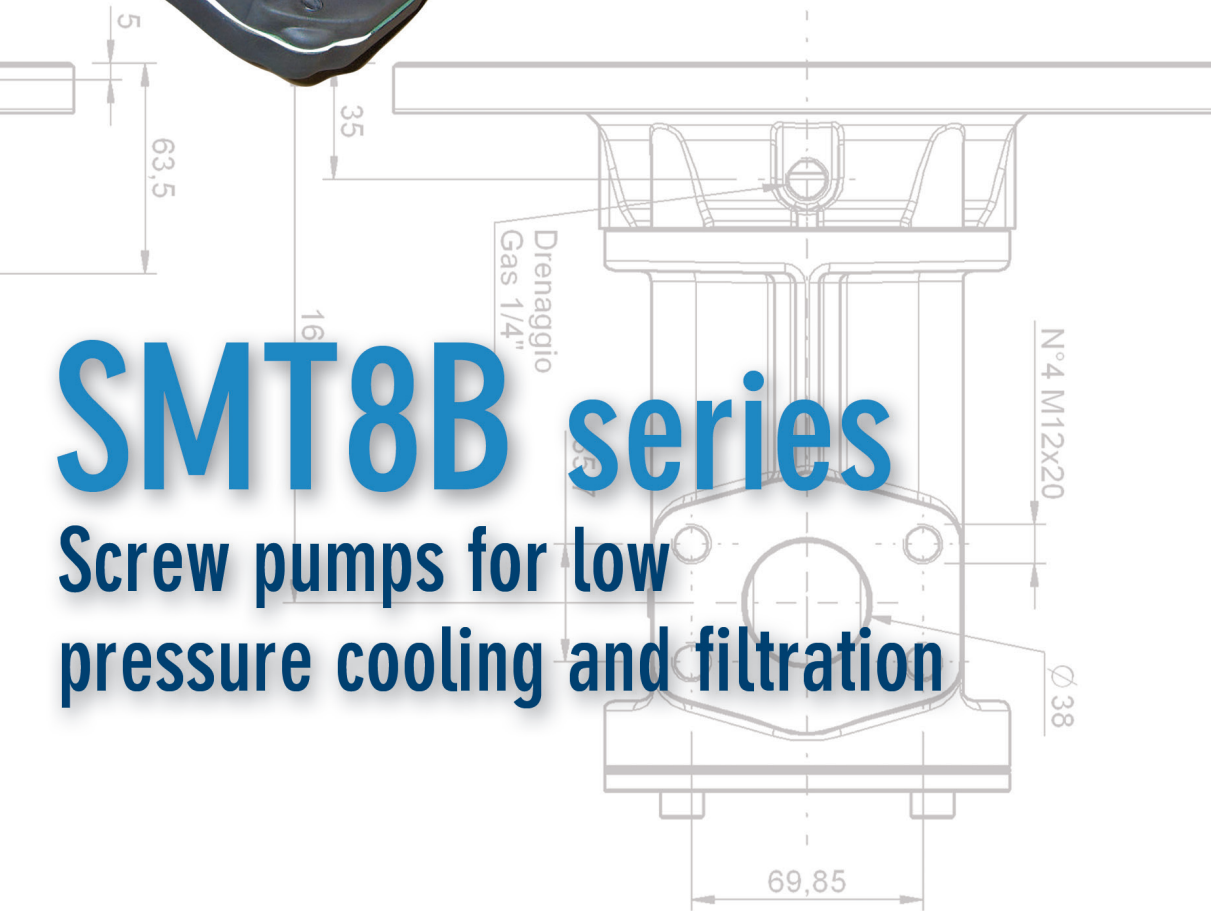
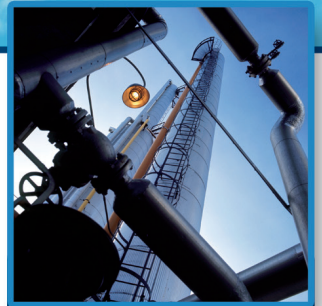


# MORE EFFICIENCY IN A COMPACT DESIGN



## SMT8B series

Screw pumps for low pressure cooling and filtration



INDUSTRIAL



MOBILE



WIND ENERGY

## SMT8B pump series

*Settima designs and manufactures hydraulic 3 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.*

## 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*



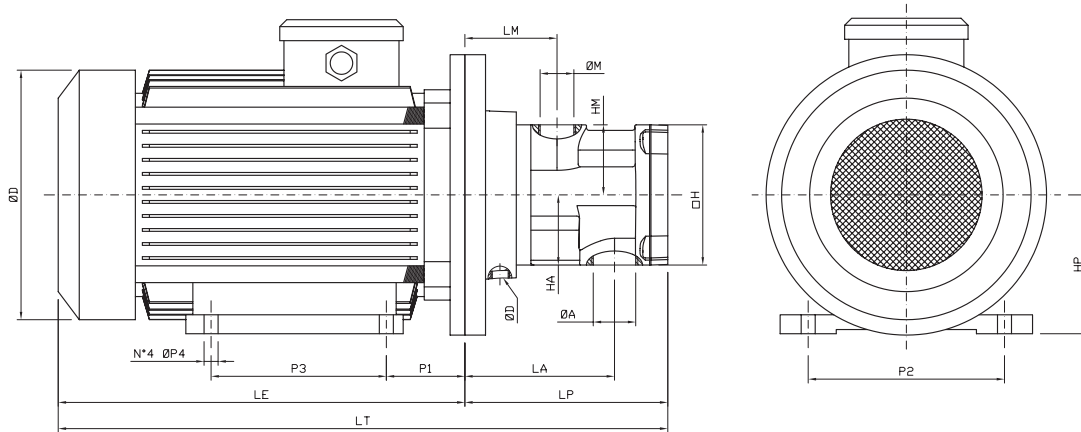
## Flow media / fluidi

### Flow media/fluidi

Mineral oil  
*Oli minerali*

Synthetic oil  
*Oli sintetici*

# Motor pump SMT8B



**SMT8B**

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	112	132 S	132 M			
HOLLOW SHAFT		14	19	24		19	24		28		24		28		38				
MOTOR DATA	ØD	160,0			200,0			200,0			250,0			200,0		250,0		300,0	
	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			
	HP	71,0	80,0	90,0		80,0	90,0		100,0	112,0	90,0		100,0	112,0	132,0				
	P1	45,0	50,0	56,0		50,0	56,0		63,0	70,0	56,0		63,0	70,0	89,0				
	P2	112,0	125,0	140,0		125,0	140,0		160,0	190,0	140,0		160,0	190,0	216,0				
	P3	90,0	100,0		125,0	100,0		125,0	140,0		100,0	125,0	140,0		178,0				
	ØP4	7,0	10,0			10,0			12,0		10,0		12,0						
PUMP DATA	LA	93,3	106,7	114,7		108,0	116,0		124,3		136,5		149,5		163,0				
	LM	52,3	65,7	73,7		67,0	75,0		83,3		81,0		94,0		107,5				
	LP	131,3	144,7	152,7		146,0	154,0		162,3		188,0		201,0		214,5				
	H	100,0				100,0				100,0									
	HA	50,0				50,0				70,0									
	ØA	1" Gas				1" Gas				1" 1/2 Gas									
	HM	50,0				50,0				65,0									
	ØM	3/4" Gas				3/4" Gas				1" 1/4 Gas									
ØD	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				

## 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	112	132 S	132 M			
HOLLOW SHAFT		14	19	24		19	24		28		24		28		38				
MOTOR DATA	ØD	160,0			200,0			200,0			250,0			200,0		250,0		300,0	
	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			
	HP	71,0	80,0	90,0		80,0	90,0		100,0	112,0	90,0		100,0	112,0	132,0				
	P1	45,0	50,0	56,0		50,0	56,0		63,0	70,0	56,0		63,0	70,0	89,0				
	P2	112,0	125,0	140,0		125,0	140,0		160,0	190,0	140,0		160,0	190,0	216,0				
	P3	90,0	100,0		125,0	100,0		125,0	140,0		100,0	125,0	140,0		178,0				
	ØP4	7,0	10,0			10,0			12,0		10,0		12,0						
PUMP DATA	LA	93,3	106,7	114,7		108,0	116,0		124,3		136,5		149,5		163,0				
	LM	52,3	65,7	73,7		67,0	75,0		83,3		81,0		94,0		107,5				
	LP	131,3	144,7	152,7		146,0	154,0		162,3		188,0		201,0		214,5				
	H	100,0				100,0				100,0									
	HA	50,0				50,0				70,0									
	ØA	1" Gas				1" Gas				1" 1/2 Gas									
	HM	50,0				50,0				65,0									
	ØM	3/4" Gas				3/4" Gas				1" 1/4 Gas									
ØD	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				

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

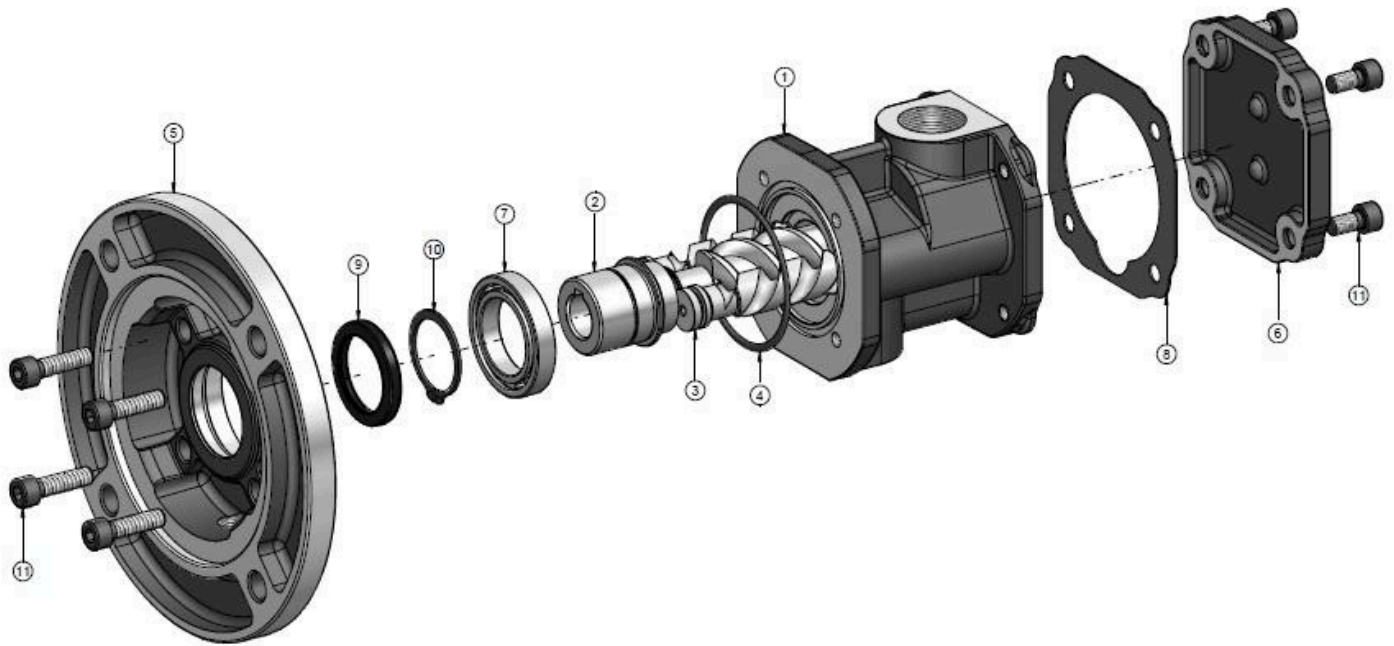
Flanges / Flange	IEC standard (for direct coupling with motor) Aluminium made IEC standard (per accoppiamento diretto) Alluminio	
Connections Conessioni	BSPP(GAS) – SAE 3000	
Drive loading Carichi	No axial or radial loads Nessun carico assiale o trasversale	
Shaft rotation Rotazione albero	Clockwise (from shaft end) for counter clockwise please contact Settima Destra, per rotazione sinistra si prega di contattare Settima	
Shaft speed Velocità di rotazione	From 500 to 1.750 rpm Da 500 a 1.750 rpm	
Flows Portate	From 15 up to 80 L/min (at 1.450 rpm) Da 15 a 80 L/min (a 1.450 rpm)	
Outlet pressure Pressione di mandata	From 0 up to 15 bar Da 0 a 15 bar	
Inlet pressure Pressione di aspirazione	Min. -0,5 bar max. 1,5 bar Min. -0,5 bar max. 1,5 bar	
Viscosity Viscosità	From 10 up to 15.000 cSt* Da 10 a 15.000 cSt*	
Seals Guarnizioni	NBR, FKM, EPDM (others on request) NBR, FKM, EPDM (altri a richiesta)	
Acoustic emissions Emissioni acustiche	From 55 up to 63 db(A) at 1.750 rpm Da 55 fino a 63 db(A) at 1.750 rpm	
Pump body (special application) Corpo (altri materiali)	Cast iron Ghisa	
Environment temperature Temperatura ambiente	From -20° up to +60°C Da -20°a +60°C	
Hydraulic temperature Temperatura olio	From -20°C up to +150°C Da -20°C a +150°C	
Filtration Filtrazione	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	Unit	Minimum	Maximum
Gas content (undissolved)	Gas contenuto (non disciolto)	Vol%	-	5
Level of contamination	Livello di contaminazione	ISO4406	-	21(19/17)
Kinematic viscosity	Viscosità Cinematica	mm <sup>2</sup> /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



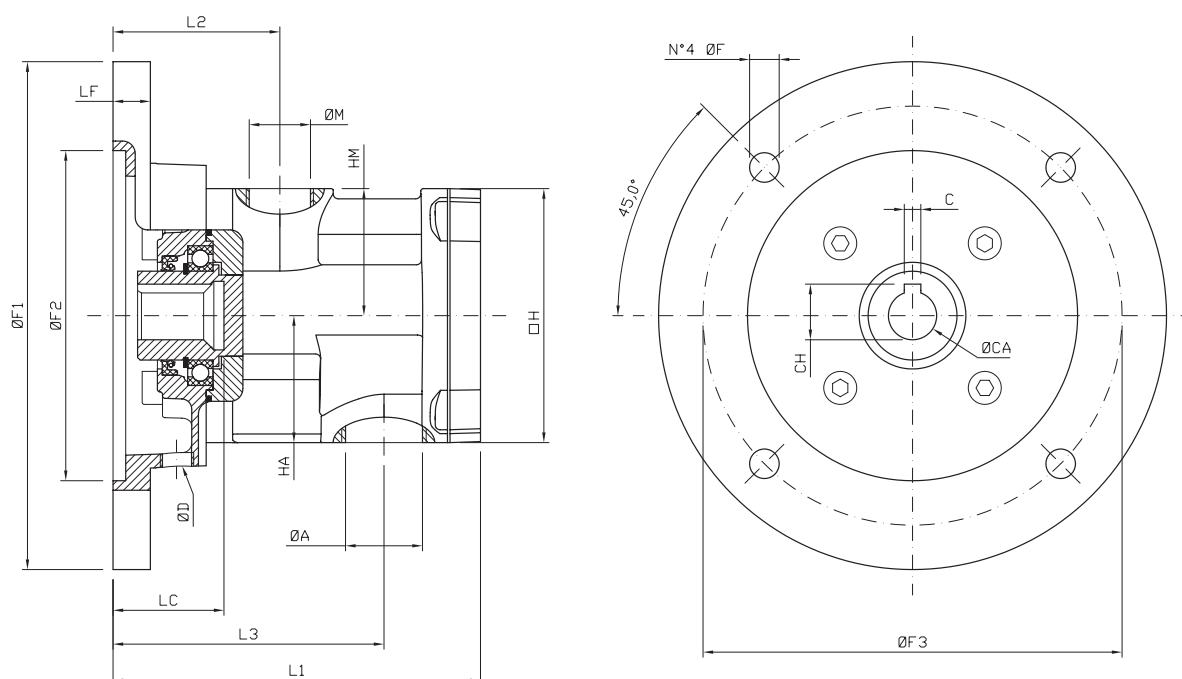
N°	DESCRIPTION/DESCRIZIONE	MATERIAL / MATERIALE
1	Pump body / Corpo pompa	Aluminum / Cast iron - Alluminio / Ghisa*
2	Main screw / Vite centrale	Steel / Acciaio*
3	Idler screw / Vite laterale	Cast iron / Ghisa*
4	O ring / O ring	NBR / FKM*
5	Front cover / Flangia motore	Aluminum / Alluminio*
6	End cover / Tappa posteriore	Aluminum / Alluminio*
7	Ball bearing / Cuscinetto	Steel / Acciaio*
8	Gasket / Guarnizione	Synthetic Fiber 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.

### Standard Hollow shaft availability

Size	Type	LPM @ 1450 rpm	Standard Hollow shaft availability				
			AC14	AC19	AC24	AC28	AC38
GR 32	26L	13	X	X	X		
	30L	15					
	35L	17					
	45L	22					
GR 40	60L	30		X	X	X	
	80L	40					
GR 45	80L	42			X	X	X
	120L	60					
	155L	77					

# SMT8B - Drawing and standard dimensions



## SMT8B

PUMP SIZE / TAGLIA POMPA		GR 32			GR 40			GR 45		
LITRES / LITRI (3000 rpm)		26 - 30 - 35 - 45			60 - 80			80 - 120 - 155		
SHAFT-FLANGE / ALBERO-FLANGIA		Ac14-B5	Ac19-B5	Ac24-B5*	Ac19-B5	Ac24-B5	Ac28-B5	Ac24-B5	Ac28-B5	Ac38-B5*
FLANGE / FLANGIA	ØF	9,5	11,6		12,0		14,0	12,0	14,0	15,0
	ØF1	160,0	200,0		200,0		250,0	200,0	250,0	300,0
	ØF2	110,0	130,0		130,0		180,0	130,0	180,0	230,0
	ØF3	130,0	165,0		165,0		215,0	165,0	215,0	265,0
	LF	23,3	15,7	23,7	15,0	23,0	15,0	12,0	15,0	
SHAFT / ALBERO	C	5,2	6,5	8,5	6,5	8,5		8,5		10,5
	ØCA	14,0	19,0	24,0	19,0	24,02	8	24,0	28,0	38,0
	CH	16,2	21,9	27,5	21,8	27,5	31,5	27,5	31,5	42,0
	LC	23,8	43,7	52,7	42,6	52,6	62,9	53,0	63,5	81,2
PUMP / POMPA	L1	131,3	144,7	152,7	146,0	154,0	162,3	188,0	201,0	214,5
	L2	52,3	65,7	73,7	67,0	75,0	83,3	81,0	94,0	107,5
	L3	93,3	106,7	114,7	108,0	116,0	124,3	136,5	149,5	163,0
	H	100,0			100,0			100,0		
	HA	50,0			50,0			70,0		
	ØA	1" Gas			1" Gas			1" 1/2 Gas		
	HM	50,0			50,0			65,0		
	ØM	3/4" Gas			3/4" Gas			1" 1/4 Gas		
	ØD	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 Settima.

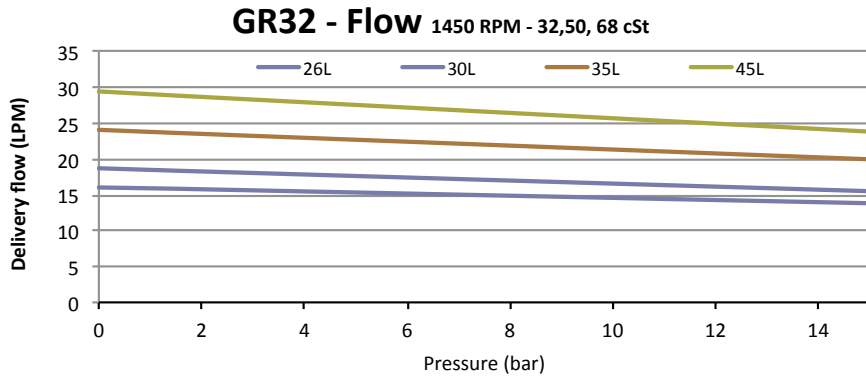
## SMAT8B (For US market)

PUMP SIZE / TAGLIA POMPA		GR 32		GR 40		GR 45	
LITRES / LITRI (3000 rpm)		26 - 30 - 35 - 45		60 - 80		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	

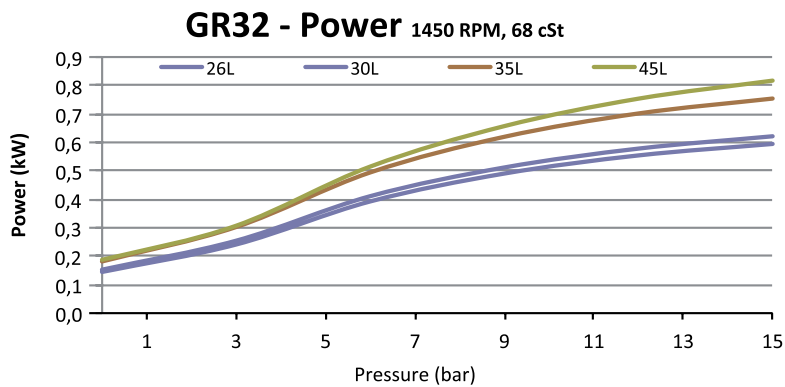
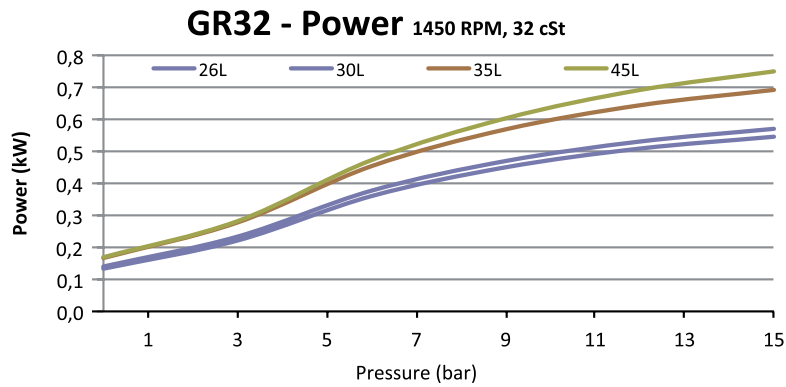
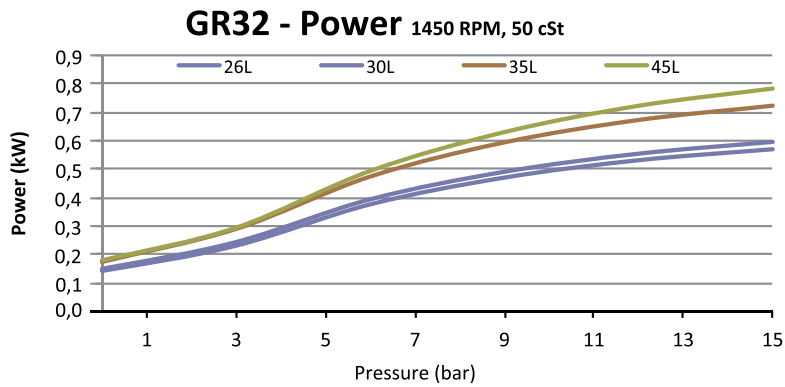


Possibility to have hollow shaft from one side (motor side) and shaft from the other side

## FLOW



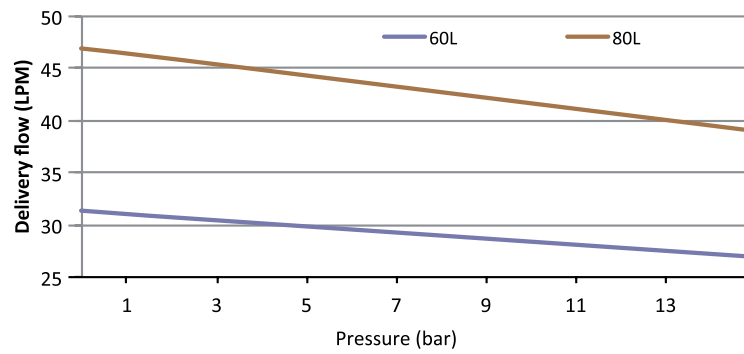
## POWER





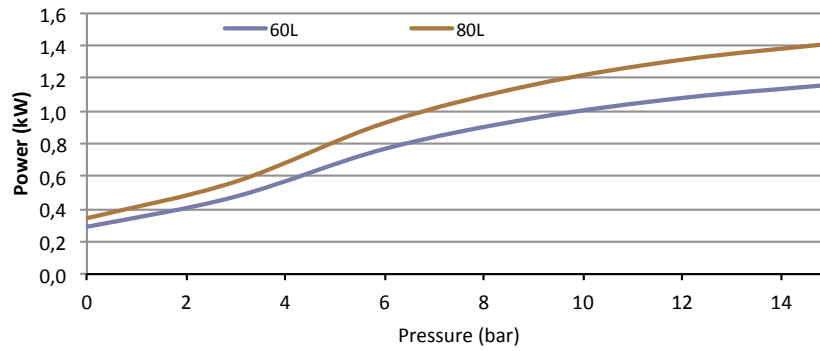
## FLOW

**GR40 - Flow** 1450 RPM - 32, 50, 68 cSt

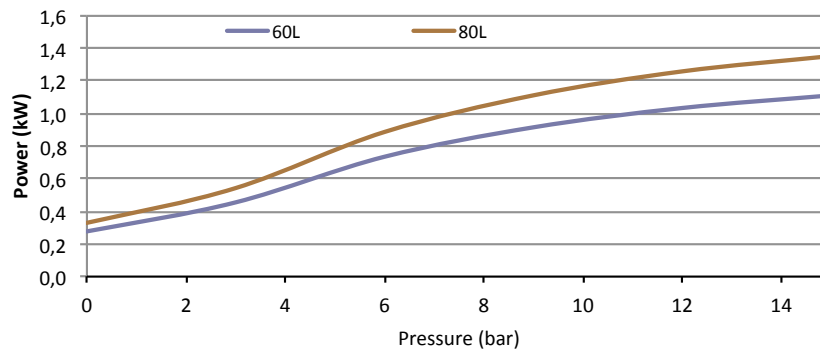


## POWER

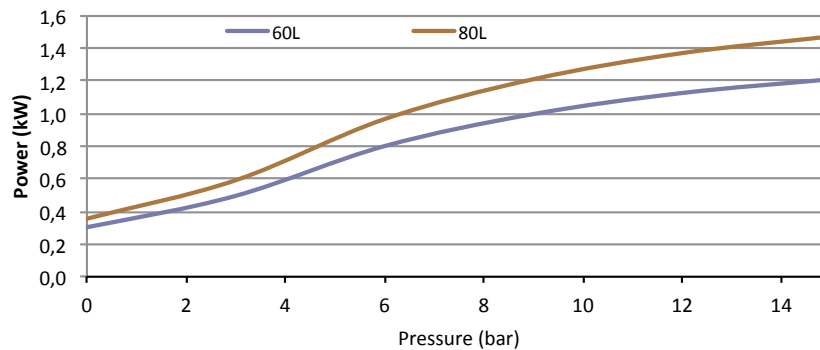
**GR40 - Power** 1450 RPM, 50 cSt



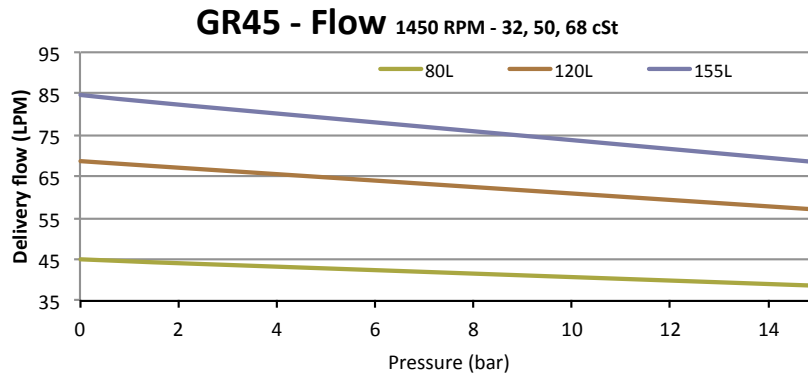
**GR40 - Power** 1450 RPM, 32 cSt



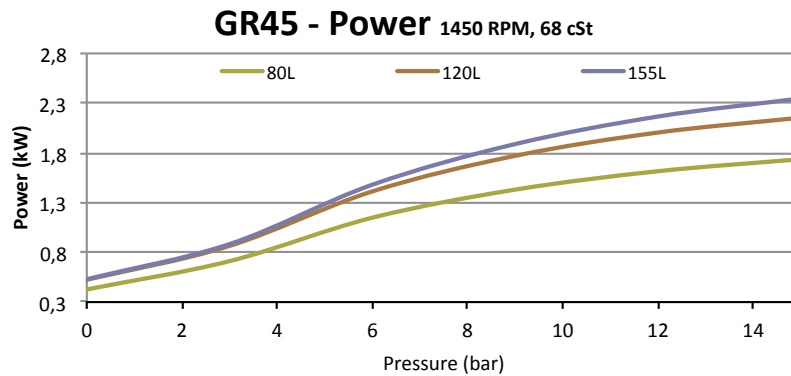
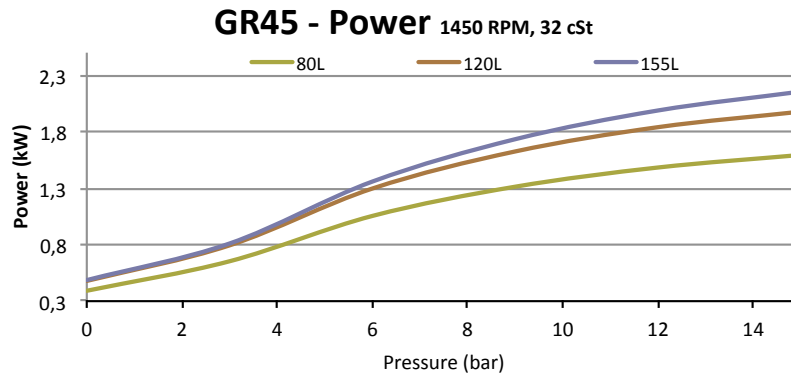
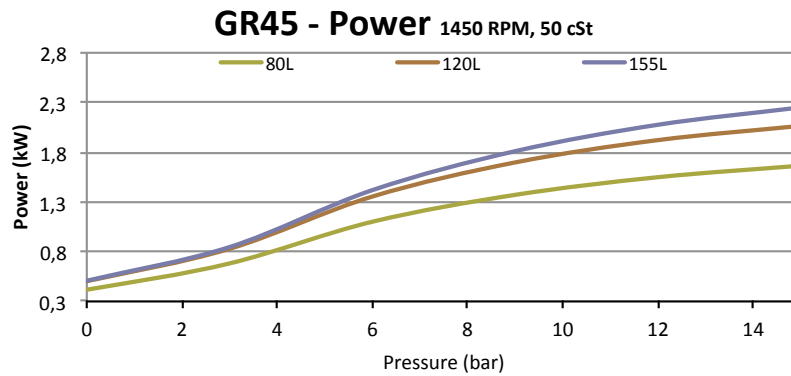
**GR40 - Power** 1450 RPM, 68 cSt



## FLOW



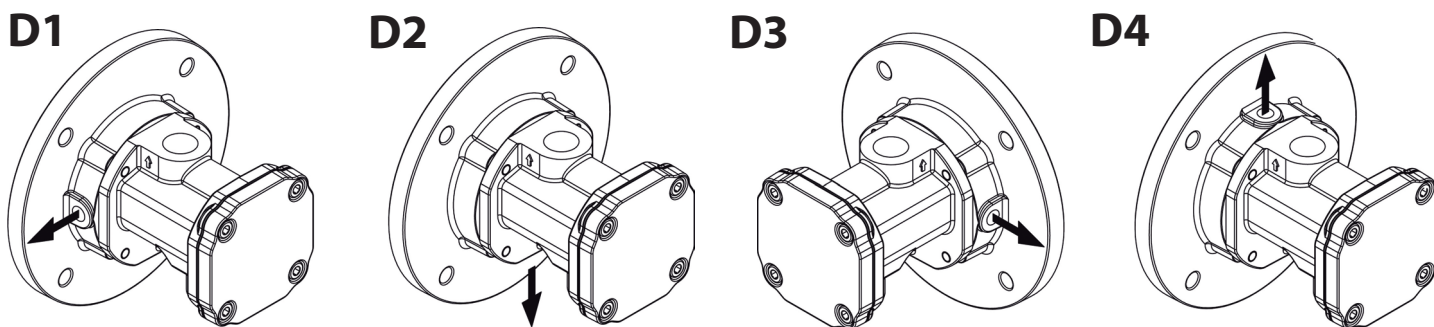
## POWER



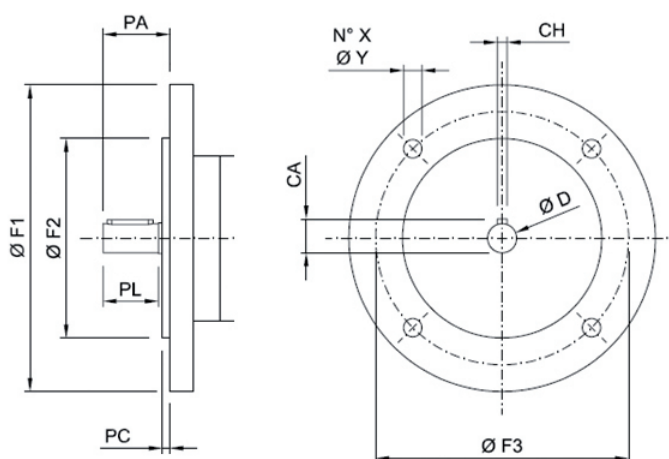
## Product range - Ordering code

Type Tipo	Class Classe	CC@ 2.950 rpm	Pump body Corpo pompa	Body treatment Trattamenti corpo	Relief valve Valvola di sicurezza	Seals Guarnizioni	Screws Viti	Drain configuration Configurazione drenaggio	Rotation Rotazione
GR 32 AC	SMT8B SMAT8B	26	Standard  (none)  Alluminum	Standard  (none)	Standard  (none)	Standard  (none)	Standard  (none)	Standard  (none)	Standard  (none)
		30							
		35							
		45							
GR 40 AC	SMT8B SMAT8B	60	Optional  <b>G</b>	Optional  <b>OX</b>	Optional  <b>RF1</b> (5bar)	Optional  <b>V</b>	Optional  <b>HD</b>	Optional  <b>D1</b>	Optional  <b>SX</b>
		80							
GR 45 AC	SMT8B SMAT8B	80	Cast Iron	Anodic coating  (only with all. Body)	<b>RF2</b> (10bar)	FKM	screws	<b>D3</b>	counter
		120							
		155							
					<b>RF3</b> (15bar)	EPDM	surface treatment	<b>D4</b>	clockwise

### Drain configuration codes



SMT8B available also with normal shaft / SMT8B con albero maschio



Type	Flange				Shaft			Pump
	F2	Y	F3	F1	PL	D	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

**SETTIMA**

**Settima, Italy**  
Headquarter, r&d and production

**SETTIMA**

USA  
Warehouse

**SETTIMA**

Shanghai, China  
Warehouse

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 **SETTIMA MECCANICA**

Area Agency/Reseller

**SETTIMA**  
*flow mechanisms*