POMPE A PISTONI ASSIALI PER CIRCUITO CHIUSO A CILINDRATA VARIABILE

VARIABLE DISPLACEMENT CLOSED CIRCUIT AXIAL PISTON PUMPS

AXIALKOLBENVERSTELLPUMPEN FÜR DEN GESCHLOSSENEN KREISLAUF

M4 PV
21•28•37

398SCP0083A00

M4 PV

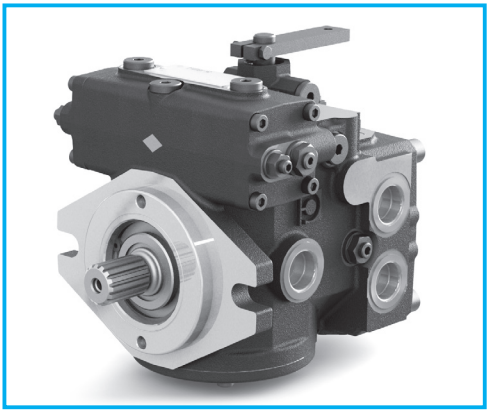
POMPE A PISTONI ASSIALI A CILINDRATA VARIABILE
VARIABLE DISPLACEMENT AXIAL PISTON PUMPS
AXIALKOLBENVERSTELLPUMPEN

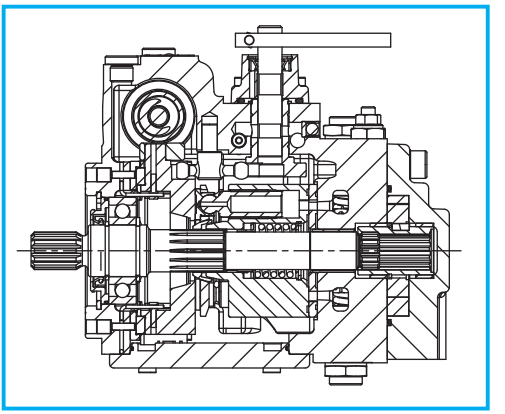
Le pompe a pistoni assiali serie M4PV sono stati concepite per operare in circuito chiuso per impieghi a media pressione.
I vari sistemi di comando disponibili le rendono facilmente adattabili alle esigenze applicative sia per il settore industriale che per quello del mobile in generale
Lo sviluppo di gruppi rotanti appositamente concepiti unito ad uno studio accurato delle sezioni di passaggio dell'olio, consentono a queste pompe di raggiungere elevate velocità di rotazione, come quelle consentite dai moderni motori diesel, garantendo una elevata affidabilità per pressioni di funzionamento fino a 250 bar continui (350 bar di picco)
Le pompe possono essere composte in versione tandem, utilizzando le opportune predisposizioni disponibili a richiesta.

M4PV series axial piston pumps have been designed to work in a closed circuit. Control systems actually available are making easy to use these pumps in any application for industrial and mobile field. Development of rotating groups, especially designed, united to an accurate study of oil passage sections, allow high speed rotation, like required by modern diesel engines, giving extreme reliability for working continuous pressure until 250 bar and working peak pressure until 350 bar.
It is possible to couple tandem versions, by means of coupling flanges optionally available.

Die Axialkolbenpumpen der Serie M4PV wurden für den Betrieb im geschlossenen Kreislauf konzipiert.
Die lieferbaren unterschiedlichen Steuerungssysteme eignen sich sowohl für stationäre als auch für mobile Anwendungen im Allgemeinen.
Speziell entwickelte Zylinderblöcke mit optimalen Saugverhältnissen erlauben den Einsatz bei hohen Pumpendrehzahlen, wie von modernen Antriebsaggregaten gefordert. Dabei ist ein kontinuierlicher Arbeitsdruck von bis zu 250 Bar (Spitzenwert 350 Bar) gewährleistet.
Die Pumpen können in der Tandemversion geliefert werden, wobei die auf Wunsch erhältichen Flanschverbindungen angewendet werden.

M4 PV 21•28•37





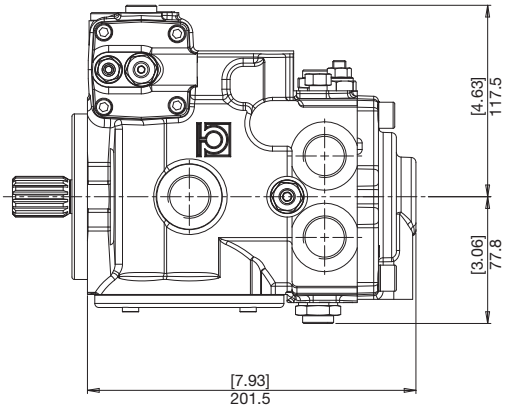
DATI TECNICI
TECHNICAL DATA
TECHNISCHE MERKMALE

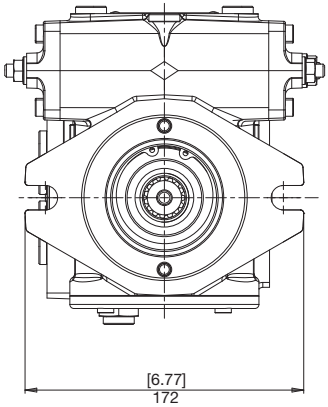
GRUPPO *GROUP* BAUREIHE	CILINDRATA TEORICA *NOMINAL DISPLACEMENT* FÖRDERVOLUMEN (TM)		OSCILLANTE *SWASHPLATE* SCHWENKWINKEL	PRESSIONE *PRESSURE* DRUCK						VELOCITÀ DI ROTAZIONE *SPEED* DREHZAHL		MASSA *WEIGHT* GEWICHT	
				CONTINUA *CONTINUOS* DAUER		INTERMITTENTE *INTERMITTENT* INTERMITTIERENDER		PICCO *PEAK* SPITZEN		MAX	MIN		
	cm³	in³	°	bar	psi	bar	psi	bar	psi	min⁻¹	min⁻¹	kg	lbs
M4PV	21	1,28	18	250	3625	300	4350	350	5075	3600	500	20	44,00
	28	1,71	18	250	3625	300	4350	350	5075	3600	500	20	44,00
	37	2,26	18	250	3625	300	4350	350	5075	3400	500	21	46,20

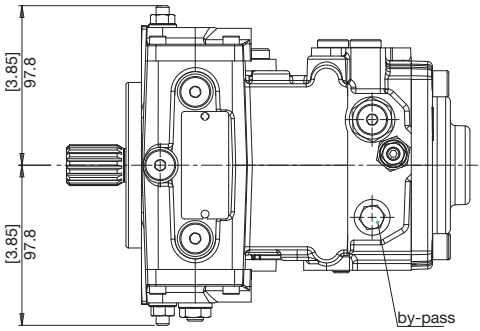
POMPA DI ALIMENTAZIONE ***BOOST PUMP*** **SPEISEPUMPE**

TIPO *TYPE* TYP	CILINDRATA STANDARD POMPA DI ALIMENTAZIONE BOOST PUMP STANDARD DISPLACEMENT FORDERVOLUMEN STANDARD SPEISEPUMPE		CILINDRATA OPZIONALE *OPTIONAL DISPLACEMENT* OPTIONALES FÖRDERVOLUMEN		PRESSIONE *PRESSURE* DRUCK	
	cm³	in³	cm³	in³	bar	psi
M4PV21	9	0,55	12	0,74	22	319
M4PV28	9	0,55	12	0,74	22	319
M4PV37	12	0,74	---	---	22	319

DIMENSIONI
SIZE
ABMESSUNGEN



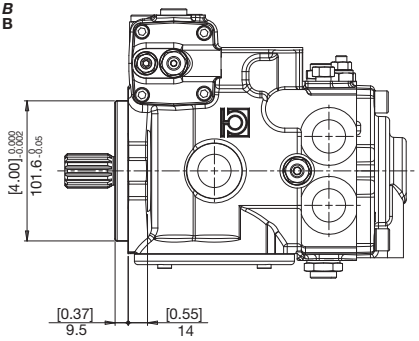


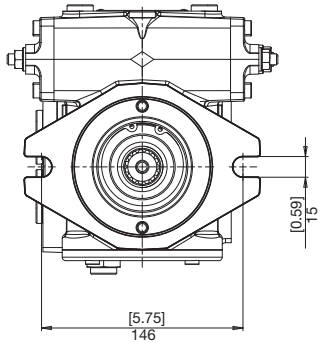


FLANGE
FLANGES
FLANSCHE

M4 PV

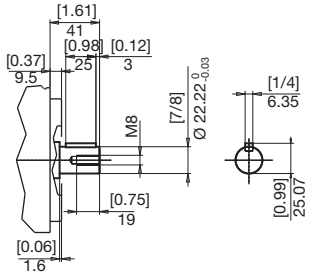
B SAE B
SAE B
SAE B



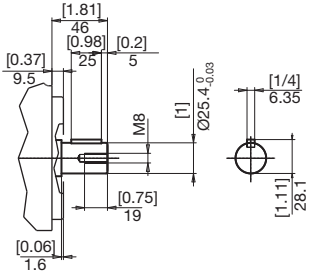


ESTREMITÀ ALBERI
SPLINE SHAFTS
WELLENPROFILE

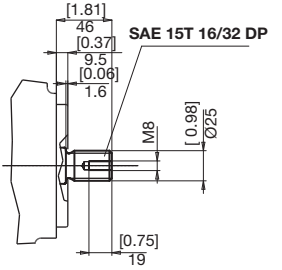
1 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT
210 N•m



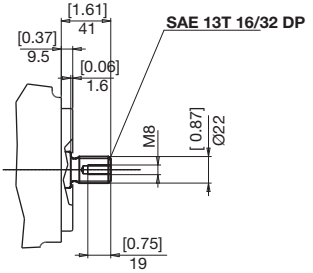
2 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT
285 N•m



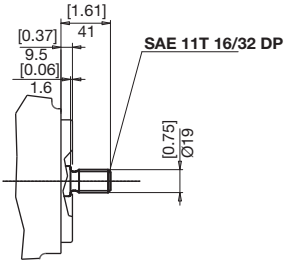
3 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT
460 N•m



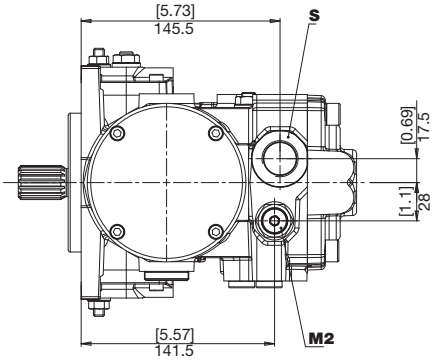
6 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT
310 N•m

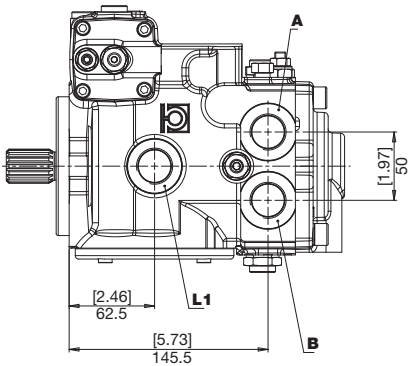


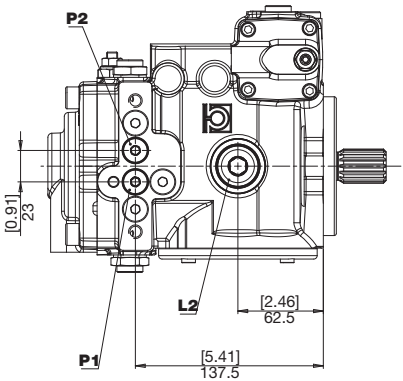
7 COPPIA MAX
MAX TORQUE
MAX DREHMOMENT
160 N•m

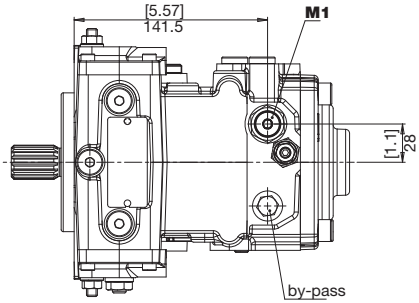


BOCCHE
PORTS
ANSCHLÜSSE





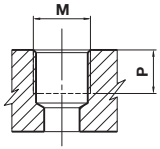




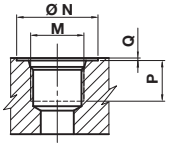
A **B**	Utilizzo *Use* Verbraucher	**P1** **P2**	Presa pressione *Pressure intake* Druckanschluss
L1 **L2**	Drenaggio *Drain* Leckölanschluss	**M1** **M2**	Presa manometro *Manometer intake* Manometeranschluss
S	Aspirazione *Feeding pump inlet* Ansaugöffnung		

BOCCHE
PORTS
ANSCHLÜSSE

M4 PV



TIPO *TYPE* TYP	M		P	
		Nm	mm	in
G2	Port ISO 1179-1 - G 1/4	17	12	0,47
G6	Port ISO 1179-1 - G 3/4	90	15	0,59



TIPO *TYPE* TYP	DIMENSIONE *SIZE* GRÖSSE	N		P		Q		M	
		mm	in	mm	in	mm	in		Nm
U2	1/4”	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U6	3/4”	42	1,65	18	0,70	0,3	0,01	Port ISO 11926-1-1 1/16-12	90

COMBINAZIONI
COMBINATIONS
KOMBINATIONEN

TIPO *TYPE* TYP	S ASPIRAZIONE *INLET* SAUGSEITE	A - B MANDATA *OUTLET* AUSGANG	L1 - L2 DRENAGGIO *DRAIN* LECKÖLANSCHLUSS	a - b PILOTAGGIO *PILOT* STEUERDRUCK	P1 - P2 PRESE PRESSIONE *PRESSURE INTAKE* DRUCKANSCHLUSS	M1 - M2 PRESE MANOMETRO *MANOMETER INTAKE* MANOMETER-ANSCHLUSS
R	G6	G6	G6	G2	G2	G2
U	U6	U6	U6	U2	G2	U2

COMANDI
CONTROLS
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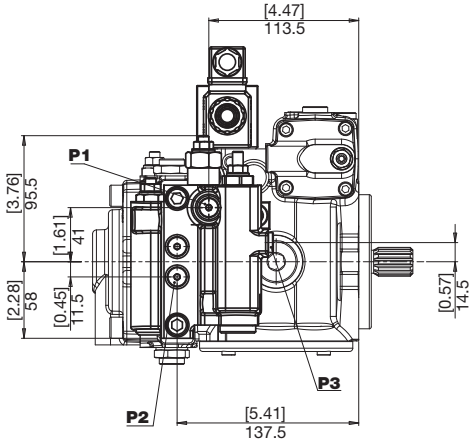
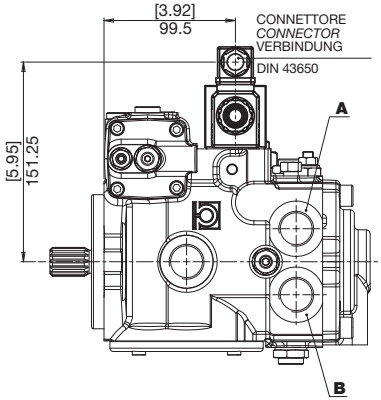
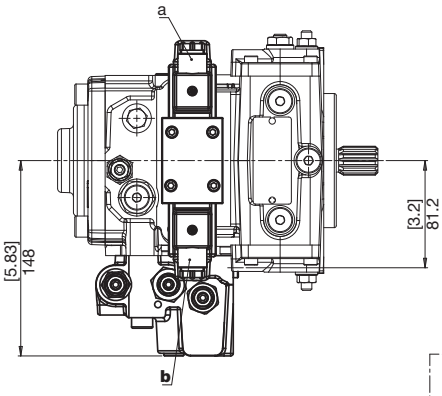
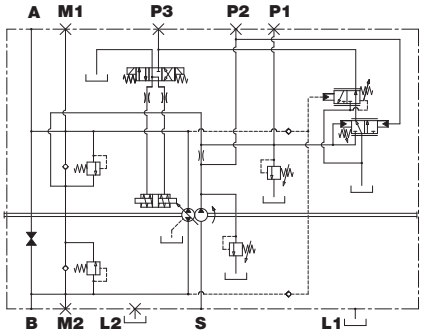
A AUTOMOTIVE
AUTOMOTIVE
AUTOMOTIVE

12 V





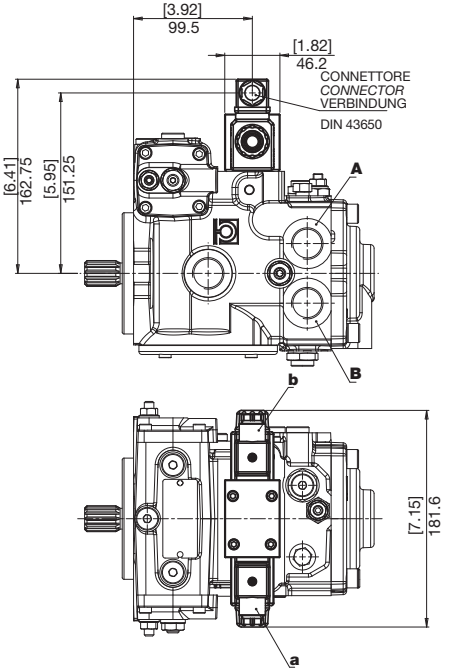




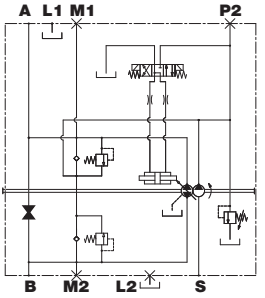
ROTAZIONE *DIRECTION* DREHRICHTUNG	SOLENOIDE IN TENSIONE *EXCITED SOLENOID* SOLENOID UNTER SPANNUNG	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A

E F — 12 V 24 V

ELETTRICO ON/OFF CENTRO CHIUSO
ELECTRICAL ON/OFF, CLOSED CENTER
ELEKTRISCH ON/OFF, GESCHLOSSENES VENTIL

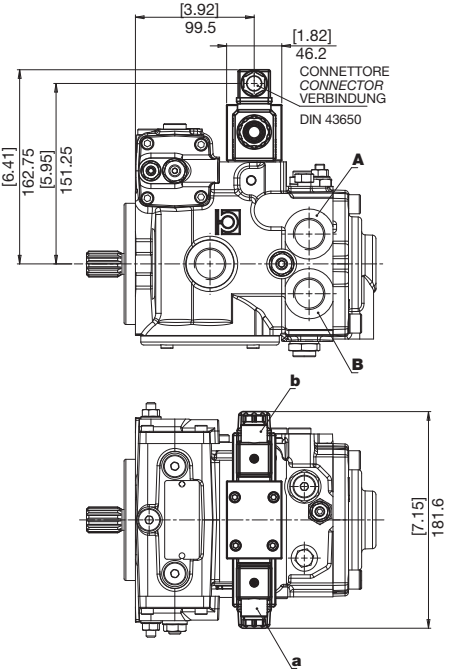


ROTAZIONE *DIRECTION* DREHRICHTUNG	SOLENOIDE IN TENSIONE *EXCITED SOLENOID* SOLENOID UNTER SPANNUNG	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A

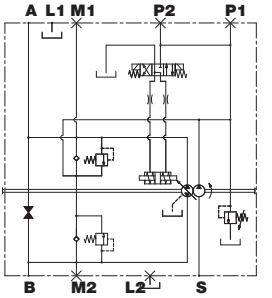


N Q — 12 V 24 V

ELETTRICO ON/OFF CENTRO APERTO
ELECTRICAL ON/OFF, OPEN CENTER
ELEKTRISCH ON/OFF, VENTIL GEÖFFNET

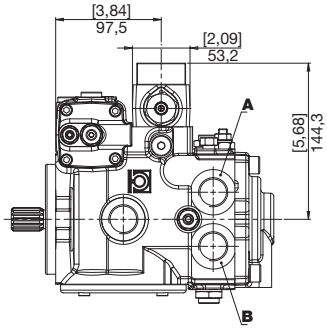


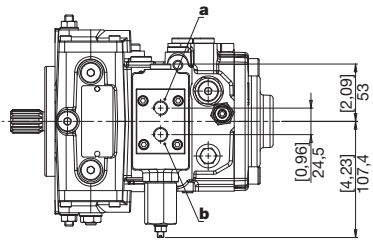
ROTAZIONE *DIRECTION* DREHRICHTUNG	SOLENOIDE IN TENSIONE *EXCITED SOLENOID* SOLENOID UNTER SPANNUNG	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A

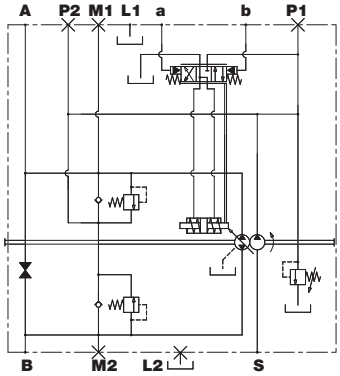


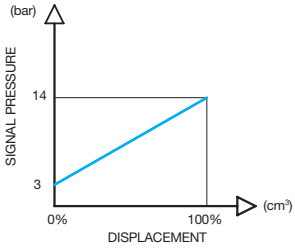
COMANDI
CONTROLS
STEUERUNGEN

G IDRAULICO RETROAZIONATO
HYDRAULIC, FEEDBACK
HYDRAULISCH, RÜCKGEFÜHRT



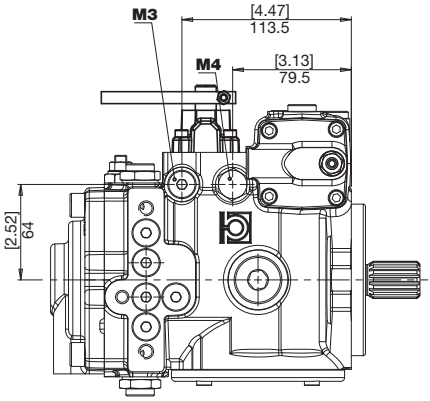


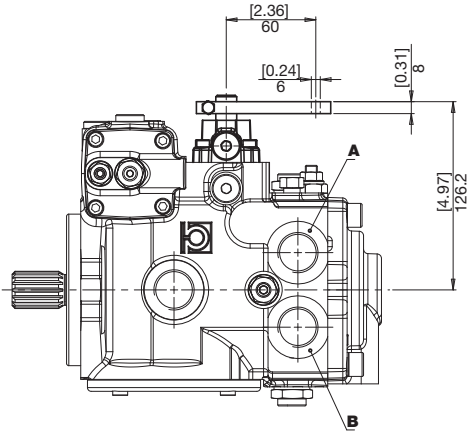


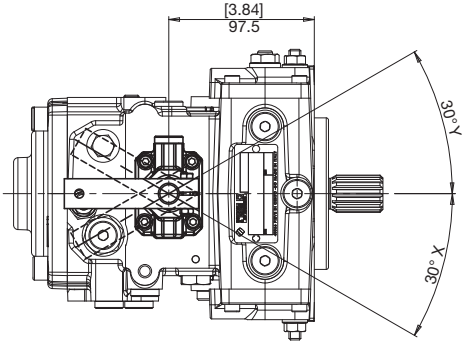


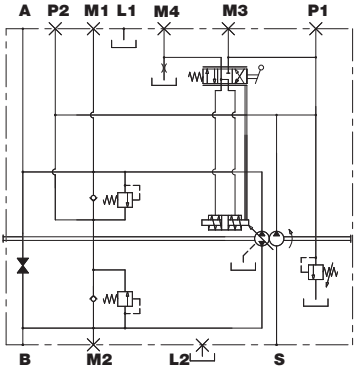
ROTAZIONE *DIRECTION* DREHRICHTUNG	PILOTAGGIO *PILOT PRESSURE* STEUERDRUCK	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	B
	b	A
SINISTRA *LEFT* LINKS	a	A
	b	B

I SERVOCOMANDO A LEVA
LEVER-OPERATED SERVO-CONTROL
HYDRAULISCHE HEBEL-SERVOSTEUERUNG



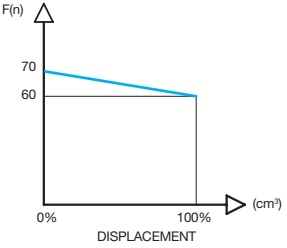






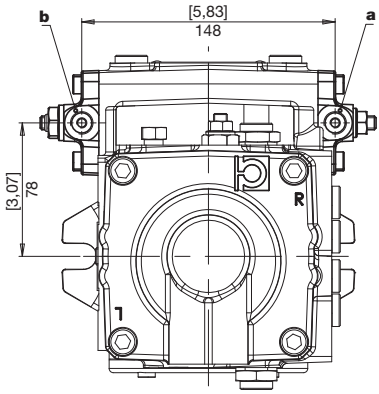
ROTAZIONE *DIRECTION* DREHRICHTUNG	LEVA COMANDO *CONTROL LEVER* STEUERHEBEL	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	Y	B
	X	A
SINISTRA *LEFT* LINKS	Y	A
	X	B

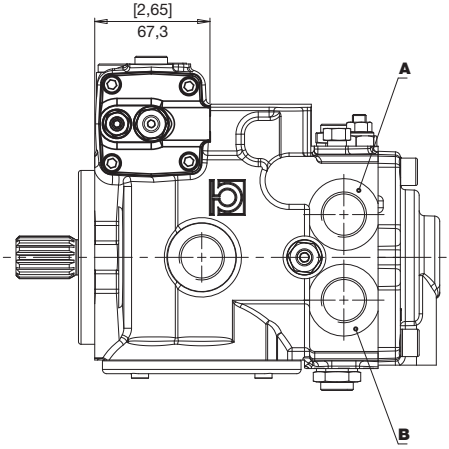
M3	Strozzatore in alimentazione *Intake restrictor* Eingangsdrossel	**M4**	Strozzatore in scarico *Outlet restrictor* Ausgangsdrossel

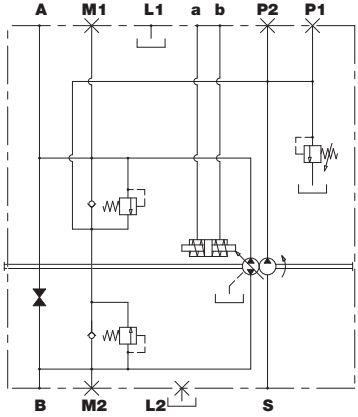


COMANDI
CONTROLS
STEUERUNGEN

K IDRAULICO A DISTANZA
REMOTE HYDRAULIC
HYDRAULISCHE FERNSTEUERUNG

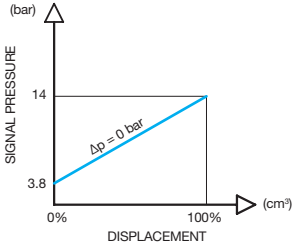






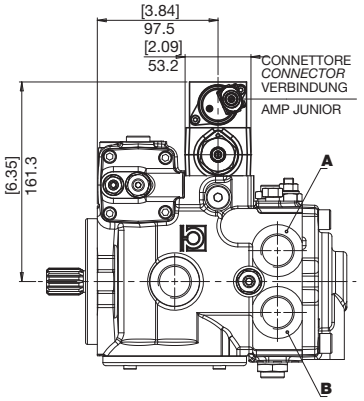
ROTAZIONE *DIRECTION* DREHRICHTUNG	PILOTAGGIO *PILOT PRESSURE* STEUERDRUCK	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A

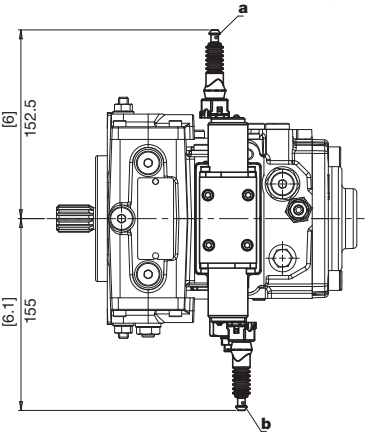
a Pressione di pilotaggio
Pilot Pressure
b Steuerdruck



O V
12 V 24 V

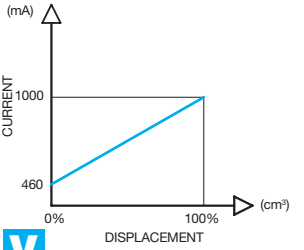
ELETTRICO PROPORZIONALE RETROAZIONATO
ELECTRICAL PROPORTIONAL FEEDBACK CONTROL
ELEKTRISCH PROPORTIONALSTEUERUNG RÜCHGEFÜHRT



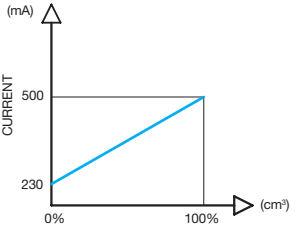


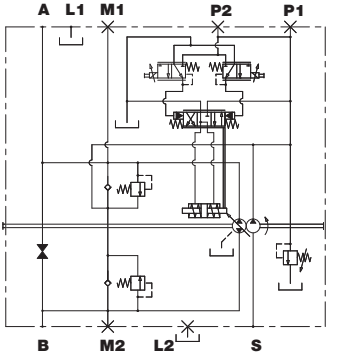
	O	V	
Tensione nominale *Rated voltage* Nennspannung	12	24	V
Corrente min (I1) *Min. current* Mindeststrom	300	180	mA
Corrente max (I2) *Max. current* Maximaler Strom	1500	850	mA
Frequenza PWM *PWM Frequency* Frequenz PWM	100	100	Hz

O



V



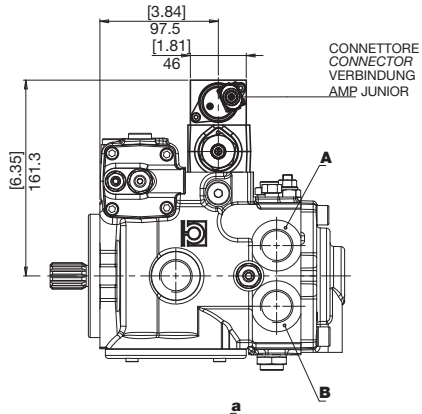


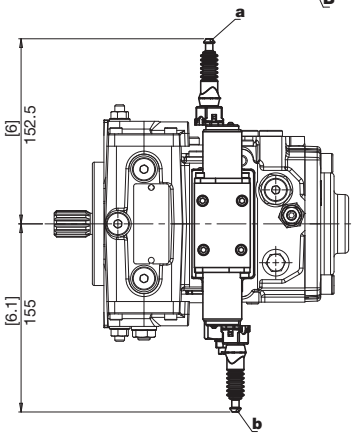
ROTAZIONE *DIRECTION* DREHRICHTUNG	SOLENOIDE IN TENSIONE *EXCITED SOLENOID* SOLENOID UNTER SPANNUNG	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	B
	b	A
SINISTRA *LEFT* LINKS	a	A
	b	B

COMANDI
CONTROLS
STEUERUNGEN

S **W**
12 V 24 V

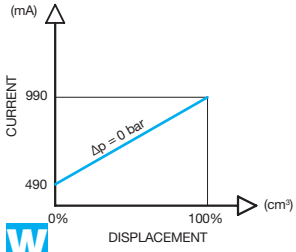
ELETTRICO PROPORZIONALE DIRETTO
ELECTRICAL PROPORTIONAL CONTROL
ELEKTRISCH PROPORTIONALSTEUERUNG



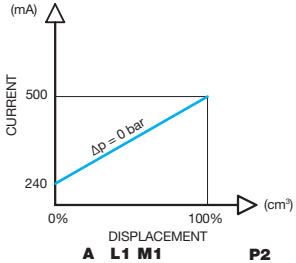


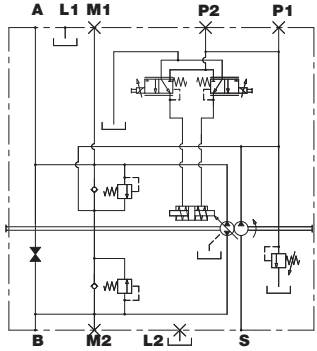
	S	W	
Tensione nominale *Rated voltage* Nennspannung	12	24	V
Corrente min (I1) *Min. current* Mindeststrom	300	180	mA
Corrente max (I2) *Max. current* Maximaler Strom	1500	850	mA
Frequenza PWM *PWM Frequency* Frequenz PWM	100	100	Hz

S



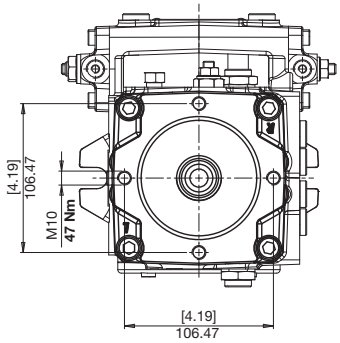
W



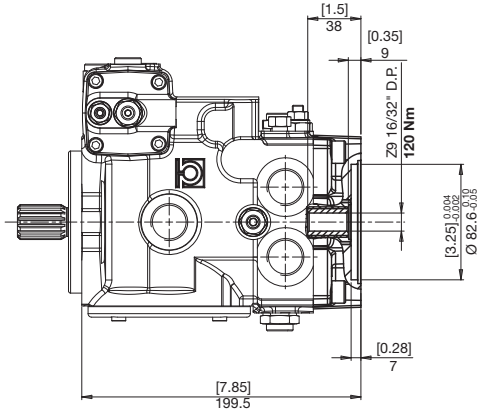


ROTAZIONE *DIRECTION* DREHRICHTUNG	SOLENOIDE IN TENSIONE *EXCITED SOLENOID* SOLENOID UNTER SPANNUNG	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A

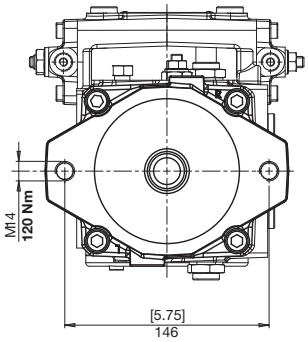
2 SAE A CON POMPA SOVRALIMENTAZIONE
SAE A WITH BOOST PUMP
SAE A MIT SPEISEPUMPE



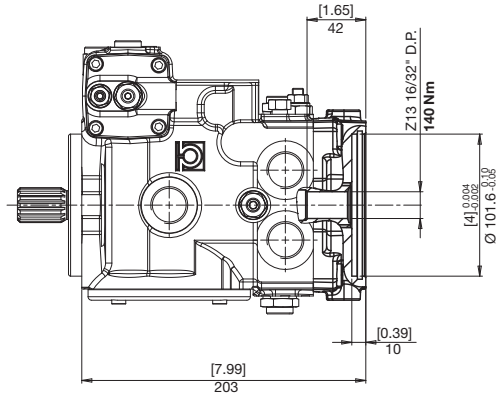
5 SAE A SENZA POMPA SOVRALIMENTAZIONE
SAE A WITHOUT BOOST PUMP
SAE A OHNE SPEISEPUMPE



3 SAE B CON POMPA SOVRALIMENTAZIONE
SAE B WITH BOOST PUMP
SAE B MIT SPEISEPUMPE



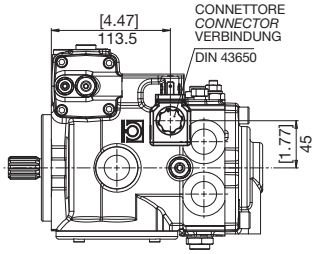
6 SAE B SENZA POMPA SOVRALIMENTAZIONE
SAE B WITHOUT BOOST PUMP
SAE B OHNE SPEISEPUMPE

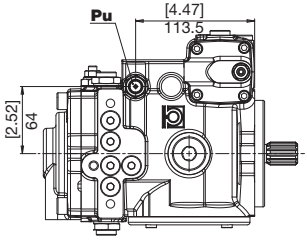


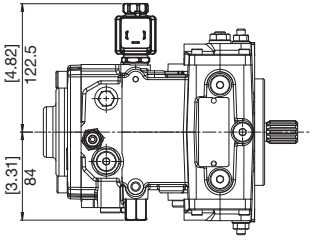
ACCESSORI
ACCESSORIES
ZUBEHÖR

E — SICUREZZA OPERATORE ASSENTE
NO OPERATOR SAFETY
SICHERUNG KEIN ARBEITER

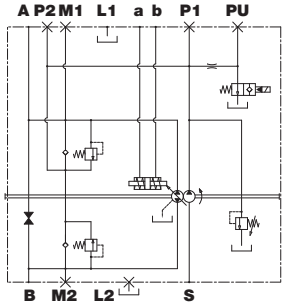
12 V



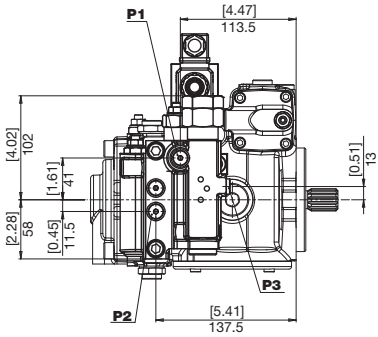


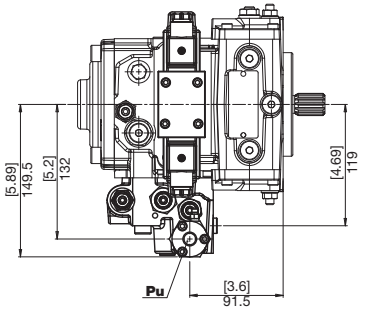


PU	Pilotaggio sblocco freno (1/4" GAS) *Brake opening pressure (1/4" GAS)* Bremse Öffnung Druck (1/4" GAS)

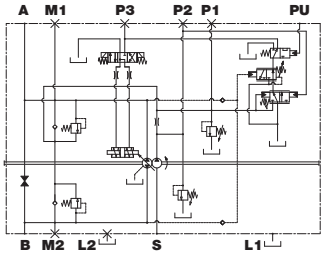


H — INCHING IDRAULICO (SOLO COMANDO A)
HYDRAULIC INCHING ("A" CONTROL)
HYDRAULISCHE INCH-VENTIL (NUR STEUERUNG A)

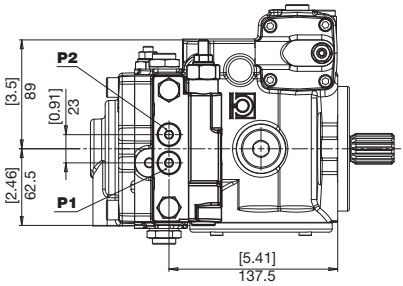


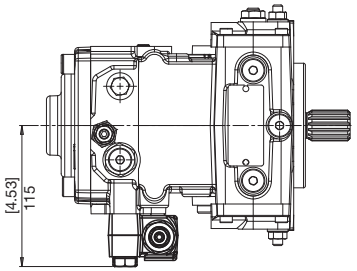


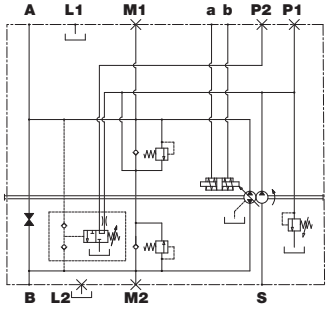
PU	Pilotaggio sblocco freno (1/4" GAS) *Brake opening pressure (1/4" GAS)* Bremse Öffnung Druck (1/4" GAS)



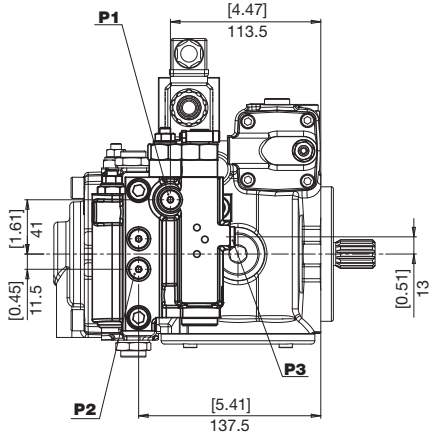
J TAGLIO DI PRESSIONE
CUT-OFF
DRUCKABSCHNEIDUNG

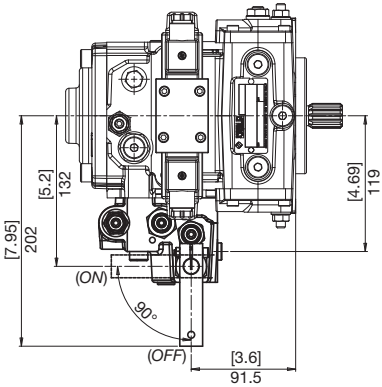


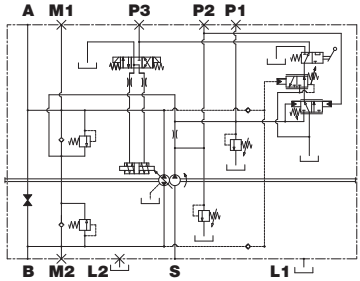




M INCHING MECCANICO (SOLO COMANDO A)
MECHANIC INCHING CONTROL ("A" CONTROL)
MECHANISCHES INCH-VENTIL (NUR STEUERUNG A)

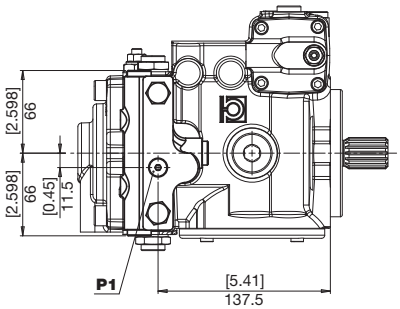


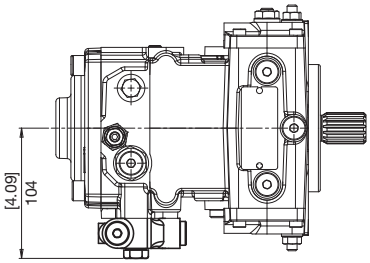




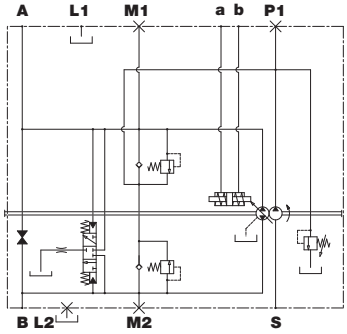
ACCESSORI
ACCESSORIES
ZUBEHÖR

V VALVOLA DI FLUSSAGGIO (5-7 l/min)
FLUSHING AND BOOST VALVE (5-7 l/min)
SPUL-UND SPEISEDRUKVENTIL (5-7 l/min)

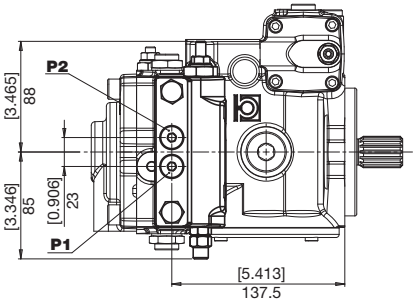


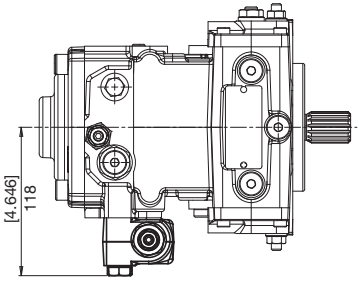


P1	Presa pressione (1/8" GAS) *Pressure intake (1/8" GAS)* Druckanschluss (1/8" GAS)

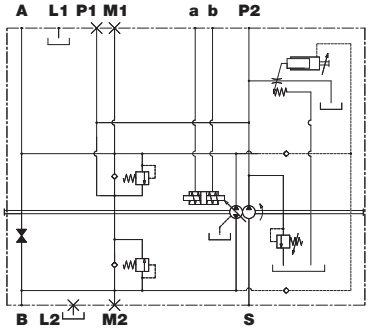


W LIMITATORE DI POTENZA
POWER LIMITER
LEISTUNGSBEGRENZER

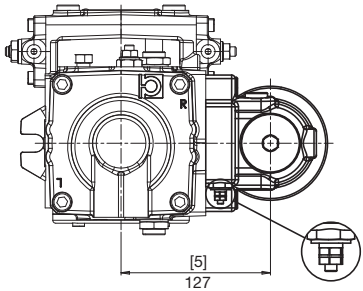




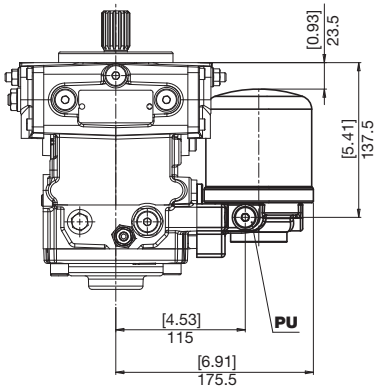
ROTAZIONE *DIRECTION* DREHRICHTUNG	PILOTAGGIO *PILOT PRESSURE* STEUERDRUCK	MANDATA *OUTPUT* AUSGANG
DESTRA *RIGHT* RECHTS	a	A
	b	B
SINISTRA *LEFT* LINKS	a	B
	b	A



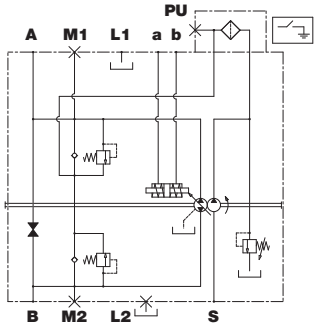
X FILTRO CON INDICATORE DI INTASAMENTO ELETTRICO
FILTER WITH ELECTRIC CLOGGING INDICATOR
FILTER MIT ELEKTRISCHEM VERSTOPFUNGSANZEIGER



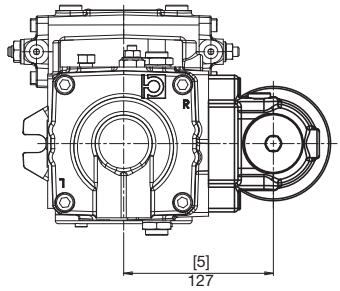
INDICATORE DIFFERENZIALE ELETTRICO 30VDC - 0,2 A max
ELECTRIC DIFFERENTIAL INDICATOR 30VDC - 0,2 A max
ELEKTRISCHER DIFFERENZDRUCKANZEIGER 30VDC - 0,2 A max

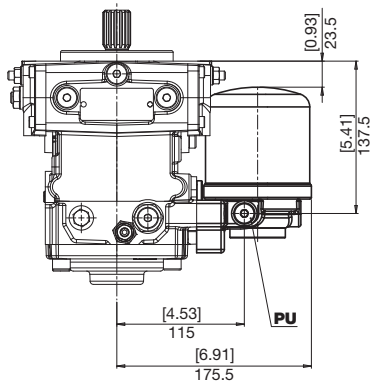


PU	Presa olio filtrato (1/4" GAS) *Filtered oil intake (1/4" GAS)* Anschluss filtriertes Öl (1/4" GAS)

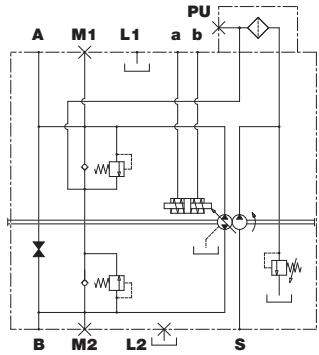


Y FILTRO SENZA INDICATORE DI INTASAMENTO
FILTER WITHOUT ELECTRIC CLOGGING INDICATOR
FILTER OHNE ELEKTRISCHEN VERSTOPFUNGSANZEIGER





PU	Presa olio filtrato (1/4" GAS) *Filtered oil intake (1/4" GAS)* Anschluss filtriertes Öl (1/4" GAS)



ISTRUZIONI PER L'ORDINAZIONE
ORDERING INSTRUCTIONS
BESTELLANLEITUNG

M4PV 28 28 I 1 E A R 6 B Y ...

SERIE
SERIES
SERIE

CILINDRATE NOMINALI
RATED DISPLACEMENT
NENNFORDERVOLUMEN
21 - 28 - 37

CILINDRATA
DISPLACEMENT
FÖRDERVOLUMEN
21 - 28 - 37

COMANDO ***CONTROL*** **STEUERUNG**

A = AUTOMOTIVE
E-F = Elettrico (12 V-24V)
G = Servocomando idraulico retroazionato
I = Servocomando a leva
K = Servocomando idraulico a distanza
N-Q = Elettrico on/off (12 V)
O-V = Elettronico proporzionale retroazionato (12 V-24V)
S-W = Elettronico proporzionale (12 V-24V)

A *= AUTOMOTIVE control*
E-F *= Electric (12 V - 24V)*
G *= Hydraulic remote feedback*
I *= Lever-operated servo-control*
K *= Remote servo-control*
N-Q *= Electric on/off (12 V-24V)*
O-V*= Electronic proportional feedback (12 V-24V)*
S-W *= Electronic proportional (12 V-24V)*

A = Automotive
E-F = Elektrische (12 V-24V)
G = Hydraulik Fernsteuerung Rüchgeführt
I = Hydraulische Hebel-Servosteuerung
K = Fern-Servosteuerung
N = Elektrische on/off (12V)
Q = Elektrische on/off (24V)
O-V = Elektronische Proportional Rüchgeführt (12 V-24V)
S-W = Elektronische Proportional (12 V-24V)

PREDISPOSIZIONI ***VERSION*** **BAUART**

1 = nessuna con pompa di alimentazione
2 = SAE A con pompa di alimentazione
3 = SAE B 2 fori con pompa di alimentazione
4 = nessuna senza pompa di alimentazione
5 = SAE A senza pompa di alimentazione
6 = SAE B 2 fori senza pompa di alimentazione
S = pompa "SHORT" primaria con pompa di alimentazione
T = pompa "SHORT" primaria senza pompa di alimentazione
Y = pompa "SHORT" secondaria senza predisposizione
U = pompa "SHORT" secondaria con predisposizione SAE A
W = pompa "SHORT" secondaria con predisposizione SAE B

1 *= no special fittings with boost pump*
2 *= SAE A mounting with boost pump*
3 *= SAE B - 2 holes mounting with boost pump*
4 *= no special fittings, no boost pump*
5 *= SAE A mounting without boost pump*
6 *= SAE B - 2 holes mounting without boost pump*
S *= primary "SHORT" pump with boost pump*
T *= primary "SHORT" pump without boost pump*
Y *= secondary "SHORT" pump without special fitting*
U *= secondary "SHORT" pump with SAE A mounting*
W *= secondary "SHORT" pump with SAE B mounting*

1 = ohne Anschlußflansch mit Speisepumpe
2 = SAE A Anschlußflansch mit Speisepumpe
3 = SAE B Anschlußflansch, mit 2 Bohrungen, mit Speisepumpe
4 = ohne Anschlußflansch, ohne Speisepumpe
5 = SAE A Anschlußflansch ohne Speisepumpe
6 = SAE B Anschlußflansch, mit 2 Bohrungen, ohne Speisepumpe
S = Primärpumpe "SHORT" mit Speisepumpe
S = Primärpumpe "SHORT" ohne Speisepumpe
Y = Sekundärpumpe "SHORT" ohne Anschlußflansch
U = Sekundärpumpe "SHORT" mit SAE A Anschlußflansch
W = Sekundärpumpe "SHORT" mit SAE B Anschlußflansch

TARATURA VALVOLE
VALVE SETTING
VENTILE

B - 150 bar
D - 180 bar
E - 210 bar
G - 250 bar
I - 280 bar
L - 300 bar
O - 350 bar
P - 400 bar

TIPO DI OSCILLANTE
SWASHPLATE TYPE
SCHWENKSCHEIBENLAGERUNG

A = oscillante su rullini
B = oscillante su bronzine
A *= mounted on needle bearing*
B *= mounted on bronze bearings*
A = Rollengelagert
B = Bronze-Gleitgelagert

SENSO DI ROTAZIONE ***DIRECTION OF ROTATION***
DREHRICHTUNG

R = Destro / *Right* / Rechts
L = Sinistro / *Left* / Links

B = Valvola by-pass
B *= By-pass valve*
B = Bypass-Ventil

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

1 = cilindrico Ø 22.22 (7/8")
2 = cilindrico Ø25.4(1")
3 = scanalato maschio 16/32" d.p. Z 15 (Std)
6 = scanalato maschio 16/32" d.p. Z 13
7 = scanalato maschio 16/32" d.p. Z 11

1 *= Round shaft Δ 22.22 (7/8")*
2 *= Round shaft Ø25.4(1")*
3 *= Male splined shaft Z15 16/32" d.p. (Std)*
6 *= Male splined shaft Z 13 16/32" d.p*
7 *= Male splined shaft Z 11 16/32" d.p*

1 = Zylindrisch Δ 22.22 (7/8")
2 = Zylindrisch Ø25.4(1")
3 = Profilwelle Z 15-16/32" d.p. (Std)
6 = Profilwelle Z 13-16/32" d.p.
7 = Profilwelle Z 11-16/32" d.p.

ESECUZIONI SPECIALI
SPECIAL VERSIONS
SONDERBAUARTEN

ACCESSORI ***ACCESSORIES*** **ZUBEHÖR**

Omettere se non richiesto / *Omit if not required* / ggf. weglassen

0 = nessuna opzione
E = sicurezza "operatore assente"
H = inching idraulico (comandi "A")
J = cut-off
M = inching meccanico (comandi "A")
R = filettatura GAS
U = filettatura UNF
V = valvola di flussaggio
W = limitatore di potenza
Y = filtro su linea sovralimentazione
X = filtro su linea sovralimentazione con indicatore intasamento elettrico

0 *= no accessories*
E *= "no operator" safety*
H *= hydraulic inching ("A" control)*
J *= cut-off*
M *= mechanic inching ("A" control)*
R *= GAS threads*
U *= UNF threads*
V *= flushing and boost valve*
W *= power limiter*
Y *= filter on charge line*
X *= filter on charge line with electric clogging indicator*

0 = kein Zubehör
E = Sicherung "kein arbeiter"
H = Hydraulische Inch-Ventil ("A" steuerung)
J = Druckabschneidung
M = Mechanische Inch-Ventil ("A" steuerung)
R = GAS Gewinde
U = UNF Gewinde
V = Spul-und speisedrukventil
W = Leistungsbegrenzer
Y = Filter auf Speisedruckleitung
X = Filter auf Speisedruckleitung mit elektrischem Anzeiger

POMPA DOPPIA CON 2 POMPE DI SOVRALIMENTAZIONE
DOUBLE PUMP WITH 2 BOOST PUMPS
TANDEMPUMPE MIT 2 SPEISEPUMPEN

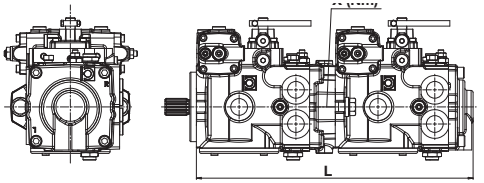
Il codice di ordinazione di una pompa multipla si ottiene sommando, come mostrato in esempio, i codici delle singole pompe (stadi) ricavati seguendo le regole di ordinazione delle pompe singole.

You build the ordering code of a multiple pump by summing the order code of the individual pumps, see our example.

Der Bestellschlüssel einer Mehrfachpumpe ergibt sich durch Summieren der Einzel-Bestellschlüssel, siehe Beispiel

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

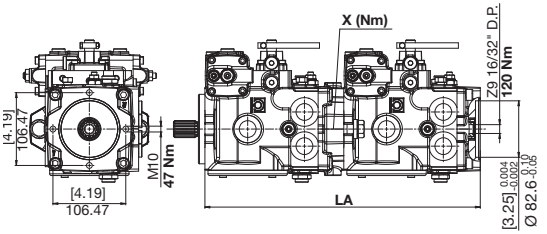
M4PV	28	28	I	3	25	A	R	3	B	R	M4PV	28	28	I	1	25	A	R	6	B	R



TIPO *TYPE* TYP	L		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	404,5	15,92	9	0,55	140
M4PV37	421	16,57	12	0,74	240

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

M4PV	28	28	I	3	25	A	R	3	B	R	M4PV	28	28	I	2	25	A	R	6	B	R

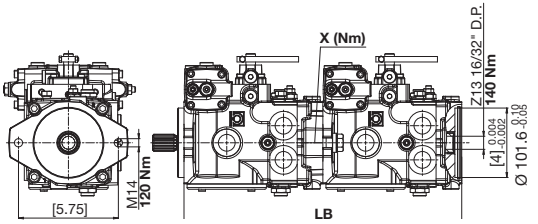


SAE A

TIPO *TYPE* TYP	LA		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	402,5	15,85	9	0,55	140
M4PV37	419	16,50	12	0,74	240

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

M4PV	28	28	I	3	25	A	R	3	B	R	M4PV	28	28	I	3	25	A	R	6	B	R



SAE B

TIPO *TYPE* TYP	LB		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	406	15,98	9	0,55	140
M4PV37	422,5	16,64	12	0,74	240

POMPA DOPPIA VERSIONE “SHORT”
DOUBLE PUMP “SHORT” VERSION
TANDEMPUMPE “SHORT” SONDERAUSRÜSTUNG

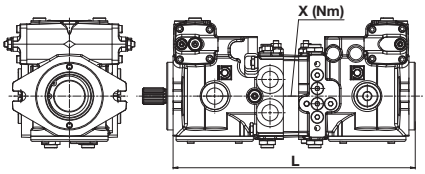
Il codice di ordinazione di una pompa multipla si ottiene sommando, come mostrato in esempio, i codici delle singole pompe (stadi) ricavati seguendo le regole di ordinazione delle pompe singole.

You build the ordering code of a multiple pump by summing the order code of the individual pumps, see our example.

Der Bestellschlüssel einer Mehrfachpumpe ergibt sich durch Summieren der Einzel-Bestellschlüssel, siehe Beispiel

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

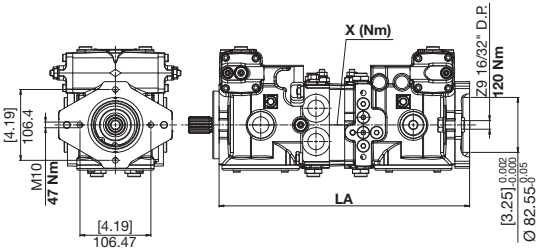
M4PV	28	28	K	S	25	A	R	3	B	R	M4PV	28	28	K	Y	25	A	R



TIPO *TYPE* TYP	L		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	361,2	14,22	12	0,74	140
M4PV37	363,2	14,23	14	0,86	240

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

M4PV	28	28	K	S	25	A	R	3	B	R	M4PV	28	28	K	U	25	A	R

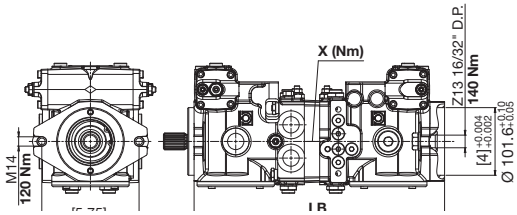


SAE A

TIPO *TYPE* TYP	LA		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	374	14,72	12	0,74	140
M4PV37	376	14,80	14	0,86	240

1° STADIO *STAGE* STUFE — 2° STADIO *STAGE* STUFE

M4PV	28	28	K	S	25	A	R	3	B	R	M4PV	28	28	K	W	25	A	R



SAE B

TIPO *TYPE* TYP	LB		POMPA DI ALIMENTAZIONE *BOOST PUMP* SPEISEPUMPE		X COPPIA *TORQUE* DREHMOMENT
	mm	in	cm³	in³	Nm
M4PV21-28	374	14,72	12	0,74	140
M4PV37	376	14,80	14	0,86	240