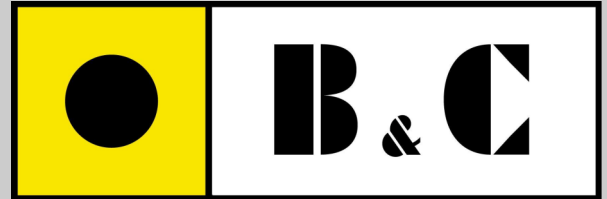


CATALOGO TECNICO
TECHNICAL CATALOGUE



MOTORI A INGRANAGGI

Serie BM

GEAR MOTORS

BM series

Indice

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Technical data

Motori unidirezionali gruppo 2 __ (BM20) _____ pag. 3

Unidirectional motors Group 2

Motori unidirezionali gruppo 3 __ (BM30) _____ pag. 19

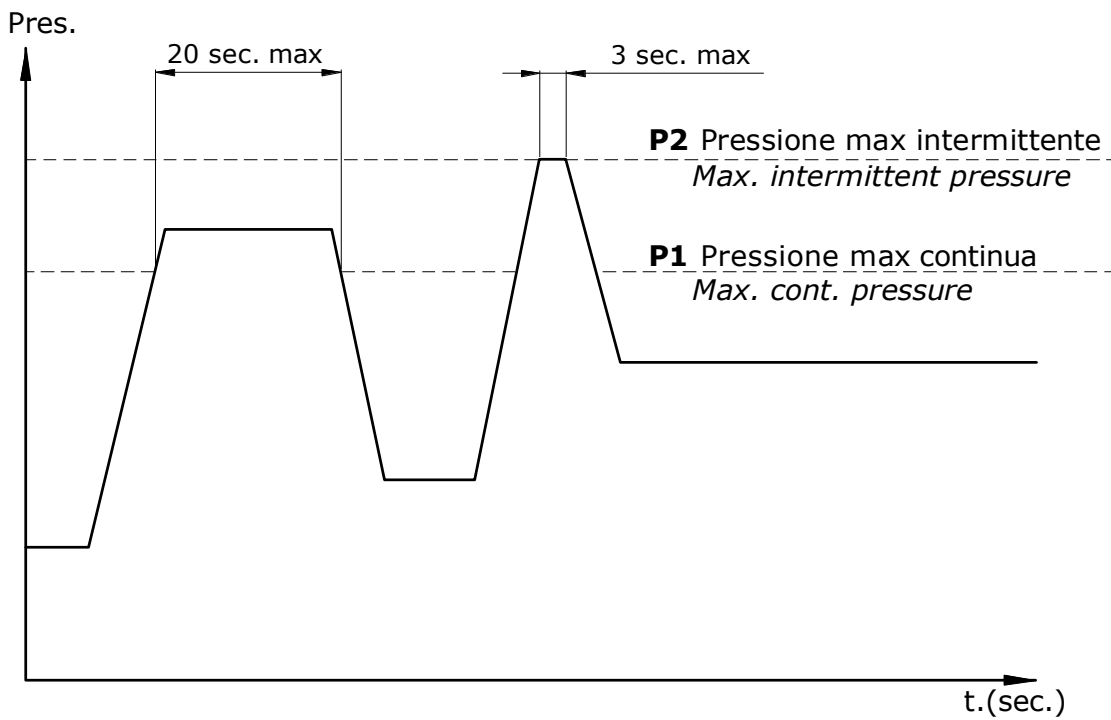
Unidirectional motors Group 3

Caratteristiche tecniche e avvertenze _____ pag. 27

Technical features and recommendations

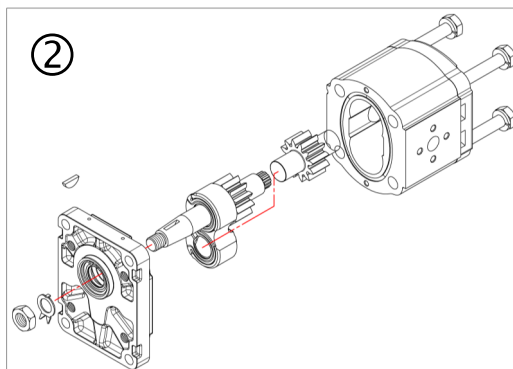
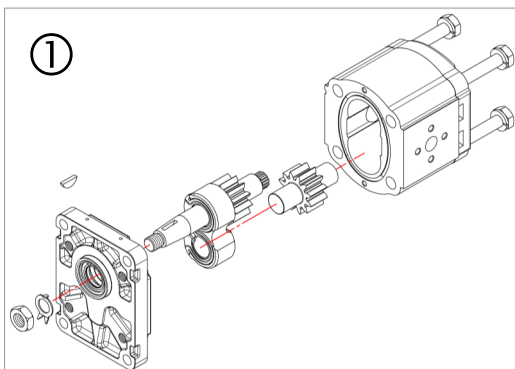
Dati tecnici

Technical data



Inversione senso di rotazione

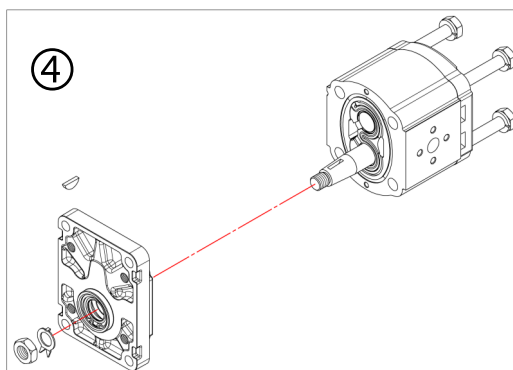
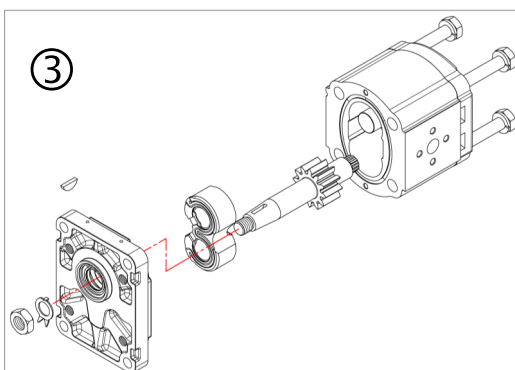
Rotation reversal



a) Smontare il motore.
①
Disassemble the motor.

b) Invertire la posizione degli ingranaggi lasciando la boccia con lo stesso orientamento.
② ③

Invert gears position leaving the bushing with its previous orientation.



c) Capovolgere la flangia e riappare il motore serrando le viti con coppia 47Nm \pm 3.

④
Reverse the flange and reassemble the motor tightening the screws with torque of 47Nm \pm 3

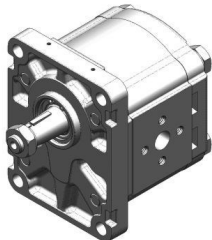
Caratteristiche tecniche motori unidir.

Unidir. motor technical characteristics

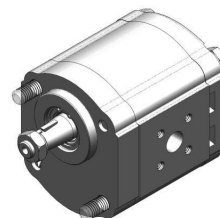
Grandezza Size	Cilindrata cm ³ /giro <i>Displacement (in³/rev)</i>	Velocità max giri/min <i>Max speed rpm</i>	Portata max lt/min <i>Max flow (gpm)</i>	Velocità min giri/min <i>Min speed rpm</i>	Portata min lt/min <i>Min flow (gpm)</i>	Coppia teor. Nm/bar <i>Theor. torque (lb.in/psi)</i>
BM20-04	4.2 (0.27)	4000	16.8 (4.44)	500	2.1 (0.55)	0.067 (0.04)
BM20-06	6.2 (0.38)	4000	24.8 (6.55)	500	3.1 (0.82)	0.1 (0.06)
BM20-08	8.3 (0.51)	3500	29.0 (7.66)	500	4.2 (1.11)	0.13 (0.08)
BM20-11	11.1 (0.68)	3500	38.9 (10.28)	500	5.6 (1.48)	0.18 (0.11)
BM20-14	14.2 (0.87)	3500	49.6 (13.10)	500	7.1 (1.88)	0.23 (0.14)
BM20-17	16.7 (1.02)	3500	58.5 (15.45)	500	8.4 (2.22)	0.27 (0.16)
BM20-20	19.6 (1.20)	3300	64.7 (17.09)	500	9.8 (2.59)	0.31 (0.19)
BM20-23	22.7 (1.39)	2800	63.6 (16.8)	500	11.4 (3.01)	0.36 (0.22)
BM20-26	26.1 (1.59)	2500	65.2 (17.22)	500	13.0 (3.43)	0.42 (0.26)
BM20-28	28.3 (1.73)	2000	56.6 (14.95)	500	14.2 (3.75)	0.45 (0.27)
BM20-32	31.7 (1.93)	1800	57.1 (15.08)	500	15.8 (4.17)	0.50 (0.31)

Rendimento mec. tipico da 0.85 a 0.90
Typical mec. efficiency from 0.85 to 0.90

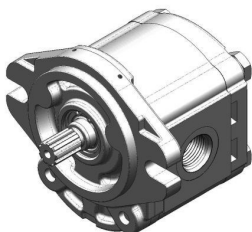
Rendimento volum. tipico da 0.90 a 0.96
Typical vol. efficiency from 0.90 to 0.96



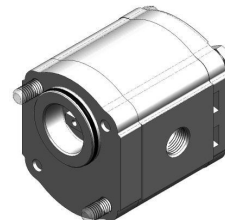
ST0
Flangia standard
Standard flange



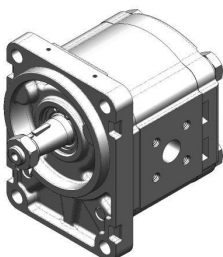
BZ0 / BN0
Flangia B50 C
B50 C flange



S20 / S21
Flangia SAE A / SAE A-OR
SAE A / SAE A-OR flange



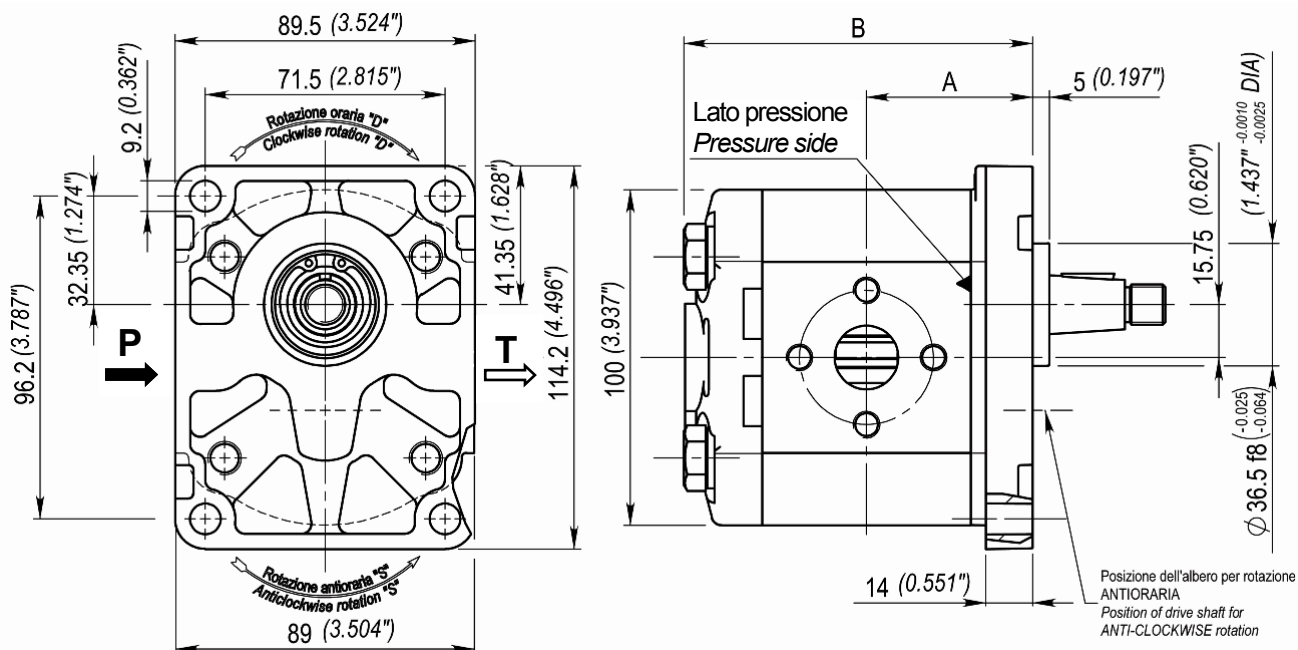
EZ1 / EN1
Flangia E52 C
E52 C flange



B80
Flangia B80 C
B80 C flange

Flangia standard ST0

Standard flange ST0



Grandezza Size	Cilindrata cm ³ /giro <i>Displacement (in³/rev)</i>	Pressione max di esercizio <i>Max working pressure</i>		Dimensioni <i>Dimensions</i>		Massa kg Mass (lbs)
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	43.9 (1.73)	92.6 (3.65)	2.16 (4.76)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	45.5 (1.79)	95.9 (3.78)	2.25 (4.96)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	47.3 (1.86)	99.4 (9.91)	2.27 (5.00)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	49.6 (1.95)	104.1 (4.10)	2.46 (5.42)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	52.2 (2.06)	109.2 (4.30)	2.60 (5.73)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	54.3 (2.14)	113.4 (4.47)	2.72 (6.00)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	56.7 (2.32)	118.2 (4.65)	2.85 (6.28)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	59.3 (2.34)	123.4 (4.86)	2.99 (6.59)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	62.1 (2.45)	129.0 (5.08)	3.15 (6.94)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)	
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)	

Codice d'ordinazione

Ordering code

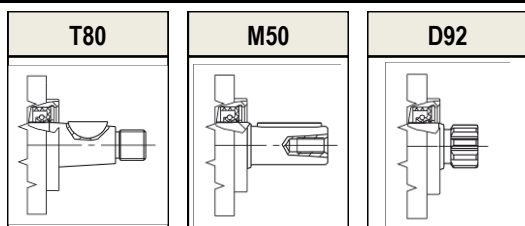
Esempio / Example

BM20 **11** **ST0** **A** **T80** **EE5** **D** **0** **0**

BM20	MOTORE UNIDIR. GRUPPO 2 / GROUP 2		
11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE	
ST0	FLANGIA / FLANGE	FLANGIA STANDARD STANDARD FLANGE	
A	ALLUMINIO / ALUMINIUM	FLANGIA E COPERCHIO FLANGE AND COVER	A : ALLUMINIO / ALLUMINIUM G : GHISA / CAST IRON
T80	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT	
EE5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS	
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION	S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER	1 - 2 : BOCCHIE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS	V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

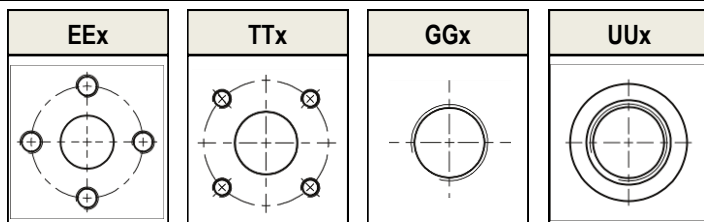
SUGGESTED SHAFTS



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CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS



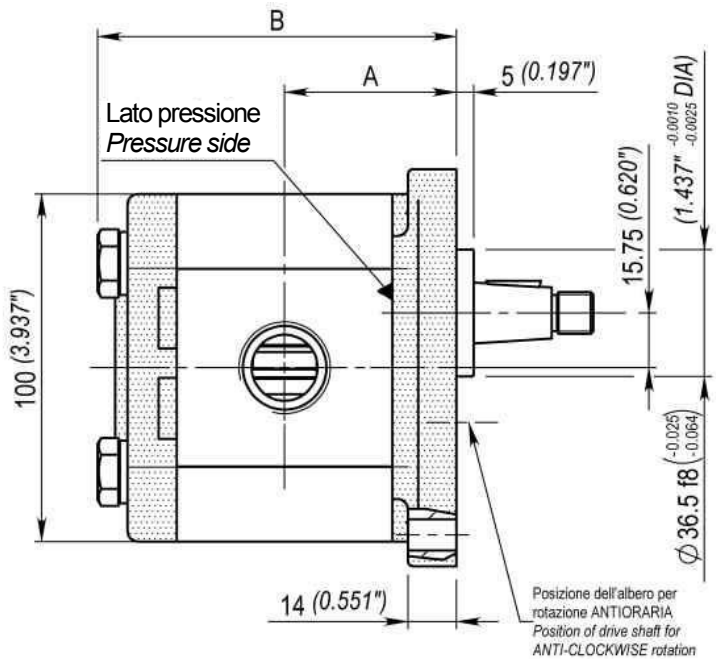
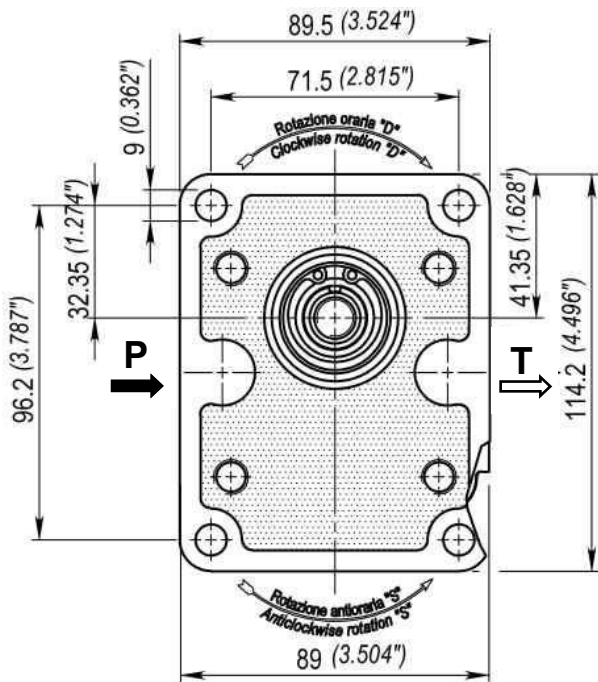
VEDI DIMENSIONI
A PAG.17
SEE DIMENSIONS
AT 17 PAGE

"X" = NUMERO VARIABILE DIPENDENTE DALLA CILINDRATA
"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

PER QUANTO NON INDICATO A CATALOGO CONTATTARE IL NOSTRO UFFICIO TECNICO
FOR ANYTHING NOT IN THIS CATALOGUE PLEASE CONTACT OUR TECHNICAL DEPARTMENT

Flangia standard **ST0** in ghisa

Cast iron standard flange **ST0**



Grandezza Size	Cilindrata cm ³ /giro <i>Displacement (in³/rev)</i>	Pressione max di esercizio <i>Max working pressure</i>		Dimensioni <i>Dimensions</i>		Massa kg <i>Mass (lbs)</i>
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	43.9 (1.73)	92.6 (3.65)	2.18 (4.81)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	45.5 (1.79)	95.9 (3.78)	2.26 (4.98)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	47.3 (1.86)	99.4 (9.91)	2.36 (5.20)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	49.6 (1.95)	104.1 (4.10)	2.48 (5.47)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	52.2 (2.06)	109.2 (4.30)	2.62 (5.78)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	54.3 (2.14)	113.4 (4.47)	2.73 (6.02)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	56.7 (2.32)	118.2 (4.65)	2.87 (6.33)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	59.3 (2.34)	123.4 (4.86)	3.01 (6.64)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	62.1 (2.45)	129.0 (5.08)	3.16 (6.97)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)	
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)	

Codice d'ordinazione

Ordering code

Esempio / Example

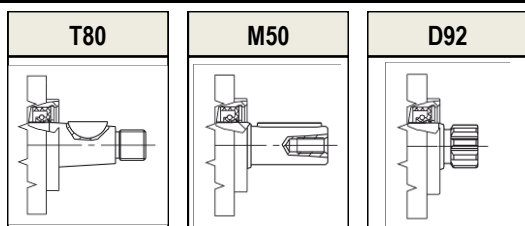
BM20 **11** **ST0** **G** **T80** **EE5** **D** **0** **0**

BM20 MOTORE UNIDIR. GRUPPO 2 / GROUP 2 UNIDIR. MOTOR

11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE	
ST0	FLANGIA / FLANGE	FLANGIA STANDARD STANDARD FLANGE	
G	GHISA / CAST IRON	FLANGIA E COPERCHIO FLANGE AND COVER	A : ALLUMINIO / ALLUMINIUM G : GHISA / CAST IRON
T80	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT	
EE5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS	
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION	S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER	1 - 2 : BOCHE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS	V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

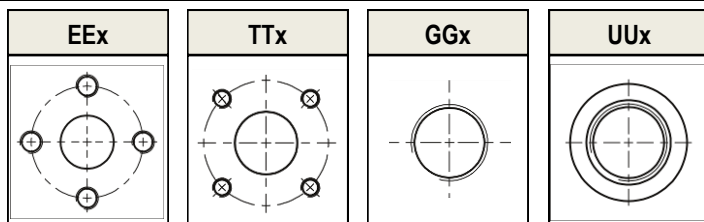
SUGGESTED SHAFTS



VEDI DIMENSIONI
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CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS

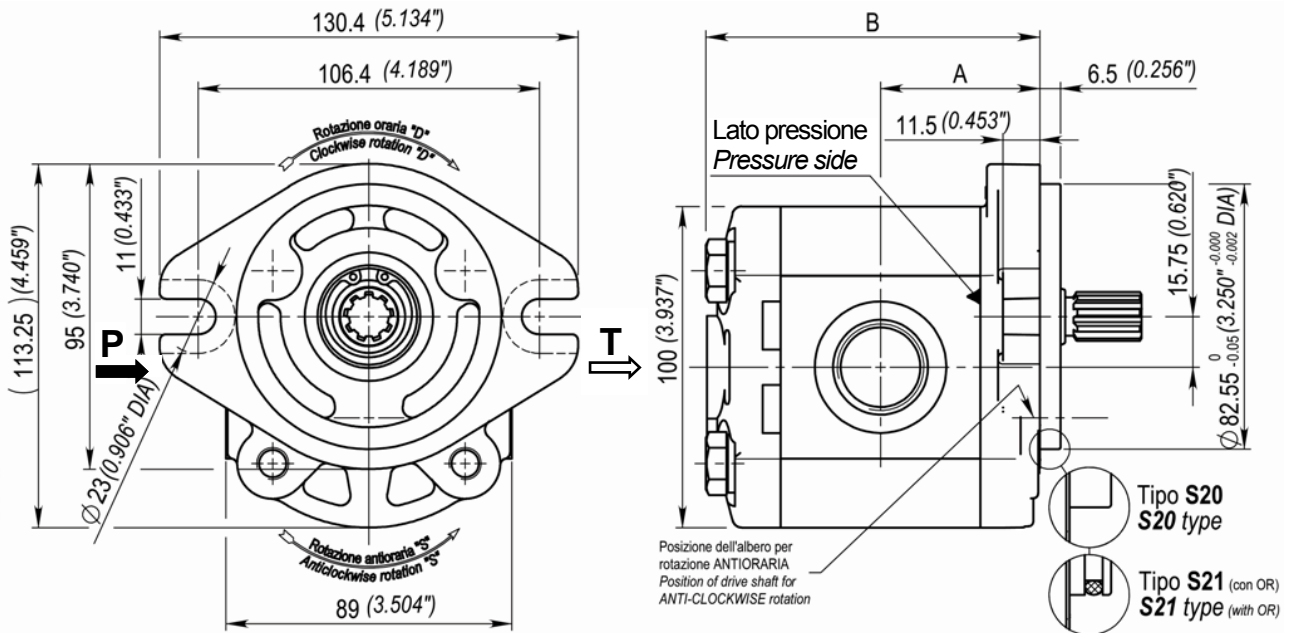


VEDI DIMENSIONI
A PAG.17
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"X" = NUMERO VARIABILE DIPENDENTE DALLA CILINDRATA
"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

Flangia SAE A S20 / SAE A-OR S21

SAE A S20 / SAE A-OR S21 flange



Grandezza Size	Cilindrata cm ³ /giro <i>Displacement (in³/rev)</i>	Pressione max di esercizio <i>Max working pressure</i>		Dimensioni <i>Dimensions</i>		Massa kg <i>Mass (lbs)</i>
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	45.9 (1.81)	94.6 (3.72)	2.23 (4.92)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	47.5 (1.87)	97.9 (3.85)	2.31 (5.09)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	49.3 (1.94)	101.4 (9.99)	2.41 (5.31)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	51.6 (2.03)	106.1 (4.18)	2.52 (5.56)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	54.2 (2.13)	111.2 (4.38)	2.66 (5.86)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	56.3 (2.22)	115.4 (4.54)	2.79 (6.15)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	58.7 (2.31)	120.2 (4.73)	2.92 (6.44)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	61.3 (2.41)	125.4 (4.94)	3.07 (6.77)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	64.1 (2.52)	131.0 (5.16)	3.21 (7.08)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)	
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)	

Codice d'ordinazione

Ordering code

Esempio / Example

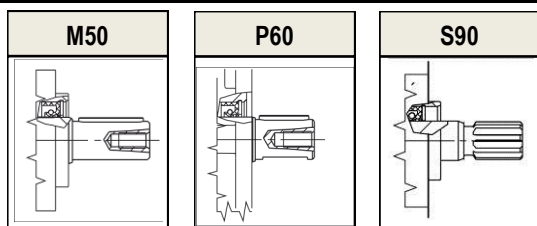
BM20 **11** **S20** **A** **P60** **UU5** **D** **0** **0**

BM20 MOTORE UNIDIR. GRUPPO 2 / GROUP 2 UNIDIR. MOTOR

11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE
S20	FLANGIA / FLANGE	S20 : SAE A S21 : SAE A CON O-RING SAE A SAE A WITH O-RING
A	ALLUMINIO / ALUMINIUM	FLANGIA E COPERCHIO IN ALLUMINIO ALUMINIUM FLANGE AND COVER
P60	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT
UU5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA S : ROTAZIONE SINISTRA CLOCKWISE ROTATION ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD 1 - 2 : BOCCHIE ASSIALI STANDARD COVER AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR V : TENUTE IN VITON® NBR SEALS VITON® SEALS

ALBERI CONSIGLIATI

SUGGESTED SHAFTS

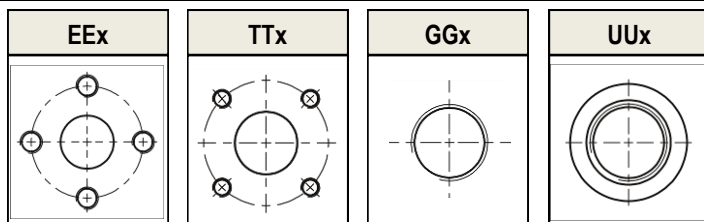


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A PAG.16

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CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS



VEDI DIMENSIONI
A PAG.17

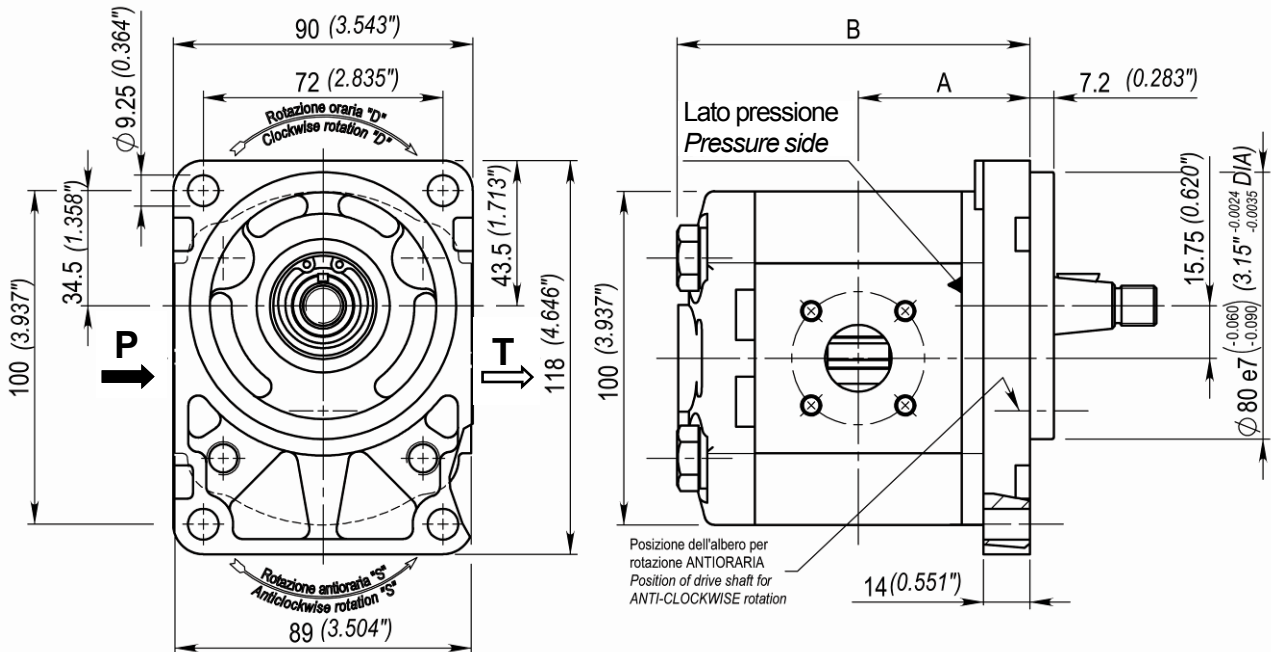
SEE DIMENSIONS
AT 17 PAGE

"X" = NUMERO VARIABILE DIPENDENTE DALLA CILINDRATA
"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

PER QUANTO NON INDICATO A CATALOGO CONTATTARE IL NOSTRO UFFICIO TECNICO
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Flangia B80 C B80

B80 C flange B80



Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Pressione max di esercizio Max working pressure		Dimensioni Dimensions		Massa kg Mass (lbs)
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	45.9 (1.81)	94.6 (3.72)	2.23 (4.92)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	47.5 (1.87)	97.9 (3.85)	2.31 (5.09)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	49.3 (1.94)	101.4 (9.99)	2.41 (5.31)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	51.6 (2.03)	106.1 (4.18)	2.52 (5.56)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	54.2 (2.13)	111.2 (4.38)	2.66 (5.86)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	56.3 (2.22)	115.4 (4.54)	2.79 (6.15)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	58.7 (2.31)	120.2 (4.73)	2.92 (6.44)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	61.3 (2.41)	125.4 (4.94)	3.07 (6.77)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	64.1 (2.52)	131.0 (5.16)	3.21 (7.08)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)	
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)	

Codice d'ordinazione

Ordering code

Esempio / Example

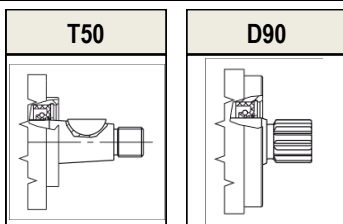
BM20 **11** **B80** **A** **T50** **TT5** **D** **0** **0**

BM20 MOTORE UNIDIR. GRUPPO 2 / GROUP 2 UNIDIR. MOTOR

11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE
B80	FLANGIA / FLANGE	FLANGIA B80 C B80 C FLANGE
A	ALLUMINIO / ALUMINIUM	FLANGIA E COPERCHIO IN ALLUMINIO ALUMINIUM FLANGE AND COVER
T50	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT
TT5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER 1 - 2 : BOCCHIE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

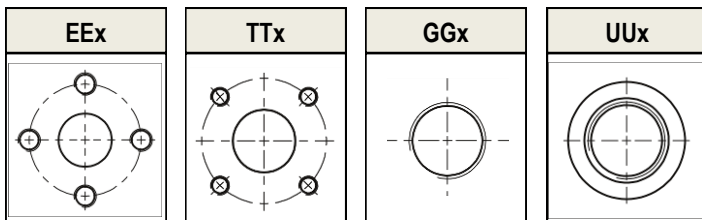
SUGGESTED SHAFTS



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CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS

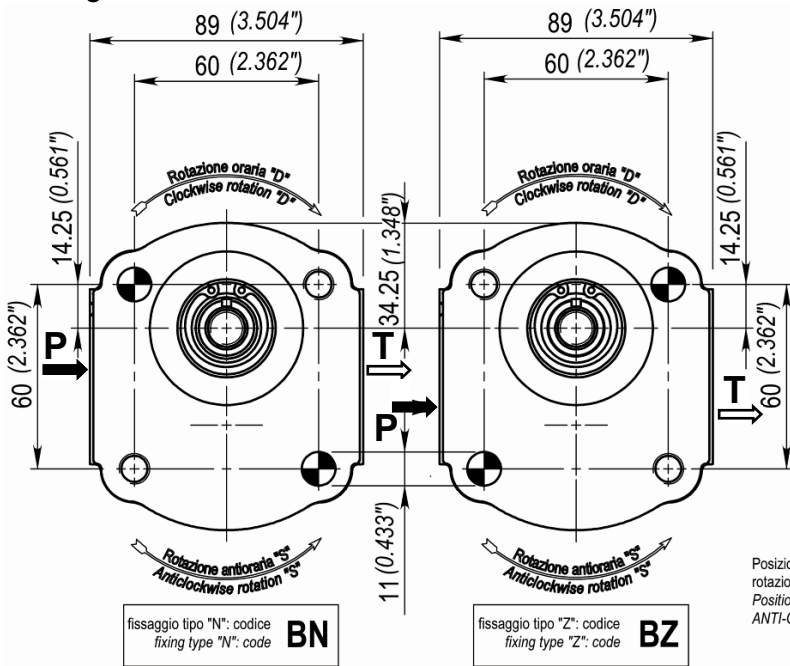


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SEE DIMENSIONS
AT 17 PAGE

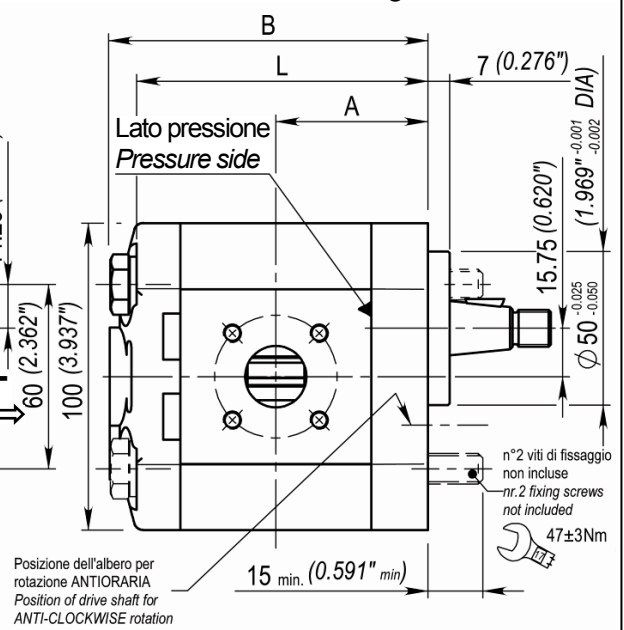
"X" = NUMERO VARIABILE DIPENDENTE DALLA CILINDRATA
"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

PER QUANTO NON INDICATO A CATALOGO CONTATTARE IL NOSTRO UFFICIO TECNICO
FOR ANYTHING NOT IN THIS CATALOGUE PLEASE CONTACT OUR TECHNICAL DEPARTMENT

Flangia B50 C BZ0 / BN0



B50 C flange BZ0 / BN0



Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Pressione max di esercizio Max working pressure		Dimensioni Dimensions			Massa* Kg
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	L mm (in)	Mass* (lbs)
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	43.9 (1.73)	92.6 (3.65)	83.5 (3.29)	1.91 (4.21)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	45.5 (1.79)	95.9 (3.78)	86.8 (3.42)	1.99 (4.39)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	47.3 (1.86)	99.4 (9.91)	90.3 (3.56)	2.08 (4.59)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	49.6 (1.95)	104.1 (4.10)	95.0 (3.74)	2.20 (4.85)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	52.2 (2.06)	109.2 (4.30)	100.1 (3.94)	2.33 (5.14)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	54.3 (2.14)	113.4 (4.47)	104.3 (4.106)	2.44 (5.38)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	56.7 (2.32)	118.2 (4.65)	109.1 (4.30)	2.57 (5.67)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	59.3 (2.34)	123.4 (4.86)	114.3 (4.50)	2.71 (5.97)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	62.1 (2.45)	129.0 (5.08)	119.9 (4.72)	2.85 (6.28)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)		
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)		

* Massa senza viti di fissaggio * Mass without fixing screws

Codice d'ordinazione

Ordering code

Esempio / Example

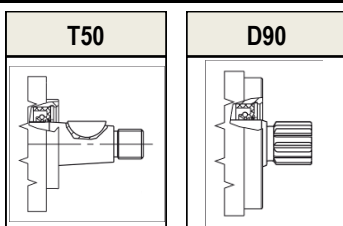
BM20 **11** **BZ0** **A** **T50** **TT5** **D** **0** **0**

BM20 MOTORE UNIDIR. GRUPPO 2 / GROUP 2 UNIDIR. MOTOR

11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE
BZ0	FLANGIA / FLANGE	BZ0 : B50 C FISSAGGIO "Z" B50 C "Z" ASSEMBLY BNO : B50 C FISSAGGIO "N" B50 C "N" ASSEMBLY
A	ALLUMINIO / ALUMINIUM	FLANGIA E COPERCHIO IN ALLUMINIO ALUMINIUM FLANGE AND COVER
T50	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT
TT5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER 1 - 2 : BOCCHIE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

SUGGESTED SHAFTS

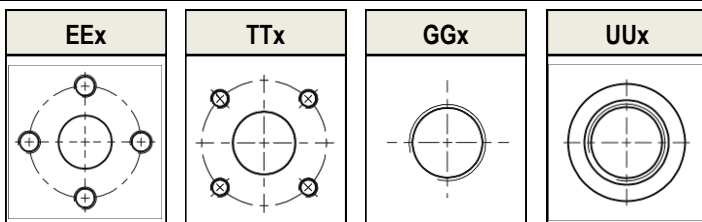


VEDI DIMENSIONI
A PAG.16

SEE DIMENSIONS
AT 16 PAGE

CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS



VEDI DIMENSIONI
A PAG.17

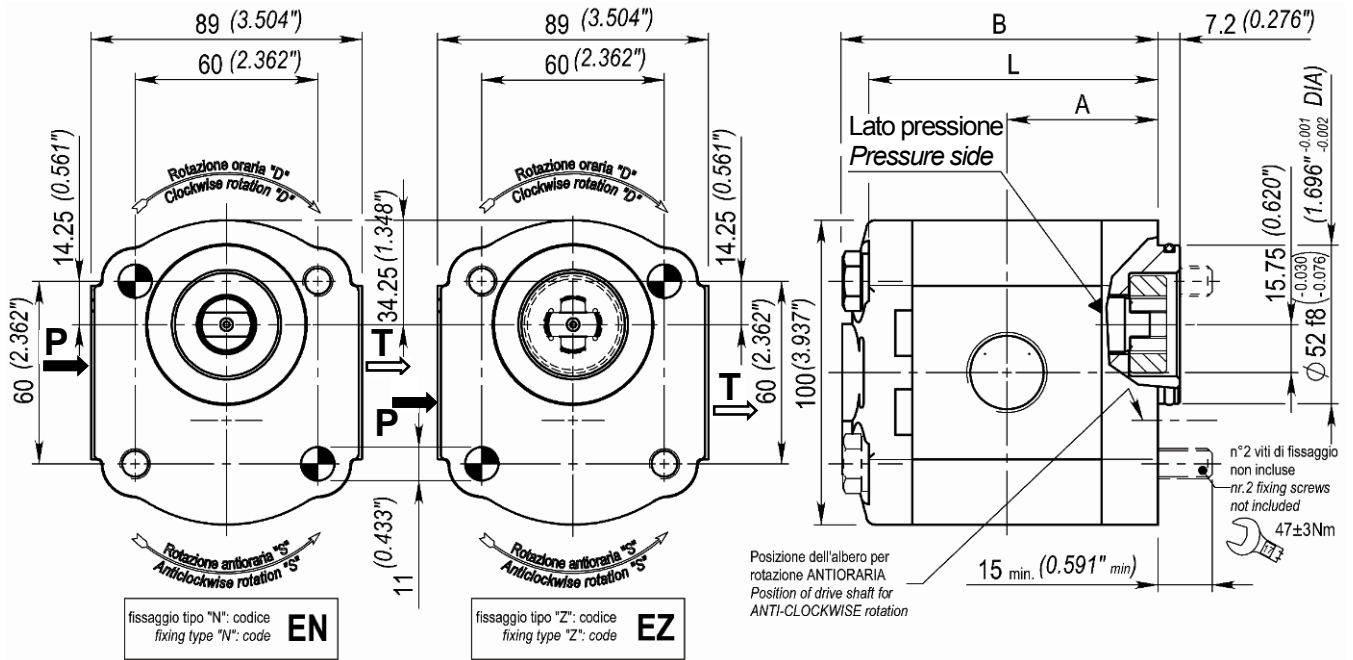
SEE DIMENSIONS
AT 17 PAGE

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"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

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Flangia E52 C EZ1 / EN1

E52 C flange EZ1 / EN1



Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Pressione max di esercizio Max working pressure		Dimensioni Dimensions			Massa* Kg
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	L mm (in)	Mass* (lbs)
BM20-04	4.2 (0.27)	250 (3625)	270 (3916)	43.9 (1.73)	92.6 (3.65)	83.5 (3.29)	1.91 (4.21)
BM20-06	6.2 (0.38)	250 (3625)	270 (3916)	45.5 (1.79)	95.9 (3.78)	86.8 (3.42)	1.99 (4.39)
BM20-08	8.3 (0.51)	250 (3625)	270 (3916)	47.3 (1.86)	99.4 (3.91)	90.3 (3.56)	2.08 (4.59)
BM20-11	11.1 (0.68)	250 (3625)	270 (3916)	49.6 (1.95)	104.1 (4.10)	95.0 (3.74)	2.20 (4.85)
BM20-14	14.2 (0.87)	250 (3625)	270 (3916)	52.2 (2.06)	109.2 (4.30)	100.1 (3.94)	2.33 (5.14)
BM20-17	16.7 (1.02)	230 (3336)	240 (3481)	54.3 (2.14)	113.4 (4.47)	104.3 (4.106)	2.44 (5.38)
BM20-20	19.6 (1.20)	210 (3046)	220 (3191)	56.7 (2.32)	118.2 (4.65)	109.1 (4.30)	2.57 (5.67)
BM20-23	22.7 (1.39)	190 (2756)	200 (2901)	59.3 (2.34)	123.4 (4.86)	114.3 (4.50)	2.71 (5.97)
BM20-26	26.1 (1.59)	170 (2466)	180 (2611)	62.1 (2.45)	129.0 (5.08)	119.9 (4.72)	2.85 (6.28)
BM20-28	28.3 (1.73)	150 (2175)	160 (2320)	x (x)	x (x)		
BM20-32	31.7 (1.93)	130 (1885)	140 (2030)	x (x)	x (x)		

* Massa senza viti di fissaggio e giunto

* Mass without fixing screws and joint

Codice d'ordinazione

Ordering code

Esempio / Example

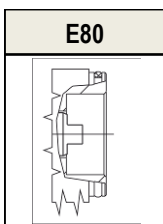
BM20 **11** **EZ1** **A** **E80** **GG5** **D** **0** **0** **3**

BM20 MOTORE UNIDIR. GRUPPO 2 / GROUP 2 UNIDIR. MOTOR

11	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE
EZ1	FLANGIA / FLANGE	EZ1: E52 C FISSAGGIO "Z" E52 C "Z" ASSEMBLY EN1: E52C C FISSAGGIO "N" E52 C "N" ASSEMBLY
A	ALLUMINIO / ALUMINIUM	FLANGIA E COPERCHIO IN ALLUMINIO ALUMINIUM FLANGE AND COVER
E80	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT
GG5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS
D	ROTAZIONE / ROTATION	D: ROTAZIONE DESTRA CLOCKWISE ROTATION S: ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0: COPERCHIO STANDARD STANDARD COVER 1 - 2: BOCCHIE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0: TENUTE IN NBR NBR SEALS V: TENUTE IN VITON® VITON® SEALS
3	ACCESSORI / OPTIONALS	3: CON GIUNTO WITH COUPLING

ALBERI CONSIGLIATI

SUGGESTED SHAFTS

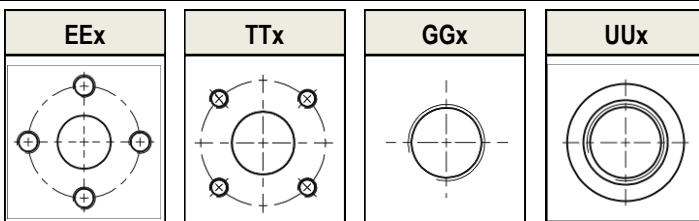


VEDI DIMENSIONI
A PAG.16

SEE DIMENSIONS
AT 16 PAGE

CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS



VEDI DIMENSIONI
A PAG.17

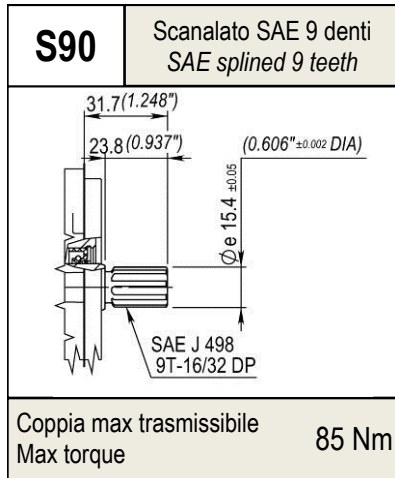
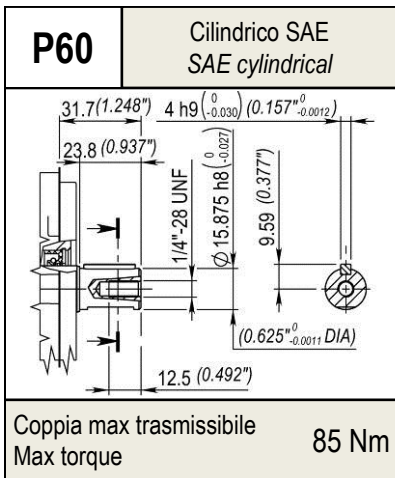
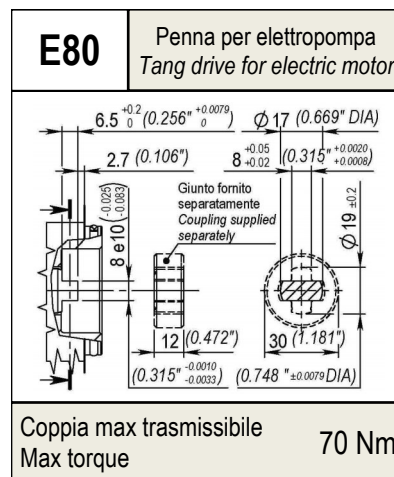
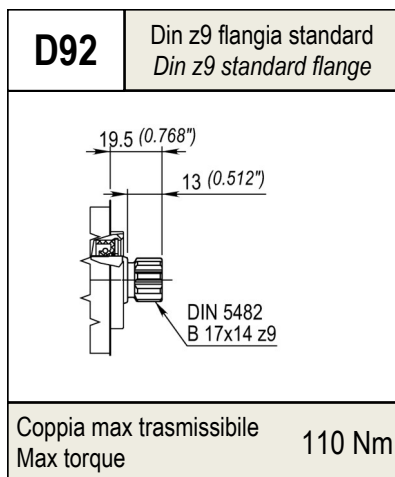
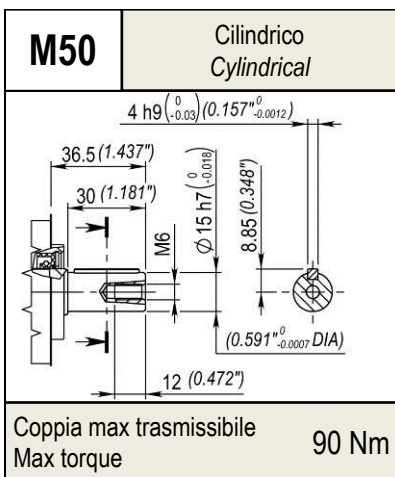
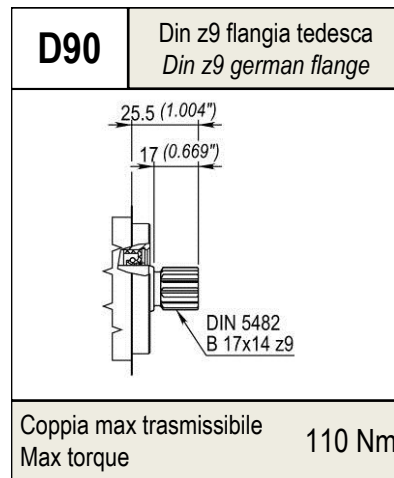
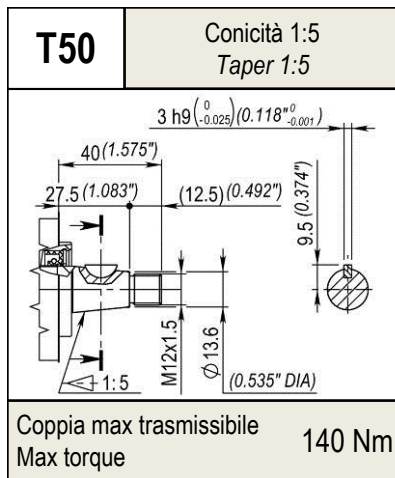
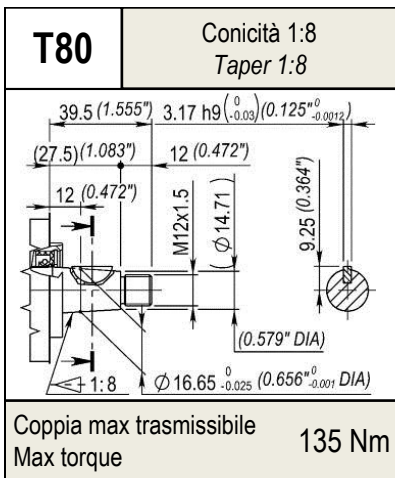
SEE DIMENSIONS
AT 17 PAGE

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"X" = VARIABLE NUMBER THAT DEPENDS ON THE DISPLACEMENT

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Alberi

Shafts



NEL CASO DI MONTAGGIO CON FLANGIA B80 C (cod.B80) LE SPORGENZE VANNO RIDOTTE DI 2 mm (0.079 in.)
 WHEN ASSEMBLED WITH B80 C FLANGE (B80 code) THE SHAFT DIMENSIONS MUST BE REDUCED BY 0.079 in. (2mm)

Conessioni

Connections

Standard europeo / European standard					
Grandezza Size	Codice Code	D	F	M	e
04 - 08	EE4	30 (1.18)	13 (0.51)	M6	15 (0.59)
11 - 26	EE5	40 (1.58)	19 (0.75)	M8	15 (0.59)

Standard europeo per motori European standard for motors		
Grandezza Size	Codice Code	
04 - 08	/	
11 - 26	EE6	

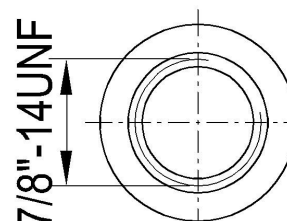
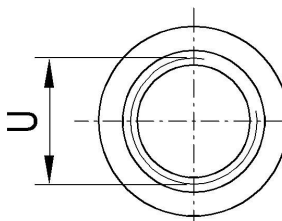
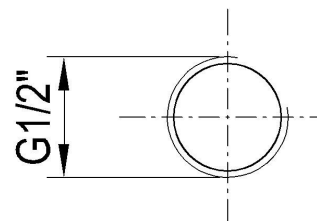
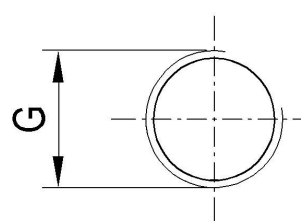
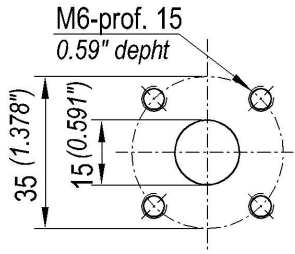
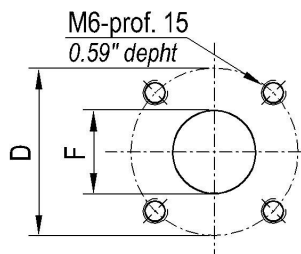
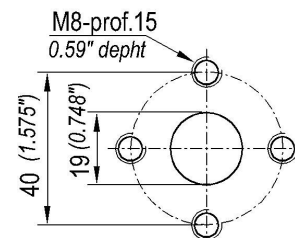
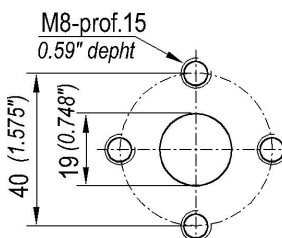
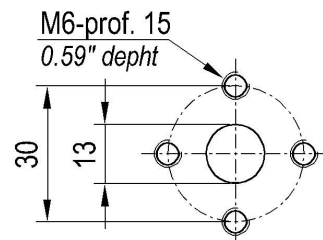
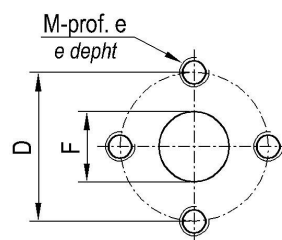
Unificazione tedesca / German unification			
Grandezza Size	Codice Code	D	F
04 - 08	TT4	35 (1.38)	15 (0.59)
11 - 26	TT5	40 (1.58)	20 (0.79)

Filettatura BSP / BSP threads		
Grandezza Size	Codice Code	G
04 - 08	GG4	G 1/2"
11 - 26	GG5	G 3/4"

Filettature SAE / SAE threads		
Grandezza Size	Codice Code	U
04 - 08	UU4	7/8" - 14 UNF
11 - 26	UU5	1-1/16" - 12 UN

USCITA
lato riferimento
OUTLET
reference side

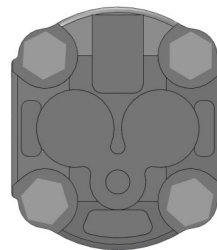
ENTRATA
INLET



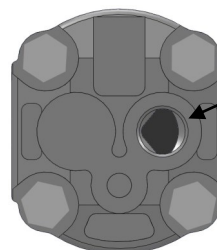
Coperchi

Cover

Coperchio standard <i>Standard cover</i>	
Grandezza <i>Size</i>	Codice <i>Code</i>
04-32	0

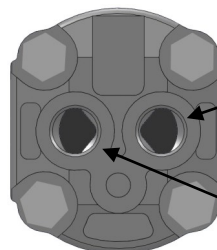


Uscita su coperchio <i>Cover outlet</i>	
Grandezza <i>Size</i>	Codice <i>Code</i>
04-32	1



1/2" BSPP

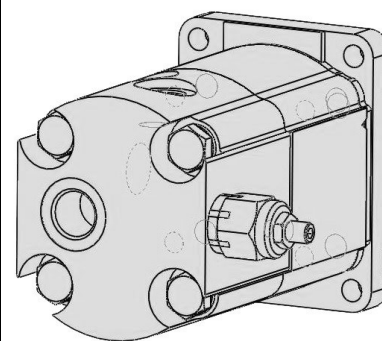
Bocche sul coperchio <i>Ports in the cover</i>	
Grandezza <i>Size</i>	Codice <i>Code</i>
04-32	2



1/2" BSPP

1/2" BSPP

Valvole (installate su coperchi speciali) <i>Valves (installed inside special bodies)</i>	
Codice <i>Code</i>	Tipo valvola <i>Valve type</i>
E	valvola di massima con scarico per linea esterna - campo di tar.1 <i>pressure relief valve with external drain - setting 1</i>
F	valvola di massima con scarico per linea esterna - campo di tar.2 <i>pressure relief valve with external drain - setting 2</i>
G	valvola di massima con scarico per linea esterna - campo di tar.3 <i>pressure relief valve with external drain - setting 3</i>
H	valvola di massima a scarico interno - campo di tar.1 <i>pressure relief valve with internal drain - setting 1</i>
J	valvola di massima a scarico interno - campo di tar.2 <i>pressure relief valve with internal drain - setting 2</i>
L	valvola di massima a scarico interno - campo di tar.3 <i>pressure relief valve with internal drain - setting 3</i>
P	coper. in ghisa con valvola di max a scarico interno - campo di tar.1 <i>cast iron cover and pressure relief valve with internal drain - setting 1</i>
Q	coper. in ghisa con valvola di max a scarico interno - campo di tar.2 <i>cast iron cover and pressure relief valve with internal drain - setting 2</i>
R	coper. in ghisa con valvola di max a scarico interno - campo di tar.3 <i>cast iron cover and pressure relief valve with internal drain - setting 3</i>
.....	per altri tipi di valvole, contattare il nostro ufficio tecnico <i>for other valve types, contact our technical department</i>



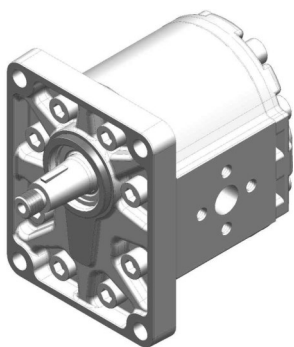
Caratteristiche tecniche motori unidir.

Unidir. motor technical characteristics

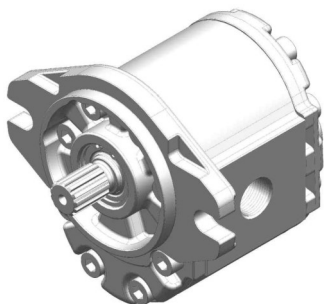
Grandezza Size	Cilindrata cm ³ /giro <i>Displacement (in³/rev)</i>	Velocità max giri/min <i>Max speed rpm</i>	Portata max lt/min <i>Max flow (gpm)</i>	Velocità min giri/min <i>Min speed rpm</i>	Portata min lt/min <i>Min flow (gpm)</i>	Coppia teor. Nm/bar <i>Theor. torque (lb.in/psi)</i>
BM30-19	19.05 (1.22)	3500	66.7 (17.6)	700	13.3 (3.51)	0.30 (0.19)
BM30-22	22.2 (1.42)	3500	77.8 (20.5)	700	15.6 (4.12)	0.35 (0.21)
BM30-28	28.3 (1.82)	3300	93.5 (24.7)	700	19.8 (5.23)	0.45 (0.27)
BM30-33	33.2 (2.13)	3300	109.4 (28.9)	700	23.2 (6.12)	0.53 (0.32)
BM30-37	37.2 (2.38)	3300	122.6 (32.4)	700	26.0 (6.86)	0.59 (0.36)
BM30-44	43.98 (2.82)	3000	131.9 (34.8)	700	30.8 (8.13)	0.70 (0.43)
BM30-52	51.9 (3.33)	3000	155.6 (41.1)	700	36.3 (9.58)	0.83 (0.51)
BM30-61	61.4 (3.94)	2500	153.5 (40.5)	700	43.0 (11.35)	0.98 (0.60)

Rendimento mec. tipico da 0.85 a 0.90
Typical mec. efficiency from 0.85 to 0.90

Rendimento volum. tipico da 0.90 a 0.96
Typical vol. efficiency from 0.90 to 0.96



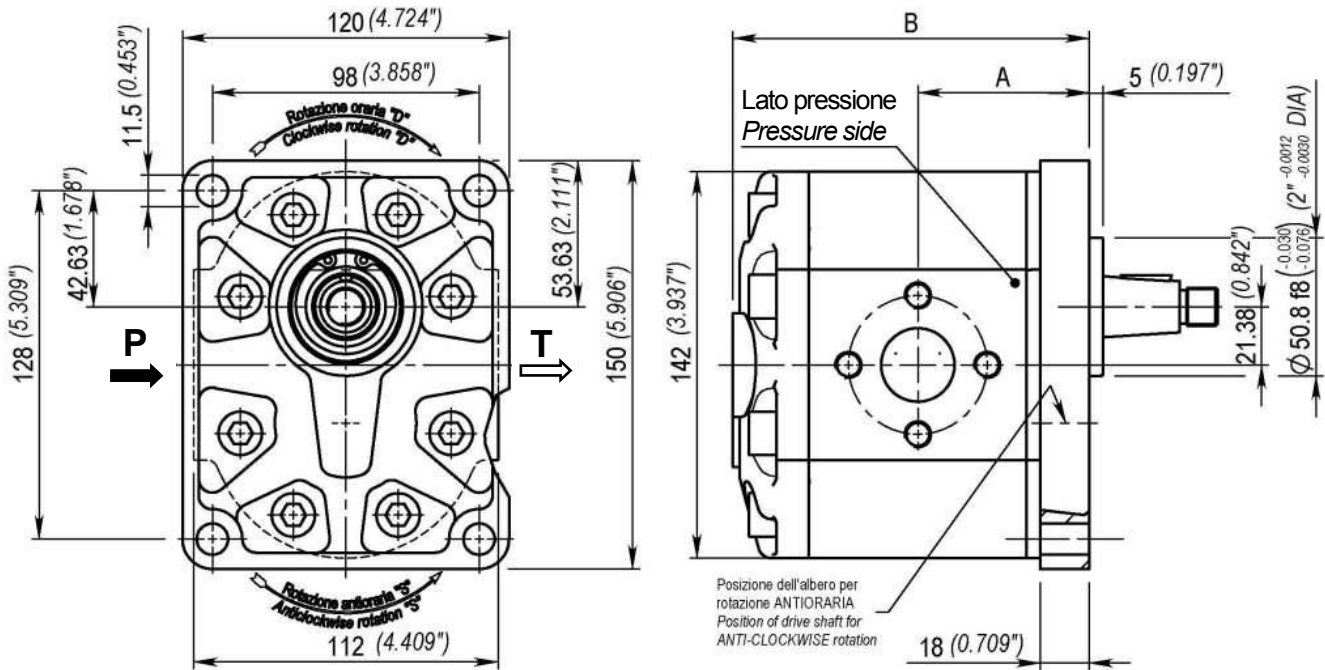
ST0
Flangia standard
Standard flange



S20 / S21
Flangia SAE B / SAE B-OR
SAE B / SAE B-OR flange

Flangia standard ST0

Standard flange ST0



Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Pressione max di esercizio Max working pressure		Dimensioni Dimensions		Massa kg Mass (lbs)
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM30-19	19.05 (1.22)	250 (3625)	270 (3916)	62.95 (2.48)	130.9 (5.15)	4.98 (11)
BM30-22	22.2 (1.42)	240 (3481)	260 (3771)	64.3 (2.53)	133.6 (5.26)	5.10 (11.3)
BM30-28	28.3 (1.82)	220 (3191)	240 (3481)	66.9 (2.63)	138.8 (5.46)	5.34 (11.8)
BM30-33	33.2 (2.13)	220 (3191)	230 (3336)	68.9 (2.71)	142.9 (5.63)	5.52 (12.2)
BM30-37	37.2 (2.38)	210 (3046)	230 (3336)	70.6 (2.78)	146.3 (5.76)	5.68 (12.5)
BM30-44	43.98 (2.82)	200 (2901)	220 (3191)	73.6 (2.90)	152.1 (5.99)	5.93 (13.1)
BM30-52	51.9 (3.33)	200 (2901)	210 (3046)	76.9 (3.03)	158.8 (6.25)	6.24 (13.8)
BM30-61	61.4 (3.94)	180 (2611)	190 (2756)	81 (3.19)	166.9 (6.57)	6.60 (14.6)

Codice d'ordinazione

Ordering code

Esempio / Example

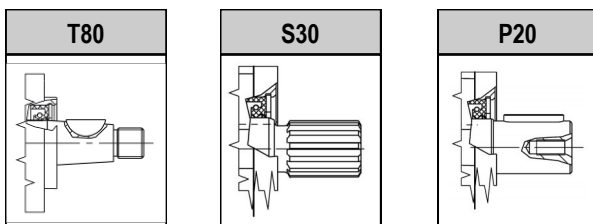
BM30 **19** **ST0** **A** **T80** **EE5** **D** **0** **0**

BM30 MOTORE UNIDIR. GRUPPO 3 / GROUP 3 UNIDIR. MOTOR

19	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE	
ST0	FLANGIA / FLANGE	FLANGIA STANDARD STANDARD FLANGE	
A	ALLUMINIO / ALUMINIUM	A : FLANGIA IN ALLUMINIO ALLUMINIUM FLANGE	G : FLANGIA IN GHISA CAST IRON FLANGE
T80	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT	
EE5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS	
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION	S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER	1 - 2 : BOCHE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS	V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

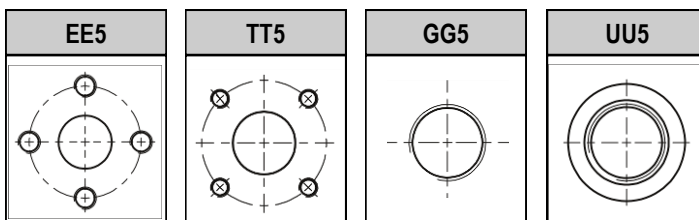
SUGGESTED SHAFTS



VEDI DIMENSIONI
A PAG.24
SEE DIMENSIONS
AT 24 PAGE

CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS

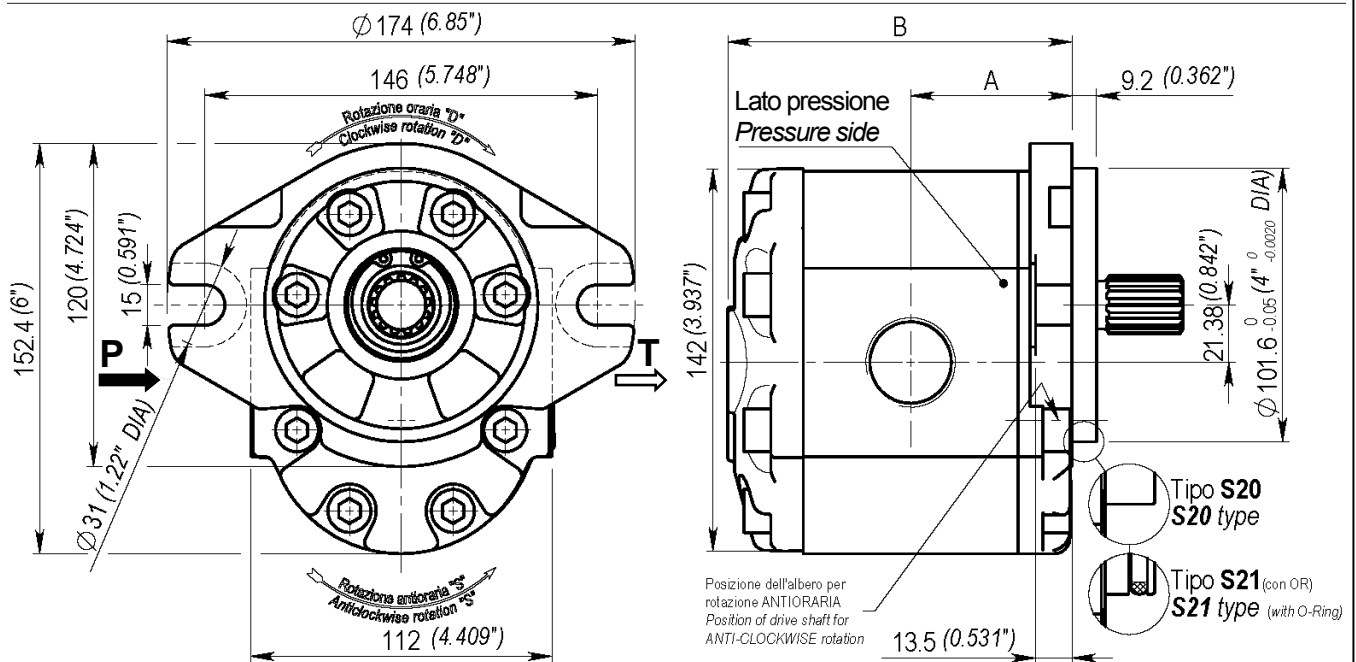


VEDI DIMENSIONI
A PAG.25
SEE DIMENSIONS
AT 25 PAGE

PER QUANTO NON INDICATO A CATALOGO CONTATTARE IL NOSTRO UFFICIO TECNICO
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Flangia SAE B S20 / SAE B-OR S21

SAE B S20 / SAE B-OR S21 flange



Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Pressione max di esercizio Max working pressure		Dimensioni Dimensions		Massa kg Mass (lbs)
		P1 Bar (psi)	P2 Bar (psi)	A mm (in)	B mm (in)	
BM30-19	19.05 (1.22)	250 (3625)	270 (3916)	60.2 (2.37)	128 (5.04)	4.98 (11)
BM30-22	22.2 (1.42)	240 (3481)	260 (3771)	61.5 (2.42)	130.8 (5.15)	5.10 (11.3)
BM30-28	28.3 (1.82)	220 (3191)	240 (3481)	64.1 (2.52)	136 (5.35)	5.34 (11.8)
BM30-33	33.2 (2.13)	220 (3191)	230 (3336)	66.2 (2.60)	140.1 (5.52)	5.52 (12.2)
BM30-37	37.2 (2.38)	210 (3046)	230 (3336)	67.9 (2.67)	143.5 (5.65)	5.68 (12.5)
BM30-44	43.98 (2.82)	200 (2901)	220 (3191)	70.8 (2.79)	149.3 (5.88)	5.93 (13.1)
BM30-52	51.9 (3.33)	200 (2901)	210 (3046)	74.1 (2.92)	156 (6.14)	6.24 (13.8)
BM30-61	61.4 (3.94)	180 (2611)	190 (2756)	78.2 (3.08)	164.1 (6.46)	6.60 (14.6)

Codice d'ordinazione

Ordering code

Esempio / Example

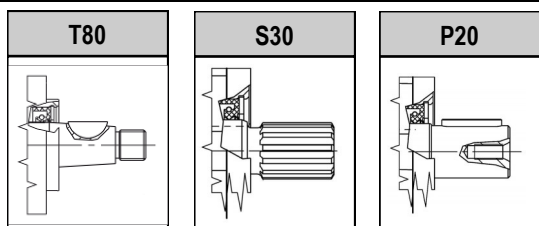
BM30 **19** **S20** **A** **S30** **GG5** **D** **0** **0**

BM30 MOTORE UNIDIR. GRUPPO 3 / GROUP 3 UNIDIR. MOTOR

19	CILINDRATA / DISPLACEMENT	VEDI TABELLA SEE TABLE	
S20	FLANGIA / FLANGE	FLANGIA SAE B SAE B FLANGE	
A	ALLUMINIO / ALUMINIUM	FLANGIA IN ALLUMINIO ALUMINIUM FLANGE	
S30	ALBERO / SHAFT	VEDI ALBERI CONSIGLIATI SEE SUGGESTED SHAFT	
GG5	CONNESSIONI / CONNECTIONS	VEDI CONNESSIONI DISPONIBILI SEE AVAILABLE CONNECTIONS	
D	ROTAZIONE / ROTATION	D : ROTAZIONE DESTRA CLOCKWISE ROTATION	S : ROTAZIONE SINISTRA ANTICLOCKWISE ROTATION
0	COPERCHIO / COVER	0 : COPERCHIO STANDARD STANDARD COVER	1 - 2 : BOCHE ASSIALI AXIAL PORTS
0	GUARNIZIONI / SEALS	0 : TENUTE IN NBR NBR SEALS	V : TENUTE IN VITON® VITON® SEALS

ALBERI CONSIGLIATI

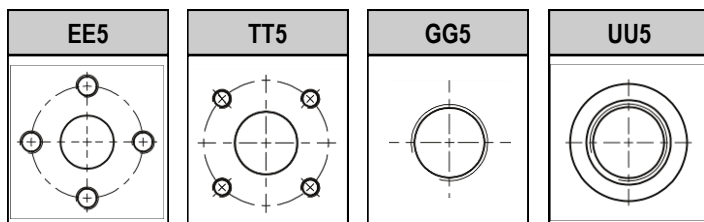
SUGGESTED SHAFTS



VEDI DIMENSIONI
A PAG.24
SEE DIMENSIONS
AT 24 PAGE

CONNESSIONI DISPONIBILI

AVAILABLE CONNECTIONS

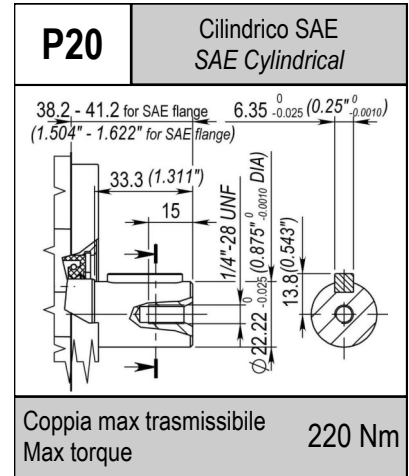
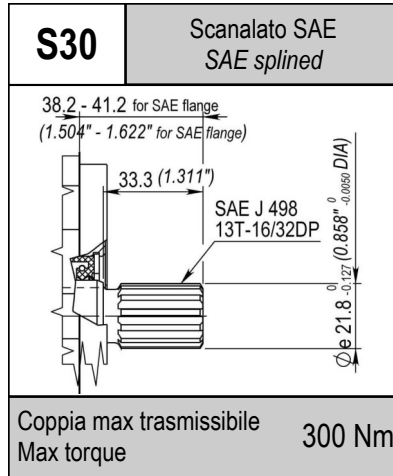
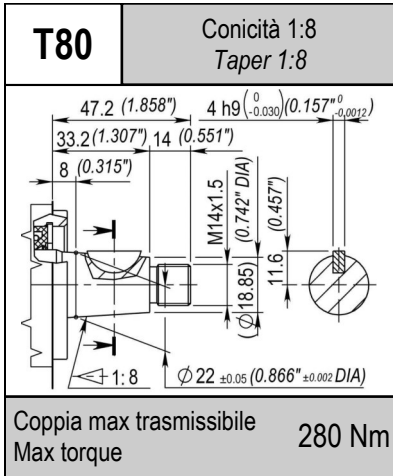


VEDI DIMENSIONI
A PAG.25
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Alberi

Shafts



NEL CASO DI MONTAGGIO CON FLANGIA SAE (cod.S20) LE SPORGENZE VANNO AUMENTATE DI 2.8 mm (0.11 in.)
 WHEN ASSEMBLED WITH SAE FLANGE (S20 code) THE SHAFT DIMENSIONS MUST BE INCREASED BY 0.11 in. (2.8 mm)

Conessioni

Connections

Standard europeo / <i>European standard</i>			
Grandezza Size	Codice Code		
19 - 61	EE5		

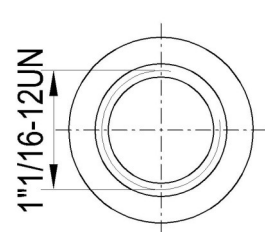
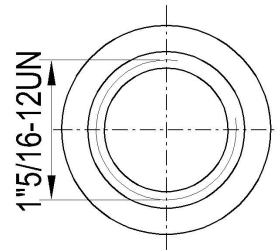
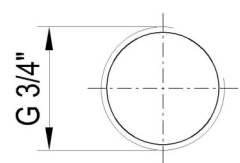
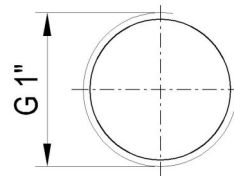
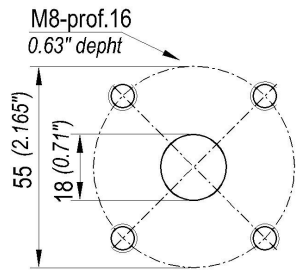
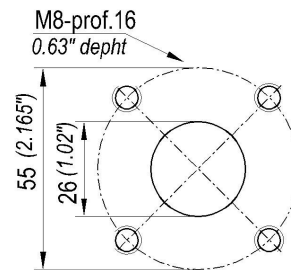
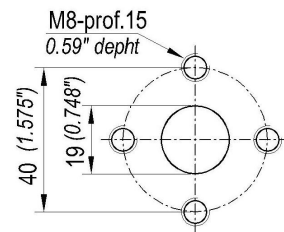
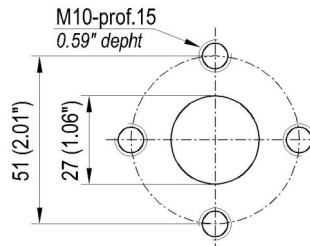
Unificazione tedesca / <i>German unification</i>			
Grandezza Size	Codice Code		
19 - 61	TT5		

Filettatura BSP / <i>BSP threads</i>			
Grandezza Size	Codice Code		
19 - 61	GG5		

Filettature SAE / <i>SAE threads</i>			
Grandezza Size	Codice Code		
19 - 61	UU5		

USCITA
lato riferimento
OUTLET
reference side

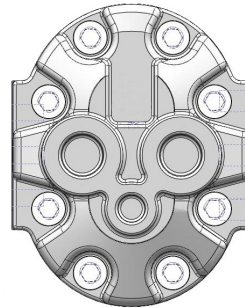
ENTRATA
INLET



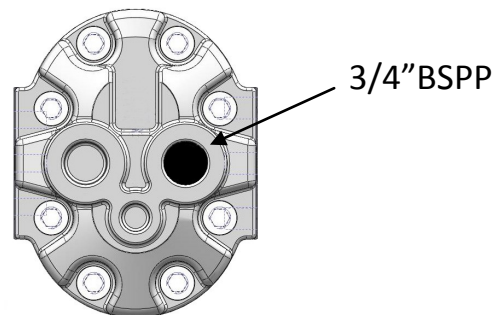
Coperchi

Cover

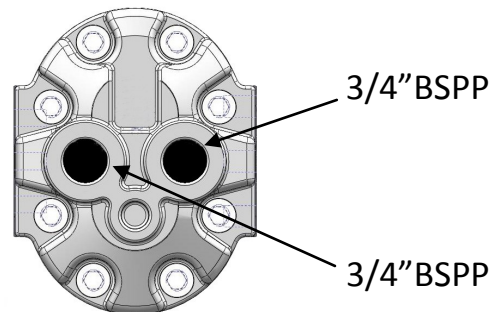
Coperchio standard <i>Standard cover</i>	
Grandezza Size	Codice Code
19-61	0



Uscita T su coperchio <i>Cover outlet</i>	
Grandezza Size	Codice Code
19-61	1



Bocche sul coperchio <i>Ports in the cover</i>	
Grandezza Size	Codice Code
19-61	2



Caratteristiche tecniche e avvertenze

Technical features and recommendations

CARATTERISTICHE TECNICHE

Motori ad ingranaggi esterni del Gr.2 e del Gr.3 dotati di flange e coperchi in alluminio o in ghisa. Il bilanciamento idrostatico dei rasamenti (boccole) è del tipo doppia compensazione con ripresa del gioco assiale mediante apposita area predefinita. Lubrificazione interna e compensazione sono proporzionali alla pressione di esercizio.

La precisione e la cura nella costruzione dei particolari consentono l'intercambiabilità delle flange di fissaggio e degli ingranaggi (nell'ambito della stessa cilindrata) permettendo in tal modo maggior flessibilità e minori impegni di magazzino presso il cliente. Sono disponibili le varie esecuzioni secondo gli standard più diffusi (europeo, tedesco, SAE) e, su richiesta, esiste la possibilità di personalizzazioni del cliente.

CONDIZIONI LIMITI DI FUNZIONAMENTO

Fluido consigliato: olio idraulico a base minerale con elevato indice di viscosità (tenendo conto delle condizioni di funzionamento dell'impianto)

Temperatura consigliata: 20÷60 °C

Temperatura limite con guarnizioni in NBR: -15÷80 °C

Temperatura limite con guarnizioni in FPM (Viton): -10÷110 °C

Pressione ammessa in aspirazione: 0.7÷3 bar assoluti (10÷44 psi)

Viscosità raccomandata: 15÷92 mm²/s

Viscosità limite all'avviamento: 3000 mm²/s

Filtraggio per pressioni di esercizio fino a 150 bar (fino a 2175 psi): 26/23 ISO DIS 4406

Filtraggio per pressioni di esercizio >150 bar (>2175 psi): 23/20 ISO DIS 4406

NOTE PER L'INSTALLAZIONE

- Verificare il corretto senso di rotazione del motore
- Collegare il condotto di ritorno al lato del motore riportante l'apposito riferimento o, in sua assenza, al foro di dimensione maggiore
- Non sono ammessi carichi assiali e/o radiali sull'albero: effettuare il collegamento all'applicazione con giunto non rigido, appositamente lubrificato e libero di muoversi assialmente.
- In caso di presenza di carichi sull'albero del motore, interporre un supporto munito di cuscinetti
- In caso di verniciatura del motore proteggere l'anello di tenuta dell'albero rotante
- Rimuovere eventuali impurità quali polvere o particelle abrasive dalla zona dell'albero rotante a contatto con l'anello di tenuta
- Rimuovere sporcizia e/o impurità dai fori di connessione e dai piani di appoggio su corpo e flangia di fissaggio
- Mantenere l'olio pulito a salvaguardia di tutti i componenti dell'impianto, controllando periodicamente lo stato dei filtri
- Eseguire eventuali rabbocchi con olio idraulico dello stesso tipo

TECHNICAL FEATURES

External gear motors, Group 2 and Group 3, equipped with aluminium or cast iron end cap and mounting flange. Floating bushing, double compensated pressure-balanced design with special area for remachining of the end float clearance. Internal lubrication and pressure compensation are performed proportionally to the operating pressure of the system. Precision machining and top accuracy of all construction details make use of fixation flanges perfectly interchangeable for models of the same delivery range providing more flexibility and less customers' stocks. The various construction types are available in compliant versions to the applicable Standards (European, German and SAE). On request, clients may ask for customized versions too.

OPERATING CONDITIONS

Recommended fluid: High-viscosity, mineral hydraulic oil (please always account for the operating conditions of your equipment)

Recommended temperature range: 20÷60 °C

Operating temperature range for NBR gaskets: -15÷80 °C

Operating temperature range for FPM (Viton) gaskets: -10÷110 °C

Admissible suction pressure: 0.7÷3 bar absolute (10÷44 psi absolute)

Recommended viscosity range: 15÷92 mm²/s

Max viscosity at start-up: 3000 mm²/s

Filtering for operating pressure up to 150 bar (up to 2175 psi): 26/23 ISO DIS 4406

Filtering for operating pressure >150 bar (>2175 psi): 23/20 ISO DIS 4406

IMPORTANT INSTALLATION TIPS

- Check for correct motor rotation in the right direction
- Connect the return pipe to the motor side marked by the relevant sign or, failure of any mark, to the largest hole
- Do not apply any axial/radial loads on the shaft of the motor. Do not use a rigid coupling for connecting to the application, provide for due lubrication and axial clearance of the coupling.
- If a load has to be applied on the shaft, it must be installed a suitable bearing shim underneath the load
- Protect the seal of the drive shaft before painting the motor
- Accurately remove eventual foreign matters (such as dust and abrasive particles) from the shaft area touching the sealing ring
- Remove chips and/or metal shavings from the connection holes, from the body bearing faces and from the mounting flange
- Be sure to keep running the motor with very clean oil to avoid even major damages to the various parts and components. Perform regular periodic controls of the filters.
- If required, perform oil touch-ups using oil of the same kind

I dati contenuti nel presente catalogo sono indicativi e possono essere modificati senza alcun preavviso
The information provided in this catalogue is subject to change without notice



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