

SMA ROTATING CASE MOTOR TYPE E1 & B1

TECHNICAL DATA										
MODEL : SMA	E1	E1	E1	B1	B1	E1*	E1	E1	B1	E1
Nominal displacement cc/rev (1)	290	350	480	500	650	670	750	850	1000	1000
Geometric displacement cc/rev	289.3	339.3	480.7	502.4	662.9	669.9	756.7	856.5	996.2	996.2
Max. speed cont. rev/min	480	480	480	430	430	322	380	350	350	350
Max. speed int. rev/min (2)	768	768	768	688	688	515	608	560	560	560
Max. speed freewheel	768	768	768	688	688	515	608	560	560	560
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
Max. torque cont. N.m	1611	1890	2677	2798	2215	3731	4215	4770	5549	5549
Max. torque intermittent N.m (2)	2256	2646	3748	3918	3059	5224	5900	6679	7768	7768
Max. power cont. K.w	40	48	68	61	80	81	84	95	100	100
Max power int. K.w (2)	80	96	136	122	160	162	168	190	200	200
Max diff. pressure cont. bar (3)	350	350	350	350	210	350	350	350	350	350
Max diff. pressure int bar (2)	490	490	490	490	290	490	490	490	490	490
Max flow cont L/min.	139	163	231	216	285	216	288	300	349	349
Max flow int L/min. (2)	222	261	369	346	456	345	460	480	558	558
Return pressure min. bar (3)	7	7	7	7	7	7	7	7	7	7
Return pressure max. bar (3)	350	350	350	350	210	350	350	350	350	350
Case pressure max. bar (4)	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	1466	1720	2437	2547	2016	3396	3836	4342	5050	5050
Avr@Max. cont. pressure	1499	1758	2490	2603	2060	3470	3920	4437	5161	5161
Min@Max. int. pressure	2053	2408	3411	3565	2784	4754	5370	6078	7070	7070
Avr@ Max. int. pressure (2)	2098	2461	3486	3644	2845	4859	5488	6212	7225	7225
Approx. weight kg (9)	80	80	85	105	105	TBA	189	189	160	189

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 shaft is rotating. Boost pressure should not be less than 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	E1*	E1	E1	E1*	E1	E1	E1	E1*	E1*	E1*
Nominal displacement cc/rev (1)	1230	1340	1600	2200	2000	2500	3200	3500	4350	4300
Geometric displacement cc/rev	1233.4	1342.9	1602.4	2227.3	2003.0	2507.2	3215.0	3504.3	4349.0	4310.8
Max. speed cont. rev/min	283	320	300	216	285	285	240	240	240	195
Max. speed int. rev/min (2)	453	512	480	346	456	456	384	384	384	312
Max. speed freewheel rev/min	453	512	480	346	456	456	384	384	384	312
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
Max. torque cont. N.m	6870	7480	8925	12405	11156	13964	10744	19518	17302	24010
Max. torque intermittent N.m (2)	9618	10471	12495	17368	15619	19550	14837	27325	24223	33614
Max. power cont. K.w	124	125	140	195	165	185	237	245	304	301
Max power int. K.w (2)	248	250	280	390	330	370	474	490	608	602
Max diff. pressure cont. bar (3)	350	350	350	350	350	350	350	350	250	350
Max diff. pressure int bar (2)	490	490	490	490	290	490	490	490	350	490
Max flow cont L/min.	349	430	481	481	571	715	772	841	1044	841
Max flow int L/min. (2)	558	688	769	770	913	1143	1235	1346	1670	1345
Return pressure min. bar (3)	7	7	7	7	7	7	7	7	7	7
Return pressure max. bar (3)	350	350	350	350	210	350	350	350	250	350
Case pressure max. bar (4)	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	6252	6807	8123	11290	10153	12709	16297	17764	15747	21852
Avr@Max. cont. pressure	6390	6957	8301	11538	10377	12989	16655	18154	16093	22332
Min@Max. int. pressure	8653	9530	11372	15806	14215	17793	22816	24869	22045	30592
Avr@ Max. int. pressure (2)	8945	9740	11622	16154	14527	18184	23317	25416	22530	31265
Approx. weight kg (9)	TBA	320	320	TBA	490	490	490	880	880	TBA

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 the use of alternative seal materials, providing fluid 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 final specification supplied.