

## SMA DUAL DISPLACEMENT ROTATING SHAFT MOTOR TYPE C2

TECHNICAL DATA								
<i>MODEL : SMA C2 Dual displacement rotating shaft motor maximum displacements</i>								
Nominal displacement cc/rev	750	1000	1340	1600	3500	4350	7000	8700
Geometric displacement cc/rev	756	996.2	1342.9	1602.4	3506.5	4344.7	7013.0	8689.4
Max. speed cont. rev/min	360	350	320	300	240	240	240	240
Max. speed int. rev/min (1)	610	560	510	480	380	307	380	307
Max. speed freewheel	610	560	510	480	380	307	380	307
Min speed rev/min (std motor)	5-10	5-10	5-10	5-10	5-10	5-10	2-4	2-4
Max. torque cont. N.m	4209	5541	7470	8914	19505	24168	39011	48336
Max. torque intermittent N.m (1)	5901	7769	10473	12496	27346	33882	54691	67765
Max. power cont. K.w	84	102	125	140	245	304	490	607
Max power int. K.w (1)	167	203	250	280	490	607	980	1215
Max diff. pressure cont. bar (2)	350	350	350	350	350	250	350	250
Max diff. pressure int bar (1)	490	490	490	490	490	350	490	350
Max flow cont L/min.	288	349	430	481	842	1043	1683	2085
Max flow int L/min.	462	558	685	769	1332	1334	2665	2668
Return pressure min. bar (2)	7	7	7	7	7	7	7	7
Return pressure max. bar (2)	350	350	350	350	350	250	350	250
Case pressure max. bar (3)	8	8	8	8	8	8	8	8
Fluid type (4)	HL;HLP TO DIN 51524 (for alternatives contact Rotary Power)							
Min/ Max viscosity cSt	15-1000 cSt							
Optimum viscosity cSt (5)	20-200 cSt							
Min / Max operating temp (6)	-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 (7)								
Min@Max. cont. pressure	3836	5050	6807	8123	17775	15731	35940	31808
Avr@Max. cont. pressure	3962	5216	7032	8390	18361	16250	37503	33191
Min@Max. Int. pressure (1)	5370	7070	9530	11372	24885	22024	50316	44531
Avr@ Max. int. pressure	5547	7303	9844	11747	25705	22750	51410	46467
Approx. weight Kg. (8)	180	180	305	305	760	760	1100	1100

MAXIMUM DISPLACEMENT FOR DUAL DISPLACEMENT MOTORS

### NOTES FOR TECHNICAL DATA TABLE

1. 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.
2. 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.
3. 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.
4. SMAmotors will operate successfully on a wide variety of hydraulic fluids. Contact ROTARY POWER for further details.
5. For very high or low speed operation, fluid viscosity should be as high as possible within the optimum



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<b>MODEL : SMA C2 Dual displacement rotating shaft motor minimum displacements</b>														
	MINIMUM DISPLACEMENT FOR DUAL DISPLACEMENT MOTOR - 1.6:1 RATIO					MINIMUM DISPLACEMENT FOR DUAL DISPLACEMENT MOTOR - 2.0:1 RATIO		MINIMUM DISPLACEMENT FOR DUAL DISPLACEMENT MOTOR - 2.6:1 RATIO						
	750	1000	1340	1600	3500	7000	8700	750	1000	1340	1600	3500		
Nominal displacement cc/rev	750	1000	1340	1600	3500	7000	8700	750	1000	1340	1600	3500		
Geometric displacement cc/rev	468.8	627.1	830.8	1037.0	2170.7	3506	4344	287.9	371.0	510.3	565.4	1335.8		
Max. speed cont. rev/min	505	465	425	400	320	240	240	760	700	640	600	290		
Max. speed int. rev/min (1)	808	744	680	640	512	380	307	986	910	832	780	377		
Max. speed freewheel rev/min	610	560	510	480	380	380	307	610	560	510	480	380		
Min speed rev/min (std motor)	5-10	5-10	5-10	5-10	5-10	2-4	2-4	5-10	5-10	5-10	5-10	5-10		
Max. torque cont. N.m	2608	3488	4621	5768	12075	19505	24168	1601	2064	2839	3145	7431		
Max. torque intermittent N.m (1)	3656	4890	6479	8067	16928	27346	33882	2245	2893	3980	4409	10417		
Max. power cont. K.w	69	85	103	121	202	245	304	64	76	95	108	113		
Max power int. K.w (1)	90	110	206	242	405	490	607	82	100	122	140	147		
Max diff. pressure cont. bar (2)	350	350	350	350	350	350	250	350	350	350	350	350		
Max diff. pressure int bar (1)	490	490	490	490	490	490	350	490	490	490	490	490		
Max flow cont L/min.	237	292	353	415	695	842	1043	219	260	327	339	387		
Max flow int L/min.	379	467	565	664	1111	1332	1334	284	338	425	441	504		
Return pressure min. bar (2)	7	7	7	7	7	7	7	7	7	7	7	7		
Return pressure max. bar (2)	350	350	350	350	350	350	250	350	350	350	350	350		
Case pressure max. bar (3)	8	8	8	8	8	8	8	8	8	8	8	8		
Fluid type (4)	HL;HLP TO DIN 51524 (for alternatives contact Rotary Power)													
Min/ Max viscosity cSt	15-1000 cSt													
Optimum viscosity cSt (5)	20-200 cSt													
Min / Max operating temp (6)	-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 (7)														
Min@Max. cont. pressure	2324	3109	4119	5141	10762	17579	15558	1411	1819	2501	2772	6548		
Avr@Max. cont. pressure	2429	3249	4304	5372	11245	18556	16423	1475	1901	2615	2898	6846		
Min@Max. int. pressure (1)	3254	4353	5766	7196	15066	24611	21782	1998	2575	3542	3924	9271		
Avr@ Max. int. pressure	3400	4548	6026	7521	15743	25705	23234	2066	2662	3661	4057	9584		

### NOTES FOR TECHNICAL DATA TABLE

- 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.
- For dual displacement motors, it may be necessary to provide a cooling flow through the idling section. This is required under all conditions for the SMA3500 and on all 2.6:1 ratio motors at high speed. The cooling flow is supplied through the speed change valve signal port. The speed change valve that is supplied for this purpose is modified to suit.