

MORE EFFICIENCY IN A COMPACT DESIGN



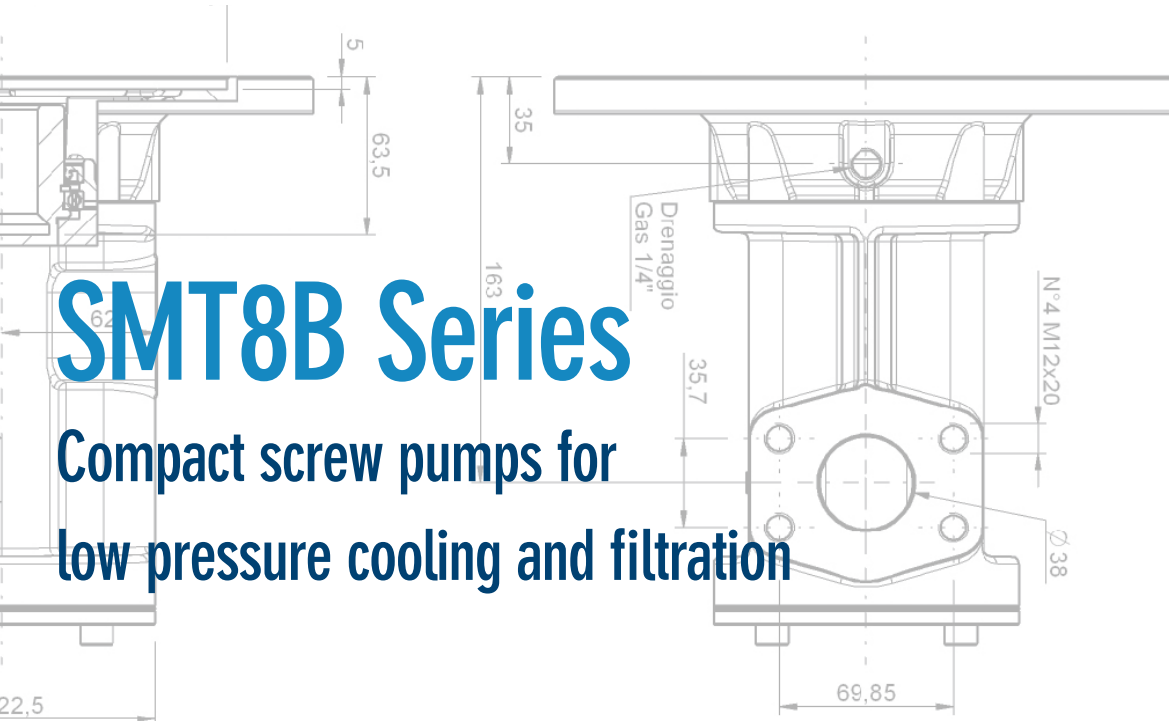
INDUSTRIAL



MOBILE



WIND ENERGY



SMT8B Series

Compact screw pumps for
low pressure cooling and filtration



SMT8B Series / Serie SMT8B

Settima designs and manufactures hydraulic three screw pumps and helical rotors pumps. **Settima** screw pumps, coupled together with external or immersed motors, run quietly and with no pulsations, they are used in hydraulic applications and many types of systems. **Settima** screw pumps are positive displacement rotary pump with axial flow design. There are only three moving parts. The power rotor is the only driven part that extends outside the case. The idler screws 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 ones. The rolling action eliminates noise and vibration.

Settima progetta e produce pompe idrauliche a tre viti e a rotori elicoidali. Le pompe Settima, accoppiate a motori esterni o sommersi, funzionano silenziosamente e senza pulsazioni e sono utilizzate in svariate applicazioni idrauliche. Le pompe a viti Settima sono pompe volumetriche progettate con trasferimento assiale della pressione. All'interno della pompa ci sono solo tre parti in movimento. La vite principale è l'unica parte guidata e trasmette il moto alle viti satelliti. Le viti satelliti svolgono anche la funzione di creazione di zone di pressione a tenuta.

Applications / Applicazioni

WIND ENERGY ENERGIA EOLICA

Low pressure cooling and recirculation (pitch controls of windmill blades)

Raffreddamento a basse pressioni e ricircolo (controllo inclinazione pale mulini a vento)

Lube services (gear and gear boxes)
Lubrificazione (ingranaggi)

INDUSTRIAL INDUSTRIALE

Low pressure cooling

Raffreddamento a basse pressioni

Off-line compact cooling systems

Sistemi compatti di raffreddamento off-line

Powerpacks cooling

Raffreddamento centraline

Chillers

Raffreddamento in genere

Oil seal services (compressors, generators)

Paraolio (compressori, generatori).

Lube services (diesel engines, turbines, compressors)

Lubrificazione (motori diesel, turbine, compressori)

MOBILE MOVIMENTAZIONE

Mobile machines cooling

Raffreddamento per macchinari movimentazione terra

Filtration, low pressure recirculation

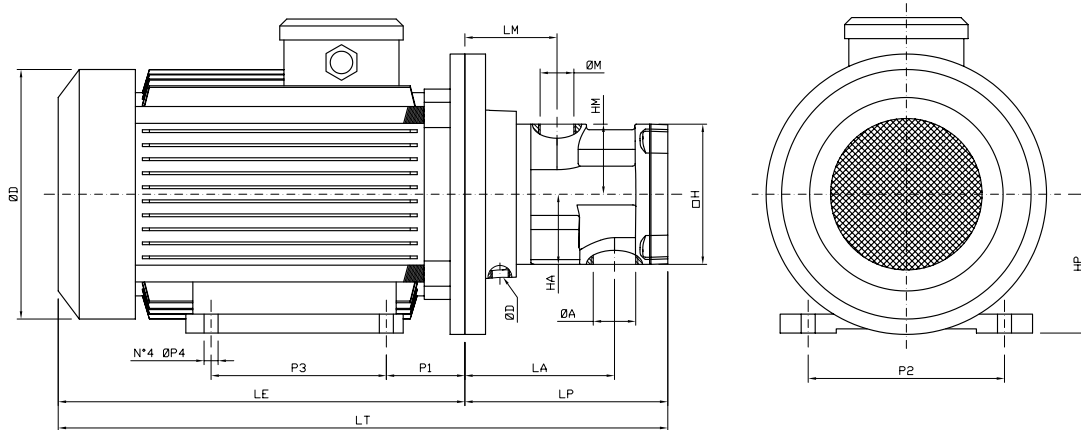
Filtrazione, ricircolo a bassa pressione



Flow media / Fluidi

Mineral oil <i>Oli minerali</i>
Synthetic oil <i>Oli sintetici</i>

Motor pump SMT8B / Motopompa SMT8B



SMT8B																		
PUMP SIZE	GR 32				GR 40					GR 45				GR 60				
L / min	26-30-35-45				60-80					80-120-155				210-300-380				
MOTOR SIZE	71	80	90 S	90 L	80	90 S	90 L	100	112	90 S	90 L	100	112	132 S	132 M	100	112	
HOLLOW SHAFT	14	19	24		19	24		28		24		28		38		28	38	
MOTOR	ØD	160,0	200,0			200,0			250,0		200,0		250,0		300,0		250,0	
	LE	225,0	256,0	255,0	280,0	256,0	255,0	280,0	307,0	328,0	255,0	280,0	307,0	328,0	365,0	403,0	307,0	328,0
	HP	71,0	80,0	90,0		80,0	90,0		100,0	112,0	90,0		100,0	112,0	132,0		100,0	112,0
	P1	45,0	50,0	56,0		50,0	56,0		63,0	70,0	56,0		63,0	70,0	89,0		63,0	70,0
	P2	112,0	125,0	140,0		125,0	140,0		160,0	190,0	140,0		160,0	190,0	216,0		160,0	190,0
	P3	90,0	100,0		125,0	100,0		125,0	140,0		100,0	125,0	140,0		178,0		140,0	
	ØP4	7,0	10,0			10,0			12,0		10,0		12,0				12,0	
PUMP	LA	93,3	106,7	114,7		108,0	116,0		124,3		136,5		149,5		163,0		161,5	
	LM	52,3	65,7	73,7		67,0	75,0		83,3		81,0		94,0		107,5		88,5	
	LP	131,3	144,7	152,7		146,0	154,0		162,3		188,0		201,0		214,5		233,0	
	H	100,0				100,0				100,0				130,0				
	HA	50,0				50,0				70,0				80,0				
	ØA	1" Gas				1" Gas				1" 1/2 Gas				2" SAE-3000				
	HM	50,0				50,0				65,0				80,0				
	ØM	3/4" Gas				3/4" Gas				1" 1/4 Gas				1" 1/4 SAE-3000				
ØD	1/4" Gas				1/4" Gas				1/4" Gas				1/4" Gas					
LT	356,3	400,7	407,7	432,7	402,0	409,0	434,0	469,3	490,3	443,0	468,0	508,0	529,0	579,5	617,5	540,0	561,0	

SMAT8B (For US market)														
PUMP SIZE	GR 32				GR 40					GR 45				
L / min	26-30-35-45				60-80					80-120-155				
MOTOR SIZE	71	80	90 S	90 L	80	90 S	90 L	100	112	90 S	90 L	100		
HOLLOW SHAFT	14	19	24		19	24		28		24		28		
MOTOR	ØD	160,0	200,0			200,0			250,0		200,0		250,0	
	LE	225,0	256,0	255,0	280,0	256,0	255,0	280,0	307,0	328,0	255,0	280,0	307,0	
	HP	71,0	80,0	90,0		80,0	90,0		100,0	112,0	90,0		100,0	
	P1	45,0	50,0	56,0		50,0	56,0		63,0	70,0	56,0		63,0	
	P2	112,0	125,0	140,0		125,0	140,0		160,0	190,0	140,0		160,0	
	P3	90,0	100,0		125,0	100,0		125,0	140,0		100,0	125,0	140,0	
	ØP4	7,0	10,0			10,0			12,0		10,0		12,0	
PUMP	LA	93,3	106,7	114,7		108,0	116,0		124,3		136,5		149,5	
	LM	52,3	65,7	73,7		67,0	75,0		83,3		81,0		94,0	
	LP	131,3	144,7	152,7		146,0	154,0		162,3		188,0		201,0	
	H	100,0				100,0				100,0				
	HA	50,0				50,0				70,0				
	ØA	1" Gas				1" Gas				1" 1/2 Gas				

Motor dimensions data might change according to motor manufacturer so, please, contact Settima.
Le dimensioni del motore possono cambiare in base al costruttore, quindi, si prega di contattare Settima.

Technical characteristics / Caratteristiche tecniche

Available models <i>Modelli disponibili</i>	GR32 - GR40 - GR45 - GR60	
Flanges <i>Flange</i>	IEC standard (for direct coupling with motor) Aluminium made <i>IEC standard (per accoppiamento diretto) Alluminio</i>	
Connections <i>Conessioni</i>	BSPP(GAS) – SAE 3000	
Drive loading <i>Carichi</i>	No axial or radial loads <i>Nessun carico assiale o trasversale</i>	
Shaft rotation <i>Rotazione albero</i>	Clockwise (from shaft end) for counter clockwise please contact Settima <i>Destra, per rotazione sinistra si prega di contattare Settima</i>	
Shaft speed <i>Velocità di rotazione</i>	From 500 to 1.750 rpm <i>Da 500 a 1.750 rpm</i>	
Flows <i>Portate</i>	From 15 up to 380 L/min (at 1.450 rpm) <i>Da 15 a 380 L/min (a 1.450 rpm)</i>	
Outlet pressure <i>Pressione di mandata</i>	From 0 up to 15 bar <i>Da 0 a 15 bar</i>	
Inlet pressure <i>Pressione di aspirazione</i>	Min. -0,5 bar max. 1,5 bar <i>Min. -0,5 bar max. 1,5 bar</i>	
Viscosity <i>Viscosità</i>	From 10 up to 15.000 cSt* <i>Da 10 a 15.000 cSt*</i>	
Seals <i>Guarnizioni</i>	NBR, FKM, EPDM	
Acoustic emissions <i>Emissioni acustiche</i>	From 55 up to 63 db(A) at 1.750 rpm <i>Da 55 fino a 63 db(A) a 1.750 rpm</i>	
Pump body <i>Corpo</i>	Aluminium (standard), Cast iron (special applications) <i>Alluminio (standard), Ghisa (applicazioni speciali)</i>	
Environment temperature <i>Temperatura ambiente</i>	From -20° up to +60°C <i>Da -20° a +60°C</i>	
Hydraulic temperature <i>Temperatura olio</i>	From -20°C up to +150°C <i>Da -20°C a +150°C</i>	
Filtration <i>Filtrazione</i>	Permissible degree of fluid contamination NAS to 1638 class 8 or ISO DIS 4406 17/14. Recommended filtration $\beta_{25} \geq 75$	Contaminazione NAS tipo classe 1638 8 o ISO DIS 4406 17/14. Filtrazione raccomandata $\beta_{25} \geq 75$

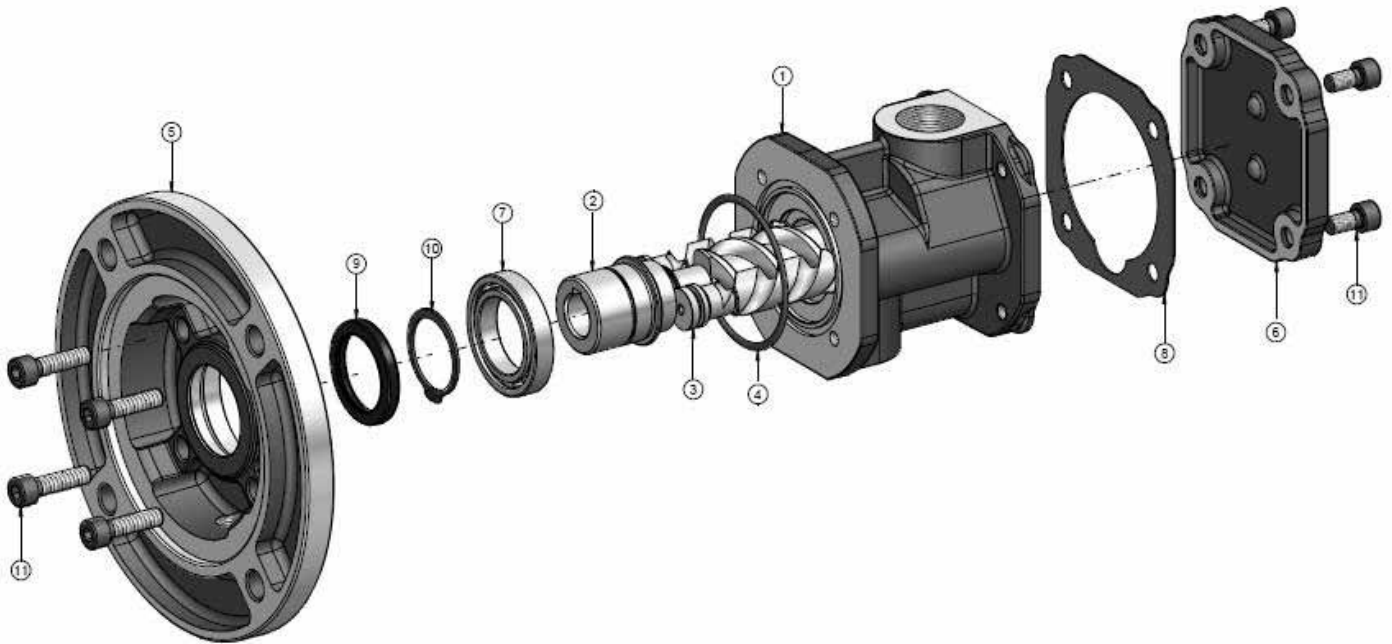
Standard performance / Prestazioni standard

Characteristics	Caratteristiche	Un.	Min.	Max.
Gas content (undissolved)	Gas contenuto (non disciolto)	Vol%	-	5
Level of contamination	Livello di contaminazione	ISO4406	-	21(19/17)
Kinematic viscosity	Viscosità Cinematica	mm ² /s	7	15.000*
Temperature (NBR seals)	Temperatura (guarnizione NBR)	°C	-25	80
Temperature (FPM seals)	Temperatura (guarnizione FPM)	°C	-25	150
Acoustic emissions	Emissioni acustiche	dB(A)	55 @ 1.500 rpm	56 @ 3.000 rpm
Pressure	Pressione	bar	-	15 (peak 20)

* Please contact Settima for more information about viscosity level.

* Contattare Settima per maggiori informazioni sul livello di viscosità.

Product description / Descrizione prodotto



N°	DESCRIPTION	DESCRIZIONE	MATERIAL	MATERIALE
1	Pump body	Corpo pompa	Aluminum / Cast iron*	Alluminio / Ghisa*
2	Main screw	Vite centrale	Steel*	Acciaio*
3	Idler screw	Vite laterale	Cast iron*	Ghisa*
4	O ring		NBR / FKM*	
5	Front cover	Flangia motore	Aluminium*	Alluminio*
6	End cover	Tappa posteriore	Aluminium*	Alluminio*
7	Ball bearing	Cuscinetto	Steel*	Acciaio*
8	Gasket	Guarnizione	NBR*	
9	Lip seal	Guarnizione a labbro	NBR / FKM*	
10	Circlip	Anello elastico	Steel	Acciaio
11	Screws	Viti	Steel	Acciaio

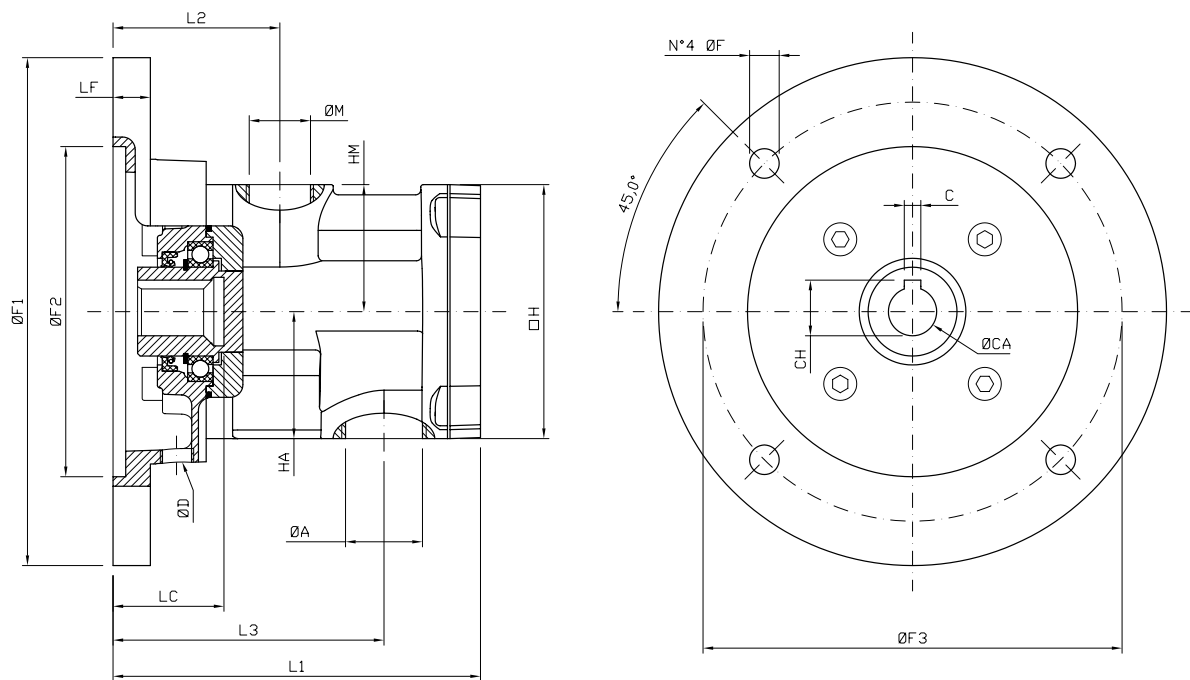
* Others available upon request.

* Altri tipi disponibili su richiesta.

Hollow shaft / albero cavo

Size / Taglia	Type / Tipo	AC14	AC19	AC24	AC28	AC38
GR 32	26L	X	X	X		
	30L					
	35L					
	45L					
GR 40	60L		X	X	X	
	80L					
GR 45	80L			X	X	X
	120L					
	155L					
GR 60	210L				X	X
	300L					
	380L					

SMT8B - Standard dimensions / Dimensioni standard



SMT8B												
SIZE / TAGLIA		GR 32			GR 40			GR 45			GR 60	
L/min (3000 RPM)		26 - 35 - 45			60 - 80			120 - 155			210 - 300 - 380	
SHAFT - FLANGE ALBERO - FLANGIA		Ac14-B5	Ac19-B5	Ac24-B5*	Ac19-B5	Ac24-B5	Ac28-B5	Ac24-B5	Ac28-B5	Ac38-B5*	Ac28-B5	Ac38-B5
FLANGE FLANGIA	ØF	9,5	11,6		12,0		14,0	12,0	14,0	15,0	14,0	
	ØF1	160,0	200,0		200,0		250,0	200,0	250,0	300,0	250,0	
	ØF2	110,0	130,0		130,0		180,0	130,0	180,0	230,0	180,0	
	ØF3	130,0	165,0		165,0		215,0	165,0	215,0	265,0	215,0	
	LF	23,3	15,7	23,7	15,0	23,0	15,0	12,0	15,0		11,0	
SHAFT ALBERO	C	5,2	6,5	8,5	6,5	8,5		8,5		10,5	8,5	
	ØCA	14,0	19,0	24,0	19,0	24,0	28	24,0	28,0	38,0	28,0	
	CH	16,2	21,9	27,5	21,8	27,5	31,5	27,5	31,5	42,0	31,5	
	LC	23,8	43,7	52,7	42,6	52,6	62,9	53,0	63,5	81,2	64,8	
PUMP POMPA	L1	131,3	144,7	152,7	146,0	154,0	162,3	188,0	201,0	214,5	233,0	
	L2	52,3	65,7	73,7	67,0	75,0	83,3	81,0	94,0	107,5	88,5	
	L3	93,3	106,7	114,7	108,0	116,0	124,3	136,5	149,5	163,0	161,5	
	H	100,0			100,0			100,0			130,0	
	HA	50,0			50,0			70,0			80,0	
	ØA	1" Gas			1" Gas			1" 1/2 Gas			2" SAE-3000	
	HM	50,0			50,0			65,0			80,0	
	ØM	3/4" Gas			3/4" Gas			1" 1/4 Gas			1" 1/4 SAE-3000	
ØD	1/4" Gas			1/4" Gas			1/4" Gas			1/4" Gas		

* The data might change according to the motor manufacturer, please contact Settima.

* I dati potrebbero cambiare in base al costruttore dei motori, contattare Set

SMAT8B - Standard dimensions / Dimensioni standard

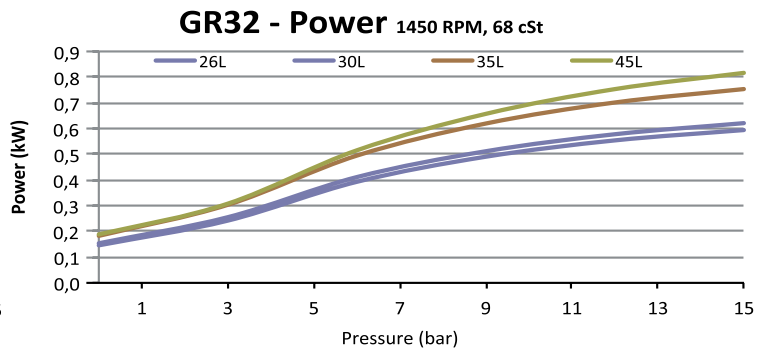
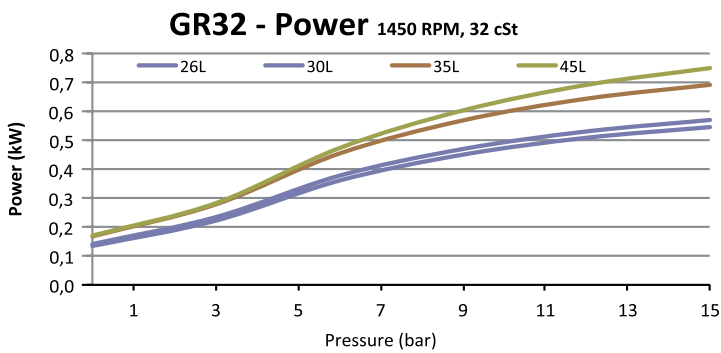
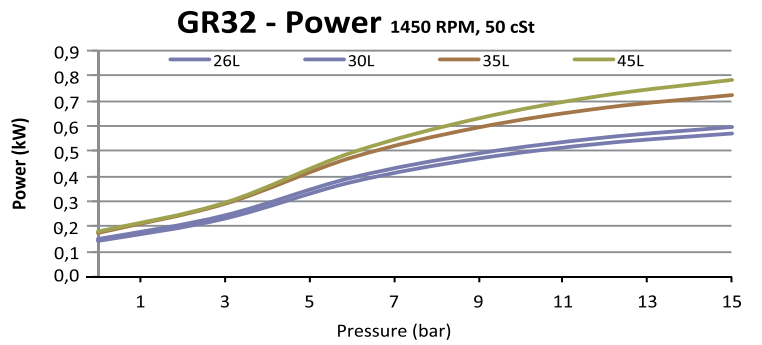
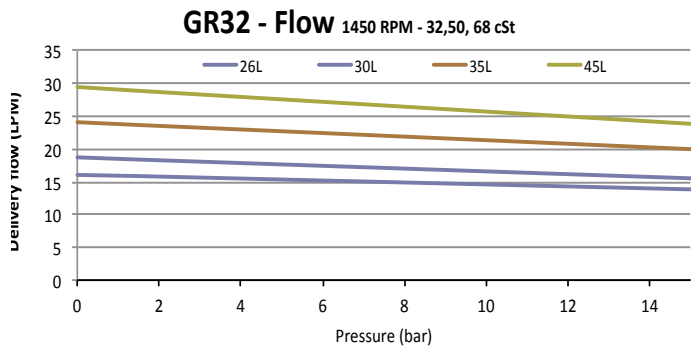
SMAT8B (For US market)							
SIZE / TAGLIA		GR 32		GR 40		GR 45	
L/min (3000 RPM)		26 - 35 - 45		60 - 80		120 - 155	
SHAFT - FLANGE ALBERO - FLANGIA		Ac7/8" 143/145TC	Ac1" 1/8 182/184TC	Ac7/8" 143/145TC	Ac1" 1/8 182/184TC	Ac1" 1/8" 182/184TC	Ac1" 3/8 213/1215TC
FLANGE FLANGIA	ØF	0,413	0,554	0,413	0,554	0,554	0,554
	ØF1	6,500	9,000	6,500	9,000	9,000	9,000
	ØF2	4,500	8,500	4,500	8,500	8,500	8,500
	ØF3	5,878	7,250	5,878	7,250	7,250	7,250
	FL	0,630	0,630	0,630	0,630	0,630	0,630
SHAFT ALBERO	C	0,209	0,256	0,209	0,256	0,256	0,335
	ØCA	0,875	1,125	0,875	1,125	1,125	1,375
	CH	0,984	1,260	0,984	1,260	1,271	1,535
	LC	2,217	2,965	2,209	2,866	2,866	3,327
PUMP POMPA	L1	6,035	7,551	6,075	6,705	8,200	9,205
	L2	2,925	4,441	2,965	3,594	3,988	4,992
	L3	4,539	6,055	4,579	5,209	6,173	7,177
	H	3,937		3,937		3,937	
	HA	1,969		1,969		2,756	
	ØA	1" Npt		1" Npt		1" 1/2 Npt	
	HM	1,969		1,969		2,559	
	ØM	3/4" Npt		3/4" Npt		1" 1/4 Npt	
	ØD	1/4" Npt		1/4" Npt		1/4" npt	

* The data might change according to the motor manufacturer, please contact Settima.

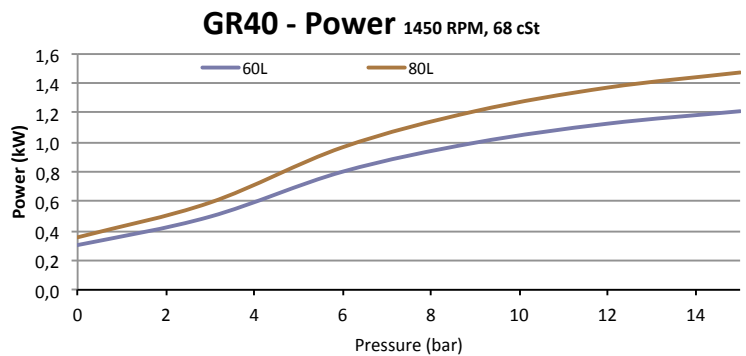
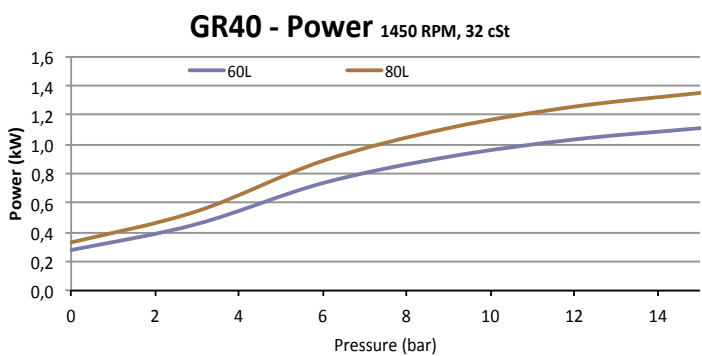
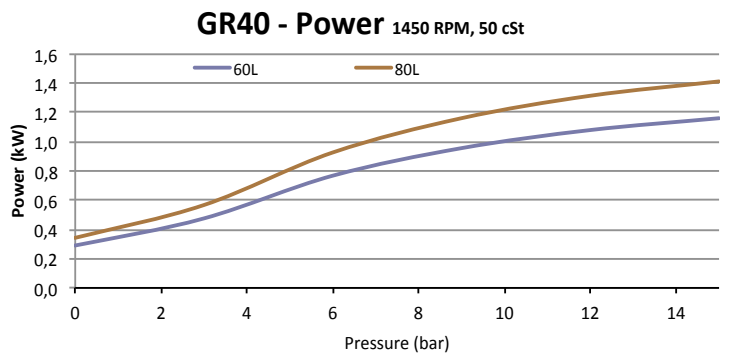
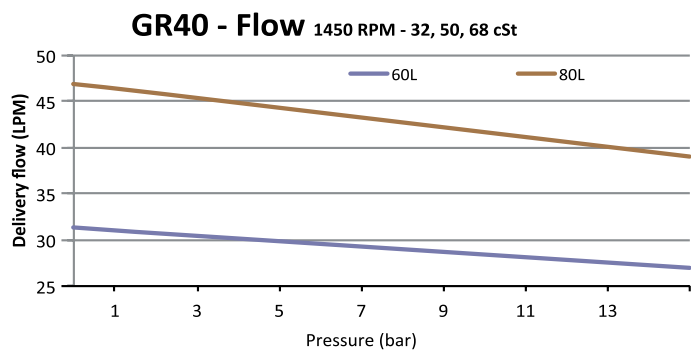
* I dati potrebbero cambiare in base al costruttore dei motori, contattare Settima.

Performances graphs

GR32



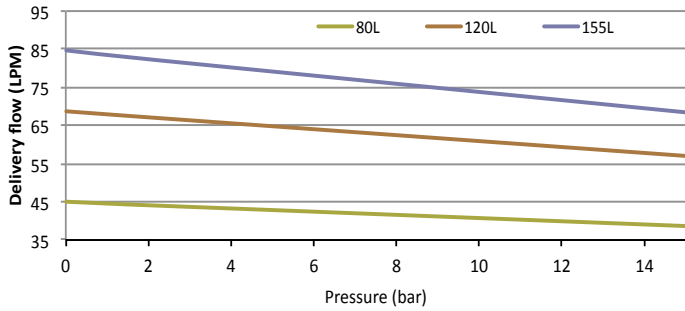
GR40



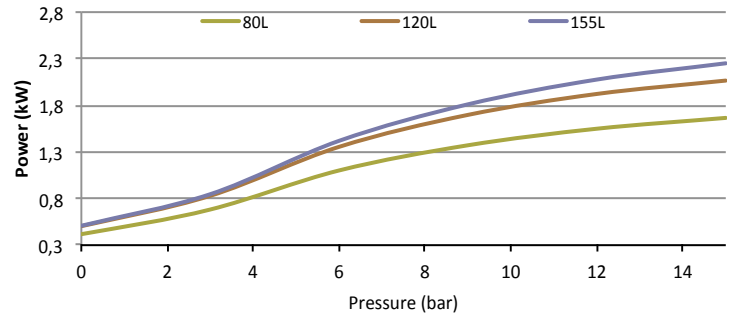
Performances graphs

GR45

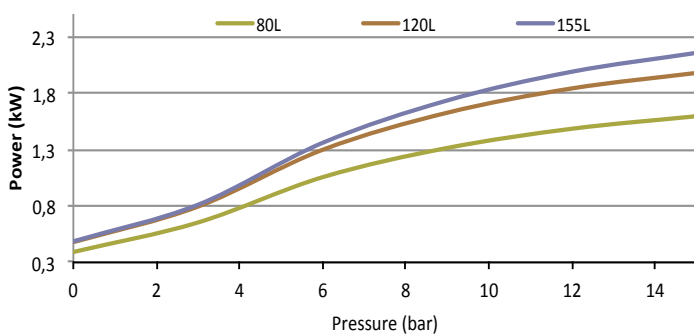
GR45 - Flow 1450 RPM - 32, 50, 68 cSt



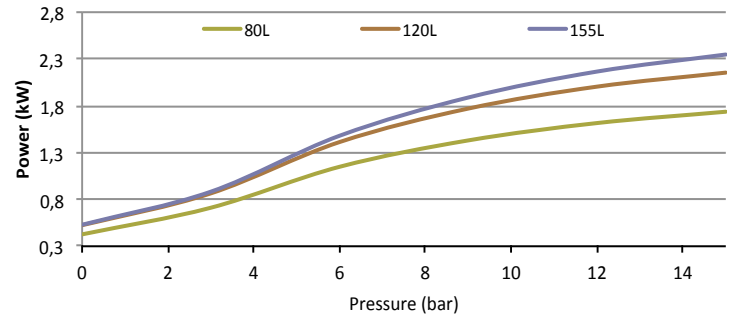
GR45 - Power 1450 RPM, 50 cSt



GR45 - Power 1450 RPM, 32 cSt

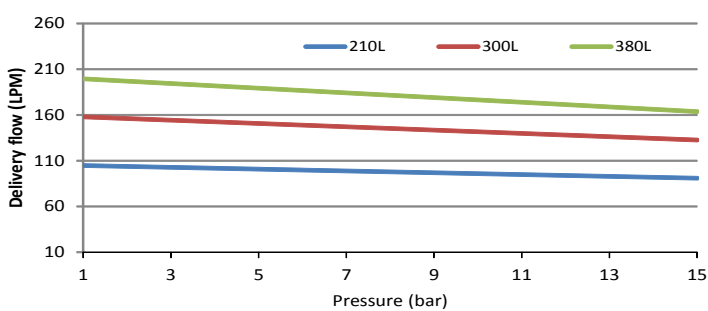


GR45 - Power 1450 RPM, 68 cSt

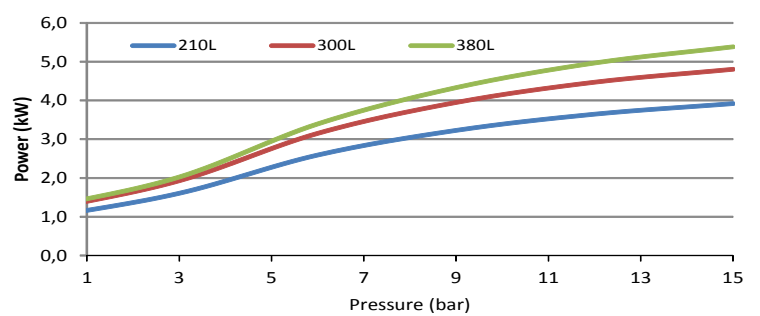


GR60

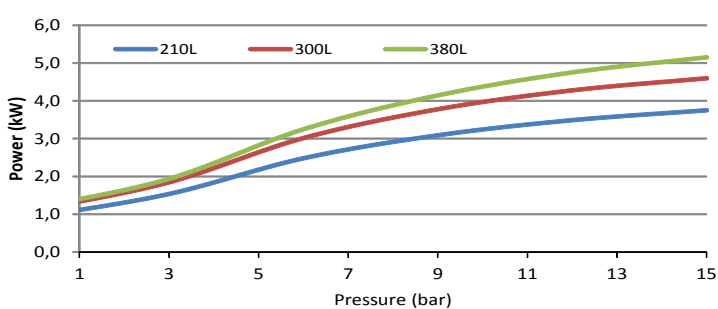
GR60 - Flow 1450 RPM - 32,50, 68 cSt



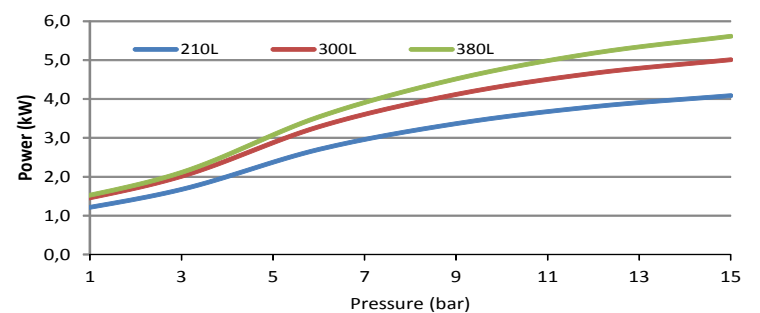
GR60 - Power 1450 RPM, 50 cSt



GR60 - Power 1450 RPM, 32 cSt



GR60 - Power 1450 RPM, 68 cSt



Ordering code / Codici di ordinazione

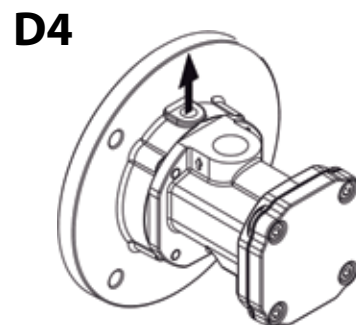
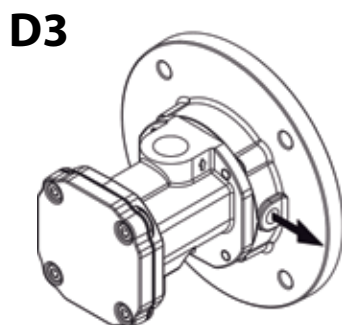
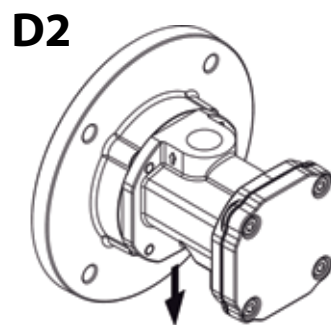
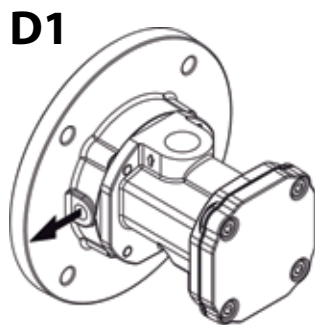
Type <i>Tipo</i>	Class <i>Classe</i>	Flows <i>Portate</i>	Shaft type <i>Tipo albero</i>	Pump body <i>Corpo pompa</i>	Body treatment <i>Trattamenti corpo</i>	Relief valve <i>Valvola di sicurezza</i>	Seals <i>Guarnizioni</i>	Screws <i>Viti</i>	Drain configuration <i>Configurazione drenaggio</i>	Rotation <i>Rotazione</i>
GR 32	SMT8B SMAT8B	26	Male shaft & flange <i>Albero maschio & flangia (none)**</i>	Standard (none) Aluminium <i>Alluminio</i>	Standard (none)	Standard (none)	Standard (none)	Standard (none)	Standard (none) D2	Standard (none) DX clockwise <i>orario</i>
		30								
		35								
		45								
GR 40	SMT8B SMAT8B	60	Hollow shaft <i>Albero cavo</i>	Optional G Cast iron <i>Ghisa</i>	Optional OX	Optional (none)	Optional (none) NBR	Optional (none)	Optional (none) D2	Optional (none) DX clockwise <i>orario</i>
		80								
GR 45	SMT8B SMAT8B	80	Hollow shaft <i>Albero cavo</i>	Optional G Cast iron <i>Ghisa</i>	Anodic coating (only with all. body) <i>Rivestimento anodico (solo corpo in all.)</i>	Optional RF1 (5bar) RF2 (10bar) RF3 (15bar)	Optional V FKM E EPDM	Optional HD surface treatment <i>trattamento superficiale</i>	Optional D1*** D3*** D4***	Optional SX counter clockwise <i>antiorario</i>
		120								
		155								
GR 60	SMT8B SMAT8B	210	Hollow shaft <i>Albero cavo</i>	Optional G Cast iron <i>Ghisa</i>	Anodic coating (only with all. body) <i>Rivestimento anodico (solo corpo in all.)</i>	Optional RF1 (5bar) RF2 (10bar) RF3 (15bar)	Optional V FKM E EPDM	Optional HD surface treatment <i>trattamento superficiale</i>	Optional D1*** D3*** D4***	Optional SX counter clockwise <i>antiorario</i>
		300								
		380								

* Please, check the table at page 5 / *Consultare la tabella a pagina 5.*

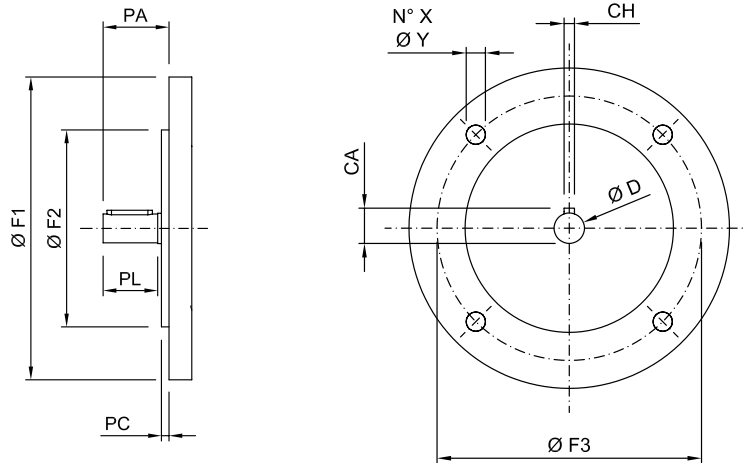
** Please, check the table at page 13 / *Consultare la tabella a pagina 13.*

*** Please, check below chapter / *Consultare il capitolo seguente.*

Drain configurations codes / Codici configurazioni drenaggio



SMT8B male shaft / SMT8B albero maschio



Type Tipo	Flange / Flangia				Shaft / Albero			Pump / Pompa
	ØF2	ØY	ØF3	ØF1	PL	ØD	CH	PA
GR 32	100	11	125	150	35	19	6	41
GR 40	125	14	160	188	36	19	6	42.5
GR 45	125	14	160	188	55	32	10	64.5
GR 60	160	18	200	235	55	32	10	65.5

SMT8B double shaft / SMT8B doppio albero

Possibility to have hollow shaft from one side (motor side) and shaft from the other side, see below picture.
 Disponibile anche con albero cavo (lato motore) e albero maschio dal lato opposto come da immagini seguenti.



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