# 导向杆气缸 DGRC

FESTO

# 主要特性

## 概述

官网 dgrc

驱动机构和导轨置于一个壳体内:
- 空间要求低
- 安装方便
- 多种安装方式可选

坚固、高精度:
- 抗扭转性能强大
- 刚性优异
- 免维护

滑动轴承导轨用于吸收高扭矩、横向力

## 订货数据 – 模块化产品系统

官网 dgrc

可配置产品
本产品及其所有产品选项可通过配置器订购。

## 图表

官网 dgrc

本文档中所示图表均可从官网获取。可用于显示精确值。

## 导轨

| | |
|---|---|
| [GF] | 滑动轴承导轨 |

大直径导向杆和四个滑动轴承轴瓦确保了高刚性。

## 缓冲

| | |
|---|---|
| [P] | 两端带弹性缓冲垫 |

气缸带有终端位置聚合物缓冲垫。
优势:
- 节省时间

## 位置感测

| | |
|---|---|
| [A] | 通过接近开关 |

通过接近开关可检测任意位置。

## 特殊材料属性

| | |
|---|---|
| [F1A] | F1A |

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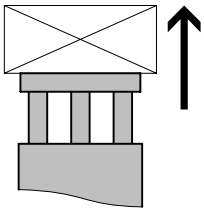
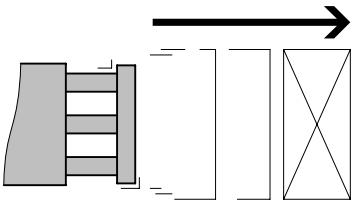
:

- Festo Ṛ

## 传送带应用场景





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- 

| 001 | | |
|---|---|---|
| **DGRC** | | |

| 002 | | |
|---|---|---|
| **GF** | | |

| 003 | [mm] | |
|---|---|---|
| **12** | 12 | |
| **16** | 16 | |
| **20** | 20 | |
| **25** | 25 | |
| **32** | 32 | |
| **40** | 40 | |
| **50** | 50 | |

| 004 | [mm] | |
|---|---|---|
| **10** | 10 | |
| **20** | 20 | |
| **25** | 25 | |
| **30** | 30 | |
| **40** | 40 | |
| **50** | 50 | |
| **80** | 80 | |
| **100** | 100 | |
| **...** | 5 ... 100 | |

| 005 | | |
|---|---|---|
| **P** | | |

| 006 | | |
|---|---|---|
| **A** | | |

# 技术参数

## 主要技术参数

| 缸径 Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 行程 | 5 ... 100 mm | | | | | | |
| 气接口 | M5 | | | G1/8 | | | G1/4 |
| 结构特点 | 导向杆气缸 | | | | | | |
| 导轨 | 滑动轴承导轨 | | | | | | |
| 抗扭转/导向 | 导向杆，带联接板 | | | | | | |
| 工作方式 | 双作用 | | | | | | |
| 缓冲 | 两端带弹性缓冲垫 | | | | | | |
| 位置感测 | 通过接近开关 | | | | | | |
| 安装位置 | 任意 | | | | | | |

## 工作和环境条件

| Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| | 0.2 ... 1 MPa | | | 0.15 ... 1 MPa | | | |
| | 2 ... 10 bar | | | 1.5 ... 10 bar | | | |
| | ISO 8573-1:2010 [7:4:4] | | | | | | |
| / | | | | | | | |
| | | | | | | | |
| 1) | –10 ... +60 °C | | | | | | |
| CRC 2) | 0 - | | | | | | |

1) 注意接近开关工作范围
2) 详见 www.festo.com/x/topic/crc

## 速度

| 缸径 Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 最大速度 | 0.8 m/s | | | | | | 0.6 m/s |

## 力

| 缸径 Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 0.6 MPa (6 bar, 87 psi) 时，力的理论值，推进 | 68 N | 121 N | 188 N | 295 N | 482 N | 754 N | 1,178 N |
| 0.6 MPa (6 bar, 87 psi) 时，力的理论值，返回 | 51 N | 90 N | 141 N | 247 N | 415 N | 686 N | 1,057 N |

## 冲击能量

| 缸径 Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 终端位置冲击能量 | 0.07 J | 0.15 J | 0.2 J | 0.3 J | 0.4 J | 0.7 J | 1 J |

许用冲击速度:

$$v = \sqrt{\frac{2 \cdot E}{m_1 + m_2}}$$

最大许用质量:

$$m_2 = \frac{2 \cdot E}{v^2} - m_1$$

v 许用冲击速度
E 最大冲击能量
m1 移动质量 (驱动)
m2 移动有效负载

**注意**

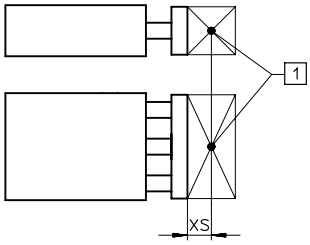
所示数值代表可达到的最大值。
必须遵守最大许用冲击能量。

# 技术参数

| 行程 | 缸径 ⌀ | | | | | | |
|---|---|---|---|---|---|---|---|
| | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
| **产品重量** | | | | | | | |
| 10 mm | 173.8 g | 199.7 g | – | – | – | – | – |
| 20 mm | 208.3 g | 238.4 g | 364.6 g | 476.8 g | 717.8 g | – | – |
| 25 mm | 226.6 g | 259 g | 390.6 g | 514.6 g | 768 g | 1,083.8 g | 1,621.7 g |
| 30 mm | 244.9 g | 279.5 g | 420.1 g | 552.4 g | 811.5 g | – | – |
| 40 mm | 281.3 g | 320.6 g | 478.8 g | 622 g | 912 g | – | – |
| 50 mm | 317.8 g | 361.6 g | 537.6 g | 697.6 g | 1,012.6 g | 1,406.5 g | 2,059 g |
| 80 mm | 439.1 g | 504.2 g | 753.6 g | 980.2 g | 1,363.9 g | 1,888.3 g | 2,680.7 g |
| 100 mm | 512.1 g | 586.4 g | 871.3 g | 1,131.4 g | 1,565 g | 2,156.3 g | 3,042 g |
| **基本重量，0 mm 行程** | | | | | | | |
| 10 mm | 88.6 g | 104.2 g | – | – | – | – | – |
| 20 mm | 108.8 g | 126.9 g | 180.8 g | 229.3 g | 322.1 g | – | – |
| 25 mm | 119.9 g | 139.4 g | 195.1 g | 252.2 g | 352.5 g | 488.6 g | 782.4 g |
| 30 mm | 131 g | 151.9 g | 212.8 g | 275.1 g | 376.1 g | – | – |
| 40 mm | 153.1 g | 176.9 g | 248.1 g | 315 g | 437 g | – | – |
| 50 mm | 175.3 g | 201.9 g | 283.4 g | 360.8 g | 497.9 g | 668.5 g | 1,060 g |
| 80 mm | 239.1 g | 272.1 g | 382 g | 490.1 g | 674.4 g | 892 g | 1,403.1 g |
| 100 mm | 283.4 g | 322.1 g | 452.7 g | 581.8 g | 796.2 g | 1,045.8 g | 1,636.6 g |
| **移动质量** | | | | | | | |
| 10 mm | 85.2 g | 95.5 g | – | – | – | – | – |
| 20 mm | 99.5 g | 111.5 g | 183.8 g | 247.5 g | 395.7 g | – | – |
| 25 mm | 106.7 g | 119.6 g | 195.5 g | 262.4 g | 415.5 g | 595.2 g | 839.3 g |
| 30 mm | 113.9 g | 127.6 g | 207.3 g | 277.3 g | 435.4 g | – | – |
| 40 mm | 128.2 g | 143.7 g | 230.7 g | 307 g | 475 g | – | – |
| 50 mm | 142.5 g | 159.7 g | 254.2 g | 336.8 g | 514.7 g | 738 g | 999 g |
| 80 mm | 200 g | 232.1 g | 371.6 g | 490.1 g | 689.5 g | 996.3 g | 1,277.6 g |
| 100 mm | 228.7 g | 264.3 g | 418.6 g | 549.6 g | 768.8 g | 1,110.5 g | 1,405.4 g |
| **移动质量重心与行程的关系** | | | | | | | |
| 10 mm | 18.5 mm | 17.8 mm | – | – | – | – | – |
| 20 mm | 23.1 mm | 22.5 mm | 24.3 mm | 23.4 mm | 28 mm | – | – |
| 25 mm | 25.5 mm | 24.8 mm | 26.6 mm | 25.7 mm | 30.2 mm | 32.5 mm | 34.1 mm |
| 30 mm | 27.9 mm | 27.2 mm | 28.9 mm | 28 mm | 32.5 mm | – | – |
| 40 mm | 32.7 mm | 32 mm | 33.6 mm | 32.6 mm | 37 mm | – | – |
| 50 mm | 37.5 mm | 36.8 mm | 38.4 mm | 37.3 mm | 41.7 mm | 44.3 mm | 45.3 mm |
| 80 mm | 57.4 mm | 59.4 mm | 63.7 mm | 62.9 mm | 63.3 mm | 66.6 mm | 66.3 mm |
| 100 mm | 67.3 mm | 69.2 mm | 73.4 mm | 72.6 mm | 72.9 mm | 76.3 mm | 75.8 mm |

**材料**

| 缸径 Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 壳体 | 阳极氧化锻造铝合金 | | | | | | |
| 盖子 | 锻造铝合金 | | | | | | |
| 活塞杆 | 高合金钢 | | | | | | |
| 导向杆 | 高合金钢 | | | | | | |
| 端板 | 阳极氧化锻造铝合金 | | | | | | |
| 密封件 | NBR | | | | | | |
| 动态密封件 | TPE-U(PU) | | | | | | |
| 材料注意事项 | RoHs 合规 | | | | | | |
| 油漆湿润缺陷物质标准 | VDMA24364-B1/B2-L | | | | | | |
| 适用于锂电池生产设施 | 产品符合 Festo 内部用于电池生产产品的定义：不使用铜锌镍含量超过1%的金属材料。例外情况：钢铁中的镍、镀镍表面、 印刷电路板、电缆、电气插头和线圈 | | | | | | |




[1]

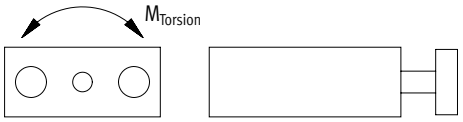
**重心距离 xs**

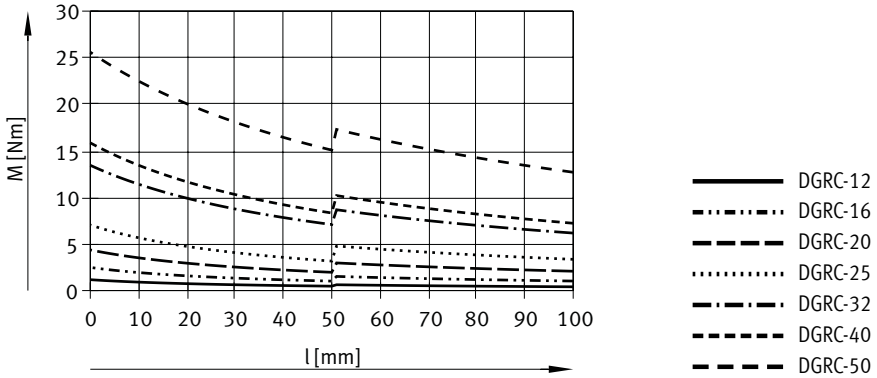
| Ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| | 50 mm | | | | | | |

**最大有效负载 F 与用于已确定重心距离 xs 的行程的关系**

| | Ø | | | | | | |
|---|---|---|---|---|---|---|---|
| | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
| 10 mm | 22.8 N | 42.9 N | – | – | – | – | – |
| 20 mm | 20.5 N | 38.7 N | 60.3 N | 82 N | 158.3 N | – | – |
| 25 mm | 19.6 N | 36.9 N | 57.6 N | 78.4 N | 152.1 N | 162 N | 231.8 N |
| 30 mm | 18.7 N | 35.3 N | 55.2 N | 75.1 N | 146.4 N | – | – |
| 40 mm | 17.1 N | 32.3 N | 50.8 N | 69.2 N | 136.1 N | – | – |
| 50 mm | 15.7 N | 29.8 N | 47.1 N | 64.1 N | 127.1 N | 135.1 N | 197.2 N |
| 80 mm | 17.9 N | 40.2 N | 65.8 N | 89.5 N | 139.4 N | 147.9 N | 202.8 N |
| 100 mm | 15.9 N | 36 N | 59.4 N | 80.9 N | 126.3 N | 133.8 N | 184.9 N |

## 许用扭矩负载 M 与行程的关系



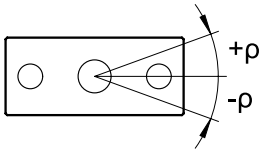

| [mm] | ø 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 10 mm | 0.91 Nm | 1.93 Nm | – | – | – | – | – |
| 20 mm | 0.74 Nm | 1.58 Nm | 2.94 Nm | 4.74 Nm | 9.92 Nm | – | – |
| 25 mm | 0.68 Nm | 1.45 Nm | 2.72 Nm | 4.38 Nm | 9.3 Nm | 10.95 Nm | 19.02 Nm |
| 30 mm | 0.63 Nm | 1.34 Nm | 2.52 Nm | 4.07 Nm | 8.76 Nm | – | – |
| 40 mm | 0.54 Nm | 1.16 Nm | 2.21 Nm | 3.56 Nm | 7.84 Nm | – | – |
| 50 mm | 0.47 Nm | 1.02 Nm | 1.96 Nm | 3.17 Nm | 7.09 Nm | 8.33 Nm | 15.08 Nm |
| 80 mm | 0.47 Nm | 1.18 Nm | 2.37 Nm | 3.83 Nm | 7.01 Nm | 8.22 Nm | 14.27 Nm |
| 100 mm | 0.4 Nm | 1.02 Nm | 2.08 Nm | 3.35 Nm | 6.17 Nm | 7.23 Nm | 12.7 Nm |

**注意**

➔ www.festo.com/engineeringtools

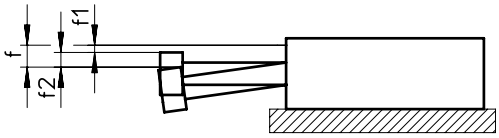
# 技术参数

ρ




| 缸径 ø | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm |
|---|---|---|---|---|---|---|---|
| 平均回转间隙 [1] | ±0.065° | | ±0.055° | ±0.045° | | ±0.035° | |

1) 返回状态，空载




f = f1 + f2
f = 端板总挠度
f1 = 挠度，由轴承平均间隙GF（生产公差 ±0.01 mm）造成
f2 = 挠度，由横向力造成

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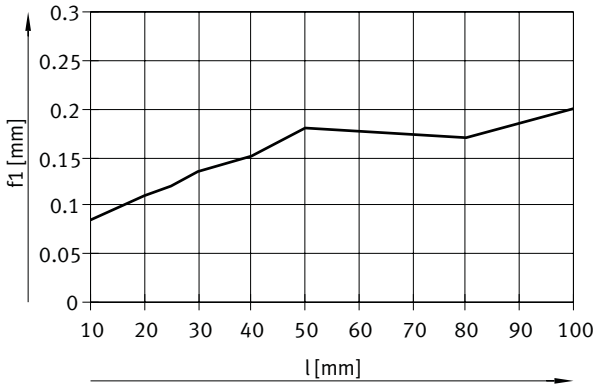
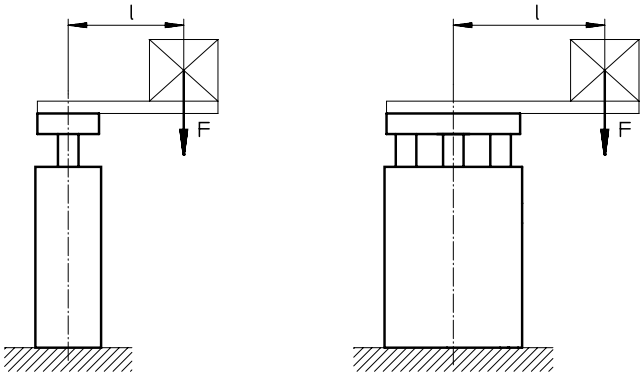



DGRC-12 ... 50

# 技术参数




0.6 MPa (6 bar, 87 psi) 时许用偏心负载:

| 缸径 ø | 12 mm | 16 mm | 20 mm | 25 mm |
|---|---|---|---|---|
| 负载 | 27 N | 48 N | 85 N | 133 N |

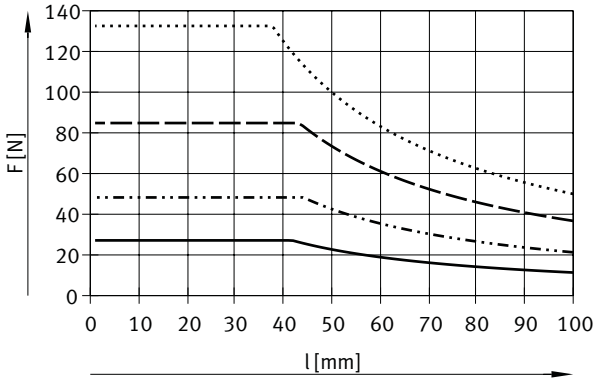
不同压力下的偏心负载:

| 缸径 ø | 12 mm | 16 mm | 20 mm | 25 mm |
|---|---|---|---|---|
| 负载 | ≤ 40%[1] | | ≤ 45%[1] | |

1) 相应压力下的纵向力理论值

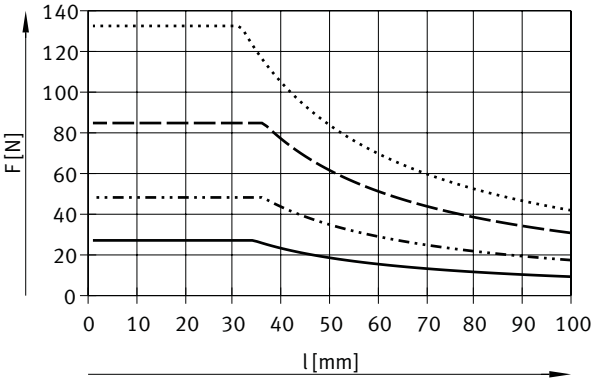
F = 纵向力
l = 杠杆臂

DGRC-12 ... 25, 行程 5 ... 10 mm



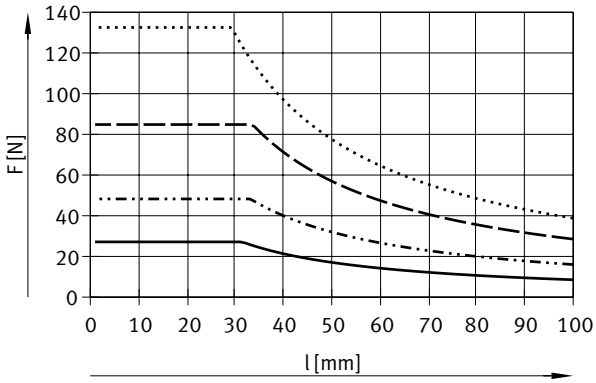

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 15 ... 20 mm



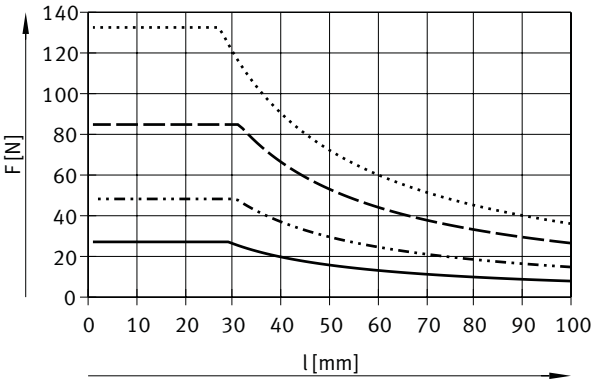

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 25 mm



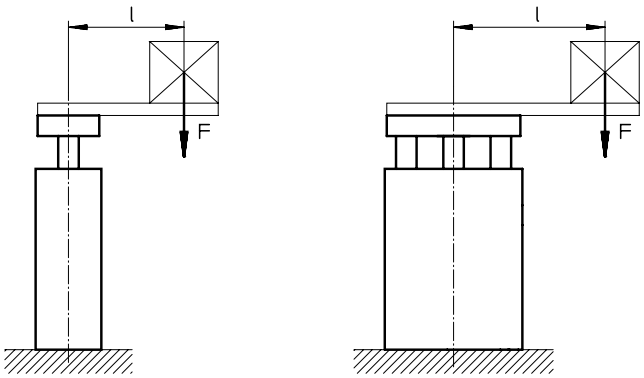

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 30 mm




DGRC-12
DGRC-16
DGRC-20
DGRC-25

# 技术参数




0.6 MPa (6 bar, 87 psi) 时，许用偏心负载:

| 缸径 ø | 12 mm | 16 mm | 20 mm | 25 mm |
|---|---|---|---|---|
| 负载 | 27 N | 48 N | 85 N | 133 N |

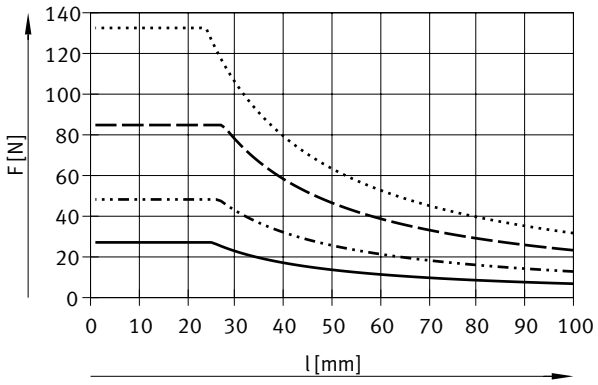
不同压力下许用偏心负载:

| 缸径 ø | 12 mm | 16 mm | 20 mm | 25 mm |
|---|---|---|---|---|
| 负载 | ≤ 40%[1] | | ≤ 45%[1] | |

1) 相应压力下的纵向力理论值

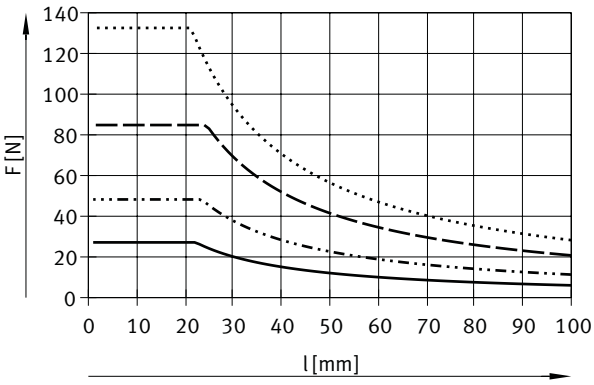
F = 纵向力
l = 杠杆臂

DGRC-12 ... 25, 行程 40 mm



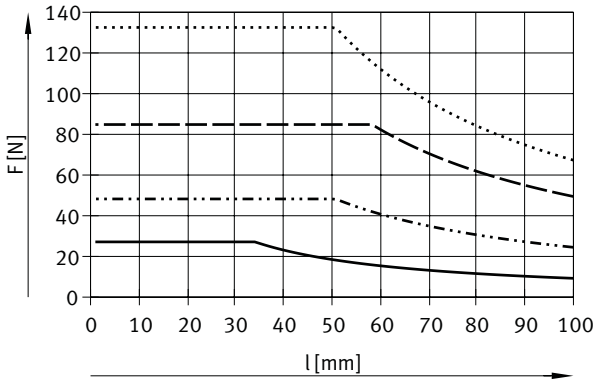

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 45 ... 50 mm



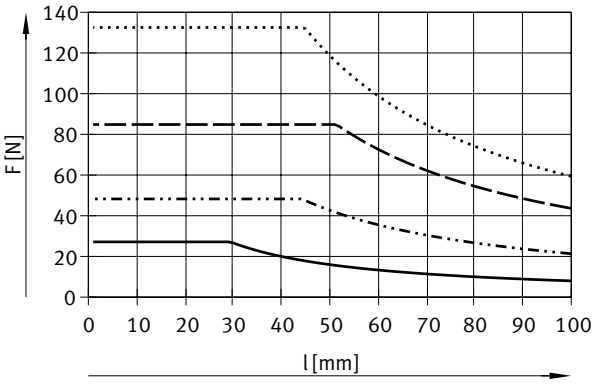

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 55 ... 80 mm



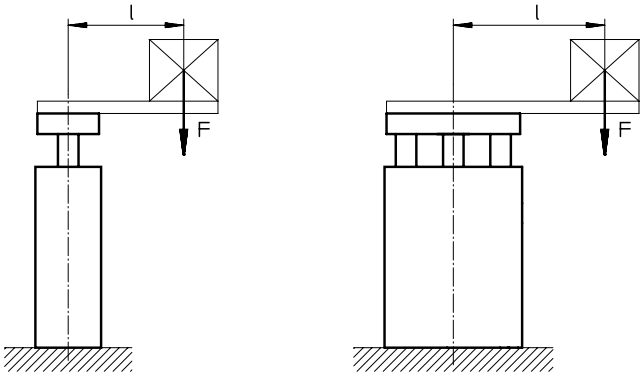

DGRC-12
DGRC-16
DGRC-20
DGRC-25

DGRC-12 ... 25, 行程 85 ... 100 mm




DGRC-12
DGRC-16
DGRC-20
DGRC-25

# 技术参数




0.6 MPa (6 bar, 87 psi) 时，许用偏心负载:

| 缸径 ø | 32 mm | 40 mm | 50 mm |
|---|---|---|---|
| 负载 | 241 N | 415 N | 648 N |

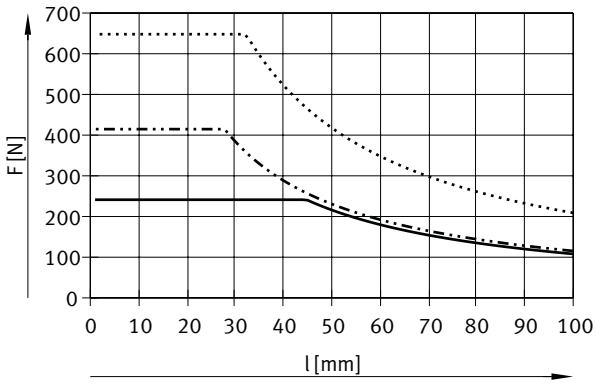
不同压力下许用偏心负载:

| 缸径 ø | 32 mm | 40 mm | 50 mm |
|---|---|---|---|
| 负载 | ≤ 50%[1] | ≤ 55%[1] | |

1) 相应压力下的纵向力理论值

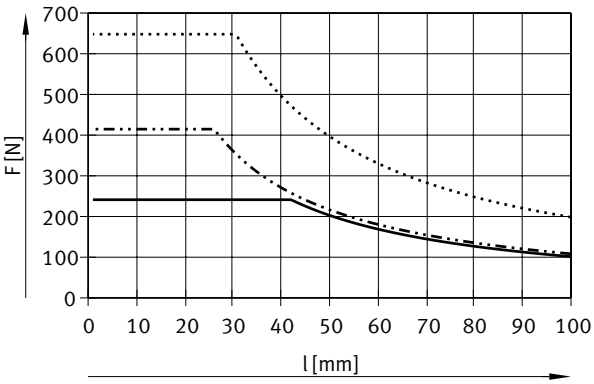
F = 纵向力
l = 杠杆臂

DGRC-32 ... 50, 行程 20 mm



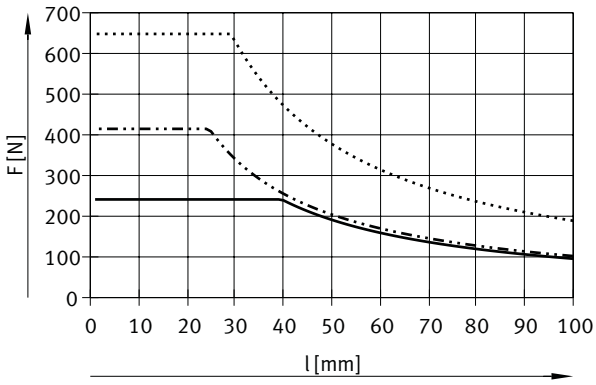

DGRC-32
DGRC-40
DGRC-50

DGRC-32 ... 50, 行程 25 mm



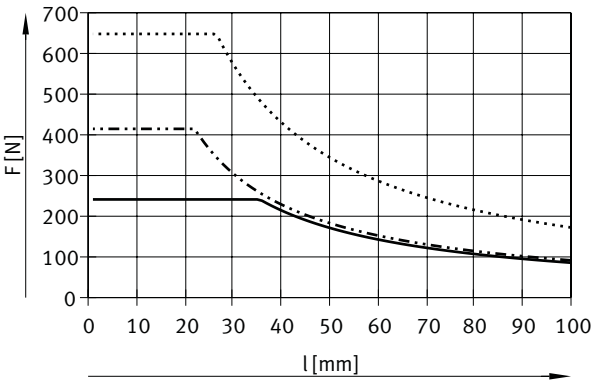

DGRC-32
DGRC-40
DGRC-50

DGRC-32 ... 50, 行程 30 mm



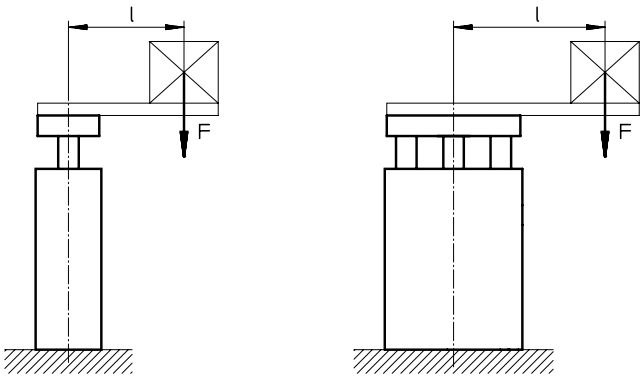

DGRC-32
DGRC-40
DGRC-50

DGRC-32 ... 50, 行程 40 mm




DGRC-32
DGRC-40
DGRC-50

# 技术参数




0.6 MPa (6 bar, 87 psi) 时，许用偏心负载:

| 缸径 ø | 32 mm | 40 mm | 50 mm |
|---|---|---|---|
| 负载 | 241 N | 415 N | 648 N |

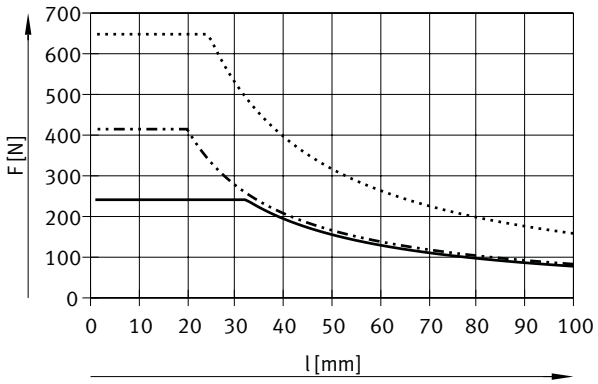
不同压力下许用偏心负载:

| 缸径 ø | 32 mm | 40 mm | 50 mm |
|---|---|---|---|
| 负载 | ≤ 50%[1] | ≤ 55%[1] | |

1) 相应压力下的纵向力理论值

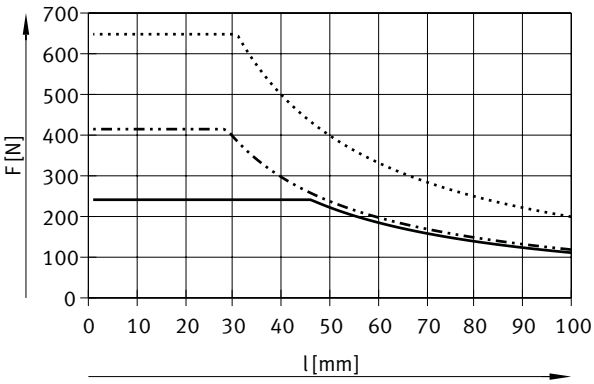
F = 纵向力
l = 杠杆臂

DGRC-32 ... 50, 行程 45 ... 50 mm



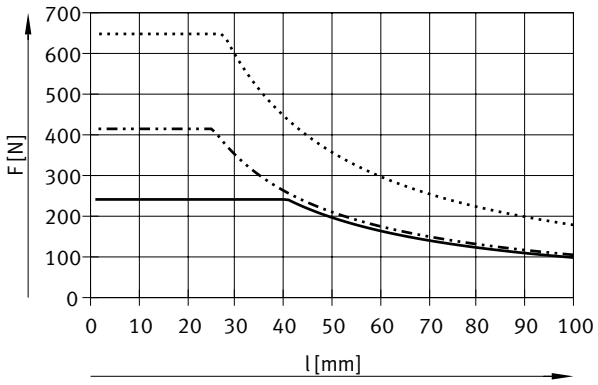

DGRC-32
DGRC-40
DGRC-50

DGRC-32 ... 50, 行程 55 ... 80 mm




DGRC-32
DGRC-40
DGRC-50

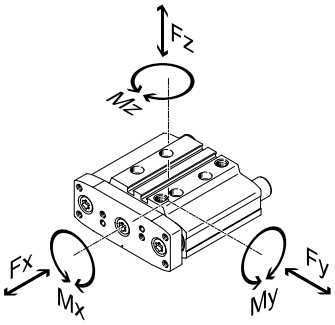
DGRC-32 ... 50, 行程 85 ... 100 mm

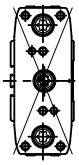


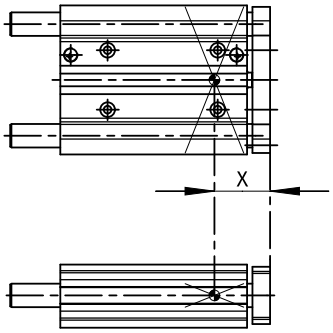

DGRC-32
DGRC-40
DGRC-50

# 技术参数

所示力和扭矩以导轨中心为参考系。






若下方所列的多种力和扭矩同时作用在气缸上，除了所列的最大负载外，还必须满足以下等式：

计算负载比较系数：

$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{x1}|}{M_{x2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

**X**

| 缸径 ø | 行程 | 尺寸 X |
|---|---|---|
| 12 mm | 5 ... 50 mm | 23.75 mm |
| | 55 ... 100 mm | 29.75 mm |
| 16 mm | 5 ... 50 mm | 23.75 mm |
| | 55 ... 100 mm | 33.75 mm |
| 20 mm | 5 ... 50 mm | 28 mm |
| | 55 ... 100 mm | 41.5 mm |
| 25 mm | 5 ... 50 mm | 28 mm |
| | 55 ... 100 mm | 41.5 mm |

| 缸径 ø | 行程 | 尺寸 X |
|---|---|---|
| 32 mm | 5 ... 50 mm | 36.5 mm |
| | 55 ... 100 mm | 45.5 mm |
| 40 mm | 5 ... 50 mm | 36.5 mm |
| | 55 ... 100 mm | 45.5 mm |
| 50 mm | 5 ... 50 mm | 46 mm |
| | 55 ... 100 mm | 55 mm |

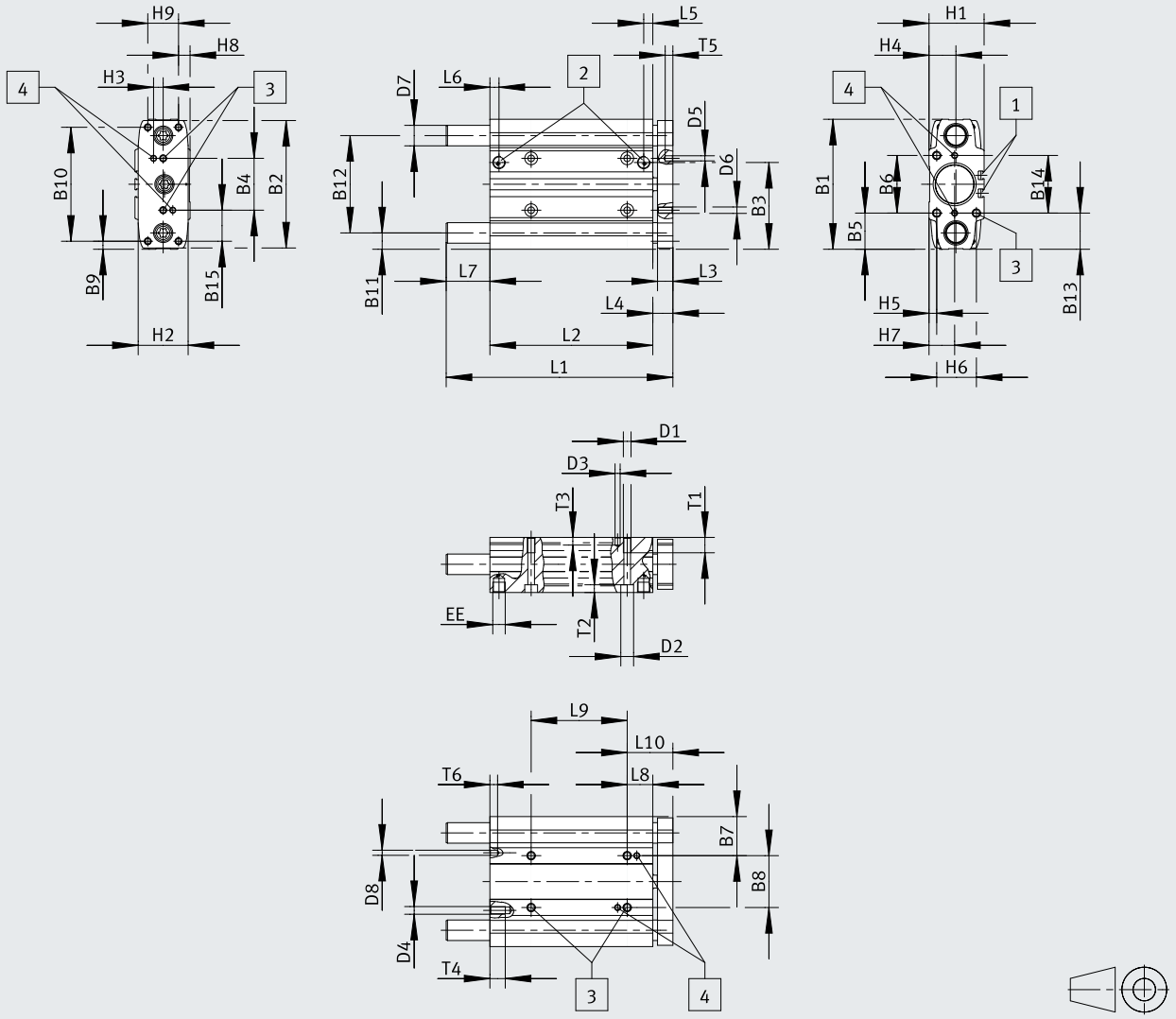
# 技术参数

ω̃ GF

所示力和扭矩以导轨中心为参考系。

| 缸径 ø | 行程 | 静态/动态 (用于使用寿命 10000 km) | | |
|---|---|---|---|---|
| | | $Fy_{max.}/Fz_{max.}$ | $Mx_{max.}$ | $My_{max.}/Mz_{max.}$ |
| 12 mm | 10 ... 50 mm | 187 N | 3.55 Nm | 2.2 Nm |
| | 80 ... 100 mm | 187 N | 3.55 Nm | 3.32 Nm |
| 16 mm | 10 ... 50 mm | 350.7 N | 7.54 Nm | 4.12 Nm |
| | 80 ... 100 mm | 350.7 N | 7.54 Nm | 7.63 Nm |
| 20 mm | 20 ... 50 mm | 487.2 N | 13.15 Nm | 6.82 Nm |
| | 80 ... 100 mm | 487.2 N | 13.15 Nm | 13.4 Nm |
| 25 mm | 20 ... 50 mm | 663 N | 21.22 Nm | 9.28 Nm |
| | 80 ... 100 mm | 663 N | 21.22 Nm | 18.23 Nm |
| 32 mm | 20 ... 50 mm | 989.7 N | 37.61 Nm | 20.29 Nm |
| | 80 ... 100 mm | 989.7 N | 37.61 Nm | 29.19 Nm |
| 40 mm | 25 ... 50 mm | 1,057 N | 44.39 Nm | 21.67 Nm |
| | 80 ... 100 mm | 1,057 N | 44.39 Nm | 31.18 Nm |
| 50 mm | 25 ... 50 mm | 1,252.7 N | 68.27 Nm | 35.08 Nm |
| | 80 ... 100 mm | 1,252.7 N | 68.27 Nm | 46.35 Nm |

**导向杆气缸 DGRC** CAD www.festo.com




[1] ω̃ [3]

[2] [4] ±0.02 mm

| | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DGRC-GF-12-...-PA | 56.9 | 54.9 | 39.25 | 17.5 | 17.45 | 22 | 19.7 | 17.5 | 4.45 | 48 | 9.45 | 38 | 18.95 | 19 | 15.25 |
| DGRC-GF-16-...-PA | 61.9 | 59.9 | 41.95 | 22.5 | 16.95 | 28 | 19.7 | 22.5 | 4.95 | 52 | 9.45 | 43 | 18.45 | 25 | 14.75 |
| DGRC-GF-20-...-PA | 76 | 74 | 49 | 28 | 21 | 34 | 24 | 28 | 5.5 | 65 | 11 | 54 | 22 | 32 | 18.5 |
| DGRC-GF-25-...-PA | 88 | 86 | 58.9 | 34 | 24 | 40 | 27 | 34 | 5 | 78 | 12 | 64 | 25 | 38 | 22 |
| DGRC-GF-32-...-PA | 101.5 | 99.5 | 67.75 | 40.5 | 28.25 | 45 | 30.5 | 40.5 | 6.25 | 89 | 12.75 | 76 | 28.25 | 45 | 24.25 |
| DGRC-GF-40-...-PA | 114 | 112 | 75 | 50.5 | 30.5 | 53 | 31.75 | 50.5 | 8 | 98 | 15 | 84 | 30.5 | 53 | 23.75 |
| DGRC-GF-50-...-PA | 139.6 | 137.6 | 92.3 | 61 | 35.8 | 68 | 39.3 | 61 | 9.3 | 121 | 15.3 | 109 | 35.8 | 68 | 30 |

| | D1 | D2<br>ø | D3<br>ø<br>H9 | D4 | D5<br>ø<br>H9 | D6 | D7<br>ø<br>h8 | D8<br>ø<br>H9 | EE | H1 | H2 | H3 | H4 | H5 | H6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DGRC-GF-12-...-PA | M4 | 6.5 | 3 | M4 | 3 | M3 | 10 | 3 | M5 | 24.5 | 23 | 7.5 | 11.5 | 3.5 | 17.5 |
| DGRC-GF-16-...-PA | M4 | 6.5 | 3 | M4 | 3 | M3 | 10 | 3 | M5 | 26.5 | 24.5 | 7.5 | 12.5 | 4 | 18.5 |
| DGRC-GF-20-...-PA | M5 | 8 | 4 | M5 | 4 | M4 | 12 | 4 | M5 | 31 | 29 | 7.5 | 14.4 | 4.5 | 22 |
| DGRC-GF-25-...-PA | M6 | 10 | 4 | M6 | 4 | M5 | 14 | 4 | G1/8 | 35.5 | 34 | 7.5 | 16.5 | 5 | 25.5 |
| DGRC-GF-32-...-PA | M6 | 10 | 4 | M6 | 4 | M5 | 16 | 4 | G1/8 | 43 | 39 | 7.5 | 21 | 6 | 31 |
| DGRC-GF-40-...-PA | M8 | 11 | 5 | M8 | 5 | M6 | 20 | 5 | G1/8 | 51 | 43 | 10 | 23.75 | 7.25 | 36.5 |
| DGRC-GF-50-...-PA | M8 | 11 | 5 | M8 | 5 | M6 | 20 | 5 | G1/4 | 61.5 | 51 | 10 | 28.5 | 8 | 45.5 |

## Dimensions

| | H7 | H8 | H9 | L3 | L4 | L5 | L6 | L8 | L10 | T1 | T2 | T3 | T4 | T5 | T6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DGRC-GF-12-...-PA | 11.5 | 5.5 | 14 | 8 | 12 | 4.7 | 4.7 | 12 | 24 | 8 | 8 | 6 | 8 | 6 | 6 |
| DGRC-GF-16-...-PA | 11.5 | 6 | 14.5 | 8 | 12 | 5.9 | 5.9 | 14 | 26 | 8 | 8 | 6 | 8 | 6 | 6 |
| DGRC-GF-20-...-PA | 14.4 | 6.75 | 17.5 | 10 | 14 | 6 | 6 | 15 | 29 | 10 | 5 | 6 | 10 | 6 | 6 |
| DGRC-GF-25-...-PA | 16.5 | 7.75 | 20 | 10 | 14 | 7.1 | 7.1 | 19.5 | 33.5 | 12 | 6 | 6 | 12 | 6 | 6 |
| DGRC-GF-32-...-PA | 20 | 9 | 24 | 12 | 16 | 7.1 | 7.1 | 20 | 36 | 12 | 6 | 6 | 12 | 6 | 6 |
| DGRC-GF-40-...-PA | 23.75 | 9.75 | 28 | 12 | 16 | 8.1 | 8.1 | 22 | 38 | 16 | 6.8 | 8 | 16 | 8 | 8 |
| DGRC-GF-50-...-PA | 28.5 | 12 | 33 | 14 | 18 | 9.1 | 9.1 | 26 | 44 | 16 | 6.8 | 8 | 16 | 8 | 8 |

| | L1 | L2 | L7 | L9 |
|---|---|---|---|---|
| DGRC-GF-12-10-PA | 47.5 | 32.6 | 2.8 | – |
| DGRC-GF-12-20-PA | 57.5 | 42.6 | 2.8 | 15 |
| DGRC-GF-12-25-PA | 62.5 | 47.6 | 2.9 | 15 |
| DGRC-GF-12-30-PA | 67.5 | 52.6 | 2.9 | 15 |
| DGRC-GF-12-40-PA | 77.5 | 62.6 | 2.9 | 30 |
| DGRC-GF-12-50-PA | 87.5 | 72.6 | 2.9 | 30 |
| DGRC-GF-12-80-PA | 129.5 | 102.6 | 14.9 | 60 |
| DGRC-GF-12-100-PA | 149.5 | 122.6 | 14.9 | 75 |
| DGRC-GF-16-10-PA | 47.5 | 34.2 | 1.3 | – |
| DGRC-GF-16-20-PA | 57.5 | 44.2 | 1.3 | 15 |
| DGRC-GF-16-25-PA | 62.5 | 49.2 | 1.3 | 15 |
| DGRC-GF-16-30-PA | 67.5 | 54.2 | 1.3 | 15 |
| DGRC-GF-16-40-PA | 77.5 | 64.2 | 1.3 | 30 |
| DGRC-GF-16-50-PA | 87.5 | 74.2 | 1.3 | 30 |
| DGRC-GF-16-80-PA | 137.5 | 104.2 | 21.3 | 60 |
| DGRC-GF-16-100-PA | 157.5 | 124.2 | 21.3 | 75 |
| DGRC-GF-20-20-PA | 64 | 44.4 | 5.6 | – |
| DGRC-GF-20-25-PA | 69 | 49.4 | 5.6 | 15 |
| DGRC-GF-20-30-PA | 74 | 54.4 | 5.6 | 15 |
| DGRC-GF-20-40-PA | 84 | 64.4 | 5.6 | 30 |
| DGRC-GF-20-50-PA | 94 | 74.4 | 5.6 | 30 |
| DGRC-GF-20-80-PA | 151 | 104.4 | 32.6 | 60 |
| DGRC-GF-20-100-PA | 171 | 124.4 | 32.6 | 75 |
| DGRC-GF-25-20-PA | 64 | 44.6 | 5.4 | – |
| DGRC-GF-25-25-PA | 69 | 49.6 | 5.4 | – |
| DGRC-GF-25-30-PA | 74 | 54.6 | 5.4 | – |
| DGRC-GF-25-40-PA | 84 | 64.6 | 5.4 | 15 |
| DGRC-GF-25-50-PA | 94 | 74.6 | 5.4 | 30 |
| DGRC-GF-25-80-PA | 151 | 104.6 | 32.4 | 60 |
| DGRC-GF-25-100-PA | 171 | 124.6 | 32.4 | 75 |
| DGRC-GF-32-20-PA | 79 | 47.2 | 15.8 | – |
| DGRC-GF-32-25-PA | 84 | 52.2 | 15.8 | – |
| DGRC-GF-32-30-PA | 89 | 57.2 | 15.8 | 15 |
| DGRC-GF-32-40-PA | 99 | 67.2 | 15.8 | 15 |
| DGRC-GF-32-50-PA | 109 | 77.2 | 15.8 | 30 |
| DGRC-GF-32-80-PA | 157 | 107.2 | 33.8 | 60 |
| DGRC-GF-32-100-PA | 177 | 127.2 | 33.8 | 75 |
| DGRC-GF-40-25-PA | 84 | 57.2 | 10.8 | – |
| DGRC-GF-40-50-PA | 109 | 82.2 | 10.8 | 30 |
| DGRC-GF-40-80-PA | 157 | 112.2 | 28.8 | 60 |
| DGRC-GF-40-100-PA | 177 | 132.2 | 28.8 | 75 |
| DGRC-GF-50-25-PA | 101 | 60.2 | 22.8 | – |
| DGRC-GF-50-50-PA | 126 | 85.2 | 22.8 | 30 |
| DGRC-GF-50-80-PA | 174 | 115.2 | 40.8 | 60 |
| DGRC-GF-50-100-PA | 194 | 135.2 | 40.8 | 75 |

# 订货数据

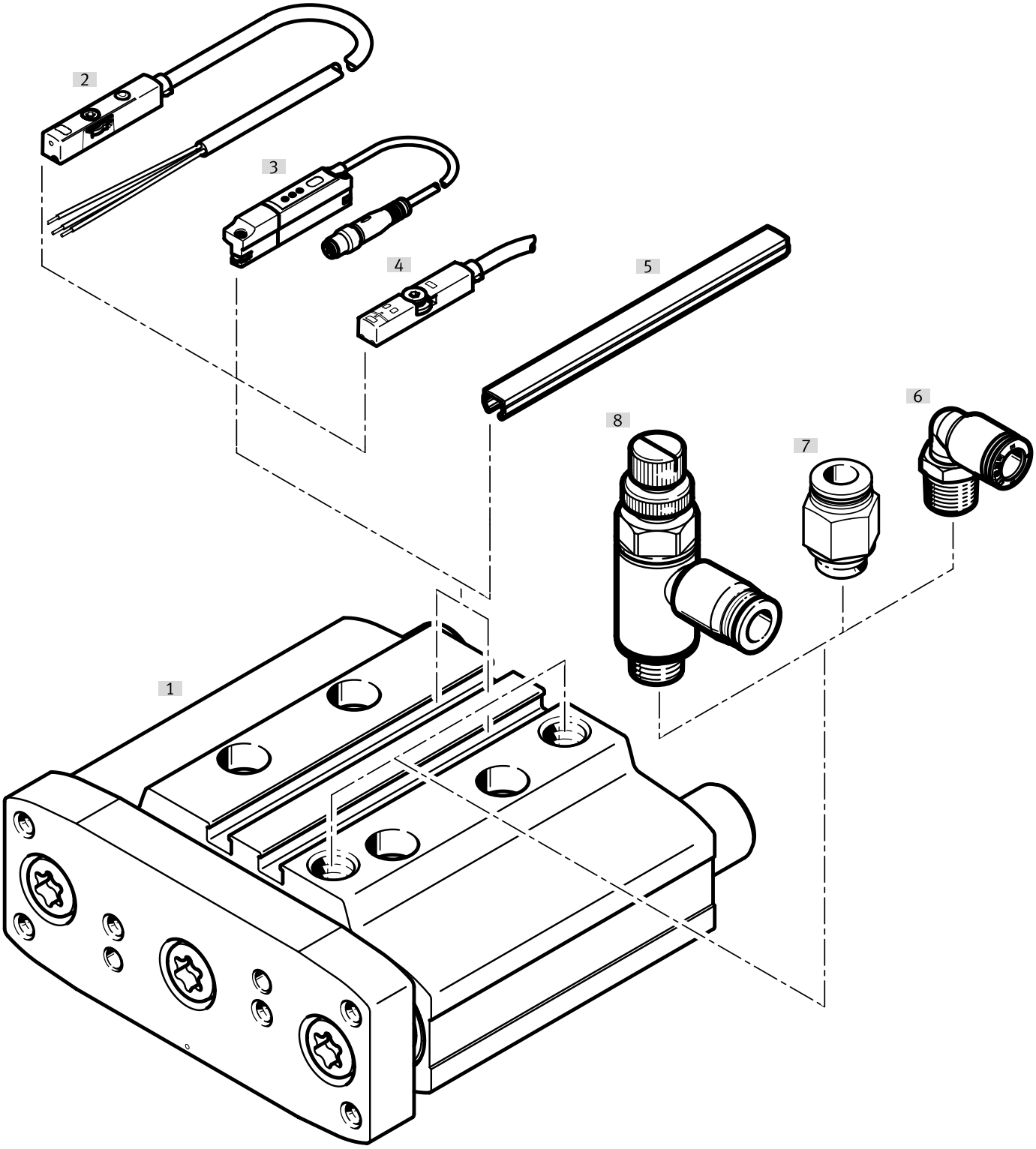
| DGRC | 缸径 Ø | 行程 | 订货号 | 型号 |
|---|---|---|---|---|
| | 12 mm | 10 mm | 8218182 | DGRC-GF-12-10-PA |
| | | 20 mm | 8218183 | DGRC-GF-12-20-PA |
| | | 25 mm | 8218184 | DGRC-GF-12-25-PA |
| | | 30 mm | 8218185 | DGRC-GF-12-30-PA |
| | | 40 mm | 8218186 | DGRC-GF-12-40-PA |
| | | 50 mm | 8218187 | DGRC-GF-12-50-PA |
| | | 80 mm | 8218188 | DGRC-GF-12-80-PA |
| | | 100 mm | 8218189 | DGRC-GF-12-100-PA |
| | 16 mm | 10 mm | 8218190 | DGRC-GF-16-10-PA |
| | | 20 mm | 8218191 | DGRC-GF-16-20-PA |
| | | 25 mm | 8218192 | DGRC-GF-16-25-PA |
| | | 30 mm | 8218193 | DGRC-GF-16-30-PA |
| | | 40 mm | 8218194 | DGRC-GF-16-40-PA |
| | | 50 mm | 8218195 | DGRC-GF-16-50-PA |
| | | 80 mm | 8218196 | DGRC-GF-16-80-PA |
| | | 100 mm | 8218197 | DGRC-GF-16-100-PA |
| | 20 mm | 20 mm | 8218198 | DGRC-GF-20-20-PA |
| | | 25 mm | 8218199 | DGRC-GF-20-25-PA |
| | | 30 mm | 8218200 | DGRC-GF-20-30-PA |
| | | 40 mm | 8218201 | DGRC-GF-20-40-PA |
| | | 50 mm | 8218202 | DGRC-GF-20-50-PA |
| | | 80 mm | 8218203 | DGRC-GF-20-80-PA |
| | | 100 mm | 8218204 | DGRC-GF-20-100-PA |
| | 25 mm | 20 mm | 8218205 | DGRC-GF-25-20-PA |
| | | 25 mm | 8218206 | DGRC-GF-25-25-PA |
| | | 30 mm | 8218207 | DGRC-GF-25-30-PA |
| | | 40 mm | 8218208 | DGRC-GF-25-40-PA |
| | | 50 mm | 8218209 | DGRC-GF-25-50-PA |
| | | 80 mm | 8218210 | DGRC-GF-25-80-PA |
| | | 100 mm | 8218211 | DGRC-GF-25-100-PA |
| | 32 mm | 20 mm | 8218212 | DGRC-GF-32-20-PA |
| | | 25 mm | 8218213 | DGRC-GF-32-25-PA |
| | | 30 mm | 8218214 | DGRC-GF-32-30-PA |
| | | 40 mm | 8218215 | DGRC-GF-32-40-PA |
| | | 50 mm | 8218216 | DGRC-GF-32-50-PA |
| | | 80 mm | 8218217 | DGRC-GF-32-80-PA |
| | | 100 mm | 8218218 | DGRC-GF-32-100-PA |
| | 40 mm | 25 mm | 8218219 | DGRC-GF-40-25-PA |
| | | 50 mm | 8218220 | DGRC-GF-40-50-PA |
| | | 80 mm | 8218221 | DGRC-GF-40-80-PA |
| | | 100 mm | 8218222 | DGRC-GF-40-100-PA |
| | 50 mm | 25 mm | 8218223 | DGRC-GF-50-25-PA |
| | | 50 mm | 8218224 | DGRC-GF-50-50-PA |
| | | 80 mm | 8218225 | DGRC-GF-50-80-PA |
| | | 100 mm | 8218226 | DGRC-GF-50-100-PA |

# 订货数据

**导向杆气缸 DGRC – 模块化产品系统**

| | 缸径 Ø | 行程 | 订货号 | 型号 |
|---|---|---|---|---|
| | 12 mm | 5 ... 100 mm | **8225636** | **DGRC-GF-12- -PA** |
| | 16 mm | | **8225637** | **DGRC-GF-16- -PA** |
| | 20 mm | | **8225638** | **DGRC-GF-20- -PA** |
| | 25 mm | | **8225639** | **DGRC-GF-25- -PA** |
| | 32 mm | | **8225640** | **DGRC-GF-32- -PA** |
| | 40 mm | | **8225641** | **DGRC-GF-40- -PA** |
| | 50 mm | | **8225642** | **DGRC-GF-50- -PA** |

# 外围元件一览



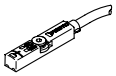
# 外围元件一览

**附件**

| 型号/订货代码 | 简要说明 | ➔ 官网 |
|---|---|---|
| [1] 导向杆气缸 DGRC | 气缸，带导向杆 | 5 |
| [2] 接近开关 SDBT-MSX | 可集成在缸筒上 | 22 |
| [3] 位置变送器 SDAT-MHS | 可集成在缸筒上 | 23 |
| [4] 接近开关 SMT-8 | 可集成在缸筒上 | 22 |
| [5] 沟槽盖 ABP-5 | 用于保护传感器电缆和传感器槽，防止脏污 | 23 |
| [6] 快插接头 QS | 用于连接标准外径气管 | qs |
| [7] 快插接头 NPQE | 用于连接标准外径气管 | npqe |
| [8] 单向节流阀 GRLA | 用于调节速度 | 23 |

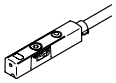
SMT-8M T

smt

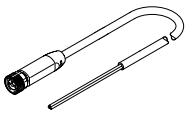
| | | | | | | |
|---|---|---|---|---|---|---|
|  | 螺丝夹紧，从从上方插入槽内 | 3芯 NPN 常开触点 | 开放式 | 2.5 m | 574338 | SMT-8M-A-NS-24V-E-2.5-OE |
| | | | 插头 M8, A编码 | 0.3 m | 574339 | SMT-8M-A-NS-24V-E-0.3-M8D |
| | | 3芯, PNP 常开触点 | 开放式 | 2.5 m | 574335 | SMT-8M-A-PS-24V-E-2.5-OE |
| | | | 插头 M8, A 编码 | 0.3 m | 574334 | SMT-8M-A-PS-24V-E-0.3-M8D |
| | | 2芯 PNP N/O | 开放式 | 5 m | 8165237 | SMT-8M-A-ZS-24V-E-5.0-OE |

**SDBT-MSX** T

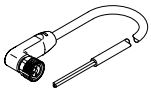
sdbt

| | 开关输出 | 开关元件功能 | 电接口 | 电缆长度 | 订货号 | 型号 |
|---|---|---|---|---|---|---|
|  | PNP/NPN 可切换 | 常闭或常开，可切换 | 开放式 | 2.5 m | 8059121 | SDBT-MSX-1L-PU-E-2.5-N-LE |
| | | | | | 8059124 | SDBT-MSX-1L-NU-E-2.5-N-LE |
| | | | 插头 M8, A 编码 | 0.3 m | 8059123 | SDBT-MSX-1L-NU-E-0.3-N-M8 |
| | | | | | 8059120 | SDBT-MSX-1L-PU-E-0.3-N-M8 |

NEBA

| | 电接口 1, 连接技术 | 电接口 2, 连接技术 | 电接口 2, 芯数 | 电缆长度 | 订货号 | 型号 |
|---|---|---|---|---|---|---|
|  | M8x1 A 编码 EN 61076-2-104 | 开放式 | 3 | 2.5 m | 8078223 | NEBA-M8G3-U-2.5-N-LE3 |
| | | | | 5 m | 8078224 | NEBA-M8G3-U-5-N-LE3 |

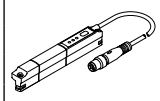
NEBA

| | 电接口 1, 连接技术 | 电接口 2, 连接技术 | 电接口 2, 芯数 | 电缆长度 | 订货号 | 型号 |
|---|---|---|---|---|---|---|
|  | M8x1 A编码 EN 61076-2-104 | 开放式 | 3 | 2.5 m | 8078230 | NEBA-M8W3-U-2.5-N-LE3 |
| | | | | 5 m | 8078231 | NEBA-M8W3-U-5-N-LE3 |

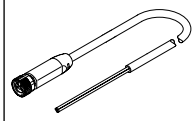
# 附件

SDAT T M8 A

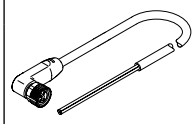
sdat

| | 感测范围 | 模拟量输出 | 电接口 1, 芯数 | 电缆长度 | 订货号 | 型号 |
|---|---|---|---|---|---|---|
|  | 0 ... 50 mm | 4 - 20 mA | 4 | 0.3 m | 1531265 | SDAT-MHS-M50-1L-SA-E-0.3-M8 |
| | 0 ... 80 mm | | | | 1531266 | SDAT-MHS-M80-1L-SA-E-0.3-M8 |
| | 0 ... 100 mm | | | | 1531267 | SDAT-MHS-M100-1L-SA-E-0.3-M8 |
| | 0 ... 125 mm | | | | 1531268 | SDAT-MHS-M125-1L-SA-E-0.3-M8 |
| | 0 ... 160 mm | | | | 1531269 | SDAT-MHS-M160-1L-SA-E-0.3-M8 |

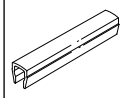
NEBA

| | 1, | h, | h, | | | |
|---|---|---|---|---|---|---|
|  | Mˢx1 A<br>ENˡ ˡ1ɥˡ ˡ-ʰ-1<br>ɥʲ | | 4 | 2.5 m | 8078227 | NEBA-M8G4-U-2.5-N-LE4 |
| | | | | 5 m | 8078228 | NEBA-M8G4-U-5-N-LE4 |

NEBA

| | 1, | h, | h, | | | |
|---|---|---|---|---|---|---|
|  | M8x1 A<br>EN 61076-2-1<br>04 | | 4 | 2.5 m | 8078233 | NEBA-M8W4-U-2.5-N-LE4 |
| | | | | 5 m | 8078234 | NEBA-M8W4-U-5-N-LE4 |

ABP T

| | | | [ ] | | |
|---|---|---|---|---|---|
|  | ɥ.ʳ m, | ABS | 2 | 151680 | ABP-5-S |

GRLA

| | 2 | 1 | | |
|---|---|---|---|---|
| | M5 | , 3 mm | 193137 | GRLA-M5-QS-3-D |
| | | 4 mm | 193138 | GRLA-M5-QS-4-D |
| | | 6 mm | 193139 | GRLA-M5-QS-6-D |
| | G1/8 | , 3 mm | 193142 | GRLA-1/8-QS-3-D |
| | | 4 mm | 193143 | GRLA-1/8-QS-4-D |
| | | 6 mm | 193144 | GRLA-1/8-QS-6-D |
| | | 8 mm | 193145 | GRLA-1/8-QS-8-D |
| | G1/4 | 6 mm | 193146 | GRLA-1/4-QS-6-D |
| | | 8 mm | 193147 | GRLA-1/4-QS-8-D |
| | | 10 mm | 193148 | GRLA-1/4-QS-10-D |