

PK³

GRUPPI DI POTENZA POWER GROUPS



PATENTED



Hydromatic

GRUPPI DI POTENZA SERIE **PK³**

POWER GROUPS SERIES



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.

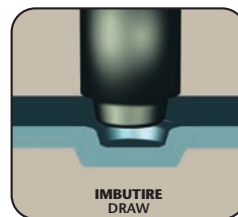
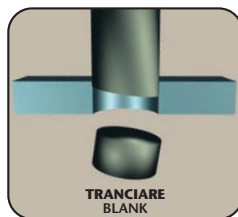
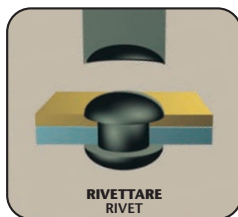
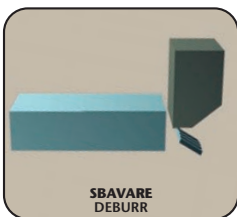
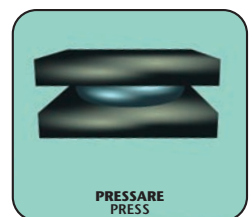
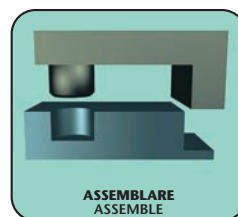
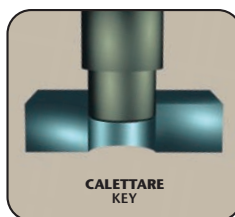
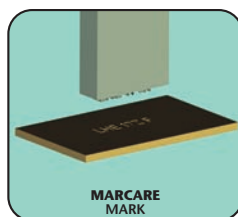
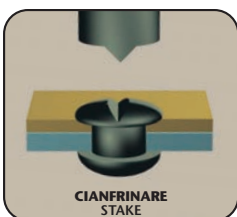
These units are driven by compressed air, and consist of three integrated sections:

- 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.

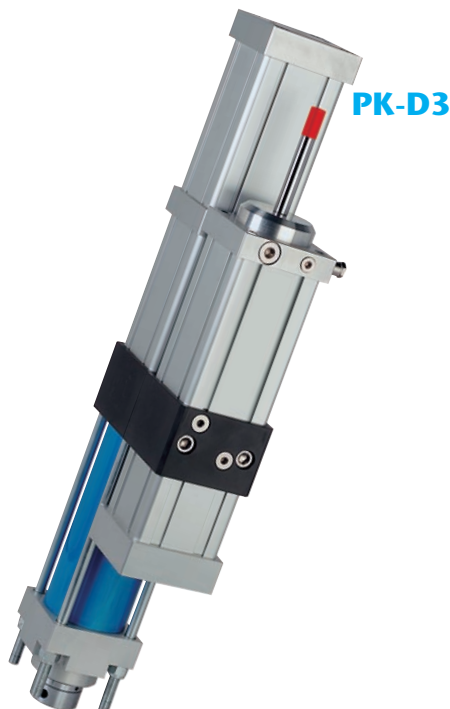
12 MODELLI STANDARD – **30** VERSIONI PER:
STANDARD MODELS – **VERSIONS TO:**



LA GAMMA THE RANGE

SERIE **PK-D**

VERSIONE CON MOLTIPLICATORE A DOPPIO STADIO
WITH DOUBLE STAGE BOOSTER



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 **PK-S**

VERSIONE CON MOLTIPLICATORE A SINGOLO STADIO
WITH SINGLE STAGE BOOSTER



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**

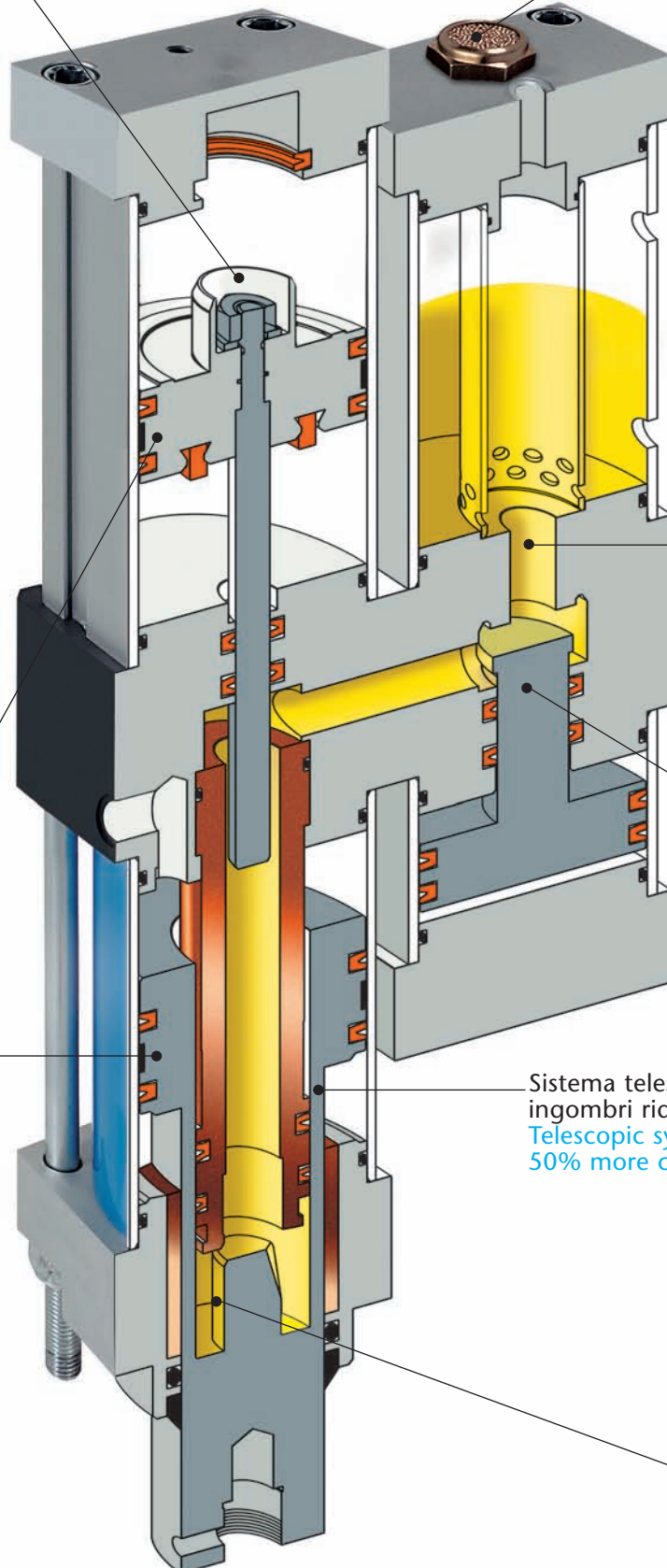
Total strokes **from 30 to 400 mm**

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.

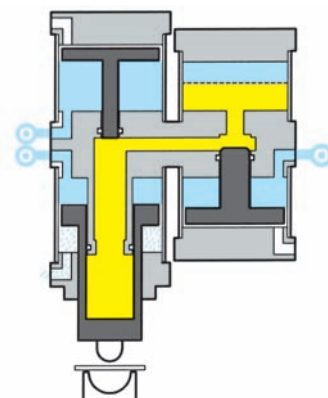
- Un concetto costruttivo studiato per superare i limiti funzionali e applicativi dei sistemi tradizionali oleopneumatici.
- **7 punti di forza delle unità serie PK-D**

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

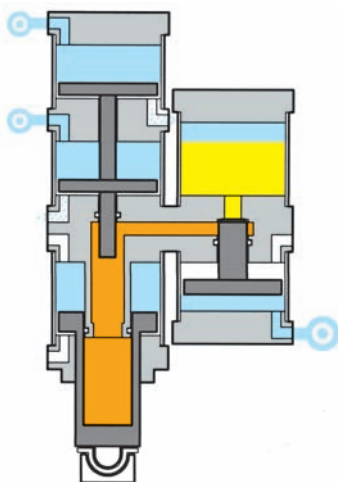
Veloce a bassa pressione
Approach stroke
 Low pressure fast approach



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

Corsa lavoro

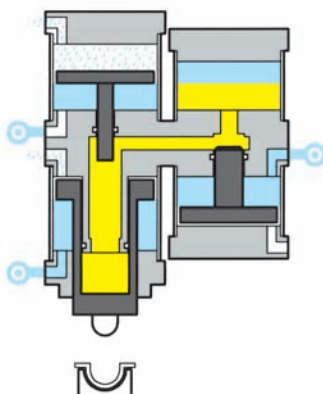
Con forza pneumo-idraulica
Power stroke
 With hydro-pneumatic force



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

Corsa di ritorno P.M.S.

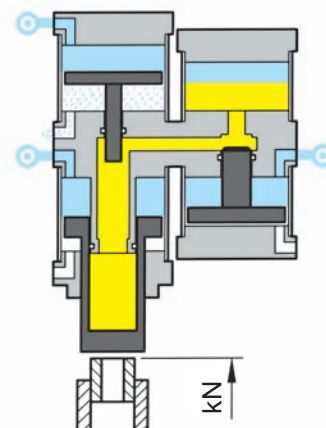
Veloce su tutta la corsa pneumatica e idraulica
Return stroke to T.D.C.
 Fast throughout both return stages



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

Arresto forza lavoro su valori programmati

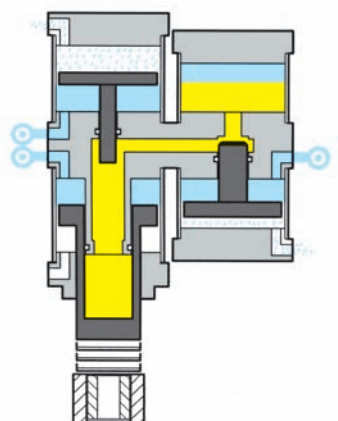
Power stroke forces can be adjusted to preset values



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

Ripetizione corsa lavoro

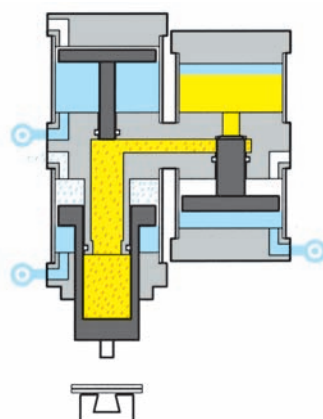
In automatico senza limite di cicli
Repeat power stroke
 Power stroke can be repeated as many times as required



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

Regolare il P.M.S.

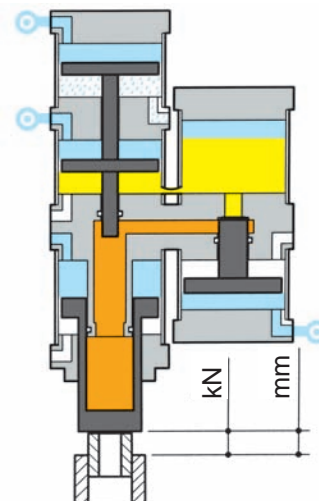
Controllare l'area di lavoro
TDC adjustment
 The TDC position can be set in any position



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



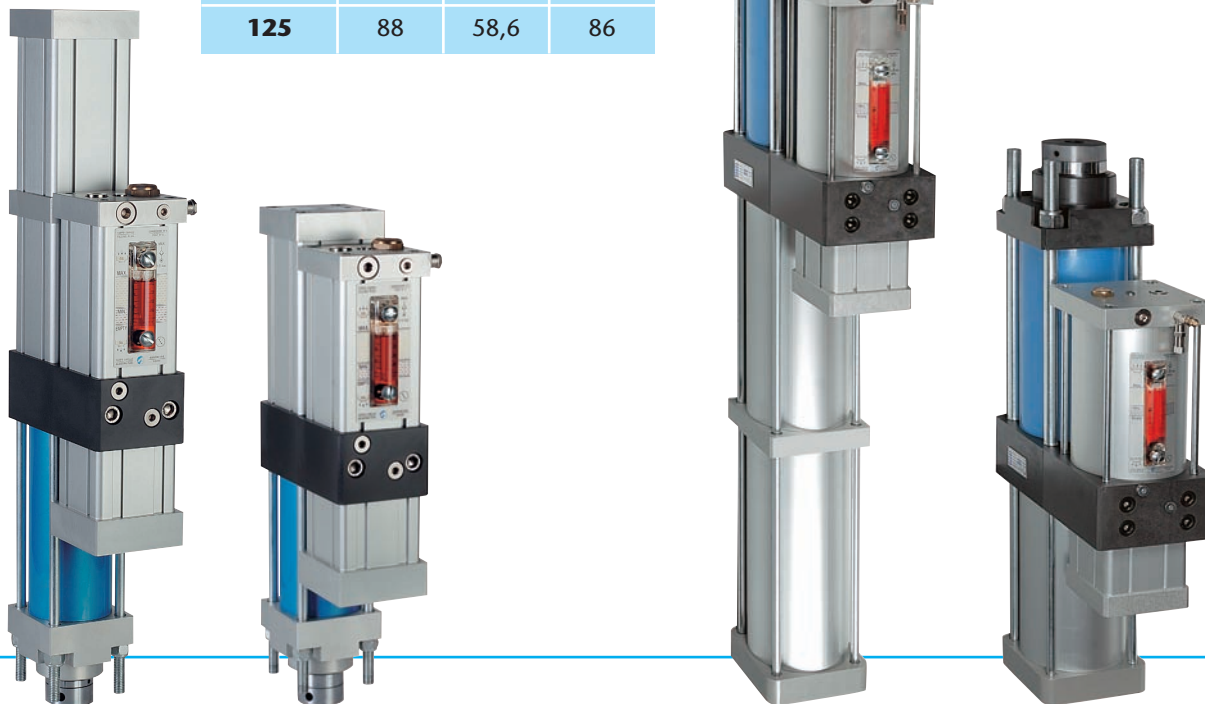
Dove è richiesta uniformità e precisione su corsa e forza lavoro.
Where smoothness and accuracy of the power stroke is required

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

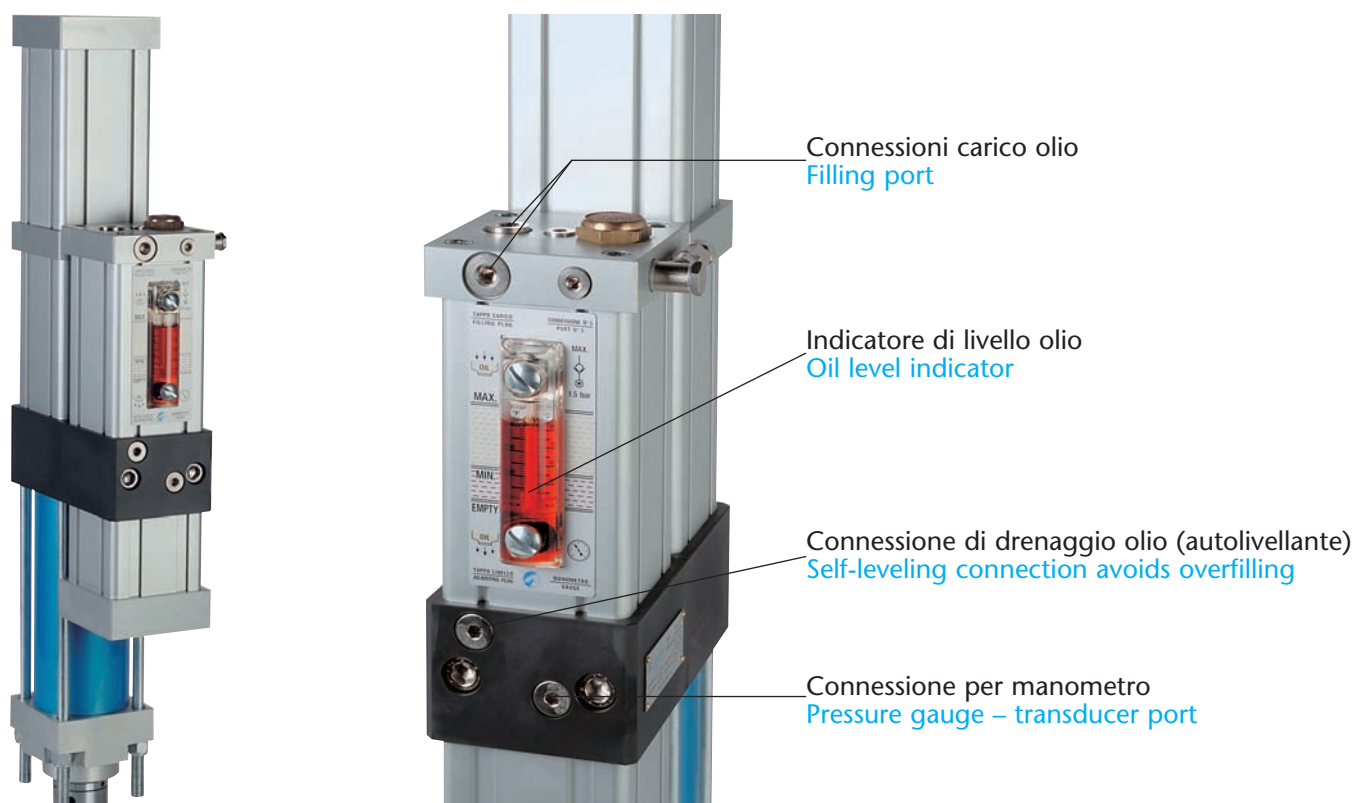
Serie Series	PK-D	PK-DR	PK-S
Taglia Size Ø	kN (6 bar)		
160	150	100	157
200	235	156	221



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

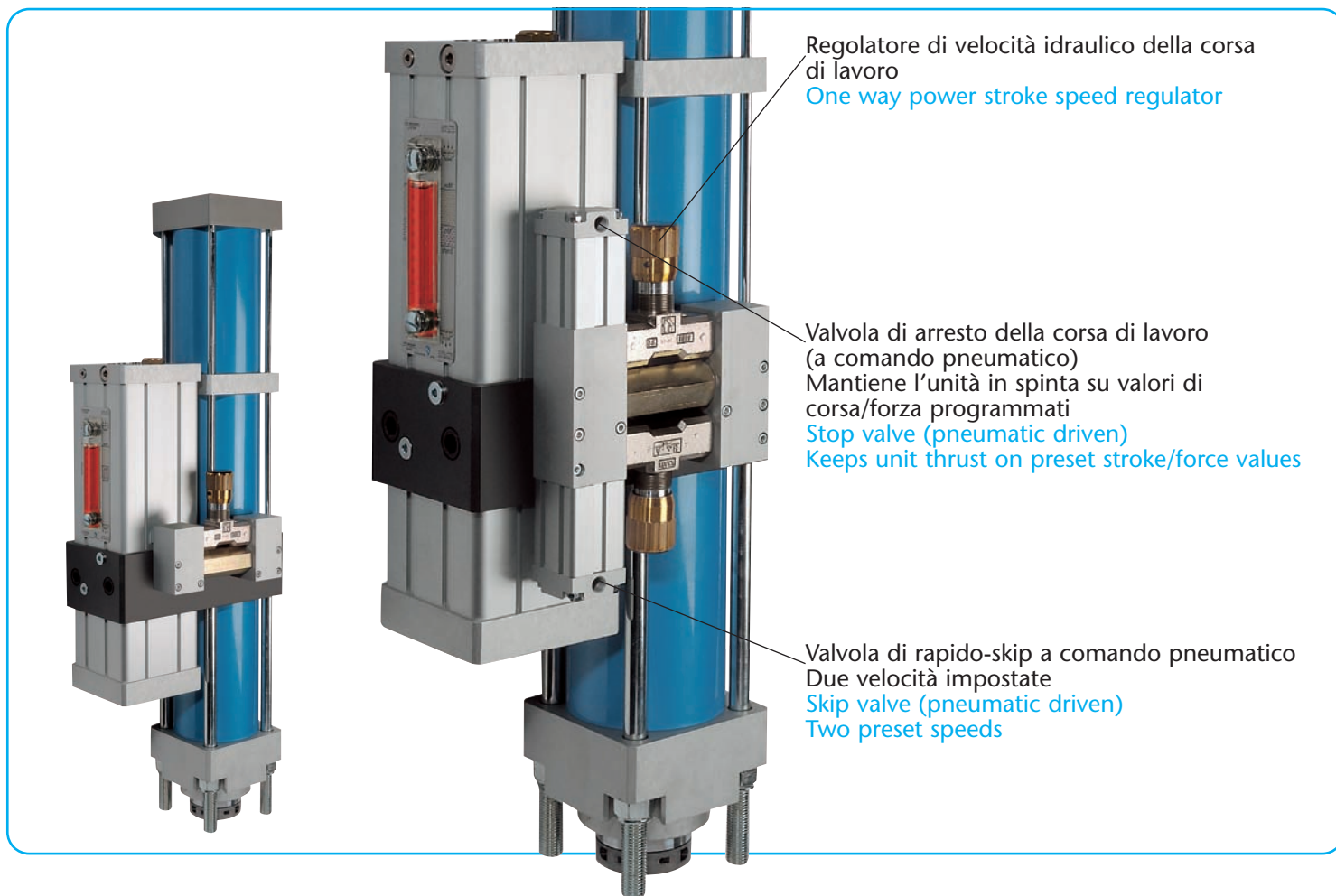
SERBATOIO COMPENSATORE SERIE PK-D, PK-DR, PK-S

COMPENSATOR OIL RESERVOIR PK-D, PK-DR, PK-S

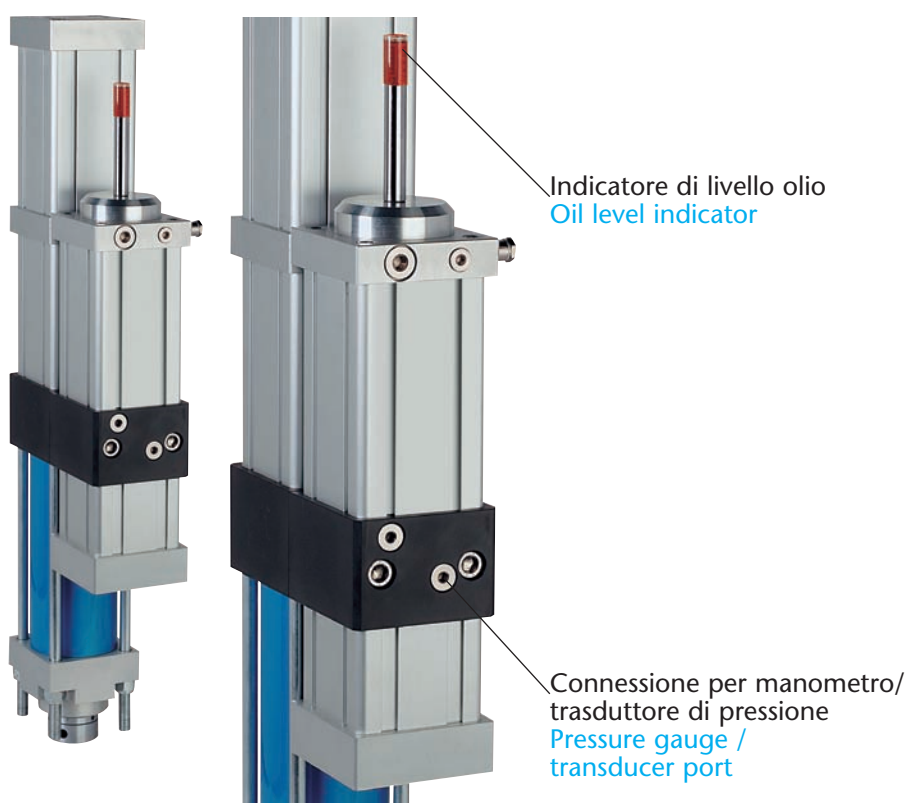


UNITÀ PK-DR CON CONTROLLO IDRAULICO DELLA CORSA LAVORO

POWER UNIT PK-DR UNIT WITH HYDRAULIC SPEED CONTROL OF POWER STROKE



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



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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.



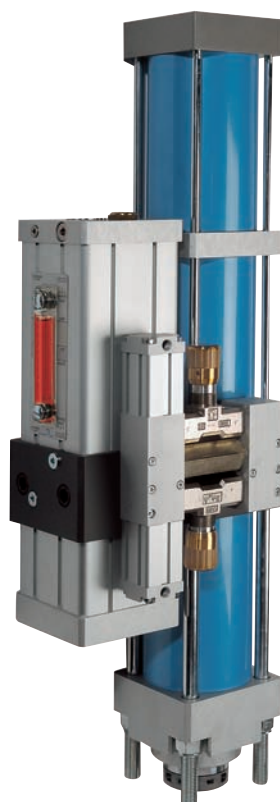
PK-DR-T

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

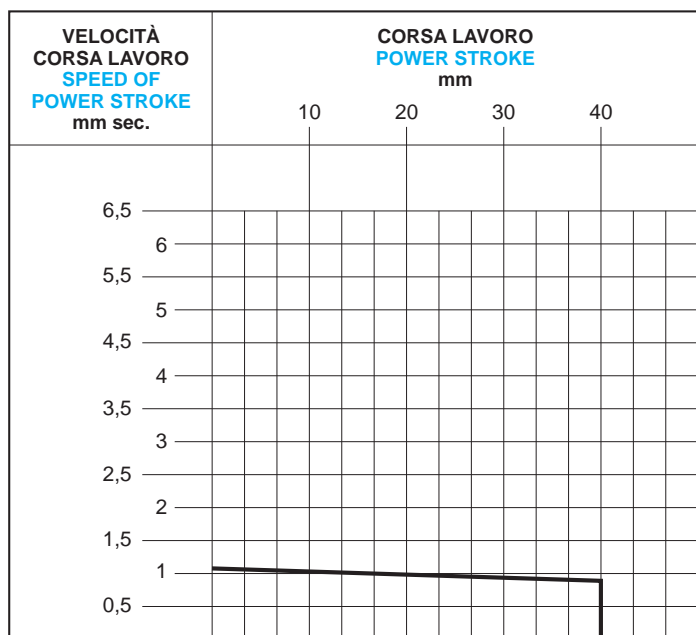
Doppia regolazione della velocità corsa lavoro, programmabile con comando (SKIP).
Double adjustment of power stroke speed, preset with control (SKIP).



PK-DR-K

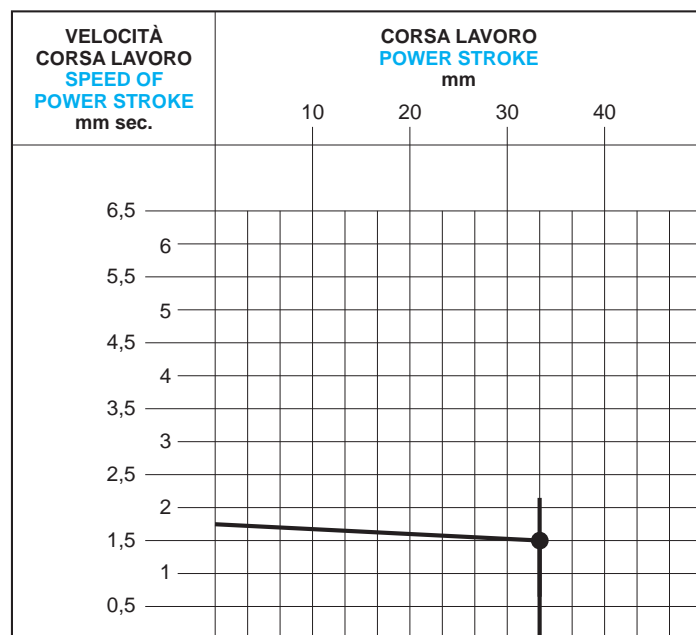
Doppia regolazione della velocità corsa lavoro con SKIP e STOP su valori programmati.
Double adjustment of power stroke speed with SKIP and STOP on preset values.

PK-DR-R



FINE LAVORO
END OF WORK

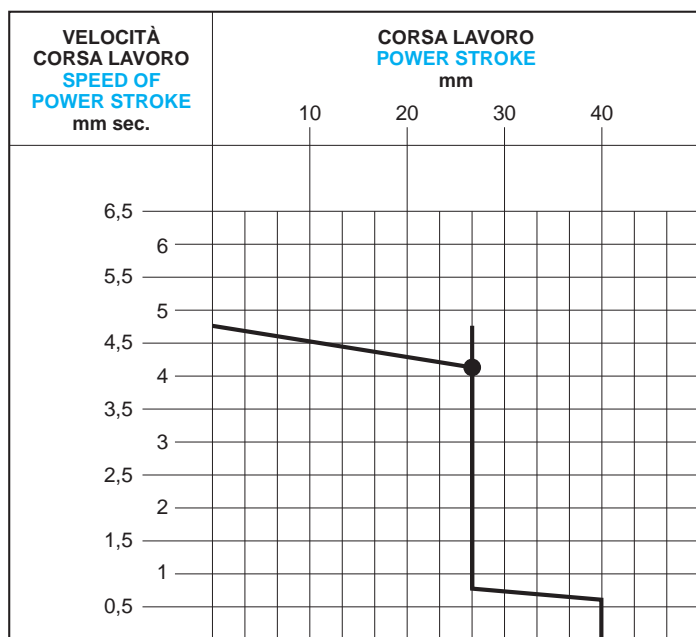
PK-DR-T



VALORE DI ARRESTO PROGRAMMATO
PRESET STOP VALUE

STOP

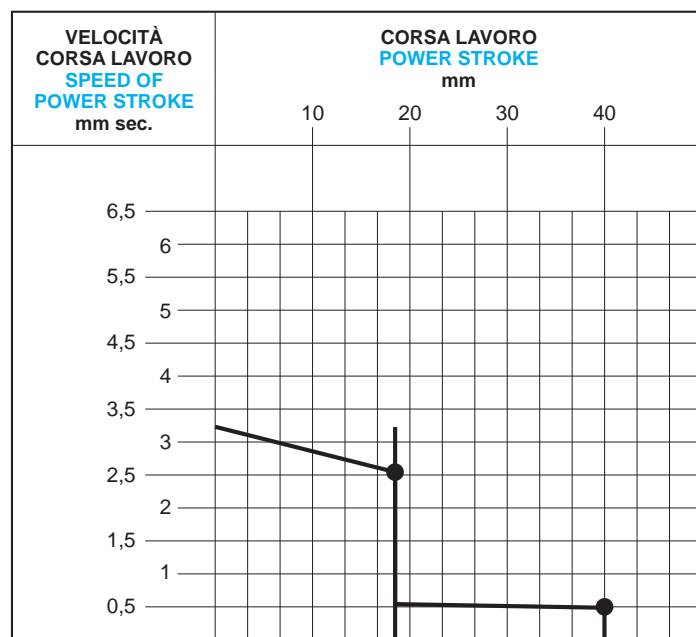
PK-DR-D



VALORE PROGRAMMATO (SKIP)
PRESET VALUE (SKIP)

FINE LAVORO
END OF WORK

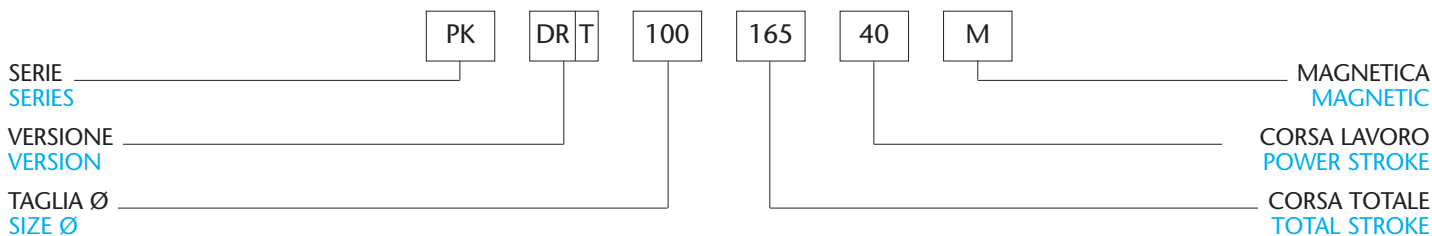
PK-DR-K



VALORE PROGRAMMATO (SKIP)
PRESET VALUE (SKIP)

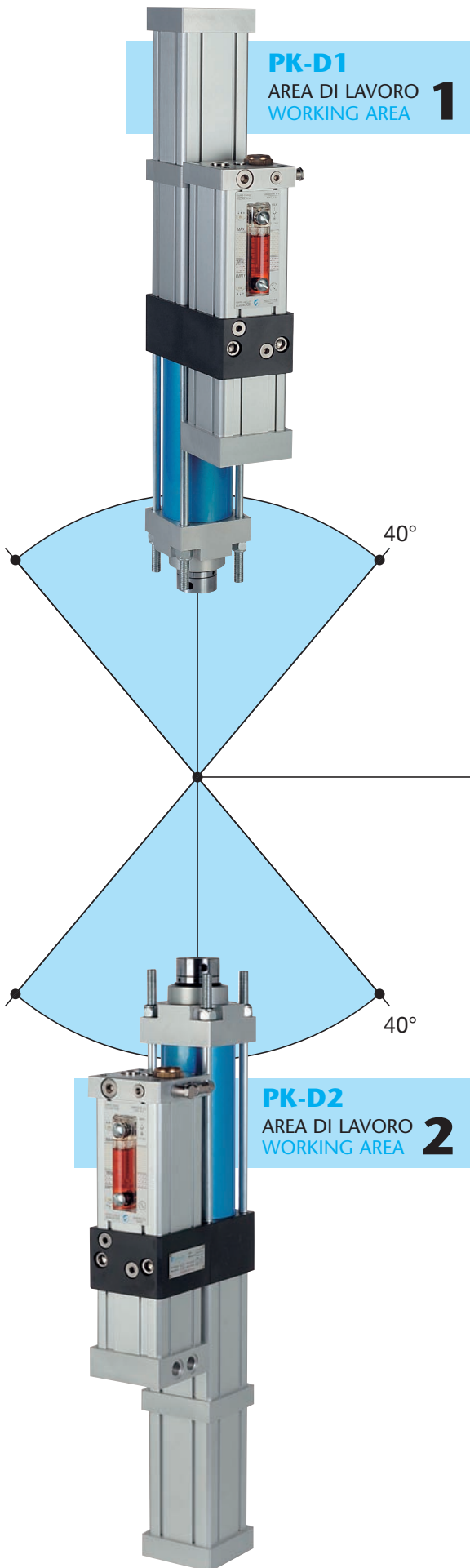
VALORE PROGRAMMATO (STOP)
PRESET VALUE (STOP)

CODICE PER L'ORDINAZIONE ORDERING CODE



LE PERFORMANCES DELLA SERIE PK-D

PERFORMANCES OF SERIES PK-D



PK-D3
AREA DI LAVORO
WORKING AREA **3**
PER APPLICAZIONI STATICHE
E DINAMICHE
FOR STATIC AND DYNAMIC
APPLICATIONS

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 = $\frac{4}{6} 6000 = \text{daN } 4000$

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

LE CORSE IN VERSIONE STANDARD

PK-D1-D2-D3

STROKES

STANDARD VERSIONS

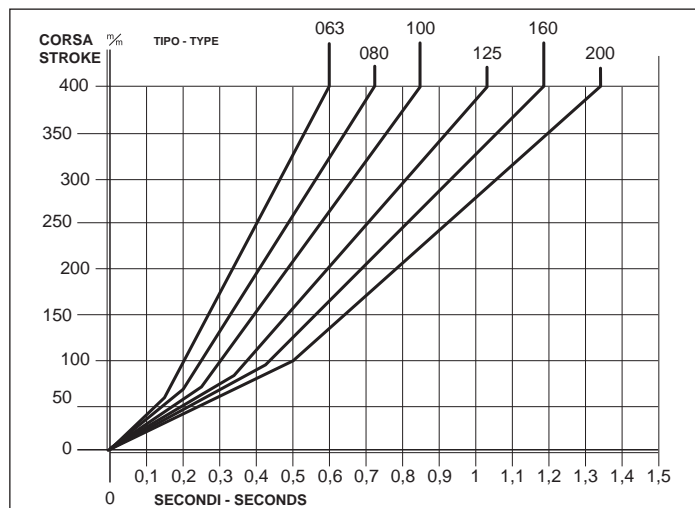
Corsa totale mm Total stroke mm	Corsa lavoro mm Power stroke mm					
	063	080	100	125	160	200
30	10-20-30	10-20-30	10-20-30			
60	10÷30	10÷30	10÷40			
115	10÷40	10÷40	10÷50			
165	10÷50	10÷50	10÷60			
215	10÷60	10÷60	10÷70			
300	10÷70	10÷80	10÷90			
400	10÷90	10÷90	10÷100			

I CONSUMI CONSUMPTION

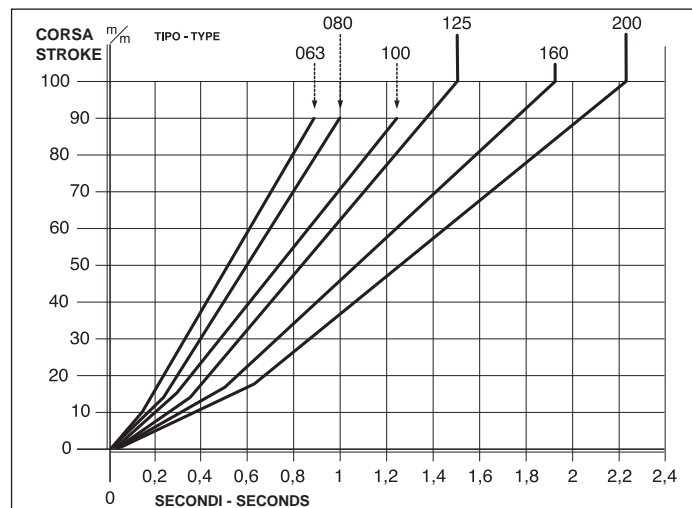
	6 bar	063	080	100	125	160	200
Corsa avvicinamento Approach stroke 10 mm	nL	0,30	0,50	0,99	1,25	1,90	3,07
Corsa lavoro Power stroke 1 mm	nL	0,39	0,64	1,02	1,44	2,56	4,02

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.

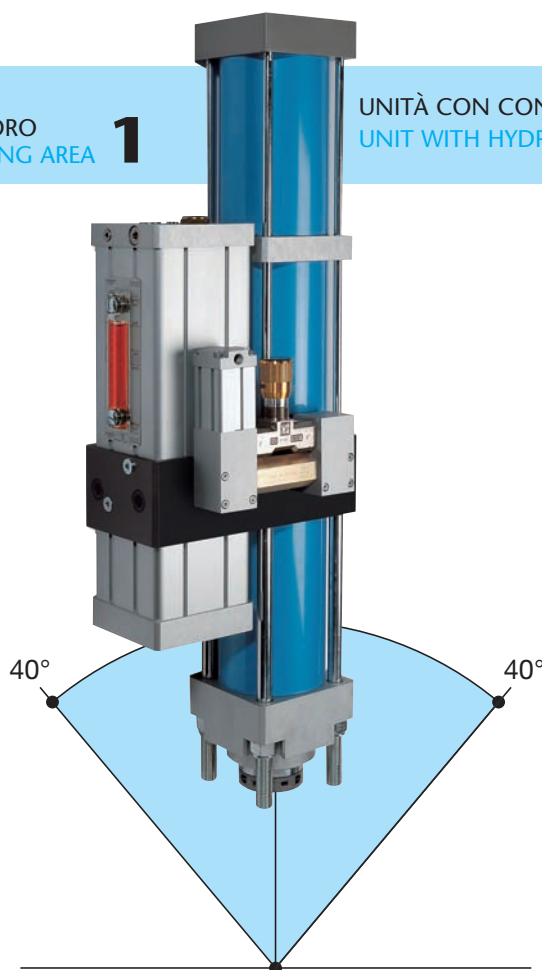
LE PERFORMANCES DELLA SERIE PK-DR

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

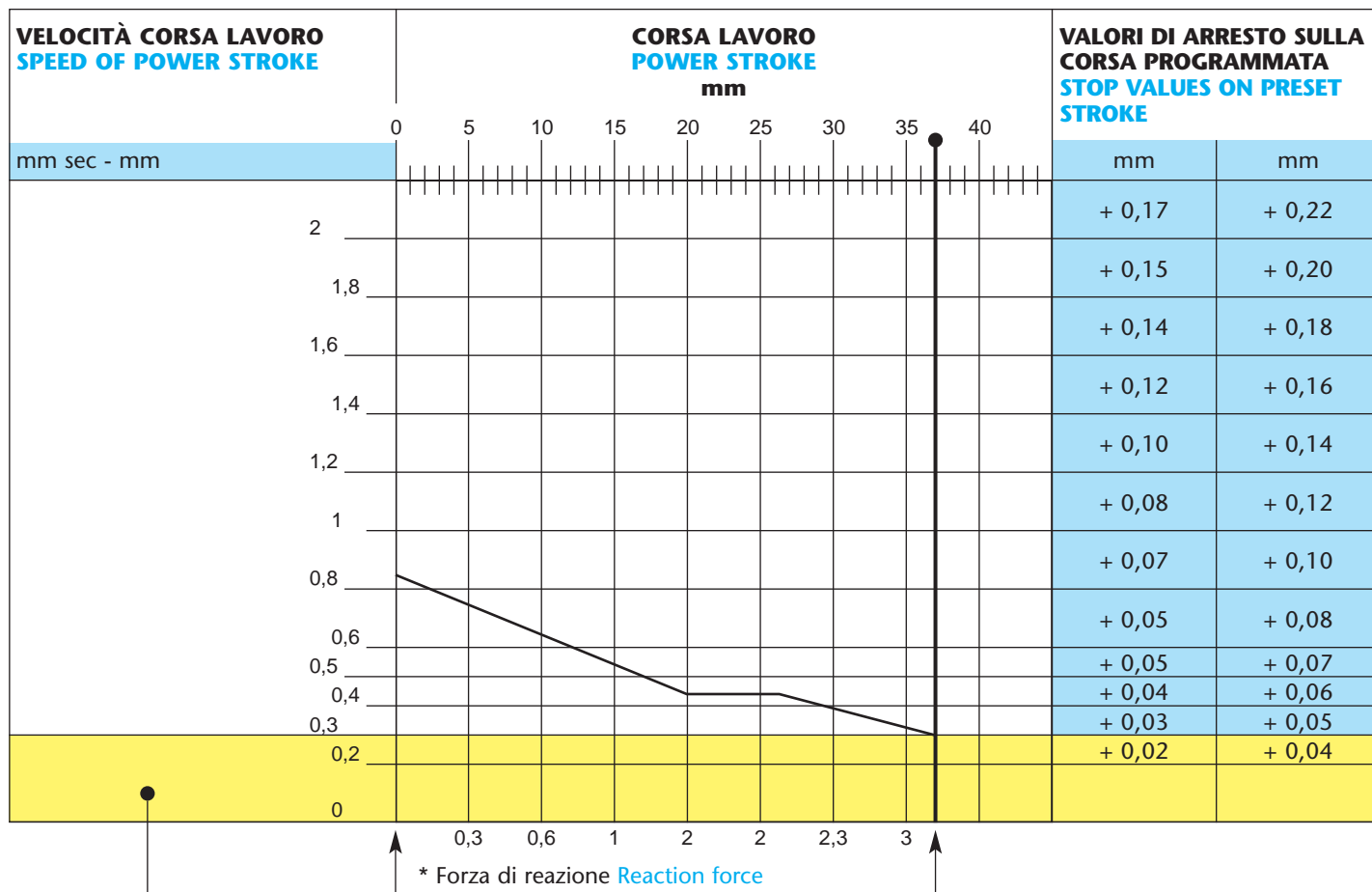
I CONSUMI CONSUMPTION

	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



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						

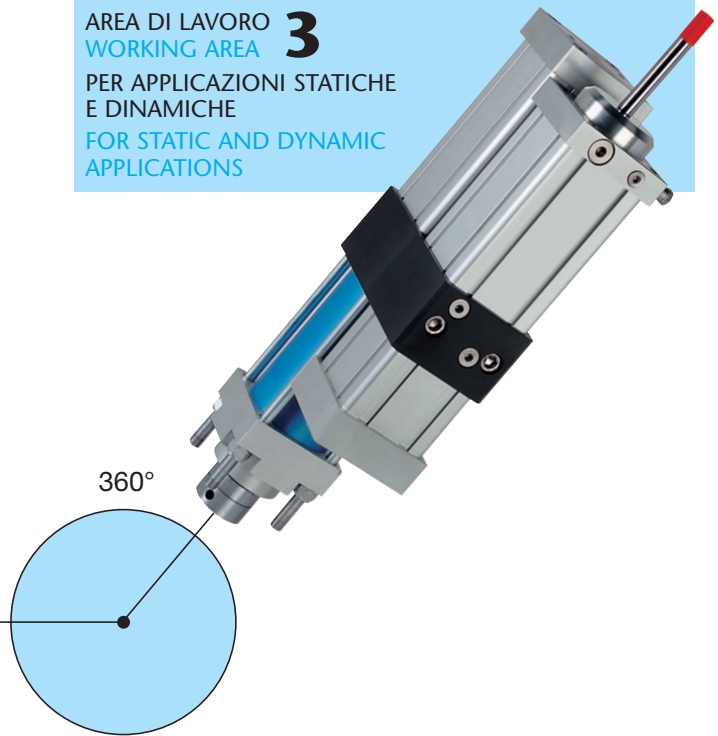
LE PERFORMANCES DELLA SERIE PK-S

PERFORMANCES OF SERIES PK-S

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



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



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



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 pressure: 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 = $\frac{4}{6} 6000 = \text{daN } 4000$

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

LE CORSE IN VERSIONE STANDARD

PK-S1-S2-S3

STROKES STANDARD VERSIONS

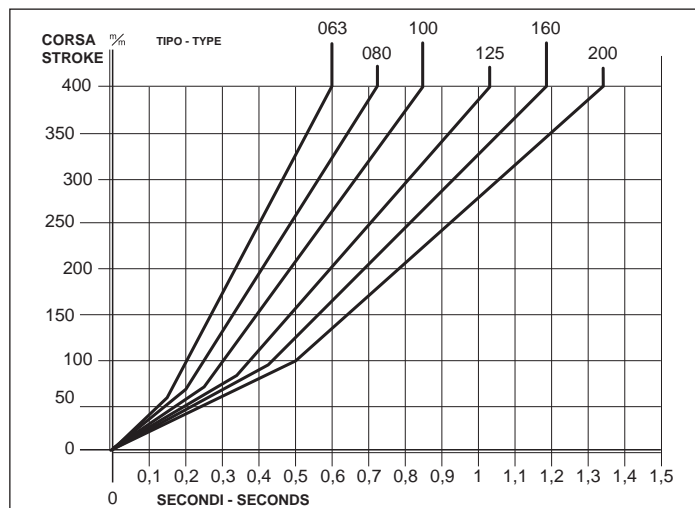
Taglia Size Ø	063	080	100	125	160	200
Corsa totale mm Total stroke mm	Corsa lavoro mm Power stroke mm					
30	5-10	5 - 10 - 15				
60	5 - 10 - 15					
115	5 - 10 - 15 - 20					
165	5 - 10 - 15 - 20 - 25					
215						
300						
400						

I CONSUMI CONSUMPTION

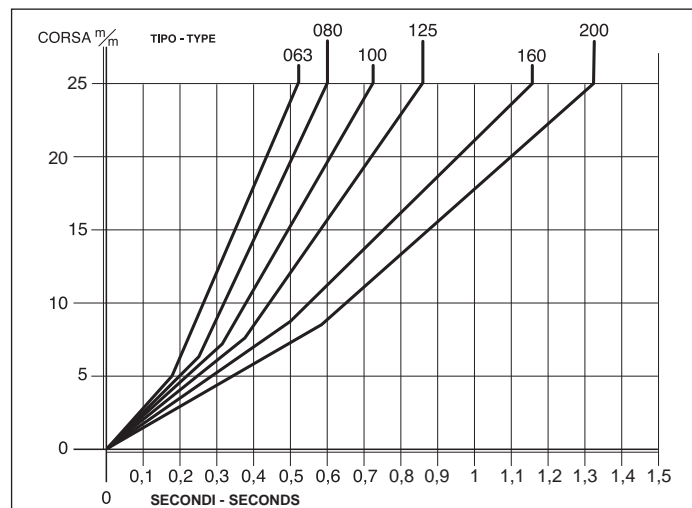
	6 bar	063	080	100	125	160	200
Corsa avvicinamento Approach stroke 10 mm	nL	0,30	0,50	0,99	1,25	1,90	3,07
Corsa lavoro Power stroke 1 mm	nL	0,38	0,79	1,36	1,98	3,62	5,13

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.



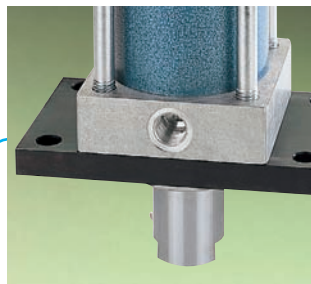
Cod. RS
Mozzo portastampi.
Code RS
Die holder pad.



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



Cod. 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.



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.

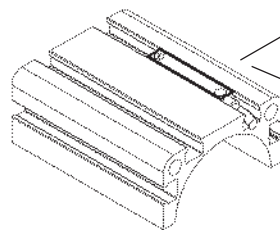
Connettore bipolare orientabile IP65 - Alimentazione AC/DC - Contatto N.A. - Potenza max contatti 1W - Tensione max 150 V in AC=220V in DC.
IP65 connector - Voltage AC/DC - Contact NO - Max power contact 1W - Max voltage 150V AC - 220V DC.

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

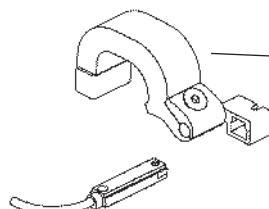


SENSORE TIPO SL

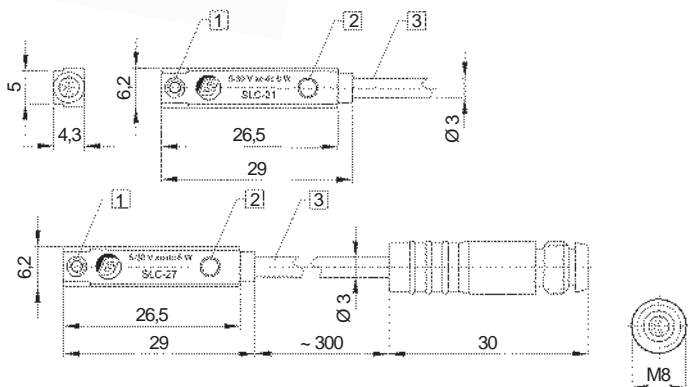
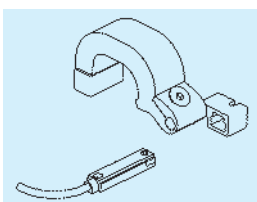
per inserimento longitudinale
SENSOR TYPE SL
for longitudinal insertion



Staffa per sensore
TIPO SL
Bracket for sensor
TYPE SL

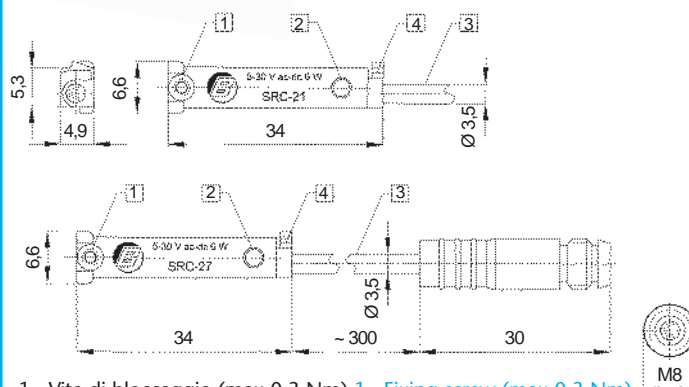
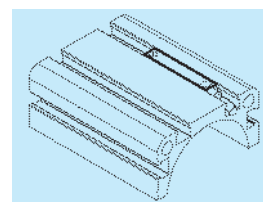


SENSORE TIPO SL SENSOR TYPE SL



- 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

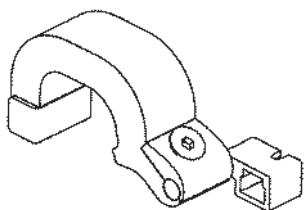
SENSORE TIPO SR SENSOR TYPE SR



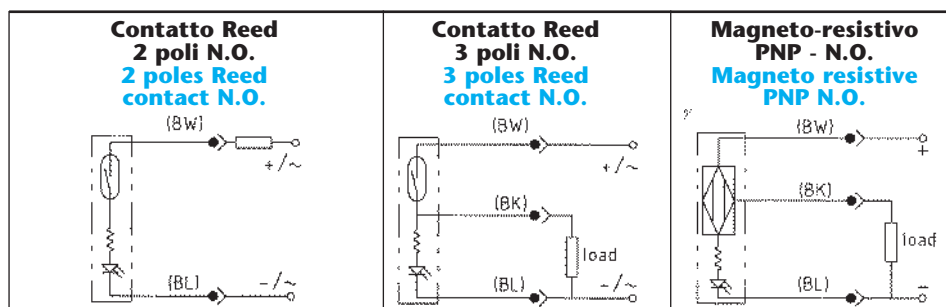
- 1= Vite di bloccaggio (max 0,3 Nm) 1= Fixing screw (max 0,3 Nm)
- 2= Diodo luminoso (LED) 2= Lightning diode (LED)
- 3= Versione connessione elettrica 3= Type of electric connection
- 4= Clip posteriore 4= Rear clip

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



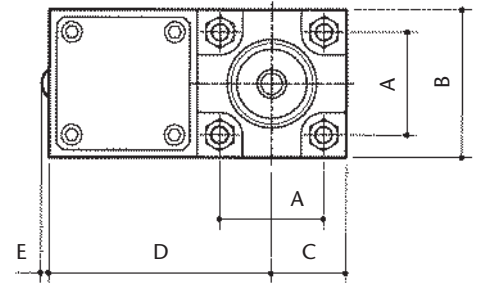
Codice Code	Code	SLC-61 SRC-61	SLC-21 SRC-21	SLC-27 SRC-27	SLD-21 SRD-21	SLD-27 SRD-27	SLN-21 SRN-21	SLN-27 SRN-27	
Versione Version	Version	Con cavo With cable	Con cavo With cable	Connett. M8 Connect. M8	Con cavo With cable	Connettore M8 Connector M8	Con cavo With cable	Connettore M8 Connector M8	
Tensione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

LE CARATTERISTICHE DIMENSIONALI

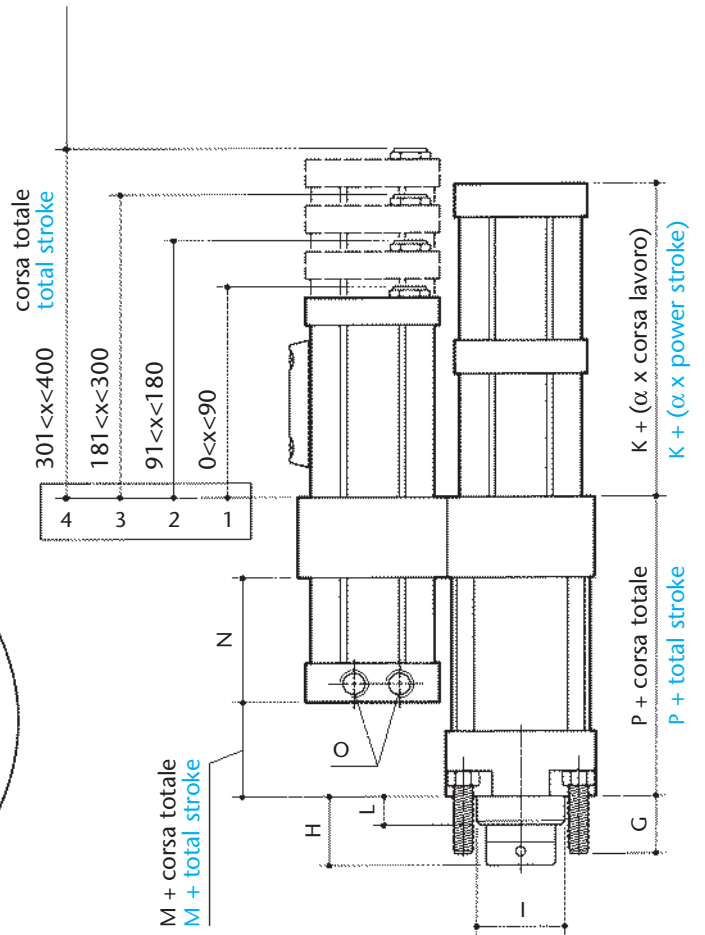
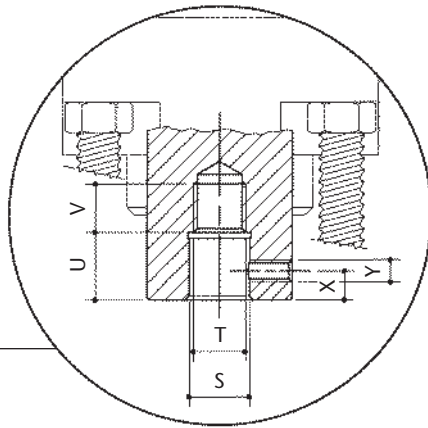
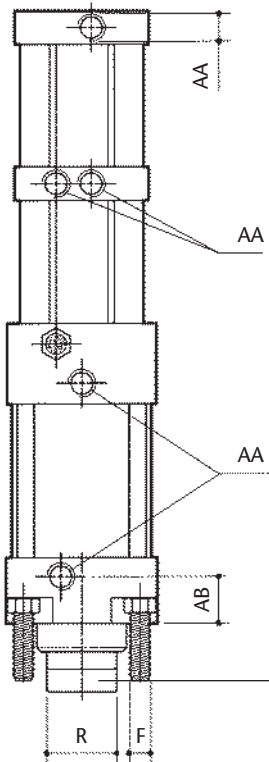
DIMENSIONAL FEATURES



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



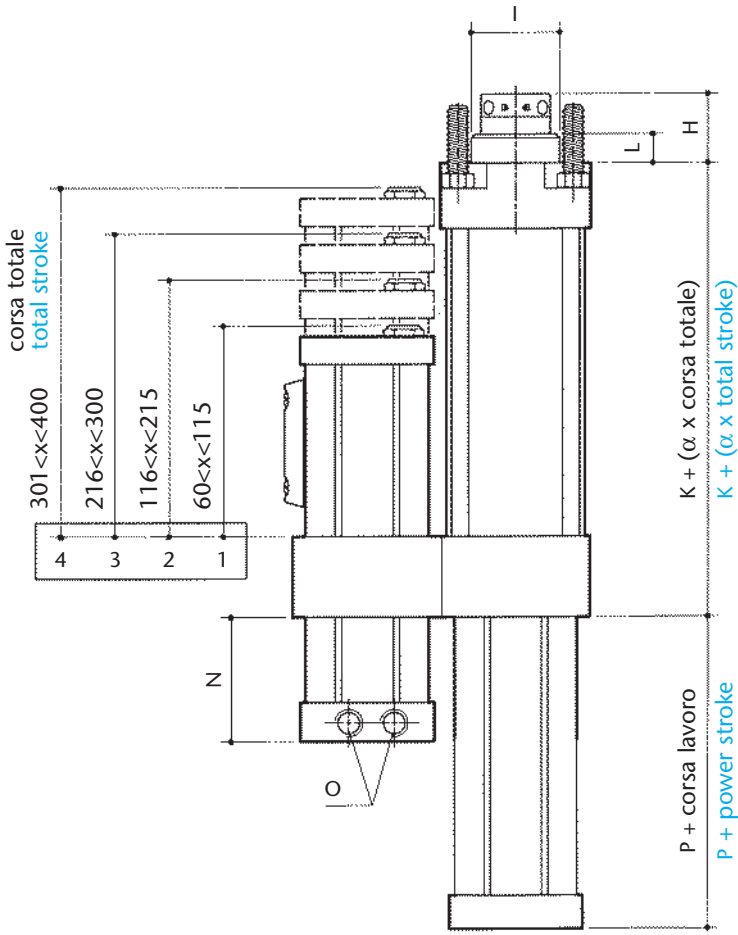
L'altezza del serbatoio varia in funzione della corsa totale (x).
Height of oil reservoir changes as a function of total stroke (x).



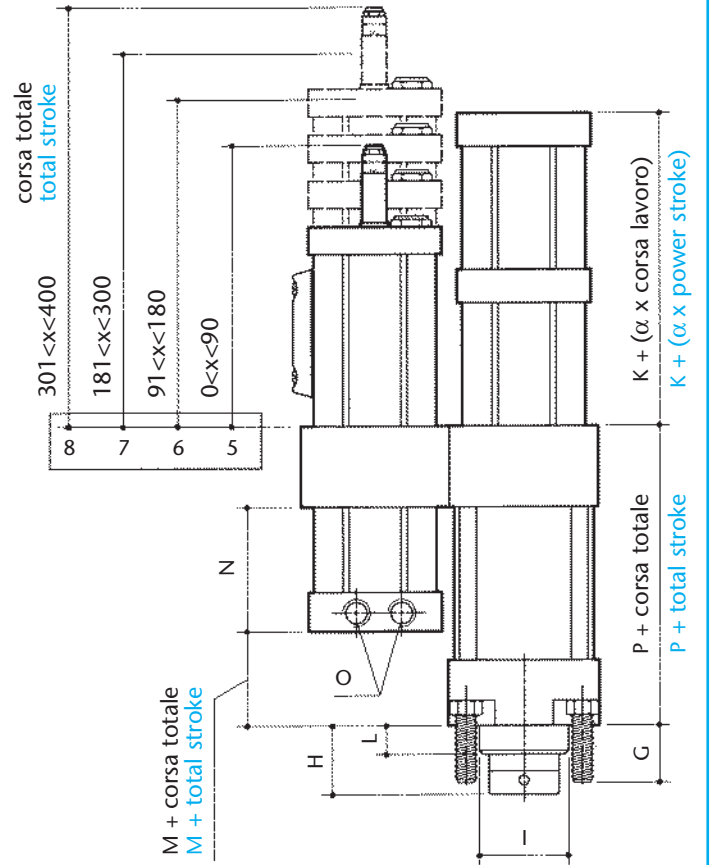
PK-D	A	B	C	D	E	F	G	H	I_{d10}	L	M	N	O	P	K	α	R	S_{H8}
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	160	12,5	40	Ø16
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	159	12,5	50	Ø20
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	197	12,5	60	Ø25
125	110	148	74	222	10	M20	58	60	110	25	52	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**



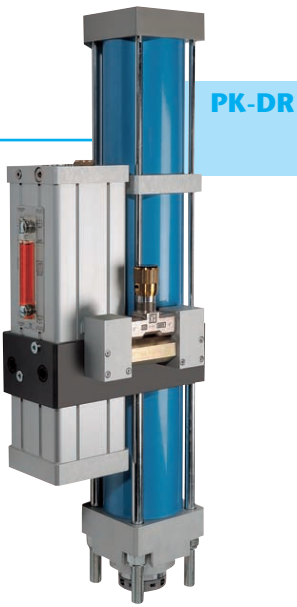
PK-D3
AREA DI LAVORO
WORKING AREA **3**



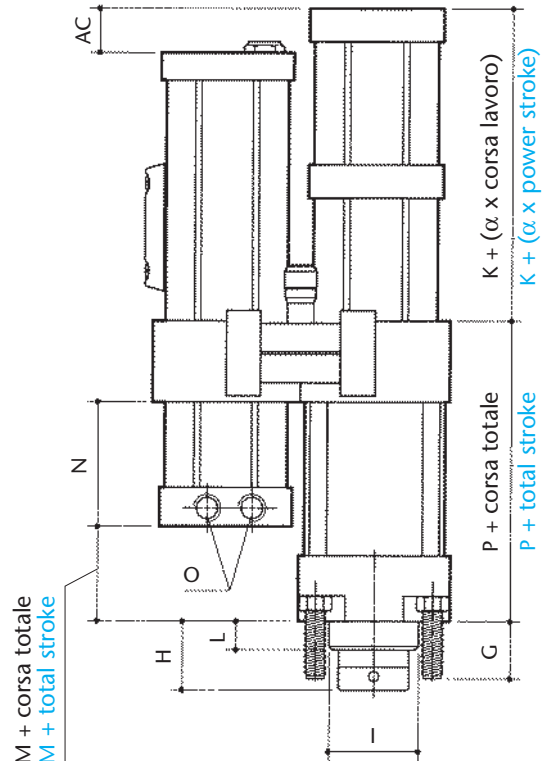
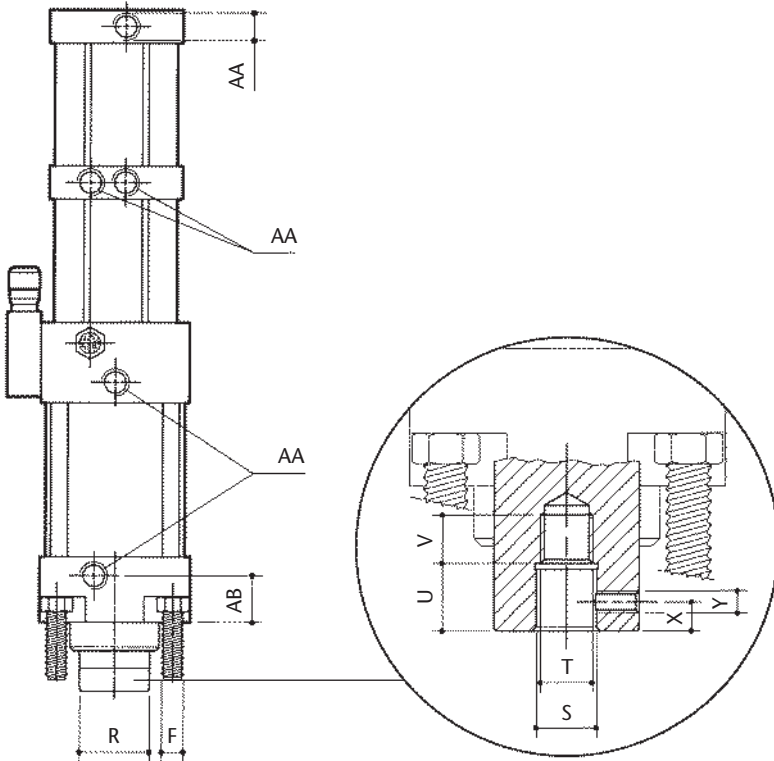
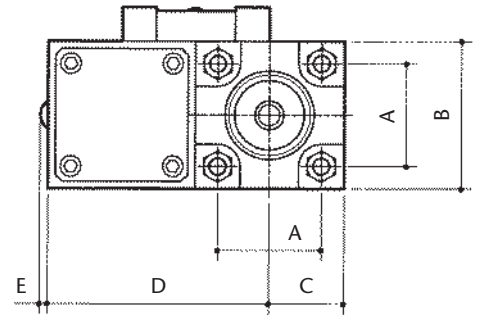
	T	U	V	X	Y	AA	AB	1	2	3	4
M12x1,5	18	12	8	M6	G3/8"	27	164	220	301	366	
M16x1,5	22	16	10	M8	G3/8"	30	158	218	299	364	
M20x1,5	28	22	12	M8	G1/2"	40,5	162	222	303	368	
M20x1,5	28	20	12	M8	G1/2"	56,5	164	224	305	370	
M27x2	35	30	15	M8	G3/4"	43	168	228	309	374	
M27x2	35	30	15	M8	G3/4"	50	173	233	314	379	

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

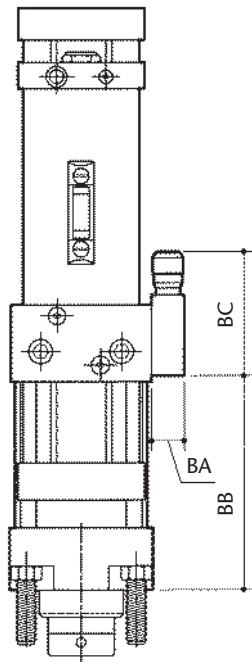


PK-DR

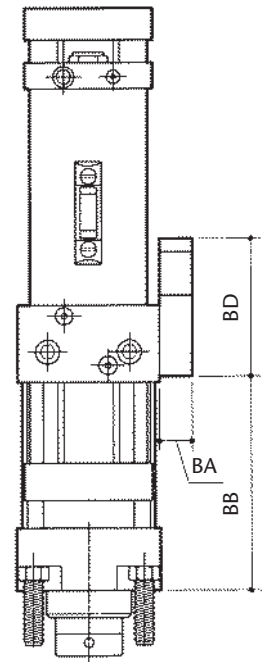


PK-D	A	B	C	D	E	F	G	H	I_{d10}	L	M	N	O	P	K	α
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	194	12,5
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	193	12,5
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	231	12,5
125	110	148	74	222	10	M20	58	60	110	25	52	120	G1/2"	268	243	11,52
160	140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

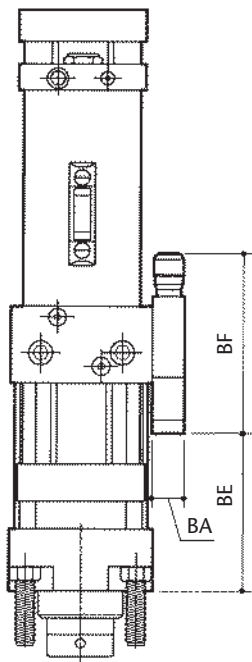
PK-DR-R



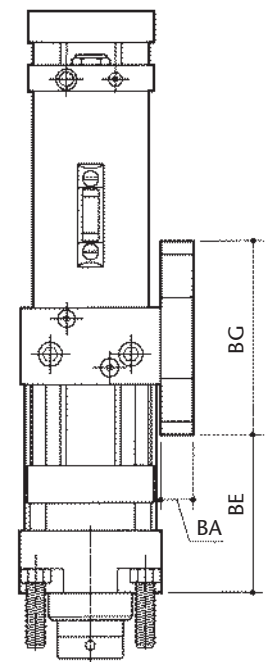
PK-DR-T



PK-DR-D



PK-DR-K



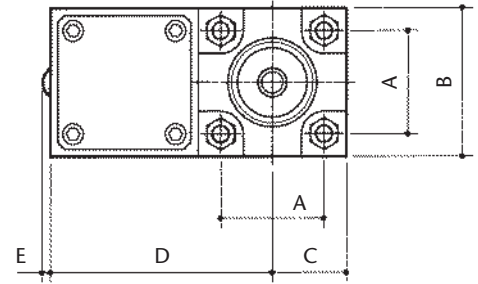
R	S _{H8}	T	U	V	X	Y	AA	AB	AC	PK-D	BA	BB	BC	BD	BE	BF	BG
40	Ø16	M12x1,5	18	12	8	M6	G3/8"	27	33	063	45	137	145	175	66	215	245
50	Ø20	M16x1,5	22	16	10	M8	G3/8"	30	33	080	45	144	145	175	74	215	245
60	Ø25	M20x1,5	28	22	12	M8	G1/2"	40,5	50	100	50	158	175	220	67	265	310
80	Ø25	M20x1,5	28	20	12	M8	G1/2"	56,5	55	126	50	203	175	220	113	265	310
100	Ø30	M27x2	35	30	15	M8	G3/4"	43	58	160	70	192	200	265	82	310	375
120	Ø30	M27x2	35	30	15	M8	G3/4"	50	58	200	70	229	200	265	119	310	375

LE CARATTERISTICHE DIMENSIONALI

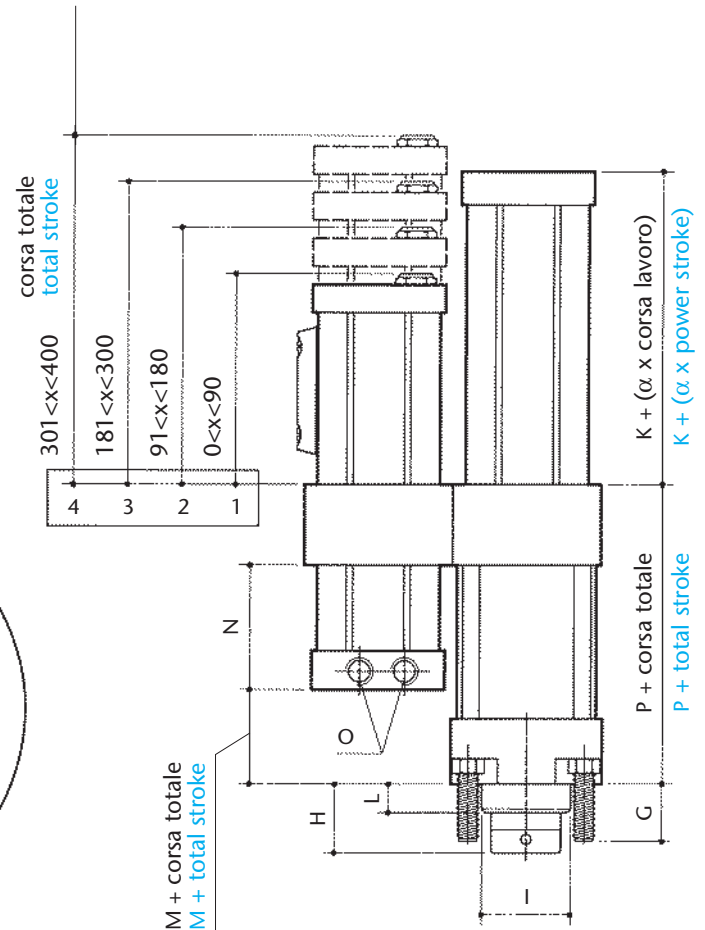
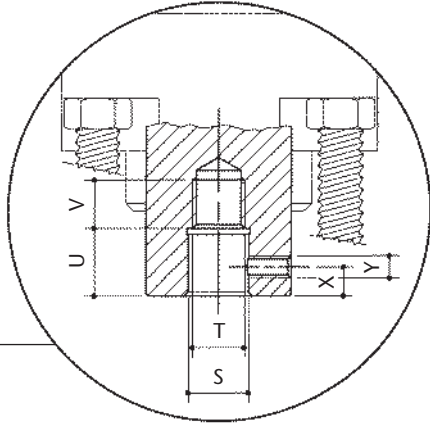
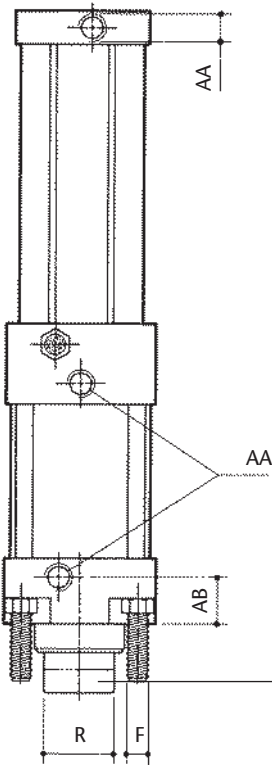
DIMENSIONAL FEATURES



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



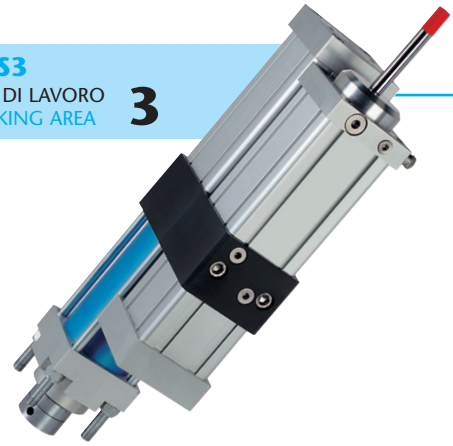
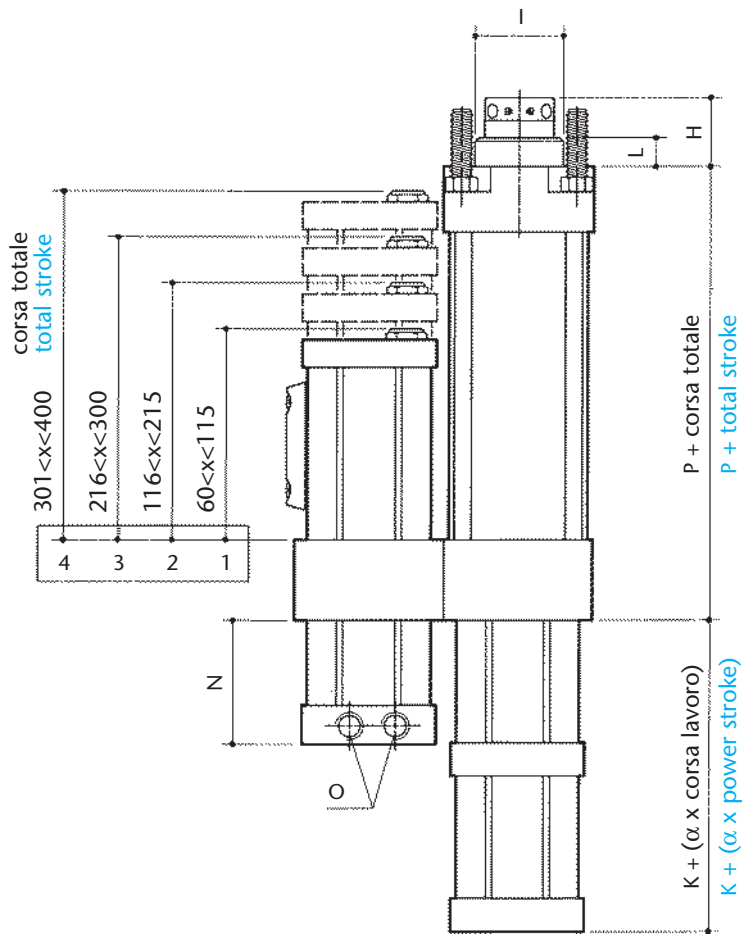
L'altezza del serbatoio varia in funzione della corsa totale (x).
Height of oil reservoir changes as a function of total stroke (x).



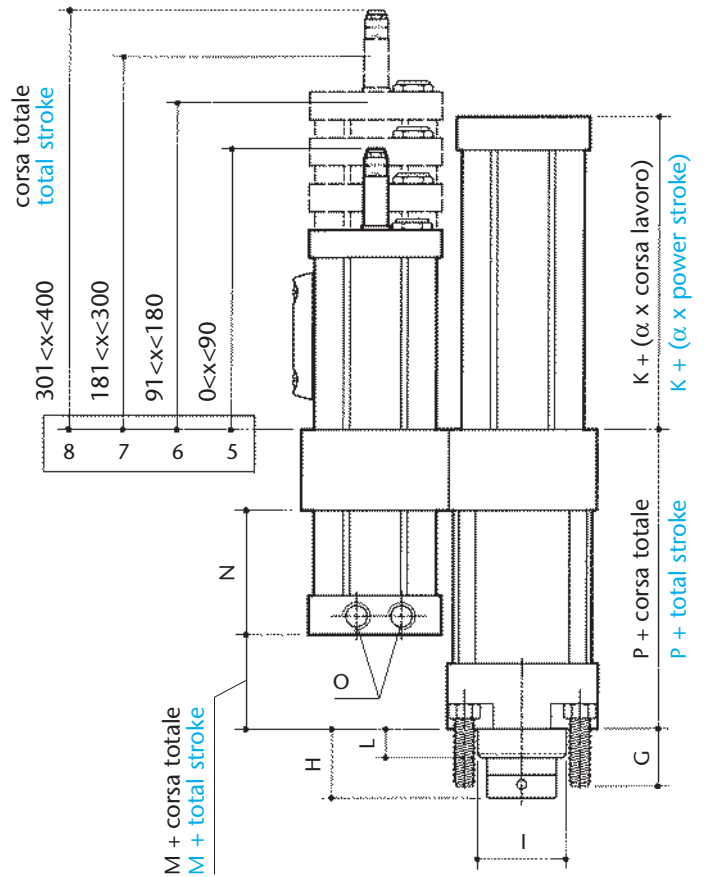
PK-S	A	B	C	D	E	F	G	H	I _{d10}	L	M	N	O	P	K	α
063	61	78	39	117	14	M10	30	40	50	12	19	103	G1/4"	192	92	9
080	75	98	49	147	13	M12	35	50	70	20	27	102	G3/8"	199	91	11,11
100	100	128	64	192	7	M16	50	60	90	25	42	111	G1/2"	223	130	12,76
125	110	148	74	222	10	M20	58	60	110	25	52	120	G1/2"	268	127	11,12
160	140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

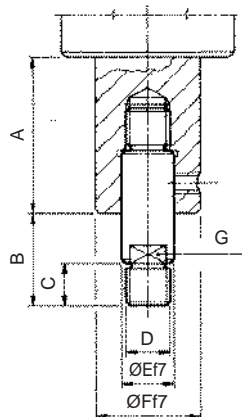
ACCESSORY DIMENSIONS

Cod. CS

Codulo per stelo. Acciaio cromato.

Code CS

Rod end. Chromium plated steel.

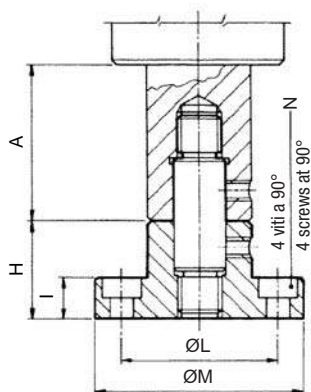


Cod. RS

Mozzo portastampi. Acciaio zincato.

Code RS

Die holder pad. Zinc plated steel.

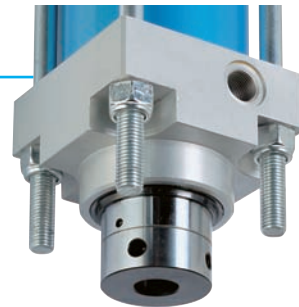
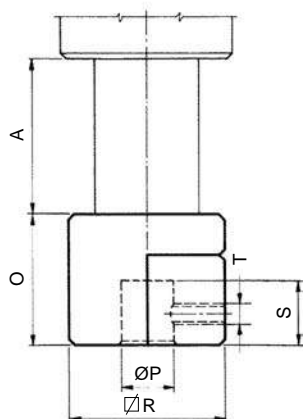


Cod. IR

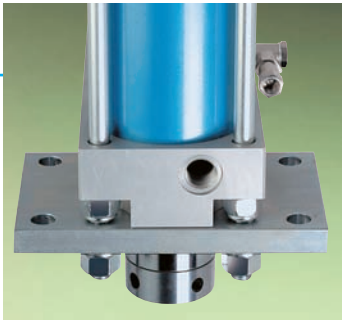
Mozzo portastampi a innesto radiale. Acciaio zincato.

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



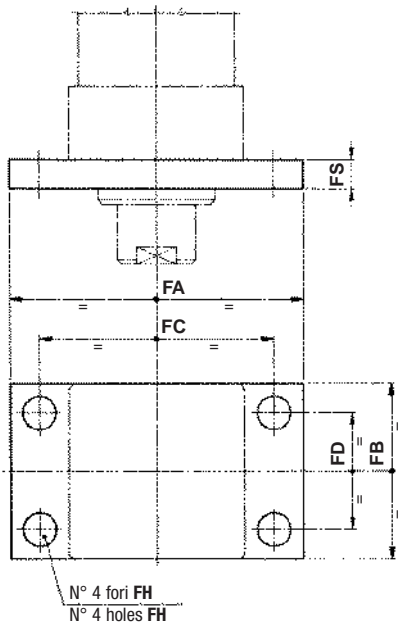
Cod. FG

Flangia per il fissaggio delle unità. Acciaio zincato.

Code FG

Flange mounting. Zinc plated steel.

**ATTACCO A FLANGIA
FLANGE MOUNTING**



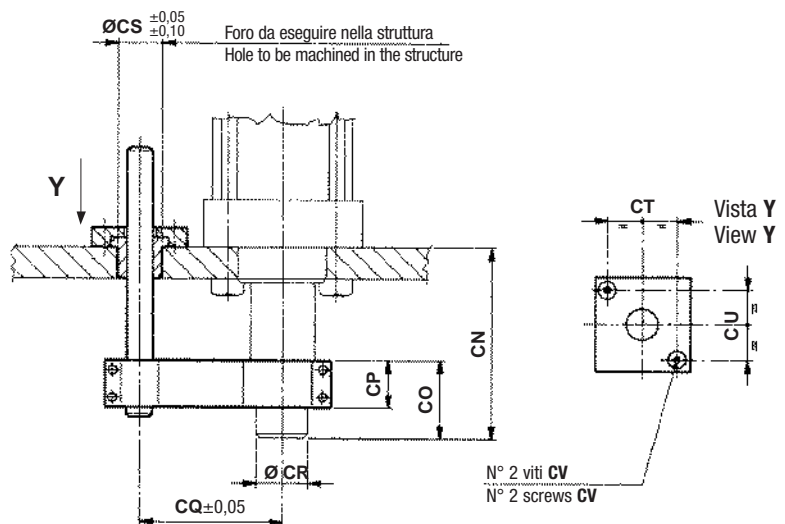
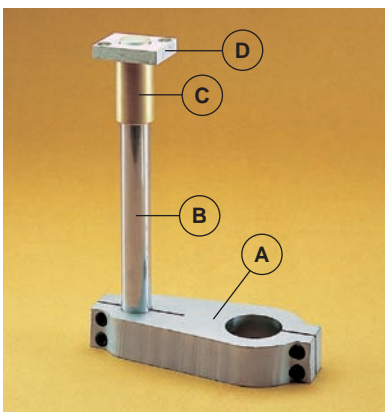
PK-D PK-S PK-DR	063	080	100	125	160	200
FA	135	165	200	240	305	340
FB	80	100	130	150	200	250
FC	110	135	170	200	255	290
FD	61	75	100	110	140	175
FH	10,5	12,5	17	21	25	25
FS	12	15	20	25	30	30

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

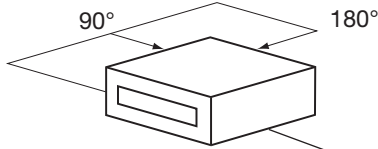


LE CONNESSIONI

CONNECTIONS

UNITÀ PK-D UNIT PK-D

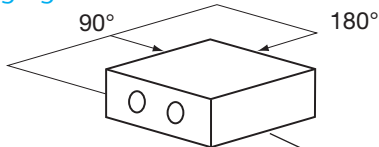
Posizionabile a...
Swinging...



Evacuatore pressione serbatoio
Pressure relief of reservoir

Connessione serbatoio
molla pneumatica 1 bar
Reservoir connection –
pneumatic spring 1 bar

Posizionabile a...
Swinging...



Apertura circuito
idraulico -
fine corsa lavoro
Opening of hydraulic
circuit - power
stroke end

Chiusura circuito
idraulico -
inizio corsa lavoro
Closing of hydraulic
valve - power
stroke start

Vite di regolazione deceleratore
Cushion's adjustment screw

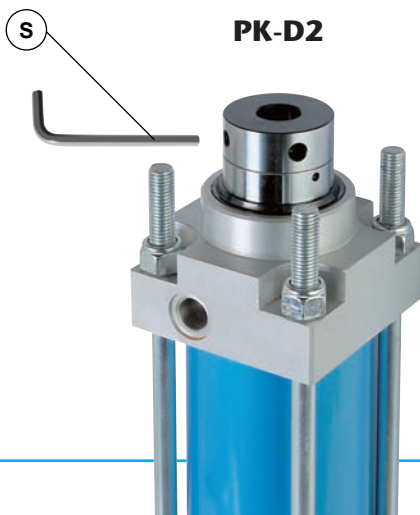
4 Corsa lavoro
Power stroke

3 Ritorno-Corsa lavoro
Return-Power stroke

2 Corsa avvicinamento
Approach stroke

1 Ritorno-Corsa avvicinamento
Return-Approach stroke

Viti di spurgo
Breather screws

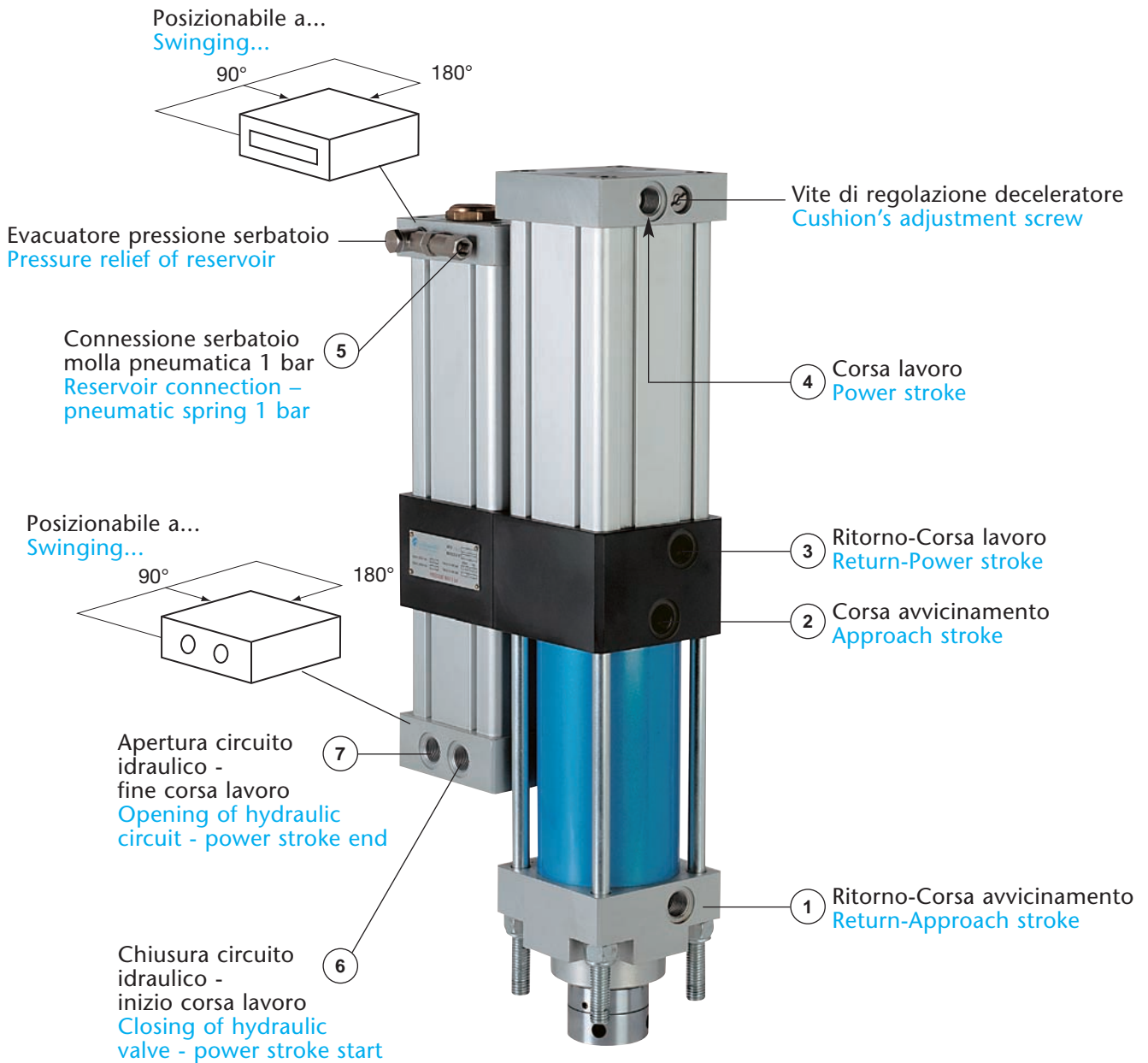


PK-D Ø	Conessioni Connections							CH S
	1	2	3	4	5	6	7	
063	3/8"	3/8"	3/8"	3/8"	1/8"	1/4"	1/4"	2,5
080	3/8"	3/8"	3/8"	3/8"		3/8"	3/8"	3
100	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
125	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"	4
160	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
200	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"	4
UNI ISO 228-1								

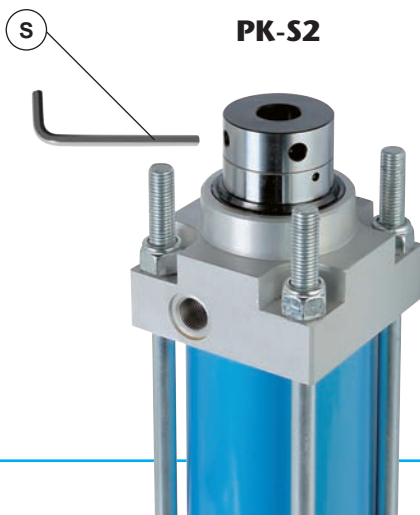
LE CONNESSIONI

CONNECTIONS

UNITÀ PK-S UNIT PK-S



Viti di spurgo
Breather screws



PK-S Ø	Connessioni Connections							CH S
	1	2	3	4	5	6	7	
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

Evacuatore pressione serbatoio
Pressure relief of reservoir

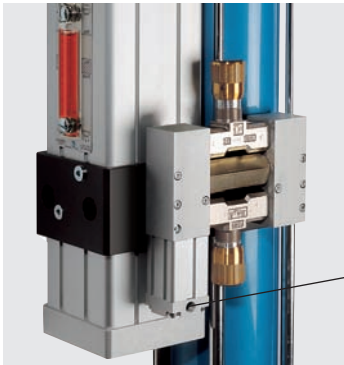
Connessione serbatoio - molla pneumatica
Reservoir connection - pneumatic spring

Vite di regolazione deceleratore
Cushion's adjustment screw

4 Corsa lavoro
Power stroke

3 Ritorno corsa lavoro
Return power stroke

VERSIONE DR-D DR-T VERSION



Doppia regolazione con SKIP
Double adjustment with SKIP

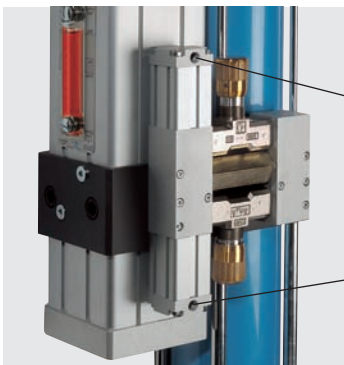
Apertura circuito idraulico - fine corsa lavoro
Opening of hydraulic circuit - power stroke end

Chiusura circuito idraulico - inizio corsa lavoro
Closing of hydraulic valve - power stroke start

2 Andata corsa avvicinamento
Approach stroke

1 Ritorno corsa avvicinamento
Return approach stroke

VERSIONE DR-K DR-T VERSION

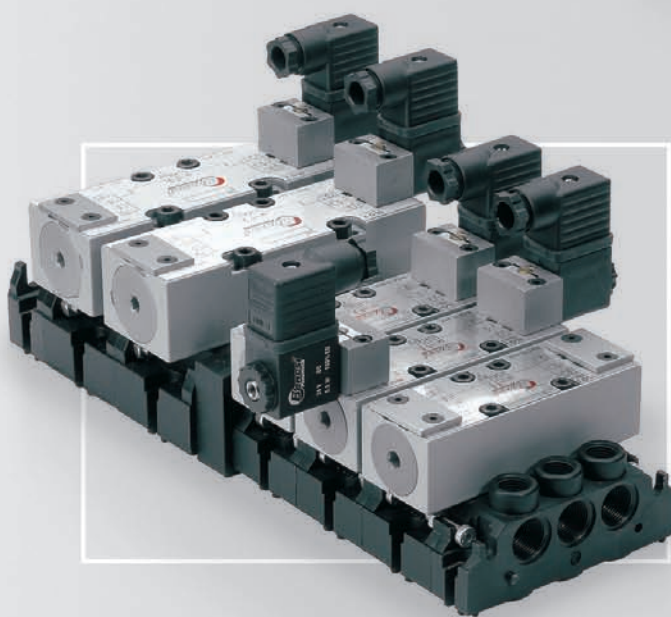
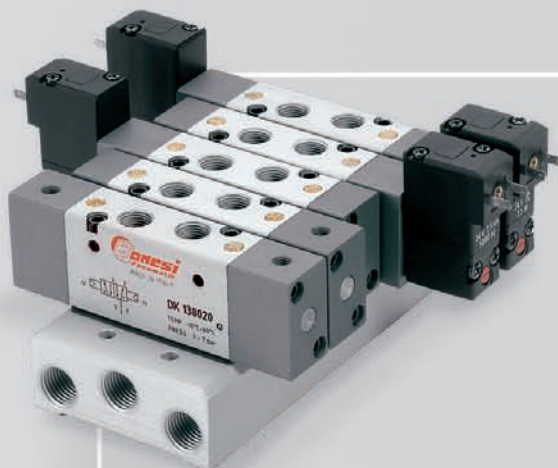


Doppia regolazione con SKIP e STOP
Double adjustment with SKIP and STOP

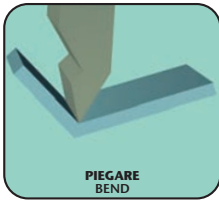
PK-DR	Conessioni Connections								
	1	2	3	4	5	6	7	T	K
063	3/8"	3/8"	3/8"	3/8"	1/8"	1/4"	1/4"	1/4"	1/4"
080	3/8"	3/8"	3/8"	3/8"		3/8"	3/8"		
100	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"		
125	1/2"	1/2"	1/2"	1/2"		1/2"	1/2"		
160	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"		
200	3/4"	3/4"	3/4"	3/4"		1/2"	1/2"		
UNI ISO 228-1									

GRUPPI VALVOLE DI COMANDO

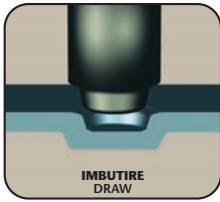
CONTROL VALVES GROUP



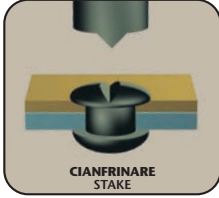
L'IMPIANTISTICA



PIEGARE
BEND



IMBUTIRE
DRAW



CIANFRINARE
STAKE

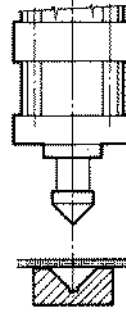


MARCARE
MARK

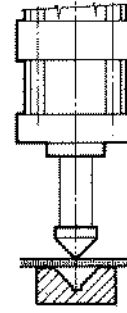
SCHEMA SCHEMA K1

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

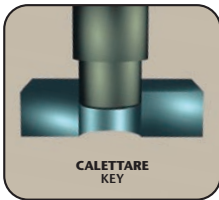
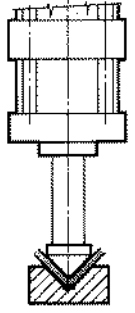
Riposo
Rest



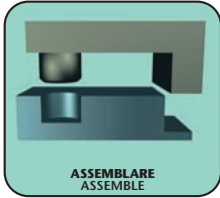
Corsa avvicinamento
Approach stroke



Corsa lavoro
Power stroke



CALETTARE
KEY

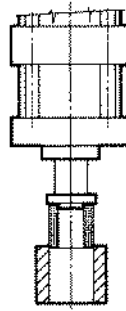


ASSEMBLARE
ASSEMBLE

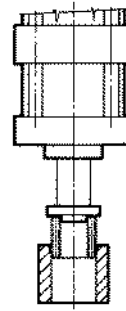
SCHEMA SCHEMA K6

Ripetizione in successione della corsa lavoro
Sequence of power strokes

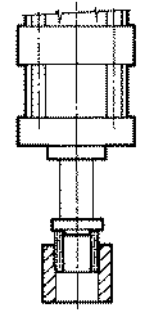
Corsa avvicinamento
Approach stroke



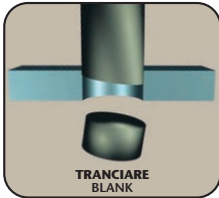
Corsa lavoro
Power stroke



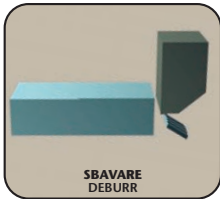
Corsa lavoro
Power stroke



+ ...



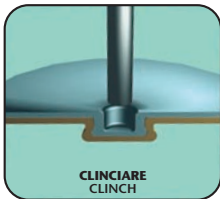
TRANCIARE
BLANK



SBAVARE
DEBURR



MARCARE
MARK

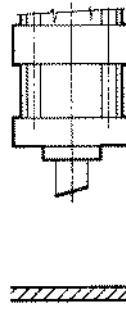


CLINCIARE
CLINCH

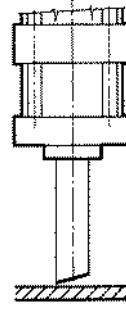
SCHEMA SCHEMA K7

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

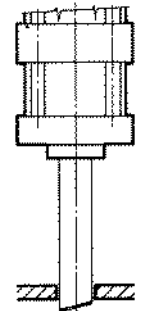
Riposo
Rest



Corsa avvicinamento
Approach stroke



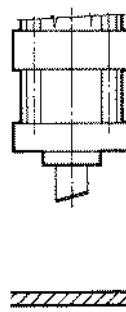
Corsa lavoro + Inversione avvicinamento
Power stroke + reversal of approach valve during power phase



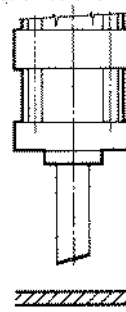
SCHEMA SCHEMA K2

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

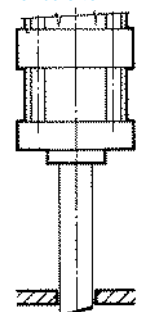
Riposo
Rest



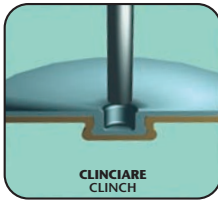
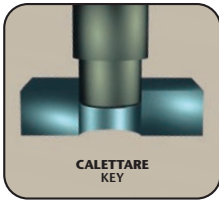
Posizionamento
Corsa avvicinamento
Positioning
Approach stroke



Corsa avvicinamento +
Corsa lavoro
Approach stroke +
Power stroke

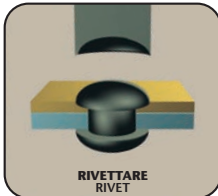
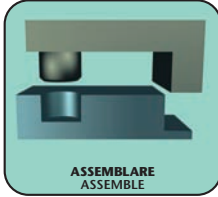
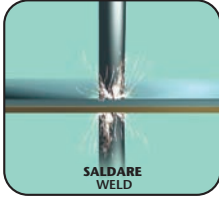


CIRCUITS



SCHEMA SK5

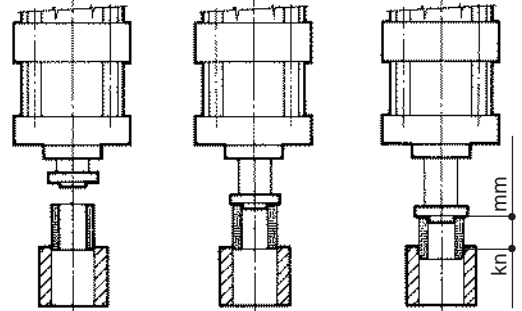
Fine lavoro con valori di forza o corsa programmati
End of power stroke with preset values of force and/or stroke



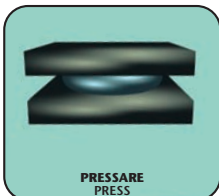
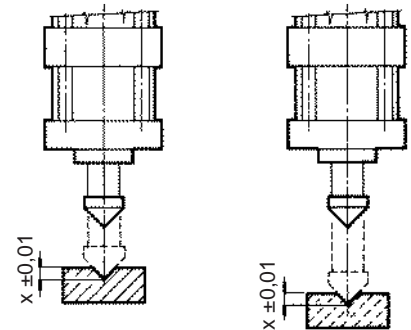
SCHEMA KDR3

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

Riposo Rest Corsa avvicinamento + Approach stroke + Corsa lavoro Power stroke



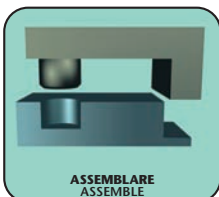
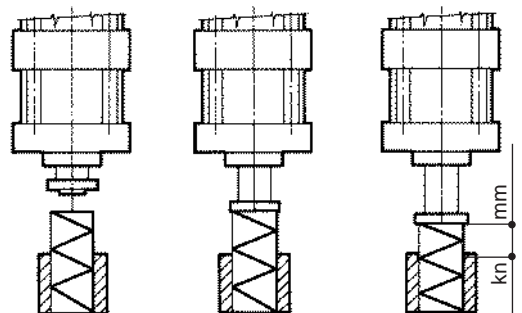
Corsa avvicinamento + Approach stroke + Corsa avvicinamento + Approach stroke +
Corsa lavoro Power stroke Corsa lavoro Power stroke



SCHEMA KDR-T4

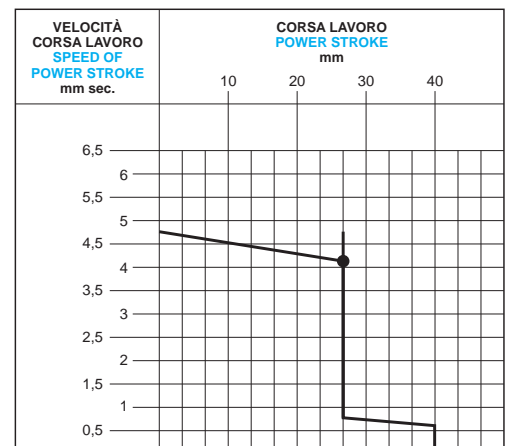
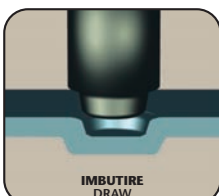
Mantenere una forza costante sul valore di forza o corsa programmato
Keep a steady force with preset value of force or stroke

Riposo Rest Corsa avvicinamento + Approach stroke + Corsa lavoro Power stroke



SCHEMA KDR-K8

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



PROGRAMMA DI PRODUZIONE MANUFACTURING PROGRAMME

**PRESSE PNEUMOIDRAULICHE
HYDROPNEUMATIC PRESSES**

1






**SISTEMI
DI CONTROLLO QUALITÀ
QUALITY
CONTROL SYSTEMS**

2




**GRUPPI DI POTENZA
POWER GROUPS**

3

TROMBOLINE

4

**PRESSE PNEUMO-
IDRAULICHE AD
AZIONAMENTO MANUALE
MANUALLY OPERATED
HYDROPNEUMATIC
PRESSES**




**MOLTIPLICATORI DI PRESSIONE
PRESSURE MULTIPLIERS
DRUCKÜBERSETZER**

SERIE MF
SERIES MF
BAUREIHE MF




**PRESSE SPECIALI
SPECIAL PRESSES**




**Sistemi di automazione
Automation systems**



Agente o distributore
Agent or distributor



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