



**POMPE A PISTONI ASSIALI PER CIRCUITO
CHIUSO A CILINDRATA VARIABILE**

***VARIABLE DISPLACEMENT
CLOSED CIRCUIT AXIAL PISTON PUMPS***

**AXIALKOLBENVERSTELLPUMPEN
FÜR DEN GESCHLOSSENEN KREISLAUF**

HM PZA

398SCP0033A01

HM PZA

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

Le pompe a pistoni assiali serie HM PZA sono state concepite per operare in circuito chiuso.

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 300 bar di picco.

Le pompe possono essere composte in versione tandem, utilizzando le opportune predisposizioni disponibili a richiesta.

Axial piston pumps series HM PZA have been designed to operate in a closed circuit.

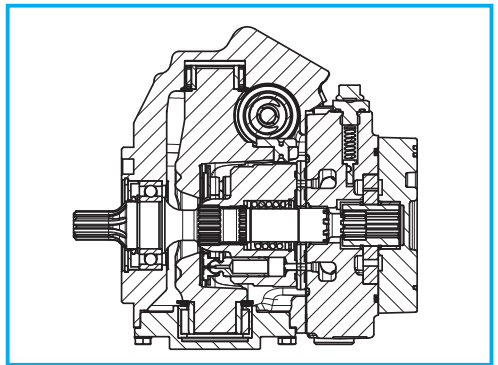
The available control systems make it easy to use these pumps in any application for industrial and mobile fields.

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 peak pressure up to 300 bar. It is possible to couple tandem versions, by means of coupling flanges optionally available.

Die Axialkolbenpumpen der Serie HM PZA wurden für den Betrieb im geschlossenen Kreislauf konzipiert.

Die verschiedenen lieferbaren Steuerungssysteme eignen sich sowohl für stationäre als auch für mobile Anwendungen im Allgemeinen.

Speziell entwickelte Zylinderblöcke mit optimalen Saugverhältnissen ermöglichen, wie von modernen Antriebsaggregaten gefordert, den Einsatz bei hohen Pumpendrehzahlen, wobei ein kontinuierlicher Arbeitsdruck mit einem Spitzenwert von 300 Bar gewährleistet ist. Unter Anwendung der auf Anfrage erhältlichen Anbauflansche können die Pumpen in der Tandemversion geliefert werden.



DATI TECNICI TECHNICAL DATA TECHNISCHE MERKMALE

GRUPPO GROUP BAUREIHE	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN		PRESSIONE PRESSURE DRUCK				VELOCITÀ DI ROTAZIONE SPEED DREHZAHL				MASSA WEIGHT GEWICHT	
	cm ³	in ³	CONTINUA CONTINUOUS DAUER		INTERMITTENTE INTERMITTENT INTERMITTIERENDER		PICCO PEAK SPITZEN		MAX	MIN	kg	lbs
			bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹		
HM PZA	7	0,43	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	8	0,49	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	9	0,55	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	10	0,61	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	11	0,67	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	12	0,73	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	13	0,80	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	14	0,85	250	3625	280	4060	300	4350	3600	500	8,5	18,7
	16	0,98	250	3625	280	4060	300	4350	3600	500	8,5	18,7
18	1,10	230	3335	250	3625	280	4060	3600	500	8,5	18,7	

PRESSIONE CONTINUA: pressione media del normale range di pressioni di funzionamento
PRESSIONE INTERMITTENTE: pressione che può essere mantenuta per periodi brevi (circa il 10% del ciclo di lavoro)

PRESSIONE DI PICCO: pressione massima permessa regolata dalle valvole di max. 1-2% del ciclo di lavoro)

CONTINUOUS PRESSURE: average pressure of the normal operating pressure range

INTERMITTENT PRESSURE: pressure that can be maintained for short periods (for about 10% of the work cycle)

PEAK PRESSURE: maximum allowable pressure regulated by maximum relief valves (max 1-2% of the work cycle)

KONTINUIERLICHER DRUCK: durchschnittlicher Druck der normalen Betriebsdruckreihe

INTERMITTIERENDER DRUCK: Druck, der für kurze Zeitabschnitte beibehalten werden kann (etwa 10% des Betriebszyklus)
SPITZENDRUCK: zugelassener Höchstdruck, von den Hochdruckventilen geregelt (max. 1-2% des Betriebszyklus)



**POMPA DI ALIMENTAZIONE
BOOST PUMP
SPEISEPUMPE**

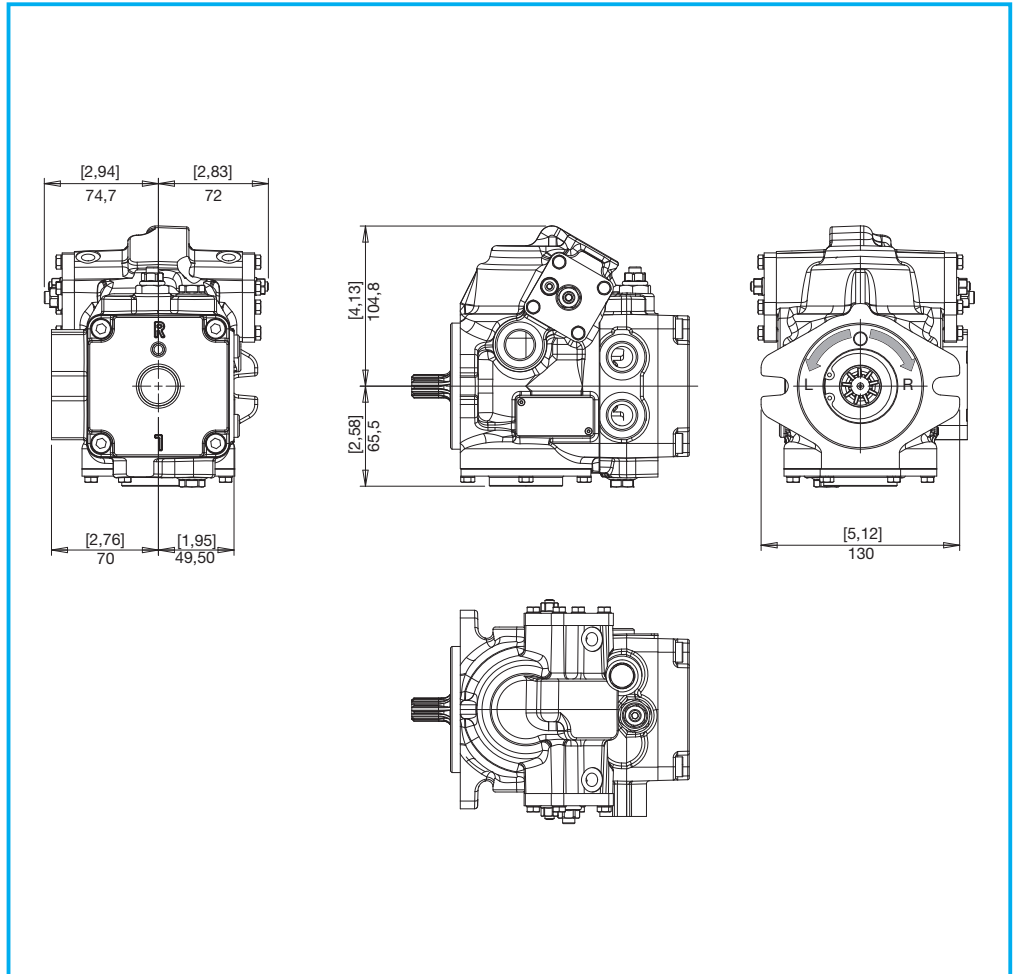
HM PZA

HM PZA	CILINDRATA DISPLACEMENT FORDERVOLUMEN		PRESSIONE PRESSURE DRUCK	
	cm ³	in ³	bar	psi
POMPA SINGOLA SINGLE PUMP PUMPE	5	0.30	12	174
POMPE TANDEM (una sovralimentazione) TANDEM PUMPS (one boost pump) MEHRFACHPUMPEN (eine Speisepumpe)	8	0.48	12	174
POMPE TANDEM (due sovralimentazioni) TANDEM PUMPS (two boost pumps) MEHRFACHPUMPEN (zwei Speisepumpen)	5+5	0.30+0.30	12	174

**MOMENTO POLARE DI INERZIA
INERTIAL MASS
TRÄGHEITSMOMENT**

approx. 42×10^{-4} N-m²

**DIMENSIONI
SIZE
ABMESSUNGEN**

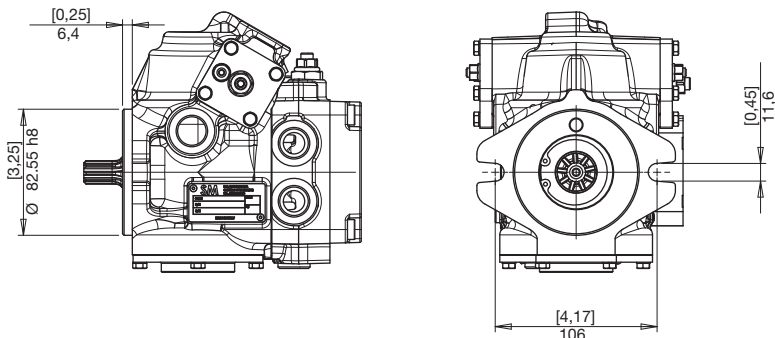


FLANGE
FLANGES
FLANSCHEN

HM PZA

A

SAE A
SAE A
SAE A

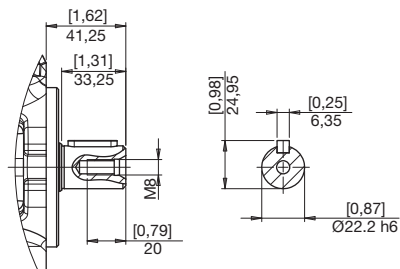


ESTREMITÀ ALBERI
SPLINE SHAFTS
WELLENPROFILE

J

COPPIA MAX
MAX TORQUE
MAX DREHMOMENT

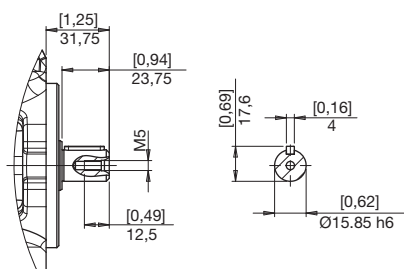
220 N•m



P

COPPIA MAX
MAX TORQUE
MAX DREHMOMENT

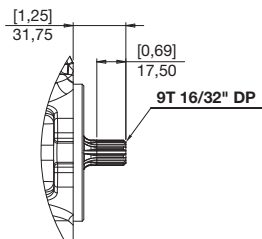
80 N•m



V

COPPIA MAX
MAX TORQUE
MAX DREHMOMENT

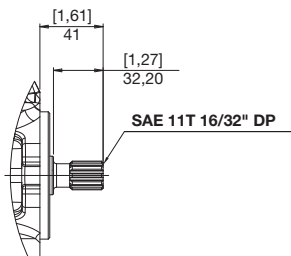
120 N•m



X

COPPIA MAX
MAX TORQUE
MAX DREHMOMENT

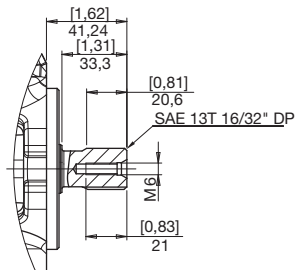
170 N•m



9

COPPIA MAX
MAX TORQUE
MAX DREHMOMENT

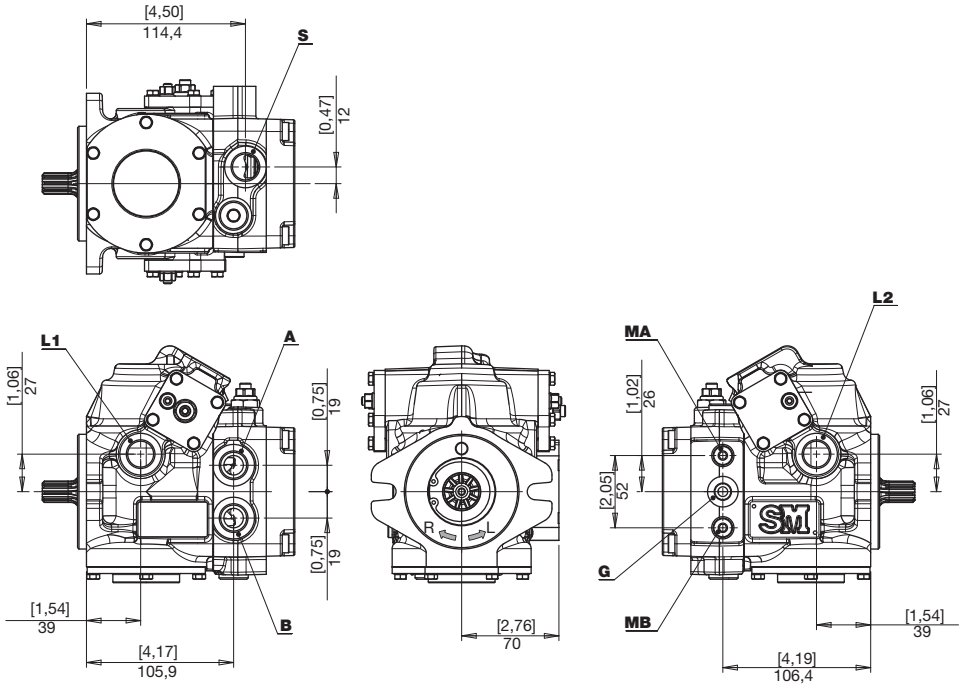
220 N•m





**BOCCHIE
PORTS
ANSCHLÜSSE**

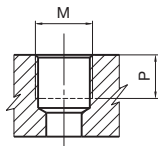
HM PZA



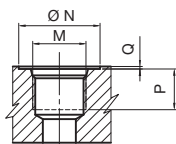
A	Utilizzi <i>Use</i> Verbraucher	G	Presse bassa pressione <i>Test port boost pressure</i> Messanschluß Speisedruck
L1	Drenaggi <i>Drain</i> Leckölanschluß	MA	Presse alta pressione <i>Test port high pressure</i> Messanschluß Hochdruck
L2		MB	
S	Aspirazione <i>Feeding pump inlet</i> Ansaugöffnung		

**BOCCHIE
PORTS
ANSCHLÜSSE**

HM PZA



TIPO TYPE TYP	M		P	
	Nm	mm	mm	in
G1	1/8" GAS BSPP	8	8	0,31
G2	1/4" GAS BSPP	17	9	0,35
G4	1/2" GAS BSPP	70	14,5	0,57



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	7/16-20 UNF	17
U5	5/8"	34	1,34	18	0,71	0,3	0,01	3/4-16 UNF	70

**COMBINAZIONI
COMBINATIONS
KOMBINATIONEN**

TIPO TYPE TYP	S ASPIRAZIONE INLET SAUGSEITE	A - B MANDATA OUTLET AUSGANG	L1 - L2 DRENAGGI DRAIN LECKÖLANSCHLUSS	PRESE PRESSIONE PRESSURE INTAKE DRUCKANSCHLÜSSE	
				MA-MB	G
G	G4	G4	G4	G1	G2
U	U5	U5	U5	G1	U2



**COMANDI
CONTROLS
STEUERUNGEN**

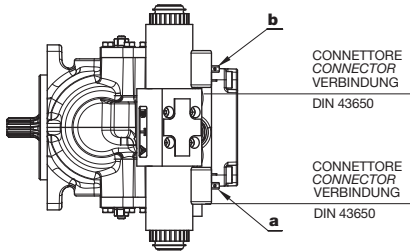
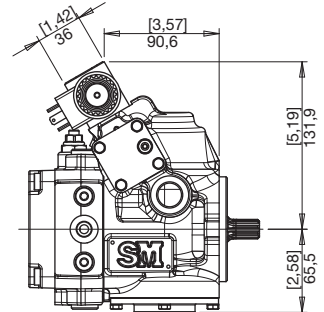
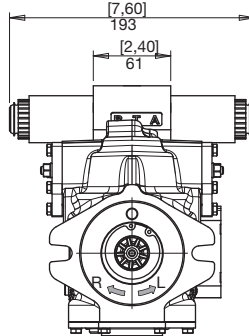
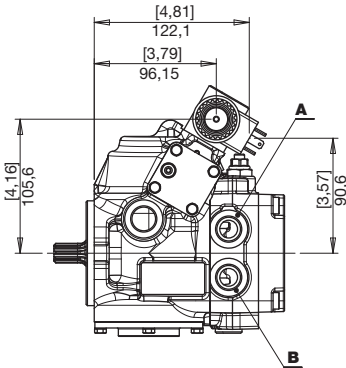
HM PZA

EF
12 V 24 V

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

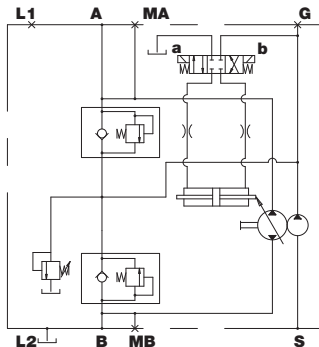
NQ
12 V 24 V

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

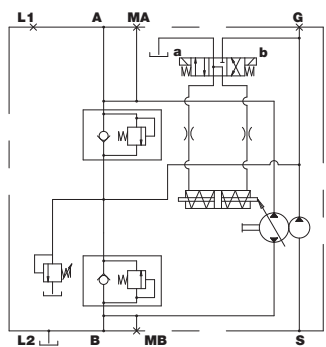


ROTAZIONE DIRECTION DREHRICHTUNG	SOLENOIDE IN TENSIONE EXCITED SOLENOID SOLENOID UNTER SPANNUNG	MANDATA OUTPUT AUSGANG
DESTRA RIGHT RECHTS	a	A
SINISTRA LEFT LINKS	b	B
	a	B
	b	A

EF



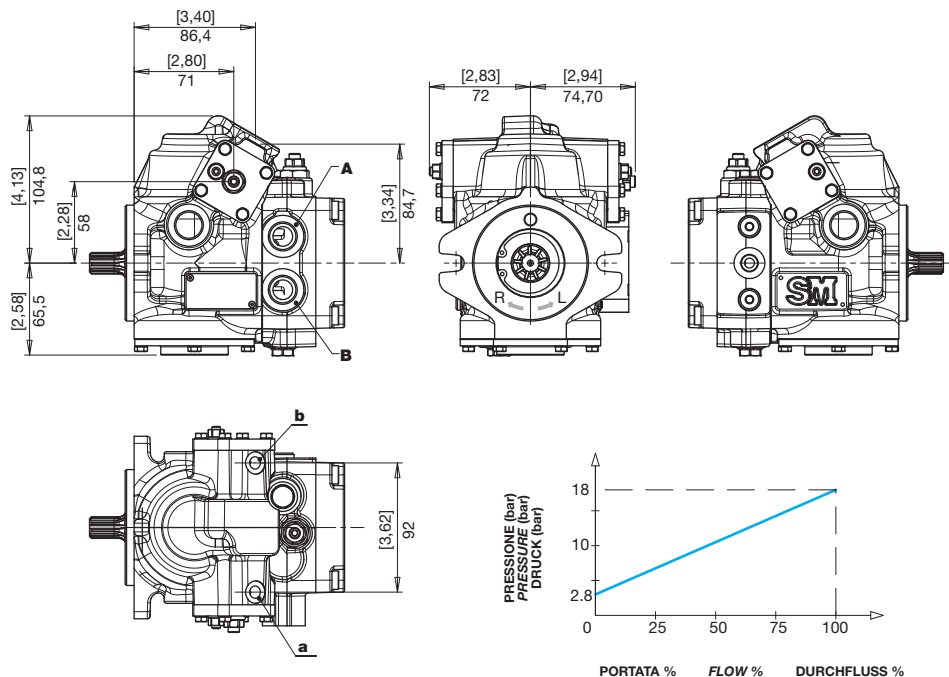
NQ



**COMANDI
CONTROLS
STEUERUNGEN**

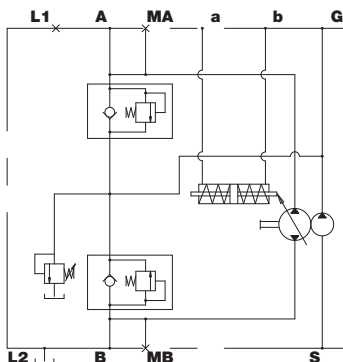


**IDRAULICO A DISTANZA
REMOTE HYDRAULIC
HYDRAULISCHE FERNSTEUERUNG**



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

Versione GAS GAS version Version GAS		Versione UNF UNF version Version UNF	
Filettatura Thread Gewinde	Profondità Depth Tiefe	Filettatura Thread Gewinde	Profondità Depth Tiefe
A Pilotaggio Pilot Pilot	G 1/8" BSP	7/16-20 UNF	12 mm 0.47 in





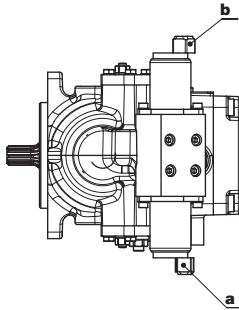
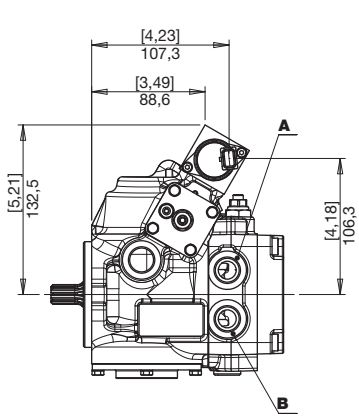
**COMANDI
CONTROLS
STEUERUNGEN**

HM PZA

S

**ELETTRICO PROPORZIONALE DIRETTO
ELECTRICAL PROPORTIONAL CONTROL
ELEKTRISCH PROPORZIONALSTEUERUNG**

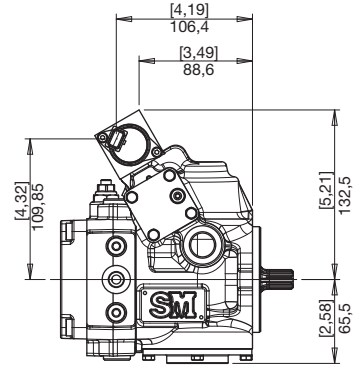
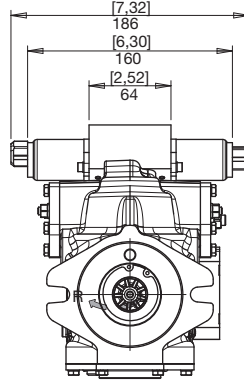
12 V



W

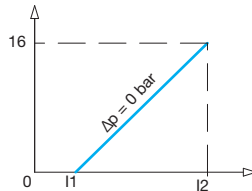
**ELETTRICO PROPORZIONALE DIRETTO
ELECTRICAL PROPORTIONAL CONTROL
ELEKTRONISCHE PROPORZIONALSTEUERUNG**

24 V



S

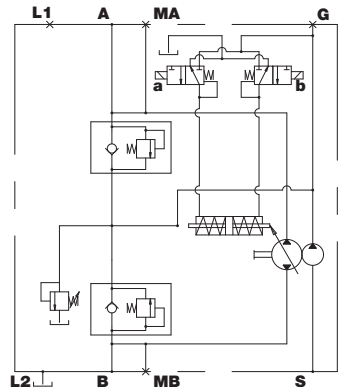
W



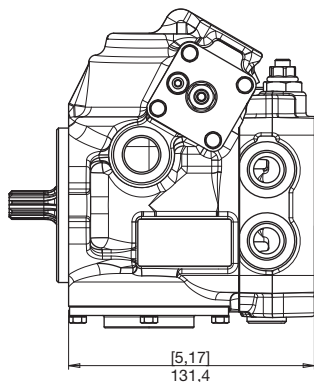
Tensione nominale Rated voltage Nennspannung	12 V	24 V
Corrente min (I1) Min. Current Mindeststrom	450 mA	250 mA
Corrente max (I2) Max. Current Maximaler Strom	1100 mA	540 mA
Frequenza PWM PWM Frequency Frequenz PWM	100 Hz	

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

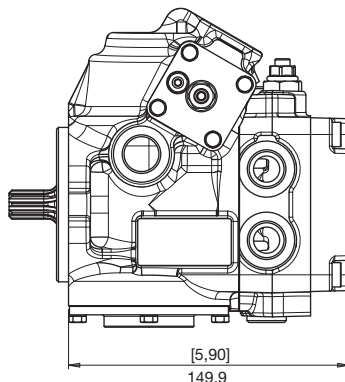
a	Solenoido Solenoid	Connettori Connectors	AMP JUNIOR TIMER
b	Solenoid Solenoïd	Verbindung	



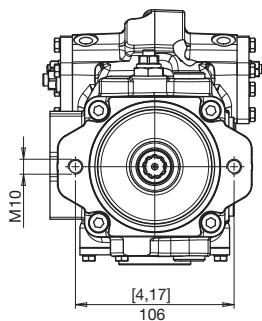
0 NESSUNA PREDISPOSIZIONE SENZA POMPA DI ALIMENTAZIONE
NO AUXILIARY MOUNT WITHOUT CHARGE PUMP
OHNE ANSCHLUSSFLANSCH OHNE SPEISEPUMPE



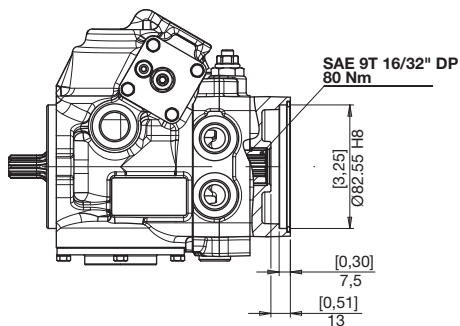
1 NESSUNA PREDISPOSIZIONE CON POMPA DI ALIMENTAZIONE
NO AUXILIARY MOUNT WITH CHARGE PUMP
OHNE ANSCHLUSSFLANSCH MIT SPEISEPUMPE



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



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

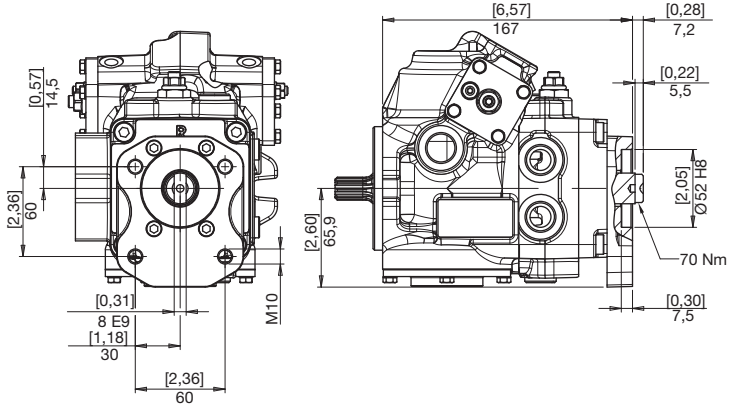




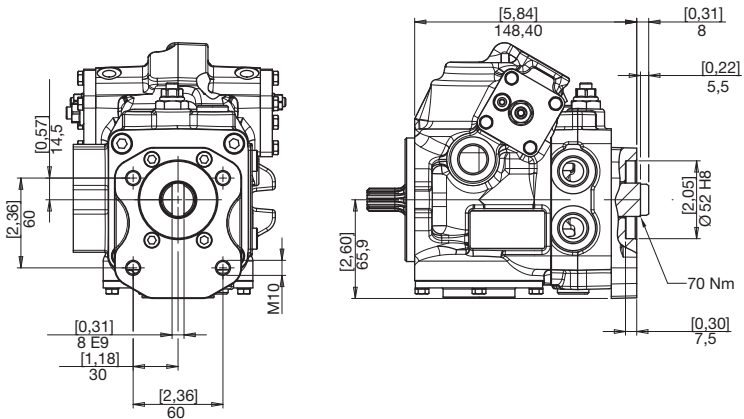
**PREDISPOSIZIONI
VERSION
BAUART**

HM PZA

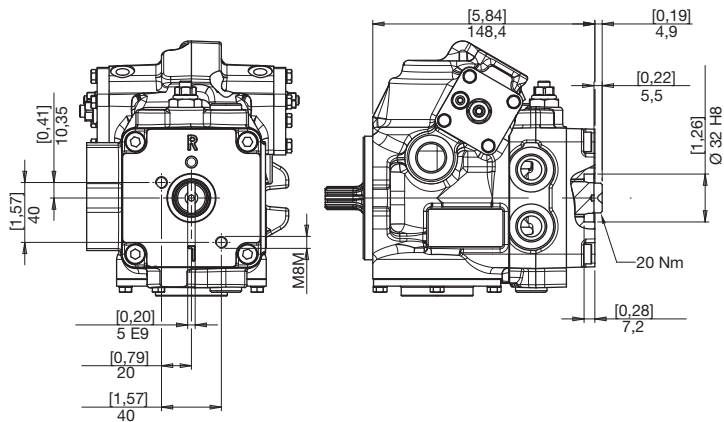
4 POMPA INGRANAGGI GR2 TEDESCA Ø 52 CON POMPA SOVRALIMENTAZIONE
GEAR PUMP GERMAN GR2 Ø 52 WITH CHARGE PUMP
ZAHNRADPUMPE DIN-NORME GR2 Ø 52 MIT SPEISEPUMPE



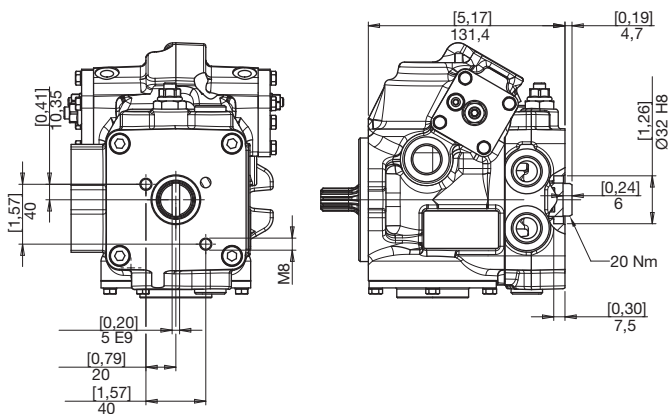
7 POMPA INGRANAGGI TEDESCA GR2 Ø 52 SENZA POMPA SOVRALIMENTAZIONE
GEAR PUMP GERMAN GR2 Ø 52 WITHOUT CHARGE PUMP
ZAHNRADPUMPE DIN-NORME GR2 Ø 52 OHNE SPEISEPUMPE



8 POMPA INGRANAGGI GR 1 CON POMPA SOVRALIMENTAZIONE
GEAR PUMP GR 1 WITH CHARGE PUMP
ZAHNRADPUMPE GR 1 MIT SPEISEPUMPE



9 POMPA INGRANAGGI GR 1 SENZA POMPA SOVRALIMENTAZIONE
GEAR PUMP GR 1 WITHOUT CHARGE PUMP
ZAHNRADPUMPE GR 1 OHNE SPEISEPUMPE

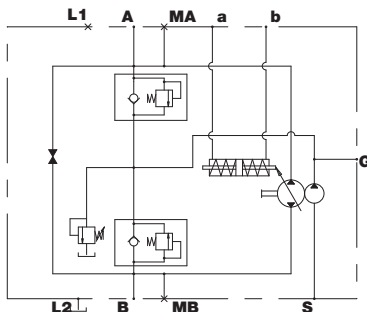
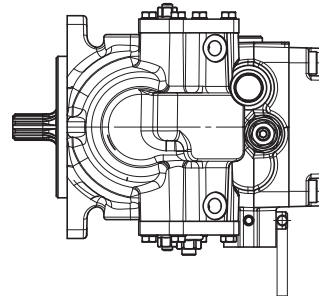
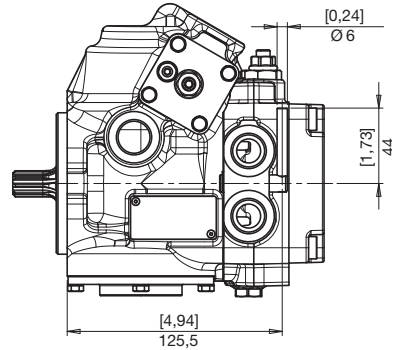
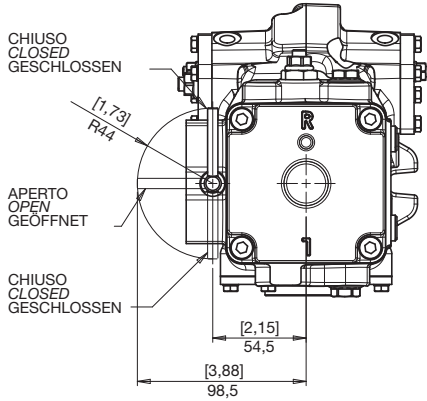




**ACCESSORI
ACCESSORIES
ZUBEHÖR**

HM PZA

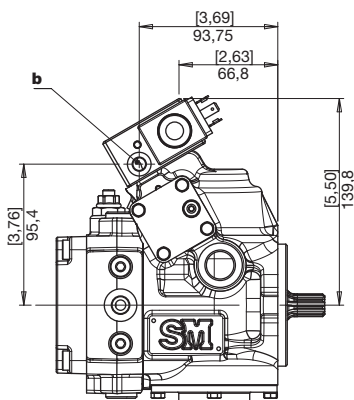
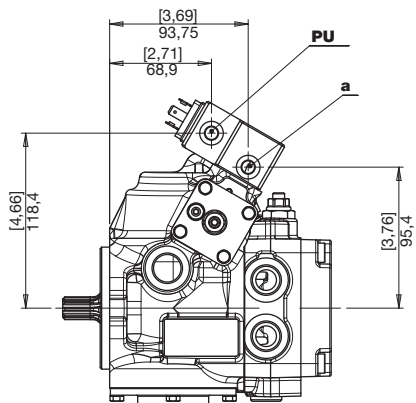
B BY-PASS
BY-PASS
BY-PASS



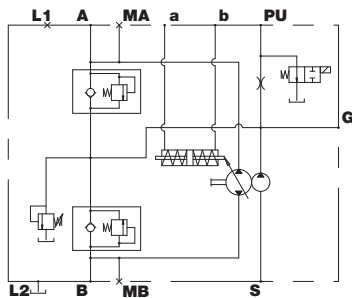
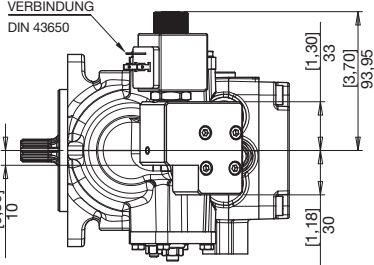
E

SICUREZZA "OPERATORE ASSENTE"
"NO OPERATOR" SAFETY
SICHERUNG "KEIN BEDIENER"

12 V



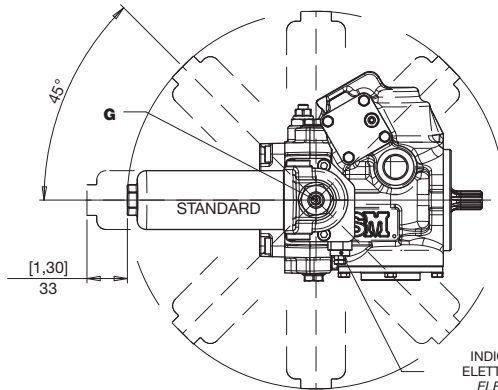
CONNETTORE
CONNECTOR
VERBINDUNG
DIN 43650



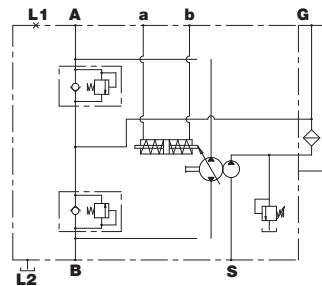
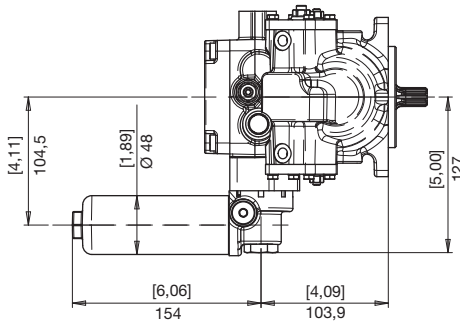
		Versione GAS GAS version Version GAS		Versione UNF UNF version Versione UNF	
		Filettatura Thread Gewinde	Profondità Depth Tiefe	Filettatura Thread Filettatura	Profondità Depth Tiefe
A	Pilotaggio Pilot Pilot	G 1/8" BSP	8 mm 0.31 in	7/16-20 UNF	12 mm 0.47 in
B	Pilotaggio sblocco freno Brake opening pressure Bremsenöffnung druck	G 1/8" BSP	8 mm 0.31 in	7/16-20 UNF	12 mm 0.47 in



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



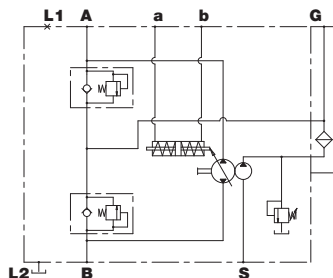
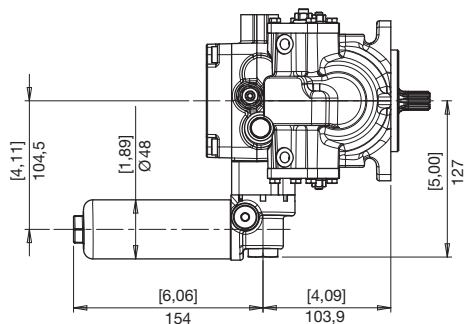
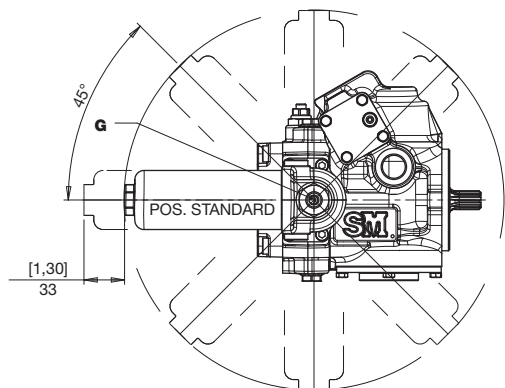
INDICATORE DIFFERENZIALE
ELETTRICO 30VDC - 0,2 A max
ELECTRICAL DIFFERENTIAL
INDICATOR 30VDC - 0,2 A max
ELEKTRISCHER DIFFERENZDRUCKANZEIGER
30VDC - 0,2 A max



È possibile richiedere il filtro ruotato ad intervalli di 45°
You can ask the filter rotated at intervals of 45°
Sie können den Filter bei 45° -Schritten gedreht gelten

G	Preso olio filtrato Filtered oil intake Anschluss filtriertes Öl	G 1/4" BSPP
		7/16-20 UNF

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



G

Preso olio filtrato
Filtered oil intake
Anschluss filteriertes Öl

G 1/4" BSPP

7/16-20 UNF

È possibile richiedere il filtro ruotato ad intervalli di 45°
You can ask the filter rotated at intervals of 45°
Sie können den Filter bei 45°-Schritten gedreht gelten

Su richiesta vengono forniti i tappi valvole con prese alta pressione G1/8" BSPP
On request we supply relief valve plugs with pressure intake G1/8" BSPP
Auf Wunsch werden die Ventile mit Kappen aus Hochdruck-G1/8" BSPP vorgesehen

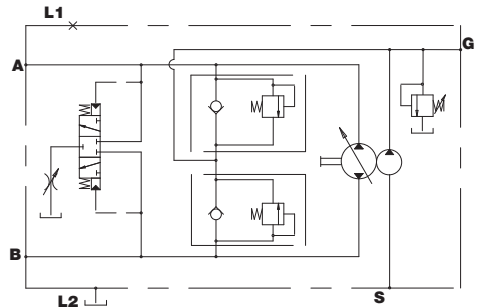
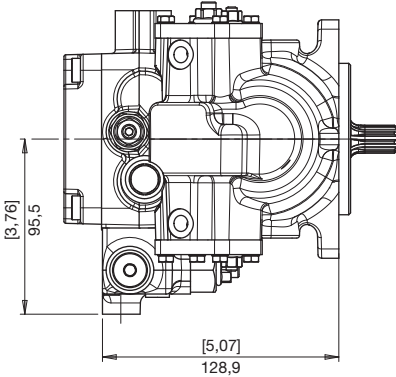
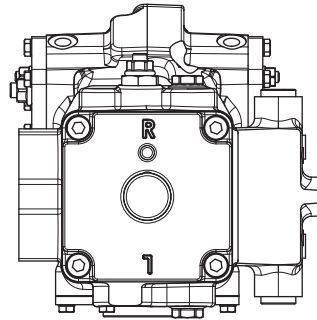
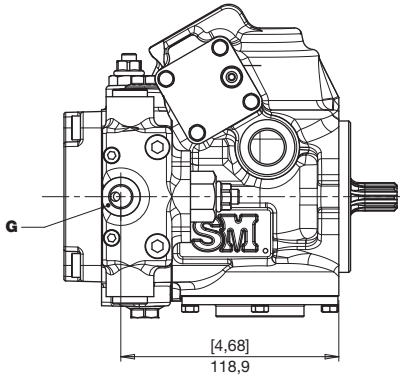


**ACCESSORI
ACCESSORIES
ZUBEHÖR**

HM PZA



**VALVOLA DI FLUSSAGGIO
FLUSHING AND BOOST VALVE
SPÜL- UND SPEISEDRUKVENTIL**



	Versione GAS GAS version Version GAS		Versione UNF UNF version Version UNF	
	Filettatura Thread Gewinde	Profondità Depth Tiefe	Filettatura Thread Gewinde	Profondità Depth Tiefe
G Presa bassa pressione Test port boost pressure Messanschluß Speisedruck	G 1/4" BSPP	9 mm 0.35 in	7/16-20 UNF	12 mm 0.47 in

HM PZA 07 R S V G K E A 1 0 ...

PRODOTTO
PRODUCT
PRODUKT

CILINDRATA
DISPLACEMENT
FÖRDERVOLUMEN
 07 = 7 cc 13 = 13 cc
 08 = 8 cc 14 = 14 cc
 09 = 9 cc 16 = 16 cc
 10 = 10 cc 18 = 18 cc
 11 = 11 cc 19 = 19 cc
 12 = 12 cc

SENSO DI ROTAZIONE
ROTATION
DREHRICHTUNG
R - Destra **L** - Sinistra
Right Left
Rechts Links

S - Pompa singola
Single pump
 Einzelne Pumpe
T - Pompa ant. Tandem
Tandem front pump
 Vordere Tandem-Pumpe
C - Pompa post. Tandem
Tandem rear pump
 Hintere Tandem-Pumpe

ESTREMITÀ D'ALBERO
SHAFT PROFILE
WELLENENDE
J - Ø 22,22
P - Ø 15,85
V - 9T 16/32 DP
X - SAE 11T 16/32" DP
9 - SAE 13T 16/32" DP
 Special for high torque
R - SAE 13T 16/32" DP
A - SAE 13T 16/32" DP

BOCCHE
PORTS
ANSCHLÜSSE
G - Gas
U - UNF

COMANDO CONTROL STEUERUNG
K - Idraulico a distanza
E - Elettrico ON/OFF centro chiuso (12V)
F - Elettrico ON/OFF centro chiuso (24V)
N - Elettrico ON/OFF centro aperto (12V)
Q - Elettrico ON/OFF centro aperto (24V)
S - Elettronico proporzionale (12V)
W - Elettronico proporzionale (24V)
K - Remote hydraulic
E - Electrical on/off, closed center (12V)
F - Electrical on/off, closed center (24V)
N - Electrical on/off, open center (12V)
Q - Electrical on/off, open center (24V)
S - Electrical proportional (12V)
W - Electrical proportional (24V)
K - Hydraulische Fernsteuerung
E - Elektrische Steuerung on/off geschlosseness Ventil (12V)
F - Elektrische Steuerung on/off geschlosseness Ventil (24V)
N - Elektrische Steuerung on/off geöffnetes Ventil (12V)
Q - Elektrische Steuerung on/off geöffnetes Ventil (24V)
S - Elektronische Proportionalsteuerung (12V)
W - Elektronische Proportionalsteuerung (24V)

TARATURA VALVOLE
VALVE SETTING
VENTILE
B - 150 bar
D - 180 bar
E - 210 bar
H - 230 bar
G - 250 bar
I - 280 bar
L - 300 bar

ESECUZIONI SPECIALI
SPECIAL VERSIONS
SONDERBAUARTEN

ACCESSORI ACCESSORIES ZUBEHÖR
O - nessuna opzione
B - By-pass
E - presenza uomo 12 V
M - Valvola di flussaggio
X - filtro con indicatore di intasamento
Y - filtro senza indicatore di intasamento
O - no accessories
B - By-pass
E - Deadman safety valve 12 V
M - Flushing and boost valve
X - filter with electric clogging indicator
Y - filter without electric clogging indicator
O - ohne Zubehör
B - By-pass
E - Totmann-Abschaltventil 12 V
M - Spül- und speise-druckventil
X - Filter mit Verstopfungsanzeiger
Y - Filter ohne Verstopfungsanzeiger

PREDISPOSIZIONI VERSION BAUART
0 - nessuna, senza pompa di alimentazione
1 - nessuna, con pompa di alimentazione 5cc
A - nessuna, con pompa di alimentazione 8cc
5 - SAE A, senza pompa di alimentazione
2 - SAE A, con pompa di alimentazione 5cc
B - SAE A, con pompa di alimentazione 8cc
7 - GR2 senza pompa di alimentazione
4 - GR2 con pompa di alimentazione 5cc
9 - GR1, senza pompa di alimentazione
8 - GR1, con pompa di alimentazione 5cc
N - predisp. tandem, senza pompa di alimentazione
Z - predisp. tandem, con pompa di alimentazione 5cc
P - predisp. tandem, con pompa di alimentazione 8cc
0 - No auxiliary mount without charge pump
1 - No auxiliary mount with charge pump 5cc
A - No auxiliary mount with charge pump 8cc
5 - SAE A mounting without charge pump
2 - SAE A mount with charge pump 5cc
B - SAE A mount with charge pump 8cc
7 - GR2 mount without charge pump
4 - GR2 mount with charge pump 5cc
9 - GR1 mount without charge pump
8 - GR1 mount with charge pump 5cc
N - Tandem pump mount without charge pump
Z - Tandem pump mount with charge pump 5cc
P - Tandem pump mount with charge pump 8cc
0 - Ohne Anschlussflansch, ohne Speisepumpe
1 - Ohne Anschlussflansch, mit Speisepumpe 5cc
A - Ohne Anschlussflansch, mit Speisepumpe 8cc
5 - SAE A-Anschlussflansch, ohne Speisepumpe
2 - SAE A-Anschlussflansch, mit Speisepumpe 5cc
B - SAE A-Anschlussflansch, mit Speisepumpe 8cc
7 - GR2-Anschlussflansch, ohne Speisepumpe
4 - GR2-Anschlussflansch, mit Speisepumpe 5cc
9 - GR1 ohne Speisepumpe
8 - GR1 mit Speisepumpe 5cc
N - Vorbereitet für Tandempumpe, ohne Speisepumpe
Z - Vorbereitet für Tandempumpe, mit Speisepumpe 5cc
P - Vorbereitet für Tandempumpe, mit Speisepumpe 8cc

TIPO DI OSCILLANTE SWASHPLATE TYPE
SCHWENKSCHNEIBENLAGERUNG
A = oscillante su rullini
B = oscillante su bronzine
A = mounted on needle bearing
B = mounted on bronze bearings
A = Rollengelagert
B = Bronze-Gleitgelagert

**POMPA DOPPIA CON 1 POMPA DI SOVRALIMENTAZIONE
DOUBLE PUMP WITH 1 BOOST PUMP
TANDEMPUMPE MIT 1 SPEISEPUMPE**

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

HM	PZA	08	R	T	V	G	K	E	B	P	0
HM	PZA	08	R	T	R	G	K	E	B	P	0

With reinforced shaft 200 Mn

2° STADIO STAGE STUFE

HM	PZA	08	R	C	V	G	K	E	B	0	0
HM	PZA	08	R	C	A	G	K	E	B	0	0

With reinforced shaft 200 Mn

1° STADIO STAGE STUFE

HM	PZA	08	R	T	V	G	K	E	B	P	0
HM	PZA	08	R	T	R	G	K	E	B	P	0

With reinforced shaft 200 Mn

2° STADIO STAGE STUFE

HM	PZA	08	R	C	V	G	K	E	B	5	0
HM	PZA	08	R	C	A	G	K	E	B	B	0

SAE A

Nelle pompe tandem con una pompa di sovralimentazione è obbligatorio installare nell'impianto un tubo di collegamento (non fornito) tra un drenaggio del primo stadio ed un drenaggio del secondo stadio.

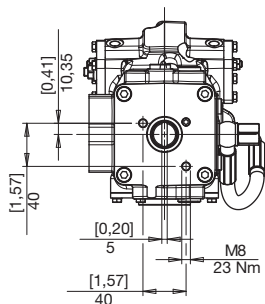
In the tandem pumps with one boost pump it is mandatory to assemble in the plant a connecting pipe (not supplied) between a drain of the first stage and a drain of the second one.

Bei den Tandempumpen mit einer Verstärkerpumpe muss in der Anlage ein Verbindungsrohr (nicht beigelegt) zwischen einer Drainage der ersten Stufe und einer Drainage der zweiten Stufe installiert werden.

- La configurazione Tandem standard è con pompa da 8cc nel primo stadio.
- Con albero rinforzato è disponibile una sola configurazione con pompa da 8cc nel secondo stadio.
- The standard Tandem configuration is with a 8cm³ pump in the first stage.
- With reinforced shaft only one configuration with 8cm³ pump in the second stage is available.
- Die serienmäßige Tandemversion hat eine 8cc Pumpe in der ersten Stufe.
- Mit verstärkter Welle ist nur eine einzige Ausführung mit 8cc in der zweiten Stufe erhältlich.

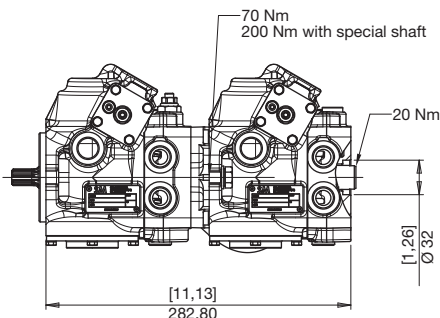
1° STADIO STAGE STUFE

HM PZA 08 R T V G K E B P O



2° STADIO STAGE STUFE

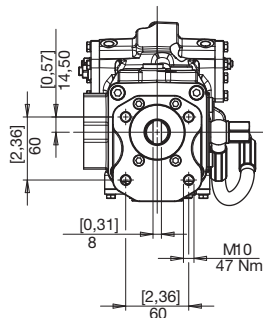
HM PZA 08 R C V G K E B 9 O



GR1

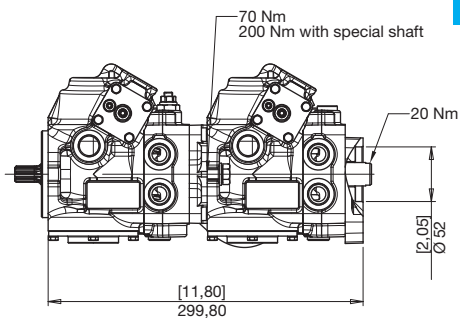
1° STADIO STAGE STUFE

HM PZA 08 R T V G K E B P O



2° STADIO STAGE STUFE

HM PZA 08 R C V G K E B 7 O



GR2

Nelle pompe tandem con una pompa di sovralimentazione è obbligatorio installare nell'impianto un tubo di collegamento (non fornito) tra un drenaggio del primo stadio ed un drenaggio del secondo stadio.

In the tandem pumps with one boost pump it is mandatory to assemble in the plant a connecting pipe (not supplied) between a drain of the first stage and a drain of the second one.

Bei den Tandempumpen mit einer Verstärkerpumpe muss in der Anlage ein Verbindungsrohr (nicht beigelegt) zwischen einer Drainage der ersten Stufe und einer Drainage der zweiten Stufe installiert werden.

- La configurazione Tandem standard è con pompa da 8cc nel primo stadio.
- Con albero rinforzato è disponibile una sola configurazione con pompa da 8cc nel secondo stadio.

- The standard Tandem configuration is with a 8cm³ pump in the first stage.
- With reinforced shaft only one configuration with 8cm³ pump in the second stage is available.

- Die serienmäßige Tandemversion hat eine 8cc Pumpe in der ersten Stufe.
- Mit verstärkter Welle ist nur eine einzige Ausführung mit 8cc in der zweiten Stufe erhältlich.