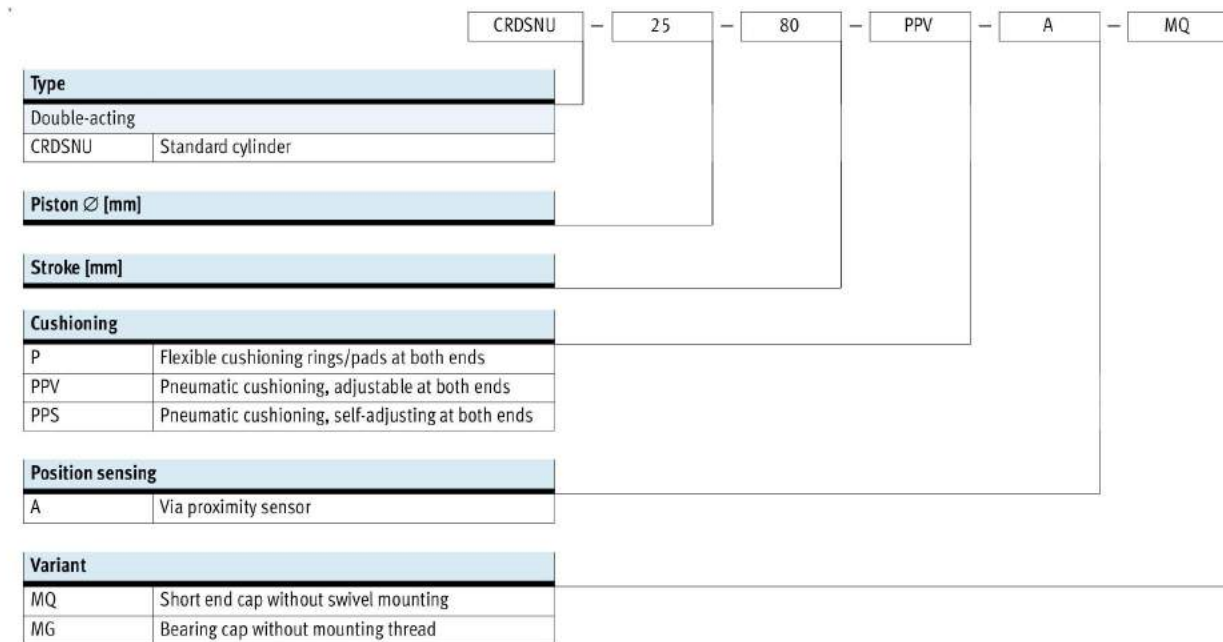


# Standard cylinders CRDSNU to ISO 6432, stainless steel



Type codes



## Modular product system

Individually configurable

CRDSNU → 15

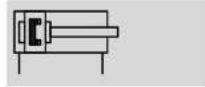
- A1 – Wiper seal variant: For increased chemical resistance
- A2 – Wiper seal variant: Hard wiper seal
- A3 – Wiper seal variant: For unlubricated operation
- S2 – Through piston rod
- K2 – Extended male piston rod thread
- K3 – Female piston rod thread
- K5 – Special piston rod thread
- K8 – Extended piston rod at the front
- S6 – Heat-resistant seals up to max. 120 °C (temperature resistance)
- TT – Low temperature –40 °C ... +80 °C
- ATEX certification II 2GD

# Standard cylinders CRDSNU to ISO 6432, stainless steel

FESTO



Technical data

Function



DIN



-  Diameter  
12 ... 25 mm
-  Stroke length  
1 ... 500 mm

| General technical data |                 | 12  | 16 | 20                                     | 25       |
|------------------------|-----------------|---|----|--|----------|
| Piston Ø               |                 | 12  | 16 | 20                                     | 25       |
| Pneumatic connection   |                 | M5  | M5 | G1/8                                   | G1/8     |
| Piston rod thread      |                 | M6  | M6 | M8                                     | M10x1.25 |
| Constructional design  | Piston          |   |    |  |          |
|                        | Piston rod      |   |    |  |          |
|                        | Cylinder barrel |   |    |  |          |
| Cushioning             | P               | Flexible cushioning rings/pads at both ends |    |  |          |
|                        | PPV             | -   |    | Adjustable cushioning at both ends     |          |
|                        | PPS             | -   |    | Self-adjusting cushioning at both ends |          |
| Cushioning length      | PPV [mm]        | -   |    | 15                                     | 17       |
|                        | PPS [mm]        | -   |    | 15                                     | 17       |
| Position sensing       |                 | Via proximity sensor                        |    |  |          |
| Type of mounting       |                 | Via accessories                             |    |  |          |
|                        |                 | Via male thread                             |    |  |          |
| Mounting position      |                 | Any   |    |  |          |

| Operating conditions                                   |  |
|--|--|
| Operating medium                                       | Compressed air in accordance with ISO 8573-1:2010 [7:4:4]  |
| Note on operating/pilot medium                         | Operation with lubricated medium possible (in which case lubricated operation will always be required) |
| Operating pressure <sup>1)</sup> [bar]                 | 1 ... 10   |
| Suitability for use in the food industry <sup>2)</sup> | As per manufacturer's declaration  |

1) An increase in the minimum operating pressure is possible with variants

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → User documentation.

| Ambient conditions                           |  | Basic version | A1        | S6         | TT          |
|--|--|---------------|-----------|------------|-------------|
| Standard cylinder                            |  |               |           |            |             |
| Ambient temperature <sup>1)</sup> [°C]       |  | -20 ... +80   | 0 ... +80 | 0 ... +120 | -40 ... +80 |
| Corrosion resistance class CRC <sup>2)</sup> |  | 3             |           |            |             |

1) Note operating range of proximity sensors

2) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

| ATEX <sup>1)</sup>                          |   |
|---|---|
| ATEX category for gas                       | II 2G                                       |
| Explosion ignition protection type for gas  | c T4  |
| ATEX category for dust                      | II 2D                                       |
| Explosion ignition protection type for dust | c 120°C                                     |
| Explosion-proof ambient temperature         | -20°C ≤ Ta ≤ +60°C                          |
| CE marking (see declaration of conformity)  | To EU Explosion Protection Directive (ATEX) |

1) Note the ATEX certification of the accessories.

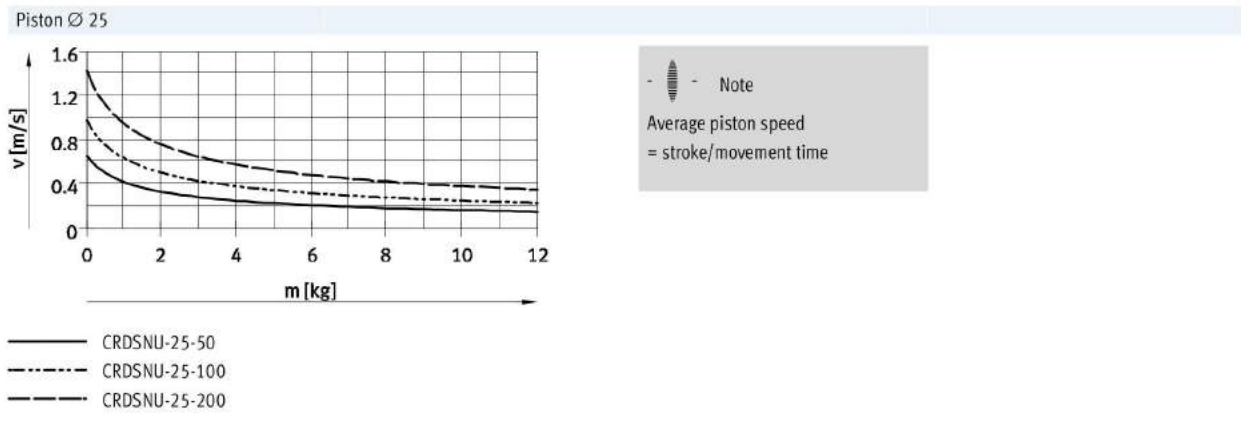
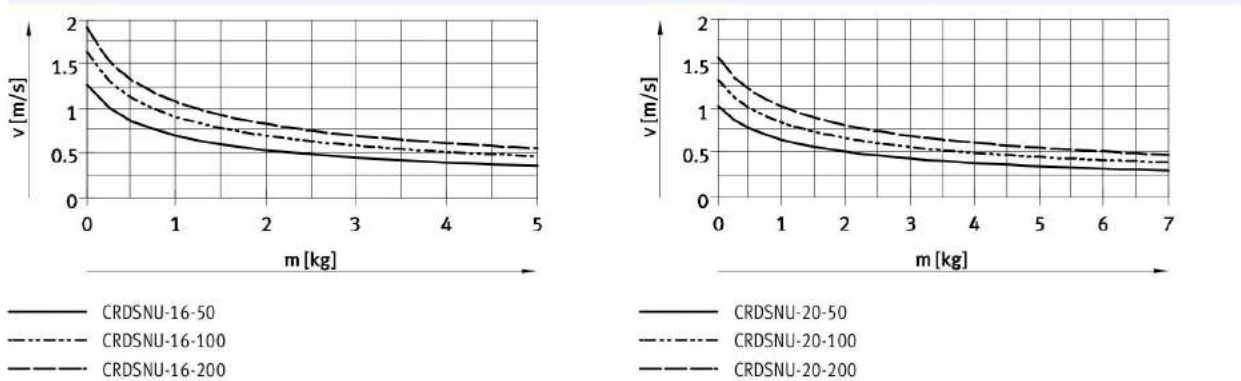
# Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

| Force [N] and impact energy [J]                                   |      |      |      |      |
|---|------|------|------|------|
| Piston Ø  | 12   | 16   | 20   | 25   |
| Theoretical force at 6 bar, advancing                             | 68   | 121  | 188  | 295  |
| Theoretical force at 6 bar, retracting                            | 51   | 104  | 158  | 247  |
| Impact energy in the end positions for P cushioning <sup>1)</sup> | 0.07 | 0.15 | 0.20 | 0.30 |

1) The values are reduced by approx. 50% at an ambient temperature of 80 °C

## Average piston speed v as a function of applied load m in combination with PPS cushionings



| Weight [g]                         |     |     |     |     |
|------------------------------------|-----|-----|-----|-----|
| Piston Ø                           | 12  | 16  | 20  | 25  |
| Basic weight with 0 mm stroke      | 101 | 130 | 310 | 410 |
| Additional weight per 10 mm stroke | 4   | 5   | 7   | 11  |
| Moving load with 0 mm stroke       | 19  | 21  | 42  | 73  |
| Additional load per 10 mm stroke   | 2   | 2   | 4   | 6   |

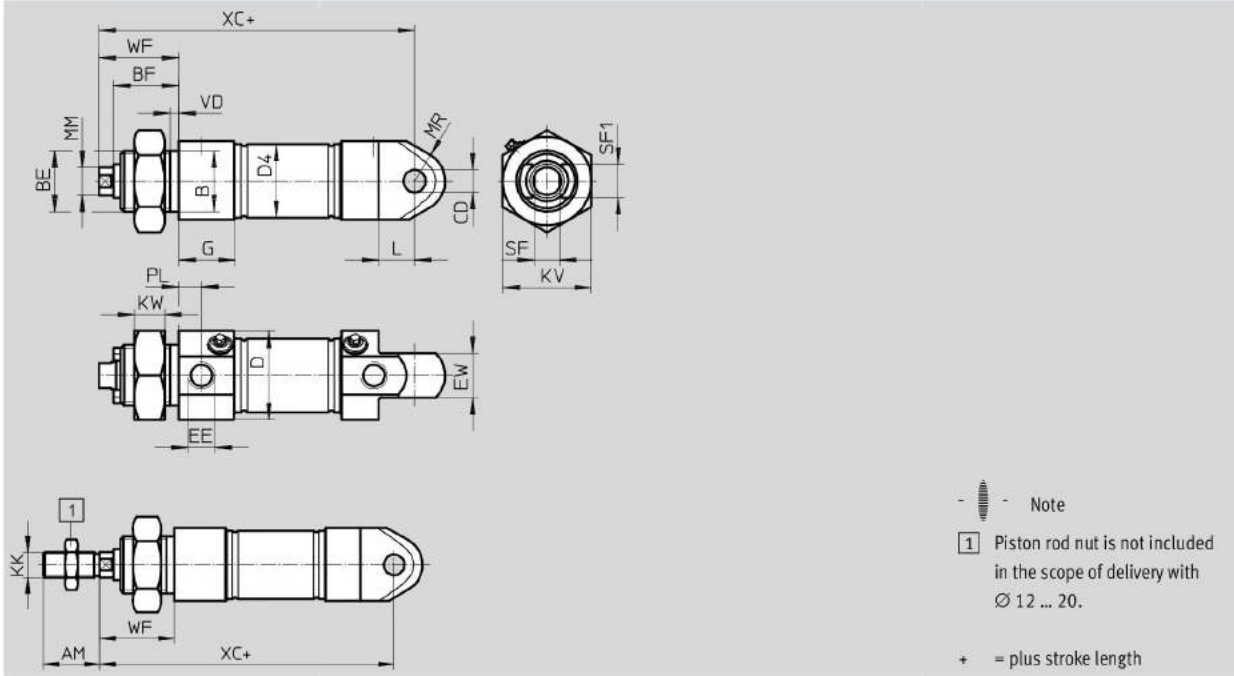
# Standard cylinders CRDSNU to ISO 6432, stainless steel



Technical data

## Dimensions

Basic version



| $\varnothing$ | AM | B<br>$\varnothing$<br>h9 | BE      | BF   | CD<br>$\varnothing$<br>H8 | D<br>$\varnothing$ | D4<br>$\varnothing$ |
|---------------|----|--------------------------|---------|------|---------------------------|--------------------|---------------------|
| 12            | 16 | 16                       | M16x1.5 | 18   | 6                         | 20                 | 13.3                |
| 16            | 16 | 16                       | M16x1.5 | 18   | 6                         | 20                 | 17.3                |
| 20            | 20 | 22                       | M22x1.5 | 20.7 | 8                         | 30                 | 21.3                |
| 25            | 22 | 22                       | M22x1.5 | 23.5 | 8                         | 32                 | 26.5                |

| $\varnothing$ | EE              | EW | G    | KK       | KV | KW | L  | MM<br>$\varnothing$ |
|---------------|-----------------|----|------|----------|----|----|----|---------------------|
| 12            | M5              | 12 | 9.5  | M6       | 24 | 8  | 10 | 6                   |
| 16            | M5              | 12 | 9.7  | M6       | 24 | 8  | 10 | 6                   |
| 20            | G $\frac{1}{8}$ | 16 | 20.5 | M8       | 32 | 11 | 13 | 8                   |
| 25            | G $\frac{1}{8}$ | 16 | 20.5 | M10x1.25 | 32 | 11 | 13 | 10                  |

| $\varnothing$ | MR | PL  | SF | SF1 | VD  | WF | XC      |
|---------------|----|-----|----|-----|-----|----|---------|
|               |    |     |    |     |     |    | $\pm 1$ |
| 12            | 8  | 6   | 5  | 9   | 3.5 | 22 | 75      |
| 16            | 8  | 6   | 5  | 9   | 3.5 | 22 | 82      |
| 20            | 11 | 8.2 | 7  | 12  | 3.5 | 24 | 95      |
| 25            | 11 | 8.2 | 9  | 12  | 3.5 | 28 | 104     |