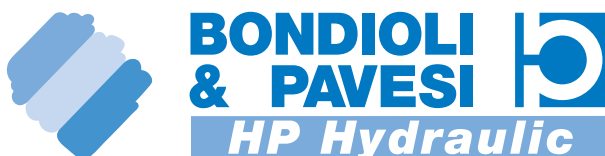


**POMPE-MOTORI-DIVISORI DI FLUSSO
AD INGRANAGGI SERIE L**

***GEARS PUMPS-MOTORS
AND FLOW DIVIDERS SERIES L***

**ZAHNRADPUMPEN,-MOTOREN
UND MENGENTEILER BAUREIHE L**

GP 004



HP HYDRAULIC S.r.l.
Gear Pump and Motor Division
Via Galliera, 319 - 40050 Funo di Argelato (BO) ITALY - Tel.: +39 051861955 - Fax: +39 051863190
E-mail hp@bypy.it - www.bypy.it

GEAR PUMP AND MOTOR DIVISION

INDICE INDEX INHALTSVERZEICHNIS

INTRODUZIONE <i>INTRODUCTION</i> EINLEITUNG	3
---	---

ISTRUZIONI GENERALI DI IMPIEGO <i>OPERATING INSTRUCTIONS</i> ALLGEMEINE GEBRAUCHSANWEISUNGEN	4
--	---

PROGRAMMA DI PRODUZIONE <i>PRODUCTION RANGE</i> LIEFERPROGRAMM	5
--	---

HPL..0	6
---------------	----------

HPL..1	11
---------------	-----------

HPL..2	19
---------------	-----------

HPL..3	27
---------------	-----------

HPL..4	35
---------------	-----------

HPLP..	40
---------------	-----------

HPLDF..	46
----------------	-----------

POMPE E MOTORI CON VALVOLE INTEGRATE <i>INTEGRATED VALVES FOR PUMP AND MOTOR</i> PUMPEN UND MOTOREN MIT EINGEBAUTEN VENTILEN	52
--	----

SUPPORTI <i>SPINDLES</i> VORSATZLAGER	54
---	----

HPLPT..+ ASS.KIT	60
-------------------------	-----------

RACCORDI <i>ELBOW</i> WINKELVERBINDUNGEN	64
--	----

Copyright©: HP Hydraulic Gear Pump and Motor Division - Febbraio 2004
Progetto Grafico: Bondioli & Pavesi.
Printed in Italy.
I dati riportati nella seguente pubblicazione non sono impegnativi. HP Hydraulic si riserva di apportare modifiche senza preavviso.

Copyright©: HP Hydraulic Gear Pump and Motor Division - February 2004
Design by: Bondioli & Pavesi.
Printed in Italy.
The data reported in this catalogue are not binding. HP Hydraulic reserves the right to change specifications without notice.

Copyright©: HP Hydraulic Gear Pump and Motor Division - Februar 2004
Grafische Gestaltung: Bondioli & Pavesi - Printed in Italy.
Die vorliegenden Angaben sind nicht bindend. HP Hydraulic behält sich technische Änderungen ohne Ankündigung vor.

INTRODUZIONE INTRODUCTION EINLEITUNG

Tra le unità idrostatiche le pompe e motori ad ingranaggi sono tra le più prodotte ed utilizzate: la robustezza della concezione, il favorevole rapporto prezzo/prestazioni, la semplicità di installazione, la possibilità di soluzioni personalizzate, l'integrazione con componenti di controllo (valvole) sono alcuni dei punti caratterizzanti questi prodotti.

L'offerta HP Hydraulic si innesta su una pluridecennale e consolidata tradizione di sviluppo e produzione di unità ad ingranaggi con spirito innovativo nel design e nei processi produttivi.

Questo permette di offrire una gamma suddivisa in modo ottimale in gruppi e cilindrate (da 0,17 a 90 cc/giro) con la possibilità di varianti ad hoc e con prestazioni che permettono ogni tipo d'impiego.

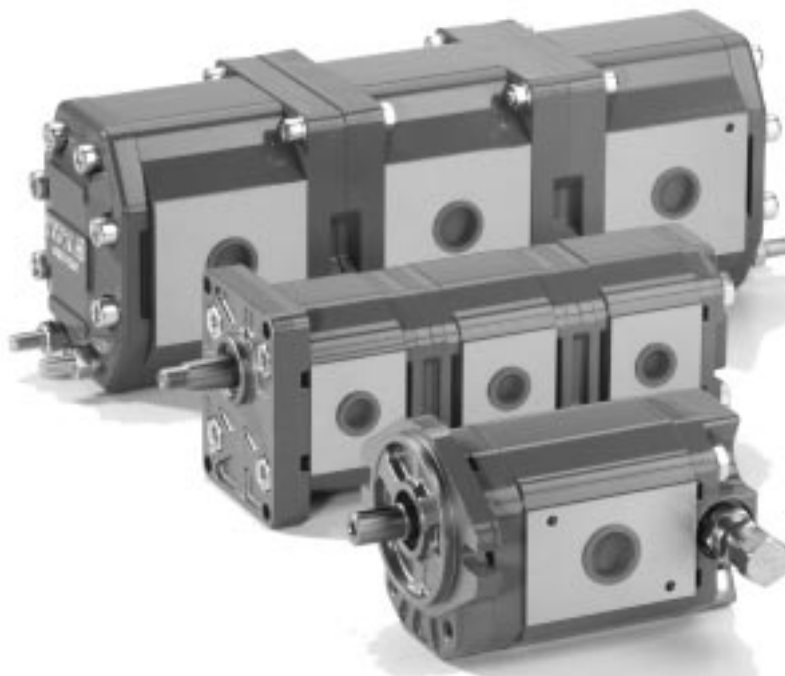
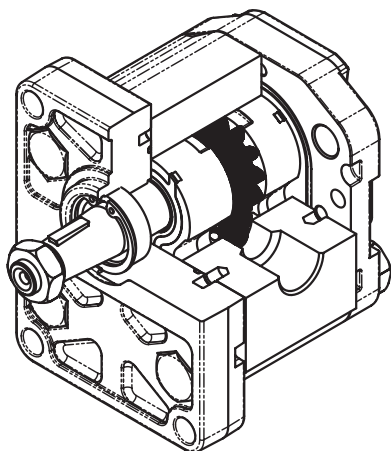
Gear pumps and motors are among the most popularly produced and utilized hydrostatic units. Some of their many characteristics are: robust design, profitable price/performance ratio, easy installation, suitability for customized solutions, possible integration with control devices (valves). HP Hydraulic offers decades of well consolidated experience in the development and production of gear units with a constant approach towards innovation of design and of manufacturing process.

This same experience enables us today to offer a range of products, grouped according to their capacity (from 0,17 to 90 cc/rev.), whose main features can be devised and varied to best respond to customer's requirements and whose performance permits use in any kind of application.

Zahnradpumpen und -motoren gehören zu den meistgebauten und gängigsten hydrostatischen Maschinen: Die robuste Bauweise, das günstige Preis-/Leistungsverhältnis, der einfache Einbau, die Möglichkeit personalisierter Lösungen, die Kombination mit Steuerungskomponenten (Ventile) sind nur einige der Vorzüge, durch die sich diese Produkte auszeichnen.

Das Angebot von HP Hydraulic beruht auf einer jahrzehntelangen und bewährten Tradition in Entwicklung und Produktion von Zahnradereinheiten mit stark innovativem Gehalt in Design und Produktionsprozessen.

Dadurch sind wir in der Lage, ein optimal in Baugruppen und Hubvolumen (von 0,17 bis 90 ccm/U) gegliedertes Programm, sowie speziell entwickelte, kundenspezifische Varianten mit Leistungsmerkmalen für jede Anwendung anzubieten.



GEAR PUMP AND MOTOR DIVISION

ISTRUZIONI GENERALI DI IMPIEGO OPERATING INSTRUCTIONS ALLGEMEINE GEBRAUCHSANWEISUNGEN

Le pompe HP Hydraulic della serie L sono prodotte in cinque differenti gruppi dimensionali 0,1,2, 3, 4, all'interno dei quali vengono ottenute le differenti cilindrate. Una gamma completa di flangie, estremità d'albero e la possibilità di ottenere pompe multiple e /o con valvole integrate nel coperchio posteriore completano la gamma di produzione.

HP Hydraulic series L pumps are supplied in five groups, different in size (0,1,2,3,4,). Various capacities will be determined within each group. The series of products is even further completed with a full range of flanges, shaft ends, and available multiple pumps with or without valves integrated into the back cover.

Die Pumpen HP Hydraulic Baureihe L sind in fünf verschiedenen Baugrößen erhältlich – nämlich 0, 1, 2 3, 4 – innerhalb derer die verschiedenen Hubvolumen lieferbar sind.

Das Produktionsprogramm wird ergänzt durch ein komplettes Angebot von Flanschen und Wellenzapfen, und durch die Möglichkeit, Mehrfachpumpen und/oder Pumpen mit in der hinteren Abdeckung eingebauten Ventilen zusammenzustellen.

FLUIDO IDRAULICO

Le pompe sono in grado di funzionare con svariati tipi di oli idraulici tra essi: Fluidi idraulici HLP (DIN 51224 parte2) Oli lubrificanti per motori API CD (SAE Fluidi idraulici HLPV(DIN 51224 parte3) J183). Per fluidi diversi da quelli citati si prega di consultare il ns servizio tecnico.

FLUID

Pumps can operate with many types of hydraulic oil some of them are: HLP Hydraulic fluids (DIN 51224 part 2) HLPV Hydraulic fluids (DIN 51224 part 3) API CD Engine Lubricating oils (SAE J183) Please contact our Engineering Department if different fluids from those above listed are requested.

HYDRAULIKMEDIUM

Die Pumpen können mit verschiedenen Hydraulikölen betrieben werden, Unter anderem können folgende Öle verwendet werden: Hydrauliköl HLP (DIN 51224 Teil 2) Hydrauliköl HLPV(DIN 51224 Teil 3) Motoröle API CD (SAE J183) Für andere Öle als oben angegeben ist eine Rücksprache mit unserem technischen Kundendienst unerlässlich.

TEMPERATURA DI FUNZIONAMENTO

- Minima -20C
- Massima continua 85C
- Di picco (intermittente) 100C

OPERATING

The Temperature range limits of a pump (standard version) are tabulated and summarized below.

- Temperature Minimum -20C
- Maximum continuous 85C
- Peak (intermitting) 100C

TEMPERATUR

- Mindestwert -20C
- Dauerhöchsttemperatur 85 °C
- Spitztemperatur (intermittierend) 100 °C

VISCOSITÀ

- Minima 10 mm²/s
- Massima (partenza a freddo)1400 mm²/s
- Campo di viscosità raccomandato12-90 mm²/s

VISCOSITY

- Minimum 10 mm²/s
- Maximum (cold-starting up) 1400 mm²/s
- Recommended viscosity range 12-90 mm²/s

VISKOSITÄT

- Mindestwert 10 mm²/s
- Höchstwert (Kaltstart) 1400 mm²/s
- Empfohlener Viskositätsbereich 12-90 mm²/s

GRADO DI FILTRAZIONE

Le classi di contaminazione consigliate in funzione della pressione di esercizio sono riportate nella tabella seguente.

FILTERING RATING

The suggested contamination classes based on continuous pressure are listed below.

FILTRATIONSGRAD

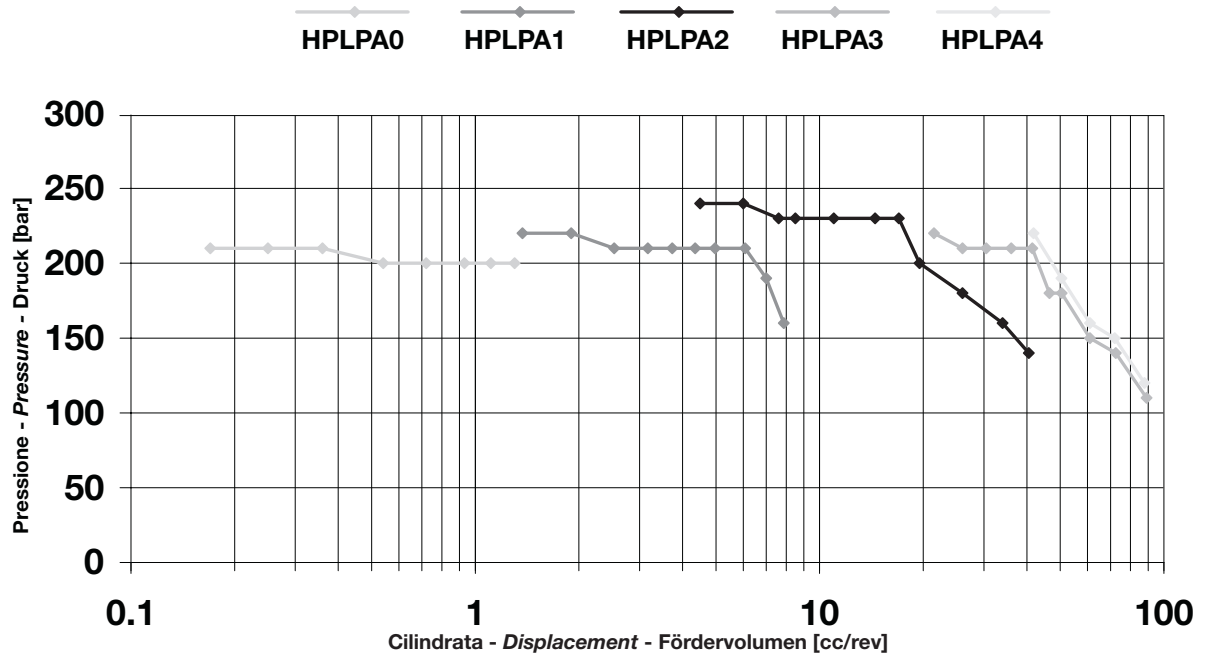
Die je nach Betriebsdruck empfohlenen Reinheitsklassen sind in der nachstehenden Tabelle aufgeführt.

Pressione di esercizio • Continuous pressure • Betriebsdruck	>150 bar	<150 bar
Classe di contaminazione • Contamination class • Reinheitsklasse ISO4406	18/15	19/16
Classe di contaminazione • Contamination class • Reinheitsklasse NAS 1638	9	10

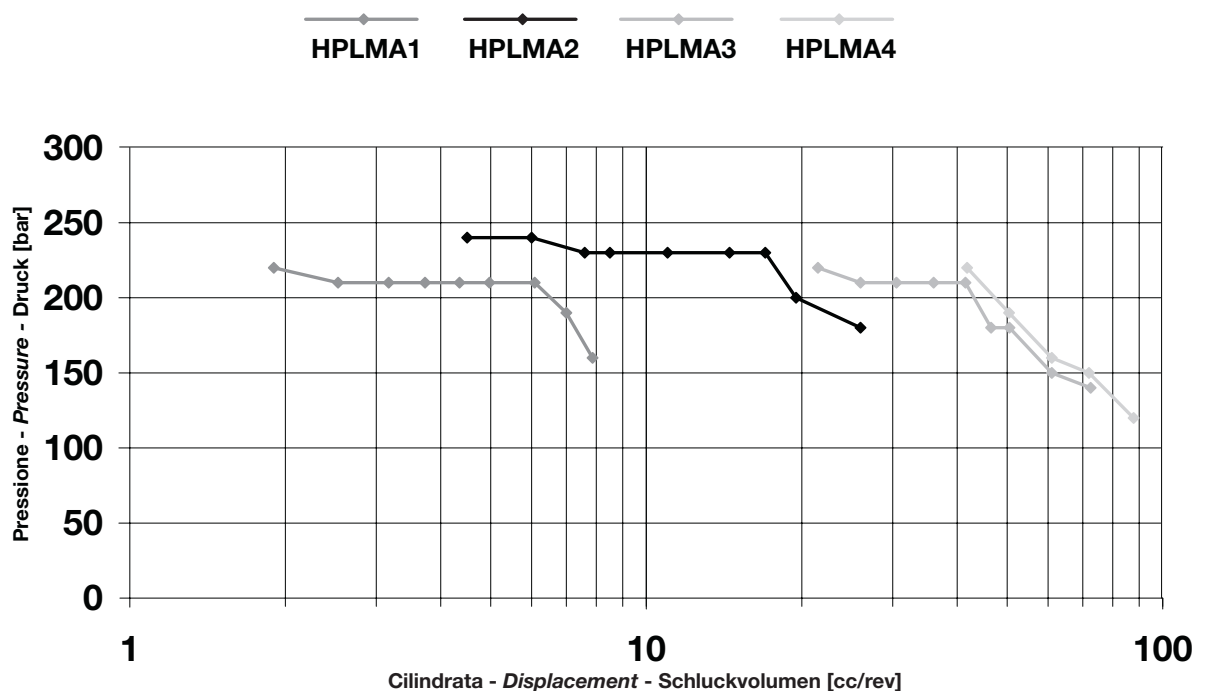


PROGRAMMA DI PRODUZIONE
PRODUCTION RANGE
LIEFERPROGRAMM

POMPE - PUMPS - PUMPEN



MOTORI - MOTORS - MOTOREN



GEAR PUMP
AND MOTOR
DIVISION

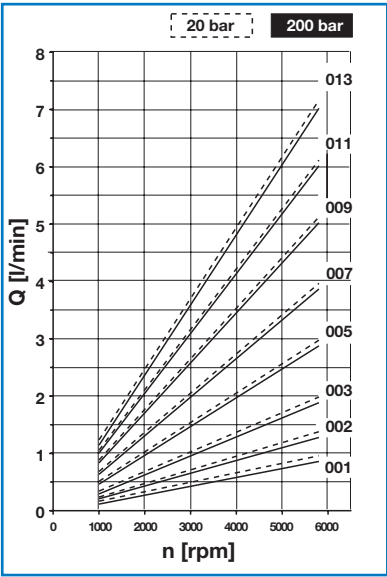
POMPE AD INGRANAGGI
GEAR PUMPS
ZAHNRADPUMPEN

HPL PAO

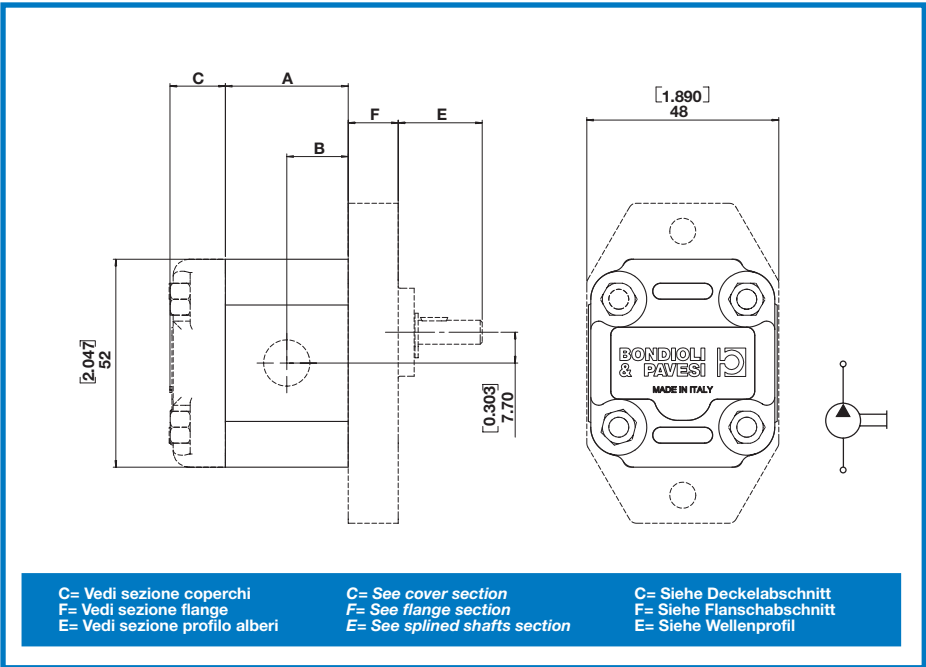
DATI TECNICI • TECHNICAL DATA
TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA/ NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
0	01	0,17	0,01	210	3046	220	3191	240	3481	5800	1000	0,39	0,84
	02	0,25	0,02	210	3046	220	3191	240	3481			0,39	0,86
	03	0,36	0,02	210	3046	220	3191	240	3481			0,4	0,88
	05	0,54	0,03	200	2901	210	3046	230	3336			0,40	0,88
	07	0,72	0,04	200	2901	210	3046	230	3336			0,41	0,90
	09	0,93	0,06	200	2901	210	3046	230	3336			0,42	0,93
	11	1,11	0,07	200	2901	210	3046	230	3336			0,43	0,95
	13	1,30	0,08	200	2901	210	3046	230	3336			0,44	0,97

DIAGRAMMA PORTATE
DIAGRAMS • KENNLINIEN



POMPE AD INGRANAGGI
GEAR PUMPS
ZAHNRADPUMPEN



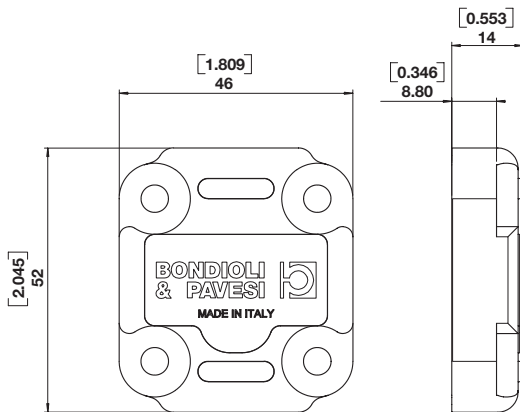
DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
0	01	29,4	1,157	14,7	0,579
	02	29,9	1,177	15,0	0,589
	03	30,7	1,209	15,4	0,604
	05	30,7	1,209	15,4	0,604
	07	30,7	1,209	15,4	0,604
	09	34,95	1,376	17,5	0,688
	11	34,95	1,376	17,5	0,688
	13	34,95	1,376	17,5	0,688

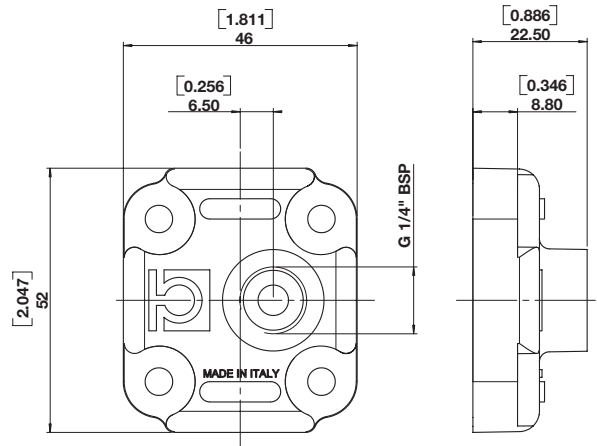


**COPERCHI
COVERS
DECKEL**

HPL..0



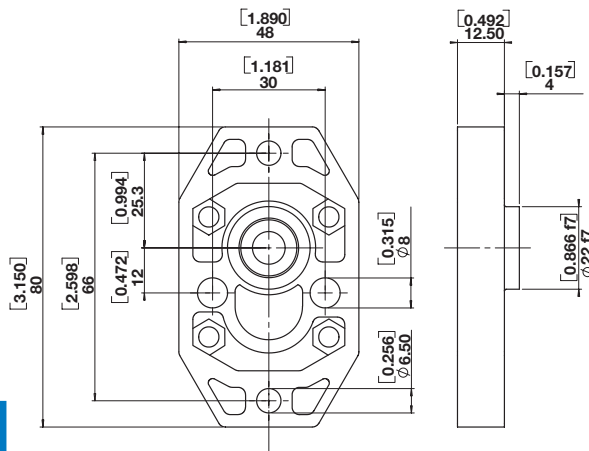
ST



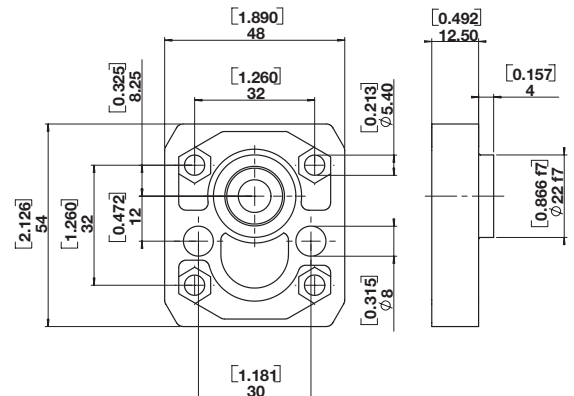
V..

Per bocche posteriori e valvole integrate
For rear ports and integrated valves
Für hintere Anschlüsse und integrierte Ventile

**FLANGE
FLANGE
FLANSCH**

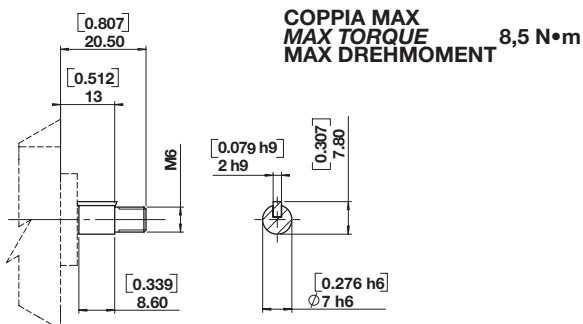


A

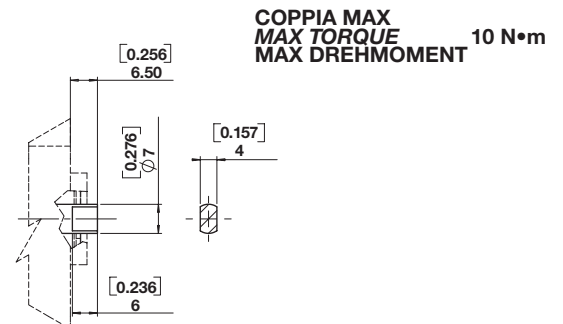


B

**PROFILO ALBERI
SPLINE SHAFTS
WELLENPROFILE**



A



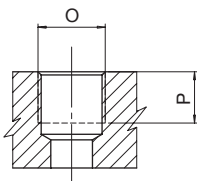
B

GEAR PUMP AND MOTOR DIVISION

BOCCHIE
PORTS
ANSCHLÜSSE

HPL..0

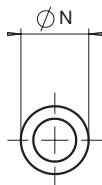
G LATERALE
LATERAL
SEITLICH



T POSTERIORE
REAR
HINTEN

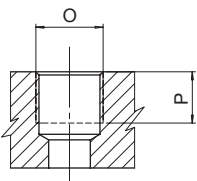
TIPO TYPE TYPE	O	P	
		mm	in
G2	1/4"	12	0,47
T2	1/4"	12	0,47

H ANTERIORE
FRONT
VORNE



TIPO TYPE TYPE	FRONTALE SEAL FRONTAL	N	
		mm	in
H0	OR 8,73 x 1,78	8	0,50

M LATERALE
LATERAL
SEITLICH



TIPO TYPE TYPE	O	P	
		mm	in
M0	M10x1	10	0,39

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

ESTREMITÀ ALBERO
SHAFT PROFIL
WELLENENDE

A

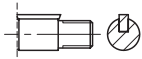


FLANGE • FLANGE • FLANSCH

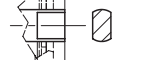
B



A



B



BOCCHIE • PORTS • ANSCHLÜSSE

M



G



T



H





**ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG**

HPL..0

HPL	PA	0	09	D	A	A	M0 M0	B	ST	
------------	-----------	----------	-----------	----------	----------	----------	--------------	----------	-----------	--

**SERIE
SERIES
SERIE**

**PRODOTTO
PRODUCT
PRODUKTE**

PA - Pompa singola
Single Pump
Einfachpumpe

**GRUPPO
GROUP
BAUGRÖSSE**

0

**CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN**

01 - 0,17
02 - 0,25
03 - 0,36
05 - 0,54
07 - 0,72
09 - 0,93
11 - 1,11
13 - 1,30

**SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG**

S - Antioraria/sinistra
Counterclockwise
Linkslauf

D - Oraria/destra
Clockwise
Rechtslauf

B - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Lecköl Anschl. (Hinten)

**COPERCHI - COVERS
DECKELN**

ST - Standard
Standard
Standard

GUARNIZIONI - SEALS - DICHTUNGEN

B - NBR
V - Viton

**BOCCHES STANDARD
STANDARD PORT
STANDARD ANSCHLÜSSE**

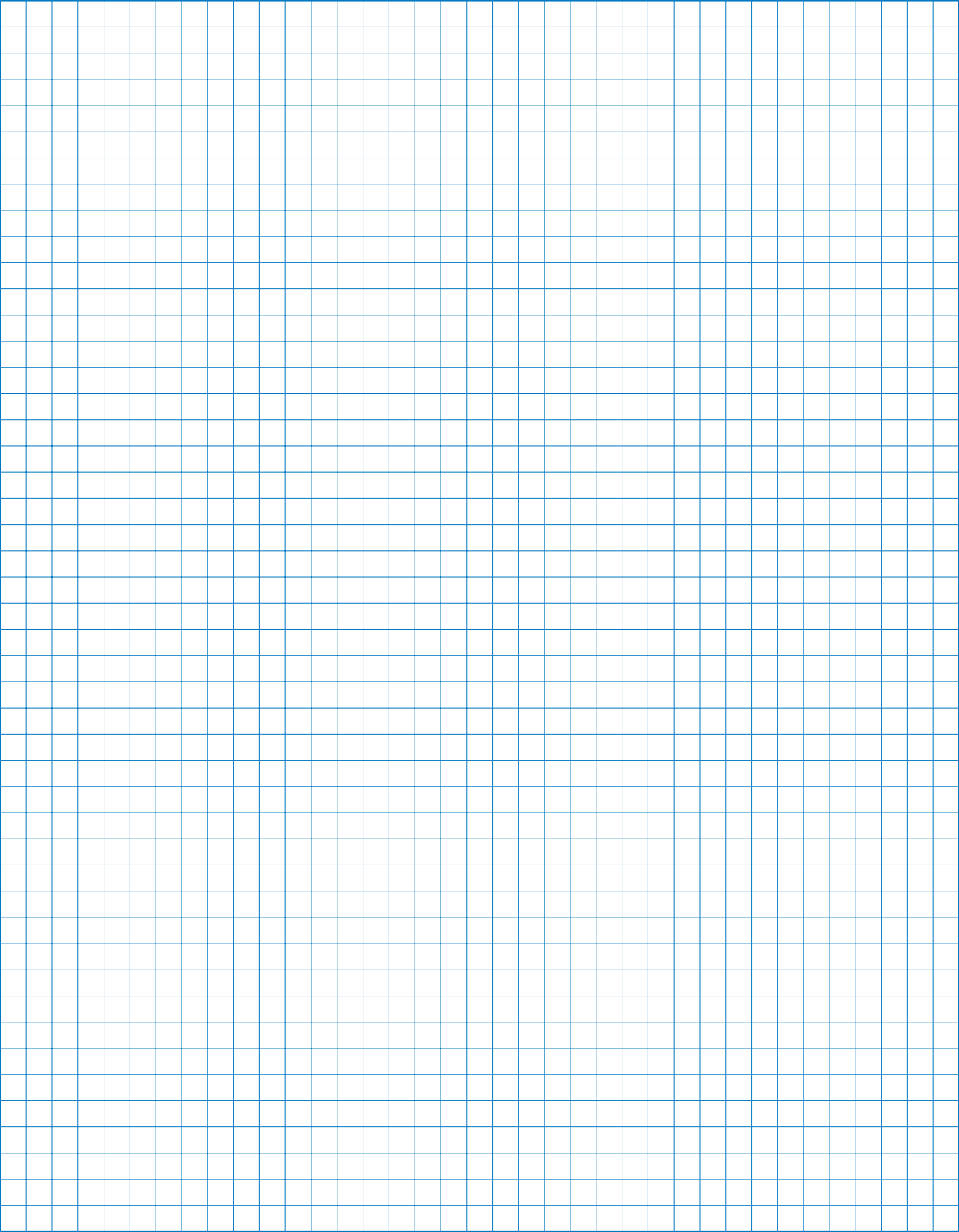
IN	OUT
M0	M0
G2	G2
T2	H0
G2	H0
M0	H0

ESTREMITÀ D'ALBERO - SHAFT PROFIL - WELLENENDE

A - Cilindrico Ø7 - Parallel shaft ø7 - Zylindrisch ø7
B - Dente frontale - Tang drive - Profil

**FLANGIA
FLANGE
FLANSCH**

A - Standard - Standard - Standard
B - Quadrata - Square - Quadrat





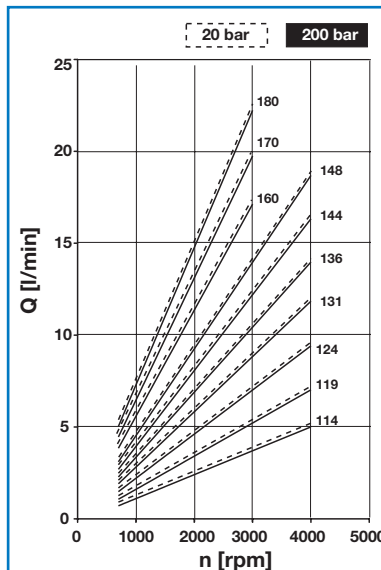
POMPE AD INGRANAGGI GEAR PUMPS ZAHNRADPUMPEN

HPL PA1

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
1	14	1,37	0,08	220	3191	260	3771	280	4061	4000	700	0,90	1,98
	19	1,90	0,12	220	3191	260	3771	280	4061			0,95	2,09
	24	2,53	0,15	210	3046	250	3626	260	3771			0,95	2,09
	31	3,17	0,19	210	3046	250	3626	260	3771			0,95	2,09
	36	3,73	0,23	210	3046	250	3626	260	3771			1,05	2,31
	44	4,35	0,27	210	3046	250	3626	260	3771			1,05	2,31
	48	4,97	0,30	210	3046	250	3626	260	3771			1,05	2,31
	60	6,08	0,37	210	3046	250	3626	260	3771	3000	700	1,20	2,65
	70	7,00	0,43	190	2756	210	3046	230	3336			1,20	2,65
	80	7,87	0,48	160	2321	180	2611	200	2901			1,20	2,65

DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



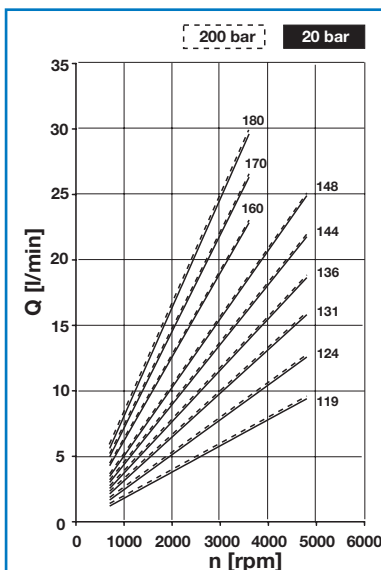
MOTORI AD INGRANAGGI GEAR MOTORS ZAHNRADMOTOREN

HPL MA1

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
1	19	1,90	0,12	220	3191	260	3771	280	4061	4800	700	0,95	2,09
	24	2,53	0,15	210	3046	250	3626	260	4061			0,95	2,09
	31	3,17	0,19	210	3046	250	3626	260	3771			0,95	2,09
	36	3,73	0,23	210	3046	250	3626	260	3771			1,05	2,31
	44	4,35	0,27	210	3046	250	3626	260	3771			1,05	2,31
	48	4,97	0,30	210	3046	250	3626	260	3771			1,05	2,31
	60	6,08	0,37	210	3046	250	3626	260	3771	3600	700	1,20	2,65
	70	7,00	0,43	190	2756	210	3046	230	3336			1,20	2,65
	80	7,87	0,48	160	2321	180	2611	200	2901			1,20	2,65

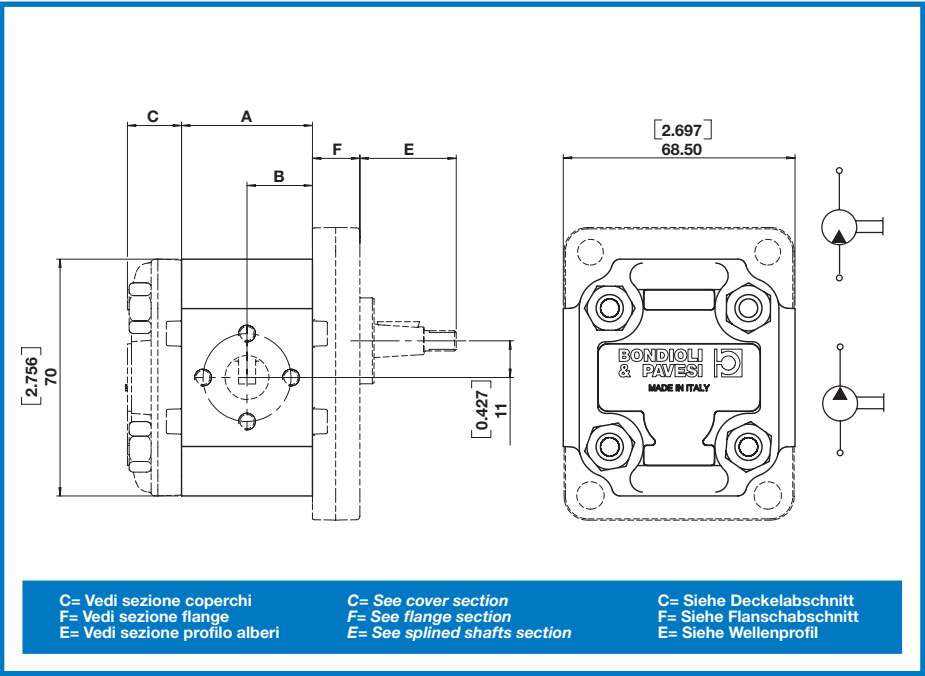
DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



GEAR PUMP
AND MOTOR
DIVISION

POMPE E MOTORI AD INGRANAGGI
GEAR PUMPS AND MOTORS
ZAHNRADPUMPEN UND -MOTOREN

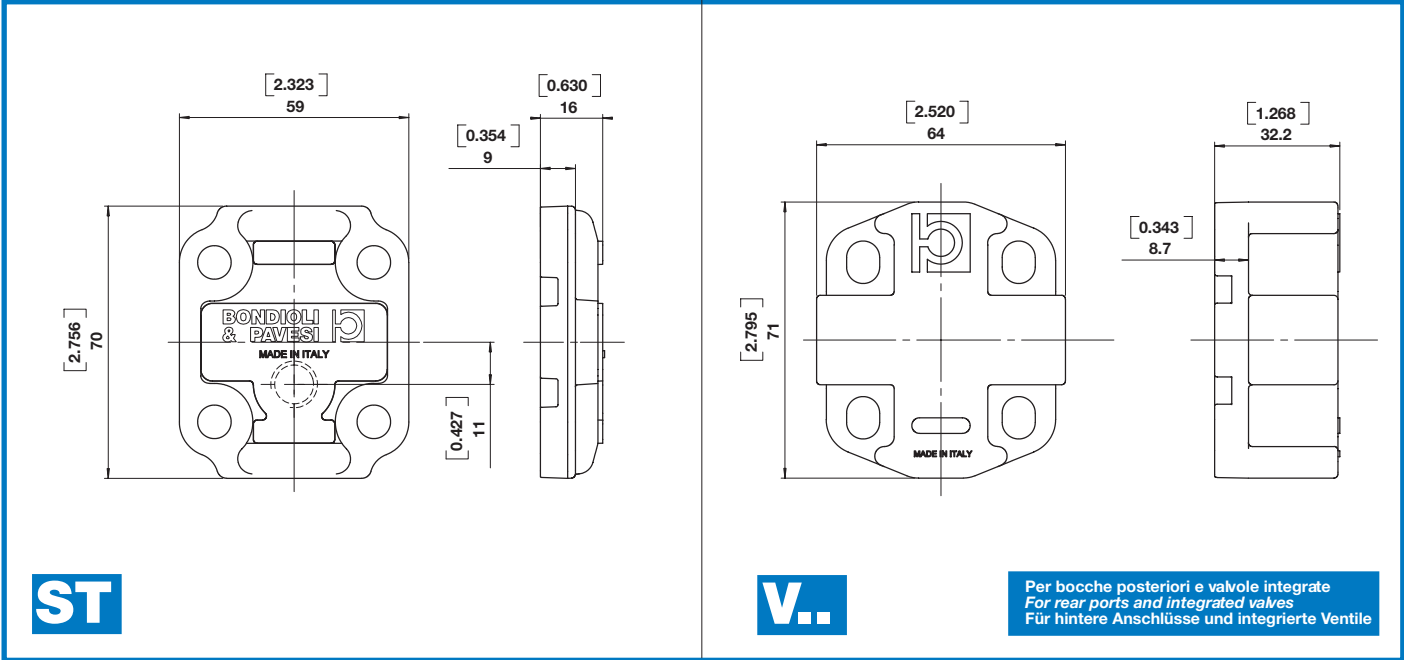
HPL..1



DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
1	14	38,7	1,524	19,4	0,762
	19	38,7	1,524	19,4	0,762
	24	38,7	1,524	19,4	0,762
	31	38,7	1,524	19,4	0,762
	36	45,35	1,785	22,7	0,893
	44	45,35	1,785	22,7	0,893
	48	45,35	1,785	22,7	0,893
	60	56,05	2,207	28,0	1,103
	70	56,05	2,207	28,0	1,103
	80	56,05	2,207	28,0	1,103

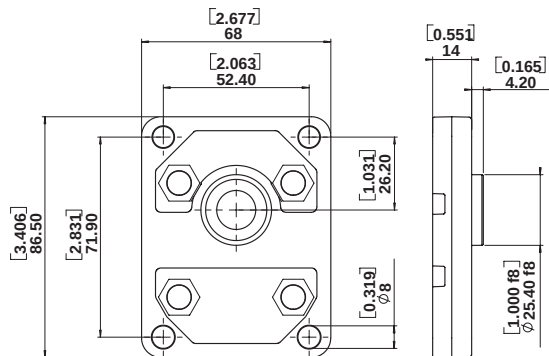
COPERCHI
COVERS
DECKEL



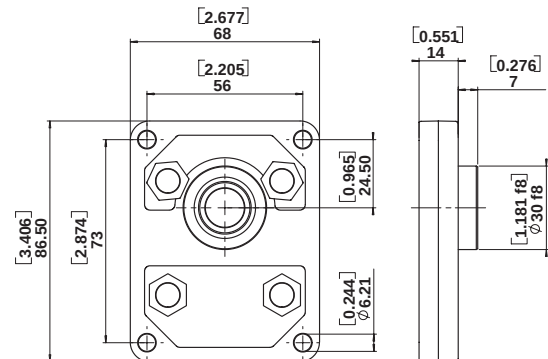


**FLANGE
FLANGES
FLANSCH**

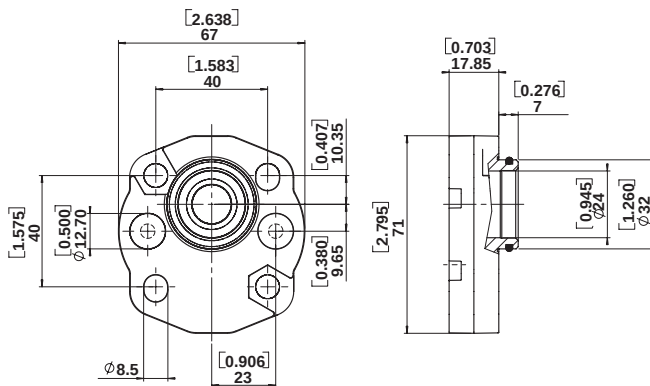
HPL..1



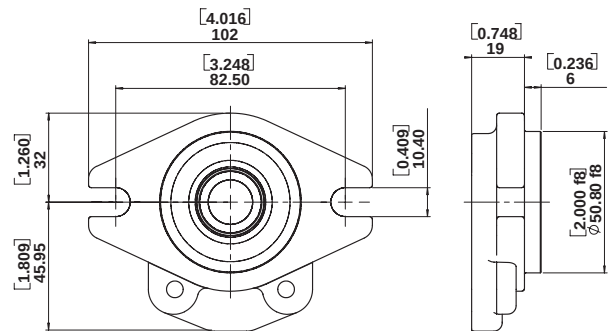
D



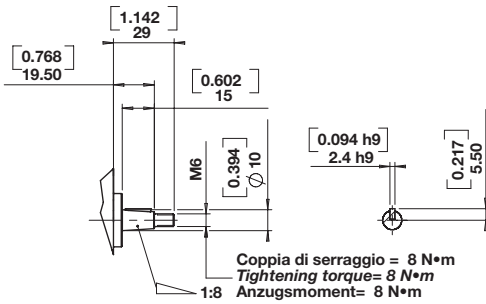
E



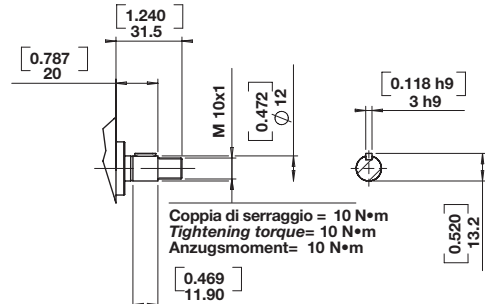
G



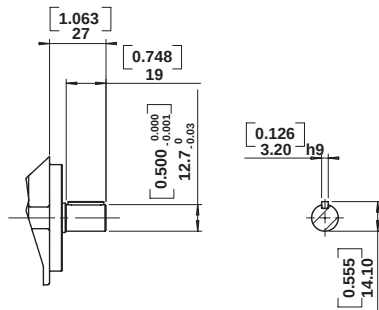
J



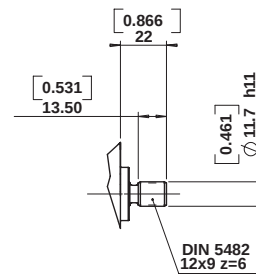
D COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 25 N•m



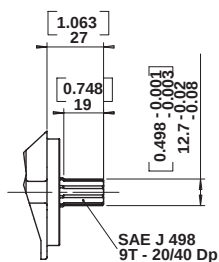
E COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 15 N•m



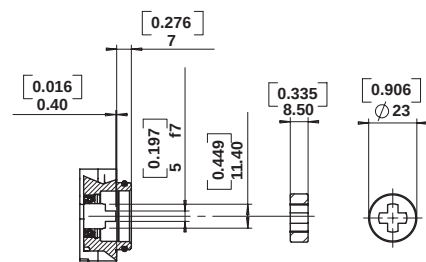
F COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 35 N•m



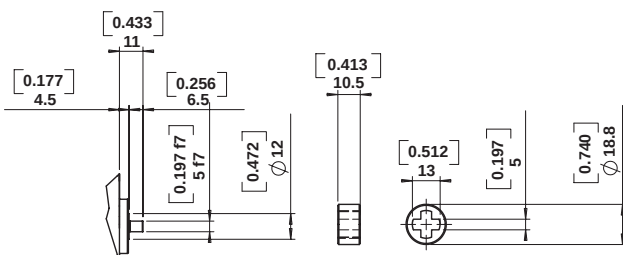
H COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 30 N•m



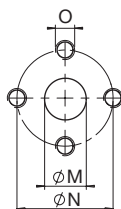
I COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 45 N•m



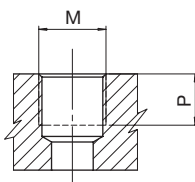
K COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 20 N•m



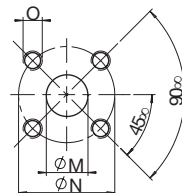
J COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 20 N•m

**BOCCHIE
PORTS
ANSCHLÜSSE****HPL..1****E** LATERALE
LATERAL
SEITLICH

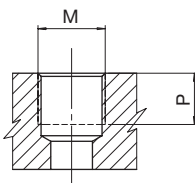
TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
E2	13	0,51	26	1,02	M5
E3	13	0,51	30	1,18	M6

G LATERALE
LATERAL
SEITLICH**T** POSTERIORE
REAR
HINTEN

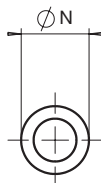
TIPO TYPE TYPE	M		P	
	mm	in	mm	in
G3	3/8"		12	0,47
T3	3/8"		12	0,47
G4	1/2"		16	0,63

X LATERALE
LATERAL
SEITLICH

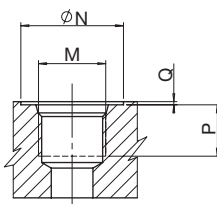
TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
X3	13	0,51	30	1,18	M6

M LATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	M		P	
	mm	in	mm	in
M2	M14x1,5		12	0,47
M4	M18x1,5		16	0,63

H ANTERIORE
FRONT
VORNE

TIPO TYPE TYPE	FRONTALE SEAL VORNE	N	
		mm	in
H1	OR 9,25 x 1,78	12,7	0,50

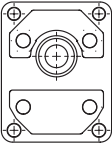
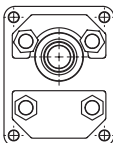
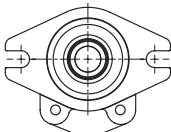
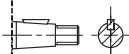
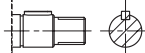
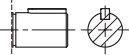
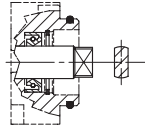
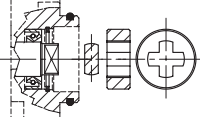
U LATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	DIMENSIONE SIZE GROSSE	N		M	P		Q	
		mm	in		mm	in	mm	in
U3	3/8"	25	0,98	9/16 - 18 UNF	13	0,3	0,3	0,01
U4	1/2"	30	1,18	3/4 - 16 UNF	15	0,3	0,3	0,01

GEAR PUMP AND MOTOR DIVISION

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

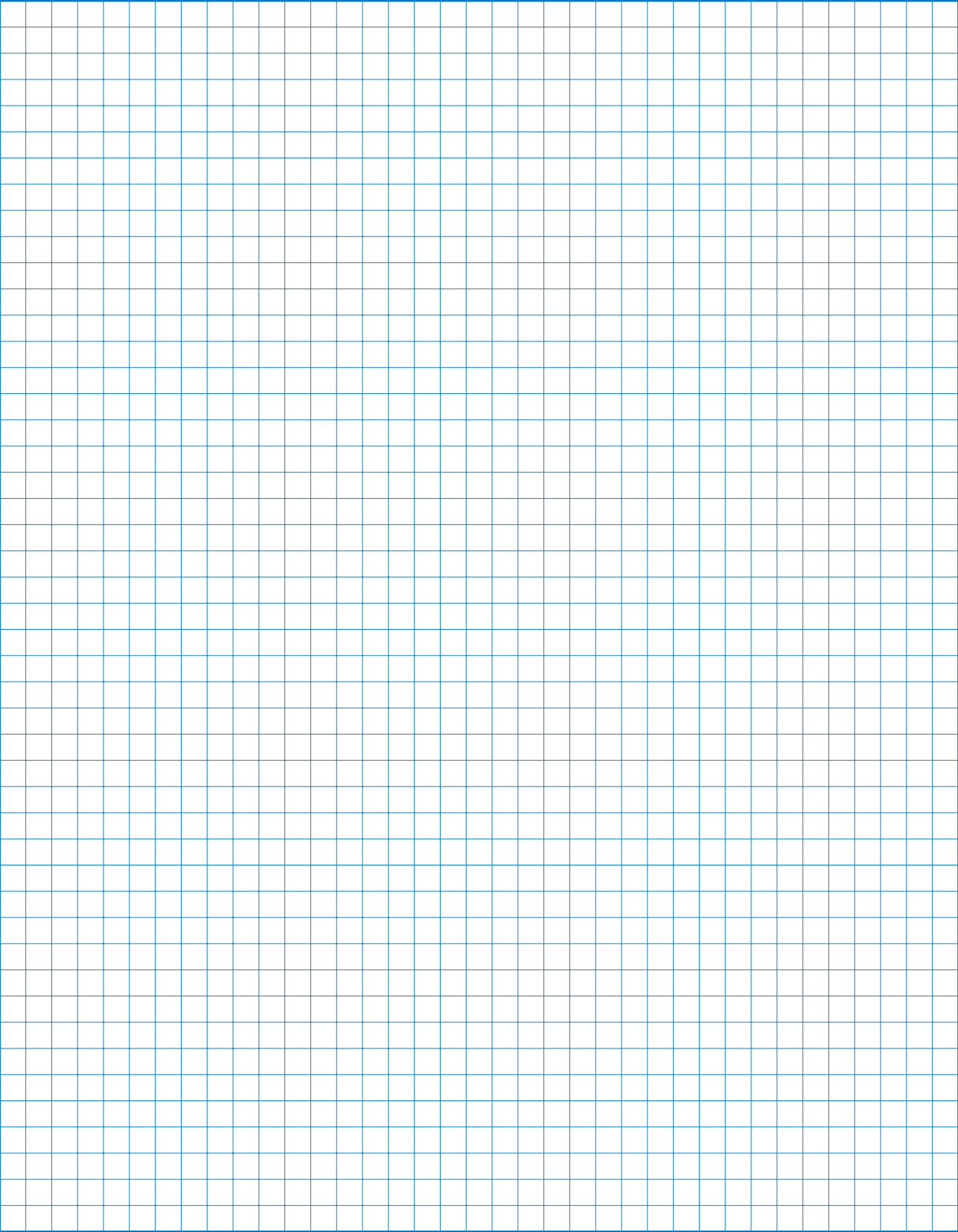
HPL..1

ESTREMITÀ ALBERO SHAFT PROFIL WELLENENDE		FLANGE • FLANGE • FLANSCH			
		D 	E 	G 	J 
D 					
E 					
F 					
H 					
I 					
J 					
K 					
BOCCHE • PORTS • ANSCHLÜSSE					
E 					
G 					
X 					
M 					
T 					
H 					
U 					

**ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG****HPL..1****HPL****PA****1****36****D****D****E****E3 E3****B****ST****SERIE
SERIES
SERIE****PRODOTTO - PRODUCT
PRODUKTE****MA** - Motore
PA - Pompa singola
PT - Pompa predisposta**MA** - Motor
PA - Pump
PT - Adapted Pump**MA** - Motor
PA - Pumpe
PT - Vorbereitete Pumpe**SET VALVOLE - (bar)
VALVE SETTING (bar)
VENTILEINSTELLUNG (bar)****COPERCHI - COVERS - DECKELN****ST** - Standard
V.. - Con valvole (vedi sez. valvole)
With valves (see valves section)
Mit Ventilen (siehe Ventile Abschnitt)**GUARNIZIONI - SEALS - DICHTUNGEN****B** - NBR
R - NBR alte pres. (25 bar)
high pres. (25 bar)
Hochdruck (25 bar)
V - Viton
W - Viton alte pres. (25 bar)
For high pres. (25 bar)
Hochdruck (25 bar)**GRUPPO - GROUP - BAUGRÖSSE
1****CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN****14** - 1,37
19 - 1,90
24 - 2,53
31 - 3,17
36 - 3,73
44 - 4,35
48 - 4,97
60 - 6,08
70 - 7,00
80 - 7,87**SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG****S** - Antioraria/sinistra
Counterclockwise
Linkslauf**D** - Oraria/destra
Clockwise
Rechtslauf**H** - Bidirezionale drenaggio interno
Reversible int. drain.
Reversierbar Lecköl Anschl. (Seitlich)**B** - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Lecköl Anschl. (Hinten)**BOCCHES STANDARD - STANDARD PORT - STANDARD ANSCHLÜSSE
CILINDRATA - DISPLACEMENT - FÖRDER-/SCHLUCKVOLUMEN**

1,4.....4,8		6.....8	
Pompe - Pumps - Pumpen IN/OUT		Pompe - Pumps - Pumpen IN/OUT	
E3 E3		E3 E3	
G3 G3		G4 G4	
X3 X3		X3 X3	
M4 M2		M4 M2	
U3 U3		U4 U4	
T3 H1		T3 H1	
Motori - Motors - Motoren OUT/IN			

**FLANGIA ANTERIORE
FRONT FLANGE
VORDERER FLANSCH****D** - Europea D 25,4
E - Europea D 30
G - Tedesca con OR
J - SAE AA**D** - European standard
E - European Ø 30
G - German with OR
J - SAE AA**D** - EU-Norm.D 95,5
E - EU-Norm.D 30
G - DIN-Norm.(mit O.R. Dichtung)
J - SAE AA**ESTREMITÀ D'ALBERO
SHAFT PROFIL - WELLENENDE****D** - Conico (1:8)
E - Cilindrico europeo
F - Cilindrico SAE "AA"
H - Scanalato 12x9
I - Scanalato SAE "AA"
J - Dente frontale sporgente
K - Dente frontale**D** - Tapered (1:8)
E - European parallel shaft
F - SAE "AA" parallel shaft
H - Splined 12x9
I - SAE "AA" splined
J - Front tooth
K - Tang drive**D** - Kegel (1:8)
E - Zylidrinch (E-norm)
F - Zylidrinch SAE "AA"
H - Keilwelle 12x9
I - Keilwelle SAE "AA"
J - Vorstehendes Kreuzprofil
K - Kreuzprofil





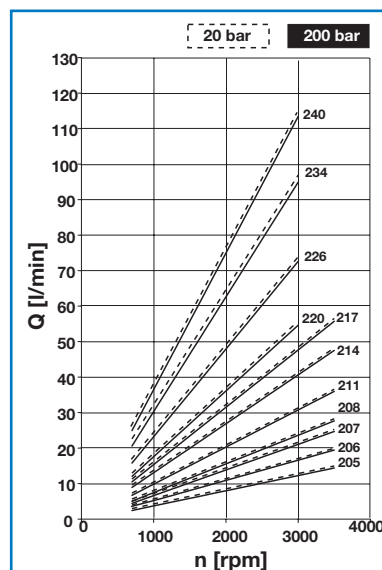
POMPE AD INGRANAGGI GEAR PUMPS ZAHNRADPUMPEN

HPL PA2

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
2	05	4,50	0,27	240	3481	260	3771	300	4351	3500	700	2,30	5,07
	06	6,00	0,37	240	3481	260	3771	300	4351			2,40	5,29
	07	7,60	0,46	230	3336	250	3626	280	4061			2,40	5,29
	08	8,50	0,52	230	3336	250	3626	280	4061			2,40	5,29
	11	11,00	0,67	230	3336	250	3626	280	4061			2,40	5,29
	14	14,50	0,88	230	3336	250	3626	280	4061			2,80	6,17
	17	17,00	1,04	230	3336	250	3626	280	4061			2,80	6,17
	20	19,50	1,19	200	2901	220	3191	250	3626	3000	700	2,80	6,17
	26	26,00	1,59	180	2611	190	2756	210	3046			3,10	6,83
	34	34,00	2,07	160	2321	170	2466	190	2756			3,40	7,50
	40	40,50	2,47	140	2031	160	2321	180	2611			3,60	7,94

DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



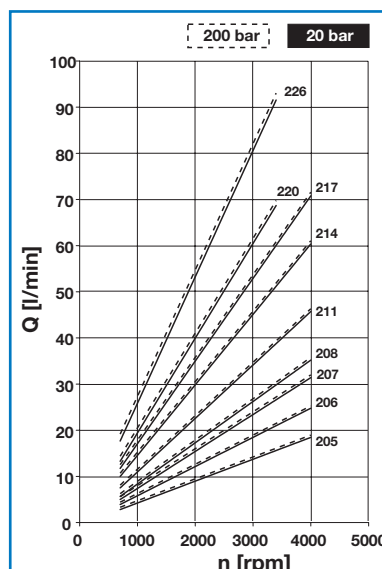
MOTORI AD INGRANAGGI GEAR MOTORS ZAHNRADMOTOREN

HPL MA2

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
2	05	4,50	0,27	240	3481	260	3771	300	4351	4000	700	2,30	5,07
	06	6,00	0,37	240	3481	260	3771	300	4351			2,40	5,29
	07	7,60	0,46	230	3336	250	3626	280	4061			2,40	5,29
	08	8,50	0,52	230	3336	250	3626	280	4061			2,40	5,29
	11	11,00	0,67	230	3336	250	3626	280	4061			2,40	5,29
	14	14,50	0,88	230	3336	250	3626	280	4061			2,80	6,17
	17	17,00	1,04	230	3336	250	3626	280	4061			2,80	6,17
	20	19,50	1,19	200	2901	220	3191	250	3626	3400	700	2,80	6,17
	26	26,00	1,59	180	2611	190	2756	210	3046			3,10	6,83

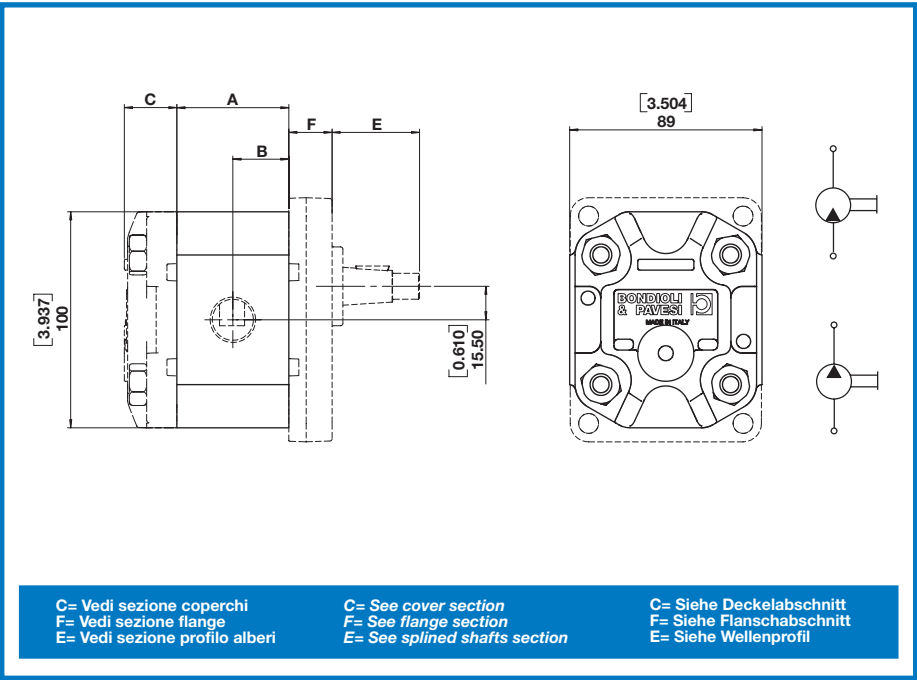
DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



GEAR PUMP
AND MOTOR
DIVISION

POMPE E MOTORI AD INGRANAGGI
GEAR PUMPS AND MOTORS
ZAHNRADPUMPEN UND -MOTOREN

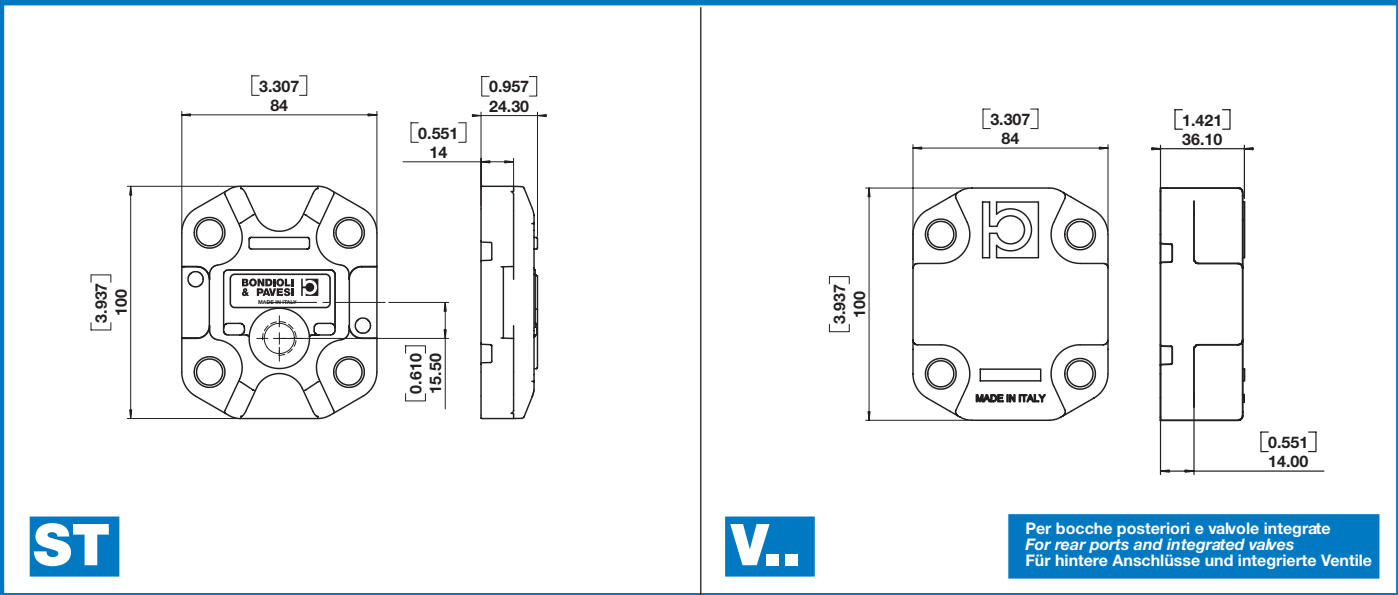
HPL..2



DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
2	05	49,15	1,935	24,6	0,968
	06	51,85	2,041	25,9	1,021
	07	50,15	1,974	25,1	0,987
	08	51,85	2,041	25,9	1,021
	11	51,85	2,041	25,9	1,021
	14	76,25	3,002	38,1	1,501
	17	76,25	3,002	38,1	1,501
	20	76,25	3,002	38,1	1,501
	26	88,55	3,486	44,3	1,743
	34	102,55	4,037	51,3	2,019
	40	115,07	4,530	57,5	2,265

COPERCHI
COVERS
DECKEL

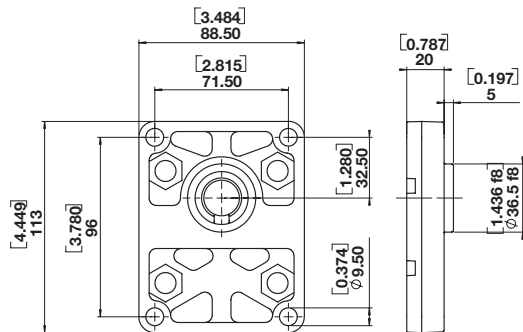




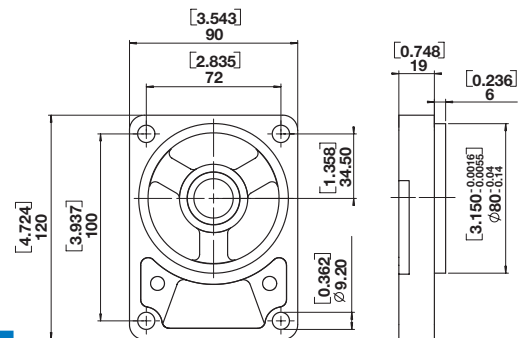
FLANGE
FLANGE
FLANSCH

HPL..2

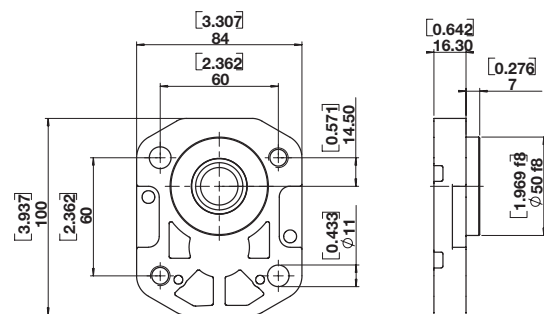
M



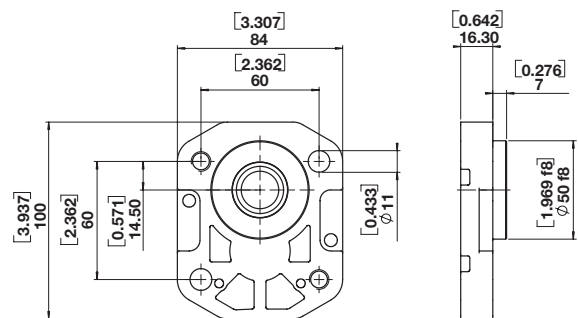
N



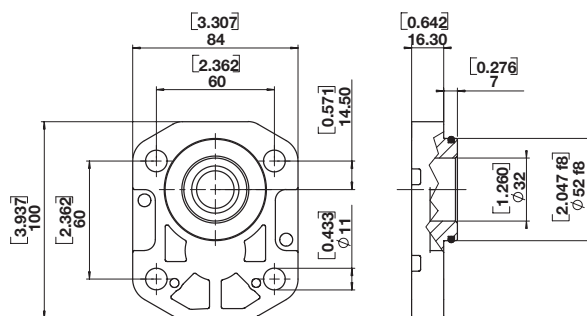
O



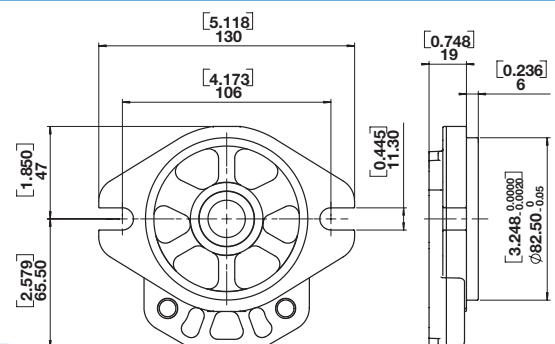
P



R



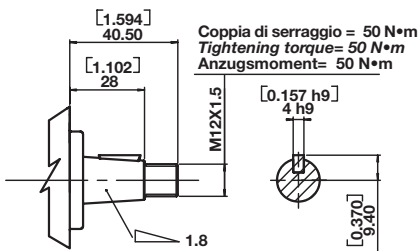
S



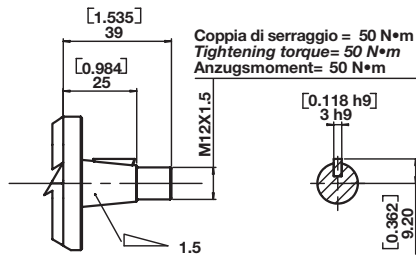
GEAR PUMP
AND MOTOR
DIVISION

PROFILO ALBERI
SPLINE SHAFTS
WELLENPROFILE

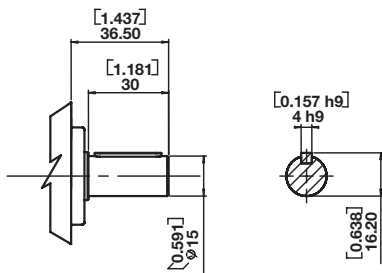
HPL..2



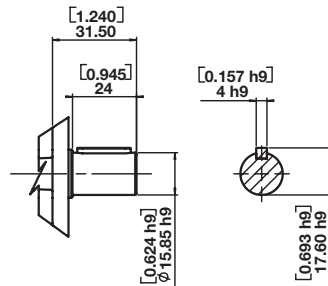
L COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 140 N•m



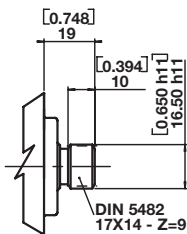
M COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 120 N•m



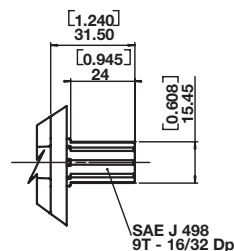
N COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 65 N•m



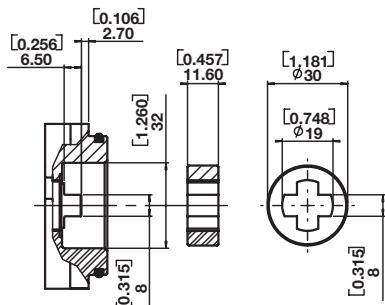
P COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 70 N•m



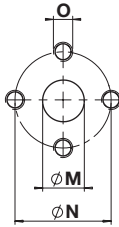
U COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 110 N•m



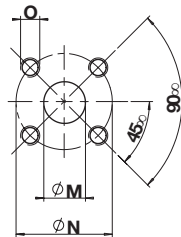
V COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 90 N•m



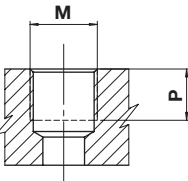
Z COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 70 N•m

**BOCCHIE
PORTS
ANSCHLÜSSE****HPL..2****E** LATERALE
LATERAL
SEITLICH

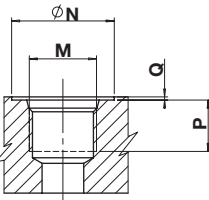
TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
E3	13	0,51	30	1,18	M6
E5	20	0,79	40	1,57	M8

X LATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
X4	15	0,59	35	1,38	M6
X5	15	0,59	40	1,57	M6
X6	20	0,79	40	1,57	M6

G LATERALE
LATERAL
SEITLICH**T** POSTERIORE
REAR
HINTEN

TIPO TYPE TYPE	M	P	
		cm	in
G4	1/2"	16	0,63
G6	3/4"	19	075
T4	1/2"	16	0,63
T6	3/4"	19	075

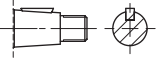
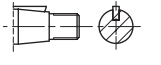
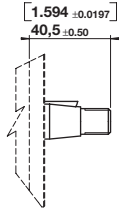
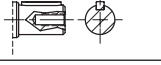
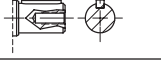
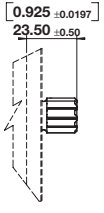
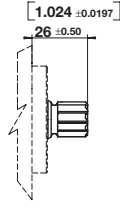
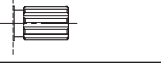
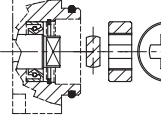
U LATERALE
LATERAL
SEITLICH**C** POSTERIORE
REAR
HINTEN

TIPO TYPE TYPE	DIMENSIONE SIZE GRÖSSE	N		P		Q		M
		mm	in	mm	in	mm	in	
U5	5/8"	34	1,34	17	0,67	0,3	0,01	7/8-14 UNF
U6	3/4"	41	1,61	19	0,75	0,3	0,01	1-1/16-12UNF
C5	5/8"	34	1,34	17	0,67	0,3	0,01	7/8-14 UNF
C6	3/4"	41	1,61	19	0,75	0,3	0,01	1-1/16-12UNF

GEAR PUMP AND MOTOR DIVISION

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

HPL..2

ESTREMITÀ ALBERO SHAFT PROFIL WELLENENDE		FLANGE • FLANGE • FLANSCH				
		M	N	OP	R	S
L						
M						
N						
P						
U						
V						
Z						
BOCCHIE • PORTS • ANSCHLÜSSE						
E						
G						
X						
U						
C						
T						



**ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG**

HPL..2

HPL

PA

2

11

D

M

L

G4 G4

B

ST

**SERIE
SERIES
SERIE**

**PRODOTTO - PRODUCT
PRODUKTE**

MA - Motore
PA - Pompa singola
PT - Pompa predisposta

MA - Motor
PA - Pump
PT - Adapted Pump

MA - Motor
PA - Pumpe
PT - Vorbereitete Pumpe

GRUPPO - GROUP - BAUGRÖSSE
2

**CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN**

05 - 4,50
06 - 6,00
07 - 7,60
08 - 8,50
11 - 11,00
14 - 14,50
17 - 17,00
20 - 19,50
26 - 26,00
34 - 34,00
40 - 40,50

**SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG**

S - Antioraria/sinistra
Counterclockwise
Linkslauf

D - Oraria/destra
Clockwise
Rechtslauf

H - Bidirezionale drenaggio interno
Reversible int. drain.
Reversierbar Lecköl Anschl. (Seitlich)

B - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Lecköl Anschl. (Hinten)

**FLANGIA ANTERIORE
FRONT FLANGE
VORDERER FLANSCH**

M - Europea
N - Tedesca
O - Tedesca D 50 2 fori DX
P - Tedesca D 50 2 fori SX
R - Tedesca D 52
S - SAE A 2 fori

M - European
N - German
O - German D 50 2 holes right
P - German D 50 2 holes left
R - German D 52
S - SAE A 2 holes

M - EU-Norm
N - DIN-Norm
O - DIN-Norm D 50 2 Bohrungen rechts
P - DIN-Norm D 50 2 Bohrungen links
R - DIN-Norm D 52
S - SAE A 2 Bohrungen

**SET VALVOLE - (bar)
VALVE SETTING (bar)
VENTILEINSTELLUNG (bar)**

COPERCHI - COVERS - DECKELN
ST - Standard

V.. - Con valvole (vedi sez. valvole)
With valves (see valves section)
Mit Ventilen (siehe Ventile Abschnitt)

GUARNIZIONI - SEALS - DICHTUNGEN

B - NBR
R - NBR alte pres. (25 bar)
V - Viton
W - Viton alte pres. (25 bar)

B - NBR
R - NBR high pres. (25 bar)
V - Viton
W - Viton high pres. (25 bar)

B - NBR
R - NBR Hochdruck (25 bar)
V - Viton
W - Viton Hochdruck (25 bar)

**BOCCHES STANDARD - STANDARD PORT - STANDARD ANSCHLÜSSE
CILINDRATA - DISPLACEMENT - FÖRDER-/SCHLUCKVOLUMEN**

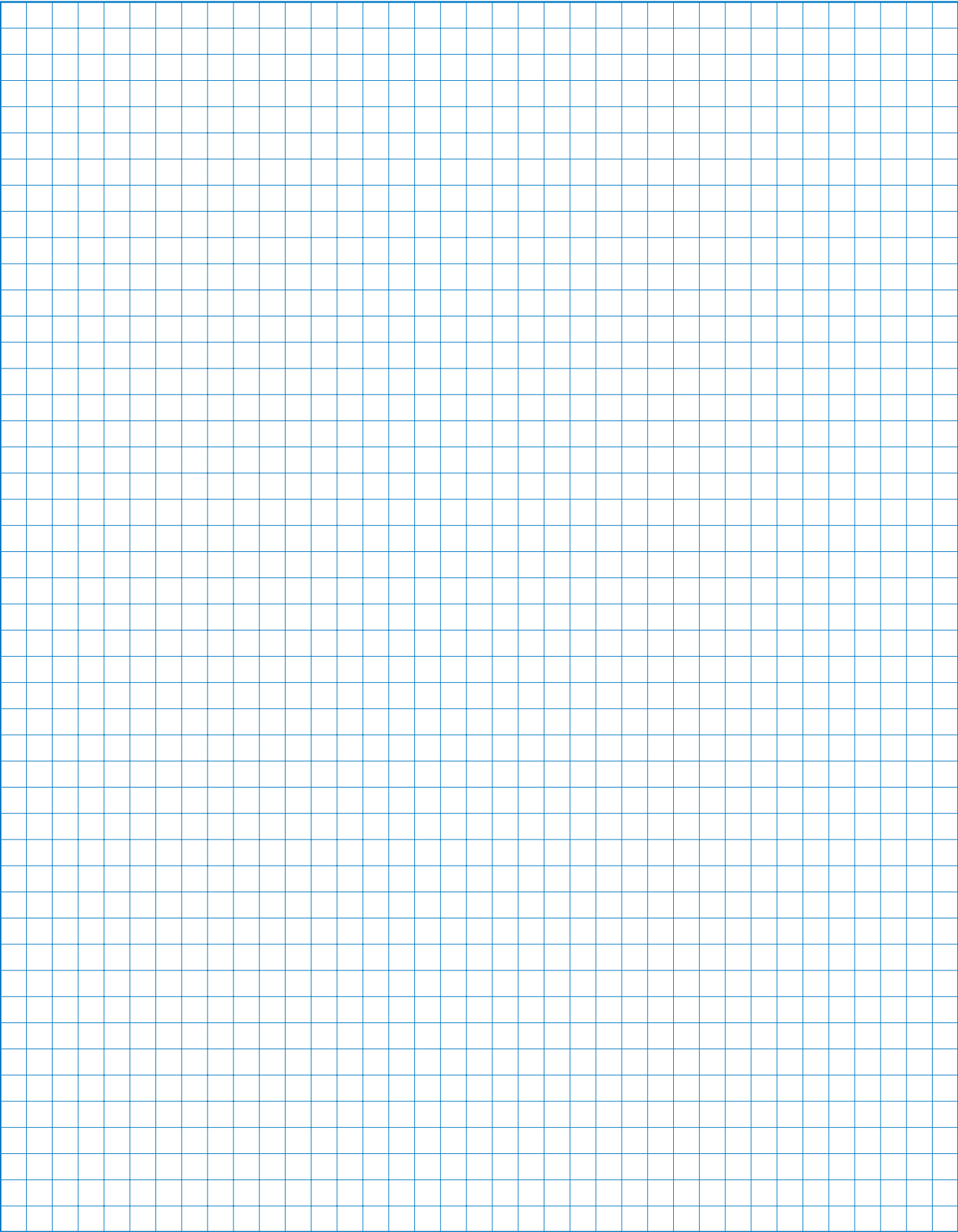
5.....11	14.....20	26.....40
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E3 E3	E5 E3	E5 E5
G4 G4	G6 G4	G6 G6
X5 X4	X6 X5	X6 X5
U6 U5	U6 U5	U6 U5
C6 C5	C6 C5	C6 C5
T6 T4	T6 T4	T6 T4
Motori - Motors - Motoren OUT/IN		

**ESTREMITÀ D'ALBERO
SHAFT PROFIL - WELLENENDE**

L - Conico (1:8)
M - Conico (1:5)
N - Cilindrico D15 europeo
P - Cilindrico SAE "A"
U - Scanalato DIN 5482
V - Scanalato SAE "A" 9T
Z - Dente frontale

L - Tapered (1:8)
M - Tapered (1:5)
N - D15 European parallel shaft
P - SAE "A" parallel shaft
U - DIN 5482 splined
V - SAE "A" 9T splined
Z - Tang drive

L - Kegel (1:8)
M - Kegel (1:5)
N - Zylindrisch (E-norm)
P - Zylindrisch SAE "A"
U - Keilwelle DIN 5482
V - Keilwelle SAE "A" 9T
Z - Kreuzprofil





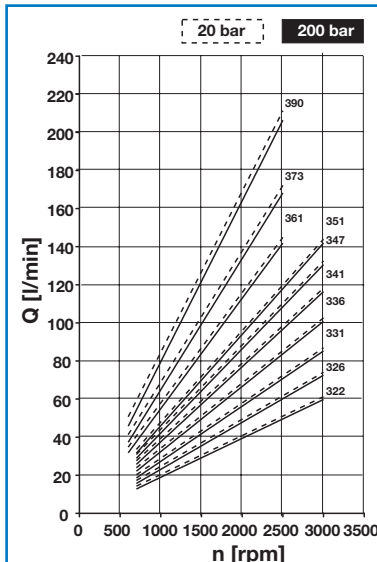
POMPE AD INGRANAGGI GEAR PUMPS ZAHNRADPUMPEN

HPL PA3

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOS DAUER		PRESSIONE PRESSURE DRUCK		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	MAX	MIN	Kg	lbs
										min ⁻¹	min ⁻¹		
3	22	21,50	1,31	220	3191	250	3626	310	4496	3000	700	6,20	13,67
	26	26,00	1,59	210	3046	250	3626	300	4351			6,20	13,67
	31	30,50	1,86	210	3046	250	3626	280	4061			6,20	13,67
	36	36,00	2,20	210	3046	250	3626	280	4061			6,50	14,33
	41	41,50	2,53	210	3046	250	3626	280	4061			7,20	15,87
	47	46,50	2,84	180	2611	210	3046	270	3916			7,20	15,87
	51	50,50	3,08	180	2611	210	3046	270	3916			7,20	15,87
	61	61,00	3,72	150	2176	180	2611	200	2901	2500	600	7,60	16,76
	73	72,50	4,42	140	2031	150	2176	180	2611			8,00	17,64
	90	89,00	5,43	110	1595	120	1740	170	2466			8,60	18,96

DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



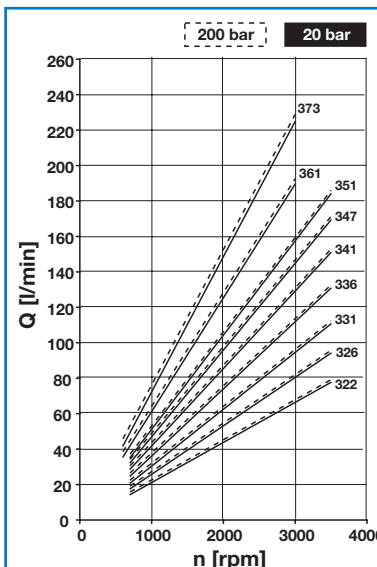
MOTORI AD INGRANAGGI GEAR MOTORS ZAHNRADMOTOREN

HPL MA3

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOS DAUER		PRESSIONE PRESSURE DRUCK		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	MAX	MIN	Kg	lbs
										min ⁻¹	min ⁻¹		
3	22	21,50	1,31	220	3191	250	3626	310	4496	3500	700	2,30	5,07
	26	26,00	1,59	210	3046	250	3626	300	4351			2,40	5,29
	31	30,50	1,86	210	3046	250	3626	280	4061			2,40	5,29
	36	36,00	2,20	210	3046	250	3626	280	4061			2,40	5,29
	41	41,50	2,53	210	3046	250	3626	280	4061			2,40	5,29
	47	46,50	2,84	180	2611	210	3046	270	3916			2,80	6,17
	51	50,50	3,08	180	2611	210	3046	270	3916			2,80	6,17
	61	61,00	3,72	150	2176	180	2611	200	2901	3000	600	2,80	6,17
	73	72,50	4,42	140	2031	150	2176	180	2611			3,10	6,83

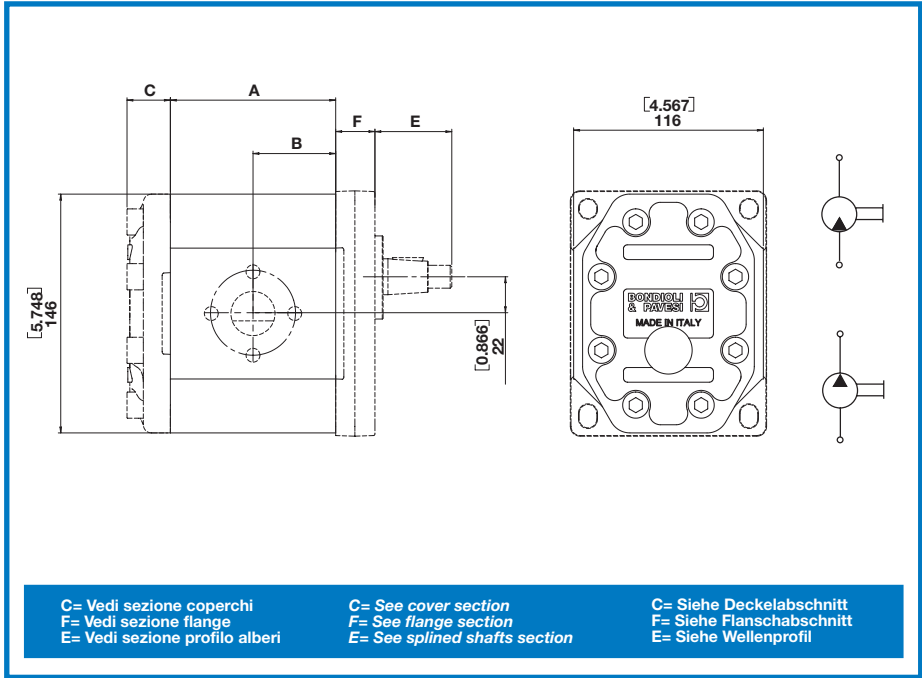
DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



GEAR PUMP
AND MOTOR
DIVISION

POMPE E MOTORI AD INGRANAGGI
GEAR PUMPS AND MOTORS
ZAHNRADPUMPEN UND -MOTOREN

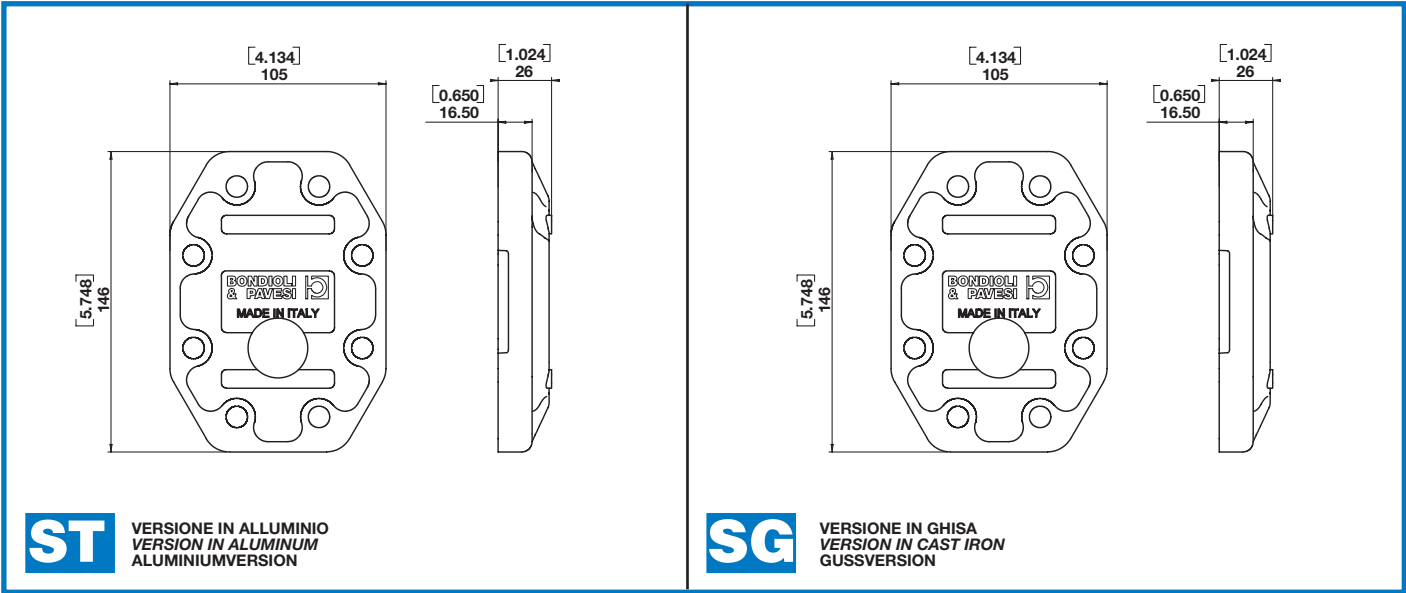
HPL..3



DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
3	22	87,07	3,428	43,5	1,714
	26	87,07	3,428	43,5	1,714
	31	87,07	3,428	43,5	1,714
	36	91,07	3,585	45,5	1,793
	41	101,07	3,979	50,5	1,990
	47	101,07	3,979	50,5	1,990
	51	101,07	3,979	50,5	1,990
	61	108,57	4,274	54,3	2,137
	73	116,07	4,570	58,0	2,285
	90	127,07	5,003	63,5	2,501

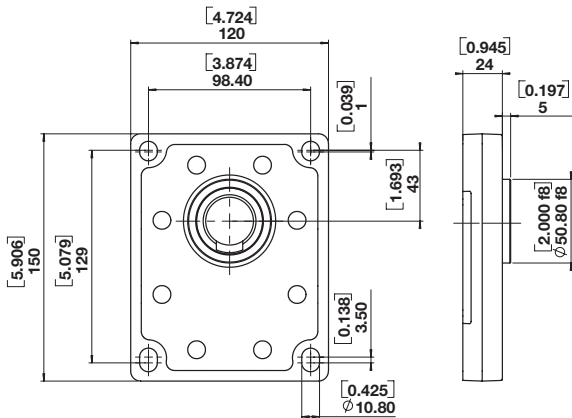
COPERCHI
COVERS
DECKELN



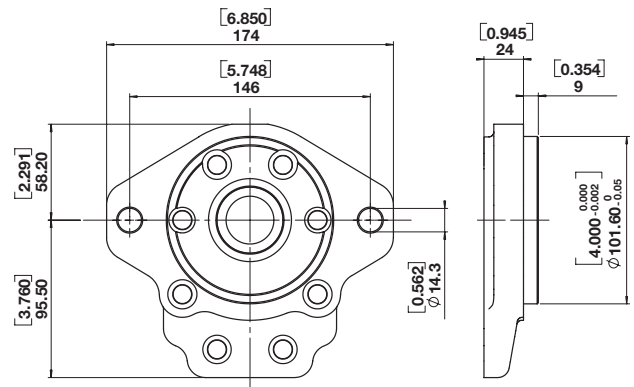


**FLANGE
FLANGE
FLANSCH**

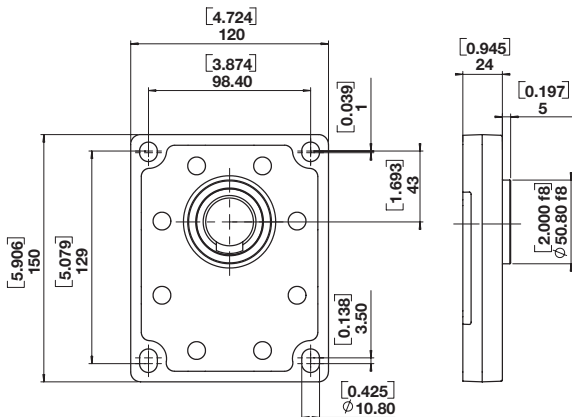
HPL..3



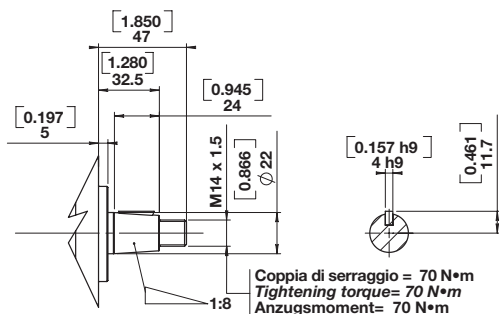
VERSIONE IN ALLUMINIO
VERSION IN ALUMINUM
ALUMINIUMVERSION



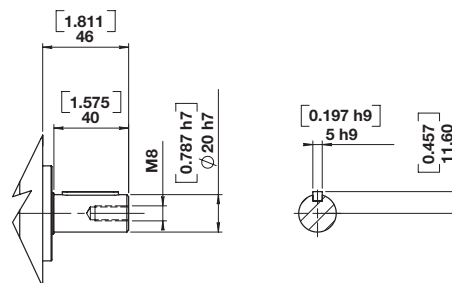
VERSIONE IN ALLUMINIO
VERSION IN ALUMINUM
ALUMINIUMVERSION



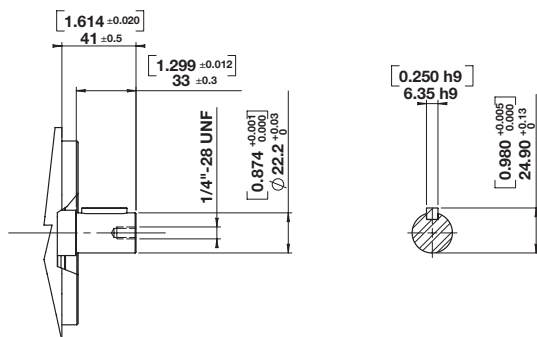
VERSIONE IN GHISA
VERSION IN CAST IRON
GUSSVERSION



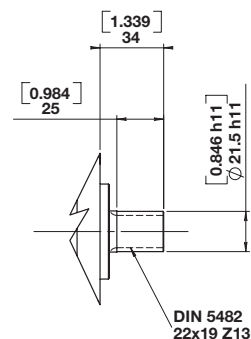
2 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 240 N•m



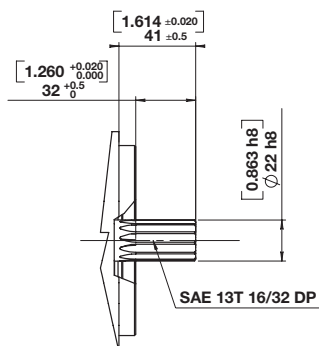
4 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 190 N•m



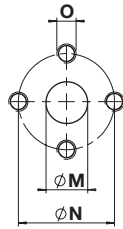
6 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 210 N•m



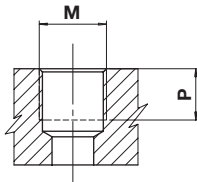
7 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 300 N•m



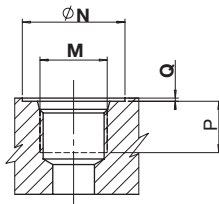
9 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 310 N•m

**BOCCHIE
PORTS
ANSCHLÜSSE****HPL..3****E**LATERALE
LATERAL
SEITLICH

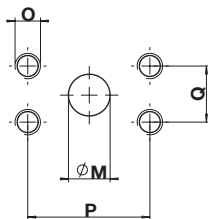
TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
E5	20	0,79	40	1,57	M8
E7	27	1,06	51	2,01	M10
E8	34	1,34	62	2,44	M10

GLATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	M		P	
			mm	in
G6	3/4"		19	0,75
G7	1"		21	0,83
G8	1-1/4"		21	0,83
G9	1-1/2"		25	0,98

ULATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	DIMENSIONE SIZE GRÖSSE	N		P		Q		M
		mm	in	mm	in	mm	in	
U6	3/4"	41	1,61	19	0,75	0,3	0,01	1-1/16"-12UNF
U7	1"	49	1,93	19	0,75	0,3	0,01	1-5/16"-12UNF
U8	1-1/4"	58	2,28	19	0,75	0,3	0,01	1-5/8"-12UNF
U9	1-1/2"	65	2,56	19	0,75	0,3	0,01	1-7/8"-12UNF

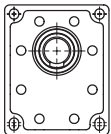
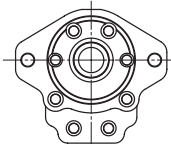
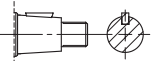
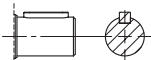
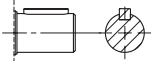
NLATERALE
LATERAL
SEITLICH

TIPO TYPE TYPE	DIMENSIONE SIZE GRÖSSE	M		P		Q		O
		mm	in	mm	in	mm	in	
N6	3/4"	20	0,79	47,6	1,87	22,5	0,87	3/8"-16UNC-2B
N7	1"	27	1,06	52,4	2,6	26,2	1,03	3/8"-16UNC-2B
N8	1-1/4"	34	1,34	58,7	2,31	30,2	1,19	7/16"-14 UNC-2B
N9	1-1/2"	38	1,50	69,9	2,75	35,7	1,41	1/2"-13 UNC-2B

GEAR PUMP AND MOTOR DIVISION

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

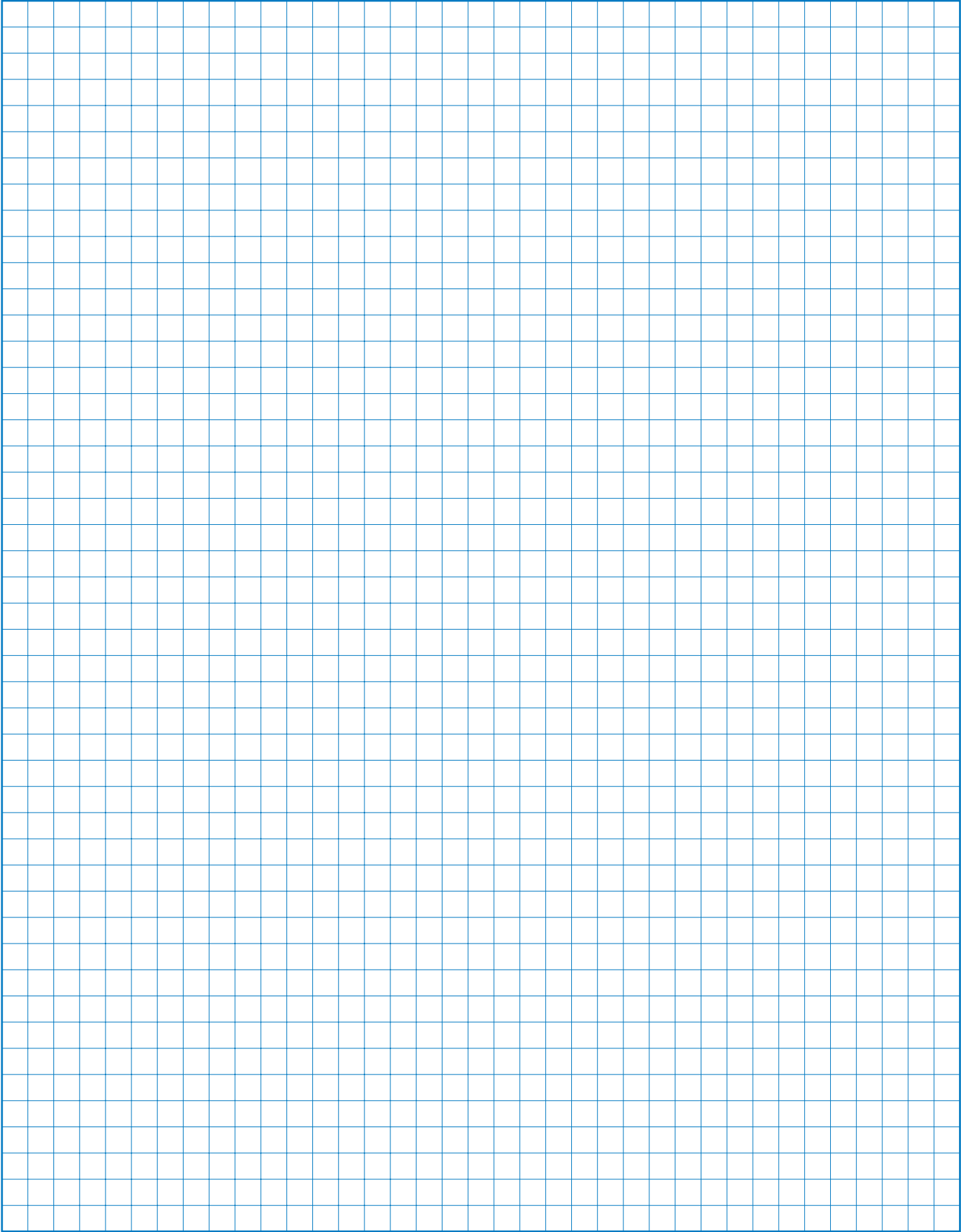
HPL..3

ESTREMITÀ ALBERO SHAFT PROFIL WELLENENDE		FLANGE • FLANGE • FLANSCH	
		W Y 	Z 
2 			
4 			
6 			
7 			
9 			
BOCCHE • PORTS • ANSCHLÜSSE			
E 			
G 			
U 			
N 			

**ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG****HPL...3****HPL****PA****3****36****D****W****2****E7 E5****B****ST****SERIE
SERIES
SERIE****PRODOTTO - PRODUCT
PRODUKTE****MA** - Motore
PA - Pompa singola
PT - Pompa predisposta**MA** - Motor
PA - Pump
PT - Adapted Pump**MA** - Motor
PA - Pumpe
PT - Vorbereitete Pumpe**GRUPPO - GROUP - BAUGRÖSSE
3****CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN****22** - 21,50
26 - 26,00
31 - 30,50
36 - 36,00
41 - 41,50
47 - 46,50
51 - 50,50
61 - 61,00
73 - 72,50
90 - 89,00**SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG****S** - Antioraria/sinistra
Counterclockwise
Linklauf**D** - Oraria/destra
Clockwise
Rechtslauf**H** - Bidirezionale drenaggio interno
Reversible int. drain.
Reversierbar Lecköl Anschl. (Seitlich)**B** - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Lecköl Anschl. (Hinten)**COPERCHI - COVERS
DECKELN****ST** - Standard
SG - Versione in ghisa
Version in cast iron
Gussversion**GUARNIZIONI - SEALS - DICHTUNGEN****B** - NBR
R - NBR alte pres. (25 bar)
V - Viton
W - Viton alte pres. (25 bar)**B** - NBR
R - NBR high pres. (25 bar)
V - Viton
W - Viton high pres. (25 bar)**B** - NBR
R - NBR Hochdruck (25 bar)
V - Viton
W - Viton Hochdruck (25 bar)**BOCCHES STANDARD - STANDARD PORT - STANDARD ANSCHLÜSSE
CILINDRATA - DISPLACEMENT - FÖRDER-/SCHLUCKVOLUMEN**

22.....31	36.....61	73.....90
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E5 E5	E7 E5	E8 E7
G6 G6	G7 G6	G8 G7
U7 U6	U8 U7	U8 U7
N7 N6	N7 N6	N7 N6
Motori - Motors - Motoren OUT/IN		

**ESTREMITÀ D'ALBERO
SHAFT PROFIL
WELLENENDE****2** - Conico (1:8)
4 - Cilindrico europeo
6 - Cilindrico SAE "B"
7 - Scanalato DIN 5482
9 - Scanalato SAE "B" 13T**2** - Tapered (1 :8)
4 - European parallel shaft
6 - SAE "B" parallel shaft
7 - DIN 5482 splined
9 - SAE "B" 13T splined**2** - Kegel (1:8)
4 - Kegel EU-Norm
6 - Zylindrisch SAE "B"
7 - Keilwelle DIN 5482
9 - Keilwelle SAE "B" 13T**FLANGIA ANTERIORE
FRONT FLANGE
VORDERER FLANSCH****W** - Europea D 50,8
Z - SAE B 2 fori
Y - Europea D 50,8 ghisa**W** - European D 50,8
Z - SAE B 2 holes
Y - European D 50,8 cast iron**W** - EU-Norm D 50,8
Z - SAE B 2 Bohrungen
Y - EU-Norm D 50,8 guß





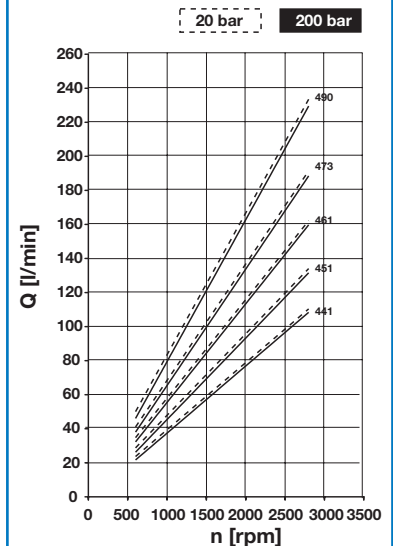
POMPE AD INGRANAGGI GEAR PUMPS ZAHNRADPUMPEN

HPL PA4

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
4	41	41,80	2,55	220	3191	250	3626	300	4351	2800	600	9,20	20,28
	51	50,40	3,08	190	2756	210	3046	280	4061			9,20	20,28
	61	61,00	3,72	160	2321	180	2611	200	2901			9,60	21,16
	73	72,00	4,39	150	2176	160	2321	180	2611			9,60	21,16
	90	87,80	5,36	120	1740	130	1885	170	2466			9,60	21,16

DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



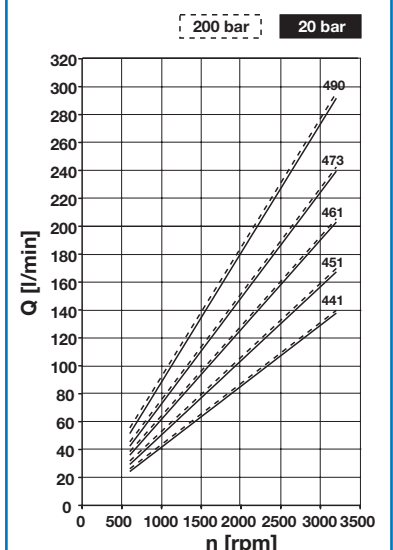
MOTORI AD INGRANAGGI GEAR MOTORS ZAHNRADMOTOREN

HPL MA4

DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT	
		cm ³	in ³	bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	Kg	lbs
4	41	41,80	2,55	220	3191	250	3626	300	4351	2800	600	9,20	20,28
	51	50,40	3,08	190	2756	210	3046	280	4061			9,20	20,28
	61	61,00	3,72	160	2321	180	2611	200	2901			9,60	21,16
	73	72,00	4,39	150	2176	160	2321	180	2611			9,60	21,16
	90	87,80	5,36	120	1740	130	1885	170	2466			9,60	21,16

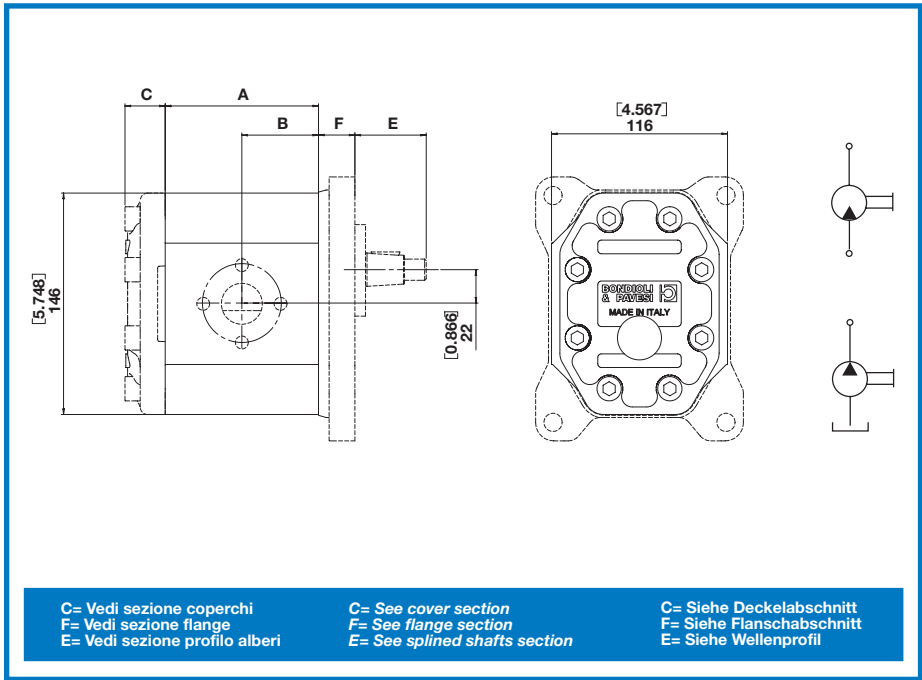
DIAGRAMMA PORTATE DIAGRAMS • KENNLINIEN



GEAR PUMP
AND MOTOR
DIVISION

POMPE E MOTORI AD INGRANAGGI
GEAR PUMPS AND MOTORS
ZAHNRADPUMPEN UND -MOTOREN

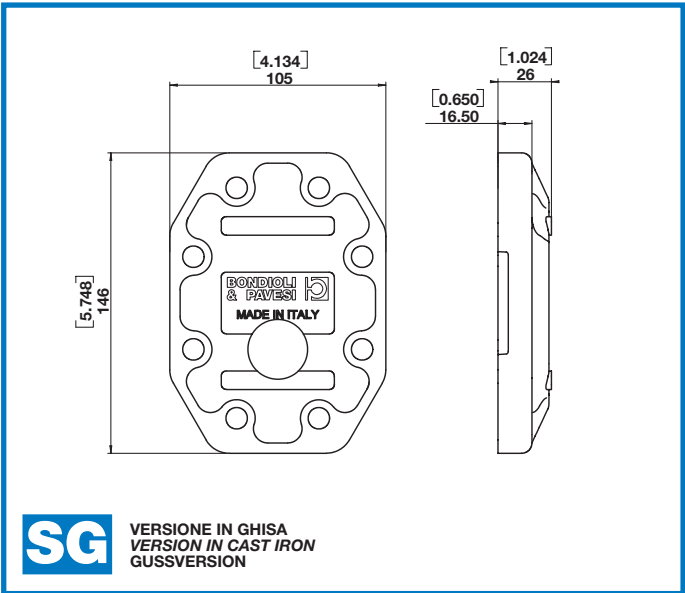
HPL..4



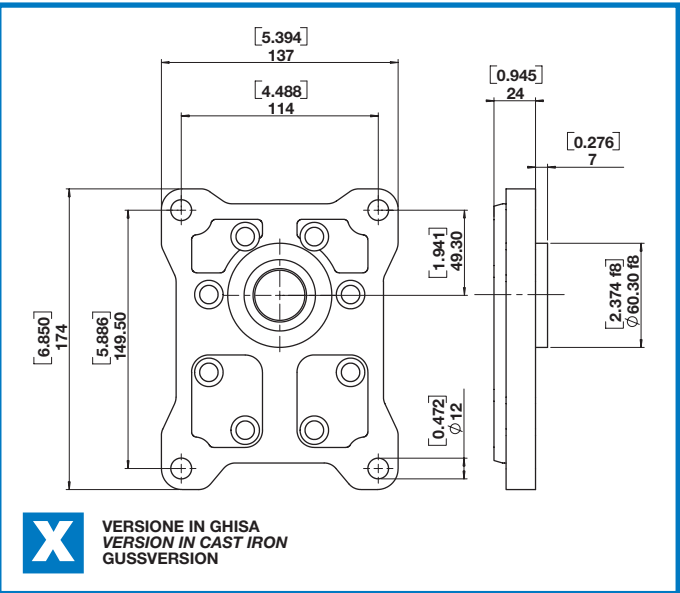
DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
4	41	101,07	3,979	50,5	1,990
	51	101,07	3,979	50,5	1,990
	61	108,57	4,274	54,3	2,137
	73	116,07	1,570	58,0	2,285
	90	127,07	5,003	63,5	2,501

COPERCHI
COVERS
DECKEL



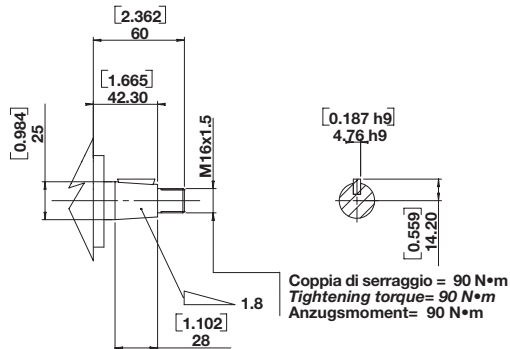
FLANGE
FLANGE
FLANSCH



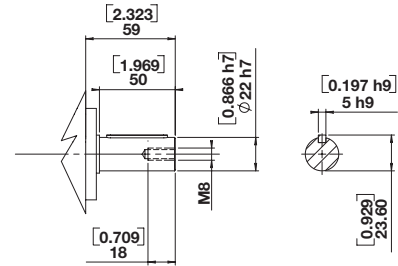


**PROFILO ALBERI
SPLINE SHAFTS
WELLENPROFILE**

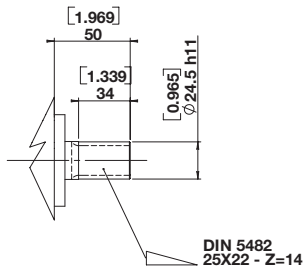
HPL..4



3 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 240 N•m



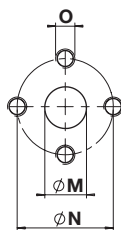
5 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 210 N•m



8 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT 300 N•m

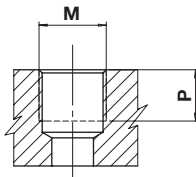
**BOCCHIE
PORTS
ANSCHLÜSSE**

E LATERALE
LATERAL
SEITLICH



TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
E7	27	1,06	51	2,01	M10
E8	34	1,34	62	2,44	M10

G LATERALE
LATERAL
SEITLICH

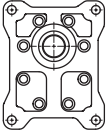
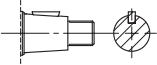
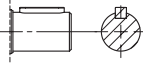


TIPO TYPE TYPE	M	P	
		mm	in
G7	1"	21	0,83
G8	1-1/4"	21	0,83

GEAR PUMP
AND MOTOR
DIVISION

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

HPL..4

ESTREMITÀ ALBERO SHAFT PROFIL WELLENENDE		FLANGE • FLANGE • FLANSCH	
		X	
3			
5			
8			
BOCCHE • PORTS • ANSCHLÜSSE			
E			
G			



**ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG**

HPL..4

HPL PA 4 61 D X 3 E7 E7 B SG

**SERIE
SERIES
SERIE**

**PRODOTTO - PRODUCT
PRODUKTE**

MA - Motore
PA - Pompa singola
PT - Pompa predisposta

MA - Motor
PA - Pump
PT - Adapted Pump

MA - Motor
PA - Pumpe
PT - Vorbereitete Pumpe

GRUPPO - GROUP - BAUGRÖSSE
4

**CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN**

41 - 41,80
51 - 50,40
61 - 61,00
73 - 72,00
90 - 87,80

**SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG**

S - Antioraria/sinistra
Counterclockwise
Linkslauf

D - Oraria/destra
Clockwise
Rechtslauf

H - Bidirezionale drenaggio interno
Reversible int. drain.
Reversierbar Leck Anschl. (Seitlich)

B - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Leck Anschl. (Hinten)

**COPERCHI - COVERS
DECKELN**

SG - Versione in ghisa
Version in cast iron
Gussversion

GUARNIZIONI - SEALS - DICHTUNGEN

B - NBR
R - NBR alte pres. (25 bar)
V - Viton
W - Viton alte pres. (25 bar)

B - NBR
R - NBR high pres. (25 bar)
V - Viton
W - Viton high pres. (25 bar)

B - NBR
R - NBR Hochdruck (25 bar)
V - Viton
W - Viton Hochdruck (25 bar)

**BOCCHES STANDARD - STANDARD PORT
STANDARD ANSCHLÜSSE**

**CILINDRATA - DISPLACEMENT
FÖRDER-/SCHLUCKVOLUMEN**

41.....61	73.....90
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E7 E7	E8 E7
G7 G7	G8 G8
Motori - Motors - Motoren OUT/IN	

**ESTREMITÀ D'ALBERO
SHAFT PROFIL
WELLENENDE**

3 - Conico (1:8)
5 - Cilindrico europeo
8 - Scanalato DIN 5482

3 - Tapered (1 :8)
5 - European parallel shaft
8 - DIN 5482 Splined

3 - Kegel (1:8)
5 - Kegel EU-Norm
8 - Keilwelle DIN 5482

**FLANGIA ANTERIORE
FRONT FLANGE
VORDERER FLANSCH**

X - Europea D 60,3

X - European D 60,3

X - EU-Norm D 60,3

GEAR PUMP AND MOTOR DIVISION

POMPE MULTIPLE MULTIPLE GEAR PUMPS MEHRFACHPUMPEN

Le pompe multiple sono combinazioni di più pompe (solitamente fino a quattro) trascinate da un unico albero.

Il trascinamento tra le diverse sezioni della pompa multipla avviene con l'interposizione di un apposito giunto e le sezioni sono tra di loro separate solitamente ciascuna pompa ha aspirazione e mandata indipendente dalle altre.

CARATTERISTICHE DI FUNZIONAMENTO

Per le singole unità valgono i valori riportati a catalogo: occorre tuttavia prestare attenzione ad alcune limitazioni.

PRESSIONE MASSIMA COPPIA MASSIMA

Le pressioni massime sono limitate dalla coppia massima che l'albero di trascinamento /o i giunti di trascinamento possono trasmettere, considerando che: l'albero di trascinamento deve trasferire la coppia necessaria al trascinamento di tutte le sezioni: i valori massimi di coppia trasmissibile da ciascun tipo di estremità d'albero sono riportati nella sezione relativa alle estremità d'albero il giunto di trascinamento deve trasferire la coppia necessaria al trascinamento delle sezioni alle sue spalle i valori massimi di coppia trasmissibile sono riassunti nella tabella sottostante:

A multiple pump is a system resulting by coupling more than one pump (up to four) together and driving them by the same shaft.

The interposal of a joint permits the different multiple pump sections (kept separated) to drive one another. Commonly each pump maintains its own independent inlet and outlet side.

OPERATING CONDITIONS

All data contained in the manual should be referred to for each single unit; still, some restrictions must be taken into account.

MAXIMUM PRESSURE MAXIMUM TORQUE

Maximum pressures are limited by the maximum torque an input shaft or input joint can transmit, considering that: The inlet shaft must transmit the necessary torque for driving all sections: for the maximum transmitted torque associated to each shaft end type, see the section dedicated to shaft ends.

The inlet joint must transmit the necessary torque for driving the sections located at its back: maximum transmitted torques are tabulated and summarized below.

Die Mehrfachpumpen sind Kombinationen mehrerer (in der Regel bis zu vier) Pumpen, die von derselben Welle angetrieben werden. Der Durchtrieb zwischen den verschiedenen Stufen der Mehrfachpumpe erfolgt durch die Zwischenschaltung einer Mitnehmerkupplung. Die Pumpenstufen sind voneinander getrennt und normalerweise sind Saug- und Druckseite jeder Pumpe unabhängig.

BETRIEBSEIGENSCHAFTEN

Für die einzelnen Einheiten gelten die im Katalog aufgeführten Werte, dennoch sind einige Einschränkungen zu beachten.

HÖCHSTDRUCK- HÖCHSTDREHMOMENT

Die Höchstdrücke werden durch das Höchstdrehmoment eingeschränkt, das die Mitnehmerwelle bzw. die Mitnehmerkupplungen übertragen können, wobei folgendes zu beachten ist: Die Mitnehmerwelle muss das für den Durchtrieb aller Pumpenstufen erforderliche Drehmoment übertragen. Die Höchstdrehmomente, die von jedem Profil übertragen werden können, sind im Kapitel der Wellenprofile angegeben.

Die Mitnehmerkupplung muss das für den Durchtrieb der dahinter liegenden Pumpenstufen erforderliche Drehmoment übertragen. Die Höchstwerte der übertragbaren Drehmomente sind in der nachstehenden Tabelle zusammengefasst:

GIUNTO DI ACCOPPIAMENTO COUPLING JOINT WELLENKUPPLUNG	COPPIA MASSIMA TRASMISSIBILE MAXIMUM TRANSMITTED TORQUE MAX. ÜBERTRAGBARES DREHMOMENT
HPLP•3 + HPLP•3	200 N•m
HPLP•3 + HPLP•2 HPLP•2 + HPLP•2	100 N•m
HPLP•3 + HPLP•1 HPLP•2 + HPLP•1 HPLP•1 + HPLP•1	30 N•m

VELOCITÀ MASSIMA

La velocità massima di una pompa multipla è limitata al valore minimo delle velocità massime delle singole sezioni.

MAXIMUM SPEED

The multiple pump maximum speed is represented by the minimum value among the maximum speeds of all sections.

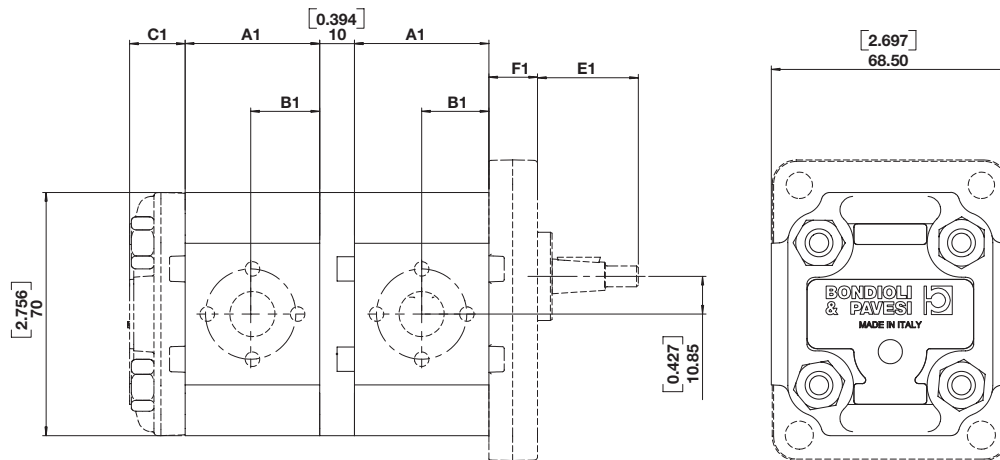
HÖCHSTDREHZAHL

Die Höchstdrehzahl einer Mehrfachpumpe ist auf den geringsten Wert der Höchstdrehzahlen der einzelnen Pumpenstufen beschränkt.

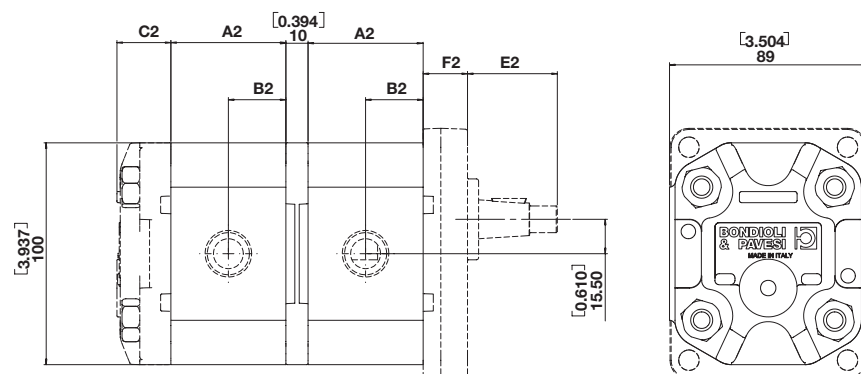
PER LE DIMENSIONI
DELLE SINGOLE SEZIONI
VEDERE IL GRUPPO DI RIFERIMENTO

FOR DIMENSION OF EACH SECTION
REFER TO THE GROUP
DIMENSION TABLE

JEDE SEKTION BITTE NACH DER
GRUPPENTABELLE AUSLEGEN



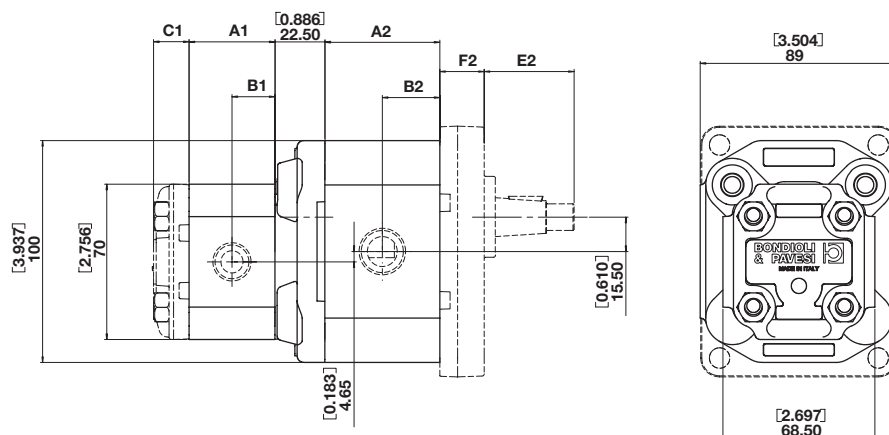
HPLP•1+HPLP•1



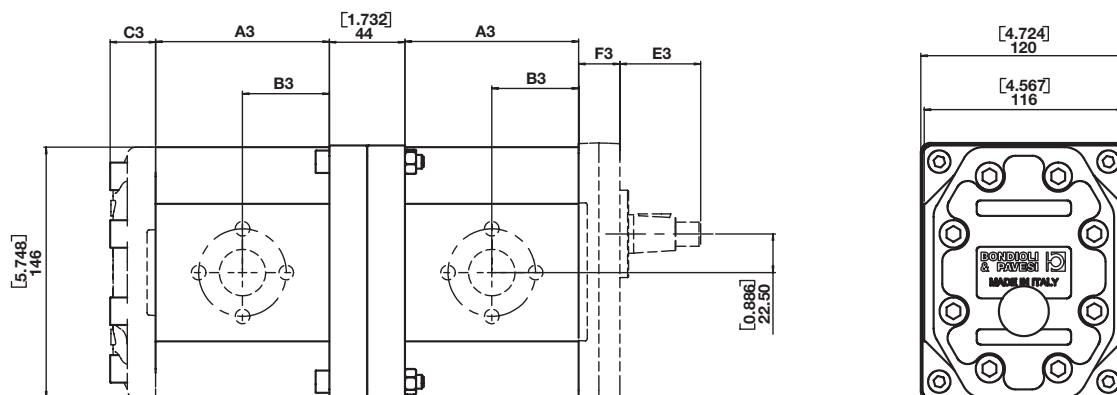
HPLP•2+HPLP•2

GEAR PUMP AND MOTOR DIVISION

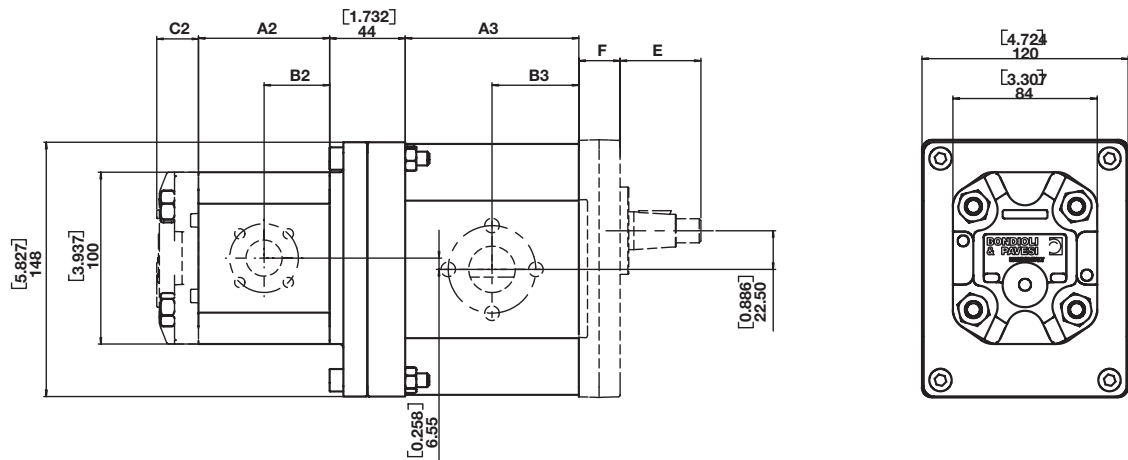
POMPE MULTIPLE MULTIPLE GEAR PUMPS MEHRFACHPUMPEN



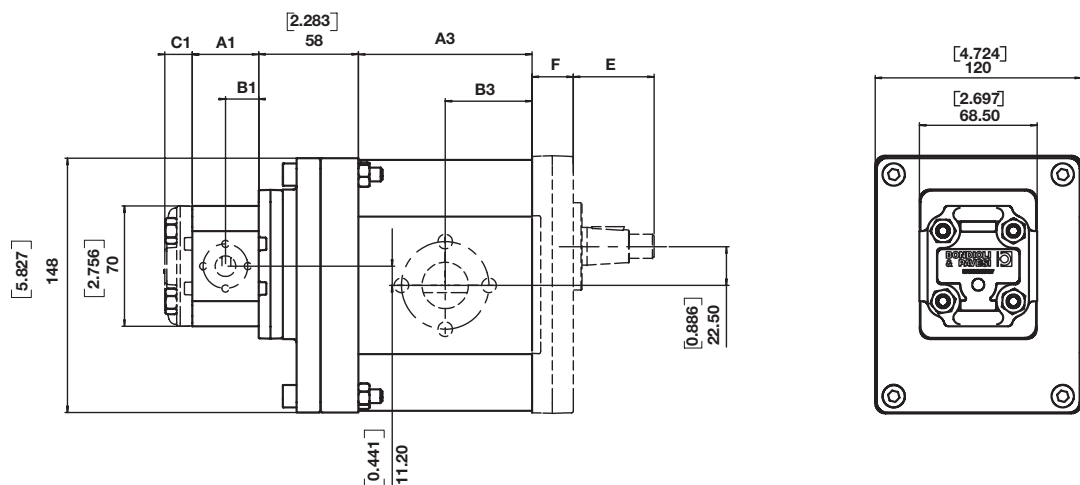
HPLP•2+HPLP•1



HPLP•3+HPLP•3



HPLP•3+HPLP•2



HPLP•3+HPLP•1

GEAR PUMP AND MOTOR DIVISION

ISTRUZIONI PER L'ORDINAZIONE - ORDERING INSTRUCTIONS - BESTELLANLEITUNG

1° STADIO (Descrizione dello Stadio -

HPL

PB

2

14

D

M

SERIE
SERIES
SERIE

PRODOTTO - PRODUCT - PRODUKT
PB - Pompa doppia
PB - Double Pump - **PB** - Doppelpumpe
PC - Pompa tripla
PC - Triple Pump - **PC** - Dreifachpumpe
PD - Pompa quadrupla
PD - Quadruple Pump - **PD** - Vierfachpumpe

CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN

HPL..1	HPL..2	HPL..3	HPL..4
14 - 1,37	05 - 4,50	22 - 21,50	41 - 41,80
19 - 1,90	06 - 6,00	26 - 26,00	51 - 50,40
24 - 2,53	07 - 7,60	31 - 30,50	61 - 61,00
31 - 3,17	08 - 8,50	36 - 36,00	73 - 72,00
36 - 3,73	11 - 11,00	41 - 41,50	90 - 87,80
44 - 4,35	14 - 14,50	47 - 46,50	
48 - 4,97	17 - 17,00	51 - 50,50	
60 - 6,08	20 - 19,50	61 - 61,00	
70 - 7,00	26 - 26,00	73 - 72,50	
80 - 7,87	34 - 34,00	90 - 89,00	
	40 - 40,50		

GRUPPO - GROUP - BAUGRÖSSE
1 - 2 - 3 - 4

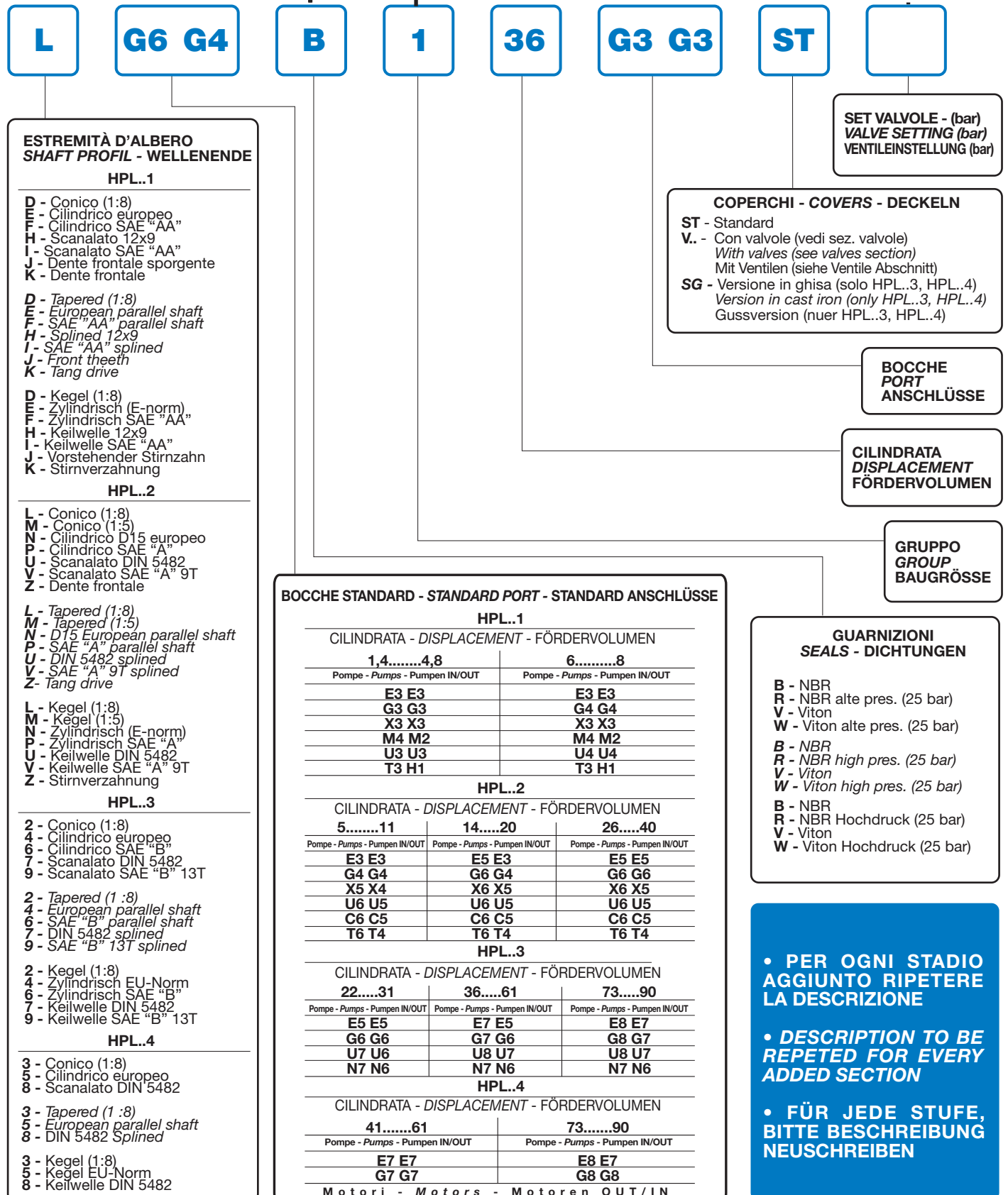
SENSO DI ROTAZIONE - ROTATION
DREHRICHTUNG
S - Antioraria/sinistra
 Counterclockwise
 Linkslauf
D - Oraria/destra
 Clockwise
 Rechtslauf

FLANGIA ANTERIORE - FRONT FLANGE - FLANSCH

HPL..1	HPL..2	HPL..3	HPL..4
D - Europea D 25,4 E - Europea D 30 G - Tedesca con OR J - SAE AA D - European standard E - European Ø 30 G - German with OR J - SAE AA D - EU-Norm.D 95,5 E - EU-Norm.D 30 G - DIN-Norm. (mit O.R. Dichtung) J - SAE AA	M - Europea N - Tedesca O - Tedesca D 50 2 fori DX P - Tedesca D 50 2 fori SX R - Tedesca D 52 S - SAE A 2 fori M - European N - German O - German D 50 2 holes right P - German D 50 2 holes left R - German D 52 S - SAE A 2 holes M - EU-Norm N - DIN-Norm O - DIN-Norm D 50 2 Bohrungen rechts P - DIN-Norm D 50 2 Bohrungen links R - DIN-Norm D 52 S - SAE A 2 Bohrungen	W - Europea D 50,8 Z - SAE B 2 fori Y - Europea D 50,8 ghisa W - European D 50,8 Z - SAE B 2 holes Y - European D 50,8 cast iron W - EU-Norm D 50,8 Z - SAE B 2 Bohrungen Y - EU-Norm D 50,8 Guß	X - Europea D 60,3 X - European D 60,3 X - EU-Norm D 60,3



STADI SUCCESSIVI - STAGE'S FOLLOWING - FOLGESTUFEN
Stage's Description - Stufen-Benennung (Descrizione dello Stadio - Stage's Description - Stufen Benennung)

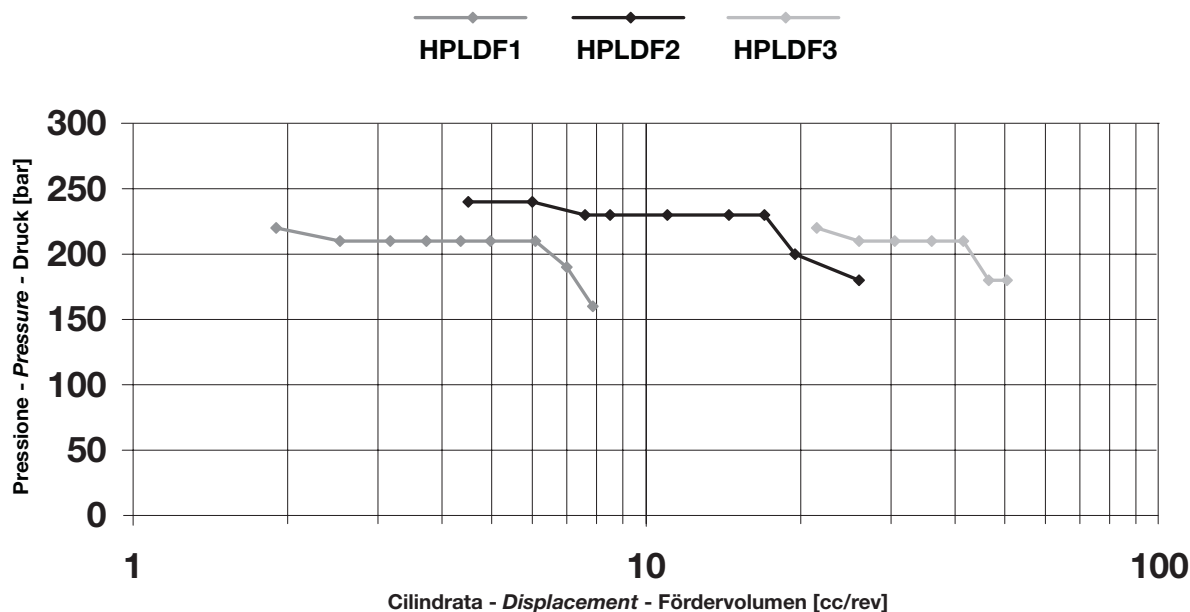


GEAR PUMP AND MOTOR DIVISION

DIVISORI DI FLUSSO
FLOW DIVIDERS
MENGENTEILER

HPLDF.1

PROGRAMMA DI PRODUZIONE PRODUCTION RANGE LIEFERPROGRAMM



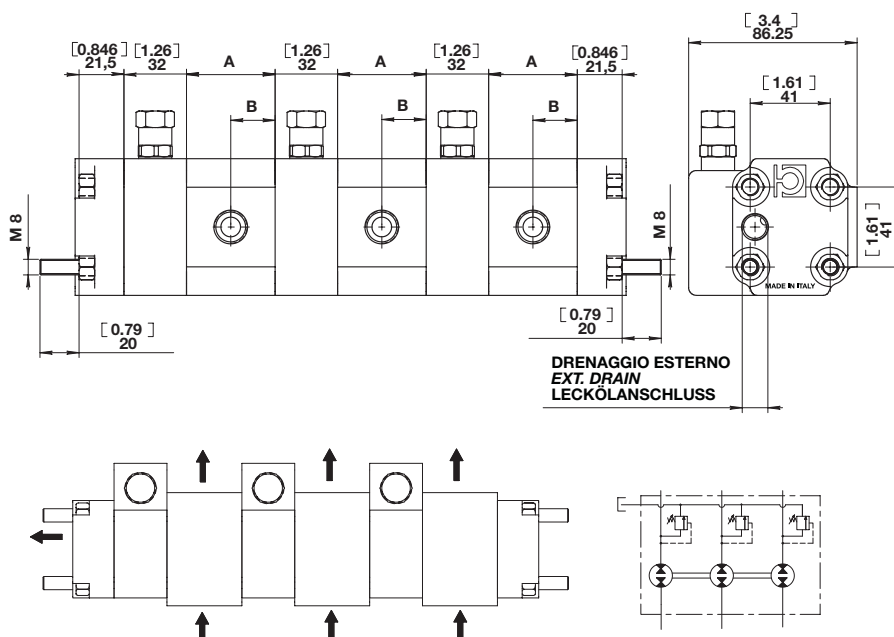
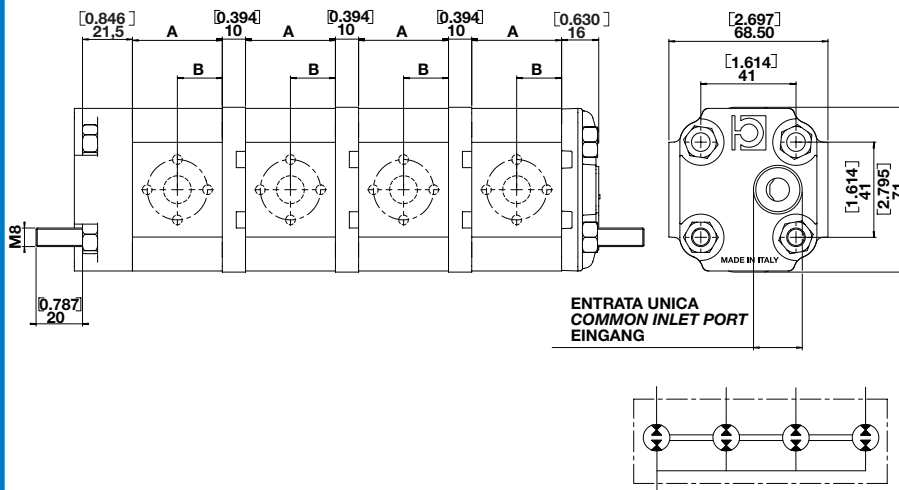
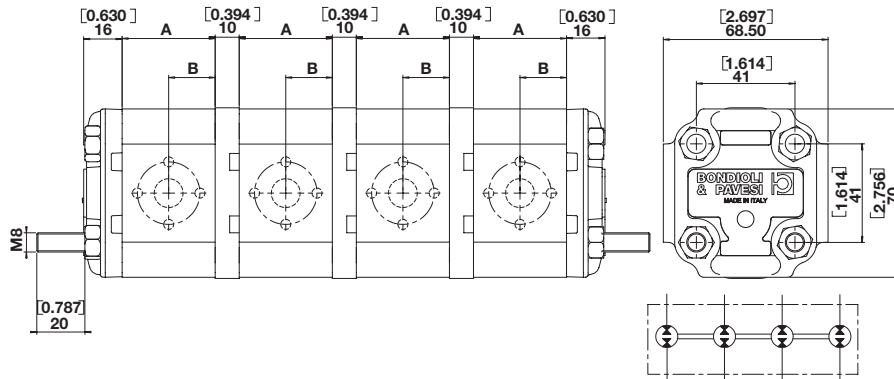
DATI TECNICI • TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TH)		PRESSIONE - PRESSURE - DRUCK						VELOCITÀ DI ROTAZIONE SPEED DREHZAHL	
				CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		ΔP MAX TRA LE SEZIONI MAX OUTLET ΔP BETWEEN SECTIONS MAX DIFFERENZ DRUCK ΔP ZWISCHEN DEN STUFEN			
		cm³	in³	bar	psi	bar	psi	bar	psi	MAX min ⁻¹	MIN min ⁻¹
1	19	1,90	0,12	220	3191	260	3771	190	2756	4800	700
	24	2,53	0,15	210	3046	250	3626	180	2611		
	31	3,17	0,19	210	3046	250	3626	180	2611		
	36	3,73	0,23	210	3046	250	3626	180	2611		
	44	4,35	0,27	210	3046	250	3626	180	2611		
	48	4,97	0,30	210	3046	250	3626	180	2611		
	60	6,08	0,37	210	3046	250	3626	180	2611	3600	
	70	7,00	0,43	190	2756	210	3046	160	2321		
80	7,87	0,48	160	2321	180	2611	130	1885			
2	05	4,50	0,27	240	3481	260	3771	210	3046	4000	700
	06	6,00	0,37	240	3481	260	3771	210	3046		
	07	7,60	0,46	230	3336	250	3626	200	2901		
	08	8,50	0,52	230	3336	250	3626	200	2901		
	11	11,00	0,67	230	3336	250	3626	200	2901		
	14	14,50	0,88	230	3336	250	3626	200	2901		
	17	17,00	1,04	230	3336	250	3626	200	2901		
	20	19,50	1,19	200	2901	220	3191	170	2466	3400	
26	26,00	1,59	180	2611	190	2756	150	2176			
3	22	21,50	1,31	220	3191	250	3626	190	2756	3500	700
	26	26,00	1,59	210	3046	250	3626	180	2611		
	31	30,50	1,86	210	3046	250	3626	180	2611		
	36	36,00	2,20	210	3046	250	3626	180	2611		
	41	41,50	2,53	210	3046	250	3626	180	2611		
	47	46,50	2,84	180	2611	210	3046	150	2176		
	51	50,50	3,08	180	2611	210	3076	150	2176		



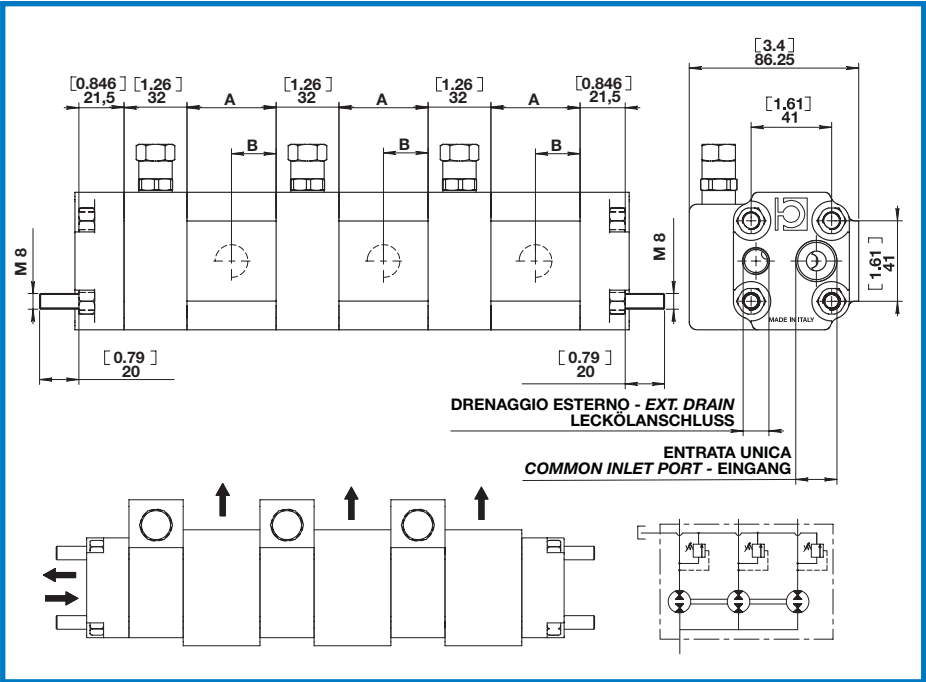
HPLDF.1

HPLDF.1



DIMENSIONE - SIZE - ABMESSUNGEN

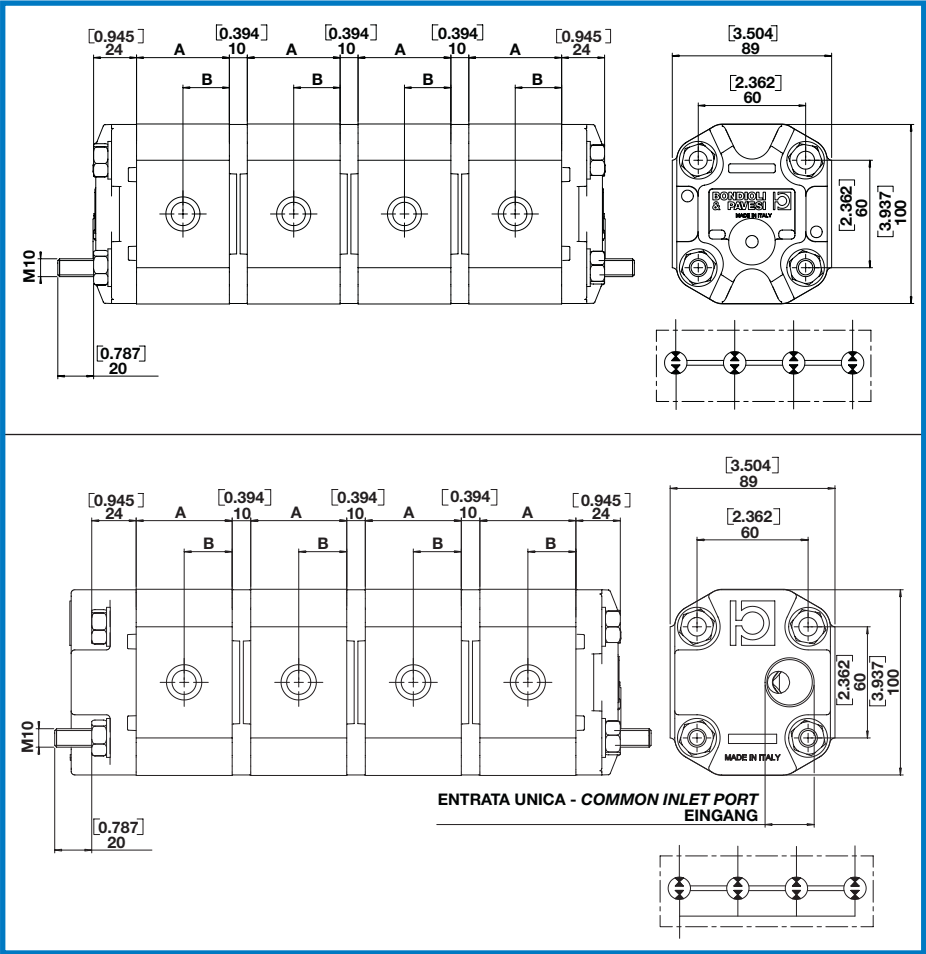
	GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
			mm	in	mm	in
1	19		37,8	1,524	19,4	0,762
	24		37,8	1,524	19,4	0,762
	31		37,8	1,524	19,4	0,762
	36		45,35	1,785	22,7	0,893
	44		45,35	1,785	22,7	0,893
	48		45,35	1,785	22,7	0,893
	60		56,05	2,207	28,0	1,103
	70		56,05	2,207	28,0	1,103
	80		56,05	2,207	28,0	1,103



HPLDF.1

DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
1	19	37,8	1,524	19,4	0,762
	24	37,8	1,524	19,4	0,762
	31	37,8	1,524	19,4	0,762
	36	45,35	1,785	22,7	0,893
	44	45,35	1,785	22,7	0,893
	48	45,35	1,785	22,7	0,893
	60	56,05	2,207	28,0	1,103
	70	56,05	2,207	28,0	1,103
	80	56,05	2,207	28,0	1,103



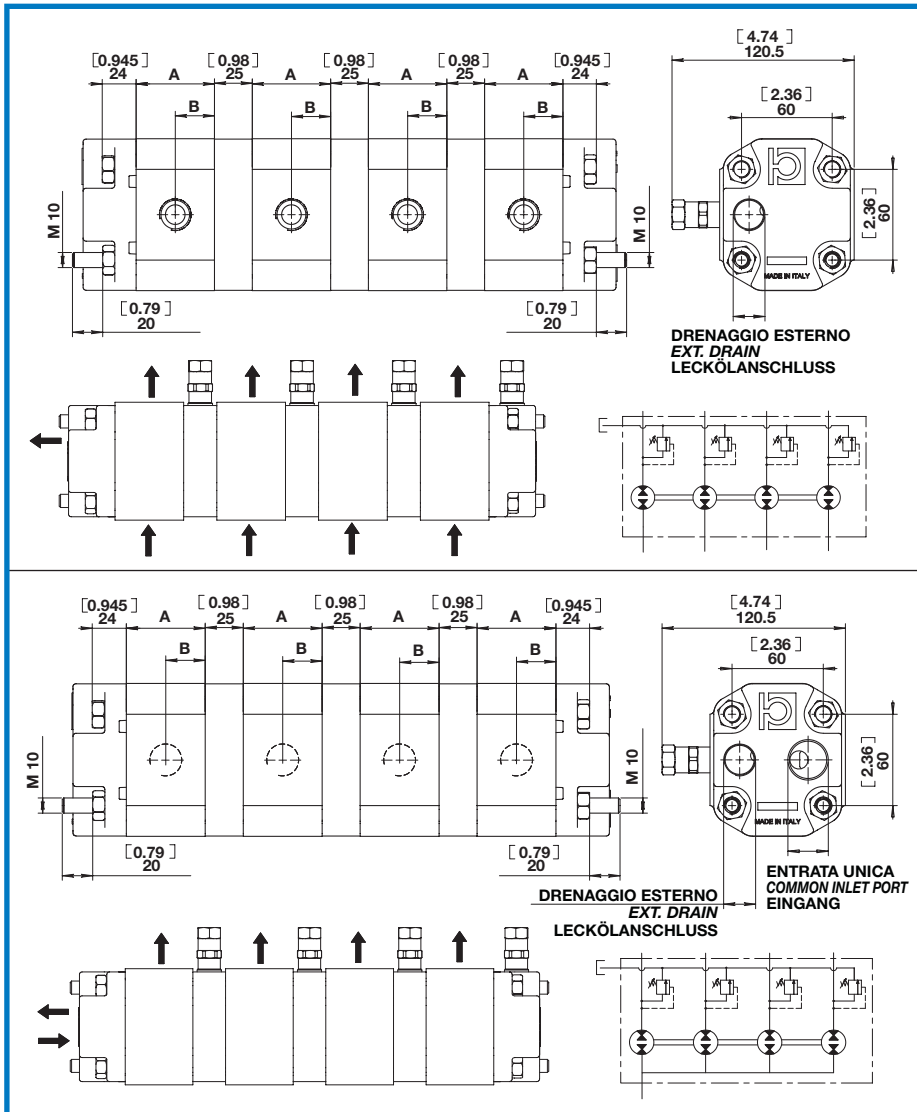
HPLDF.2

DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
2	05	49,15	1,935	24,6	0,968
	06	51,85	2,041	25,9	1,021
	07	50,15	1,974	25,1	0,987
	08	51,85	2,041	25,9	1,021
	11	51,85	2,041	25,9	1,021
	14	76,25	3,002	38,1	1,501
	17	76,25	3,002	38,1	1,501
	20	76,25	3,002	38,1	1,501
	26	88,55	3,486	44,3	1,743

HPLDF.1

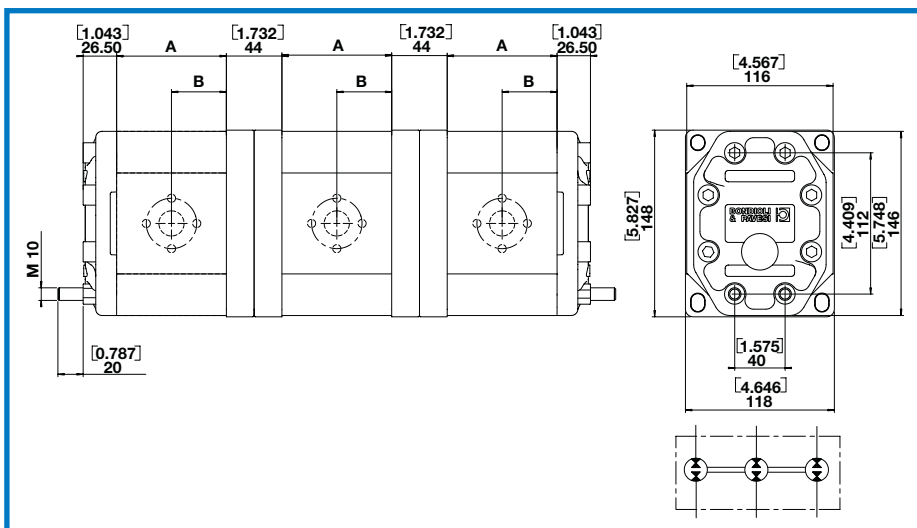
HPLDF.2



DIMENSIONE - SIZE - ABMESSUNGEN

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
2	05	49,15	1,935	24,6	0,968
	06	51,85	2,041	25,9	1,021
	07	50,15	1,974	25,1	0,987
	08	51,85	2,041	25,9	1,021
	11	51,85	2,041	25,9	1,021
	14	76,25	3,002	38,1	1,501
	17	76,25	3,002	38,1	1,501
	20	76,25	3,002	38,1	1,501
	26	88,55	3,486	44,3	1,743

HPLDF.3



DIMENSIONE - SIZE - ABMESSUNGEN

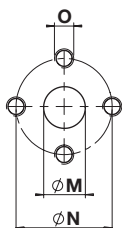
GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A		B	
		mm	in	mm	in
3	22	87,07	3,428	43,5	1,714
	26	87,07	3,428	43,5	1,714
	31	87,07	3,428	43,5	1,714
	36	91,07	3,585	45,5	1,793
	41	101,07	3,979	50,5	1,990
	47	101,07	3,979	50,5	1,990
	51	101,07	3,979	50,5	1,990

GEAR PUMP AND MOTOR DIVISION

BOCCH
PORTS
ANSCHLÜSSE

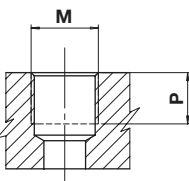
HPL DF...

E LATERALE
LATERAL
SEITLICH



TIPO TYPE TYPE	M		N		O
	mm	in	mm	in	
E3	13	0,51	30	1,18	M6
E5	20	0,79	40	1,57	M8
E7	27	1,34	62	2,44	M10

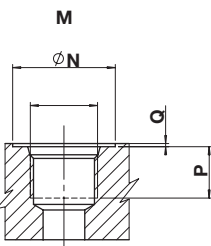
G LATERALE
LATERAL
SEITLICH



T POSTERIORE
REAR
HINTEREN

TIPO TYPE TYPE	M	P	
		cm	in
G3	3/8"	12	0,47
G4	1/2"	16	0,63
G6	3/4"	19	0,75
G7	1"	21	0,83
T4	1/2"	16	0,63
T6	3/4"	19	0,75

U LATERALE
LATERAL
SEITLICH



C POSTERIORE
REAR
HINTEREN

TIPO TYPE TYPE	DIMENSIONE SIZE ABMESSUNGEN	N		P		Q		M
		mm	in	mm	in	mm	in	
U3	3/8"	25	0,98	13	0,3	0,3	0,01	9/16-18 UNF
U4	1/2"	30	1,18	15	0,3	0,3	0,01	3/4-16 UNF
U5	5/8"	34	1,34	17	0,67	0,3	0,01	7/8-14 UNF
U6	3/4"	41	1,61	19	0,75	0,3	0,01	1-1/16-12 UNF
U7	1"	49	1,93	19	0,75	0,3	0,01	1-5/16" 12 UNF
U8	1-1/4"	58	2,28	19	0,75	0,3	0,01	1-5/8"-12 UNF
C5	5/8"	34	1,34	17	0,67	0,3	0,01	7/8-14 UNF
C6	3/4"	41	1,61	19	0,75	0,3	0,01	1-1/16-12 UNF



ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

HPL	DF	2	2	11	G4 G4	B	ST	
------------	-----------	----------	----------	-----------	--------------	----------	-----------	--

SERIE
SERIES
SERIE

PRODOTTI - PRODUCT
PRODUKTE

DF - Divisori di flusso
Flow dividers
Mengenteiler

2 - 3 - 4 - 5 - 6
N° degli Stadi
N° Stage
N° Stufen

GRUPPO - GROUP - BAUGRÖSSE
1 - 2 - 3

CILINDRATA - DISPLACEMENT
FÖRDERVOLUMEN

HPLDF.1	HPLDF.2	HPLDF.3
19 - 1,90	05 - 4,50	22 - 21,50
24 - 2,53	06 - 6,00	26 - 26,00
31 - 3,17	07 - 7,60	31 - 30,50
36 - 3,73	08 - 8,50	36 - 36,00
44 - 4,35	11 - 11,00	41 - 41,50
48 - 4,97	14 - 14,50	47 - 46,50
60 - 6,08	17 - 17,00	51 - 50,50
70 - 7,00	20 - 19,50	
80 - 7,87	26 - 26,00	

SET VALVOLE - (bar)
VALVE SETTING (bar)
VENTILEINSTELLUNG (bar)

COPERCHI - COVERS - DECKELN

ST - Standard
SG - Versione in ghisa (solo HPLDF.3)
Version in cast iron (only HPLDF.3)
Gussversion (nuer HPLDF.3)
VE - Con valvole (vedi sezione valvole)
With valves
Mit Ventilen

GUARNIZIONI - SEALS - DICHTUNGEN

B - NBR
V - Viton

BOCCHES STANDARD - STANDARD PORT - STANDARD ANSCHLÜSSE
HPLDF.1

CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN

1,9.....4,8		6.....8	
IN/OUT	DRAIN	IN/OUT	DRAIN
E3 E3	G3	E3 E3	G3
G3 G3	G3	G4 G4	G3
U3 U3	U3	U4 U4	U3

ASPIRAZIONE UNICA - COMMON INLET - EINGANG

T4 G3	G3	T4 G4	G3
C5 U3	U3	C5 U4	U3

HPLDF.2

CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN

5.....11		14.....20		26	
IN/OUT	DRAIN	IN/OUT	DRAIN	IN/OUT	DRAIN
E3 E3	G4	E5 E3	G4	E5 E5	G4
G4 G4	G4	G6 G4	G4	G6 G6	G4
U6 U5	U4	U6 U5	U4	U6 U5	U4

ASPIRAZIONE UNICA - COMMON INLET - EINGANG

T6 G4	G4	T6 G4	G4	T6 G4	G4
C6 U5	U4	C6 U5	U4	C6 U5	U4

HPLDF.3

CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN

22.....31		36.....51	
IN/OUT		IN/OUT	
E5 E5		E7 E5	
G6 G6		G7 G6	
U7 U6		U8 U7	

GEAR PUMP AND MOTOR DIVISION

ACCESSORI
ACCESSORIES
ZUBEHÖR

POMPE E MOTORI CON VALVOLE INTEGRATE INTEGRATED VALVES FOR PUMP AND MOTOR PUMPEN UND MOTOREN MIT INTEGRIERTEN VENTILEN

Con lo scopo di integrare più funzioni in un unico componente il circuito idraulico e quindi per ridurre anche la circuitistica d'impianto è possibile incorporare nel coperchio della pompa e/o del motore alcuni tipi di valvole di controllo della portata (valvole prioritarie) e della pressione oltre a valvole di non ritorno.

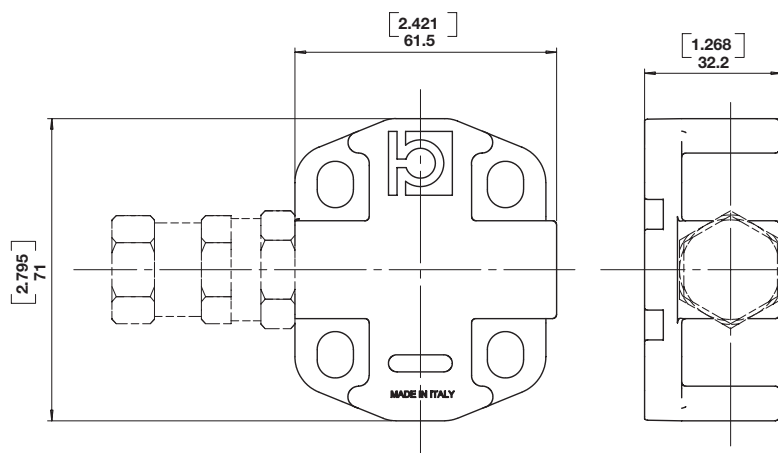
Per ottenere informazioni più accurate della gamma di personalizzazioni si prega di contattare il ns servizio tecnico-commerciale.

To integrate many functions into a single component of the hydraulic circuit and to limit the installation circuitry, it is possible to have some types of flow control valves (priority valves), pressure control valves, and check valves incorporated into the pump/motor cover.

For further information about the series of customized solutions, please contact our Technical and Commercial Department.

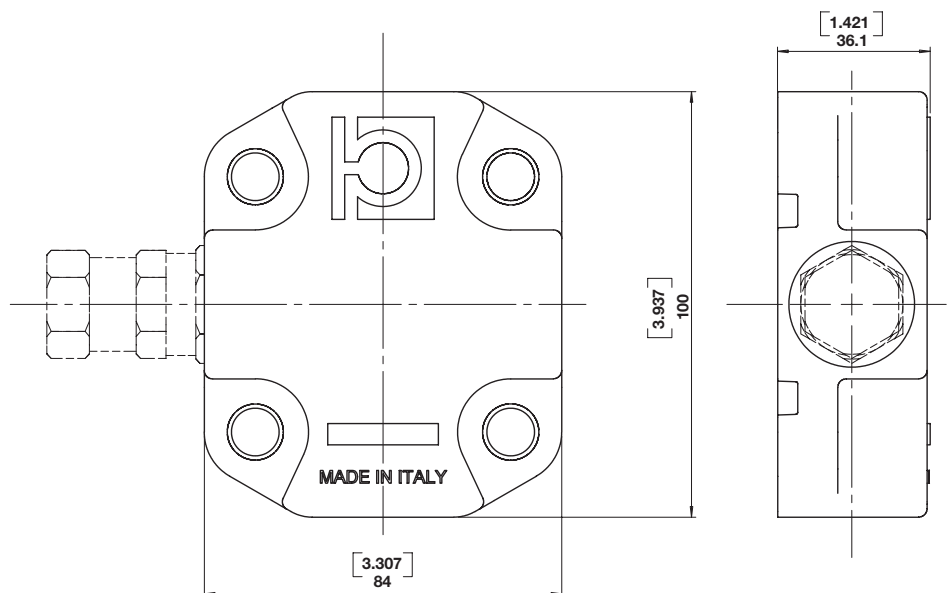
Um mehrere Funktionen in einem einzigen Bauteil des Hydraulikkreislaufs zusammenzufassen, und folglich auch, um die Anzahl der Anlagenbauteile zu reduzieren, können in den Deckel der Pumpe und/oder des Motors einige Ventiltypen zur Regelung von Durchfluss (Prioritätsventile) und Druck, sowie Rückschlagventile integriert werden. Für nähere Informationen über die Möglichkeiten der Personalisierung wenden Sie sich bitte an unseren technischen Kundendienst und Vertrieb.

HPL..1



V...

HPL..2

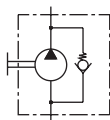


V...



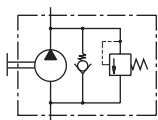
**VALVOLE
VALVES
VENTILE**

VA



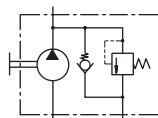
**VALVOLA UNIDIREZIONALE
ANTI-CAVITATION CHECK VALVE
RÜCKSCHLAGVENTILE**

VB



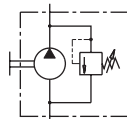
**VALVOLA DI DI MASSIMA PRESSIONE A TARATURA FISSA DRENAGGIO INTERNO
ANTI-CAVITATION CHECK VALVE AND RELIEF VALVE WITH INTERNAL DRAIN
FESTEINGESTELLTEN DRUCKBEGRENZUNGSVENTIL MIT INTERNEM LECKÖL**

VC



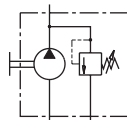
**VALVOLA DI DI MASSIMA PRESSIONE A TARATURA FISSA DRENAGGIO ESTERNO
ANTI-CAVITATION CHECK VALVE AND RELIEF VALVE WITH EXTERNAL DRAIN
FESTEINGESTELLTEN DRUCKBEGRENZUNGSVENTIL MIT EXTERNEM LECKÖL**

VD



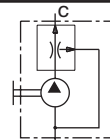
**VALVOLA DI DI MASSIMA PRESSIONE DIRETTA REGOLABILE A DRENAGGIO INTERNO
PRESSURE RELIEF VALVE WITH INTERNAL DRAIN
EINSTELLBARES DRUCKBEGRENZUNGSVENTIL MIT INTERNEM LECKÖL**

VE



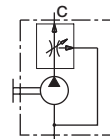
**VALVOLA DI DI MASSIMA PRESSIONE DIRETTA REGOLABILE A DRENAGGIO ESTERNO
PRESSURE RELIEF VALVE WITH EXTERNAL DRAIN
EINSTELLBARES DRUCKBEGRENZUNGSVENTIL MIT EXTERNEM LECKÖL**

VF



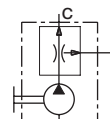
**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA A TARATURA FISSA
CON RICIRCOLO PORTATA RESIDUA
FIXED PRIORITY FLOW DIVIDER, 2-WAY
FESTINGESTELLTES DRUCKKOMPENSIERTES STROMREGELVENTIL
MIT RESTÖLUMLAUF**

VG



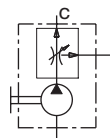
**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA CON RICIRCOLO PORTATA RESIDUA
ADJUSTABLE PRIORITY FLOW DIVIDER, 2-WAY
EINSTELLBARES DRUCKKOMPENSIERTES STROMREGELVENTIL MIT RESTÖLUMLAUF**

VH



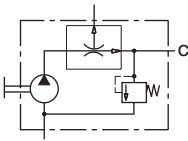
**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA A TARUTURA FISSA
FIXED PRIORITY FLOW DIVIDER, 3-WAY
FESTEINGESTELLTES 3-WEGE-STROM-REGELVENTIL MIT DRUCKKOMPENSATION**

VI



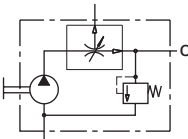
**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA
ADJUSTABLE PRIORITY FLOW DIVIDER, 3-WAY
FESTEINGESTELLTES 3-WEGE-STROM-REGELVENTIL MIT DRUCKKOMPENSATION**

VJ



**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA A TARUTA FISSA
CON CONTROLLO DI PRESSIONE SU PORTATA COSTANTE
FIXED PRIORITY FLOW DIVIDER, 3-WAY WITH RELIEF ON PRIORITY FLOW
FESTEINGESTELLTES KOMPENSIERTES STROMREGELVENTIL
MIT DRUCKBEGRENZUNGSVENTIL**

VK



**VALVOLA REGOLATRICE DI FLUSSO COMPENSATA CON CONTROLLO DI PRESSIONE
SU PORTATA COSTANTE
ADJUSTABLE PRIORITY FLOW DIVIDER, 3-WAY WITH RELIEF ON PRIORITY FLOW
FESTEINGESTELLTES KOMPENSIERTES STROMREGELVENTIL
MIT DRUCKBEGRENZUNGSVENTIL**

GEAR PUMP AND MOTOR DIVISION

ACCESSORI
ACCESSORIES
ZUBEHÖR

SUPPORTI
SPINDLES
VORSATZLAGER

Per l'utilizzo delle pompe e dei motori in presenza di carichi assiali e/o radiali (trascinamento per mezzo di cinghie o catene e ruote dentate a ingranaggi dritti o elicoidali).

In funzione dell'entità dei carichi esterni sono disponibili diversi tipi di supporti. I diagrammi sottoriportati guidano nella appropriata scelta del supporto. Fornibile separatamente (Cod. HPL5...) o montati sulla Pompa/Motore.

Bearings are suited for using pumps and motors in event of axial and/or radial loads (driving is carried out by means of belts or chains and sprocket wheels with straight-tooth/spiral gear).

Different types of supports are available based on the different types of external load.

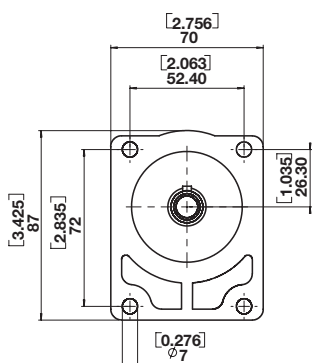
Refer to the following diagrams to select the proper type of support.

Available separately (Cod. HPL5...) or mounted on the units.

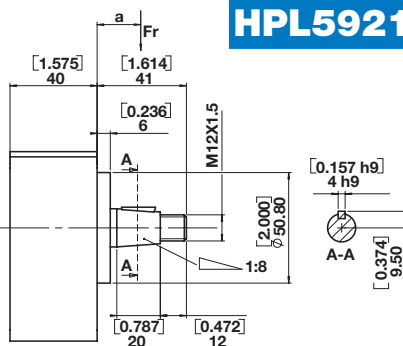
Für die Verwendung der Pumpen und der Motoren bei Einwirkung von Axial- und/oder Radiallasten (Durchtrieb mittels Riemen oder Ketten und gerade- oder schrägrerzahn Zahnrädern).

Je nach Ausmaß der externen Lasten sind verschiedene Lagertypen verfügbar. Die untenstehenden Diagramme dienen als Leitfaden für die richtige Auswahl des Lagers.

HPL...1
FLANGIA STANDARD EUROPEA
CENTRAGGIO Ø 50,8

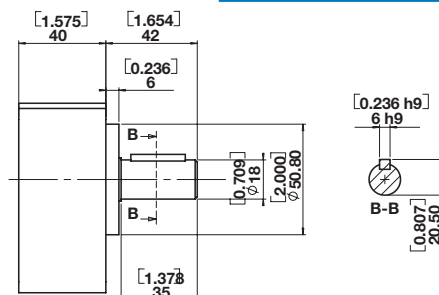


HPL...1
EUROPEAN FRONT FLANGE
Ø 50,8

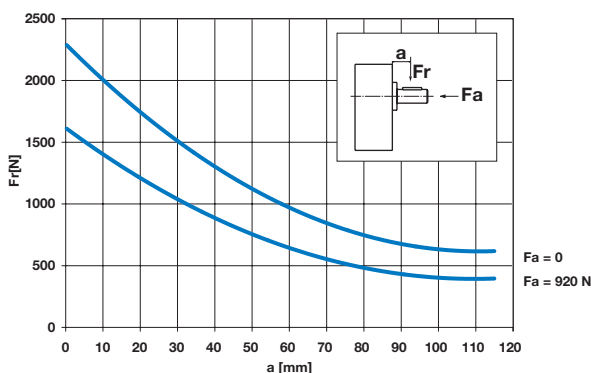


HPL5921C1

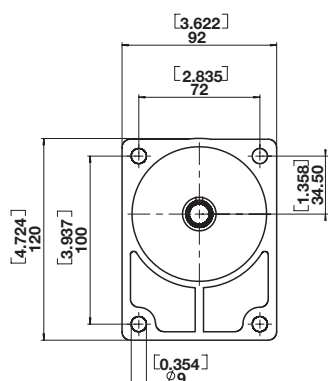
HPL...1
VORDERER FLANSCH EU-NORM
Ø 50,8



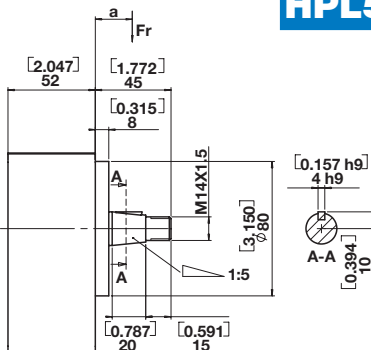
HPL5921C2



HPL...2
FLANGIA STANDARD TEDESCA
CENTRAGGIO Ø 80

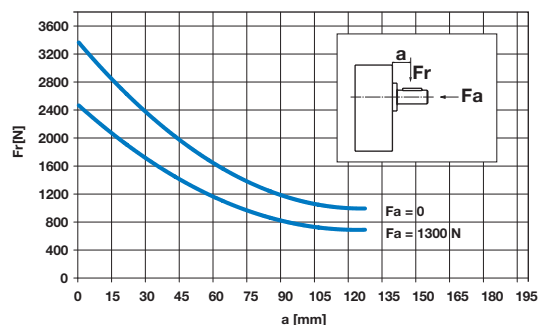


HPL...2
GERMAN FRONT FLANGE
Ø 80

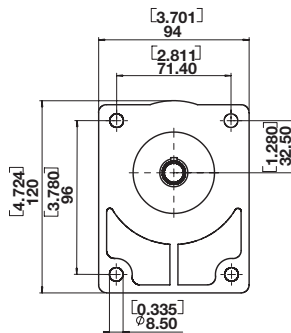


HPL5922B1

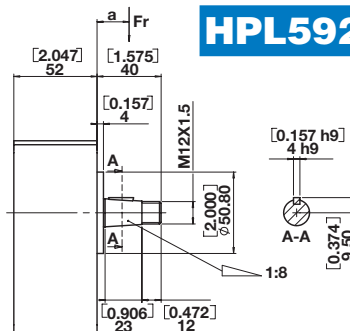
HPL...2
VORDERER FLANSCH EU-NORM
Ø 80



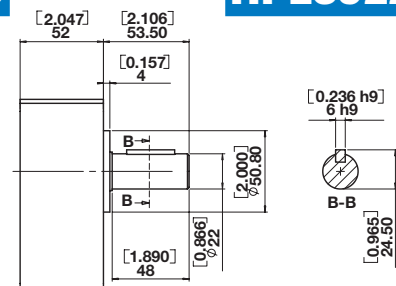
HPL...2
FLANGIA STANDARD EUROPEA
CENTRAGGIO Ø 50,8



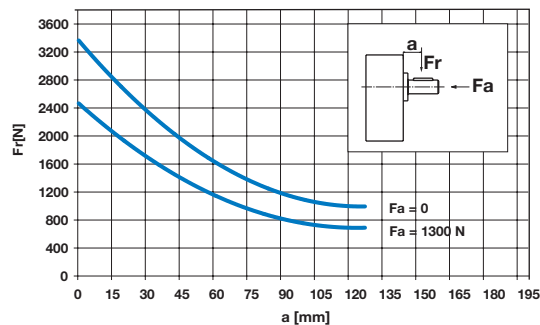
HPL...2
EUROPEAN FRONT FLANGE
Ø 50,8



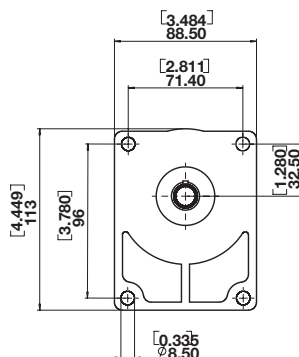
HPL...2
VORDERER FLANSCH EU-NORM
Ø 50,8



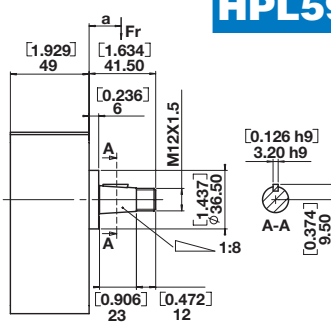
HPL5922C3

HPL5922C4

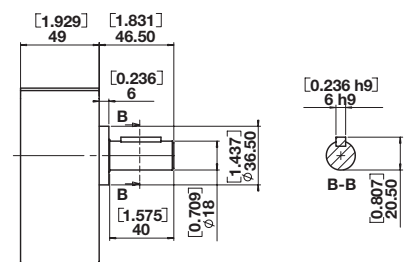
HPL...2
FLANGIA STANDARD EUROPEA
CENTRAGGIO Ø 36,5



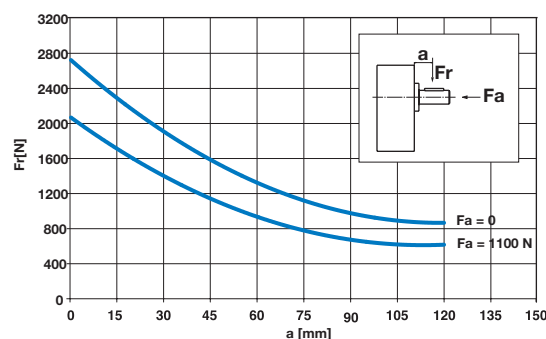
HPL...2
EUROPEAN FRONT FLANGE
Ø 36,5



HPL...2
VORDERER FLANSCH EU-NORM
Ø 36,5



HPL5922C5

HPL5922C6

GEAR PUMP AND MOTOR DIVISION

ACCESSORI
ACCESSORIES
ZUBEHÖR

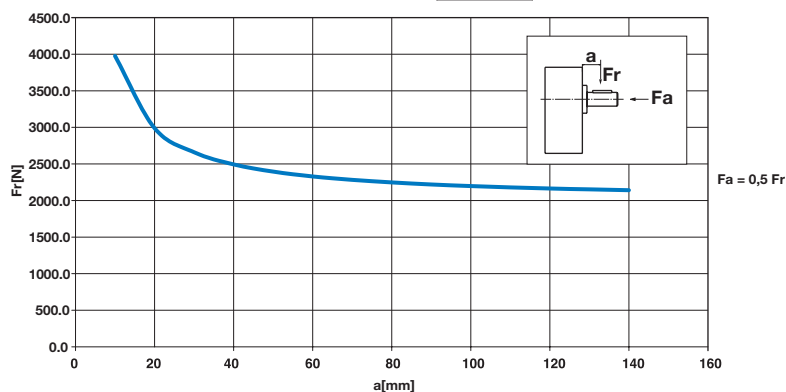
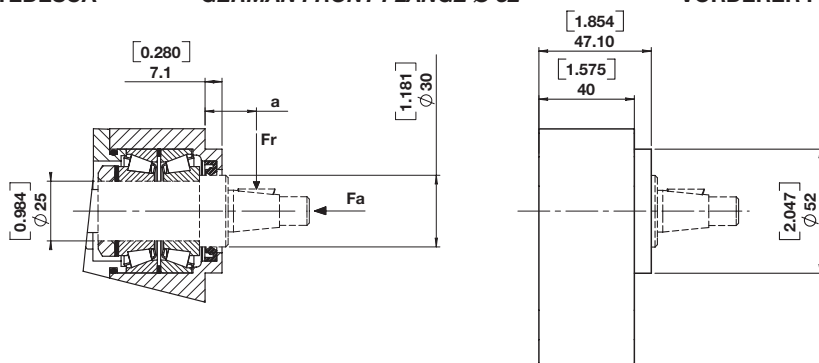
SUPPORTI
SPINDLES
VORSATZLAGER

HPL...2
SUPPORTO A RULLI CONICI
FLANGIA STANDARD TEDESCA
CENTRAGGIO Ø 52

HPL...2
TAPER ROLLER SUPPORT
GERMAN FRONT FLANGE Ø 52

HPL...2
KEGELROLLENLAGER
VORDERER FLANSCH DIN-NORM Ø52

HPL4922B2



Estremità d'albero disponibili:
Conico e Cilindrico.

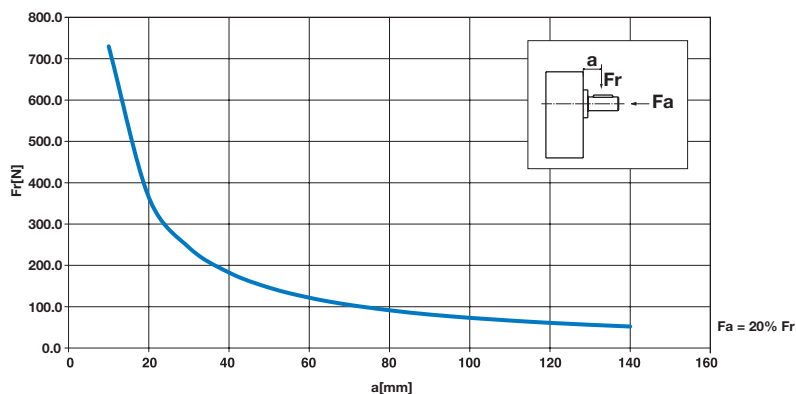
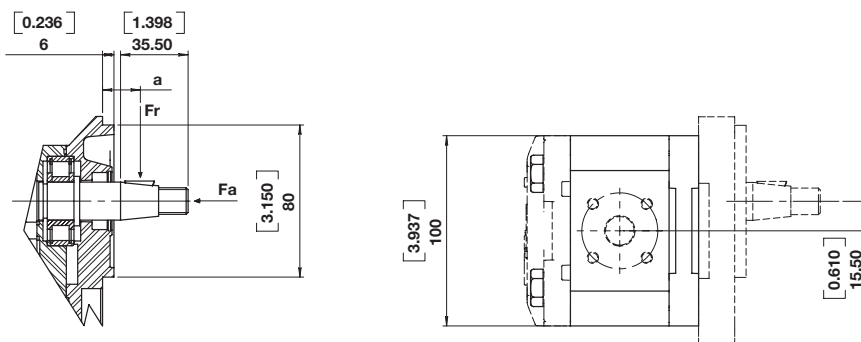
Shaft available:
Tapered and parallel version.

Lieferbare Wellenenden:
Kegel und Zylindrisch

HPL...2
SUPPORTO INTEGRALE
(NON FORNIBILE
SEPARATAMENTE)

HPL...2
INTEGRATED SUPPORT
(NOT AVAILABLE SEPARATELY)

HPL...2
INTEGRIERTES LAGER
(NICHT LIEFERBAR ALS EINZELSTÜCK)



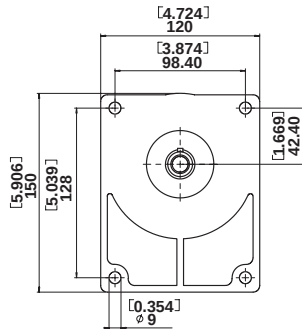
Estremità d'albero e flange
disponibili:
I1 = Europea
I3 = SAE

Shaft and flange available:
I1 = European
I3 = SAE

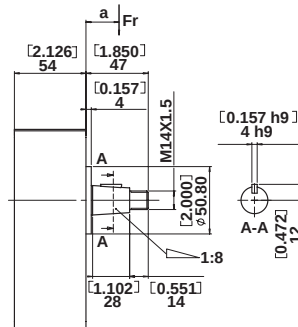
Lieferbare Wellenenden
und Flansche:
I1 = EU-Norm
I3 = SAE



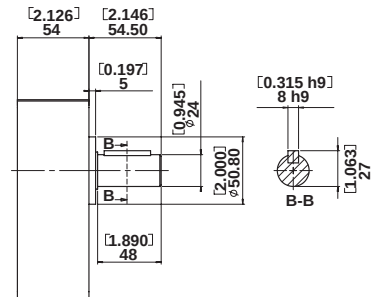
HPL...3
FLANGIA STANDARD EUROPEA
CENTRAGGIO Ø 50,8



HPL...3
EUROPEAN FRONT FLANGE
Ø 50,8

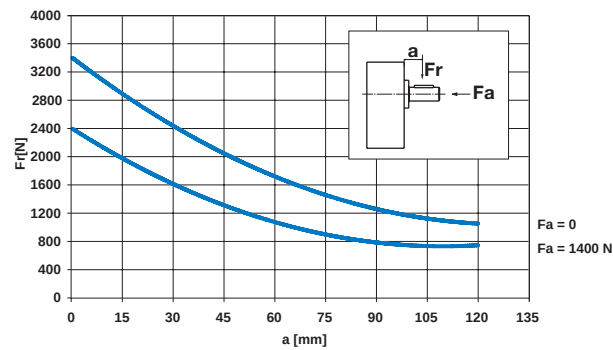


HPL...3
VORDERER FLANSCH EU-NORM
Ø 50,8

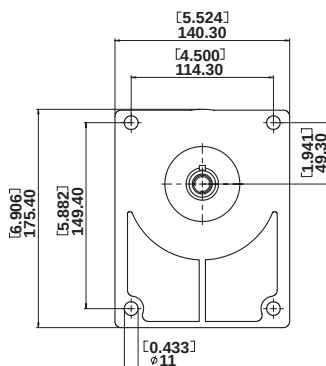


HPL5923C7

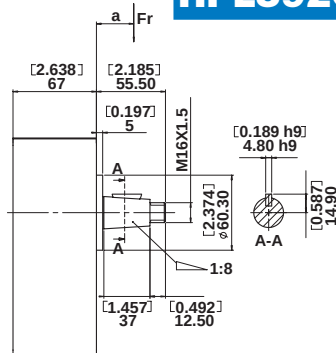
HPL5923C8



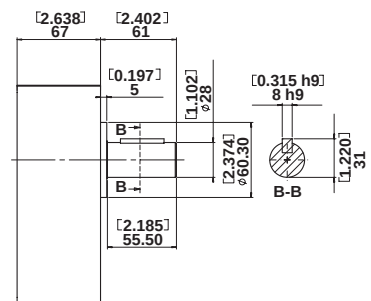
HPL...4
FLANGIA STANDARD EUROPEA
CENTRAGGIO Ø 60,3



HPL...4
EUROPEAN FRONT FLANGE
Ø 60,3

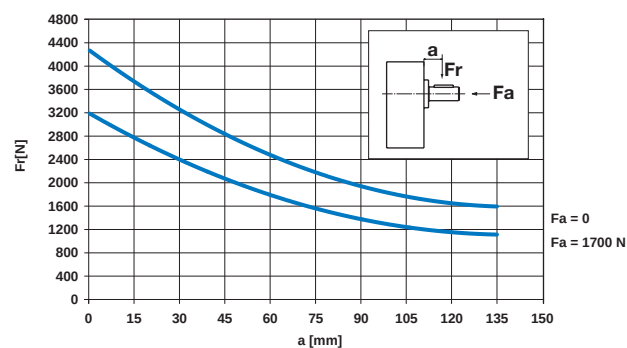


HPL...4
VORDERER FLANSCH EU-NORM
Ø 60,3



HPL592C49

HPL5924C0



GEAR PUMP AND MOTOR DIVISION

ISTRUZIONI PER L'ORDINAZIONE - ORDERING INSTRUCTIONS - BESTELLANLEITUNG

POMPE E MOTORI COMPLETI DI SUPPORTO
PUMP OR MOTOR WITH BEARING SUPPORT
PUMPEN UND MOTOREN MIT VORSATZLAGER

HPL

PA

2

11

D

SERIE
SERIES
SERIE

PRODOTTO - PRODUCT PRODUKTE

MA - Motore
PA - Pompa singola
PB - Pompa doppia
PC - Pompa tripla

MA - Motor
PA - Pump
PB - Double Pump
PC - Triple Pump

MA - Motor
PA - Pumpe
PB - Doppelpumpe
PC - Dreifachpumpe

GRUPPO - GROUP - BAUGRÖSSE
1 - 2 - 3 - 4

CILINDRATA - DISPLACEMENT FÖRDER-/SCHLUCKVOLUMEN

HPL..1	HPL..2	HPL..3	HPL..4
14 - 1,37	05 - 4,50	22 - 21,50	41 - 41,80
19 - 1,90	06 - 6,00	26 - 26,00	51 - 50,40
24 - 2,53	07 - 7,60	31 - 30,50	61 - 61,00
31 - 3,17	08 - 8,50	36 - 36,00	73 - 72,00
36 - 3,73	11 - 11,00	41 - 41,50	90 - 87,80
44 - 4,35	14 - 14,50	47 - 46,50	
48 - 4,97	17 - 17,00	51 - 50,50	
60 - 6,08	20 - 19,50	61 - 61,00	
70 - 7,00	26 - 26,00	73 - 72,50	
80 - 7,87	34 - 34,00	90 - 89,00	
	40 - 40,50		

SENSO DI ROTAZIONE - ROTATION - DREHRICHTUNG

S - Antioraria/sinistra
Counterclockwise
Linkslauf

D - Oraria/destra
Clockwise
Rechtslauf

H - Bidirezionale drenaggio interno
Reversible int. drain.
Reversierbar Lecköl-Anschluss (Seitlich)

B - Bidirezionale drenaggio esterno posteriore
Reversible rear. drain. pont.
Reversierbar Lecköl-Anschluss (Hinten)

**C5****G4 G4****B****ST****SET VALVOLE - (bar)**
VALVE SETTING (bar)
VENTIL-EINSTELLUNG (bar)**COPERCHI - COVERS - DECKELN**

ST - Standard
V.. - Con valvole (vedi sez. valvole)
With valves (see valves section)
Mit Ventilen (siehe Ventile Abschnitt)
SG - Versione in ghisa (solo HPL..3, HPL..4)
Version in cast iron (only HPL..3, HPL..4)
Gussversion (nur HPL..3, HPL..4)

GUARNIZIONI - SEALS - DICHTUNGEN

B - NBR
R - NBR alte pres. (25 bar)
V - Viton
W - Viton alte pres. (25 bar)
B - NBR
R - NBR high pres. (25 bar)
V - Viton
W - Viton high pres. (25 bar)
B - NBR
R - NBR Hoch Druck (25 bar)
V - Viton
W - Viton Hoch Druck (25 bar)

TIPO DI SUPPORTO - SPINDLE TYPE - LAGER TYP**HPL..1**

C1 - Conico (1:8)
C2 - Cilindrico

C1 - Tapered (1:8)
C2 - Parallel shaft

C1 - Kegel (1:8)
C2 - Zylindrisch

HPL..3

C7 - Conico (1:8) Ø 50,8
C8 - Cilindrico Ø 50,8

C7 - Tapered (1:8) Ø 50,8
C8 - Parallel shaft Ø 50,8

C7 - Kegel (1:8) Ø 50,8
C8 - Zylindrisch Ø 50,8

HPL..2

C3 - Conico (1:8) Ø 50,8
C4 - Cilindrico Ø 50,8
C5 - Conico (1:8) Ø 36,5
C6 - Cilindrico Ø 36,5
I1 - Integrale Ø 36,5
I2 - Integrale Ø 80
I3 - Integrale SAE
B1 - Conico (1:5) Ø 80
B2 - Conico (1:5) Ø 52

C3 - Tapered (1:8) Ø 50,8
C4 - Parallel shaft Ø 50,8
C5 - Tapered (1:8) Ø 36,5
C6 - Parallel shaft Ø 36,5
I1 - Integrated Ø 36,5
I2 - Integrated Ø 80
I3 - Integrated SAE
B1 - Tapered (1:5) Ø 80
B2 - Tapered (1:5) Ø 52

C3 - Kegel (1:8) Ø 50,8
C4 - Zylindrisch Ø 50,8
C5 - Kegel (1:8) Ø 36,5
C6 - Zylindrisch Ø 36,5
I1 - Integriertlager Ø 36,5
I2 - Integriertlager Ø 80
I3 - Integriertlager SAE
B1 - Kegel (1:5) Ø 80
B2 - Kegel (1:5) Ø 52

HPL..4

C9 - Conico (1:8) Ø 60,3
C0 - Cilindrico ø60,3

C9 - Tapered (1:8) Ø 60,3
C0 - Parallel shaft ø60,3

C9 - Kegel (1:8) Ø 60,3
C0 - Zylindrisch Ø 60,3

**BOCCHES STANDARD - STANDARD PORT
STANDARD ANSCHLÜSSE****HPL..1****CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN**

1,4.....4,8	6.....8
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E3 E3	E3 E3
G3 G3	G4 G4
X3 X3	X3 X3
M4 M2	M4 M2
U3 U3	U4 U4
T3 H1	T3 H1

HPL..2**CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN**

5.....11	14.....20	26.....40
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E3 E3	E5 E3	E5 E5
G4 G4	G6 G4	G6 G6
X5 X4	X6 X5	X6 X5
U6 U5	U6 U5	U6 U5
C6 C5	C6 C5	C6 C5
T6 T4	T6 T4	T6 T4

HPL..3**CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN**

22.....31	36.....61	73.....90
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E5 E5	E7 E5	E8 E7
G6 G6	G7 G6	G8 G7
U7 U6	U8 U7	U8 U7
N7 N6	N7 N6	N7 N6

HPL..4**CILINDRATA - DISPLACEMENT - FÖRDERVOLUMEN**

41.....61	73.....90
Pompe - Pumps - Pumpen IN/OUT	Pompe - Pumps - Pumpen IN/OUT
E7 E7	E8 E7
G7 G7	G8 G8
Motori - Motors - Motoren OUT/IN	

GEAR PUMP AND MOTOR DIVISION

ACCESSORI ACCESSORIES ZUBEHÖR

KIT ASSEMBLAGGIO POMPE PT ASSEMBLY KIT (PT PUMPS ONLY) ZUSAMMENBAU-SATZ (NUR PT-PUMPEN)

Le pompe PT sono pompe singole, che possono essere assemblate rapidamente e facilmente con l'impiego DEGLI APPOSITI KIT.

- HPLKA11ST

per l'assemblaggio di pompe Gruppo 1.

- HPLKA21ST

per l'assemblaggio di pompe Gruppo 2 e 1.

- HPLKA22ST

per l'assemblaggio di pompe Gruppo 2.

PT pumps are single pumps that can be quickly and easily assembled using THE DEDICATED ASSEMBLY KIT.

- HPLKA11ST

Group 1 assembly

- HPLKA21ST

Group 2 and 1 assembly

- HPLKA22ST

Group 2 assembly

Assembly steps are following described.

Die PT-Pumpen sind Einfachpumpen, die schnell zu Mehrfachpumpen zusammengebaut werden können, unter Verwendung der dazugehörigen Zusammenbau-Sätze.

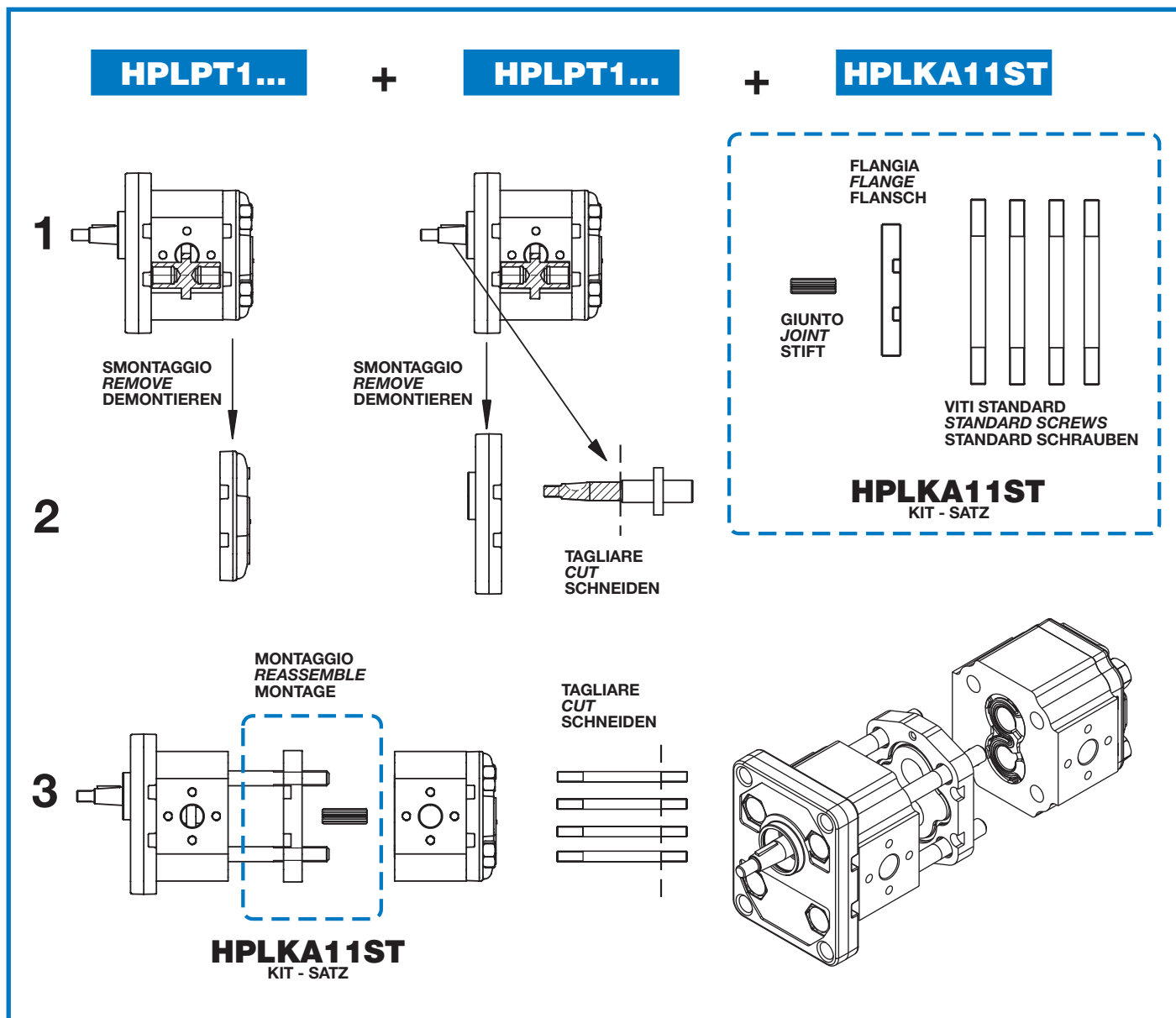
- **HPLKA11ST** Für den Zusammenbau der Pumpen Gruppe 1.

- **HPLKA11ST** Für den Zusammenbau der Pumpen Gruppe 2 e 1.

- **HPLKA11ST** Für den Zusammenbau der Pumpen Gruppe 2.

Le fasi schematiche delle operazioni sono riportate di seguito.

Untenstehend die schematisch dargestellten Montagevorgänge.





HPLPT2...

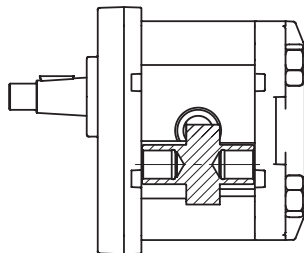
+

HPLPT1...

+

HPLKA21ST

1

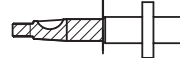
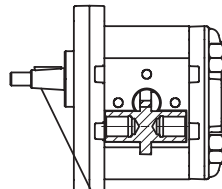


SMONTAGGIO
REMOVE
DEMONTIEREN

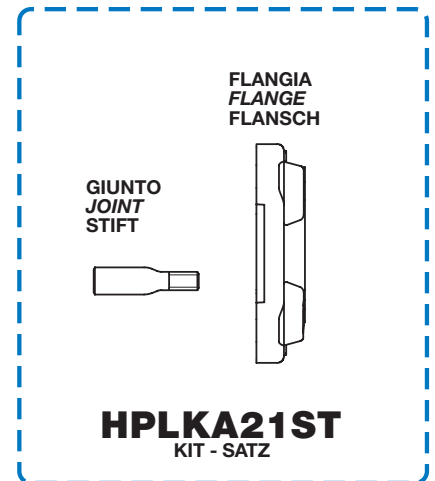
2



SMONTAGGIO
REMOVE
DEMONTIEREN



TAGLIARE
CUT
SCHNEIDEN



FLANGIA
FLANGE
FLANSCH

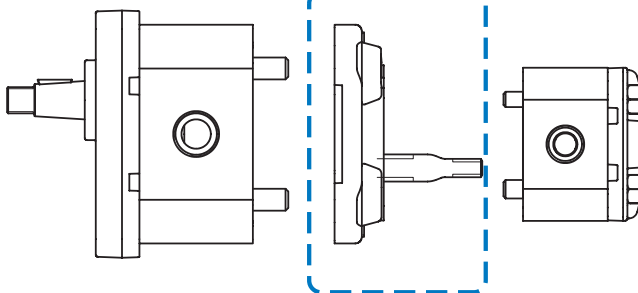
GIUNTO
JOINT
STIFT



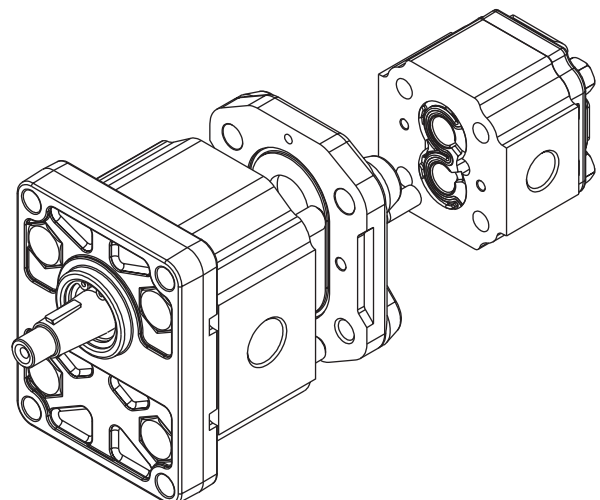
HPLKA21ST
KIT - SATZ

MONTAGGIO
REASSEMBLE
EINBAU

3



HPLKA21ST
KIT - SATZ



GEAR PUMP AND MOTOR DIVISION

ACCESSORI
ACCESSORIES
ZUBEHÖR

KIT ASSEMBLAGGIO POMPE PT
ASSEMBLY KIT (PT PUMPS ONLY)
ZUSAMMENBAU-SATZ (NUR PT-PUMPEN)

HPLPT2...

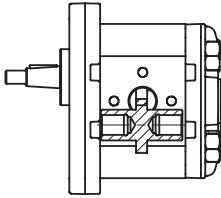
+

HPLPT2...

+

HPLKA22ST

1

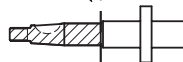
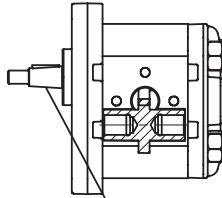


SMONTAGGIO
REMOVE
DEMONTIEREN

2



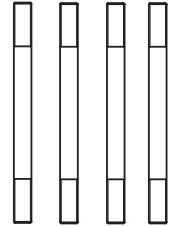
SMONTAGGIO
REMOVE
DEMONTIEREN



TAGLIARE
CUT
SCHNEIDEN

GIUNTO
JOINT
STIFT

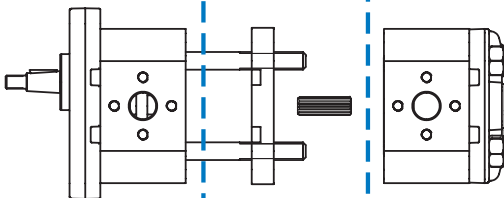
FLANGIA
FLANGE
FLANSCH



VITI STANDARD
STANDARD SCREWS
STANDARD SCHRAUBEN

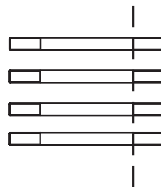
HPLKA22ST
KIT - SATZ

3

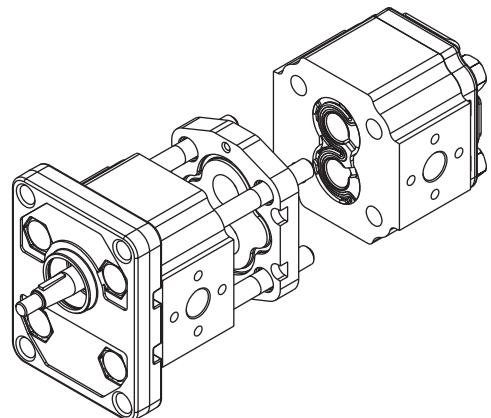


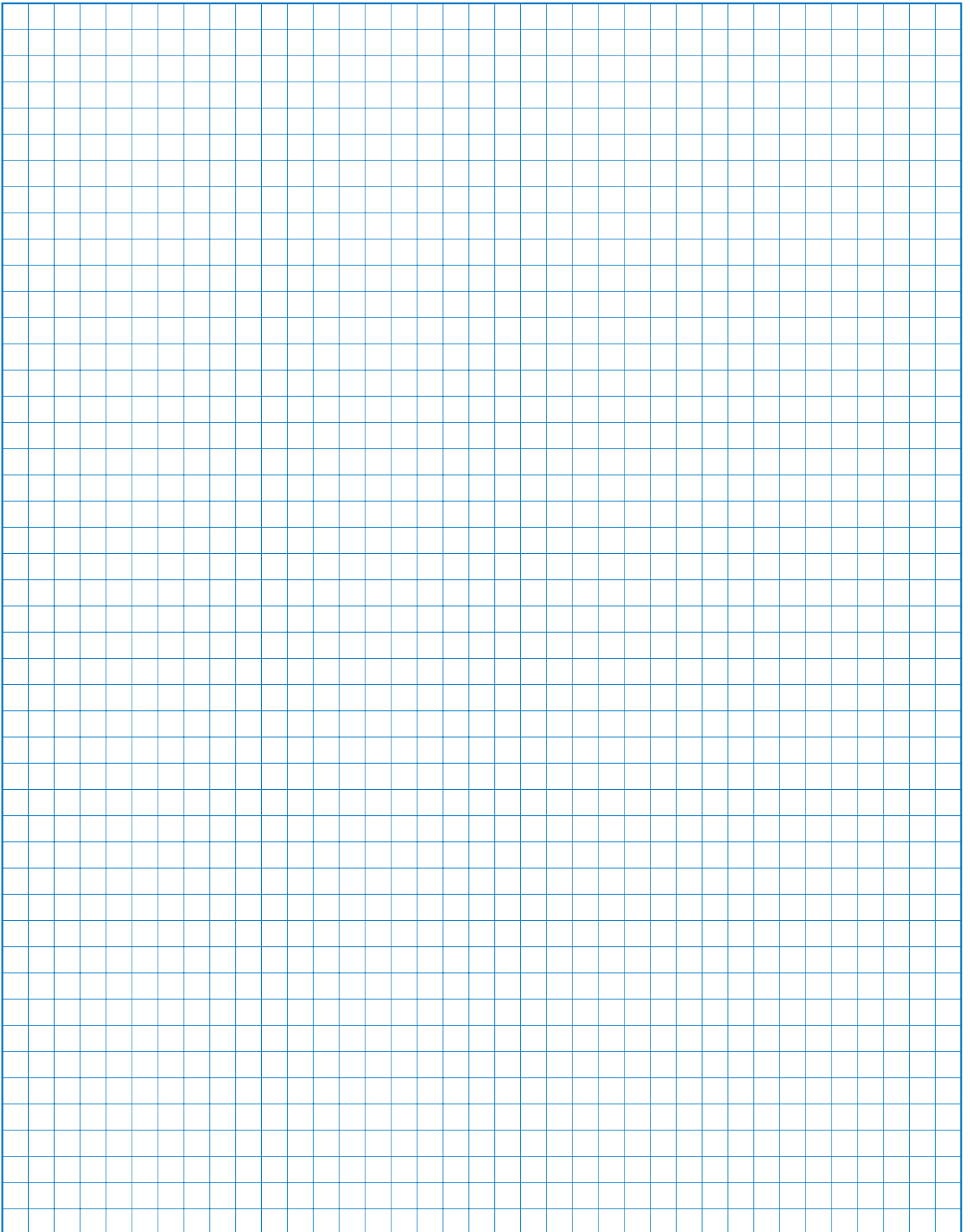
MONTAGGIO
REASSEMBLE
MONTAGE

TAGLIARE
CUT
SCHNEIDEN



HPLKA22ST
KIT - SATZ

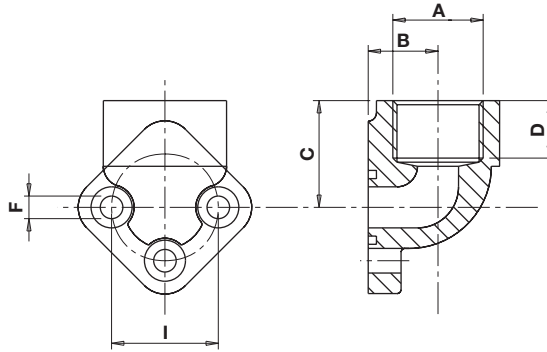




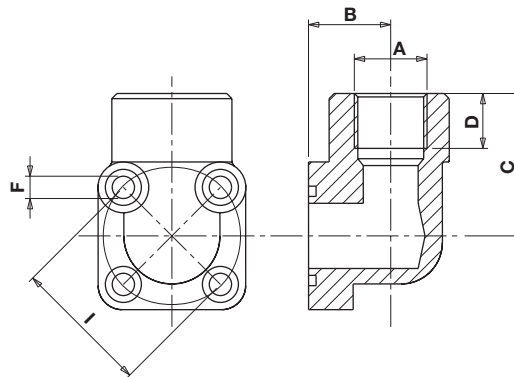
GEAR PUMP AND MOTOR DIVISION

ACCESSORI
ACCESSORIES
ZUBEHÖR

RACCORDI A GOMITO
UNION ELBOW
WINKELVERBINDUNGEN



TIPO TYPE TYP	DESCRIZIONE DESCRIPTION BENENNUNG	A	B		C		D		I		F
			mm	in	mm	in	mm	in	mm	in	
HPL5767E0G31R	GR.RG 26x12 G3/8"	3/8"	16	0,63	26	1,02	14	0,56	26	1,02	M 5
HPL5767E0G41R	GR.RG 26x12 G1/2"	1/2"	16	0,63	26	1,02	14	0,56	26	1,02	M 5
HPL5767E3G31R	GR.RG 30x13.5 G3/8"	3/8"	17,5	0,69	26	1,02	14	0,56	30	1,18	M 6
HPL5767E3G41R	GR.RG 30x13.5 G1/2"	1/2"	17,5	0,69	26	1,02	14	0,56	30	1,18	M 6
HPL5767E4G61R	GR.RG 40x20 G3/4"	3/4"	21	0,82	36	1,42	16	0,60	40	1,58	M 8
HPL5767E7G71R	GR.RG 51x27 G1"	1"	27	1,06	43	1,70	21	0,80	51	2,00	M 10
HPL5767E8G81R	GR.RG 62x34 G1 1/4"	1 1/4"	34,5	1,36	55	2,17	27	1,06	62	2,45	M 10
HPL5767E4G41R	GR.RG 40x20 G1/2"	1/2"	21	0,83	36	1,42	16	0,63	40	1,58	M 10
HPL5767E0M41R	GR.RG 26x12 M18x1.5	18X1.5	17,5	0,69	26	1,02	14	0,56	26	1,02	M 5
HPL5767E3M41R	GR.RG 30x13.5 M18x1.5	18X1.5	17,5	0,69	26	1,02	14	0,56	30	1,18	M 6

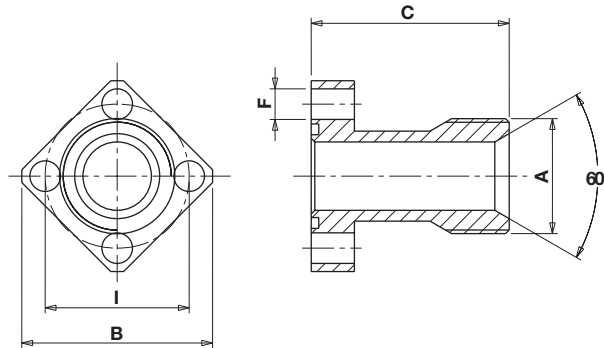


TIPO TYPE TYP	DESCRIZIONE DESCRIPTION BENENNUNG	A	B		C		D		I		F
			mm	in	mm	in	mm	in	mm	in	
HPL5767X3G31R	GR.R.GB 30x13 3/8"	3/8"	18	0,70	40	1,58	16	0,63	30	1,18	M 6
HPL5767X3G41R	GR.R.GB 30x13 1/2"	1/2"	18	0,70	40	1,58	16	0,63	30	1,18	M 6
HPL5767X4G31R	GR.R.GB 35x13 3/8"	3/8"	18	0,70	40	1,58	16	0,63	35	1,38	M 6
HPL5767X4G41R	GR.R.GB 35x13 1/2"	1/2"	18	0,70	40	1,58	16	0,63	35	1,38	M 6
HPL5767X6G61R	GR.R.GB 40X19 3/4"	3/4"	24	0,95	41,5	1,63	16	0,63	40	1,58	M 6
HPL5767X6G41R	GR.R.GB 40X19 1/2"	1/2"	24	0,95	41,5	1,63	16	0,63	40	1,58	M 6
HPL5767X3M41R	GR.R.GB 30x13 M18x1.5	18X1.5	18	0,70	40	1,58	16	0,63	30	1,18	M 6



**ACCESSORI
ACCESSORIES
ZUBEHÖR**

**RACCORDI DIRITTI
STRAIGHT UNION
GERADE VERBINDUNGEN**



TIPO TYPE TYP	DESCRIZIONE DESCRIPTION BENENNUNG	A	B		C		I		F
			mm	in	mm	in	mm	in	
HPL5767E3G42R	GR.RD 30x13.5 (1/2")	1/2"	46	1,81	35	1,38	30	1,18	M 6
HPL5767E5G42R	GR.RD 40x20 (3/4")	3/4"	53	2,09	40	1,58	40	1,58	M 8
HPL5767E7G42R	GR.RD 51x27 (1")	1"	73	2,88	55	2,17	51	2,00	M 10
HPL5767E8G42R	GR.RD 62x34 (1 1/4")	1 1/4"	86	3,39	70	2,76	62	2,45	M 10
HPL5767E0M42R	GR.RD 26x12 M18x1.5	18x1.5	46	1,81	35	1,38	26	1,81	M 6

NOTA: I raccordi vengono forniti completi di viti, rondelle e guarnizioni OR.

NOTE: Connectors are supplied complete with bolts, washers and O-rings.

BEMERKUNG: Die Verbindungen werden komplett mit Bolzen, Scheiben und O-Ringe geliefert.