

# Datasheet

## Suction cup FCF50P Polyurethane 55/60, M10x1.5 male

Item number: FCF50P.4R.M10M



- Special designed friction cups for oily surfaces, such as sheets in metal forming processes.
- Normal wear on friction cup will not affect the long term shear force performance.
- Best choice if > 0.1g/m<sup>2</sup> press oil is used on the sheet.
- Thanks to the strong grip on oily surfaces, the suction cups can withstand high shear forces, typically 2–4 times more than corresponding conventional suction cups.
- The "FCF" design is suitable for slightly domed and flat surfaces, e.g., such as those encountered when handling metal sheets in press lines.
- The suction cups have support cleats that prevent thin objects from being disfigured.
- DURAFLEx® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

### Technical data

| Description              | Unit            | Value                   |
|--------------------------|-----------------|-------------------------|
| Suction cup shape        | -               | Flat Concave            |
| Application              | -               | Oily sheet metal        |
| Suction cup design       | -               | Round                   |
| Characteristics          | -               | Oily sheet metal        |
| Material                 | -               | Polyurethane (PU)       |
| Weight, max.             | oz              | 2.36                    |
| Weight, min.             | oz              | 1.093                   |
| Suction cup model        | -               | FCF                     |
| Volume                   | in <sup>3</sup> | 0.61                    |
| Height                   | in              | 1.97                    |
| Outer diameter, min.     | in              | 1.97                    |
| Outer diameter, actuated | in              | 2.11                    |
| Fitting size             | -               | M10x1.5                 |
| Fitting option           | -               | None                    |
| Fitting style            | -               | Male                    |
| Fitting type             | -               | M-thread                |
| Suction cup model        | -               | FCF50P Dry metal sheet  |
| Movement, vertical max.  | in              | 0.16                    |
| Curve radius, min.       | in              | 1.97                    |
| Suction cup model        | -               | FCF50P Oily steel plate |
| Movement, vertical max.  | in              | 0.16                    |
| Curve radius, min.       | in              | 1.97                    |

## Performance - Lifting forces

|                         | Vertical (lb) | Parallel (lb) |
|-------------------------|---------------|---------------|
| FCF50P Dry metal sheet  | 17.54         | 17.31         |
| 17.72 -inHg             | 23.83         | 23.61         |
| FCF50P Oily steel plate |               |               |
| 17.72 -inHg             | 16.19         | 11.69         |
| 26.58 -inHg             | 22.71         | 15.74         |

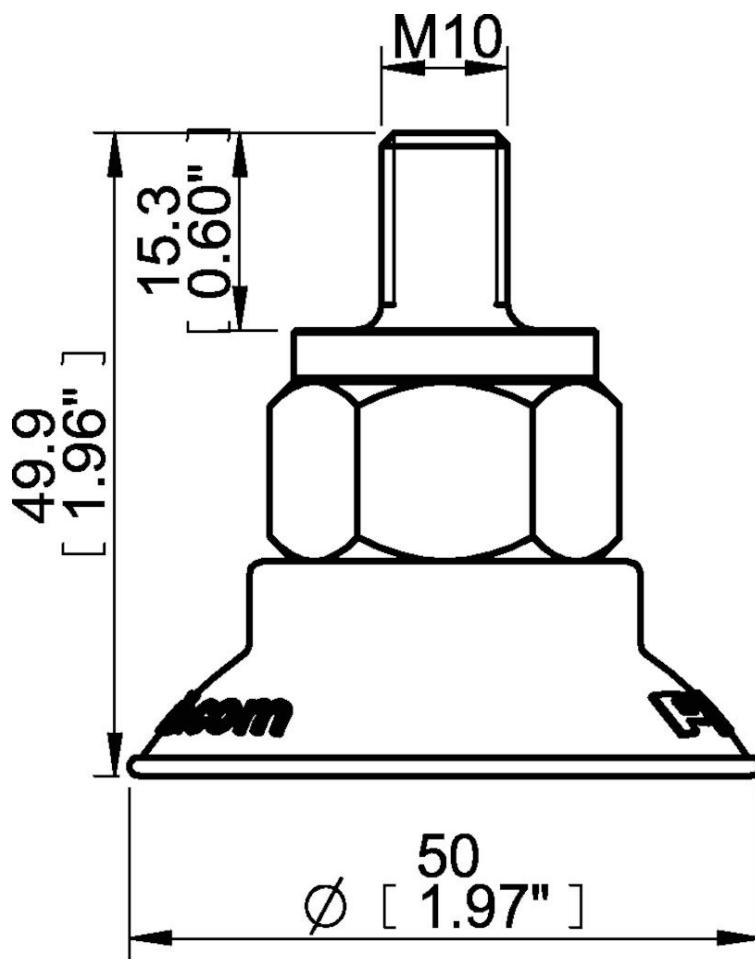
## Material

|                        |                     |                     |
|------------------------|---------------------|---------------------|
| Name                   | Polyurethane (PU55) | Polyurethane (PU60) |
| Color                  | Orange              | Green transparent   |
| Temperature, min.   °F | 50.0                | 50.0                |
| Temperature max.   °F  | 122.0               | 122.0               |
| Hardness   °Shore A    | 55                  | 60                  |

## Material resistance

|                    |           |           |
|--------------------|-----------|-----------|
| Alcohol            | n/a       | n/a       |
| Concentrated acids | Fair      | Fair      |
| Ethanol            | Fair      | Fair      |
| Hydrolysis         | Fair      | Fair      |
| Methanol           | Poor      | Poor      |
| Oil                | Excellent | Excellent |
| Oxidation          | Poor      | Poor      |
| Gasoline           | Fair      | Fair      |
| Wear resistance    | Excellent | Excellent |
| Weather and ozone  | Excellent | Excellent |

## Dimensional drawings



**Values specified in this data sheet are tested at (unless otherwise stated):**

- Room temperature (20°C [68°F]  $\pm$  3°C [5.5°F]).
- Standard atmosphere (101.3 [29.9 inHg]  $\pm$  1.0 kPa [0.3 inHg]).
- Relative humidity 20-70%.
- Compressed air quality, DIN ISO 8573-1 class 4.