



Series 1500 Ecompact

These cylinders are built according to ISO 21287 standards. New barrel profile has two sensor slots on the three sides (Ø 20 and Ø 25 one slot) suitable for sensors 1580._, MRS._, MHS._ series housing, without need for adaptors.

Versions with end stroke adjustable pneumatic cushioning are also available, allowing adjustments to deceleration and keeping the required overall dimensions according to ISO 21287.

For fixing operation is possible to use the four threaded holes on the end covers, or screws in body holes, alternatively all the fixing devices of UNITOP RU-P/6-P/7 (Ø20 and Ø25) and ISO 15552 (from Ø32 to Ø100) series.

Construction characteristics

Body	anodized aluminium
Piston rod bushings	sintered bronze
Seals	standard: NBR Oil resistant rubber, PUR Piston rod seals (PUR or FPM on request)
Springs	stainless steel
Pistons	from Ø20 to Ø40 acetal resin (aluminium on request), Ø50 and Ø100 aluminium (with FPM seals, aluminium piston for all standard diameters)
Piston rod	from Ø 20 to Ø 25 stainless steel from Ø32 to Ø100 C43 chromed (on request stainless steel)
End caps	aluminium alloy casting painted
Fixing screws	zinc plated steel

Operational characteristics

Fluid	filtered and preferably lubricated air or not (if lubricated the lubrication must be continuous)
Max. pressure	10 bar
Working temperature	-5°C ... +70°C with standard seals (magnetic or non magnetic piston) -30°C ... +80°C with PUR seals (magnetic or non magnetic piston) -5°C ... +80°C with FPM seals (magnetic piston) -5°C - +150°C with FPM seals (non magnetic piston)

Please follow the suggestions below to ensure a long life for these cylinders:

- use clean and lubricated air.
- correct alignment during assembly with regard to the applied load so as to avoid radial components or bending the rod.
- avoid high speeds together with long strokes and heavy loads: this would produce kinetic energy which the cylinder cannot absorb, especially if used as a limit stop (in this case use mechanical stop device).
- evaluate the environmental characteristics of cylinder used (high temperature, hard atmosphere, dust, humidity etc.).

Please note: air must be dried for applications with lower temperature.

Use hydraulic oils H class (ISO VG32) for correct continued lubrication.

Stroke tolerance, minimum and maximum spring loads and cushioning length

Bore (mm)	Stroke tolerance (mm)	Minimum springs load (N)	Maximum springs load (N)	Cushioning length (mm)
Ø20	+ 1,5 / 0 mm	10,8	19,6	/
Ø25		16,7	22,6	5
Ø32		19,6	25,5	6,5
Ø40	+ 2 / 0 mm	25,5	42,2	8
Ø50		44,1	96,3	7,5
Ø63		44,1	96,3	7,5
Ø80	+ 2,5 / 0 mm	63,8	100,1	8
Ø100		107,9	193,3	12



DOUBLE ACTING version WITH NON-ROTATING DEVICE

Cylinders with longer strokes than those in the chart are also available, exceptionally for applications without twisting moments and/or radial loads on the anti-rotation device.

	Stroke																															
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	25	30	35	40	45	50	55	60	65	70	75	80				
Bore	WITHOUT CUSHIONING DEVICE																WITH CUSHIONING DEVICE															
Ø20	●	●	●	●	●	●	●	●																								
Ø25	●	●	●	●	●	●	●	●										●	●	●	●											
Ø32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Ø40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Ø50	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Ø63	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Ø80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Ø100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		

SINGLE ACTING version

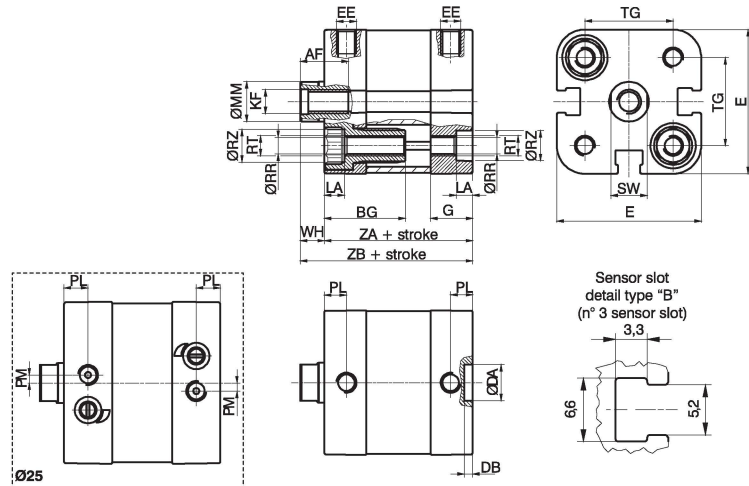
Please get in touch with our sales rep. for dimensions over 25 mm stroke.

Stroke	Bore							
	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
5	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●
Maximum suggested strokes	75							

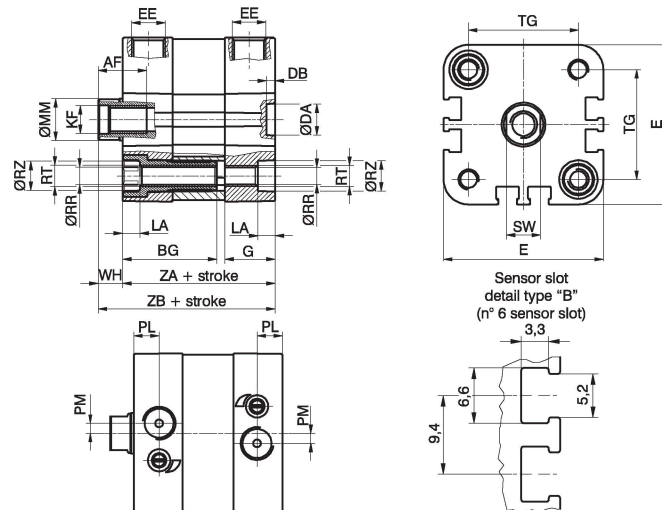
► BASIC version double and single acting



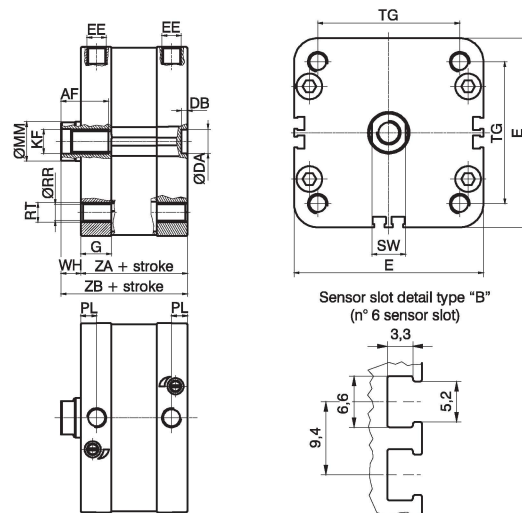
Ø20 and Ø25



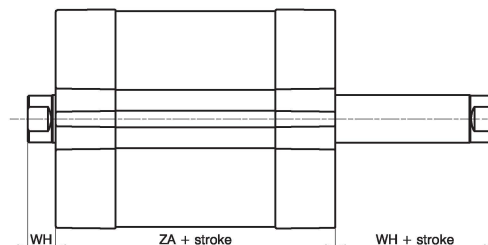
from Ø32 to Ø63



Ø80 and Ø100

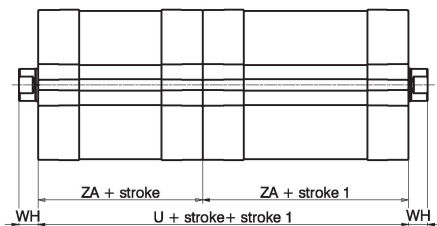


► THROUGH ROD CYLINDER version, double and single acting

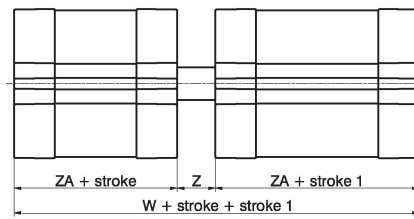




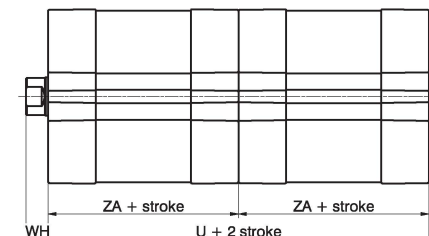
TANDEM version with opposed rods



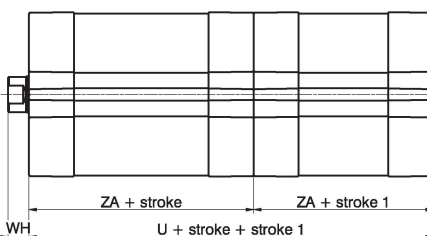
TANDEM version opposed common rod



TANDEM version push with common rods



TANDEM version push with independent rods



Ordering code

Basic and Through rod cylinder version

15 . Ø .stroke. . .

- 1= magnetic piston, Double acting
- 2= magnetic piston, Single acting with front spring
- 3= magnetic piston, Single acting with rear spring
- 4= non magnetic piston, Double acting
- 5= non magnetic piston, Single acting with front spring
- 6= non magnetic piston, Single acting with rear spring

- 01= Basic, female threaded rod
- 02= Basic, male threaded rod
- 03= through rod, female threaded rod
- 04= through rod, male threaded rod
- 05= through rod, bored female threaded rod
- 06= through rod, bored male threaded rod
- 07= with non-rotating device
- 08= through rod, female threaded rod, with non-rot. device on one side ***
- 09= through rod, male threaded rod, with non-rot. device on one side ***

- 0=NBR seals and C43 chromed plated rod*
- 1=NBR seals and stainless steel rod (starting from bore Ø32)
- 4=PUR seals and C43 chromed plated rod*
- 5=PUR seals and stainless steel rod (starting from bore Ø32)
- 6=FPM seals and C43 chromed plated rod*
- 7=FPM seals and stainless steel rod (starting from bore Ø32)
- * (Ø20 and Ø25 stainless steel)
- 4=Non-cushioned versions (mechanical cushioning only)
- 5=Versions with adjustable end of stroke cushioning system (from Ø25)

*** It is possible to order the Ø20, Ø25, Ø32 and Ø40 cylinders with an aluminium piston by replacing the '0' with 'K' in the ordering code.
Example: 1540.20.10.01.1 (Acetyl Resin Piston)
1540.20.10.K1.1 (Aluminium Piston version)

*** for single acting version, the spring is on the anti-rotation side

TANDEM version (magnetic pistons)

15 . Ø .stroke. (stroke 1) . .

- C= female threaded rod
- G= male threaded rod
- H= with through rod and female threaded rod
- R= with through rod and male threaded rod
- N= with non-rotating device
- B= female threaded rod
- F= male threaded rod
- M= with non-rotating device
- P= with through rod and female threaded rod
- Q= with through rod and male threaded rod
- D= Opposed tandem with common rod
- A= female threaded rod
- E= male threaded rod
- L= with non-rotating device on both ends

Tandem push with common rods

Tandem push with independent rods

Tandem with opposite rods

- 0=NBR seals and C43 chromed plated rod*
- 1=NBR seals and stainless steel rod (starting from bore Ø32)
- 4=PUR seals and C43 chromed plated rod*
- 5=PUR seals and stainless steel rod (starting from bore Ø32)
- 6=FPM seals and C43 chromed plated rod*
- 7=FPM seals and stainless steel rod (starting from bore Ø32)

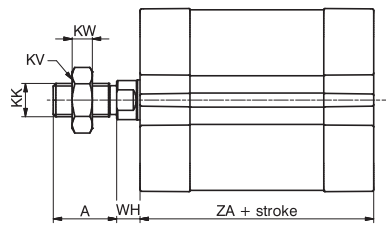
* (Ø20 and Ø25 stainless steel)

- 4= Non-cushioned version (mechanical cushioning only)
- 5= Versions with adjustable end of stroke cushioning system (from Ø25)

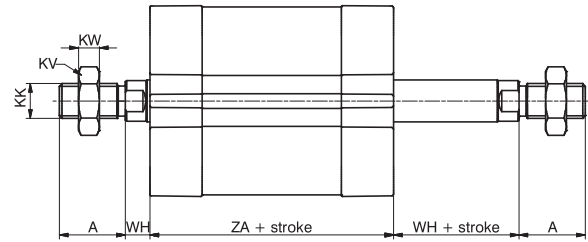
Seals compounds scheme: **NBR** oil resistant nitrilic rubber
PUR: polyurethane seals **FPM**: fluoropolymer rubber seals

Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
AF (min)	12	12	14	14	18	18	24	24
BG	20	20	16	16	16	16	/	/
DA (H9)	9	9	9	9	12	12	12	12
DB (+0,1/0)	2,1	2,1	2,5	2,5	2,6	2,6	3	3
E (max)	36	40,5	47,5	55	66	78	96	116
EE	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8
G	10,5	12	14,5	15	15	15	15,5	18,5
KF	M6	M6	M8	M8	M10	M10	M12	M12
LA (0/-0,1)	4,1	4,1	5	5	5	5	/	/
MM (f7)	10	10	12	12	16	16	20	25
PL (+0,1/0)	5,5	6	7,5	8	8	8	8	8
PM	/	2	3	/	/	/	/	/
RR (min)	4,1	4,1	5,1	5,1	6,6	6,6	8,4	8,4
RT	M5	M5	M6	M6	M8	M8	M10	M10
RZ (min)	7,5	7,5	8,5	8,5	10,5	10,5	/	/
SW (0/-0,1)	9	9	10	10	13	13	17	22
TG (±0,2)	22	26	32,5	38	46,5	56,5	72	89
U	74	78	88	90	90	98	108	134
W	83	89	100	103	105	113	124	154
WH (±1)	6	6	7	7	8	8	10	10
Z	9	11	12	13	15	15	16	20
ZA (±0,5)	37	39	44	45	45	49	54	67
ZB (+1/0)	43	45	51	52	53	57	64	77
Weight (g)	stroke	105	110	200	270	420	550	1400
	every 5mm	10	10,5	13	17	23,5	27	51

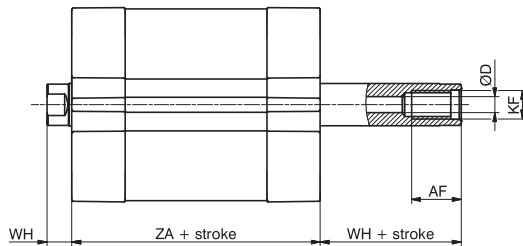
Basic version male piston rod



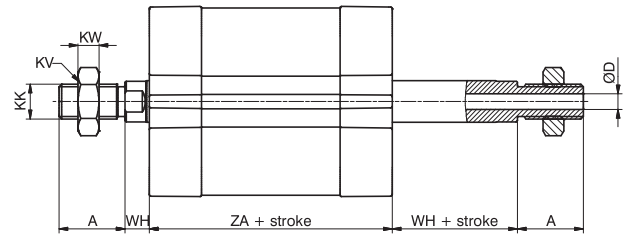
Through rod cylinder version male rod



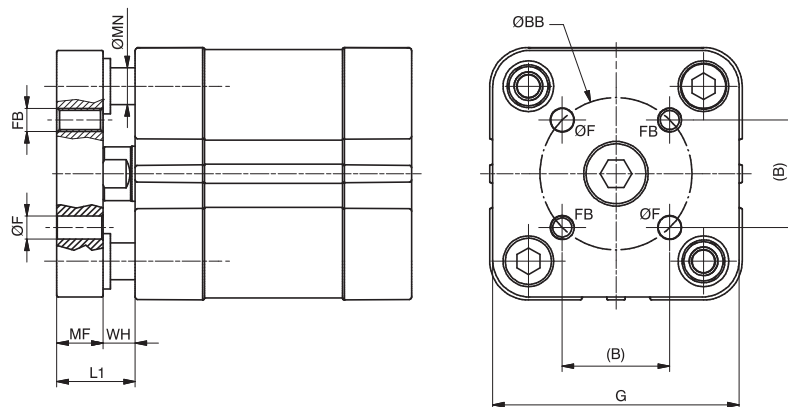
Through rod cylinder version bored female piston rod



Through rod cylinder version bored male piston rod



Non-rotating version



Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A (0/-0,5)	16	16	19	19	22	22	28	28
AF (min)	12	12	14	14	18	18	24	24
B	12	15,6	19,8	23,3	29,7	35,4	46	56,6
BB (±0,1)	17	22	28	33	42	50	65	80
D	3	3,8	4,5	4,5	6	6	8	10
F (+0,1/0)	4	5	5	5	6	6	8	10
FB	M4	M5	M5	M5	M6	M6	M8	M10
G	35	39,5	45	52	65	75	95	115
KF	M6	M6	M8	M8	M10	M10	M12	M12
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
KV ↗	13	13	17	17	19	19	24	24
KW	5	5	6	6	7	7	8	8
L1	14	14	17	17	20	20	24	24
MF (+0,1/0)	8	8	10	10	12	12	14	14
MN (f7)	6	6	8	8	10	10	12	12
WH (±1)	6	6	7	7	8	8	10	10
ZA (±0,5)	37	39	44	45	45	49	54	67