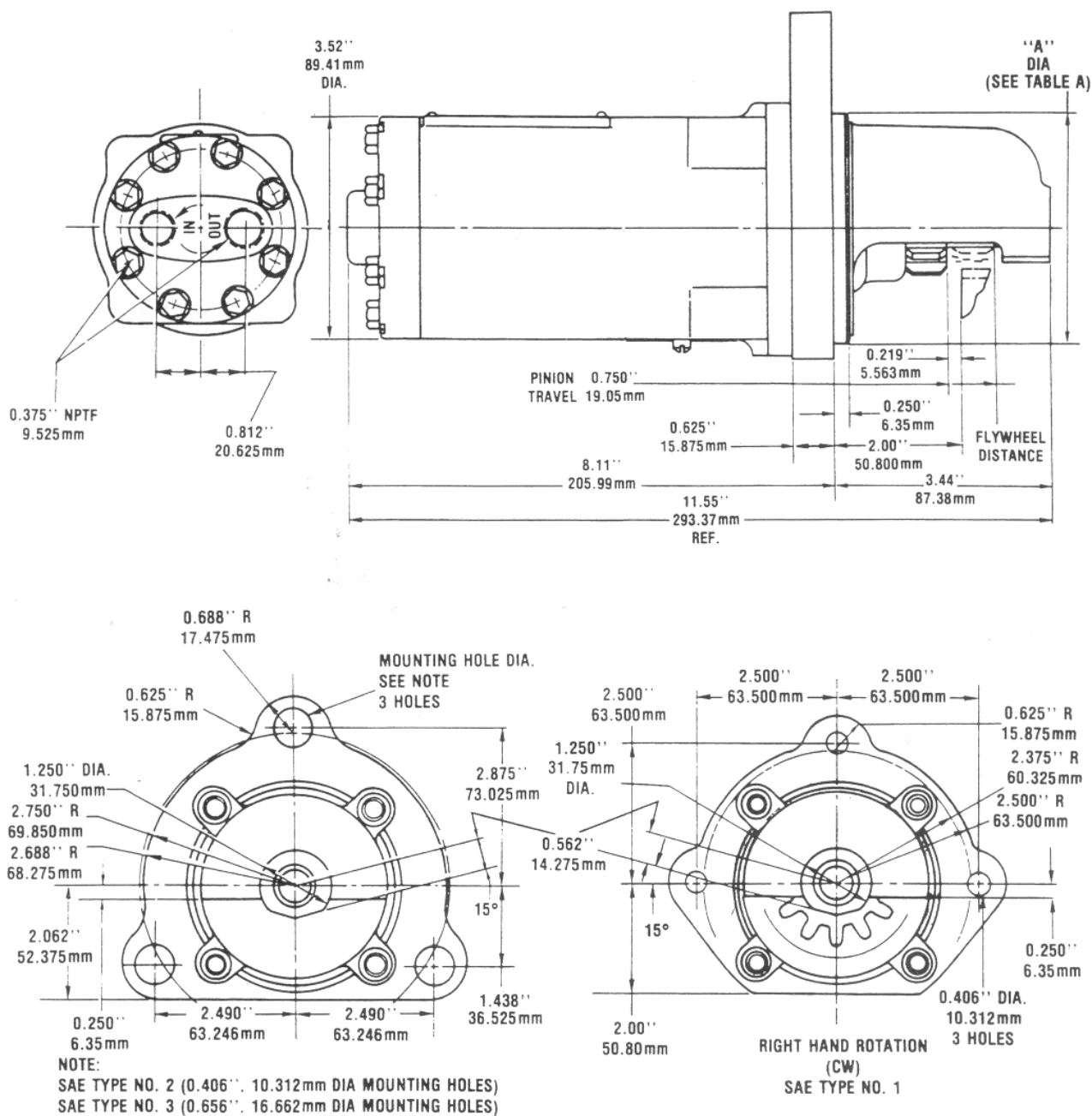
- Motor Housing	Aluminum
- Pinion Housing	Aluminum
- Cylinder	Steel
- Piston	Bronze
- Number of Pistons	Seven
- Displacement	0.50 in ³ (8.19 cm ³)/Rev.
- Speed Range	0 to 7000 RPM
- Drive Type	Inertia
- Maximum Working Pressure	3000 psi (207 bars)
- Rotation (Viewing Drive End)	cw - standard, ccw - optional
- Duty Cycle	Intermittent
- Torque Chart	See Page 6
- Dimensions	See Page 7
- Weight	11.0 lbs (5.0 kgs)
- Overall Volumetric Efficiency	92 percent



Torque vs RPM of CMO Hydrotor

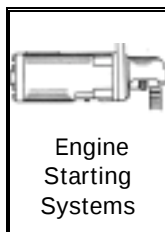
 Engine Starting Systems	Document: Data Sheet Version: 1 Status: actual Author: bs Date: 02-07-15 Approved: rs Date: 02-07-15 File: PC	CMO Hydrator Data Sheet	 HUGLI HUEGLI TECH LTD SWITZERLAND Tel.: +41-62-916 50 30 Fax: +41-62-916 50 35 www.huegli-tech.com
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Dimensions



SAE TYPE MOUNTING FLANGE	"A" DIA. (PILOT DIA.)	
	IN.	MM
SAE NO. 1	3.495-3.499	(88.773-88.875)
SAE NO. 2	3.620-3.624	(91.948-92.050)
SAE NO. 3	3.620-3.624	(91.948-92.050)

Table A

 Engine Starting Systems	Document: Data Sheet Version: 1 Status: actual Author: bs Date: 02-07-15 Approved: rs Date: 02-07-15 File: PC	CMO Hydrotor Data Sheet	 HUGLI HUEGLI TECH LTD SWITZERLAND Tel.: + 41-62-916 50 30 Fax: + 41-62-916 50 35 www.huegli-tech.com
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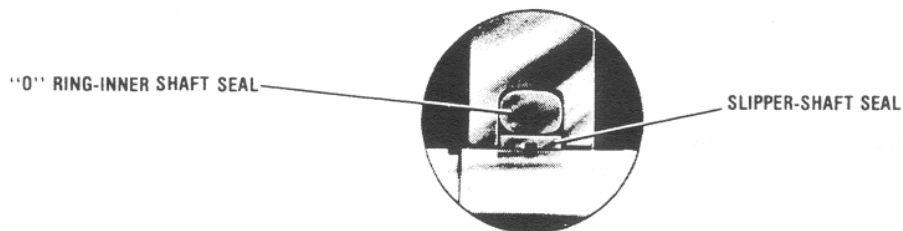
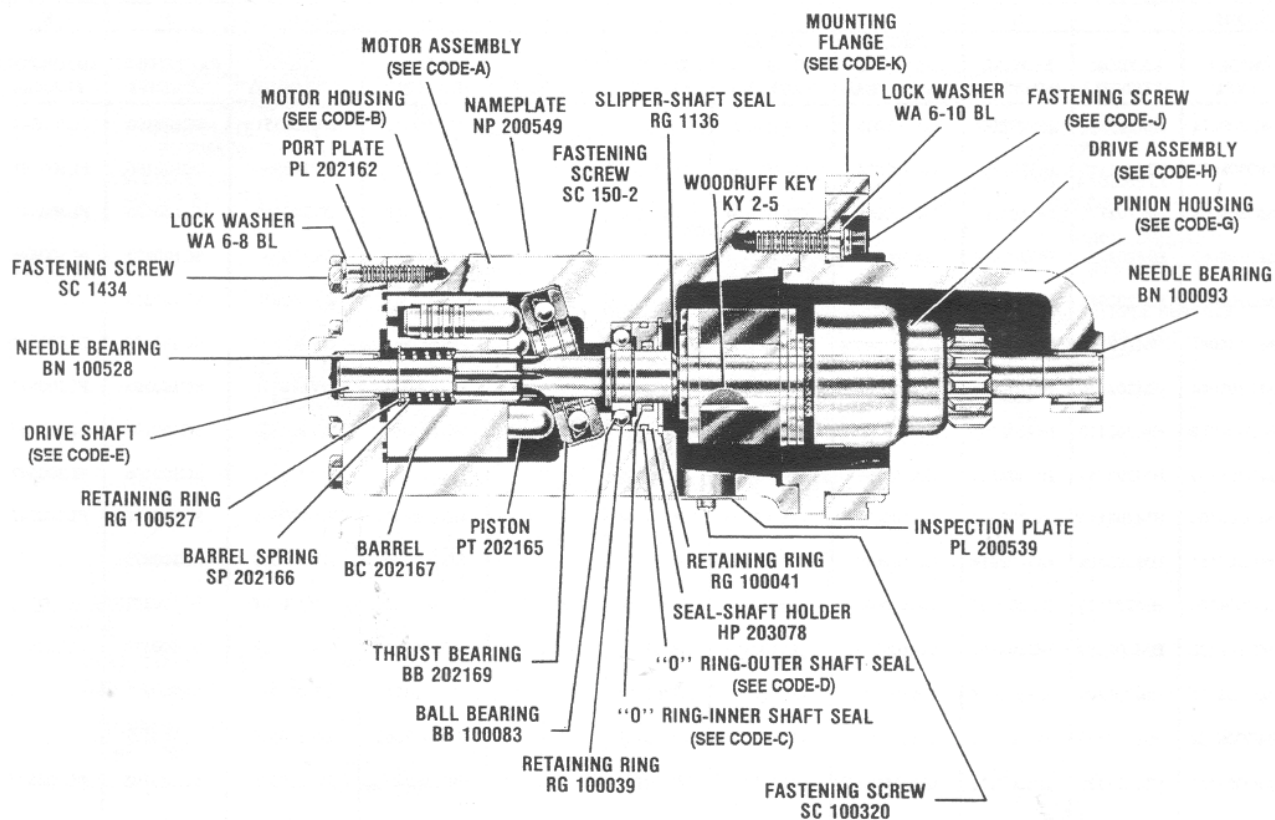
Hydrotor Variations

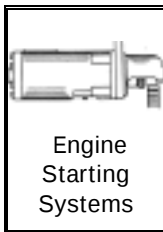
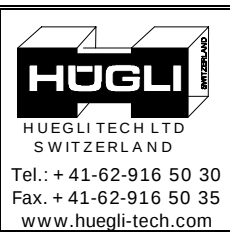
MODEL TYPE	MOUNTING FLANGE TYPE	FLANGE TO RING GEAR DIMENSION INCHES (MM)	FLANGE MOUNTING HOLES INCH (MM)	NUMBER OF TEETH	DIAM-ETRAL PITCH	PINION O.D. INCHES (MM)	PRESSURE ANGLE	ROTA-TION	REMARKS
CMO 300271	SAE #3	2.00 (50.8)	.53 (13.46)	12/13	8/10	1.825 (46.355)	20°	CW	SUPERSEDED BY CMO 308121 MNTNG FLNG ROTATED 90° CCW
* CMO 300416				10/11	8/10	1.575 (40.005)	20°	CW	
* CMO 308051	SAE #3	2.00 (50.8)	.53 (13.46)	12/13	10/12	1.467 (37.262)	20°	CW	
* CMO 308056	SPECIAL	0.98 (24.89)	.45 (11.43)	13	8/10	1.825 (46.355)	20°	CW	
CMO 308057	SAE #1	2.00 (50.8)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CW	
* CMO 308064	SAE #3			13	8/10	1.825 (46.355)	20°	CW	
* CMO 308065	SAE #3			12	10/12	1.467 (37.262)	20°	CW	
* CMO 308066	2 BOLT SPEC.			13	8/10	1.825 (46.355)	20°	CW	
CMO 308068	SAE #1	2.00 (50.8)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CW	
CMO 308069	SPECIAL	0.94 (23.88)	.45 (11.43)	10/11	8/10	1.575 (40.005)	20°	CW	
CMO 308075	SAE OUTBRD	1.61 (40.89)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CW	SUPERSEDED BY CMA 308008 ETHYLENE - PROPLYENE SEALS
* CMO 308077	SAE #3	2.00 (50.8)	.66 (16.76)	12	6/8	2.250 (57.150)	20°	CW	
CMO 308081	SAE #1	2.00 (50.8)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CW	
* CMO 308083	SAE #1	2.00 (50.8)	.41 (10.41)	13	8/10	1.825 (46.355)	20°	CCW	
CMO 308084	SAE #1	2.00 (50.8)	.41 (10.41)	13	8/10	1.825 (46.355)	20°	CW	
* CMO 308085	SAE #3	2.00 (50.8)	.41 (10.41)	12	6/8	2.250 (57.150)	20°	CCW	
CMO 308086	SAE #1	2.00 (50.8)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CCW	
* CMO 308094	SPECIAL			9/10	10/12	1.167 (29.642)	20°	CW	
CMO 308103	SAE #1	2.00 (50.8)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CW	
CMO 308106	SAE #1	2.00 (50.8)	.41 (10.41)	9/10	10	1.200 (30.480)	14.5°	CW	
CMO 308111	SAE #2 BOLT	1.61 (40.89)	.41 (10.41)	10/11	8/10	1.575 (40.005)	20°	CCW	WET CLUTCH WET CLUTCH
CMO 308121	SPECIAL	0.98 (24.89)	.45 (11.43)	13	8/10	1.825 (46.355)	20°	CW	
CMO 308122	SAE #1	2.00 (50.8)	.41 (10.41)	9/10	10/12	1.167 (29.642)	20°	CW	
CMO 308126	2 BOLT SP.	0.87 (22.10)	.48 (12.19)	10/11	8/10	1.575 (40.005)	20°	CW	
CMO 308128	SPECIAL	0.92 (23.37)	.45 (11.43)	10/11	8/10	1.575 (40.005)	20°	CW	
CMO 308131	SAE #1	2.00 (50.8)	.41 (10.41)	9/10	8/10	1.450 (36.830)	20°	CW	
CMO 308132	SAE #4	.87 (22.098)	.48 (12.19)	10/11	8/10	1.575 (40.005)	20°	CCW	
CMO 308134	SPECIAL	2.00 (50.8)	.41 (10.41)	9/9.5	MOD 3	1.358 (34.932)	15°	CW	
CMO 308135	SPECIAL	2.00 (50.8)	.41 (10.41)	9/9.5	MOD 3	1.358 (34.932)	15°	CW	
CMO 308145	SPECIAL	.94 (23.88)	.45 (11.43)	10/11	8/10	1.575 (40.005)	20°	CCW	
CMO 308146	SAE #1	2.00 (50.8)	.41 (10.41)	9/10	10/12	1.167 (29.642)	20°	CCW	4 - BOLT FLANGE 4 - BOLT FLANGE
CMO 308172	SAE #4	1.61 (40.89)	.48 (12.19)	10/11	8/12	1.575 (40.005)	20°	CW	

*OBSOLETE - NOT AVAILABLE

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Spare Parts



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Spare Part Variations

CODE	A	B	C	D	E	F	G	H	J	K
MODEL TYPE	MOTOR ASSEMBLY	MOTOR HOUSING	INNER 'O' RING SHAFT SEAL	OUTER 'O' RING SHAFT SEAL	DRIVE SHAFT	GASKET	PINION HOUSING	DRIVE ASSEMBLY	FASTENING SCREWS	MOUNTING FLANGE
CMO300271	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200551	SC100196	FL200544
CMO308057	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200550	SC100196	FL200547
CMO308068	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200550	SC100196	FL200547
CMO308069	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200550	SC100272	FL200694
CMO308075	HM202983	HG202814	GA100088	GA100104	SH202815		HG200749	DV200550	SC100273	
CMO308081	HM202551	HG202161	GA202543	GA202540	SH202164		HG200541	DV200550	SC100196	FL200547
CMO308084	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200551	SC100196	FL200547
CMO308086	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200558	SC100196	FL200547
CMO308103	HM202743	HG202161	GA100088	GA100104	SH202164		HG200541	DV200558	SC100196	FL200547
CMO308106	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200553	SC100196	FL200547
CMO308111	HM202816	HG202814	GA100088	GA100104	SH202815		HG200749	DV200558	SC100273	(1)
CMO308121	HM202170	HG202161	GA100088	GA100104	SH202164	GA203068	HG202442	DV200551	SC100272	(2) (3)
CMO308122	HM202170	HG202161	GA100088	GA100104	SH202164	GA203068	HG200541	DV200559	SC100273	FL200547 (3)
CMO308126	HM203205	HG202814	GA100088	GA100104	SH202164		HG203178	DV200550	SC100273	
CMO308128	HM202170	HG202161	GA100088	GA100104	SH202164		EHS41-3062	DV200550	SC100272	
CMO308131	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200555	SC100196	FL200547
CMO308132	HM203365	HG202814	GA100088	GA100104	SH202164		HG203178	DV200558	SC100273	
CMO308134	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV203423-1	SC100196	FL203367
CMO308135	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV203423-1	SC100196	FL203368
CMO308145	HM202550	HG202161	GA100088	GA100104	SH202164		HG200541	DV200558	SC100272	FL200694
CMO308146	HM202170	HG202161	GA100088	GA100104	SH202164		HG200541	DV200559	SC100196	FL200547
CMO308172	HM206193	HG202814	GA100088	GA100104	SH202815		HG200689	DV200550	SC100273	(1)

- (1) Replace needle bearing BN100093 with bearing BN100091
(2) Integral part of the pinion housing
(3) Special wet clutch application (Parts not illustrated)



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