

Sauger ESS und Saugnäpfe ESV








FESTO



Sauger ESS




Lieferübersicht

FESTO

| Typ | Sauger-Ø [mm] | Sauger- halter Größe | Befesti- gungs- gewinde | Nenn- weite [mm] | Lebensmittel-Zulas- sung FDA | Werkstoffe | | | | | | → Seite/ Internet | | | |
|--|--|----------------------------|-------------------------------|------------------------|---------------------------------|----------------|-----------------|---------------------------------|---------|-------------|------------|----------------------|----|---|---|
| | | | | | | Fluorkautschuk | Nitrilkautschuk | Nitrilkautschuk antistatisch | Silikon | Polyurethan | Vulkollan® | | | | |
| Standard, rund ESS-...-S... |  | 2 | 1 | Ø 3 | 0,6 | ■ | ■ | ■ | ■ | ■ | ■ | - | 7 | | |
| | | 4 | | | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | - | | | |
| | | 6 | 2 | Ø 4 | 2,0 | ■ | ■ | ■ | ■ | ■ | ■ | - | | | |
| | | 8 | | | | ■ | ■ | ■ | ■ | ■ | ■ | - | | | |
| |  | 10 | 3 | M4x0,7 | 2,0 | ■ | ■ | ■ | ■ | ■ | ■ | - | 7 | | |
| | | 15 | | | | ■ | ■ | ■ | ■ | ■ | ■ | - | | | |
| | | 20 | | | | 4 | M6x1 | 3,0 | ■ | ■ | ■ | ■ | | ■ | - |
| | | 30 | ■ | ■ | ■ | | | | ■ | ■ | - | | | | |
| | | 40 | 5 | M10x1,5 | 6,0 | | | | ■ | ■ | ■ | ■ | | ■ | - |
| | | 50 | | | | | | | ■ | ■ | ■ | ■ | | ■ | - |
| | | 60 | 6 | M20x2 | 10,0 | ■ | ■ | ■ | ■ | ■ | ■ | - | | | |
| | | 80 | | | | ■ | ■ | ■ | ■ | ■ | - | | | | |
| | | 100 | | | | ■ | ■ | ■ | ■ | ■ | - | | | | |
| 150 | | ■ | | | | ■ | ■ | ■ | ■ | - | | | | | |
| 200 | ■ | ■ | ■ | ■ | ■ | - | | | | | | | | | |
| Rund, extratief ESS-...-E... |  | 15 | 3 | M4x0,7 | 2,0 | - | ■ | ■ | - | ■ | ■ | - | 11 | | |
| | | 20 | 4 | M6x1 | 3,0 | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 30 | | | | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 40 | | | | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 50 | | | | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 60 | 5 | M10x1,5 | 6,0 | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 80 | | | | - | ■ | ■ | - | ■ | ■ | - | | | |
| | | 100 | | | | - | ■ | ■ | - | ■ | ■ | - | | | |
| Faltenbalg, rund, 1,5-fach ESS-...-B... |  | 10 | 3 | M4x0,7 | 2,0 | - | - | ■ | - | ■ | ■ | - | 14 | | |
| | | 20 | 4 | M6x1 | 3,0 | - | - | ■ | - | ■ | ■ | - | | | |
| | | 30 | | | | - | - | ■ | - | ■ | ■ | - | | | |
| | | 40 | | | | - | - | ■ | - | ■ | ■ | - | | | |
| | | 50 | 5 | M10x1,5 | 6,0 | - | - | ■ | - | ■ | ■ | - | | | |
| 80 | - | - | | | | ■ | - | ■ | ■ | - | | | | | |
| Faltenbalg, rund, 1,5-fach ESS-...-BT... |   | 40 | 4 | M6 | 2,5 | - | - | - | - | - | - | ■ | 16 | | |
| | | | | M10 | | | | | | | | | | | |
| | | | | G¾-l | | | | | | | | | | | |
| | | | | G¾ | | | | | | | | | | | |
| | | 50 | 4 | M6 | 2,5 | - | - | - | - | - | - | - | | ■ | |
| | | | | M10 | | | | | | | | | | | |
| | | | | G¾-l | | | | | | | | | | | |
| | | 80 | 5 | M10 | 2,5 | - | - | - | - | - | - | - | | ■ | |
| | | | | G¾-l | | | | | | | | | | | |
| | | | | G¾ | | | | | | | | | | | |
| Faltenbalg, rund, 3,5-fach ESS-...-C... |  | 10 | 3 | M4x0,7 | 2,0 | - | - | ■ | - | ■ | - | - | 18 | | |
| | | 20 | 4 | M6x1 | 3,0 | - | - | ■ | - | ■ | - | - | | | |
| | | 30 | | | | - | - | ■ | - | ■ | - | | | | |
| | | 40 | | | | - | - | ■ | - | ■ | - | | | | |
| | | 50 | | | | - | - | ■ | - | ■ | - | | | | |

Sauger ESS





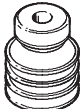

Lieferübersicht

| Typ | Sauger-Ø bzw. Sauger- Größe | Saugerhalter | Befestigungs- gewinde | Nennweite | Werkstoffe | | → Seite/ Internet | |
|------------------------------|--|--------------------|--------------------------|-----------|-----------------|------------|----------------------|----|
| | | | | | Nitrilkautschuk | Vulkollan® | | |
| | [mm] | Größe | | [mm] | | | | |
| Sauger oval ESS-...-O... |  | 4x10 | 4 | M6x1 | 3,0 | ■ | - | 20 |
| | | 4x20 | | | | | | |
| | | 6x10 | | | | | | |
| | | 6x20 | | | | | | |
| | | 8x20 | | | | | | |
| | | 8x30 | | | | | | |
| | | 10x30 | | | | | | |
| | | 15x45 | 5 | M10x1,5 | 6,0 | ■ | - | |
| | | 20x60 | | | | | | |
| | | 25x75 | | | | | | |
| 30x90 | | | | | | | | |
| Glockenform ESS-...-GT... |   | 30 | 4 | M6 | 2,5 | - | ■ | 22 |
| | | M10 | | | | | | |
| | | G $\frac{1}{8}$ -I | | | | | | |
| | | G $\frac{1}{8}$ | | | | | | |
| | | 40 | 4 | M6 | 2,5 | - | ■ | |
| | | M10 | | | | | | |
| | | G $\frac{1}{4}$ -I | | | | | | |
| | | G $\frac{1}{4}$ | | | | | | |
| | | 50 | 4 | M6 | 2,5 | - | ■ | |
| | | M10 | | | | | | |
| | | G $\frac{1}{8}$ -I | | | | | | |
| | | G $\frac{1}{8}$ | | | | | | |
| | | 60 | 5 | M10 | 2,5 | - | ■ | |
| | | G $\frac{1}{4}$ -I | | | | | | |
| | | G $\frac{1}{4}$ | | | | | | |
| | | 80 | 5 | M10 | 5,5 | - | ■ | |
| | | G $\frac{1}{4}$ -I | | | | | | |
| | | G $\frac{1}{4}$ | | | | | | |
| 100 | 5 | M10 | 5,5 | - | ■ | | | |
| G $\frac{1}{4}$ -I | | | | | | | | |
| G $\frac{1}{4}$ | | | | | | | | |

Saugnapfe ESV

Lieferübersicht

FESTO


| Typ | Sauger-Ø [mm] | Sauger- halter Größe | Befesti- gungs- gewinde | Lebensmittel-Zulas- sung FDA | Werkstoffe | | | | | | → Seite/ Internet | |
|--|---|----------------------------|-------------------------------|---------------------------------|----------------|-----------------|---------------------------------|---------|-------------|------------|----------------------|----|
| | | | | | Fluorkautschuk | Nitrilkautschuk | Nitrilkautschuk antistatisch | Silikon | Polyurethan | Vulkollan® | | |
| Standard, rund ESV-...-S... |  | 20 | 4 | M6x1 | ■ | ■ | ■ | ■ | ■ | ■ | - | 7 |
| | | 30 | | | | | | | | | | |
| | | 40 | | | | | | | | | | |
| | | 50 | | | | | | | | | | |
| | | 60 | 5 | M10x1,5 | ■ | ■ | ■ | - | ■ | ■ | - | |
| | | 80 | | | | | | | | | | |
| | | 100 | | | | | | | | | | |
| | | 150 | 6 | M20x2 | ■ | ■ | ■ | - | ■ | ■ | - | |
| 200 | | | | | | | | | | | | |
| Rund, extratief ESV-...-E... |  | 20 | 4 | M6x1 | - | ■ | ■ | - | ■ | ■ | - | 11 |
| | | 30 | | | | | | | | | | |
| | | 40 | | | | | | | | | | |
| | | 50 | | | | | | | | | | |
| | | 60 | 5 | M10x1,5 | - | ■ | ■ | - | ■ | ■ | - | |
| | | 80 | | | | | | | | | | |
| 100 | | | | | | | | | | | | |
| Faltenbalg, rund, 1,5-fach ESV-...-B... |  | 20 | 4 | M6x1 | - | - | ■ | - | ■ | ■ | - | 14 |
| | | 30 | | | | | | | | | | |
| | | 40 | | | | | | | | | | |
| | | 50 | | | | | | | | | | |
| | | 80 | 5 | M10x1,5 | - | - | ■ | - | ■ | ■ | - | |
| Faltenbalg, rund, 1,5-fach ESV-...-BT... |  | 40 | 4 | - | - | - | - | - | - | ■ | 16 | |
| | | 50 | | | | | | | | | | |
| | | 80 | | | | | | | | | | |
| Faltenbalg, rund, 3,5-fach ESV-...-C... |  | 20 | 4 | M6x1 | - | - | ■ | - | ■ | - | - | 18 |
| | | 30 | | | | | | | | | | |
| | | 40 | | | | | | | | | | |
| | | 50 | 5 | M10x1 | - | - | ■ | - | ■ | - | - | |
| Glockenform ESV-...-GT... |  | 30 | 4 | - | - | - | - | - | - | - | ■ | 22 |
| | | 40 | | | | | | | | | | |
| | | 50 | | | | | | | | | | |
| | | 60 | 5 | - | - | - | - | - | - | - | ■ | |
| | | 80 | | | | | | | | | | |
| | | 100 | | | | | | | | | | |

Sauger ESS/Saugnapfe ESV

Typenschlüssel

FESTO

| | | | | | |
|--|---------------------------------|----|---|---|----|
| ESS | | 10 | S | N | M6 |
| Typ | | | | | |
| ESS | Sauger | | | | |
| ESV | Saugnapf | | | | |
| Sauger-Ø bzw. Sauger-Größe [mm] | | | | | |
| 2...200 | rund | | | | |
| 4x10 | oval | | | | |
| 4x20 | oval | | | | |
| 6x10 | oval | | | | |
| 6x20 | oval | | | | |
| 8x20 | oval | | | | |
| 8x30 | oval | | | | |
| 10x30 | oval | | | | |
| 15x45 | oval | | | | |
| 20x60 | oval | | | | |
| 25x75 | oval | | | | |
| 30x90 | oval | | | | |
| Saugertyp | | | | | |
| S | Standard, rund | | | | |
| E | extratief | | | | |
| B | Faltenbalg, rund 1,5-fach | | | | |
| C | Faltenbalg, rund 3,5-fach | | | | |
| O | Oval | | | | |
| G | Glockenform | | | | |
| Werkstoffe | | | | | |
| F | Fluorkautschuk | | | | |
| N | Nitrilkautschuk | | | | |
| NA | Nitrilkautschuk antistatisch | | | | |
| S | Silikon | | | | |
| U | Polyurethan | | | | |
| T | Vulkollan® | | | | |
| Anschlussgrößen | | | | | |
| M6 | Gewinde M6 | | | | |
| M10 | Gewinde M10 | | | | |
| G $\frac{1}{8}$ | Gewinde G $\frac{1}{8}$ | | | | |
| G $\frac{1}{4}$ | Gewinde G $\frac{1}{4}$ | | | | |
| G $\frac{1}{8}$ -I | Innengewinde G $\frac{1}{8}$ -I | | | | |
| G $\frac{1}{4}$ -I | Innengewinde G $\frac{1}{4}$ -I | | | | |

-  - Hinweis

Mögliche Kombinationen entnehmen Sie den Bestellaangaben.

Sauger ESS/Saugnäpfe ESV

Datenblatt

FESTO

| Allgemeine Technische Daten | | | | | | |
|-----------------------------|---|---------------------------|---------------------------------|-------------------------------|-------------|------------|
| Typ | ESS/ESV-... | | | | | |
| | F | N | NA | S | U | T |
| Betriebsmedium | atmosphärische Luft | | | | | |
| Einbaulage | beliebig | | | | | |
| Werkstoff | Fluorkautschuk | Nitrilkautschuk | Nitrilkautschuk antistatisch | Silikon | Polyurethan | Vulkollan® |
| Shore-Härte | 60±5 | 50±5 (60±5) ¹⁾ | 50±5 | 50±5 | 60±5 | 72±5 |
| Farbe | Grau | Schwarz | Schwarz mit weißem Punkt | Transparent | Blau | Rotbraun |
| Werkstoff-Hinweis | LABS-frei | | | LABS-haltige Stoffe enthalten | | LABS-frei |
| | Kupfer-, PTFE- und silikonfrei → Bestellangaben | | | | | |

1) Wert in Klammern gilt für Sauger ESS-...-SN, Sauger-Ø 10 ... 100 mm und Sauger ESS-...-EN


| Umweltbedingungen | | | | | | |
|---|--------------|-------------|-------------|--------------|-------------|-------------|
| Typ | ESS/ESV-... | | | | | |
| | F | N | NA | S | U | T |
| Umgebungstemperatur [°C] | -10 ... +200 | -10 ... +70 | -10 ... +70 | -30 ... +180 | -20 ... +60 | -10 ... +80 |
| Korrosionsbeständigkeit KBK ¹⁾ | 1 | | | | | 2 |

1) Korrosionsbeständigkeitsklasse 1 nach Festo Norm 940 070
Bauteile mit geringer Korrosionsbeanspruchung. Transport- und Lagerschutz. Teile ohne vorrangig dekorative Anforderung an die Oberfläche z. B. im nicht sichtbaren Innenbereich oder hinter Abdeckungen.
Korrosionsbeständigkeitsklasse 2 nach Festo Norm 940 070
Bauteile mit mäßiger Korrosionsbeanspruchung. Außenliegende sichtbare Teile mit vorrangig dekorativer Anforderung an die Oberfläche, die im direkten Kontakt zur umgebenden industrieüblichen Atmosphäre bzw. Medien, wie Kühl- und Schmierstoffe stehen.

Sauger ESS/Saugnapfe ESV, Standard rund

Datenblatt

ESS-...-S...
ESV-...-S...

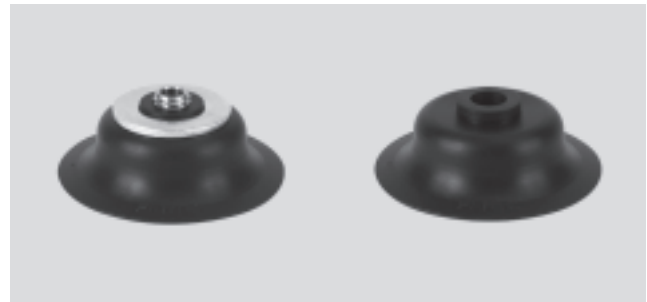
-  - Temperaturbereich
-30 ... +200 °C

Funktion



-  - Durchmesser
2 ... 200 mm

Lebensmittel-
Zulassung FDA



| Allgemeine Technische Daten | | | | | | | | |
|-----------------------------|----------------------------|--------------------------|-------------------------------|------------------------------------|--|---|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungs- gewinde | Wirksamer Sauger-Ø [mm] | Abreißkraft bei -0,7 bar [N] | Sauger- volumen ³⁾ [cm ³] | Min. Radius R ²⁾ des Werkstücks [mm] | Gewicht | |
| | | | | | | | ESS [g] | ESV [g] |
| 2 | Größe 1 | Ø 3 ¹⁾ | 1,4 | 0,1 | 0,002 | 10 | 0,1 | - |
| 4 | | | 3,3 | 0,4 | 0,008 | 10 | 0,1 | - |
| 6 | Größe 2 | Ø 4 ¹⁾ | 5,2 | 1,1 | 0,015 | 15 | 0,2 | - |
| 8 | | | 7,2 | 2,3 | 0,030 | 20 | 0,2 | - |
| 10 | Größe 3 | M4x0,7 | 8,3 | 3,9 | 0,050 | 30 | 1,5 | - |
| 15 | | | 13,5 | 8,5 | 0,208 | 35 | 1,9 | - |
| 20 | Größe 4 | M6x1 | 17,6 | 16,3 | 0,318 | 60 | 6,4 | 1,6 |
| 30 | | | 18,4 | 40,8 | 0,867 | 110 | 9 | 2,7 |
| 40 | | | 26,5 | 69,6 | 1,566 | 230 | 16,3 | 7,4 |
| 50 | | | 33,3 | 105,8 | 2,387 | 330 | 22 | 11,2 |
| 60 | Größe 5 | M10x1,5 | 42,0 | 166,1 | 3,953 | 350 | 49 | 22 |
| 80 | | | 57,8 | 309,7 | 19,312 | 400 | 133 | 33 |
| 100 | | | 75,2 | 503,6 | 29,779 | 460 | 222 | 59 |
| 150 | Größe 6 | M20x2 | 114,3 | 900 | 173,826 | 480 | 719 | 361 |
| 200 | | | 151,7 | 1 610 | 245,454 | 680 | 1 198 | 840 |

- 1) Wird in den Saugerhalter auf- bzw. eingesteckt
- 2) Minimaler Wölbungsradius des zu greifenden Werkstücks
- 3) Zu evakuierendes Saugervolumen

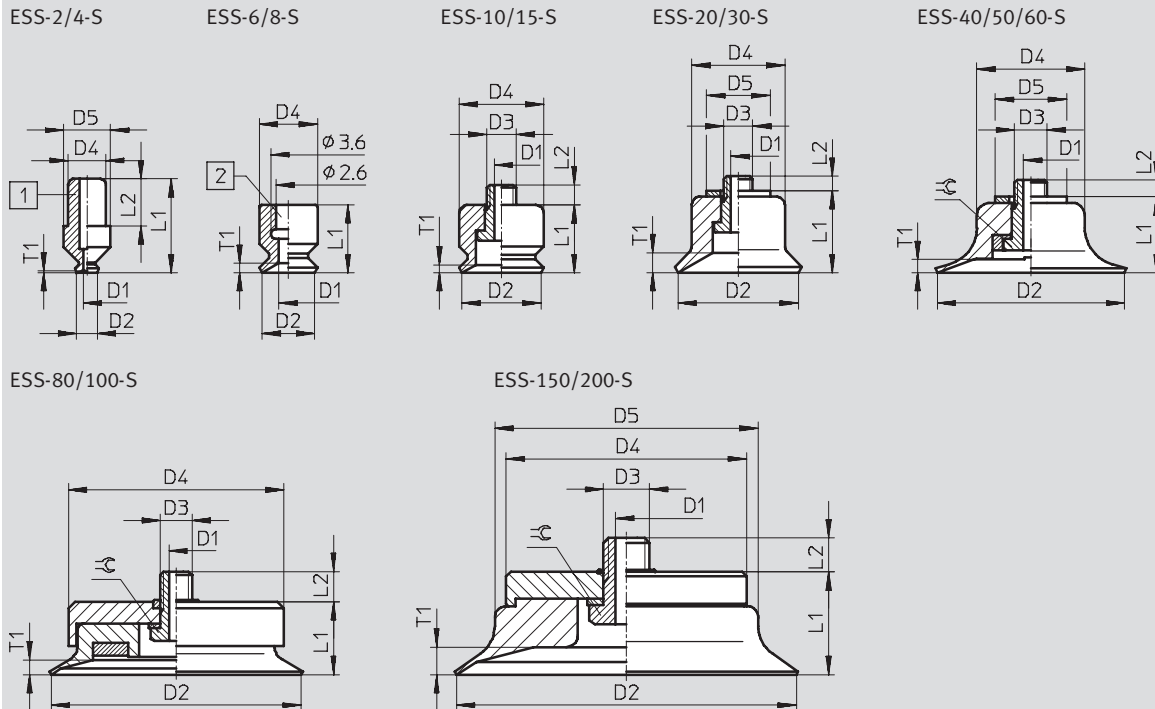
| Querkraft F [N] bei pu = -0,7 bar; Ra = 7 µm | | | | | |
|--|------------|------------|------------|------------|-------------|
| Sauger-Ø [mm] | ESS-...-SN | ESS-...-SS | ESS-...-SU | ESS-...-SF | ESS-...-SNA |
| 2 | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 |
| 4 | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 |
| 6 | 3,5 | 2,5 | 3 | 1,5 | 2 |
| 8 | 9,5 | 3,5 | 5 | 3,5 | 4 |
| 10 | 3,5 | 4 | 7 | 4,5 | 7,5 |
| 15 | 10,5 | 6,5 | 9 | 10,5 | 13,5 |
| 20 | 11,5 | 10,5 | 23 | 15,5 | 14,5 |
| 30 | 19,5 | 23,5 | 19 | 22 | 20 |
| 40 | 60 | 25 | 83 | 25 | 49 |
| 50 | 135 | 84 | 130 | 69,5 | 81,5 |
| 60 | 136 | 85 | 151 | 117,5 | - |
| 80 | 315 | 104 | 295 | 139,5 | - |
| 100 | 600 | 130 | 482,5 | 299 | - |
| 150 | 675 | 400 | 1 000 | 480 | - |
| 200 | 850 | 425 | 1 000 | 500 | - |

Sauger ESS/Saugnäpfe ESV, Standard rund

Datenblatt

FESTO

Abmessungen



- 1 Zapfen zum Einstecken in Halter
- 2 Bohrung zum Aufstecken auf Halter

| Typ Sauger | für Sauggreifer | D1 NW | D2 Ø | D3 | D4 Ø | D5 Ø | L1 | L2 | T1 | ≈ |
|--------------|-----------------|-------|------|---------|------|------|------|-----|-----|----|
| ESS-2-S... | ESG-2-S... | Ø 0,6 | 2 | – | 3,2 | 4 | 8 | 4 | 0,2 | – |
| ESS-4-S... | ESG-4-S... | Ø 1,2 | 4 | – | 3,2 | 4 | 8 | 4 | 0,6 | – |
| ESS-6-S... | ESG-6-S... | Ø 2 | 6 | – | 6 | – | 7 | – | 1 | – |
| ESS-8-S... | ESG-8-S... | Ø 2 | 8 | – | 6 | – | 5,5 | – | 1,1 | – |
| ESS-10-S... | ESG-10-S... | ≈ 2 | 10 | M4x0,7 | 10 | – | 8 | 3 | 1 | – |
| ESS-15-S... | ESG-15-S... | ≈ 2 | 15 | M4x0,7 | 11 | – | 9 | 3 | 2,4 | – |
| ESS-20-S... | ESG-20-S... | ≈ 3 | 20 | M6x1 | 15 | 18 | 11,6 | 2,4 | 1,8 | – |
| ESS-30-S... | ESG-30-S... | ≈ 3 | 30 | M6x1 | 17 | 18 | 12,6 | 3,4 | 2 | – |
| ESS-40-S... | ESG-40-S... | ≈ 3 | 40 | M6x1 | 25 | 22 | 15,6 | 3,2 | 1,9 | – |
| ESS-50-S... | ESG-50-S... | ≈ 3 | 50 | M6x1 | 30 | 22 | 16,6 | 3,2 | 1,6 | – |
| ESS-60-S... | ESG-60-S... | Ø 6 | 60 | M10x1,5 | 40 | – | 20,6 | 4,5 | 2,6 | 14 |
| ESS-80-S... | ESG-80-S... | Ø 6 | 80 | M10x1,5 | 68 | – | 23 | 9,4 | 4,7 | 14 |
| ESS-100-S... | ESG-100-S... | Ø 6 | 100 | M10x1,5 | 85 | – | 25 | 8,4 | 5,5 | 14 |
| ESS-150-S... | ESG-150-S... | Ø 10 | 150 | M20x2 | 105 | 115 | 45 | 13 | 12 | 27 |
| ESS-200-S... | ESG-200-S... | Ø 10 | 200 | M20x2 | 105 | 160 | 50 | 13 | 15 | 27 |

Sauger ESS/Saugnapfe ESV, Standard rund

Datenblatt

FESTO

| Bestellangaben | | | |
|---|-----------|--------------------------|--------------------|
| Sauger-Ø [mm] | ESS | | ESV |
| | Teile-Nr. | Typ | Teile-Nr. Typ |
| Fluorkautschuk F | | | |
| 2 | 189 267 | ESS-2-SF ¹⁾ | – |
| 4 | 189 272 | ESS-4-SF ¹⁾ | – |
| 6 | 189 277 | ESS-6-SF ¹⁾ | – |
| 8 | 189 282 | ESS-8-SF ¹⁾ | – |
| 10 | 189 287 | ESS-10-SF ¹⁾ | – |
| 15 | 189 292 | ESS-15-SF ¹⁾ | – |
| 20 | 189 297 | ESS-20-SF ¹⁾ | 190 982 ESV-20-SF |
| 30 | 189 302 | ESS-30-SF ¹⁾ | 190 987 ESV-30-SF |
| 40 | 189 307 | ESS-40-SF ¹⁾ | 190 992 ESV-40-SF |
| 50 | 189 312 | ESS-50-SF ¹⁾ | 190 997 ESV-50-SF |
| 60 | 189 317 | ESS-60-SF ¹⁾ | 191 002 ESV-60-SF |
| 80 | 189 321 | ESS-80-SF ¹⁾ | 191 006 ESV-80-SF |
| 100 | 189 325 | ESS-100-SF ¹⁾ | 191 010 ESV-100-SF |
| 150 | 189 329 | ESS-150-SF ¹⁾ | 191 014 ESV-150-SF |
| 200 | 189 333 | ESS-200-SF ¹⁾ | 191 018 ESV-200-SF |
| Nitrilkautschuk N | | | |
| 2 | 189 264 | ESS-2-SN ¹⁾ | – |
| 4 | 189 269 | ESS-4-SN ¹⁾ | – |
| 6 | 189 274 | ESS-6-SN ¹⁾ | – |
| 8 | 189 279 | ESS-8-SN ¹⁾ | – |
| 10 | 189 284 | ESS-10-SN ¹⁾ | – |
| 15 | 189 289 | ESS-15-SN ¹⁾ | – |
| 20 | 189 294 | ESS-20-SN ¹⁾ | 190 979 ESV-20-SN |
| 30 | 189 299 | ESS-30-SN ¹⁾ | 190 984 ESV-30-SN |
| 40 | 189 304 | ESS-40-SN ¹⁾ | 190 989 ESV-40-SN |
| 50 | 189 309 | ESS-50-SN ¹⁾ | 190 994 ESV-50-SN |
| 60 | 189 314 | ESS-60-SN ¹⁾ | 190 999 ESV-60-SN |
| 80 | 189 318 | ESS-80-SN ¹⁾ | 191 003 ESV-80-SN |
| 100 | 189 322 | ESS-100-SN ¹⁾ | 191 007 ESV-100-SN |
| 150 | 189 326 | ESS-150-SN ¹⁾ | 191 011 ESV-150-SN |
| 200 | 189 330 | ESS-200-SN ¹⁾ | 191 015 ESV-200-SN |
| Nitrilkautschuk, antistatisch NA | | | |
| 2 | 189 268 | ESS-2-SNA ¹⁾ | – |
| 4 | 189 273 | ESS-4-SNA ¹⁾ | – |
| 6 | 189 278 | ESS-6-SNA ¹⁾ | – |
| 8 | 189 283 | ESS-8-SNA ¹⁾ | – |
| 10 | 189 288 | ESS-10-SNA ¹⁾ | – |
| 15 | 189 293 | ESS-15-SNA ¹⁾ | – |
| 20 | 189 298 | ESS-20-SNA ¹⁾ | 190 983 ESV-20-SNA |
| 30 | 189 303 | ESS-30-SNA ¹⁾ | 190 988 ESV-30-SNA |
| 40 | 189 308 | ESS-40-SNA ¹⁾ | 190 993 ESV-40-SNA |
| 50 | 189 313 | ESS-50-SNA ¹⁾ | 190 998 ESV-50-SNA |

1) Kupfer-, PTFE- und silikonfrei

Sauger ESS/Saugnäpfe ESV, Standard rund

FESTO

Datenblatt


| Bestellangaben | | | |
|----------------------|-----------|------------|--------------------|
| Sauger-Ø [mm] | ESS | | ESV |
| | Teile-Nr. | Typ | Teile-Nr. Typ |
| Silikon S | | | |
| 2 | 189 266 | ESS-2-SS | - |
| 4 | 189 271 | ESS-4-SS | - |
| 6 | 189 276 | ESS-6-SS | - |
| 8 | 189 281 | ESS-8-SS | - |
| 10 | 189 286 | ESS-10-SS | - |
| 15 | 189 291 | ESS-15-SS | - |
| 20 | 189 296 | ESS-20-SS | 190 981 ESV-20-SS |
| 30 | 189 301 | ESS-30-SS | 190 986 ESV-30-SS |
| 40 | 189 306 | ESS-40-SS | 190 991 ESV-40-SS |
| 50 | 189 311 | ESS-50-SS | 190 996 ESV-50-SS |
| 60 | 189 316 | ESS-60-SS | 191 001 ESV-60-SS |
| 80 | 189 320 | ESS-80-SS | 191 005 ESV-80-SS |
| 100 | 189 324 | ESS-100-SS | 191 009 ESV-100-SS |
| 150 | 189 328 | ESS-150-SS | 191 013 ESV-150-SS |
| 200 | 189 332 | ESS-200-SS | 191 017 ESV-200-SS |
| Polyurethan U | | | |
| 2 | 189 265 | ESS-2-SU | - |
| 4 | 189 270 | ESS-4-SU | - |
| 6 | 189 275 | ESS-6-SU | - |
| 8 | 189 280 | ESS-8-SU | - |
| 10 | 189 285 | ESS-10-SU | - |
| 15 | 189 290 | ESS-15-SU | - |
| 20 | 189 295 | ESS-20-SU | 190 980 ESV-20-SU |
| 30 | 189 300 | ESS-30-SU | 190 985 ESV-30-SU |
| 40 | 189 305 | ESS-40-SU | 190 990 ESV-40-SU |
| 50 | 189 310 | ESS-50-SU | 190 995 ESV-50-SU |
| 60 | 189 315 | ESS-60-SU | 191 000 ESV-60-SU |
| 80 | 189 319 | ESS-80-SU | 191 004 ESV-80-SU |
| 100 | 189 323 | ESS-100-SU | 191 008 ESV-100-SU |
| 150 | 189 327 | ESS-150-SU | 191 012 ESV-150-SU |
| 200 | 189 331 | ESS-200-SU | 191 016 ESV-200-SU |

Sauger ESS/Saugnäpfe ESV, rund extratief

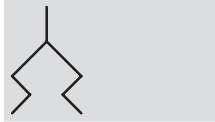
FESTO


Datenblatt

ESS-...-E...
ESV-...-E...

-  - Temperaturbereich
-30 ... +200 °C

Funktion



-  - Durchmesser
15 ... 100 mm



| Allgemeine Technische Daten | | | | | | | | |
|-----------------------------|----------------------------|--------------------------|-------------------------------|------------------------------------|--|---|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungs- gewinde | Wirksamer Sauger-Ø [mm] | Abreißkraft bei -0,7 bar [N] | Sauger- volumen ²⁾ [cm ³] | Min. Radius R ¹⁾ des Werkstücks [mm] | Gewicht | |
| | | | | | | | ESS [g] | ESV [g] |
| 15 | Größe 3 | M4x0,7 | 13,8 | 9,8 | 0,350 | 20 | 1,9 | - |
| 20 | Größe 4 | M6x1 | 17,2 | 17 | 0,840 | 30 | 6,4 | 1,6 |
| 30 | | | 20,9 | 37,2 | 2,120 | 50 | 9,2 | 2,9 |
| 40 | | | 28,1 | 67,6 | 4,040 | 80 | 16,9 | 8 |
| 50 | | | 36,9 | 103,6 | 7,900 | 100 | 23,4 | 12,6 |
| 60 | Größe 5 | M10x1,5 | 40,5 | 162,5 | 19,770 | 120 | 48 | 21 |
| 80 | | | 62,7 | 275 | 51,610 | 160 | 141 | 41 |
| 100 | | | 78,5 | 440,8 | 84,660 | 200 | 228 | 65 |

- 1) Minimaler Wölbungsradius des zu greifenden Werkstücks
2) Zu evakuierendes Saugervolumen

| Querkraft F [N] bei p _u = -0,7 bar; Ra = 7 µm | | | | |
|--|------------|------------|------------|------------|
| Sauger-Ø [mm] | ESS-...-EN | ESS-...-ES | ESS-...-EU | ESS-...-EF |
| 15 | 9 | 10 | 15 | 14,5 |
| 20 | 14 | 13 | 16 | 15,5 |
| 30 | 24,5 | 21,5 | 41,5 | 18,5 |
| 40 | 53 | 28,5 | 46,5 | 22 |
| 50 | 115 | 42,5 | 62 | 60 |
| 60 | 130 | 63,5 | 134 | 62,5 |
| 80 | 216 | 107,5 | 136,5 | 148,5 |
| 100 | 351 | 150 | 352,5 | 254,5 |

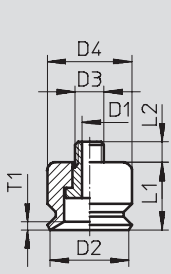
Sauger ESS/Saugnäpfe ESV, rund extratief

Datenblatt

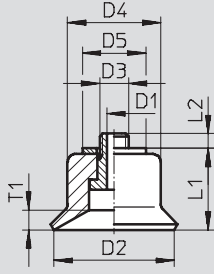
FESTO

Abmessungen

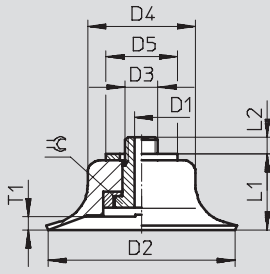
ESS-15-E



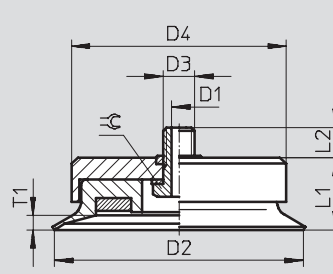
ESS-20/30-E



ESS-40/50/60-E



ESS-80/100-E



| Typ Sauger | für Sauggreifer | D1 NW | D2 Ø | D3 | D4 Ø | D5 Ø | L1 | L2 | T1 | ⊕ |
|---------------|--------------------|----------|---------|---------|---------|---------|------|-----|------|----|
| ESS-15-E... | ESG-15-E... | ⊕ 2 | 15 | M4x0,7 | 11 | - | 10 | 3 | 2,9 | - |
| ESS-20-E... | ESG-20-E... | ⊕ 3 | 20 | M6x1 | 15 | 18 | 12,6 | 2,4 | 3 | - |
| ESS-30-E... | ESG-30-E... | ⊕ 3 | 30 | M6x1 | 17 | 18 | 15,6 | 3,4 | 4,5 | - |
| ESS-40-E... | ESG-40-E... | ⊕ 3 | 40 | M6x1 | 25 | 22 | 19,1 | 3,2 | 4,5 | - |
| ESS-50-E... | ESG-50-E... | ⊕ 3 | 50 | M6x1 | 30 | 22 | 21,1 | 3,9 | 6,5 | - |
| ESS-60-E... | ESG-60-E... | Ø 6 | 60 | M10x1,5 | 40 | - | 27,6 | 5,4 | 9,5 | 14 |
| ESS-80-E... | ESG-80-E... | Ø 6 | 80 | M10x1,5 | 68 | - | 33 | 9,4 | 8,6 | 14 |
| ESS-100-E... | ESG-100-E... | Ø 6 | 100 | M10x1,5 | 85 | - | 33 | 8,4 | 10,7 | 14 |

Sauger ESS/Saugnapfe ESV, rund extratief

Datenblatt

FESTO


| Bestellangaben | | | |
|--------------------------|-----------|--------------------------|--------------------|
| Sauger-Ø [mm] | ESS | | ESV |
| | Teile-Nr. | Typ | Teile-Nr. Typ |
| Fluorkautschuk F | | | |
| 15 | 189 337 | ESS-15-EF ¹⁾ | – |
| 20 | 189 341 | ESS-20-EF ¹⁾ | 191 026 ESV-20-EF |
| 30 | 189 345 | ESS-30-EF ¹⁾ | 191 030 ESV-30-EF |
| 40 | 189 349 | ESS-40-EF ¹⁾ | 191 034 ESV-40-EF |
| 50 | 189 353 | ESS-50-EF ¹⁾ | 191 038 ESV-50-EF |
| 60 | 189 357 | ESS-60-EF ¹⁾ | 191 042 ESV-60-EF |
| 80 | 189 361 | ESS-80-EF ¹⁾ | 191 046 ESV-80-EF |
| 100 | 189 365 | ESS-100-EF ¹⁾ | 191 050 ESV-100-EF |
| Nitrilkautschuk N | | | |
| 15 | 189 334 | ESS-15-EN ¹⁾ | – |
| 20 | 189 338 | ESS-20-EN ¹⁾ | 191 023 ESV-20-EN |
| 30 | 189 342 | ESS-30-EN ¹⁾ | 191 027 ESV-30-EN |
| 40 | 189 346 | ESS-40-EN ¹⁾ | 191 031 ESV-40-EN |
| 50 | 189 350 | ESS-50-EN ¹⁾ | 191 035 ESV-50-EN |
| 60 | 189 354 | ESS-60-EN ¹⁾ | 191 039 ESV-60-EN |
| 80 | 189 358 | ESS-80-EN ¹⁾ | 191 043 ESV-80-EN |
| 100 | 189 362 | ESS-100-EN ¹⁾ | 191 047 ESV-100-EN |
| Silikon S | | | |
| 15 | 189 336 | ESS-15-ES | – |
| 20 | 189 340 | ESS-20-ES | 191 025 ESV-20-ES |
| 30 | 189 344 | ESS-30-ES | 191 029 ESV-30-ES |
| 40 | 189 348 | ESS-40-ES | 191 033 ESV-40-ES |
| 50 | 189 352 | ESS-50-ES | 191 037 ESV-50-ES |
| 60 | 189 356 | ESS-60-ES | 191 041 ESV-60-ES |
| 80 | 189 360 | ESS-80-ES | 191 045 ESV-80-ES |
| 100 | 189 364 | ESS-100-ES | 191 049 ESV-100-ES |
| Polyurethan U | | | |
| 15 | 189 335 | ESS-15-EU | – |
| 20 | 189 339 | ESS-20-EU | 191 024 ESV-20-EU |
| 30 | 189 343 | ESS-30-EU | 191 028 ESV-30-EU |
| 40 | 189 347 | ESS-40-EU | 191 032 ESV-40-EU |
| 50 | 189 351 | ESS-50-EU | 191 036 ESV-50-EU |
| 60 | 189 355 | ESS-60-EU | 191 040 ESV-60-EU |
| 80 | 189 359 | ESS-80-EU | 191 044 ESV-80-EU |
| 100 | 189 363 | ESS-100-EU | 191 048 ESV-100-EU |

1) Kupfer-, PTFE- und silikonfrei

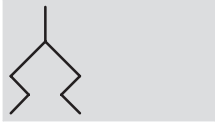
Sauger ESS/Saugnäpfe ESV, Faltenbalg, rund 1,5-fach

Datenblatt

ESS-...-B...
ESV-...-B...

-  - Temperaturbereich
-30 ... +180 °C

Funktion



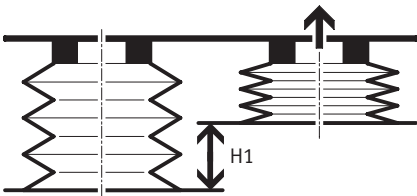
-  - Durchmesser
10 ... 80 mm



| Allgemeine Technische Daten | | | | | | | | | |
|-----------------------------|----------------------------|--------------------------|-------------------------------|------------------------------------|--|---|--------------------------------|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungs- gewinde | Wirksamer Sauger-Ø [mm] | Abreißkraft bei -0,7 bar [N] | Sauger- volumen ²⁾ [cm ³] | Min. Radius R ¹⁾ des Werkstücks [mm] | Höhenaus- gleich H1 [mm] | Gewicht | |
| | | | | | | | | ESS [g] | ESV [g] |
| 10 | Größe 3 | M4x0,7 | 7,4 | 4,7 | 0,380 | 20 | 4 | 1,8 | - |
| 20 | Größe 4 | M6x1 | 14,3 | 12,9 | 1,600 | 40 | 6 | 6,7 | 1,9 |
| 30 | | | 20,3 | 26,2 | 4,070 | 80 | 8 | 9,9 | 3,6 |
| 40 | | | 25,2 | 52,3 | 8,870 | 90 | 9,5 | 18,7 | 9,8 |
| 50 | | | 31,8 | 72,6 | 14,230 | 150 | 11 | 24,7 | 13,9 |
| 80 | Größe 5 | M10x1,5 | 55 | 213,6 | 63,900 | 430 | 10 | 139 | 39 |

- 1) Minimaler Wölbungsradius des zu greifenden Werkstücks
2) Zu evakuierendes Saugervolumen

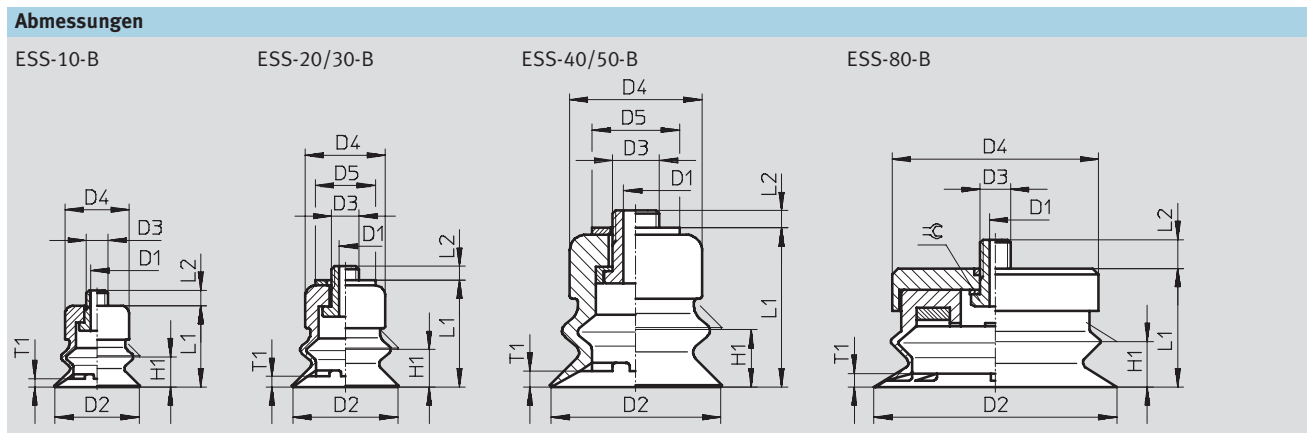
Höhenausgleich H1



| Querkraft F [N] bei p _u = -0,7 bar; Ra = 7 µm | | | |
|--|------------|------------|------------|
| Sauger-Ø [mm] | ESS-...-BN | ESS-...-BS | ESS-...-BU |
| 10 | 4,5 | 2,5 | 3 |
| 20 | 9,5 | 8 | 9,5 |
| 30 | 24,5 | 16 | 21,5 |
| 40 | 32,5 | 32,5 | 33 |
| 50 | 55,5 | 38 | 47 |
| 80 | 199,5 | 93 | 132,5 |

Sauger ESS/Saugnapfe ESV, Faltenbalg, rund 1,5-fach

Datenblatt



| Typ Sauger | für Sauggreifer | D1 NW | D2 Ø | D3 | D4 Ø | D5 Ø | H1 | L1 | L2 | T1 | ⊕ |
|-------------|-----------------|-------|------|---------|------|------|-----|------|-----|-----|----|
| ESS-10-B... | ESG-10-B... | ≈ 2 | 10 | M4x0,7 | 10 | – | 4 | 16 | 3 | 1 | – |
| ESS-20-B... | ESG-20-B... | ≈ 3 | 20 | M6x1 | 15 | 18 | 6 | 20,6 | 2,4 | 2 | – |
| ESS-30-B... | ESG-30-B... | ≈ 3 | 30 | M6x1 | 17 | 18 | 8 | 24,6 | 3,4 | 2,5 | – |
| ESS-40-B... | ESG-40-B... | ≈ 3 | 40 | M6x1 | 25 | 22 | 9,5 | 31,6 | 3,2 | 4 | – |
| ESS-50-B... | ESG-50-B... | ≈ 3 | 50 | M6x1 | 30 | 22 | 11 | 33,6 | 3,2 | 4 | – |
| ESS-80-B... | ESG-80-B... | Ø 6 | 80 | M10x1,5 | 68 | – | 10 | 39 | 9,4 | 2 | 14 |

| Bestellangaben | | | | |
|--------------------------|-----------|-------------------------|-----------|-----------|
| Sauger-Ø [mm] | ESS | | ESV | |
| | Teile-Nr. | Typ | Teile-Nr. | Typ |
| Nitrilkautschuk N | | | | |
| 10 | 189 374 | ESS-10-BN ¹⁾ | – | – |
| 20 | 189 378 | ESS-20-BN ¹⁾ | 191 054 | ESV-20-BN |
| 30 | 189 382 | ESS-30-BN ¹⁾ | 191 057 | ESV-30-BN |
| 40 | 189 386 | ESS-40-BN ¹⁾ | 191 060 | ESV-40-BN |
| 50 | 189 390 | ESS-50-BN ¹⁾ | 191 063 | ESV-50-BN |
| 80 | 189 394 | ESS-80-BN ¹⁾ | 191 066 | ESV-80-BN |
| Silikon S | | | | |
| 10 | 189 376 | ESS-10-BS | – | – |
| 20 | 189 380 | ESS-20-BS | 191 056 | ESV-20-BS |
| 30 | 189 384 | ESS-30-BS | 191 059 | ESV-30-BS |
| 40 | 189 388 | ESS-40-BS | 191 062 | ESV-40-BS |
| 50 | 189 392 | ESS-50-BS | 191 065 | ESV-50-BS |
| 80 | 189 396 | ESS-80-BS | 191 068 | ESV-80-BS |
| Polyurethan U | | | | |
| 10 | 189 375 | ESS-10-BU | – | – |
| 20 | 189 379 | ESS-20-BU | 191 055 | ESV-20-BU |
| 30 | 189 383 | ESS-30-BU | 191 058 | ESV-30-BU |
| 40 | 189 387 | ESS-40-BU | 191 061 | ESV-40-BU |
| 50 | 189 391 | ESS-50-BU | 191 064 | ESV-50-BU |
| 80 | 189 395 | ESS-80-BU | 191 067 | ESV-80-BU |


1) Kupfer-, PTFE- und silikonfrei

Sauger ESS/Saugnäpfe ESV, Faltenbalg, rund 1,5-fach

FESTO


Datenblatt

ESS-...-BT-...
ESV-...-BT

-  - Temperaturbereich
-10 ... +80 °C

Funktion



-  - Durchmesser
40 ... 80 mm



| Allgemeine Technische Daten | | | | | | | |
|-----------------------------|----------------------------|---|------------------------------------|---|-------------------------------|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungsgewinde | Abreißkraft bei -0,7 bar [N] | Min. Radius R ¹⁾ des Werkstücks [mm] | Volumen [cm ³] | Gewicht | |
| | | | | | | ESS [g] | ESV [g] |
| 40 | Größe 4 | M6x1 | 59 | 35 | 9,70 | 18 | 10,5 |
| | Größe 5 | M10x1,5 | | | 9,71 | 19 | |
| | - | G ¹ / ₄ -I Innengewinde | | | 10,00 | 19 | |
| | - | G ¹ / ₄ Außengewinde | | | 9,73 | 20,5 | |
| 50 | Größe 4 | M6x1 | 100 | 40 | 17,50 | 24 | 16,2 |
| | Größe 5 | M10x1,5 | | | 17,51 | 25 | |
| | - | G ¹ / ₄ -I Innengewinde | | | 17,80 | 25 | |
| | - | G ¹ / ₄ Außengewinde | | | 17,53 | 26 | |
| 80 | Größe 5 | M10x1,5 | 237 | 100 | 58,50 | 84,5 | 57,2 |
| | - | G ¹ / ₄ -I Innengewinde | | | 58,50 | 87,5 | |
| | - | G ¹ / ₄ Außengewinde | | | 58,50 | 85,5 | |

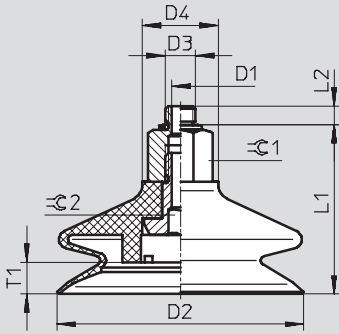
1) Minimaler Wölbungsradius des zu greifenden Werkstücks

Sauger ESS/Saugnapfe ESV, Faltenbalg, rund 1,5-fach

Datenblatt

FESTO

Abmessungen



| Typ | D1 Ø NW | D2 Ø | D3 | D4 Ø | L1 | L2 | T1 | ⊘ 1 | ⊘ 2 |
|-------------|---------------|---------|-----|---------|-------|------|------|--------|--------|
| ESS-40-BT | 2,5 | 40 | M6 | 20 | 36 | 3,45 | 9 | 15 | 4 |
| | | | M10 | | 36,3 | 6,2 | | 17 | |
| | | | G¼ | | 48,3 | - | | | |
| ESS-40-BT-I | | | G¼ | | | | | | |
| ESS-50-BT | 2,5 | 50 | M6 | 20 | 38,05 | 3,45 | 8 | 15 | 4 |
| | | | M10 | | 38,3 | 6,2 | | 17 | |
| | | | G¼ | | 50,3 | 5,8 | | | |
| ESS-50-BT-I | | | G¼ | | | | | | |
| ESS-80-BT | 2,5 | 80 | M10 | 20 | 53,3 | 6,2 | 10,5 | 17 | 8 |
| | | | G¼ | | 60,8 | 5,8 | | | |
| | | | G¼ | | | | | | |
| ESS-80-BT-I | | | G¼ | | | | | | |

Bestellangaben

| Sauger-Ø [mm] | Anschluss | ESS | | ESV | |
|------------------|-----------------|-----------|------------------------------|-----------|---------|
| | | Teile-Nr. | Typ | Teile-Nr. | Typ |
| 40 | M6 | 525 989 | ESS-40-BT-M6 ¹⁾ | - | |
| | M10 | 525 990 | ESS-40-BT-M10 ¹⁾ | - | |
| | G¼ Innengewinde | 525 991 | ESS-40-BT-G¼-I ¹⁾ | - | |
| | G¼ | 525 992 | ESS-40-BT-G¼ ¹⁾ | - | |
| | - | - | - | - | 526 006 |
| 50 | M6 | 525 993 | ESS-50-BT-M6 ¹⁾ | - | |
| | M10 | 525 994 | ESS-50-BT-M10 ¹⁾ | - | |
| | G¼ Innengewinde | 525 995 | ESS-50-BT-G¼-I ¹⁾ | - | |
| | G¼ | 525 996 | ESS-50-BT-G¼ ¹⁾ | - | |
| | - | - | - | - | 526 007 |
| 80 | M10 | 525 997 | ESS-80-BT-M10 ¹⁾ | - | |
| | G¼ Innengewinde | 525 998 | ESS-80-BT-G¼-I ¹⁾ | - | |
| | G¼ | 525 999 | ESS-80-BT-G¼ ¹⁾ | - | |
| | - | - | - | - | 526 008 |


1) Kupfer-, PTFE- und silikonfrei

Sauger ESS/Saugnäpfe ESV, Faltenbalg, rund 3,5-fach

FESTO


Datenblatt

ESS-...-C...
ESV-...-C...

-  - Temperaturbereich
-30 ... +180 °C

Funktion



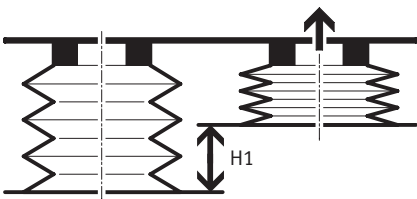
-  - Durchmesser
10 ... 50 mm



| Allgemeine Technische Daten | | | | | | | | | |
|-----------------------------|----------------------------|--------------------------|-------------------------------|------------------------------------|--|---|--------------------------------|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungs- gewinde | Wirksamer Sauger-Ø [mm] | Abreißkraft bei -0,7 bar [N] | Sauger- volumen ²⁾ [cm ³] | Min. Radius R ¹⁾ des Werkstücks [mm] | Höhenaus- gleich H1 [mm] | Gewicht | |
| | | | | | | | | ESS [g] | ESV [g] |
| 10 | Größe 3 | M4x0,7 | 6,9 | 3,9 | 0,290 | 25 | 3,3 | 1,6 | - |
| 20 | Größe 4 | M6x1 | 14,5 | 8,2 | 2,750 | 50 | 7 | 6,9 | 2,1 |
| 30 | | | 20,9 | 20,8 | 9,470 | 80 | 10,5 | 12,2 | 5,8 |
| 40 | | | 28,2 | 42,4 | 19,720 | 100 | 12,8 | 21,9 | 13 |
| 50 | | | 32,8 | 63,4 | 38,920 | 180 | 17,5 | 32,1 | 21,3 |

- 1) Minimaler Wölbungsradius des zu greifenden Werkstücks
2) Zu evakuierendes Saugervolumen

Höhenausgleich H1



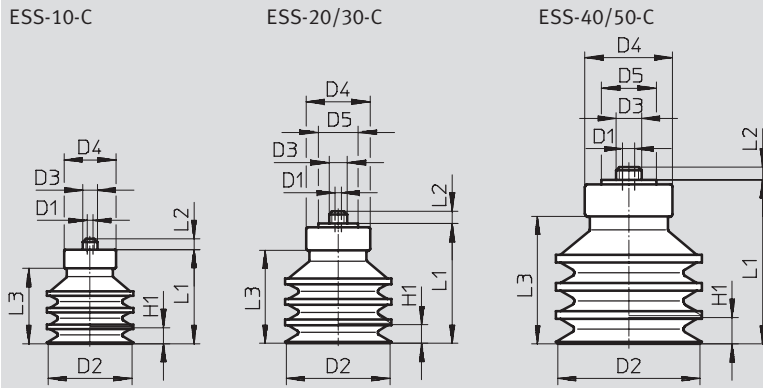
| Querkraft F [N] bei p _u = -0,7 bar; Ra = 7 µm | | |
|--|------------|------------|
| Sauger-Ø [mm] | ESS-...-CN | ESS-...-CS |
| 10 | 1,5 | 1 |
| 20 | 6,5 | 7 |
| 30 | 11,5 | 11 |
| 40 | 47,5 | 13 |
| 50 | 49 | 45,5 |

Sauger ESS/Saugnäpfe ESV, Faltenbalg, rund 3,5-fach

Datenblatt

FESTO

Abmessungen



| Typ Sauger | für Sauggreifer | D1 ↺ NW | D2 ∅ | D3 | D4 ∅ | D5 ∅ | H1 | L1 | L2 | L3 |
|-------------|-----------------|---------------|---------|--------|---------|---------|------|------|-----|------|
| ESS-10-C... | ESG-10-C... | 2 | 10 | M4x0,7 | 10 | - | 3,3 | 12,7 | 3 | 8,7 |
| ESS-20-C... | ESG-20-C... | 3 | 20 | M6x1 | 15 | 18 | 7 | 23 | 2,4 | 16,4 |
| ESS-30-C... | ESG-30-C... | 3 | 30 | M6x1 | 18 | 18 | 10,5 | 34,3 | 3,4 | 26,2 |
| ESS-40-C... | ESG-40-C... | 3 | 40 | M6x1 | 25 | 22 | 12,8 | 39,6 | 3,2 | 31 |
| ESS-50-C... | ESG-50-C... | 3 | 50 | M6x1 | 30 | 22 | 17,5 | 48 | 3,2 | 39,4 |

Bestellangaben

| Sauger-∅ [mm] | ESS | | ESV | |
|--------------------------|-----------|-------------------------|-----------|-----------|
| | Teile-Nr. | Typ | Teile-Nr. | Typ |
| Nitrilkautschuk N | | | | |
| 10 | 189 398 | ESS-10-CN ¹⁾ | - | - |
| 20 | 189 400 | ESS-20-CN ¹⁾ | 191 071 | ESV-20-CN |
| 30 | 189 402 | ESS-30-CN ¹⁾ | 191 073 | ESV-30-CN |
| 40 | 189 404 | ESS-40-CN ¹⁾ | 191 075 | ESV-40-CN |
| 50 | 189 406 | ESS-50-CN ¹⁾ | 191 077 | ESV-50-CN |
| Silikon S | | | | |
| 10 | 189 399 | ESS-10-CS | - | - |
| 20 | 189 401 | ESS-20-CS | 191 072 | ESV-20-CS |
| 30 | 189 403 | ESS-30-CS | 191 074 | ESV-30-CS |
| 40 | 189 405 | ESS-40-CS | 191 076 | ESV-40-CS |
| 50 | 189 407 | ESS-50-CS | 191 078 | ESV-50-CS |


1) Kupfer-, PTFE- und silikonfrei

Sauger ESS, oval

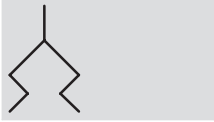
Datenblatt

FESTO

ESS-...-O...

-  - Temperaturbereich
-10 ... +70 °C

Funktion



| Allgemeine Technische Daten | | | | | | |
|-----------------------------|----------------------------|--------------------------|---------------------------------------|------------------------------------|---|----------------|
| Sauger-Größe [mm] | Saugerhalter passend zu | Befestigungs- gewinde | Wirksame Fläche [cm ²] | Abreißkraft bei -0,7 bar [N] | Saugervolumen ¹⁾ [cm ³] | Gewicht [g] |
| 4x10 | Größe 4 | M6x1 | 0,29 | 2 | 0,064 | 2 |
| 4x20 | | | 0,57 | 3,4 | 0,112 | 2,5 |
| 6x10 | | | 0,35 | 2,9 | 0,106 | 2 |
| 6x20 | | | 0,74 | 5,9 | 0,196 | 2,5 |
| 8x20 | | | 0,89 | 8 | 0,256 | 2,5 |
| 8x30 | | | 1,36 | 10,9 | 0,376 | 3 |
| 10x30 | | | 2,23 | 15,2 | 0,350 | 2,9 |
| 15x45 | Größe 5 | M10x1,5 | 4,84 | 32 | 1,570 | 23,8 |
| 20x60 | | | 9,12 | 62,8 | 3,690 | 30,8 |
| 25x75 | | | 14,67 | 92,5 | 6,700 | 46,8 |
| 30x90 | | | 21,83 | 134,4 | 10,170 | 55,3 |

1) Zu evakuierendes Saugervolumen

| Querkraft F [N] bei $p_u = -0,7$ bar und $R_a = 7 \mu\text{m}$ | | |
|--|------------|----------|
| Sauger-Größe [mm] | Horizontal | Vertikal |
| 4x10 | 3,5 | 5 |
| 4x20 | 4,5 | 11 |
| 6x10 | 8,5 | 12 |
| 6x20 | 9 | 12,5 |
| 8x20 | 11 | 13 |
| 8x30 | 17 | 13,5 |
| 10x30 | 23 | 16 |
| 15x45 | 43 | 35 |
| 20x60 | 116 | 63 |
| 25x75 | 125,5 | 115 |
| 30x90 | 201 | 134,5 |

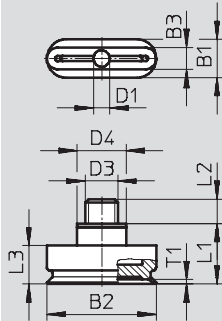
Sauger ESS, oval

Datenblatt

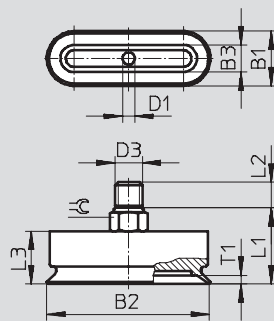
FESTO

Abmessungen

ESS-4x10 ... 10x30-O



ESS-15x45 ... 30x90-O



| Typ | für Sauggreifer | B1 | B2 | B3 | D1 Ø NW | D3 | D4 Ø | L1 | L2 | L3 | T1 | ⊖ |
|----------------|-----------------|----|----|----|---------------|---------|---------|------|-----|------|-----|----|
| ESS-4x10-O... | ESG-4x10-O... | 7 | 10 | 4 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 0,8 | - |
| ESS-4x20-O... | ESG-4x20-O... | 7 | 20 | 4 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 0,8 | - |
| ESS-6x10-O... | ESG-6x10-O... | 7 | 10 | 6 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 1 | - |
| ESS-6x20-O... | ESG-6x20-O... | 7 | 20 | 6 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 1 | - |
| ESS-8x20-O... | ESG-8x20-O... | 7 | 20 | 8 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 1 | - |
| ESS-8x30-O... | ESG-8x30-O... | 7 | 30 | 8 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 1 | - |
| ESS-10x30-O... | ESG-10x30-O... | 10 | 30 | 7 | 2,5 | M6x1 | 9 | 11,1 | 4,4 | 7 | 1,1 | - |
| ESS-15x45-O... | ESG-15x45-O... | 15 | 45 | 15 | 6 | M10x1,5 | - | 25,5 | 8,5 | 18,5 | 2,5 | 12 |
| ESS-20x60-O... | ESG-20x60-O... | 20 | 60 | 20 | 6 | M10x1,5 | - | 26,3 | 8,5 | 19,3 | 3,2 | 12 |
| ESS-25x75-O... | ESG-25x75-O... | 25 | 75 | 25 | 6 | M10x1,5 | - | 28 | 8,5 | 21 | 3,7 | 12 |
| ESS-30x90-O... | ESG-30x90-O... | 30 | 90 | 30 | 6 | M10x1,5 | - | 28,5 | 8,5 | 21,5 | 3,7 | 12 |

Bestellangaben

| Sauger-Größe [mm] | ESS | |
|----------------------|-----------|----------------------------|
| | Teile-Nr. | Typ |
| Nitrilkautschuk N | | |
| 4x10 | 189 408 | ESS-4X10-ON ¹⁾ |
| 4x20 | 189 409 | ESS-4X20-ON ¹⁾ |
| 6x10 | 189 410 | ESS-6X10-ON ¹⁾ |
| 6x20 | 189 411 | ESS-6X20-ON ¹⁾ |
| 8x20 | 189 412 | ESS-8X20-ON ¹⁾ |
| 8x30 | 189 413 | ESS-8X30-ON ¹⁾ |
| 10x30 | 189 414 | ESS-10X30-ON ¹⁾ |
| 15x45 | 189 415 | ESS-15X45-ON ¹⁾ |
| 20x60 | 189 416 | ESS-20X60-ON ¹⁾ |
| 25x75 | 189 417 | ESS-25X75-ON ¹⁾ |
| 30x90 | 189 418 | ESS-30X90-ON ¹⁾ |


1) Kupfer-, PTFE- und silikonfrei

Sauger ESS/Saugnäpfe ESV, Glockenform

FESTO


Datenblatt

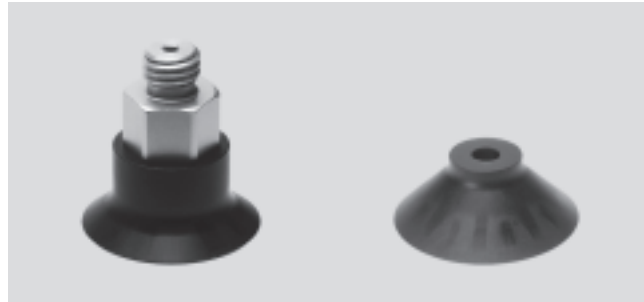
ESS-...-GT-...
ESV-...-GT

-  - Temperaturbereich
-10 ... +80 °C

Funktion



-  - Durchmesser
30 ... 100 mm



| Allgemeine Technische Daten | | | | | | | |
|-----------------------------|----------------------------|---------------------------------|------------------------------------|---|-------------------------------|------------|------------|
| Sauger-Ø [mm] | Saugerhalter passend zu | Befestigungsgewinde | Abreißkraft bei -0,7 bar [N] | Min. Radius R ¹⁾ des Werkstücks [mm] | Volumen [cm ³] | Gewicht | |
| | | | | | | ESS [g] | ESV [g] |
| 30 | Größe 4 | M6x1 | 36 | 26 | 2,3 | 12 | 4,2 |
| | Größe 5 | M10x1,5 | | | | 13 | |
| | - | G $\frac{1}{8}$ -I Innengewinde | | | | 14 | |
| | - | G $\frac{1}{8}$ Außengewinde | | | | 13 | |
| 40 | Größe 4 | M6x1 | 64 | 35 | 5,1 | 14 | 5,7 |
| | Größe 5 | M10x1,5 | | | | 15 | |
| | - | G $\frac{1}{4}$ -I Innengewinde | | | 5,4 | 14,5 | |
| | - | G $\frac{1}{4}$ Außengewinde | | | 5,1 | 16 | |
| 50 | Größe 4 | M6x1 | 97 | 40 | 11,2 | 17 | 9,2 |
| | Größe 5 | M10x1,5 | | | | 18 | |
| | - | G $\frac{1}{4}$ -I Innengewinde | | | 11,5 | 18 | |
| | - | G $\frac{1}{4}$ Außengewinde | | | 11,2 | 21 | |
| 60 | Größe 5 | M10x1,5 | 134 | 75 | 12,3 | 20 | 10,7 |
| | - | G $\frac{1}{4}$ -I Innengewinde | | | | 19,5 | |
| | - | G $\frac{1}{4}$ Außengewinde | | | | 21 | |
| 80 | Größe 5 | M10x1,5 | 245 | 100 | 28,0 | 28 | 30,9 |
| | - | G $\frac{1}{4}$ -I Innengewinde | | | | 61 | |
| | - | G $\frac{1}{4}$ Außengewinde | | | | 60 | |
| 100 | Größe 5 | M10x1,5 | 375 | 135 | 53,2 | 86,5 | 58,9 |
| | - | G $\frac{1}{4}$ -I Innengewinde | | | | 89,5 | |
| | - | G $\frac{1}{4}$ Außengewinde | | | | 87,5 | |

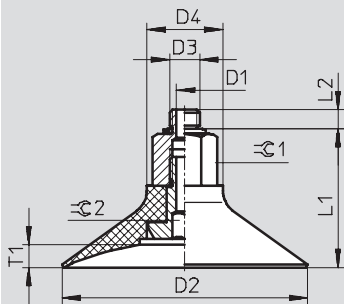
1) Minimaler Wölbungsradius des zu greifenden Werkstücks

Sauger ESS/Saugnapfe ESV, Glockenform

Datenblatt

FESTO

Abmessungen



| Typ | D1 Ø NW | D2 Ø | D3 | D4 Ø | L1 | L2 | T1 | R1 | R2 |
|--------------|---------------|---------|-----------------|---------|-------|------|-----|----|----|
| ESS-30-GT | 2,5 | 30 | M6 | 20 | 27,55 | 3,45 | 3,5 | 15 | 4 |
| ESS-30-GT-I | | | M10 | | 27,8 | 6,2 | | 17 | |
| ESS-40-GT | | | G $\frac{1}{8}$ | | 36,8 | 4,7 | | 15 | |
| ESS-40-GT-I | 2,5 | 40 | G $\frac{1}{8}$ | 20 | 29,55 | 3,45 | 5,5 | 15 | 4 |
| ESS-50-GT | | | M6 | | 29,8 | 6,2 | | 17 | |
| ESS-50-GT-I | | | M10 | | 30,2 | 5,8 | | 15 | |
| ESS-60-GT | 5,5 | 60 | G $\frac{1}{4}$ | 20 | 42,2 | – | 8 | 15 | 4 |
| ESS-60-GT-I | | | G $\frac{1}{4}$ | | 32,05 | 3,45 | | 17 | |
| ESS-80-GT | | | M6 | | 32,3 | 6,2 | | 15 | |
| ESS-80-GT-I | 5,5 | 80 | M10 | 25 | 32,7 | 5,8 | 7,5 | 17 | 8 |
| ESS-100-GT | | | G $\frac{1}{4}$ | | 44,7 | – | | 22 | |
| ESS-100-GT-I | | | G $\frac{1}{4}$ | | 34,3 | 6,2 | | 22 | |
| ESS-100-GT | 5,5 | 100 | M10 | 25 | 34,7 | 5,8 | 9 | 17 | 4 |
| ESS-100-GT-I | | | G $\frac{1}{4}$ | | 45,7 | – | | 22 | |
| ESS-100-GT | | | G $\frac{1}{4}$ | | 43,3 | 6,2 | | 22 | |
| ESS-100-GT-I | 5,5 | 100 | M10 | 25 | 47,8 | 6,2 | 9 | 22 | 8 |
| ESS-100-GT | | | G $\frac{1}{4}$ | | 48,2 | 5,8 | | 22 | |
| ESS-100-GT-I | | | G $\frac{1}{4}$ | | 59,2 | – | | 22 | |

Sauger ESS/Saugnäpfe ESV, Glockenform

FESTO

Datenblatt

| Bestellangaben | | | | | |
|------------------|------------------------------|-----------|---|-----------|--------------------------|
| Sauger-Ø [mm] | Anschluss | ESS | | ESV | |
| | | Teile-Nr. | Typ | Teile-Nr. | Typ |
| 30 | M6 | 525 968 | ESS-30-GT-M6 ¹⁾ | - | |
| | M10 | 525 969 | ESS-30-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{8}$ Innengewinde | 525 970 | ESS-30-GT-G $\frac{1}{8}$ -I ¹⁾ | - | |
| | G $\frac{1}{8}$ | 525 971 | ESS-30-GT-G $\frac{1}{8}$ ¹⁾ | - | |
| | - | - | - | 526 000 | ESV-30-GT ¹⁾ |
| 40 | M6 | 525 972 | ESS-40-GT-M6 ¹⁾ | - | |
| | M10 | 525 973 | ESS-40-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{4}$ Innengewinde | 525 974 | ESS-40-GT-G $\frac{1}{4}$ -I ¹⁾ | - | |
| | G $\frac{1}{4}$ | 525 975 | ESS-40-GT-G $\frac{1}{4}$ ¹⁾ | - | |
| | - | - | - | 526 001 | ESV-40-GT ¹⁾ |
| 50 | M6 | 525 976 | ESS-50-GT-M6 ¹⁾ | - | |
| | M10 | 525 977 | ESS-50-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{4}$ Innengewinde | 525 978 | ESS-50-GT-G $\frac{1}{4}$ -I ¹⁾ | - | |
| | G $\frac{1}{4}$ | 525 979 | ESS-50-GT-G $\frac{1}{4}$ ¹⁾ | - | |
| | - | - | - | 526 002 | ESV-50-GT ¹⁾ |
| 60 | M10 | 525 980 | ESS-60-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{4}$ Innengewinde | 525 981 | ESS-60-GT-G $\frac{1}{4}$ -I ¹⁾ | - | |
| | G $\frac{1}{4}$ | 525 982 | ESS-60-GT-G $\frac{1}{4}$ ¹⁾ | - | |
| | - | - | - | 526 003 | ESV-60-GT ¹⁾ |
| 80 | M10 | 525 983 | ESS-80-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{4}$ Innengewinde | 525 984 | ESS-80-GT-G $\frac{1}{4}$ -I ¹⁾ | - | |
| | G $\frac{1}{4}$ | 525 985 | ESS-80-GT-G $\frac{1}{4}$ ¹⁾ | - | |
| | - | - | - | 526 004 | ESV-80-GT ¹⁾ |
| 100 | M10 | 525 986 | ESS-100-GT-M10 ¹⁾ | - | |
| | G $\frac{1}{4}$ Innengewinde | 525 987 | ESS-100-GT-G $\frac{1}{4}$ -I ¹⁾ | - | |
| | G $\frac{1}{4}$ | 525 988 | ESS-100-GT-G $\frac{1}{4}$ ¹⁾ | - | |
| | - | - | - | 526 005 | ESV-100-GT ¹⁾ |

1) Kupfer-, PTFE- und silikonfrei

Sauger ESS und Saugnäpfe ESV

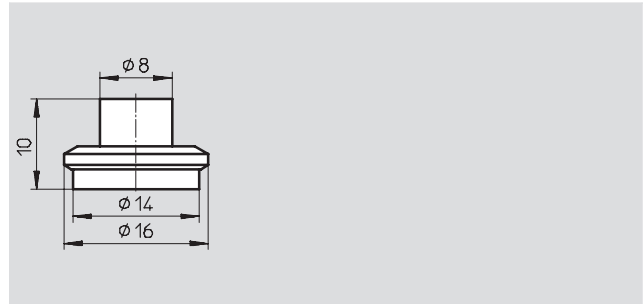
Zubehör

FESTO

Saugereinsatz OASI

für Sauger / Saugnäpfe

Sauger-Ø 20 mm,
Faltenbalg 3,5-fach



| Allgemeine Technische Daten | |
|--------------------------------|---------------------|
| Betriebsdruck [bar] | -0,95 ... 0 |
| Betriebsmedium | atmosphärische Luft |
| Umgebungstemperatur [°C] | 5 ... 50 |
| Abwurfimpulstauglichkeit [bar] | ≤0,3 |
| Befestigungsart | einsteckbar |
| Einbaulage | Zapfen innen |
| Werkstoff | |
| Saugereinsatz | Polyethylen |
| Werkstoff-Hinweis | RoHS konform |

| Bestellangaben und Gewicht | | |
|----------------------------|-------------|-------------------|
| | Gewicht [g] | Teile-Nr. Typ |
| Saugereinsatz | 0,6 | 1072015 OASI-20-E |