



**POMPE
AD INGRANAGGI
GEAR PUMPS**



CATALOGO
TECNICO
TECHNICAL
CATALOGUE

CARATTERISTICHE GENERALI MAIN FEATURES

Il presente catalogo include pompe ad ingranaggi esterni del Gr. 1, Gr. 2 e del Gr. 3 sia in configurazione singola che in tandem (pompa multipla). Sono dotate 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. Tutte le pompe sono predisposte per il traino di una eventuale pompa posteriore mediante un apposito kit di trasformazione fornibile separatamente.

Condizioni e 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 c.St.

Viscosità limite all'avviamento:

2500 c.St.

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.

The present range includes external gear pumps, Group 1, Group 2 and Group 3, single and tandem construction (multiple pump), with aluminium or cast iron end cap and mounting flange.

Floating bushing, double compensated pressure-balanced design with special area for resetting 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.

All pumps are designed for combined operation with an eventual retrofittable rear pump.

Assembly kit for rear-mount is available on request.

Operating conditions

Recommended fluid:

High-viscosity, mineral hydraulic oil (please always pay attention to the operating conditions of the 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 c.St.

Max viscosity at start-up:

2500 c.St.

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.

Note per l'installazione

- Verificare il corretto senso di rotazione della pompa.
- Collegare il condotto di aspirazione al lato della pompa riportante l'apposito riferimento o, in sua assenza, al foro di dimensione maggiore.
- Non sono ammessi carichi assiali e/o radiali sull'albero della pompa: effettuare il collegamento all'albero motore con giunto non rigido, appositamente lubrificato e libero di muoversi assialmente.
- In caso di presenza di carichi sull'albero della pompa, interporre un supporto munito di cuscinetti.
- In caso di verniciatura della pompa proteggere l'anello di tenuta per albero rotante.
- Rimuovere eventuali impurità quali polvere o particelle abrasive dalla zona dell'albero rotante a contatto con l'anello di tenuta.
- Rimuovere trucioli e/o impurità dai fori di connessione e dai piani di appoggio su corpo e flangia di fissaggio.
- Riempire la pompa di fluido facendola ruotare a mano per evitare il primo avviamento a secco
- Agevolare la fuoriuscita dell'aria dall'impianto alla prima accensione allentando momentaneamente il tubo di mandata della pompa.
- 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.

Important installation tips

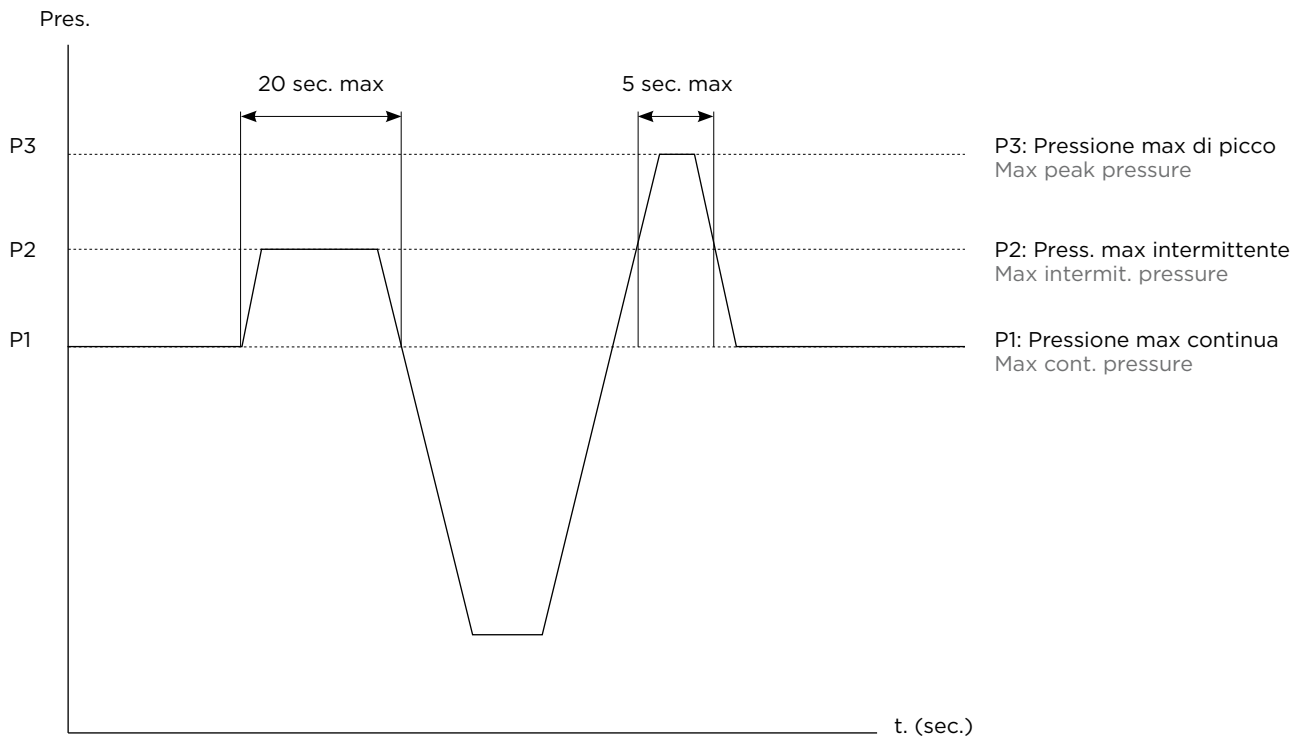
- Check for correct pump rotation in the proper direction.
- Connect the suction pipe to the pump side marked by the relevant sign or, failure of any mark, to the largest hole.
- Do not apply any axial/radial loads on the shaft of the pump. Do not use a rigid coupling for connection to the motor shaft, provide for due lubrication and axial clearance of the coupling.
- If a load is to be applied on the shaft of the pump, be sure to install a suitable external bearing for the load.
- Protect the seal of the drive shaft before painting the pump.
- 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.
- As you fill fluid into the pump, be sure to manually let the pump rotate in order to avoid dry start-ups.
- Release the delivery pipe to facilitate bleeding the pump at first startup.
- Be sure to keep running the pump 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.

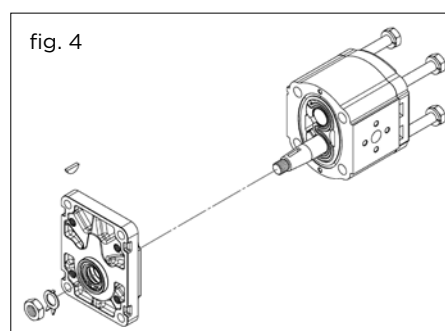
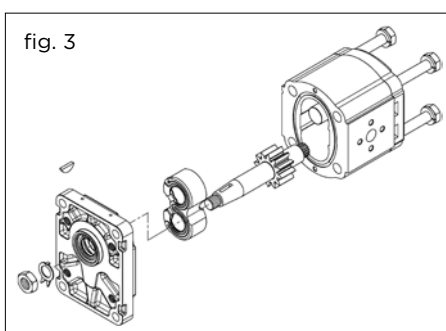
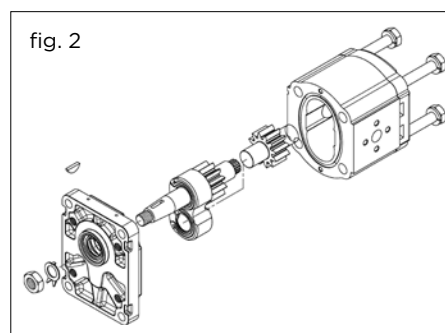
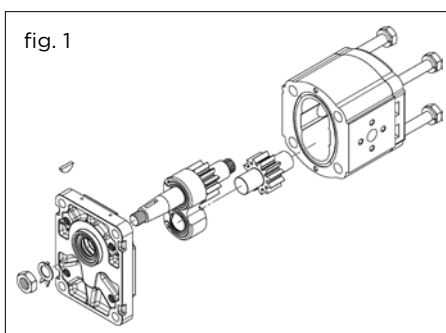
The information provided in this catalogue is subject to change without notice.

A technical drawing of a mechanical part, possibly a bracket or a housing, shown in a perspective view. The drawing is rendered in white lines on a yellow background. It features a rectangular base with rounded corners and several circular holes. A cylindrical component is attached to the right side of the base. The drawing is a line art representation, showing the geometry and features of the part.

DATI TECNICI
TECHNICAL DATA



INVERSIONE SENSO DI ROTAZIONE - ROTATION REVERSAL



I. Smontare la pompa (fig.1)
Disassemble the pump.

II. Invertire la posizione degli ingranaggi lasciando la boccola con lo stesso orientamento (fig.2 - 3)
Invert gears position leaving the bushing with its previous orientation.

III. Capovolgere la flangia e riassemblare la pompa serrando le viti con coppia $47\text{Nm} \pm 3$ (fig.4)

Reverse the flange and reassemble the pump tightening the screws with torque of $47\text{Nm} \pm 3$.

GRUPPO 3
GROUP 3



BG30 GR. 3

CARATTERISTICHE TECNICHE - TECHNICAL CHARACTERISTICS

Grandezza Size	Cilindrata cm ³ /giro Displacement (in ³ /rev)	Velocità max giri/min Max speed rpm	Portata max lt/min Max flow (gpm)	Velocità min giri/min Min speed rpm	Portata min lt/min Min flow (gpm)	Rendim. Vol. min* % Min Volum. Effic.* %
BG30-19	19.05 (1.22)	3500	66.7 (17.6)	700	13.3 (3.51)	95
BG30-22	22.2 (1.42)	3500	77.8 (20.5)	700	15.6 (4.12)	95
BG30-28	28.3 (1.82)	3300	93.5 (24.7)	700	19.8 (5.23)	95
BG30-33	33.2 (2.13)	3300	109.4 (28.9)	700	23.2 (6.12)	95
BG30-37	37.2 (2.38)	3300	122.6 (32.4)	700	26.0 (6.86)	95
BG30-44	43.98 (2.82)	3000	131.9 (34.8)	700	30.8 (8.13)	95
BG30-52	51.9 (3.33)	3000	155.6 (41.1)	700	36.3 (9.58)	95
BG30-61	61.4 (3.94)	2500	153.5 (40.5)	700	43.0 (11.35)	95

*Rendimento volumetrico a 1500 giri/min * Volumetric efficiency at 1500 rpm



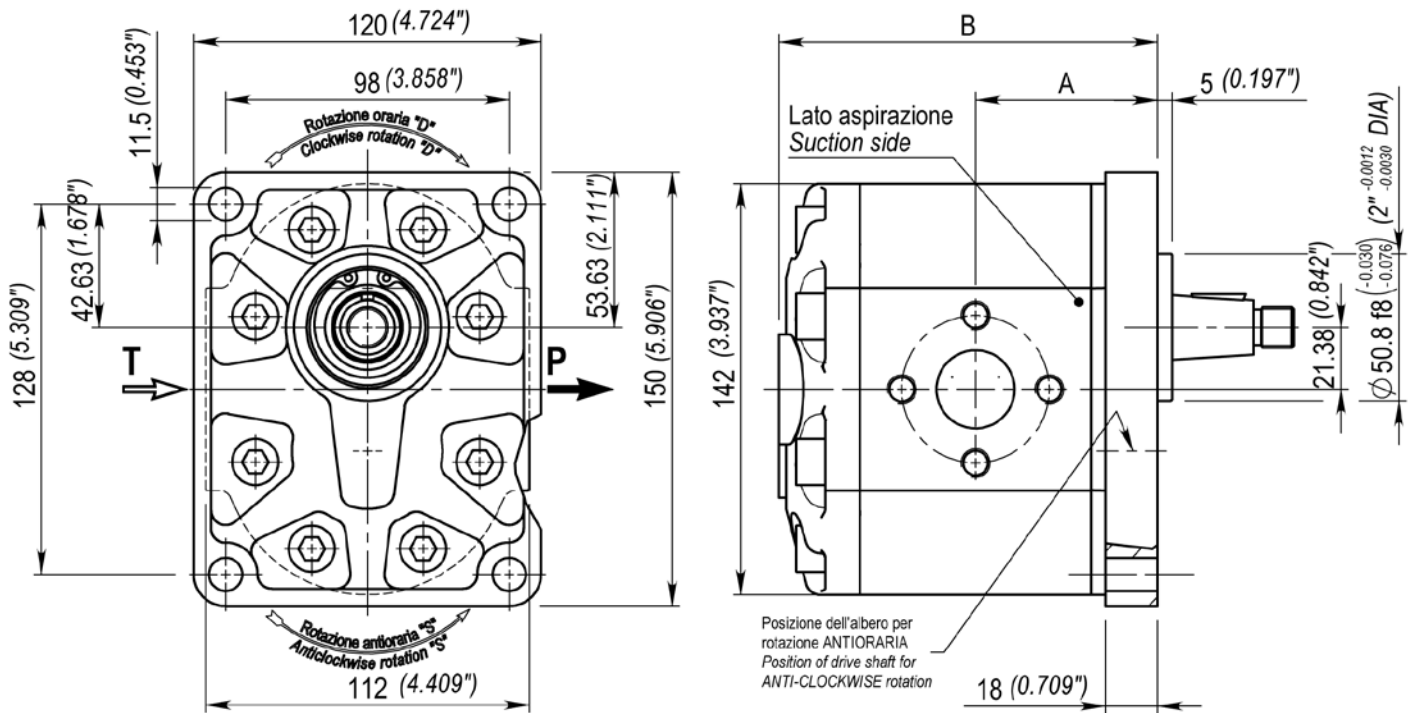
ST0
Flangia standard
Standard flange



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

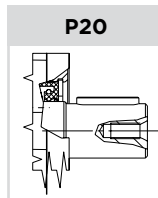
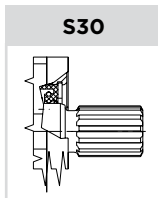
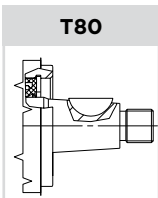
BG30 GR. 3

FLANGIA STANDARD **STO**
STANDARD FLANGE **STO**

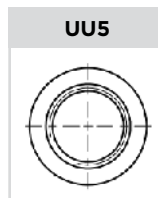
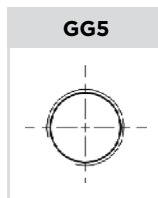
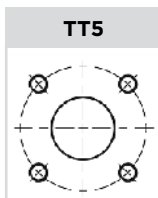
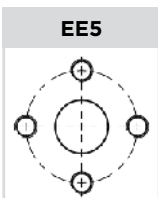


DIMENSIONI E PESI - EXTERNAL DIMENSIONS AND WEIGHTS

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)	P3 Bar (psi)	A mm (in)	B mm (in)	
BG30-19	19.05 (1.22)	250 (3625)	270 (3916)	300 (4351)	62.95 (2.48)	130.9 (5.15)	4.98 (11)
BG30-22	22.2 (1.42)	240 (3481)	260 (3771)	290 (4206)	64.3 (2.53)	133.6 (5.26)	5.10 (11.3)
BG30-28	28.3 (1.82)	220 (3191)	240 (3481)	260 (3771)	66.9 (2.63)	138.8 (5.46)	5.34 (11.8)
BG30-33	33.2 (2.13)	220 (3191)	230 (3336)	260 (3771)	68.9 (2.71)	142.9 (5.63)	5.52 (12.2)
BG30-37	37.2 (2.38)	210 (3046)	230 (3336)	250 (3625)	70.6 (2.78)	146.3 (5.76)	5.68 (12.5)
BG30-44	43.98 (2.82)	200 (2901)	220 (3191)	240 (3481)	73.6 (2.90)	152.1 (5.99)	5.93 (13.1)
BG30-52	51.9 (3.33)	200 (2901)	210 (3046)	230 (3336)	76.9 (3.03)	158.8 (6.25)	6.24 (13.8)
BG30-61	61.4 (3.94)	180 (2611)	190 (2756)	200 (2901)	81 (3.19)	166.9 (6.57)	6.60 (14.6)

ALBERI CONSIGLIATI - SUGGESTED SHAFTS


Vedi dimensioni a fine sezione BG30
See dimensions at the end of section BG30

CONNESSIONI DISPONIBILI - SAVALIABLE CONNECTIONS


Vedi dimensioni a fine sezione BG30
See dimensions at the end of section BG30

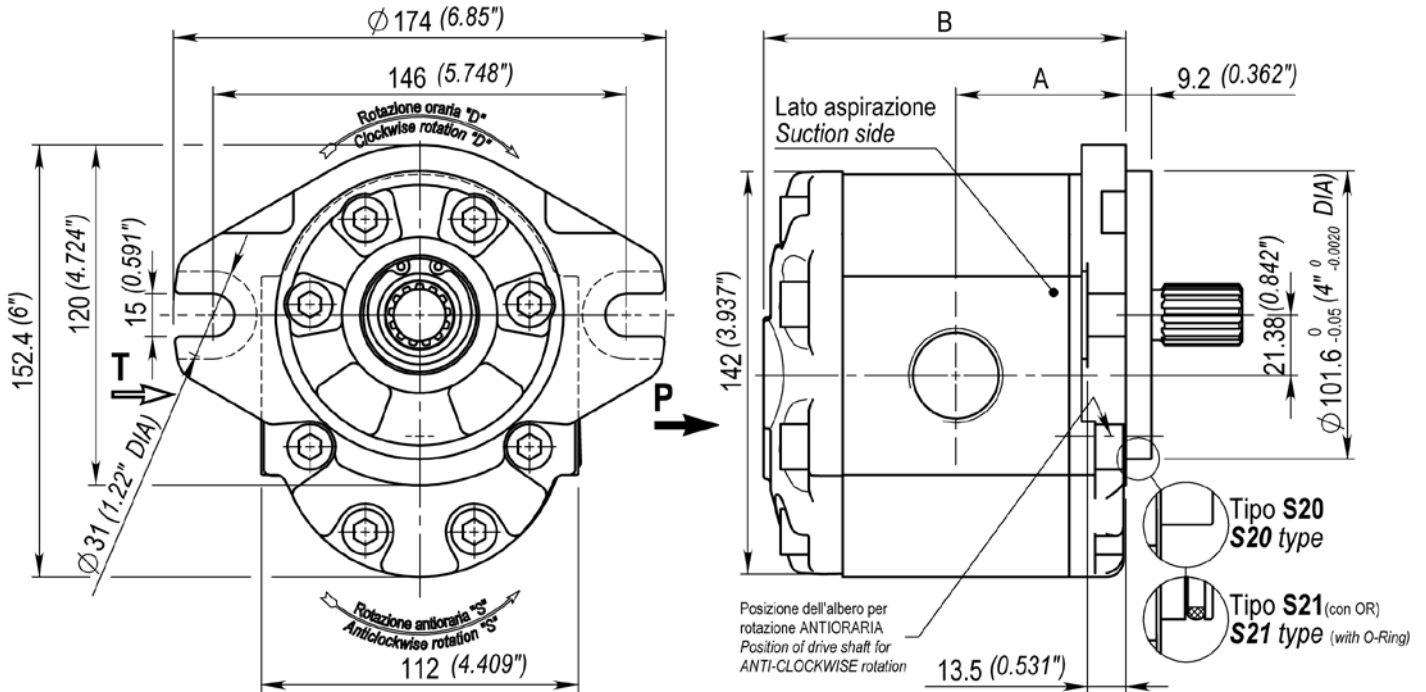
"X" = numero variabile dipendente dalla cilindrata
"X" = variable number that depends on the displacement

CODICE ORDINAZIONE - ORDERING CODE

BG30	CODICE CODE	
	CILINDRATA DISPLACEMENT	19 22 28 33 37 44 52 61 19.05 22.2 28.3 33.2 37.2 43.98 51.9 61.4
	FLANGIA FLANGE	ST0 Standard Standard
	FLANGIA E COPERCHIO FLANGE AND COVER	A Alluminio Aluminium G Ghisa Cast iron (Heavy duty)
	ALBERO SHAFT	T80 S30 P20
	CONNESSIONE CONNECTION	EE5 TT5 GG5 UU5
	ROTAZIONE ROTATION	D Rotazione destra Clockwise rotation S Rotazione sinistra Anticlockwise rotation
	COPERCHIO STANDARD STANDARD COVER	O Standard Standard
	GUARNIZIONI SEALS	O Tenute in Nbr Nbr seals V Tenute in Viton® Viton® seals

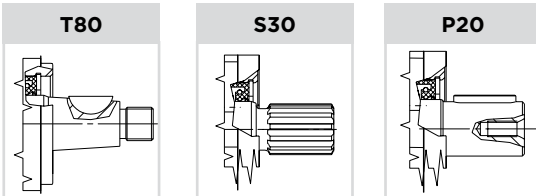
BG30 GR. 3

FLANGIA SAE B **S20** / SAE B-OR **S21**
SAE B **S20** / SAE B-OR **S21** FLANGE

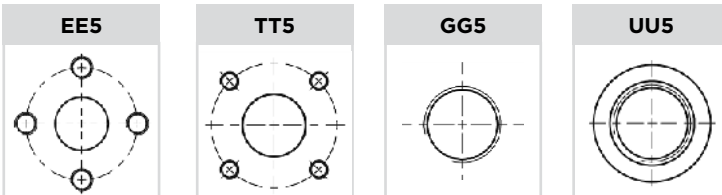


DIMENSIONI E PESI - EXTERNAL DIMENSIONS AND WEIGHTS

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)	P3 Bar (psi)	A mm (in)	B mm (in)	
BG30-19	19.05 (1.22)	250 (3625)	270 (3916)	300 (4351)	60.2 (2.37)	128 (5.04)	4.98 (11)
BG30-22	22.2 (1.42)	240 (3481)	260 (3771)	290 (4206)	61.5 (2.42)	130.8 (5.15)	5.10 (11.3)
BG30-28	28.3 (1.82)	220 (3191)	240 (3481)	260 (3771)	64.1 (2.52)	136 (5.35)	5.34 (11.8)
BG30-33	33.2 (2.13)	220 (3191)	230 (3336)	260 (3771)	66.2 (2.60)	140.1 (5.52)	5.52 (12.2)
BG30-37	37.2 (2.38)	210 (3046)	230 (3336)	250 (3625)	67.9 (2.67)	143.5 (5.65)	5.68 (12.5)
BG30-44	43.98 (2.82)	200 (2901)	220 (3191)	240 (3481)	70.8 (2.79)	149.3 (5.88)	5.93 (13.1)
BG30-52	51.9 (3.33)	200 (2901)	210 (3046)	230 (3336)	74.1 (2.92)	156 (6.14)	6.24 (13.8)
BG30-61	61.4 (3.94)	180 (2611)	190 (2756)	200 (2901)	78.2 (3.08)	164.1 (6.46)	6.60 (14.6)

ALBERI CONSIGLIATI - SUGGESTED SHAFTS


Vedi dimensioni a fine sezione BG30
See dimensions at the end of section BG30

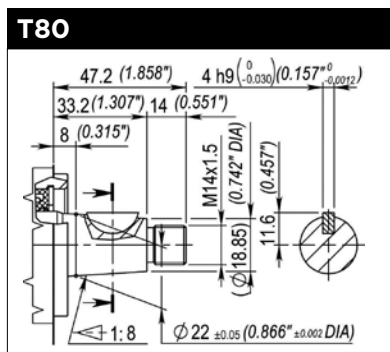
CONNESSIONI DISPONIBILI - SAVALIABLE CONNECTIONS


Vedi dimensioni a fine sezione BG30
See dimensions at the end of section BG30

"X" = numero variabile dipendente dalla cilindrata
"X" = variable number that depends on the displacement

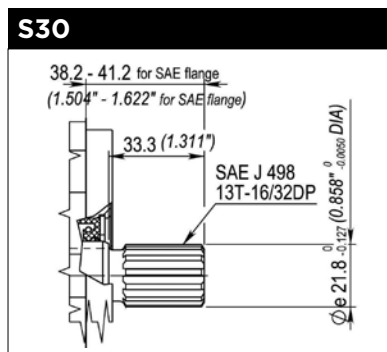
CODICE ORDINAZIONE - ORDERING CODE

BG30	CODICE CODE	
	CILINDRATA DISPLACEMENT	19 22 28 33 37 44 52 61 19.05 22.2 28.3 33.2 37.2 43.98 51.9 61.4
	FLANGIA FLANGE	S20 Standard Standard
	FLANGIA E COPERCHIO FLANGE AND COVER	A Alluminio Aluminium G Ghisa Cast iron (Heavy duty)
	ALBERO SHAFT	T80 S30 P20
	CONNESSIONE CONNECTION	EE5 TT5 GG5 UU5
	ROTAZIONE ROTATION	D Rotazione destra Clockwise rotation S Rotazione sinistra Anticlockwise rotation
	COPERCHIO STANDARD STANDARD COVER	O Standard Standard
	GUARNIZIONI SEALS	O Tenute in Nbr Nbr seals V Tenute in Viton® Viton® seals



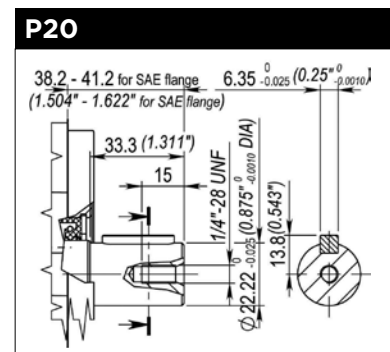
CONICITÀ 1:8
TAPER 1:8

Coppia max trasmissibile 280 Nm
Max torque 280 Nm



SCANALATO SAE
SAE SPLINED

Coppia max trasmissibile 300 Nm
Max torque 300 Nm



CILINDRICO SAE
SAE CYLINDRICAL

Coppia max trasmissibile 220 Nm
Max torque 220 Nm

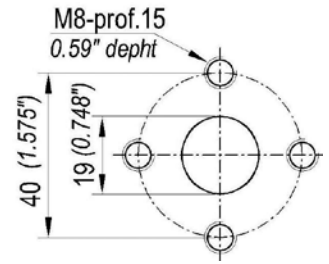
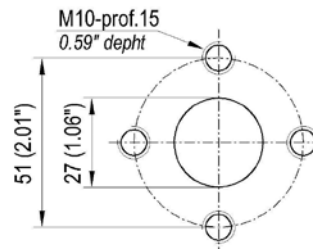
Nel caso di montaggio con flangia SAE (cod. S20)
le sporgenze vanno aumentate di 2.8 mm (0.11 in.)
When assembled with SAE flange (S20 code)
the shaft dimensions must be increased by 0.11 in. (2.8 mm)

ASPIRAZIONE lato riferimento
SUCTION reference side

MANDATA
DELIVERY

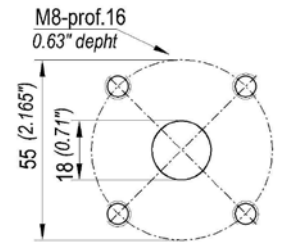
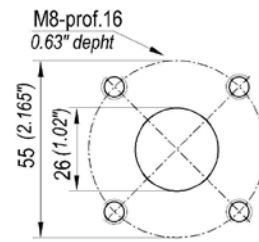
STANDARD EUROPEO - EUROPEAN STANDARD

Grandezza Size	Codice Code
19 - 61	EE5



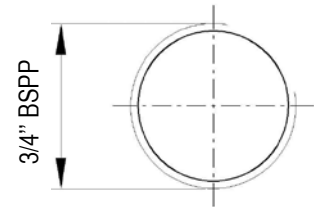
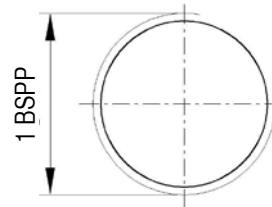
UNIFICAZIONE TEDESCA - GERMAN UNIFICATION

Grandezza Size	Codice Code
19 - 61	TT5



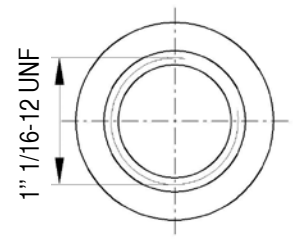
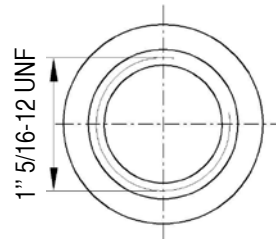
FILETTATURE BSPP - BSPP THREADS

Grandezza Size	Codice Code
19 - 61	GG5



FILETTATURE SAE - SAE THREADS

Grandezza Size	Codice Code
19 - 61	UU5

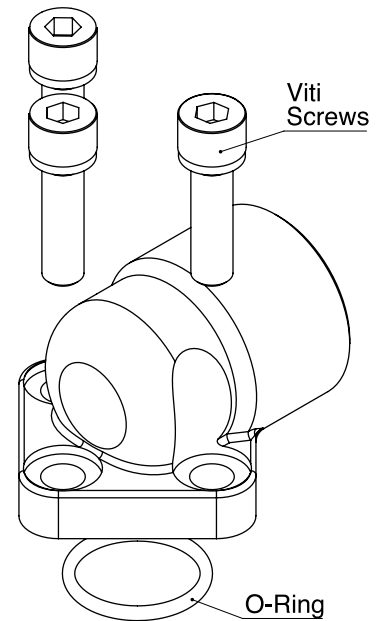
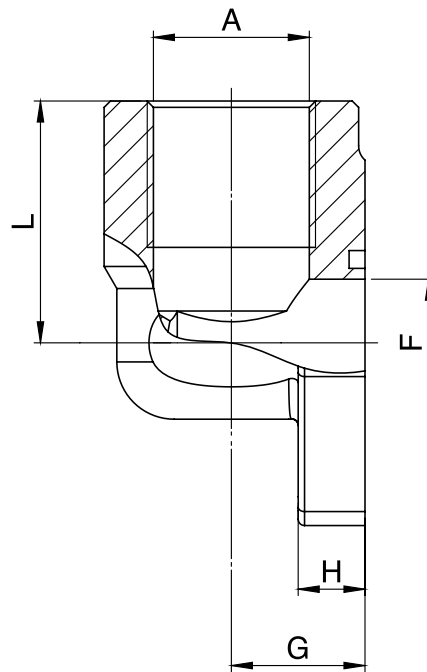
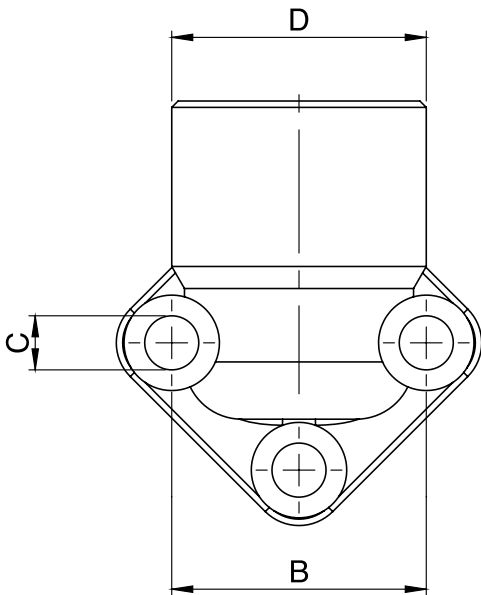


A technical line drawing of a mechanical assembly, likely a connector, rendered in white lines on a solid yellow background. The drawing shows a cylindrical component with a flange and a central shaft, mounted on a rectangular plate with several circular holes. The perspective is an isometric view.

**RACCORDI
CONNECTORS**

RACCORDI CONNECTORS

RACCORDI A GOMITO PER CONNESSIONI TIPO "EE"
ELBOW CONNECTORS FOR CONNECTIONS TYPE "EE"



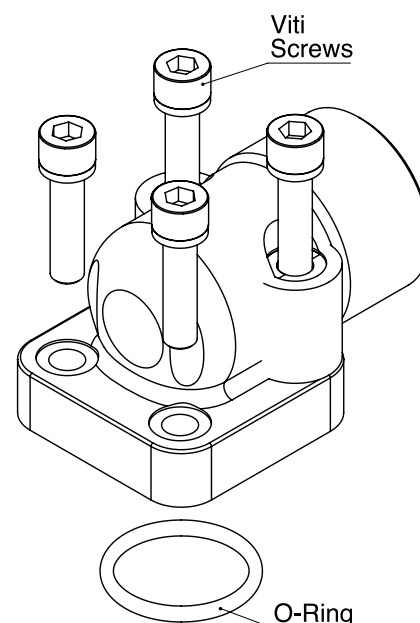
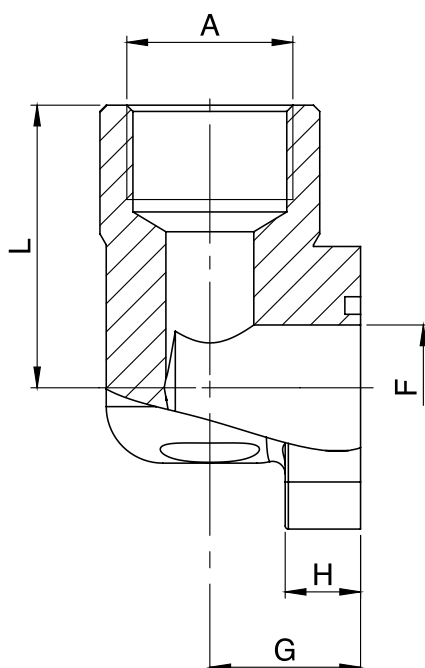
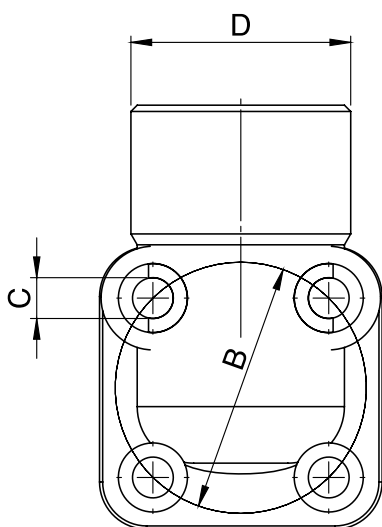
Materiale: acciaio
Material: steel

DIMENSIONI - EXTERNAL DIMENSIONS

Codice ordinazione Order code	Press. max (bar) Max press. (bar)	Dimensioni Dimensions								N° fori Holes N°	Viti metriche Metric screws	O-ring O-ring
		A	B	C	D	F	G	H	L			
FO001000	300	3/8" BSPP	26	5.5	30.5	11.5	18	9.5	27	3	M5 x 20	2056
FO001100	300	1/2" BSPP	26	5.5	30.5	11.5	18	9.5	27	3	M5 x 20	2056
FO001200	300	3/8" BSPP	30	6.5	30.5	11.5	18	9.5	27	3	M6 x 20	121
FO001300	300	1/2" BSPP	30	6.5	30.5	11.5	18	9.5	27	3	M6 x 20	121
FO001400	300	1/2" BSPP	40	8.5	40	20	21	10.5	38	3	M8 x 25	132
FO001500	300	3/4" BSPP	40	8.5	40	20	21	10.5	38	3	M8 x 25	132
FO001600	300	3/4" BSPP	51	10.5	45	25	27	13.5	47	3	M10 x 30	3125
FO001700	300	1" BSPP	51	10.5	45	25	27	13.5	47	3	M10 x 30	3125

RACCORDI CONNECTORS

RACCORDI A GOMITO PER CONNESSIONI TIPO "TT"
ELBOW CONNECTORS FOR CONNECTIONS TYPE "TT"



Materiale: acciaio
Material: steel

DIMENSIONI - EXTERNAL DIMENSIONS

Codice ordinazione Order code	Press. max (bar) Max press. (bar)	Dimensioni Dimensions								N° fori Holes N°	Viti metriche Metric screws	O-ring O-ring
		A	B	C	D	F	G	H	L			
F0002800	300	3/8" BSPP	30	6.5	34	12	19	11	41	4	M6 x 20 - M6 x 35	121
F0002900	300	1/2" BSPP	30	6.5	34	12	19	11	41	4	M6 x 20 - M6 x 35	121
F0003000	300	3/8" BSPP	35	6.5	32	13.5	18	11	40	4	M6 x 20 - M6 x 35	3075
F0003100	300	1/2" BSPP	35	6.5	32	13.5	18	11	40	4	M6 x 20 - M6 x 35	3075
F0003200	300	1/2" BSPP	40	6.5	35	20	24	10	45	4	M6 x 25 - M6 x 45	132
F0003300	300	3/4" BSPP	40	6.5	35	20	24	10	45	4	M6 x 25 - M6 x 45	132
F0003400	300	3/4" BSPP	55	8.5	46	25	35	13	54	4	M8 x 25 - M8 x 60	4118
F0003500	300	1" BSPP	55	8.5	46	25	35	13	54	4	M8 x 25 - M8 x 60	4118



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