

# Parallel gripper HPPF-12-48-A-S

Part number: 8141589

FESTO



 General operating condition

## Data sheet

| Feature                                            | Value                                                                                                                                                                                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size                                               | 12                                                                                                                                                                                                                             |
| Total stroke                                       | 48 mm                                                                                                                                                                                                                          |
| Stroke per gripper jaws                            | 24 mm                                                                                                                                                                                                                          |
| Max. angular gripper jaw backlash ax, ay           | 0 deg                                                                                                                                                                                                                          |
| Max. gripper jaw backlash Sz                       | 0 mm                                                                                                                                                                                                                           |
| Repetition accuracy, gripper                       | ≤0.02 mm                                                                                                                                                                                                                       |
| Number of gripper jaws                             | 2                                                                                                                                                                                                                              |
| Drive system                                       | Pneumatic                                                                                                                                                                                                                      |
| Mounting position                                  | optional                                                                                                                                                                                                                       |
| Mode of operation                                  | Double-acting                                                                                                                                                                                                                  |
| Cushioning                                         | Elastic cushioning rings/plates at both ends                                                                                                                                                                                   |
| Gripper function                                   | Parallel                                                                                                                                                                                                                       |
| Gripper force back-up                              | None                                                                                                                                                                                                                           |
| Design                                             | Flat mounting method for gripper fingers<br>Rack and pinion<br>Force pilot operated motion sequence                                                                                                                            |
| Guide                                              | Ball guide                                                                                                                                                                                                                     |
| Position detection                                 | Via proximity switch                                                                                                                                                                                                           |
| Symbol                                             | 00991894                                                                                                                                                                                                                       |
| Variants                                           | Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. |
| Operating pressure                                 | 0.1 MPa ... 0.7 MPa                                                                                                                                                                                                            |
| Operating pressure                                 | 1 bar ... 7 bar                                                                                                                                                                                                                |
| Operating pressure                                 | 14.5 psi ... 101.5 psi                                                                                                                                                                                                         |
| Max. operating frequency of gripper                | 2 Hz                                                                                                                                                                                                                           |
| Min. opening time at 0.6 MPa (6 bar, 87 psi)       | 121 ms                                                                                                                                                                                                                         |
| Min. closing time at 0.6 MPa (6 bar, 87 psi)       | 105 ms                                                                                                                                                                                                                         |
| Operating medium                                   | Compressed air to ISO 8573-1:2010 [7:4:4]                                                                                                                                                                                      |
| Note on operating and pilot medium                 | Lubricated operation possible (in which case lubricated operation will always be required)                                                                                                                                     |
| Corrosion resistance class CRC                     | 0 - No corrosion stress                                                                                                                                                                                                        |
| LABS (PWIS) conformity                             | VDMA24364 zone III                                                                                                                                                                                                             |
| Suitability for the production of Li-ion batteries | Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils          |

| Feature                                                         | Value                                                          |
|-----------------------------------------------------------------|----------------------------------------------------------------|
| Cleanroom class                                                 | Class 7 according to ISO 14644-1                               |
| Ambient temperature                                             | -10 °C ... 60 °C                                               |
| Total gripping force, opening, 0.6MPa (6bar, 87 psi)            | 135.72 N                                                       |
| Total gripping force, closing, 0.6MPa (6bar, 87 psi)            | 135.72 N                                                       |
| Gripper force per gripper jaw, opening, 0.6 MPa (6 bar, 87 psi) | 67.86 N                                                        |
| Gripper force per gripper jaw, closing, 0.6 MPa (6 bar, 87 psi) | 67.86 N                                                        |
| Max. force on gripper jaw Fz static                             | 98 N                                                           |
| Max. moment Mx                                                  | 1.4 Nm                                                         |
| Max. moment My                                                  | 0.7 Nm                                                         |
| Max. moment Mz                                                  | 0.7 Nm                                                         |
| Product weight                                                  | 339 g                                                          |
| Type of mounting                                                | Direct mounting via through-hole<br>Direct mounting via thread |
| Pneumatic connection                                            | M5                                                             |
| Note on materials                                               | RoHS-compliant                                                 |
| Material cover cap                                              | Wrought aluminium alloy, anodised                              |
| Material cover                                                  | Anodised wrought aluminium alloy                               |
| Material end plate                                              | High-alloy stainless steel                                     |
| Material housing                                                | Anodised wrought aluminium alloy                               |
| Material gripper jaws                                           | High-alloy steel                                               |
| Material piston seal                                            | TPE-U(PU)                                                      |
| Material o-ring                                                 | NBR                                                            |
| Material screws                                                 | Coated steel                                                   |
| Gear rack material                                              | High-alloy stainless steel                                     |