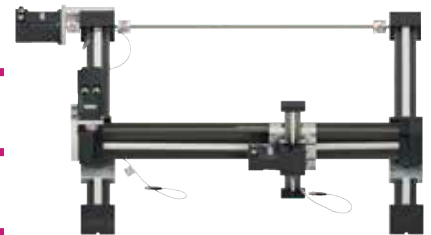


robolink[®] - polymer-based robot arm

Robot arms

Rotary axes

Apiro[®] joints

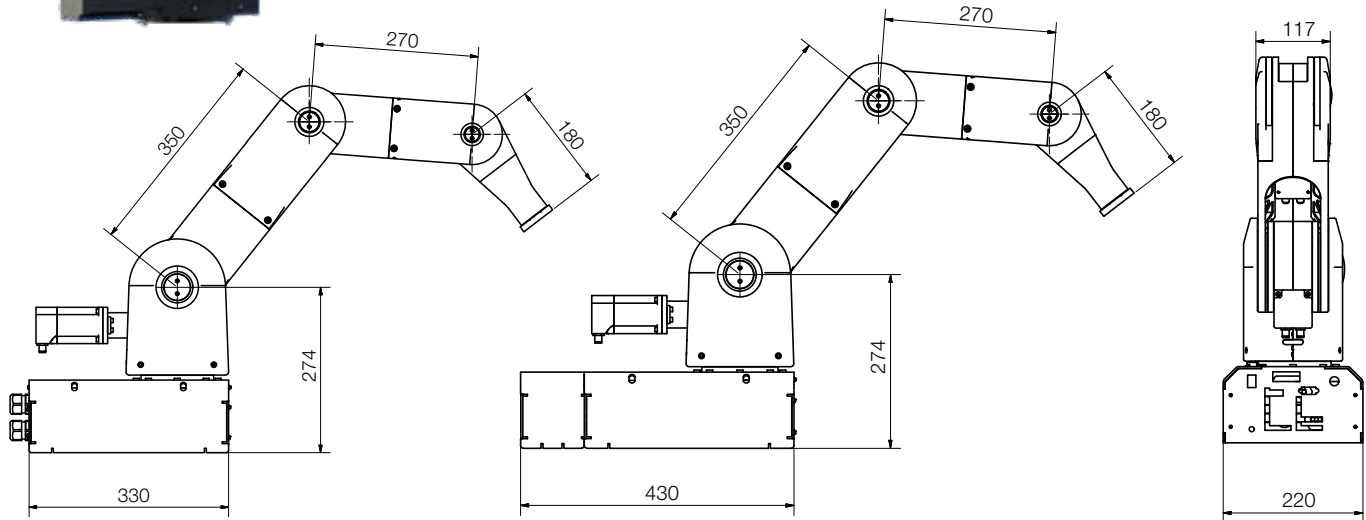


roboLink® RL-DP | Polymer-based robot arm

Robot arm with integrated control system



- Payload up to 30N
- Cycle times > 6s
- Reach up to 790mm
- Also available as DPI version with integrated control system
- With motor encoders upon request
- Version with drive encoders possible
- Available as 4 DOF or 5 DOF¹⁶⁸⁾
- Optimized bearing of the single axes for low backlash



Technical data

		Small option		Large option	
		4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾	4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾
		RL-DC	RL-DC	RL-DP	RL-DP
Operating voltage	[VDC]	24	24	24	24
Nominal power (at full load)	[W]	120	120	120	120
Weight (without power supply unit, ext. display)	[kg]	11	12	22	23
Precision (WDH precision)	[mm]	±0.5	±0.5	±0.5	±0.5
Max. speed (TCP)	[mm/s]	100	100	100	100



For more information, see the technical data sheets

► <https://downloads.igus.com>

¹⁶⁸⁾ DOF: degree of freedom

roboLink® RL-DP | Product range

Robot arm available in 8 versions

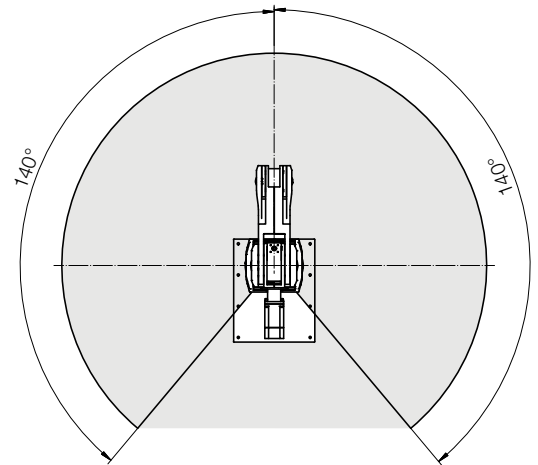
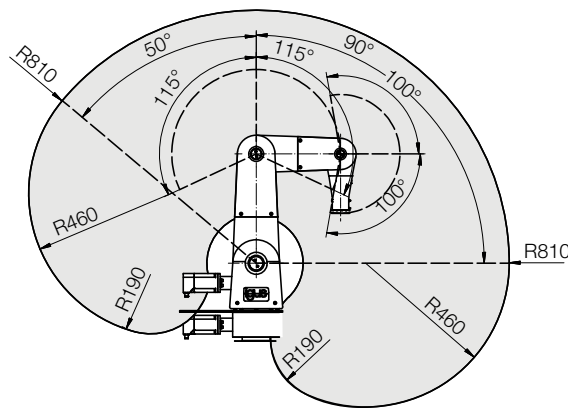


- Integrated gearbox
 - High degrees of precision and high loads
 - Faster
 - Internal cables
 - Lightweight
 - More configuration options online
- ▶ www.igus.com/RL-DP



Small option

Large option



Small option – 4DOF¹⁶⁸⁾ or 5 DOF¹⁶⁸⁾

	4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾
Part No.	RL-D-RBT-3322-BF	RL-D-RBT-3322S-BF
Reach	510mm	680mm
Load capacity	10 N	5 N

Large option – 4DOF¹⁶⁸⁾ or 5 DOF¹⁶⁸⁾

	4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾
Part No.	RL-DP-RBT-5532	RL-DP-RBT-5532S
Reach	620mm	790mm
Load capacity	30 N	30 N

All with integrated control system

Small option	4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾
Part No.	RL-DCi-4S-M-B	RL-DCi-5S-M-B
Large option	4 DOF ¹⁶⁸⁾	5 DOF ¹⁶⁸⁾
Part No.	RL-DPI-RBT-5532	RL-DPI-RBT-5532S
With top hat (DIN) rail	RL-DP-4-0002-00-0	RL-DP-5-0002-00-0
With control cabinet	RL-DP-4-0004-00-0	RL-DP-5-0004-00-0

¹⁶⁸⁾ DOF: degree of freedom

roboLink® D | Rotary axis | Overview

Rotary axis – with iglide® PRT slewing rings



econ

Entry level model mounted with plain bearings for manual adjustments with light polymer slewing ring PRT-02 series.

More information on
iglide® PRT-02 slewing rings

► Page 740



Standard

Robust type with plain bearings for high loads. Manual and electrical operation. With robust aluminum slewing ring of the PRT-01 series.

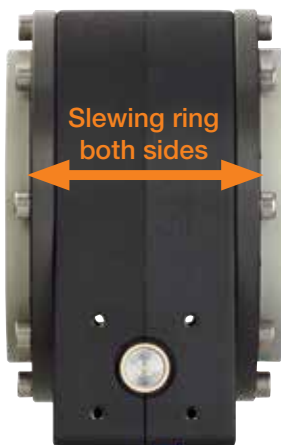
More information on
iglide® PRT-01 slewing rings

► Page 738



Dynamics

Dynamic design with ball bearings. Manual or electrical adjustments with slewing ring with ball bearings.



Delivery time
2–3 days

The screenshot shows the igus website interface. At the top, there is a search bar with the text 'Search e.g. article numbers' and a shopping cart icon labeled 'Shopping Cart (0)'. Below the search bar is a navigation menu with links for 'Shop', 'Configurators', 'Product Information', 'Solutions', 'Resources', 'Company', 'Inquiry / Contact', and 'US(EN)'. The main content area features a large heading 'Low Cost Automation Solutions' and a list of categories on the left. The categories include 'Robotic arms', 'Modular robot gearbox', 'Strain wave gear', 'Robotic rotary joints', 'Worm gear joints' (with sub-options for 'symmetric' and 'asymmetric'), 'Worm gear accessories', 'Control system', 'Gantries/Cartesian robots', and 'Delta robots'. Two product listings are visible, both for 'roboLink® D High End robotic joint, size 20'. The first listing is for a 'symmetrical' joint, priced at 'from 442.46 USD/Pc.' with '1 item, ready for shipping' and a delivery time of '1 in 24 - 48 hours'. The second listing is for an 'asymmetrical' joint, priced at 'from 370.01 USD/Pc.' with '1 item, ready for shipping' and a delivery time of '1 in 24 - 48 hours'. Both listings include a 'Shop now' button.

Order roboLink® D rotary axes with proven iglide® slewing rings quickly and easily in the rotary axis shop.

The extensive modular robotic system allows you to automate manual work steps quickly and easily.



More information and prices online

► www.igus.com/roboLink

robolink® D | Rotary axis | Technical data

Rotary axis with two PRT slewing rings, with plain bearings



Order key

Type	Options				
RL - D - 20 - 101 - 38 - 01033					
robolink®	Direct drive	Installation size	Design	Gear ratio	Variation

Technical data

Part No.	Size (H x W x D)	Shaft Ø	Trans- mission	Axis distance	Backlash	Breakaway torque	Max. axial dyn. load on output
	[mm]	[mm]	[mm/rev]	[mm]	[°]	[cNm]	[N]
RL-D-20-101-38-01033	90 x 80 x 67	8	1:38	31	< 0.5°	< 5	> 500
RL-D-20-101-70-01033	90 x 80 x 67	8	1:70	31	< 0.5°	< 5	> 500
RL-D-30-101-5-01033	110 x 100 x 94	10	1:5	40	< 0.5°	< 7	> 700
RL-D-30-101-50-01033	110 x 100 x 94	10	1:50	40	< 0.5°	< 7	> 700
RL-D-30-101-70-01033	110 x 100 x 94	10	1:70	40	< 0.5°	< 7	> 700
RL-D-50-101-48-01033	170 x 150 x 103	15	1:48	63	< 0.5°	< 10	> 1,200
RL-D-50-101-70-01033	170 x 150 x 103	15	1:70	63	< 0.5°	< 10	> 1,200

Part No.	Speed at max. load	Weight	Efficiency	Moment of break- age (static)	Max. output Dynamic torque 12rpm	
					Periodic use (<30%)	Continuous use
	[rpm]	[g]		[Nm]	[Nm]	[Nm]
RL-D-20-101-38-01033	20	610	0.45	30	10	5
RL-D-20-101-70-01033	20	610	0.35	20	5	2.5 (9rpm)
RL-D-30-101-5-01033	12	1,180	0.65	40	10	5
RL-D-30-101-50-01033	12	1,180	0.40	60	20	10
RL-D-30-101-70-01033	12	1,180	0.30	30	12	7.5 (6rpm)
RL-D-50-101-48-01033	8	3,050	0.40	180	50	25
RL-D-50-101-70-01033	8	3,050	0.30	140	40	20

roboLink® D | Rotary axis | Technical data

Rotary axis with one PRT slewing rings, with plain bearings



Order key

Type	Options				
RL - D - 20 - 102 - 38 - 01035					
roboLink®	Direct drive	Installation size	Design	Gear ratio	Variation

Technical data

Part No.	Size (H x W x D)	Shaft Ø	Transmission	Axis distance	Backlash	Breakaway torque	Max. axial dyn. load on output
	[mm]	[mm]	[mm/rev]	[mm]	[°]	[cNm]	[N]
RL-D-20-102-38-01035	90 x 80 x 67	8	1:38	31	< 0.5°	< 5	> 500
RL-D-20-102-70-01035	90 x 80 x 67	8	1:70	31	< 0.5°	< 5	> 500
RL-D-30-102-5-01035	110 x 100 x 94	10	1:5	40	< 0.5°	< 7	> 700
RL-D-30-102-50-01035	110 x 100 x 94	10	1:50	40	< 0.5°	< 7	> 700
RL-D-30-102-70-01035	110 x 100 x 94	10	1:70	40	< 0.5°	< 7	> 700
RL-D-50-102-48-01035	170 x 150 x 103	15	1:48	63	< 0.5°	< 10	> 1,200
RL-D-50-102-70-01035	170 x 150 x 103	15	1:70	63	< 0.5°	< 10	> 1,200

Part No.	Speed at max. load	Weight	Efficiency	Moment of break-age (static)	Max. output Dynamic torque 12rpm	
					Periodic use (<30%)	Continuous use
	[rpm]	[g]		[Nm]	[Nm]	[Nm]
RL-D-20-102-38-01035	20	470	0.45	30	10	5
RL-D-20-102-70-01035	20	470	0.35	20	5	2.5 (9rpm)
RL-D-30-102-5-01035	12	890	0.65	40	10	5
RL-D-30-102-50-01035	12	890	0.40	60	20	10
RL-D-30-102-70-01035	12	890	0.30	30	12	7.5 (6rpm)
RL-D-50-102-48-01035	8	2,300	0.40	180	50	25
RL-D-50-102-70-01035	8	2,300	0.30	140	40	20

robolink® D | Rotary axis | Technical data

Rotary axis with two PRT slewing rings, with ball bearings



Order key

Type	Options				
RL - D - 20 - 105 - 38 - 010BB					
robolink®	Direct drive	Installation size	Design	Gear ratio	Variation

Technical data

Part No.	Size (H x W x D)	Shaft Ø	Trans- mission	Axis distance	Backlash	Breakaway torque	Max. axial dynamic load on output
	[mm]	[mm]	[mm/rev]	[mm]	[°]	[cNm]	[N]
RL-D-20-105-38-010BB	90 x 80 x 67	8	1:38	31	< 0.5°	< 5	> 250
RL-D-20-105-70-010BB	90 x 80 x 67	8	1:70	31	< 0.5°	< 5	> 250
RL-D-30-105-5-010BB	110 x 100 x 94	10	1:5	40	< 0.5°	< 7	> 450
RL-D-30-105-50-010BB	110 x 100 x 94	10	1:50	40	< 0.5°	< 7	> 450
RL-D-30-105-70-010BB	110 x 100 x 94	10	1:70	40	< 0.5°	< 7	> 450
RL-D-50-105-48-010BB	170 x 150 x 103	15	1:48	63	< 0.5°	< 10	> 1,000
RL-D-50-105-70-010BB	170 x 150 x 103	15	1:70	63	< 0.5°	< 10	> 1,000

Part No.	Speed at max. load	Weight	Efficiency	Moment of breakage (static)	Max. output dynamic torque 12rpm	
					Periodic use (<30%)	Continuous use
	[rpm]	[g]		[Nm]	[Nm]	[Nm]
RL-D-20-105-38-010BB	20	320	0.45	30	10	5
RL-D-20-105-70-010BB	20	320	0.35	20	5	2.5 (9 rpm)
RL-D-30-105-5-010BB	12	620	0.65	40	10	5
RL-D-30-105-50-010BB	12	620	0.40	60	20	10
RL-D-30-105-70-010BB	12	620	0.30	30	12	7.5 (6 rpm)
RL-D-50-105-48-010BB	8	2,730	0.40	180	50	25
RL-D-50-105-70-010BB	8	2,730	0.30	140	40	20

roboLink® D | Rotary axis | Product range

Rotary axis with one PRT slewing rings, with ball bearings



Order key

Type	Options				
RL - D - 20 - 106 - 38 - 010B5					
roboLink®	Direct drive	Installation size	Design	Gear ratio	Variation

Technical data

Part No.	Size (H x W x D)	Shaft Ø	Trans- mission	Axis distance	Backlash	Breakaway torque	Max. axial dynamic load on output
	[mm]	[mm]	[mm/rev]	[mm]	[°]	[cNm]	[N]
RL-D-20-106-38-010B5	90 x 80 x 67	8	1:38	31	< 0.5°	< 5	> 250
RL-D-20-106-70-010B5	90 x 80 x 67	8	1:70	31	< 0.5°	< 5	> 250
RL-D-30-106-5-010B5	110 x 100 x 94	10	1:5	40	< 0.5°	< 7	> 450
RL-D-30-106-50-010B5	110 x 100 x 94	10	1:50	40	< 0.5°	< 7	> 450
RL-D-30-106-70-010B5	110 x 100 x 94	10	1:70	40	< 0.5°	< 7	> 450
RL-D-50-106-48-010B5	170 x 150 x 103	15	1:48	63	< 0.5°	< 10	> 1,000
RL-D-50-106-70-010B5	170 x 150 x 103	15	1:70	63	< 0.5°	< 10	> 1,000

Part No.	Speed at max. load	Weight	Efficiency	Moment of breakage (static)	Max. output dynamic torque 12rpm	
					Periodic use (<30%)	Continuous use
	[rpm]	[g]		[Nm]	[Nm]	[Nm]
RL-D-20-106-38-010B5	20	280	0.45	30	10	5
RL-D-20-106-70-010B5	20	280	0.35	20	5	2.5 (9 rpm)
RL-D-30-106-5-010B5	12	520	0.65	40	10	5
RL-D-30-106-50-010B5	12	520	0.40	60	20	10
RL-D-30-106-70-010B5	12	520	0.30	30	12	7.5 (6 rpm)
RL-D-50-106-48-010B5	8	2,140	0.40	180	50	25
RL-D-50-106-70-010B5	8	2,140	0.30	140	40	20

roboLink® D | Rotary axis | Product range

roboLink® D robot joint with direct drive



- Adaptable to various motors, standard option: NEMA17 / 23 / 23XL stepper motor
- INI kit for zero position optionally adaptable

Motor kit

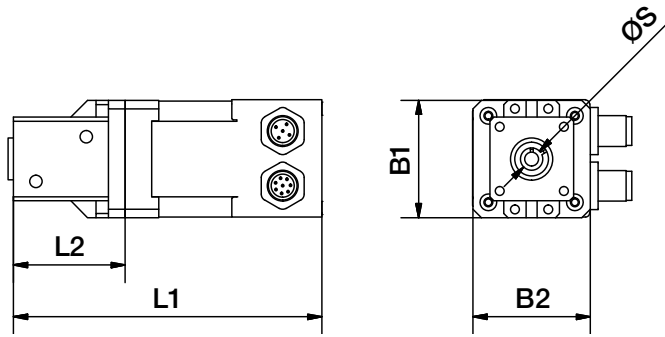
Motor type	Distance over hubs [mm]	Versions
igus® stepper motor		
NEMA17, NEMA23, NEMA23XL	42, 56, 60	-00: with strand wires
		-01: with stepper motor without encoder
		-02: with motor encoder
		-NM: version without motor

Technical data

Joint	Installation size 20		Installation size 30		Installation size 50	
	RL-D-20-101-38-xxxxx		RL-D-30-101-50-xxxxx		RL-D-50-101-48-xxxxx	
Motor	+ NEMA17	+ NEMA17	+ NEMA23	+ NEMA23	+ NEMA23XL	
Motor type	Stepper motor					
Weight (with standard joint)	[g]	890	1.1140	1,860	2,540	2,970
Max. radial torque strength (short-term)	[Nm]	5	6	12	21	38
Max. radial torque strength (long-term)	[Nm]	4	5	8	18	33
Max. speed (at max. load)	[rpm]	5	4	4	4	4
Max. axial dynamic load (horizontal installation)	[N]	> 500	> 700	> 700	> 1,200	> 1,200



Delivery time
2–3 days



Dimensions [mm]

Part No.	ØS	L1	L2	B1	B2
NEMA17					
RL-D-20-MK-C-N17-00	8	99.4	40	42.0	42.0
RL-D-20-MK-C-N17-01	8	110.4	40	42.0	42.0
RL-D-20-MK-C-N17-02	8	110.4	40	42.0	42.0
RL-D-20-MK-C-N17-NM	8	-	40	42.0	42.0
RL-D-30-MK-C-N17-00	10	99.4	40	42.0	42.0
RL-D-30-MK-C-N17-01	10	110.4	40	42.0	42.0
RL-D-30-MK-C-N17-02	10	110.4	40	42.0	42.0
RL-D-30-MK-C-N17-NM	10	-	40	42.0	42.0
NEMA23					
RL-D-30-MK-C-N23-00	10	118	42	56.4	56.4
RL-D-30-MK-C-N23-01	10	140	42	56.4	56.4
RL-D-30-MK-C-N23-02	10	140	42	56.4	56.4
RL-D-30-MK-C-N23-NM	10	-	42	56.4	56.4
RL-D-50-MK-C-N23-00	15	124	48	60.0	60.0
RL-D-50-MK-C-N23-01	15	146	48	60.0	60.0
RL-D-50-MK-C-N23-02	15	146	48	60.0	60.0
RL-D-50-MK-C-N23-NM	15	-	48	60.0	60.0
NEMA23XL					
RL-D-50-MK-C-N23XL-00	15	136.5	48	60.0	60.0
RL-D-50-MK-C-N23XL-01	15	158.5	48	60.0	60.0
RL-D-50-MK-C-N23XL-02	15	158.5	48	60.0	60.0
RL-D-50-MK-C-N23XL-NM	15	-	48	60.0	60.0
RL-D-MONT-MOT-01					Motor assembly

roboLink® D | Rotary axis | Product range

roboLink® D – components with DC motor



Order key



RL-D-20-A0202

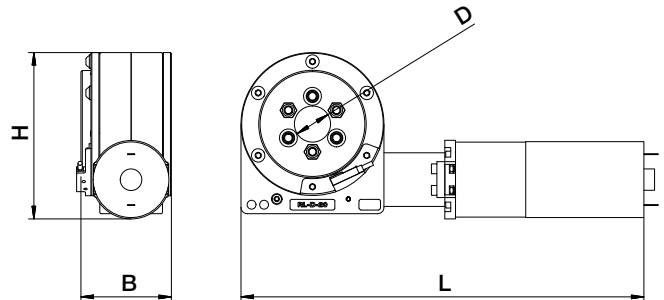


RL-D-30-A0203



RL-D-50-A0204

- Assembly of robot joint, motor kit, INI kit
- Also available with cables ► [Page 1732](#) and motor control system ► [Page 1746](#)



Type	Options
RL - D - 20 - A0202	
roboLink®	Direct drive
Installation size	Variation

Technical data

	Weight	Max. output torque	Max. speed	Service life
	[kg]	[Nm]	[rpm]	
Installation size 20				
RL-D-20-A0202	1.06	7	12	Min. 1,000,000 cycles ¹⁶⁹⁾
Installation size 30				
RL-D-30-A0203	1.50	20	9	Min. 1,000,000 cycles ¹⁶⁹⁾
Installation size 50				
RL-D-50-A0204	4.8	50	6	Min. 1,000,000 cycles ¹⁶⁹⁾

¹⁶⁹⁾ At a rated torque of 2.5Nm and a rated speed of 30rpm

Dimensions [mm]

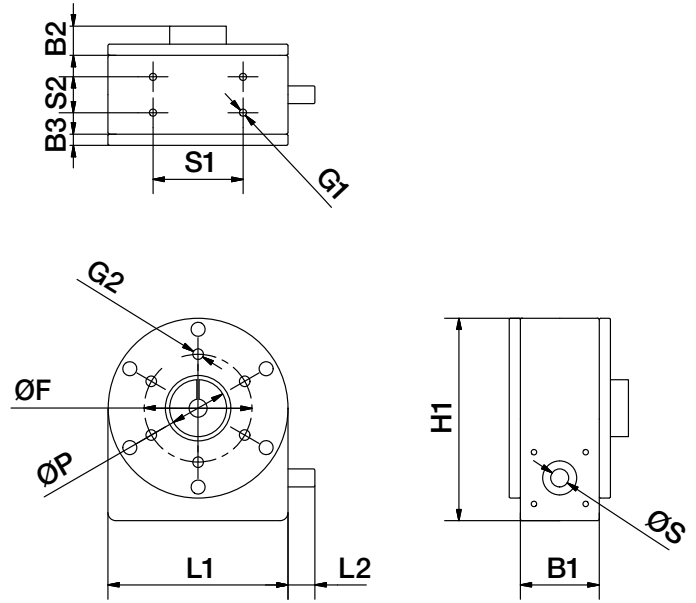
Part No.	D	B	L	H
Installation size 20				
RL-D-20-A0202	20	50.5	233.7	90.0
Installation size 30				
RL-D-30-A0203	30	63.5	253.7	110.0
Installation size 50				
RL-D-50-A0204	50	87.5	303.77	170.5



Delivery time
2–3 days



- Cost-effective alternative without slewing ring bearing
- Lightweight
- Replaceable coupling components for different shaft diameters



Dimensions [mm]

Part No.	ØS	ØP	ØF	ØT	L1	L2	B1	B2	B3	H1	G1	S1	S2
RL-D-20-103-...	8	25	48	20	80.5	12	35	13	5	90.5	M4	40	16
RL-D-30-103-...	10	32	64	30	100.5	12	45	16.3	6	110.5	M4	55	20
RL-D-50-103-...	15	42	100	50	150.5	13	60	22.8	6	170.5	M6	80	30



Order example: RL-D-20-103-38-010K5-08
 roboLink® robot joint installation size 20, gear ratio
 1:38, gearbox, motor pin 8mm



More information and prices online
 ► www.igus.com/roboLink



Delivery time
 2–3 days

roboLink® | Online tools | roboLink® designer

Calculate and configure robot arms



With the roboLink® designer, you can quickly and easily configure online in an intuitive CAD interface your individual roboLink® D robot arm online. Select individual roboLink® components step by step to configure the robot arm individually, from the first axis to the tool. Simulation of the solution thanks to output of max. range and max. payload, teach function and inverse kinematics.

► www.igus.com/roboLink-designer