

SMA ROTATING SHAFT MOTOR TYPE C1

TECHNICAL DATA													
MODEL : SMA C1 standard													
Nominal displacement cc/rev (1)	200	290	350	480	500	650	670*	750	850	1000	1230*	1340	1600
Geometric displacement cc/rev	207.8	289.3	339.3	480.7	502.4	662.9	669.9	756.7	856.5	996.2	1233.4	1342.9	1602.4
Max. speed cont. rev/min	480	480	480	480	430	430	322	380	350	350	283	320	300
Max. speed int. rev/min (2)	768	768	768	768	688	688	515	608	560	560	453	512	480
Max. speed freewheel	768	768	768	768	688	688	515	608	560	560	453	512	480
Min speed rev/min (std motor)	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10
Max. torque cont. N.m	1157	1611	1890	2677	2798	2215	3731	4215	4770	5549	6870	7480	8925
Max. torque intermittent N.m (2)	1620	2256	2646	3748	3918	3059	5224	5900	6679	7768	9618	10471	12495
Max. power cont. K.w	28	40	48	68	61	80	81	84	95	100	124	125	140
Max power int. K.w (2)	56	80	96	136	122	160	162	168	190	200	248	250	280
Max diff. pressure cont. bar (3)	350	350	350	350	350	210	350	350	350	350	350	350	350
Max diff. pressure int bar (2)	490	490	490	490	490	290	490	490	490	490	490	490	490
Max flow cont L/min.	100	139	163	231	216	285	216	288	300	349	349	430	481
Max flow int L/min. (2)	160	222	261	369	346	456	345	460	480	558	558	688	769
Return pressure min. bar (3)	7	7	7	7	7	7	7	7	7	7	7	7	7
Return pressure max. bar (3)	350	350	350	350	350	210	350	350	350	350	350	350	350
Case pressure max. bar (4)	8	8	8	8	8	8	8	8	8	8	8	8	8
Fluid type (5)	HL;HLP TO DIN 51524 (for alternatives contact Rotary Power)												
Min/ Max viscosity cSt	15-1000 cSt												
Optimum viscosity cSt (6)	20-200 cSt												
Min / Max operating temp (7)	-20 + 90 Degrees centigrade												
Optimum operating temp	50 Degrees centigrade												
Fluid cleanliness	To NAS 1638 Class 9 ISO code 18/13 or better												
Filtration	B25 ratio 75 or better for simple closed loop systems												
Starting torque N.m : (8)													
Min@Max. cont. pressure	1053	1465	1720	2437	2547	2016	3396	3836	4342	5050	6252	6807	8123
Avr@Max. cont. pressure	1077	1499	1758	2490	2603	2060	3470	3920	4437	5161	6390	6957	8301
Min@Max. int. pressure	1475	2053	2408	3411	3565	2784	4754	5370	6078	7070	8753	9530	11372
Avr@ Max. int. pressure (2)	1507	2098	2461	3486	3644	2845	4859	5488	6212	7225	8945	9740	11622
Polar moment of inertia kg.sq.m	0.0052	0.0052	0.0052	TBA	0.0094	0.0094	TBA	0.0174	0.0174	0.0199	TBA	0.0487	0.0487
Approx. weight kg (9)	83	83	83	88	110	110	TBA	170	170	170	TBA	290	290

NOTES FOR TECHNICAL DATA TABLE

- Motors indicated with an asterisk (*) are to be introduced shortly.
- Intermittent values up to the maximum shown, may occur for up to 10% of every minute, as part of a known duty cycle, subject to approval by ROTARY POWER.
- Maintain positive gauge pressure at both main ports at all times while the motor is under load, whether or not the motor is running. Do not allow the pressure to drop below 7 bar above case pressure, with a fluid viscosity of 30 cSt. When utilising higher viscosities, higher boost pressures will be required. For over-running conditions consult ROTARY POWER.
- Case pressure should be kept to the minimum possible. Continuously high case pressure will adversely affect the life of the shaft seal system. Motor drain lines should be independently returned to the tank.



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TECHNICAL DATA													
MODEL : SMA C1 standard													
Nominal displacement cc/rev (1)	2200	2000	2500	3200	3500	4350	4300*	7000	8600*	8700	7400	8800	10500
Geometric displacement cc/rev	2227.3	2003.0	2507.2	3215.0	3504.3	4349.0	4310.8	7008.6	8421.6	8698.0	7381.4	8811.7	10497.8
Max. speed cont. rev/min	216	285	285	240	240	240	195	240	195	240	180	150	125
Max. speed int. rev/min (2)	346	456	456	384	384	384	312	384	312	384	288	240	200
Max. speed freewheel	346	456	456	384	384	384	312	384	312	384	288	240	200
Min speed rev/min (std motor)	5-10	5-10	5-10	5-10	5-10	5-10	5-10	2-4	2-4	2-4	5-10	5-10	5-10
Max. torque cont. N.m	12405	11156	13964	10744	19518	17302	24010	39036	46906	34604	41112	49078	58470
Max. torque intermittent N.m (2)	17368	15619	19550	14837	27325	24223	33614	54650	65668	48445	57557	68710	81858
Max. power cont. K.w	195	165	185	237	245	304	301	490	602	608	443	528	630
Max power int. K.w (2)	390	330	370	474	490	608	602	980	1204	1216	886	1056	1260
Max diff. pressure cont. bar (3)	350	350	350	210	350	250	350	350	350	250	350	350	350
Max diff. pressure int bar (2)	490	490	490	290	490	350	490	490	490	350	490	490	490
Max flow cont L/min.	481	571	715	772	841	1044	841	1682	1642	2088	1329	1322	1312
Max flow int L/min. (2)	770	913	1143	1235	1346	1670	1345	2691	2628	3340	2126	2115	2100
Return pressure min. bar (3)	7	7	7	7	7	7	7	7	7	7	7	7	7
Return pressure max. bar (3)	350	350	350	210	350	250	350	350	350	250	350	350	350
Case pressure max. bar (4)	8	8	8	8	8	8	8	8	8	8	8	8	8
Fluid type (5)	HL;HLP TO DIN 51524 (for alternatives contact Rotary Power)												
Min/ Max viscosity cSt	15-1000 cSt												
Optimum viscosity cSt (6)	20-200 cSt												
Min / Max operating temp (7)	-20 + 90 Degrees centigrade												
Optimum operating temp	50 Degrees centigrade												
Fluid cleanliness	To NAS 1638 Class 9 ISO code 18/13 or better												
Filtration	B25 ratio 75 or better for simple closed loop systems												
Starting torque N.m : (8)													
Min@Max. cont. pressure	11290	10153	12709	9778	17764	15747	21852	35527	42690	31493	37417	44667	53214
Avr@Max. cont. pressure	11538	10377	12989	9993	18154	16093	22332	36308	43628	32186	38239	45649	54384
Min@Max. int. pressure	15806	14215	17793	13503	24869	22045	30592	49738	59766	44091	52383	62534	74500
Avr@ Max. int. pressure (2)	16154	14527	18184	13800	25416	22530	31265	50831	61079	45060	53535	63908	76137
Polar moment of inertia kg.sq.m	TBA	0.0715	0.0715	0.0715	0.2293	0.2293	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Approx. weight kg (9)	TBA	440	440	440	790	790	790	1140	1140	1140	1250	1250	1250

NOTES FOR TECHNICAL DATA TABLE

- SMAmotors will operate successfully on a wide variety of hydraulic fluids. Contact ROTARY POWER for further details.
- For very high or low speed operation, fluid viscosity should be as high as possible within the optimum viscosity limits.
- Higher temperatures may be possible if required, through
- viscosity remains within the optimum range, subject to approval by ROTARY POWER.
- Many factors affect starting efficiencies. Figures shown are a reasonable approximation for most conditions. Please contact ROTARY POWER for a more detailed assessment of a specific application.
- Weights shown are an approximation and depend on