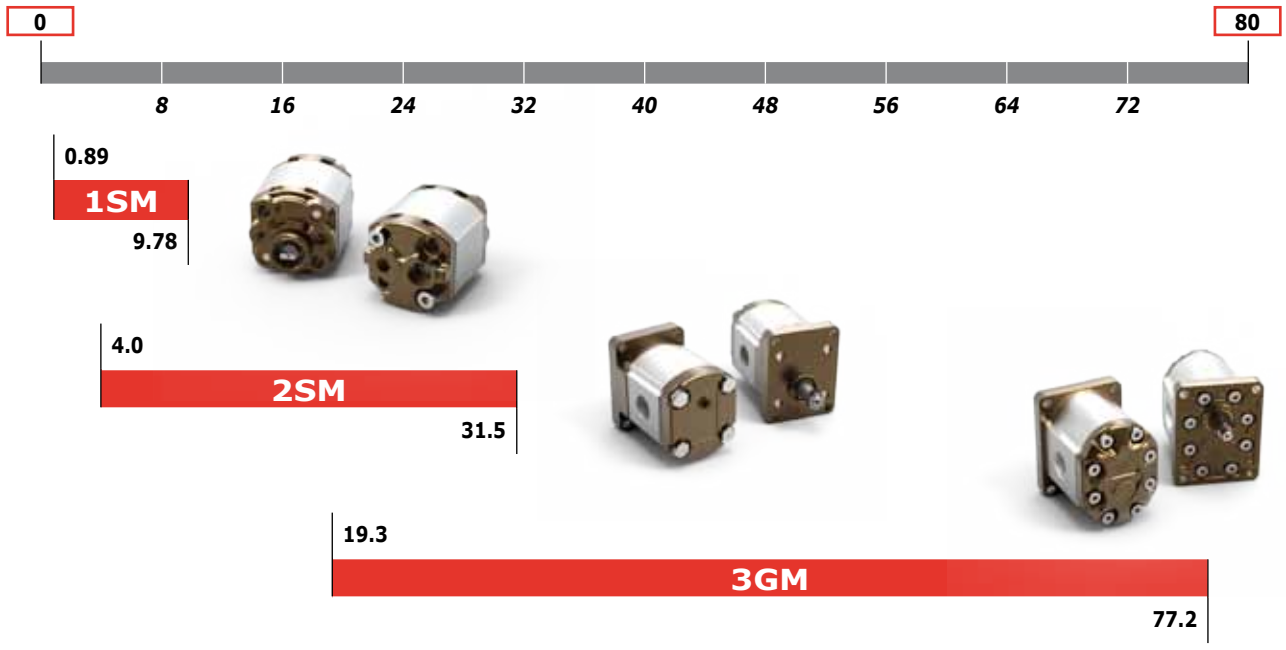
MOTORI AD INGRANAGGI
GEAR MOTORS

INTRODUZIONE • *INTRODUCTION*

Il motore ad ingranaggi esterni è un componete utilizzato per applicazioni oleodinamiche dove all'albero è richiesta una buona erogazione di coppia. La semplicità nella costruzione (rispetto ad altre tipologie di motori più complessi come ad esempio motori orbitali o a pistoni) unita alla grande versatilità, resistenza e lunga durata consentono una manutenzione ridotta e costi d'acquisto più contenuti.
Tali motori possono sia lavorare in condizioni gravose con elevate potenze idrauliche, sia in condizioni standard con una bassa emissione acustica ed elevati rendimenti idromeccanici e volumetrici grazie all'ottima bilanciatura.
La gamma Galtech grazie un costante lavoro di ricerca unito all'esperienza pluriennale, alla meticolosa scelta dei materiali e alla costante cura nel processo non solo di produzione, ma anche nei test di validazione si è ampliata mantenendo elevati standard qualitativi.
I motori ad ingranaggi esterni sono costituiti da 3 gruppi: 1SM, 2SM e 3GM con 20 cilindrate da 0.89 a 77.2 cc/giro adatte alle più variate applicazioni sia industriali che nel campo del mobile con elevati rapporti potenza/peso e potenza/dimensioni. Si possono raggiungere pressioni elevate fino a 270 bar e una velocità massima di rotazione di 4000 giri/min.
Sia nella versione monodirezionale che bidirezionale i motori Galtech possono essere assemblati con totale intercambiabilità sia con flange standard (europea, tedesca, SAE) sia con tipologie speciali ed utilizzare una vasta gamma di alberi come quelli conici, cilindrici scanalati e con dente frontale. Sono disponibili vari coperchi e flange in ghisa per ridurre la rumorosità e aumentare i limiti operativi. Inoltre è possibile montare coperchi valvola limitatrice di pressione anche per la regolazione a due velocità.

External gear motor is a component used for hydraulic applications where a good torque output is required at the shaft. Simple construction (compared with other types of more complex motors such as orbital or piston motors) and great versatility, durability and endurance allow to reduce maintenance and tolower the purchasing costs.
These motors can work both under heavy operating conditions ant transmit high hydraulic power output or in standard conditions with a low noise level and high hydromechanical and volumetric efficiencies by means of an excellent balancing.
Galtech range is increased maintaining high quality standards by means of a constant research combined with years of experience, meticulous choice of materials and constant care not only in the production processes but also in the validation tests.
External gear motors range is composed by 3 groups: 1SM, 2SM and 3GM with 20 displacement sizes from 0.89 to 77.2 cc/rev. high pressures up to 270 bar and a maximum speed of 4000 RPM. These motors can be used in different industrial and mobile applications with good power/weight and power/size ratios.
Both unidirectional and bidirectional Galtech motors can be assembled with a full interchangeability with standard flanges (European, German, SAE) or with special types.
A wide variety of shafts is manufactured: tapered, splined, parallel and dihedral claw. Cast iron covers and flanges to reduce noise level and increase the operating limits are available. It is also possible to assemble covers with pressure relief valve for two-speed adjustment

Le cilindrate disponibili sono evidenziate nel seguente diagramma (cm^3/giro):
Available displacements are indicated below (cm^3/rev):

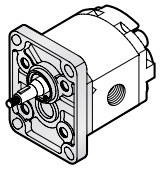
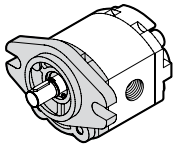
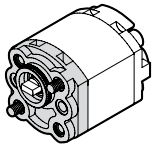
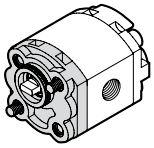
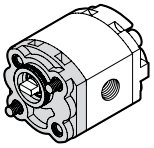


MOTORI AD INGRANAGGI GAMMA PRODOTTO
GEAR MOTORS PRODUCT RANGE

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	6000	5.3	*1.40*	600	0.49	0.13	92*
1SM 012	1.18	*0.07*	6000	7.1	*1.88*	600	0.65	0.17	92*
1SM 016	1.6	*0.10*	6000	9.6	*2.54*	400	0.61	0.16	95*
1SM 020	2.0	*0.12*	5500	11	*2.91*	400	0.76	0.20	95*
1SM 025	2.5	*0.15*	5000	12.5	*3.30*	400	0.95	0.25	95*
1SM 032	3.2	*0.20*	4500	14.4	*3.80*	400	1.21	0.32	95*
1SM 037	3.7	*0.23*	4000	14.8	*3.91*	400	1.40	0.37	95*
1SM 042	4.2	*0.26*	3500	14.7	*3.88*	400	1.60	0.42	95*
1SM 050	5.0	*0.31*	3000	15	*3.96*	400	1.90	0.50	95*
1SM 063	6.3	*0.38*	2700	17	*4.49*	400	2.39	0.63	95*
1SM 078	7.76	*0.47*	2500	19.4	*5.13*	400	2.95	0.78	95*
1SM 098	9.78	*0.60*	2000	19.6	*5.18*	400	3.71	0.98	95*

* = Valori medi rilevati in fase di collaudo a 1500 giri/min. *Average values collected during the testing at 1500 rpm.*

FLANGE - *FLANGES*

EUR	SAEAA	MC32	E32BX - E32BC	E32CX - E32CC
				
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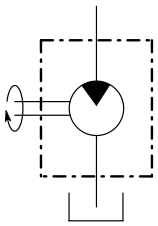
VERSIONI DISPONIBILI • *AVAILABLE VERSIONS*

Motore unidirezionale (D-S)
Unidirectional motor (D-S)

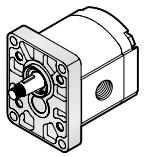
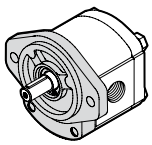
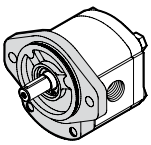
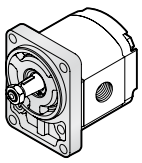
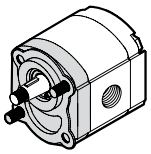
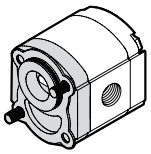


MOTORI AD INGRANAGGI GAMMA PRODOTTO
GEAR MOTORS PRODUCT RANGE

GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	*0.24*	4000	16	*4.23*	500	*1.9*	0.50	95*
2SM 060	6	*0.37*	4000	24	*6.34*	500	*2.85*	0.75	95*
2SM 080	8.5	*0.52*	3500	29.7	*7.85*	500	*4.03*	1.06	95*
2SM 110	11	*0.67*	3500	38.5	*10.17*	500	*5.22*	1.38	95*
2SM 140	14	*0.85*	3500	49	*12.95*	500	*6.65*	1.76	95*
2SM 160	16.5	*1.01*	3500	57.7	*15.24*	500	*7.83*	2.07	95*
2SM 190	19.5	*1.19*	3300	64.3	*16.99*	500	*9.26*	2.45	95*
2SM 220	22.5	*1.37*	2800	63	*16.64*	500	*10.68*	2.82	95*
2SM 260	26	*1.59*	2500	65	*17.17*	500	*12.35*	3.26	95*
2SM 310	31.5	*1.92*	2200	69	*18.22*	500	*15.75*	4.16	95*

* = Valori rilevati in fase di collaudo a 1500 giri/min. *Value collected during the testing at 1500 rpm.*

FLANGE - *FLANGES*

EUR	SAEA	SAEAOR	B80C	B50C	E52C
					
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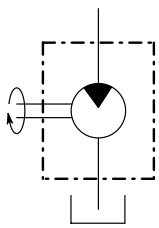
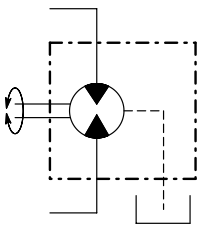
VERSIONI DISPONIBILI • *AVAILABLE VERSIONS*

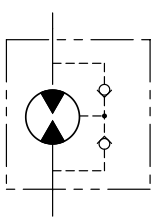
Motore unidirezionale (D-S)
Unidirectional motor (D-S)



Motore reversibile con drenaggio esterno (R)
Reversible motor with external drain (R)



Motore reversibile con drenaggio interno (X)
Reversible motor with internal drain (X)



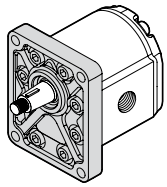
MOTORI AD INGRANAGGI GAMMA PRODOTTO
GEAR MOTORS PRODUCT RANGE

GRUPPO GROUP 3GM	CILINDRATA DISPLACEMENT		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
3GM 190	19.3	*1.2*	3500	67.6	*17.84*	700	12.8	*3.39*	95*
3GM 230	23.0	*1.4*	3500	80.3	*21.22*	700	15.5	*4.03*	95*
3GM 300	30.2	*1.8*	3300	99.7	*26.33*	700	20.1	*5.31*	95*
3GM 340	33.8	*2.1*	3300	111.6	*29.49*	700	22.5	*5.94*	95*
3GM 370	37.5	*2.3*	3300	123.6	*32.66*	700	24.9	*6.58*	95*
3GM 440	44.6	*2.7*	3000	133.8	*35.35*	700	29.7	*7.84*	95*
3GM 530	53.0	*3.2*	3000	159.1	*42.04*	700	35.3	*9.32*	95*
3GM 620	62.7	*3.8*	2500	156.8	*41.41*	700	41.7	*11.01*	95*
3GM 700	70.5	*4.3*	2500	176.3	*46.58*	700	46.9	*12.39*	95*
3GM 770	77.2	*4.7*	2200	169.8	*44.84*	700	51.3	*13.56*	95*

* = Valori rilevati in fase di collaudo a 1500 giri/min. *Value collected during the testing at 1500 rpm.*

FLANGE - *FLANGES*

EUR



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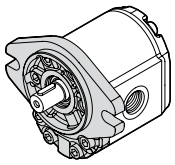
SAEB



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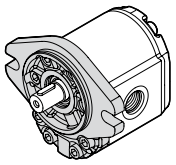
SAEBOR



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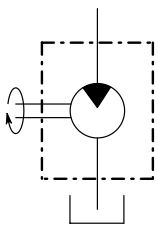
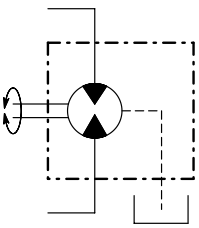
VERSIONI DISPONIBILI • *AVAILABLE VERSIONS*

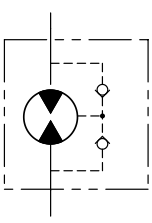
Motore unidirezionale (D-S)
Unidirectional motor (D-S)



Motore reversibile con drenaggio esterno (R)
Reversible motor with external drain (R)



Motore reversibile con drenaggio interno (X)
Reversible motor with internal drain (X)



FLUIDI IDRAULICI • *HYDRAULIC FLUIDS*

È consigliabile utilizzare oli idraulici di origine minerale con buone caratteristiche antischiuma, antiusura , antiossidanti, anticorrosione e con proprietà di rapida disareazione ed elevato indice di viscosità;

- viscosità raccomandata 15÷92 mm^2/s
- viscosità limite d'avviamento 2000 mm^2/s

Durante il normale funzionamento la temperatura dell'olio dovrà essere compresa tra 20° C e 65° C con valori limite compresi tra -20° C e 80° C con le guarnizioni in NBR e -15 °C e 100 °C con le stesse in Viton.

It is advisable to use hydraulic oils of mineral origin with anti-foaming, antiwear, anti-oxidant and anti-corrosion characteristics and rapid air removal properties and a high viscosity index;

- *Recommended viscosity 15÷92 mm^2/s (cSt)*
- *Start-up viscosity limit 2000 mm^2/s (cSt)*

During normal operation, the temperature of the oil must be between 20°C and 65°C and limit values between -20°C and 80°C with NBR gasket and limit values between -15°C and 100°C with Viton gasket.

PRESSIONE DI DRENAGGIO • *DRAINAGE PRESSURE*

Qualora il drenaggio non fosse interno il limite massimo di pressione su tale linea è pari a 6 bar.

Without external drain, 6 bar is the maximum counterpressure allowed.

FILTRAZIONE • *FILTRATION*

Per eliminare eventuali impurità presenti nell'olio e garantire una durata superiore del motore, è necessario introdurre nell'impianto un'efficace filtrazione verificandone periodicamente la funzionalità.
I livelli di filtrazione raccomandati sono i seguenti:

Utilizzo fino a 150 bar:
21/19/16 (ISO 4406) classe 10 (NAS 1638)

Utilizzo oltre 150 bar:
20/18/15 (ISO 4406) classe 9 (NAS 1638)

In order to eliminate any impurities present in the oil and to guarantee a longer duration of the motor, the system must be equipped with effective filtration which must be periodically checked to ensure that it is operating correctly.
The following are the recommended filtration levels:

Up to 150 bar:
21/19/16 (ISO 4406) classe 10 (NAS 1638)

Over to 150 bar:
20/18/15 (ISO 4406) classe 9 (NAS 1638)

NOTE INSTALLAZIONE • *INSTALLATION NOTES*

Prima di avviare l'impianto a regime, sono consigliati alcuni accorgimenti:

- Verificare in caso di motore unidirezionale, che il senso di rotazione sia coerente con il lato da cui proviene l'alimentazione.
- Verificare che nelle flange di connessione alle porte di mandata non siano presenti trucioli, sporco o altro.
- Se il motore è sottoposto a verniciatura, proteggere l'anello di tenuta verificando anche che la zona di contatto fra anello di tenuta e albero sia priva di polvere o di sedimenti abrasivi che possono accelerare le usure e causare delle perdite.
- Assicurarsi che il giunto utilizzato per la trasmissione compensi disallineamenti assiali che potrebbero pregiudicare l'integrità del motore.
- In caso in cui il motore trasmetta dei carichi radiali e/o assiali sull'albero (come ad esempio quando trascina pulegge e cinghie) è necessario optare per le versioni con supporto rinforzato.
- Il giunto di collegamento fra alberi scanalati dovrà essere lubrificato, libero di muoversi assialmente e di lunghezza adatta a coprire tutta l'estensione dei due alberi (motore e pompa).

Durante il primo avviamento:

- scollegare lo scarico della pompa di alimentazione per permettere di spurgare l'aria nel circuito e, in caso di valvole di massima, tarare le valvole limitatrici di pressione al minimo valore.
- Evitare, in presenza di livelli di pressione di alimentazione superiori alla pressione massima continuativa, di sottoporre il motore ad un regime di rotazione inferiore a quello minimo consentito.
- Evitare partenze sotto carico in condizioni di bassa temperatura o di lunghi periodi di inattività.

Before you start setting system, some precautions are recommended:

- *In case of a monodirectional motor check for the direction of rotation to be consistent with the inlet side.*
- *Remove all dirt, chips and all foreign bodies from flange connecting inlet and delivery ports.*
- *Protect the drive shaft sealing ring during pump painting; check that the contact area between ring and shaft is clean: dust or abrasive sediments could accelerate the wear and cause leakage.*
- *Make sure that the transmission joint balances any axial misalignment that might compromise the engine working.*
- *With radial and/or axial loads provided by the motor shaft (such as when it drives pulleys or chains) use the available versions with strengthen shaft.*
- *The coupling joint between the spline shafts has to be properly lubricated, free to move axially and of suitable length to cover both motor and pump shafts.*

Installation notes:

- *Disconnect the drain pump to bleed off the air in the circuit and, set the pressure relief valve at the minimum value (if installed).*
- *Avoid lower rotation speed than min. allowed with an inlet pressure higher than the continuous max pressure.*
- *Do not start the system under load at low temperatures or after long stops.*
- *Check the whole system filling by bleeding off the whole air*

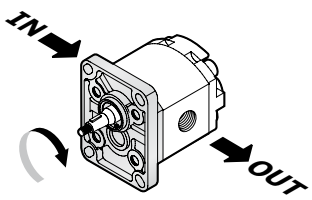
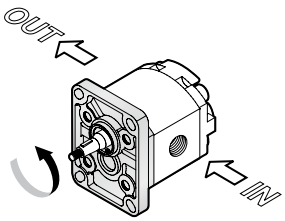
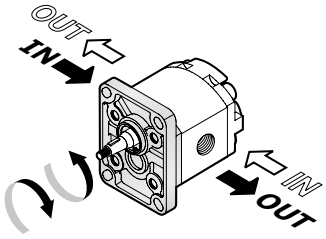
MOTORI AD INGRANAGGI INFORMAZIONI TECNICHE
GEAR MOTORS TECHNICAL INFORMATIONS

• Per verificare l'effettivo riempimento sfiatare il circuito dopo un primo avviamento di qualche istante dove è stata attivata tutta la componentistica.
• Tenendo controllata la temperatura del fluido e delle parti in movimento e la velocità di rotazione è infine possibile aumentare la pressione fino al raggiungimento delle condizioni di esercizio previste che devono mantenersi entro i limiti indicati nel presente catalogo.

amount after few minutes of system working.
• Increase the pressure until you reach the operating values by keeping checked the fluid and the moving parts temperature and the rotation speed. Maintain the set values within the limits depicted in this catalogue.

DEFINIZIONE DEL VERSO DI ROTAZIONE GUARDANDO L'ALBERO DI TRASCINAMENTO
DEFINITION OF ROTATION LOOKING AT THE DRIVE SHAFT

USCITA FLUIDO AD ALTA PRESSIONE
HIGH PRESSURE FLUID EXIT

D	ROTAZIONE DESTRA *CLOCKWISE ROTATION*	S	ROTAZIONE SINISTRA *COUNTER CLOCKWISE ROTATION*	R	ROTAZIONE REVERSIBILE *CLOCKWISE COUNTER CLOCKWISE ROTATION*
Ingresso - bassa pressione ***Inlet*** *- low pressure*		**Scarico** - alta pressione ***Outlet*** *- high pressure*			
Scarico - alta pressione ***Outlet*** *- high pressure*		**Ingresso** - bassa pressione ***Inlet*** *- low pressure*			

SENSO DI ROTAZIONE • *WISE ROTATION*

Il senso di rotazione viene definito S (sinistro) e D (destro) osservando l'albero frontalmente.
In caso di rotazione sinistra S lo scarico sarà a sinistra dell'albero mentre l'ingresso alla sua destra; il contrario sarà per motore monodirezionale destro.
Se i motori sono monodirezionali in fase di ordine è necessario precisare il senso di rotazione desiderato, oppure intervenire modificando l'assetto interno come illustrato di seguito (inversione del senso di rotazione).

The direction of rotation is defined by observing head on the shaft: S (left) and D (right).
In cases of anticlockwise S rotation , outlet port will be on the left of the shaft while inlet port on the right; the opposite layout is observed in case of clockwise D rotation.
Please specify the require direction in case of monodirectional motors during the ordering phase, otherwise modify the internal assembly layout as depicted in the following pages.

INVERSIONE • *REVERSAL*

Il senso di rotazione dei motori è evidenziato da una freccia sulla targhetta.
La targhetta è posizionata sul corpo. (vedi pag.94)

L'inversione del senso di rotazione di un motore si esegue nel seguente modo:

- Smontare il motore come da figura 1.
- Sfilare gli ingranaggi C e D e rimontarli secondo la figura 2
- Rimontare la boccola B nella stessa posizione della figura 1
- Capovolgere la flangia A e rimontare il motore serrando le viti con una chiave dinamometrica.
- Per i motori 3GM, smontare solo la flangia anteriore.

Motors wise rotation is indicated by an arrow on the label.
The plate is placed on the body (see page 94).

How to invert the motor wise rotation:

- *Disassemble motor as shown in figure 1.*
- *Pull off gears C - D and reassemble according to figure 2.*
- *Reassemble bushing B as before.*
- *Reverse the flange A and reassemble the motor tightening the screws by dynamometric wrench.*
- *For the motors 3GM, disassemble only front flange.*

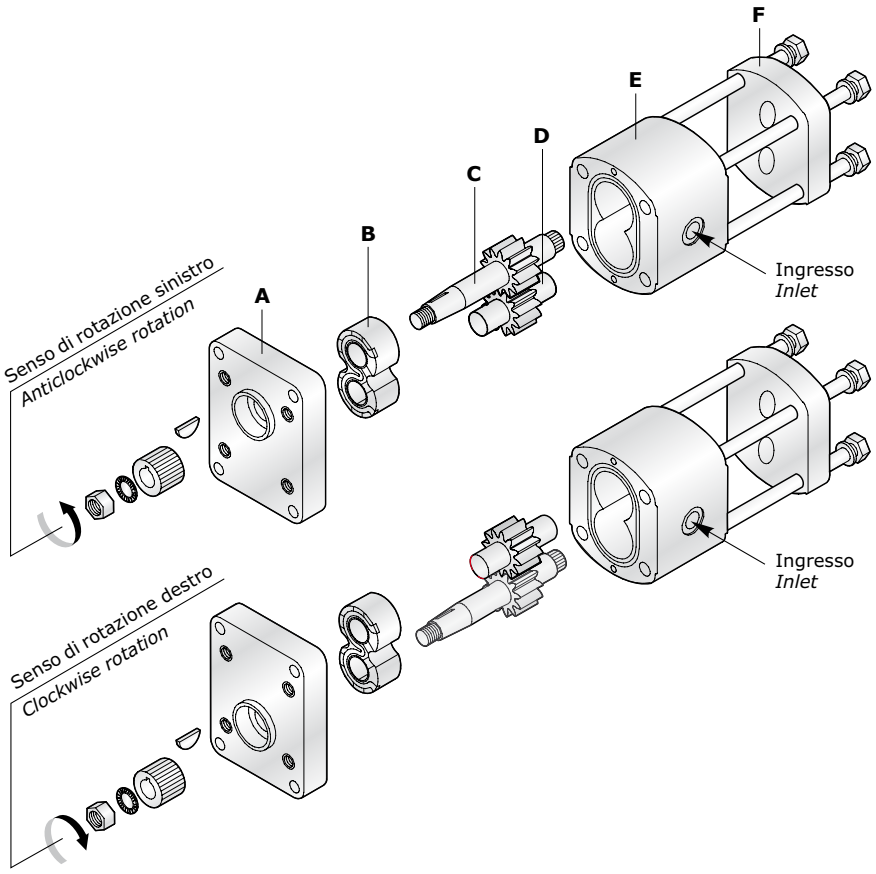
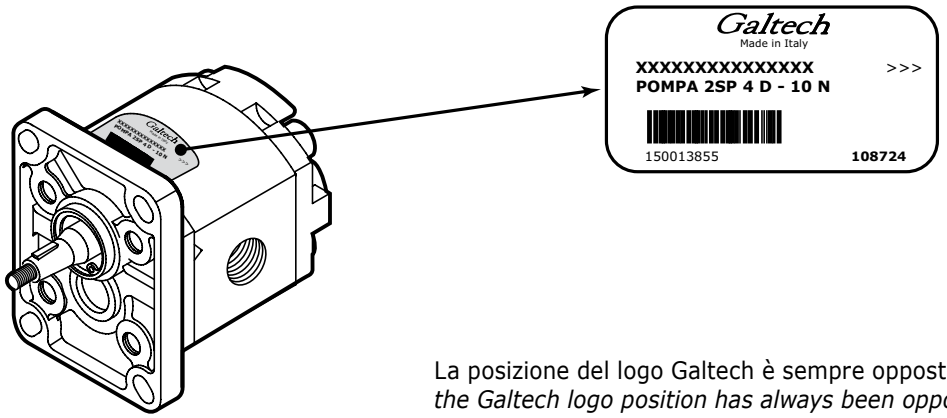


Fig. 1

Fig. 2

TARGHETTA • *PLATE*



La posizione del logo Galtech è sempre opposta alla flangia.
the Galtech logo position has always been opposed to the flange.

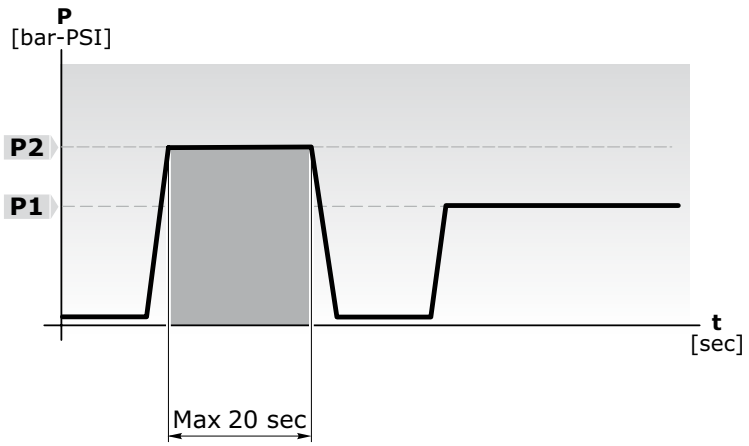
MOTORI AD INGRANAGGI INFORMAZIONI TECNICHE
GEAR MOTORS TECHNICAL INFORMATIONS

TIPO DI MOTORE - *TYPE OF MOTOR*	GRUPPO - *GROUP* **1SM**	GRUPPO - *GROUP* **2SM**	GRUPPO - *GROUP* **3GM**
Numero di viti ***numbers of screws***	4	4	16
Tipo di filetto ***Type of thread***	M8	M10	M10
Coppia di serraggio viti ***Tightening torque of screws***	30 Nm / 266 in-lbs	50 Nm / 443 in-lbs	60 Nm / 531 in-lbs
Tipo di giunto ***Type of coupling***	1IS 12M	2IS 14M / 2IS 15M	3IS 18M
Coppia di serraggio dado giunto ***Tightening torque at nut coupling***	9 ÷ 10 Nm / 80 ÷ 90 in-lbs	22 ÷ 25 Nm / 195 ÷ 221 in-lbs 32 ÷ 35 Nm / 283 ÷ 310 in-lbs	50 ÷ 55 Nm / 443 ÷ 487 in-lbs

DEFINIZIONE DELLE PRESSIONI • *DEFINITION OF PRESSURES*

I motori possono essere sottoposti alle pressioni P1, P2, indicate nelle tabelle delle prestazioni.
Il grafico seguente ne illustra le definizioni e l'applicabilità rispettando i limiti delle velocità di rotazione riportati.

The motors can be subjected to the pressures P1, P2 indicated in the performance tables.
The following diagram illustrates the definitions and applicability of these, compared to the rotation speed limits included.



P2 Pressione massima intermittente
Max intermittent pressure

P1 Pressione massima continua
Continuos max pressure

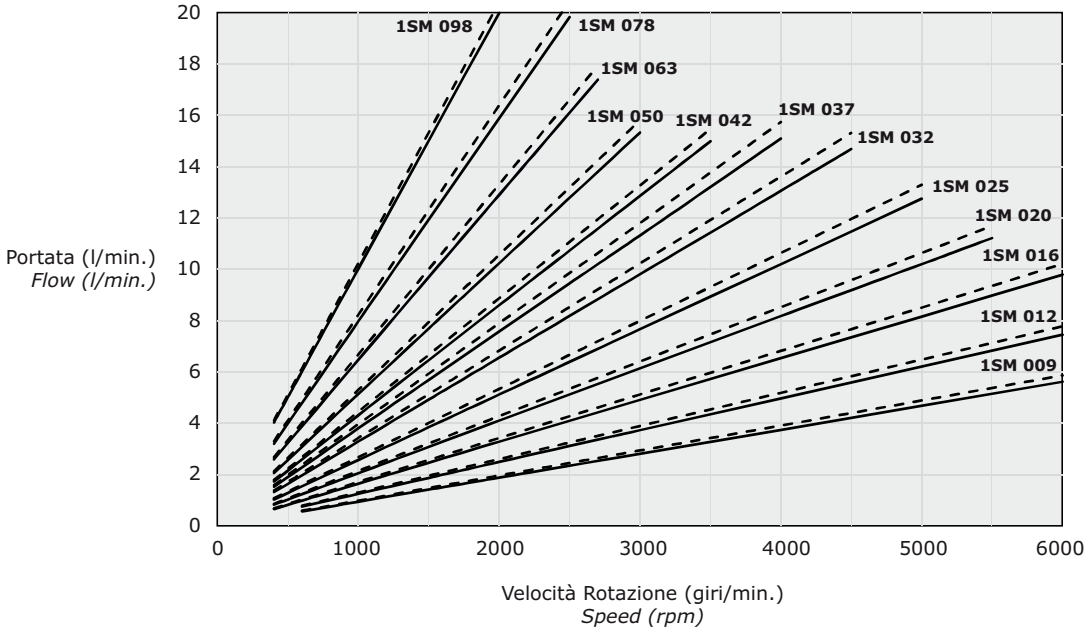
MISURE IDRAULICHE - *HYDRAULIC MEASURES*		
Q	Portata *Flow*	[l/min] [Gal/min]
M	Coppia *Torque*	[Nm] [lfb.in]
P	Potenza *Power*	[kW] [HP]
V	Cilindrata *Displacement*	[cm³/giro] [in³/rev]
n	Velocità *Speed*	[min⁻¹]
Δp	Pressione *Pressure*	[bar] [PSI]
η_v	Rendimento volumetrico *Volumetric efficiency*	
η_m	Rendimento meccanico *Mechanical efficiency*	
η_t	Rendimento totale *Overal efficiency*	

FORMULE UTILI - *USEFUL FORMULAS*		
Q =	$\frac{V \cdot n}{1000 \cdot \eta_v}$	[l/min]
	$\frac{V \cdot n}{231 \cdot \eta_v}$	[Gal/min]
M =	$\frac{\Delta p \cdot V \cdot \eta_m}{63.83}$	[Nm]
	$\frac{\Delta p \cdot V \cdot \eta_m}{2 \cdot 3.14}$	[lfb.in]
P =	$\frac{\Delta p \cdot V \cdot n \cdot \eta_t}{600 \cdot 1000}$	[kW]
	$\frac{\Delta p \cdot V \cdot n \cdot \eta_t}{395934}$	[HP]

FATTORE CONVERSIONE - *CONVERSION FACTOR*	
1 l/min	0.2641 US Gal/min
1 Nm	8.851 in-lbs
1 Nm	0.7375 ft-lbs
1 N	0.2248 lbs
1 kW	1.34 HP
1 cm³/giro	0.061 in³/rev
1 bar	14.5 PSI
1 mm	0.0394 in
1 kg	2.205 lbs

GRUPPO *GROUP* 1SM

DIAGRAMMA PORTATA - VELOCITÀ DI ROTAZIONE
FLOW - SPEED CHART

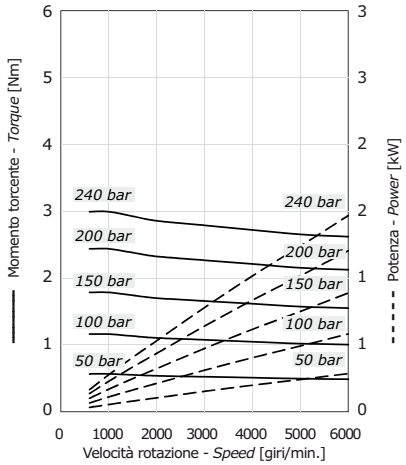


GRUPPO *GROUP* 1SM

DIAGRAMMI POTENZE
POWER DIAGRAM

Grafici rilevati a banco di collaudo a 40°C con olio VG46
Diagrams collected on test bench at 40°C with VG46 mineral oil

1SM 009



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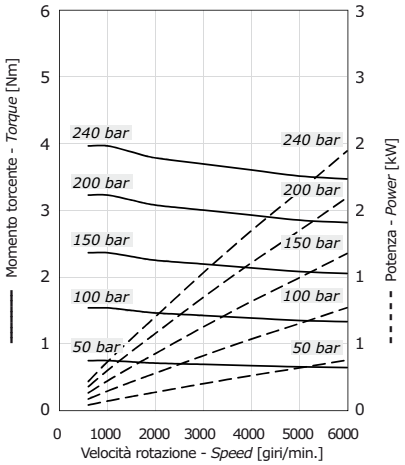
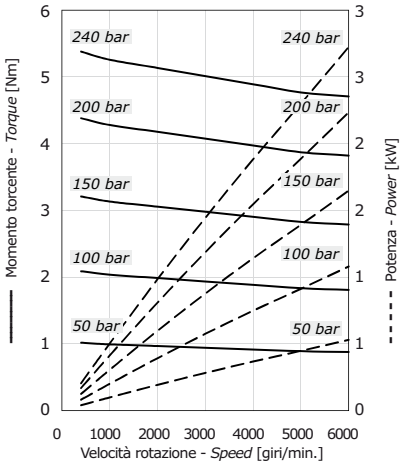
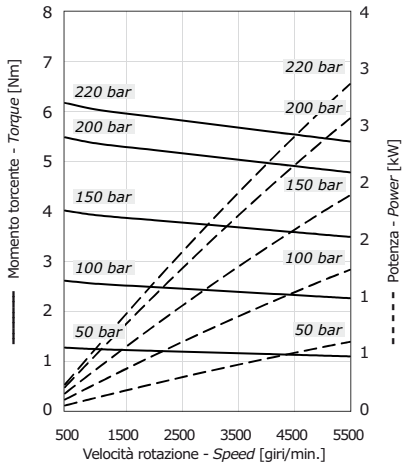


1SM 016

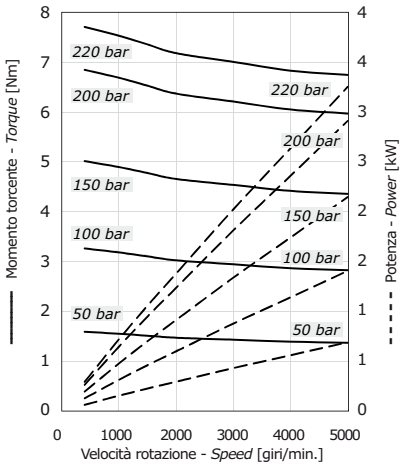


MOTORI AD INGRANAGGI PRESTAZIONI
GEAR MOTORS PERFORMANCES

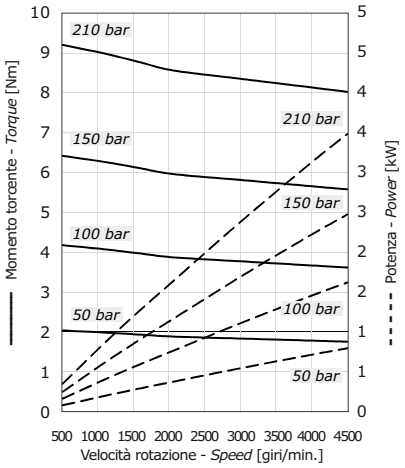
1SM 020



1SM 025



1SM 032



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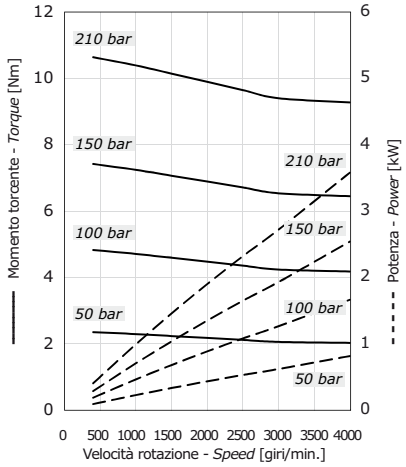

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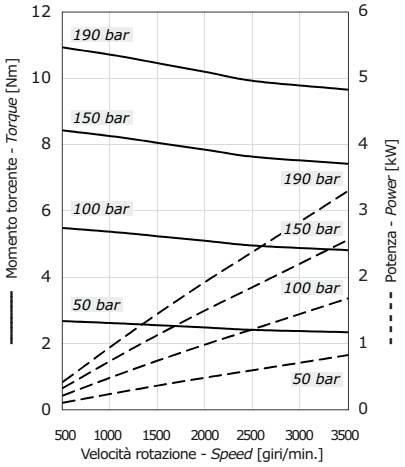

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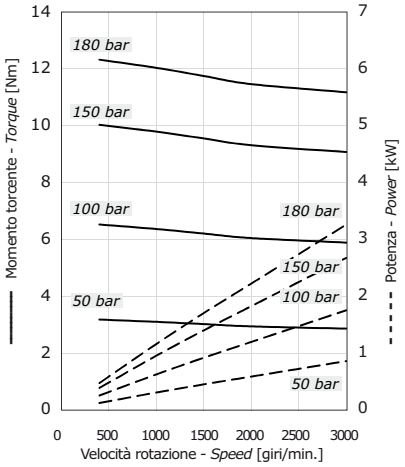

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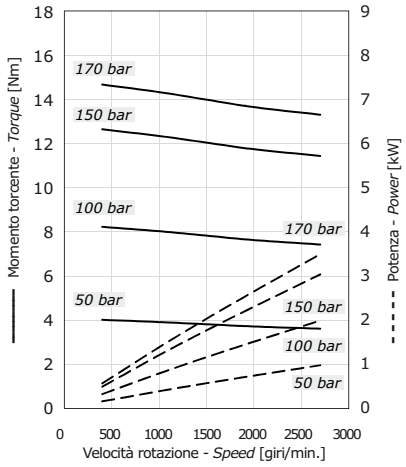

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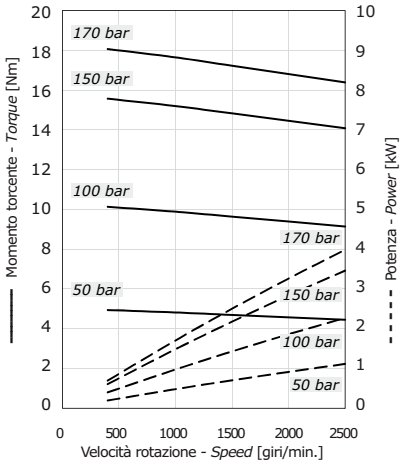
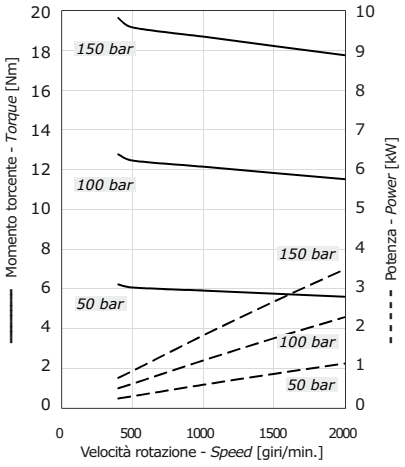
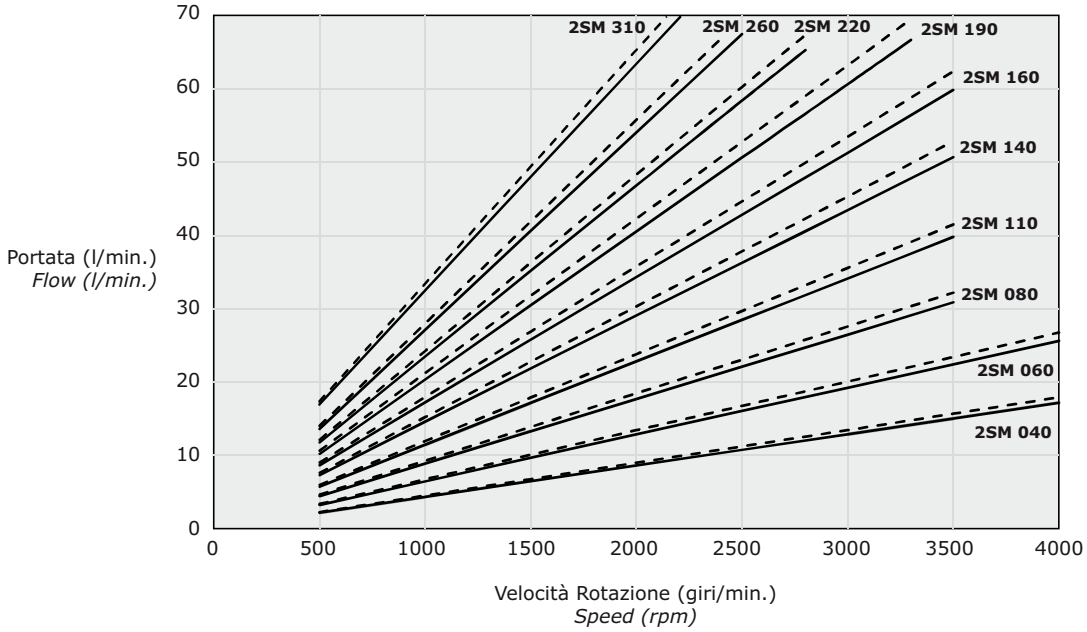


1SM 098



GRUPPO / *GROUP* 2SM

DIAGRAMMA PORTATA - VELOCITÀ DI ROTAZIONE
FLOW - SPEED CHART

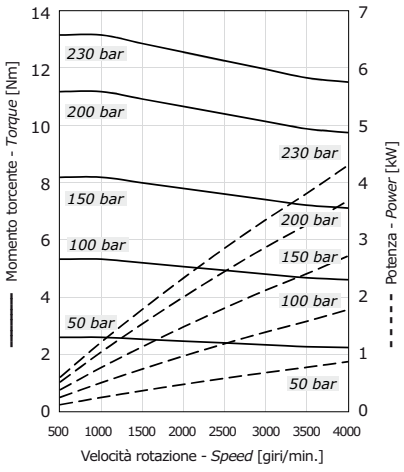


GRUPPO / *GROUP* 2SM

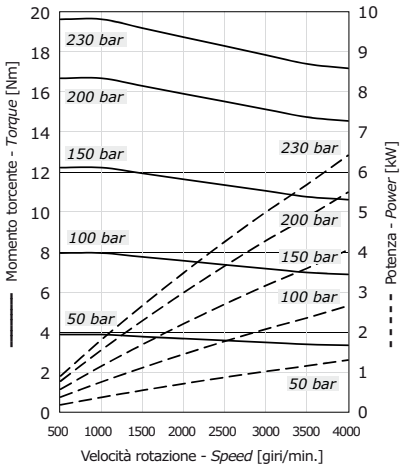
DIAGRAMMI POTENZE
POWER DIAGRAM

Grafici rilevati a banco di collaudo a 40°C con olio VG46
Diagrams collected on test bench at 40°C with VG46 mineral oil

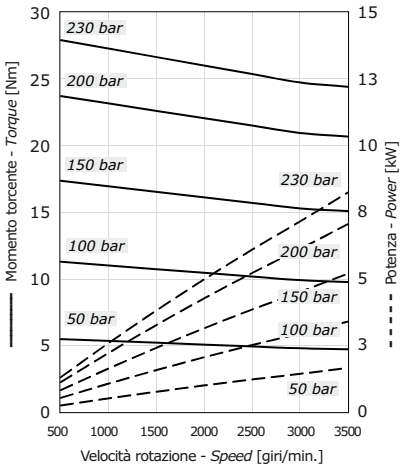
2SM 040



2SM 060

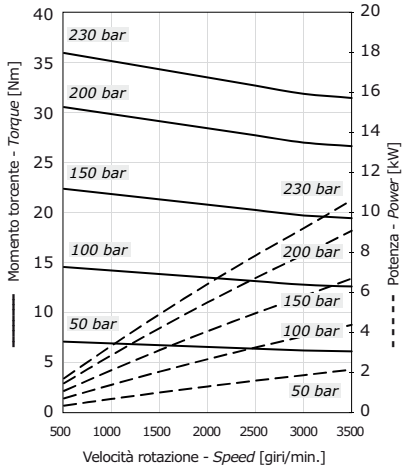


2SM 080

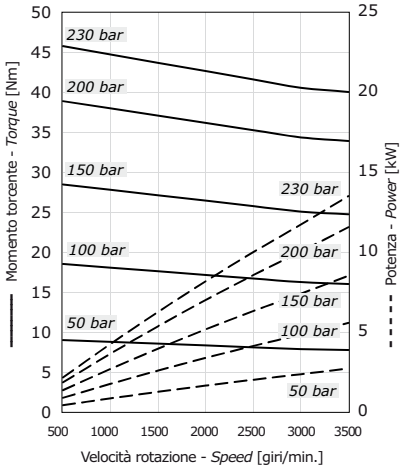


MOTORI AD INGRANAGGI PRESTAZIONI
GEAR MOTORS PERFORMANCES

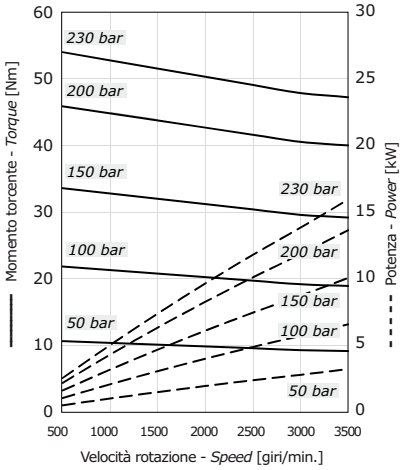
2SM 110



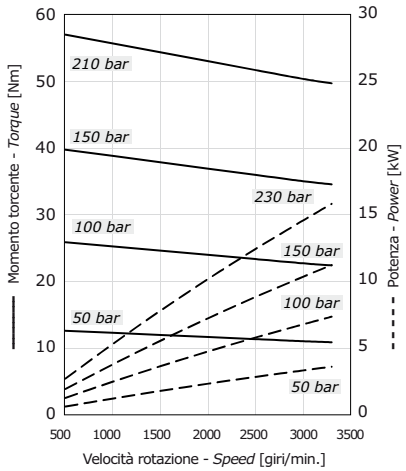
2SM 140



2SM 160



2SM 190



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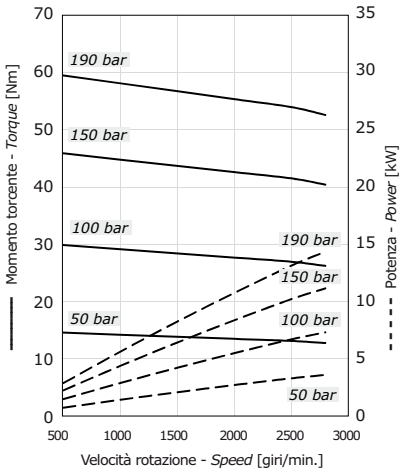

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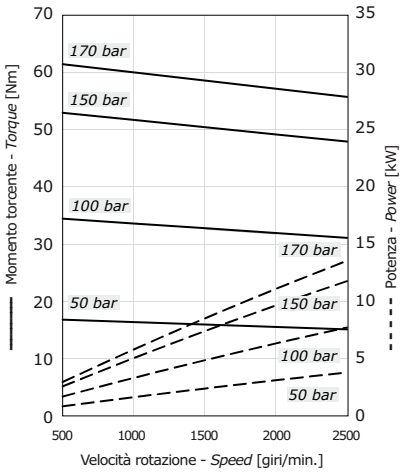

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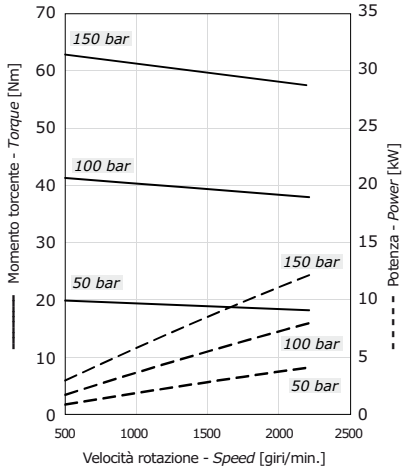
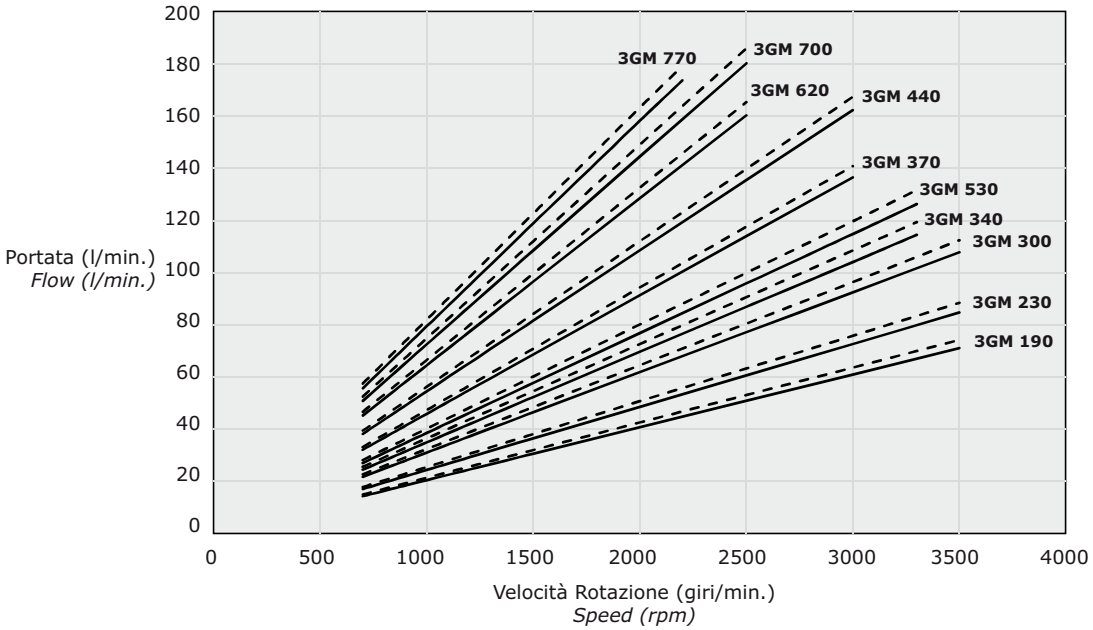


MOTORI AD INGRANAGGI PRESTAZIONI
GEAR MOTORS PERFORMANCES

GRUPPO *GROUP* 3GM

DIAGRAMMA PORTATA - VELOCITÀ DI ROTAZIONE
FLOW - SPEED CHART

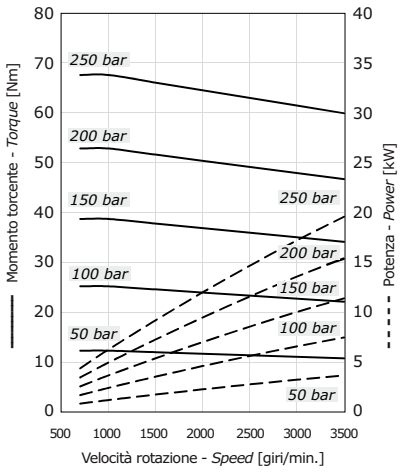


GRUPPO *GROUP* 3GM

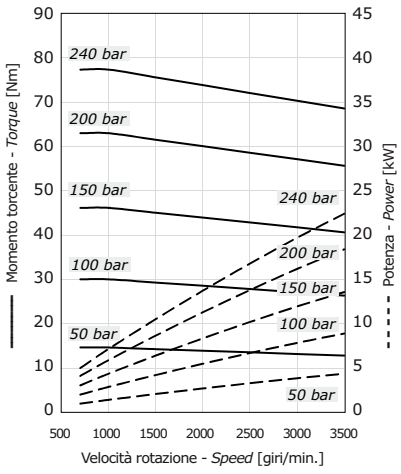
DIAGRAMMI POTENZE
POWER DIAGRAM

Grafici rilevati a banco di collaudo a 40°C con olio VG46
Diagrams collected on test bench at 40°C with VG46 mineral oil

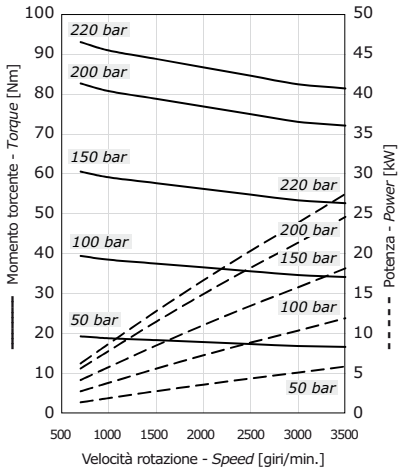
3GM 190



3GM 230

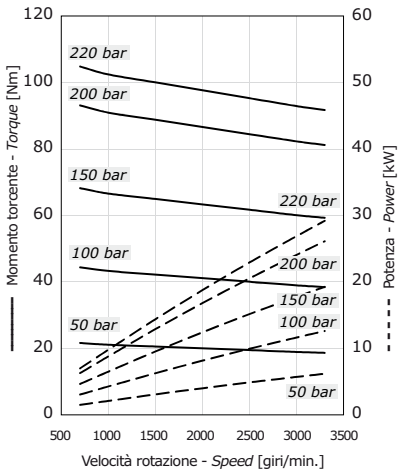


3GM 300

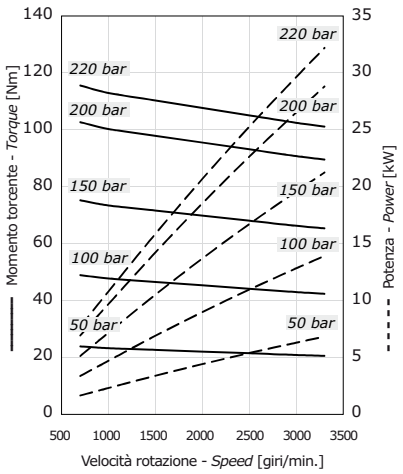


MOTORI AD INGRANAGGI PRESTAZIONI
GEAR MOTORS PERFORMANCES

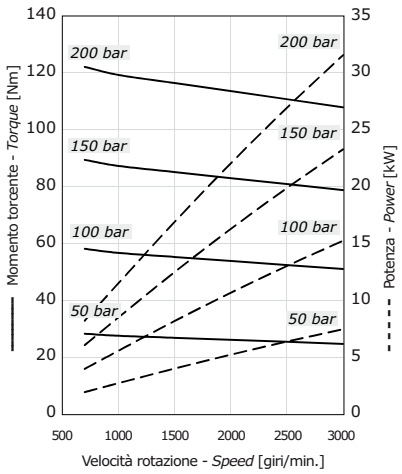
3GM 340



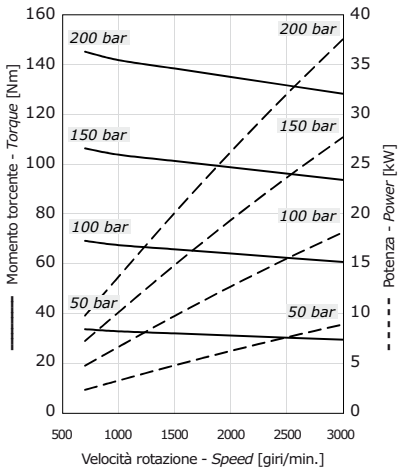
3GM 370



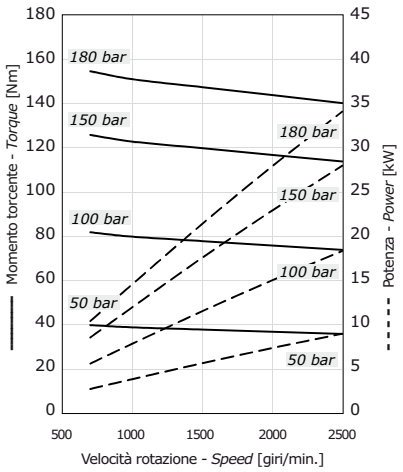
3GM 440



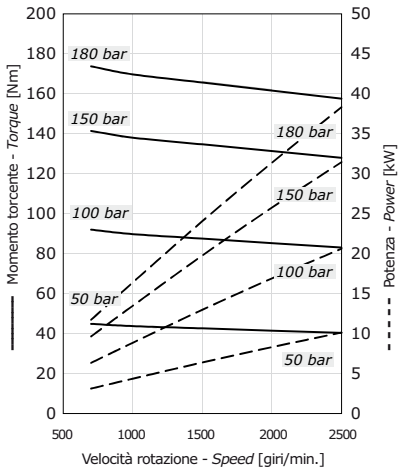
3GM 530



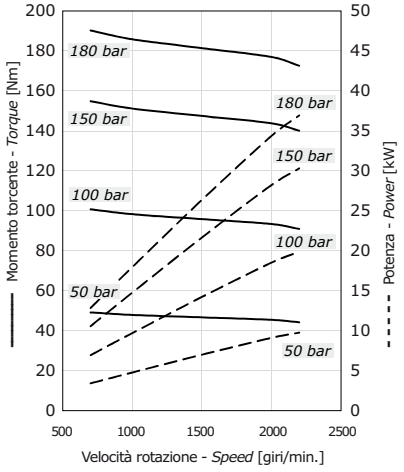
3GM 620



3GM 700



3GM 770

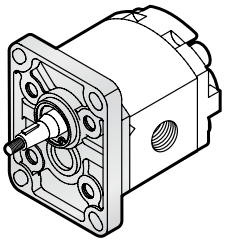


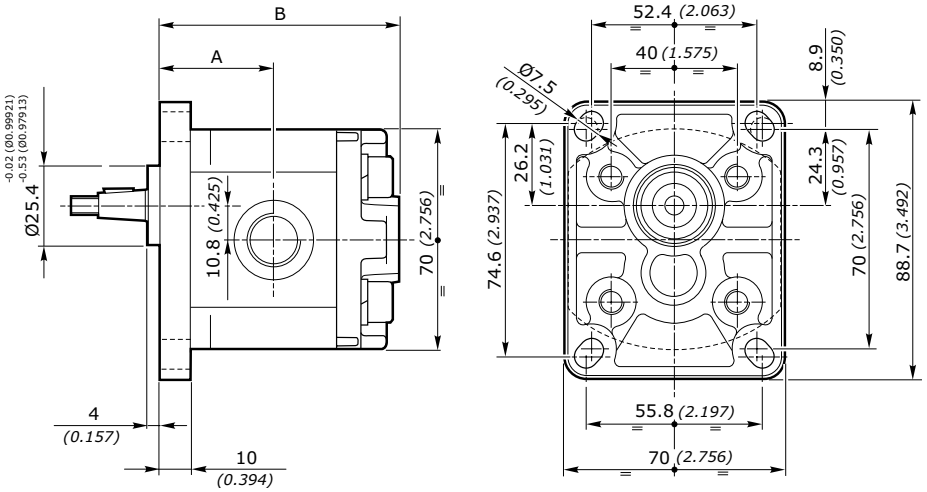
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA EUROPEA EUR *EUROPEAN FLANGE*

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	240	*3480*	260	*3770*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	240	*3480*	260	*3770*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	240	*3480*	260	*3770*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	220	*3190*	250	*3625*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	220	*3190*	250	*3625*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	210	*3045*	240	*3480*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	210	*3045*	240	*3480*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	190	*2755*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*





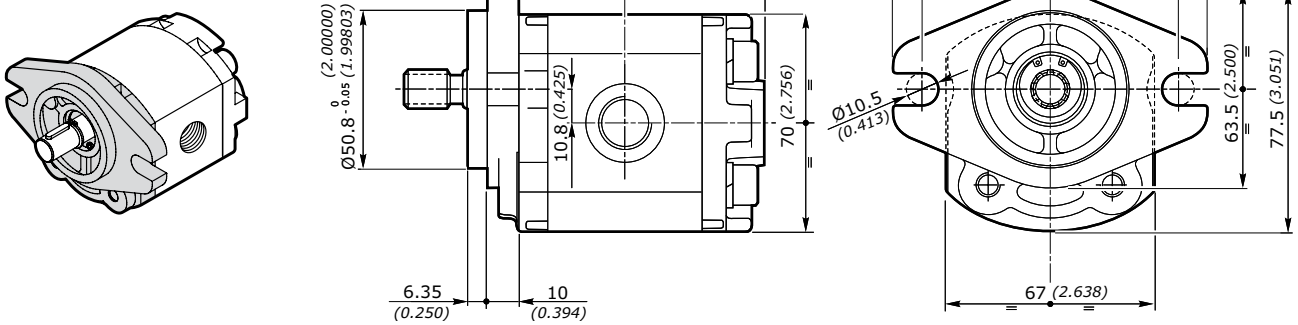
GRUPPO - GROUP 1	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
1SM 009	34.80	*1.370*	73.6	*2.898*	0.91	*2.01*
1SM 012	35.35	*1.392*	74.7	*2.941*	0.93	*2.05*
1SM 016	36.20	*1.425*	76.4	*3.008*	0.95	*2.09*
1SM 020	36.95	*1.455*	77.9	*3.067*	0.97	*2.14*
1SM 025	37.95	*1.494*	79.9	*3.146*	1.00	*2.21*
1SM 032	39.30	*1.547*	82.6	*3.252*	1.04	*2.29*
1SM 037	40.30	*1.587*	84.6	*3.331*	1.07	*2.36*
1SM 042	41.25	*1.624*	86.5	*3.406*	1.10	*2.43*
1SM 050	42.80	*1.685*	89.6	*3.528*	1.14	*2.51*
1SM 063	45.35	*1.785*	94.7	*3.728*	1.22	*2.69*
1SM 078	48.20	*1.898*	100.4	*3.953*	1.30	*2.87*
1SM 098	52.15	*2.053*	108.3	*4.264*	1.41	*3.11*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA SAE SAEAA *SAE FLANGE*

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	240	*3480*	260	*3770*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	240	*3480*	260	*3770*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	240	*3480*	260	*3770*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	220	*3190*	250	*3625*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	220	*3190*	250	*3625*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	210	*3045*	240	*3480*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	210	*3045*	240	*3480*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	190	*2755*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*



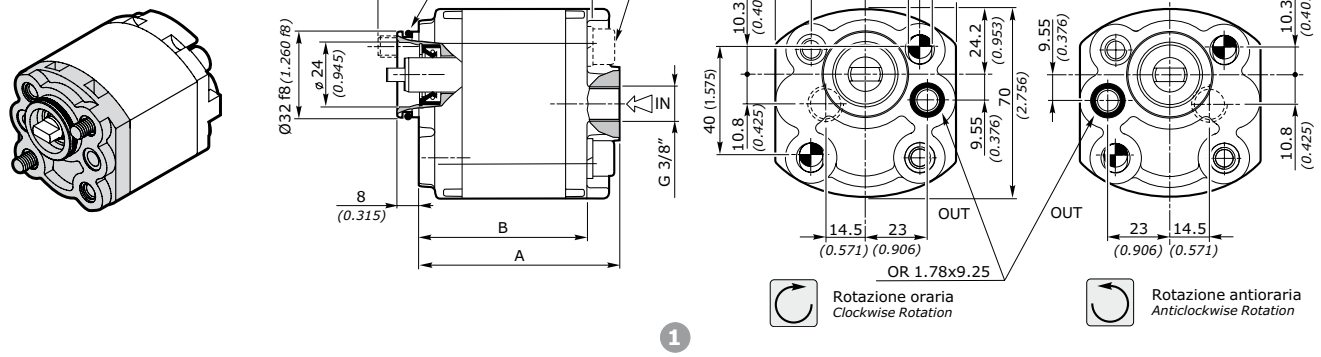
GRUPPO - GROUP 1	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
1SP 009	38.30	*1.508*	77.10	*3.035*	0.91	*2.01*
1SP 012	38.85	*1.530*	78.20	*3.079*	0.93	*2.05*
1SP 016	39.70	*1.563*	79.90	*3.146*	0.95	*2.09*
1SP 020	40.45	*1.593*	81.40	*3.205*	0.97	*2.14*
1SP 025	41.45	*1.632*	83.40	*3.283*	1.00	*2.21*
1SP 032	42.80	*1.685*	86.10	*3.390*	1.04	*2.29*
1SP 037	43.80	*1.724*	88.10	*3.469*	1.07	*2.36*
1SP 042	44.75	*1.762*	90.00	*3.543*	1.10	*2.43*
1SP 050	46.30	*1.823*	93.10	*3.665*	1.14	*2.51*
1SP 063	48.85	*1.923*	98.20	*3.866*	1.22	*2.69*
1SP 078	51.70	*2.035*	103.90	*4.091*	1.30	*2.87*
1SP 098	55.65	*2.191*	111.80	*4.402*	1.41	*3.11*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA PER MINICENTRALINA MC32 *POWER-PACK FLANGE*

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	210	*3045*	240	*3480*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	210	*3045*	240	*3480*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	210	*3045*	240	*3480*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	210	*3045*	240	*3480*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	210	*3045*	240	*3480*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	200	*2900*	230	*3335*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	200	*2900*	230	*3335*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	180	*2610*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*



1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio del motore può essere effettuato con 2 viti prigioniere (25 ± 2Nm).
Fissare il motore mediante dadi autobloccanti (32 ± 2 Nm).

1 *Tightening torque of screws: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).*
The screws kit for the motor assembly should be ordered separately.
*Ordering code: **0019W** (+ lenght **L** - see table)*

The assembling of the motor should be effected by 2 screw (221 ± 18 lb-in).
Fix the motor by self-locking nuts (283 ± 18 lb-in).

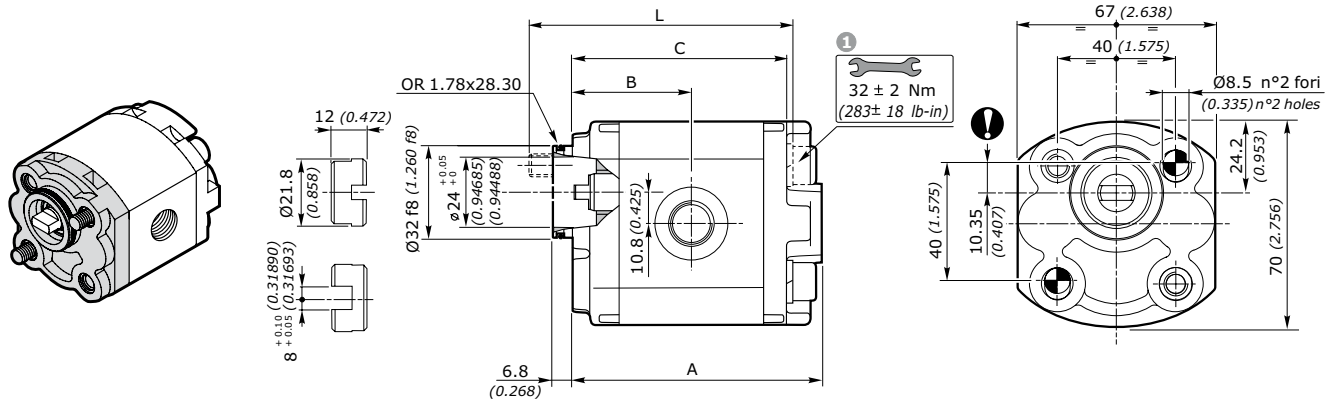
GRUPPO - GROUP 1	A		B		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	kg	lbs
1SM 009	73.1	*2.878*	61.6	*2.425*	80	*3.150*	0.91	*2.01*
1SM 012	74.2	*2.921*	62.7	*2.469*	80	*3.150*	0.93	*2.05*
1SM 016	75.9	*2.988*	64.4	*2.535*	80	*3.150*	0.95	*2.09*
1SM 020	77.4	*3.047*	65.9	*2.594*	80	*3.150*	0.97	*2.14*
1SM 025	79.4	*3.126*	67.9	*2.673*	85	*3.346*	1.00	*2.21*
1SM 032	82.1	*3.232*	70.6	*2.780*	85	*3.346*	1.04	*2.29*
1SM 037	84.1	*3.311*	72.6	*2.858*	90	*3.543*	1.07	*2.36*
1SM 042	86.0	*3.386*	74.5	*2.933*	90	*3.543*	1.10	*2.43*
1SM 050	89.1	*3.508*	77.6	*3.055*	95	*3.740*	1.14	*2.51*
1SM 063	94.2	*3.709*	82.7	*3.256*	100	*3.937*	1.22	*2.69*
1SM 078	99.9	*3.933*	88.4	*3.480*	105	*4.134*	1.30	*2.87*
1SM 098	107.8	*4.244*	96.3	*3.791*	115	*4.528*	1.41	*3.11*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA TEDESCA FISSAGGIO MINICENTRALINA **E32BX** *POWER-PACK FIXING GERMAN FLANGE*

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	210	*3045*	240	*3480*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	210	*3045*	240	*3480*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	210	*3045*	240	*3480*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	210	*3045*	240	*3480*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	210	*3045*	240	*3480*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	200	*2900*	230	*3335*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	200	*2900*	230	*3335*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	180	*2610*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*



1

Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio del motore può essere effettuato con 2 viti prigioniere (25 ± 2Nm).
Fissare il motore mediante dadi autobloccanti (32 ± 2 Nm).

1

Tightening torque of screws: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).
The screws kit for the motor assembly should be ordered separately.
*Ordering code: **0019W** (+ lenght **L** - see table)*

The assembling of the motor should be effected by 2 screw (221 ± 18 lb-in).
Fix the motor by self-locking nuts (283 ± 18 lb-in).

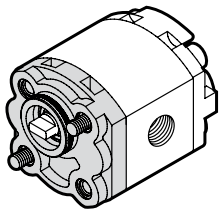
GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SM 009	73.6	*2.898*	34.80	*1.370*	61.6	*2.425*	80	*3.150*	0.91	*2.01*
1SM 012	74.7	*2.941*	35.35	*1.392*	62.7	*2.469*	80	*3.150*	0.93	*2.05*
1SM 016	76.4	*3.008*	36.20	*1.425*	64.4	*2.535*	80	*3.150*	0.95	*2.09*
1SM 020	77.9	*3.067*	36.95	*1.455*	65.9	*2.594*	80	*3.150*	0.97	*2.14*
1SM 025	79.9	*3.146*	37.95	*1.494*	67.9	*2.673*	85	*3.346*	1.00	*2.21*
1SM 032	82.6	*3.252*	39.30	*1.547*	70.6	*2.780*	85	*3.346*	1.04	*2.29*
1SM 037	84.6	*3.331*	40.30	*1.587*	72.6	*2.858*	90	*3.543*	1.07	*2.36*
1SM 042	86.5	*3.406*	41.25	*1.624*	74.5	*2.933*	90	*3.543*	1.10	*2.43*
1SM 050	89.6	*3.528*	42.80	*1.685*	77.6	*3.055*	95	*3.740*	1.14	*2.51*
1SM 063	94.7	*3.728*	45.35	*1.785*	82.7	*3.256*	100	*3.937*	1.22	*2.69*
1SM 078	100.4	*3.953*	48.20	*1.898*	88.4	*3.480*	105	*4.134*	1.30	*2.87*
1SM 098	108.3	*4.264*	52.15	*2.053*	96.3	*3.791*	115	*4.528*	1.41	*3.11*

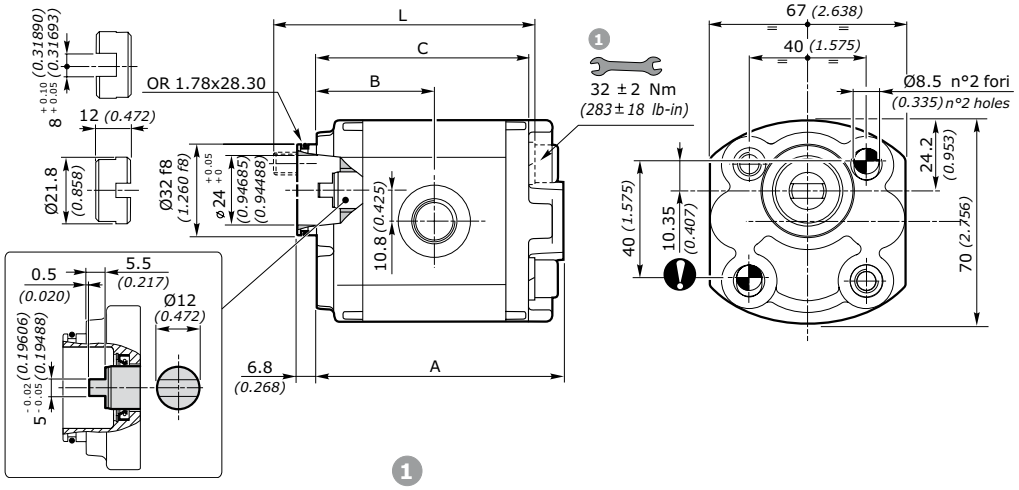
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA TEDESCA FISSAGGIO MINICENTRALINA CON ANELLO DI TENUTA **E32BC** ***POWER-PACK FIXING GERMAN FLANGE WITH SEAL SHAFT***

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	210	*3045*	240	*3480*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	210	*3045*	240	*3480*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	210	*3045*	240	*3480*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	210	*3045*	240	*3480*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	210	*3045*	240	*3480*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	200	*2900*	230	*3335*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	200	*2900*	230	*3335*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	180	*2610*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*





1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio del motore può essere effettuato con 2 viti prigioniere (25 ± 2Nm).
Fissare il motore mediante dadi autobloccanti (32 ± 2 Nm).

1 *Tightening torque of screws: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).*
The screws kit for the motor assembly should be ordered separately.
*Ordering code: **0019W** (+ lenght **L** - see table)*

The assembling of the motor should be effected by 2 screw (221 ± 18 lb-in).
Fix the motor by self-locking nuts (283 ± 18 lb-in).

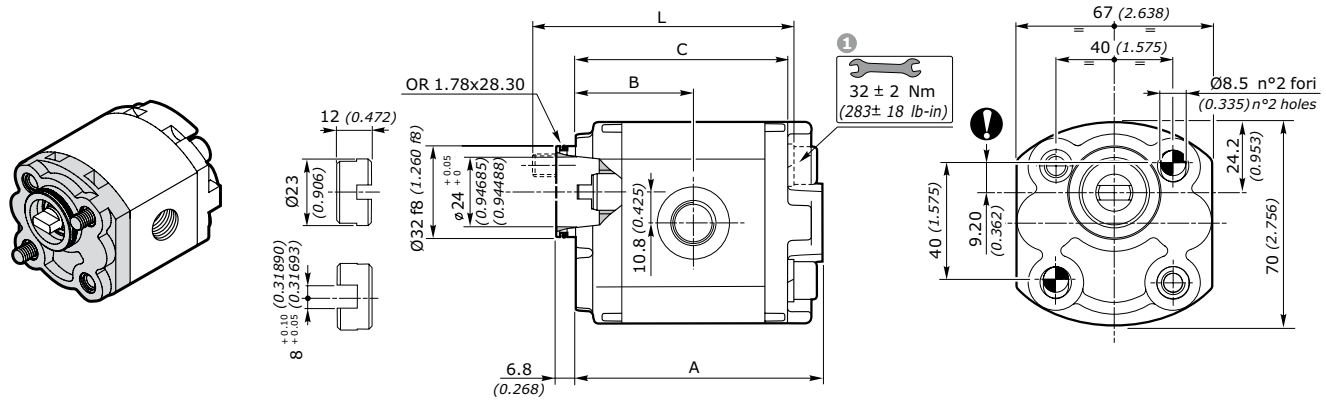
GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SM 009	73.6	*2.898*	34.80	*1.370*	61.6	*2.425*	80	*3.150*	0.91	*2.01*
1SM 012	74.7	*2.941*	35.35	*1.392*	62.7	*2.469*	80	*3.150*	0.93	*2.05*
1SM 016	76.4	*3.008*	36.20	*1.425*	64.4	*2.535*	80	*3.150*	0.95	*2.09*
1SM 020	77.9	*3.067*	36.95	*1.455*	65.9	*2.594*	80	*3.150*	0.97	*2.14*
1SM 025	79.9	*3.146*	37.95	*1.494*	67.9	*2.673*	85	*3.346*	1.00	*2.21*
1SM 032	82.6	*3.252*	39.30	*1.547*	70.6	*2.780*	85	*3.346*	1.04	*2.29*
1SM 037	84.6	*3.331*	40.30	*1.587*	72.6	*2.858*	90	*3.543*	1.07	*2.36*
1SM 042	86.5	*3.406*	41.25	*1.624*	74.5	*2.933*	90	*3.543*	1.10	*2.43*
1SM 050	89.6	*3.528*	42.80	*1.685*	77.6	*3.055*	95	*3.740*	1.14	*2.51*
1SM 063	94.7	*3.728*	45.35	*1.785*	82.7	*3.256*	100	*3.937*	1.22	*2.69*
1SM 078	100.4	*3.953*	48.20	*1.898*	88.4	*3.480*	105	*4.134*	1.30	*2.87*
1SM 098	108.3	*4.264*	52.15	*2.053*	96.3	*3.791*	115	*4.528*	1.41	*3.11*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA PER ELETTROPOMPA E32CX *ELECTRO-PUMP FLANGE*

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	210	*3045*	240	*3480*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	210	*3045*	240	*3480*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	210	*3045*	240	*3480*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	210	*3045*	240	*3480*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	210	*3045*	240	*3480*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	200	*2900*	230	*3335*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	200	*2900*	230	*3335*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	180	*2610*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*



1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio del motore può essere effettuato con 2 viti prigioniere (25 ± 2Nm).
Fissare il motore mediante dadi autobloccanti (32 ± 2 Nm).

1 *Tightening torque of screws: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).*
The screws kit for the motor assembly should be ordered separately.
*Ordering code: **0019W** (+ lenght **L** - see table)*

The assembling of the motor should be effected by 2 screw (221 ± 18 lb-in).
Fix the motor by self-locking nuts (283 ± 18 lb-in).

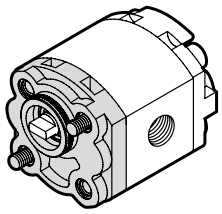
GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SM 009	73.6	*2.898*	34.80	*1.370*	61.6	*2.425*	80	*3.150*	0.91	*2.01*
1SM 012	74.7	*2.941*	35.35	*1.392*	62.7	*2.469*	80	*3.150*	0.93	*2.05*
1SM 016	76.4	*3.008*	36.20	*1.425*	64.4	*2.535*	80	*3.150*	0.95	*2.09*
1SM 020	77.9	*3.067*	36.95	*1.455*	65.9	*2.594*	80	*3.150*	0.97	*2.14*
1SM 025	79.9	*3.146*	37.95	*1.494*	67.9	*2.673*	85	*3.346*	1.00	*2.21*
1SM 032	82.6	*3.252*	39.30	*1.547*	70.6	*2.780*	85	*3.346*	1.04	*2.29*
1SM 037	84.6	*3.331*	40.30	*1.587*	72.6	*2.858*	90	*3.543*	1.07	*2.36*
1SM 042	86.5	*3.406*	41.25	*1.624*	74.5	*2.933*	90	*3.543*	1.10	*2.43*
1SM 050	89.6	*3.528*	42.80	*1.685*	77.6	*3.055*	95	*3.740*	1.14	*2.51*
1SM 063	94.7	*3.728*	45.35	*1.785*	82.7	*3.256*	100	*3.937*	1.22	*2.69*
1SM 078	100.4	*3.953*	48.20	*1.898*	88.4	*3.480*	105	*4.134*	1.30	*2.87*
1SM 098	108.3	*4.264*	52.15	*2.053*	96.3	*3.791*	115	*4.528*	1.41	*3.11*

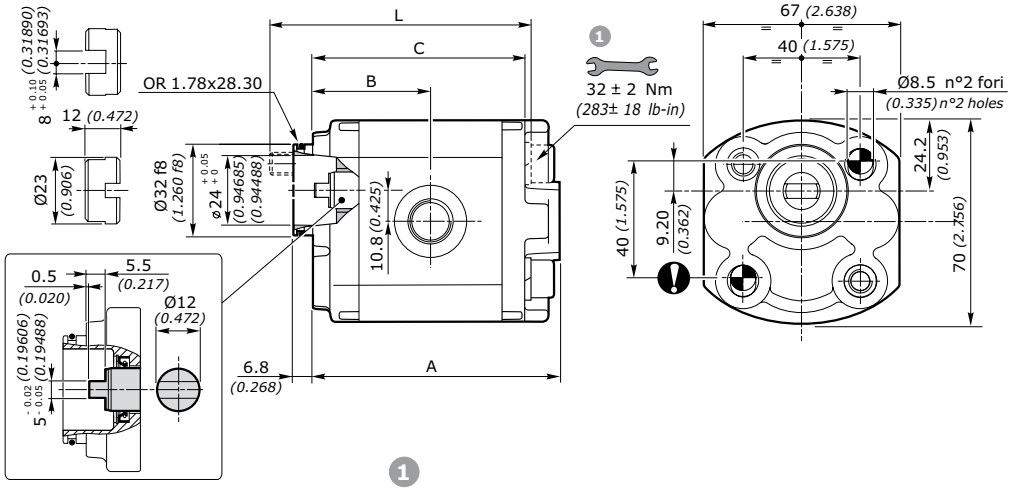
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

FLANGIA PER ELETTROPOMPA CON ANELLO DI TENUTA **E32CC** ***ELECTRO-PUMP FLANGE WITH SEAL SHAFT***

GRUPPO GROUP 1SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX MAX PRESSURE P1		PRESSIONE MAX MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm³/giro	in³/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
1SM 009	0.89	*0.05*	210	*3045*	240	*3480*	6000	5.3	*1.40*	600	0.49	*0.13*	92*
1SM 012	1.18	*0.07*	210	*3045*	240	*3480*	6000	7.1	*1.88*	600	0.65	*0.17*	92*
1SM 016	1.6	*0.10*	210	*3045*	240	*3480*	6000	9.6	*2.54*	400	0.61	*0.16*	95*
1SM 020	2.0	*0.12*	210	*3045*	240	*3480*	5500	11	*2.91*	400	0.76	*0.20*	95*
1SM 025	2.5	*0.15*	210	*3045*	240	*3480*	5000	12.5	*3.30*	400	0.95	*0.25*	95*
1SM 032	3.2	*0.20*	200	*2900*	230	*3335*	4500	14.4	*3.80*	400	1.21	*0.32*	95*
1SM 037	3.7	*0.23*	200	*2900*	230	*3335*	4000	14.8	*3.91*	400	1.40	*0.37*	95*
1SM 042	4.2	*0.26*	180	*2610*	210	*3045*	3500	14.7	*3.88*	400	1.60	*0.42*	95*
1SM 050	5.0	*0.31*	180	*2610*	210	*3045*	3000	15	*3.96*	400	1.90	*0.50*	95*
1SM 063	6.3	*0.38*	170	*2465*	190	*2755*	2700	17	*4.49*	400	2.39	*0.63*	95*
1SM 078	7.76	*0.47*	170	*2465*	190	*2755*	2500	19.4	*5.13*	400	2.95	*0.78*	95*
1SM 098	9.78	*0.60*	150	*2175*	170	*2465*	2000	19.6	*5.18*	400	3.71	*0.98*	95*

DIMENSIONI • *DIMENSIONS*





1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio del motore può essere effettuato con 2 viti prigioniere (25 ± 2Nm).
Fissare il motore mediante dadi autobloccanti (32 ± 2 Nm).

1 *Tightening torque of screws: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).*
The screws kit for the motor assembly should be ordered separately.
*Ordering code: **0019W** (+ lenght **L** - see table)*

The assembling of the motor should be effected by 2 screw (221 ± 18 lb-in).
Fix the motor by self-locking nuts (283 ± 18 lb-in).

GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SM 009	73.6	*2.898*	34.80	*1.370*	61.6	*2.425*	80	*3.150*	0.91	*2.01*
1SM 012	74.7	*2.941*	35.35	*1.392*	62.7	*2.469*	80	*3.150*	0.93	*2.05*
1SM 016	76.4	*3.008*	36.20	*1.425*	64.4	*2.535*	80	*3.150*	0.95	*2.09*
1SM 020	77.9	*3.067*	36.95	*1.455*	65.9	*2.594*	80	*3.150*	0.97	*2.14*
1SM 025	79.9	*3.146*	37.95	*1.494*	67.9	*2.673*	85	*3.346*	1.00	*2.21*
1SM 032	82.6	*3.252*	39.30	*1.547*	70.6	*2.780*	85	*3.346*	1.04	*2.29*
1SM 037	84.6	*3.331*	40.30	*1.587*	72.6	*2.858*	90	*3.543*	1.07	*2.36*
1SM 042	86.5	*3.406*	41.25	*1.624*	74.5	*2.933*	90	*3.543*	1.10	*2.43*
1SM 050	89.6	*3.528*	42.80	*1.685*	77.6	*3.055*	95	*3.740*	1.14	*2.51*
1SM 063	94.7	*3.728*	45.35	*1.785*	82.7	*3.256*	100	*3.937*	1.22	*2.69*
1SM 078	100.4	*3.953*	48.20	*1.898*	88.4	*3.480*	105	*4.134*	1.30	*2.87*
1SM 098	108.3	*4.264*	52.15	*2.053*	96.3	*3.791*	115	*4.528*	1.41	*3.11*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

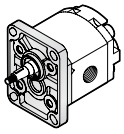
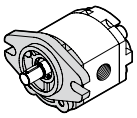
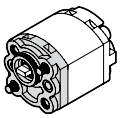
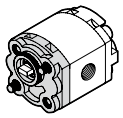
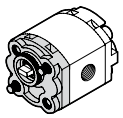
CODICE ORDINAZIONE • *ORDER CODE*

1SM - A - 020 - D - EUR - H - N - 10 - 0 - G

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*	PAGINA - *PAGE*
1SM	Tipo motore *Motor type*	Motore - gruppo 1 *Motor - group 1*	89
A	Materiale flangia e coperchio *Flange and cover material*	**A** = alluminio / *aluminium*	
020	Cilindrata *Displacement*	Cilindrata = 2 cm^3/g *Displacement = 0.12 in^3/rev*	89
D	Senso di rotazione *Rotation type*	**D** = Rotazione destra / *Clockwise rotation* **S** = Rotazione sinistra / *Anticlockwise rotation*	93
EUR	Tipo Flangia *Flange type*	Flangia europea standard *Standard european flange*	110
H	Tipo anello di tenuta *Seal ring type*	Vedi tabella compatibilità *See compatibility table*	
N	Tipo guarnizione *Gasket type*	**N** = NBR **V** = Viton	
10	Tipo Albero *Shaft type*	Vedi tabella compatibilità *See compatibility table*	111
0	Posizione connessione *Connection position*	Vedi tabella compatibilità *See compatibility table*	114
G	Tipo connessione *Connection type*	Vedi tabella compatibilità *See compatibility table*	

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

TIPOLOGIA FLANGIA • *FLANGE TYPE*

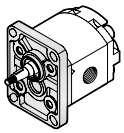
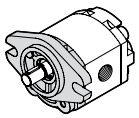
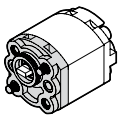
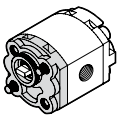
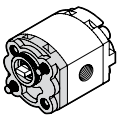
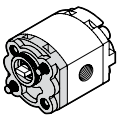
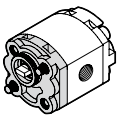
1SM	EUR	SAEAA	MC32	E32BX - E32BC	E32CX - E32CC
					
A alluminio *aluminium*	◇	◇	◇	◇	◇
G ghisa *cast iron*	non disponibile *not available*	non disponibile *not available*	non disponibile *not available*	non disponibile *not available*	non disponibile *not available*

◇ = Combinazione standard - *Standard combination*

ANELLO DI TENUTA • *SEAL RING*

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*
A	Flangia senza anello di tenuta *Flange without seal ring*	
H	Anello di tenuta fino a **8** bar *Sealing ring up to **8** bar*	Per basse pressioni (con distanziali di rinforzo) *For low pressures (with stiffering seal)*
K	Anello di tenuta fino a **30** bar *Sealing ring up to **30** bar*	Per alte pressioni *For high pressures*
W	Anello di tenuta fino a **100** bar *Sealing ring up to **100** bar*	Per altissime pressioni *For very high pressures*

COMBINAZIONE FLANGIA - ANELLO DI TENUTA - GUARNIZIONE • *FLANGE - SEAL RING - GASKET COMBINATION*

1SM	EUR			SAEAA			MC32			E32BX	E32BC		E32CX	E32CC	
															
	Anello - *seal ring*			Anello - *seal ring*			Anello - *seal ring*			Anello - *seal ring*	Anello - *seal ring*		Anello - *seal ring*	Anello - *seal ring*	
	H	**K**	**W**	**H**	**K**	**W**	**H**	**K**	**W**	**A**	**B**	**K**	**A**	**B**	**K**
NBR **N**	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Viton **V**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

◇ = Combinazione standard - *Standard combination*

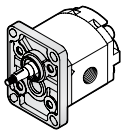
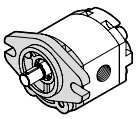
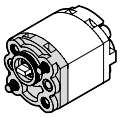
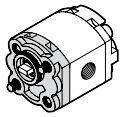
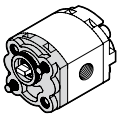
● = Combinazione disponibile - *Available combination*

esempio • *example:* **1SM - A - 020 - D - EUR - H - N - 10 - 0 - G**

EUR = Flangia europea / *European flange*
H = Anello tenuta fino a 8 bar / Seal ring up to 8 *bar*
N = *Guarnizione in NBR / NBR o-ring*

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

COMBINAZIONE ALBERO - FLANGIA • *SHAFT - FLANGE COMBINATION*

1SM	EUR	SAEAA	MC32	E32BX-E32BC	E32CX-E32CC
					
10 Conico 1:8 *Tapered 1:8*	◇	●	●		
11 Conico 1:5 *Tapered 1:5*	●	●	●		
13 Cilindrico SAEAA *Parallel shaft SAEAA*	●	◇			
14 Scanalato SAEAA 9 denti *SAEAA 9T splined*	●	◇			
15 Scanalato DIN5480 6 denti 12x9 *DIN5480 Splined*	●	●	●		
17 Fresato a dente frontale *Dihedral claw*				◇	◇
27 Fresato a dente frontale (con anello) *Dihedral claw (with sealing ring)*	●	●	◇		

◇ = Combinazione standard - *Standard combination*

● = Combinazione disponibile - *Available combination*

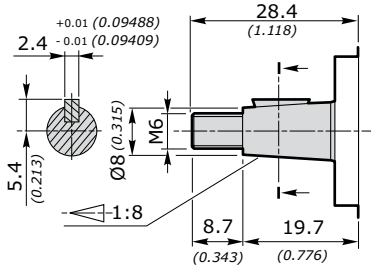
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

1SM

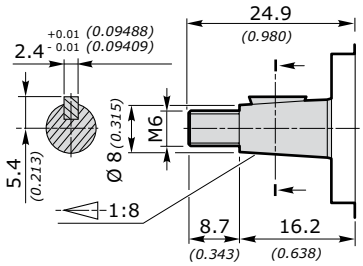
DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

10
Conico 1:8
Tapered 1:8

Coppia 30 Nm
Torque 22 ft-lbs



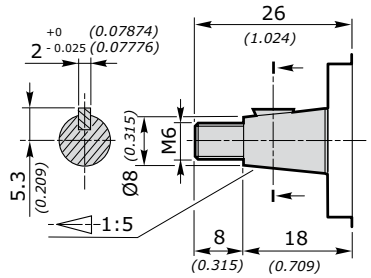
Disponibile per - *available for:* **EUR - MC32**



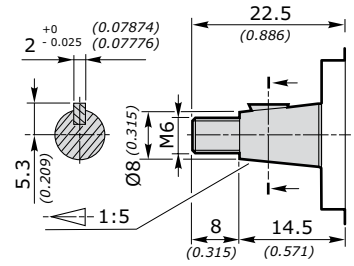
Disponibile per - *available for:* **SAEAA**

11
Conico 1:5
Tapered 1:5

Coppia 30 Nm
Torque 22 ft-lbs



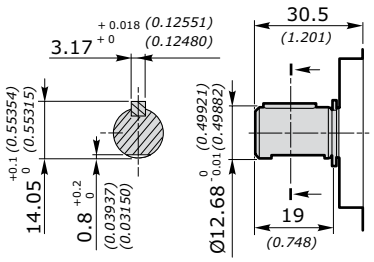
Disponibile per - *available for:* **EUR - MC32**



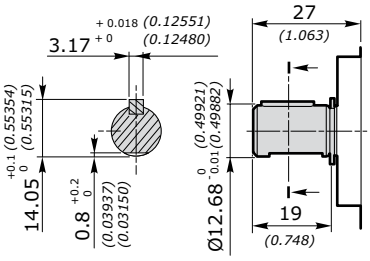
Disponibile per - *available for:* **SAEAA**

13
Cilindrico
SAEAA
Parallel shaft
SAEAA

Coppia 35 Nm
Torque 26 ft-lbs



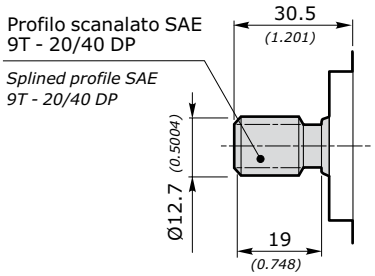
Disponibile per - *available for:* **EUR**



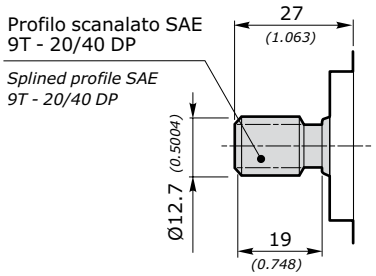
Disponibile per - *available for:* **SAEAA**

14
Scanalato
SAEAA 9 denti
SAEAA
9T splined

Coppia 40 Nm
Torque 30 ft-lbs



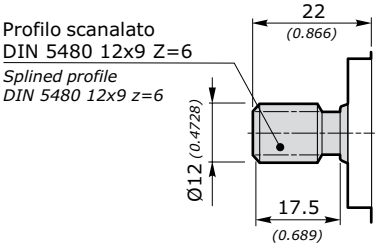
Disponibile per - *available for:* **EUR**



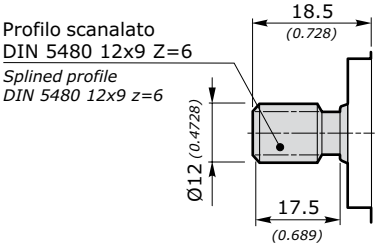
Disponibile per - *available for:* **SAEAA**

15
Scanalato
DIN 5480
6 denti 12x9
DIN 5480
splined

Coppia 30 Nm
Torque 22 ft-lbs



Disponibile per - *available for:* **EUR - MC32**



Disponibile per - *available for:* **SAEAA**

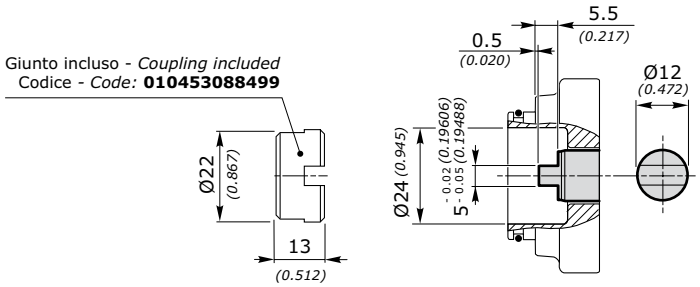
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

1SM

DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

17
Fresato
a dente frontale
Dihedral craw

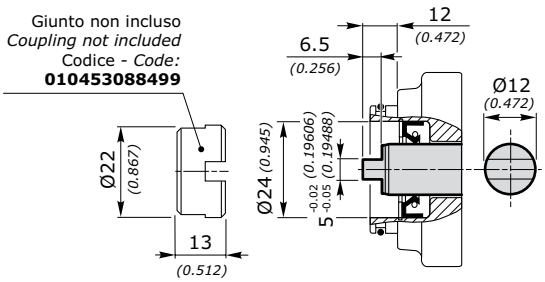
Coppia 25 Nm
Torque 19 ft-lbs



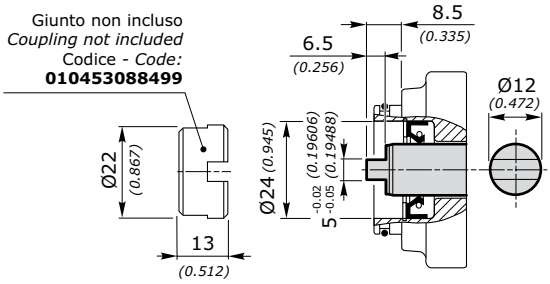
Disponibile per - *available for:* **E32BX - E32BC - E32CX - E32CC**

27
Fresato
a dente frontale
(con anello)
Dihedral claw
(with sealing ring)

Coppia 25 Nm
Torque 19 ft-lbs



Disponibile per - *available for:* **EUR - MC32**



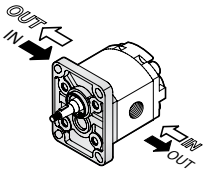
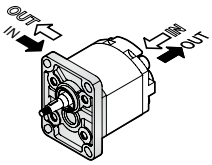
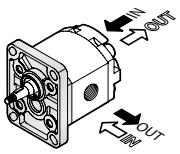
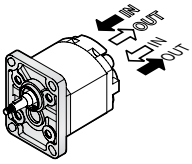
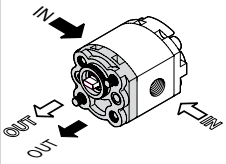
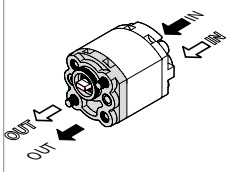
Disponibile per - *available for:* **SAEAA**

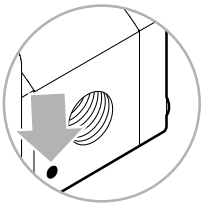
MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

POSIZIONE CONNESSIONE • *CONNECTION POSITION*

Rotazione destra - **D**
*Right rotation - **D***

Rotazione sinistra - **S**
*Left rotation - **S***

0	**1**	**3**	**4**	**2** (per - *for* MC32)	**5** (per - *for* MC32)
					



Il segno del corpo indica il LATO SCARICO per i motori
The sign on the body identify the OUTLET SIDE for the motors

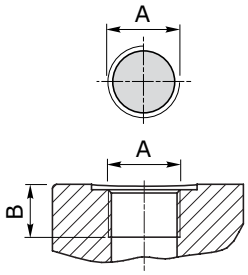
IN = INGRESSO - *INLET*
OUT = SCARICO - *OUTLET*

TIPO CONNESSIONE • *CONNECTION TYPE*

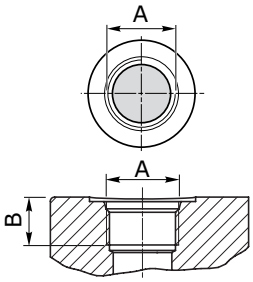
Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale.

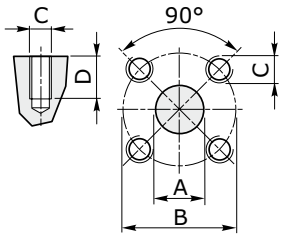
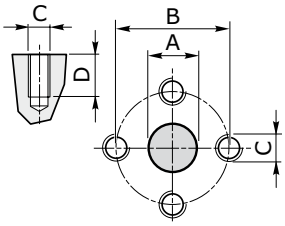
The connections type shown correspond to standard configuration; for different applications contact our Commercial Dept.

1SP		POSIZIONE CONNESSIONE - *CONNECTION POSITION*					
		0	**1**	**3**	**4**	**2**	**5**
GAS	**G**	◇	◇	◇	◇	◇	◇
UNF	**U**	◇	◇	◇	◇	◇	◇
FLANGIATE *FLANGED*	**T**	◇				◇	
	N	◇				◇	

GAS	UNI ISO 228/1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**			INGRESSO - *INLET* **IN**		
				A	**B**		**A**	**B**	
		**G**	009	G 3/8"	14 [mm] *0.552 [inch]*	40 [Nm] *354 [in.lbs]*	G 3/8"	14 [mm] *0.552 [inch]*	40 [Nm] *354 [in.lbs]*
			012						
			016						
			O20						
			025						
			032						
			037						
			042						
			050						
			063						
			078						
			098						

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

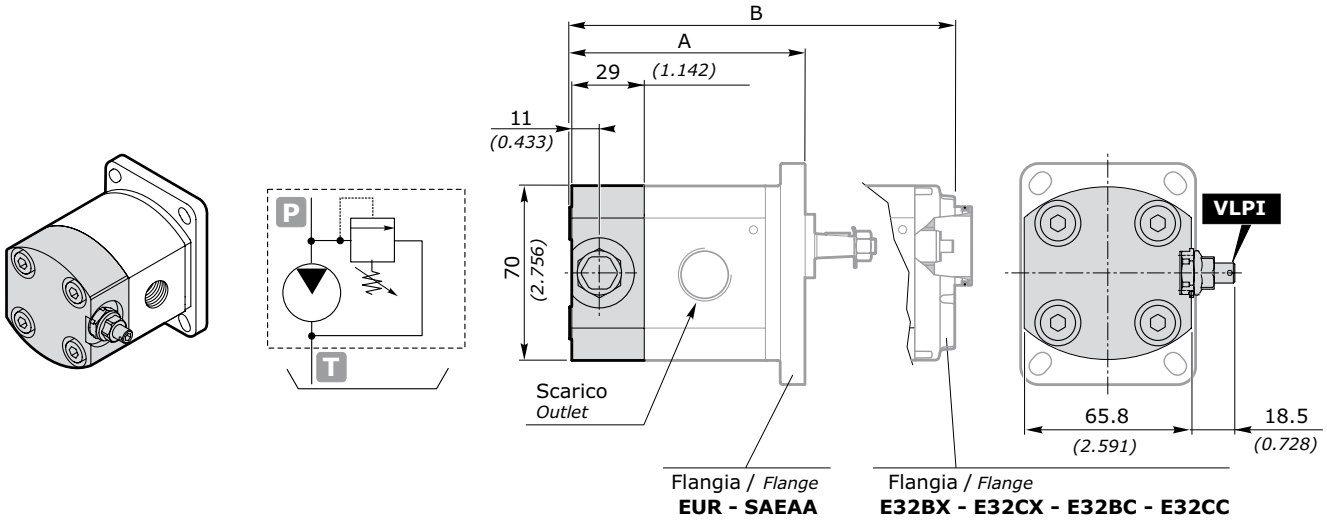
UNF	ANSI/ASME B1.1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B		INGRESSO - *INLET* **IN** A	B	
		**U**	009	SAE 6 9/16"-18 UNF	13 [mm] *0.512 [inch]*	40 [Nm] *354 [in.lbs]*	SAE 6 9/16"-18 UNF	13 [mm] *0.512 [inch]*	40 [Nm] *354 [in.lbs]*
			012						
			016						
			020						
			025	SAE 8 3/4"-14 UNF	15 [mm] *0.591 [inch]*	50 [Nm] *443 [in.lbs]*	SAE 8 3/4"-14 UNF	15 [mm] *0.591 [inch]*	50 [Nm] *443 [in.lbs]*
			032						
			037						
			042						
			050						
			063						
			078						
			098						

FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B	C	D		INGRESSO - *INLET* **IN** A	B	C	D	
		**T**	009	12 [mm] *0.472 [inch]*	30 [mm] *1.181 [inch]*	M6	13 [mm] *0.512 [inch]*	8 [Nm] *71 [in.lbs]*	12 [mm] *0.472 [inch]*	30 [mm] *1.181 [inch]*	M6	13 [mm] *0.512 [inch]*	8 [Nm] *71 [in.lbs]*
			012										
			016										
			020										
			025										
			032										
			037										
			042										
			050										
			063										
			078										
			098										
		**N**	009	10 [mm] *0.394 [inch]*	26 [mm] *1.024 [inch]*	M5	11 [mm] *0.433 [inch]*	7 [Nm] *62 [in.lbs]*	10 [mm] *0.394 [inch]*	26 [mm] *1.024 [inch]*	M5	11 [mm] *0.433 [inch]*	7 [Nm] *62 [in.lbs]*
			012										
			016										
			020										
			025	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	11 [mm] *0.433 [inch]*	8 [Nm] *71 [in.lbs]*	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	11 [mm] *0.433 [inch]*	8 [Nm] *71 [in.lbs]*
			032										
			037										
			042										
			050										
			063										
			078										
			098										

OPZIONI • *OPTIONALS*

VLPI

VALVOLA LIMITATRICE DI PRESSIONE A SCARICO INTERNO
PRESSURE RELIEF VALVE WITH INTERNAL EXHAUST



GRUPPO GROUP 1	A EUR		A SAEAA		B E32BX - E32CX E32BC - E32CC	
	mm	*inch*	*mm*	*inch*	*mm*	*inch*
1SM 009	82.6	*3.252*	86.1	*3.390*	82.6	*3.252*
1SM 012	83.7	*3.295*	87.2	*3.433*	83.7	*3.295*
1SM 016	85.4	*3.362*	88.9	*3.500*	85.4	*3.362*
1SM 020	86.9	*3.421*	90.4	*3.559*	86.9	*3.421*
1SM 025	88.9	*3.500*	92.4	*3.638*	88.9	*3.500*
1SM 032	91.6	*3.606*	95.1	*3.744*	91.6	*3.606*
1SM 037	93.6	*3.685*	97.1	*3.823*	93.6	*3.685*
1SM 042	95.5	*3.760*	99.0	*3.898*	95.5	*3.760*
1SM 050	98.6	*3.882*	102.1	*4.020*	98.6	*3.882*
1SM 063	103.7	*4.083*	107.2	*4.220*	103.7	*4.083*
1SM 078	109.4	*4.307*	112.9	*4.445*	109.4	*4.307*
1SM 098	117.3	*4.618*	120.8	*4.756*	117.3	*4.618*

ATTENZIONE:

La valvola limitatrice di pressione si applica sostituendo il coperchio posteriore (previsto solo scarico interno).
Il coperchio VLP è disponibile in allumnio.

WARNING:

The pressure relief valve can be applied by substituting the rear cover (only internal relief is set).
VLP cover is available in aluminum.

MOTORI AD INGRANAGGI GRUPPO 1SM
GEAR MOTORS GROUP 1SM

esempio ● *example:* **1SM - A - 020 - D - EUR - H - N - 10 - 0 - G - VLPI N 120**

VLPI = Coperchio con VPL a scarico interno / *Cover with VPL at internal exhaust*
N = Tipo molla - vedi tabella / *Spring type - see table*
120 = Taratura - vedi tabella / *Setting - see table*

TIPO - TYPE	CAMPI DI TARATURE - CALIBRATION FIELDS					
	molla bianca - *white spring*	**B**	molla nera - *black spring*	**N**	molla rossa - *red spring*	**R**
bar	30 ÷ 80		81 ÷ 200		201 ÷ 350	
psi	*435 ÷ 1160*		*1175 ÷ 2900*		*2915 ÷ 5075*	
STANDARD	70 bar *(1015 psi)*		150 bar *(2175 psi)*		250 bar *(3625 psi)*	

NOTA: In caso di omissione del valore di taratura, esso sarà inteso standard (vedi tabella).
NOTE: Without setting request, it will be considered standard (see table).

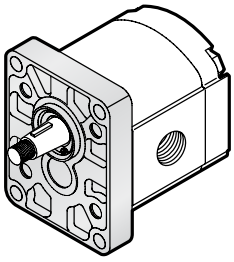
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

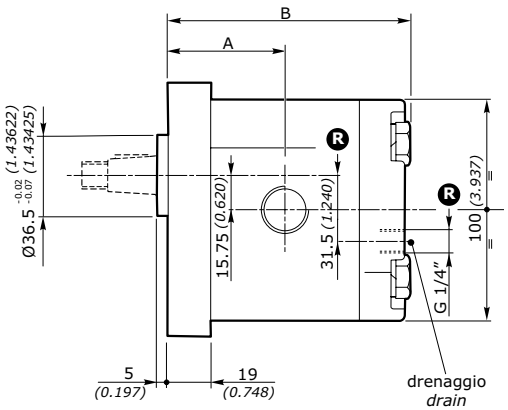
FLANGIA EUROPEA EUR *EUROPEAN FLANGE*

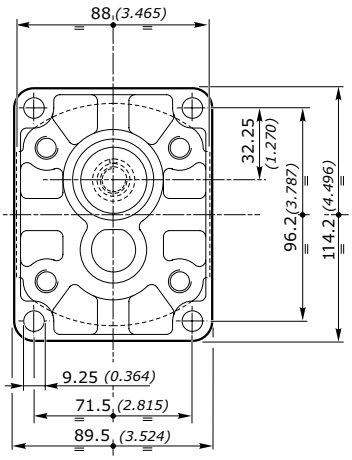
FLANGIA E COPERCHIO IN ALLUMINIO - *FLANGE AND COVER IN ALUMINIUM*

GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE								VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
			S - D		R		S - D		R								
	cm³/giro	in³/rev	P1 bar	P1 psi	P1 bar	P1 psi	P2 bar	P2 psi	P2 bar	P2 psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	*0.24*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	16	*4.23*	500	1.9	*0.50*	95*
2SM 060	6	*0.37*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	24	*6.34*	500	2.85	*0.75*	95*
2SM 080	8.5	*0.52*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	29.7	*7.85*	500	4.03	*1.06*	95*
2SM 110	11	*0.67*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	38.5	*10.17*	500	5.22	*1.38*	95*
2SM 140	14	*0.85*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	49	*12.95*	500	6.65	*1.76*	95*
2SM 160	16.5	*1.01*	230	*3335*	200	*2900*	240	*3480*	200	*2900*	3500	57.7	*15.24*	500	7.83	*2.07*	95*
2SM 190	19.5	*1.19*	210	*3045*	185	*2683*	220	*3190*	185	*2683*	3300	64.3	*16.99*	500	9.26	*2.45*	95*
2SM 220	22.5	*1.37*	190	*2755*	170	*2465*	200	*2900*	170	*2465*	2800	63	*16.64*	500	10.68	*2.82*	95*
2SM 260	26	*1.59*	170	*2465*	150	*2175*	180	*2610*	155	*2248*	2500	65	*17.17*	500	12.35	*3.26*	95*
2SM 310	31.5	*1.92*	130	*1885*	120	*1740*	140	*2030*	130	*1885*	2200	69	*18.22*	500	15.75	*4.16*	95*

DIMENSIONI • *DIMENSIONS*







Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
2SM 040	44.4	*1.748*	93.0	*3.661*	2.30	*5.07*
2SM 060	46.0	*1.811*	96.3	*3.791*	2.45	*5.40*
2SM 080	48.1	*1.894*	100.5	*3.957*	2.60	*5.73*
2SM 110	50.2	*1.976*	104.6	*4.118*	2.70	*5.95*
2SM 140	52.7	*2.075*	109.6	*4.315*	2.80	*6.17*
2SM 160	54.8	*2.157*	113.8	*4.480*	2.95	*6.51*
2SM 190	57.3	*2.256*	118.8	*4.677*	3.10	*6.84*
2SM 220	59.8	*2.354*	123.8	*4.874*	3.25	*7.17*
2SM 260	62.7	*2.469*	129.6	*5.102*	3.40	*7.50*
2SM 310	66.9	*2.636*	138.0	*5.437*	3.61	*7.96*

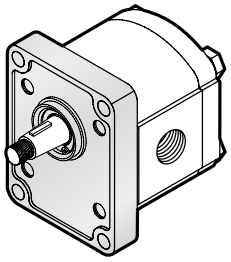
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

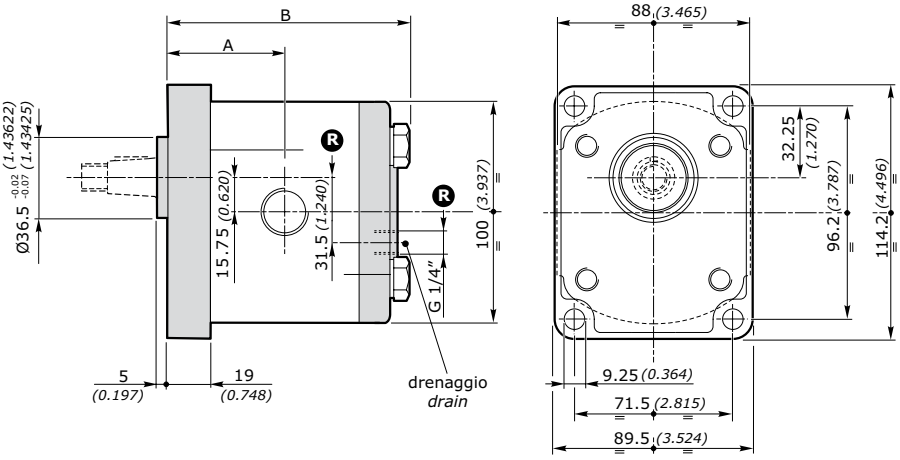
FLANGIA EUROPEA EUR *EUROPEAN FLANGE*

FLANGIA E COPERCHIO IN GHISA - *FLANGE AND COVER IN CAST IRON*

GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE								VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
			S - D		R		S - D		R								
	cm³/giro	*in³/rev*	**P1** *bar*	**P1** *psi*	**P1** *bar*	**P1** *psi*	**P2** *bar*	**P2** *psi*	**P2** *bar*	**P2** *psi*	*giri/min - rpm*	*l/min*	*Gal/min*	*giri/min - rpm*	*l/min*	*Gal/min*	*%*
2SM 040	4	*0.24*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	16	*4.23*	500	1.9	*0.50*	95*
2SM 060	6	*0.37*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	24	*6.34*	500	2.85	*0.75*	95*
2SM 080	8.5	*0.52*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	29.7	*7.85*	500	4.03	*1.06*	95*
2SM 110	11	*0.67*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	38.5	*10.17*	500	5.22	*1.38*	95*
2SM 140	14	*0.85*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	49	*12.95*	500	6.65	*1.76*	95*
2SM 160	16.5	*1.01*	230	*3335*	200	*2900*	240	*3480*	200	*2900*	3500	57.7	*15.24*	500	7.83	*2.07*	95*
2SM 190	19.5	*1.19*	210	*3045*	185	*2683*	220	*3190*	185	*2683*	3300	64.3	*16.99*	500	9.26	*2.45*	95*
2SM 220	22.5	*1.37*	190	*2755*	170	*2465*	200	*2900*	170	*2465*	2800	63	*16.64*	500	10.68	*2.82*	95*
2SM 260	26	*1.59*	170	*2465*	150	*2175*	180	*2610*	155	*2248*	2500	65	*17.17*	500	12.35	*3.26*	95*
2SM 310	31.5	*1.92*	130	*1885*	120	*1740*	140	*2030*	130	*1885*	2200	69	*18.22*	500	15.75	*4.16*	95*

DIMENSIONI • *DIMENSIONS*





Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	*inch*	*mm*	*inch*	*kg*	*lbs*
2SM 040	44.4	*1.748*	93.0	*3.661*	3.40	*7.50*
2SM 060	46.0	*1.811*	96.3	*3.791*	3.55	*7.83*
2SM 080	48.1	*1.894*	100.5	*3.957*	3.70	*8.16*
2SM 110	50.2	*1.976*	104.6	*4.118*	3.80	*8.38*
2SM 140	52.7	*2.075*	109.6	*4.315*	3.90	*8.60*
2SM 160	54.8	*2.157*	113.8	*4.480*	4.05	*8.93*
2SM 190	57.3	*2.256*	118.8	*4.677*	4.20	*9.26*
2SM 220	59.8	*2.354*	123.8	*4.874*	4.35	*9.59*
2SM 260	62.7	*2.469*	129.6	*5.102*	4.50	*9.92*
2SM 310	66.9	*2.636*	138.0	*5.437*	4.71	*7.96*

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

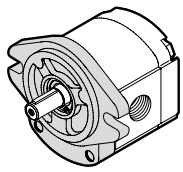
FLANGIA SAE SAEA-SAEAOR *SAE FLANGE*

FLANGIA E COPERCHIO IN ALLUMINIO - *FLANGE AND COVER IN ALUMINIUM*

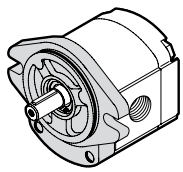
GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE								VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
			S - D		R		S - D		R								
	cm^3/giro	in^3/rev	P1 bar	P1 psi	P1 bar	P1 psi	P2 bar	P2 psi	P2 bar	P2 psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	0.24	230	3335	230	3335	270	3915	230	3335	4000	16	4.23	500	1.9	0.50	95*
2SM 060	6	0.37	230	3335	230	3335	270	3915	230	3335	4000	24	6.34	500	2.85	0.75	95*
2SM 080	8.5	0.52	230	3335	230	3335	270	3915	230	3335	3500	29.7	7.85	500	4.03	1.06	95*
2SM 110	11	0.67	230	3335	230	3335	270	3915	230	3335	3500	38.5	10.17	500	5.22	1.38	95*
2SM 140	14	0.85	230	3335	230	3335	270	3915	230	3335	3500	49	12.95	500	6.65	1.76	95*
2SM 160	16.5	1.01	230	3335	200	2900	240	3480	200	2900	3500	57.7	15.24	500	7.83	2.07	95*
2SM 190	19.5	1.19	210	3045	185	2683	220	3190	185	2683	3300	64.3	16.99	500	9.26	2.45	95*
2SM 220	22.5	1.37	190	2755	170	2465	200	2900	170	2465	2800	63	16.64	500	10.68	2.82	95*
2SM 260	26	1.59	170	2465	150	2175	180	2610	155	2248	2500	65	17.17	500	12.35	3.26	95*
2SM 310	31.5	1.92	130	1885	120	1740	140	2030	130	1885	2200	69	18.22	500	15.75	4.16	95*

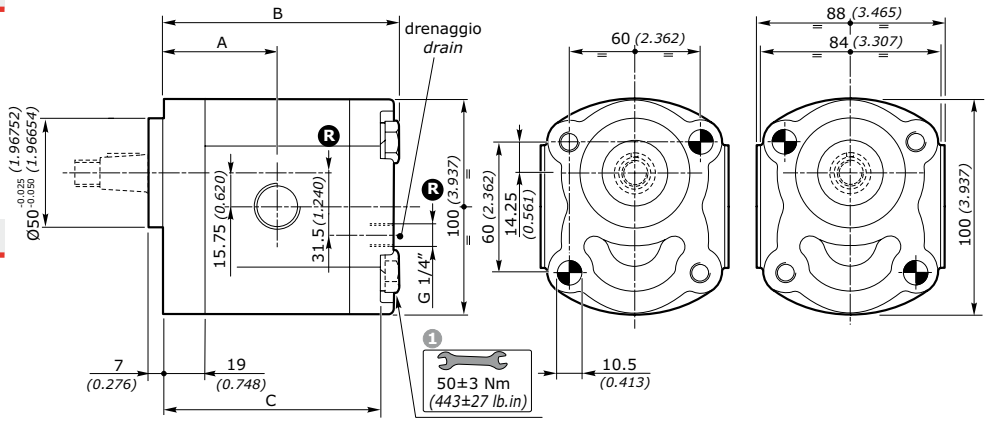
DIMENSIONI • *DIMENSIONS*

SAEA



SAEAOR





Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
2SM 040	44.4	1.748	93.0	3.661	2.30	5.07
2SM 060	46.0	1.811	96.3	3.791	2.45	5.40
2SM 080	48.1	1.894	100.5	3.957	2.60	5.73
2SM 110	50.2	1.976	104.6	4.118	2.70	5.95
2SM 140	52.7	2.075	109.6	4.315	2.80	6.17
2SM 160	54.8	2.157	113.8	4.480	2.95	6.51
2SM 190	57.3	2.256	118.8	4.677	3.10	6.84
2SM 220	59.8	2.354	123.8	4.874	3.25	7.17
2SM 260	62.7	2.469	129.6	5.102	3.40	7.50
2SM 310	66.9	2.636	138.0	5.437	3.61	7.96

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

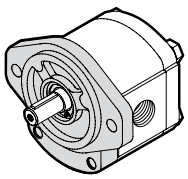
FLANGIA SAE SAEA-SAEAOR *SAE FLANGE*

FLANGIA E COPERCHIO IN GHISA - *FLANGE AND COVER IN CAST IRON*

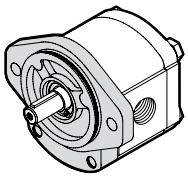
GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE								VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
			S - D		R		S - D		R								
	cm³/giro	*in³/rev*	**P1** *bar*	**P1** *psi*	**P1** *bar*	**P1** *psi*	**P2** *bar*	**P2** *psi*	**P2** *bar*	**P2** *psi*	*giri/min - rpm*	*l/min*	*Gal/min*	*giri/min - rpm*	*l/min*	*Gal/min*	%
2SM 040	4	*0.24*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	16	*4.23*	500	1.9	*0.50*	95*
2SM 060	6	*0.37*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	24	*6.34*	500	2.85	*0.75*	95*
2SM 080	8.5	*0.52*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	29.7	*7.85*	500	4.03	*1.06*	95*
2SM 110	11	*0.67*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	38.5	*10.17*	500	5.22	*1.38*	95*
2SM 140	14	*0.85*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	49	*12.95*	500	6.65	*1.76*	95*
2SM 160	16.5	*1.01*	230	*3335*	200	*2900*	240	*3480*	200	*2900*	3500	57.7	*15.24*	500	7.83	*2.07*	95*
2SM 190	19.5	*1.19*	210	*3045*	185	*2683*	220	*3190*	185	*2683*	3300	64.3	*16.99*	500	9.26	*2.45*	95*
2SM 220	22.5	*1.37*	190	*2755*	170	*2465*	200	*2900*	170	*2465*	2800	63	*16.64*	500	10.68	*2.82*	95*
2SM 260	26	*1.59*	170	*2465*	150	*2175*	180	*2610*	155	*2248*	2500	65	*17.17*	500	12.35	*3.26*	95*
2SM 310	31.5	*1.92*	130	*1885*	120	*1740*	140	*2030*	130	*1885*	2200	69	*18.22*	500	15.75	*4.16*	95*

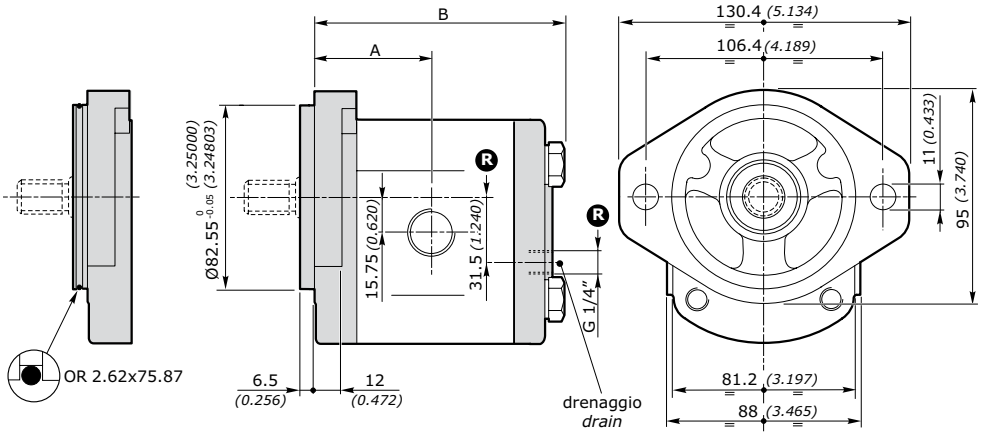
DIMENSIONI • *DIMENSIONS*

SAEA



SAEAOR





Ⓡ Solo per motori reversibili - *Only for reversible motors*

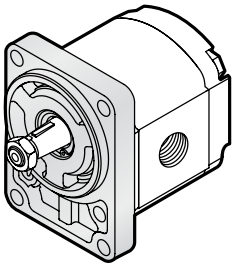
GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	*inch*	*mm*	*inch*	*kg*	*lbs*
2SM 040	44.4	*1.748*	93.0	*3.661*	3.40	*7.50*
2SM 060	46.0	*1.811*	96.3	*3.791*	3.55	*7.83*
2SM 080	48.1	*1.894*	100.5	*3.957*	3.70	*8.16*
2SM 110	50.2	*1.976*	104.6	*4.118*	3.80	*8.38*
2SM 140	52.7	*2.075*	109.6	*4.315*	3.90	*8.60*
2SM 160	54.8	*2.157*	113.8	*4.480*	4.05	*8.93*
2SM 190	57.3	*2.256*	118.8	*4.677*	4.20	*9.26*
2SM 220	59.8	*2.354*	123.8	*4.874*	4.35	*9.59*
2SM 260	62.7	*2.469*	129.6	*5.102*	4.50	*9.92*
2SM 310	66.9	*2.636*	138.0	*5.437*	4.71	*7.96*

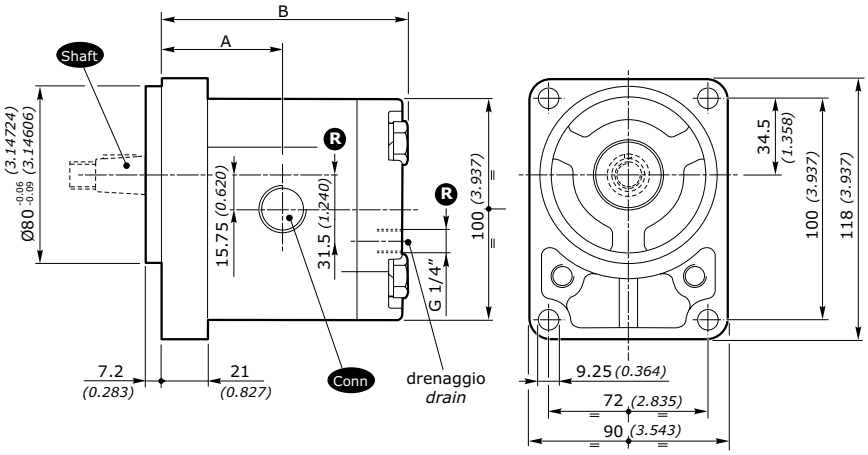
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

FLANGIA TEDESCA B80C *GERMAN FLANGE*

GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE S - D		R		S - D		R		VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
	cm^3/giro	in^3/rev	P1 bar	P1 psi	P1 bar	P1 psi	P2 bar	P2 psi	P2 bar	P2 psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	0.24	230	3335	230	3335	270	3915	230	3335	4000	16	4.23	500	1.9	0.50	95*
2SM 060	6	0.37	230	3335	230	3335	270	3915	230	3335	4000	24	6.34	500	2.85	0.75	95*
2SM 080	8.5	0.52	230	3335	230	3335	270	3915	230	3335	3500	29.7	7.85	500	4.03	1.06	95*
2SM 110	11	0.67	230	3335	230	3335	270	3915	230	3335	3500	38.5	10.17	500	5.22	1.38	95*
2SM 140	14	0.85	230	3335	230	3335	270	3915	230	3335	3500	49	12.95	500	6.65	1.76	95*
2SM 160	16.5	1.01	230	3335	200	2900	240	3480	200	2900	3500	57.7	15.24	500	7.83	2.07	95*
2SM 190	19.5	1.19	210	3045	185	2683	220	3190	185	2683	3300	64.3	16.99	500	9.26	2.45	95*
2SM 220	22.5	1.37	190	2755	170	2465	200	2900	170	2465	2800	63	16.64	500	10.68	2.82	95*
2SM 260	26	1.59	170	2465	150	2175	180	2610	155	2248	2500	65	17.17	500	12.35	3.26	95*
2SM 310	31.5	1.92	130	1885	120	1740	140	2030	130	1885	2200	69	18.22	500	15.75	4.16	95*

DIMENSIONI • *DIMENSIONS*





Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
2SM 040	46.4	1.827	95.0	3.740	2.30	5.07
2SM 060	48.0	1.890	98.3	3.870	2.45	5.40
2SM 080	50.1	1.972	102.5	4.035	2.60	5.73
2SM 110	52.2	2.055	106.6	4.197	2.70	5.95
2SM 140	54.7	2.154	111.6	4.394	2.80	6.17
2SM 160	56.8	2.236	115.8	4.559	2.95	6.51
2SM 190	59.3	2.335	120.8	4.756	3.10	6.84
2SM 220	61.8	2.433	125.8	4.953	3.25	7.17
2SM 260	64.7	2.547	131.6	5.181	3.40	7.50
2SM 310	68.9	2.715	140.0	5.516	3.61	7.96

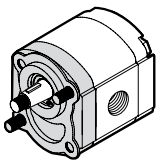
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

FLANGIA B50C *FLANGE*

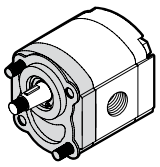
GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE S - D		R		S - D		R		VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
	cm^3/giro	in^3/rev	P1 bar	P1 psi	P1 bar	P1 psi	P2 bar	P2 psi	P2 bar	P2 psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	0.24	230	3335	230	3335	270	3915	230	3335	4000	16	4.23	500	1.9	0.50	95*
2SM 060	6	0.37	230	3335	230	3335	270	3915	230	3335	4000	24	6.34	500	2.85	0.75	95*
2SM 080	8.5	0.52	230	3335	230	3335	270	3915	230	3335	3500	29.7	7.85	500	4.03	1.06	95*
2SM 110	11	0.67	230	3335	230	3335	270	3915	230	3335	3500	38.5	10.17	500	5.22	1.38	95*
2SM 140	14	0.85	230	3335	230	3335	270	3915	230	3335	3500	49	12.95	500	6.65	1.76	95*
2SM 160	16.5	1.01	230	3335	200	2900	240	3480	200	2900	3500	57.7	15.24	500	7.83	2.07	95*
2SM 190	19.5	1.19	210	3045	185	2683	220	3190	185	2683	3300	64.3	16.99	500	9.26	2.45	95*
2SM 220	22.5	1.37	190	2755	170	2465	200	2900	170	2465	2800	63	16.64	500	10.68	2.82	95*
2SM 260	26	1.59	170	2465	150	2175	180	2610	155	2248	2500	65	17.17	500	12.35	3.26	95*
2SM 310	31.5	1.92	130	1885	120	1740	140	2030	130	1885	2200	69	18.22	500	15.75	4.16	95*

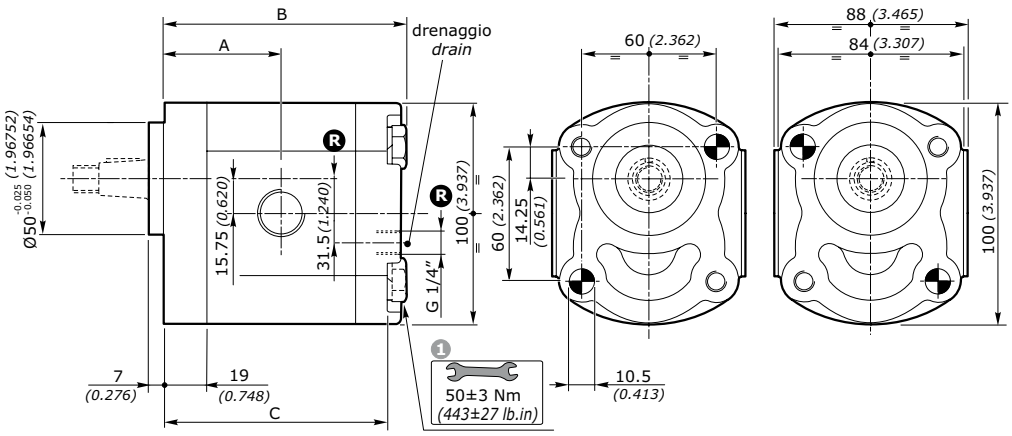
DIMENSIONI • *DIMENSIONS*

B50CX



B50CY





Ⓡ Solo per motori reversibili - *Only for reversible motors*

① Coppia di serraggio viti: 50 ± 3Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio della pompa è da ordinare separatamente.
Codice di ordinazione: **0029W** (+ lunghezza **L** - vedi tabella)
Il fissaggio della pompa può essere effettuato con 2 viti prigioniere classe 10.9-12.9 UNI EN 20898/1 preserrate: 40 ± 3Nm. Fissare la pompa mediante dadi autobloccanti con coppia si serraggio: 50 ± 3Nm

① *Tightening torque of screws: 443 ± 27 lb-in (screws 10.9-12.9 UNI EN 20898/1).*
The screws kit for the pump assembly should be ordered separately.
*Ordering code: **0029W** (+ lenght **L** - see table)*
The assembling of the pump should be effected with 2 screw studs type 10.9-12.9 UNI EN 20898/1 pre-tighten 354 ± 27 lb-in. Fix the pump by self-locking nuts with tightening torque: 443 ± 27 lb-in

GRUPPO - GROUP 2	A		B		C		L ①		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
2SM 040	44.4	1.748	93.0	3.661	84.0	3.307	105	4.134	2.30	5.07
2SM 060	46.0	1.811	96.3	3.791	87.3	3.437	105	4.134	2.45	5.40
2SM 080	48.1	1.894	100.5	3.957	91.5	3.602	110	4.331	2.60	5.73
2SM 110	50.2	1.976	104.6	4.118	95.6	3.764	115	4.528	2.70	5.95
2SM 140	52.7	2.075	109.6	4.315	100.6	3.961	120	4.724	2.80	6.17
2SM 160	54.8	2.157	113.8	4.480	104.8	4.126	125	4.921	2.95	6.51
2SM 190	57.3	2.256	118.8	4.677	109.8	4.323	130	5.118	3.10	6.84
2SM 220	59.8	2.354	123.8	4.874	114.8	4.520	135	5.315	3.25	7.17
2SM 260	62.7	2.469	129.6	5.102	120.6	4.748	140	5.512	3.40	7.50
2SM 310	66.9	2.636	138.0	5.437	129.0	5.083	150	5.910	3.61	7.96

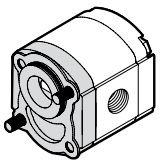
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

FLANGIA E52C *FLANGE*

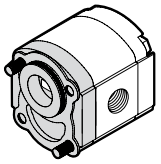
GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE S - D		R		S - D		R		VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
	cm^3/giro	in^3/rev	**P1** bar	**P1** psi	**P1** bar	**P1** psi	**P2** bar	**P2** psi	**P2** bar	**P2** psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
2SM 040	4	0.24	230	3335	230	3335	270	3915	230	3335	4000	16	4.23	500	1.9	0.50	95*
2SM 060	6	0.37	230	3335	230	3335	270	3915	230	3335	4000	24	6.34	500	2.85	0.75	95*
2SM 080	8.5	0.52	230	3335	230	3335	270	3915	230	3335	3500	29.7	7.85	500	4.03	1.06	95*
2SM 110	11	0.67	230	3335	230	3335	270	3915	230	3335	3500	38.5	10.17	500	5.22	1.38	95*
2SM 140	14	0.85	230	3335	230	3335	270	3915	230	3335	3500	49	12.95	500	6.65	1.76	95*
2SM 160	16.5	1.01	230	3335	200	2900	240	3480	200	2900	3500	57.7	15.24	500	7.83	2.07	95*
2SM 190	19.5	1.19	210	3045	185	2683	220	3190	185	2683	3300	64.3	16.99	500	9.26	2.45	95*
2SM 220	22.5	1.37	190	2755	170	2465	200	2900	170	2465	2800	63	16.64	500	10.68	2.82	95*
2SM 260	26	1.59	170	2465	150	2175	180	2610	155	2248	2500	65	17.17	500	12.35	3.26	95*
2SM 310	31.5	1.92	130	1885	120	1740	140	2030	130	1885	2200	69	18.22	500	15.75	4.16	95*

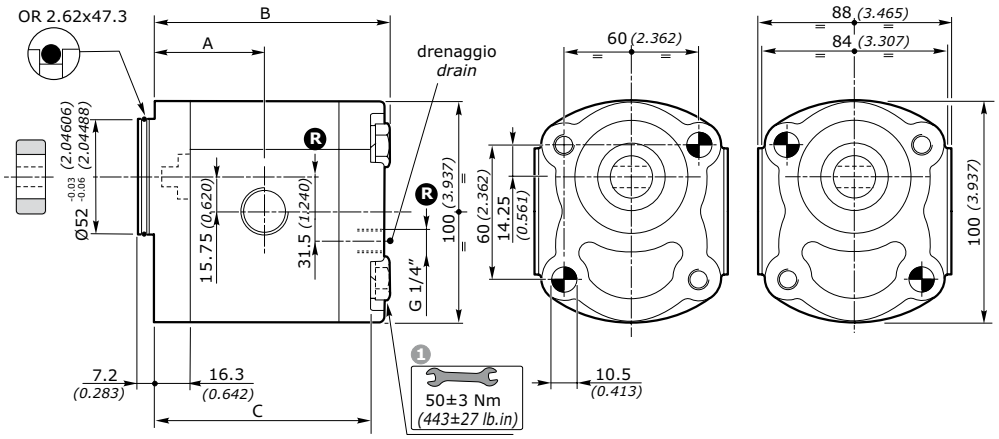
DIMENSIONI • *DIMENSIONS*

E52CX



E52CY





Ⓡ Solo per motori reversibili - *Only for reversible motors*

① Coppia di serraggio viti: 50 ± 3Nm (viti classe 10.9-12.9 UNI EN 20898/1)
Il kit viti per il fissaggio del motore è da ordinare separatamente.
Codice di ordinazione: 0029W (+ lunghezza L - vedi tabella)
Il fissaggio del motore può essere effettuato con 2 viti prigioniere classe 10.9-12.9 UNI EN 20898/1 preserrate: 40 ± 3Nm. Fissare il motore mediante dadi autobloccanti con coppia si serraggio: 50 ± 3Nm

① *Tightening torque of screws: 443 ± 27 lb-in (screws 10.9-12.9 UNI EN 20898/1). The screws kit for the motor assembly should be ordered separately.*
Ordering code: 0029W (+ lenght L - see table)
The assembling of the motor should be effected with 2 screw studs type 10.9-12.9 UNI EN 20898/1 pre-tighten 354 ± 27 lb-in. Fix the motor by self-locking nuts with tightening torque: 443 ± 27 lb-in

GRUPPO - GROUP 2	A		B		C		L ①		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
2SP 040	41.7	1.642	90.3	3.555	81.3	3.201	100	3.937	2.30	5.07
2SP 060	43.3	1.705	93.6	3.685	84.6	3.331	105	4.134	2.45	5.40
2SP 080	45.4	1.787	97.8	3.850	88.8	3.496	110	4.331	2.60	5.73
2SP 110	47.5	1.870	101.9	4.012	92.9	3.657	115	4.528	2.70	5.95
2SP 140	50.0	1.969	106.9	4.209	97.9	3.854	120	4.724	2.80	6.17
2SP 160	52.1	2.051	111.1	4.374	102.1	4.020	120	4.724	2.95	6.51
2SP 190	54.6	2.150	116.1	4.571	107.1	4.217	125	4.921	3.10	6.84
2SP 220	57.1	2.248	121.1	4.768	112.1	4.413	130	5.118	3.25	7.17
2SP 260	60.0	2.362	126.9	4.996	117.9	4.642	140	5.512	3.40	7.50
2SP 310	64.2	2.529	135.3	5.331	126.3	4.988	145	5.713	3.61	7.96

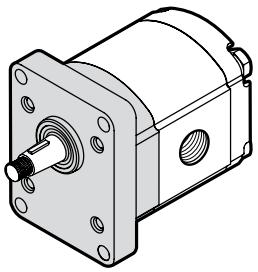
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

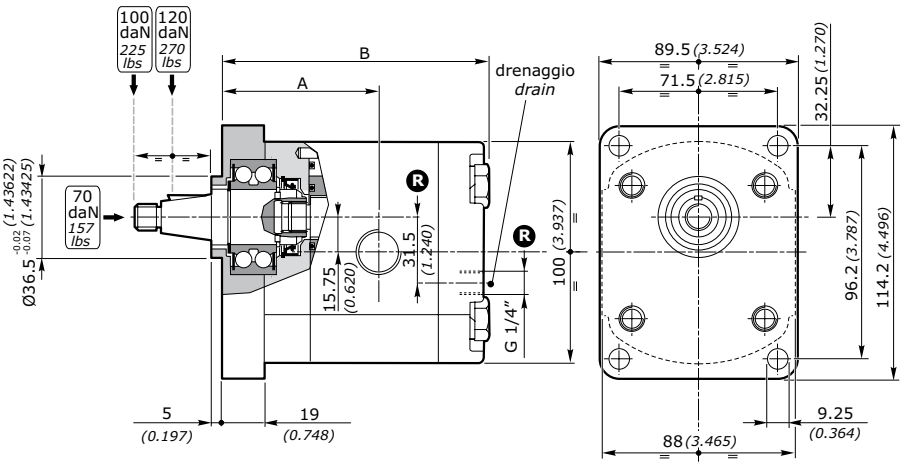
VERSIONE DA UTILIZZARE IN PRESENZA DI CARICHI ASSIALI E/O RADIALI
VERSION TO USE WITH AXIAL AND/OR RADIAL LOADS

FLANGIA SUPEUR *FLANGE*

GRUPPO GROUP 2SM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE S - D		R		S - D		R		VELOCITÀ MAX MAXSPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUM. MIN. MIN. VOLUM. EFFICIENCY
	cm³/giro	*in³/rev*	**P1** *bar*	**P1** *psi*	**P1** *bar*	**P1** *psi*	**P2** *bar*	**P2** *psi*	**P2** *bar*	**P2** *psi*	*giri/min - rpm*	*l/min*	*Gal/min*	*giri/min - rpm*	*l/min*	*Gal/min*	%
2SM 040	4	*0.24*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	16	*4.23*	500	1.9	*0.50*	95*
2SM 060	6	*0.37*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	4000	24	*6.34*	500	2.85	*0.75*	95*
2SM 080	8.5	*0.52*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	29.7	*7.85*	500	4.03	*1.06*	95*
2SM 110	11	*0.67*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	38.5	*10.17*	500	5.22	*1.38*	95*
2SM 140	14	*0.85*	230	*3335*	230	*3335*	270	*3915*	230	*3335*	3500	49	*12.95*	500	6.65	*1.76*	95*
2SM 160	16.5	*1.01*	230	*3335*	200	*2900*	240	*3480*	200	*2900*	3500	57.7	*15.24*	500	7.83	*2.07*	95*
2SM 190	19.5	*1.19*	210	*3045*	185	*2683*	220	*3190*	185	*2683*	3300	64.3	*16.99*	500	9.26	*2.45*	95*
2SM 220	22.5	*1.37*	190	*2755*	170	*2465*	200	*2900*	170	*2465*	2800	63	*16.64*	500	10.68	*2.82*	95*
2SM 260	26	*1.59*	170	*2465*	150	*2175*	180	*2610*	155	*2248*	2500	65	*17.17*	500	12.35	*3.26*	95*
2SM 310	31.5	*1.92*	130	*1885*	120	*1740*	140	*2030*	130	*1885*	2200	69	*18.22*	500	15.75	*4.16*	95*

DIMENSIONI • *DIMENSIONS*



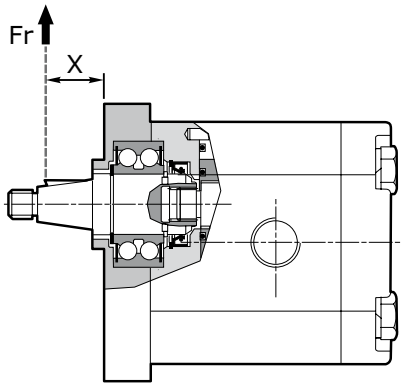


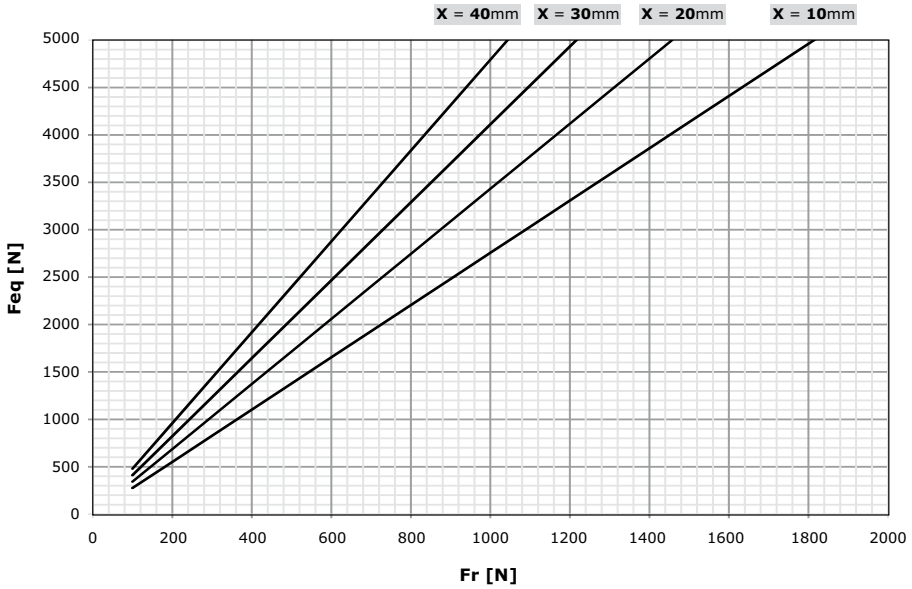
Ⓡ Solo per motori reversibili - *Only for reversible motors*

La flangia SUPEUR è sempre allestita con anello di rinforzo. *SUPEUR flange is always equipped with sealing ring*

GRUPPO - GROUP 2	A		B		MASSA - MASS	
	mm	*inch*	*mm*	*inch*	*kg*	*lbs*
2SP 040	64.4	*2.535*	113.0	*4.449*	2.80	*6.17*
2SP 060	66.0	*2.598*	116.3	*4.579*	2.95	*6.50*
2SP 080	68.1	*2.681*	120.5	*4.744*	3.10	*6.84*
2SP 110	70.2	*2.764*	124.6	*4.906*	3.20	*7.06*
2SP 140	72.7	*2.863*	129.6	*5.102*	3.30	*7.28*
2SP 160	74.8	*2.945*	133.8	*5.268*	3.45	*7.61*
2SP 190	77.3	*3.043*	138.8	*5.465*	3.60	*7.94*
2SP 220	79.8	*3.142*	143.8	*5.661*	3.75	*8.27*
2SP 260	82.7	*3.256*	149.6	*5.890*	3.90	*8.60*
2SP 310	86.9	*3.424*	158.0	*6.225*	4.11	*9.06*

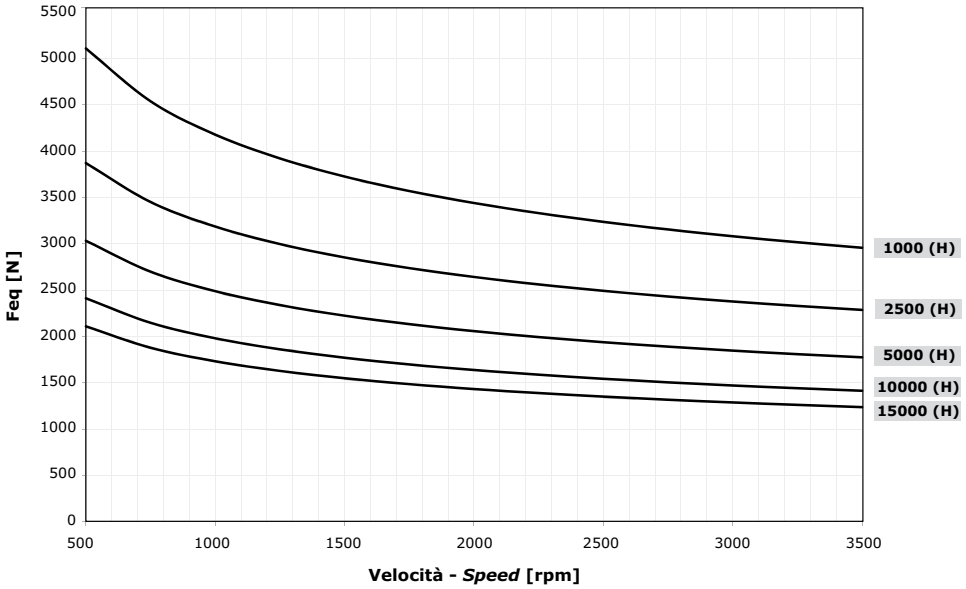
CARICO DINAMICO EQUIVALENTE • *CARICO DINAMICO EQUIVALENTE*





In caso di carichi combinati applicati all'albero (radiale + assiale) contattare il nostro Ufficio Tecnico.
In case of both radial and axial loads applied to the shaft please contact our technical department.

DIAGRAMMA CUSCINETTI • *DIAGRAM BEARING EXPECTED LIFE*



MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

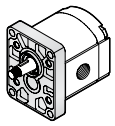
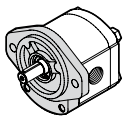
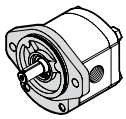
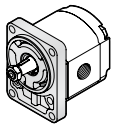
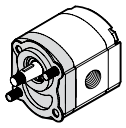
CODICE ORDINAZIONE • *ORDER CODE*

2SM - G - 140 - D - EUR - H - N - 10 - 0 - G

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*	PAGINA - *PAGE*
2SP	Tipo motore *Motor type*	Motore - gruppo 2 *Motor - group 2*	90
G	Materiale flangia e coperchio *Flange and cover material*	**A** = alluminio / *aluminium* **G** = Ghisa / *Cast iron*	
140	Cilindrata *Displacement*	Cilindrata = 14 cm^3/g *Displacement = 0.85 in^3/rev*	90
D	Tipo rotazione *Rotation type*	**D** = Rotazione destra / *Clockwise rotation* **S** = Rotazione sinistra / *Anticlockwise rotation* **R** = Reversibile / *Reversible* **X** = Reversibile con drenagio interno *Reversible with internal draiion*	93
EUR	Tipo Flangia *Flange type*	Flangia standard *Standard flange*	128
H	Tipo anello di tenuta *Seal ring type*	Vedi tabella compatibilità *See compatibility table*	
N	Tipo guarnizione *Gasket type*	**N** = NBR **V** = Viton	
10	Tipo Albero *Shaft type*	Vedi tabella compatibilità *See compatibility table*	129
0	Posizione connessione *Connection position*	Vedi tabella compatibilità *See compatibility table*	133
G	Tipo connessione *Connection type*	Vedi tabella compatibilità *See compatibility table*	

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

TIPOLOGIA FLANGIA • *FLANGE TYPE*

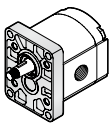
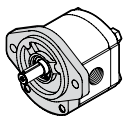
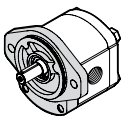
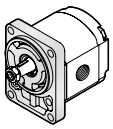
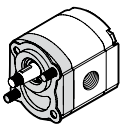
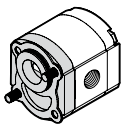
2SM	EUR	SAEA	SAEAOR	B80C	B50C	E52C
						
A alluminio *aluminium*	◇	◇	◇	◇	◇	◇
G ghisa *cast iron*	◇	◇	◇	non disponibile *not available*	non disponibile *not available*	non disponibile *not available*

◇ = Combinazione standard - *Standard combination*

ANELLO DI TENUTA • *SEAL RING*

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*
A	Flangia senza anello di tenuta *Flange without seal ring*	
H	Anello di tenuta fino a **8** bar *Sealing ring up to **8** bar*	Per basse pressioni (con distanziali di rinforzo) *For low pressures (with stiffering seal)*
K	Anello di tenuta fino a **30** bar *Sealing ring up to **30** bar*	Per alte pressioni *For high pressures*
W	Anello di tenuta fino a **100** bar *Sealing ring up to **100** bar*	Per altissime pressioni *For very high pressures*

COMBINAZIONE FLANGIA - ANELLO DI TENUTA - GUARNIZIONE • *FLANGE - SEAL RING - GASKET COMBINATION*

2SM	EUR			SAEA			SAEAOR			B80C			B50C			E52C
																
	Anello - *Seal ring*			Anello - *Seal ring*			Anello - *Seal ring*			Anello - *Seal ring*			Anello - *Seal ring*			Anello - *Seal ring*
	H	**K**	**W**	**H**	**K**	**W**	**H**	**K**	**W**	**H**	**K**	**W**	**H**	**K**	**W**	**A**
NBR **N**	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Viton **V**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

◇ = Combinazione standard - *Standard combination*

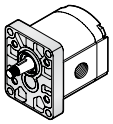
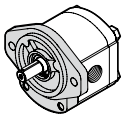
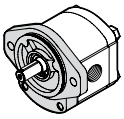
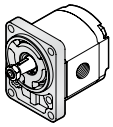
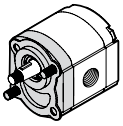
● = Combinazione disponibile - *Available combination*

esempio • *example:* **1SM - A - 140 - D - EUR - H - N - 10 - 0 - G**

EUR = Flangia europea / *European flange*
H = Anello tenuta fino a 8 bar / Seal ring up to 8 *bar*
N = *Guarnizione in NBR / NBR o-ring*

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

COMBINAZIONE ALBERO - FLANGIA • *SHAFT - FLANGE COMBINATION*

2SM	EUR	SAEA	SAEAOR	B80C	B50C	FE32C
						
10 Conico 1:8 *Tapered 1:8*	◇	●	●	●	◇	
11 Conico 1:5 *Tapered 1:5*	●	●	●	◇	●	
12 Cilindrico EUR *EUR Parallel shaft*	●	●	●	●	●	
13 Cilindrico SAEA *SAEA parallel shaft*	●	◇	◇	●	●	
14 Scanalato SAEA 9 denti *SAEA 9T splined*	●	◇	◇	●	●	
15 Scanalato DIN5482 9 denti (26/24) *DIN5482 9T splined (26/24)*	●	●	●	◇	●	
16 Scanalato DIN5482 9 denti (20) *DIN5482 9T splined (20)*	●	●	●	◇	●	
17 Fresato a dente frontale *Dihedral claw*						◇
40 Scanalato SAE 10 denti (52) *SAE 10T splined (52)*		●	●			
41 Scanalato SAE 10 denti (37.5) *SAE 10T splined (37.5)*		●	●			
42 Scanalato SAEA 11 denti (55.6) *SAEA 11T splined (55.6)*		●	●			
43 Scanalato SAEA 11 denti (31.5) *SAEA 11T splined (31.5)*		●	●			
44 Scanalato SAEA 11 denti (13.5) *SAEA 11T splined (13.5)*		●	●			

◇ = Combinazione standard - *Standard combination*

● = Combinazione disponibile - *Available combination*

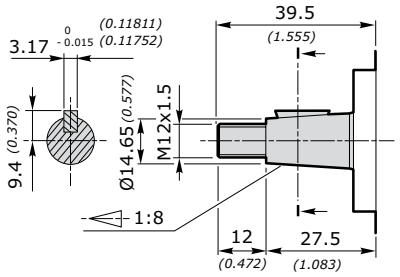
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

2SM

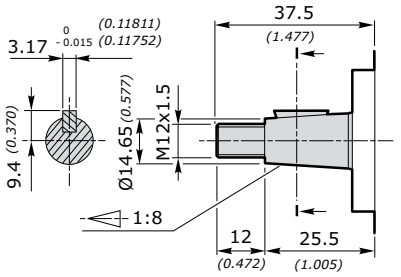
DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

10
Conico 1:8
Tapered 1:8

Coppia 140 Nm
Torque 104 ft-lbs



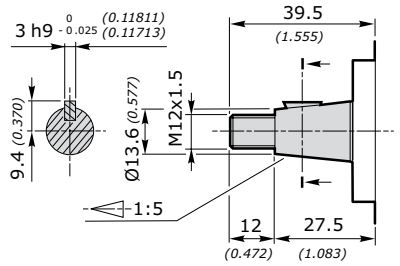
Disponibile per - *available for:* **EUR-SAEA-SAEAOR-B50C-P400D-SUPEUR**



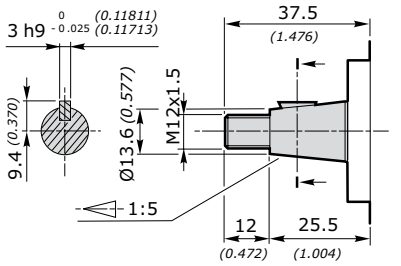
Disponibile per - *available for:* **B80C**

11
Conico 1:5
Tapered 1:5

Coppia 140 Nm
Torque 104 ft-lbs



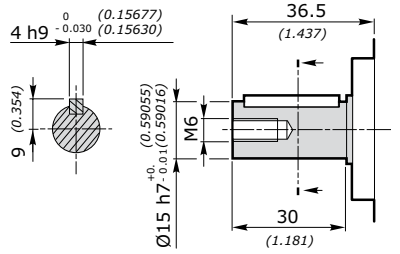
Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**



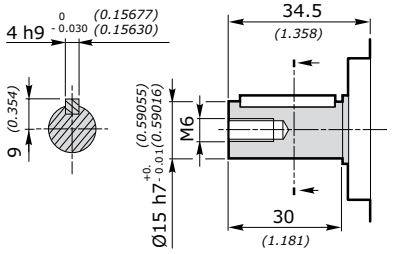
Disponibile per - *available for:* **B80C**

12
Cilindrico EUR
EUR Parall shaft

Coppia 80 Nm
Torque 59 ft-lbs



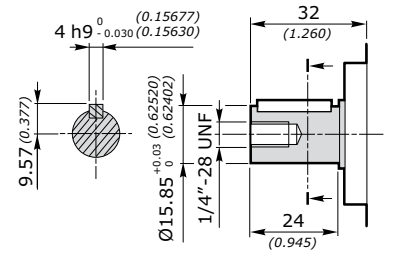
Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**



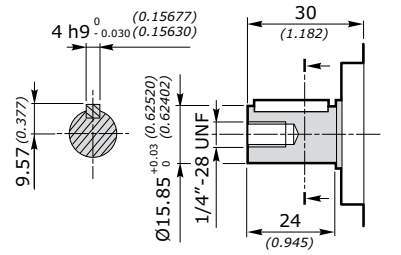
Disponibile per - *available for:* **B80C**

13
Cilindrico SAEA
SAEA parall shaft

Coppia 90 Nm
Torque 67 ft-lbs



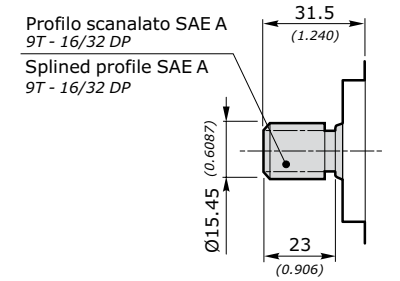
Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**



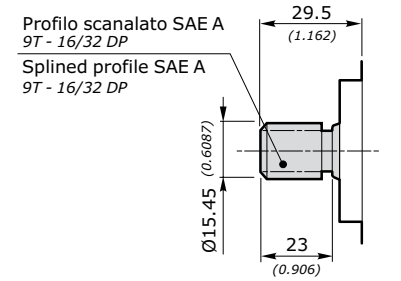
Disponibile per - *available for:* **B80C**

14
Scanalato SAEA 9 denti
SAEA 9T splined

Coppia 100 Nm
Torque 74 ft-lbs



Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**



Disponibile per - *available for:* **B80C**

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

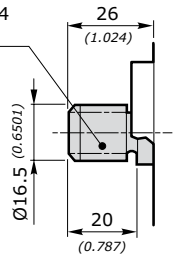
2SM

DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

15
Scanalato DIN5482 9 denti (26/24)
DIN5482 9T splined (26/24)

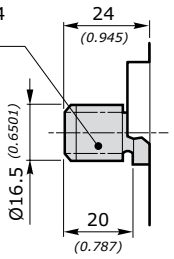
Coppia 100 Nm
Torque 74 ft-lbs

Profilo scanalato B 17x14
DIN 5482 n°denti = 9
Splined profile B 17x14
DIN 5482 n°of teeth = 9



Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**

Profilo scanalato B 17x14
DIN 5482 n°denti = 9
Splined profile B 17x14
DIN 5482 n°of teeth = 9

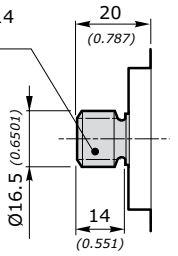


Disponibile per - *available for:* **B80C**

16
Scanalato DIN5482 9 denti (20)
DIN5482 9T splined (20)

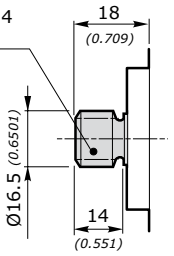
Coppia 100 Nm
Torque 74 ft-lbs

Profilo scanalato B 17x14
DIN 5482 n°denti = 9
Splined profile B 17x14
DIN 5482 n°of teeth = 9



Disponibile per - *available for:* **EUR - SAEA - SAEAOR - B50C**

Profilo scanalato B 17x14
DIN 5482 n°denti = 9
Splined profile B 17x14
DIN 5482 n°of teeth = 9

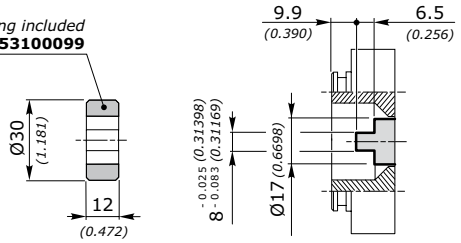


Disponibile per - *available for:* **B80C**

17
Fresato a dente frontale
Dihedral claw

Coppia 80 Nm
Torque 59 ft-lbs

Giunto incluso - *Coupling included*
Codice - *Code:* **010453100099**

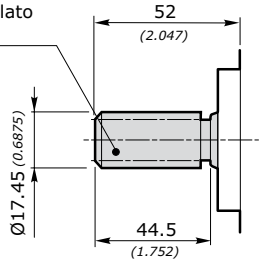


Disponibile per - *available for:* **E52C**

40
Scanalato SAE 10 denti (52)
SAE 10T splined (52)

Coppia 130 Nm
Torque 96 ft-lbs

Profilo scanalato
Splined profile
z = 10T
16/32 DP
α = 30°

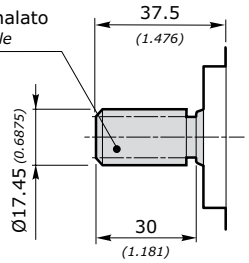


Disponibile per - *available for:* **SAEA - SAEAOR**

41
Scanalato SAE 10 denti (37.5)
SAE 10T splined (37.5)

Coppia 130 Nm
Torque 96 ft-lbs

Profilo scanalato
Splined profile
z = 10T
16/32 DP
α = 30°



Disponibile per - *available for:* **SAEA - SAEAOR**

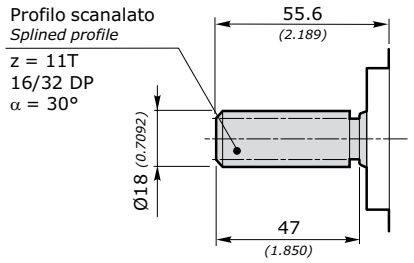
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

2SM

DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

42
Scanalato SAEA
11 denti (55.6)
SAEA 11T
splined (55.6)

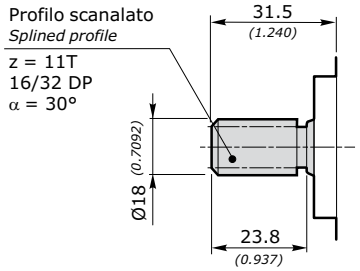
Coppia 150 Nm
Torque 111 ft-lbs



Disponibile per - *available for:* **SAEA - SAEAOR**

43
Scanalato SAEA
11 denti (31.5)
SAEA 11T
splined (31.5)

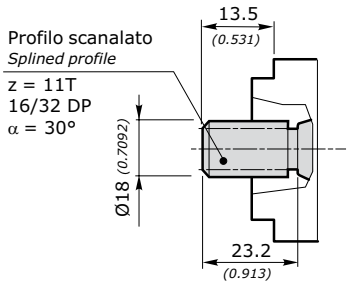
Coppia 150 Nm
Torque 111 ft-lbs



Disponibile per - *available for:* **SAEA - SAEAOR**

44
Scanalato SAEA
11 denti (13.5)
SAEA 11T
splined (13.5)

Coppia 150 Nm
Torque 111 ft-lbs



Disponibile per - *available for:* **SAEA - SAEAOR**

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

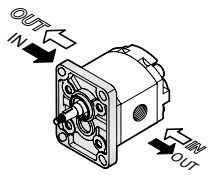
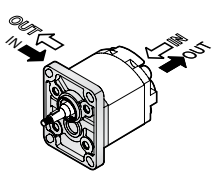
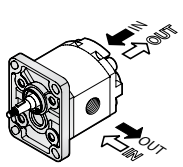
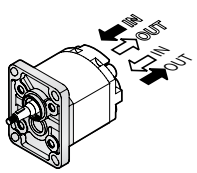
POSIZIONE CONNESSIONE PER MOTORI (D-S) • *CONNECTION POSITION FOR (D-S) MOTORS*

Rotazione destra - **D**
*Right rotation - **D***

Rotazione sinistra - **S**
*Left rotation - **S***

POSIZIONE CONNESSIONE PER MOTORI (R) • *CONNECTION POSITION FOR (R) MOTORS*

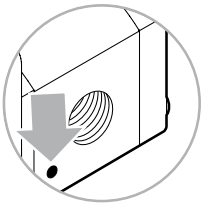
Rotazione - **R**
*Rotation - **R***

0	1	3	4
			

TIPO CONNESSIONE PER MOTORI D-S • *CONNECTION TYPE FOR D-S MOTORS*

Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale.

The connections type shown correspond to standard configuration; for different applications contact our Commercial Dept.

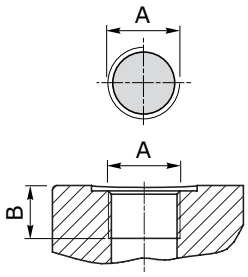


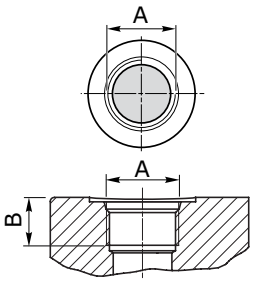
Il segno del corpo indica il LATO SCARICO per i motori
The sign on the body identify the OUTLET SIDE for the motors

IN = INGRESSO - *INLET*
OUT = SCARICO - *OUTLET*

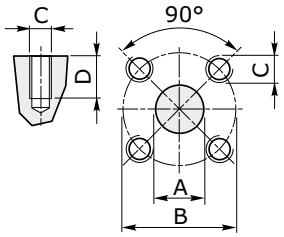
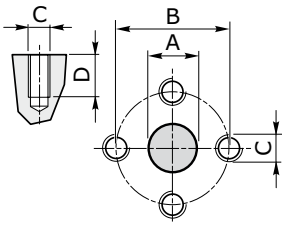
2SM		POSIZIONE CONNESSIONE - *CONNECTION POSITION*			
		0	**1**	**3**	**4**
GAS	**G**	◇	◇	◇	◇
UNF	**U**	◇	◇	◇	◇
	W	◇			
FLANGIATE *FLANGED*	**T**	◇			
	N	◇			
	M	◇			
	F	◇			

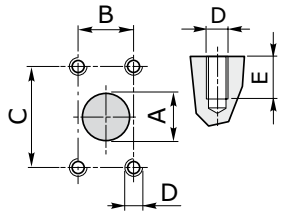
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

GAS	UNI ISO 228/1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	SCARICO - *OUTLET* **OUT** B	SCARICO - *OUTLET* **OUT**	INGRESSO - *INLET* **IN** A	INGRESSO - *INLET* **IN** B	INGRESSO - *INLET* **IN**
		**G**	40	G 1/2"	16 [mm] *0.630 [inch]*	50 [Nm] *443 [in.lbs]*	G 1/2"	16 [mm] *0.630 [inch]*	50 [Nm] *443 [in.lbs]*
			60						
			80						
			110	G 3/4"	17 [mm] *0.670 [inch]*	60 [Nm] *531 [in.lbs]*			
			140						
			160						
			190						
			220						
			260						
			310						

UNF	ANSI/ASME B1.1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	SCARICO - *OUTLET* **OUT** B	SCARICO - *OUTLET* **OUT**	INGRESSO - *INLET* **IN** A	INGRESSO - *INLET* **IN** B	INGRESSO - *INLET* **IN**
		**U**	40	SAE 10 7/8"-14 UNF	17 [mm] *0.670 [inch]*	55 [Nm] *487 [in-lbs]*	SAE 10 7/8"-14 UNF	17 [mm] *0.670 [inch]*	55 [Nm] *487 [in-lbs]*
			60						
			80						
			110	SAE 12 1"1/16-12 UN	20 [mm] *0.788 [inch]*	60 [Nm] *531 [in.lbs]*			
			140						
			160						
			190						
			220						
			260						
			310						
		W	40	SAE 16 1"5/16-12 UN	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*	SAE 12 1"1/16-12 UN	20 [mm] *0.788 [inch]*	60 [Nm] *531 [in.lbs]*
			60						
			80						
			110						
			140						
			160						
			190						
			220						
			260						
			310						

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

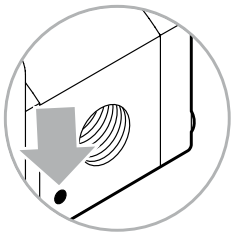
FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B	C	D		INGRESSO - *INLET* **IN** A	B	C	D	
		**T**	40 60 80 110 140 160 190 220 260 310	20 [mm] *0.787 [inch]*	40 [mm] *1.575 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	15 [mm] *0.591 [inch]*	35 [mm] *1.378 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
		**N**	40 60 80	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
			110 140 160 190 220 260 310	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	14 [mm] *0.552 [inch]*	15 [Nm] *133 [in.lbs]*					
		M	40 60 80	non disponibile *not available*					non disponibile *not available*				
			110 140 160 190 220 260 310	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	14 [mm] *0.552 [inch]*	15 [Nm] *133 [in.lbs]*	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	14 [mm] *0.552 [inch]*	15 [Nm] *133 [in.lbs]*

FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B	C	D	E		INGRESSO - *INLET* **IN** A	B	C	D	E	
		**F**	40 60 80 110	20 [mm] *0.787 [inch]*	17,4 [mm] *0.685 [inch]*	38 [mm] *1.496 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	15 [mm] *0.591 [inch]*	17,4 [mm] *0.685 [inch]*	38 [mm] *1.496 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
			140 160 190 220 260 310	26 [mm] *1.024 [inch]*	47.6 [mm] *1.874 [inch]*	22.4 [mm] *0.882 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*						

TIPO CONNESSIONE PER MOTORI (R) • *CONNECTION TYPE FOR (R) MOTORS*

Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale.

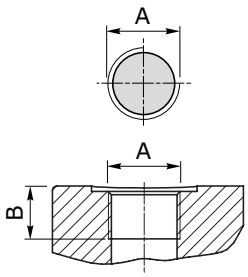
The connections type shown correspond to standard configuration; for different applications contact our Commercial Dept.

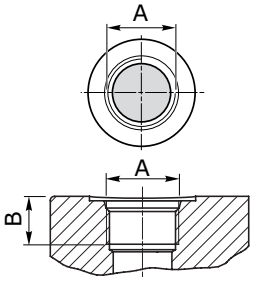


L'eventuale segno sul corpo dei Motori REVERSIBILI non è da considerare.
Any sign on the body in REVERSIBLE Motors is not considered.

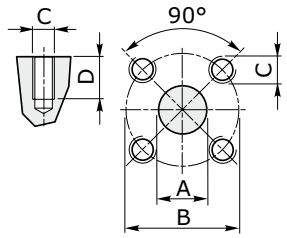
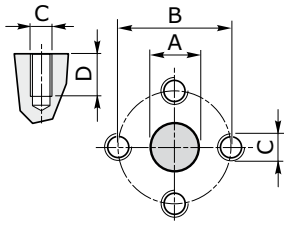
IN = INGRESSO - *INLET*
OUT = SCARICO - *OUTLET*

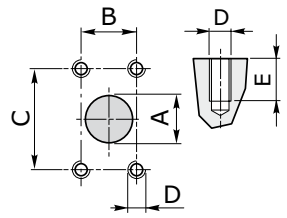
2SM		POSIZIONE CONNESSIONE - *CONNECTION POSITION*			
		0	**1**	**3**	**4**
GAS	**G**	◇	◇	◇	◇
UNF	**U**	◇	◇	◇	◇
FLANGIATE *FLANGED*	**T**	◇			
	N	◇			
	F	◇			

GAS	UNI ISO 228/1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**			INGRESSO - *INLET* **IN**		
				A	**B**		**A**	**B**	
		**G**	40	G 1/2"	16 [mm] *0.630 [inch]*	50 [Nm] *443 [in.lbs]*	G 1/2"	16 [mm] *0.630 [inch]*	50 [Nm] *443 [in.lbs]*
			60						
			80						
			110	G 3/4"	17 [mm] *0.670 [inch]*	60 [Nm] *531 [in.lbs]*	G 3/4"	17 [mm] *0.670 [inch]*	60 [Nm] *531 [in.lbs]*
			140						
			160						
			190						
			220						
			260						
			310						

UNF	ANSI/ASME B1.1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**			INGRESSO - *INLET* **IN**		
				A	**B**		**A**	**B**	
		**U**	40	SAE 10 7/8"-14 UNF	17 [mm] *0.670 [inch]*	55 [Nm] *487 [in-lbs]*	SAE 10 7/8"-14 UNF	17 [mm] *0.670 [inch]*	55 [Nm] *487 [in-lbs]*
			60						
			80						
			110	SAE 12 1"1/16-12 UN	20 [mm] *0.788 [inch]*	60 [Nm] *531 [in.lbs]*	SAE 12 1"1/16-12 UN	20 [mm] *0.788 [inch]*	60 [Nm] *531 [in.lbs]*
			140						
			160						
			190						
			220						
			260						
			310						

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

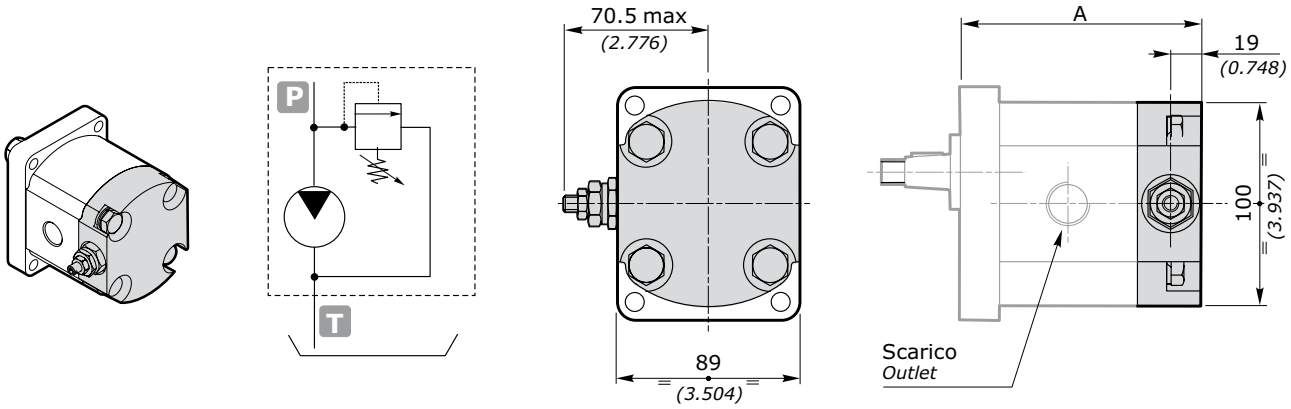
FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**					INGRESSO - *INLET* **IN**				
				A	**B**	**C**	**D**		**A**	**B**	**C**	**D**	
		**T**	40 60 80	15 [mm] *0.591 [inch]*	35 [mm] *1.378 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	15 [mm] *0.591 [inch]*	35 [mm] *1.378 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
			110 140 160 190 220 260 310	20 [mm] *0.787 [inch]*	40 [mm] *1.575 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	20 [mm] *0.787 [inch]*	40 [mm] *1.575 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
		**N**	40 60 80	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	13 [mm] *0.512 [inch]*	30 [mm] *1.181 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
			110 140 160 190 220 260 310	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	14 [mm] *0.552 [inch]*	15 [Nm] *133 [in.lbs]*	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	14 [mm] *0.552 [inch]*	15 [Nm] *133 [in.lbs]*

FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**						INGRESSO - *INLET* **IN**					
				A	**B**	**C**	**D**	**E**		**A**	**B**	**C**	**D**	**E**	
		**F**	40 60 80 110	20 [mm] *0.787 [inch]*	17,4 [mm] *0.685 [inch]*	38 [mm] *1.496 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	20 [mm] *0.787 [inch]*	17,4 [mm] *0.685 [inch]*	38 [mm] *1.496 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*
			140 160 190 220 260 310	26 [mm] *1.024 [inch]*	47.6 [mm] *1.874 [inch]*	22.4 [mm] *0.882 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*	26 [mm] *1.024 [inch]*	47.6 [mm] *1.874 [inch]*	22.4 [mm] *0.882 [inch]*	M6	15 [mm] *0.591 [inch]*	8 [Nm] *71 [in.lbs]*

MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

OPZIONI • *OPTIONALS*

VLPI — VALVOLA LIMITATRICE DI PRESSIONE A SCARICO INTERNO
PRESSURE RELIEF VALVE WITH INTERNAL EXHAUST



GRUPPO GROUP 2	A EUR-SAEA-B50C		B80C		E52C	
	mm	*inch*	*mm*	*inch*	*mm*	*inch*
2SM 040	104.8	*4.126*	106.8	*4.205*	102.1	*4.020*
2SM 060	108.1	*4.256*	110.1	*4.335*	105.4	*4.150*
2SM 080	112.3	*4.421*	114.3	*4.500*	109.6	*4.315*
2SM 110	116.4	*4.583*	118.4	*4.661*	113.7	*4.476*
2SM 140	121.4	*4.780*	123.4	*4.858*	118.7	*4.673*
2SM 160	125.6	*4.945*	127.6	*5.024*	122.9	*4.839*
2SM 190	130.6	*5.142*	132.6	*5.220*	127.9	*5.035*
2SM 220	135.6	*5.339*	137.6	*5.417*	132.9	*5.232*
2SM 260	141.4	*5.567*	143.4	*5.646*	138.7	*5.461*
2SM 310	149.8	*5.902*	151.8	*5.981*	147.1	*5.796*

La valvola limitatrice di pressione si applica sostituendo il coperchio posteriore. Il coperchio VLP è disponibile in alluminio. E' rappresentata un motore con rotazione destra. Nei motori con rotazione sinistra, la valvola è nel lato opposto.

The pressure relief valve can be applied by substituting the rear cover. VLP cover is available in aluminum. The showed motor is clockwise rotation. Motor with anticlockwise rotation, the valve is in opposite side.

esempio • *example:* **2SM - A - 140 - D - EUR - H - N - 10 - 0 - G - VLPI N 120**

VLPI = Coperchio con VPL a scarico interno / *Cover with VPL at internal exhaust*
N = Tipo molla - vedi tabella / *Spring type - see table*
120 = Taratura - vedi tabella / *Setting - see table*

TIPO - TYPE	CAMPI DI TARATURE - CALIBRATION FIELDS					
	molla bianca - *white spring*	**B**	molla nera - *black spring*	**N**	molla rossa - *red spring*	**R**
bar	30 ÷ 80		81 ÷ 200		201 ÷ 350	
psi	*435 ÷ 1160*		*1175 ÷ 2900*		*2915 ÷ 5075*	
STANDARD	70 bar *(1015 psi)*		150 bar *(2175 psi)*		250 bar *(3625 psi)*	

NOTA: In caso si omissione del valore di taratura, esso sarà inteso standard (vedi tabella).
NOTE: Without setting request, it will be considered standard (see table).

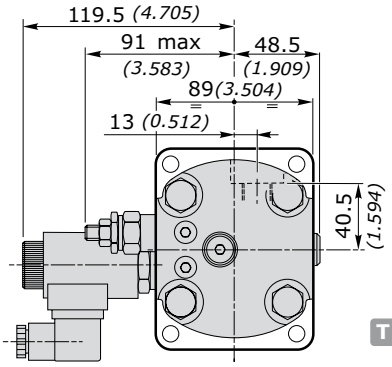
MOTORI AD INGRANAGGI GRUPPO 2SM
GEAR MOTORS GROUP 2SM

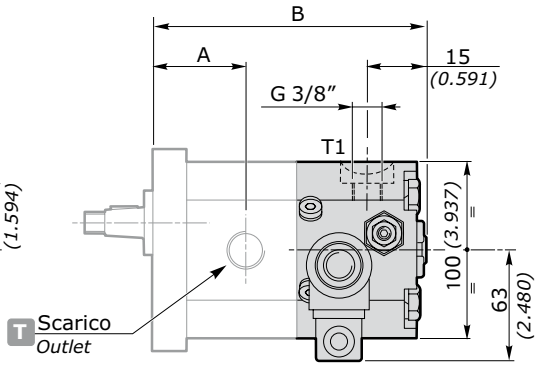
VLP

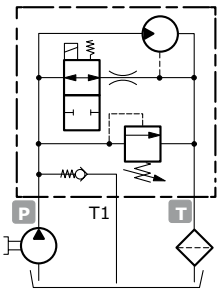
MOTORE UNIDIREZIONALE A 2 VELOCITÀ CON VALVOLA LIMITATRICE DI PRESSIONE
2 SPEED UNIDIRECTIONAL MOTOR WITH PRESSURE RELIEF VALVE

Solo per motori con flangia e coperchio in alluminio. *Only motors with flange and cover alluminium.*

ROTAZIONE DESTRA - *CLOCKWISE ROTATION*

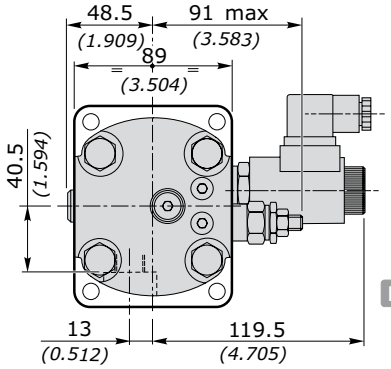


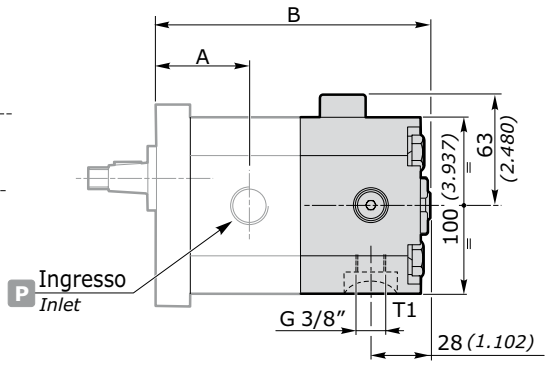


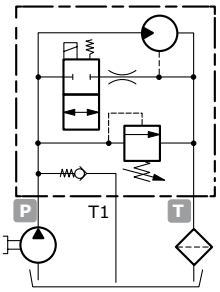


Elettrovalvola normalmente aperta (NA)
Usually open (NA)

ROTAZIONE SINISTRA - *ANTICLOCKWISE ROTATION*







Elettrovalvola normalmente chiusa (NC)
Usually closed (NC)

GRUPPO - GROUP 2		2SM 040	2SM 060	2SM 080	2SM 110	2SM 140	2SM 160	2SM 190	2SM 220	2SM 260	2SM 310
A	*mm*	44.4	46.0	48.1	50.2	52.7	54.8	57.3	59.8	62.7	66.9
	inch	*1.748*	*1.811*	*1.894*	*1.976*	*2.075*	*2.157*	*2.256*	*2.354*	*2.469*	*2.636*
B	*mm*	142.3	*145.6*	149.8	*153.9*	*158.9*	*163.1*	*168.1*	*173.1*	*182.0*	*190.4*
	inch	*5.602*	*5.732*	*5.898*	*6.059*	*6.256*	*6.421*	*6.618*	*6.815*	*7.165*	*7.502*

esempio ● *example:* **2SM - A - 140 - D - EUR - H - N - 10 - 0 - G - NA 24VDC VLP N 150**

NA = Normalmente aperta / *Usually open* **NC =** Normalmente chiusa / *Usually closed*
24VDC = Tensione magnete / *Electromagnete voltage* (12VDC - 24VDC - 48VDC)
VLP = Coperchio con VPL / *Cover with VPL*
N = Tipo molla - vedi tabella / *Spring type - see table*
150 = Taratura - vedi tabella / *Setting - see table*

TIPO - TYPE	CAMPI DI TARATURE - CALIBRATION FIELDS					
	molla bianca - *white spring*	**B**	molla nera - *black spring*	**N**	molla rossa - *red spring*	**R**
bar	30 ÷ 80		81 ÷ 200		201 ÷ 350	
psi	*435 ÷ 1160*		*1175 ÷ 2900*		*2915 ÷ 5075*	
STANDARD	70 bar *(1015 psi)*		150 bar *(2175 psi)*		250 bar *(3625 psi)*	

NOTA: In caso si omissione del valore di taratura, esso sarà inteso standard (vedi tabella).
NOTE: Without setting request, it will be considered standard (see table).

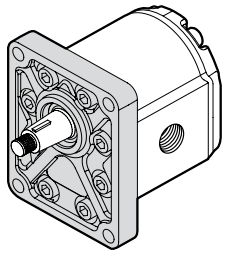
MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

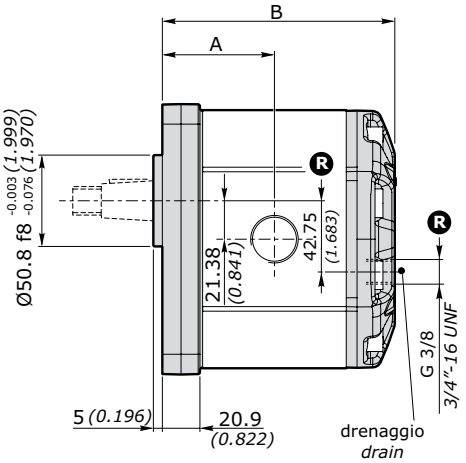
FLANGIA EUROPEA EUR *EUROPEAN FLANGE*

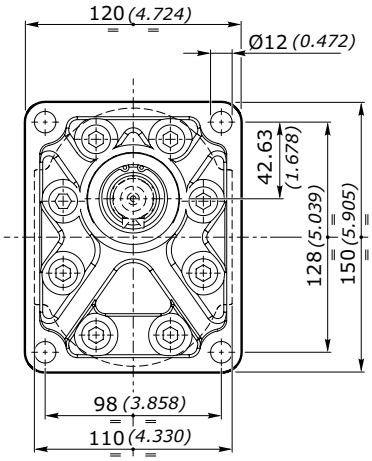
FLANGIA E COPERCHIO IN GHISA - *CAST IRON FLANGE AND COVER*

GRUPPO GROUP 3GM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE P1		PRESSIONE MAX - MAX PRESSURE P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm^3/giro	in^3/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
3GM 190	19.3	1.2	250	3625	270	3915	3500	67.6	17.84	700	12.8	3.39	95*
3GM 230	23.0	1.4	240	3480	260	3770	3500	80.3	21.22	700	15.5	4.03	95*
3GM 300	30.2	1.8	220	3190	240	3480	3300	99.7	26.33	700	20.1	5.31	95*
3GM 340	33.8	2.1	220	3190	230	3335	3300	111.6	29.49	700	22.5	5.94	95*
3GM 370	37.5	2.3	210	3045	230	3335	3300	123.6	32.66	700	24.9	6.58	95*
3GM 440	44.6	2.7	200	2900	220	3190	3000	133.8	35.35	700	29.7	7.84	95*
3GM 530	53.0	3.2	200	2900	210	3045	3000	159.1	42.04	700	35.3	9.32	95*
3GM 620	62.7	3.8	180	2610	190	2755	2500	156.8	41.41	700	41.7	11.01	95*
3GM 700	70.5	4.3	180	2610	200	2900	2500	176.3	46.58	700	46.9	12.39	95*
3GM 770	77.2	4.7	170	2465	190	2755	2200	169.8	44.84	700	51.3	13.56	95*

DIMENSIONI • *DIMENSIONS*







Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 3	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
3GM 190	62.4	2.456	128.3	5.051	7.67	16.91
3GM 230	63.9	2.515	131.3	5.169	7.81	17.21
3GM 300	66.9	2.633	137.3	5.405	8.09	17.82
3GM 340	68.4	2.692	140.3	5.523	8.22	18.12
3GM 370	69.9	2.751	143.3	5.641	8.36	18.43
3GM 440	72.9	2.870	149.3	5.877	8.64	19.04
3GM 530	76.4	3.007	156.3	6.153	8.96	19.75
3GM 620	80.4	3.165	164.3	6.468	9.33	20.56
3GM 700	86.9	3.421	170.8	6.724	9.63	21.22
3GM 770	92.4	3.637	176.3	6.940	9.88	21.77

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

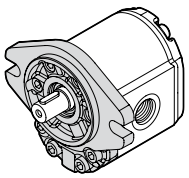
FLANGIA SAE SAEB-SAEBOR *SAE FLANGE*

FLANGIA E COPERCHIO IN GHISA - *CAST IRON FLANGE AND COVER*

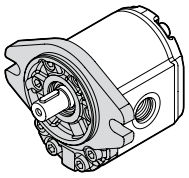
GRUPPO GROUP 3GM	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE P1		P2		VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm³/giro	in³/rev	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
3GM 190	19.3	1.2	250	3625	270	3915	3500	67.6	17.84	700	12.8	3.39	95*
3GM 230	23.0	1.4	240	3480	260	3770	3500	80.3	21.22	700	15.5	4.03	95*
3GM 300	30.2	1.8	220	3190	240	3480	3300	99.7	26.33	700	20.1	5.31	95*
3GM 340	33.8	2.1	220	3190	230	3335	3300	111.6	29.49	700	22.5	5.94	95*
3GM 370	37.5	2.3	210	3045	230	3335	3300	123.6	32.66	700	24.9	6.58	95*
3GM 440	44.6	2.7	200	2900	220	3190	3000	133.8	35.35	700	29.7	7.84	95*
3GM 530	53.0	3.2	200	2900	210	3045	3000	159.1	42.04	700	35.3	9.32	95*
3GM 620	62.7	3.8	180	2610	190	2755	2500	156.8	41.41	700	41.7	11.01	95*
3GM 700	70.5	4.3	180	2610	200	2900	2500	176.3	46.58	700	46.9	12.39	95*
3GM 770	77.2	4.7	170	2465	190	2755	2200	169.8	44.84	700	51.3	13.56	95*

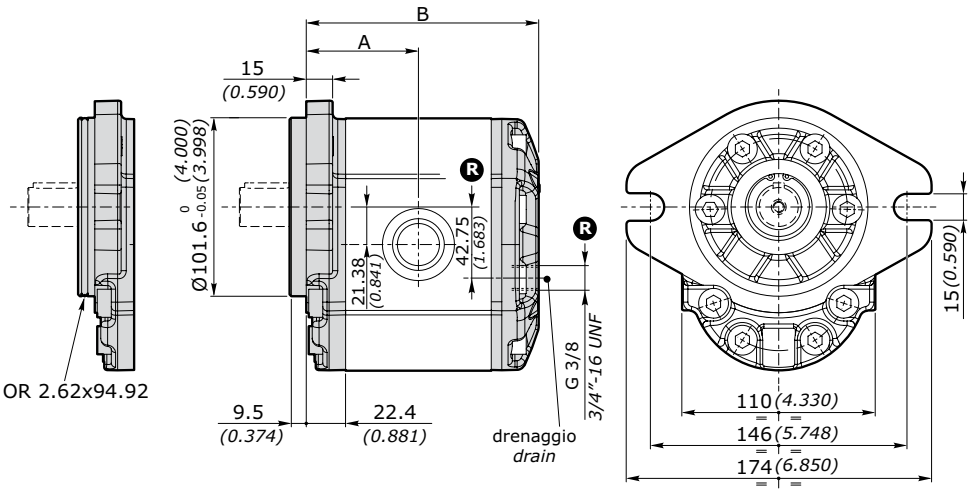
DIMENSIONI • *DIMENSIONS*

SAEB



SAEBOR





Ⓡ Solo per motori reversibili - *Only for reversible motors*

GRUPPO - GROUP 3	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
3GM 190	62.4	2.456	128.3	5.051	7.67	16.91
3GM 230	63.9	2.515	131.3	5.169	7.81	17.21
3GM 300	66.9	2.633	137.3	5.405	8.09	17.82
3GM 340	68.4	2.692	140.3	5.523	8.22	18.12
3GM 370	69.9	2.751	143.3	5.641	8.36	18.43
3GM 440	72.9	2.870	149.3	5.877	8.64	19.04
3GM 530	76.4	3.007	156.3	6.153	8.96	19.75
3GM 620	80.4	3.165	164.3	6.468	9.33	20.56
3GM 700	86.9	3.421	170.8	6.724	9.63	21.22
3GM 770	92.4	3.637	176.3	6.940	9.88	21.77

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

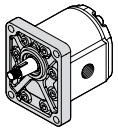
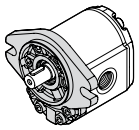
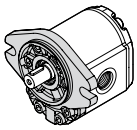
CODICE ORDINAZIONE • *ORDER CODE*

3GM - G - 340 - D - EUR - H - N - 10 - 0 - G

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*	PAGINA - *PAGE*
3GM	Tipo motore *Motor type*	Motore - gruppo 3 *Motor - group 3*	91
G	Materiale flangia e coperchio *Flange and cover material*	**G** = Ghisa / *Cast iron*	
340	Cilindrata *Displacement*	Cilindrata = 23 cm^3/g *Displacement = 1.40 in^3/rev*	91
D	Tipo rotazione *Rotation type*	**D** = Rotazione destra / *Clockwise rotation* **S** = Rotazione sinistra / *Anticlockwise rotation*	93
EUR	Tipo Flangia *Flange type*	Flangia standard europea *European standard flange*	143
H	Tipo anello di tenuta *Seal ring type*	Vedi tabella compatibilità *See compatibility table*	
N	Tipo guarnizione *Gasket type*	**N** = NBR **V** = Viton	
10	Tipo Albero *Shaft type*	Vedi tabella compatibilità *See compatibility table*	144
0	Posizione connessione *Connection position*	Vedi tabella compatibilità *See compatibility table*	146
G	Tipo connessione *Connection type*	Vedi tabella compatibilità *See compatibility table*	

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

TIPOLOGIA FLANGIA • *FLANGE TYPE*

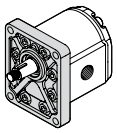
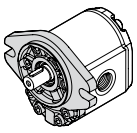
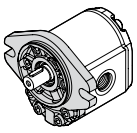
3GM	EUR	SAEB	SAEBOR
			
A alluminio *aluminium*	non disponibile *not available*	non disponibile *not available*	non disponibile *not available*
G ghisa *cast iron*	◇	◇	◇

◇ = Combinazione standard - *Standard combination*

ANELLO DI TENUTA • *SEAL RING*

SIGLA - *CODE*	TIPO - *TYPE*	DESCRIZIONE - *DESCRIPTION*
H	Anello di tenuta fino a **8** bar *Sealing ring up to **8** bar*	Per basse pressioni (con distanziali di rinforzo) *For low pressure (with stiffering seal)*
K	Anello di tenuta fino a **30** bar *Sealing ring up to **30** bar*	Per alte pressioni *For high pressure*
W	Anello di tenuta fino a **100** bar *Sealing ring up to **100** bar*	Per altissime pressioni *For very high pressure*

COMBINAZIONE FLANGIA - ANELLO DI TENUTA - GUARNIZIONE • *FLANGE - SEAL RING - GASKET COMBINATION*

3GM		EUR			SAEB			SAEBOR		
										
		Anello - *seal ring*			Anello - *seal ring*			Anello - *seal ring*		
		H	**K**	**W**	**H**	**K**	**W**	**H**	**K**	**W**
NBR	**N**	◇	◇	◇	◇	◇	◇	◇	◇	◇
Viton	**V**	●	●	●	●	●	●	●	●	●

◇ = Combinazione standard - *Standard combination*

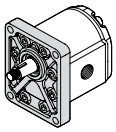
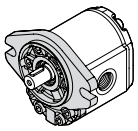
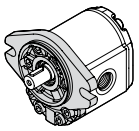
● = Combinazione disponibile - *Available combination*

esempio • *example:* **3GM - G - 340 - D - EUR - H - N - 10 - 0 - G**

EUR = flangia europea std / *Std european flange*
H = Anello tenuta fino a 8 bar / Seal ring up to 8 *bar*
N = *guarnizione in NBR / NBR o-ring*

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

COMBINAZIONE ALBERO - FLANGIA • *SHAFT - FLANGE COMBINATION*

3GM	EUR	SAEB	SAEBOR
			
10 Conico 1:8 *Tapered 1:8*	◇	●	●
13 Cilindrico SAEB *SAEB Parallel shaft*	●	◇	◇
14 Scanalato SAEB 13 denti (38.2) *SAEB 13T splined (38.2)*	●	◇	◇
14R Scanalato SAEB 13 denti (44.7) *SAEB 13T splined (44.7)*	●	●	●

◇ = Combinazione standard - *Standard combination*

● = Combinazione disponibile - *Available combination*

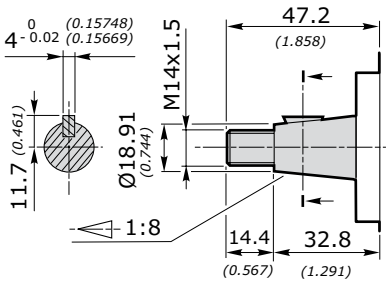
MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

3GM

DIMENSIONI ALBERO - *SHAFT DIMENSIONS*

10
Conico 1:8
Tapered 1:8

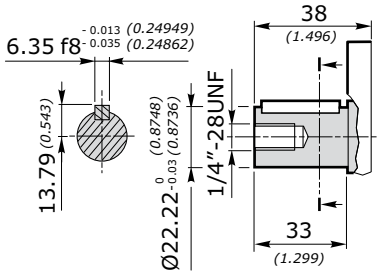
Coppia 240 Nm
Torque 178 ft-lbs



Disponibile per - *available for:* **EUR - SAEB - SAEBOR**

13
Cilindrico SAEB
SAEB Parallel shaft

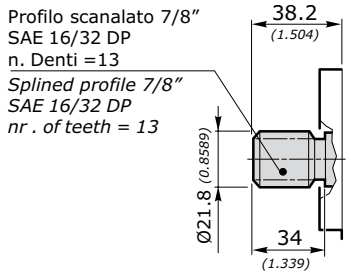
Coppia 200 Nm
Torque 148 ft-lbs



Disponibile per - *available for:* **EUR - SAEB - SAEBOR**

14
Scanalato SAEB
13 denti (38.2)
SAEB 13T splined (38.2)

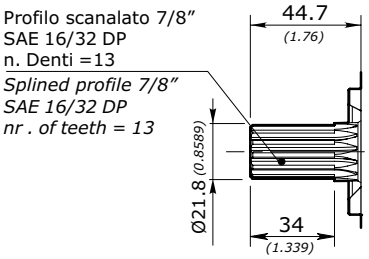
Coppia 270 Nm
Torque 200 ft-lbs



Disponibile per - *available for:* **EUR - SAEB - SAEBOR**

14R
Scanalato SAEB
13 denti (44.7)
SAEB 13T splined (44.7)

Coppia 270 Nm
Torque 200 ft-lbs



Disponibile per - *available for:* **EUR - SAEB - SAEBOR**

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

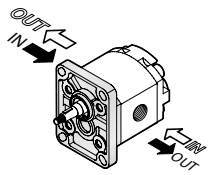
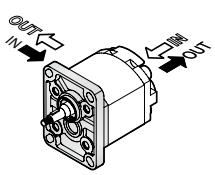
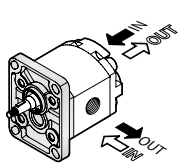
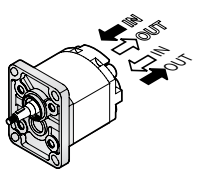
POSIZIONE CONNESSIONE PER MOTORI (D-S) • *CONNECTION POSITION FOR (D-S) MOTORS*

Rotazione destra - **D**
*Right rotation - **D***

Rotazione sinistra - **S**
*Left rotation - **S***

POSIZIONE CONNESSIONE PER MOTORI (R) • *CONNECTION POSITION FOR (R) MOTORS*

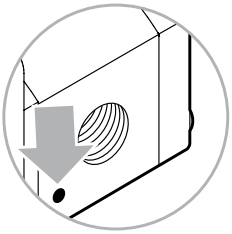
Rotazione - **R**
*Rotation - **R***

0	1	3	4
			

TIPO CONNESSIONE PER MOTORI D-S • *CONNECTION TYPE FOR D-S MOTORS*

Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale.

The connections type shown correspond to standard configuration; for different applications contact our Commercial Dept.

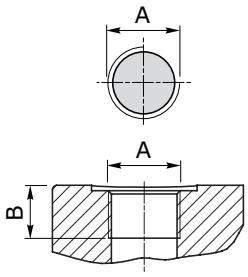


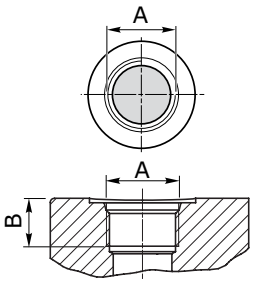
Il segno sul corpo indica il lato scarico per i motori
The sign on the body identify the outlet side for the motors

IN = INGRESSO - *INLET*
OUT = SCARICO - *OUTLET*

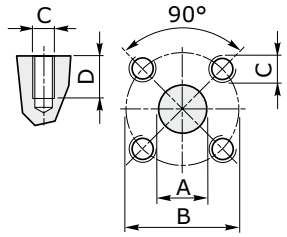
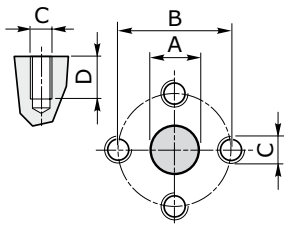
3GM		POSIZIONE CONNESSIONE - *CONNECTION POSITION*			
		0	**1**	**3**	**4**
GAS	**G**	◇	◇	◇	◇
UNF	**W**	◇	◇	◇	◇
FLANGIATE *FLANGED*	**T**	◇			
	N	◇			
	F	◇			

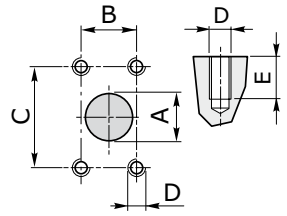
MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

GAS	UNI ISO 228/1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	SCARICO - *OUTLET* **OUT** B	SCARICO - *OUTLET* **OUT**	INGRESSO - *INLET* **IN** A	INGRESSO - *INLET* **IN** B	INGRESSO - *INLET* **IN**
		**G**	190	G 1″	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*	G 3/4″	17 [mm] *0.670 [in.lbs]*	60 [mm] *531 [in.lbs]*
			230						
			300						
			340						
			370						
			440						
			530						
			630						
			700						
			770						

UNF	ANSI/ASME B1.1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	SCARICO - *OUTLET* **OUT** B	SCARICO - *OUTLET* **OUT**	INGRESSO - *INLET* **IN** A	INGRESSO - *INLET* **IN** B	INGRESSO - *INLET* **IN**
		**W**	190	SAE 16 1″5/16-12 UN	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*	SAE 12 1″1/16-12 UN	20 [mm] *0.788 [inch]*	60 [Nm] *531 [in.lbs]*
			230						
			300						
			340						
			370						
			440						
			530						
			630						
			700						
			770						

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**					INGRESSO - *INLET* **IN**				
				A	**B**	**C**	**D**		**A**	**B**	**C**	**D**	
		**T**	190 230 300 340 370 440 530 630 700 770	26 [mm] *1.024 [inch]*	55 [mm] *2.167 [inch]*	M8	16 [mm] *0.630 [inch]*	15 [Nm] *133 [in.lbs]*	18 [mm] *0.709 [inch]*	55 [mm] *2.167 [inch]*	M8	16 [mm] *0.630 [inch]*	15 [Nm] *133 [in.lbs]*
		**N**	190 230 300 340 370 440 530 630 700 770	27 [mm] *1.064 [inch]*	51 [mm] *2.009 [inch]*	M10	15 [mm] *0.591 [inch]*	20 [Nm] *177 [in.lbs]*	19 [mm] *0.748 [inch]*	40 [mm] *1.575 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*

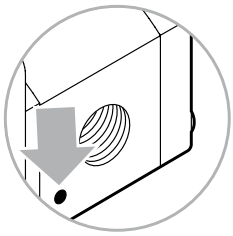
FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT**						INGRESSO - *INLET* **IN**					
				A	**B**	**C**	**D**	**E**		**A**	**B**	**C**	**D**	**E**	
		**F**	190 230 300 340 370	27 [mm] *1.063 [inch]*	26.2 [mm] *1.031 [inch]*	52.4 [mm] *2.063 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*	24 [mm] *0.945 [inch]*	26.2 [mm] *1.031 [inch]*	52.4 [mm] *2.063 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*
			440 530 630 700 770	42 [mm] *1.654 [inch]*	69.8 [mm] *2.748 [inch]*	35.6 [mm] *1.402 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*						

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

TIPO CONNESSIONE PER MOTORI (R) • *CONNECTION TYPE FOR (R) MOTORS*

Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale.

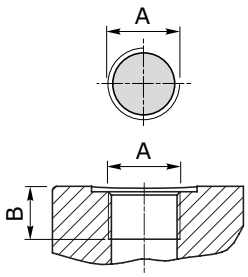
The connections type shown correspond to standard configuration; for different applications contact our Commercial Dept.

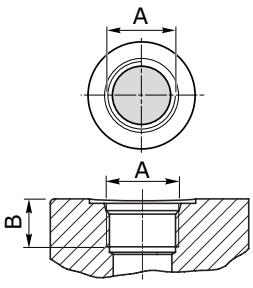


L'eventuale segno sul corpo dei Motori REVERSIBILI non è da considerare.
Any sign on the body in REVERSIBLE Motors is not considered.

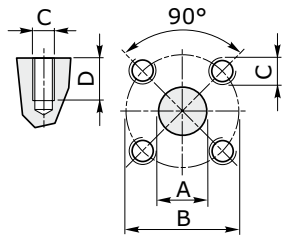
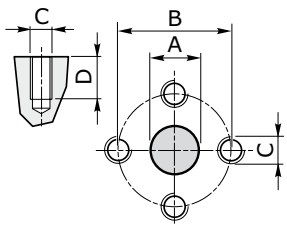
IN = MANDATA - *DELIVERY*
OUT = SCARICO - *OUTLET*

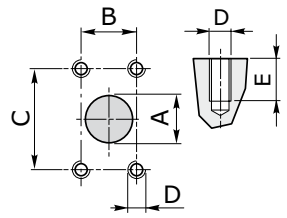
3GM		POSIZIONE CONNESSIONE - *CONNECTION POSITION*			
		0	**1**	**3**	**4**
GAS	**G**	◇	◇	◇	◇
UNF	**W**	◇	◇	◇	◇
FLANGIATE *FLANGED*	**T**	◇			
	N	◇			
	F	◇			

GAS	UNI ISO 228/1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B		INGRESSO - *INLET* **IN** A	B	
		**G**	190	G 1"	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*	G 1"	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*
			230						
			300						
			340						
			370						
			440						
			530						
			630						
			700						
			770						

UNF	ANSI/ASME B1.1	SIGLA *CODE*	CIL. *DISPL.*	SCARICO - *OUTLET* **OUT** A	B		INGRESSO - *INLET* **IN** A	B	
		**W**	190	SAE 16 1"5/16-12 UN	20 [mm] *0.788 [inch]*	70 [Nm] *620 [in.lbs]*			
			230						
			300						
			340						
			370						
			440						
			530						
			630						
			700						
			770						

MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

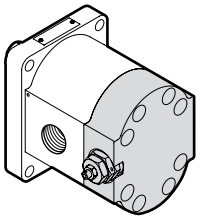
FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO *OUTLET* **OUT**					INGRESSO - *INLET* **IN**				
				A	**B**	**C**	**D**		**A**	**B**	**C**	**D**	
		**T**	190 230 300 340 370 440 530 630 700 770	26 [mm] *1.024 [inch]*	55 [mm] *2.167 [inch]*	M8	16 [mm] *0.630 [inch]*	15 [Nm] *133 [in.lbs]*					
		**N**	190 230 300 340 370 440 530 630 700 770	27 [mm] *1.064 [inch]*	51 [mm] *2.009 [inch]*	M10	15 [mm] *0.591 [inch]*	20 [Nm] *177 [in.lbs]*	27 [mm] *1.064 [inch]*	51 [mm] *2.009 [inch]*	M10	15 [mm] *0.591 [inch]*	20 [Nm] *177 [in.lbs]*

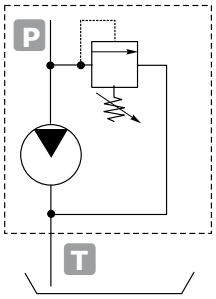
FLANGIATE FLANGED	ISO/R 262	SIGLA *CODE*	CIL. *DISPL.*	SCARICO *OUTLET* **OUT**						INGRESSO - *INLET* **IN**					
				A	**B**	**C**	**D**	**E**		**A**	**B**	**C**	**D**	**E**	
		**F**	190 230 300 340 370	27 [mm] *1.064 [inch]*	26.2 [mm] *1.031 [inch]*	52.4 [mm] *2.063 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*						
			440 530 630 700 770	42 [mm] *1.654 [inch]*	69.8 [mm] *2.748 [inch]*	35.6 [mm] *1.402 [inch]*	M8	15 [mm] *0.591 [inch]*	15 [Nm] *133 [in.lbs]*						

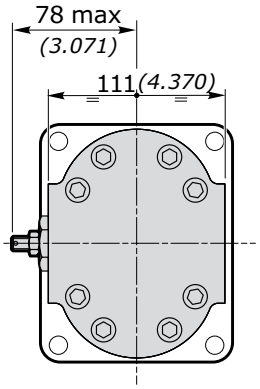
MOTORI AD INGRANAGGI GRUPPO 3GM
GEAR MOTORS GROUP 3GM

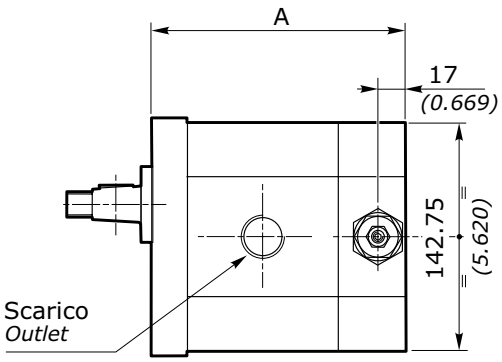
OPZIONI • *OPTIONALS*

VLPI — VALVOLA LIMITATRICE DI PRESSIONE A SCARICO INTERNO
PRESSURE RELIEF VALVE WITH INTERNAL EXHAUST









GRUPPO GROUP 3	A EUR - SAEB - SAEBOR	
	mm	*inch*
3GM 190	146.30	*5.759*
3GM 230	149.30	*5.877*
3GM 300	155.30	*6.114*
3GM 340	158.30	*6.232*
3GM 370	161.30	*6.350*
3GM 440	167.30	*6.586*
3GM 530	174.30	*6.862*
3GM 620	182.30	*7.177*
3GM 700	188.30	*7.413*
3GM 770	194.30	*7.649*

La valvola limitatrice di pressione si applica sostituendo il coperchio posteriore (previsto solo scarico interno).
Il corpo VLP è disponibile in alluminio.
È rappresentato unmotore con rotazione destra.

The pressure relief valve can be applied by substituting the rear cover (only internal relief is set).
VLP cover is available in aluminum.
The showed pump is clockwise rotation.

esempio • *example:* **3GM - A - 340 - D - EUR - H - N - 10 - 0 - G - VLPI N 120**

VLPI = Coperchio con VPL a scarico interno / *Cover with VPL at internal exhaust*
N = Tipo molla - vedi tabella / *Spring type - see table*
120 = Taratura - vedi tabella / *Setting - see table*

TIPO - TYPE	CAMPI DI TARATURE - CALIBRATION FIELDS					
	molla bianca - *white spring*	**B**	molla nera - *black spring*	**N**	molla rossa - *red spring*	**R**
bar	30 ÷ 80		81 ÷ 200		201 ÷ 350	
psi	*435 ÷ 1160*		*1175 ÷ 2900*		*2915 ÷ 5075*	
STANDARD	70 bar *(1015 psi)*		150 bar *(2175 psi)*		250 bar *(3625 psi)*	

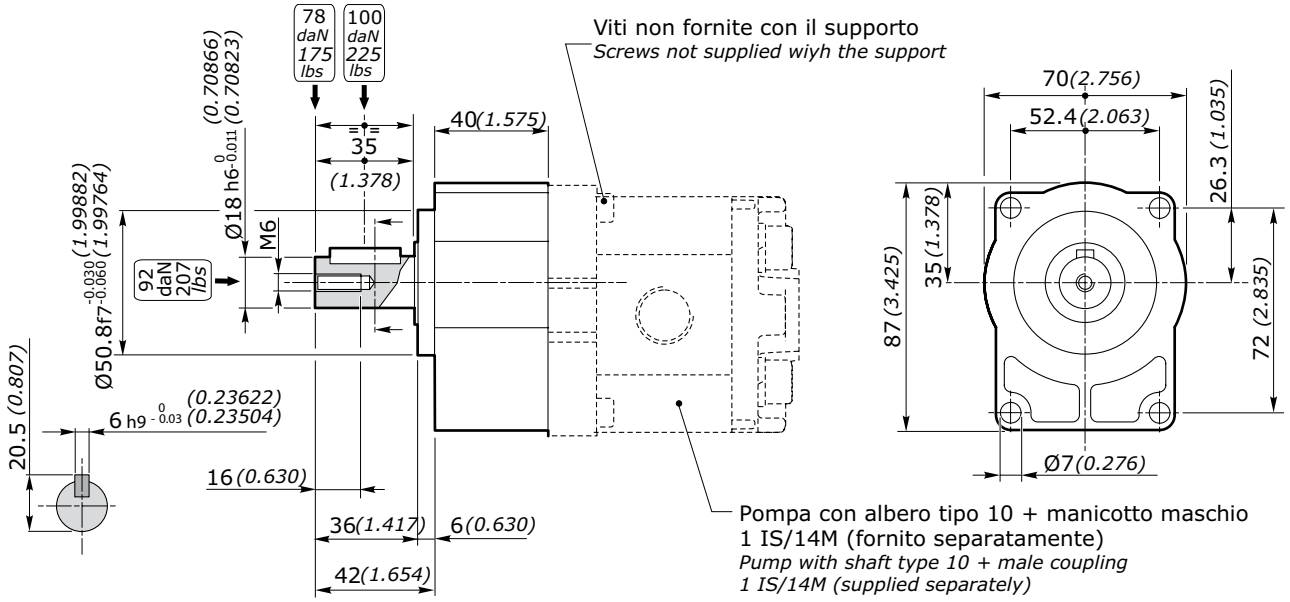
NOTA: In caso si omissione del valore di taratura, esso sarà inteso standard (vedi tabella).
NOTE: Without setting request, it will be considered standard (see table).

SUPPORTI • *SUPPORTS*

GRUPPO - GROUP 1

SUPPORTO CON ALBERO TIPO 12 • *SUPPORT WITH SHAFT TYPE 12*

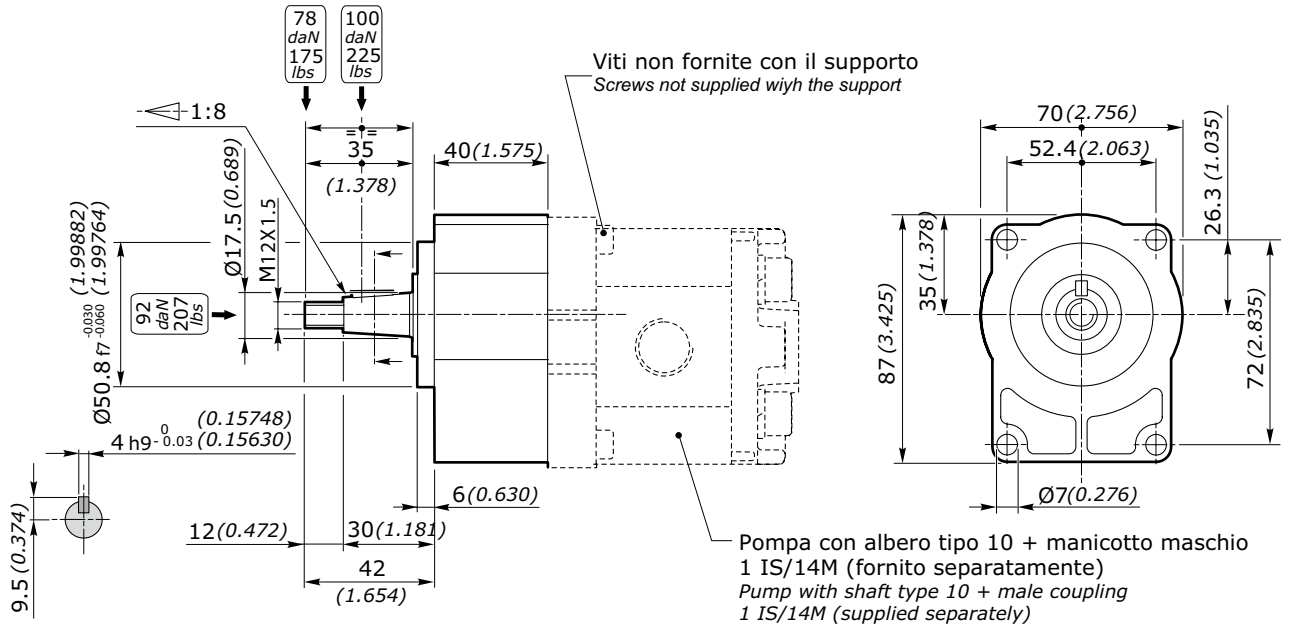
Codice ordinazione - *Order code:* **015104000000000**



GRUPPO - GROUP 1

SUPPORTO CON ALBERO TIPO 10 • *SUPPORT WITH SHAFT TYPE 10*

Codice ordinazione - *Order code:* **015105000000000**



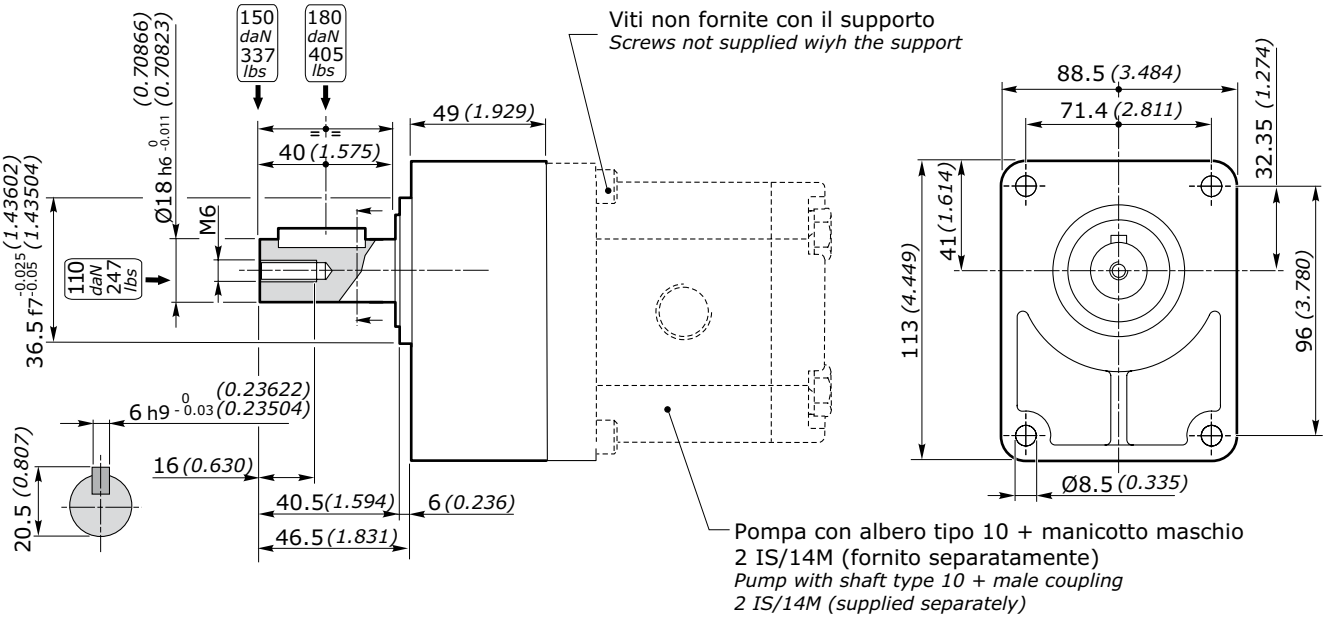
ACCESSORI
ACCESSORIES

SUPPORTI • *SUPPORTS*

GRUPPO - GROUP 2

SUPPORTO CON ALBERO TIPO 12 • *SUPPORT WITH SHAFT TYPE 12*

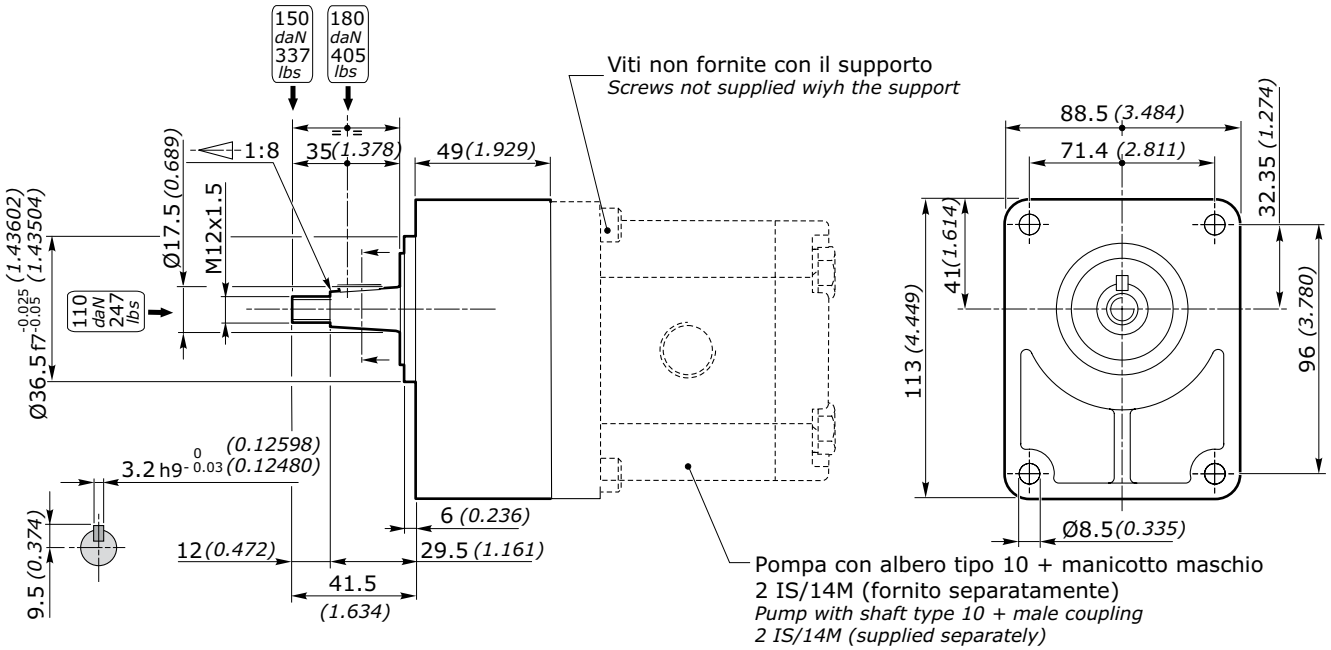
Codice ordinazione - *Order code:* **015212000000000**



GRUPPO - GROUP 2

SUPPORTO CON ALBERO TIPO 10 • *SUPPORT WITH SHAFT TYPE 10*

Codice ordinazione - *Order code:* **015212010000000**

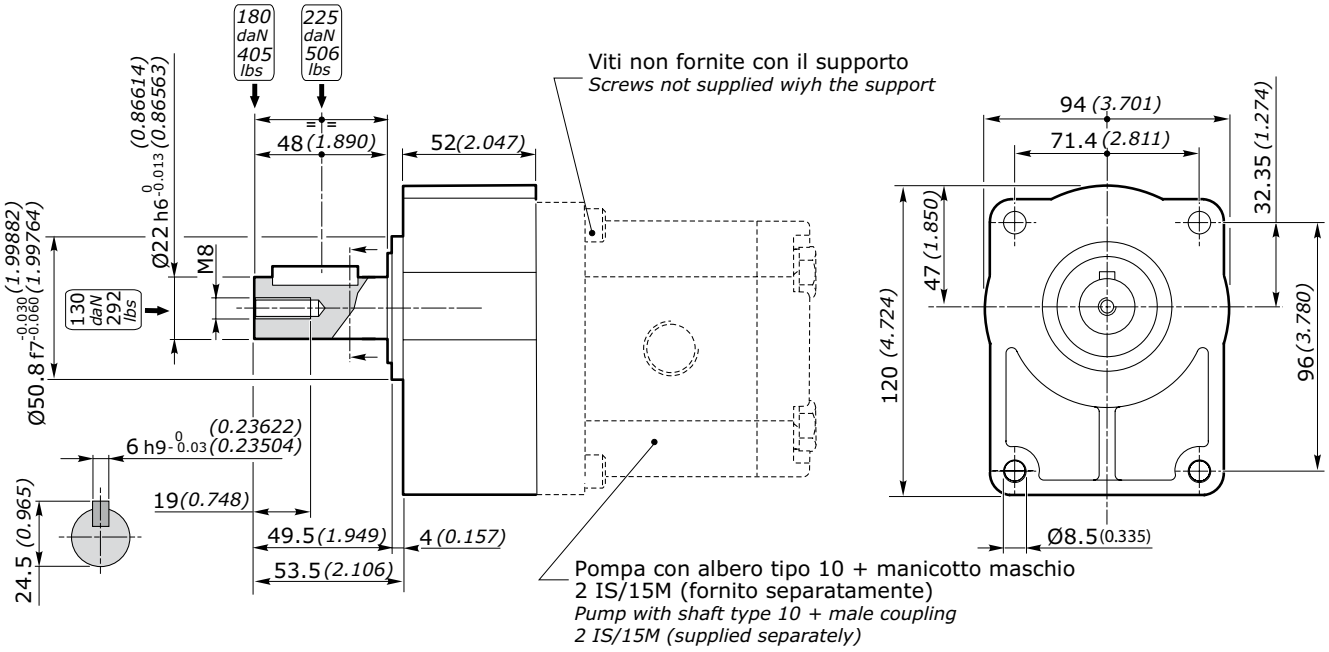


SUPPORTI • *SUPPORTS*

GRUPPO - GROUP 2

SUPPORTO RINFORZATO CON ALBERO TIPO 12 • *RENFORCED SUPPORT WITH SHAFT TYPE 12*

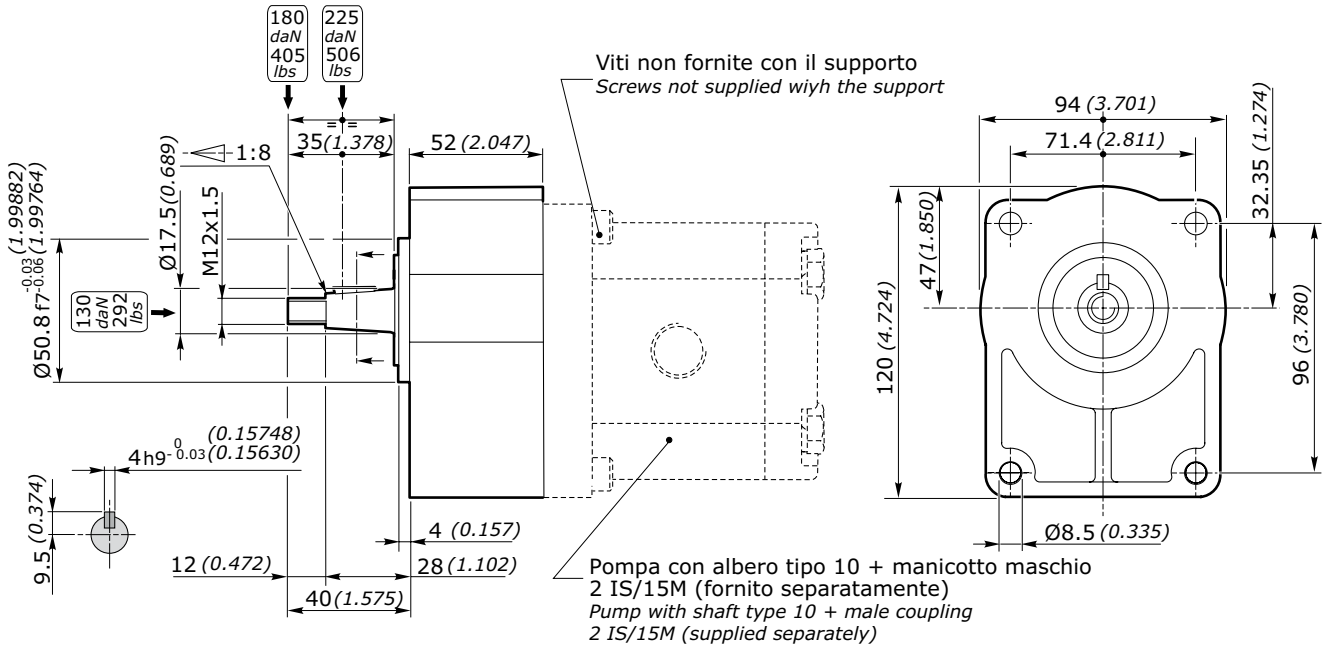
Codice ordinazione - *Order code:* **015213000000000**



GRUPPO - GROUP 2

SUPPORTO RINFORZATO CON ALBERO TIPO 10 • *RENFORCED SUPPORT WITH SHAFT TYPE 10*

Codice ordinazione - *Order code:* **015213010000000**



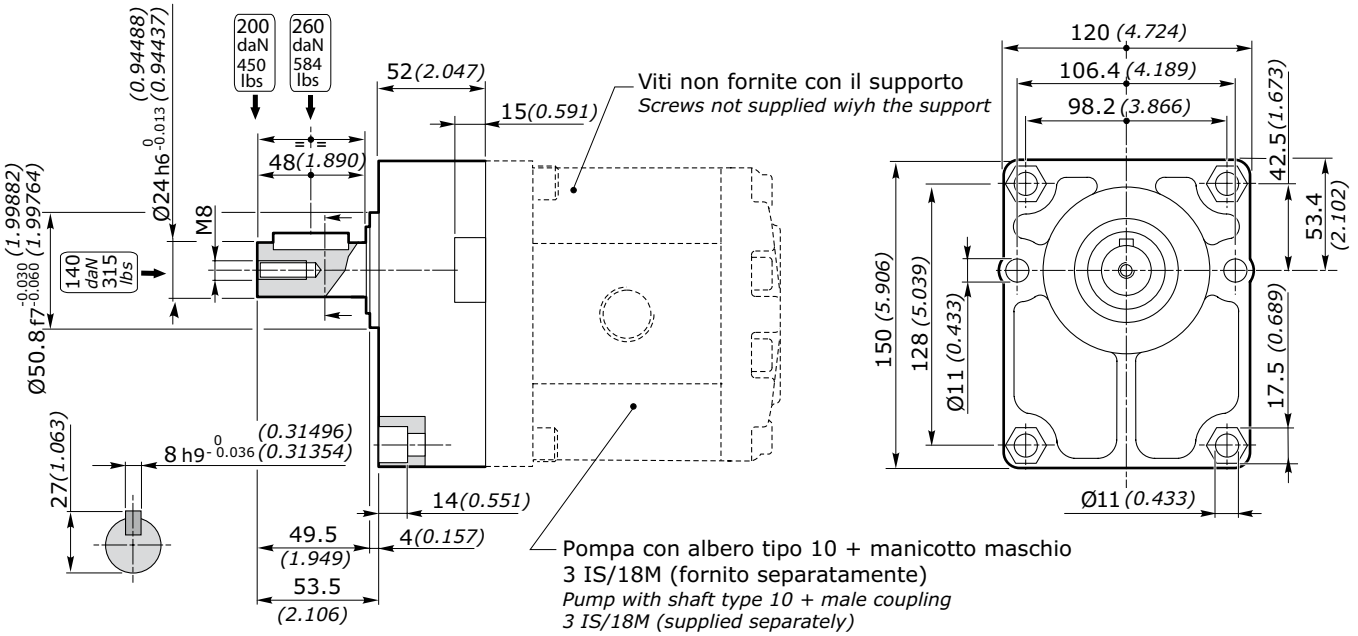
ACCESSORI
ACCESSORIES

SUPPORTI • *SUPPORTS*

GRUPPO - GROUP 3

SUPPORTO CON ALBERO TIPO 12 • *SUPPORT WITH SHAFT TYPE 12*

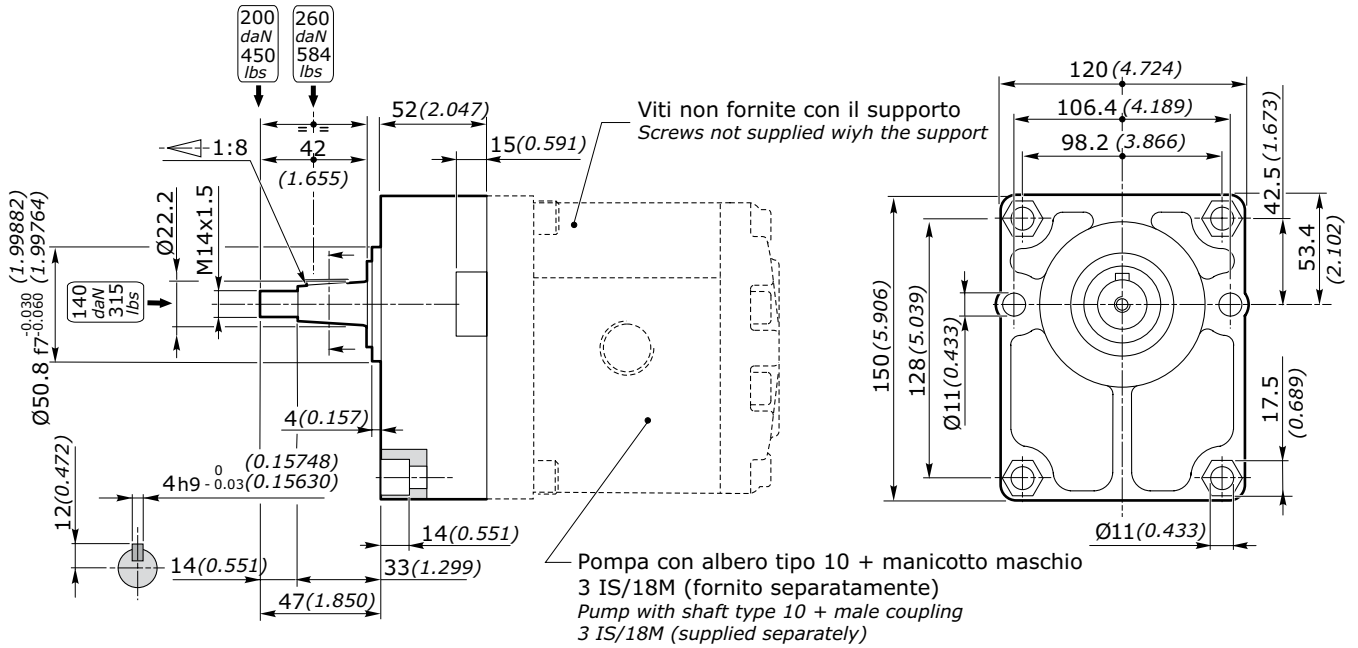
Codice ordinazione - *Order code:* **015302100000000**



GRUPPO - GROUP 3

SUPPORTO CON ALBERO TIPO 12 • *SUPPORT WITH SHAFT TYPE 12*

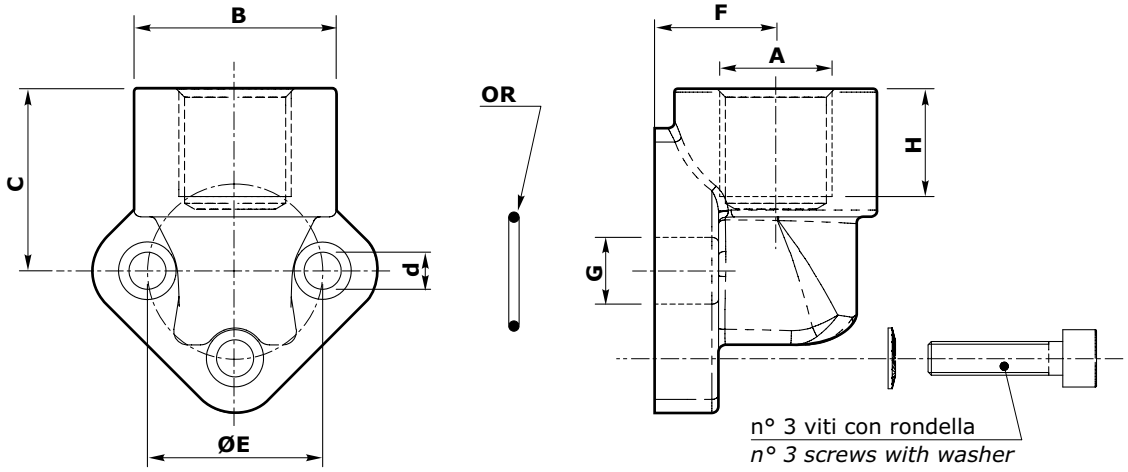
Codice ordinazione - *Order code:* **01530220000000**



RACCORDI • *CONNECTORS*

RACCORDO A GOMITO • *ELBOW CONNECTORS*

per connessioni tipo "N" - *for connections type "N"*



ACCIAIO • *STEEL*

TIPO - TYPE	A	B		C		d		E		F		G		H		OR
		mm	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	
FG 3/8" - 26	G 3/8	30	*1.181*	27.5	*1.083*	5.5	*0.217*	26	*1.024*	17	*0.669*	11	*0.433*	12	*0.472*	14.00 X 1.78
FG 3/8" - 30	G 3/8	30	*1.181*	27.5	*1.083*	6.5	*0.256*	30	*1.181*	17	*0.669*	12	*0.472*	12	*0.472*	15.88 X 2.62
FG 1/2" - 30	G 1/2	30	*1.181*	27.5	*1.083*	6.5	*0.256*	30	*1.181*	17	*0.669*	12	*0.472*	12	*0.472*	15.88 X 2.62
FG 3/4" - 40	G 3/4	38	*1.496*	36	*1.417*	8.5	*0.335*	40	*1.575*	21	*0.817*	19	*0.748*	16	*0.630*	23.81 X 2.62
FG 1" - 51	G 1	45	*1.772*	47	*1.850*	10.5	*0.413*	51	*2.008*	26	*1.024*	25	*0.984*	18	*0.709*	31.42 X 2.62
FG 1"1/2 - 72.5	G 1"1/2	63	*2.480*	56	*2.205*	13	*0.512*	72,5	*2.854*	34.5	*1.358*	40	*1.575*	24	*0.945*	47.22 X 3.53

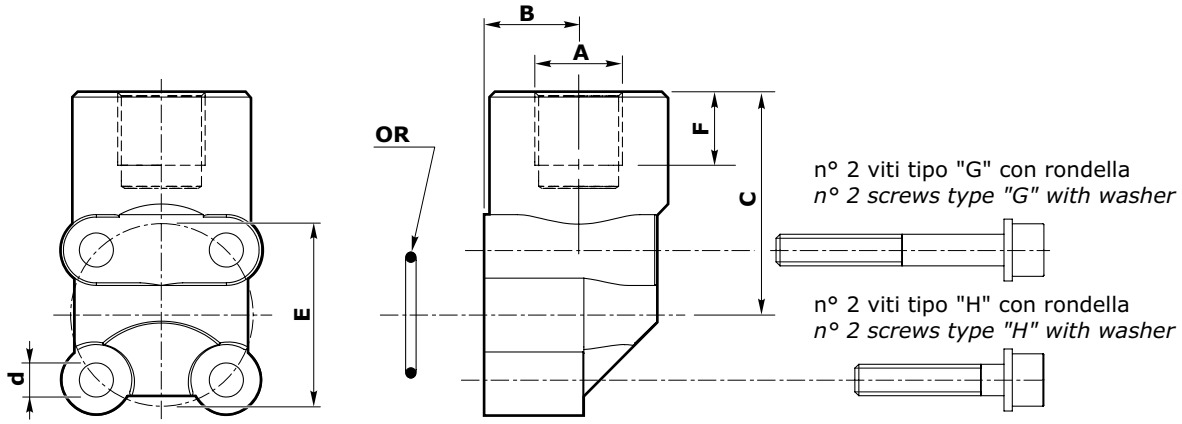
ACCIAIO - STEEL	
TIPO - TYPE	**CODICE ORDINAZIONE - ORDER CODE**
FG 3/8" - 26	016000000
FG 3/8" - 30	016100000
FG 1/2" - 30	016200000
FG 3/4" - 40	016300000
FG 1" - 51	016400000
FG 1"1/2 - 72.5	016500000

ACCESSORI
ACCESSORIES

RACCORDI • *CONNECTORS*

RACCORDO A GOMITO • *ELBOW CONNECTORS*

per connessioni tipo "T" - *for connections type "T"*



ACCIAIO • *STEEL*

TIPO - TYPE	A	B		C		d		E		F		OR	VITI TIPO **H** SCREW TYPE **H**	VITI TIPO **G** SCREW TYPE **G**
		mm	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*			
FG 3/8" 0.5 BKA	G 3/8	18	*0.709*	40	*1.575*	6.5	*0.256*	30	*1.181*	16	*0.630*	15.88 X 2.62	M6 X 35 UNI 5931	M6 X 45 UNI 5931
FG 1/2" 0.5 BKA	G 1/2	18	*0.709*	40	*1.575*	6.5	*0.256*	30	*1.181*	16	*0.630*	15.88 X 2.62		
FG 3/8" 1 BKA	G 3/8	18	*0.709*	40	*1.575*	6.5	*0.256*	35	*1.378*	16	*0.630*	18.72 X 2.62	M6 X 20 UNI 5931	M6 X 35 UNI 5931
FG 1/2" 1 BKA	G 1/2	18	*0.709*	40	*1.575*	6.5	*0.256*	35	*1.378*	16	*0.630*	18.72 X 2.62		
FG 1/2" 2 BKA	G 1/2	24	*0.945*	41.5	*1.634*	6.5	*0.256*	40	*1.575*	16	*0.630*	23.81 X 2.62		M6 X 45 UNI 5931
FG 3/4" 2 BKA	G 3/4	24	*0.945*	41.5	*1.634*	6.5	*0.256*	40	*1.575*	16	*0.630*	23.81 X 2.62		

ALLUMINIO • *ALUMINIUM*

TIPO - TYPE	A	B		C		d		E		F		OR	VITI TIPO **H** SCREW TYPE **H**	VITI TIPO **G** SCREW TYPE **G**
		mm	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*			
FG 3/8" 0.5 BKAL	G 3/8	18	*0.709*	40	*1.575*	6.5	*0.256*	30	*1.181*	14	*0.551*	15.88 X 2.62	M6 X 30 UNI 5931	M6 X 45 UNI 5931
FG 1/2" 0.5 BKAL	G 1/2	18	*0.709*	40	*1.575*	6.5	*0.256*	30	*1.181*	14	*0.551*	15.88 X 2.62		
FG 3/8" 1 BKAL	G 3/8	18	*0.709*	40	*1.575*	6.5	*0.256*	35	*1.378*	16	*0.630*	18.72 X 2.62		
FG 1/2" 1 BKAL	G 1/2	18	*0.709*	40	*1.575*	6.5	*0.256*	35	*1.378*	16	*0.630*	18.72 X 2.62		
FG 1/2" 2 BKAL	G 1/2	24	*0.945*	41.5	*1.634*	6.5	*0.256*	40	*1.575*	16	*0.630*	23.81 X 2.62	M6 X 35 UNI 5931	M6 X 55 UNI 5931
FG 3/4" 2 BKAL	G 3/4	24	*0.945*	41.5	*1.634*	6.5	*0.256*	40	*1.575*	16	*0.630*	23.81 X 2.62		

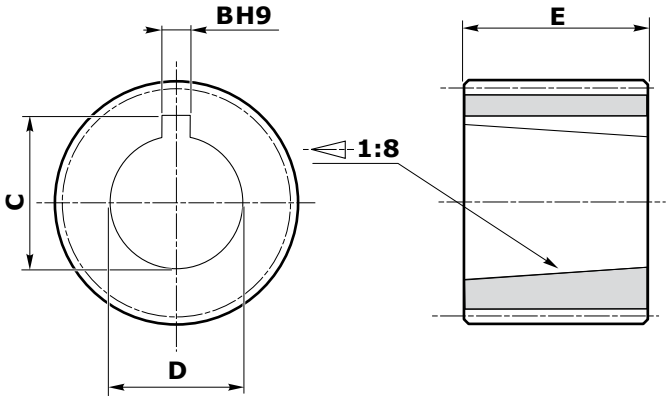
ACCIAIO - STEEL	
TIPO - TYPE	**CODICE ORDINAZIONE - ORDER CODE**
FG 3/8" 0.5 BKA	-
FG 1/2" 0.5 BKA	-
FG 3/8" 1 BKA	01999110.000.000
FG 1/2" 1 BKA	01999120.000.000
FG 1/2" 2 BKA	01999220.000.000
FG 3/4" 2 BKA	01999230.000.000

ALLUMINIO - ALUMINIUM	
TIPO - TYPE	**CODICE ORDINAZIONE - ORDER CODE**
FG 3/8" 0.5 BKAL	01998010.000.000
FG 1/2" 0.5 BKAL	01998020.000.000
FG 3/8" 1 BKAL	01998110.000.000
FG 1/2" 1 BKAL	01998120.000.000
FG 1/2" 2 BKAL	01998220.000.000
FG 3/4" 2 BKAL	01998230.000.000

MANICOTTI DI TRASCINAMENTO • *MALES COUPLING*

MANICOTTO DI TRASCINAMENTO POMPE • *COUPLING FOR GEAR PUMPS*

maschio - *male*

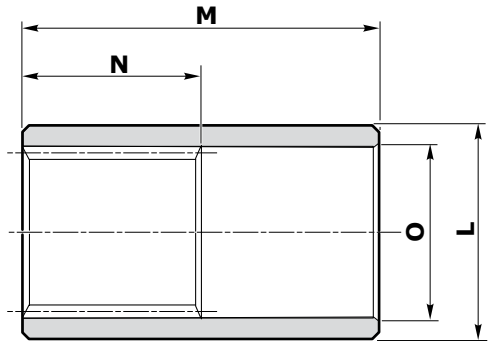


TIPO - TYPE	CODICE ORDINAZIONE - ORDER CODE
1 IS / 12M	018.001.000.000.000
1 IS / 14M	018.002.000.000.000
2 IS / 14M	018.003.000.000.000
2 IS / 15M	018.004.000.000.000
3 IS / 18M	018.005.000.000.000
4 IS / 23M	018.006.000.000.000

TIPO - TYPE	PROFILO PROFILE **DIN 5482**	N. DENTI N. TEETH	B		C		D		E		COPPIA SERRAGGIO DADO-GIUNTO NUT-JOINT SCREW TIGHTENING TORQUE	
			mm	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*	*Nm*	*in-lbs*
1 IS / 12M	B20 X 17	12	2.4	*0.094*	9.6	*0.378*	7.82	*0.308*	14.5	*0.571*	9 ÷ 10	*80 ÷ 89*
1 IS / 14M	B25 X 22	14	2.4	*0.094*	9.6	*0.378*	7.82	*0.308*	14.5	*0.571*	9 ÷ 10	*80 ÷ 89*
2 IS / 14M	B25 X 22	14	3.17	*0.125*	16.5	*0.650*	14.31	*0.563*	22	*0.866*	22 ÷ 25	*195 ÷ 221*
2 IS / 15M	B28 X 25	15	3.17	*0.125*	15.8	*0.622*	14.31	*0.563*	22	*0.866*	32 ÷ 35	*283 ÷ 310*
3 IS / 18M	B35 X 31	18	4	*0.157*	21	*0.827*	18.39	*0.724*	26	*1.024*	50 ÷ 55	*443 ÷ 487*
4 IS / 23M	B48 X 44	23	6.35	*0.250*	30.2	*1.189*	27.50	*1.083*	42	*1.654*	100 ÷ 120	*885 ÷ 1062*

MANICOTTO DI TRASCINAMENTO POMPE • *COUPLING FOR GEAR PUMPS*

femmina - *female*



TIPO - TYPE	CODICE ORDINAZIONE - ORDER CODE
1 IS / 12F	018.021.000.000.000
1 IS / 14F	018.022.000.000.000
2 IS / 15F	018.023.000.000.000
3 IS / 18F	018.024.000.000.000
4 IS / 23F	018.025.000.000.000

TIPO - TYPE	PROFILO PROFILE **DIN 5482**	N. DENTI N. TEETH	L		M		N		O	
			mm	*inch*	*mm*	*inch*	*mm*	*inch*	*mm*	*inch*
1 IS / 12F	A20 X 17	12	2.4	*0.094*	9.6	*0.378*	7.82	*0.308*	14.5	*0.571*
1 IS / 14F	A25 X 22	14	2.4	*0.094*	9.6	*0.378*	7.82	*0.308*	14.5	*0.571*
2 IS / 15F	A28 X 25	15	3.17	*0.125*	15.8	*0.622*	14.31	*0.563*	22	*0.866*
3 IS / 18F	A35 X 31	18	4	*0.157*	21	*0.827*	18.39	*0.724*	26	*1.024*
4 IS / 23F	A48 X 44	23	6.35	*0.250*	30.2	*1.189*	27.50	*1.083*	42	*1.654*

CODICI ORDINAZIONE
ORDER CODES

1SP	CODICI COMPLETI POMPA SINGOLA - GRUPPO 1 *COMPLETE ORDER CODE SINGLE PUMP - GROUP 1*	
CODICE *CODE*	SIGLA DI ORDINAZIONE COMPLETA *COMPLETE ORDER CODE*	DESCRIZIONE *DESCRIPTION*
1GP10010000	1SP-A-090-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 0.89 cm³/giro - connessione GAS *European flange - displacement 0.05 in³/rev - connection GAS*
1GP10010028	1SP-A-012-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 1.18 cm³/giro - connessione GAS *European flange - displacement 0.07 in³/rev - connection GAS*
1GP10010032	1SP-A-012-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 1.18 cm³/giro - connessione UNF *European flange - displacement 0.07 in³/rev - connection UNF*
1GP10010066	1SP-A-016-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 1.6 cm³/giro - connessione UNF *European flange - displacement 0.10 in³/rev - connection UNF*
1GP10010088	1SP-A-020-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 2.0 cm³/giro - connessione GAS *European flange - displacement 0.12 in³/rev - connection GAS*
1GP10010090	1SP-A-020-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 2.0 cm³/giro - connessione UNF *European flange - displacement 0.12 in³/rev - connection UNF*
1GP10010126	1SP-A-025-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 2.5 cm³/giro - connessione GAS *European flange - displacement 0.15 in³/rev - connection GAS*
1GP10010129	1SP-A-025-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 2.5 cm³/giro - connessione UNF *European flange - displacement 0.15 in³/rev - connection UNF*
1GP10010163	1SP-A-032-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 3.2 cm³/giro - connessione GAS *European flange - displacement 0.20 in³/rev - connection GAS*
1GP10010167	1SP-A-032-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 3.2 cm³/giro - connessione UNF *European flange - displacement 0.20 in³/rev - connection UNF*
1GP10010204	1SP-A-032-S-MC32-B-N-27-5-G	Flangia per minicentralina - cilindrata 3.2 cm³/giro - connessione GAS *Power-pack Flange - displacement 0.20 in³/rev - connection GAS*
1GP10010211	1SP-A-037-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 3.7 cm³/giro - connessione GAS *European flange - displacement 0.23 in³/rev - connection GAS*
1GP10010241	1SP-A-042-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 4.2 cm³/giro - connessione GAS *European flange - displacement 0.26 in³/rev - connection GAS*
1GP10010243	1SP-A-042-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 4.2 cm³/giro - connessione UNF *European flange - displacement 0.26 in³/rev - connection UNF*
1GP10010275	1SP-A-050-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 5.0 cm³/giro - connessione GAS *European flange - displacement 0.31 in³/rev - connection GAS*
1GP10010278	1SP-A-050-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 5.0 cm³/giro - connessione UNF *European flange - displacement 0.31 in³/rev - connection UNF*
1GP10010312	1SP-A-063-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 6.3 cm³/giro - connessione GAS *European flange - displacement 0.38 in³/rev - connection GAS*
1GP10010316	1SP-A-063-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 6.3 cm³/giro - connessione UNF *European flange - displacement 0.38 in³/rev - connection UNF*
1GP10010320	1SP-A-063-D-EUR-B-N-14-0-N	Flangia Europea - cilindrata 6.3 cm³/giro - albero 14 - connessione UNF *European flange - displacement 0.38 in³/rev - shaft 14 - connection UNF*
1GP10010374	1SP-A-078-S-MC32-B-N-27-5-G	Flangia per minicentralina - cilindrata 7.76 cm³/giro - connessione GAS *Power-pack Flange - displacement 0.47 in³/rev - connection GAS*

CODICI ORDINAZIONE
ORDER CODES

2SP	CODICI COMPLETI POMPA SINGOLA - GRUPPO 2 *COMPLETE ORDER CODE SINGLE PUMP - GROUP 2*	
CODICE *CODE*	SIGLA DI ORDINAZIONE COMPLETA *COMPLETE ORDER CODE*	DESCRIZIONE *DESCRIPTION*
1GP20010000	2SP-A-040-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 4.0 cm³/giro - connessione GAS *European flange - displacement 0.24 in³/rev - connection GAS*
1GP20010005	2SP-A-040-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 4.0 cm³/giro - connessione UNF *European flange - displacement 0.24 in³/rev - connection UNF*
1GP20010075	2SP-A-060-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 6.0 cm³/giro - connessione GAS *European flange - displacement 0.37 in³/rev - connection GAS*
1GP20010081	2SP-A-060-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 6.0 cm³/giro - connessione UNF *European flange - displacement 0.37 in³/rev - connection UNF*
1GP20010172	2SP-A-080-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 8.5 cm³/giro - connessione GAS *European flange - displacement 0.52 in³/rev - connection GAS*
1GP20010179	2SP-A-080-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 8.5 cm³/giro - connessione UNF *European flange - displacement 0.52 in³/rev - connection UNF*
1GP20010299	2SP-A-110-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 11 cm³/giro - connessione GAS *European flange - displacement 0.67 in³/rev - connection GAS*
1GP20010307	2SP-A-110-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 11 cm³/giro - connessione UNF (destra) *European flange - displacement 0.67 in³/rev - connection UNF (right)*
1GP20010375	2SP-A-110-D-SAEA-B-N-14-0-N	Flangia SAEA - cilindrata 11 cm³/giro - albero 14 - connessione UNF *SAEA flange - displacement 0.67 in³/rev - shaft 14 - connection UNF*
1GP20010396	2SP-A-110-S-EUR-B-N-10-0-N	Flangia Europea - cilindrata 11 cm³/giro - connessione UNF (sinistra) *European flange - displacement 0.67 in³/rev - connection UNF (left)*
1GP20010447	2SP-A-140-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 14 cm³/giro - connessione GAS *European flange - displacement 0.85 in³/rev - connection GAS*
1GP20010454	2SP-A-140-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 14 cm³/giro - connessione UNF *European flange - displacement 0.85 in³/rev - connection UNF*
1GP20010515	2SP-A-140-D-SAEA-B-N-14-0-N	Flangia SAEA - cilindrata 14 cm³/giro - albero 14 - connessione UNF *SAEA flange - displacement 0.85 in³/rev - shaft 14 - connection UNF*
1GP20010572	2SP-A-160-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 16.5 cm³/giro - connessione GAS *European flange - displacement 1.01 in³/rev - connection GAS*
1GP20010579	2SP-A-160-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 16.5 cm³/giro - connessione UNF (destra) *European flange - displacement 1.01 in³/rev - connection UNF (right)*
1GP20010637	2SP-A-160-D-SAEA-B-N-14-0-N	Flangia SAEA - cilindrata 16.5 cm³/giro - albero 14 - connessione UNF *SAEA flange - displacement 1.01 in³/rev - shaft 14 - connection UNF*
1GP20010657	2SP-A-160-S-EUR-B-N-10-0-N	Flangia Europea - cilindrata 16.5 cm³/giro - connessione UNF (sinistra) *European flange - displacement 1.01 in³/rev - connection UNF (left)*
1GP20010706	2SP-A-190-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 19.5 cm³/giro - connessione GAS *European flange - displacement 1.19 in³/rev - connection GAS*
1GP20010715	2SP-A-190-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 19.5 cm³/giro - connessione UNF *European flange - displacement 1.19 in³/rev - connection UNF*
1GP20010706	2SP-A-220-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 22.5 cm³/giro - connessione GAS *European flange - displacement 1.37 in³/rev - connection GAS*
1GP20010715	2SP-A-220-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 22.5 cm³/giro - connessione UNF *European flange - displacement 1.37 in³/rev - connection UNF*
1GP20010921	2SP-A-260-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 26 cm³/giro - connessione GAS *European flange - displacement 1.59 in³/rev - connection GAS*
1GP20010929	2SP-A-260-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 26 cm³/giro - connessione UNF *European flange - displacement 1.59 in³/rev - connection UNF*

CODICI ORDINAZIONE
ORDER CODES

3GP	CODICI COMPLETI POMPA SINGOLA - GRUPPO 3 *COMPLETE ORDER CODE SINGLE PUMP - GROUP 3*	
CODICE *CODE*	SIGLA DI ORDINAZIONE COMPLETA *COMPLETE ORDER CODE*	DESCRIZIONE *DESCRIPTION*
1GP30010066	3GP-G-230-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 23 cm³/giro - connessione UNF *European flange - displacement 1.4 in³/rev - connection UNF*
1GP30010116	3GP-G-300-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 30.2 cm³/giro - connessione GAS *European flange - displacement 1.8 in³/rev - connection GAS*
1GP30010117	3GP-G-300-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 30.2 cm³/giro - connessione UNF *European flange - displacement 1.8 in³/rev - connection UNF*
1GP30010178	3GP-G-340-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 33.8 cm³/giro - connessione GAS *European flange - displacement 2.1 in³/rev - connection GAS*
1GP30010179	3GP-G-340-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 33.8 cm³/giro - connessione UNF *European flange - displacement 2.1 in³/rev - connection UNF*
1GP30010234	3GP-G-370-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 37.5 cm³/giro - connessione GAS *European flange - displacement 2.3 in³/rev - connection GAS*
1GP30010235	3GP-G-370-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 37.5 cm³/giro - connessione UNF *European flange - displacement 2.3 in³/rev - connection UNF*
1GP30010244	3GP-G-440-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 44.6 cm³/giro - connessione GAS *European flange - displacement 2.7 in³/rev - connection GAS*
1GP30010245	3GP-G-440-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 44.6 cm³/giro - connessione UNF *European flange - displacement 2.7 in³/rev - connection UNF*
1GP30010349	3GP-G-530-D-EUR-B-N-10-0-G	Flangia Europea - cilindrata 53 cm³/giro - connessione GAS *European flange - displacement 3.2 in³/rev - connection GAS*
1GP30010351	3GP-G-530-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 53 cm³/giro - connessione UNF *European flange - displacement 3.2 in³/rev - connection UNF*
1GP30010359	3GP-G-620-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 62.7 cm³/giro - connessione UNF *European flange - displacement 3.8 in³/rev - connection UNF*
1GP30010408	3GP-G-700-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 70.5 cm³/giro - connessione UNF *European flange - displacement 4.3 in³/rev - connection UNF*
1GP30010413	3GP-G-770-D-EUR-B-N-10-0-N	Flangia Europea - cilindrata 77.2 cm³/giro - connessione UNF *European flange - displacement 4.7 in³/rev - connection UNF*

CODICI ORDINAZIONE
ORDER CODES

2SM	CODICI COMPLETI MOTORE - GRUPPO 2 *COMPLETE ORDER CODE MOTOR - GROUP 2*	
CODICE *CODE*	SIGLA DI ORDINAZIONE COMPLETA *COMPLETE ORDER CODE*	DESCRIZIONE *DESCRIPTION*
1GM20010126	2SM-A-110-R-EUR-B-N-10-0-G	Flangia europea - cilindrata 11 cm^3/giro - connessione GAS (reversibile) *European flange - displacement 0.67 in^3/rev - connection GAS (reversible)*
1GM20010128	2SM-A-110-R-EUR-B-N-10-0-N	Flangia europea - cilindrata 11 cm^3/giro - connessione UNF (reversibile) *European flange - displacement 0.67 in^3/rev - connection UNF (reversible)*
1GM20010180	2SM-A-140-R-EUR-B-N-10-0-G	Flangia europea - cilindrata 14 cm^3/giro - connessione GAS (reversibile) *European flange - displacement 0.85 in^3/rev - connection GAS (reversible)*
1GM20010181	2SM-A-140-R-EUR-B-N-10-0-N	Flangia europea - cilindrata 14 cm^3/giro - connessione UNF (reversibile) *European flange - displacement 0.85 in^3/rev - connection UNF (reversible)*
1GM20010223	2SM-A-160-R-EUR-B-N-10-0-G	Flangia europea - cilindrata 16.5 cm^3/giro - connessione GAS (reversibile) *European flange - displacement 1.01 in^3/rev - connection GAS (reversible)*
1GM20010225	2SM-A-160-R-EUR-B-N-10-0-N	Flangia europea - cilindrata 16.5 cm^3/giro - connessione UNF (reversibile) *European flange - displacement 1.01 in^3/rev - connection UNF (reversible)*
1GM20010269	2SM-A-190-R-EUR-B-N-10-0-G	Flangia europea - cilindrata 19.5 cm^3/giro - connessione GAS (reversibile) *European flange - displacement 1.19 in^3/rev - connection GAS (reversible)*
1GM20010271	2SM-A-190-R-EUR-B-N-10-0-N	Flangia europea - cilindrata 19.5 cm^3/giro - connessione UNF (reversibile) *European flange - displacement 1.19 in^3/rev - connection UNF (reversible)*