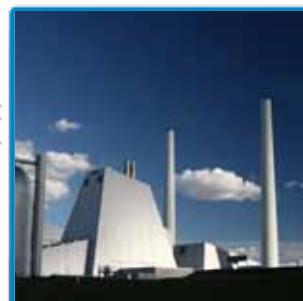




コンパクト、
安全、低騒音



MARINE



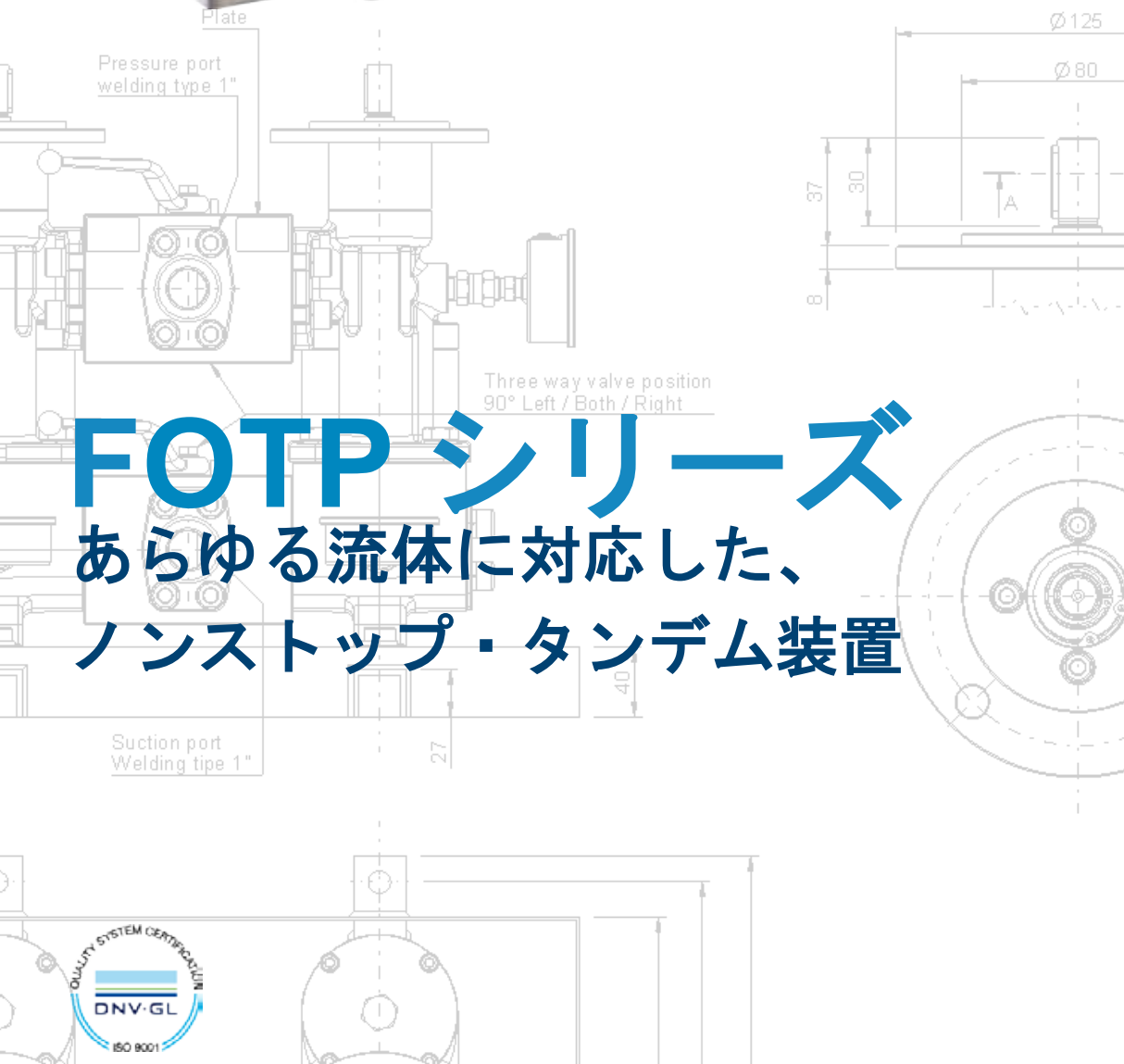
POWER GEN



OIL & GAS

FOTP シリーズ

あらゆる流体に対応した、
ノンストップ・タンデム装置



FOTPツインシステムシリーズ

FOTPツインユニットはディーゼル油用の最先端のポンプで、粘度が低い流体や、少量の硫黄を含むディーゼル油(MDO)に対応したポンプユニットです。当製品は、ISO8217に準拠し、低硫黄燃料油(MDO)に対応しております。

FOTPはマリン分野や発電分野、特にバーナー関係装置に適した、燃料制御用ツインユニットです。

当ユニットは一般的なディーゼル油や船舶用ディーゼル油(MDO)、船舶用軽油(MGO)や低硫黄燃料油や重質燃料油(HFO)、バンカー油、その他マリンに用いられる様々な流体に対応しています。

当製品の主な特徴は、ユニットを構成する2つのポンプを同時に又は別々に稼働させることが可能な点です。別々に稼働させることで、どちらか1つのポンプが動作不良を起こしても、滞りなくシステムを稼働させることができます。また、ポンプ1つずつそれぞれ異なる流体を扱うことも可能です。

FOTPはコンパクトな為、限られたスペースでも容易に設置可能であり、また操作も簡易的です。またメンテナンス時もシステムを稼働させ続けられるので、メンテナンスに伴う稼働時間の減少も防ぐことができます。

この革新的なFOTPツインユニットは、フィルターの内側からポンプの外に向かって流体を流すことができるよう設計されております。その為、全てのごみや金属片はフィルターにて回収され、ポンプ内部へ侵入する恐れがありません。またフィルターは、流体を漏らすことなく取り外し可能で、メンテナンスも容易です。

ご要望があれば、FOTPシリーズは以下の規格に準拠した形でご提供可能です。

: DNV,BV,LRS,RS,GL,RINA,KR,NK,CCSなど。



GR40 FOTP

適合性のある流体

- 低硫黄燃料油を含む、あらゆる種類の流体
- 燃料、マリン分野での蒸留燃料油、残留油
- DMX (ISO 8217に依る), DMA, DMB, DMC, DMZ



GR20 FOTP

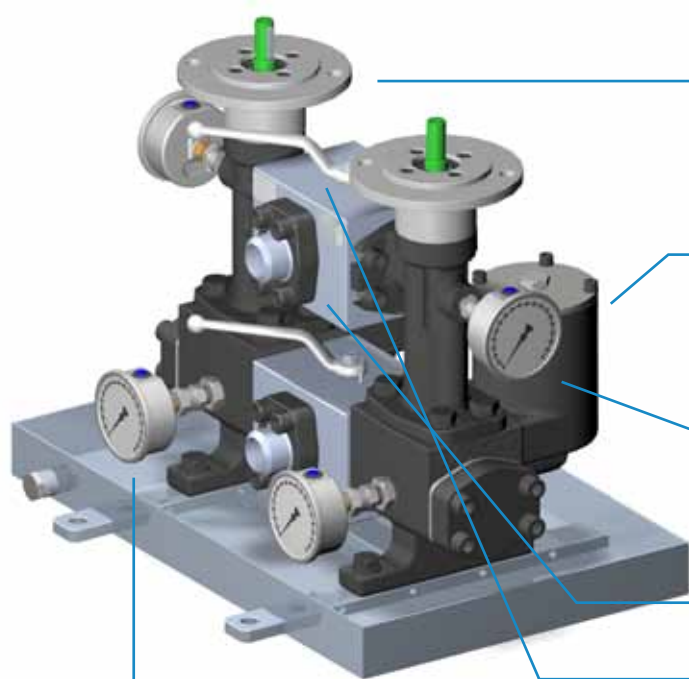
磁気カップリング—FGMオプション—

ご要求に応じて、磁気カップリングを装備することも可能です。この永久磁気カップリングにより、内部ロータと外部ロータ間の磁力を通してトルクが伝わり、また、駆動側と被駆動側は完全に分離されます。特に危険な流体に使用する場合、深刻な油漏れの恐れが無いこのカップリングの使用は非常に有効です。カップリングは被駆動側のパワーユニットに固定され、内部ロータと外部ロータを切り離しています。機械的な接触が無い為、振動は極端に少なく、油漏れの心配もありません。上述のような特徴から、当カップリングは漏れが許されない流体や環境下において使用されています。



GR20 FOTP FGM

Parts function description



Twin unit to allow operation to continue while one pump is out of service for assistance, or for any necessity to swap from one pump to another.

Outside filter to clean all eventual dirt of HFO or other fuel. Easy to remove for cleaning without draining oil.

Pressure gauge to indicate the outlet pressure.

3 way valve enables to switch the fuel fluid either to the right or left pump or both at the same time.

Pressure gauge to indicate pressure after filter also used as filter contamination indicator.

Switch over level to permit the functioning of both pumps at the same time or just one.

アプリケーション

マリン

バーナーブースティングシステム

バーナーインジェクション

燃料の供給・循環装置、潤滑システム

MDO, MGO, LSD, バンカー油, HFO等の供給、移送システム

DMX, DMA, DMB, DMC, DMZのハンドリング



発電

タービン、コンプレッサーの潤滑システム

シールオイル (API676)

バーナーブースティングシステム用タンデム装置

バーナーインジェクション用タンデム装置

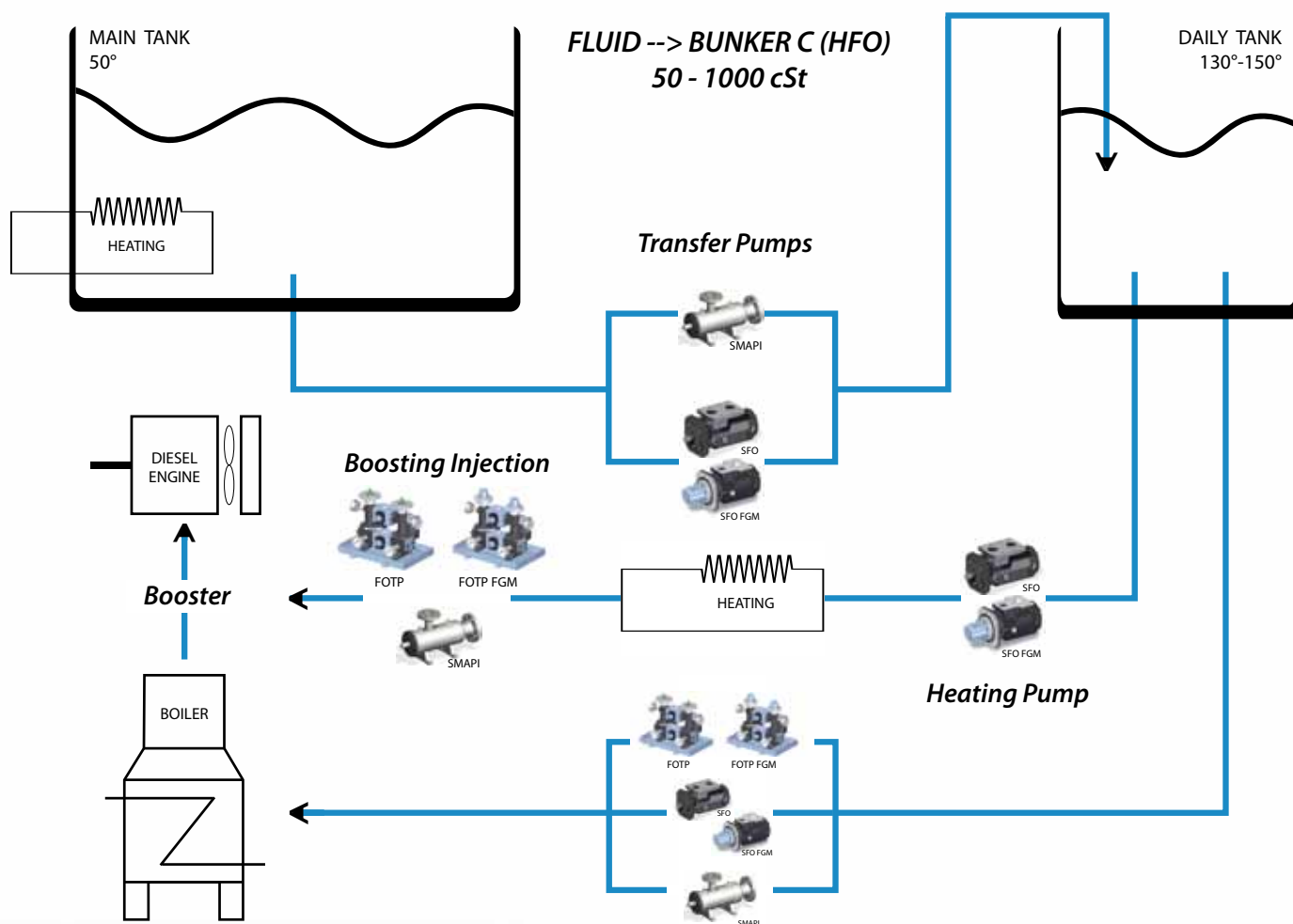


オイル&ガス

循環装置、移送システム



Settima products for marine application



Technical characteristics

リリース弁： ご要望に応じて、FOTPツインシステムに2個の安全弁を装備することが可能です（各ポンプに1個ずつ）。
2台のポンプ間の差圧を制御することにより、ポンプを保護します。

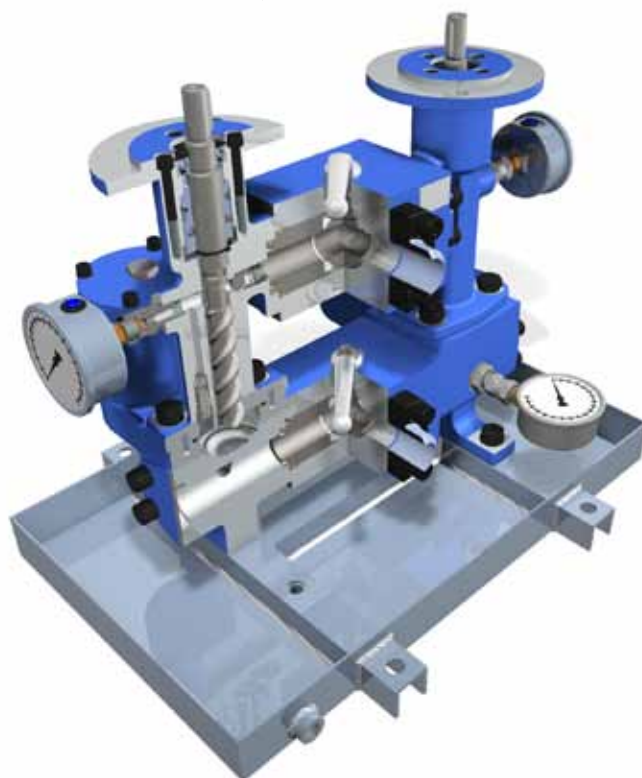
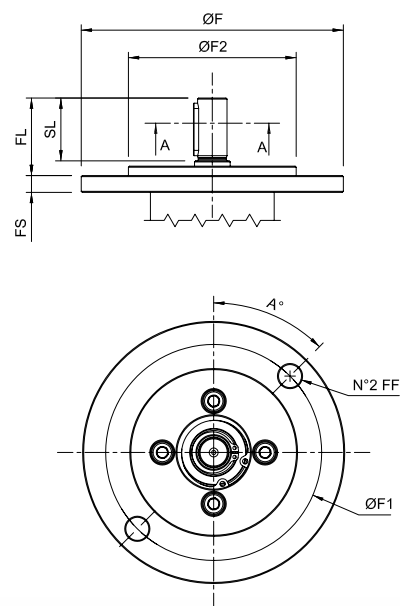
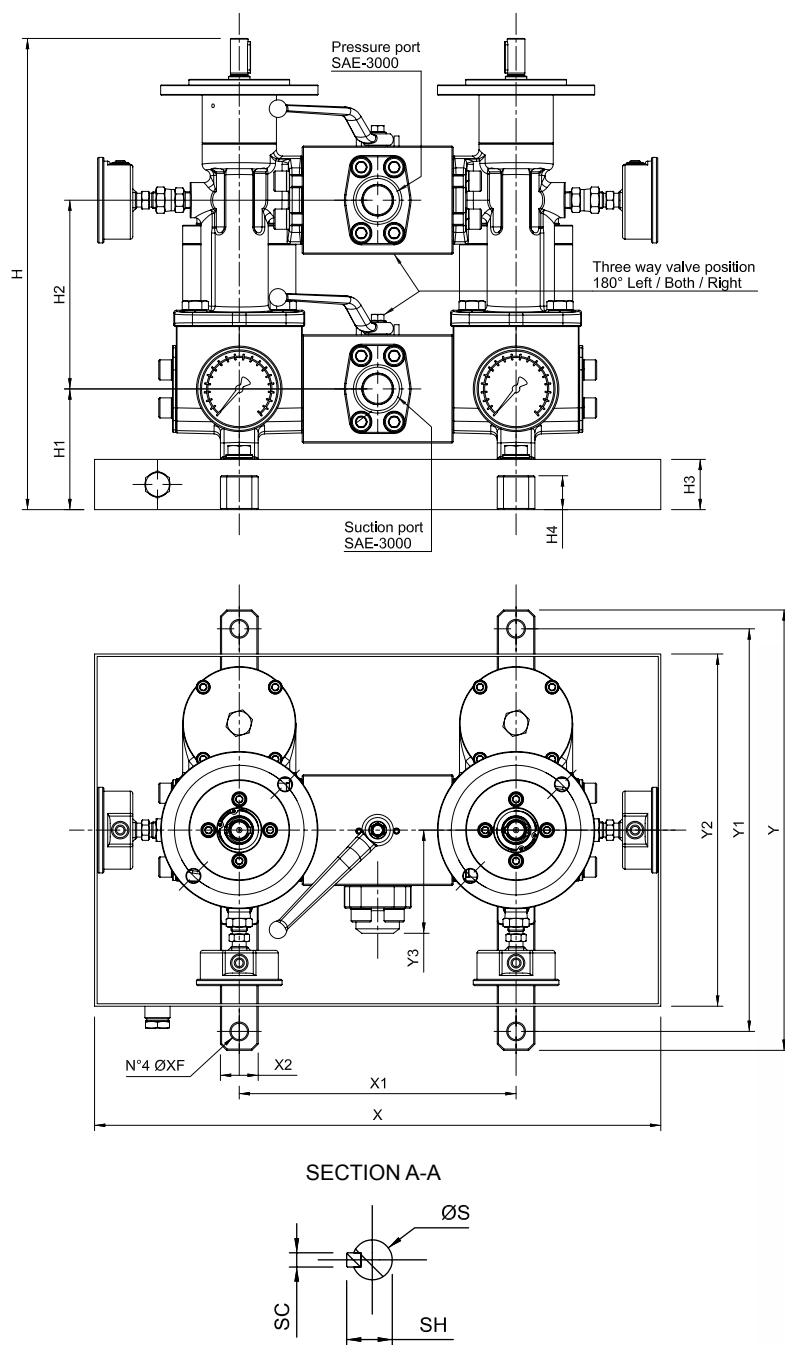
ドライブ： FOTPツインシステムに、電動モーター及び磁気カップリングを装備することが可能です。
磁気カップリングの使用により、油漏れを防ぐことができます。



Technical characteristics

Models / Modelli	20 - 25 - 32 - 40
Flanges / Flange	ISO 3019/2
Connections Conessioni	SAE 3000 from 1"
Shaft rotation Rotazione albero	Clockwise (from shaft end) – counter clockwise (contact Settima) Destra – sinistra (contattare Settima)
Shaft speed Velocità di rotazione	From 500 to 3.600 rpm Da 500 a 3.600 rpm
Flows Portate	From 8 up to 150 L/min at 3.000 rpm Da 8 a 150 L/min a 3.000 rpm
Outlet pressure Pressione di mandata	Up to 70 bar Fino a 70 bar
Inlet pressure Pressione di aspirazione	Min. -0.7 bar max. 8 bar (for higher pressure please contact Settima) Min. -0.7 bar max. 8 bar (per pressioni maggiori contattare Settima)
Fluids Fluidi	Fuels, Marine distillate fuels, Marine residual fuels, all fuels according to latest ISO 8217 international standard (DMX, DMA, DMB, DMC, DMZ, LSD)
Viscosity Viscosità	Down to 1 cSt (as per latest ISO 8217 international standard) Fino a 1 cSt (come da versione più aggiornata ISO 8217)
Seals Guarnizioni	Mechanical seal - NBR, FKM, EPDM (others on request), magnetic coupling FGM (optional) Tenuta meccanica – NBR, FKM, EPDM (altri su richiesta), giunto magnetico FGM (opzione)
Acoustic emissions Emissioni acustiche	From 55 up to 58 db(A) at 2.750 rpm Da 55 fino a 58 db(A) a 2.750 rpm
Pump body Corpo pompa	Molten cast iron Fusione in ghisa
Screws Viti	Steel, core hardened steel Acciaio, acciaio temprato
Environment temperature Temperatura ambiente	From -20°C up to +50°C Da -20°C fino a +50°C
Hydraulic temperature Temperatura olio	From -20°C up to +150°C Da -20°C fino a +150°C
Filtration Filtrazione	Permitted 70 µm, (in case of low viscosity 20 µm) Permesso 70 µm, (in caso di bassa viscosità 20 µm)

GR20 Dimensional drawing*

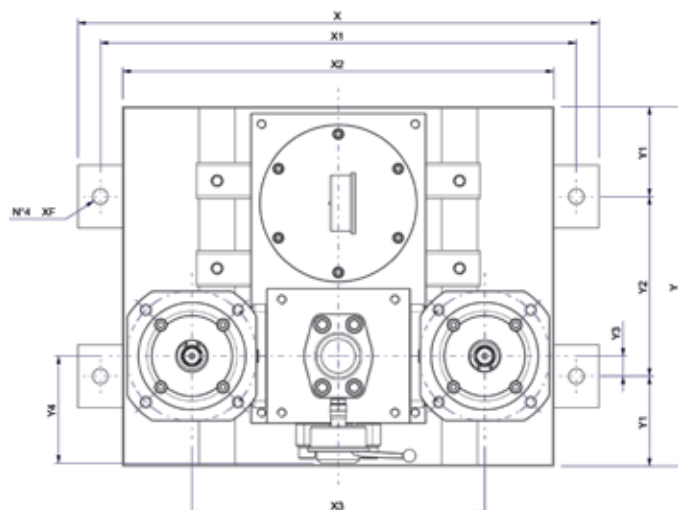
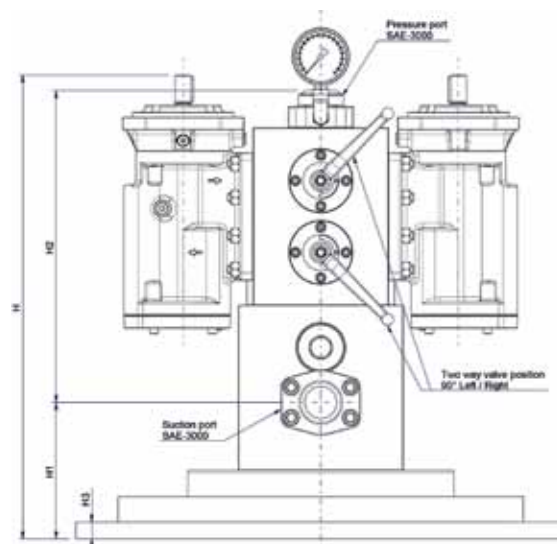
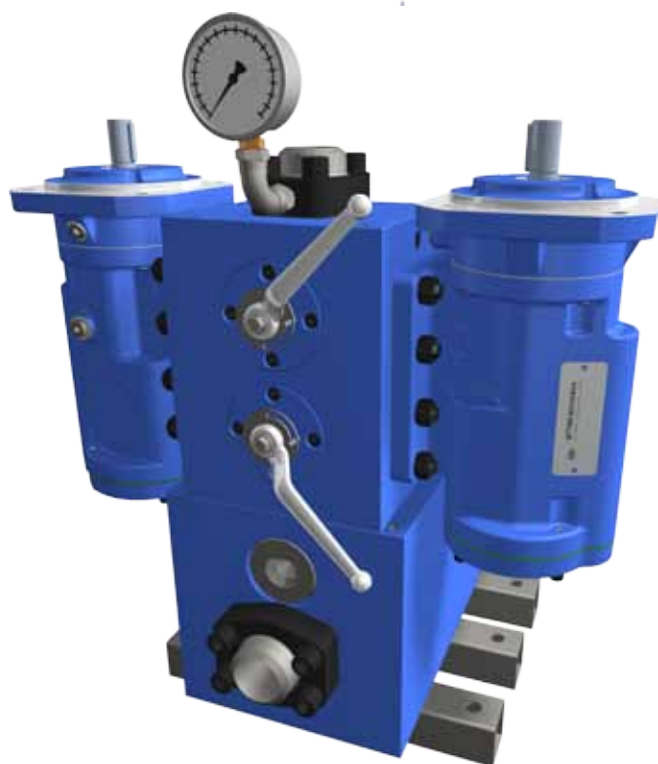
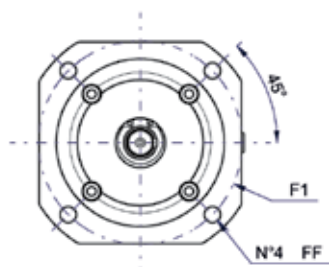
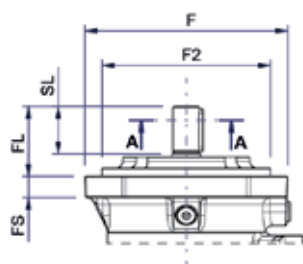


	L/min	X	X1	X2	XF	Y	Y1	Y2	Y3	H	H1	H2	H3
GR20	8-12-15-23	450	220	30	13	350	320	280	82	374.5	96	150	40

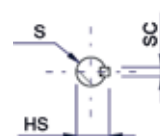
	H4	F	F1	F2	FF	FS	FL	A	S	SH	SC	SL
GR 20	27	125	103	80	11	8	37	45°	14	16	5	30

* The dimensions reported in the present catalogue can change without any notice. Please, always contact Settima for exact dimensions.

GR25-32-40 Dimensional drawing*



SECTION A-A

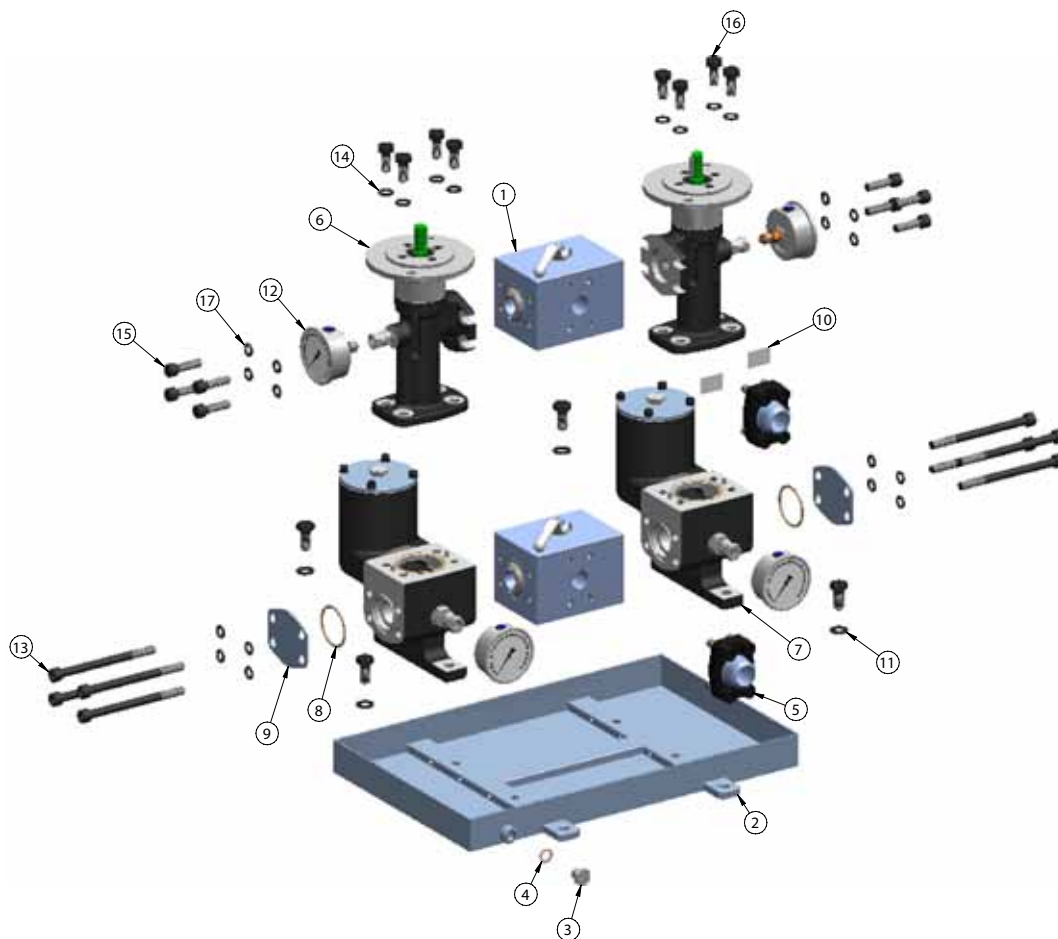


	L/min	X	X1	X2	XF	Y	Y1	Y2	Y3	H	H1	H2	H3
GR25	25-30	580	530	480	17	400	100	200	22,5	534	161,5	369	20
GR32	35-45-55-75									542			
GR40	100-125-150									549			

	F	F1	F2	FF	FS	FL	A	S	HS	SC	SL
GR25	135	130	110	9	12	50	45°	14	16	5	29
GR32								19			
GR 40	144	145	120	11	15				21,5	6	34

* The dimensions reported in the present catalogue can change without any notice. Please, always contact Settima for exact dimensions.

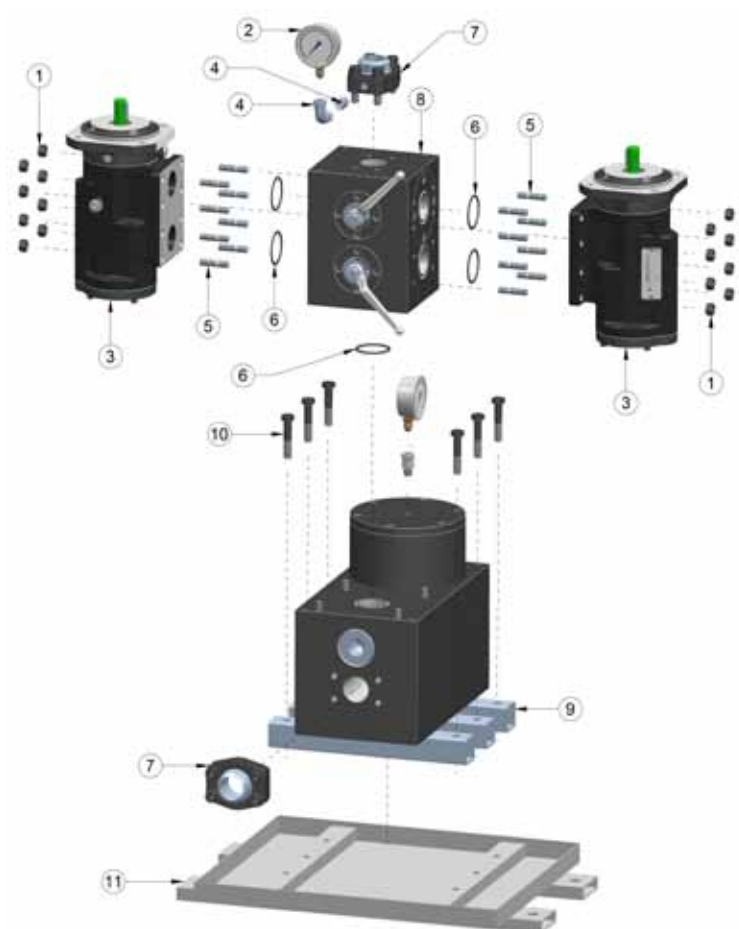
GR20 Standard types and options - Ordering Code



N°	Title	Material
1	3 way valve	-
2	Oil pan	Stainless steel
3	Cap	Steel
4	Seal	Copper
5	SAE Flange from 1"	-
6	Pump group TM	-
7	Suction group	-
8	O-ring seal	FKM
9	Protection flange SAE	Steel

N°	Title	Material
10	Plate	Steel
11	Washer	Steel
12	Pressure gauge	Steel
13	Screw	Steel
14	Washer	Steel
15	Screw	Steel
16	Screw	Steel
17	Washer	Steel

GR25-32-40 Standard types and options - Ordering Code



N°	Title	Material
1	Nut	Steel
2	Pressure gauge	Steel
3	Pump	-
4	Fitting	Steel
5	Captive screw	Steel
6	O-ring seal	FKM

N°	Title	Material
7	SAE Flange from 1" 1/2	-
8	2 way valve	-
9	Suction group	-
10	Screw	Steel
11	Oil pan	Steel

Standard types and options - Ordering Code

Standard types and options

	Standard	Options
Pressure valve	With no relief valve	*Internal safety valve
Corrosion preservation	Phosphating	*Varnishing upon request
Sealing	Mechanical seal	*Magnetic coupling (FGM)

*Please write the option(s) chosen in your order. Si prega di riportare nell'ordine le opzioni scelte

Ordering code

Type Tipo	Class Classe	L/min	Seals Guarnizioni	Rotation Rotazione	Internal safety valve Valvola di sicurezza interna
GR 20	FOTP	8L	<u>Standard</u> TM V*	<u>Standard</u> DX clockwise	<u>Standard</u> none
		12L			
		15L			
		23L			
GR 25	FOTP	25L			
		30L			
GR32	FOTP	35L			
		45L			
		55L			
		75L			
GR40	FOTP	100L			
		125L			
		150L			

*Mechanical seal FKM. Tenuta meccanica FKM.

** Others available upon request, please contact Settima. Altre su richiesta, contattare Settima.

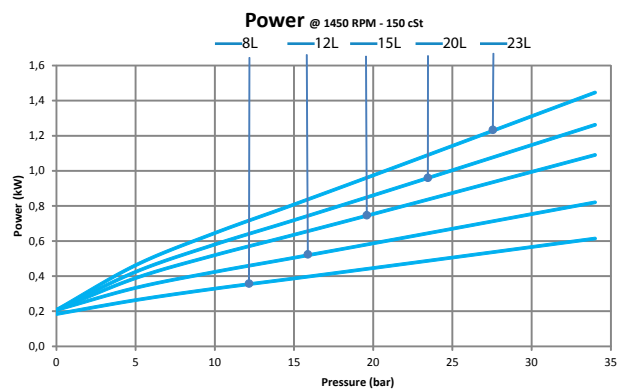
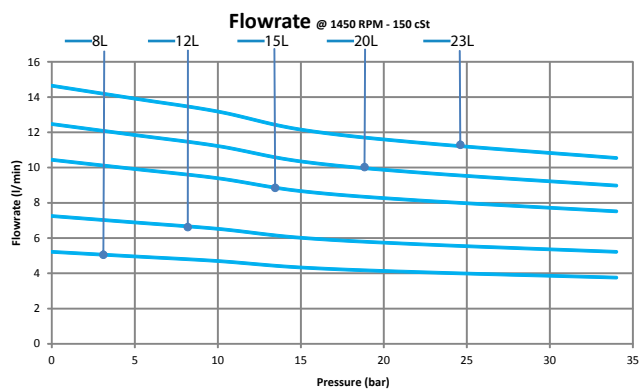
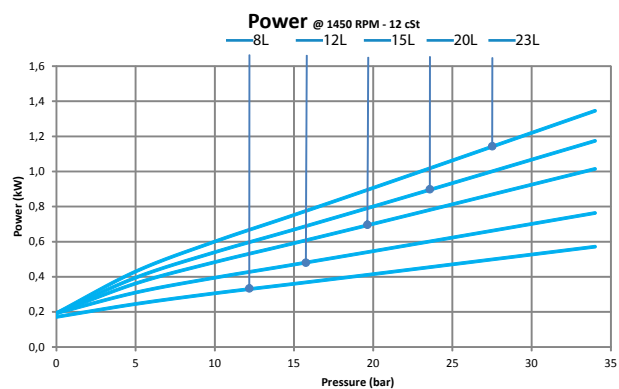
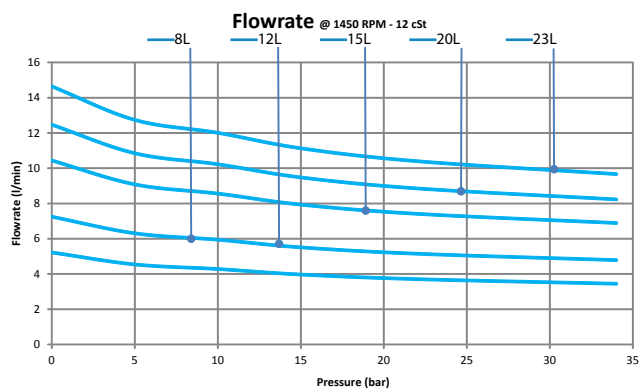
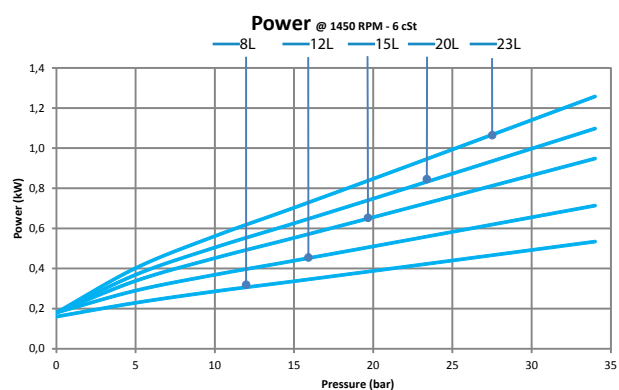
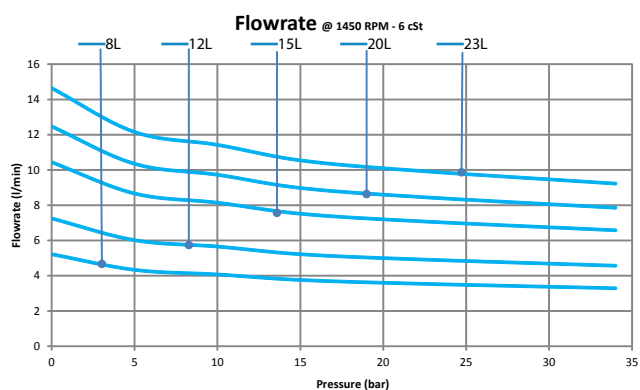
*** For rotation counter clockwise, please contact Settima. Per rotazione antioraria contattare Settima.

To request pump varnishing, please write it in your order. Per richieste di verniciatura riportarlo sull'ordine.

GR20 Performance @1450 rpm

FLOWRATE (L/min)

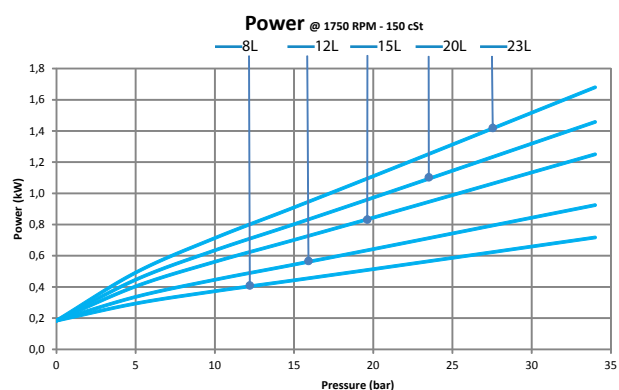
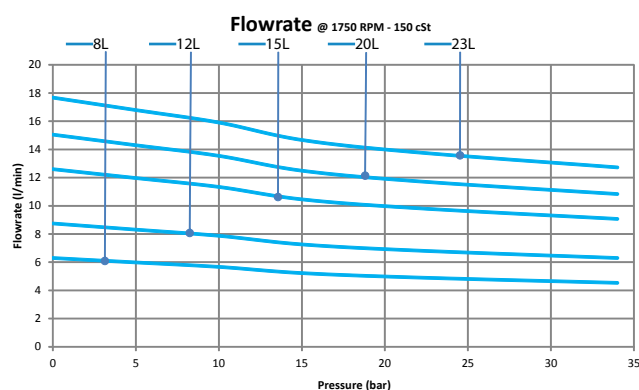
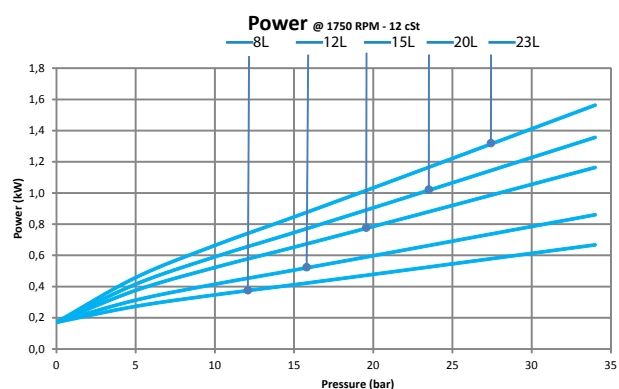
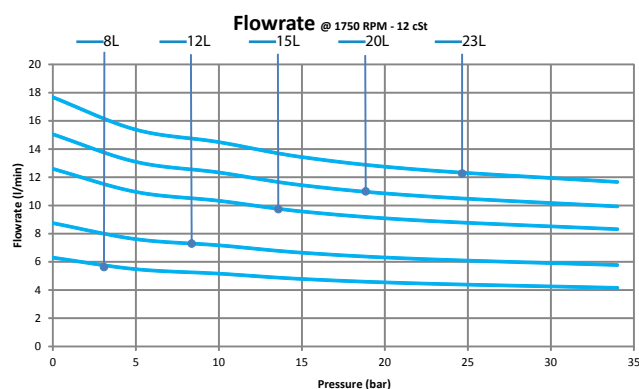
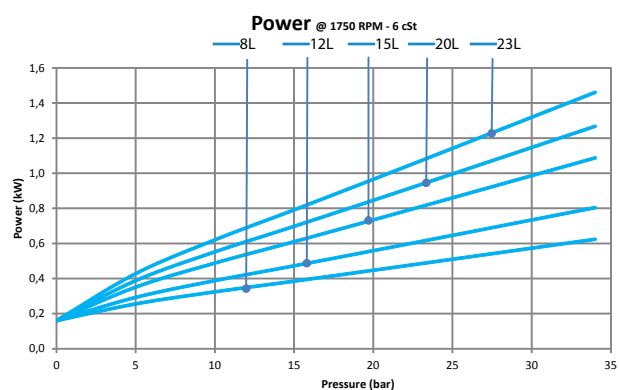
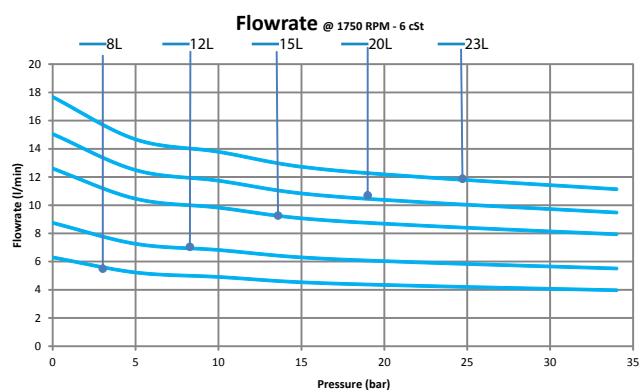
POWER (Kw)



GR20 Performance @1750 rpm

FLOWRATE (L/min)

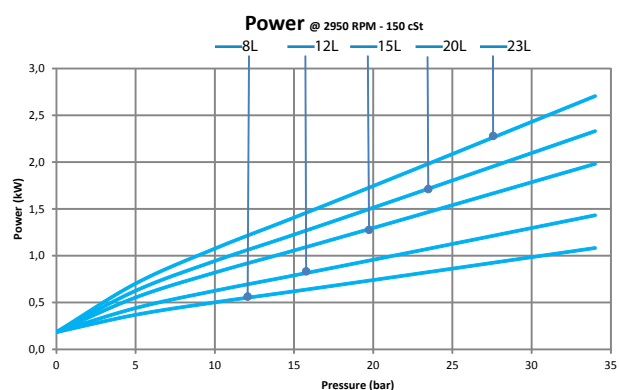
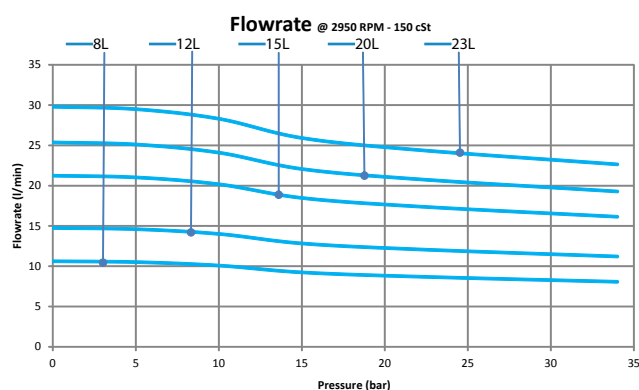
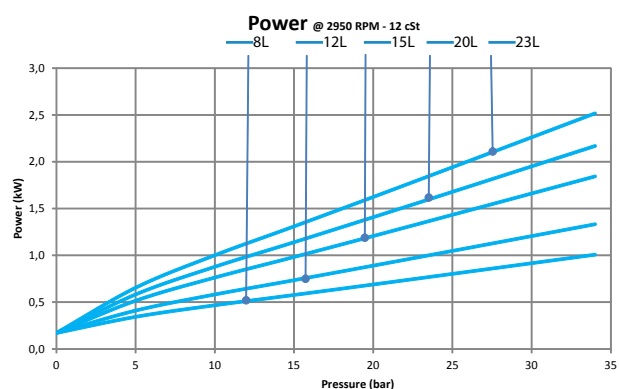
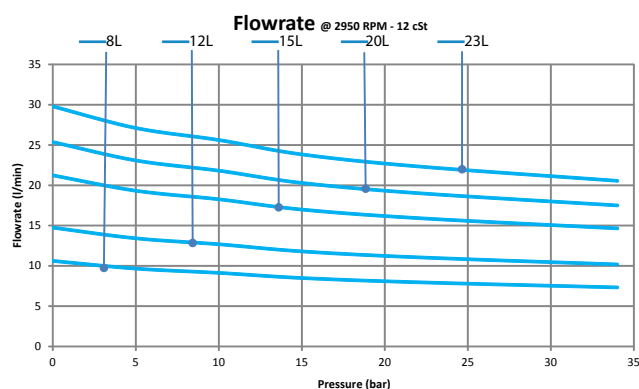
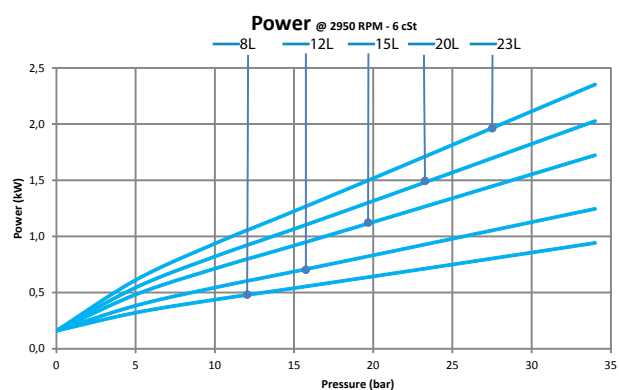
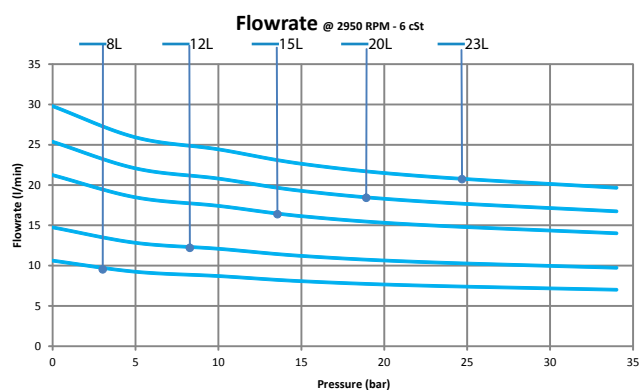
POWER (Kw)



GR20 Performance @2950 rpm

FLOWRATE (L/min)

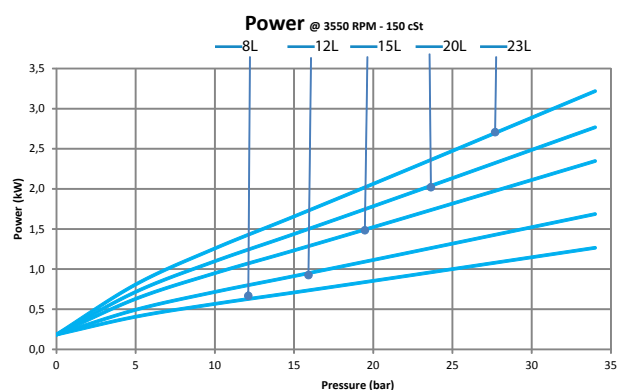
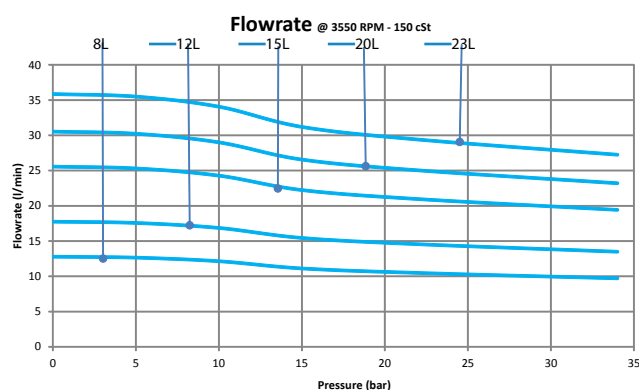
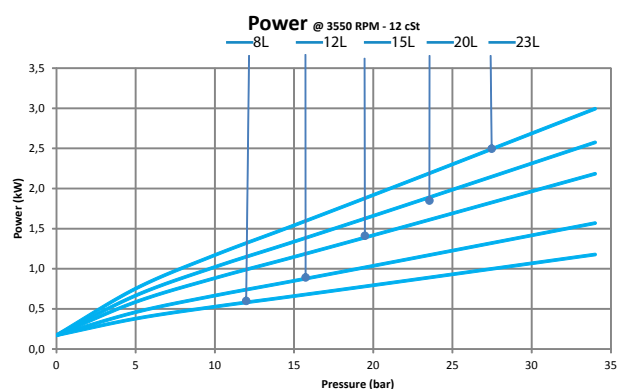
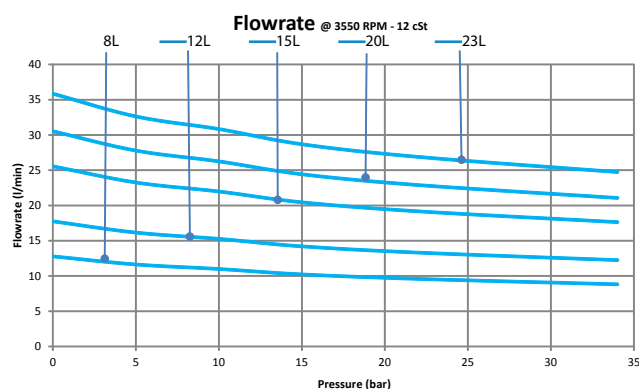
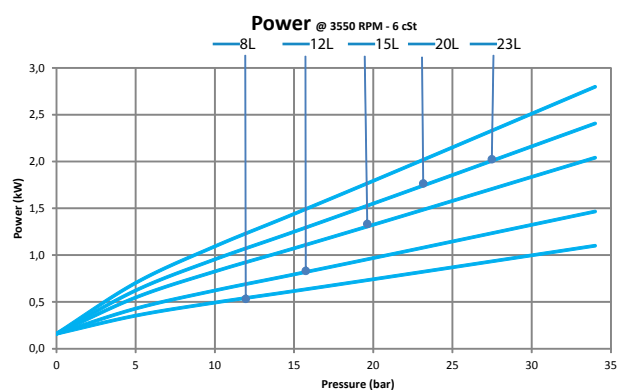
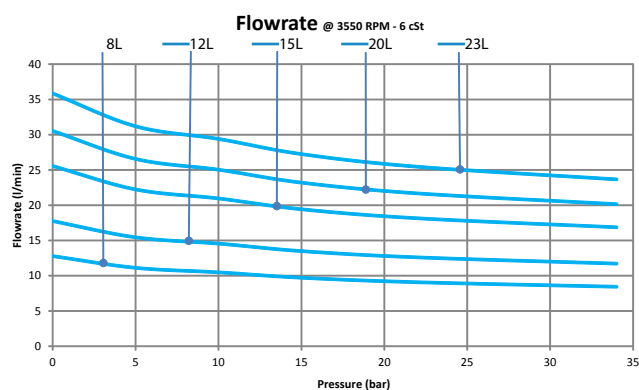
POWER (Kw)



GR20 Performance @3550 rpm

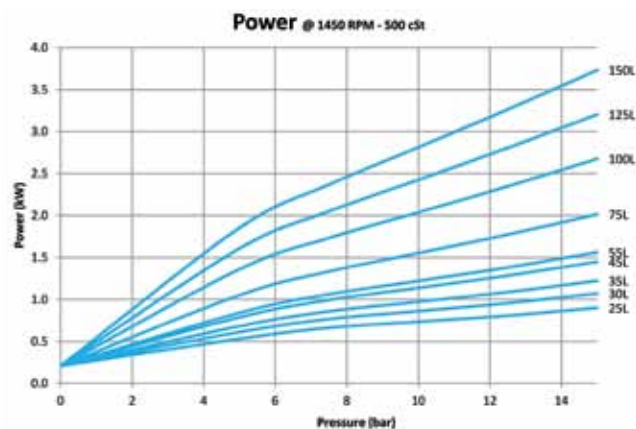
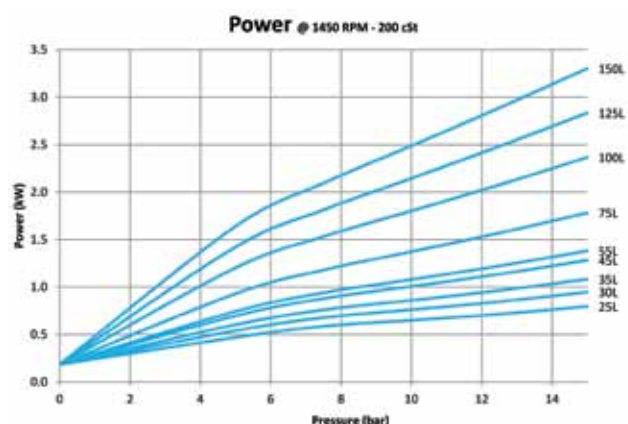
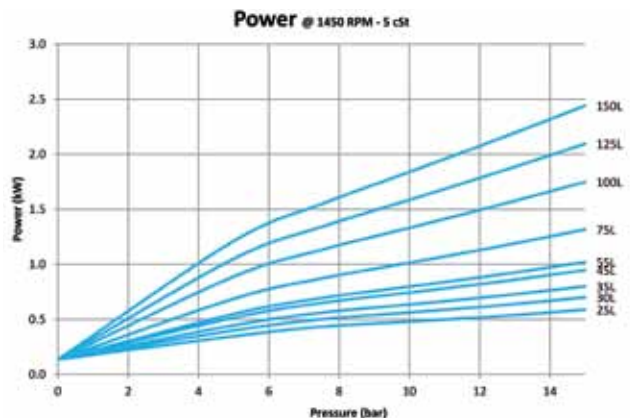
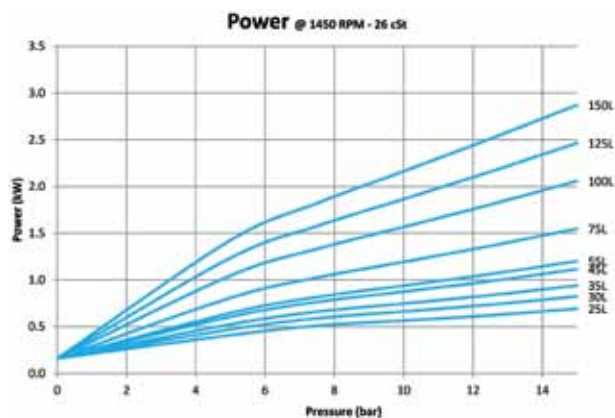
FLOWRATE (L/min)

POWER (Kw)

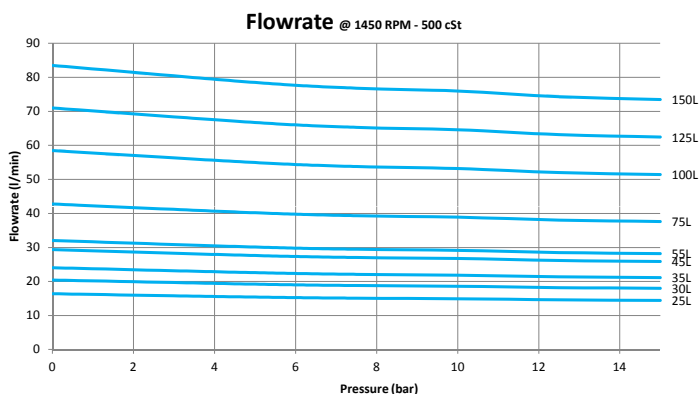
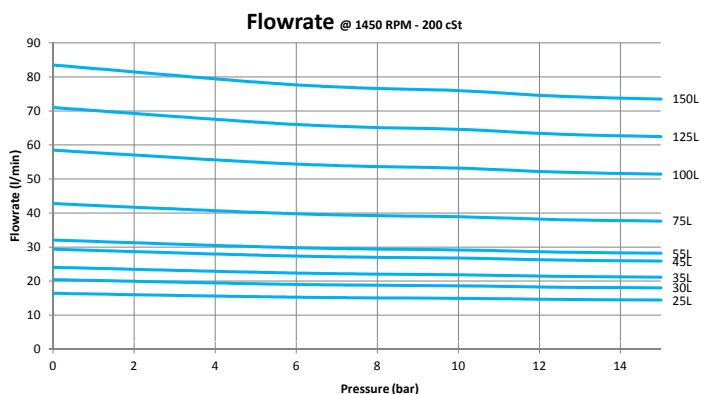
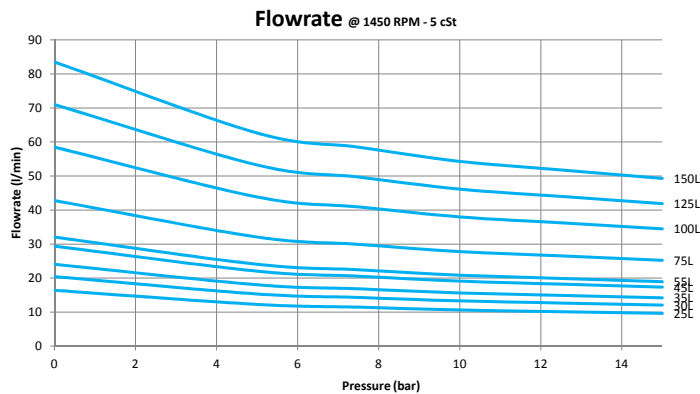
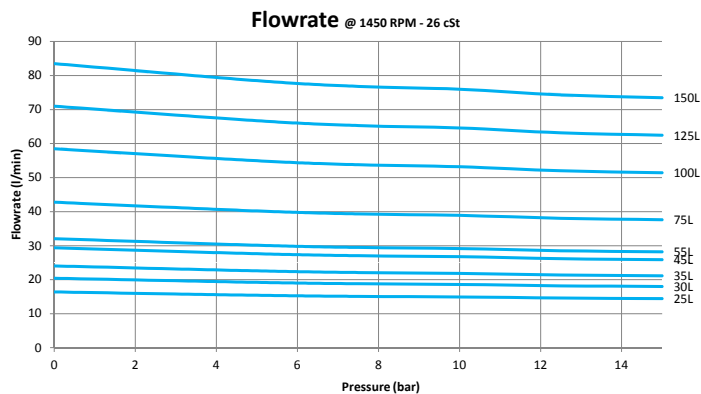


GR25-32-40 Performance @1450 rpm

POWER (Kw)

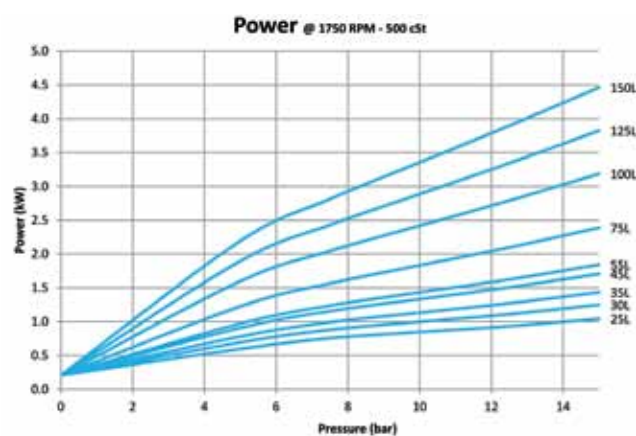
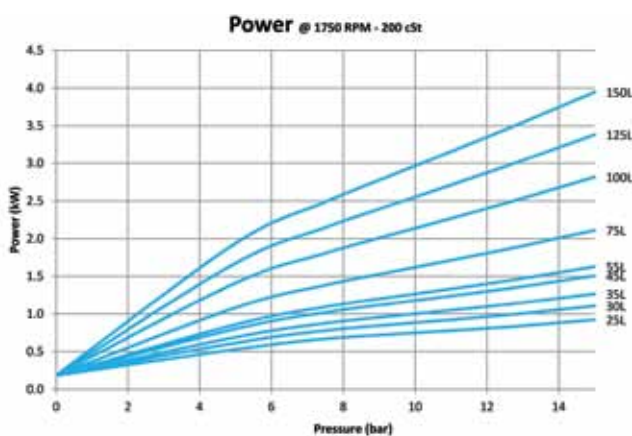
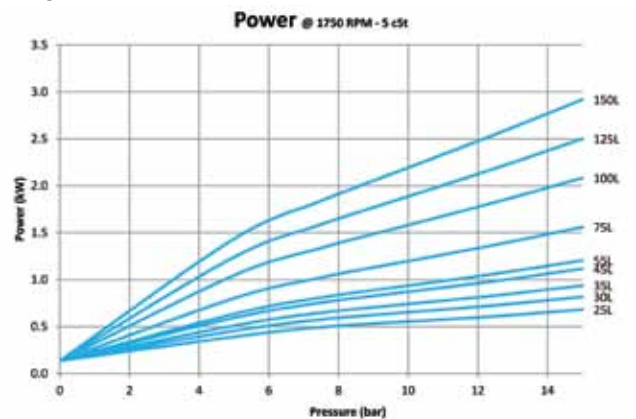
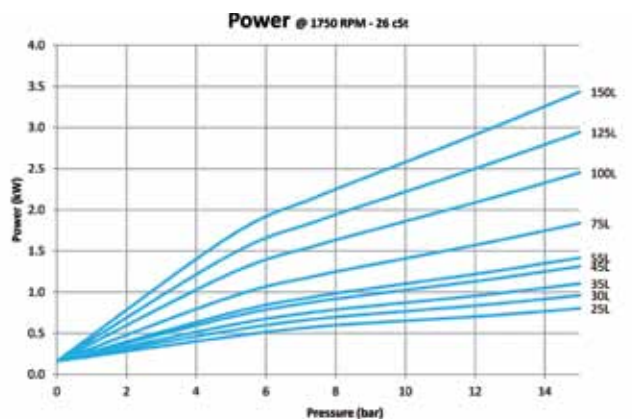


FLOWRATE (L/min)

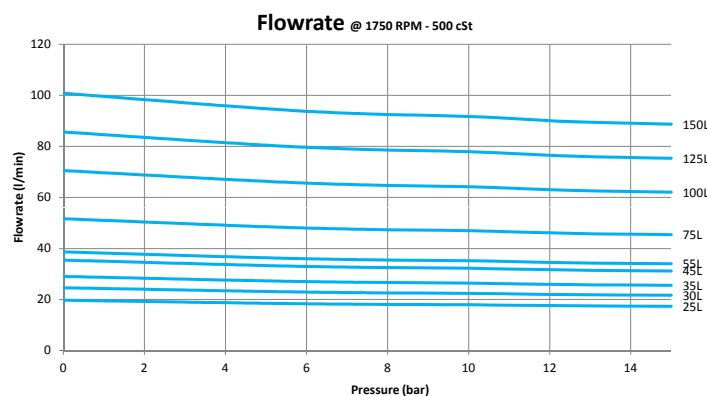
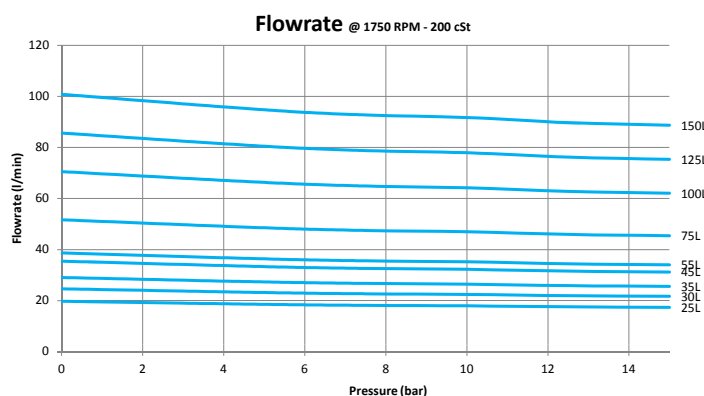
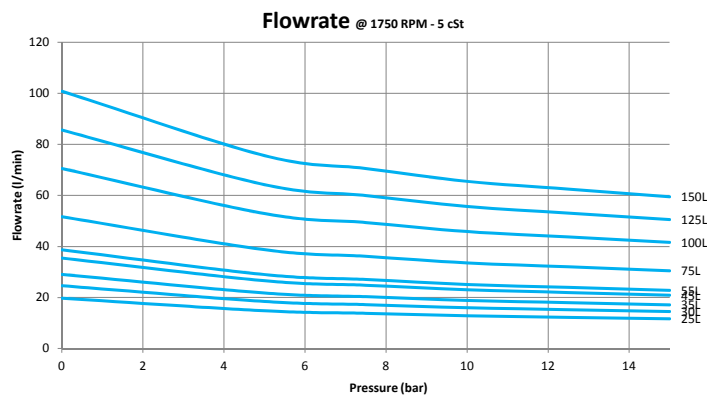
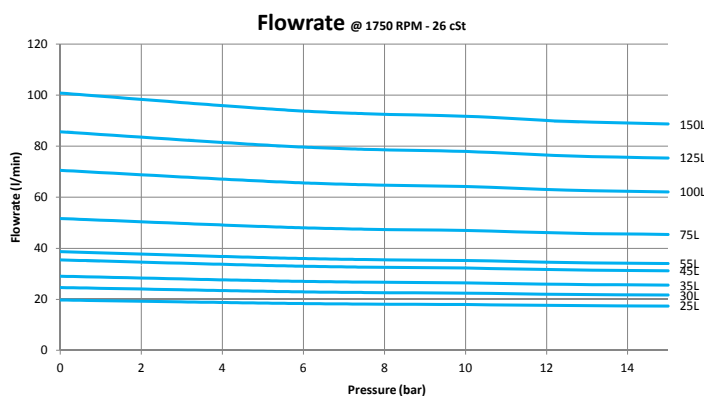


GR25-32-40 Performance @1750 rpm

POWER (Kw)

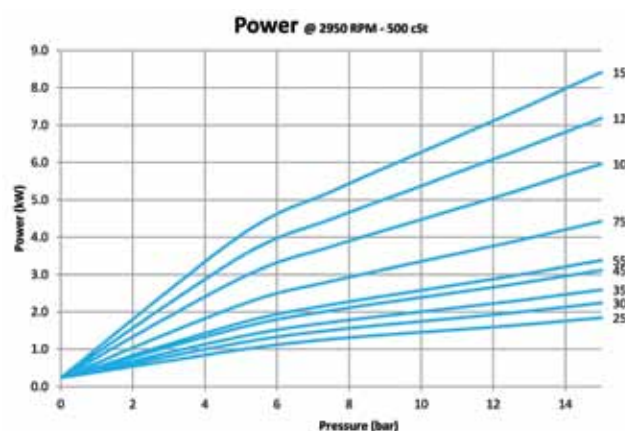
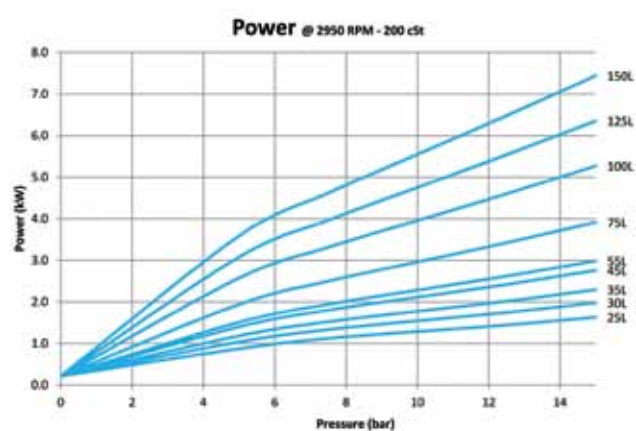
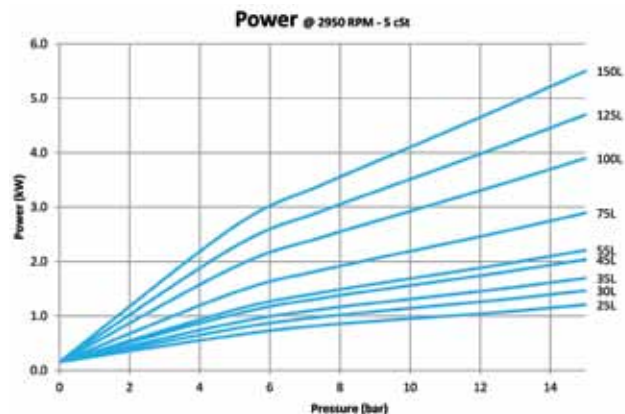
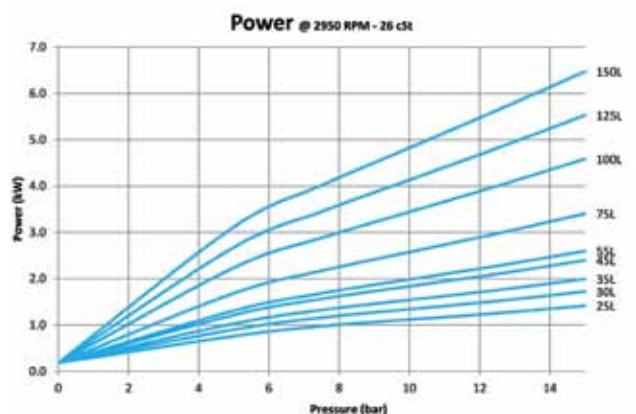


FLOWRATE (L/min)

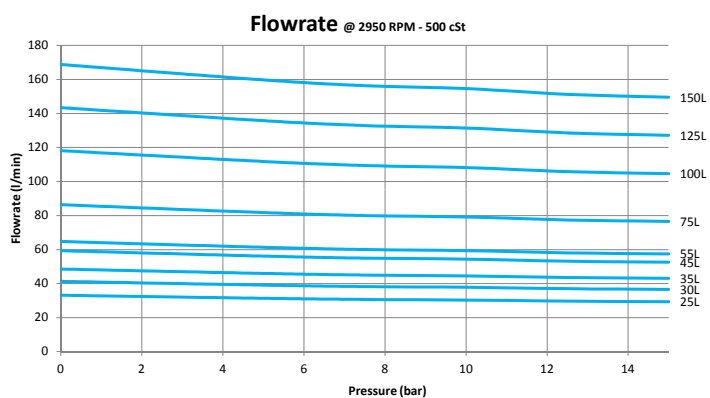
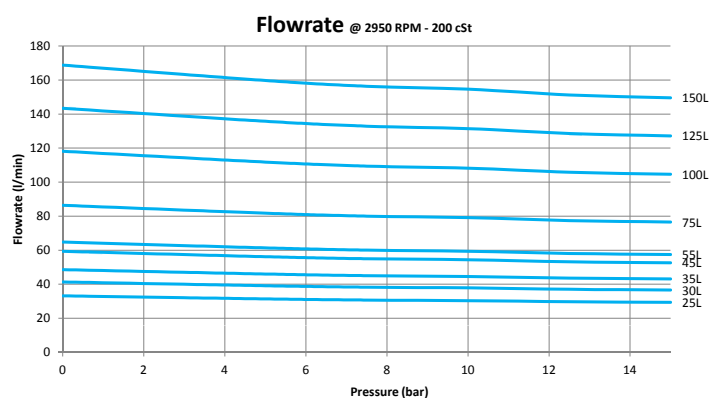
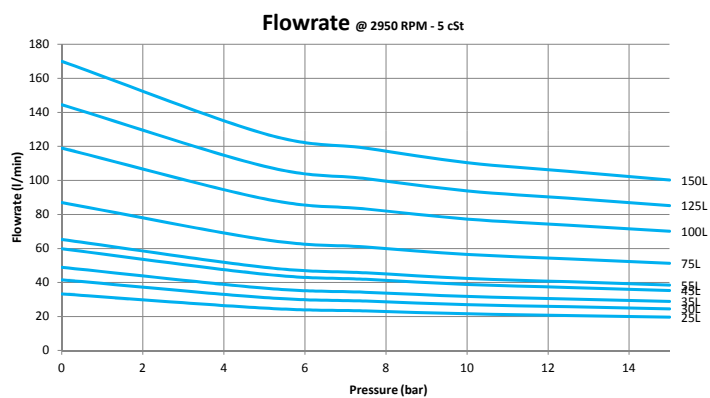
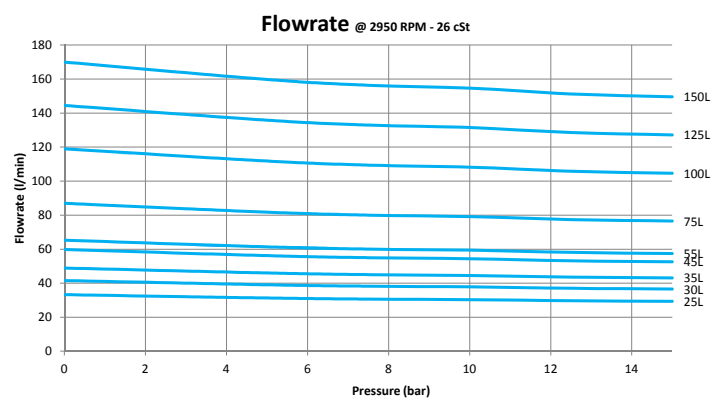


GR25-32-40 Performance @2950 rpm

POWER (Kw)

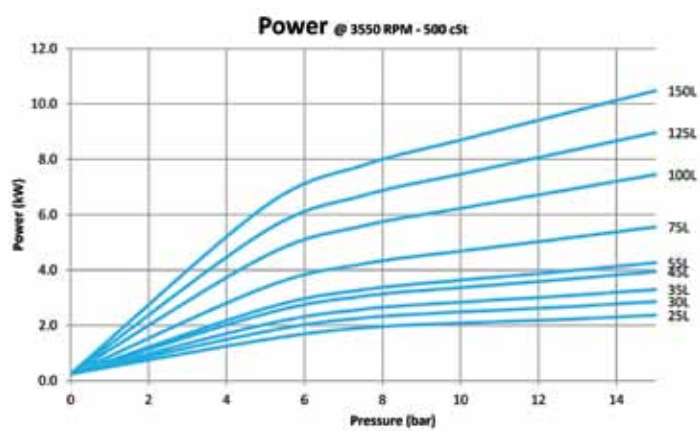
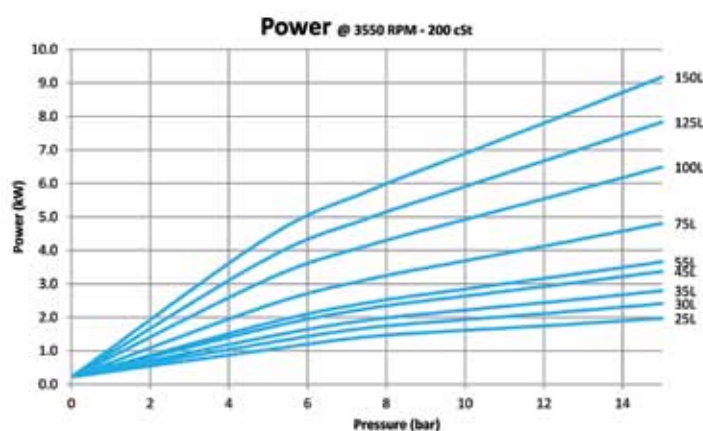
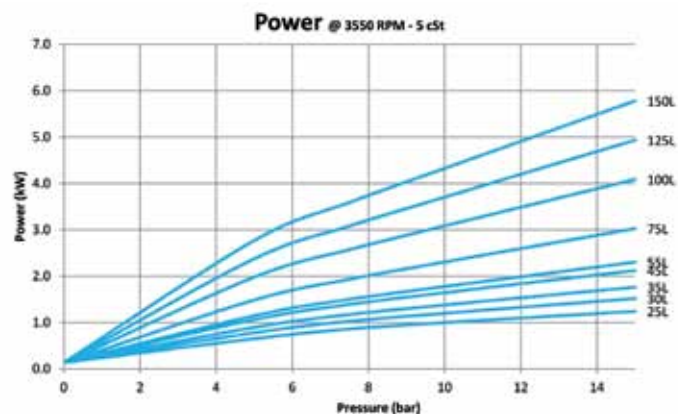
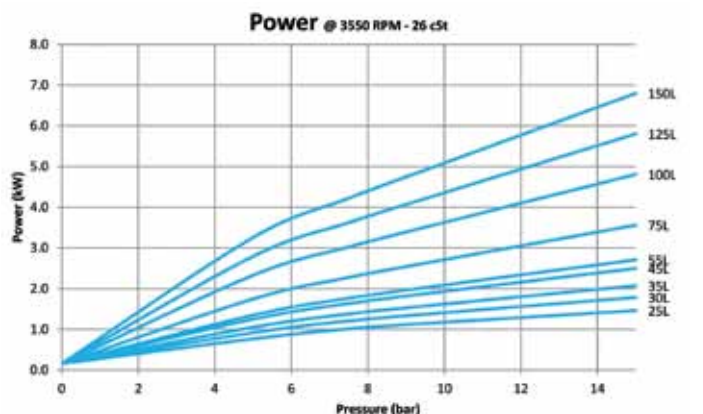


FLOWRATE (L/min)

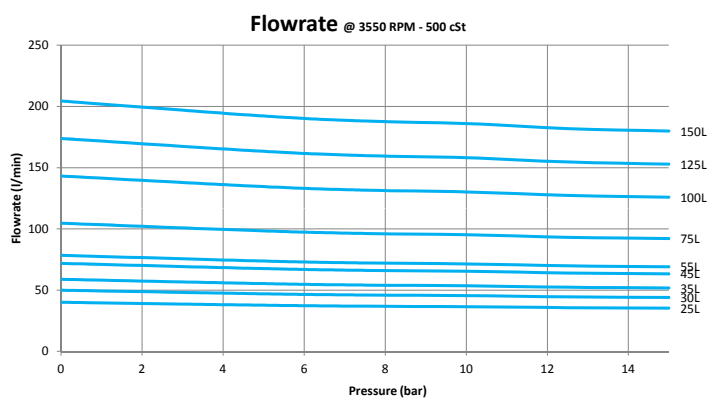
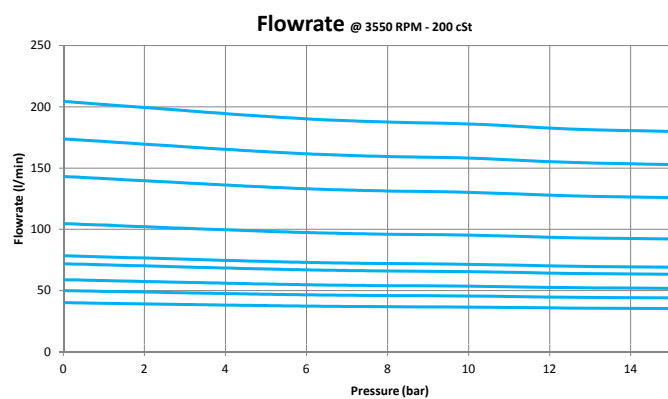
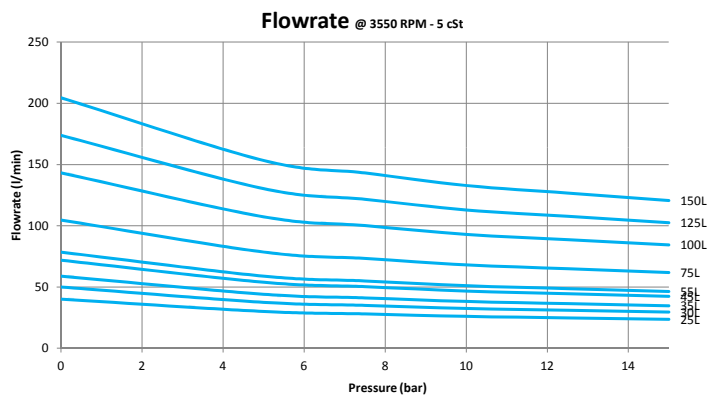
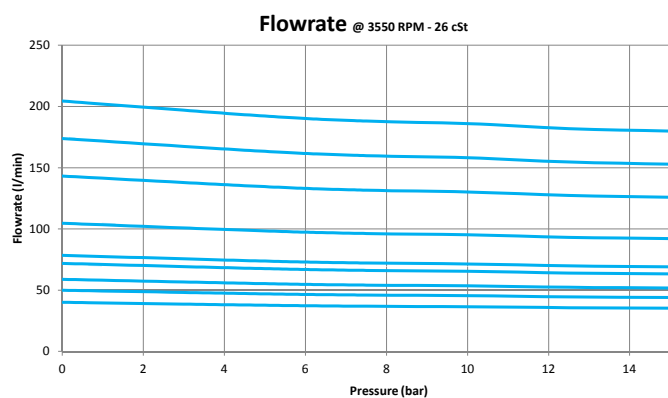


GR25-32-40 Performance @3550 rpm

POWER (Kw)



FLOWRATE (L/min)



Application form

For eventual requests of quotation and if not using the ordering code table (pag. 16), please use this application form. / Nel caso di richiesta di offerta si prega di inviare l'applicazione form a Settima.

Customer:						
Project number or name:						
FIELD (select the right one):			APPLICATION (select the right one):			
Industrial			Lubrica- tion		Boosting	
Marine			Fuel transfer		Other:	
Oil & Gas			Filtration			
Other:			Cooling			
PUMP TYPE (select the right one):						
SMT16B		FOTP		SMAPI (API 676 compliant)		
SMT		Continuum		Other:		
SFO		2VHL				
INSTALLATION						
Horizontal/vertical:						
Above liquid level:		[m]				
FLUID DATA						
Type / name of fluid:						
Fluid neatness (filtration, contamination)		micron		NAS		
Temperature (min,normal,max):		[°C]		[°C]		[°C]
Viscosity (max,normal,min):		[cSt]		[cSt]		[cSt]
APPLICATION DATA						
Flow (min, design):		[l/min]				[l/min]
Discharge pressure (normal, design):		[bar]				[bar]
Suction pressure (normal, design):		[bar]				[bar]
ELECTRICAL MOTOR						
To be supply by Settima (yes, no):						
Driving coupling (select the right one):		[Elastic standard]		[Steel Laminae + 5" Spacer compliant API676]		
Other coupling requirements :						
Rated speed:		[rpm]				
Power:		[kW]				
Frequency:		[Hz]				
Other motor requirement (ATEX, ...):						
Other motor requirement (painting, ...):						
PUMP OPTIONS						
Rotation direction (select the right one)		[CW standard]		[CCW]		
Safety relief valve:						
Mechanical seal requirements:						
Screw set material requirements:						
Pump body material requirements:						
Pump certifications required:						
Pump test required:						
External pump case painting required:						
Other pump parts painting required (i.e. foot, ..):						



SETTIMA

Settima, Italy

Headquarter, r&d and production

SETTIMA

USA
Warehouse

SETTIMA

ASIA Ltd.
Sales Office

 **TOHTO 株式会社**

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IP 050-3785-5916
ホームページ : <http://www.tohto-hydraulics.co.jp>
メール : tohto@tohto-hydraulics.co.jp

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TEL 06(6304)7995 FAX.06(6304)3067
IP 050-3785-5920
メール : osaka@tohto-hydraulics.co.jp

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050-3785-5924
メール : gotenba@tohto-hydraulics.co.jp

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