

# LWA 6DOF 6kg PowerBall Light Weight Arm

Part No. 0306960

1.

- Base Data

2.

- Workspace and Flanges

3.

- ERB PowerBalls 115 and 145

4.

- Accessories

5.

- Force-Control and Compliant Behavior

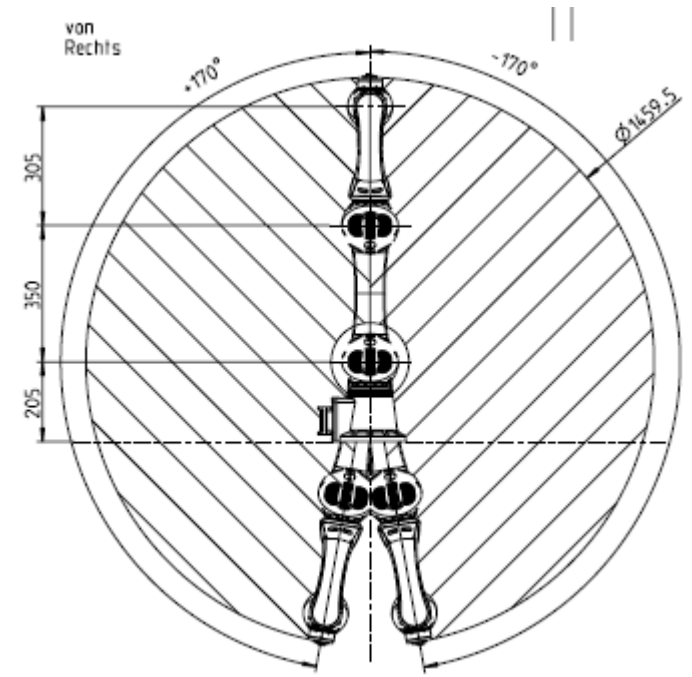
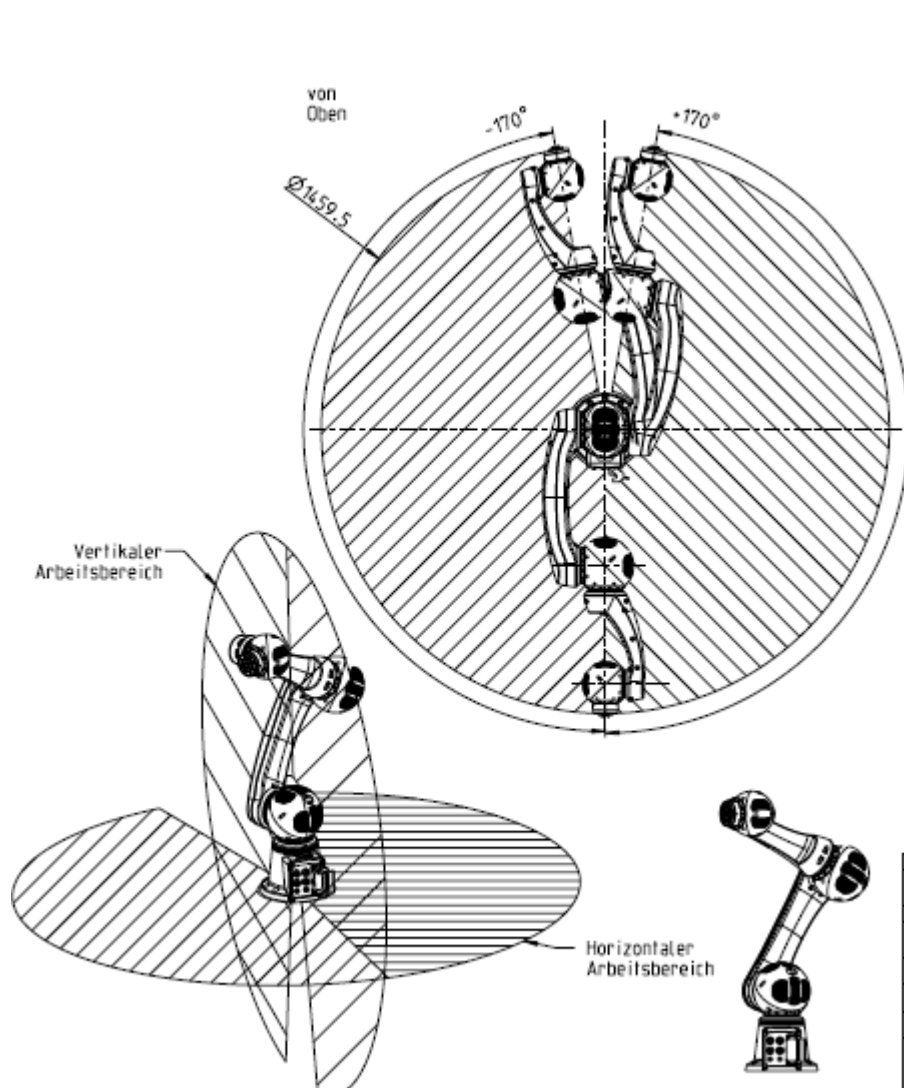
6.

- Example Applications

# Base Data

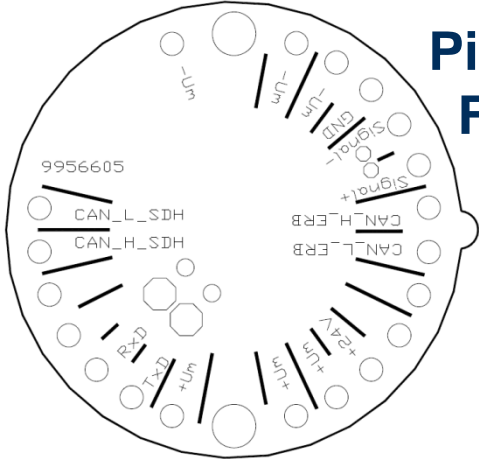
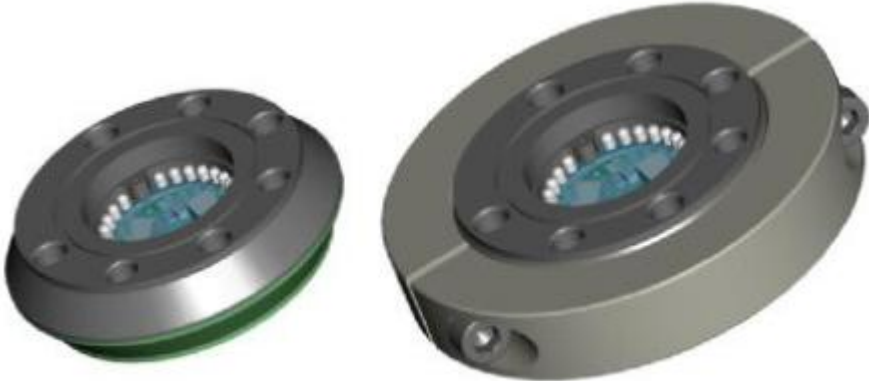
Type	Articulated 6 DOF Light Weight Robot	
Nominal payload	6 kg	
Number of axis	6	
Wrist mounting flange	Flat Tool Changer Including several free signal connections and power	
Mounting position	any	
Repeatability	±0.06 mm	
Weight, Protection	12.5 kg, IP 54	
Axis data	Speed at nominal load	Range
Axis 1	72 °/s	±170°
Axis 2	72 °/s	±110
Axis 3	72 °/s	±155
Axis 4	72 °/s	±170
Axis 5	90 °/s	±140
Axis 6	90 °/s	±170
Drives	Brushless DC motors with permanent magnetic brakes	
Position Feedback	Absolute position sensing	
Work space	See figures	
Power supply	24 V DC/ avg. 3 A / max. 20A	
Single axis control via	CANopen (CiA DS402:IEC61800-7-201)	



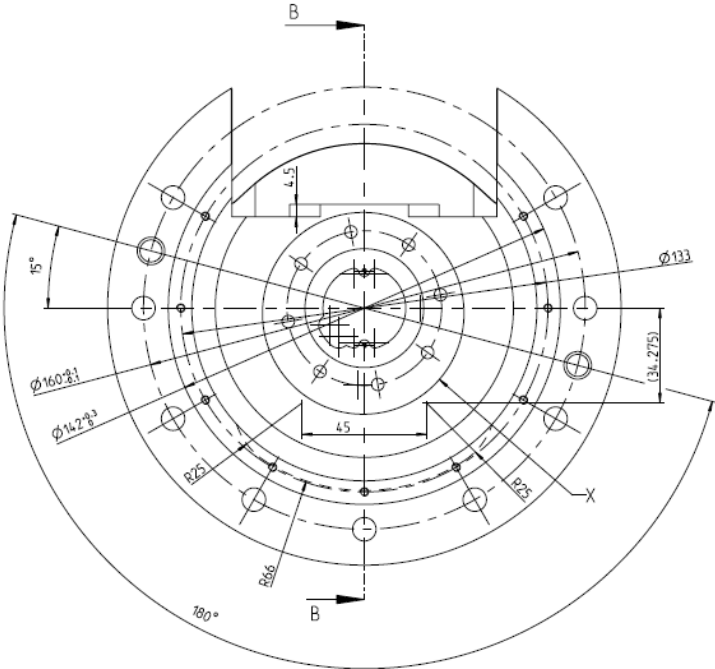


# Flanges

## Manual Flat Tool Changer



**Pin-Out at Flange**



**Robot Base**



# ERB PowerBall



Details per Axis		ERB 115	ERB 145
Max. Speed	[°/s]	72	72
Nominal Torque	[Nm]	7	35
Max. Torque	[Nm]	19	64
Max. rotation angle	[°]	340	340
Max. ambient temp	[°C]	40	40
Max. surface temp	[°C]	70	70
Weight	[kg]	1.8	3.9
Communication	CANopen (DS402:IEC61800-7-201)		



## KEBA Robot Control CP242/A



## Gripper PG070



## Gripper EGP/MEG050



## Gripper WSG 050



## Robotic Hand SDH 2

# Force Control and compliant behavior



Encoder  
Actual Value

6D F/T  
Sensor-Data

Set-Point

CAN



Preprocess  
actual value

Calculation  
Set-Point

Analysis of sensor  
values

Calculation of force  
deviation

Calculation of set-  
point path control

Set-Point adjustment



# Example Application: Lab Automation



## Mobile Manipulator for

- Grasping of small parts
- Sharing workspace with humans on a mobile platform
- Easily adaptable
- Minimal sensor usage
- Safe according to ISO EN 10218





Thank you for your attention!

[www.schunk-modular-robotics.com](http://www.schunk-modular-robotics.com)

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