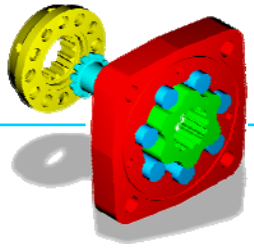
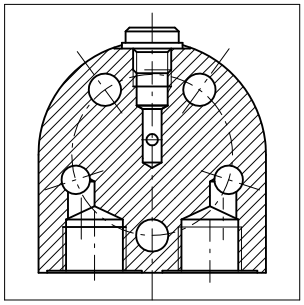


BGM

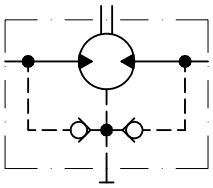
MOTORI ORBITALI

HYDRAULIC MOTORS SERIES

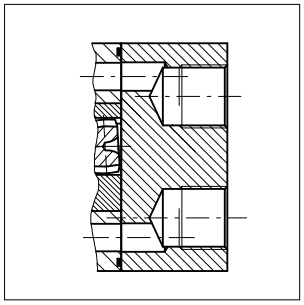
CARATTERISTICHE DEL MOTORE
MOTOR FEATURES



Alimentazione laterale.
Side ports configuration.

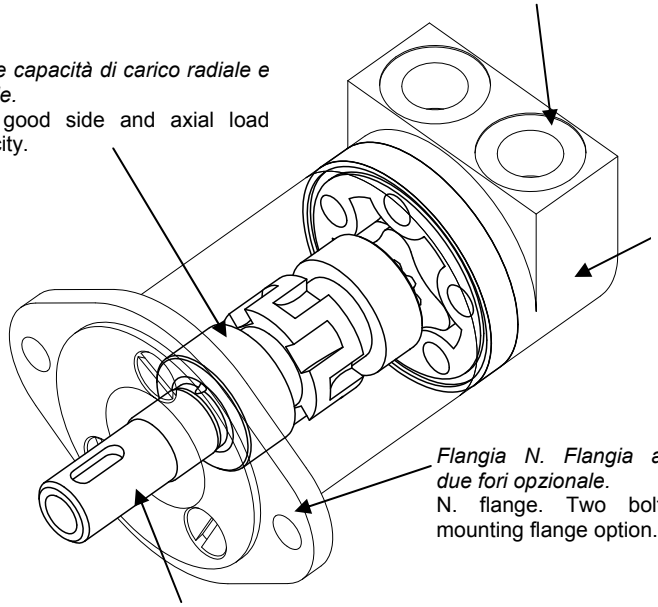


Possibilità di alimentazione laterale o posteriore.
Rear and side ports option.

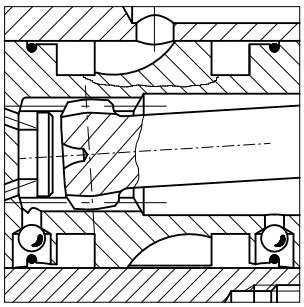


Alimentazione posteriore.
Rear ports configuration.

Buone capacità di carico radiale e assiale.
Very good side and axial load capacity.



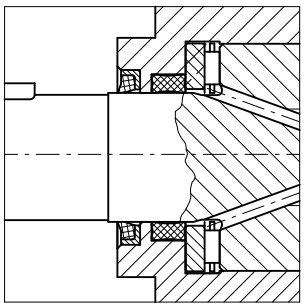
Valvole interne di drenaggio.
Built - in check valves.



Distribuzione radiale e tolleranze ridotte al minimo per assicurare un drenaggio ridotto - Valvole interne di drenaggio.
Optimized spool valve design to minimize the leakage - built-in check valves.

Flangia N. Flangia a due fori opzionale.
N. flange. Two bolt mounting flange option.

Elevato rapporto coppia/peso e buona regolarità a basso numero di giri.
High torque/weight ratio and very good low speed performance.



Parapolvere per proteggere la guarnizione di tenuta dell'albero dalle impurità.
Dust seal to protect the high pressure shaft seal.

CODICE DI ORDINAZIONE
ORDERING CODE

Serie Series	*Cilindrata* Displacemet	*Albero* Shaft	*Attacchi* Ports	*Opzioni* Options
BGM	**13**	**C16**		**SP1**

CODICE CODE	*Cilindrata* Displacement
13	*13 cm³/giro* [0.79 in³/rev]
20	*20 cm³/giro* [1.22 in³/rev]
32	*32 cm³/giro* [1.95 in³/rev]
40	*40 cm³/giro* [2.44 in³/rev]
50	*50 cm³/giro* [3.05 in³/rev]

CODICE CODE	*Albero* Shaft
C16	*Cilindrico Ø16 mm* Parallel keyed 0.6 in
S16	*Scanalato Profilo B17x14 DIN5482* B17x14 DIN5482 Splined

CODICE CODE	*Attacchi* Ports
	3/8 G (BSPP)
9/16"-18 UNF	9/16"-18 UNF

CODICE CODE	*Opzioni* Options
	Nessuna Opzione Without Option
N	Flangia N N Flange
TAC-E	TAC-E
/Q	/Q
SP1	SP1
N SP1	Flangia N + SP1 N Flange + SP1

In caso di caratteristiche non elencate, contattare Uff.Tecnico.
Please contact technical departement for not listed features.

CARATTERISTICHE TECNICHE
TECHNICAL SPECIFICATIONS

Motore Motor	*Cilindrata* Displacement cm^3/giro [in^3/rev]	*Max. pressione in ingresso* Max. input pressure bar [psi]	*Pressione diff. max.* Max. differential pressure bar [psi]	*Coppia max.** Max. torque* Nm [lbf·ft]	*Portata max.* Max. flow l/min [U.S. gpm]	*Velocità max.* Max. speed rpm	*Potenza max.* Max. horsepower kW [hp]
BGM 13	12.9 [0.78]	Cont 140 [2030] Int[1] 175 [2537] Peak[2] 225 [3265]	Cont 100 [1450] Int[1] 140 [2030] Peak[2] 200 [2900]	Cont 16 [11.7] Int[1] 23 [16.9] Peak[2] 33 [24.3[	Cont 20 [5.28] Int[1] 25 [6.60]	Cont 1550 Int[1] 1935	Cont 2.3 [3.08] Int[1] 3.2 [4.28]
BGM 20	20 [1.22]	Cont 140 [2030] Int[1] 175 [2537] Peak[2] 225 [3265]	Cont 100 [1450] Int[1] 140 [2030] Peak[2] 200 [2900]	Cont 25 [18.4] Int[1] 35 [25.7] Peak[2] 51 [37.5]	Cont 20 [5.28] Int[1] 25 [6.60]	Cont 1000 Int[1] 1250	Cont 2.3 [3.08] Int[1] 3.3 [4.42]
BGM 32	31.8 [1.93]	Cont 140 [2030] Int[1] 175 [2537] Peak[2] 225 [3265]	Cont 100 [1450] Int[1] 140 [2030] Peak[2] 160 [2320]	Cont 39 [28.7] Int[1] 54 [39.7] Peak[2] 60 [44.2]	Cont 20 [5.28] Int[1] 25 [6.60]	Cont 625 Int[1] 785	Cont 2.3 [3.08] Int[1] 2.8 [3.75]
BGM 40	40.1 [2.44]	Cont 140 [2030] Int[1] 175 [2537] Peak[2] 225 [3265]	Cont 100 [1450] Int[1] 140 [2030] Peak[2] 160 [2320]	Cont 50 [36.8] Int[1] 67 [49.3] Peak[2] 76 [56.0]	Cont 20 [5.28] Int[1] 25 [6.60]	Cont 495 Int[1] 620	Cont 1.8 [2.41] Int[1] 2.5 [3.35]
BGM 50	50 [3.05]	Cont 140 [2030] Int[1] 175 [2537] Peak[2] 225 [3265]	Cont 80 [1160] Int[1] 140 [2030] Peak[2] 160 [2320]	Cont 49 [36.1] Int[1] 83 [61.1] Peak[2] 94 [69.2]	Cont 20 [5.28] Int[1] 25 [6.60]	Cont 400 Int[1] 500	Cont 1.8 [2.41] Int[1] 2.4 [3.21]

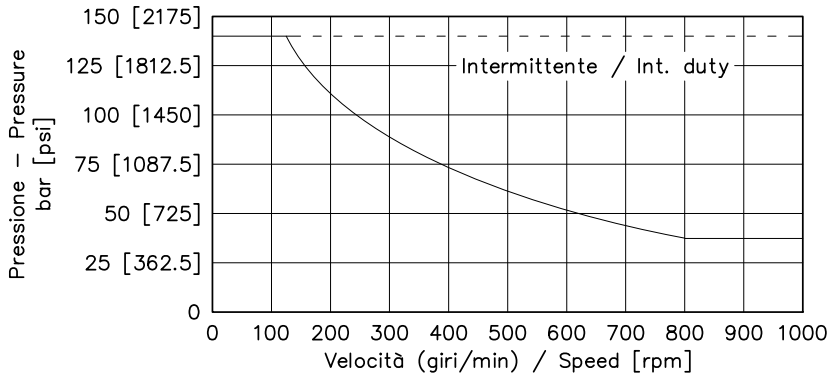
[1] *Le condizioni intermittenti non devono durare più del 10% di ogni minuto* / Intermittent duty must not exceed 10% each minute.
[2] *Le condizioni di picco non devono durare più del 1% di ogni minuto* / Peak duty must not exceed 1% each minute.

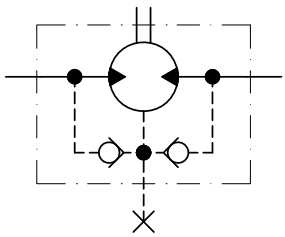
Motore Motor	*Pressione max scar. con drenaggio* Max return pressure with drain line bar [psi]	*Pressione max avviamento a vuoto* Max starting pressure with no load bar [psi]	*Coppia minima di spunto* Min starting torque Nm [lbf·ft]
BGM 13	140 [2030]	4 [58]	*A press. diff. Max* At max Δp: Cont 12 [8.8], Int[1] 17 [12.5]
BGM 20	140 [2030]	4 [58]	*A press. diff. Max* At max Δp: Cont 21 [15.4], Int[1] 30 [22.1]
BGM 32	140 [2030]	4 [58]	*A press. diff. Max* At max Δp: Cont 35 [25.7], Int[1] 51 [37.5]
BGM 40	140 [2030]	4 [58]	*A press. diff. Max* At max Δp: Cont 34 [25], Int[1] 48 [35.3]
BGM 50	140 [2030]	4 [58]	*A press. diff. Max* At max Δp: Cont 40 [29.4], Int[1] 70 [51.5]

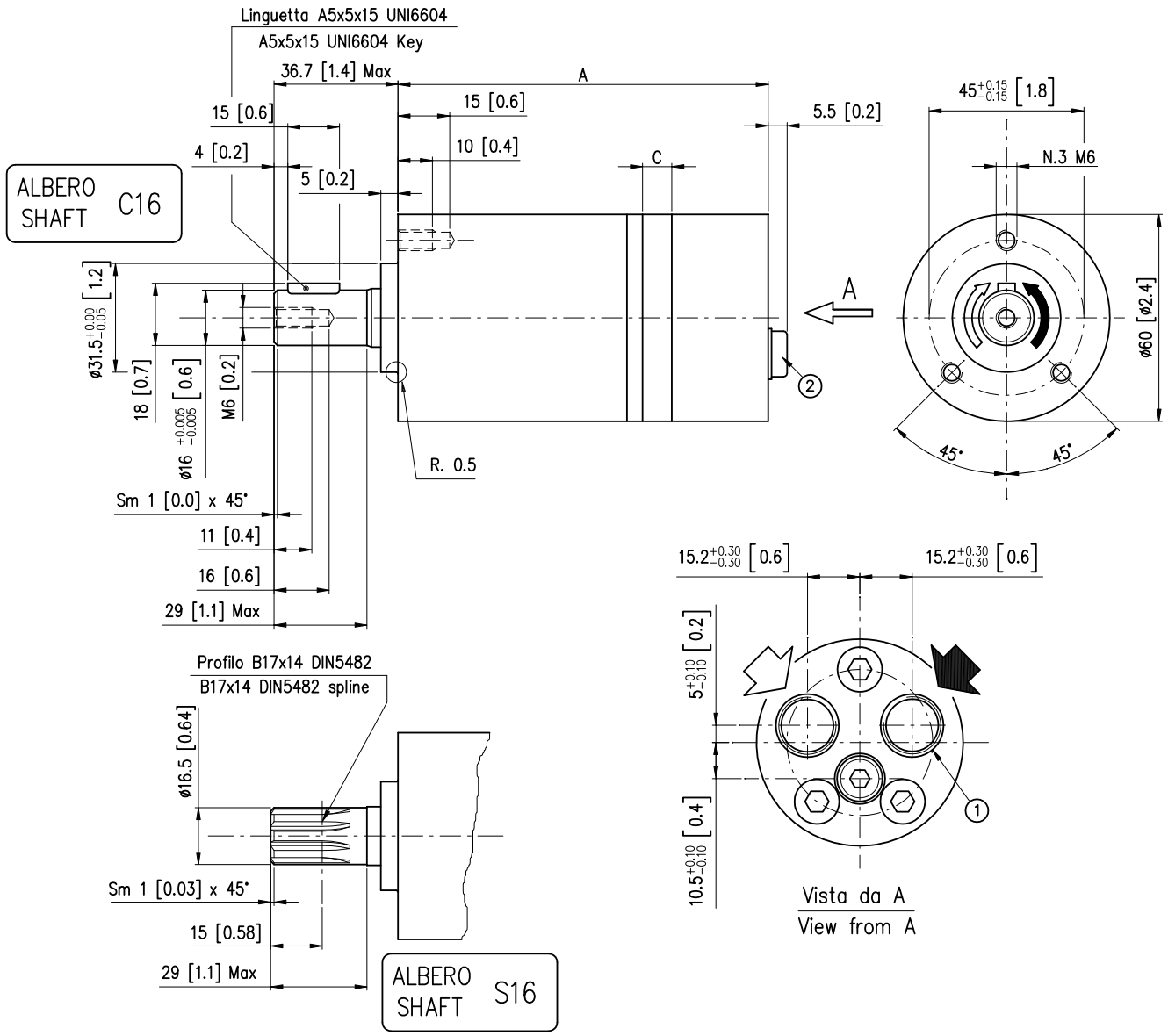
MASSIMA PRESSIONE AMMESSA SULLA GUARNIZIONE ALBERO
MAX PERMISSIBLE SHAFT SEAL PRESSURE

Pressione massima di scarico senza drenaggio o massima pressione nella linea di drenaggio.

Max. return pressure without drain line or max. pressure in the drain line.







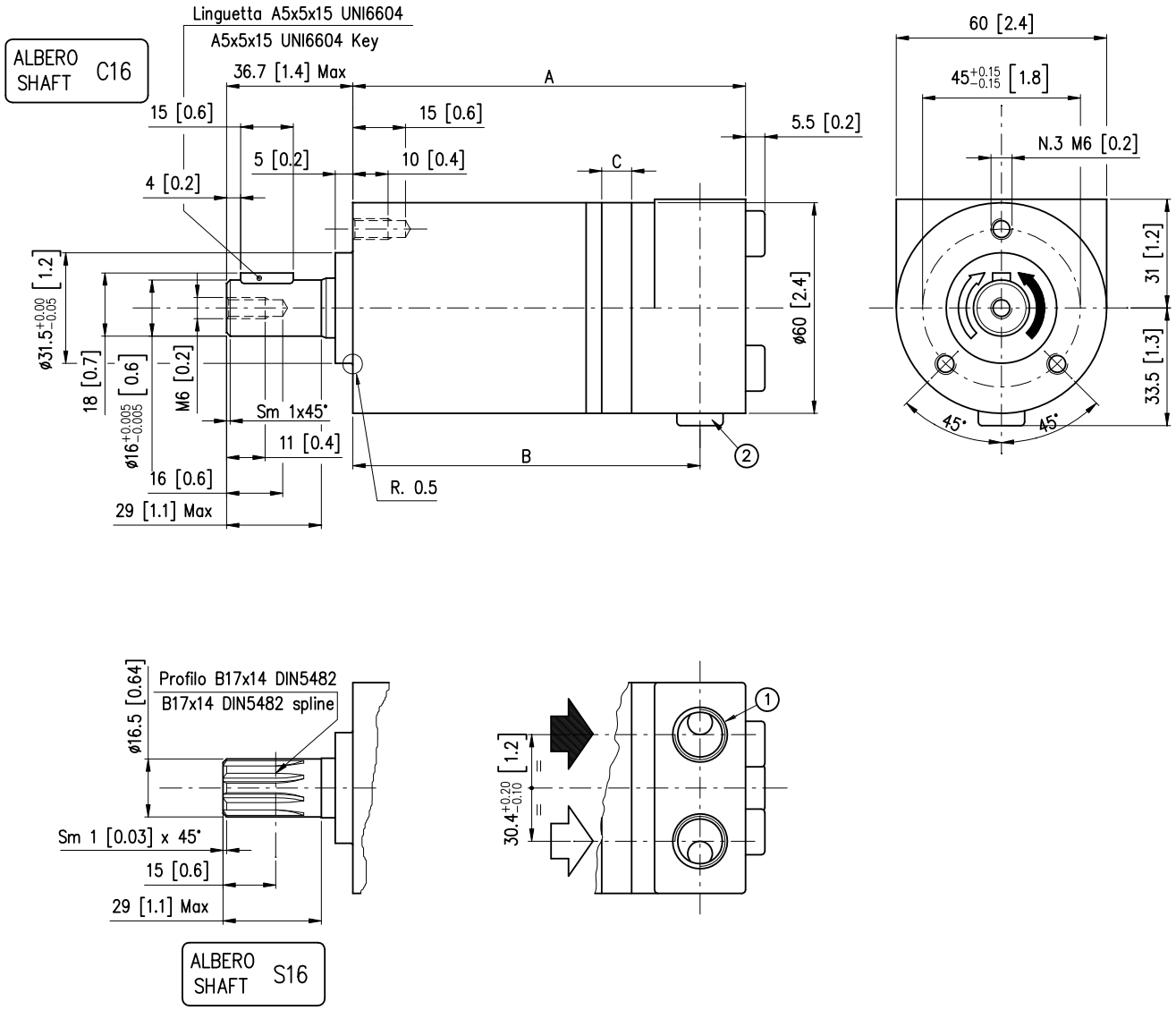
VERSIONE METRICA / METRIC VERSION

1) *N.2 Fori di alimentazione 3/8 G (BSPP) prof. filetto 12mm*
   N.2 3/8 G (BSPP) main ports thread depth [0.46in]
2) *Drenaggio motore 1/8 G (BSPP) prof. filetto 9mm*
   1/8 G (BSPP) drain port thread depth [0.35in]

VERSIONE SAE / SAE VERSION

1) *N.2 Fori di alimentazione 9/16"-18 UNF prof. filetto 13mm*
   N.2 9/16"-18 UNF main ports thread depth [0.5in]
2) *Drenaggio motore 7/16"-20 UNF prof. filetto 12mm*
   7/16"-20 UNF drain port thread depth [0.5in]

		BGM 13	BGM 20	BGM 32	BGM 40	BGM 50
A	**mm [in]**	104.5 [4.1]	107.5 [4.2]	112.5 [4.4]	116 [4.5]	120 [4.7]
B	**mm [in]**	-	-	-	-	-
C	**mm [in]**	5.5 [0.2]	8.5 [0.3]	13.5 [0.5]	17 [0.7]	21 [0.8]
***Pesi* - Weight**	**kg [lb]**	2 [4.4]	2.06 [4.5]	2.15 [4.7]	2.2 [4.8]	2.25 [4.9]



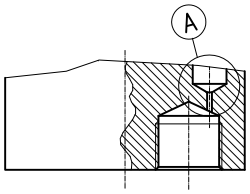
VERSIONE METRICA / METRIC VERSION

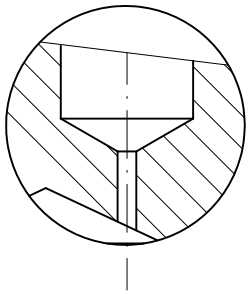
1) *N.2 Fori di alimentazione 3/8 G (BSPP) prof. filetto 12mm*
   N.2 3/8 G (BSPP) main ports thread depth [0.46in]
2) *Drenaggio motore 1/8 G (BSPP) prof. filetto 10mm*
   1/8 G (BSPP) drain port thread depth [0.39in]

VERSIONE SAE / SAE VERSION

1) *N.2 Fori di alimentazione 9/16"-18 UNF prof. filetto 13mm*
   N.2 9/16"-18 UNF main ports thread depth [0.5in]
2) *Drenaggio motore 7/16"-20 UNF prof. filetto 12mm*
   7/16"-20 UNF drain port thread depth [0.5in]

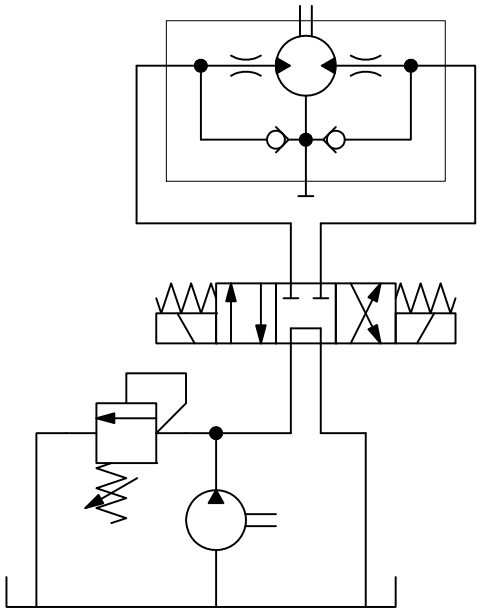
		BGM 13 SP1	BGM 20 SP1	BGM 32 SP1	BGM 40 SP1	BGM 50 SP1
A	**mm [in]**	113.8 [4.5]	116.8 [4.6]	121.8 [4.8]	125.3 [4.9]	129.3 [5.1]
B	**mm [in]**	95.3 [3.7]	98.3 [3.9]	103.3 [4.1]	106.8 [4.2]	110.8 [4.4]
C	**mm [in]**	5.5 [0.2]	8.5 [0.3]	13.5 [0.5]	17 [0.7]	21 [0.8]
***Pesi* - Weight**	**kg [lb]**	2.1 [4.6]	2.16 [4.7]	2.25 [4.9]	2.3 [5]	2.35 [5.1]





PART. A

Strozzatore fisso
Flow restrictor



I motori BGM/Q dispongono di uno strozzatore sulla parte posteriore del motore che assicura velocità molto basse dell'albero anche in presenza di valori elevati di portata.
Una tipica applicazione è quella della rotazione dei tubi di scarico delle turbine da neve montate su autocarri o trattori.

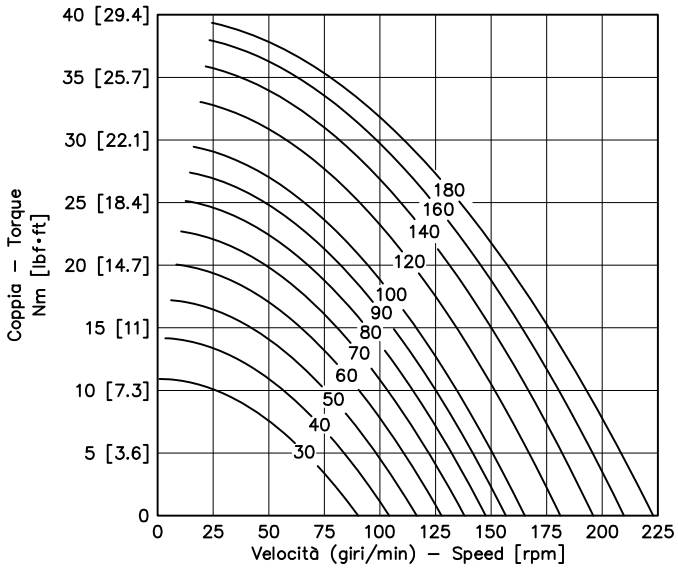
BGM/Q motors feature a restrictor at the back of the motor meant to ensure very low shaft speed though in presence of high flow.
Typical applications are truck or tractor mounted snow blowers.

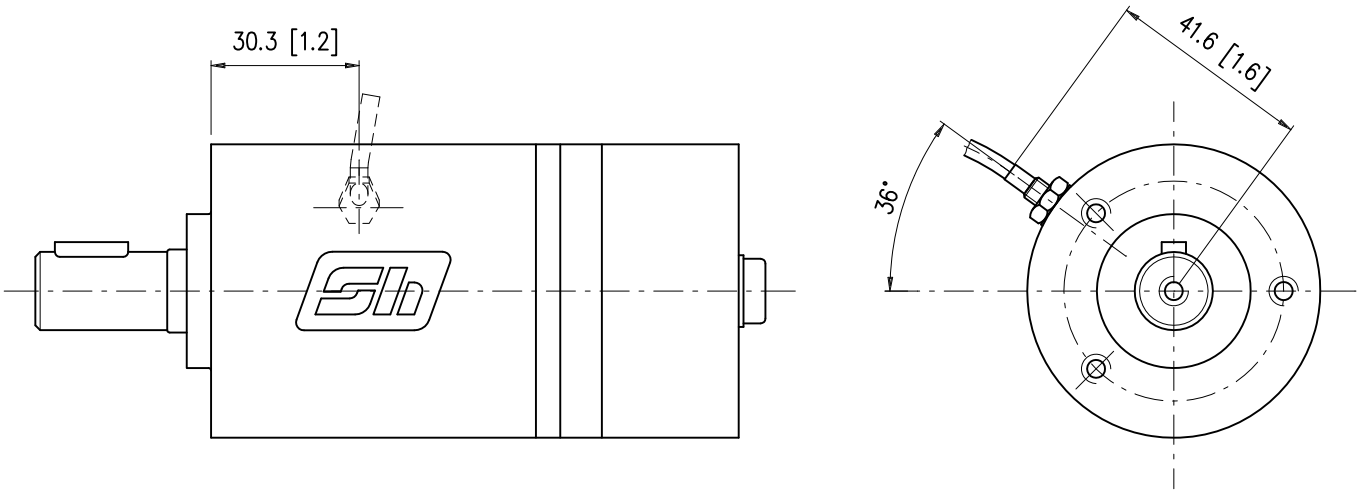
CURVE CARATTERISTICHE
PERFORMANCE CURVES

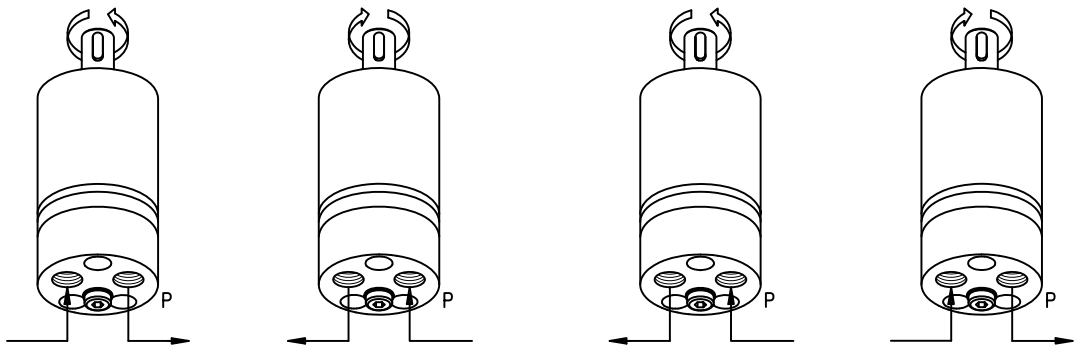
BGM/Q

Curva caratteristica della coppia (Nm) in funzione del numero di giri per le diverse pressioni di taratura della valvola a monte della strozzatura con foro D = 1.2 mm su motore BGM32.

Performance curves (torque/speed) according to pressure relief valve setting and 1.2 mm [0.04 in] diameter (for BGM32) of flow restrictor.

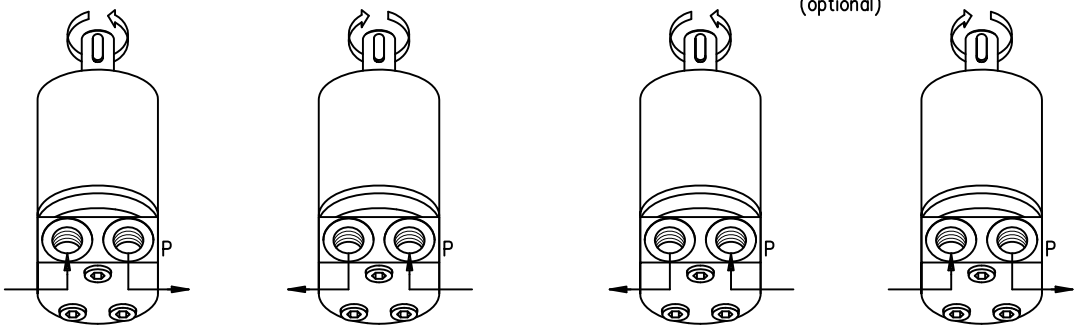






Senso di rotazione SX
CCW direction of rotation
STANDARD

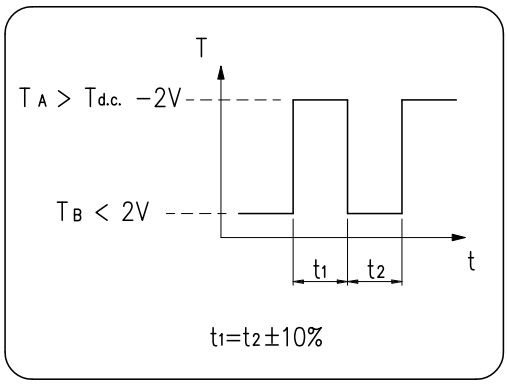
Senso di rotazione DX
(opzionale)
CW direction of rotation
(optional)

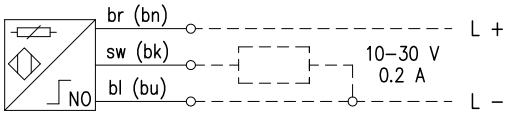


Caratteristiche sensore elettronico

Numero d'impulsi per giro = 4
Principio di funzionamento induttivo
Funzione di uscita PNP
Tensione nominale 10-30 V d.c.
Caricabilità massima 200 mA
Frequenza massima 3000 Hz
Campo di temperatura -25° C +85° C
Gradi di protezione IP 67
Lunghezza cavo 2 m

Segnale di uscita in versione elettronica
Output signal electronic tacho



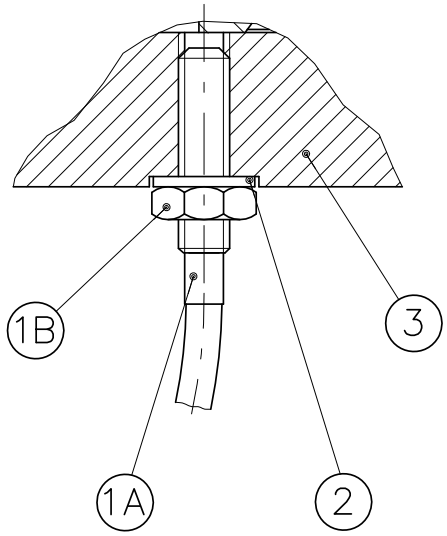


Electronic sensor technical features

Number of pulses for revolution = 4
Inductive principle
Output current PNP
Voltage 10-30 V d.c.
Max load 200 mA
Max frequency 3000 Hz
Temperature range -25°C +85°C
Enclosure IP 67
Cable length 2 m

Kit di trasformazione 109.0900.0000

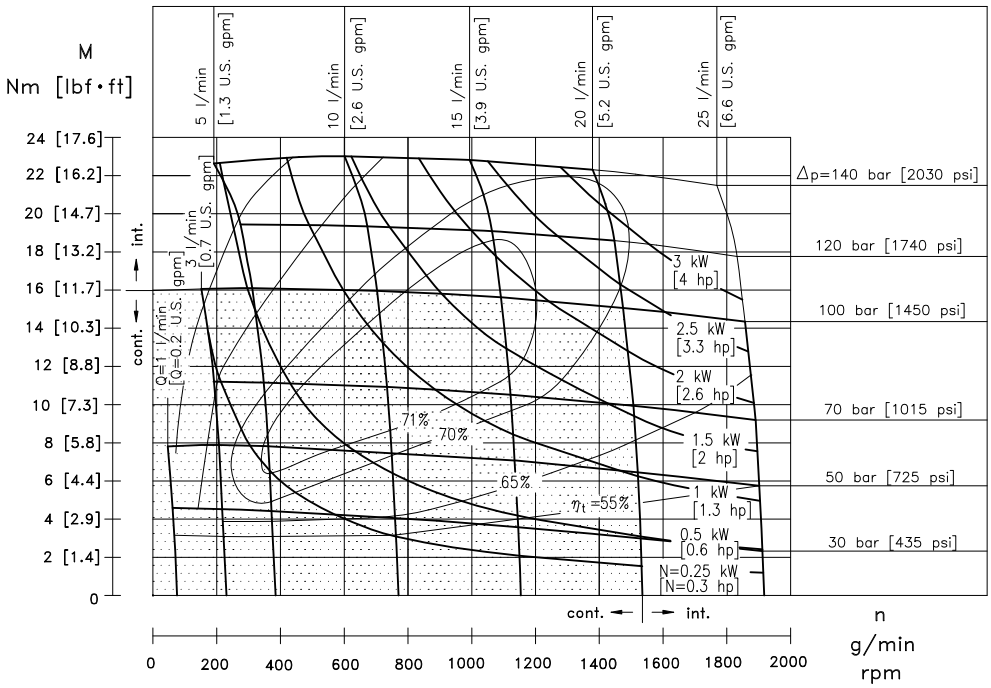
1. *Cod. 424.0090.0000*
   Sensore induttivo (1A) + dado di fissaggio M5x0.5 (1B)
2. *Cod. 406.0730.0000*
   Rondella di tenuta GM2000 M5
3. *Cod. 301.1780.0000*
   Corpo speciale per BGM versione TAC-E



Transformation kit 109.0900.0000

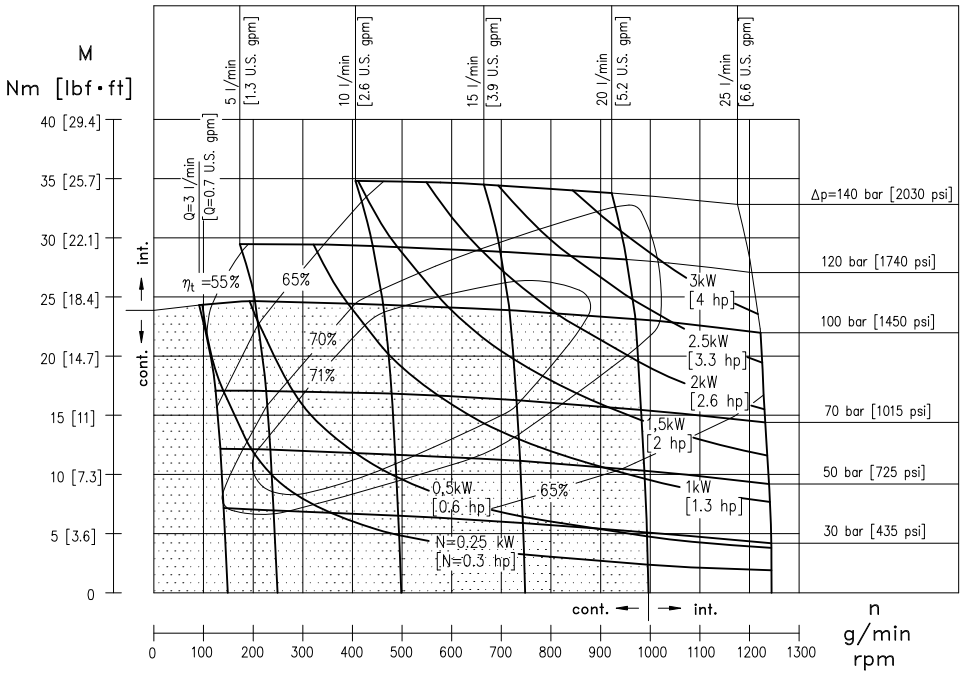
1. Cod. 424.0090.0000
   inductive sensor (1A) + M5x0.5 locking nut (1B)
2. Cod. 406.0730.0000
   Sealing washer GM2000 M5
3. Cod. 301.1780.0000
   BGM TAC-E special version casing

BGM 13



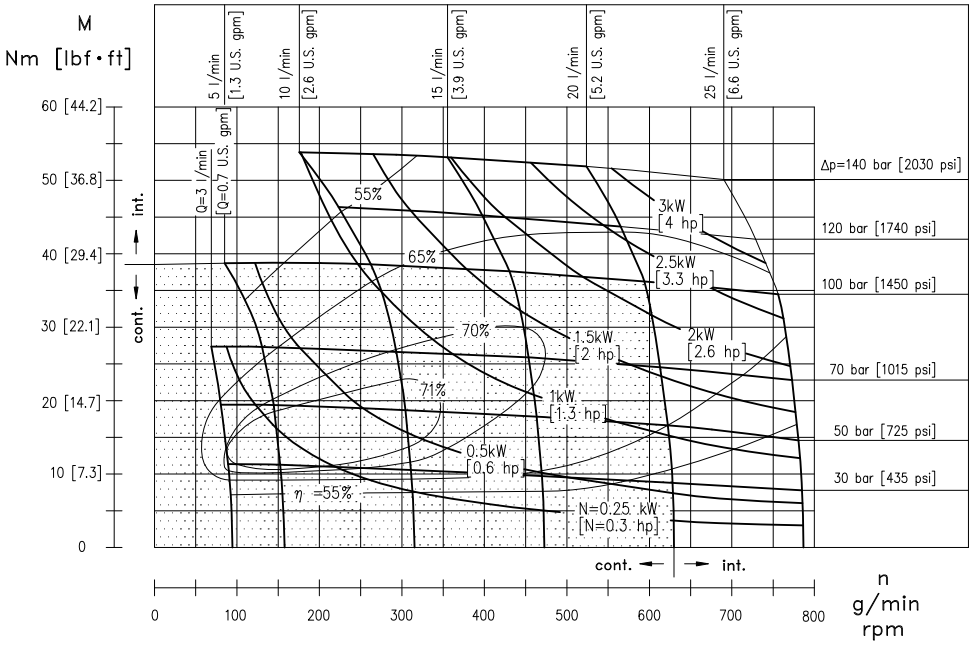
Pressioni e portate superiori a quelle ammesse in regime continuo non devono essere applicate contemporaneamente.
Exceeding continuous pressure values or exceeding flow values indicated, must not occur simultaneously.

BGM 20



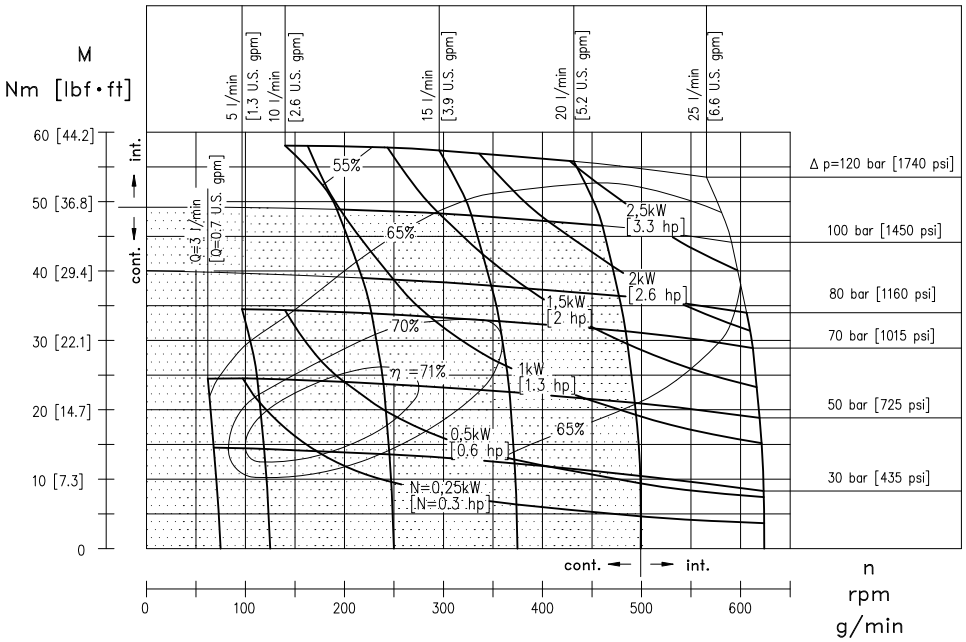
Pressioni e portate superiori a quelle ammesse in regime continuo non devono essere applicate contemporaneamente.
Exceeding continuous pressure values or exceeding flow values indicated, must not occur simultaneously.

BGM 32



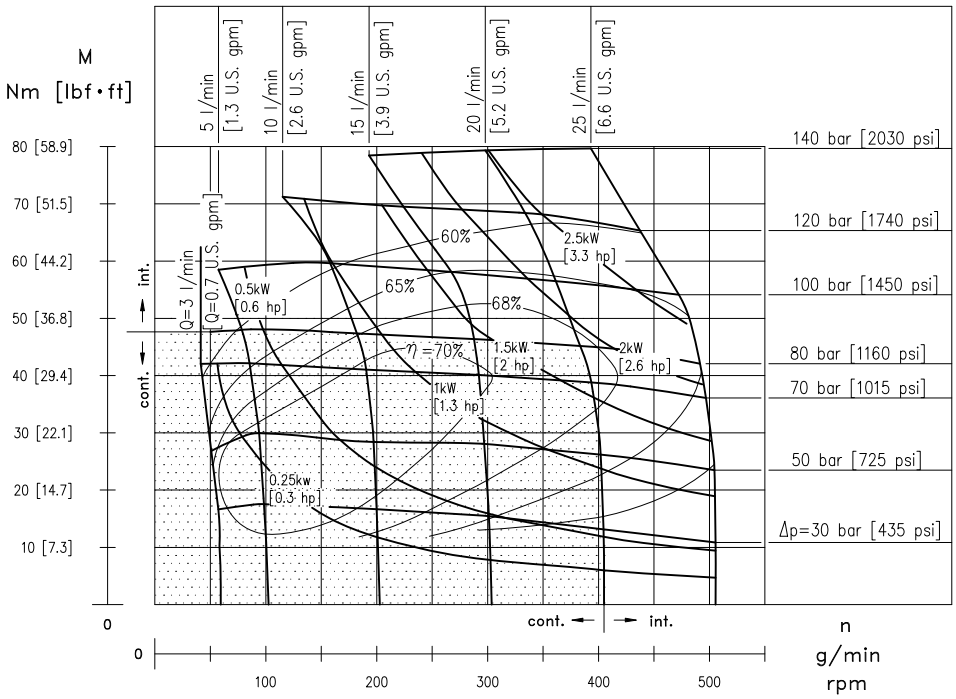
Pressioni e portate superiori a quelle ammesse in regime continuo non devono essere applicate contemporaneamente.
Exceeding continuous pressure values or exceeding flow values indicated, must not occur simultaneously.

BGM 40



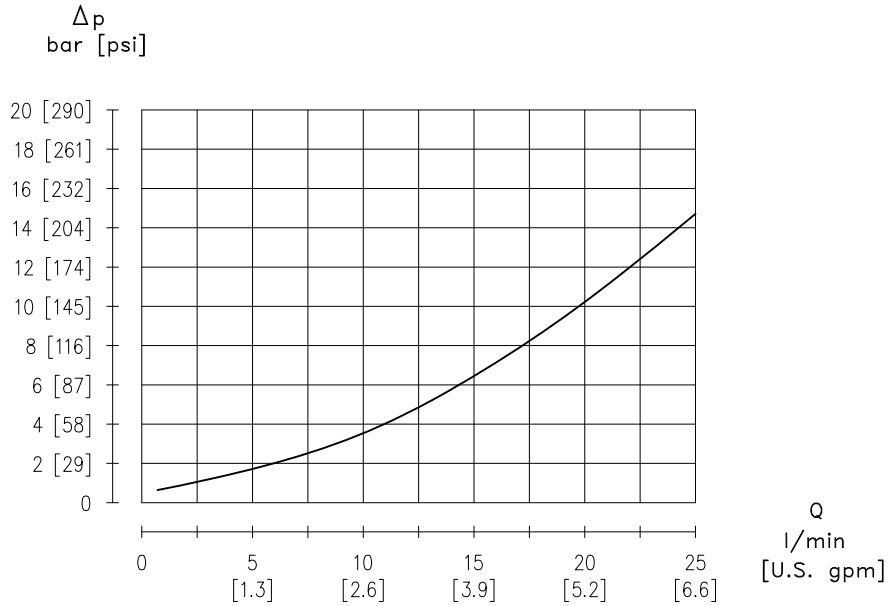
Pressioni e portate superiori a quelle ammesse in regime continuo non devono essere applicate contemporaneamente.
Exceeding continuous pressure values or exceeding flow values indicated, must not occur simultaneously.

BGM 50



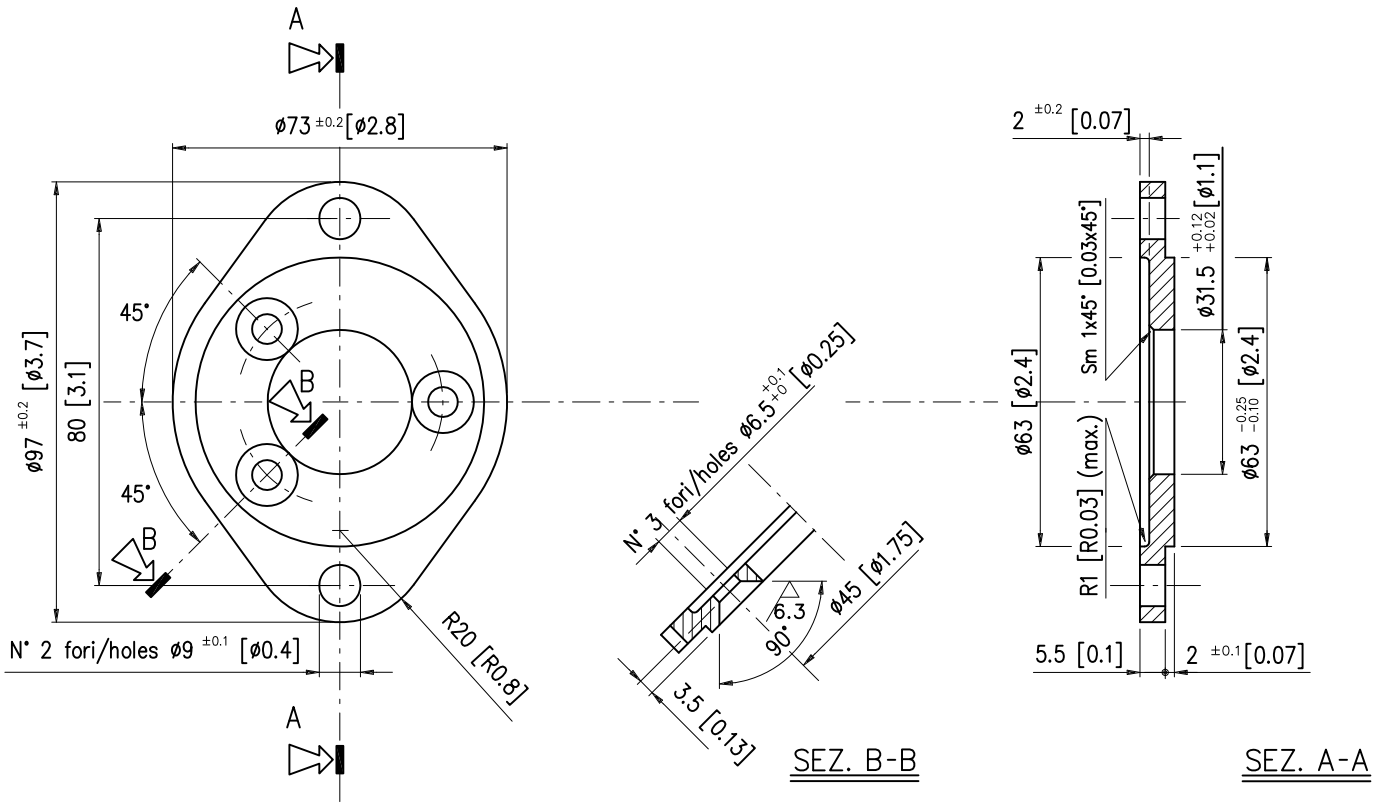
Pressioni e portate superiori a quelle ammesse in regime continuo non devono essere applicate contemporaneamente.
Exceeding continuous pressure values or exceeding flow values indicated, must not occur simultaneously.

PERDITE DI CARICO PER ATTRAVERSAMENTO
PRESSURE LOSS

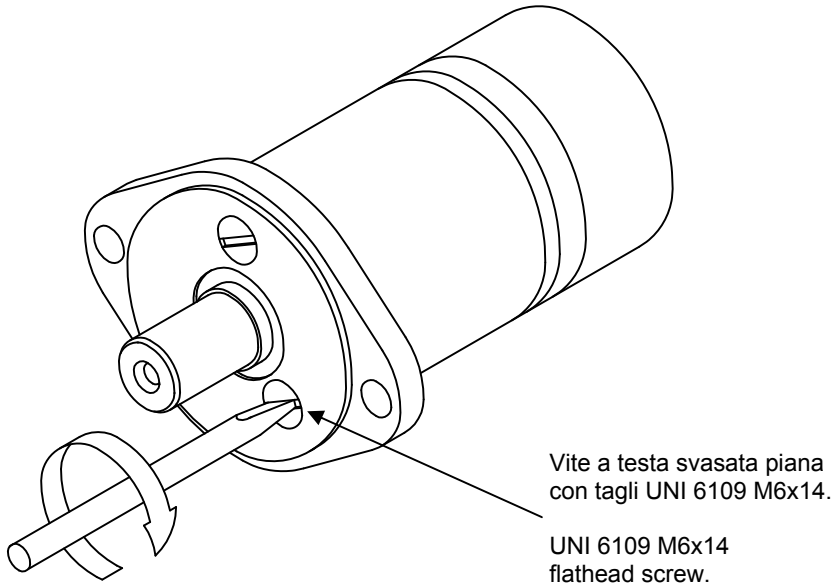


Il diagramma è stato ottenuto con prove eseguite su un numero significativo di motori, utilizzando un'olio avente una viscosità cinematica di 37 cSt alla temperatura di 45° C.

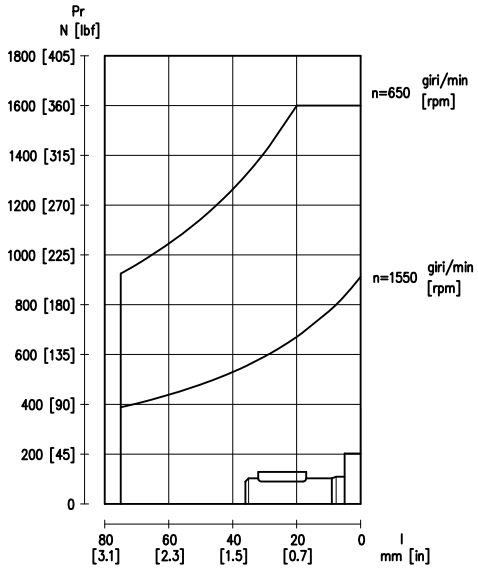
Diagram according tests done with a relevant number of motors and using hydraulic oil with kinematic viscosity of 37 cSt at 45° C temperature.

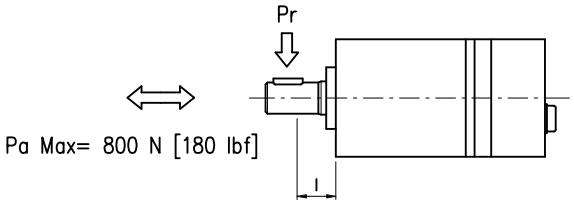


MONTAGGIO FLANGIA N
N FLANGE ASSEMBLING



CARICHI AMMESSI SULL'ALBERO
SHAFT LOAD CAPACITY





I motori della serie BGM, creati per avere minimi ingombri e alte velocità di rotazione, ammettono un carico radiale massimo sull'albero di 1600 N (Pr max.). Questo valore è stato calcolato con un numero di giri n=650 giri/min a una distanza dalla flangia l=20 mm.
Per il calcolo del carico radiale (Pr) ai vari numeri di giri (n) e alle varie distanze dalla flangia (l) si può utilizzare la formula che segue:

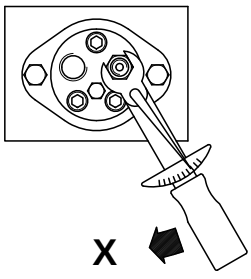
Compact design and high speed are the major features of the BGM line, together with a side load capacity of 1600 N [360 lbf] (Pr max.) at 20 mm [0.78 in] from flange; this figure applies to a 650 rpm speed. For other speeds and distances from flange the following formula applies:

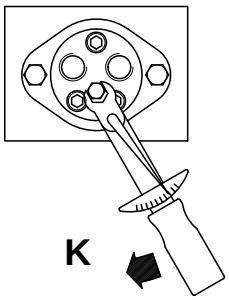
$$Pr = \frac{1500}{n} \cdot \frac{52300}{55.5 + L} \quad (N)$$

La formula è valida per valori di n ≥ 650 (giri/min) e l ≤ 75 (mm). Se il numero di giri è minore del valore indicato (650) si deve utilizzare la curva o la formula considerando n=650 (giri/min).
Le curve rappresentate nel diagramma tengono conto della variabile "l" mantenendo costante n.

This formula being valid for speed n ≥ 650 rpm and l ≤ 75 mm [2.9 in].
With n < 650 rpm refer to curve or formula considering n=650 rpm, in fact curves refer to n=const with just "l" variable.

COPPIE DI SERRAGGIO
TIGHTENING TORQUE





	X	K
***Raccordi* - Nipples**	3/8 G (BSPP)	1/8 G (BSPP)
***con rondella in acciaio* - with steel washer**	60 Nm 44.2 [lbf·ft]	20 Nm 14.7 [lbf·ft]
***con rondella in alluminio* - with aluminium washer**	40 Nm 29.4 [lbf·ft]	10 Nm 7.3 [lbf·ft]
***con rondella in rame* - with copper washer**	60 Nm 44.2 [lbf·ft]	20 Nm 14.7 [lbf·ft]

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