

Unità serie Units series US

Cilindro pneumatico
con controllo idraulico coassiale
Pneumatic cylinder with coaxial
hydraulic control



Le unità US sono disponibili con una serie di funzioni applicabili sulle corse in uscita ed in rientro, consentendo di determinare singole caratteristiche o innumerevoli combinazioni per rispondere a specifiche esigenze applicative.

US units are available with a series of functions that may be applied on the forward and return strokes, allowing to obtain single features or forward and return strokes combinations to satisfy specific application needs.

Caratteristiche costruttive - Product features

- Camicia in alluminio estruso calibrata e anodizzata
- Testata in alluminio pressocolato anodizzato
- Corpo posteriore in alluminio trafilato e anodizzato
- Stelo in acciaio C45 cromato a spessore
- Tiranti in acciaio zincati
- Guarnizioni pneumatiche in gomma nitrilica antiolio NBR
- Guarnizioni idrauliche in poliuretano
- Olio circuito idraulico: ATF Dexron II

- Gauged and anodized extruded aluminium body
- Cylinder head made of anodized die-cast aluminium
- Rear body made of drawn and anodized aluminium
- Piston rod in C45 hard chrome plated steel
- Tie rods in cadmium plated steel
- Pneumatic gasket made of NBR anti-oil nitrile rubber
- Hydraulic gaskets made of polyurethane
- Hydraulic circuit oil: ATF Dexron II

Dati tecnici - Technical data

- Fluido: aria filtrata con o senza lubrificazione
- Pressione max: 7 bar
- Temperatura: - 20° + 60°C
- Campo di regolazione velocità:
minima 60 mm/min. massima 12 m/min.
- Deceleratore idraulico progressivo (vedere pag 19)

- Fluid: filtered air with or without lubrication
- Max pressure: 7 bar
- Temperature: - 20° + 60°C
- Speed regulation range minimum 60 mm/min.
maximum 12 m/min.
- Progressive hydraulic decelerator (see page 19)

Alesaggi Borings Ø: mm 50 - 63 - 80 - 100 - 125 - 160 - 200

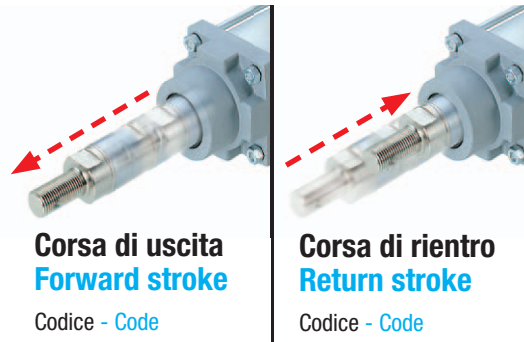
- Versione standard o magnetica
- Funzioni: Corsa regolata - SKIP - STOP -
Deceleratori idraulici in uscita e rientro nelle varie combinazioni
- Standard or magnetic version
- Functions: Regulated stroke - quick stroke (SKIP) - STOP -
Hydraulic decelerators in forward and return stroke
in the various combinations

Corse standard disponibili - Standard strokes available mm

	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1500
50	•	•	•	•	•	•	•							
63	•	•	•	•	•	•	•	•	•	•	•			
80	•	•	•	•	•	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•	•	•	•
160	•	•	•	•	•	•	•	•	•	•	•	•	•	•
200	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Alesaggio - Boring
mm

Funzioni - Functions



Corsa di uscita
Forward stroke

Codice - Code

Corsa di rientro
Return stroke

Codice - Code

Regolatore di velocità
Speed governor

RU

RT

1

Versione standard - **Standard version**

2

Versione a quadro - **Panel version**

Valvola di STOP
STOP valve

Valvola di STOP NC/NA
STOP valve NC/NO

SU

ST

11

A comando pneumatico NC/NA
NC/NO pneumatic actuated

12

A comando elettrico NC/NA
NC/NO electric actuated

Valvola di rapido (SKIP)
Quick stroke valve (SKIP)

Standard - Veloce NC/NA
Standard - Quick NC/NO

KU

KT

Veloce - Regolabile NC/NA
Quick - Adjustable NC/NO

KS

KR

Chiusura decelerata progressiva NA
Gradual decelerated closing NO

KA

KD

11

A comando pneumatico NC/NA
NC/NO pneumatic actuated

12

A comando elettrico NC/NA
NC/NO electric actuated

Deceleratore idraulico di fine corsa
End-stroke hydraulic decelerator

A gradino - Doppia rampa
Step - Double ramp

DU

DT

Progressivo in chiusura
Gradual closing

DS

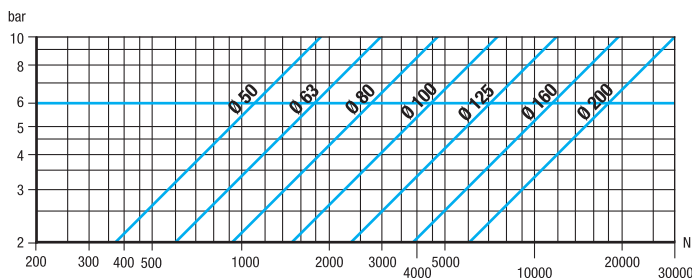
DR

N.B. Per l'alesaggio 50 mm le funzioni esposte in tabella sono possibili solo per la corsa in uscita o in rientro.

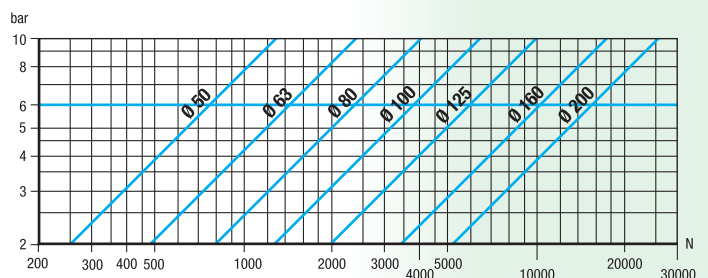
Non è possibile creare combinazioni nei due sensi di marcia.

NOTE: For 50 mm bore the functions shown in the table apply only for the forward or return stroke. It is not possible to create combinations in both directions.

Forza teorica in uscita - **Theoretic forward force**



Forza teorica in rientro - **Theoretic return force**



Unità serie US

Units series US

Singola regolazione - Single adjustment



Unità base - Basis unit

A

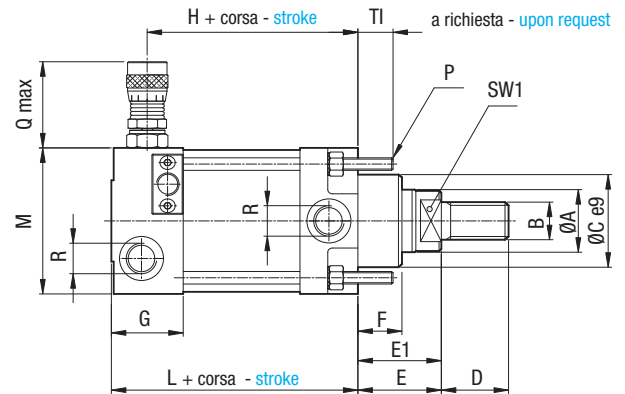
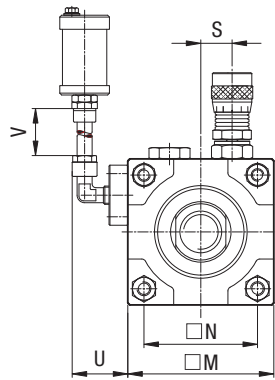
C

D

B

Dimensioni comuni per tutte le versioni

Common dimensions for all versions



Alesaggio Boring

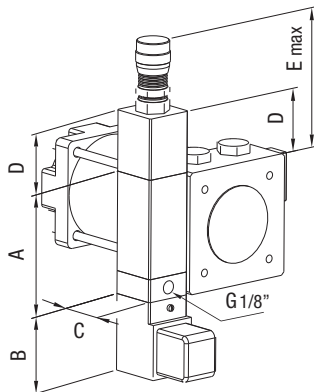
mm	A	B	C	D	E	E1*	F	G	H	L	M	N	P	Q	R	S	TI	U	V	SW1
50	30	M 16x1,5	45	32	41,5	61,5	23	38	91	107,5 ±0,5	60	43 ±0,5	M 5	50	G 1/4	14,5	23	40	500	24
63	30	M 16x1,5	50	32	41,5	61,5	23	38	92	107,5 ±0,5	70	54,5 ±0,5	M 6	50	G 3/8	14,5	23	40	500	24
80	35	M 20x1,5	60	40	54,5	70,5	35	43	100	118 ±0,7	90	70 ±0,5	M 8	48,5	G 3/8	17,5	28	40	500	30
100	40	M 20x1,5	60	40	54,5	70,5	30	43	105	123 ±1	110	83,5 ±0,5	M 10	44	G 1/2	17,5	28	40	500	30
125	55	M 27x2	85	54	58,5	78,5	38	43	105	123 ±1	140	102,5 ±0,7	M 10	38,5	G 1/2	17,5	34	40	500	30
160	65	M 36x2	90	72	64	89	37	54	130	160 ±1,5	170	133 ±0,7	M 14	40	G 3/4	22	42	50	500	46
200	80	M 36x2	115	72	73	98	46	61	173	205 ±1,5	210	161 ±0,7	M 16	34	G 3/4	22	42	50	500	46

* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (cod.- code DS-DU)

Versioni - Versions

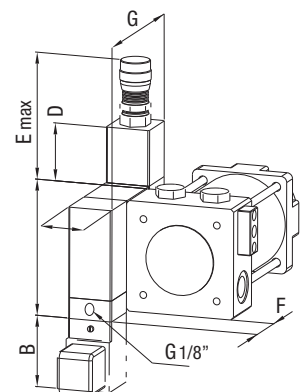
A In uscita: regolato-STOP
In rientro: veloce
Forward: regulated-STOP
Return: quick

B In uscita: veloce
In rientro: regolato-STOP
Forward: quick
Return: regulated-STOP



C In uscita: regolato-SKIP-STOP
In rientro: veloce
Forward: regulated-SKIP-STOP
Return: quick

D In uscita: veloce
In rientro: regolato-SKIP-STOP
Forward: quick
Return: regulated-SKIP-STOP



Alesaggio Boring mm	A	B	□C	D	E
50 ÷ 125	81	65	32	40	90
160-200	130	65	50	65	165

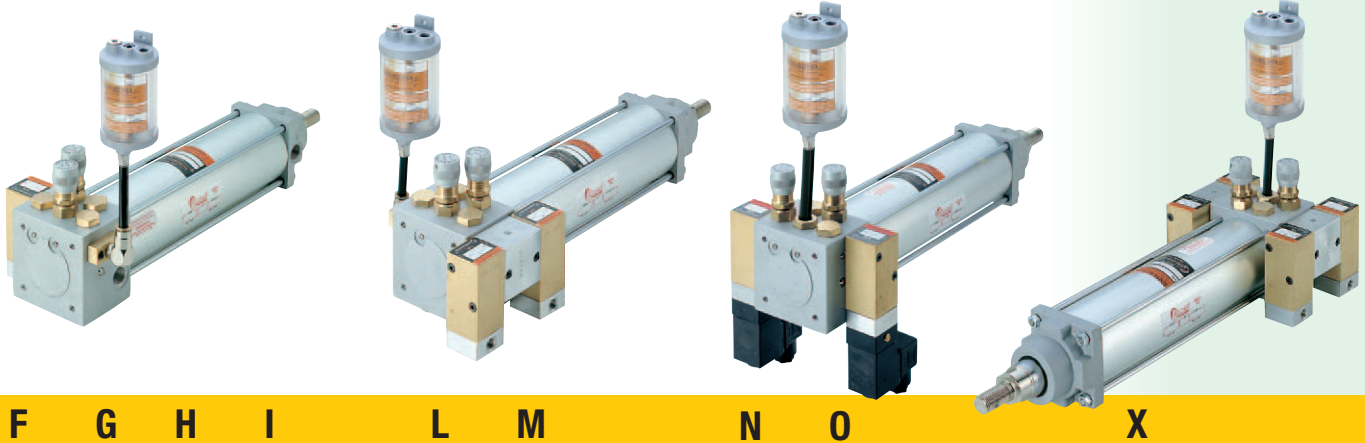
Alesaggio Boring mm	A	B	□C	D	E	F	G
50 ÷ 125	81	65	32	40	90	32	110
160 - 200	130	65	50	65	165	50	160

Connessioni valvole 1/8" - 1/8" Valve connections

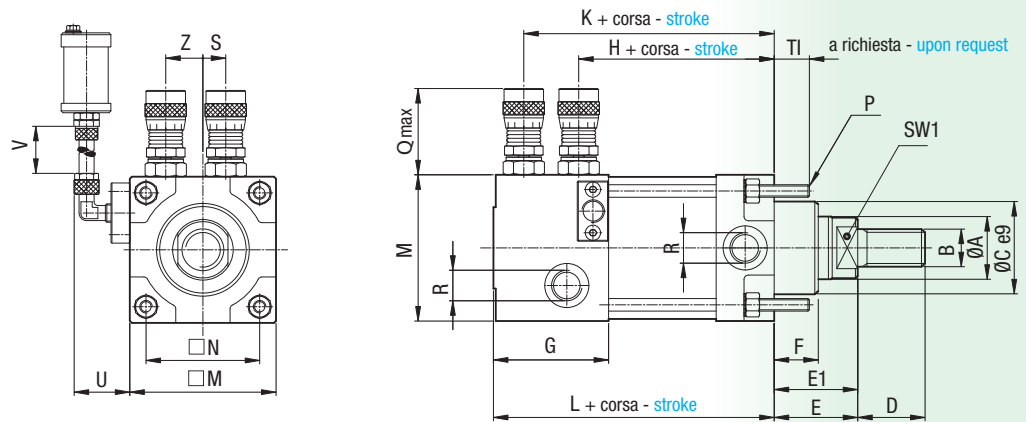
Connessioni valvole 1/8" - 1/8" Valve connections

Le valvole di SKIP- STOP vengono fornite in versione NC - su richiesta NA - The SKIP- STOP valves are supplied in NC version - NO on request.

Doppia regolazione - Double adjustment



Dimensioni comuni per tutte le versioni
Common dimensions for all versions



Alesaggio

Boring

mm	A	B	C	D	E	E1*	F	G	H	K	L	M	N	P	Q	R	S	TI	U	V	Z	SW1
63	30	M 16x1,5	50	32	41,5	61,5	23	61	83,5	107,5	130,5 ±0,5	70	54,5 ±0,5	M 6	50	G 3/8	12,5	23	40	500	24,5	24
80	35	M 20x1,5	60	40	54,5	70,5	35	65	95	120	140 ±0,7	90	70 ±0,5	M 8	48,5	G 3/8	12,5	28	40	500	24,5	30
100	40	M 20x1,5	60	40	54,5	70,5	30	65	100	125	145 ±1	110	83,5 ±0,5	M 10	44	G 1/2	12,5	28	40	500	24,5	30
125	55	M 27x2	85	54	58,5	78,5	38	65	100	125	145 ±1	140	102,5 ±0,7	M 10	38,5	G 1/2	12,5	34	40	500	24,5	30
160	65	M 36x2	90	72	64	89	37	67	120,5	149,5	168 ±1,5	170	133 ±0,7	M 14	40	G 3/4	17	42	50	500	34	46
200	80	M 36x2	115	72	73	98	46	68	154	183	212 ±1,5	210	161 ±0,7	M 16	34	G 3/4	17	42	50	500	34	46

* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (cod.- code DS-DU)

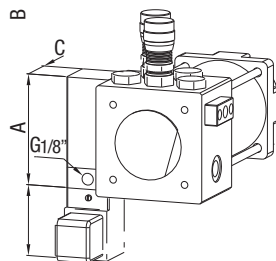
Versioni - Versions

F In uscita: regolato-STOP
In rientro: regolato
Forward: regulated-STOP
Return: regulated

G In uscita: regolato
In rientro: regolato-STOP
Forward: regulated
Return: regulated-STOP

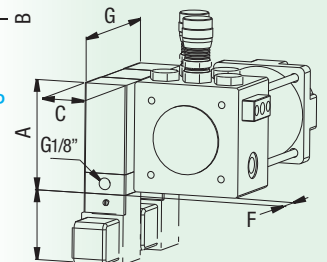
H In uscita: regolato-SKIP
In rientro: regolato
Forward: regulated-SKIP
Return: regulated

I In uscita: regolato
In rientro: regolato-SKIP
Forward: regulated
Return: regulated-SKIP



L In uscita: regolato-SKIP-STOP
In rientro: regolato
Forward: regulated-SKIP-STOP
Return: regulated

M In uscita: regolato
In rientro: regolato-SKIP-STOP
Forward: regulated
Return: regulated-SKIP-STOP



Alesaggio

Boring mm

	A	B	□C
63÷125	81	65	32
160-200	130	65	50

Connessioni valvole 1/8" - 1/8" Valve connections

Alesaggio

Boring mm

	A	B	□C	F	G
63÷125	81	65	32	25	110
160-200	130	65	50	40	160

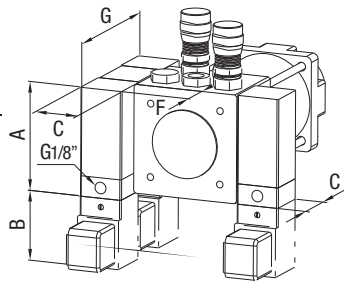
Connessioni valvole 1/8" - 1/8" Valve connections

Unità serie **US** Doppia regolazione - Double adjustment

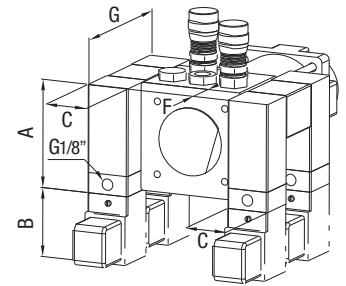
Versioni - Versions

N In uscita: regolato-SKIP
In rientro: regolato-SKIP
Forward: regulated-SKIP
Return: regulated-SKIP

O In uscita: regolato-SKIP-STOP
In rientro: regolato-SKIP
Forward: regulated-SKIP-STOP
Return: regulated-SKIP



X In uscita: regolato-SKIP-STOP
In rientro: regolato-SKIP-STOP
Forward: regulated-SKIP-STOP
Return: regulated-SKIP-STOP



Alesaggio Boring mm	A	B	C	F	G
63÷125	81	65	32	25	110
160-200	130	65	50	40	160

Connessioni valvole 1/8" - 1/8" Valve connections

Alesaggio Boring mm	A	B	C	F	G
63÷125	81	65	32	25	110
160-200	130	65	50	40	160

Connessioni valvole 1/8" - 1/8" Valve connections

Vasi compensatori - Expansion tanks

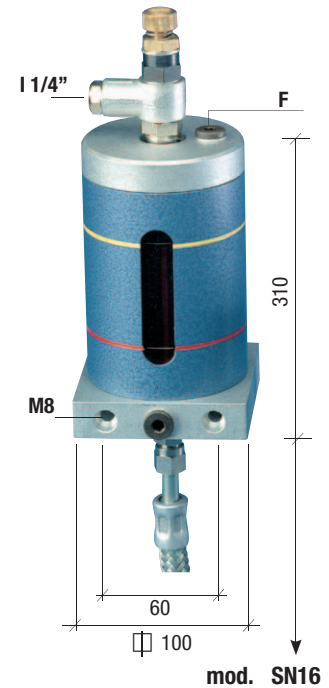
Le unità vengono fornite complete di vaso compensatore
Units are supplied complete of expansion tank



mod. V61 V62



mod. V81 V82



mod. SN16

I Connessione di alimentazione - pressione max 6 bar - Feeding connection - max pressure 6 bar

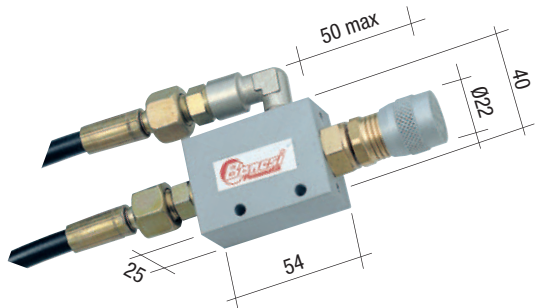
F Connessione di caricamento olio - Oil filling connection

Vaso collegato secondo il modello - Tank connected according to the model

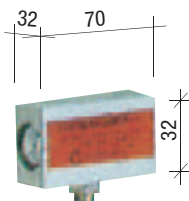
Alesaggio Boring mm	Corsa - stroke mm																
	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800		
50	VASO - TANK V61						VASO - TANK V62		VASO - TANK V81			VASO - TANK V82					
63	VASO - TANK V61						VASO - TANK V62		VASO - TANK V81			VASO - TANK V82					
80	VASO - TANK V61						VASO - TANK V62		VASO - TANK V81			VASO - TANK V82					
100	VASO - TANK V61						VASO - TANK V62		VASO - TANK V81			VASO - TANK V82					
125	VASO - TANK V61						VASO - TANK V62		VASO - TANK V81			VASO - TANK V82					
160	VASO - TANK V81						VASO - TANK V82				VASO - TANK SN16		VASO - TANK SPECIALE - SPECIAL				
200	VASO - TANK V81						VASO - TANK V82				VASO - TANK SN16		VASO - TANK SPECIALE - SPECIAL				
mm	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800		

Accessori e Optional - Accessories and Optionals

Regolatore da pannello cod. 2RU/2RT
Regulator (panel mounted) code 2RU/2RT



Valvola di sicurezza AIR STOP cod. AR
AIR STOP safety valve code AR



Accessori di fissaggio - Fixing accessories

- 1 Cerniera
 - 2 Forcella oscillante
 - 3 Flangia
 - 4 Piedini
 - 5 Forcella femmina
 - 6 Cerniera intermedia
- 1 Hinge
2 Oscillating clevis
3 Flange
4 Feet
5 Female clevis
6 Intermediate hinge



Tubi di collegamento
(dimensioni a richiesta)
Connecting Pipes
(dimensions on request)



Unità serie Units series **US** Fissaggi - Fixings

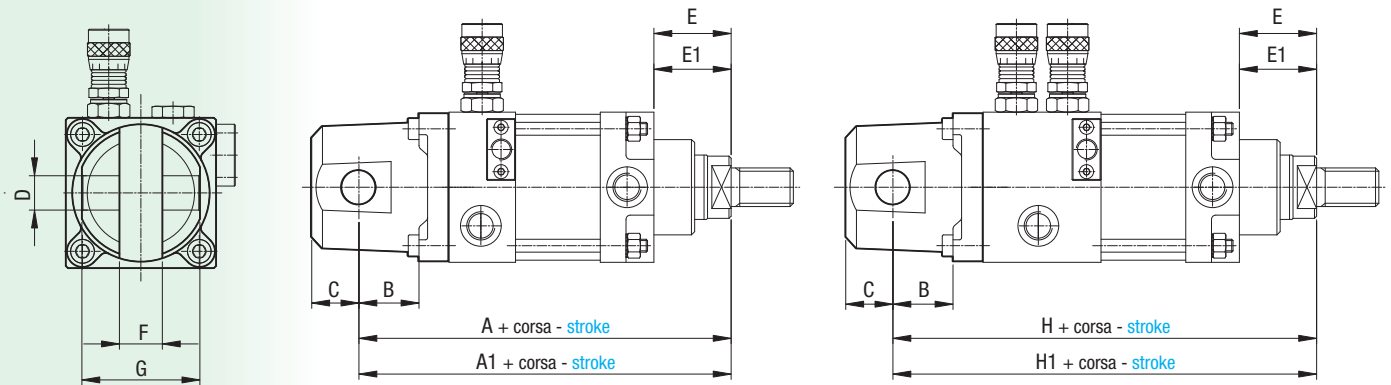
Cerniera posteriore - Rear hinge

Alluminio **cod. CE**

Aluminium **code CE**

Singola regolazione
Single adjustment

Doppia regolazione
Double adjustment



Alesaggio - Boring

mm	A	A1*	B	C	D H8	E	E1*	F	G	H	H1*
50	178	198	20	16	12	41,5	61,5	15	37		
63	190	210	30	20	16	41,5	61,5	20	55	213	233
80	221	237	35	25	18	54,5	70,5	25	75	243	259
100	226	242	35	25	20	54,5	70,5	25	75	248	264
125	241	261	45	25	25	58,5	78,5	30	80	263	283
160	287,5	312,5	45	35	25	64	89	35	95	300,5	325,5
200	346	371	45	38	25	73	98	75	160	353	378

* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (**cod.- code DS-DU**)

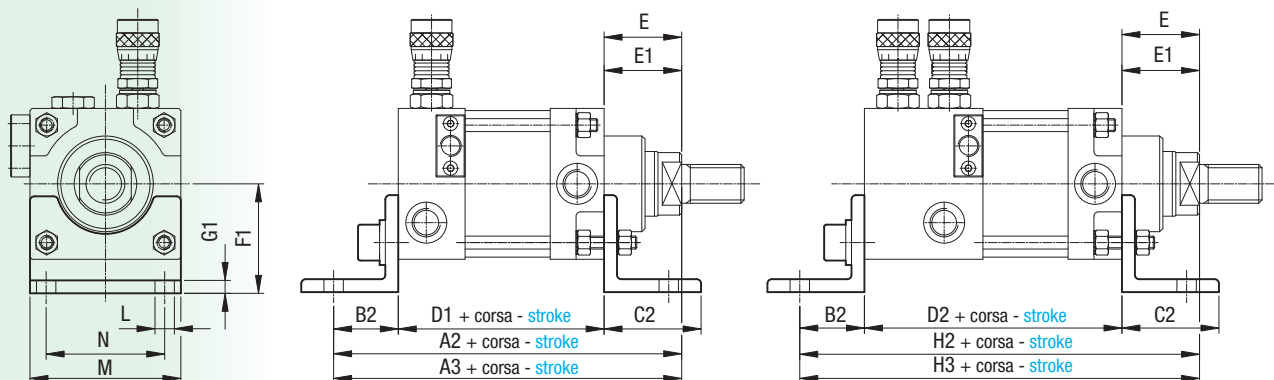
Piedini - Feet

Alluminio **cod. PI**

Aluminium **code PI**

Singola regolazione
Single adjustment

Doppia regolazione
Double adjustment



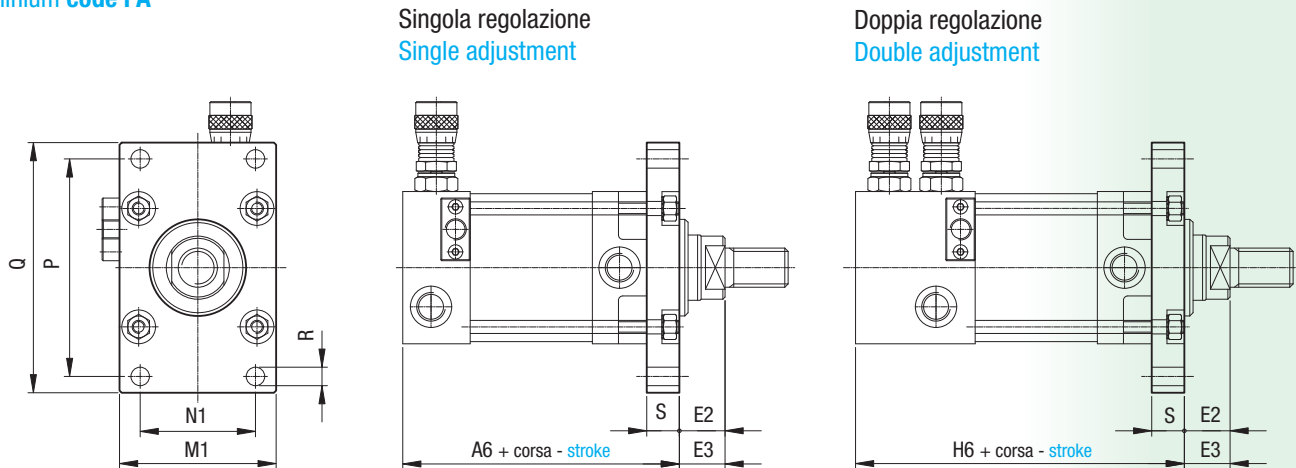
Alesaggio - Boring

mm	A2	A3*	B2	C2	D1	D2	E	E1*	F1	G1	H2	H3*	L	M	N
50	183	203	35	45	106,5		41,5	61,5	45	6			9	60	45
63	183	203	35	45	106,5	129,5	41,5	61,5	50	6	206	226	9	70	55
80	214	230	43	60	116,5	138,5	54,5	70,5	60	6	236	252	12	90	70
100	219	235	43	60	121,5	143,5	54,5	70,5	73	6	241	257	14	110	85
125	232	252	52	70	121,5	143,5	58,5	78,5	91	8	254	274	16	140	100
160	279,5	304,5	62	80	153,5	166,5	64	89	115	8	292,5	317,5	18	170	130
200	338	363	62	80	203	210	73	98	135	8	345	370	20	210	170

* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (**cod.- code DS-DU**)

Flangia anteriore - Rear flange

Alluminio **cod. FA**
Aluminium **code FA**



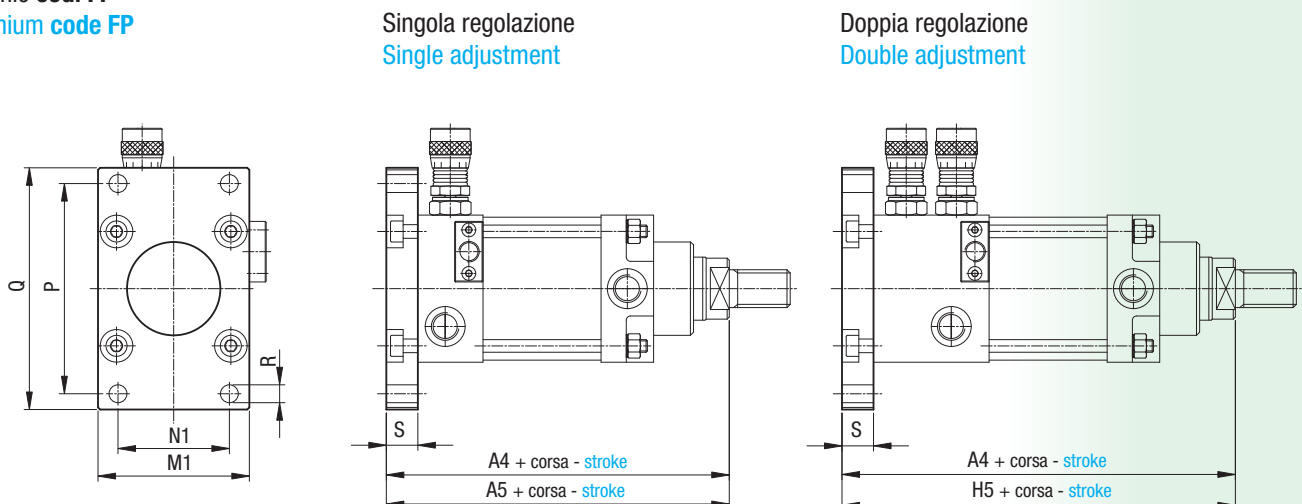
Alesaggio - Boring

mm	A6	E2	E3*	H6	M1	N1	P	Q	R	S
50	118,5	30,5	50,5		60	43	89	105	6,5	11
63	122,5	26,5	46,5	145,5	72	54,5	100	115	8,5	15
80	135	37,5	53,5	157	90	70	130	150	8,5	17
100	143	34,5	50,5	165	110	83,5	141	166	10,5	20
125	143	38,5	58,5	165	135	102,5	155	185	10,5	20
160	180	39	64	193	170	133	210	250	16	25
200	230	48	73	237	210	162	320	360	17	25

* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (**cod.- code DS-DU**)

Flangia posteriore - Rear flange

Alluminio **cod. FP**
Aluminium **code FP**



Alesaggio - Boring

mm	A4	A5*	H4	H5*	M1	N1	P	Q	R	S
50	159	179			60	43	89	105	6,5	11
63	163	183	186	206	72	54,5	100	115	8,5	15
80	188	204	210	226	90	70	130	150	8,5	17
100	196	212	218	234	110	83,5	141	166	10,5	20
125	200	220	222	242	135	102,5	155	185	10,5	20
160	242,5	267,5	255,5	280,5	170	133	210	250	16	25
200	301	326	308	333	210	162	320	360	17	25

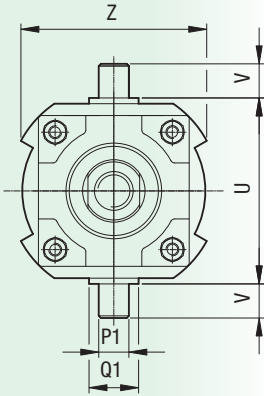
* Con deceleratore idraulico in uscita - With hydraulic decelerator in forward stroke (**cod.- code DS-DU**)

Unità serie Units series **US** Fissaggi - Fixings

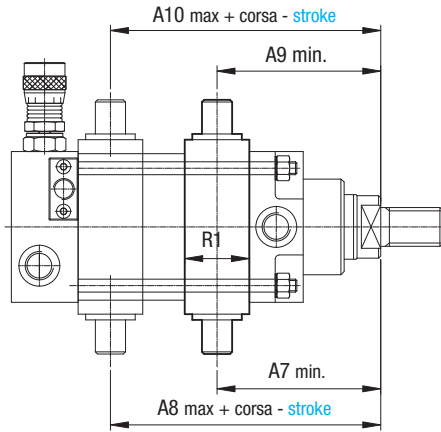
Cerniera intermedia - **Intermediate hinge**

Ottone **cod. SL**

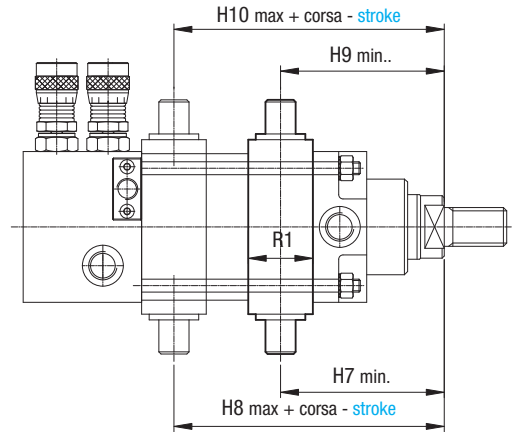
Brass **code SL**



Singola regolazione
Single adjustment



Doppia regolazione
Double adjustment



Alesaggio - **Boring**

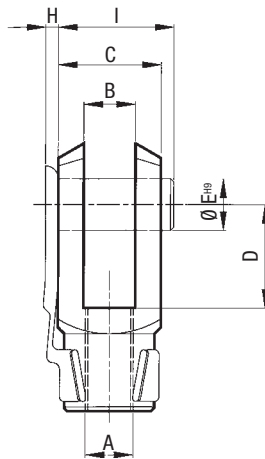
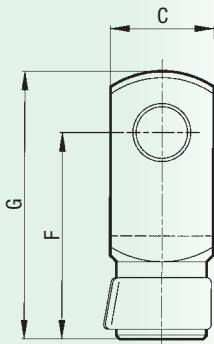
mm	A7	A8	A9*	A10*	H7	H8	H9*	H10*	P1f6	Q1	R1	U	V	Z*
50	84	93,5	104	113,5					16	24	35	69	16	65
63	86,5	91	106,5	111	86,5	91	106,5	111	20	30	40	83	20	85
80	107	102	123	118	107	102	123	118	20	30	55	108	20	99
100	117	102	133	118	117	102	133	118	25	35	65	131	25	118
125	120,5	106	141	126	120,5	106	141	126	25	35	65	159	25	145
160	141,5	127,5	166,5	152,5	141,5	127,5	166,5	152,5	35	45	75	194	35	188
200	178	177	203	202	178	177	203	202	35	45	80	242	35	228

* Con deceleratore idraulico in uscita - **With hydraulic decelerator in forward stroke (cod.- code DS-DU)**

Forcella femmina - **Female clevis**

Acciaio nichelato **cod. FF**

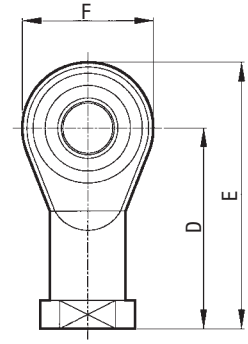
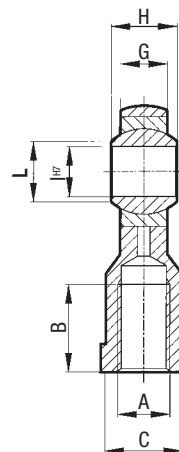
Nickel-plated steel **code FF**



Forcella oscillante - **Oscillating clevis**

Acciaio nichelato **cod. KJ**

Nickel-plated steel **code KJ**



Alesaggio

Boring

mm	A	B	C	D	E	F	G	H	I
50	M 16x1,5	16	32	32	16	64	83	4	36
63	M 16x1,5	16	32	32	16	64	83	4	36
80	M 20x1,5	20	40	40	20	80	105	4	44
100	M 20x1,5	20	40	40	20	80	105	4	44
125	M 27x2	30	55	54	30	110	148		65
160	M 36x2	35	70	72	35	144	188		84
200	M 36x2	35	70	72	35	144	188		84

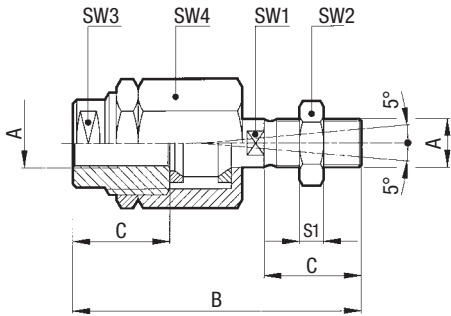
Alesaggio

Boring

mm	A	B	C	D	E	F	G	H	I	L
50	M 16x1,5	28	22	64	85	42	15	21	16	19,3
63	M 16x1,5	28	22	64	85	42	15	21	16	19,3
80	M 20x1,5	33	30	77	102	50	18	25	20	24,3
100	M 20x1,5	33	30	77	102	50	18	25	20	24,3
125	M 27x2	51	41	110	145	70	25	37	30	34,8
160	M 36x2	56	50	125	165	80	28	43	35	37,7
200	M 36x2	56	50	125	165	80	28	43	84	37,7

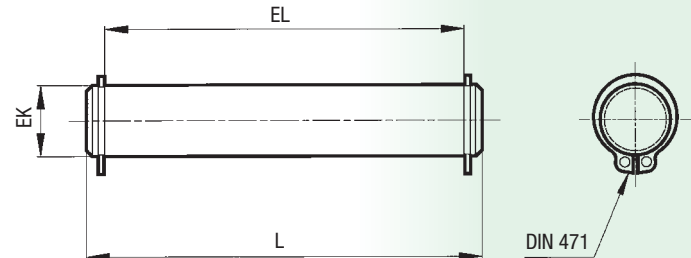
Snodo radiale - Assiale - Radial - axial joint

Acciaio zincato **cod. KK**
Galvanized steel **code KK**



Perno per cerniera - Pin for hinge

Acciaio zincato **cod. SEC**
Galvanized steel **code SEC**



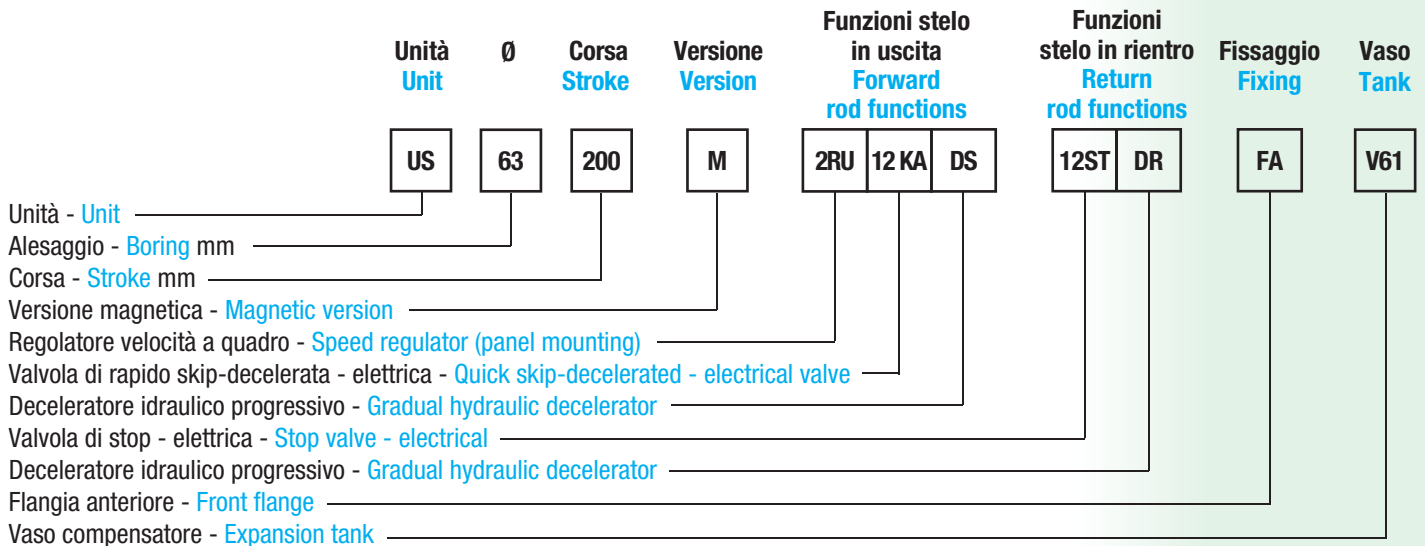
Alesaggio

Boring	mm	A	B	C	S1	SW1	SW2	SW3	Sw4
50	M 16x1,5	103	32	8	20	24	30	42	
63	M 16x1,5	103	32	8	20	24	30	42	
80	M 20x1,5	119	40	10	20	30	30	42	
100	M 20x1,5	119	40	10	20	30	30	42	

Alesaggio - Boring

mm	EK e8	EL	L
50	12	38	44
63	16	56	62
80	18	76	82
100	20	76	82
125	25	82	88
160	25	97	103
200	25	162	168

Composizione codice per l'ordinazione - Order code



N.B. L'assenza di codici in uscita o in rientro si intende a corsa libera
NOTE: The absence of the forward or return code means that the stroke is free