SIBERMOTOR

PRODUCT CATALOGUE

API
ISO/TS
29001
Registered

Q1
API Spec Q1
Registered ®

QMS
REGISTERED

24 Karpinskogo Str., Perm, 614022, Russia

Reception
tel.: +7 (342) 211–13–11, fax: +7 (342) 280–17–67
e–mail: reception–bi@integra.ru

Commercial Department
tel.: +7 (342) 211–12–83, 211–12–81
fax: +7 (342) 211–12–84
e–mail: market–bi@integra.ru

www.vniibt–bi.ru

INTEGRA
DRILLING TOOLS

SIBERMOTOR

is a highly efficient tool corresponding to the requirements of all modern oil and gas on- and off-shore well drilling technologies.

BASIC DESIGNATION OF THE MOTOR

SM375.7850

Product code
SM - SIBERMOTOR
Diameter in the decimal
representation
of the size in inches X100
3 3/4"

Lobes configuration, rotor/stator
7/8

Stages x 10
5,0

ADDITIONAL LETTERS IN THE CODE

SM375S.7850H.C

S – (spindle) increased diameter
      spindle corresponding to the diameter
      of the next size
D – (direct) straight motor
H – (high speed) super high RPM
T – (temperature) heat resistant version
N – (nitrogen) nitrogen resistant version
U – (ultra power) hard rubber
X – reinforced stator
C – (tungsten carbide) rotor hard coating

SIBERMOTOR ADVANTAGES

Positive displacement motors (PDM) standard configuration has adjustable bent housing, except for three small diameter motors. Bend angle values are specified in the table. There is possibility to supply PDM equipped with X-over subs instead of adjustable bent housing upon the customer's requirement.

Flex groove, i.e. middle part stator OD narrowing, improves stator threaded connections fatigue damage resistance under the run with drill string rotation. As a result there is no need to use special flex sub above the motor.

PDM top sub has regular type connecting box thread and simultaneously acts as a catching device of the rotor. Such technical invention reduces probability of the motor loss in a hole even in cases when upper part of stator is damaged.

Additionally installed float and/or damp subs also have standard connecting regular type threads that excludes usage of supplementary X-over subs.

Power section of any motor can be made of a rubber compound having increased mechanical properties, so called "hard rubber". This provides PDM power and operating torque growth up to 50%. This technical decision is economically approved in comparison with the technology of stator lining reinforcement.

It is necessary to fill in special PDM selection form in order to make right choice. This will ensure delivery of the equipment mostly suitable for the operation conditions and get maximum running efficiency.

SIBERMOTOR Specification

Product code	Housing OD, in	Flex groove OD of Power section stator, in	Overall length, ft	Length to bend, in	Bend angles	Weight, lbs	Diameter of bits used, in	Connection threads		Length of active part of the stator, in	Lobes	Stages	Flow rate, gpm	No-load RPM	Max allowed differential pressure drop, psi	Parameters at max power		WOB, lbf
								Bit box	Top sub							Torque, ft-lbs	Max power, hp	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Tool OD 1 1/16 "																		
SM168.3450	1 11/16	N/A	6.8	N/A	N/A	32	2 5/16	M16x1,5	NC12	39.4	3/4	5.0	3.2 – 7.9	138 – 336	290	22 – 44	0.4 – 1.9	1323
SM168.5636	1 11/16	N/A	7.5	N/A	N/A	42	2 5/16	NC12	NC12	51.2	5/6	3.6	16 – 32	282 – 564	290	59 – 111	2.6 – 9.8	1764
Tool OD 2 7/8 "																		
SM287.4542	2 7/8	N/A	13.0	41.0	0°– 3°	220	3 3/8 – 3 7/8	2 3/8 Reg	P.A.C. 2 3/8 NC23	75	4/5	4.2	48 – 79	240 – 396	435	443 – 590	15 – 34	4409
Tool OD 3 1/2 "																		
SM350.5651	3 1/2	N/A	13.3	45.1	0°– 2.5	403	3 7/8 – 4 3/4	2 3/8 Reg	2 3/8 Reg	79	5/6	5.1	79 – 111	270 – 378	580	811 – 959	59	8818
Tool OD 3 3/4 "																		
SM375.5650	3 3/4	N/A	17.5	51.6	0°– 2.5	485	4 7/16 – 4 7/8	2 7/8 Reg	NC 26	118	5/6	5.0	79 – 159	180 – 360	580	1033 – 1623	68	11023
SM375.6728	3 3/4	N/A	17.5	51.6	0°– 2.5	485	4 7/16 – 4 7/8	2 7/8 Reg	NC 26	118	6/7	2.8	79 – 159	84 – 168	435	1106 – 1696	38	11023
SM375S.5650	4 3/16	N/A	17.7	50.8	0°– 2.5	538	4 3/4 – 4 7/8	2 7/8 Reg	NC 26	118	5/6	5.0	79 – 159	180 – 360	580	1033 – 1623	68	13228
SM375S.6728	4 3/16	N/A	17.7	50.8	0°– 2.5	538	4 3/4 – 4 7/8	2 7/8 Reg	NC 26	118	6/7	2.8	79 – 159	84 – 168	435	1106 – 1696	38	13228
SM375S.4565	4 3/16	3 5/8	24.2	50.8	0°– 2.5	575	4 3/4 – 5 5/8	2 7/8 Reg	NC 26	150	4/5	6.5	79 – 159	150 – 300	870	1475 – 2213	129	13228
SM375S.7868	4 3/16	3 5/8	20.3	50.8	0°– 2.5	624	4 3/4 – 5 5/8	2 7/8 Reg	NC 26	197	7/8	6.8	48 – 127	90 – 252	870	1401 – 2139	103	13228
SM375.3488HS	4 3/16	N/A	17.4	N/A	N/A	397	4 3/4 – 4 7/8	2 7/8 Reg	NC 26	118	3/4	8.8	79 – 159	396 – 792	1160	811 – 959	122	11023

SIBERMOTOR Specification

Product code	Housing OD, in.	Flex groove OD of Power section stator, in	Overall length, ft	Length to bend, in	Bend angles	Weight, lbs	Diameter of bits used, in	Connection threads Bit box	Connection threads Top sub	Length of active part of the stator, in	Lobes	Stages	Flow rate, gpm	No-load RPM	Max allowed differential pressure drop, psi	Parameters at max power Torque, ft-lbs	Parameters at max power Max power, hp	WOB, lbf
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Tool OD 4 3/16 "																		
SM418.4560	4 3/16	N/A	17.6	49.0	0° – 2.5°	631	4 3/4 – 5 15/16	2 7/8 Reg	NC31	118	4/5	6.0	95 – 190	198 – 396	580	1475 – 2213	128	17637
SM418.7860		N/A	17.6	49.0		639				118	7/8	3.7		96 –192	725	1696 – 2581	61	
Tool OD 4 3/4 " & 5 "																		
SM475.6743	4 3/16	N/A	18.7	57.9	0° – 3°	827	5 5/8 – 6 1/2	3 1/2 Reg	NC38	118	6/7	4.3	159 – 317	168 – 336	580	2065 – 3319	157	22046
SM475.7850	4 3/16	4 7/16	22.2	57.9		849				158	7/8	5.0	159 – 317	132 – 264	870	3098 – 4425	163	22046
SM475S.7850	5.0	4 7/16	22.3	60.6	0° – 2.5°	884				158	7/8	5.0		132 – 264	870	3098 – 4425	163	30865
SM500.7837	5.0	N/A	18.8	60.6	0° – 2.5°	922	5 3/4 – 6 1/2	3 1/2 Reg	NC38	118	7/8	3.7	159 – 317	120 – 240	580	2803 – 4057	131	30865
SM500.7826	5.0	N/A	18.8	60.6	0° – 2.5°	922				118	7/8	2.6	159 – 317	81 – 162	435	2213 – 4057	89	30865
SM500.5657		4 13/16	22.1			952				158	5/6	5.7		162 – 324	652	2360 – 3688	170	30865
Tool OD 6 3/4 "																		
SM675.4572	7.0	6 3/4	28.3	74.9	0° – 2° (0° – 3°)	2474	8 7/16 – 9 5/8	4 1/2 Reg	NC50	200.8	4/5	7.2	301 – 602	150 – 294	797	4720 – 6564	277	55120
SM675.5661	7.0	6 3/4	28.3	74.9		2524					5/6	6.1	301 – 602	120 – 230	725	5532 – 8482	285	55120
SM675.7856						2621					7/8	5.6		84 – 168	653	7376 – 1432	287	
Tool OD 8 "																		
SM800.4568	8 1/4	8.00	32.8	83.0	0° – 2° (0° – 3°)	3902	10 5/8 – 12 1/4	6 5/8 Reg	6 5/8 Reg	236.2	4/5	6.8	399 – 901	100 – 228	798	7007 – 8998	385	88185
SM800.7875						3902				236.2	7/8	7.5		66 – 149	595	8039 –10031	284	
Tool OD 9 5/8 "																		
SM962.7841	9 1/2	N/A	26.3	91.1	0° – 3°	4147	11 5/8 – 17 1/2	6 5/8 Reg	6 5/8 FH 7 5/8 Reg	141.7	7/8	4.1	476 – 793	84 – 144	507	9588 –11801	256	88185
SM962.5664	9 1/2	N/A	29.6	91.1	0° – 3°	4579				141.7	5/6	5.0		120 – 198	725	8113 –11063	316	88185
SM962.3460		9 1/16	31.1			4572				200.8	3/4	6.0	555 – 1014	138 – 240	725	8851 –12539	434	

SIBERMOTOR Specification (metric)

Product code	Housing OD, mm.	Flex groove OD of Power section stator, mm	Overall length, m	Length to bend, mm	Bend angles	Weight, kg	Diameter of bits used, mm	Connection threads Bit box	Connection threads Top sub	Length of active part of the stator, mm	Lobes	Stages	Flow rate, lpm	No-load RPM	Max allowed differential pressure drop, Bar	Torque, kN·m	Max power, kWt	WOB, ton
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Tool OD 1 1/16 " (43 mm)																		
SM168.3450	43	N/A	1.87	N/A	N/A	14	58.0	M16x 1.5	NC12	1000	3/4	5.0	12 – 30	138 – 336		0.03 – 0.06	1.4	0.8
SM168.5636	43	N/A	2.29	N/A	N/A	19	58.0	Nc12	NC12	1300	5/6	3.6	60 – 120	282 – 564	20	0.08 – 0.15	7.2	0.8
Tool OD 2 7/8 " (73 mm)																		
SM287.4542	73	N/A	3.9	1035	0° – 3°	100	83.0 – 98.4	2 3/8 Reg	P.A.C. 2 3/8 NC23	1900	4/5	4.2	180 – 300	240 – 396	30	0.6 – 0.8	25	2
Tool OD 3 1/2 " (88 mm)																		
SM350.5651	89	N/A	4.06	1146	0° – 2.5°	183	98.4 – 120.6	2 3/8 Reg	2 3/8 Reg	2000	5/6	5.1	300 – 420	270 – 378	40	1.1 – 1.3	39	4
Tool OD 3 3/4 " (95 mm)																		
SM375.5650	95	N/A	5.35	1310	0° – 2.5°	220	112.0 – 120.6	2 7/8 Reg	NC 26	3000	5/6	5.0	300 – 600	180 – 360	40	1.4 – 2.2	50	5
SM375.6728	95	N/A	5.35	1310	0° – 2.5°	220	112.0 – 120.6	2 7/8 Reg	NC 26	3000	6/7	2.8	300 – 600	84 – 168	30	1.5 – 2.3	28	5
SM375S.5650	106	N/A	5.39	1290	0° – 2.5°	243	120.6 – 123.8	2 7/8 Reg	NC 26	3000	5/6	5.0	300 – 600	180 – 360	40	1.4 – 2.2	50	6
SM375S.6728	106	N/A	5.39	1290	0° – 2.5°	243	120.6 – 123.8	2 7/8 Reg	NC 26	3000	6/7	2.8	300 – 600	84 – 168	30	1.5 – 2.3	28	6
SM375S.4565	106	92	7.39	1290	0° – 2.5°	259	120.6 – 142.9	2 7/8 Reg	NC 26	5000	4/5	6.5	300 – 600	150 – 300	60	2.0 – 3.0	95	6
SM375S.7868	106	92	6.19	1290	0° – 2.5°	283	120.6 – 142.9	2 7/8 Reg	NC 26	4000	7/8	6.8	180 – 480	90 – 252	60	1.9 – 1.9	76	6
SM375.3488HS	106	N/A	5.32	N/A	N/A	180	120.6 – 123.8	2 7/8 Reg	NC 26	3800	3/4	8.8	300 – 600	396 – 792	80	1.1 – 1.3	90	5

SIBERMOTOR Specification (metric)

| Product code | Housing OD, mm | Flex groove OD of Power section stator, mm | Overall length, m | Length to bend, mm | Bend angles | Weight, kg | Diameter of bits used, mm | Connection threads | | Length of active part of the stator, mm | Lobes | Stages | Flow rate, lpm | No-load RPM | Max allowed differential pressure drop, Bar | Parameters at max power | | WOB, ton |
								Bit box	Top sub							Torque, kN·m	Max power, kWt	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Tool OD 4 3/16 " (106 mm)																		
SM418.4560	106	N/A	5.36	1245	0° – 2.5°	286	123.8 – 151.0	2 7/8 Reg	NC 31	3000	4/5	6.0	360 – 720	198 –396	40	2.0 – 3.0	94	8
SM418.7860		N/A	5.36	1245		290				3000	7/8	3.7		96 – 192	50	2.3 – 3.5	45	
Tool OD 4 3/4 " &5 " (120 &127 mm)																		
SM475.6743	120	N/A	5.7	1470	0° – 3°	341	139.7 – 165.1	3 1/2 Reg	NC38	3000	6/7	4.3	600 – 1200	168 – 336	40	2.8 – 4.5	115	10
SM475.7850		113	6.76	1470		380				4050	7/8	5.0		132 – 264	60	4.2 – 6.0	120	10
SM475S.7850	127	113	6.81	1542	0° – 2.5°	401				4050	7/8	5.0		132 – 264	60	4.2 – 6.0	120	14
SM500.7837	127	N/A	5.74	1540	0° – 2.5°	418	142.9 – 165.1	3 1/2 Reg	NC38	3000	7/8	3.7	600 – 1200	120 – 240	40	3.8 – 5.5	96	14
SM500.7826		N/A	5.74			418				3000	7/8	2.6		81 –162	30	3.0 – 5.5	65	
SM500.5657		122	6.74			432				4000	5/6	5.7		162 – 324	45	3.2 – 5.5	150	14
Tool OD 6 3/4 " (172 mm)																		
SM675.4572	178	172	8.6	1903	0° – 2° (0° – 3°)	1122	214.3 – 244.5	4 1/2 Reg	NC50	5100	4/5	7.2	1140 – 2280	150 – 294	55	6.4 – 8.9	204	25
SM675.5661						1146					5/6	6.1		120 – 230	50	8.0 – 15.0	190	
SM675.7856						1189					7/8	5.6		84 – 168	45	10.0 – 15.5	211	
Tool OD 8 " (203 mm)																		
SM800.4568	216	203	10.0	2110	0° – 2° (0° – 3°)	1770	269.9 – 311.1	6 5/8 Reg	6 5/8 Reg	6000	4/5	6.8	1510 – 3410	100 – 228	55	9.5 – 12.2	287	40
SM800.7875										6000	7/8	7.5		66 – 149	41	10.9 – 13.6	212	
Tool OD 9 5/8 " (244 mm)																		
SM962.7841	240	N/A	8.03	2315	0° – 3°	1851	295.3 – 444.5	6 5/8 Reg	6 5/8 FH / 7 5/8 Reg	3600	7/8	4.1	1800 – 3000	84-144	35	13.0 – 16.0	191	40
SM962.5664		N/A	8.03			1816				3600	5/6	5.0		120-198	50	11.0 –15.0	236	
SM962.3460		230	9.5			2044				5100	3/4	6.0	2100 – 3840	138-240	50	12.0 – 17.0	324	