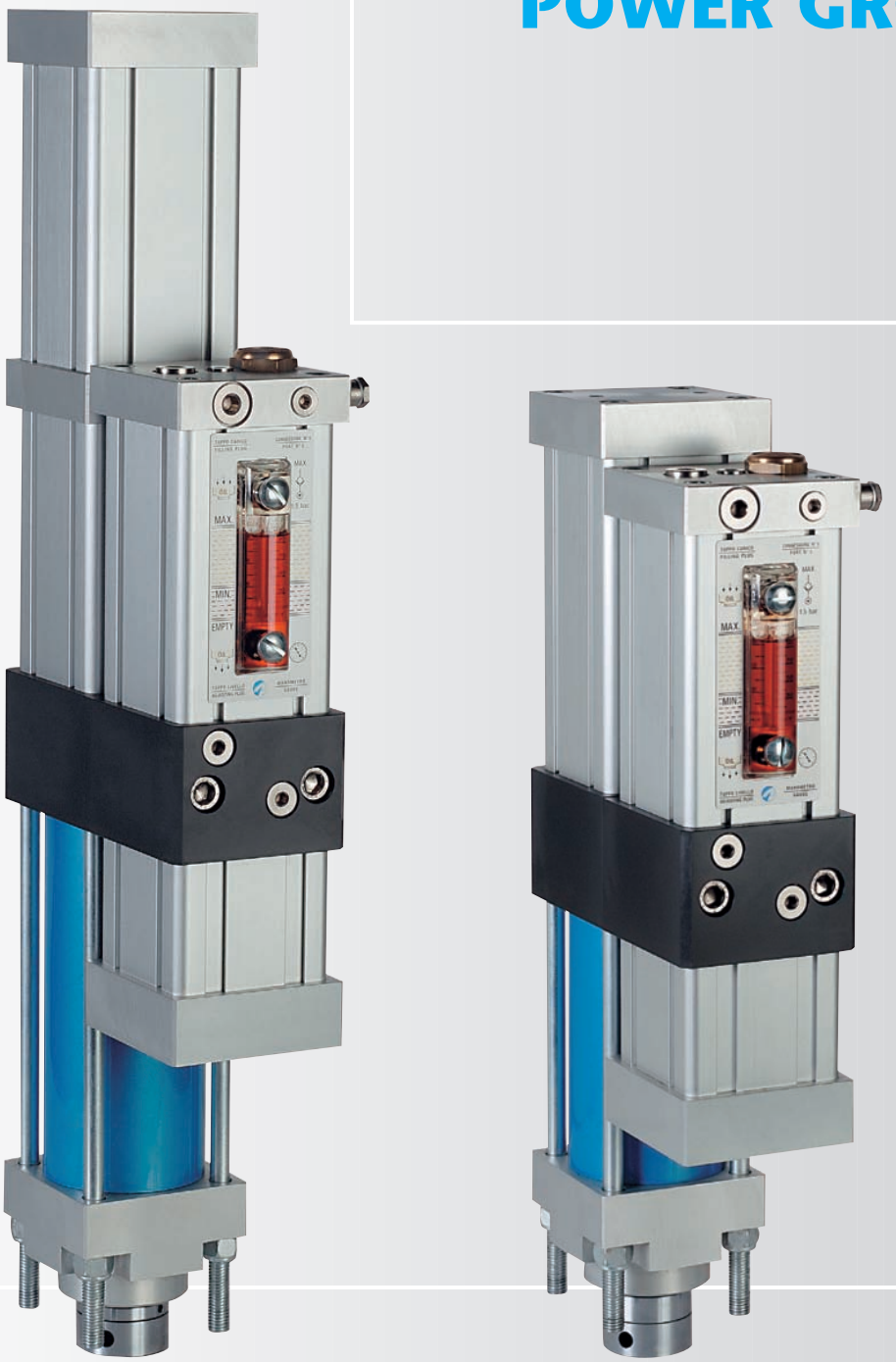
PK³

GRUPPI DI POTENZA
POWER GROUPS



PATENTED

Alfamatic



GRUPPI DI POTENZA SERIE PK³
POWER GROUPS SERIES PK³

Sono unità pneumoidrauliche che utilizzano l'aria compressa come fluido motore, sono costituite da tre elementi integrati:

- Un cilindro pneumatico per la corsa di avvicinamento
- Un moltiplicatore pneumoidraulico per la corsa di lavoro
- Una valvola per il controllo di portata e pressione del fluido idraulico.

Le unità PK³ sono il risultato di una evoluzione tecnologica in grado di sviluppare performance funzionali e applicative non realizzabili dai comuni sistemi oleopneumatici oggi presenti sul mercato.

Un concetto innovativo in grado di sostituire sistemi pneumatici-idraulici ed elettrici su macchine o linee automatiche dove viene richiesta velocità, forza applicata, controllo e precisione del ciclo produttivo.

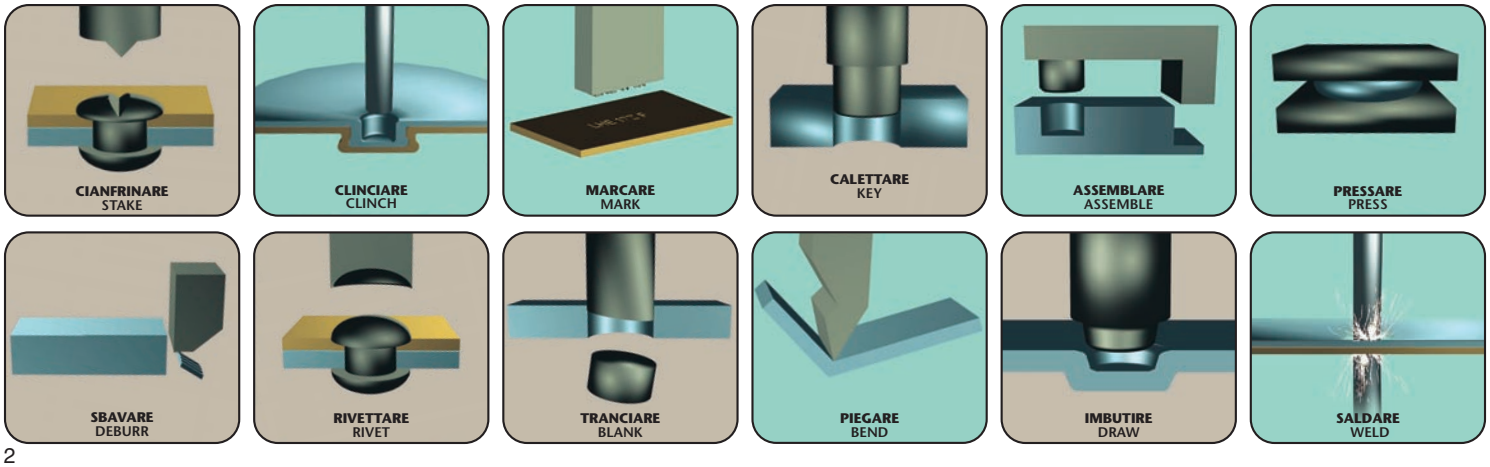
These units are driven by compressed air, and consist of three integrated sections:

- A pneumatic cylinder for the approach stroke
- A hydro-pneumatic intensifier for the power stroke
- A valve to control the flow rate and pressure of the hydraulic fluid.

The PK³ design is the result of technological evolution which enables them to outperform other hydro-pneumatic systems currently on the market.

Their innovative concept allows these units to replace pneumatic, hydraulic and electrical systems on stand alone machines or automated lines, where speed, force, cycle control and accuracy are required.

12 MODELLI STANDARD – 30 VERSIONI PER:
12 STANDARD MODELS – 30 VERSIONS TO:



LA GAMMA
THE RANGE

SERIE / SERIES PK-D

VERSIONE CON MOLTIPLICATORE A DOPPIO STADIO
WITH DOUBLE STAGE BOOSTER


PK-D1


PK-D2


PK-D3


PK-DR

6 TAGLIE
Forze corsa lavoro da: **22 - 37 - 60 - 88 - 150 - 235 kN**
Corse lavoro **da 10 a 100 mm**
Corse totali **da 30 a 400 mm**

6 SIZES
Power stroke forces: **22 - 37 - 60 - 88 - 150 - 235 kN**
Power strokes **from 10 to 100 mm**
Total strokes **from 30 to 400 mm**

SERIE / SERIES PK-S

VERSIONE CON MOLTIPLICATORE A SINGOLO STADIO
WITH SINGLE STAGE BOOSTER


PK-S1

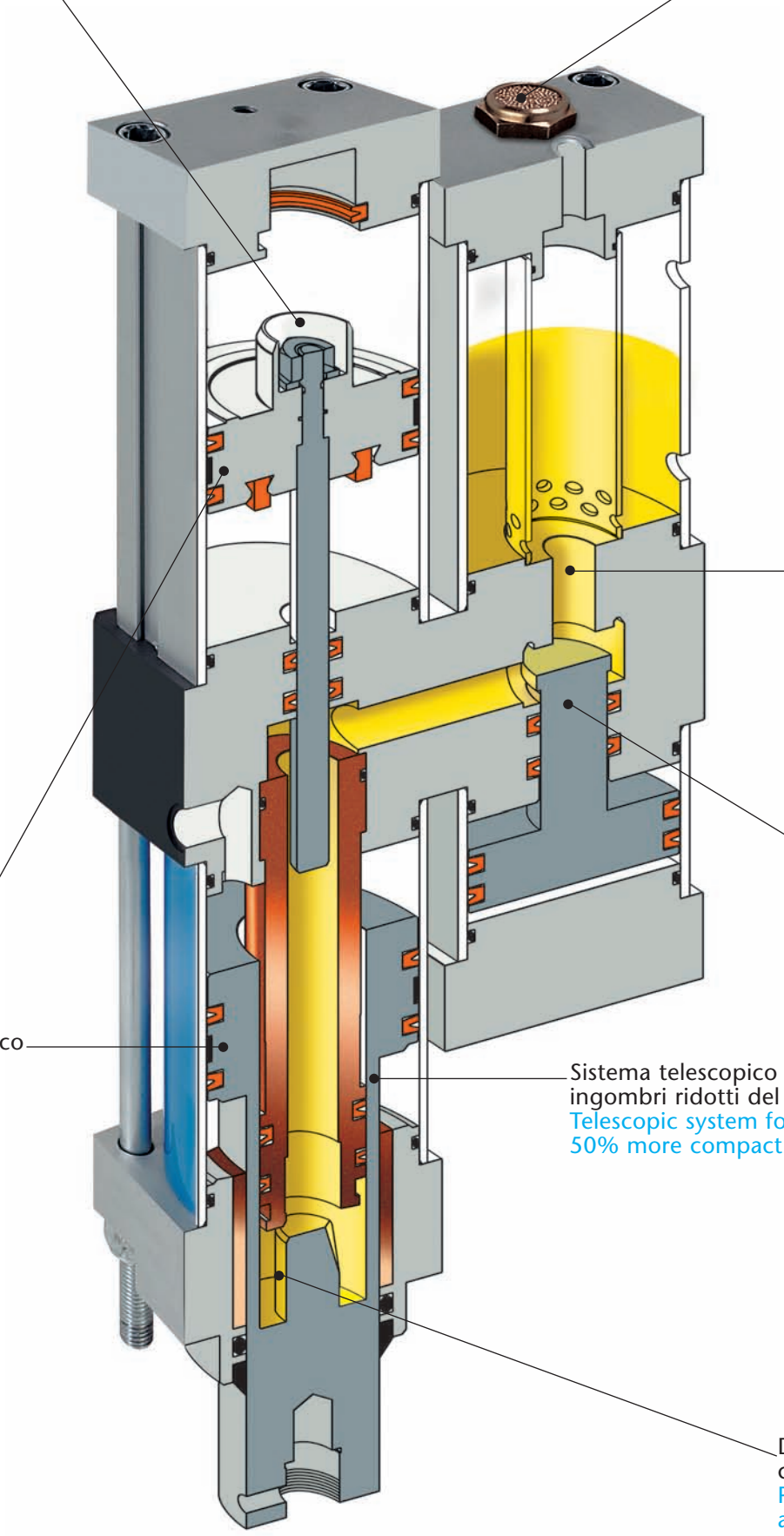

PK-S2


PK-S3

6 TAGLIE
Forze corsa lavoro da: **17 - 35 - 60 - 86 - 157 - 221 kN**
Corse lavoro **da 5 a 25 mm**
Corse totali **da 30 a 400 mm**

6 SIZES
Power stroke forces from: **17 - 35 - 60 - 86 - 157 - 221 kN**
Power strokes **from 5 to 25 mm**
Total strokes **from 30 to 400 mm**

CARATTERISTICHE COSTRUTTIVE UNITÀ PK
TECHNICAL FEATURES SERIES PK



Deceleratore di ritorno moltiplicatore
Return cushion for pressure booster

Valvola di sicurezza serbatoio
Oil reservoir safety valve

Passaggi olio
per grandi portate
High flow oil connection

Gruppo valvola idraulica
Hydraulic valve group

Pistone magnetico
Magnetic piston

Sistema telescopico corsa avvicinamento -
ingombri ridotti del 50% sulla corsa totale
Telescopic system for the approaching stroke -
50% more compact on the total stroke.

Deceleratore idraulico
corsa di ritorno
Return cushion for
approaching stroke section

CARATTERISTICHE FUNZIONALI SERIE PK-D
FUNCTIONAL FEATURES SERIES PK-D

Le caratteristiche tecniche delle unità PK³ permettono di controllare e gestire le diverse fasi del ciclo operativo.

• Un concetto costruttivo studiato per superare i limiti funzionali e applicativi dei sistemi tradizionali oleopneumatici.

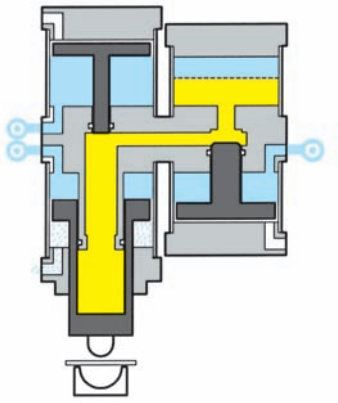
• 7 punti di forza delle unità serie PK-D

Technical features of PK³ units enable operation and monitoring of the different phases of the complete cycle.

• The requirement of the design was to overcome inherent limitations of conventional hydro pneumatic systems.

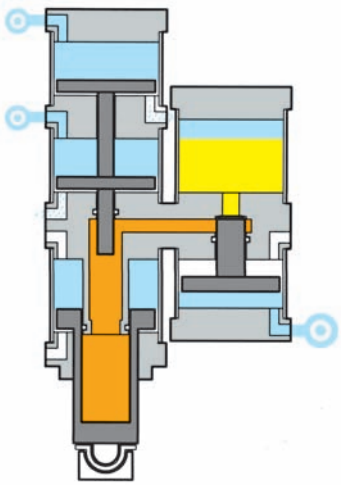
• 7 advantages of PK-D units

Avvicinamento
Veloce a bassa pressione
Approach stroke
Low pressure fast approach



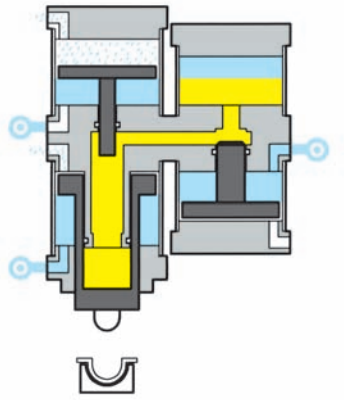
Condotto idraulico dimensionato per le max velocità
Large hydraulic port to allow maximum speed

Corsa lavoro
Con forza pneumo-idraulica
Power stroke
With hydro-pneumatic force



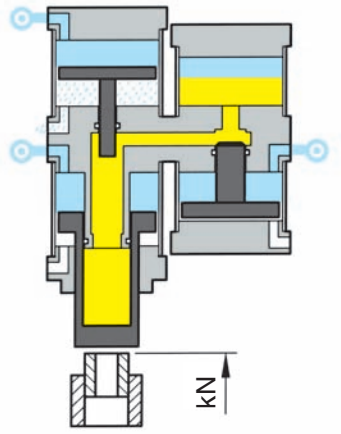
Doppio stadio in spinta, velocità corsa lavoro +40%
Double thrust intensifier gives 40% increase in speed

Corsa di ritorno P.M.S.
Veloce su tutta la corsa pneumatica e idraulica
Return stroke to T.D.C.
Fast throughout both return stages



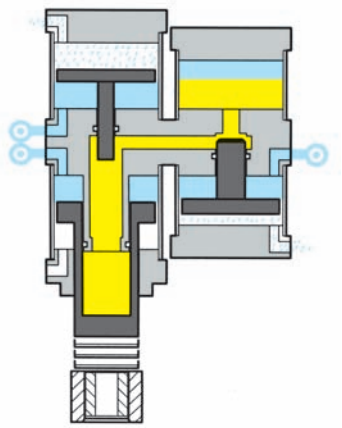
Elimina la doppia velocità sulla corsa di ritorno
Avoids dwell on return stroke

Arresto forza lavoro su valori programmati
Power stroke forces can be adjusted to preset values



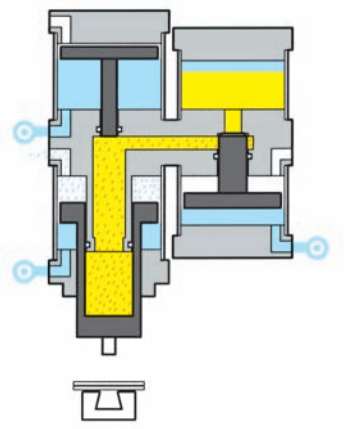
Risposte precise ai segnali degli strumenti di controllo
Control devices can be used to give exact read outs

Ripetizione corsa lavoro
In automatico senza limite di cicli
Repeat power stroke
Power stroke can be repeated as many times as required



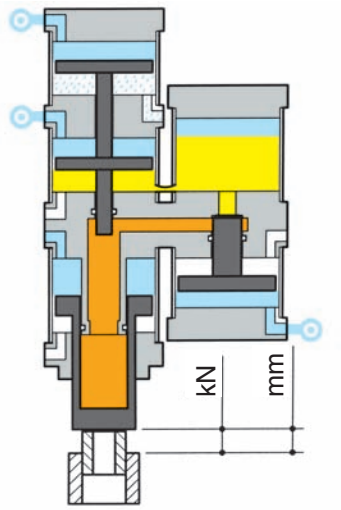
La funzione coordinata moltiplicatore/valvola esclude problemi di emulsione
The integrated intensifier/valve avoids aeration problems

Regolare il P.M.S.
Controllare l'area di lavoro
TDC adjustment
The TDC position can be set in any position



La valvola chiude il condotto e ferma idraulicamente il cilindro
The valve closes the hydraulic port and stops cylinder movement by hydraulic lock

Unità PK-DR con controllo idraulico
Units PK-DR with speed control of power stroke

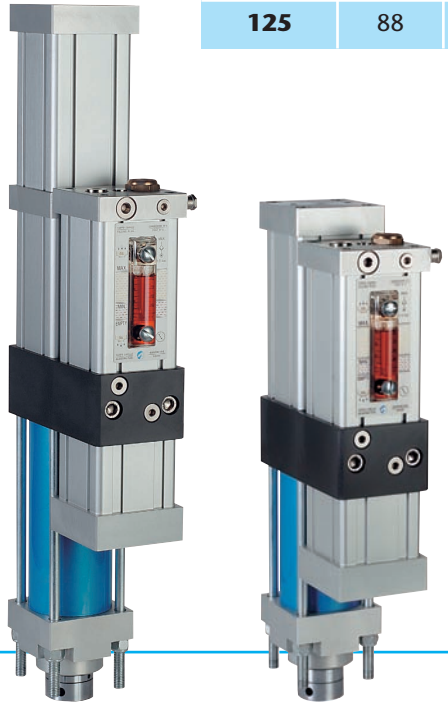


Dove è richiesta uniformità e precisione su corsa e forza lavoro.
Where smoothness and accuracy of the power stroke is required

CARATTERISTICHE COSTRUTTIVE UNITÀ PK
TECHNICAL FEATURES OF PK UNITS

Serie Series	PK-D	PK-DR	PK-S
Taglia Size Ø	kN (6 bar)		
063	22	15,2	17
080	37	24,8	35
100	60	41	60
125	88	58,6	86

Serie Series	PK-D	PK-DR	PK-S
Taglia Size Ø	kN (6 bar)		
160	150	100	157
200	235	156	221





Stadio avvicinamento e lavoro in versione magnetica **Both approach and power stroke pistons are magnetic**

SERBATOIO COMPENSATORE SERIE PK-D, PK-DR, PK-S
COMPENSATOR OIL RESERVOIR PK-D, PK-DR, PK-S





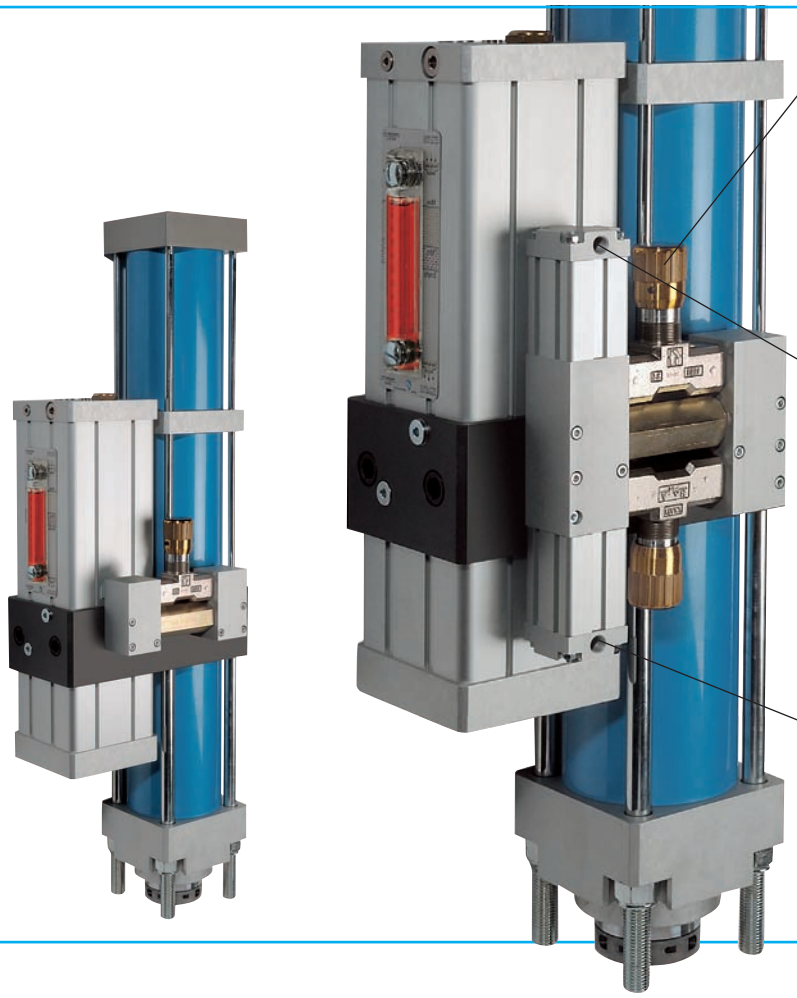
Connessioni carico olio
Filling port

Indicatore di livello olio
Oil level indicator

Connessione di drenaggio olio (autolivellante)
Self-leveling connection avoids overfilling

Connessione per manometro
Pressure gauge – transducer port

UNITÀ PK-DR CON CONTROLLO IDRAULICO DELLA CORSA LAVORO
POWER UNIT PK-DR UNIT WITH HYDRAULIC SPEED CONTROL OF POWER STROKE



Regolatore di velocità idraulico della corsa di lavoro
One way power stroke speed regulator

Valvola di arresto della corsa di lavoro (a comando pneumatico)
Mantiene l'unità in spinta su valori di corsa/forza programmati
Stop valve (pneumatic driven)
Keeps unit thrust on preset stroke/force values

Valvola di rapido-skip a comando pneumatico
Due velocità impostate
Skip valve (pneumatic driven)
Two preset speeds

PK-D3 - PK-S3 PER IMPIEGO STATICO E DINAMICO
PK-D3 - PK-S3 FOR STATIC AND MOVING APPLICATIONS



Indicatore di livello olio
Oil level indicator

Connessione per manometro/ trasduttore di pressione
Pressure gauge / transducer port

INDICE INDEX

Le versioni PK-DR **p. 8**
Versions PK-DR

Le performances
Performance
PK-D **p. 10**
PK-DR **p. 12**
PK-S **p. 14**

Gli accessori **p. 16**
Accessories
PK-D, PK-DR, PK-S

Le dimensioni
Dimensions
PK-D **p. 18**
PK-DR **p. 21**
PK-S **p. 22**

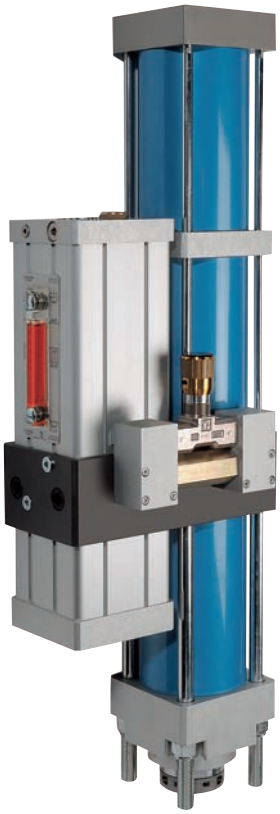
Le dimensioni degli accessori **p. 24**
Accessory Dimensions

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L'impiantistica **p. 30**
Circuits

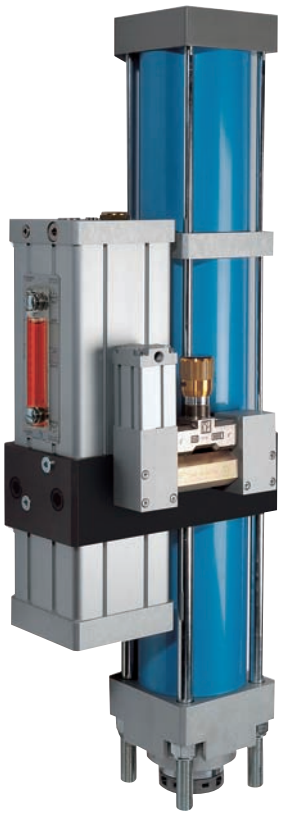
LE VERSIONI DELLA SERIE PK-DR
THE VERSIONS OF THE SERIES PK-DR

PK-DR-R



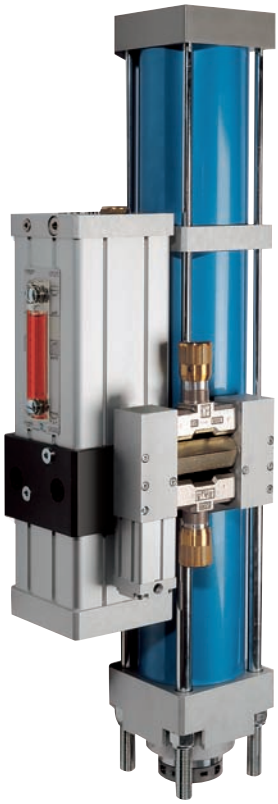
Controllo della velocità su tutta la corsa lavoro.
Speed control of the whole power stroke.

PK-DR-T



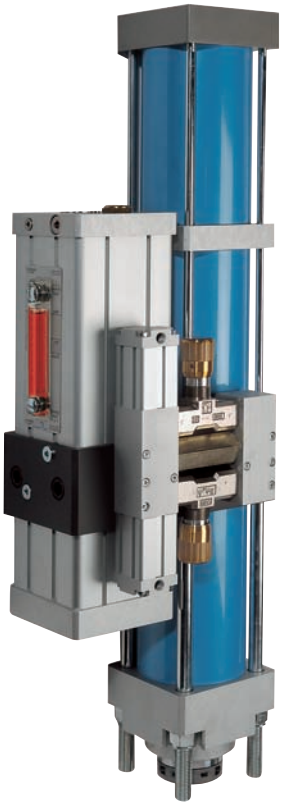
Controllo della velocità corsa lavoro con stop. Per mantenere l'unità in spinta su valori di corsa/forza programmati.
Speed control of power stroke with stop. To keep unit thrust on preset stroke/force values.

PK-DR-D



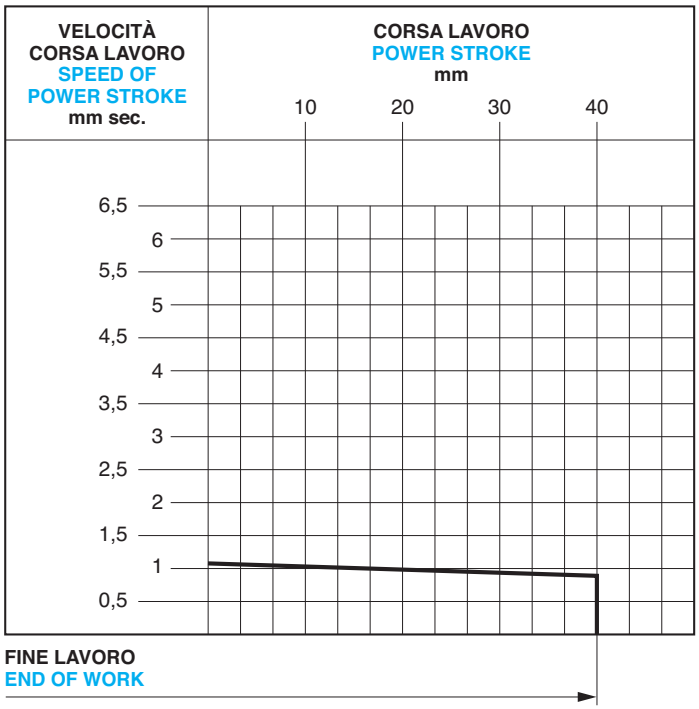
Doppia regolazione della velocità corsa lavoro, programmabile con comando (SKIP).
Double adjustment of power stroke speed, preset with control (SKIP).

PK-DR-K

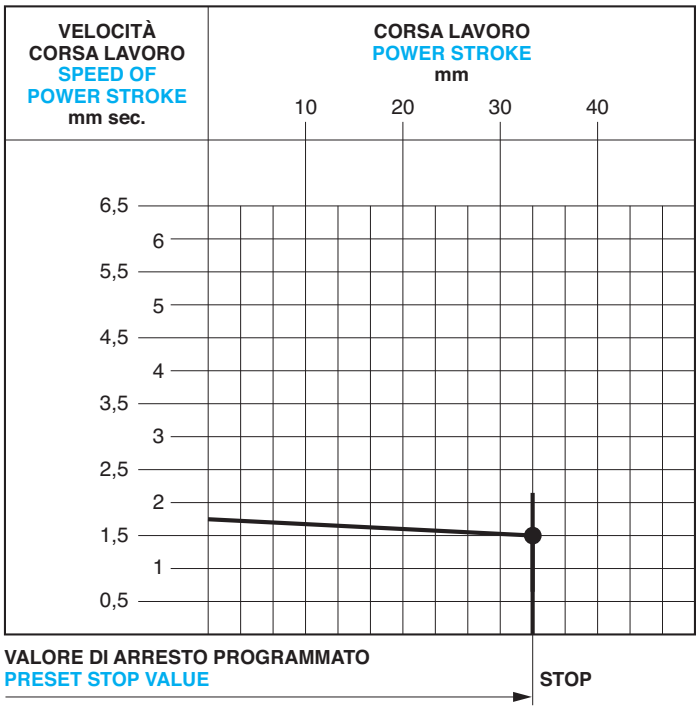


Doppia regolazione della velocità corsa lavoro con SKIP e STOP su valori programmati.
Double adjustment of power stroke speed with SKIP and STOP on preset values.

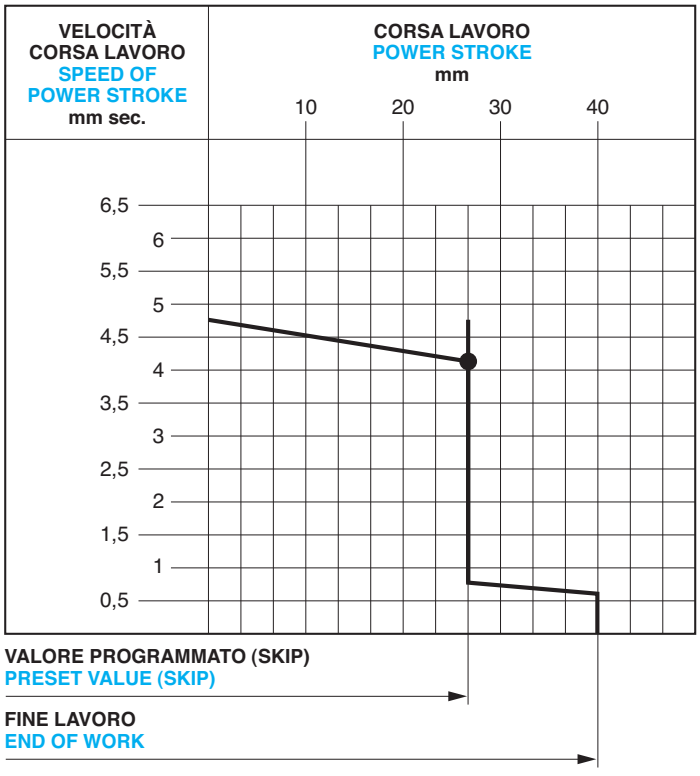
PK-DR-R



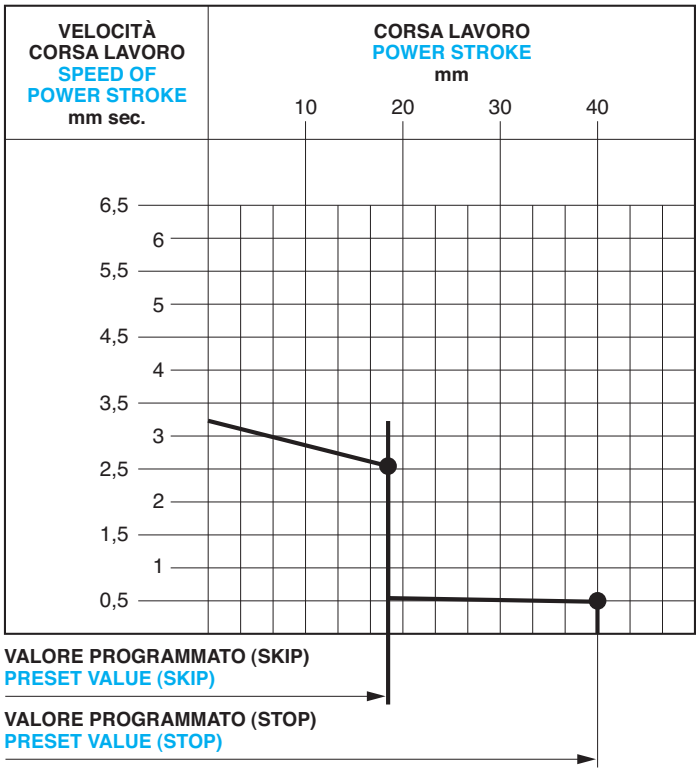
PK-DR-T



PK-DR-D



PK-DR-K

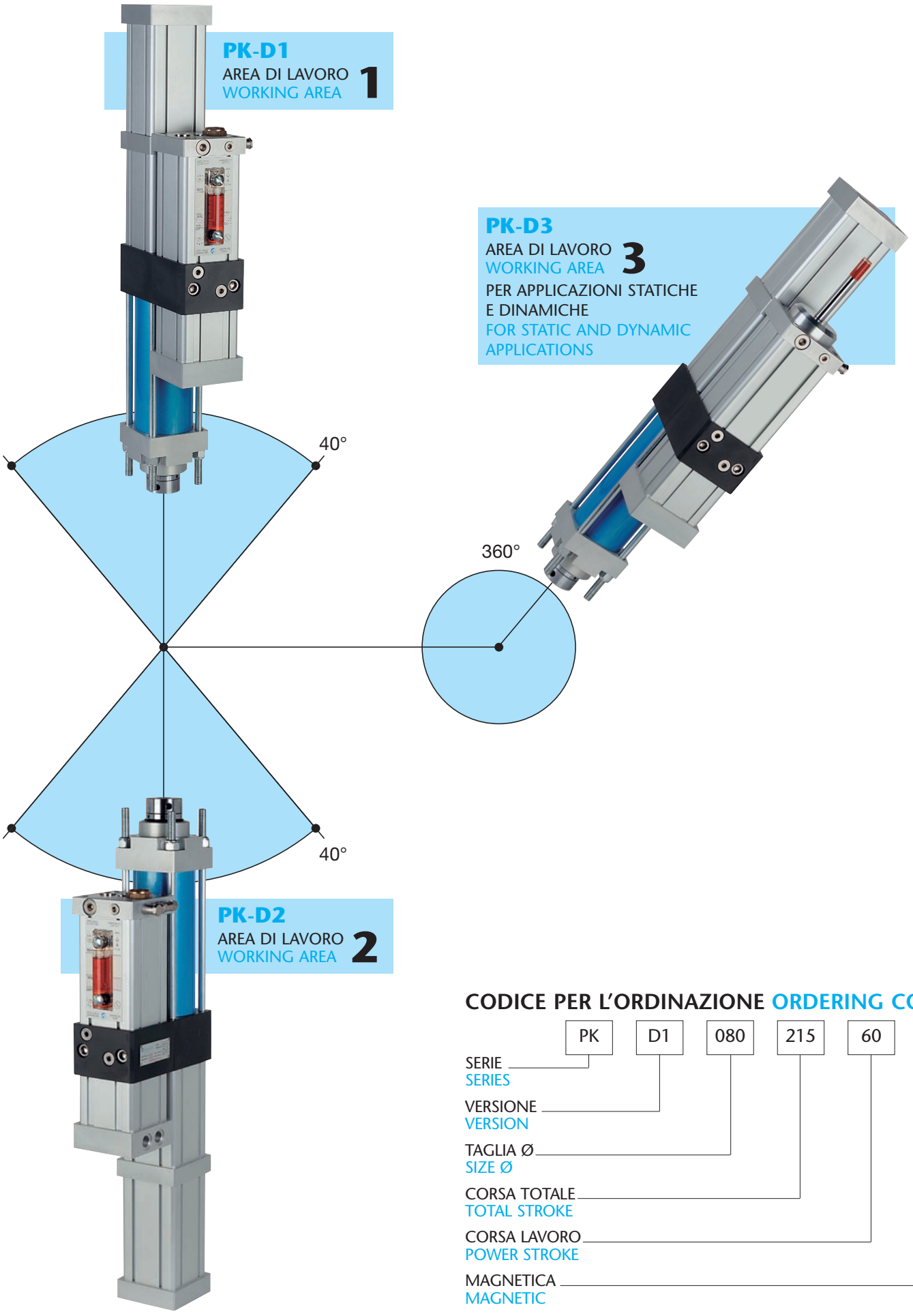


CODICE PER L'ORDINAZIONE ORDERING CODE

PK	DR T	100	165	40	M

- SERIE / SERIES
- VERSIONE / VERSION
- TAGLIA Ø / SIZE Ø
- CORSA TOTALE / TOTAL STROKE
- CORSA LAVORO / POWER STROKE
- MAGNETICA / MAGNETIC

LE PERFORMANCES DELLA SERIE PK-D
PERFORMANCES OF SERIES PK-D



CODICE PER L'ORDINAZIONE ORDERING CODE

PK	D1	080	215	60	M

SERIE
SERIES

VERSIONE
VERSION

TAGLIA Ø
SIZE Ø

CORSA TOTALE
TOTAL STROKE

CORSA LAVORO
POWER STROKE

MAGNETICA
MAGNETIC

Fluido motore: aria filtrata e lubrificata.
Pressione di lavoro: max 6 bar - temperatura -30°C +80°C.

Power source: filtered and lubricated compressed air
Operating pressure: max 6 bar - temperature range -30°C +80°C.

LE FORZE CON ALIMENTAZIONE A 6 BAR FORCES WITH 6 BAR AIR SUPPLY

PK-D Taglia Size Ø		063	080	100	125	160	200
Corsa lavoro Power stroke	daN	2200	3700	6000	8800	15000	23500
Corsa avvicinamento Approach stroke	daN	160	250	450	520	830	1260
Corsa ritorno Return stroke	daN	100	160	310	350	570	1020

Le forze di lavoro e di avvicinamento sono proporzionali alle pressioni impostate.
Es. PK-D 100 = daN 6000 P.a 4 bar = $\frac{4}{6}$ 6000 = daN 4000

Power and approach forces are proportional to input pressure.
Example PK-D 100 = daN 6000 I.p at 4 bar = $\frac{4}{6}$ 6000 = daN 4000

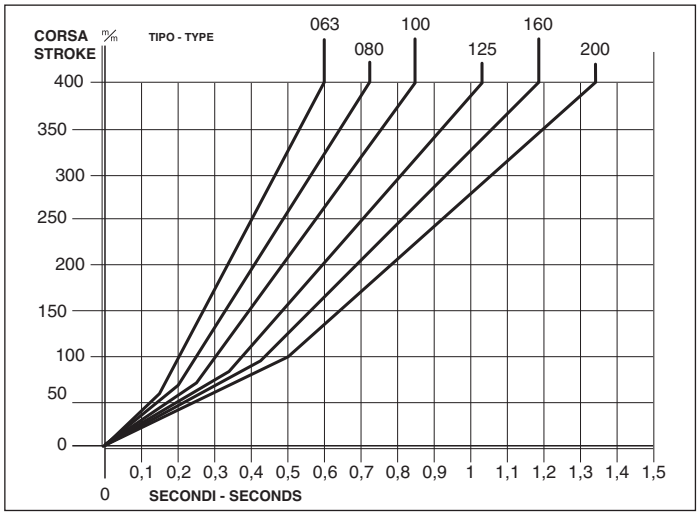
LE CORSE IN VERSIONE STANDARD PK-D1-D2-D3 STROKES STANDARD VERSIONS

Corsa totale mm Total stroke mm	Corsa lavoro mm Power stroke mm					
	063	080	100	125	160	200
30	10-20-30	10-20-30	10-20-30			
60	10÷30	10÷30	10÷40			
115	10÷40	10÷40	10÷50			
165	10÷50	10÷50	10÷60			
215	10÷60	10÷60	10÷70			
300	10÷70	10÷80	10÷90			
400	10÷90	10÷90	10÷100			

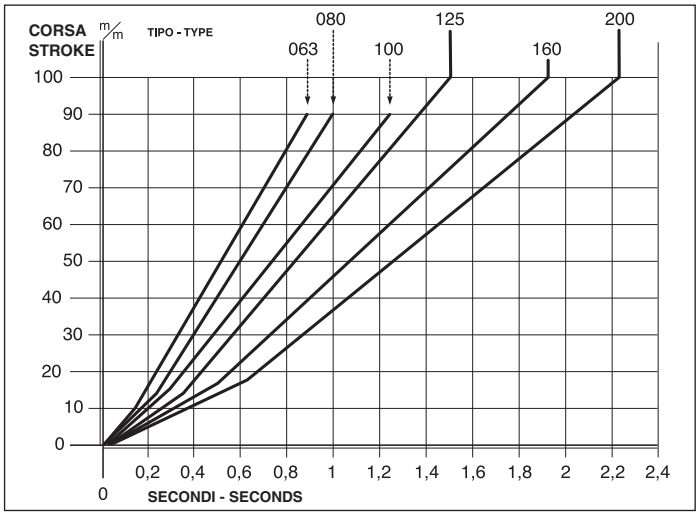
I CONSUMI CONSUMPTION		6 bar	063	080	100	125	160	200
Corsa avvicinamento Approach stroke	10 mm	nL	0,30	0,50	0,99	1,25	1,90	3,07
Corsa lavoro Power stroke	1 mm	nL	0,39	0,64	1,02	1,44	2,56	4,02

I valori riportati in tabella si intendono per ciclo completo. Values stated on table are for a complete cycle.

VELOCITÀ CORSA AVVICINAMENTO/RITORNO
SPEED OF APPROACH/RETURN STROKE



VELOCITÀ CORSA LAVORO
SPEED OF POWER STROKE



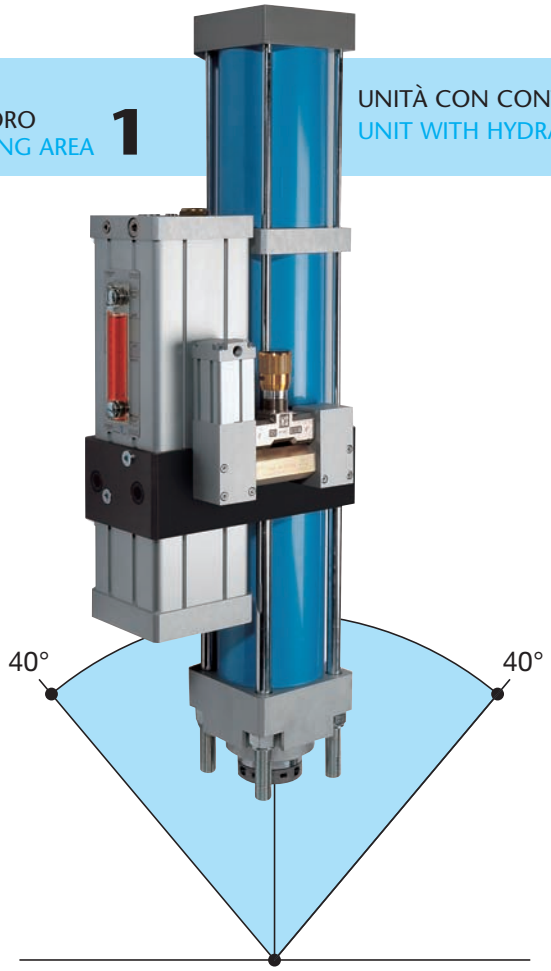
ESEMPIO PER DETERMINARE IL TEMPO CICLO – UNITÀ PK-D 080
Corsa avvicinamento 100 mm (A) - Corsa lavoro 20 mm (B) - Corsa ritorno 120 mm (C) = A+B+C = 0,25 + 0,30 + 0,30 = 0,85 sec.

EXAMPLE TO CALCULATE THE CYCLE TIME – UNIT PK-D 080
Approach stroke 100 mm (A) - Power stroke 20 mm (B) - Return stroke 120 mm (C) = A+B+C = 0,25 + 0,30 + 0,30 = 0,85 sec.

LE PERFORMANCES DELLA SERIE PK-DR
PERFORMANCES OF SERIES PK-DR

PK-DR...
AREA DI LAVORO
ONLY WORKING AREA **1**

UNITÀ CON CONTROLLO IDRAULICO DELLA CORSA LAVORO
UNIT WITH HYDRAULIC CONTROL VALVE OF POWER STROKE



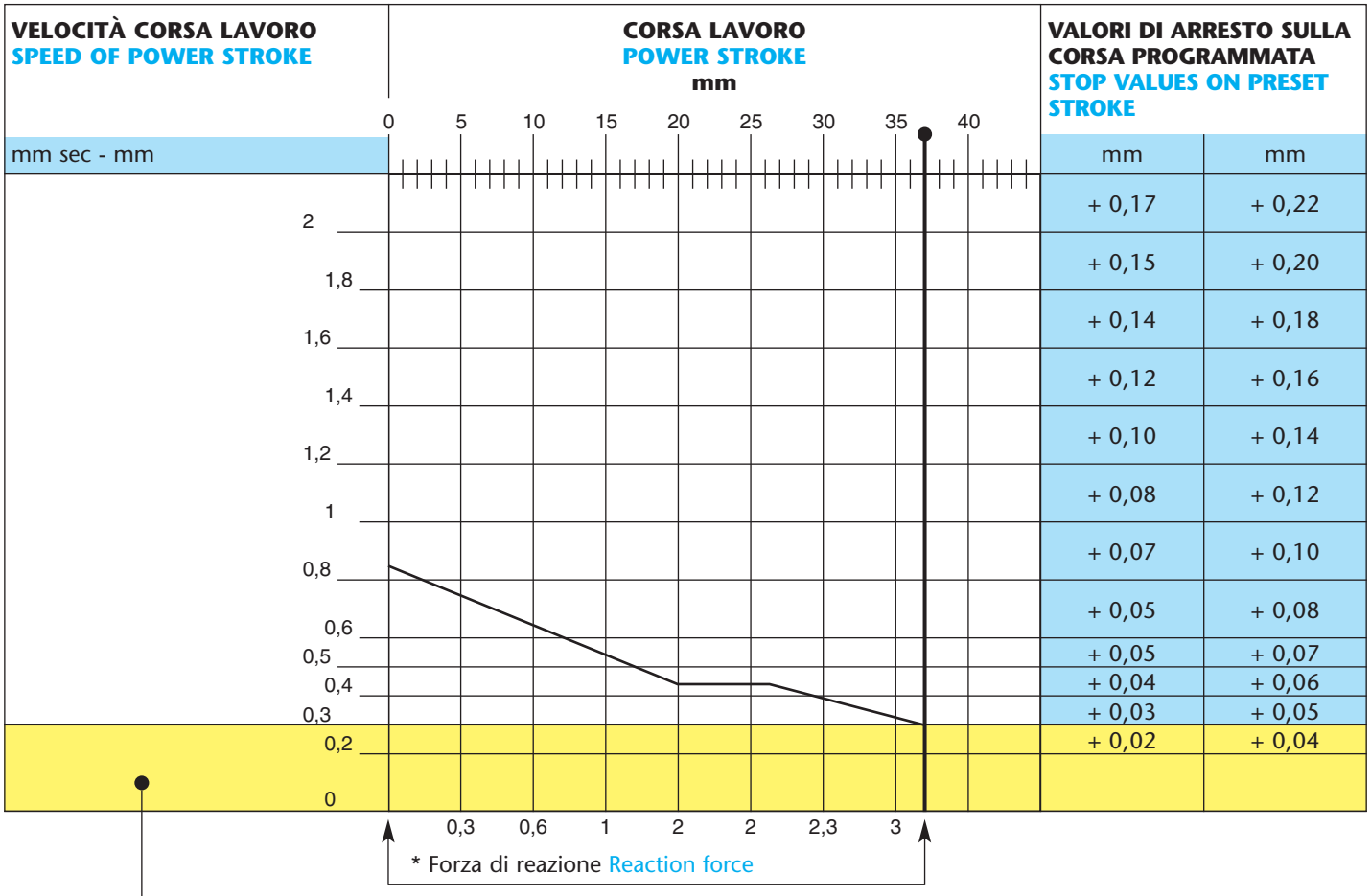
LE FORZE FORCES		CORSA LAVORO POWER STROKE					
PK-DR Taglia Size Ø		**063**	**080**	**100**	**125**	**160**	**200**
Pressione Pressure	**bar**	**Forza Force daN**					
	3	350	620	1100	1480	2500	3900
	4	750	1240	2100	2940	5000	7800
	5	1130	1860	3100	4400	7500	11700
	6	1520	2480	4100	5860	10000	15600
Corsa avvicinamento Approach stroke	6	160	250	450	520	830	1260
Corsa ritorno Return stroke	6	100	160	310	350	570	1020

I CONSUMI CONSUMPTION	**6 bar**	**063**	**080**	**100**	**125**	**160**	**200**
Corsa avvicinamento Approach stroke	10 mm nL	0,30	0,50	0,99	1,25	1,90	3,07
Corsa lavoro Power stroke	1 mm nL	0,39	0,64	1,02	1,44	2,56	4,02

Fluido motore: aria filtrata e lubrificata.
Pressione di lavoro: max 6 bar - temperatura -30°C +80°C.

Power source: filtered and lubricated compressed air.
Operating pressure: max 6 bar – temperature range -30°C +80°C.

LE PERFORMANCE DEL CONTROLLO IDRAULICO
PERFORMANCES OF HYDRAULIC CONTROL



VALORI DI ARRESTO SULLA CORSA PROGRAMMATA STOP VALUES ON PRESET STROKE	
mm	mm
+ 0,17	+ 0,22
+ 0,15	+ 0,20
+ 0,14	+ 0,18
+ 0,12	+ 0,16
+ 0,10	+ 0,14
+ 0,08	+ 0,12
+ 0,07	+ 0,10
+ 0,05	+ 0,08
+ 0,05	+ 0,07
+ 0,04	+ 0,06
+ 0,03	+ 0,05
+ 0,02	+ 0,04

LA VELOCITÀ Si rileva sul valore di arresto della corsa programmata P.M.I.
SPEED It is detected on stop value of preset stroke B.D.C.

*La velocità cambia al variare della forza di reazione. *Speed changes when reaction force changes.

Esempio di programmazione della corsa lavoro How to preset power stroke

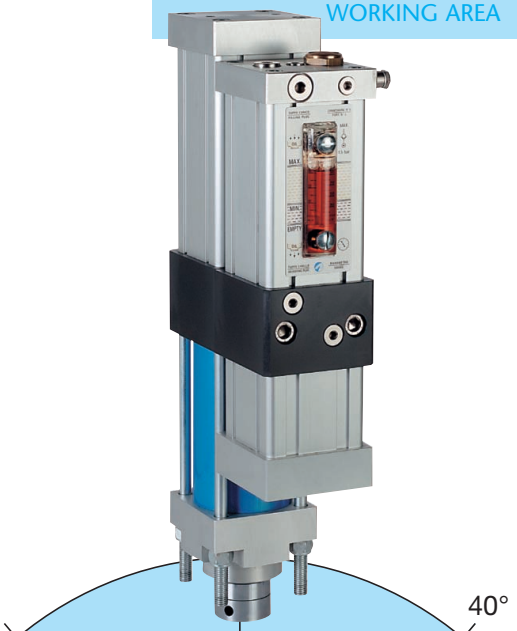
P.M.I./B.D.C. mm	Velocità Speed mm sec.	Valore programmato Preset value	Tolleranza Tolerance mm
37	0,3	36,97	37 ± 0,01

LE CORSE
IN VERSIONE STANDARD
PK-DR
STROKES
STANDARD VERSIONS

Taglia Size Ø	063	080	100	125	160	200
Corsa totale mm Total stroke mm	Corsa lavoro mm Power stroke mm					
30	10-20	10-20-30	10-20-30			
60	10÷30		10÷40			
115	10÷40		10÷50			
165	10 ÷ 50					
215						
300						
400						

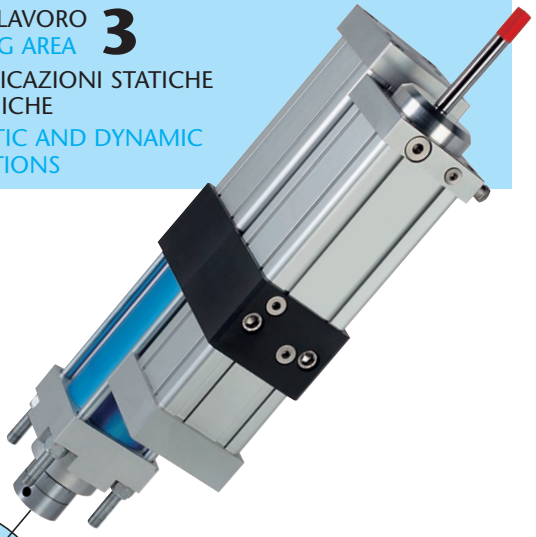
LE PERFORMANCES DELLA SERIE PK-S
PERFORMANCES OF SERIES PK-S

PK-S1
AREA DI LAVORO **1**
WORKING AREA



40°

PK-S3
AREA DI LAVORO **3**
WORKING AREA
PER APPLICAZIONI STATICHE E DINAMICHE
FOR STATIC AND DYNAMIC APPLICATIONS



360°

40°



PK-S2
AREA DI LAVORO **2**
WORKING AREA

CODICE PER L'ORDINAZIONE ORDERING CODE

PK	S1	080	215	15	M

SERIE
SERIES

VERSIONE
VERSION

TAGLIA Ø
SIZE Ø

CORSA TOTALE
TOTAL STROKE

CORSA LAVORO
POWER STROKE

MAGNETICA
MAGNETIC

Fluido motore: aria filtrata e lubrificata.
Pressione di lavoro: max 6 bar - temperatura -30°C +80°C.

filtered and lubricated compressed air.
Operating pressare: max 6 bar - temperature range -30°C +80°C.

LE FORZE CON ALIMENTAZIONE A 6 BAR FORCES WITH 6 BAR AIR SUPPLY

PK-S Taglia Size Ø		063	080	100	125	160	200
Corsa lavoro Power stroke	daN	1700	3500	6000	8600	15700	22100
Corsa avvicinamento Approach stroke	daN	160	250	450	520	830	1260
Corsa ritorno Return stroke	daN	100	160	310	350	570	1020

Le forze di lavoro e di avvicinamento sono proporzionali alle pressioni impostate.
Es. PK-S 100 = daN 6000 P.a 4 bar = $\frac{4}{6}$ 6000 = daN 4000

Power and approach forces are proportional to input pressure.
Example PK-S 100 = daN 6000 I.p at 4 bar = $\frac{4}{6}$ 6000 = daN 4000

LE CORSE IN VERSIONE STANDARD PK-S1-S2-S3 STROKES STANDARD VERSIONS

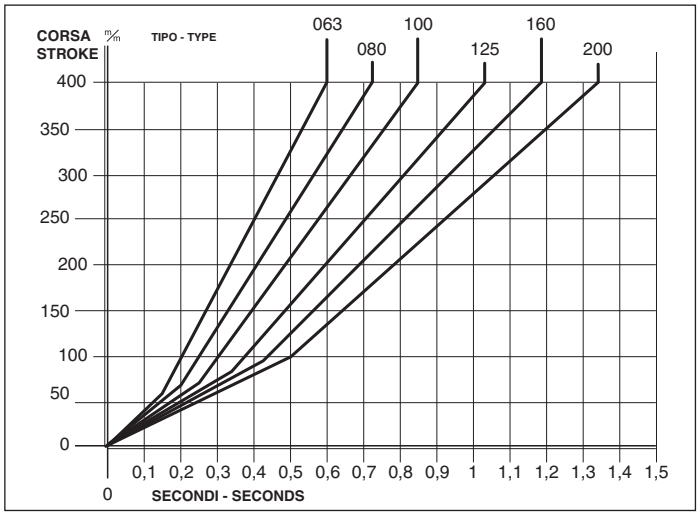
Taglia Size Ø	063	080	100	125	160	200
Corsa totale mm Total stroke mm	Corsa lavoro mm Power stroke mm					
30	5-10	5 - 10 - 15				
60		5 - 10 - 15				
115		5 - 10 - 15 - 20				
165		5 - 10 - 15 - 20 - 25				
215						
300						
400						

I CONSUMI CONSUMPTION

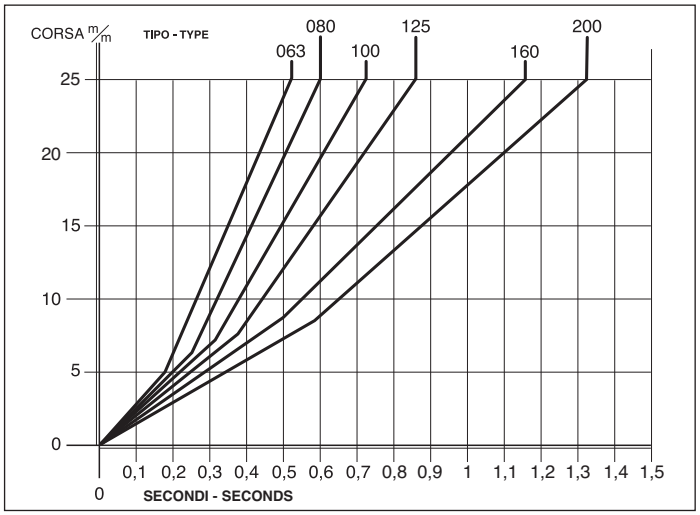
		6 bar	063	080	100	125	160	200
Corsa avvicinamento Approach stroke	10 mm	nL	0,30	0,50	0,99	1,25	1,90	3,07
Corsa lavoro Power stroke	1 mm	nL	0,38	0,79	1,36	1,98	3,62	5,13

I valori riportati in tabella si intendono per ciclo completo. Values stated on table are for a complete cycle.

VELOCITÀ CORSA AVVICINAMENTO/RITORNO
SPEED OF APPROACHING/RETURN STROKE



VELOCITÀ CORSA LAVORO
SPEED OF POWER STROKE



ESEMPIO PER DETERMINARE IL TEMPO CICLO – UNITÀ PK-S 080
Corsa avvicinamento 85 mm - Corsa lavoro 15 mm - Corsa ritorno 100 mm = 0,2 + 0,35 + 0,25 = 0,8 sec.

EXAMPLE TO CALCULATE THE CYCLE TIME – UNIT PK-S 080
Approaching stroke 85 mm - Power stroke 15 mm - Return stroke 100 mm = 0,2 + 0,35 + 0,25 = 0,8 sec.

GLI ACCESSORI SERIE PK-D, PK-DR, PK-S
ACCESSORIES SERIES PK-D, PK-DR, PK-S



Cod. HE
Indicatore di livello elettrico.
Code SN
Electric oil level indicator.



Cod. RS
Mozzo portastampi.
Code RS
Die holder pad.



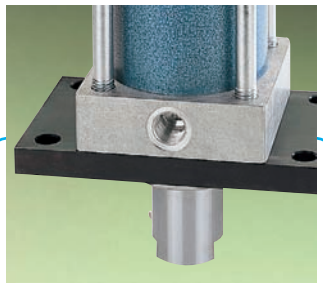
Cod. IR
Mozzo portastampi a innesto radiale.
Code IR
Die holder pad with radial location.



Cod. RP
Gruppo antirotazione completo di staffa, stelo antirotante, boccola di guida, coperchio boccola.
Code RP
Anti-rotation group complete with bracket, anti-rotation rod, guide bushing and bushing cap.



Cod. CS
Codulo per stelo.
Code CS
Rod end.



Cod. FG - FP
Flangia per il fissaggio delle unità.
Code FG - FP
Flange for mounting of units.

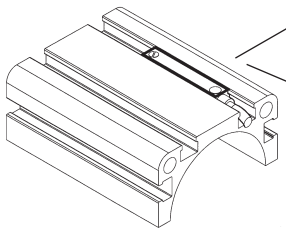
Connettore bipolare orientabile IP65 - Alimentazione AC/DC - Contatto N.A. - Potenza max contatti 1W - Tensione max 150 V in AC=220V in DC.
IP65 connector – Voltage AC/DC - Contact NO – Max power contact 1W – Max voltage 150V AC - 220V DC.



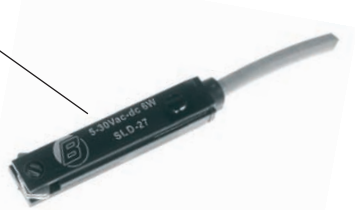
FINECORSA ELETTRICI ED ELETTRONICI
ELECTRICAL AND ELECTRONIC SENSORS

SENSORE TIPO SR
per inserimento radiale in cava a T
SENSOR TYPE SR
for radial insertion in switch groove

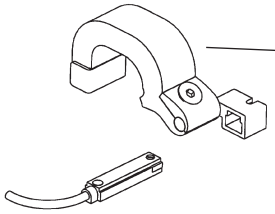




SENSORE TIPO SL
per inserimento longitudinale
SENSOR TYPE SL
for longitudinal insertion



Staffa per sensore
TIPO SL
Bracket for sensor
TYPE SL

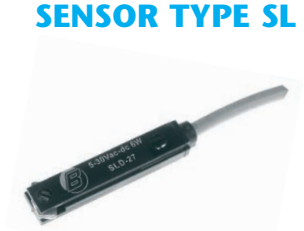


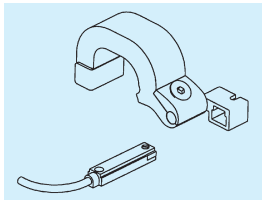


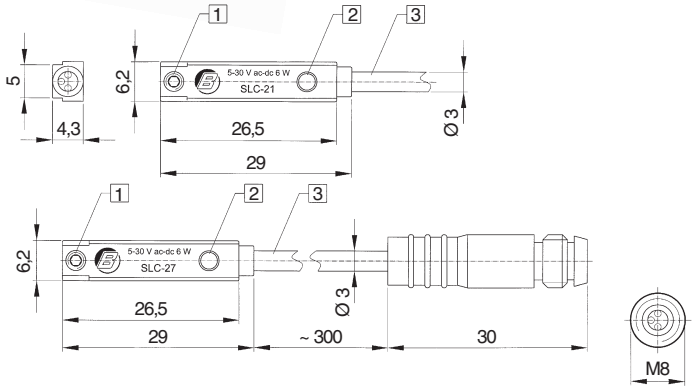
FINECORSA ELETTRICI ED ELETTRONICI
ELECTRICAL AND ELECTRONIC SWITCHES

Finecorsa magnetici per il rilevamento senza contatto delle posizioni dello stelo.
Magnetic sensors for non contact detection of piston rod position.

SENSORE TIPO SL
SENSOR TYPE SL

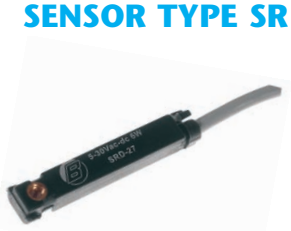


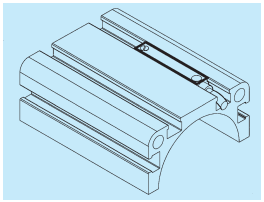


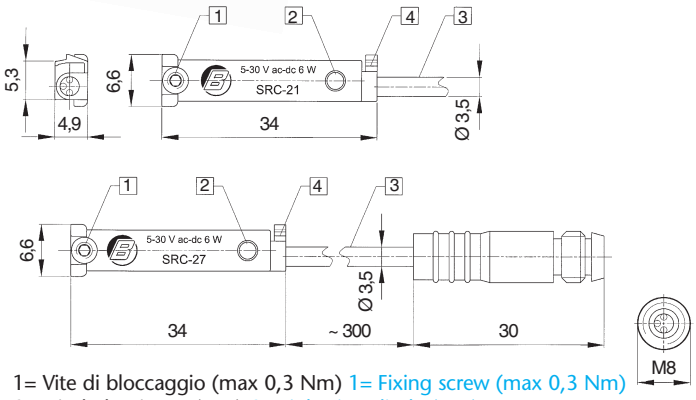


1= Vite di bloccaggio (max 0,3 Nm) 1= Fixing screw (max 0,3 Nm)
2= Diodo luminoso (LED) 2= Lightning diode (LED)
3= Versione connessione elettrica 3= Type of electric connection

SENSORE TIPO SR
SENSOR TYPE SR



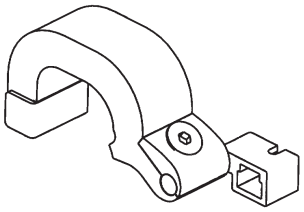




1= Vite di bloccaggio (max 0,3 Nm) 1= Fixing screw (max 0,3 Nm)
2= Diodo luminoso (LED) 2= Lightning diode (LED)
3= Versione connessione elettrica 3= Type of electric connection
4= Clip posteriore 4= Rear clip

STAFFA PER SENSORE SL
BRACKET FOR SENSOR SL

UNITÀ UNIT PK-D
UNITÀ UNIT PK-S
UNITÀ UNIT PK-DR



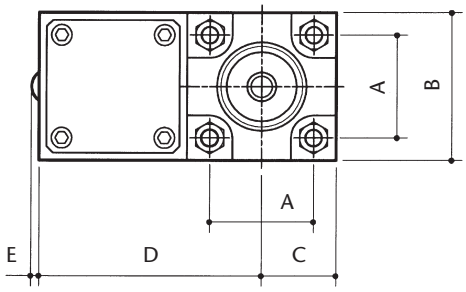
Taglia Size	Cod. staffa Code Bracket	Taglia Size	Cod. staffa Bracket Code
063	SL-81	125	ST-60
080	SL-81	160	ST-52
100	SL-81S	200	ST-52

		Contatto Reed 2 poli N.O. 2 poles Reed contact N.O.			**Contatto Reed 3 poli N.O. 3 poles Reed contact N.O.**		**Magneto-resistivo PNP - N.O. Magneto resistive PNP N.O.**	
Codice	**Code**	SLC-61 SRC-61	SLC-21 SRC-21	SLC-27 SRC-27	SLD-21 SRD-21	SLD-27 SRD-27	SLN-21 SRN-21	SLN-27 SRN-27
Versione	**Version**	Con cavo With cable	Con cavo With cable	Connett. M8 Connect. M8	Con cavo With cable	Connettori M8 Connector M8	Con cavo With cable	Connettori M8 Connector M8
Tensione di esercizio	Working tension	5÷230 V-ac/dc	5÷30 V-dc/ac		5÷24 V-ac/dc		6÷30 V-dc	
Corrente di commutaz.	Commutating current	0,2 A	max 0,2 A		max 0,25 A		max 0,20 A	
Potenza (carico ohmico)	Power (ohmic loading)	6 W	max 6 W					
Tempo commutazione	Commutating time	0,5 ms	0,5 ms		0,5 ms		0,8 µs	
Tempo di rilascio	Release time	0,1 ms	0,1 ms		0,1 ms		0,3 µs	
Vita elettrica	Electric life	10^7 impulsi 10^7 contacts					10^9 impulsi 10^9 contacts	
Frequenza di lavoro	Working frequency	max 400 Hz	max 400 Hz				max 200 Hz	
Caduta di tensione	Voltage fall	max 3V	max 3V		–		max 1V	
Grado di protezione	Protection	IP 67	IP 67		IP 67		IP 67	
Temperatura di lavoro	Working temperature	–10°C+70°C	–10°C+70°C					
Lunghezza cavo	Cable length m	2,5	2,5	0,3	2,5	0,3	2,5	0,3
Sezione cavo	Cable section mm²	2x0,14	2x0,14		3x0,14		3x0,14	
Protezione contro inversione di polarità	Protection against polarity reversal	sì yes			sì yes		sì yes	

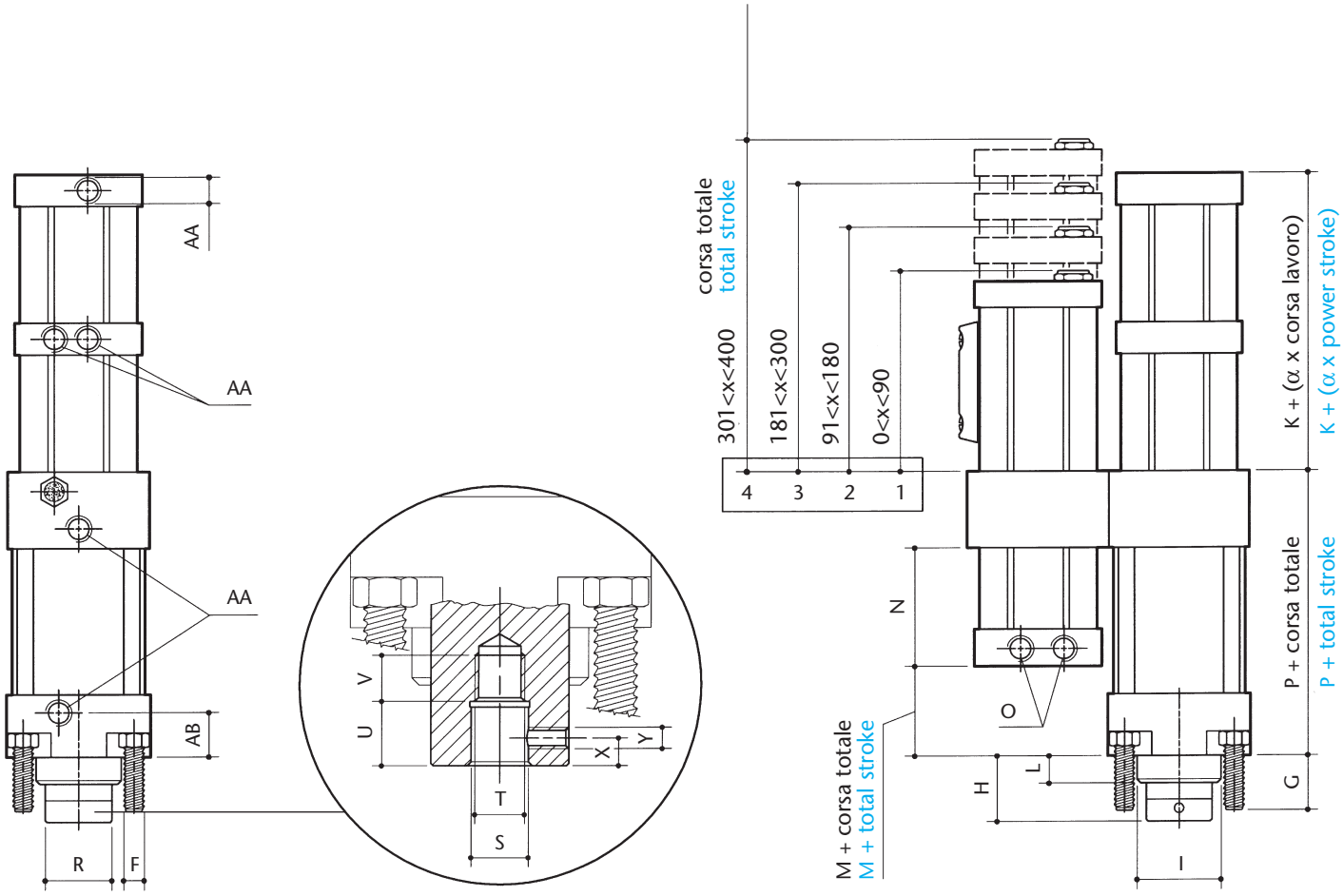
LE CARATTERISTICHE DIMENSIONALI
DIMENSIONAL FEATURES



PK-D1
AREA DI LAVORO
WORKING AREA **1**



L'altezza del serbatoio varia in funzione della corsa totale (x).
Height of oil reservoir changes as a function of total stroke (x).



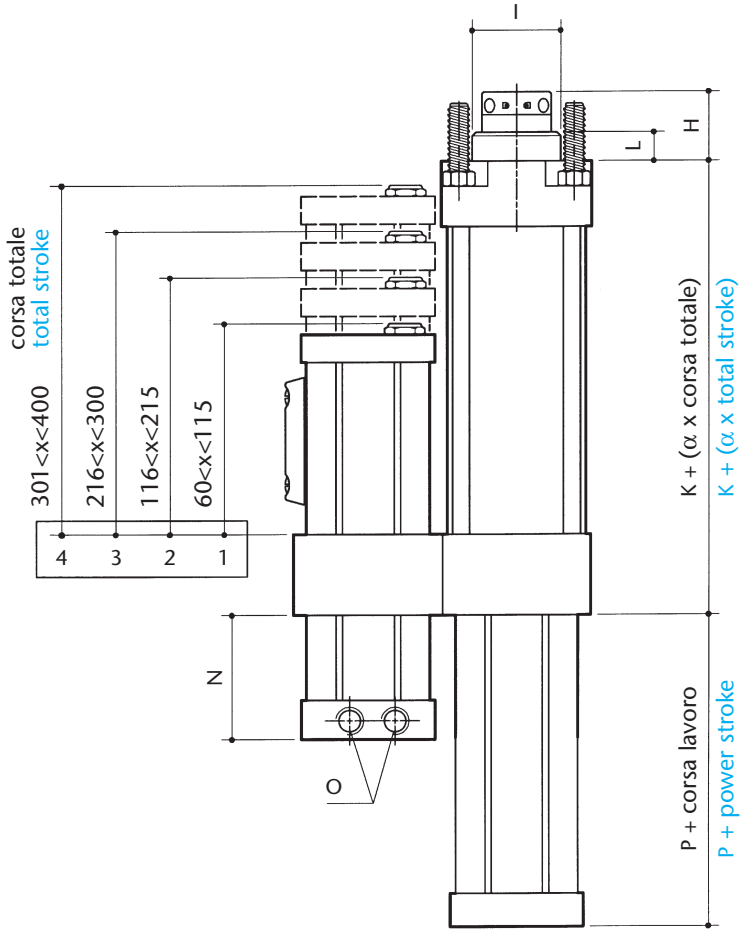
PK-D	A	B	C	D	E	F	G	H	l_{d10}	L	M	N	O	P	K	α	R	S_{H8}	
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	160	12,5	40	Ø16	
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	159	12,5	50	Ø20	
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	197	12,5	60	Ø25	
125	110	148	74	222	10	M20	58	60	110	25	52	120	G1/2"	268	209	11,52	80	Ø25	
160	140	187	94	281	8	M24	75	95	130	45	52	120	G1/2"	272	250	12,5	100	Ø30	
200	175	216	110	330	13	M24	75	95	150	45	73	120	G1/2"	309	244	12,5	120	Ø30	

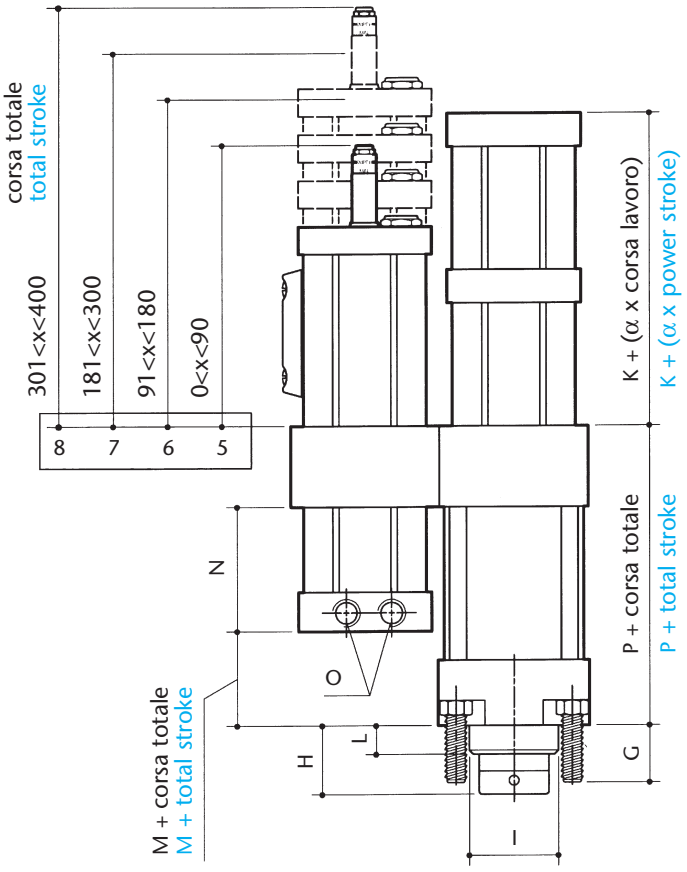


PK-D2
AREA DI LAVORO
WORKING AREA
2



PK-D3
AREA DI LAVORO
WORKING AREA
3

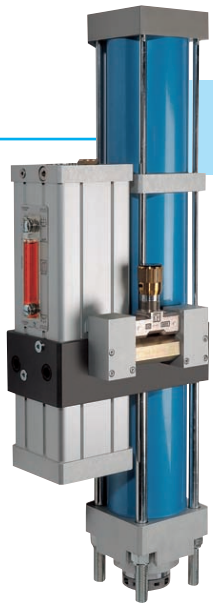




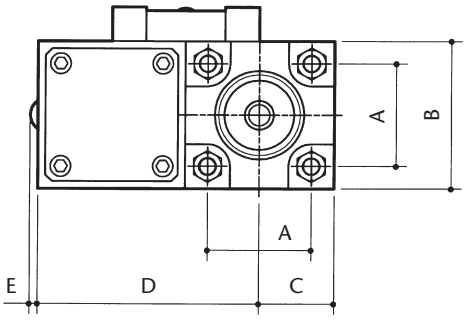
	T	U	V	X	Y	AA	AB	1	2	3	4
	M12x1,5	18	12	8	M6	G3/8"	27	164	220	301	366
	M16x1,5	22	16	10	M8	G3/8"	30	158	218	299	364
	M20x1,5	28	22	12	M8	G1/2"	40,5	162	222	303	368
	M20x1,5	28	20	12	M8	G1/2"	56,5	164	224	305	370
	M27x2	35	30	15	M8	G3/4"	43	168	228	309	374
	M27x2	35	30	15	M8	G3/4"	50	173	233	314	379

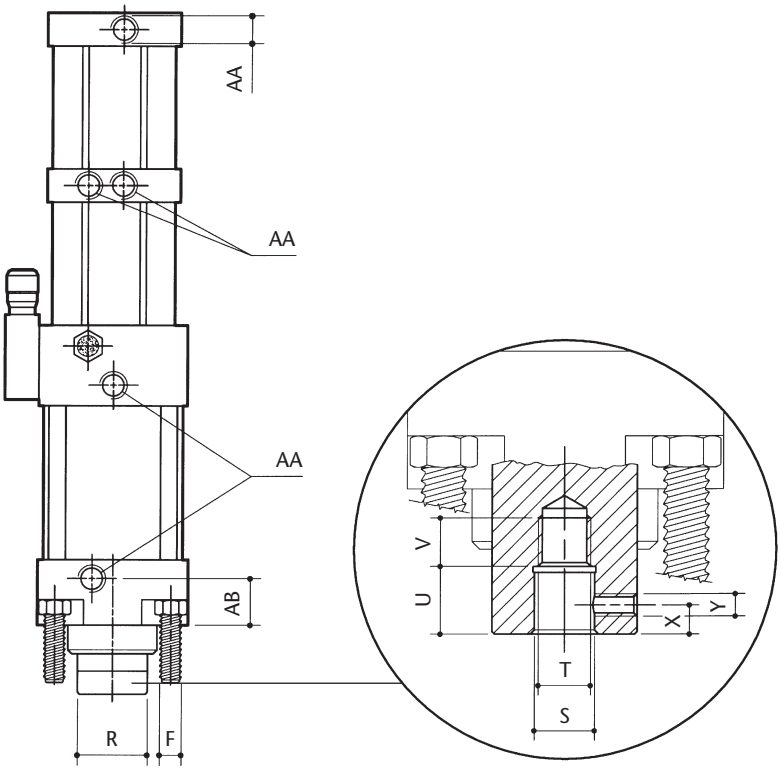
PK-D	5	6	7	8
063	289	335	379	427
080	283	333	377	425
100	287	337	381	429
125	289	339	383	431
160	293	343	387	435
200	298	348	392	440

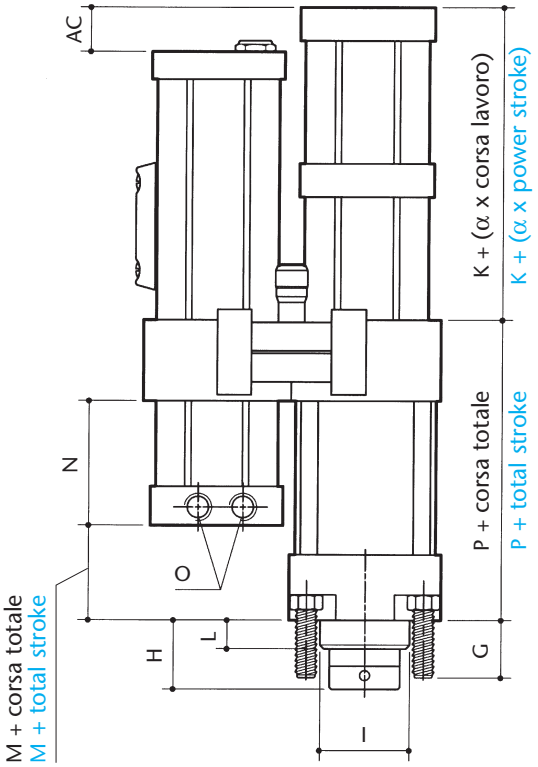
LE CARATTERISTICHE DIMENSIONALI
DIMENSIONAL FEATURES



PK-DR

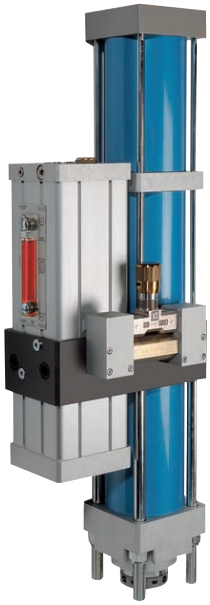


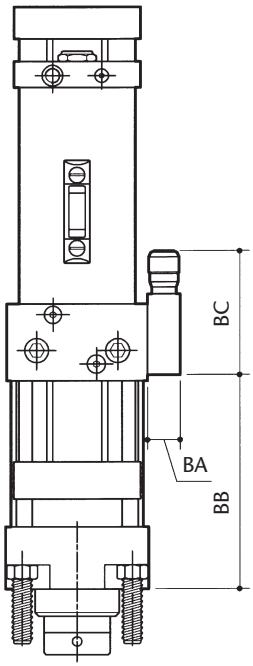




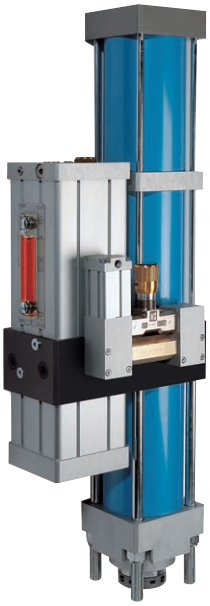
PK-D	A	B	C	D	E	F	G	H	l_{d10}	L	M	N	O	P	K	α	
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	194	12,5	
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	193	12,5	
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	231	12,5	
125	110	148	74	222	10	M20	58	60	110	25	52	120	G1/2"	268	243	11,52	
160	140	187	94	281	8	M24	75	95	130	45	52	120	G1/2"	272	284	12,5	
200	175	216	110	330	13	M24	75	95	150	45	73	120	G1/2"	309	278	12,5	

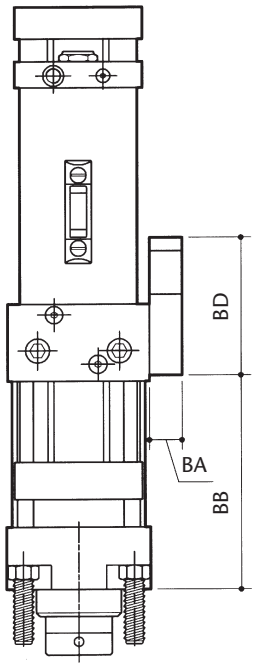
PK-DR-R



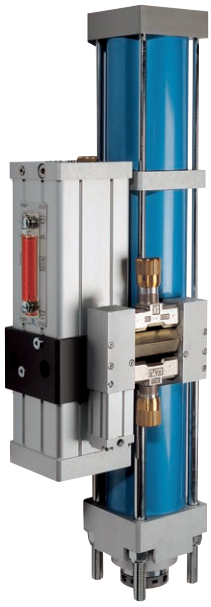


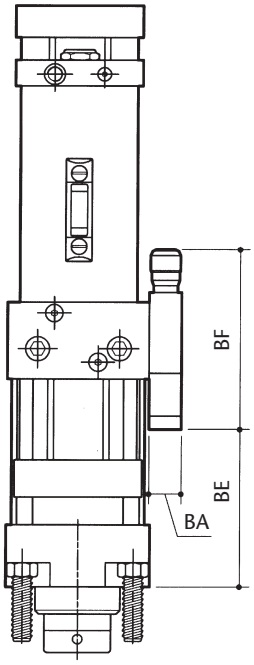
PK-DR-T



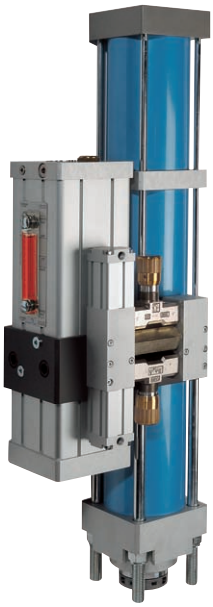


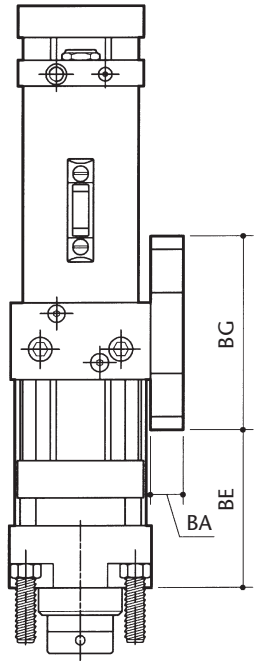
PK-DR-D





PK-DR-K





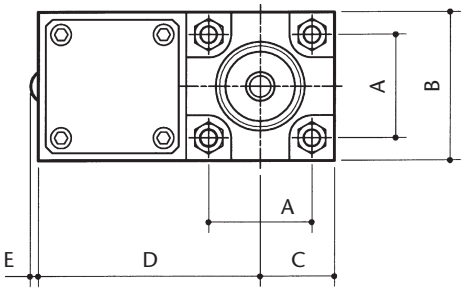
	R	S_{H8}	T	U	V	X	Y	AA	AB	AC
	40	Ø16	M12x1,5	18	12	8	M6	G3/8"	27	33
	50	Ø20	M16x1,5	22	16	10	M8	G3/8"	30	33
	60	Ø25	M20x1,5	28	22	12	M8	G1/2"	40,5	50
	80	Ø25	M20x1,5	28	20	12	M8	G1/2"	56,5	55
	100	Ø30	M27x2	35	30	15	M8	G3/4"	43	58
	120	Ø30	M27x2	35	30	15	M8	G3/4"	50	58

PK-D	BA	BB	BC	BD	BE	BF	BG
063	45	137	145	175	66	215	245
080	45	144	145	175	74	215	245
100	50	158	175	220	67	265	310
126	50	203	175	220	113	265	310
160	70	192	200	265	82	310	375
200	70	229	200	265	119	310	375

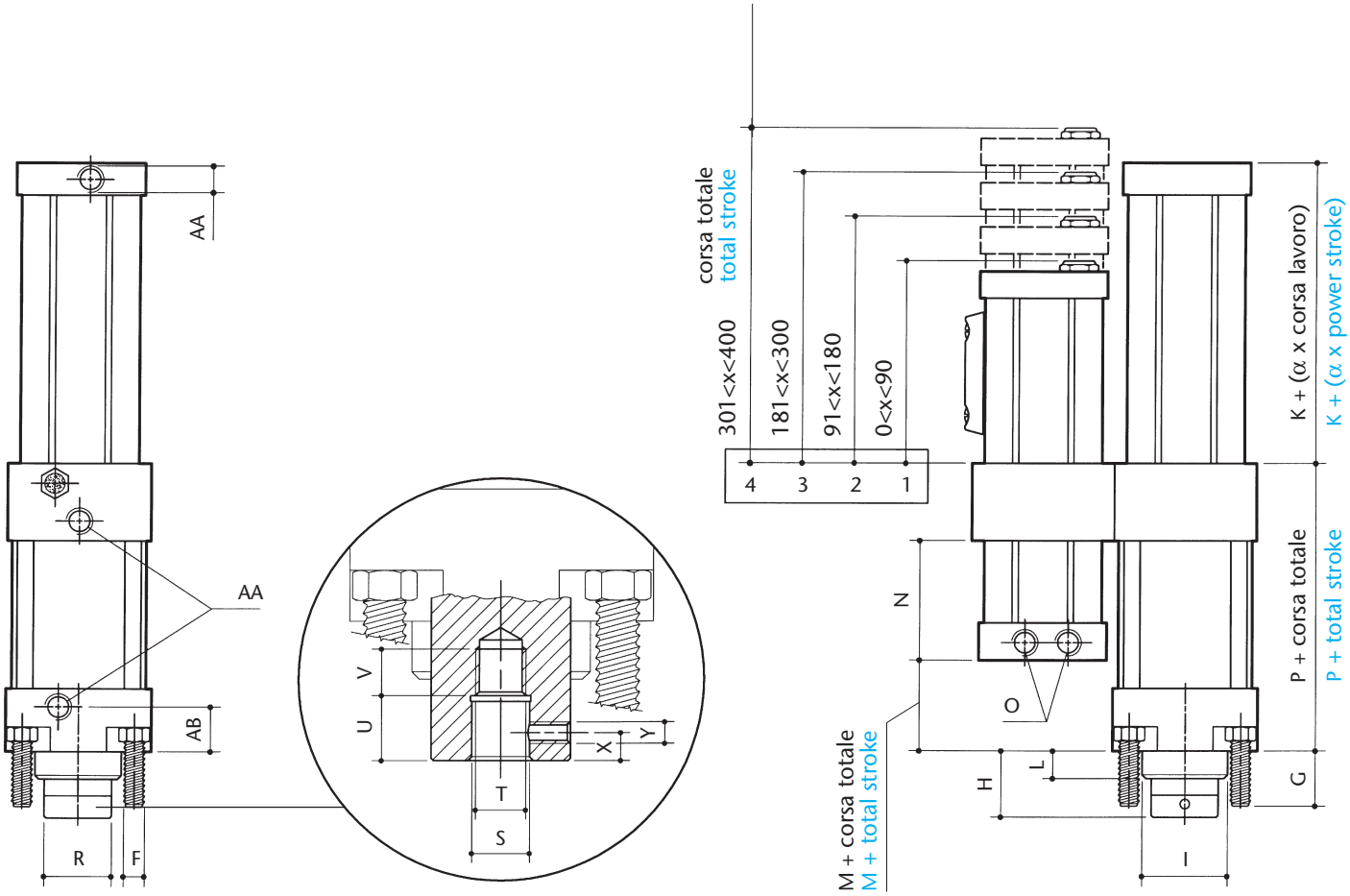
LE CARATTERISTICHE DIMENSIONALI
DIMENSIONAL FEATURES



PK-S1
AREA DI LAVORO
WORKING AREA **1**



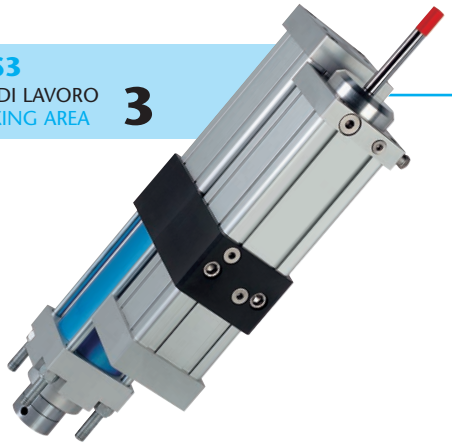
L'altezza del serbatoio varia in funzione della corsa totale (x).
Height of oil reservoir changes as a function of total stroke (x).



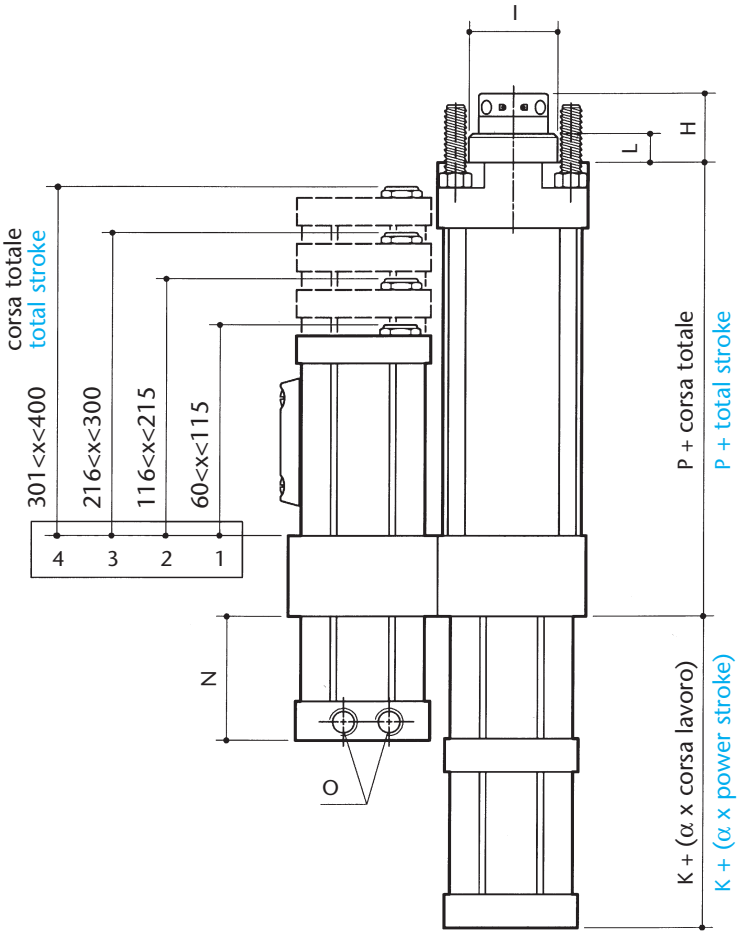
PK-S	A	B	C	D	E	F	G	H	l_{d10}	L	M	N	O	P	K	α
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	92	9
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	91	11,11
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	130	12,76
125	110	148	74	222	10	M20	58	60	110	25	52	120	G1/2"	268	127	11,12
160	140	187	94	281	8	M24	75	95	130	45	52	120	G1/2"	272	153	13,22
200	175	216	110	330	13	M24	75	95	150	45	73	120	G1/2"	309	147	11,11

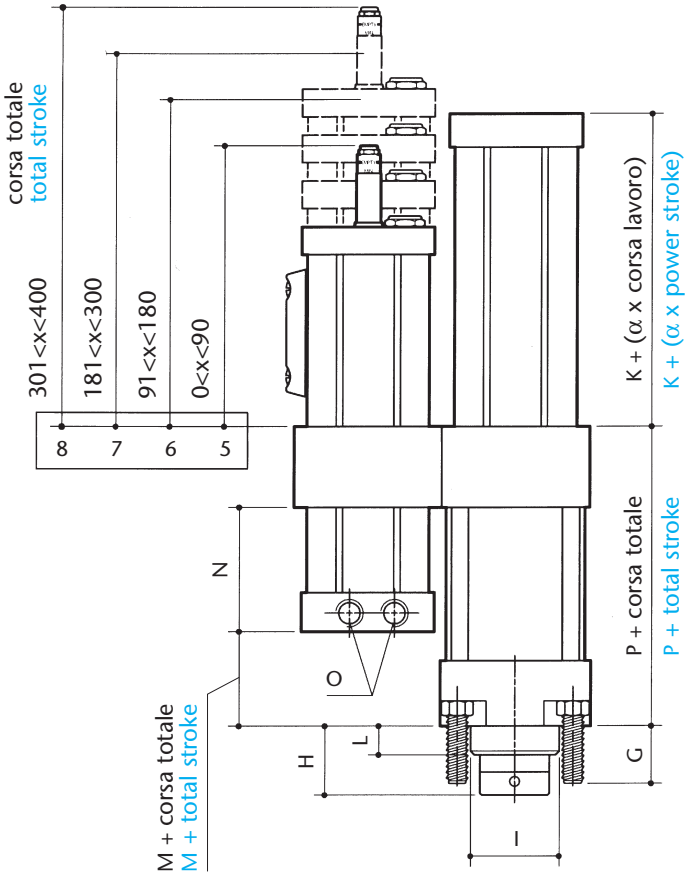


PK-S2
AREA DI LAVORO
WORKING AREA **2**



PK-S3
AREA DI LAVORO
WORKING AREA **3**



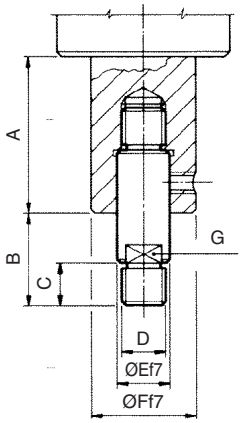


	R	S_{H8}	T	U	V	X	Y	AA	AB	1	2	3	4	**PK-S**	5	6	7	8
	40	Ø16	M12x1,5	18	12	8	M6	G3/8"	27	164	220	301	366	063	289	335	379	427
	50	Ø20	M16x1,5	22	16	10	M8	G3/8"	30	158	218	299	364	080	283	333	377	425
	60	Ø25	M20x1,5	28	22	12	M8	G1/2"	40,5	162	222	303	368	100	287	337	381	429
	80	Ø25	M20x1,5	28	20	12	M8	G1/2"	56,5	164	224	305	370	125	289	339	383	431
	100	Ø30	M27x2	35	30	15	M8	G3/4"	43	168	228	309	374	160	293	343	387	435
	120	Ø30	M27x2	35	30	15	M8	G3/4"	50	173	233	314	379	200	298	348	392	440

CARATTERISTICHE DIMENSIONALI - ACCESSORI
ACCESSORY DIMENSIONS

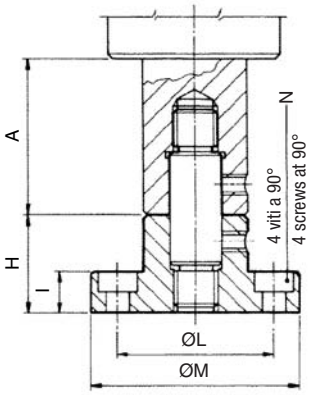
Cod. CS
Codulo per stelo. Acciaio cromato.
Code CS
Rod end. Chromium plated steel.





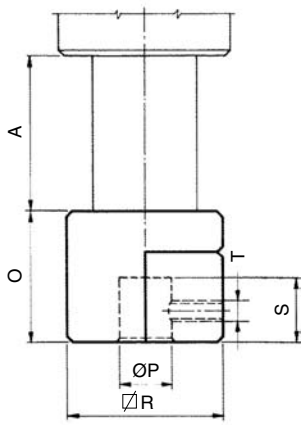
Cod. RS
Mozzo portastampi. Acciaio zincato.
Code RS
Die holder pad. Zinc plated steel.

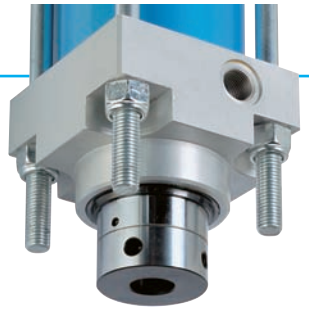




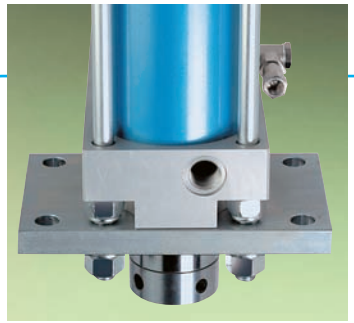
Cod. IR
Mozzo portastampi a innesto radiale. Acciaio zincato.
Code IR
Die holder pad with radial location. Zinc plated steel.





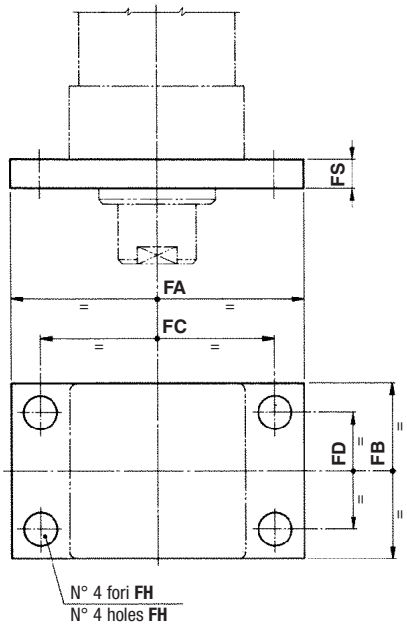


PK-D PK-S PK-DR	063	080	100	125	160	200
A	28	30	35	35	50	50
B	23	33	38	38	52	52
C	12	16	20	20	27	27
D	M12x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2
E	Ø16	Ø20	Ø25	Ø25	Ø30	Ø30
F	Ø40	Ø50	Ø60	Ø80	Ø100	Ø120
G	Ch.12	Ch.16	Ch.20	Ch.20	Ch.27	Ch.27
H	25	35	40	40	55	55
I	12	15	20	20	25	25
L	Ø46	Ø60	Ø78	Ø98	Ø130	Ø150
M	Ø59	Ø78	Ø98	Ø118	Ø158	Ø178
N	M6	M8	M8	M8	M12	M12
O	35	35	50	50	80	80
P	Ø16	Ø20	Ø25	Ø25	Ø30	Ø30
R	50	50	60	80	100	100
S	18	22	28	28	35	35
T	M6	M8	M8	M8	M8	M8



Cod. FG
Flangia per il fissaggio delle unità. Acciaio zincato.
Code FG
Flange mounting. Zinc plated steel.

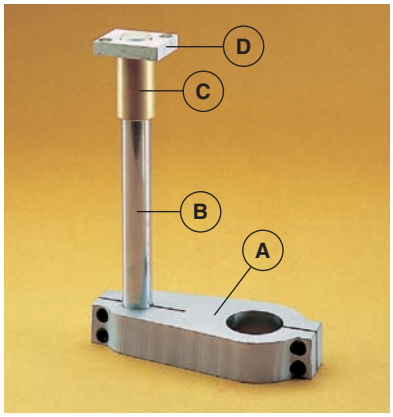
ATTACCO A FLANGIA
FLANGE MOUNTING

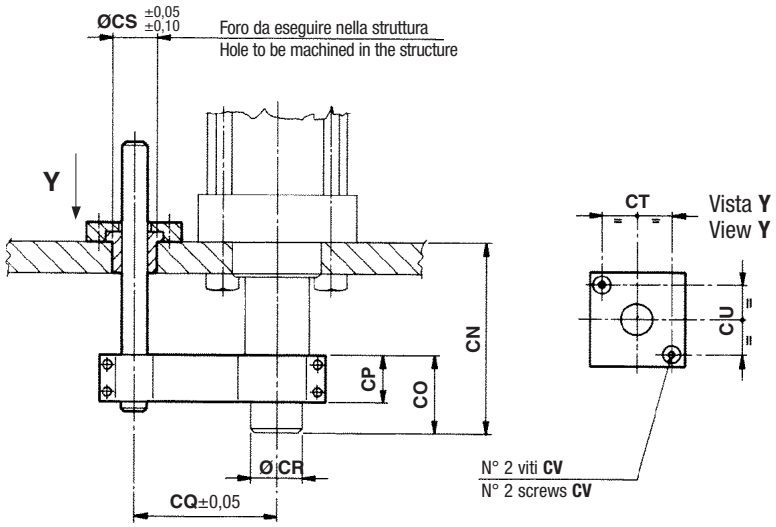


PK-D PK-S PK-DR	063	080	100	125	160	200
FA	135	165	200	240	305	340
FB	80	100	130	150	200	250
FC	110	135	170	200	255	290
FD	61	75	100	110	140	175
FH	10,5	12,5	17	21	25	25
FS	12	15	20	25	30	30
CN	91	111	126	141	161	161
CO	38	45	55	55	60	60
CP	25	30	35	35	35	35
CQ	70	90	104	117	155	155
CR	40	50	60	80	100	120
CS	25	28	36	36	46	46
CT	20	26	38	38	45	45
CU	30	37	38	38	45	45
CV	M4x12	M6x16	M6x16	M6x16	M6x16	M6x16

GRUPPO ANTIROTAZIONE
ANTI-ROTATION GROUP

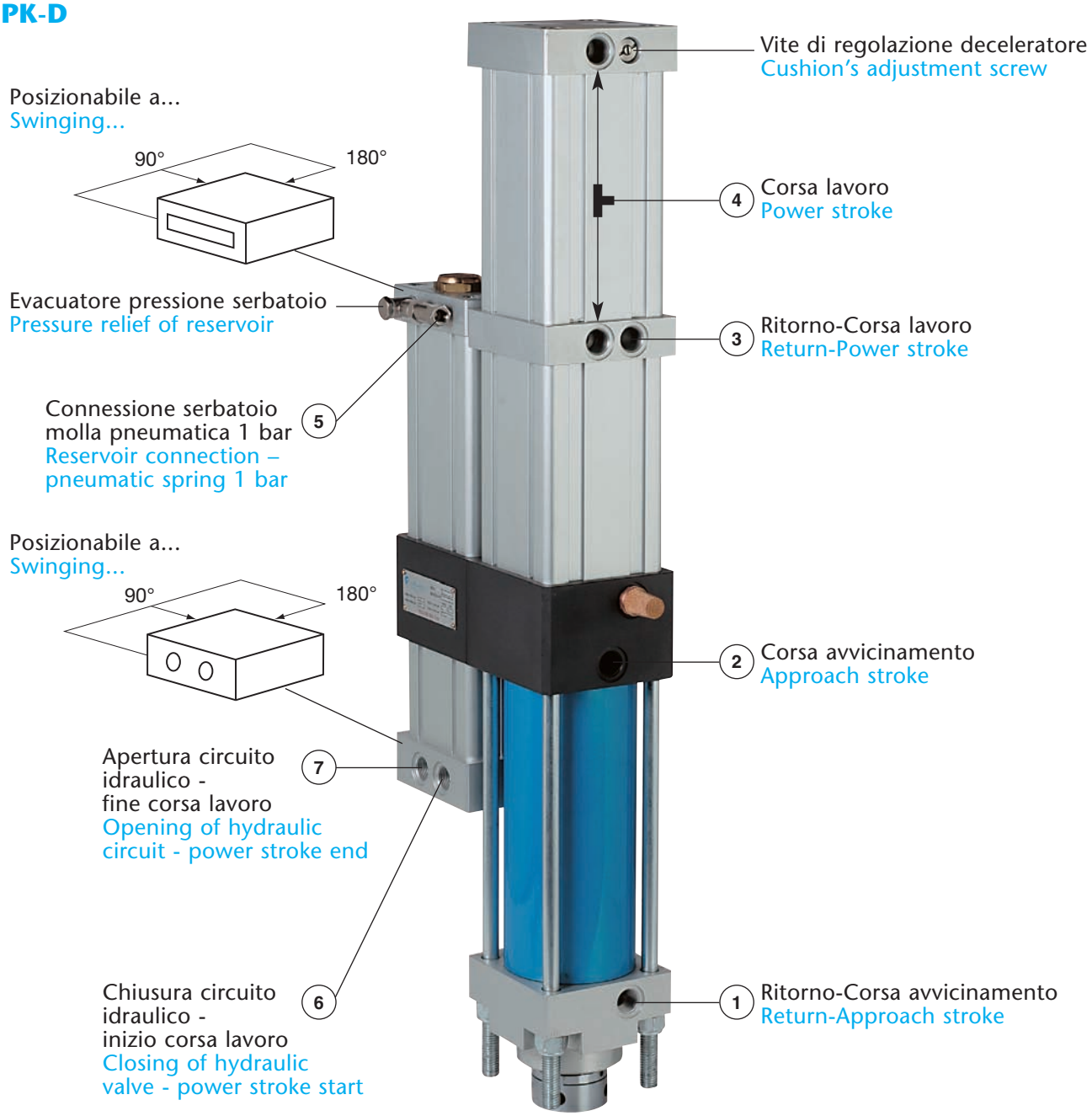
Cod. R **Code R**
A - Acciaio zincato Zinc plated steel
B - Acciaio cromato Chromium plated steel
C - Bronzo Bronze
D - Alluminio Aluminum



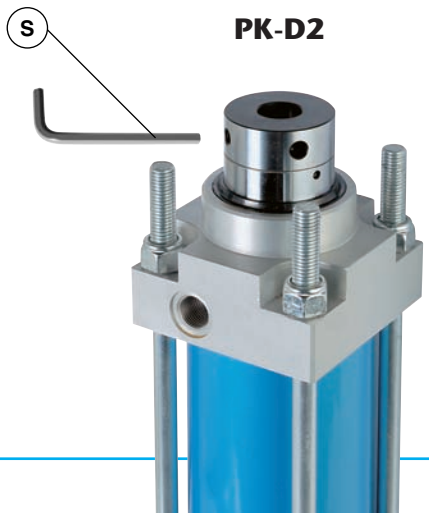


LE CONNESSIONI
CONNECTIONS

UNITÀ PK-D
UNIT PK-D



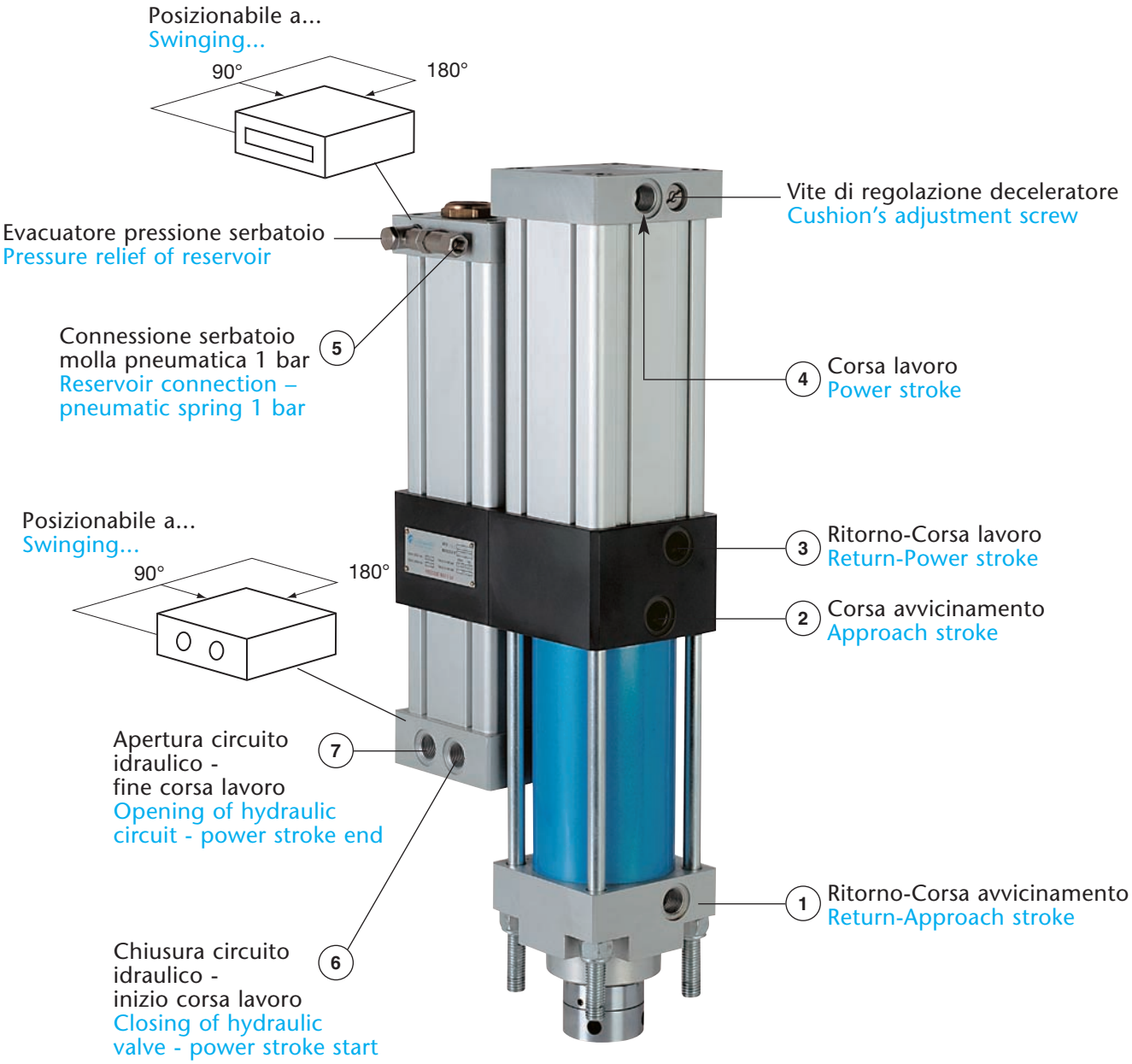
Viti di spurgo
Breather screws



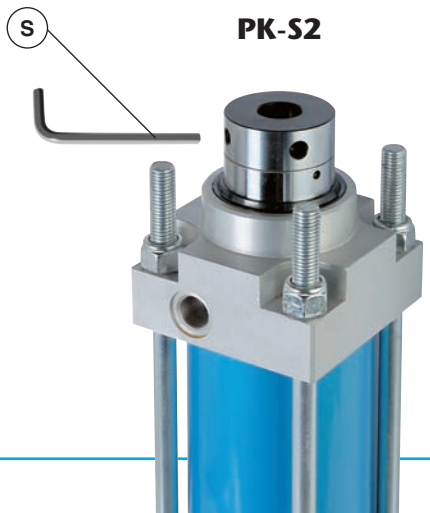
PK-D Ø	Connessioni Connections							CH
	1	2	3	4	5	6	7	S
063	3/8"	3/8"	3/8"	3/8"	1/8"	1/4"	1/4"	2,5
080	3/8"	3/8"	3/8"	3/8"		3/8"	3/8"	3
100	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
125	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
160	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
200	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
	UNI ISO 228-1							

LE CONNESSIONI
CONNECTIONS

UNITÀ PK-S
UNIT PK-S



Viti di spurgo
Breather screws

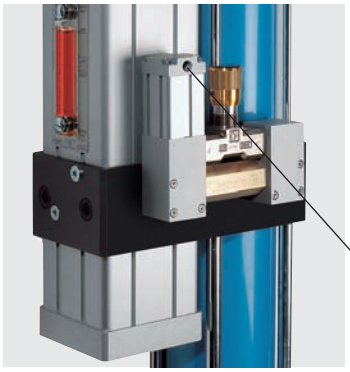


PK-S Ø	Connessioni Connections							CH
	1	2	3	4	5	6	7	S
063	3/8"	3/8"	3/8"	3/8"	1/8"	1/4"	1/4"	2,5
080	3/8"	3/8"	3/8"	3/8"		3/8"	3/8"	3
100	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
125	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
160	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
200	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
	UNI ISO 228-1							

LE CONNESSIONI
CONNECTIONS

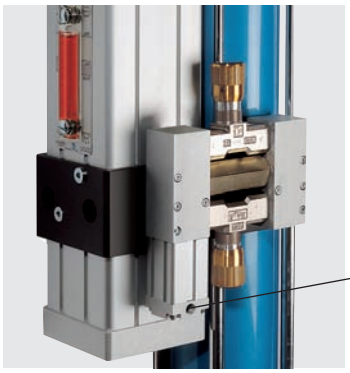
UNITÀ PK-DR
UNIT PK-DR

VERSIONE DR-T
DR-T VERSION



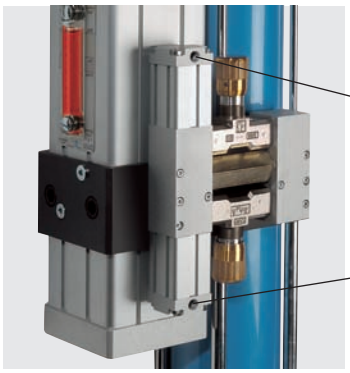
Valvola di blocco STOP
Stop valve

VERSIONE DR-D
DR-T VERSION

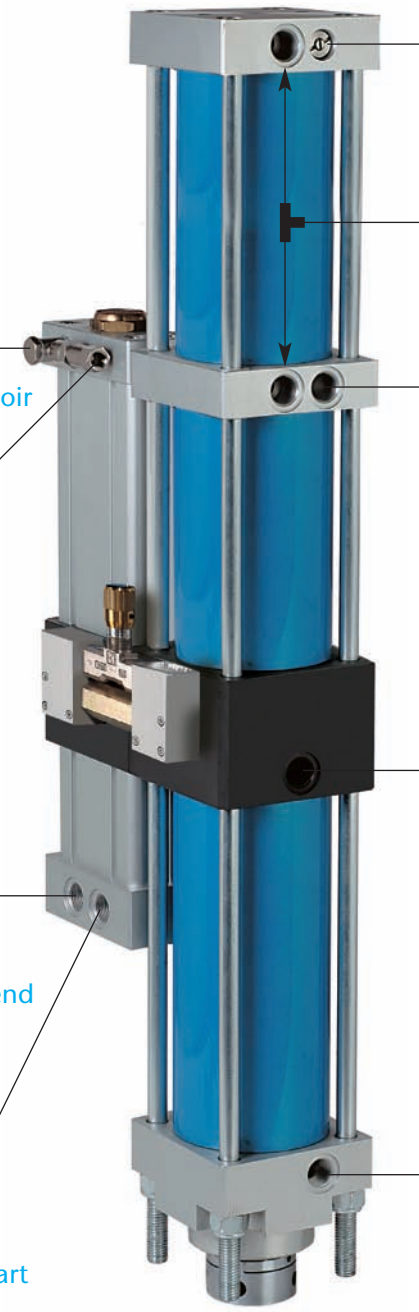


Doppia regolazione con SKIP
Double adjustment with SKIP

VERSIONE DR-K
DR-T VERSION



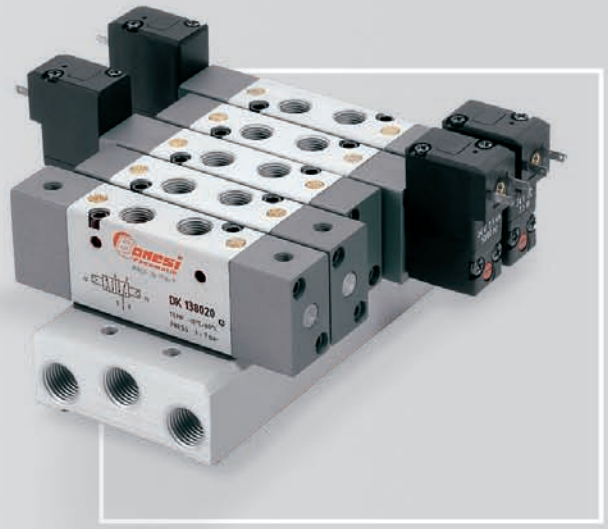
Doppia regolazione con SKIP e STOP
Double adjustment with SKIP and STOP

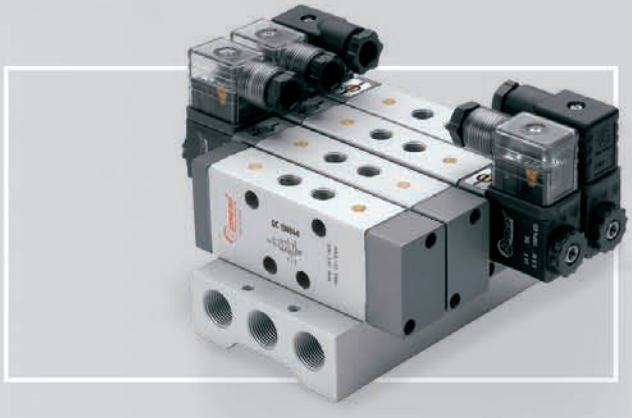


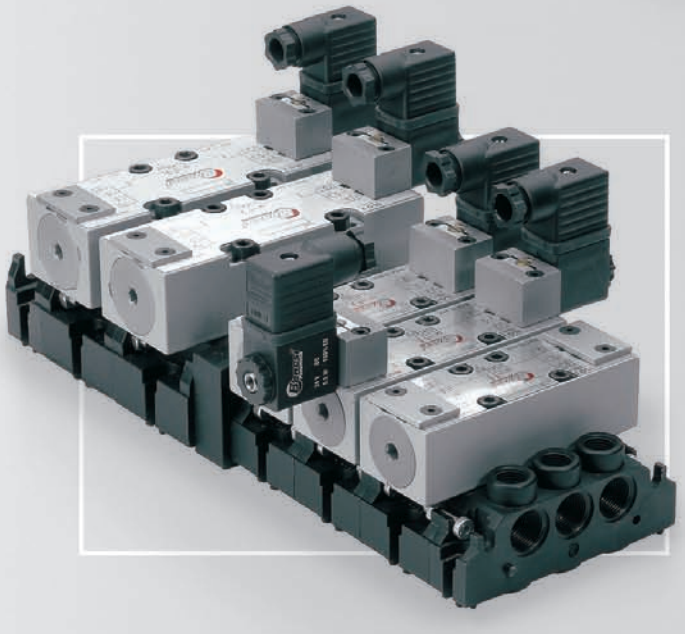
PK-DR	Connessioni Connections								
	1	2	3	4	5	6	7	T	K
063	3/8"	3/8"	3/8"	3/8"	1/8"	1/4"	1/4"	1/4"	1/4"
080	3/8"	3/8"	3/8"	3/8"		3/8"	3/8"		
100	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"		
125	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"		
160	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"		
200	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"		
	UNI ISO 228-1								

GRUPPI VALVOLE DI COMANDO
CONTROL VALVES GROUP

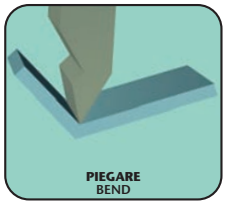


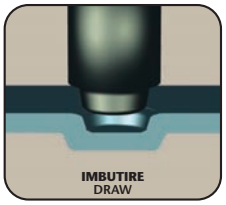


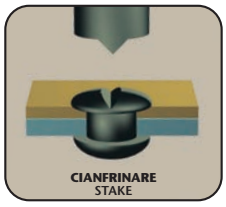




L'IMPIANTISTICA



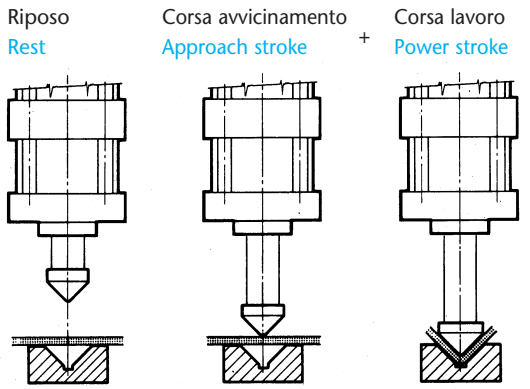




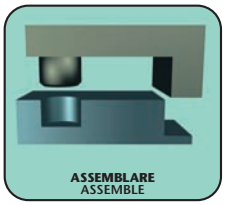


SCHEMA SCHEME K1

Corsa avvicinamento e corsa lavoro in sequenza
Approach and power stroke sequence

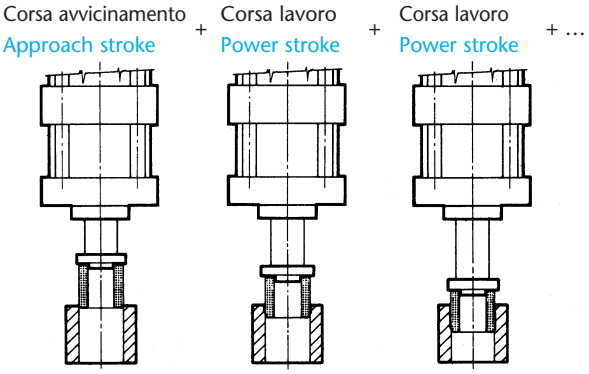


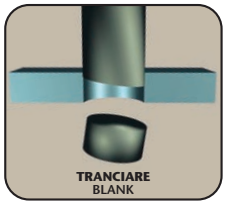


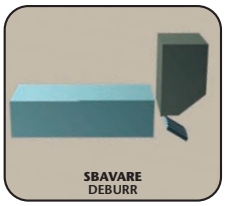


SCHEMA SCHEME K6

Ripetizione in successione della corsa lavoro
Sequence of power strokes

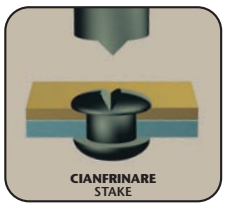






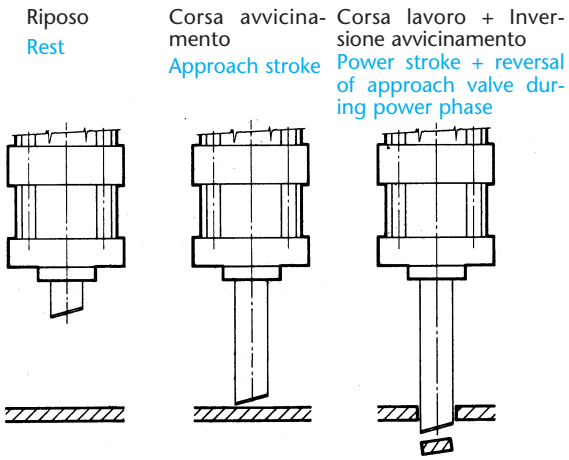






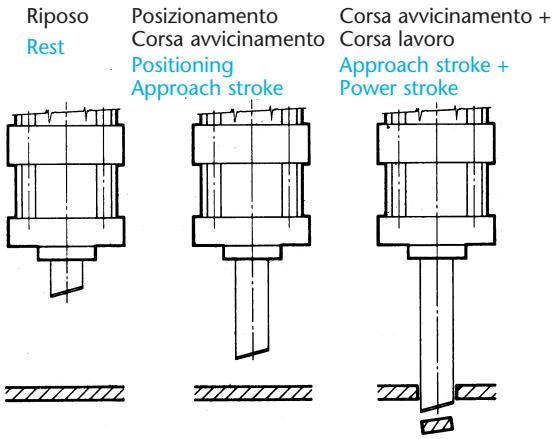
SCHEMA SCHEME K7

Corsa lavoro con molla pneumatica di reazione
Power stroke with pneumatic spring reaction

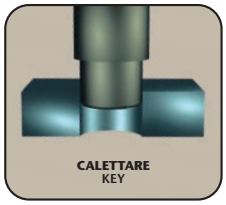


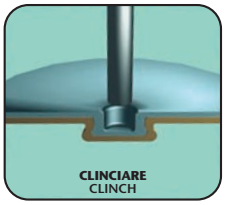
SCHEMA SCHEME K2

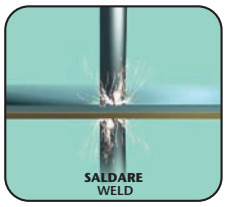
Riduzione della corsa di avvicinamento variando il P.M.S.
Reduction of approach stroke by TDC

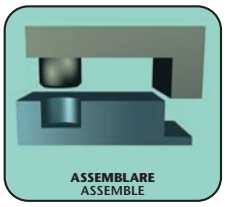


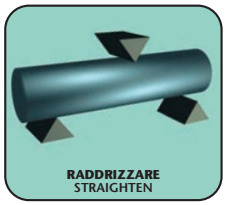
CIRCUITS

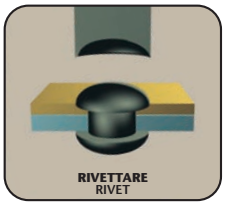






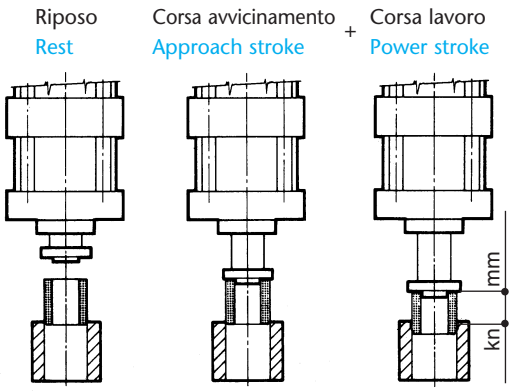






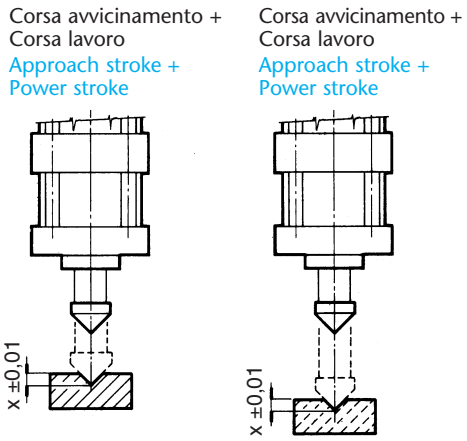
SCHEMA SCHEME SK5

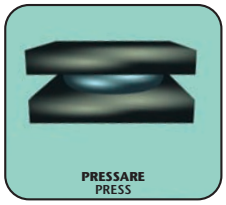
Fine lavoro con valori di forza o corsa programmati
End of power stroke with preset values of force and/or stroke



SCHEMA SCHEME KDR3

Precisione sul valore programmato del P.M.I. - Fine lavoro
Precision of preset value of BDC – end of power stroke

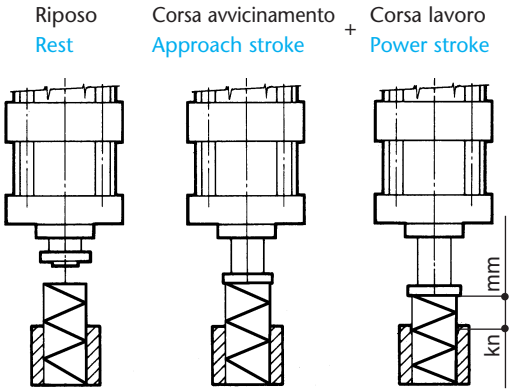


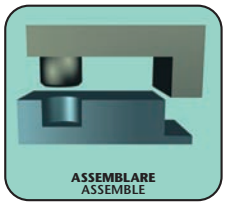


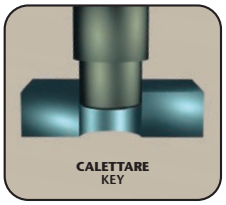


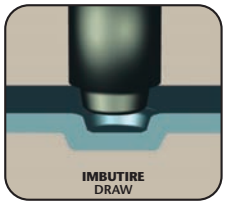
SCHEMA SCHEME KDR-T4

Mantenere una forza costante sul valore di forza o corsa programmato
Keep a steady force with preset value of force or stroke



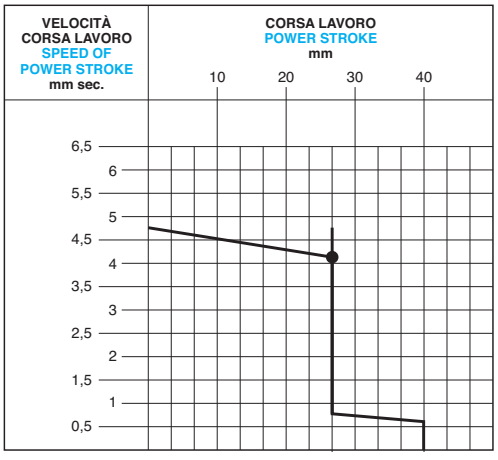






SCHEMA SCHEME KDR-K8

Corsa lavoro a due velocità programmate
Power stroke with two preset speeds



PROGRAMMA DI PRODUZIONE
MANUFACTURING PROGRAMME













Sistemi di automazione
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