

# HPL ..1

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

### HPL PA1

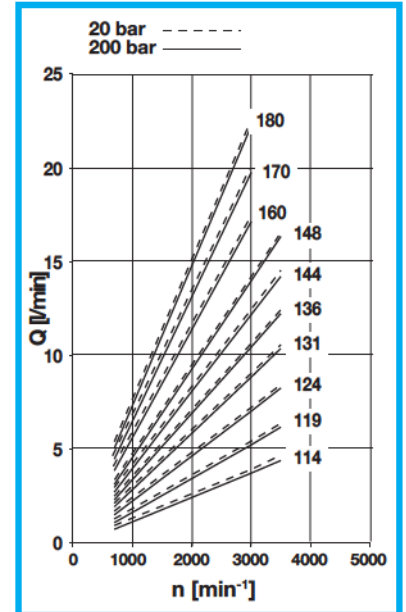
#### POMPE AD INGRANAGGI GEAR PUMPS ZAHNRADPUMPEN

#### DATI TECNICI TECHNICAL DATA TECHNISCHE MERKMALE



#### DIAGRAMMA PORTATE DIAGRAMS KENNLINIEN

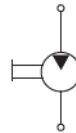
GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		PRESSIONE PRESSURE DRUCK		PICCO PEAK SPITZEN	VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT		
		cm <sup>3</sup>	in <sup>3</sup>	bar	psi	bar	psi		bar	psi	MAX	MIN	kg
										min <sup>-1</sup>	min <sup>-1</sup>		
1	14	1,37	0,08	220	3191	260	3771	280	4061	3500	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			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



### HPL MA1

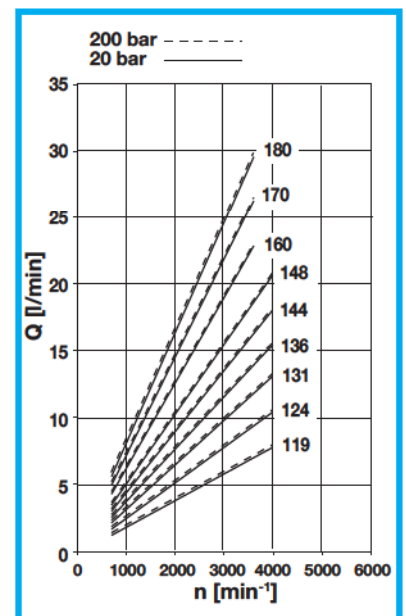
#### MOTORI AD INGRANAGGI GEAR MOTORS ZAHNRADMOTOREN

#### DATI TECNICI TECHNICAL DATA TECHNISCHE MERKMALE



#### DIAGRAMMA PORTATE DIAGRAMS KENNLINIEN

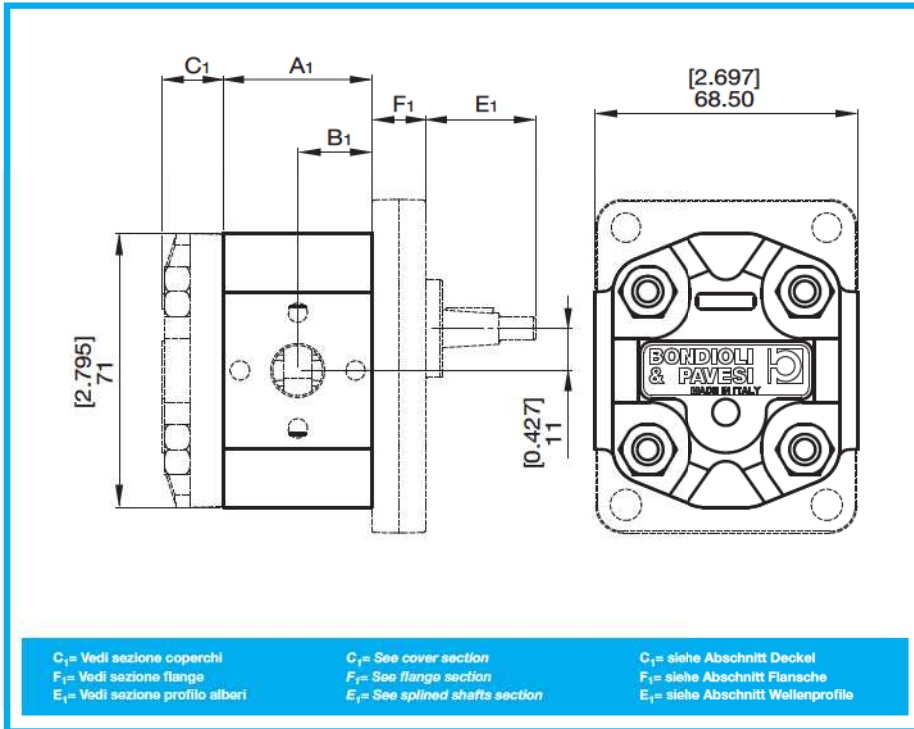
GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		CONTINUA CONTINUOUS DAUER		PRESSIONE PRESSURE DRUCK		PICCO PEAK SPITZEN	VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT		
		cm <sup>3</sup>	in <sup>3</sup>	bar	psi	bar	psi		bar	psi	MAX	MIN	kg
										min <sup>-1</sup>	min <sup>-1</sup>		
1	19	1,90	0,12	220	3191	260	3771	280	4061	4000	700	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			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





**DIMENSIONI  
SIZE  
ABMESSUNGEN**

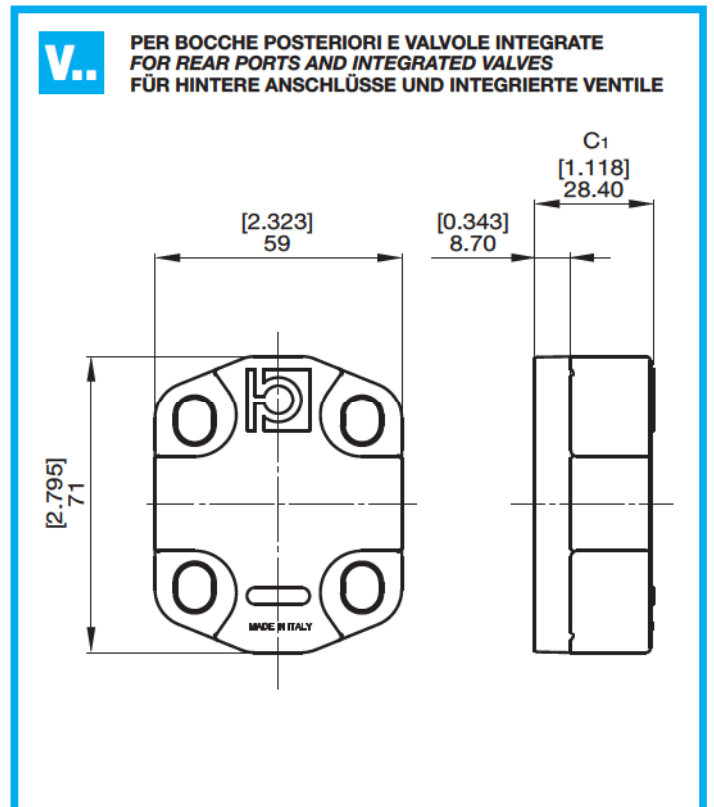
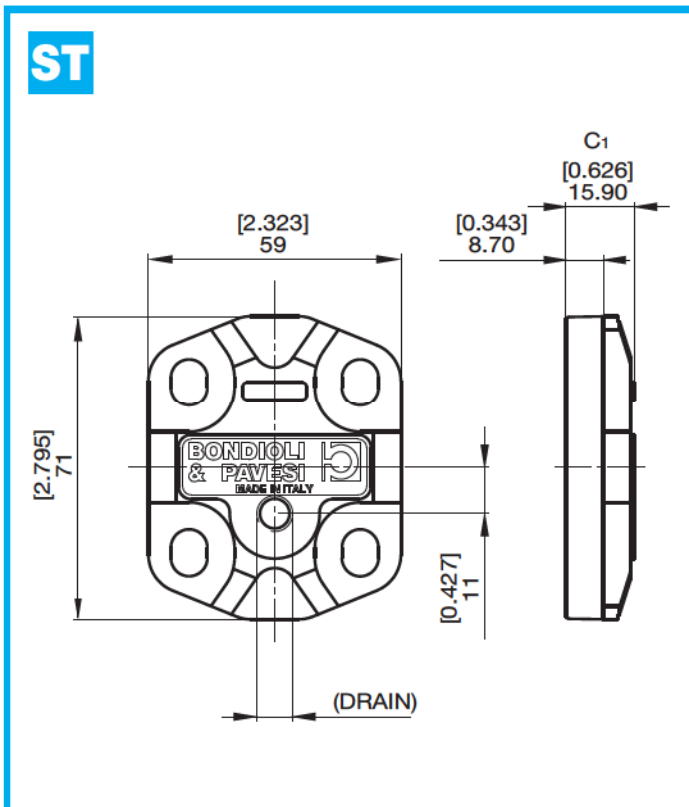
**HPL..1**

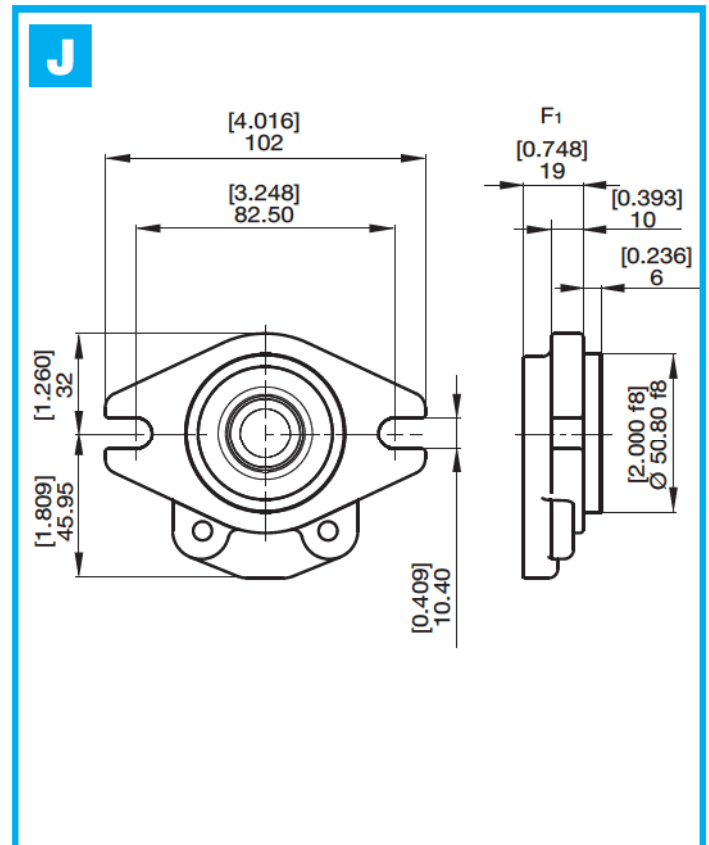
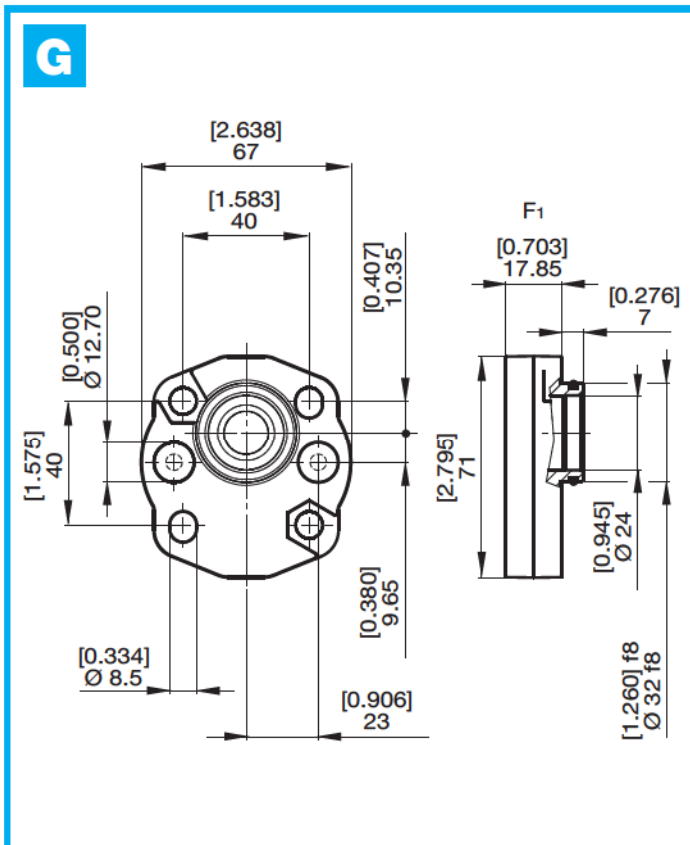
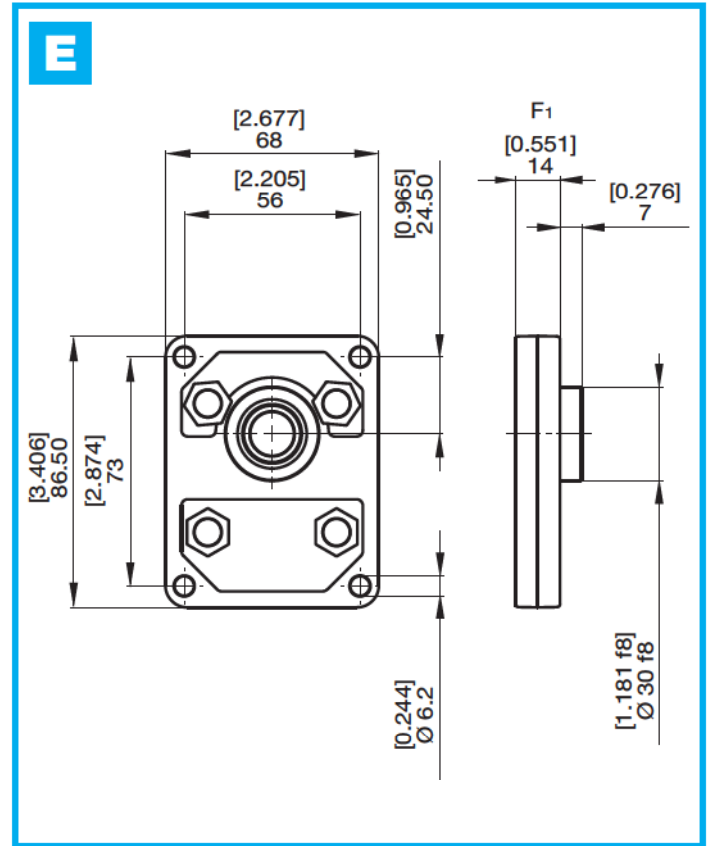
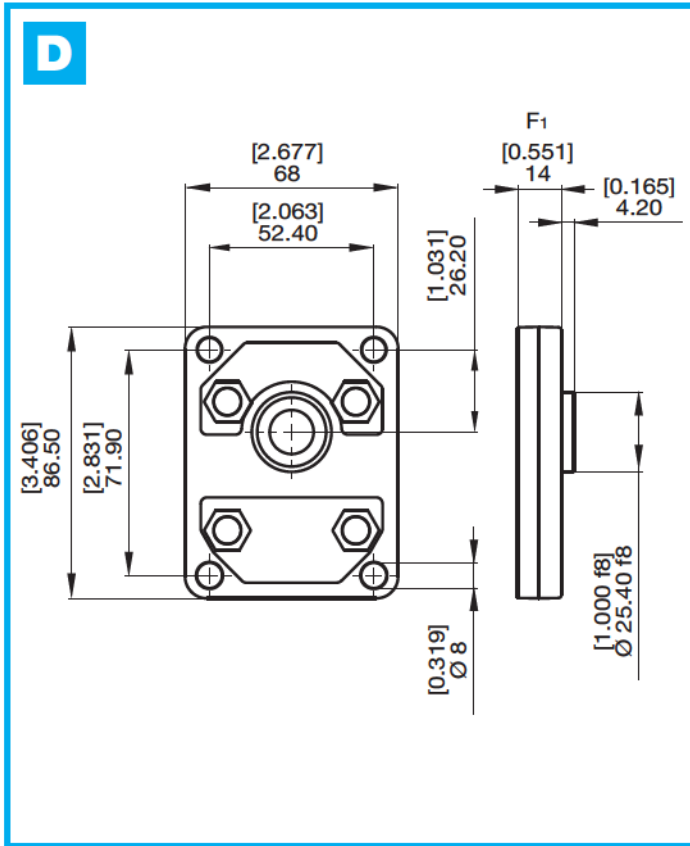


**DIMENSIONI  
SIZE  
ABMESSUNGEN**

GRUPPO GROUP BAUREIHE	TIPO TYPE TYP	A <sub>1</sub>		B <sub>1</sub>	
		mm	in	mm	in
1	14	38,70	1,524	19,4	0,762
	19	38,70	1,524	19,4	0,762
	24	38,70	1,524	19,4	0,762
	31	38,70	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**







**PROFILO ALBERI  
SPLINE SHAFTS  
WELLENPROFILE**

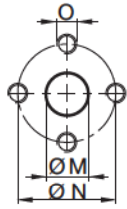
**HPL..1**

<p><b>D</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 25 N•m</p> <p>Coppia di serraggio = 8 N•m Tightening torque = 8 N•m Anzugsmoment = 8 N•m</p>	<p><b>E</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 15 N•m</p> <p>Coppia di serraggio = 10 N•m Tightening torque = 10 N•m Anzugsmoment = 10 N•m</p>
<p><b>F</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 35 N•m</p>	<p><b>G</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 25 N•m</p> <p>Coppia di serraggio = 8 N•m Tightening torque = 8 N•m Anzugsmoment = 8 N•m</p>
<p><b>H</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 30 N•m</p>	<p><b>I</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 45 N•m</p>
<p><b>J</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 20 N•m</p>	<p><b>K</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 20 N•m</p>
<p><b>T</b> COPPIA MAX MAX TORQUE MAX DREHMOMENT 60 N•m</p> <p>Coppia di serraggio = 10 N•m Tightening torque = 10 N•m Anzugsmoment = 10 N•m</p>	

**BOCCHIE  
PORTS  
ANSCHLÜSSE**

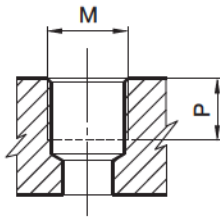
**HPL..1**

**E** LATERALE  
LATERAL  
SEITLICH



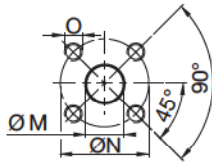
TIPO TYPE TYP	M		N		O	
	mm	in	mm	in		Nm
<b>E2</b>	13	0,51	26	1,02	M5	6
<b>E3</b>	13	0,51	30	1,18	M6	10

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



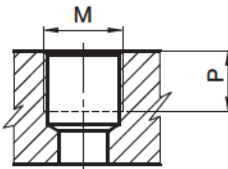
TIPO TYPE TYP	M		P	
		Nm	mm	in
<b>* G2</b>	1/4" GAS BSPP	17	12	0,47
<b>G3</b>	3/8" GAS BSPP	38	12	0,47
<b>G4</b>	1/2" GAS BSPP	50	14,5	0,57
<b>T3</b>	3/8" GAS BSPP	38	12	0,47
<b>T4</b>	1/2" GAS BSPP	40	14,5	0,57

**X** LATERALE  
LATERAL  
SEITLICH



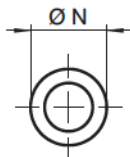
TIPO TYPE TYP	M		N		O	
	mm	in	mm	in		Nm
<b>X3</b>	13	0,51	30	1,18	M6	10

**M** LATERALE  
LATERAL  
SEITLICH



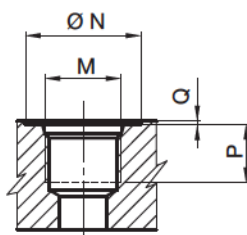
TIPO TYPE TYP	M		P	
		Nm	mm	in
<b>* M1</b>	M12x1,5	15	12	0,47
<b>M2</b>	M14x1,5	17	12	0,47
<b>M4</b>	M18x1,5	40	16	0,63

**H** ANTERIORE  
FRONT  
VORNE



TIPO TYPE TYP	FRONTALE SEAL FRONTAL	N	
		mm	in
<b>H1</b>	OR 9,25 x 1,78	12,7	0,50

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



TIPO TYPE TYP	DIMENSIONE SIZE GRÖSSE	N		P		Q		M	
		mm	in	mm	in	mm	in		Nm
<b>* U2</b>	1/4"	21	0,83	12	0,47	0,3	0,01	7/16-20 UNF	17
<b>U3</b>	3/8"	25	0,98	13	0,51	0,3	0,01	9/16-18 UNF	25
<b>U4</b>	1/2"	30	1,18	15	0,59	0,3	0,01	3/4-16 UNF	47
<b>C3</b>	3/8"	25	0,98	13	0,51	0,3	0,01	9/16-18 UNF	25
<b>C4</b>	1/2"	30	1,18	15	0,59	0,3	0,01	3/4-16 UNF	47

\* Drenaggio

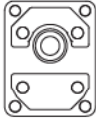
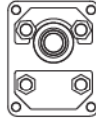









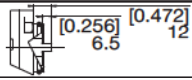










\* Drain Port

\* Lecköl



**COMBINAZIONI  
COMBINATIONS  
KOMBINATIONEN**

**HPL..1**

ESTREMITÀ ALBERO SHAFT PROFIL WELLENENDE		FLANGE FLANGE FLANSCH			
		<b>D</b> 	<b>E</b> 	<b>G</b> 	<b>J</b> 
<b>D</b> 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<b>E</b> 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<b>F</b> 				<input checked="" type="checkbox"/>	
<b>G</b> 			<input checked="" type="checkbox"/>		
<b>H</b> 	<input checked="" type="checkbox"/>				
<b>I</b> 				<input checked="" type="checkbox"/>	
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<b>K</b> 			<input checked="" type="checkbox"/>		
<b>T</b> 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<b>BOCCHIE PORTS ANSCHLÜSSE</b>					
<b>E</b> 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
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<b>X</b> 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
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<b>H</b> 			<input checked="" type="checkbox"/>		
<b>U</b> 				<input checked="" type="checkbox"/>	
<b>C</b> 				<input checked="" type="checkbox"/>	

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**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**  
**PRODUKT**

**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**

**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  
**D** - Oraria/destra  
**H** - Bidirezionale drenaggio interno  
**B** - Bidirezionale drenaggio esterno posteriore

**S** - Counterclockwise  
**D** - Clockwise  
**H** - Reversible ind drain.  
**B** - Reversible rear. drain. pont.

**S** - Linkslauf  
**D** - Rechtslauf  
**H** - reversibel, Lecköl intern, Anschluß seitlich  
**B** - reversibel, Lecköl extern, Anschluß hinten

**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 wih OR  
**J** - SAE AA

**D** - EU-Norm.D 25,4  
**E** - EU-Norm.D 30  
**G** - DIN-Norm.(mit O.R. Dichtung)  
**J** - SAE AA

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

**COPERCHI - COVERS - DECKEL**

**ST** - Standard  
**V..** - Con valvole  
(Vedi sez. valvole)  
*With valves*  
(See valves section)  
Mit Ventilen  
(siehe Abschnitt Ventile)

**GUARNIZIONI - SEALS - DICHTUNGEN**

**B** - NBR  
**R** - NBR alte pres. (25 bar)  
*For high pres. (25 bar)*  
Hochdruck (25 bar)  
**V** - Viton  
**W** - Viton alte pres. (25 bar)  
*For high pres. (25 bar)*  
Hochdruck (25 bar)

**BOCCHIE STD - STANDARD PORT - STANDARD ANSCHLÜSSE**  
**CILINDRATA - DISPLACEMENT - FÖRDER-/SCHLUCKVOLUMEN**

1,4.....4,8			6.....8			1,4.....4,8			6.....8		
Pompe - Pumps	Pumpen IN/OUT	DRAIN	Pompe - Pumps	Pumpen IN/OUT	DRAIN	Pompe - Pumps	Pumpen IN/OUT	DRAIN	Pompe - Pumps	Pumpen IN/OUT	DRAIN
E3	E3	M1	E3	E3	M1	U3	U3	U4	U4	U2	
G3	G3	G2	G4	G4	G2	T3	H1	T3	H1	-	
X3	X3	M1	X3	X3	M1	T3	T3	T4	T3	G2	
M4	M2	M1	M4	M2	M1	C3	C3	C4	C3	U2	

**MOTORI - MOTORS - MOTOREN OUT/IN**  
**MOTORI BIDIR. IN=OUT - REVERS. MOTORS IN=OUT -**  
**BIDIREK.MOTOREN IN=OUT**

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

**D** - Conico (1:8)  
**E** - Cilindrico europeo  
**F** - Cilindrico SAE "AA"  
**G** - Conico (1:5)  
**H** - Scanalato 12x9  
**I** - Scanalato SAE "AA"  
**J** - Dente frontale sporgente  
**K** - Dente frontale  
**T** - Conico high torque (1:8)

**D** - Tapered (1:8)  
**E** - European parallel shaft  
**F** - SAE "AA" parallel shaft  
**G** - Tapered (1:5)  
**H** - Splined 12x9  
**I** - SAE "AA" splined  
**J** - Front tooth  
**K** - Tang drive  
**T** - Tapered high torque (1:8)

**D** - Kegel (1:8)  
**E** - cilindrisch (E-norm)  
**F** - zylindrisch SAE "AA"  
**G** - Kegel (1:5)  
**H** - Keilwelle 12x9  
**I** - Keilwelle SAE "AA"  
**J** - Vorstehendes Kreuzprofil  
**K** - Kreuzprofil  
**T** - verstärkter Kegel (1:8)