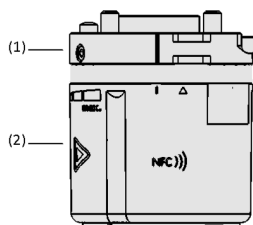


Vacuum Generator ECBPMi

Pumping speed up to 1.6 l/min



Vacuum Generator ECBPMi



System Design Vacuum Generator ECBPMi



Suitability for Industry Specific Applications

Applications

- Electric vacuum generator for handling suction-tight workpieces
- Flexible application in lightweight robotics, human-robot collaboration (MRK environment) as well as in mobile robotics
- Simple and fast commissioning on lightweight robots thanks to intelligent software support
- Small dimensions and low weight for robots with payloads < 3kg
- Integration in vending machines with limited installation space
- Ideal for automated handling of small parts, e.g. bin-picking with a single suction gripper
- One bellows suction cup inclusive for a complete vacuum gripping system

Design

- Modular adapter flange (1) incl. cable strain relief
- Interference-free design adapted to the size of the robot flange
- Available robot integration sets (incl. all necessary parts) for plug & work integration with common lightweight robot types
- Intuitive operation via user interface with capacitive keys (2) and rotating status display
- Integrated NFC interface for commissioning and parameterization via smartphone
- Electrical connection cable (3)

Product highlights

- Extremely compact electric vacuum generator for handling workpieces with a single suction cup
- Universal adaptation to lightweight robots or cobots using a flange adapter plate
- Simple and fast commissioning thanks to central electrical interface (Plug & Work)
- Electrical connection through external cabling or internal pins saves tubing on the robot

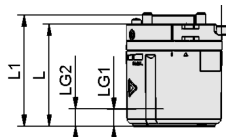
Vacuum Generator ECBPMi

Pumping speed up to 1.6 l/min

Technical Data Vacuum Generator ECBPMi

Type	Suction rate (max.) [l/min]	Rated power [W]	Voltage	Rated current [A]	Operating temperature [°C]
ECBPMi 24V-DC M12-8	1.6	7.2	24V - DC	0.3	0 ... 40 °C

Design Data Vacuum Generator ECBPMi



ECBPMi

Design Data Vacuum Generator ECBPMi

Type	L [mm]	L1 [mm]	LG1	LG2 [mm]
ECBPMi 24V-DC M12-8	67.41	73.41	6	11

STORAGE STATION

ALWR1-50-A

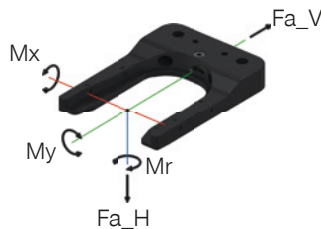
PRODUCT SPECIFICATIONS



MOTCH

Forces and moments

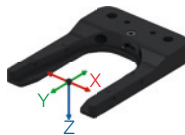
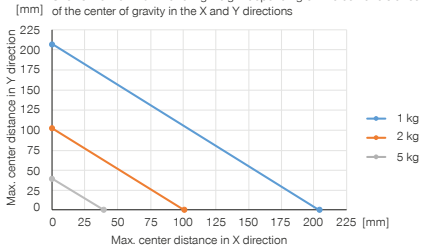
Shows static forces and torques that may have an effect on the storage station due to the loose part



Mr [Nm]	1
Mx [Nm]	1.5
My [Nm]	1
Fa_H [N]	50
Fa_V [N]	100

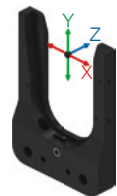
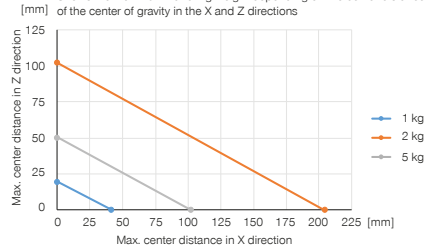
Horizontal design

Shows the maximum handling weight depending on the center distances of the center of gravity in the X and Y directions



Vertical design

Shows the maximum handling weight depending on the center distances of the center of gravity in the X and Z directions



RECOMMENDED ACCESSORIES

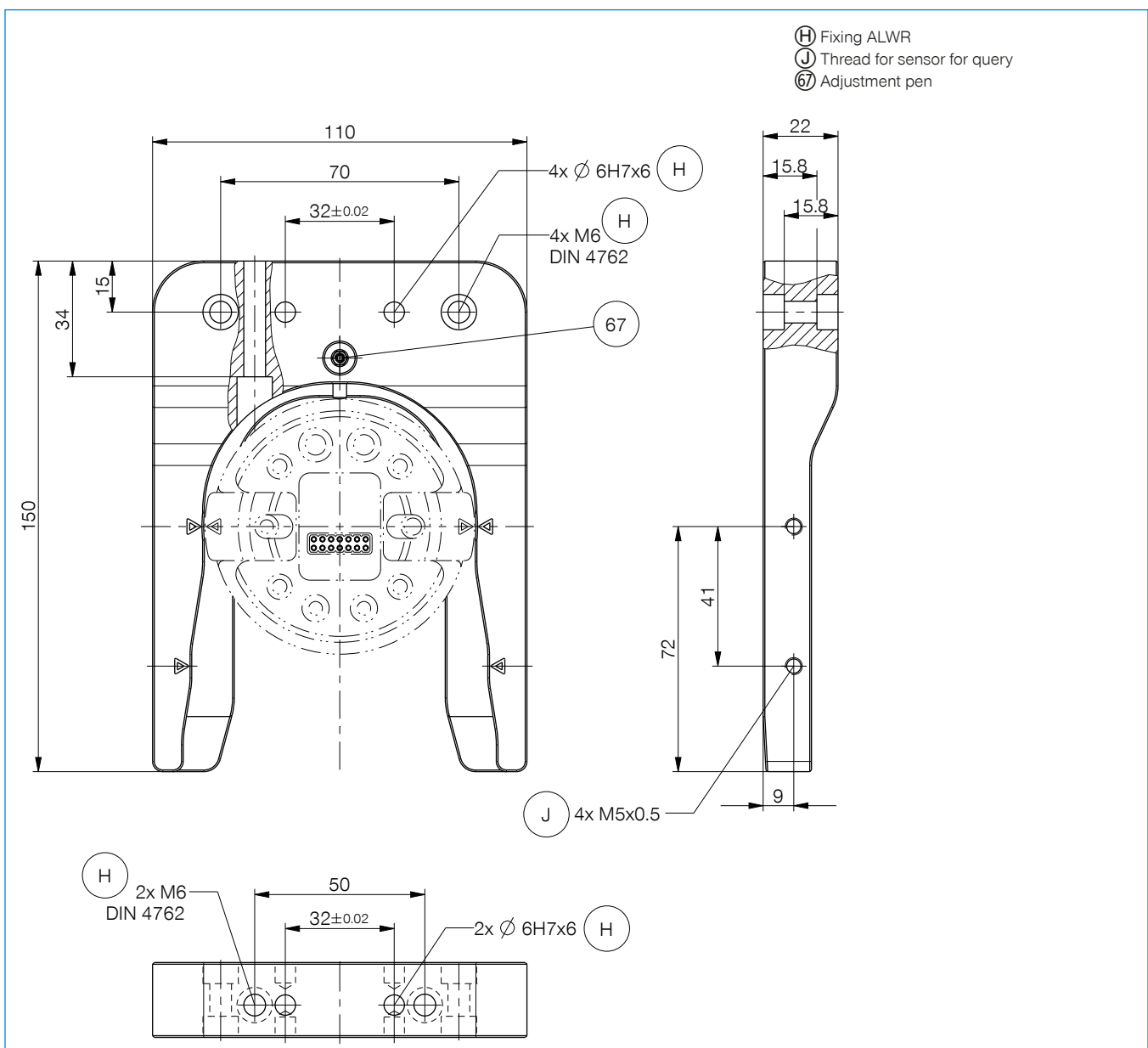


SENSORS



NJ5-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8

► Technical Data	
Order no.	ALWR1-50-A
Compatible with installation size	LWR50L
Locking force [N]	40
Release force [N]	20
Weight [kg]	0.21



LIGHTWEIGHT CHANGER FOR ROBOTS - BATCH PART

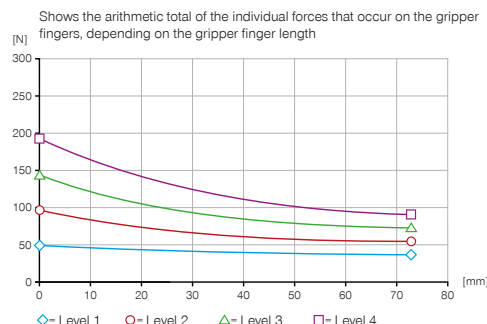
LWR50L-03-00003-A

PRODUCT SPECIFICATIONS



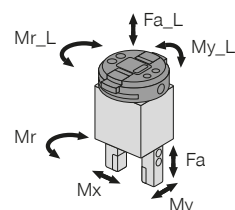
MATCH

Gripping force diagram



Forces and moments

Shows static forces and moments



Mr_L [Nm]	20	Mr [Nm]	7
My_L [Nm]	40	Mx [Nm]	7
Fa_L [N]	500	My [Nm]	5.5
		Fa [N]	200

Order no.	Technical data
	LWR50L-03-00003-A
General data	
HRC design according to ISO/TS 15066	Yes
Control	I/O
Operating temperature [°C]	5 ... +50
Protection to IEC 60529	IP40
Weight [kg]	0.77
Tool changer specific data	
Electrical energy transfer	integrated
Locking stroke [mm]	1
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Tightening force [N]	50
Release force [N]	0
Offset at coupling max. in X,Y [mm]	1.0
Gripper specific data	
suitable for series	LWR50F-xx-01/02
HRC form	collaborative
Cable management	internal
Type of drive	electrical
Integrated position sensing	digital
Stroke per jaw [mm]	10
Gripping force safety device	mechanical
Gripping force in closing (adjustable) max. [N]	190
Gripping force in opening (adjustable) max. [N]	190
Gripping force in accordance with ISO/TS 15066 [N]	<140
Closing time [s]	0.19
Opening time [s]	0.19
Control time [s]	0.03
Dead weight of mounted gripper finger max. [kg]	0.1
Length of the gripper fingers max. [mm]	80
Repetition accuracy +/- [mm]	0.05
Voltage [V]	24
Current consumption max. [A]	1
Minimum positioning path per jaw [mm]	0.5

► RECOMMENDED ACCESSORIES



CONNECTIONS / OTHER

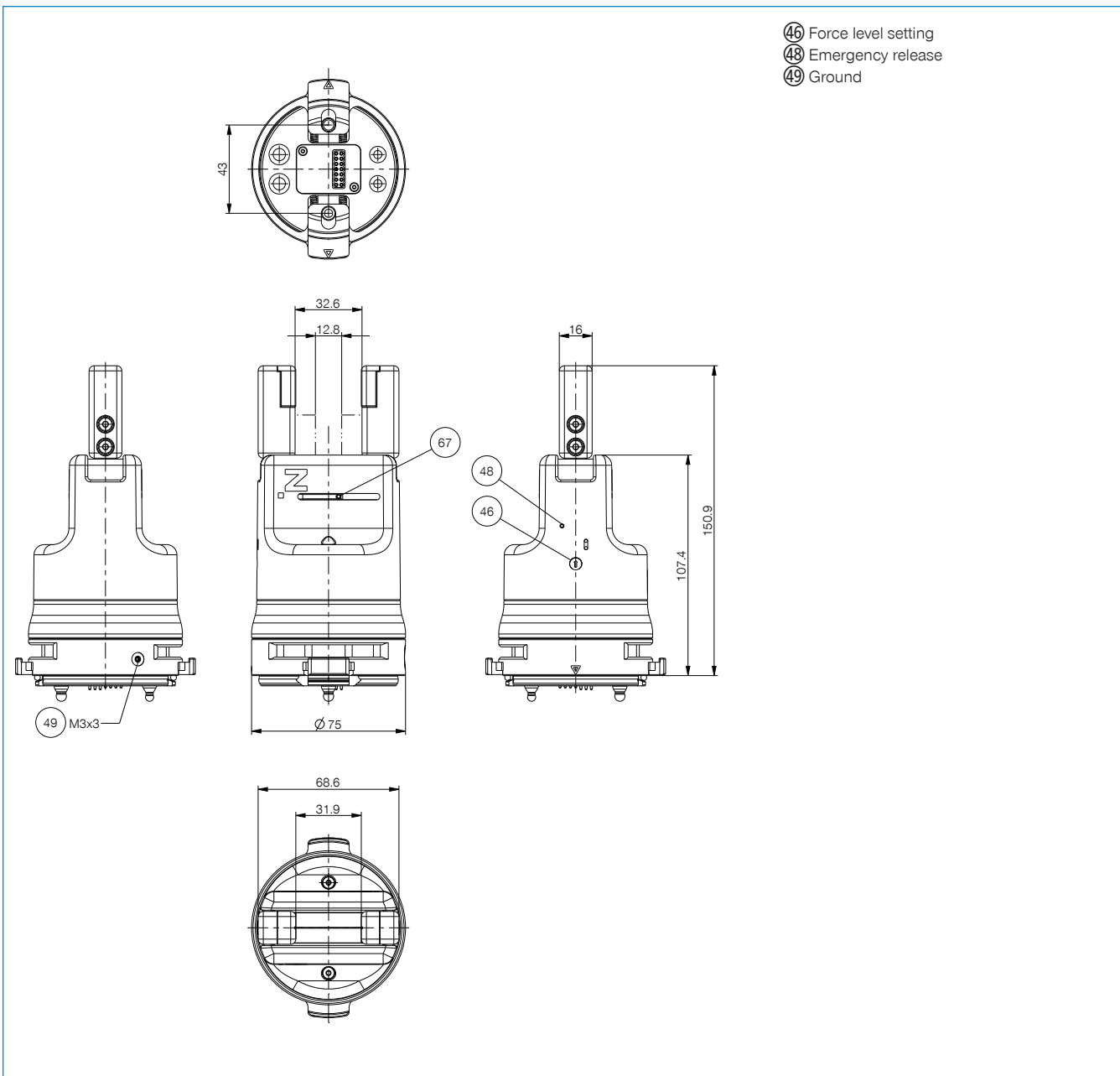


ALWR1-50-A
Storage station

► RECOMMENDED ACCESSORY STORAGE STATION



NJ5-E2SK-01
Inductive Proximity Switch Cable 0,3 m - Connector M8



LIGHTWEIGHT CHANGER FOR ROBOTS - FIXED PART

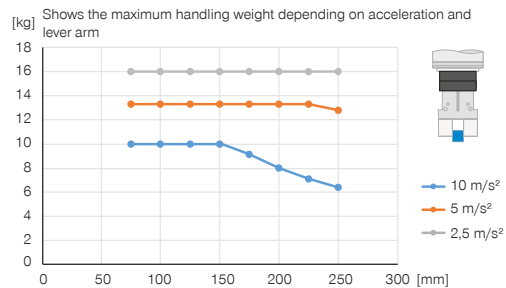
LWR50F-13-01-A / 10.08.09.00016

PRODUCT SPECIFICATIONS



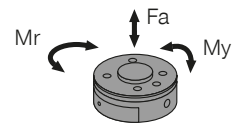
MOTCH

Vertical design with centered holding force



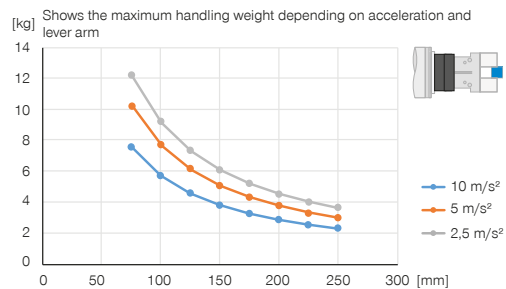
Forces and moments

Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

Horizontal design with centered holding force



RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



LWR50L-03-00002-A
Lightweight changer for robots - batch part



LWR50L-23-00006-A
Lightweight changer for robots - batch part



CONNECTIONS / OTHER



WVM7
Angled Fittings - Quick Connect Style



ZUB123084
Strain relief

LIGHTWEIGHT CHANGER FOR ROBOTS - FIXED PART

LWR50F-15-01-A / 10.08.09.00021

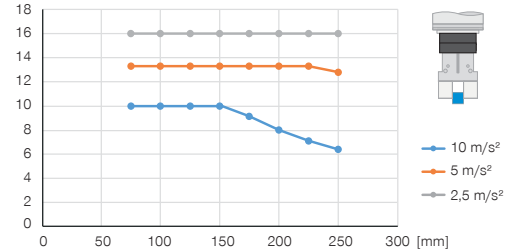
PRODUCT SPECIFICATIONS



MATCH

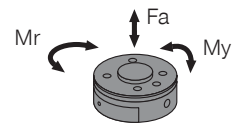
Vertical design with centered holding force

Shows the maximum handling weight depending on acceleration and lever arm



Forces and moments

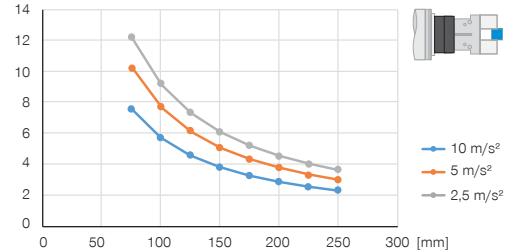
Shows static forces and moments



Mr [Nm]	20
My [Nm]	40
Fa [N]	500

Horizontal design with centered holding force

Shows the maximum handling weight depending on acceleration and lever arm



RECOMMENDED ACCESSORIES



GRIPPING COMPONENTS



LWR50L-03-00002-A
Lightweight changer for robots - batch part



LWR50L-03-00003-A
Lightweight changer for robots - batch part



LWR50L-23-00006-A
Lightweight changer for robots - batch part



CONNECTIONS / OTHER



WVM7
Angled Fittings - Quick Connect Style



ZUB123084
Strain relief

Order no.	► Technical data
	Zimmer Group LWR50F-15-01-A / Schmalz 10.08.09.00021
Suitable for robot type	ABB IRB1100
Control	Digital I/O
Connecting flange according EN ISO 9409-1	PCD 31,5
Maximum handling weight [kg]	25
Connecting cable	Plug, M12, 12-pole
Locking stroke [mm]	1
Electrical energy transfer	integrated
Pneumatic energy transfer	integrated
Tightening force [N]	50
Release force [N]	0
Repetition accuracy in X, Y [mm]	0.05
Repetition accuracy in Z [mm]	0.05
Offset at coupling max. in X,Y [mm]	1.0
Operating temperature [°C]	5 ... +60
Service life in cycles	100,000
Protection to IEC 60529	IP40
Weight [kg]	0.39

- ① Fixing (robot side)
- ② Energy supply
- ④ pneumatic feed-through
- ⑤1 Ground
- ⑤2 Connect-LED/Freedrive (robot-specific)

