



**POMPE A PISTONI ASSIALI PER CIRCUITO  
APERTO CON REGOLAZIONE LOAD SENSING  
O A PRESSIONE COSTANTE**

***OPEN CIRCUIT AXIAL PISTON PUMPS WITH  
LOAD-SENSING OR CONSTANT PRESSURE  
CONTROL***

**AXIALKOLBENPUMPEN FÜR DEN OFFENEN KREI-  
SLAUF MIT LOAD-SENSING-REGELUNG ODER KON-  
STANTDRUCKREGELUNG**

**HP A3  
28.37.44**

398SOP0033A00

# HP A3

## POMPE A PISTONI ASSIALI PER CIRCUITO APERTO CON REGOLAZIONE LOAD SENSING O A PRESSIONE COSTANTE OPEN CIRCUIT AXIAL PISTON PUMPS WITH LOAD-SENSING OR CONSTANT PRESSURE CONTROL AXIALKOLBENPUMPEN FÜR DEN OFFENEN KREISLAUF MIT LOAD-SENSING-REGELUNG ODER KONSTANTDRUCKREGELUNG

Le pompe a pistoni assiali serie HP A3 sono state concepite per operare in circuito aperto.

I vari sistemi di regolazione disponibili le rendono facilmente adattabili alle esigenze applicative sia per il settore industriale che per quello mobile.

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 richieste dai moderni motori diesel, garantendo una buona affidabilità per pressioni di funzionamento fino a 280 bar continui (350 bar di picco).

I controlli, esposti nella presente sezione, permettono un funzionamento con regolazione load sensing o a pressione costante.

Utilizzando le opportune predisposizioni, è possibile comporre versioni tandem.

*The HP A3 series axial piston pumps have been designed to work in an open 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 into the pumps, allow high speed rotation, like required by modern diesel engines, giving extreme reliability for working continuous pressure until 280 bar and until 350 bar for peak pressure.*

*Control types shown in this section allow a load sensing or constant pressure control over the pump.*

*It is possible to couple Tandem versions for both pump types, by means of coupling proper flanges.*

Die Axialkolbenpumpen der Serie HP A3 wurden für den Betrieb im offenen Kreislauf konzipiert.

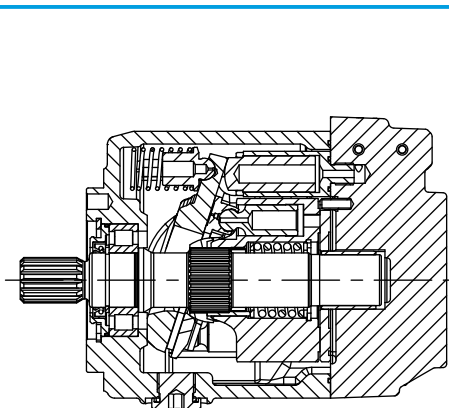
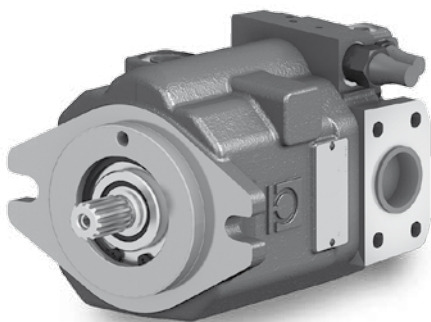
Die lieferbaren unterschiedlichen Steuerungssysteme eignen sich sowohl für stationäre als auch für mobile Anwendungen.

Speziell entwickelte Zylinderblöcke mit optimalen Saugverhältnissen erlauben den Einsatz bei hohen Pumpendrehzahlen, wie von modernen Antriebsaggregaten gefordert.

Die in diesem Abschnitt dargestellten Steuerungen sind mit Load-Sensing-Regelung oder Konstantdruck-Regelung lieferbar.

Für beide Pumpenfamilien können unter Anwendung von Anbauflanschen Tandemversionen zusammengebaut werden.

## HP A3 28.37.44

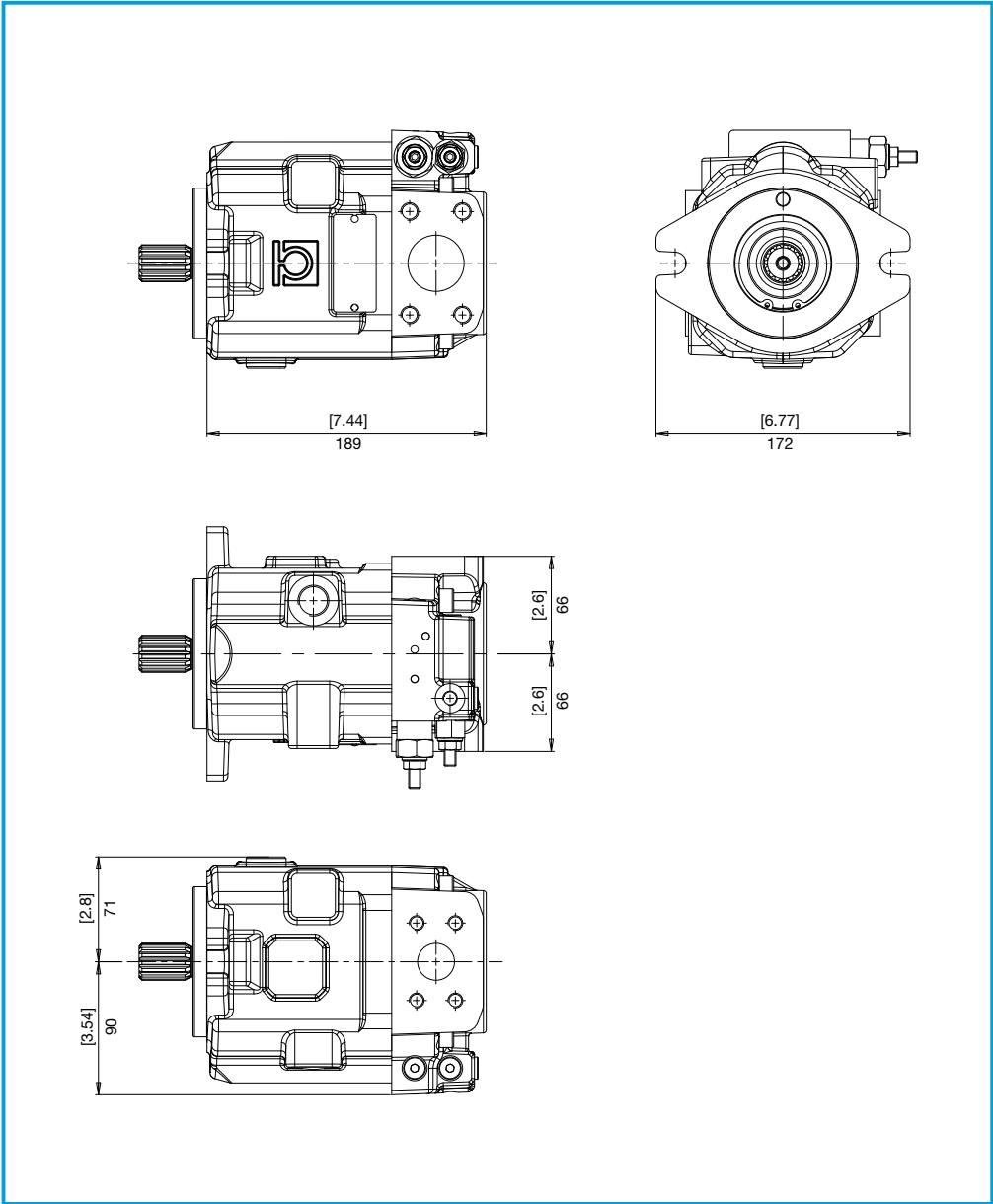


### DATI TECNICI TECHNICAL DATA TECHNISCHE MERKMALE

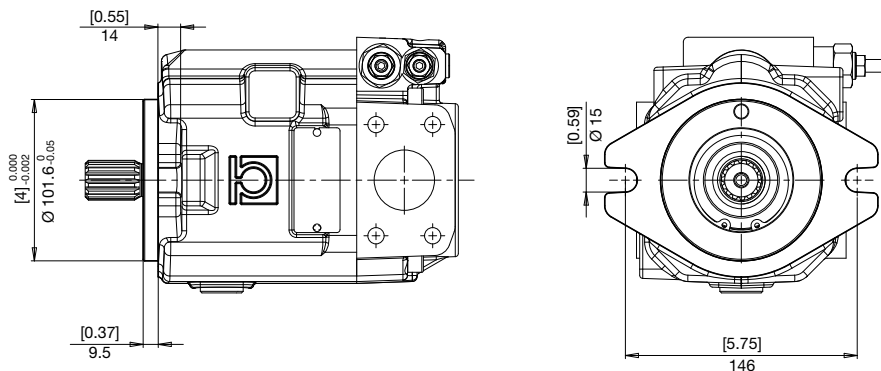
GRUPPO GROUP BAUREIHE	CILINDRATA TEORICA NOMINAL DISPLACEMENT FÖRDERVOLUMEN (TM)		OSCILLANTE SWASHPLATE SCHWENKWINKEL	PRESSIONE PRESSURE DRUCK		VELOCITÀ DI ROTAZIONE SPEED DREHZAHL		MASSA WEIGHT GEWICHT					
	cm <sup>3</sup>	in <sup>3</sup>		CONTINUA CONTINUOUS DAUER	INTERMITTENTE INTERMITTENT INTERMITTIERENDER	PICCO PEAK SPITZEN	MAX		MIN				
HP A3	28	1,71	18	280	4060	320	4640	350	5075	3400	500	15	33
	37	2,26	15	250	3625	280	4060	320	4640	3200	500	15,5	34,2
	44	2,68	18	250	3625	280	4060	320	4640	3000	500	16	35,3

**DIMENSIONI  
 SIZE  
 ABMESSUNGEN**

**HP A3**

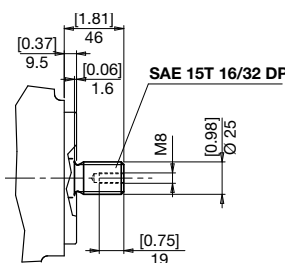


**B** SAE B  
SAE B  
SAE B

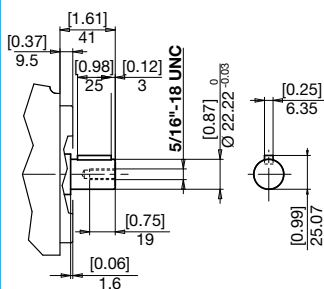


ESTREMITÀ ALBERI  
SPLINE SHAFTS  
WELLENPROFILE

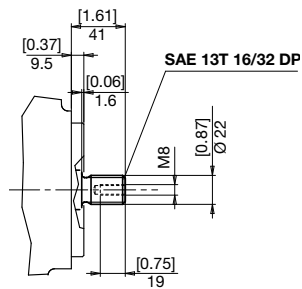
**1** COPPIA MAX  
MAX TORQUE  
MAX DREHMOMENT 460 N•m



**6** COPPIA MAX  
MAX TORQUE  
MAX DREHMOMENT 210 N•m



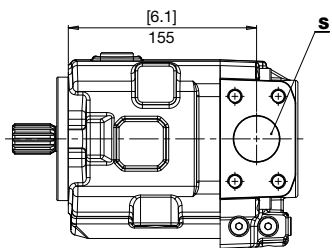
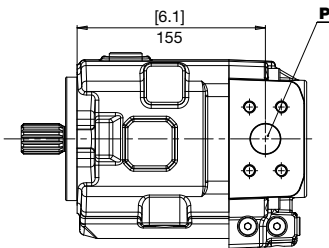
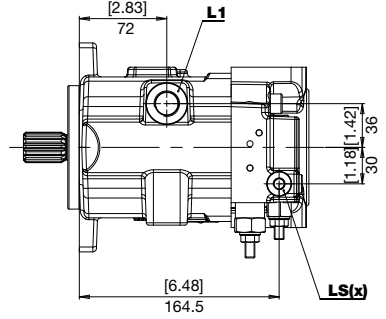
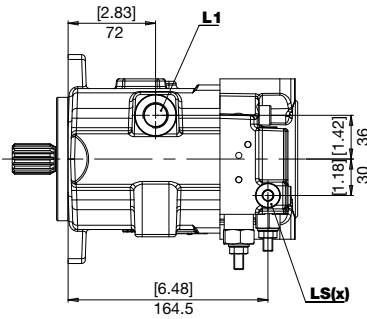
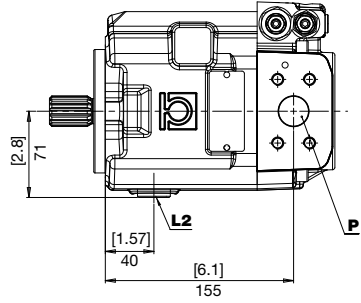
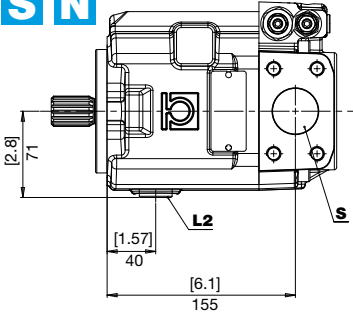
**9** COPPIA MAX  
MAX TORQUE  
MAX DREHMOMENT 310 N•m



**BOCCHIE LATERALI**  
**LATERAL PORTS**  
**SEITLICHANSCHLÜSSE**

**HP A3**

**S N**



ROTAZIONE DIRECTION DREHRICHTUNG	DESTRA RIGHT RECHTS
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ROTAZIONE DIRECTION DREHRICHTUNG	SINISTRA LEFT LINKS
--	---------------------------

**S** Aspirazione  
 Feeding pump inlet  
 Ansaugöffnung

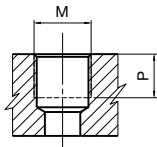
**L1** Drenaggi  
**L2** Drain  
 Leckölanschluss

**P** Mandata  
 Output  
 Ausgang

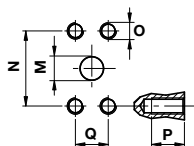
**LS(x)** Pilotaggio  
 Pilot  
 Steuerdruck

**BOCCHE  
PORTS  
ANSCHLÜSSE**

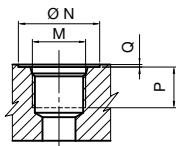
**HP A3**



TIPO TYPE TYP		M		P	
		Nm	mm	in	
<b>G1</b>	Port ISO 1179-1 - G 1/8	8	8	0,31	
<b>G4</b>	Port ISO 1179-1 - G 1/2	50	16	0,63	



TIPO TYPE TYP	M		N		P		Q		O	
	mm	in	mm	in	mm	in	mm	in		Nm
<b>N7</b>	25	1	52,4	2,06	18	0,71	26,2	1,03	M10	38
<b>N9</b>	38	1,5	69,9	2,75	20	0,79	35,7	1,41	M12	70



TIPO TYPE TYP	DIMENSIONE SIZE GRÖSSE	N		P		Q		Port ISO 11926-1-7/16-20	M
		mm	in	mm	in	mm	in		
<b>U2</b>	1/4"	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
<b>U3</b>	3/8"	25	0,98	13	0,51	0,3	0,01	Port ISO 11926-1-9/16-18	40

**COMBINAZIONI  
COMBINATIONS  
KOMBINATIONEN**

TIPO TYPE TYP	S ASPIRAZIONE INLET SAUGSEITE	P MANDATA OUTLET AUSGANG	L1 - L2 DRENAGGIO DRAIN LECKÖLANSCHLUSS	LS(X) PILOTAGGIO PILOT STEUERDRUCK
<b>S</b>	N9	N7	G4	G1
<b>N</b>	N9	N7	U3	U2



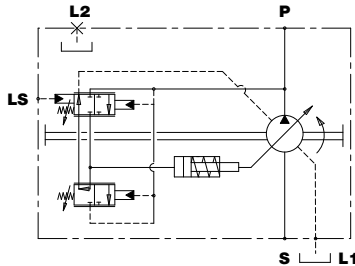
**REGOLAZIONI  
CONTROL SYSTEMS  
REGLEREINSTELLUNG**

**HP A3**

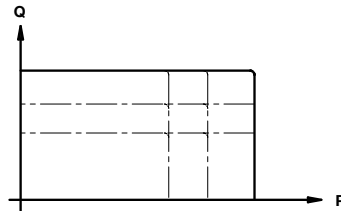
**L** **REGOLATORE DI PRESSIONE/PORTATA  
PRESSURE/FLOW RATE REGULATOR  
DRUCK-UND FORDERSTROM STROMPEGLER**

REGOLATORE DI PORTATA  
FLOW RATE REGULATOR  
FORDERSTROM STROMPEGLER

REGOLATORE DI PRESSIONE  
PRESSURE RATE REGULATOR  
DRUCK STROMPEGLER



PORTATA  
FLOWRATE  
FORDERSTROM



PRESSIONE DI ESERCIZIO  
WORKING PRESSURE  
BETRIEBSDRUCK

PRESSIONE DI ESERCIZIO WORKING PRESSURE BETRIEBSDRUCK		DIFFERENZIALE DI PRESSIONE $\Delta p$ PRESSURE DIFFERENTIAL $\Delta p$ DIFFERENZDRUCKANZEIGER $\Delta p$		
bar	psi	14 bar - 203 psi	21 bar - 305 psi	25 bar - 363 psi
180	2610	<b>A</b>	<b>B</b>	<b>C</b>
210	3045	<b>E</b>	<b>F</b>	<b>G</b>
250	3625	<b>I</b>	<b>L</b>	<b>M</b>
280	4060	<b>O</b>	<b>P</b>	<b>Q</b>
320	4640	<b>S</b>	<b>T</b>	<b>U</b>
350	5075	<b>Z</b>	<b>X</b>	<b>Y</b>

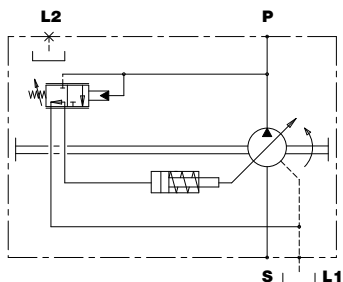
È necessario prevedere una valvola di massima pressione esterna tarata ad un valore superiore del 10% della taratura del regolatore di pressione della pompa.

*An external relief valve set at 10% above the pump pressure regulator must always be provided.*

Es muss ein externes Druckbegrenzungsventil vorgesehen werden, dessen Einstellwert mehr als 10% über dem des Druckreglers der Pumpe liegen muss.

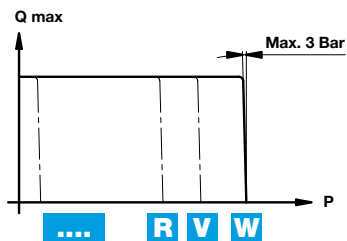
**P** REGOLATORE DI PRESSIONE  
PRESSURE RATE REGULATOR  
DRUCK STROMPEGLER

REGOLATORE DI PRESSIONE  
PRESSURE RATE REGULATOR  
DRUCK STROMPEGLER



CURVA CARATTERISTICA DELLA POMPA CON REGOLATORE DI PRESSIONE  
CHARACTERISTIC CURVE OF THE PUMP WITH PRESSURE REGULATOR  
KENNLINIE DER PUMPE MIT DRUCKREGLER

PORTATA  
FLOWRATE  
FORDERSTROM

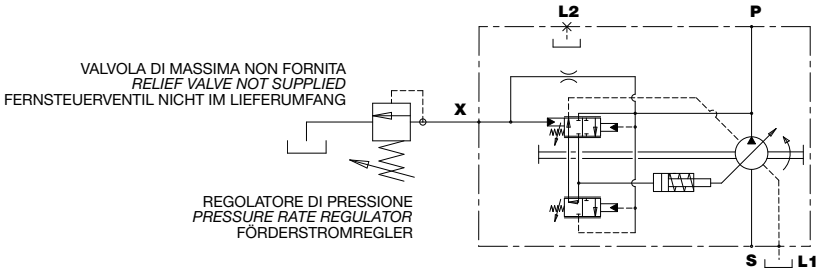


PRESSIONE DI ESERCIZIO  
WORKING PRESSURE  
BETRIEBSDRUCK

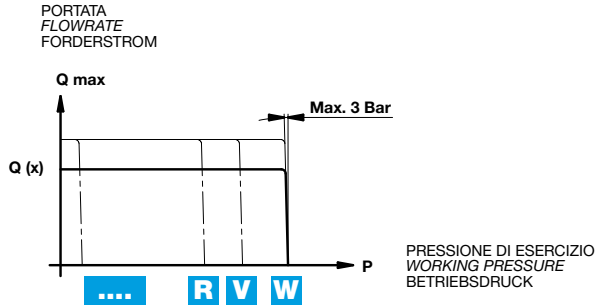
CODICE CODE BEST.- NR.	PRESSIONE DI ESERCIZIO WORKING PRESSURE BETRIEBSDRUCK	
	bar	psi
<b>D</b>	180	2610
<b>H</b>	210	3045
<b>N</b>	250	3625
<b>R</b>	280	4060
<b>V</b>	320	4640
<b>W</b>	350	5075



**R** **REGOLATORE DI PRESSIONE A CONTROLLO REMOTO  
PRESSURE/FLOW RATE REGULATOR REMOTE CONTROLLED  
DRUCK-UND FORDERSTROM STROMPEGLER FERNBEDIENUNG**



**CURVA CARATTERISTICA DELLA POMPA CON REGOLATORE DI PRESSIONE  
CHARACTERISTIC CURVE OF THE PUMP WITH PRESSURE REGULATOR  
KENNLINIE DER PUMPE MIT DRUCKREGLER**



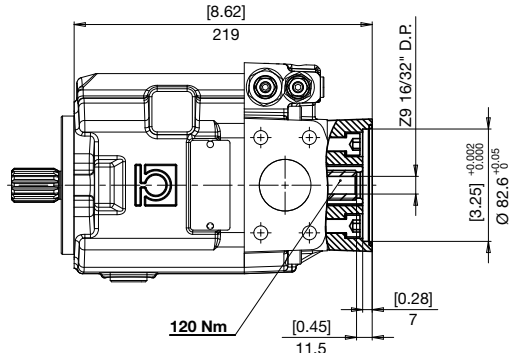
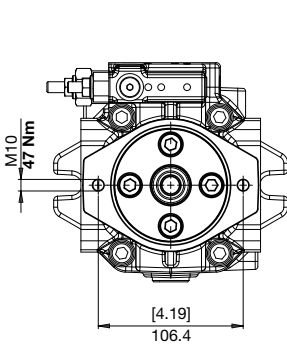
**DIFFERENZIALE DI PRESSIONE 21 bar PRESSURE DIFFERENTIAL 21 bar DIFFERENZDRUCK 21 bar**

CODICE CODE BEST.- NR.	PRESSIONE DI ESERCIZIO WORKING PRESSURE BETRIEBSDRUCK	
	bar	psi
<b>D</b>	180	2610
<b>H</b>	210	3045
<b>N</b>	250	3625
<b>R</b>	280	4060
<b>V</b>	320	4640
<b>W</b>	350	5075

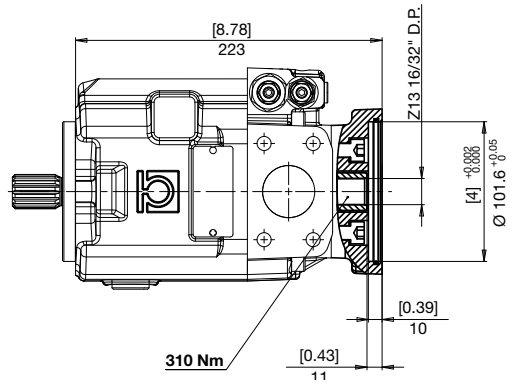
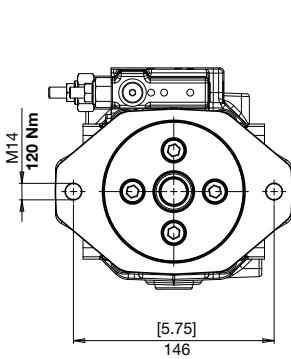
PREDISPOSIZIONI  
VERSION  
BAUART

HP A3

**5** SAE A  
SAE A  
SAE A



**6** SAE B  
SAE B  
SAE B





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

**HP A3**



**PRODOTTO**  
**PRODUCT**  
**PRODUKT**  
**A3** - Pompa a pistoni assiali per circuito aperto  
**A3** - *Open circuit axial piston pump*  
**A3** - Axialkolbenpumpen für den offenen Kreislauf

**CILINDRATA**  
**DISPLACEMENT**  
**FÖRDERVOLUMEN**  
**028 - 037 - 044**

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

**FLANGIA**  
**FLANGE**  
**FLANSCH**  
**B** - SAE B

**ESTREMITÀ D'ALBERO**  
**SHAFT PROFIL**  
**WELLELENDE**  
**1** - Z15 16/32" DP  
**6** - cilindrico d. 22,22  
*round shaft d. 22,22*  
*zylindrisch d. 22,22*  
**9** - Z13 16/32" DP

**ESECUZIONI SPECIALI**  
**SPECIAL VERSIONS**  
**SONDERBAUARTEN**

**PREDISPOSIZIONI**  
**VERSION**  
**BAUART**  
**0** - nessuna predisposizione  
**5** - SAE A  
**6** - SAE B  
**0** - *no special fittings*  
**5** - SAE A  
**6** - SAE B  
**0** - ohne Anschlußflansch  
**5** - SAE A  
**6** - SAE B

**SET REGOLATORI**  
**CONTROL SYSTEM SET**  
**REGLERSET**  
Vedi tabella  
*See chart*  
Siehe Tabelle

**REGOLAZIONI**  
**CONTROL SYSTEMS**  
**REGLEREINSTELLUNG**  
**L** - Regolatore di pressione/portata  
*Pressure/flow rate regulator*  
*Druck-und forderstrom strompegler*  
**P** - Regolatore di pressione  
*Pressure rate regulator*  
*Druck strompegler*  
**R** - Regolatore di pressione a controllo remoto  
*Pressure rate regulator remote controlled*  
*Druck strompegler fernbedienung*

**BOCCHIE**  
**PORT**  
**ANSCHLÜSSE**  
Vedi tabella  
*See chart*  
Siehe Tabelle