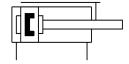
## Guided drive DFM-20-20-P-A-KF-F1A

Part number: 8118850







## **Data sheet**

Piston diameter 20 mm  Operating mode, drive unit Yoke  Cushioning Elastic cushioning rings/plates at both ends  Mounting position optional  Guide Recirculating ball bearing guide  Design Guidance  Position detection Via proximity switch  Mariants Metals with copper, zinc or nickel 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 0.2 MPa1 MPa 2 bar10 bar  Max. speed 0.8 m/s  Mode of operation Double-acting  Operating medium Compressed air to ISO 8573-1:2010 [7:4:4]  Note on operating and pilot medium always be required)  Corrosion resistance class CRC 0. No corrosion stress  LABS (PWIS) conformity VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class CRC 0. No corrosion stress  Class 7 according to ISO 14644-1  Ambient temperature 5. °C60 °C  Impact energy in end positions 0.2 Nm  Max. force Fy  Max. force Fy static 510 N  Max. force Fz  Max. force Fz  Max. force Fz  Max. force Fz static 510 N	Feature	Value
Piston diameter 20 mm  Operating mode, drive unit Yoke  Cushioning Elastic cushioning rings/plates at both ends  Mounting position optional  Guide Recirculating ball bearing guide  Design Guidance  Position detection Via proximity switch  Variants use. Exceptions are nickel as main constituent are excluded from use. Exceptions are nickel plug connectors and coils.  Operating pressure 2 bar 10 bar  Max. speed 0.8 m/s  Mode of operation Double-acting  Operating medium Compressed air to ISO 8573-1:2010 [7:4:4]  Lubricated operation possible (in which case lubricated operation will always be required)  Corrosion resistance class CRC 0 - No corrosion stress  USMA2364-B1/B2-L  Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class Class 7 according to ISO 14644-1  Ambient temperature -5 °C60 °C  Impact energy in end positions 0,2 Nm  Max. force Fy static 510 N  Max. force Fz  Max. force Fz static	Distance from centre of gravity of load to yoke plate xs	50 mm
Operating mode, drive unit  Cushioning  Elastic cushioning rings/plates at both ends  Optional  Guide  Recirculating ball bearing guide  Design  Guidance  Position detection  Via proximity switch  Metals with copper, zinc or nickel 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  O.2 MPa1 MPa 2 bar10 bar  Max. speed  O.8 m/s  Mode of operation  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  O - No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  5 °C60 °C  Impact energy in end positions  O,2 Nm  Max. force Fy  408 N  Max. force Fz  Max. force Fz static	Stroke	20 mm
Elastic cushioning Elastic cushioning rings/plates at both ends  Mounting position optional  Guide Recirculating ball bearing guide  Design Guidance  Position detection Via proximity switch  Variants Metals with copper, zinc or nickel 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 0.2 MPa1 MPa  Departing pressure 0.8 m/s  Mode of operation Double-acting  Operating medium Compressed air to ISO 8573-1:2010 [7:4:4]  Note on operating and pilot medium always be required)  Corrosion resistance class CRC 0-No corrosion stress  LABS (PWIS) conformity VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class Class 7 according to ISO 14644-1  Ambient temperature 5-0°60°C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fy  Max. force Fz  408 N  Max. force Fz  408 N  Max. force Fz static 510 N	Piston diameter	20 mm
Mounting position Guide Recirculating ball bearing guide Design Guidance Via proximity switch Variants Metals with copper, zinc or nickel 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  O.2 MPa1 MPa 2 bar10 Dar  Max. speed O.8 m/s  Mode of operation 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 O · No corrosion stress  LABS (PWIS) conformity VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class Cleanroom class Class 7 according to ISO 14644-1  Ambient temperature -5 °C60 °C  Impact energy in end positions Max. force Fy 408 N  Max. force Fy static 510 N  Max. force Fz 408 N  Max. force Fz 408 N	Operating mode, drive unit	Yoke
Recirculating ball bearing guide  Design Guidance  Via proximity switch  Wetals with copper, zinc or nickel 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  O.2 MPa1 MPa 2 bar10 bar  Max. speed  O.8 m/s  Mode of operation  Double-acting  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  O · No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Anhient temperature  5° C60 °C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fz  408 N	Cushioning	Elastic cushioning rings/plates at both ends
Design Guidance  Via proximity switch  Wetals with copper, zinc or nickel 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  O.2 MPa1 MPa 2 bar10 bar  Max. speed  O.8 m/s  Double-acting 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  O - No corrosion stress  LABS (PWIS) conformity  VDMA2364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fz  408 N  Max. force Fz static  510 N	Mounting position	optional
Position detection  Via proximity switch  Metals with copper, zinc or nickel 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  O.2 MPa1 MPa 2 bar10 bar  Max. speed  O.8 m/s  Mode of operation  Double-acting  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  O - No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Clean room class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  O,2 Nm  Max. force Fy  408 N  Max. force Fy static  510 N  Max. force Fz  408 N  Max. force Fz  408 N  Max. force Fz static	Guide	Recirculating ball bearing guide
Metals with copper, zinc or nickel 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  Oz. MPa 1 MPa 2 bar 10 bar  Max. speed  Oz. m/s  Mode of operation  Double-acting  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  Oz. No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  Oz. Nm  Max. force Fy  408 N  Max. force Fy static  510 N  Max. force Fz  408 N  Max. force Fz  408 N  Max. force Fz static	Design	Guidance
use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.  Operating pressure  Description  Operating Departion  Operating medium  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  O - No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  0,2 Nm  Max. force Fy  408 N  Max. force Fy static  510 N  Max. force Fz static  510 N	Position detection	Via proximity switch
2 bar10 bar  Max. speed  0.8 m/s  Double-acting  Operating medium  Compressed air to ISO 8573-1:2010 [7:4:4]  Lubricated operation possible (in which case lubricated operation will always be required)  Corrosion resistance class CRC  0 - No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Cleanroom temperature  -5 °C60 °C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fy  408 N  Max. force Fz  408 N  Max. force Fz static  510 N	Variants	
Double-acting 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 O - No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -5 °C60 °C Impact energy in end positions 0,2 Nm Max. force Fy 408 N Max. force Fy 408 N Max. force Fz static 510 N Max. force Fz static	Operating pressure	
Operating medium  Compressed air to ISO 8573-1:2010 [7:4:4]  Lubricated operation possible (in which case lubricated operation will always be required)  O - No corrosion stress  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fy  408 N  Max. force Fz static  510 N  Max. force Fz static	Max. speed	0.8 m/s
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always be required)  Corrosion resistance class CRC  0 - No corrosion stress  VDMA24364-B1/B2-L  Suitability for the production of Li-ion batteries  Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils  Cleanroom class  Class 7 according to ISO 14644-1  Ambient temperature  -5 °C60 °C  Impact energy in end positions  Max. force Fy  408 N  Max. force Fz  408 N  Max. force Fz static  510 N	Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
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Ambient temperature -5 °C60 °C Impact energy in end positions 0,2 Nm  Max. force Fy 408 N  Max. force Fy static 510 N  Max. force Fz 408 N  Max. force Fz 408 N	Suitability for the production of Li-ion batteries	from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and
Impact energy in end positions  O,2 Nm  Max. force Fy  408 N  Max. force Fy static  510 N  Max. force Fz  408 N  Max. force Fz  510 N	Cleanroom class	Class 7 according to ISO 14644-1
Max. force Fy         408 N           Max. force Fy static         510 N           Max. force Fz         408 N           Max. force Fz static         510 N	Ambient temperature	-5 °C60 °C
Max. force Fy static 510 N  Max. force Fz 408 N  Max. force Fz static 510 N	Impact energy in end positions	0,2 Nm
Max. force Fz 408 N Max. force Fz static 510 N	Max. force Fy	408 N
Max. force Fz static 510 N	Max. force Fy static	510 N
	Max. force Fz	408 N
Max. moment Mx 11.84 Nm	Max. force Fz static	510 N
	Max. moment Mx	11.84 Nm

Feature	Value
Max. torque Mx static	14.79 Nm
Max. moment My	4.49 Nm
Max. torque My static	5.61 Nm
Max. moment Mz	4.49 Nm
Max. torque Mz static	5.61 Nm
Max. permissible torque load Mx as a function of stroke	2.43 Nm
Max. effective load dependent upon stroke at defined distance xs	46 N
Theoretical force at 0.6 MPa (6 bar, 87 psi), return stroke	141 N
Theoretical force at 0.6 MPa (6 bar, 87 psi), advance stroke	188 N
Moving mass	376 g
Product weight	747 g
Centre of gravity of moving mass as a function of stroke	17.5 mm
alternative connections	See product drawing
Pneumatic connection	M5
Note on materials	RoHS-compliant
Material cover	Wrought aluminium alloy
Material seals	NBR
Material housing	Wrought aluminium alloy
Material piston rod	High-alloy stainless steel