



The Professional Choice

Screw Pump

40 bar / 80 bar



OLAER Screw Pump | For circulation of oil in hydraulic and lubricating systems

General

Advantages

- Constant flow, even in the presence of varying system backpressures.
- Low noise and vibration levels, minimizing foundation requirements.
- High efficiency and independent of viscosity or temperature variations.
- Non-pulsating flow, without the need for pulsation dampeners.
- Reliable performance and long lasting life.
- Quick and compact installation.

Operation

OLAER USA screw pumps offer a high quality, reliable solution for the efficient movement of fluids within a system or application. They are positive displacement rotary pumps with an axial flow design that has only three moving parts. The power rotor is the only driven

part that extends outside of the case. The idler screws actually act as sealing parts and are turned hydraulically by the fluid being pumped. There is only a rolling action between the drive screw and the idler screw.

This rolling action eliminates noise and vibration, ensuring a long life.

Typical applications

- Lube services (diesel engines, turbines, compressors, gears and gear boxes)
- Seal oil services (compressors, generators)
- Power Hydraulics (presses, machine tools, working machines rolling mill, injection moulding machines, dumping equipment, elevators, variable pitch propellers, hydraulic winches)
- Hydraulic governors, refinery & petrol chemical services, cooling, transfer services, fuel oil burners, and special applications for marine industries.

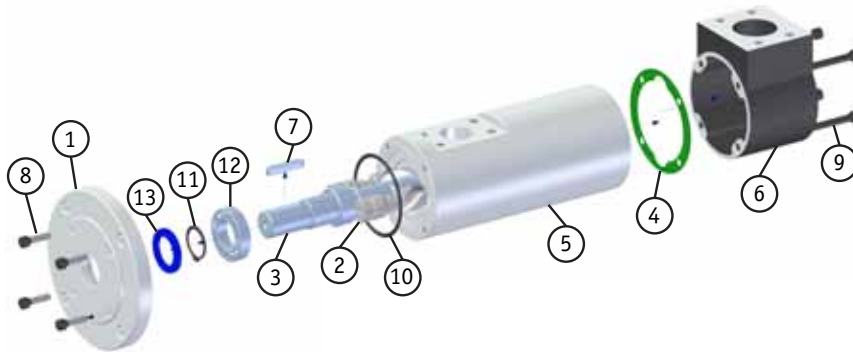
Types	Metric Series - Dry (SMT, SMT16B) or Submersed (SMIT, SMIT16B) USA Series - Dry (SMAT, SMAT16B) or Submersed (SMAIT, SMAIT16B)
Mounting Flanges Metric Series U-series	ISO 3019/2 - IEC standard for mounting with bell housing. Hollow shaft option for direct coupling to motor available. SAE four bolt (J744) standard for mounting with bell housing (consult factory for proper pump coupling selection). Hollow shaft option not available.
Fluid Connections GR20-GR25-GR32-GR110	BSPP for metric series, SAE O-Ring (J1926) for US series. SAE Code 61(J518) inlet/outlet ports for both series.
Drive Loading	No axial or radial loads generated by pump.
Shaft Rotation	Clockwise viewed from the shaft end (Available also in counter-clockwise).
Shaft Speed	From 500 to 3600 rpm. For hollow shaft do not exceed 1800 rpm.
Pump Flow Rate Range	From 1 - 540 gpm (Depends on pressure, viscosity and motor speed).
Pump Outlet Pressure (maximum)	1200 psi continuous- 1450 psi peak (SMT, SMIT, SMAT, SMAIT) 300 psi continuous- 400 psi peak (SMT16B, SMIT16B, SMAT16B, SMAIT16B)
Pump Inlet Pressure	Minimum: -5 psi / Maximum: +45 psi with standard shaft seals.
Compatible Fluids	Mineral oil, vegetable oils, biodegradable fluids, synthetic fluids or emulsion.
Viscosity	Standard applications from 30 SSU to 2,000 SSU Non-standard applications from 10 SSU to 200,000 SSU*
Compatible Fluids	Oil - water emulsion (Oil Minimum 5%)* Water oil emulsion 40%* Water Glycol - Water maximum 35 to 55%* Phosphate ester Lubrication - High viscosity oils* Special synthetic fluids: Skydrol, MIL-H5606, etc. Ethanol, bio diesel, crude oil, bunker oil, coolants, MGO, MDO. Other fluids: Consult factory.
Seals	Standard - Nitrile (NBR) lip seal. Special seals such as FKM, EPDM, PTFE available on request. Mechanical seals are also available on request.
Noise Levels	From 52 dB(A) to 68 dB(A) at 3600 rpm (measured per ISO 4412 standard)
Pump Body Material	Extruded aluminium alloy. Cast iron, carbon steel, stainless steel (for special applications)
Screw Material	Steel for primary screw, cast iron for secondary screws.
Ambient Temperature Range	From -4°F up to +140°F
Fluid Temperature Range	From -4°F up to +356°F
Filtration	Permissible degree of fluid contamination NAS 1638 class 10 or ISO 4406 -/19/16. Recommended filtration $\beta_{25} > 75$
Maintenance	Generally not required (shaft seals may need replaced due to shaft seal type and/or operating conditions).

(*) For high/low viscosity applications, oil-air emulsions or water glycol solutions please consult factory. For special applications please consult Olaer.



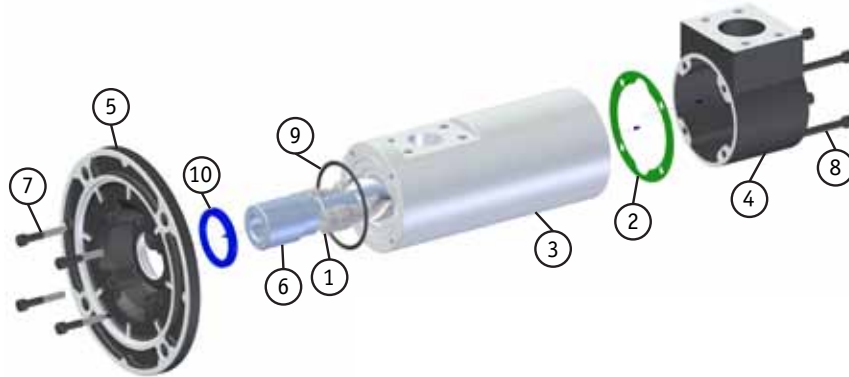
Component description

STANDARD SHAFT PUMP



- 1) Mounting Flange
- 2) Idler Screw
- 3) Main Screw
- 4) Gasket
- 5) Body
- 6) Suction Cover
- 7) Key
- 8) Flange Bolts
- 9) Cover Bolts
- 10) O-Ring Seal
- 11) Snap Ring
- 12) Ball Bearing
- 13) Shaft Seal

HOLLOW SHAFT PUMP



- 1) Idler Screw
- 2) Plane Gasket
- 3) Body
- 4) Suction Cover
- 5) Mounting Flange
- 6) Main Screw
- 7) Flange Bolts
- 8) Cover Bolts
- 9) O-Ring Seal
- 10) Shaft Seal

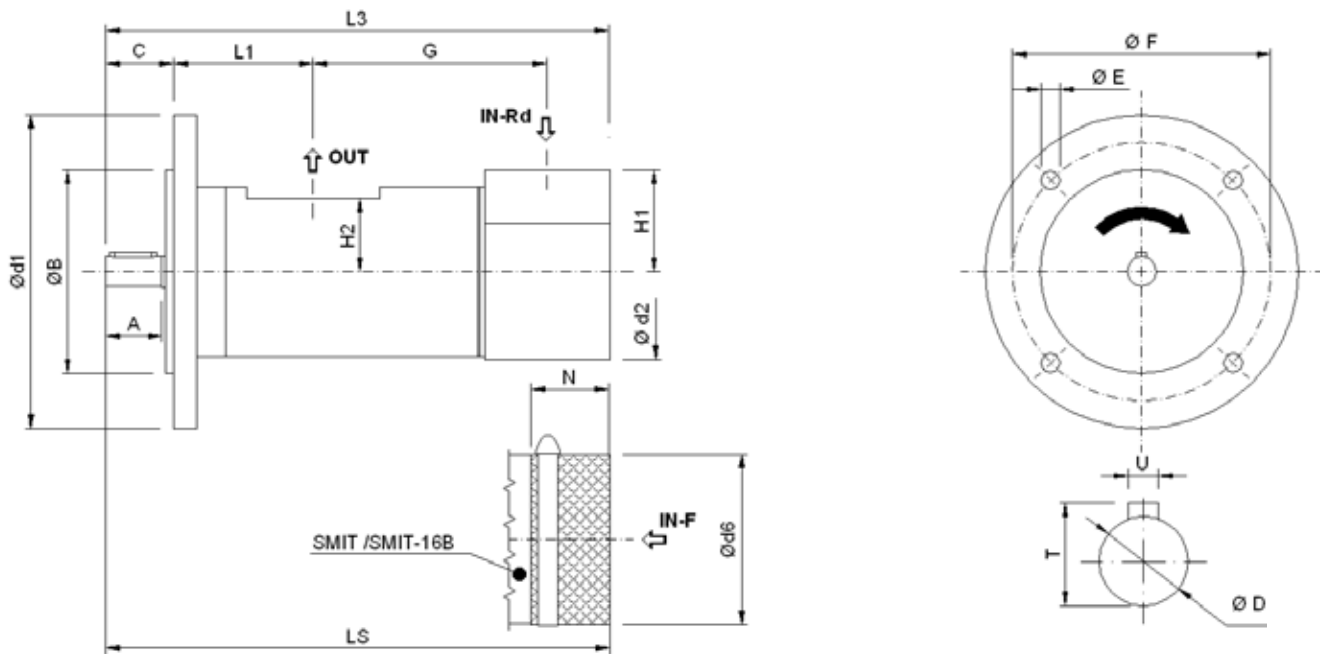
Direct coupling motor/pump

	IEC Motor form	Motor pump selection (For Hollow shaft only)							
		56 AC9	63 AC11	71 AC14	80 AC19	90 AC24	100 AC28	112 AC28	132 AC38
GR 20	B14								
	B5								
GR 25	B14								
	B5								
GR 32	B14								
	B5								
GR 40	B14								
	B5								
GR 45	B5								
GR 55	B5								
GR 60	B5								
GR 70	B5								

The flanges marked in the above table are standard. Special options available.



Product Specifications

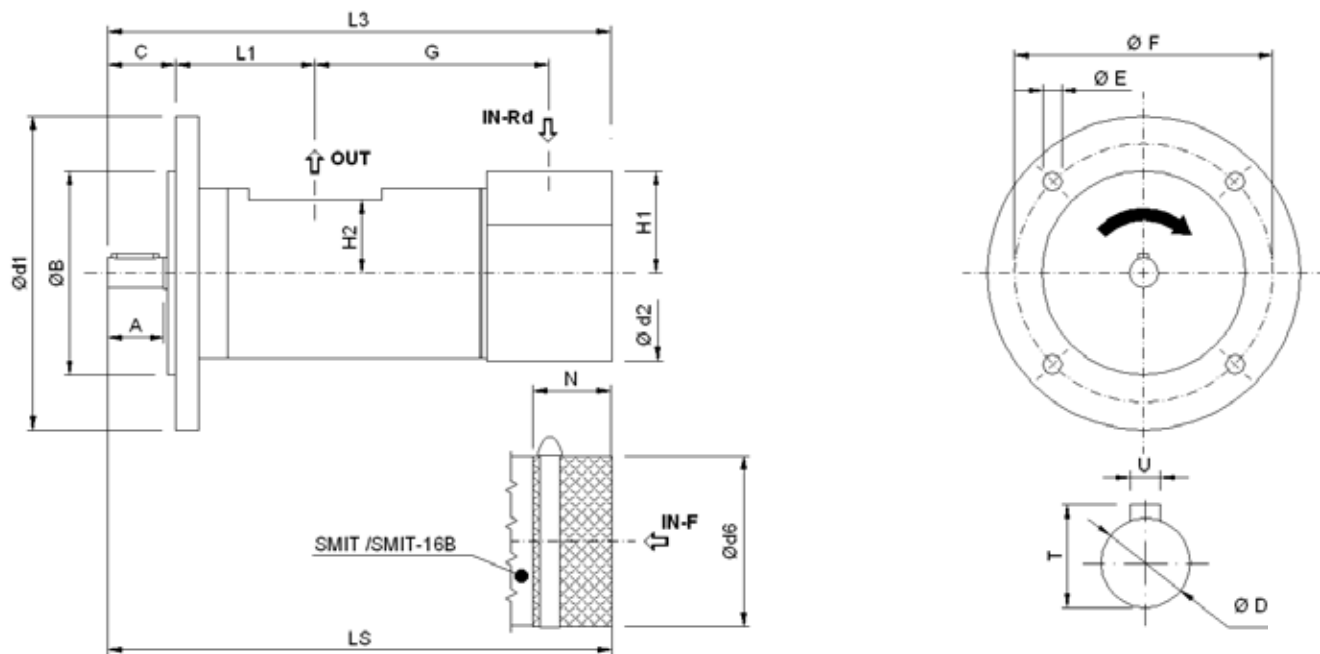


SERIES SMT - SMIT (80 BAR)

Type		GR20 8-12-15- 17-20L	GR25 25-30L	GR32 35-45- 55-75L	GR40 80-100- 125-150L	GR45 180-210L	GR55 250-300- 330-380L	GR60 440-500L	GR70 560-600- 660-800L	GR80 1000-1200L
Flange	B	3.15	3.15	3.94	4.92	4.92	6.3	6.3	7.87	7.87
	E	0.43	0.43	0.43	0.55	0.55	0.71	0.71	0.87	0.87
	F	4.06	4.06	4.92	6.3	6.3	7.87	7.87	9.84	9.84
	d1	4.92	4.92	5.91	7.4	7.4	9.25	9.25	11.81	11.81
Shaft	A	1.22	1.42	1.42	1.42	2.17	2.17	2.17	2.17	2.17
	D	0.55	0.75	0.75	0.75	1.26	1.26	1.26	1.26	1.5
	T	0.63	0.85	0.85	0.85	1.38	1.38	1.38	1.38	1.61
	U	0.2	0.24	0.24	0.24	0.39	0.39	0.39	0.39	0.39
Suction port	H1	0.98	1.06	2.17	2.56	3.35	3.7	4.13	4.33	4.92
	IN-Rd	½" BSPP	¾" BSPP	1¼" SAE	1½" SAE	2" SAE	2½" SAE	3" SAE	3½" SAE	4" SAE
Pressure port	H2	0.98	1.08	1.65	1.83	2.03	2.17	2.5	2.87	3.27
	OUT	½" BSPP	½" BSPP	1" SAE	1¼" SAE	1½" SAE	2" SAE	2½" SAE	3" SAE	3" SAE
Pump	C	1.46	1.65	1.61	1.67	2.54	2.54	2.58	2.58	2.95
	d2	2.32	2.56	3.76	11.81	4.98	5.85	6.3	7.09	8.27
	L3	9.06	11.97	13.23	15.26	17.58	20.12	22.48	26.22	30.31
	L1	2.09	2.85	2.72	3.33	3.5	3.96	3.98	4.55	5.91
	G	4.67	6.73	7.56	8.84	9.76	11.69	13.46	16.61	18.52
	N	1.57	2.56	2.76	2.76	2.76	3.94	3.94	3.94	3.94
	d6	2.36	6.85	3.78	4.33	4.88	5.7	6.1	7.17	7.95
LS	8.27	11.2	11.02	13.13	14.82	17.99	19.53	23.78	27.68	
Weight	in Lbs	4.19	6.61	13.89	19.24	30.64	48.5	61.95	93.26	148.37

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Product Specifications

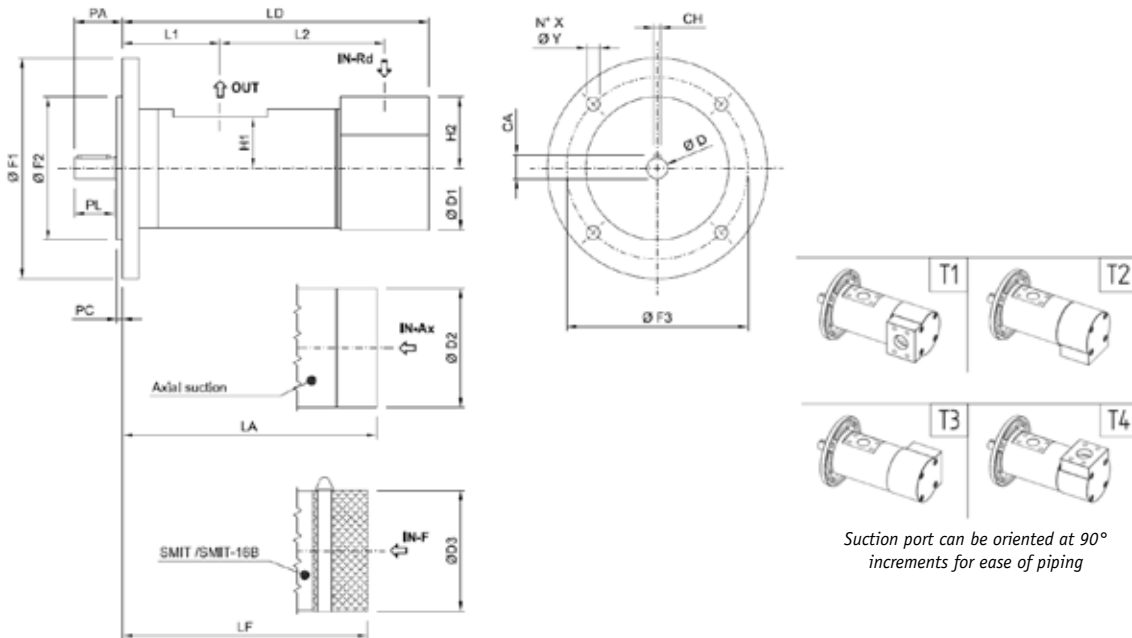


SERIES SMT 16B - SMIT 16B (40 BAR)

Type		GR20 8-12- 15-20L	GR25 25-30L	GR32 35-45- 55-75L	GR40 100-125- 150L	GR45 180-210L	GR55 250-300- 330-380L	GR60 440-550L	GR70 600-660- 800L	GR80 1000- 1200L	GR90 1500- 2200L	GR110 2300- 3200L
Flange	B	3.15	3.15	3.94	4.92	4.92	6.3	6.3	7.87	7.87	9.84	9.84
	E	0.43	0.43	0.43	0.55	0.55	0.71	0.71	0.87	0.87	1.02	1.02
	F	4.06	4.06	4.92	6.3	6.3	7.87	7.87	9.84	9.84	11.81	11.81
	d1	4.92	4.92	5.91	7.4	7.4	9.25	9.25	11.81	11.81	13.87	13.78
Shaft	A	1.22	1.42	1.42	1.42	2.17	2.17	2.17	2.17	2.17	4.33	4.33
	D	0.55	0.75	0.75	0.75	1.26	1.26	1.26	1.26	1.5	2.17	2.17
	T	0.63	0.85	0.85	0.85	1.38	1.38	1.38	1.38	1.61	2.32	2.32
	U	0.2	0.24	0.24	0.24	0.39	0.39	0.39	0.39	0.39	0.63	0.63
Suction port	H1	0.98	1.06	2.17	2.56	3.35	3.7	4.13	4.33	4.92	5.51	5.51
	IN-Rd	½" BSPP	¾" BSPP	1¼" SAE	1½" SAE	2" SAE	2½" SAE	3" SAE	3½" SAE	4" SAE	5" SAE	5" SAE
Pressure port	H2	0.98	1.08	1.65	1.83	2.03	2.17	2.5	2.87	3.27	3.94	3.94
	OUT	½" BSPP	½" BSPP	1" SAE	1¼" SAE	1½" SAE	2" SAE	2½" SAE	3" SAE	3" SAE	4" SAE	4" SAE
Pump	C	1.46	1.65	1.61	1.67	2.54	2.54	2.58	2.58	2.95	4.65	4.65
	d2	2.32	2.56	3.76	11.81	4.98	5.85	6.3	7.09	8.27	9.84	9.84
	L3	7.36	8.66	10.2	11.97	14.76	15.89	17.3	19.94	23.39	39.37	39.17
	L1	2.09	2.85	2.72	3.33	3.5	3.96	3.98	4.55	5.91	20.67	19.29
	G	3.07	3.43	4.8	5.89	7.47	7.99	8.98	10.96	11.65	20.67	19.29
	N	1.57	2.56	2.76	2.76	2.76	3.94	3.94	3.94	3.94	3.94	3.94
	d6	2.36	6.85	3.78	4.33	4.88	5.7	6.1	7.17	7.95	9.84	9.84
	LS	7.17	7.87	9.06	11.61	13.97	13.7	14.33	17.48	20.75	31.93	31.73
Weight	in Lbs	3.3	4.6	9.7	15	24	34	55	66	105	209	264

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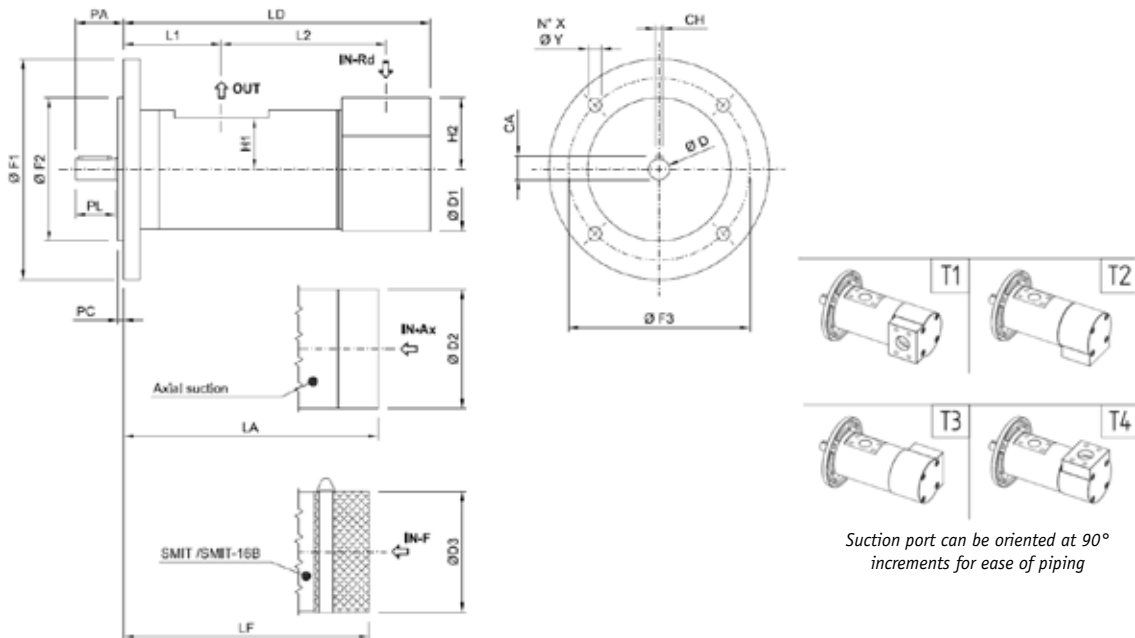
SMAT - SMAT 16B / SMAIT - SMAIT 16B

Type	GR20		GR25		GR32		GR40		GR45	
	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B
Flange	SAE-A		SAE-A		SAE-B		SAE-C		SAE-C	
L1	2.087		2.780		2.717	2.402	3.327	2.717	3.504	2.969
L2	4.665	3.090	6.969	3.661	7.559	4.843	8.839	5.886	9.764	7.484
LD	7.598	6.024	10.594	7.287	11.614	8.583	13.701	10.138	15.039	12.224
OUT-Rd	¾" SAE J1926-1		¾" SAE J1926-1		1" SAE - 3000		1 ¼" SAE - 3000		1 ½" SAE - 3000	
H1	0.984		1.083		1.614		1.831		2.028	
IN-Rd	¾" SAE J1926-1		1 1/16" SAE J1926-1		1 ¼" SAE - 3000		1 ½" SAE - 3000		2" SAE - 3000	
H2	1.024		1.063		2.165		2.559		3.346	
Ø D1	2.323		2.559		3.780		4.409		4.921	
PA	1.457		1.728		1.614		1.555	1.673	2.539	
PL	1.181		1.417		1.378		1.339	1.417	2.165	
PC	0.177		0.252		0.157		0.157		0.157	
Ø F1	4.921		4.921		5.906		7.402		7.402	
Ø F2	3.250		3.250		4.000		5.000		5.000	
Ø F3	4.189		4.189		5.000		6.378		6.380	
N° X	2		2		4		4		4	
Ø Y	0.433		0.433		0.563		0.570		0.563	
Ø D	0.551		0.748		0.748		0.748		1.260	
CA	0.630		0.846		0.846		0.846		1.378	
CH	0.197		0.236		0.246		0.236		0.394	
IN-Ax	¾" SAE J1926-1		1 1/16" SAE J1926-1		1 ¼" SAE - 3000		1 ½" SAE - 3000		2" SAE - 3000	
LA	6.850	5.276	10.240	6.933	10.157	7.126	12.240	8.680	12.992	10.177
Ø D2	2.323		2.560		3.701		4.250		4.823	
IN-F	Strainer		Strainer		Strainer		Strainer		Strainer	
LF	6.811	5.236	9.470	6.165	9.409	6.378	11.570	8.010	12.362	9.547
Ø D3	2.362		2.600		3.740		4.290		4.862	

SMAT and SMAIT = 80 BAR / SMAT 16B and SMAIT 16B = 40 BAR

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Product Specifications



SMAT - SMAT 16B / SMAIT - SMAIT 16B

Type	GR55		GR60		GR70		GR80		GR90	GR110
	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B	SMAT	SMAT 16B
Flange	SAE-D		SAE-D		SAE-D		SAE-E		SAE-E	SAE-E
L1	3.957	3.287	3.976	3.287	4.547	3.720	5.906		10.079	11.299
L2	11.693	7.972	13.465	8.996	16.614	10.984	18.524	11.594	20.699	19.252
LD	17.697	13.307	19.902	14.744	23.839	17.382	27.362	20.433	34.690	34.490
OUT-Rd	2" SAE - 3000		2 ½" SAE - 3000		3" SAE - 3000		3" SAE - 3000		4" SAE - 3000	4" SAE - 3000
H1	2.165		2.480		2.874		3.268		3.937	3.937
IN-Rd	2 ½" SAE - 3000		3" SAE - 3000		3 ½" SAE - 3000		4" SAE - 3000		5" SAE - 3000	5" SAE - 3000
H2	3.740		4.134		4.331		4.921		5.512	5.512
Ø D1	5.827		6.299		7.087		8.268		9.843	9.843
PA	2.421	2.539	2.579		2.382	2.579	2.953		4.646	4.646
PL	2.165		2.165		2.165		2.362		4.331	4.331
PC	0.157		0.157		0.157		0.157		0.197	0.197
Ø F1	10.443		10.433		10.630		13.976		13.780	13.780
Ø F2	6.000		6.000		6.000		6.500		6.500	6.500
Ø F3	9.000		9.000		9.000		12.500		12.500	12.500
N° X	4		4		4		4		4	4
Ø Y	0.811		0.811		0.811		0.811		0.812	0.812
Ø D	1.260		1.260		1.260		1.496		2.170	2.170
CA	1.378		1.378		1.378		1.614		2.320	2.320
CH	0.394		0.394		0.394		0.394		0.630	0.630
IN-Ax	2 ½" SAE - 3000		3" SAE - 3000		3 ½" SAE - 3000		4" SAE - 3000		5" SAE - 3000	5" SAE - 3000
LA	15.374	10.984	17.146	11.988	20.846	14.390	25.354	18.425	32.126	31.929
Ø D2	5.610		6.102		7.087		8.268		9.843	9.843
IN-F	Strainer		Strainer		Strainer		Strainer		Strainer	Strainer
LF	15.571	11.181	16.949	11.790	21.398	14.941	24.724	17.795	28.386	28.189
Ø D3	5.650		6.063		7.047		8.032		9.882	9.882

SMAT and SMAIT = 80 BAR / SMAT 16B and SMAIT 16B = 40 BAR

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Performances

4 POLE MOTOR 1750 RPM

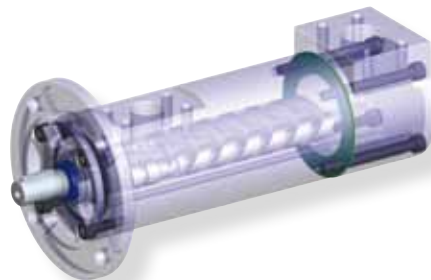
Type		40 BAR / 80 BAR						80 BAR					
		50 SSU											
		75 PSI		150 PSI		300 PSI		450 PSI		600 PSI		750 PSI	
		GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP
GR20	8L/(2.1G)	1.6	0.1	1.5	0.2	1.4	0.3	1.4	0.5	1.3	0.6	1.3	0.8
	12L/(3.17G)	2.2	0.2	2.1	0.3	2.0	0.5	1.9	0.7	1.9	0.9	1.8	1.1
	15L/(3.97G)	3.1	0.2	3.0	0.4	2.9	0.7	2.8	1.0	2.7	1.3	2.6	1.6
	17L/(4.5G)	3.4	0.3	3.3	0.4	3.1	0.8	3.0	1.1	2.9	1.4	2.8	1.8
	20L/(5.28G)	3.7	0.3	3.6	0.4	3.4	0.8	3.3	1.2	3.2	1.5	3.1	1.9
GR25	25L/(6.60G)	4.9	0.3	4.7	0.6	4.5	1.1	4.3	1.5	4.2	2.0	4.0	2.5
	30L/(7.93G)	6.1	0.4	5.9	0.7	5.6	1.3	5.4	1.9	5.2	2.5	5.0	3.1
GR32	35L/(9.25G)	7.2	0.5	6.9	0.8	6.6	1.5	6.3	2.2	6.1	2.9	6.0	3.6
	45L/(11.89G)	8.7	0.6	8.5	1.0	8.0	1.9	7.7	2.7	7.5	3.5	7.3	4.4
	55L/(14.53G)	9.5	0.6	9.2	1.1	8.8	2.1	8.5	3.0	8.2	3.8	7.9	4.8
	75L/(19.81G)	12.7	0.8	12.3	1.4	11.7	2.7	11.3	3.9	10.9	5.1	10.6	6.4
GR40	80L/(21.1G)	14.0	0.9	13.5	1.6	12.9	3.0	12.4	4.3	12.0	5.6	11.6	7.0
	100L/(26.4G)	17.4	1.1	16.8	1.9	16.0	3.7	15.4	5.3	14.9	7.0	14.5	8.7
	125L/(33.02G)	21.1	1.4	20.5	2.3	19.4	4.5	18.7	6.5	18.1	8.4	17.6	10.6
	150L/(39.63G)	24.8	1.6	24.1	2.8	22.9	5.3	22.0	7.6	21.3	9.9	20.7	12.5
GR45	180L/(47.56G)	29.9	1.9	28.9	3.3	27.5	6.3	26.5	9.1	25.6	11.9	24.8	15.0
	210L/(55.48G)	35.4	2.2	34.3	3.9	32.5	7.5	31.3	10.8	30.4	14.1	29.4	17.7
GR55	250L/(66.04G)	44.6	2.8	43.2	4.8	41.0	9.4	39.5	13.6	38.3	17.7	37.1	22.3
	300L/(79.25G)	50.5	3.1	48.9	5.5	46.4	10.7	44.7	15.4	43.3	20.1	42.0	25.2
	330L/(87.17G)	55.8	3.4	54.0	6.0	51.3	11.8	49.4	17.0	47.9	22.2	46.4	27.9
	380L/(100.38G)	63.4	3.9	61.4	6.9	58.3	13.4	56.2	19.3	54.4	25.2	52.7	31.7
GR60	440L/(116.23G)	75.4	4.6	73.1	8.1	69.4	15.9	66.9	22.9	64.8	29.9	62.8	37.7
	500L/(132.08G)	83.8	5.1	81.2	9.0	77.1	17.6	74.3	25.5	72.0	33.3	69.7	41.9
GR70	560L/(147.9G)	90.3	5.4	87.5	9.7	83.1	18.9	80.1	27.3	77.5	35.8	75.2	45.0
	600L/(158.5G)	102.7	6.2	99.5	11.0	94.5	21.5	91.0	31.1	88.1	40.7	85.4	51.2
	660L/(174.35G)	114.1	6.9	110.5	12.2	105.0	23.9	101.1	34.5	97.9	45.2	94.9	56.9
	800L/(211.33G)	133.1	8.0	128.9	14.2	122.5	27.9	118.0	40.3	114.3	52.7	110.8	66.4
GR80	1.000L/(264.17G)	173.8	10.1	168.4	18.1	160.0	35.7	154.1	51.7	149.2	67.7	144.7	85.3
	1.2000L/(317G)	211.1	12.3	204.5	22.0	194.2	43.4	187.1	62.8	181.2	82.2	175.7	103.6
GR90	1.500L/(396.25G)	235.7	13.8	228.4	24.6	216.9	48.5						
	1.700L/(447.1G)	275.0	16.1	266.4	28.7	253.1	56.5						
	2.000L/(528.34G)	314.3	18.3	304.5	32.8	289.2	64.6						
	2.200L/(581.17G)	361.4	21.1	350.2	37.7	332.6	74.3						
GR110	2.300L/(607.6G)	352.1	20.6	341.2	36.7	324.0	73.4						
	2.500L/(660.43G)	399.1	23.3	386.6	41.6	367.2	82.0						
	2.800L/(739.68G)	446.0	26.0	432.1	46.5	410.4	91.7						
	3.200L/(845.35G)	516.4	30.1	500.4	53.9	475.2	106.2						

Flow rates within this range
will downgrade performance.
Consult Olaer for additional assistance.

SMAT 16B, SMAIT 16B, SMT 16B and SMIT 16B = 40 BAR

SMT, SMIT, SMAT, SMAIT = 80 BAR

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Performances

4 POLE MOTOR 1750 RPM

Type		40 BAR / 80 BAR								80 BAR									
		300 SSU																	
		75 PSI		150 PSI		300 PSI		450 PSI		600 PSI		750 PSI		900 PSI		1000 PSI		1100 PSI	
		GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP
GR20	8L/(2.1G)	1.6	0.2	1.5	0.2	1.5	0.4	1.4	0.5	1.4	0.7	1.4	0.9	1.3	1.0	1.3	1.1	1.3	1.2
	12L/(3.17G)	2.2	0.2	2.2	0.3	2.1	0.6	2.0	0.8	2.0	1.0	1.9	1.2	1.9	1.4	1.9	1.5	1.8	1.7
	15L/(3.97G)	3.1	0.3	3.1	0.5	3.0	0.8	2.9	1.1	2.8	1.4	2.7	1.7	2.7	2.0	2.7	2.2	2.6	2.4
	17L/(4.5G)	3.5	0.4	3.4	0.5	3.3	0.9	3.2	1.2	3.1	1.5	3.0	1.9	3.0	2.2	2.9	2.4	2.9	2.6
	20L/(5.28G)	3.8	0.4	3.7	0.6	3.5	0.9	3.5	1.3	3.4	1.7	3.3	2.0	3.2	2.4	3.2	2.6	3.2	2.9
GR25	25L/(6.60G)	4.9	0.5	4.8	0.7	4.6	1.2	4.5	1.7	4.4	2.1	4.3	2.6	4.2	3.1	4.2	3.4	4.1	3.7
	30L/(7.93G)	6.2	0.6	6.0	0.9	5.8	1.5	5.6	2.1	5.5	2.6	5.4	3.3	5.3	3.8	5.2	4.3	5.1	4.7
GR32	35L/(9.25G)	7.3	0.6	7.1	1.0	6.8	1.7	6.6	2.4	6.5	3.1	6.3	3.8	6.2	4.5	6.1	5.0	6.1	5.4
	45L/(11.89G)	8.9	0.8	8.7	1.2	8.3	2.1	8.1	2.9	7.9	3.8	7.7	4.7	7.6	5.5	7.5	6.1	7.4	6.6
	55L/(14.53G)	9.7	0.8	9.4	1.3	9.1	2.3	8.8	3.2	8.6	4.1	8.4	5.1	8.3	6.0	8.2	6.6	8.1	7.3
	75L/(19.81G)	12.9	1.1	12.6	1.7	12.1	3.0	11.8	4.3	11.5	5.5	11.2	6.8	11.0	8.0	10.9	8.8	10.8	9.7
GR40	80L/(21.1G)	14.2	1.2	13.8	1.8	13.3	3.3	12.9	4.6	12.6	5.9	12.4	7.4	12.1	8.7	12.0	9.6	11.8	10.6
	100L/(26.4G)	17.6	1.5	17.2	2.3	16.6	4.1	16.1	5.7	15.7	7.4	15.4	9.2	15.1	10.8	14.9	12.0	14.7	13.1
	125L/(33.02G)	21.4	1.8	20.9	2.8	20.1	5.0	19.6	7.0	19.1	9.0	18.7	11.2	18.3	13.1	18.1	14.5	17.9	15.9
	150L/(39.63G)	25.2	2.1	24.6	3.2	23.7	5.8	23.0	8.2	22.5	10.5	22.0	13.1	21.6	15.5	21.3	17.1	21.1	18.8
GR45	180L/(47.56G)	30.3	2.4	29.6	3.8	28.4	6.9	27.7	9.8	27.0	12.6	26.4	15.7	25.9	18.5	25.6	20.5	25.3	22.5
	210L/(55.48G)	35.9	2.9	35.0	4.5	33.7	8.2	32.8	11.6	32.0	14.9	31.3	18.6	30.7	21.9	30.3	24.3	30.0	26.6
GR55	250L/(66.04G)	45.3	3.5	44.2	5.6	42.5	10.2	41.3	14.5	40.4	18.7	39.4	23.3	38.7	27.5	38.3	30.5	37.8	33.5
	300L/(79.25G)	51.2	3.9	50.0	6.3	48.1	11.6	46.8	16.4	45.7	21.1	44.6	26.4	43.8	31.2	43.3	34.5	42.8	37.9
	330L/(87.17G)	56.6	4.4	55.2	7.0	53.1	12.8	51.7	18.1	50.5	23.3	49.3	29.2	48.4	34.4	47.8	38.1	47.3	41.8
	380L/(100.38G)	64.3	4.9	62.8	7.9	60.4	14.5	58.7	20.5	57.4	26.5	56.1	33.1	55.0	39.1	54.4	43.3	53.8	47.5
GR60	440L/(116.23G)	76.5	5.8	74.7	9.4	71.9	17.2	69.9	24.4	68.3	31.5	66.7	39.4	65.5	46.5	64.7	51.5	64.0	56.5
	500L/(132.08G)	85.0	6.4	83.0	10.4	79.8	19.1	77.7	27.1	75.8	35.0	74.1	43.7	72.8	51.7	71.9	57.2	71.1	62.8
GR70	560L/(147.9G)	91.6	6.8	89.5	11.0	86.0	20.4	83.7	29.0	81.7	37.5	79.9	46.9	78.4	55.5	77.5	61.5	76.6	67.5
	600L/(158.5G)	104.2	7.7	101.7	12.6	97.8	23.2	95.1	33.0	92.9	42.7	90.8	53.4	89.1	63.1	88.1	69.9	87.1	76.7
	660L/(174.35G)	115.7	8.6	113.0	14.0	108.7	25.8	105.7	36.6	103.2	47.4	100.9	59.3	99.0	70.1	97.9	77.7	96.8	85.2
	800L/(211.33G)	135.0	10.0	131.8	16.3	126.8	30.1	123.3	42.7	120.4	55.3	117.7	69.2	115.5	81.8	114.2	90.6	112.9	99.4
GR80	1.000L/(264.17G)	176.4	12.0	172.2	20.0	165.6	37.6	161.1	53.6	157.3	69.6	153.7	87.2	150.9	103.2	149.1	114.4	147.4	125.6
	1.2000L/(317G)	214.2	14.6	209.1	24.3	201.1	45.7	195.6	65.1	191.0	84.5	186.7	105.9	183.2	125.3	181.1	138.9	179.0	152.5
GR90	1.500L/(396.25G)	239.2	16.3	233.5	27.2	224.6	51.0												
	1.700L/(447.1G)	279.0	19.1	272.4	31.7	262.0	59.5												
	2.000L/(528.34G)	318.9	21.8	311.3	36.2	299.4	68.1												
	2.200L/(581.17G)	366.7	25.1	358.0	41.7	344.4	78.3												
GR110	2.300L/(607.6G)	357.3	24.4	348.8	40.6	335.5	76.2												
	2.500L/(660.43G)	404.9	27.7	395.3	46.0	380.2	86.4												
	2.800L/(739.68G)	452.6	30.9	441.8	51.4	424.9	96.6												
	3.200L/(845.35G)	524.0	35.8	511.5	59.6	492.0	111.8												

Flow rates within this range will downgrade performance.
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SMT, SMIT, SMAT, SMAIT = 80 BAR
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Examples of screw pumps within various applications

Performances

4 POLE MOTOR 1750 RPM

Type		40 BAR / 80 BAR						80 BAR											
		1500 SSU																	
		75 PSI		150 PSI		300 PSI		450 PSI		600 PSI		750 PSI		900 PSI		1000 PSI		1100 PSI	
		GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP	GAL	HP
GR20	8L/(2.1G)	1.6	0.2	1.6	0.3	1.5	0.5	1.5	0.6	1.5	0.8	1.4	0.9	1.4	1.1	1.4	1.2	1.4	1.3
	12L/(3.17G)	2.2	0.3	2.2	0.4	2.1	0.7	2.1	0.9	2.0	1.1	2.0	1.3	2.0	1.5	2.0	1.7	1.9	1.8
	15L/(3.97G)	3.2	0.5	3.1	0.6	3.0	1.0	3.0	1.3	2.9	1.6	2.9	1.9	2.8	2.2	2.8	2.4	2.8	2.6
	17L/(4.5G)	3.5	0.5	3.4	0.7	3.3	1.1	3.3	1.4	3.2	1.7	3.1	2.1	3.1	2.4	3.1	2.6	3.0	2.9
	20L/(5.28G)	3.8	0.6	3.7	0.8	3.6	1.2	3.6	1.5	3.5	1.9	3.4	2.3	3.4	2.6	3.4	2.9	3.3	3.1
GR25	25L/(6.60G)	5.0	0.7	4.9	0.9	4.7	1.4	4.6	1.9	4.5	2.4	4.5	2.9	4.4	3.4	4.4	3.7	4.3	4.0
	30L/(7.93G)	6.2	0.8	6.1	1.1	5.9	1.8	5.8	2.4	5.7	3.0	5.6	3.6	5.5	4.2	5.5	4.6	5.4	5.0
GR32	35L/(9.25G)	7.3	0.9	7.2	1.3	7.0	2.0	6.8	2.7	6.7	3.4	6.6	4.2	6.5	4.9	6.4	5.3	6.4	5.8
	45L/(11.89G)	9.0	1.1	8.8	1.5	8.5	2.5	8.3	3.3	8.2	4.2	8.1	5.1	7.9	5.9	7.9	6.5	7.8	7.1
	55L/(14.53G)	9.8	1.2	9.6	1.7	9.3	2.7	9.1	3.6	8.9	4.5	8.8	5.6	8.7	6.5	8.6	7.1	8.5	7.8
GR40	75L/(19.81G)	13.0	1.6	12.8	2.2	12.4	3.6	12.1	4.8	11.9	6.1	11.7	7.4	11.6	8.6	11.4	9.5	11.4	10.4
	80L/(21.1G)	14.3	1.6	14.1	2.3	13.6	3.8	13.3	5.2	13.1	6.5	12.9	8.0	12.7	9.4	12.6	10.3	12.5	11.3
	100L/(26.4G)	17.8	2.0	17.5	2.9	17.0	4.7	16.6	6.4	16.3	8.1	16.0	10.0	15.8	11.7	15.7	12.8	15.5	14.0
GR45	125L/(33.02G)	21.6	2.5	21.2	3.5	20.6	5.8	20.2	7.8	19.8	9.8	19.5	12.1	19.2	14.1	19.0	15.6	18.8	17.0
	150L/(39.63G)	25.5	2.9	25.0	4.1	24.2	6.8	23.7	9.2	23.3	11.6	22.9	14.2	22.6	16.6	22.4	18.3	22.2	20.0
GR55	180L/(47.56G)	30.6	3.4	30.0	4.8	29.1	8.0	28.5	10.9	28.0	13.8	27.5	17.0	27.1	19.9	26.9	21.9	26.7	23.9
	210L/(55.48G)	36.2	4.0	35.6	5.7	34.5	9.5	33.8	12.9	33.2	16.3	32.6	20.1	32.1	23.6	31.8	26.0	31.6	28.4
GR60	250L/(66.04G)	45.7	4.8	44.9	6.9	43.5	11.7	42.6	16.0	41.8	20.3	41.1	25.1	40.5	29.4	40.2	32.5	39.8	35.5
	300L/(79.25G)	51.7	5.4	50.8	7.8	49.3	13.2	48.2	18.1	47.3	23.0	46.5	28.4	45.9	33.3	45.4	36.7	45.1	40.2
	330L/(87.17G)	57.1	6.0	56.1	8.7	54.4	14.6	53.2	20.0	52.3	25.4	51.4	31.4	50.7	36.8	50.2	40.6	49.8	44.4
GR70	380L/(100.38G)	65.0	6.8	63.8	9.9	61.9	16.6	60.5	22.8	59.4	28.9	58.4	35.7	57.6	41.8	57.1	46.1	56.6	50.4
	440L/(116.23G)	77.3	7.9	75.9	11.6	73.6	19.6	72.0	26.9	70.7	34.2	69.5	42.3	68.5	49.6	67.9	54.7	67.3	59.9
GR80	500L/(132.08G)	85.9	8.8	84.3	12.8	81.8	21.8	80.0	29.9	78.6	38.0	77.2	47.0	76.2	55.1	75.5	60.8	74.8	66.5
	560L/(147.9G)	92.6	9.1	90.8	13.5	88.1	23.1	86.3	31.9	84.7	40.7	83.2	50.3	82.1	59.1	81.3	65.2	80.6	71.3
	600L/(158.5G)	105.2	10.4	103.3	15.4	100.2	26.3	98.1	36.3	96.3	46.2	94.6	57.2	93.3	67.2	92.4	74.1	91.7	81.1
GR90	660L/(174.35G)	116.9	11.5	114.7	17.1	111.3	29.2	109.0	40.3	107.0	51.4	105.1	63.6	103.6	74.6	102.7	82.4	101.8	90.1
	800L/(211.33G)	136.4	13.5	133.9	19.9	129.9	34.1	127.1	47.0	124.8	59.9	122.6	74.1	120.9	87.1	119.8	96.1	118.8	105.1
GR100	1.000L/(264.17G)	178.2	15.2	174.8	23.2	169.6	40.8	166.0	56.8	163.0	72.8	160.2	90.4	157.9	106.4	156.5	117.5	155.2	128.7
	1.2000L/(317G)	216.4	18.4	212.3	28.2	206.0	49.5	201.6	68.9	198.0	88.4	194.5	109.7	191.8	129.1	190.0	142.7	188.4	156.3
GR110	1.500L/(396.25G)	241.6	20.6	237.1	31.4	230.0	55.3												
	1.700L/(447.1G)	281.9	24.0	276.6	36.7	268.4	64.5												
	2.000L/(528.34G)	322.2	27.5	316.1	41.9	306.7	73.7												
GR110	2.200L/(581.17G)	370.5	31.6	363.6	48.2	352.7	84.8												
	2.300L/(607.6G)	360.9	30.8	354.2	47.0	343.6	82.6												
	2.500L/(660.43G)	409.1	34.9	401.4	53.2	389.4	93.6												
	2.800L/(739.68G)	457.2	39.0	448.6	59.5	435.2	104.6												
	3.200L/(845.35G)	529.4	45.1	519.5	68.9	504.0	121.2												

Flow rates within this range will downgrade performance.
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SMT, SMIT, SMAT, SMAIT = 80 BAR

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ORDERING KEY

GR *** 1	*** 2	***L 3	* 4	* 5 / 6	** 7	** 8	** 9	** 10	*** 11	** 12	*** 13
PUMP TYPE	DRY OR SUBMERSIBLE	NOMINAL FLOW (GPM) @ 1750 RPM	HIGH VISCOSITY FLAG	HOLLOW SHAFT TYPE/ FLANGE TYPE (OMIT FOR NORMAL SHAFT) (ONLY FOR 1750 RPM)	PUMP BODY	SCREWS TREATMENT	SEALS TYPE	SHAFT SEAL	INTERNAL PRESSURE RELIEF VALVE	SUCTION FLANGE	ROTATION
GR20	SMT SMT 16B DRY (metric series)	8/12/15/20	STANDARD up to 460 SSU	MOTOR SHAFT (5)	STANDARD ALUMINIUM	HA CORE HARDENED SCREWS	TM MECHANICAL SEAL	STANDARD NBR	STANDARD NO PRESSURE RELIEF	STANDARD RADIAL	STANDARD RIGHT ROTATION
GR25		25/30									
GR32		35/45/55/75									
GR40		80/100/125/150									
GR45		180/210									
GR55		250/300/330/380	S1 from 460 to 1160 SSU								
GR60		440/500	S2 ⁽¹⁾ from 1160 to 2320 SSU								
GR70		600/660/800	S3 from 2320 to 3710 SSU								
GR80		1.000/1.200									
GR90		1.500/1.700 2.000/2.200									
GR110	2.300/2.500	S4 over 3710 SSU	MOTOR FORM B5 B14 B5R	A CARBON STEEL (18NiCrMo5)	HD SURFACE HARDENED SCREWS	V FKM	RF1 PRESSURE RELIEF AT 5 BAR	AX AXIAL	AL TANK - TOP FLANGE	SX LEFT ROTATION	
				K ⁽²⁾ HARDENED STEEL		E EPDM	RF2 PRESSURE RELIEF AT 10 BAR				
									RF3 PRESSURE RELIEF AT 15 BAR		
									RF ⁽³⁾ VARIABLE REGULATION VALVE		

- (1) High Viscosity flag (S2) option reduces the efficiency of the pump.
- (2) Hardened Steel available from GR20 to GR70 included.
- (3) Variable regulation relief valve (RP) not available for GR20, GR25, GR80, GR90, GR100.

EXAMPLES:

(1) GR55 SMT16B 250L S2 AC28/B5 G V RF1

Pump providing a nominal flow of 250L, for thick oil (operation viscosity between 1160 and 2320 SSU), hollow shaft diameter 28 (motor 132) flange B5, cast iron body, Viton seals, pressure relief valve at 5bar- DO NOT NEED bell housing and coupling, mountable directly on the motor.

(2) GR80 SMT16B 1.000L

Pump providing a nominal flow of 1000L/min at 2750 rpm, (For model coding purpose we are representing the flow and rpm based on the 50HZ) normal shaft, aluminium body-need bell housing and coupling.

SAMPLE APPLICATION SUMMARY

Applications	High Viscosity Screws	Body Material	Screw Material	Seals
Cooling	*	*	*	*
Cooling (Water & Glycol)	*	G	*	*
Filtration System	*	G / K	HA	*
Gearbox Lube	S1, S2, S3, S4	*	*	*
Fluid Transfer	*	*	*	*
Power Packs	*	*	*	*
Tool Machines-Chip Conveyors	*	G / K	HA	*

(*) Standard configuration and material

SCREW PUMP SIZING QUESTIONNAIRE

Please read carefully and complete the following questionnaire. By doing this you will allow us to propose the best possible solution to enhance your system performance. We suggest you photocopy the form, and FAX it to us at 713-937-0438.

Company Name _____ Name _____

Address _____

Telephone _____ Fax _____

Email _____ Qty _____ Date _____

APPLICATION DESCRIPTION

Type of Fluid _____

Pump Suction Position with Respect to the Fluid Level _____

Pump Speed Min _____ (RPM) Max _____ (RPM)

Working Pressure Max _____ (PSI) Peak _____ (PSI)

Pump Flow Required _____ (GPM) _____ % AIR _____ % WATER

Initial Viscosity _____ (Fahrenheit) _____ (SSU)

Operating Viscosity _____ (Fahrenheit) _____ (SSU)

Inlet Pressure Max _____ (PSI) Max @ min RPM _____ (PSI)

Drive Shaft Side Loads if any _____ (Force)

Ambient Temperature _____ °C



- in Fluid Energy Management

Global perspective

and local entrepreneurial flair



Olaer is a global player specialising in innovative, efficient system solutions for temperature optimisation and energy storage. Olaer develops, manufactures and markets products and systems for a number of different sectors, e.g. the aircraft, engineering, steel and mining industries, as well as for sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc.

All over the world, our products operate in the most diverse environments and applications. One constantly

repeated demand in the market is for optimal energy storage and temperature optimisation. We work at a local level with a whole world as our workplace – local entrepreneurial flair and a global perspective go hand in hand.

Our local presence, long experience and a wealth of knowledge combine with our cutting-edge expertise to give you the best possible conditions for making a professional choice.