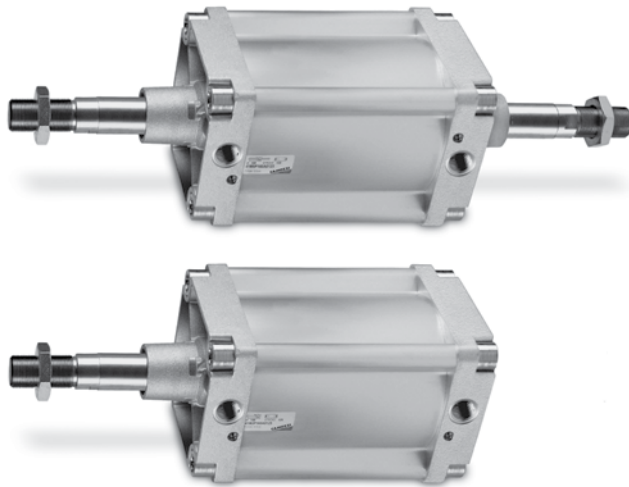


Large Bore Extruded Cylinders, ISO 6431 Series 41

 EXPRESS DELIVERY AVAILABLE

Double-acting cushioned, magnetic
 ø160 - 200 (DIN/ISO 6431)



- » DIN/ISO 6431 VDMA 24562
- » Rolled stainless steel rod
- » Adjustable cushioning
- » Aluminum Profile

Cylinders Series 41 with diameters 160 and 200 have been designed so as to comply with the dimensions laid down in the DIN/ISO 6431 standards. The extruded aluminium tube in this series is regarded as very aesthetically pleasing.

The mounting brackets used on the end-caps tube are designed in an extremely secure way, making use of the cylinder tie-rods positioned internally and not visible on the assembled cylinders. This cylinder series is normally equipped with adjustable cushioning. Moreover, to reduce the noise of the impact of the piston and end-caps, these cylinders are equipped with a mechanical cushioning.

GENERAL DATA

| | |
|-----------------------|---|
| Type of construction | with tie-rods |
| Operation | double-acting |
| Materials | end-caps = AL; other parts: see coding |
| Mounting | with tie-rods, front flange, rear flange, feet, centre trunnion, front and rear trunnion, swivel combination |
| Strokes min - max | 10 – 2500 mm |
| Operating temperature | 0°C – 80°C (with dry air - 20°C) (32 - 176°F, with dry air -4°F) |
| Operating pressure | 1 – 10 bar |
| Speed | 10 – 500 mm/sec (without load) |
| Fluid | filtered air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted. |

STANDARD STROKES FOR DOUBLE-ACTING CYLINDERS SERIES 41

* = Double-acting

MAXIMUM STROKE LENGTHS (mm)

| Series (and Ø) | Min-Max Stroke (Produced in USA) | Min-Max Stroke (Produced in Italy) |
|--------------------|----------------------------------|------------------------------------|
| 40, 41 (Ø 160-320) | 10-1500 mm | 10-2500 mm |

STANDARD STROKES

| Ø | 25 | 50 | 75 | 80 | 100 | 125 | 150 | 160 | 200 | 250 | 300 | 320 | 400 | 500 |
|-----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 160 | | * | | | * | | * | | * | | | | * | * |
| 200 | | * | | | * | | | | * | | | | | |

CODING EXAMPLE

| | | | | | | | |
|----|---|---|---|-----|---|------|--|
| 41 | M | 2 | P | 160 | A | 0200 | |
|----|---|---|---|-----|---|------|--|

| | |
|-------------|--|
| 41 | SERIES |
| M | VERSION M = standard magnetic |
| 2 | OPERATION 2 = double-acting (front and rear cushions) 3 = double-acting (no cushion) 4 = double-acting (rear cushions) 5 = double-acting (front cushion) 6 = double-acting (through-rod with front and rear cushions) |
| P | MATERIALS P = see the general data on page 1/1.15.01 R = stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rod nuts C = rolled stainless steel AISI 303 piston rod, stainless steel AISI 304 piston rod nut U = rolled stainless steel AISI 303 piston rod, stainless steel AISI 304 piston rod nut, stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rod nuts W = rolled stainless steel AISI 304 piston rod, stainless steel AISI304 piston rod nut, stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rod nuts |
| 160 | BORE 160 = 160 mm 200 = 200 mm |
| A | TYPE OF DESIGN A = tie-rods F = cylinder with centre trunnion |
| 0200 | STROKE see table |
| | = standard V = FKM rod seals W = all FKM seals, up to 140°C C = PU coated cylinder. Color: Grey * (___) = extended piston rod ___ mm |
| | * The C version is available on request. For further information, please contact our technical department. |

ACCESSORIES FOR CYLINDERS SERIES 41

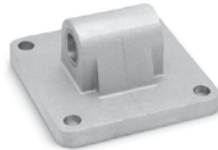
| MAXIMUM STROKE LENGTHS (mm) | | |
|-----------------------------|----------------------------------|------------------------------------|
| Series (and Ø) | Min-Max Stroke (Produced in USA) | Min-Max Stroke (Produced in Italy) |
| 40, 41 (Ø 160-320) | 10-1500 mm | 10-2500 mm |



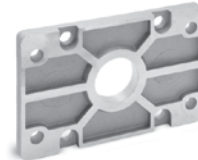
Clevis pin Mod. S



90° swivel combination Mod. ZS



Rear trunnion, male Mod. L



Front and rear flange Mod. D-E



Counter bracket for centre trunnion Mod. BF



Centre trunnion Mod. F



Foot mount Mod. B



Rod fork end Mod. G



Front and rear female trunnion Mod. C-H



Swivel ball joint Mod. GA



Swivel combination Mod. I



Piston rod nut Mod. U



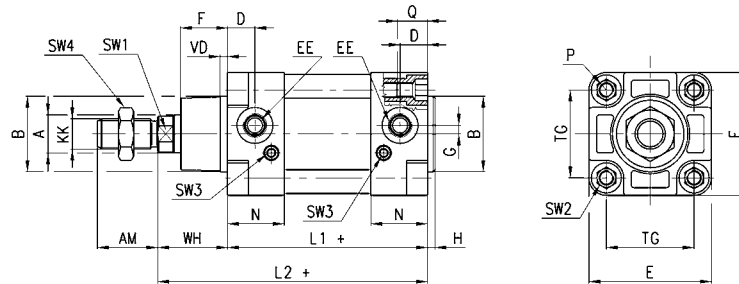
All accessories are supplied separately, except for the piston rod nut Mod. U

EXPRESS DELIVERY AVAILABLE

Cylinders Series 41



+ = add the stroke



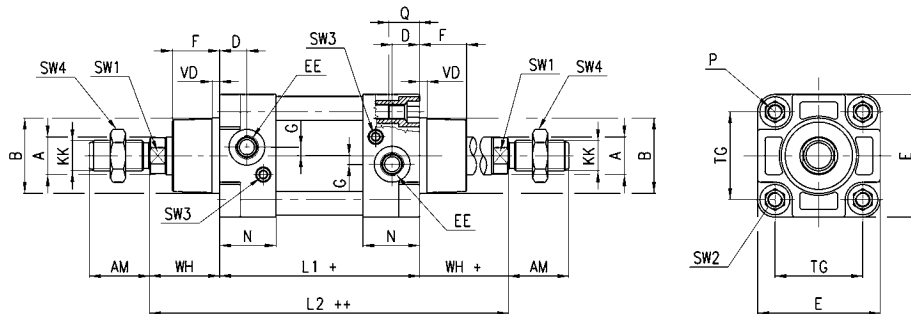
DIMENSIONS (mm)

| Ø | ØA | KK | ØB | D | G | F | AM | H | EE | WH | L1+ | L2+ | VD | N | P | Q | TG | E | SW1 | SW2 | SW3 | SW4 | cushioning front/rear |
|-----|----|-------|----|----|----|------|----|---|------|----|-----|-----|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----------------------|
| 160 | 40 | M36x2 | 65 | 25 | 12 | 53.5 | 72 | 6 | G3/4 | 80 | 180 | 260 | 6 | 45 | M16 | 26 | 140 | 176 | 36 | 17 | 4 | 55 | 29 / 36 |
| 200 | 40 | M36x2 | 75 | 25 | 12 | 63.5 | 72 | 6 | G3/4 | 95 | 180 | 275 | 6 | 45 | M16 | 26 | 175 | 216 | 36 | 17 | 4 | 55 | 44 / 42 |

Cylinders Series 41 - through-rod



+ = add the stroke
++ = add the stroke 2 times



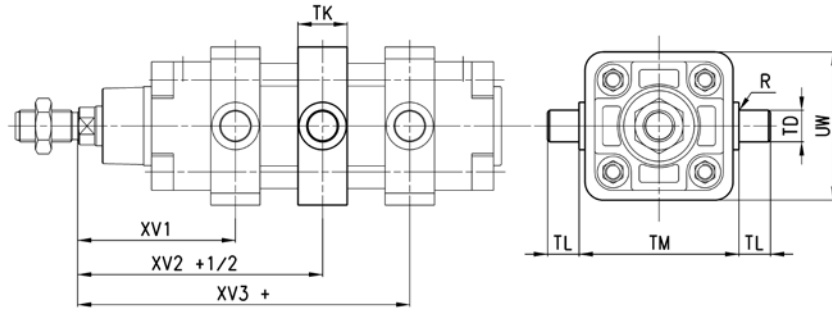
DIMENSIONS (mm)

| Ø | A | KK | B | D | G | F | AM | EE | WH | L1+ | L2++ | VD | N | P | Q | TG | E | SW1 | SW2 | SW3 | SW4 | cushioning front/rear |
|-----|----|-------|----|----|----|------|----|------|----|-----|------|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----------------------|
| 160 | 40 | M36x2 | 65 | 25 | 12 | 53.5 | 72 | G3/4 | 80 | 180 | 340 | 6 | 45 | M16 | 26 | 140 | 176 | 36 | 17 | 4 | 55 | 29 / 36 |
| 200 | 40 | M36x2 | 75 | 25 | 12 | 63.5 | 72 | G3/4 | 95 | 180 | 370 | 6 | 45 | M16 | 26 | 175 | 216 | 36 | 17 | 4 | 55 | 44 / 42 |

Cylinders Series 41 with centre trunnion Mod. F



+ = add the stroke



| DIMENSIONS (mm) | | | | | | | | | | |
|-----------------|-----|-----|-----|-----|----|----|----|-----|-----|--|
| Ø | XV1 | XV2 | XV3 | TM | TK | TD | TL | UW | R | |
| 160 | 145 | 170 | 195 | 200 | 40 | 32 | 32 | 200 | 0,2 | |
| 200 | 160 | 185 | 210 | 250 | 40 | 32 | 32 | 250 | 0,2 | |

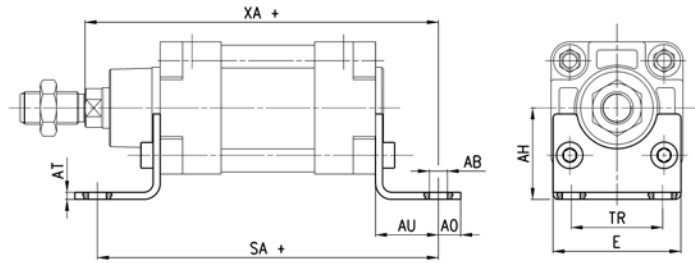
ISO / VDMA CYLINDERS

EXPRESS DELIVERY AVAILABLE

Foot mount Mod. B



Material: black-painted steel (cataphoresis)
 Supplied with:
 2x feet
 4x screws

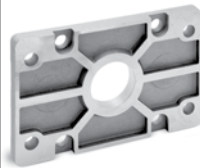


+ = add the stroke

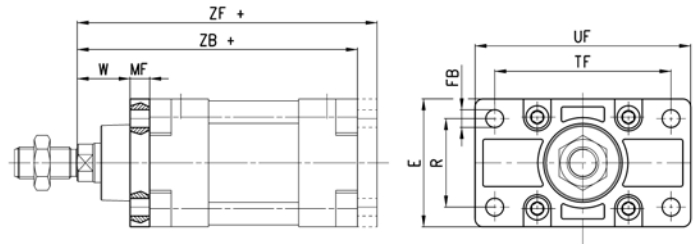
DIMENSIONS (mm)

| Mod. | ∅ | AT | SA+ | XA+ | TR | E | ∅AB | AH | AO | AU |
|----------|-----|----|-----|-----|-----|-----|-----|-----|----|----|
| B-41-160 | 160 | 10 | 300 | 320 | 115 | 175 | 18 | 115 | 20 | 60 |
| B-41-200 | 200 | 11 | 320 | 345 | 135 | 215 | 22 | 135 | 30 | 70 |

Front and rear flange Mod. D-E



Material: Aluminium.
 Supplied with:
 1x flange
 4x screws

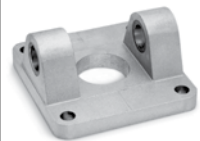


+ = add the stroke

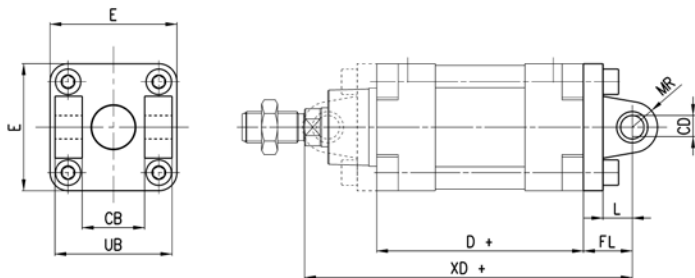
DIMENSIONS (mm)

| Mod. | ∅ | W | MF | ZB+ | TF | R | UF | E | ∅FB | ZF+ |
|------------|-----|----|----|-----|-----|-----|-----|-----|-----|-----|
| D-E-41-160 | 160 | 60 | 20 | 260 | 230 | 115 | 276 | 175 | 18 | 280 |
| D-E-41-200 | 200 | 70 | 25 | 275 | 270 | 135 | 312 | 215 | 22 | 300 |

Front and rear female trunnion Mod. C-H



Material: Aluminium.
 Supplied with:
 1x female trunnion
 4x screws



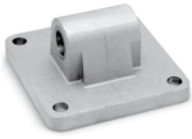
+ = add the stroke

DIMENSIONS (mm)

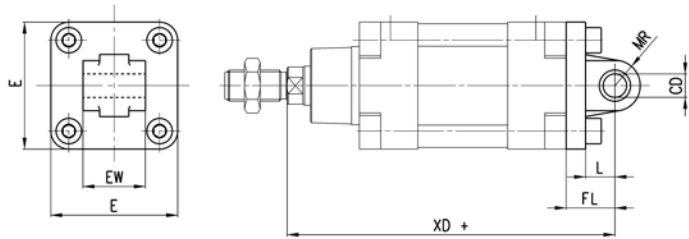
| Mod. | ∅ | ∅CD | L | FL | D+ | XD+ | MR | E | CB | UB |
|------------|-----|-----|----|----|-----|-----|----|-----|----|-----|
| C-H-41-160 | 160 | 30 | 35 | 55 | 180 | 315 | 30 | 175 | 90 | 170 |
| C-H-41-200 | 200 | 30 | 35 | 60 | 180 | 335 | 30 | 215 | 90 | 170 |

Rear male trunnion Mod. L

Material: Aluminium
 Supplied with:
 1x male trunnion
 4x screws



+ = add the stroke



DIMENSIONS (mm)

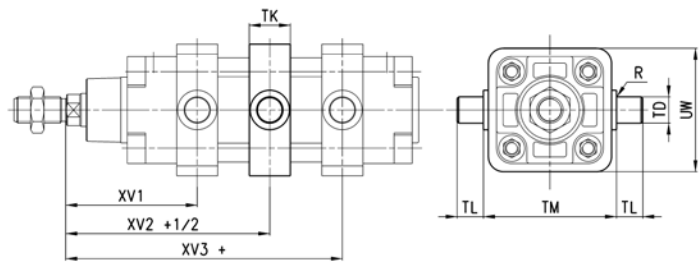
| Mod. | ∅ | ∅CD | L | FL | XD+ | MR | E | EW ^{-0.5-1.2} |
|----------|-----|-----|----|----|-----|----|-----|------------------------|
| L-41-160 | 160 | 30 | 35 | 55 | 315 | 30 | 175 | 90 |
| L-41-200 | 200 | 30 | 35 | 60 | 335 | 30 | 215 | 90 |

Centre trunnion Mod. F

Material: white zinc-plated steel.
 Supplied with:
 1x centre trunnion
 4x clamping elements
 4x locking screws



+ = add the stroke



DIMENSIONS (mm)

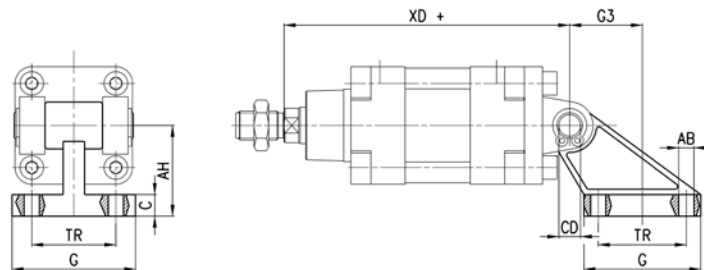
| Mod. | ∅ | XV1 | XV+1/2 | XV3+ | TM | h | ∅TD | TL | UW | R |
|----------|-----|-----|--------|------|-----|----|-----|----|-----|-----|
| F-41-160 | 160 | 145 | 170 | 195 | 200 | 40 | 32 | 32 | 200 | 0.2 |
| F-41-200 | 200 | 160 | 185 | 210 | 250 | 40 | 32 | 32 | 250 | 0.2 |

90° Swivel combination Mod. ZS*

Material: Aluminium
 * not according to standard



+ = add the stroke

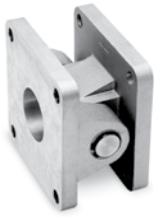


DIMENSIONS (mm)

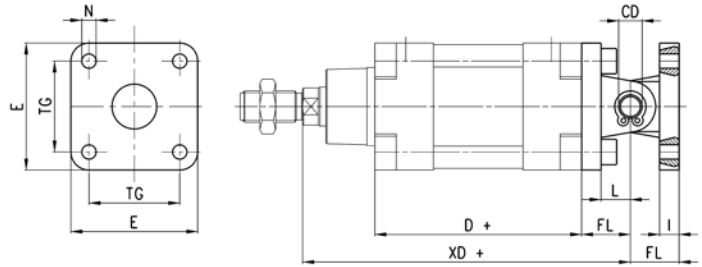
| Mod. | ∅ | TR | ∅AB | AH | C | G | ∅CD | XD+ | G3 |
|--------|-----|-----|-----|-----|----|-----|-----|-----|-----|
| ZS-160 | 160 | 140 | 18 | 140 | 20 | 180 | 30 | 315 | 105 |
| ZS-200 | 200 | 175 | 18 | 140 | 25 | 220 | 30 | 335 | 125 |

EXPRESS DELIVERY AVAILABLE

Swivel combination Mod. I (combination of C + L + S)



+ = add the stroke



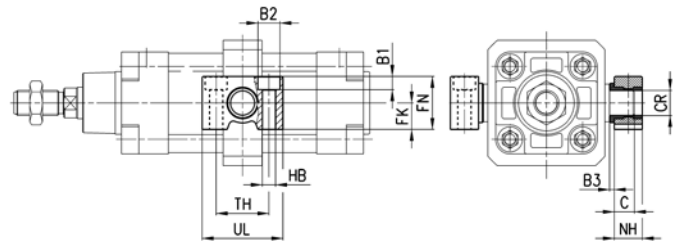
DIMENSIONS (mm)

| Mod. | Ø | ØCD | L | FL | D+ | XD+ | TG | E | ØN | I |
|----------|-----|-----|----|----|-----|-----|-----|-----|----|----|
| I-41-160 | 160 | 30 | 35 | 55 | 180 | 315 | 140 | 175 | 17 | 20 |
| I-41-200 | 200 | 30 | 35 | 60 | 180 | 335 | 175 | 215 | 17 | 25 |

Counter bracket for centre trunnion Mod. BF



Material: Aluminium.
Supplied with:
2x supports



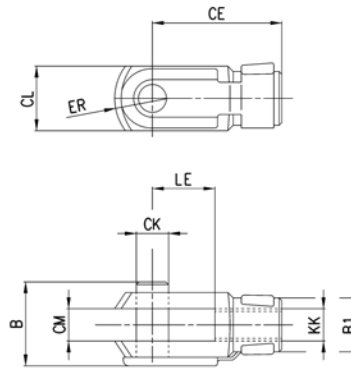
DIMENSIONS (mm)

| Mod. | Ø | ØCR | NH | C | B3 | TH | UL | FK | FN | B1 | ØB2 | ØHB |
|------------|---------|-----|----|------|----|----|----|----|----|----|-----|-----|
| BF-160-200 | 160-200 | 32 | 35 | 17,5 | 4 | 60 | 92 | 30 | 60 | 16 | 26 | 18 |

Rod fork end Mod. G



ISO 8140.
Material: zinc-plated steel.

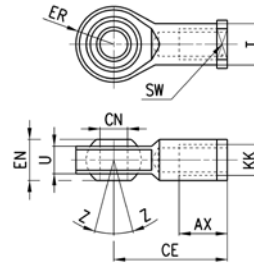


DIMENSIONS (mm)

| Mod. | Ø | ØCK | LE | CM | CL | ER | CE | KK | B | ØB1 |
|-----------|---------|-----|----|----|----|----|-----|-------|----|-----|
| G-160-200 | 160-200 | 35 | 72 | 35 | 70 | 44 | 144 | M36X2 | 92 | 60 |

Swivel ball joint Mod. GA

ISO 8139.
Material: zinc-plated steel.

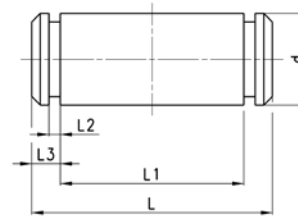


DIMENSIONS (mm)

| Mod. | Ø | ØCN | U | EN | ER | AX | CE | KK | ØT | Z | SW |
|------------|---------|-----|----|----|----|----|-----|-------|----|---|----|
| GA-160-200 | 160-200 | 35 | 28 | 43 | 40 | 56 | 125 | M36x2 | 46 | 6 | 50 |

Clevis pin Mod. S

Supplied with:
1x clevis pin (stainless steel 303)
2x C-clips (plain carbon steel)

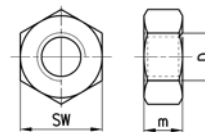


DIMENSIONS (mm)

| Mod. | Ø | d | L | L1 | L2 | L3 |
|-----------|---------|----|-----|-----|-----|------|
| S-160-200 | 160-200 | 30 | 179 | 170 | 1,6 | 4,25 |

Piston rod nut Mod. U

UNI EN ISO 4035.
Material: zinc-plated steel.



DIMENSIONS (mm)

| Mod. | Ø | D | m | SW |
|-----------|---------|-------|----|----|
| U-160-200 | 160-200 | M36x2 | 14 | 55 |