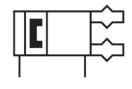
Angled gripper DHWS-16-A Part number: 1310178



Data sheet

Ax. interchangeability 0.2 mm Max. opening angle 40 deg Rotational symmetry 0.2 mm Pneumatic gripper repetition accuracy 0.04 mm Number of gripper jaws 2 Mounting position Any Mode of operation Double-acting Sripper function Angle Structural design Lever Position sensing For proximity sensor Operating pressure 2 bar8 bar Max. operating frequency of pneumatic gripper 4 Hz Min. opening time at 6 bar 52 ms Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) 1 - Low corrosion stress ABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coils coils Ambient temperature 5 °C60 °C Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total grip	Feature	Value
Max. opening angle40 degRotational symmetry0.2 mmOnumber of gripper repetition accuracy0.04 mmNumber of gripper jaws2Mounting positionAnyMode of operationDouble-actingGripper functionAngleStructural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzMin. opening time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use.Exception are printed circuit boards, cables, electrical connectors and coils5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw, Kx static50 NMaximum force on gripper jaw, Kx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 Nm	Size	16
Rotational symmetry 0.2 mm Pneumatic gripper repetition accuracy 0.04 mm Number of gripper jaws 2 Mounting position Any Mode of operation Double-acting Sripper function Angle Structural design Lever Position sensing For proximity sensor Operating pressure 2 bar8 bar Max. operating frequency of pneumatic gripper 4 Hz Min. closing time at 6 bar 52 ms Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) 1 - Low corrosion stress LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coils Coll or C Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Masis momen	Max. interchangeability	0.2 mm
Pneumatic gripper repetition accuracy 0.04 mm Number of gripper jaws 2 Mounting position Any Mode of operation Double-acting Sripper function Angle Structural design Ever Position sensing For proximity sensor Operating pressure 2 bar8 bar Max. operating frequency of pneumatic gripper 4 Hz Min. opening time at 6 bar 52 ms Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) 1 - Low corrosion stress LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coils Ambient temperature 5 °C60 °C Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening 129 Ncm Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening	Max. opening angle	40 deg
Number of gripper jaws2Mounting positionAnyMode of operationDouble-actingGripper functionAngleStructural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzMin. opening time at 6 bar44 msMin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 · Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesKerals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Massimum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Rotational symmetry	0.2 mm
Mounting positionAnyMode of operationDouble-actingGripper functionAngleStructural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzMin. opening time at 6 bar44 msMin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesKetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 Nm	Pneumatic gripper repetition accuracy	0.04 mm
Mode of operationDouble-actingGripper functionAngleStructural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barWax. operating frequency of pneumatic gripper4 HzWin. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010[7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5° C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Number of gripper jaws	2
Gripper functionAngleStructural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzMin. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 · Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Mounting position	Any
Structural designLeverPosition sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzMin. opening time at 6 bar44 msMin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw, Kz static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Mode of operation	Double-acting
Position sensingFor proximity sensorOperating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzWin. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumOperation with oil lubrication possible (required for further use)Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesException are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw, Kz static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Gripper function	Angle
Operating pressure2 bar8 barMax. operating frequency of pneumatic gripper4 HzWin. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Structural design	Lever
Max. operating frequency of pneumatic gripper4 HzWin. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mx static1.6 Nm	Position sensing	For proximity sensor
Win. opening time at 6 bar44 msWin. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Operating pressure	2 bar8 bar
Min. closing time at 6 bar52 msOperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMaximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Max. operating frequency of pneumatic gripper	4 Hz
Deperating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Min. opening time at 6 bar	44 ms
Information on operating and pilot mediaOperation with oil lubrication possible (required for further use)Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw, Mx static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Min. closing time at 6 bar	52 ms
Corrosion resistance class (CRC)1 - Low corrosion stressLABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]
LABS (PWIS) conformityVDMA24364-B2-LSuitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Information on operating and pilot media	Operation with oil lubrication possible (required for further use)
Suitability for the production of Li-ion batteriesMetals with more than 5% by mass of copper are excluded from use. Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Corrosion resistance class (CRC)	1 - Low corrosion stress
Exception are printed circuit boards, cables, electrical connectors and coilsAmbient temperature5 °C60 °CTotal gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	LABS (PWIS) conformity	VDMA24364-B2-L
Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening129 NcmTotal gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Suitability for the production of Li-ion batteries	Exception are printed circuit boards, cables, electrical connectors and
Total gripping torque at 6 bar, closing114 NcmMass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Ambient temperature	5 °C60 °C
Mass moment of inertia0.14 kgcm²Maximum force on gripper jaw Fz, static50 NMaximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Total gripping torque at 0.6 MPa (6 bar, 87 psi), opening	129 Ncm
Maximum force on gripper jaw Fz, static 50 N Maximum torque on gripper jaw, Mx static 1.6 Nm Maximum torque on gripper jaw, My static 1.6 Nm Maximum torque on gripper jaw, Mz static 1.6 Nm	Total gripping torque at 6 bar, closing	114 Ncm
Maximum torque on gripper jaw, Mx static1.6 NmMaximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Mass moment of inertia	0.14 kgcm ²
Maximum torque on gripper jaw, My static1.6 NmMaximum torque on gripper jaw, Mz static1.6 Nm	Maximum force on gripper jaw Fz, static	50 N
Maximum torque on gripper jaw, Mz static 1.6 Nm	Maximum torque on gripper jaw, Mx static	1.6 Nm
	Maximum torque on gripper jaw, My static	1.6 Nm
Product weight 110 g	Maximum torque on gripper jaw, Mz static	1.6 Nm
	Product weight	110 g

FESTO



Feature	Value
Type of mounting	With internal thread and centering sleeve Via through-hole and centering sleeve Optionally:
Pneumatic connection	M3
Note on materials	RoHS-compliant
Cover cap material	РА
Housing material	Wrought aluminum alloy Hard-anodized
Gripper jaw material	High-alloy steel