

**▶ PNEUMATIC**

Series DGK

532



Series DGP400

536

2-JAW ANGULAR ROTARY GRIPPERS SERIES DGK

▶ PRODUCT ADVANTAGES



“TWO in ONE”

▶ Smooth stroke configuration

You can adjust the 180° opening angle to be unique to your application using an adjusting screw

▶ 2 in 1

Gripping and swivelling in a module allows optimum utilisation of the installation space

▶ Individually adjustable

How you stay flexible: 90° or 180° swivel angle - You decide what your application requires on site

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

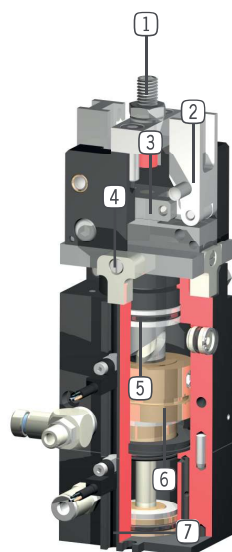
Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

www.zimmer-group.com



► BENEFITS IN DETAIL



- ① **Stroke adjustment screw**
 - Infinitely adjustable opening stroke
- ② **Gripper jaw**
 - individual gripper finger mounting
- ③ **Guided toggle lever mechanism**
 - synchronized the movement of the gripper jaws
 - mechanically self-locking
- ④ **Endposition 0°/90°/180° adjustment**
 - endstops for 0°/90°/180° included with purchase
- ⑤ **Rotating-drive mechanism**
 - robust, wear-resistant
- ⑥ **Drive**
 - two double-acting pneumatic cylinders
- ⑦ **Slot for magnetic field sensor**
 - sensing of the rotational position and gripper jaw position

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

All information just a click away at: www.zimmer-group.com

Find data, illustrations, 3D models and operating instructions for your installation size using the order number for your desired product.

Quick, clear and always up-to-date.



2-JAW ANGULAR ROTARY GRIPPERS

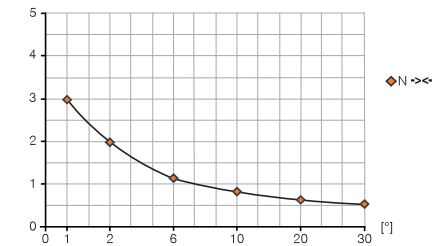
INSTALLATION SIZE DGK20

▶ PRODUCT SPECIFICATIONS



▶ Gripping moment diagram

[Nm] Gripping force as a function of opening angle.



▶ Forces and moments

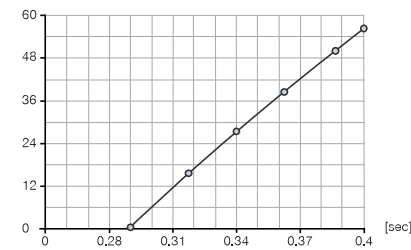
Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	0.8
Mx [Nm]	0.8
My [Nm]	1
Fa [N]	150

▶ Rotation time diagram

[kg cm²] Rotation time as a function of mass moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRVM5X4



Stop 90° + 180°

ANS0065

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Angled Cable 5 m

MFS103KHC



Magnetic field sensor
Angled Cable 0,3 m -
Connector M8

MFS103SKHC



Magnetic field sensor
Straight Cable 5 m

MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8

MFS204SKHC

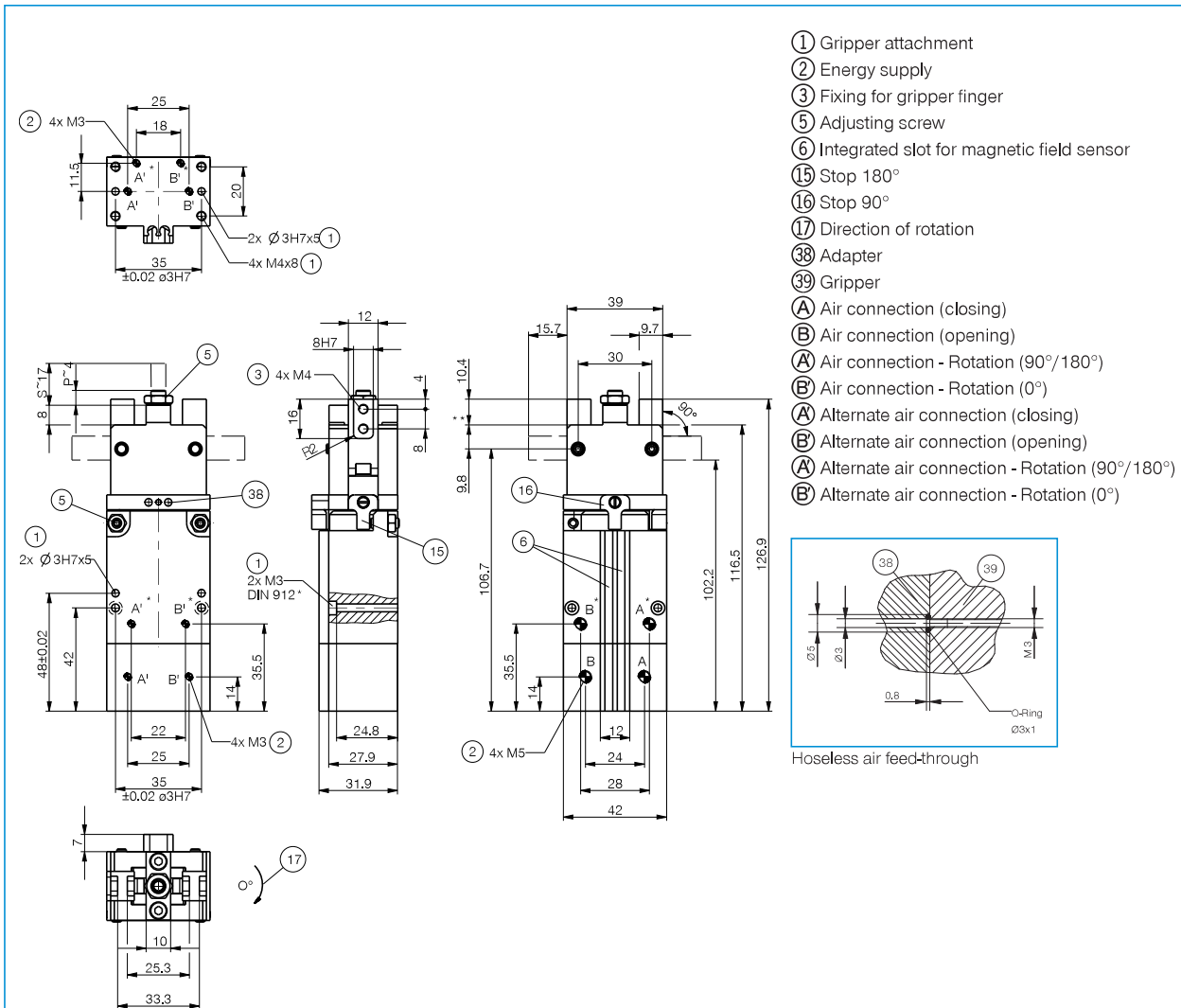


Straight Fittings - Quick
Connect Style

GVM5

Order no.	DGK20N
Stroke per jaw [°]	90
Gripping force in closing [N]	150
Gripping moment in closing [Nm]	3
Closing time [s]	0.25
Opening time [s]	0.25
Torque [Nm]	0.5
Repetition accuracy +/- [mm]	0.1
Repetition accuracy +/- [°]	0.05
Axial bearing load [N]	960
Radial bearing load [Nm]	10
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	9
Air volume per cycle 90° [cm ³]	4.6
Air volume per cycle 180° [cm ³]	9.2
Weight [kg]	0.55

*All data measured at 6 bar



2-JAW PARALLEL ROTARY GRIPPERS

SERIES DGP400

▶ PRODUCT ADVANTAGES



“TWO in ONE”

▶ Proven T slot guide

This established and proven guiding technology stands for the highest process reliability like no other

▶ 2 in 1

Gripping and swivelling in a module allows optimum utilisation of the installation space

▶ Individually adjustable

How you stay flexible: 90° or 180° swivel angle - You decide what your application requires on site

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

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HOW TO ORDER CORRECTLY

- ▶ The product order numbers are arranged according to this diagram:

Order no.	DGP404N	<input type="checkbox"/>		
For external gripping, self-locking, spring closing		C		
For internal gripping, self-locking, spring opening		O		



► BENEFITS IN DETAIL



- ① **Removable centering sleeves**
 - quick and economical positioning of the gripper fingers
- ② **Wedge hook mechanism**
 - synchronized the movement of the gripper jaws
- ③ **Precise T-Slot guide**
 - high forces and moments capacity
- ④ **Endposition 0°/90°/180° adjustment**
 - endstops for 0°/90°/180° included with purchase
- ⑤ **Rotating-drive mechanism**
 - robust, wear-resistant
- ⑥ **Drive**
 - two double-acting pneumatic cylinders
- ⑦ **Slot for magnetic field sensor**
 - sensing of the rotational position and gripper jaw position
- ⑧ **Integrated gripping force safety device**
 - optional via integrated spring (C or O models)

► FURTHER INFORMATION IS AVAILABLE ONLINE



► Technical Information

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Quick, clear and always up-to-date.



2-JAW PARALLEL ROTARY GRIPPERS

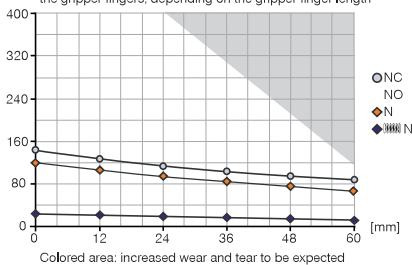
INSTALLATION SIZE DGP404

▶ PRODUCT SPECIFICATIONS



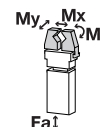
▶ Gripping moment diagram

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length



▶ Forces and moments

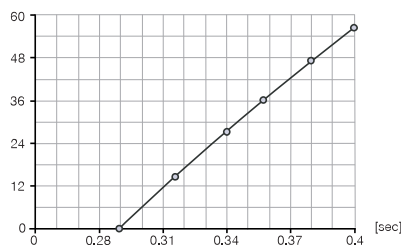
Displays static forces and moments that can also have an effect, besides the gripping force.



Mr [Nm]	8
Mx [Nm]	15
My [Nm]	10
Fa [N]	300

▶ Rotation time diagram

[kg cm²] Rotation time as a function of mass moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4



Centering Disc
DST40400



Stop 90° + 180°
ANS0065

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Angled Cable 5 m
MFS103KHC



Magnetic field sensor Angled Cable 0,3 m - Connector M8
MFS103SKHC



Magnetic field sensor Straight Cable 5 m
MFS204KHC



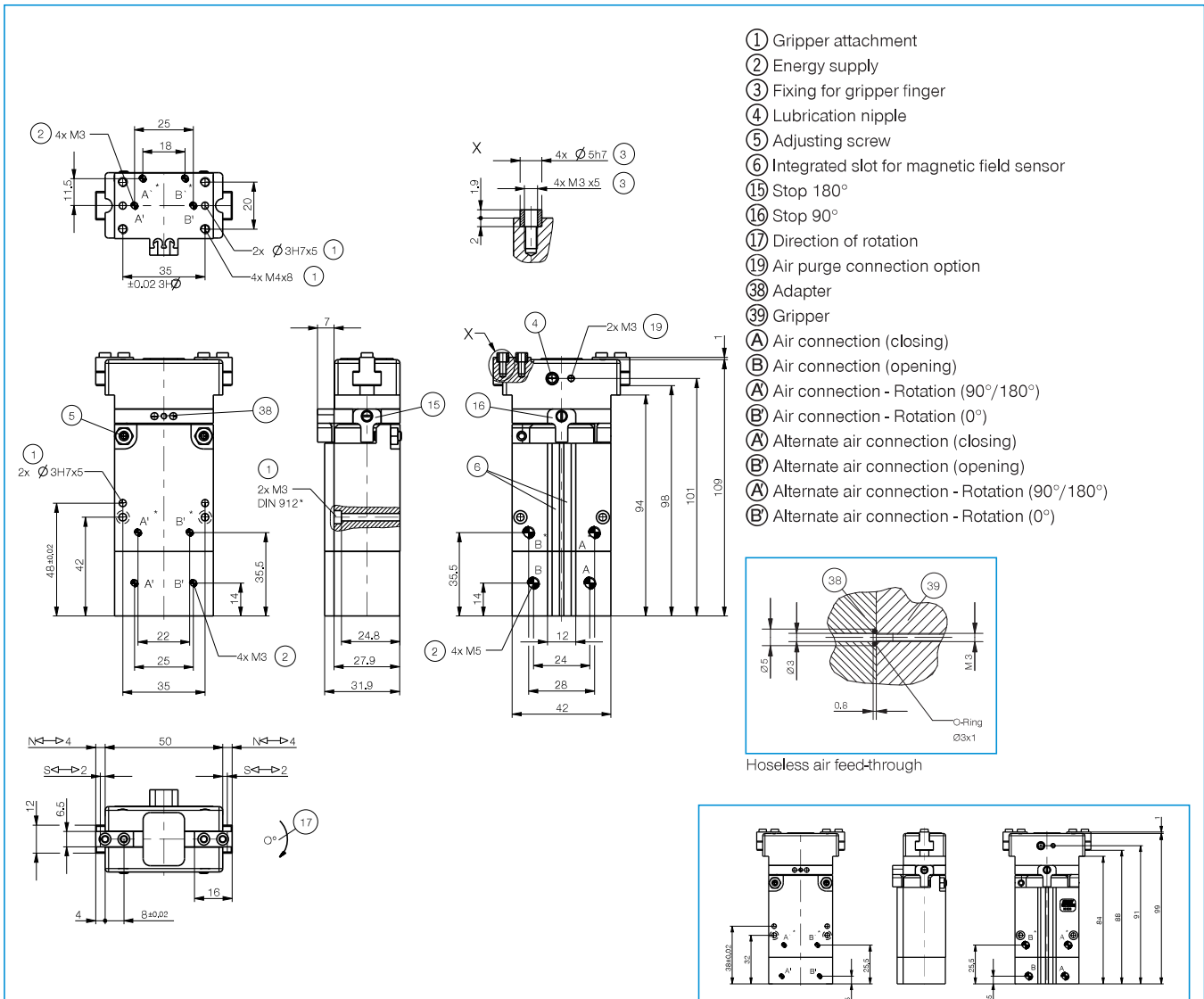
Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Straight Fittings - Quick Connect Style
GVM5

Order no.	► Technical Data*		
	DGP404N	DGP404NC	DGP404NO
Stroke per jaw [mm]	4	4	4
Gripping force in opening [N]	115		155
Gripping force in closing [N]	115	155	
Gripping force secured by spring min. [N]		40	40
Closing time / Opening time [s]	0,01 / 0,01	0,015 / 0,015	0,015 / 0,015
Torque [Nm]	0,5	0,5	0,5
Repetition accuracy +/- [mm]	0,05	0,05	0,05
Repetition accuracy +/- [°]	0,05	0,05	0,05
Axial bearing load [N]	960	960	960
Radial bearing load [Nm]	10	10	10
Operating pressure [bar]	3 ... 8	3 ... 8	3 ... 8
Operating temperature [°C]	5 ... +80	5 ... +80	5 ... +80
Air volume per cycle [cm³]	3	5	5
Air volume per cycle 90° [cm³]	4,5	4,5	4,5
Air volume per cycle 180° [cm³]	9	9	9
Weight [kg]	0,44	0,48	0,48

*All data measured at 6 bar



SWIVEL- AND ROTARY MODULES

OVERVIEW OF SERIES

3

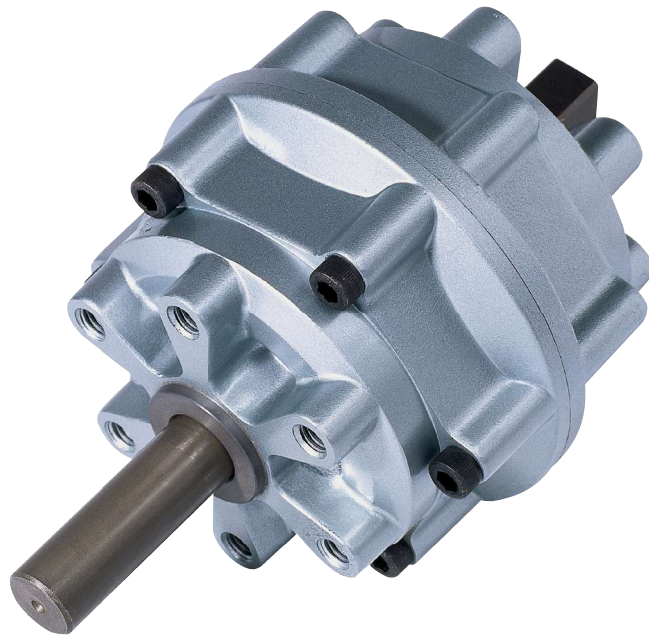
Products	Torque [Nm]	Swivel angle [°]	Number of installation sizes
Rotary Cylinders pneumatic Page 542			
Series PRN	0,15 247	90 270	●●●●●●●●
Series SH	0,59-7,2	0 360	●●
Flat Swivel Units pneumatic Page 572			
Series MSF	0,3-1,2	90-180	●●●
Series SF-C	1,5 130	0 180	●●●●●●
Flat Swivel Units electric Page 654			
Series DES	12 64	∞	●●
Angle Pivot Units pneumatic Page 668			
Series SWM1000	10 64	90	●●●●
Series SW	1,5 120	180	●●●●●●
Swivel Jaws pneumatic Page 694			
Series SB *	0,1-1,6	90-180	●●●
Series SBZ	1,2 5 7	90-180	●●●●●

*Specifications for setup in pairs

AP class	Position sensing			Positionability				Options					Safety characteristics	Maintenance		
	Magnetic field sensor	Inductive sensor	Integrated sensing	Positionability, 2 positions	Positionability, 3 positions	Positionability, 4 positions	Positionability freely selectable	Elastomer end position damping	PowerStop end position damping	Adjustable swivel angle	IP class	Fluid feed-through		Electrical feed-through	Self locking mechanism	Maintenance-free cycles (max.)
1		•		•							54				1.5 million	
1						•				•	54				1.5 million	
2	•			•				•	•	•	41	•			10 million	
3	•	•		•	•				•	•	64	•			10 million	
3			•				•			•	54	•	•	•		5 million
3	•			•					•		30				10 million	
3	•	•		•					•		64	•			10 million	
2		•		•				•		•	54				10 million	
3		•		•					•		54				10 million	

ROTARY CYLINDERS

OVERVIEW OF SERIES



▶ PNEUMATIC



Series PRN

544



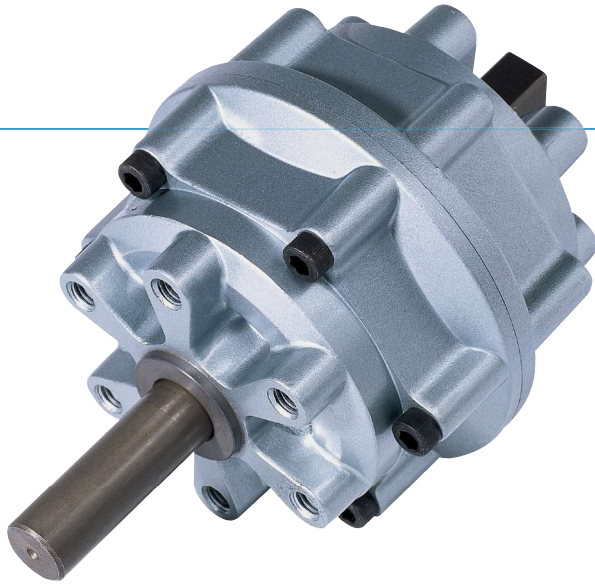
Series SH

566

ROTARY CYLINDERS

SERIES PRN

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most economic type of swivelling reduces your production costs

▶ Dampened end position

Using the hydraulic brake allows you to move up to the end positions gently, increasing the process reliability and durability of your application

▶ Forged drive shaft

This shaft is not only robust, but can be individually adjusted, e.g. with supply holes through the axis

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

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HOW TO ORDER CORRECTLY

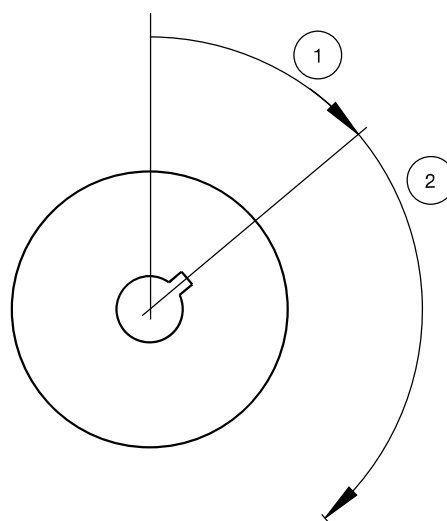
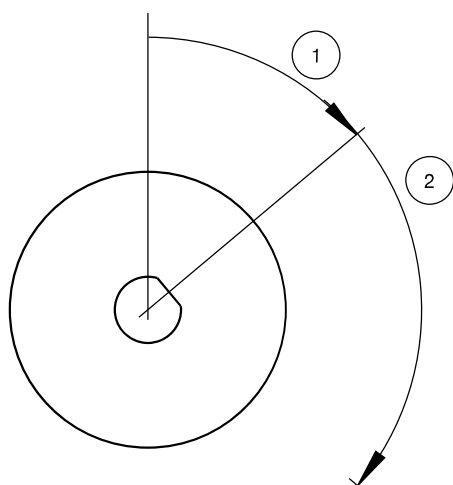
- ▶ The product order numbers are arranged according to this diagram:

Order no.	PRN30-	<input type="checkbox"/>	-B	
Rotation angle 90°		90		
Rotation angle 100°		100		
Rotation angle 180°		180		
Swivel angle 270°		270		
Swivel angle 280°		280		



▶ STARTING ANGLE

- ① Starting angle
- ② Swivel angle



PRN1
PRN3
PRN10

PRN20
PRN30
PRN50
PRN150
PRN300
PRN800

▶ SERIES CHARACTERISTICS



Number of installation sizes	9
Swivel angle	90° - 270°
Torque	0,15 Nm - 247 Nm
Weight	0,04 kg - 12,5 kg
AP class	1



Inductive sensor



Positionability - 2 positions



IP54



1,5 million maintenance-free cycles (max.)

ROTARY CYLINDERS

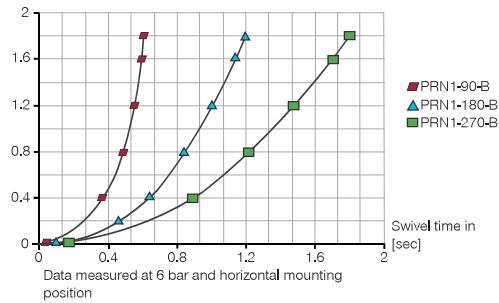
INSTALLATION SIZE PRN1

▶ PRODUCT SPECIFICATIONS



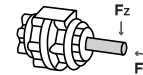
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	3
FZ [N]	30

▶ RECOMMENDED ACCESSORIES



Flange

F1-P



Angle flange

F1-LB



Straight Fittings - Quick Connect Style

GVM5



Flow Control Valves - with Swivel joint

DRVM5X4



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB1-B



Inductive proximity switch - Cable 5 m

NJ3-E2-02

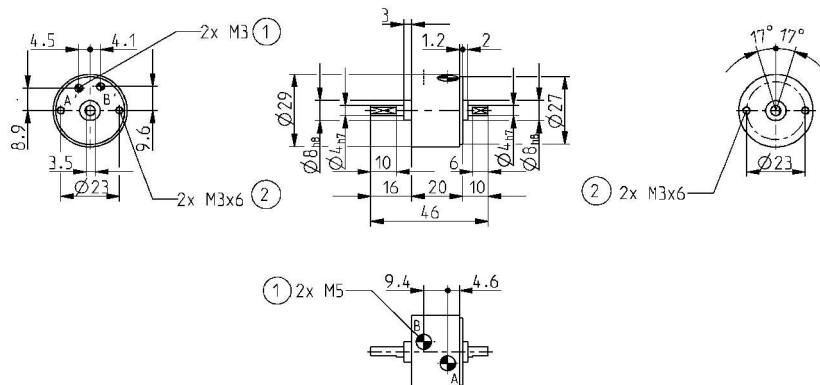


Plug-in connector customizable Straight-Connector M8

S8-G-3

Order no.	► Technical Data*		
	PRN1-90-B	PRN1-180-B	PRN1-270-B
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +4°	0° / +4°	0° / +4°
Starting Angle [°]	90	90	45
Torque [Nm]	0.15	0.15	0.15
Swivel time [s]	0.1	0.17	0.24
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	7	7	7
Operating temperature min. [°C]	-5	-5	-5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	2.8	2.8	2.8
Weight [kg]	0.04	0.04	0.04

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- Ⓐ Air connection (0°-90°/180°/270°)
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Alternate air connection 0°-90°/180°/270°
- Ⓑ Alternate air connection 90°/180°/270°-0°

ROTARY CYLINDERS

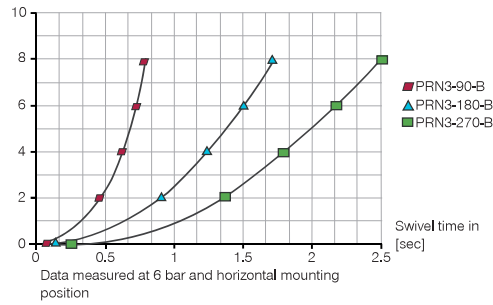
INSTALLATION SIZE PRN3

▶ PRODUCT SPECIFICATIONS



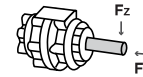
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	4
FZ [N]	40

▶ RECOMMENDED ACCESSORIES



Flange

F3-P



Angle flange

F3-LB



Straight Fittings - Quick Connect Style

GVM5



Flow Control Valves - with Swivel joint

DRVM5X4



Pressure Safety Valve

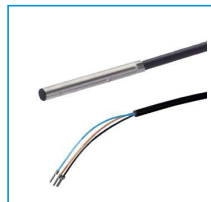
DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB3



Inductive proximity switch - Cable 5 m

NJ3-E2-02



Plug-in connector customizable Straight - Connector M8

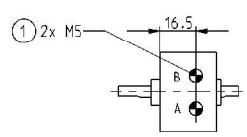
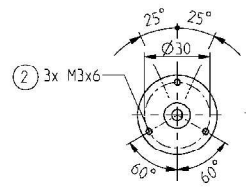
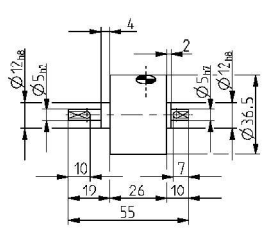
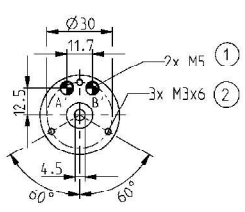
S8-G-3

► Technical Data*

Order no.	PRN3-90-B	PRN3-180-B	PRN3-270-B
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +4°	0° / +4°	0° / +4°
Starting Angle [°]	90	90	45
Torque [Nm]	0.38	0.38	0.38
Swivel time [s]	0.13	0.2	0.28
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	7	7	7
Operating temperature min. [°C]	-5	-5	-5
Operating temperature max. [°C]	+80	+80	+80 </td
Air volume per cycle [cm³]	6.8	6.8	6.8
Weight [kg]	0.07	0.07	0.07

*All data measured at 6 bar

- ① Energy supply
- ② Fixing Rotor
- Ⓐ Air connection (0°-90°/180°/270°)
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Alternate air connection 0°-90°/180°/270°
- Ⓑ Alternate air connection 90°/180°/270°-0°



ROTARY CYLINDERS

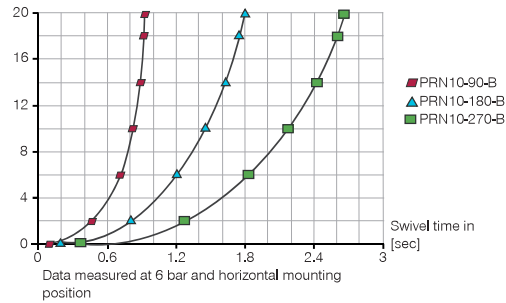
INSTALLATION SIZE PRN10

▶ PRODUCT SPECIFICATIONS



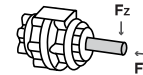
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	4
FZ [N]	50

▶ RECOMMENDED ACCESSORIES



Flange

F10-P



Angle flange

F10-LB



Straight Fittings - Quick Connect Style

GVM5



Flow Control Valves - with Swivel joint

DRVM5X4



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB10



Stop Stroke Adjustment Screws

AI-M8X1-38



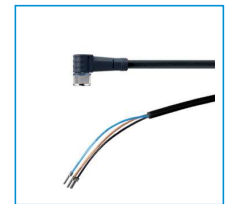
Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)

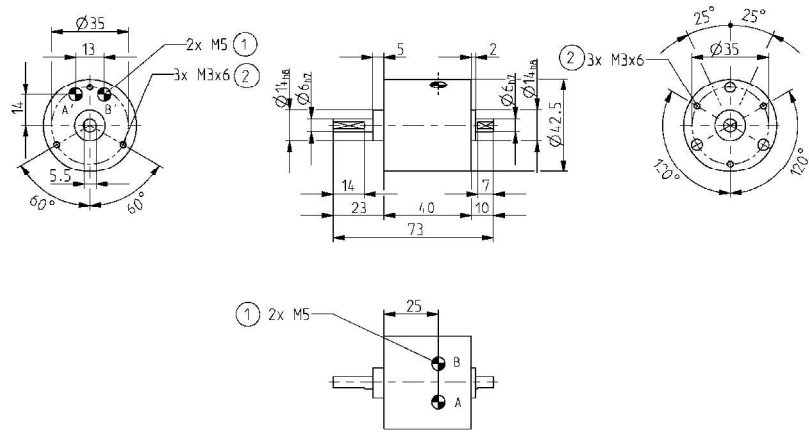
KAW500

► Technical Data*

Order no.	PRN10-90-B	PRN10-180-B	PRN10-270-B
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +4°	0° / +4°	0° / +4°
Starting Angle [°]	90	90	45
Torque [Nm]	1.2	1.2	1.2
Swivel time [s]	0.13	0.2	0.28
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	7	7	7
Operating temperature min. [°C]	-5	-5	-5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	19.6	19.6	19.6
Weight [kg]	0.14	0.14	0.14

*All data measured at 6 bar

- ① Energy supply
- ② Fixing Rotor
- Ⓐ Air connection (0°-90°/180°/270°)
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Alternate air connection 0°-90°/180°/270°
- Ⓑ Alternate air connection 90°/180°/270°-0°



ROTARY CYLINDERS

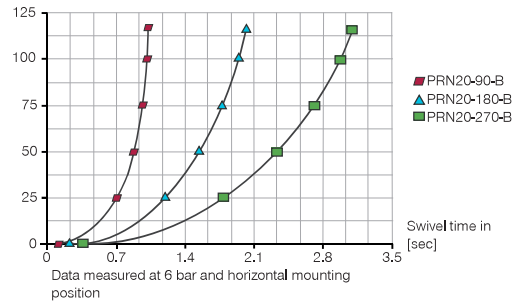
INSTALLATION SIZE PRN20

▶ PRODUCT SPECIFICATIONS



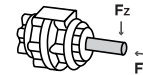
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	25
FZ [N]	300

▶ RECOMMENDED ACCESSORIES



Flange

F20-P



Angle flange

F20-LB



Straight Fittings - Quick Connect Style

GVM5



Flow Control Valves - with Swivel joint

DRVM5X4



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB20



Stop Stroke Adjustment Screws

AI-M8X1-38



Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S

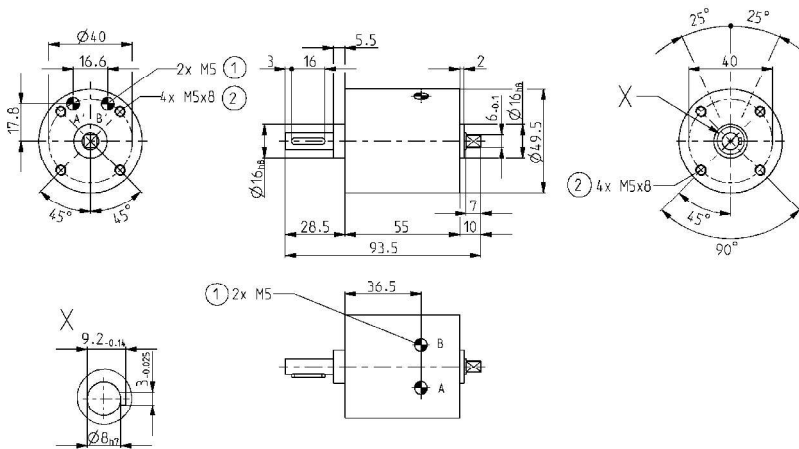


Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500

Order no.	► Technical Data*		
	PRN20-90-B	PRN20-180-B	PRN20-270-B
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +4°	0° / +4°	0° / +4°
Starting Angle [°]	90	90	45
Torque [Nm]	2.1	2.1	2.1
Swivel time [s]	0.14	0.25	0.34
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	10	10	10
Operating temperature min. [°C]	-5	-5	-5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	34	34	34
Weight [kg]	0.25	0.25	0.25

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- Ⓐ Air connection (0°-90°/180°/270°)
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Alternate air connection 0°-90°/180°/270°
- Ⓑ Alternate air connection 90°/180°/270°-0°

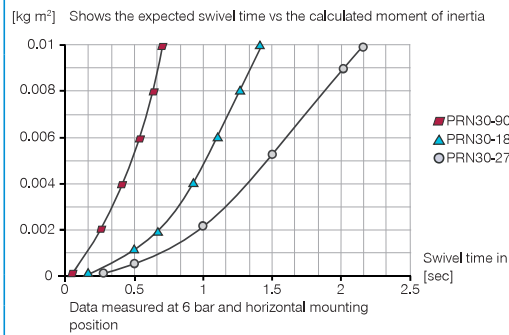
ROTARY CYLINDERS

INSTALLATION SIZE PRN30

▶ PRODUCT SPECIFICATIONS

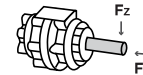


▶ Moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	30
FZ [N]	400

▶ RECOMMENDED ACCESSORIES



Flange

F30-P



Angle flange

F30-LB



Straight Fittings - Quick Connect Style

GV1-8X6



Flow Control Valves - with Swivel joint

DRV1-8X6



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB30



Stop Stroke Adjustment Screws

AI-M8X1-38



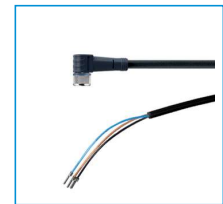
Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S

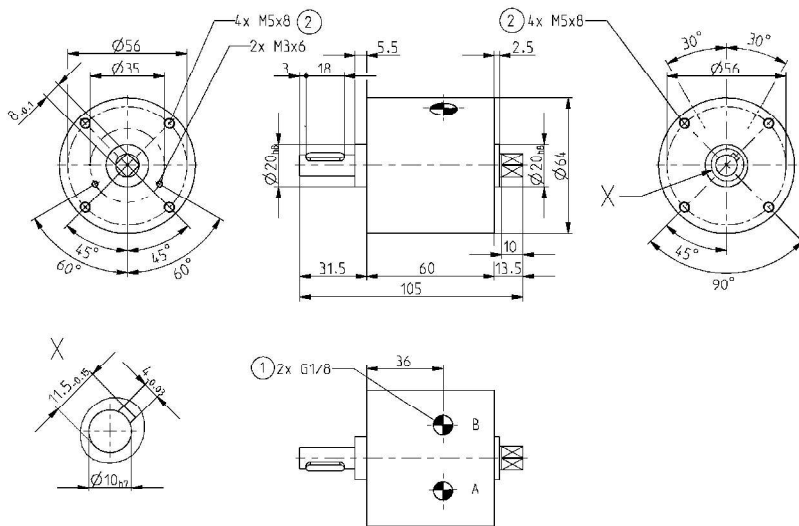


Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500

Order no.	► Technical Data*		
	PRN30-90	PRN30-180	PRN30-270
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +3°	0° / +3°	0° / +3°
Starting Angle [°]	45	45	45
Torque [Nm]	4.1	4.1	4.1
Swivel time [s]	0.17	0.33	0.5
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	10	10	10
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+60	+60	+60
Air volume per cycle [cm ³]	74	74	86
Weight [kg]	0.5	0.5	0.5

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- A Air connection (0°-90°/180°/270°)
- B Air connection (90°/180°/270°-0°)

ROTARY CYLINDERS

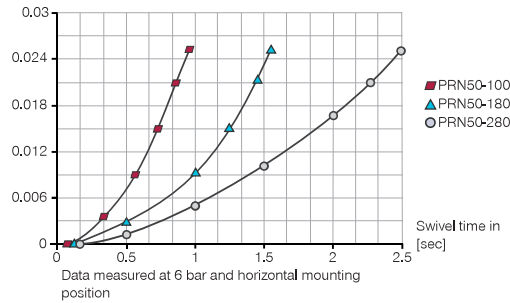
INSTALLATION SIZE PRN50

▶ PRODUCT SPECIFICATIONS



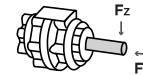
▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	44
FZ [N]	580

▶ RECOMMENDED ACCESSORIES



Flange

F50-P



Angle flange

F50-LB



Straight Fittings - Quick Connect Style

GV1-8X6



Flow Control Valves - with Swivel joint

DRV1-8X6



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB50



Stop Stroke Adjustment Screws

AI-M8X1-38



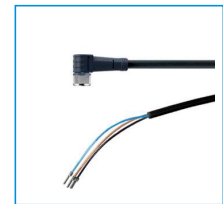
Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

▶ RECOMMENDED ACCESSORY OIL DAMPER



Oil damper see page 564

CRN50



Stop Lever 90° / Starting Angle 45°

A50-90-B



Stop Lever 180° / Starting Angle 45°

A50-180-B

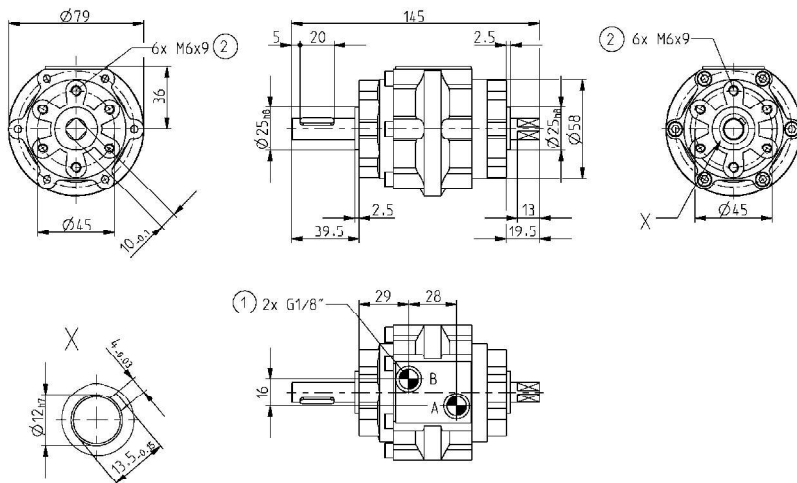


Stop Lever 270° / Starting Angle 45°

A50-270

Order no.	► Technical Data*		
	PRN50-90	PRN50-180-B	PRN50-270
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +3°	0° / +3°	0° / +3°
Starting Angle [°]	45	45	45
Torque [Nm]	12.8	5.9	5.9
Swivel time [s]	0.17	0.33	0.5
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	10	10	10
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+60	+60	+60
Air volume per cycle [cm ³]	86	102	124
Weight [kg]	0.8	0.75	0.75

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- Ⓑ Air connection (90°/180°/270°-0°)
- Ⓐ Air connection (0°-90°/180°/270°)

ROTARY CYLINDERS

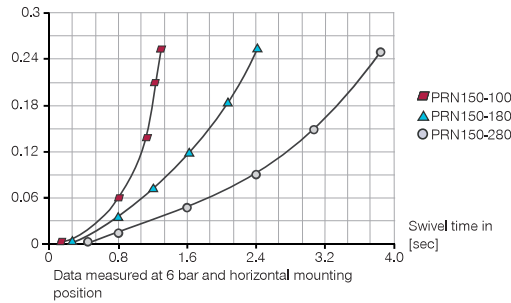
INSTALLATION SIZE PRN150

▶ PRODUCT SPECIFICATIONS



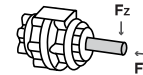
▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	88
FZ [N]	1170

▶ RECOMMENDED ACCESSORIES



Flange

F150-P



Angle flange

F150-LB



Straight Fittings - Quick Connect Style

GV1-4X8



Flow Control Valves - with Swivel joint

DRV1-4X8



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB150



Stop Stroke Adjustment Screws

AI-M10X1-70



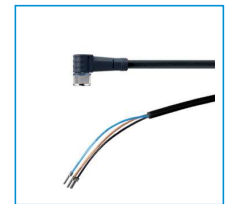
Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500

▶ RECOMMENDED ACCESSORY OIL DAMPER



Oil damper see page 564

CRN150



Stop Lever 90° / Starting Angle 45°

A150-90-B



Stop Lever 180° / Starting Angle 45°

A150-180-B

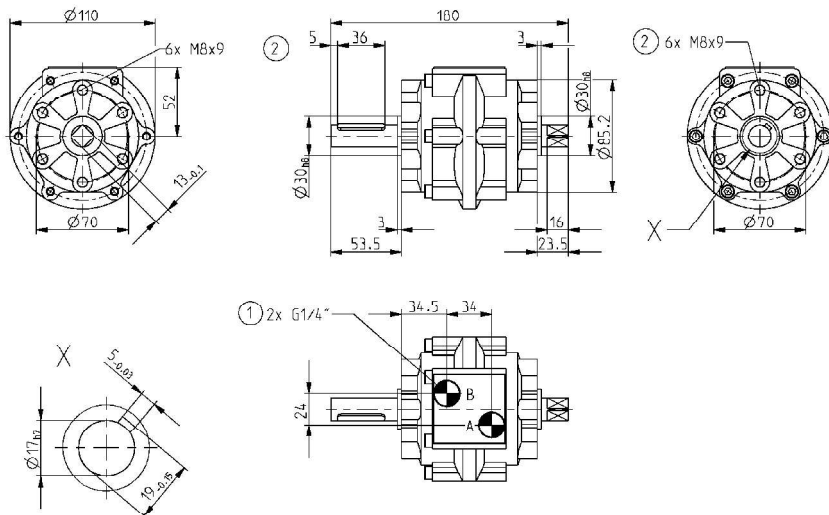


Stop Lever 270° / Starting Angle 45°

A150-270

Order no.	► Technical Data*		
	PRN150-90	PRN150-180-B	PRN150-270
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +3°	0° / +3°	0° / +3°
Starting Angle [°]	45	45	45
Torque [Nm]	41.5	18	18
Swivel time [s]	0.25	0.38	0.63
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	10	10	10
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+60	+60	+60
Air volume per cycle [cm ³]	246	292	370
Weight [kg]	1.9	1.9	1.6

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- Ⓐ Air connection (0°-90°/180°/270°)
- Ⓑ Air connection (90°/180°/270°-0°)

ROTARY CYLINDERS

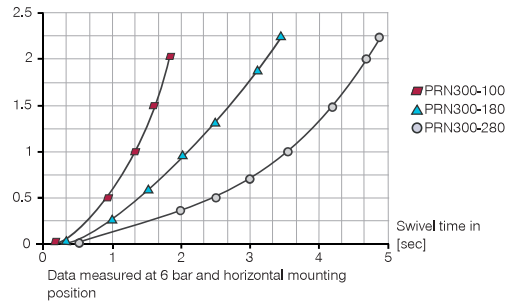
INSTALLATION SIZE PRN300

▶ PRODUCT SPECIFICATIONS



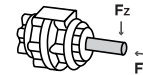
▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	145
FZ [N]	1950

▶ RECOMMENDED ACCESSORIES



Angle flange

F300-LB



Straight Fittings - Barb Style Connection

GV3-8X13ID



Flow Control Valves - in Line

DRV1-4I



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ROTATION LIMITER



Rotation limiter

DB300



Stop Stroke Adjustment Screws

AI-M10X1-70



Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

▶ RECOMMENDED ACCESSORY OIL DAMPER



Oil damper see page 564

CRN300



Stop Lever 90° / Starting Angle 45°

A300-90-B



Stop Lever 180° / Starting Angle 45°

A300-180-B

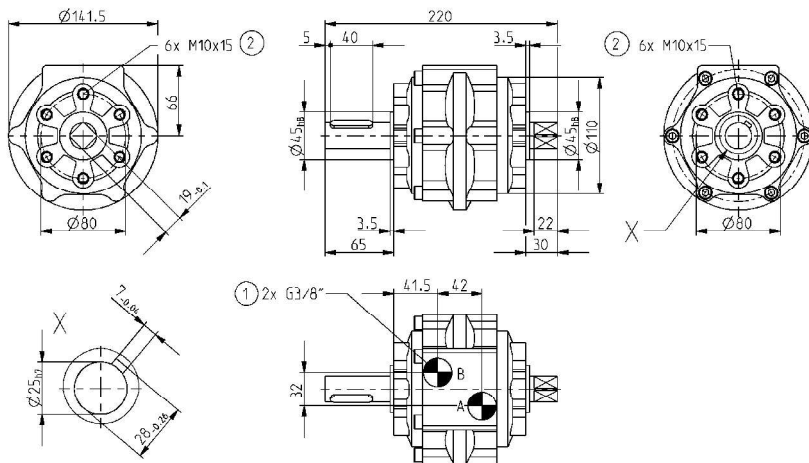


Stop Lever 270° / Starting Angle 45°

A300-270

Order no.	► Technical Data*		
	PRN300-90	PRN300-180-B	PRN300-270
Swivel angle [°]	90	180	270
Tolerance swivel angle [°]	0° / +3°	0° / +3°	0° / +3°
Starting Angle [°]	45	45	45
Torque [Nm]	83	34.5	34.5
Swivel time [s]	0.33	0.5	0.71
Operating pressure min. [bar]	2	2	2
Operating pressure max. [bar]	10	10	10
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+60	+60	+60
Air volume per cycle [cm ³]	542	566	730
Weight [kg]	4.1	3.7	3.6

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- A Air connection (0°-90°/180°/270°)
- B Air connection (90°/180°/270°-0°)

ROTARY CYLINDERS

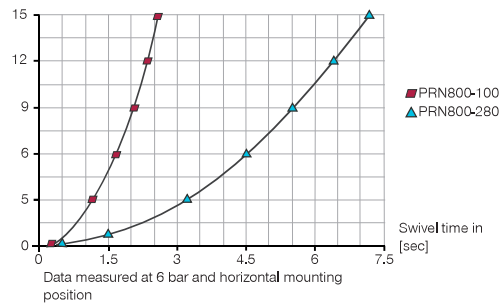
INSTALLATION SIZE PRN800

▶ PRODUCT SPECIFICATIONS



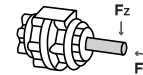
▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	490
FZ [N]	4900

▶ RECOMMENDED ACCESSORIES



Straight Fittings - Barb Style Connection
GV1-2X13ID



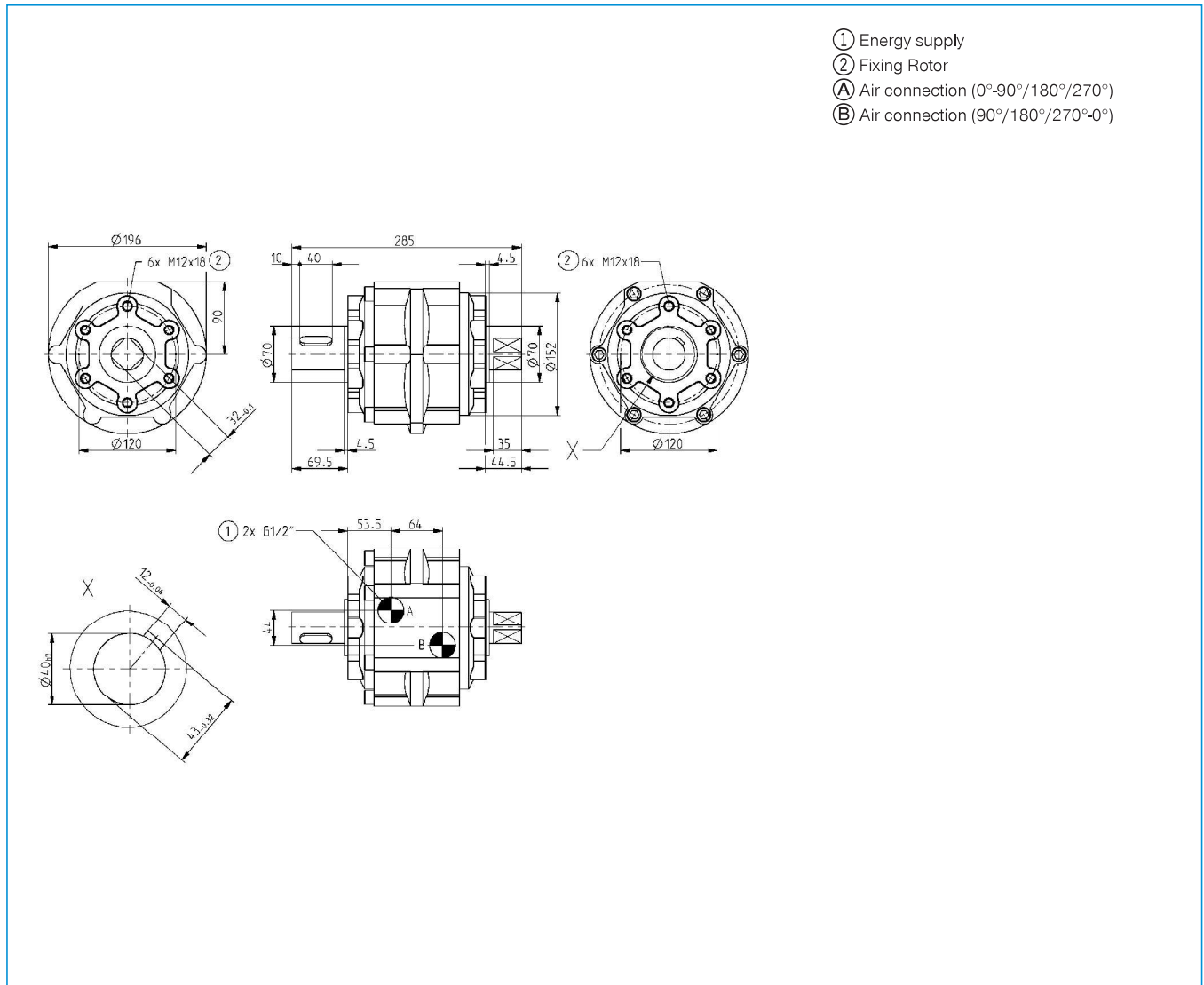
Flow Control Valves - in Line
DRV1-4I



Pressure Safety Valve
DSV1-8

Order no.	► Technical Data*	
	PRN800-90	PRN800-270
Swivel angle [°]	90	270
Tolerance swivel angle [°]	0° / +3°	0° / +3°
Starting Angle [°]	45	45
Torque [Nm]	247	123
Swivel time [s]	0,45	1
Operating pressure min. [bar]	2	2
Operating pressure max. [bar]	10	10
Operating temperature min. [°C]	5	5
Operating temperature max. [°C]	+60	+60
Air volume per cycle [cm³]	1548	2092
Weight [kg]	12,5	11

*All data measured at 6 bar



ROTARY CYLINDERS

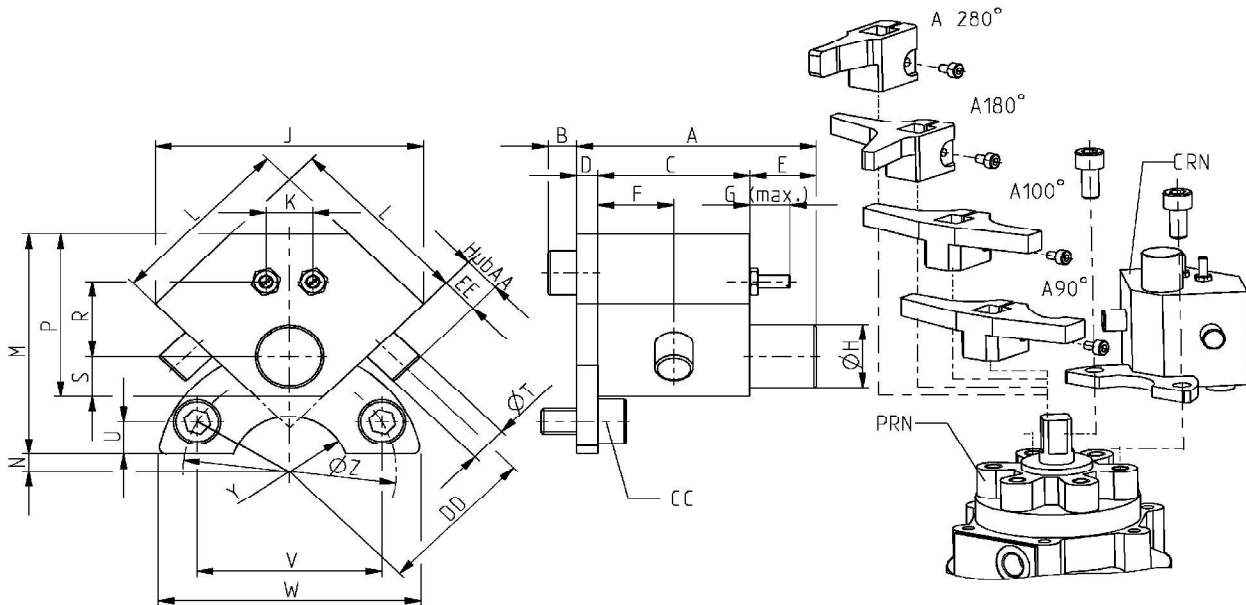
ACCESSORIES SERIES PRN

► OIL DAMPER FOR PNEUMATIC ROTOR



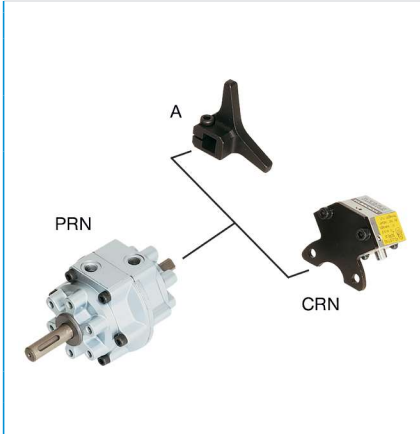
► Technical Data

Order no.	CRN50	CRN150	CRN300
suitable for	PRN50	PRN150	PRN300
Brake angle [°]	11	12	14
Energy absorption per stroke max. [Nm]	3	10	20
Energy absorption per stroke max. [Nm/h]	12000	43200	84000
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	50	50	50
Weight [g]	240	420	780



Order no.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	Y	Z	AA	CC	DD	EE
CRN50	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
CRN150	50.6	6.0	3.2	4.5	14	16	8.5	Ø14,4	56.6	9.9	40	50	4.0	37	17.0	9.2	Ø8	7.2	39.0	56	R12,5	Ø45	6.5	M6x1x12	34	8
CRN300	62.5	7.2	4.2	4.5	16	21	12.0	Ø22,5	91.9	12.7	65	87	8.0	61	33.2	14.1	Ø12	12.0	69.2	95	R22,5	Ø80	15.0	M10x1,5x20	62	18

▶ STOP LEVER FOR OIL DAMPER



▶ STOP LEVER PRN50

Order no.	A50-90-B	A50-180-B	A50-270
Swivel angle [°]	90	180	270

▶ STOP LEVER PRN150

Order no.	A150-90-B	A150-180-B	A150-270
Swivel angle [°]	90	180	270

▶ STOP LEVER PRN300

Order no.	A300-90-B	A300-180-B	A300-270
Swivel angle [°]	90	180	270

ROTARY CYLINDERS

SERIES SH

▶ PRODUCT ADVANTAGES



“The flexible”

▶ Movable to four positions

The two separately or jointly controlled rotors provide you with the greatest flexibility in positioning your work-pieces

▶ High torque rating

The optimal ratio of installation space and torque reduces interference contours and creates precious space in your application

▶ 360° swivel angle

Do you want your application to be flexible and individualised? The infinitely variable 360° adjustable swivel angle lets you!

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

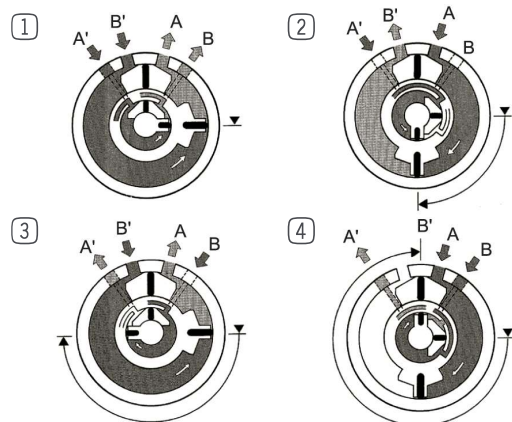
Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

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► BENEFITS IN DETAIL



1 0-position

- High-pressure air in 1B and 2B: Internal- and external blades go to the 0-position

2 First 90°-intermediate adjustment

- High-pressure air A and A': The external blade swivel up to the external limit stop (Stopper) at 90°.

3 Second 90°-intermediate setting

- High-pressure air B and B': The external blade swivels with the internal 90° limit stop to the 0-position. The internal blade swivel 180° set opposite each other.

4 Third 90°-intermediate adjustment

- High-pressure air A and B: The external blade swivels with the internal blade in the movement direction at 90°.

► SERIES CHARACTERISTICS



Number of installation sizes	2
Swivel angle	360°
Torque	0,59 Nm - 7,2 Nm
Weight	0,52 kg - 1,13 kg
AP class	1



Positionability - 4 positions



Adjustable swivel angle



IP54



1,5 million maintenance-free cycles (max.)

ROTARY CYLINDERS

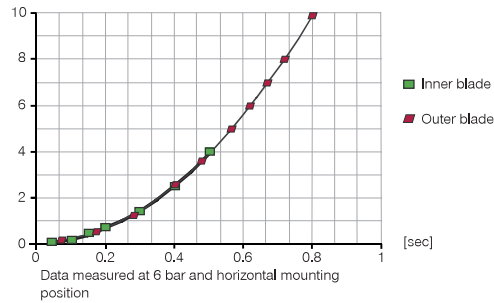
INSTALLATION SIZE SH-5

▶ PRODUCT SPECIFICATIONS



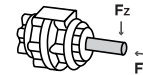
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	30
FZ [N]	60

▶ RECOMMENDED ACCESSORIES



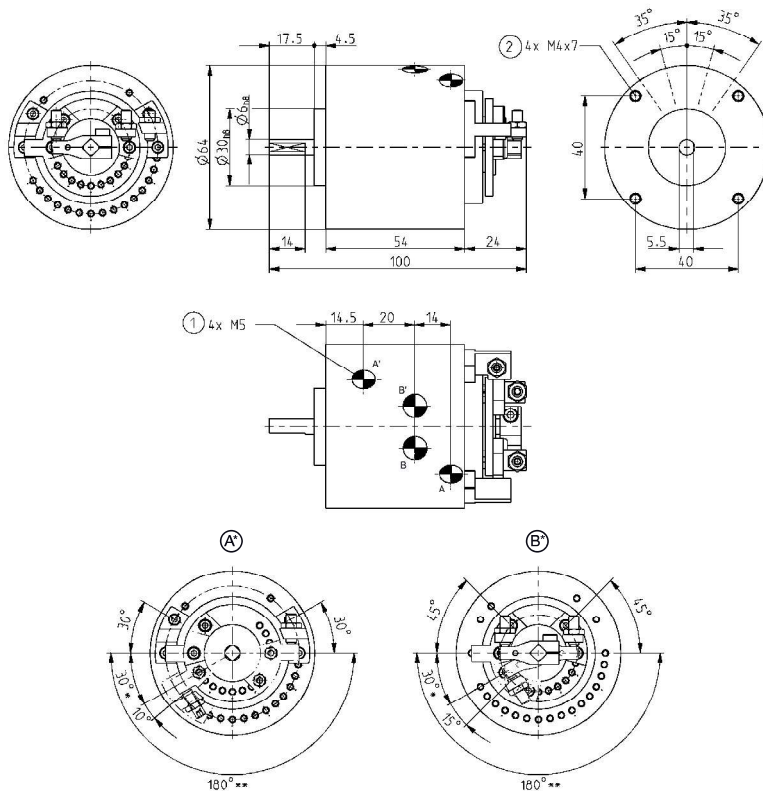
Straight Fittings - Quick Connect Style
GVM5



Flow Control Valves - with Swivel joint
DRVM5X4

Order no.	SH-5
Swivel angle [°]	360
Torque outer blade [Nm]	2.73
Torque inner blade [Nm]	0.59
Swivel time outer blade [s]	0.8
Swivel time inner blade [s]	0.5
Repetition accuracy +/- [°]	3
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Air volume per cycle outer blade [cm ³]	14
Air volume per cycle inner blade [cm ³]	56
Weight [kg]	0.52

*All data measured at 6 bar



- ① Energy supply
- ② Fixing Rotor
- Ⓐ internal air connection 0°-180°
- Ⓑ internal air connection 180°-0°
- Ⓐ external air connection 0°-180° (alternativ)
- Ⓑ external air connection 180°-0° (alternativ)
- Ⓐ' external blade
- Ⓑ' internal blade
- * Swivel angle min. 30°
- ** Swivel angle max. 180°

ROTARY CYLINDERS

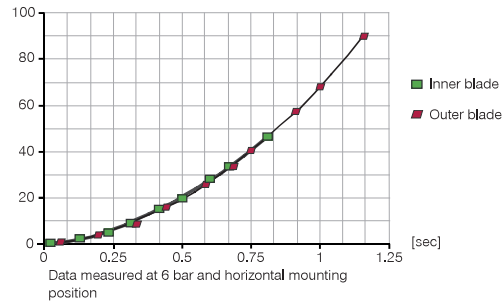
INSTALLATION SIZE SH-20

▶ PRODUCT SPECIFICATIONS



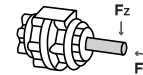
▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ Forces and moments

Shows the maximum static shaft load.



FY [N]	125
FZ [N]	255

▶ RECOMMENDED ACCESSORIES



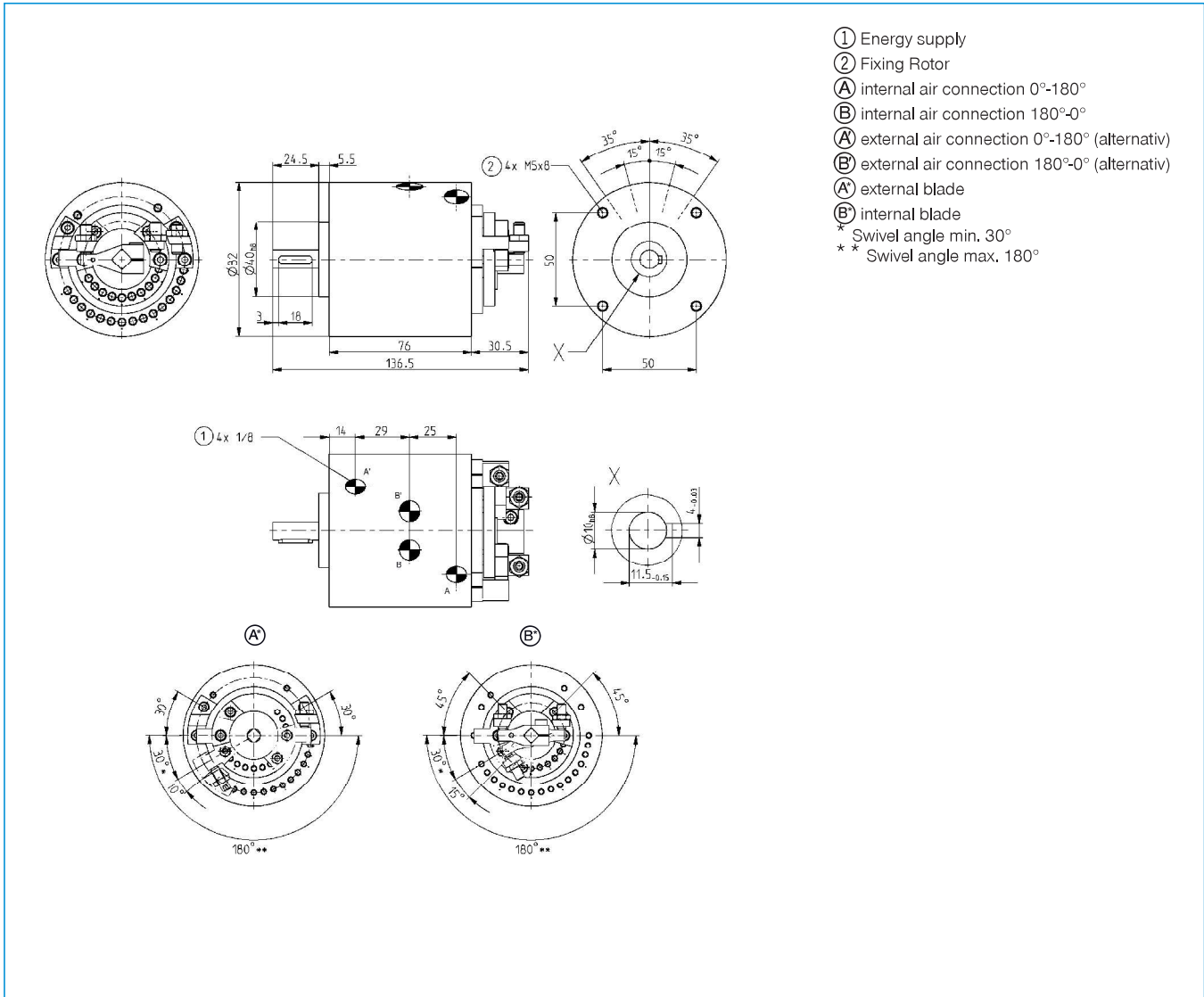
Straight Fittings - Quick Connect Style
GV1-8X6



Flow Control Valves - with Swivel joint
DRV1-8X6

Order no.	▶ Technical Data*
Swivel angle [°]	360
Torque outer blade [Nm]	7.2
Torque inner blade [Nm]	2.35
Swivel time outer blade [s]	1.1
Swivel time inner blade [s]	0.8
Repetition accuracy +/- [°]	3
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Air volume per cycle outer blade [cm ³]	72
Air volume per cycle inner blade [cm ³]	23
Weight [kg]	1.13

*All data measured at 6 bar



FLAT SWIVEL UNITS

OVERVIEW OF SERIES



► PNEUMATIC



Series MSF

574



Series SF-C

582

FLAT SWIVEL UNITS

SERIES MSF

▶ PRODUCT ADVANTAGES



“The unique”

▶ Decide for yourself!

Flange connection or journal shaft, with or without shock absorbers: The multitude of variants ensure you always find what you need

▶ Flat structure

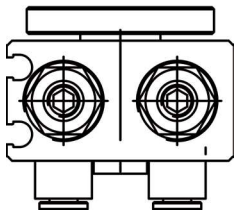
Thanks to the reverse double piston drive, the unit can work in operations requiring flat conditions. This is how you can build your application to save more space

▶ Infinitely adjustable swivel angle

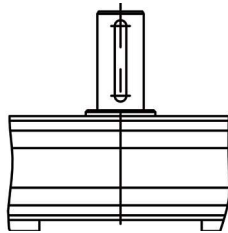
Become flexible and unique with the completely adjustable swivel angle that also reduces set up times

▶ VERSIONS

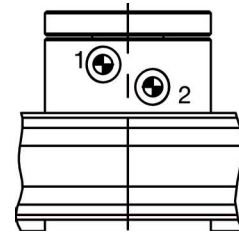
-F001



-F002



-D2



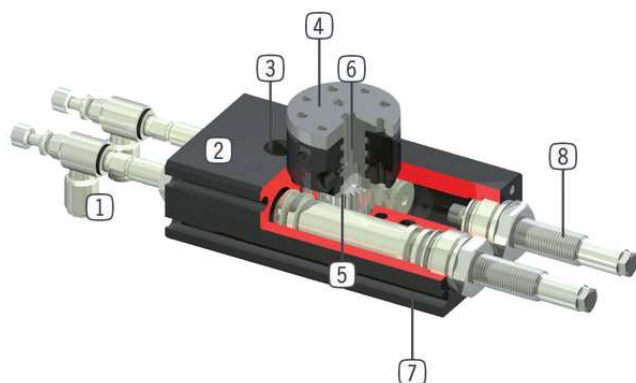
HOW TO ORDER CORRECTLY

▶ The product order numbers are arranged according to this diagram:

Order no.	MSF40	<input type="checkbox"/>	<input type="checkbox"/>	
Without shock absorber		N		
With shock absorber		S		
Tool holder via flange				-F001
Tool holder via shaft extension				-F002
Tool holder via flange with integrated 2-way rotary distributor				-D2



► BENEFITS IN DETAIL



- ① **Air flow control valve**
 - for speed regulation
 - included in scope of delivery
- ② **Robust, lightweight housing**
 - Hard-coated aluminum alloy
- ③ **Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- ④ **Tool intake**
 - with shaft extension or flange available
- ⑤ **Force transfer**
 - rack and pinion
- ⑥ **Up to 2 way integrated air feed-through**
 - for hoseless air transfer
 - hose package does not have to be pivoted
- ⑦ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑧ **Integrated shock absorbers with spiral groove technology**
 - adjustable end position damping

► SERIES CHARACTERISTICS



Number of installation sizes	3
Swivel angle	90° - 180°
Torque	0,3 Nm - 1,2 Nm
Weight	0,17 kg - 0,46 kg
AP class	2



Elastomer end position damping



Powerstop end position damping



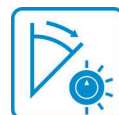
fluid feed-through



Magnetic field sensor



Positionability - 2 positions



Adjustable swivel angle



IP41



10 million maintenance-free cycles (max.)

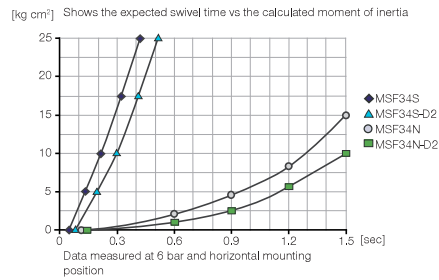
FLAT SWIVEL UNITS

INSTALLATION SIZE MSF34

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM3X4



Centering Disc
DST40800

▶ RECOMMENDED ACCESSORIES



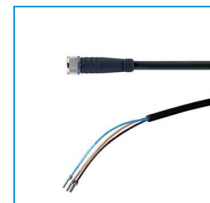
Magnetic field sensor Angled Cable 0,3 m - Connector M8
MFS103SKHC



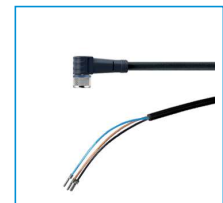
Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



2-Position-Sensor Cable 0,3 m - Connector M8
MFSP2SKHC-02



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Plug-in connector customizable Straight - Connector M12
S12-G-3



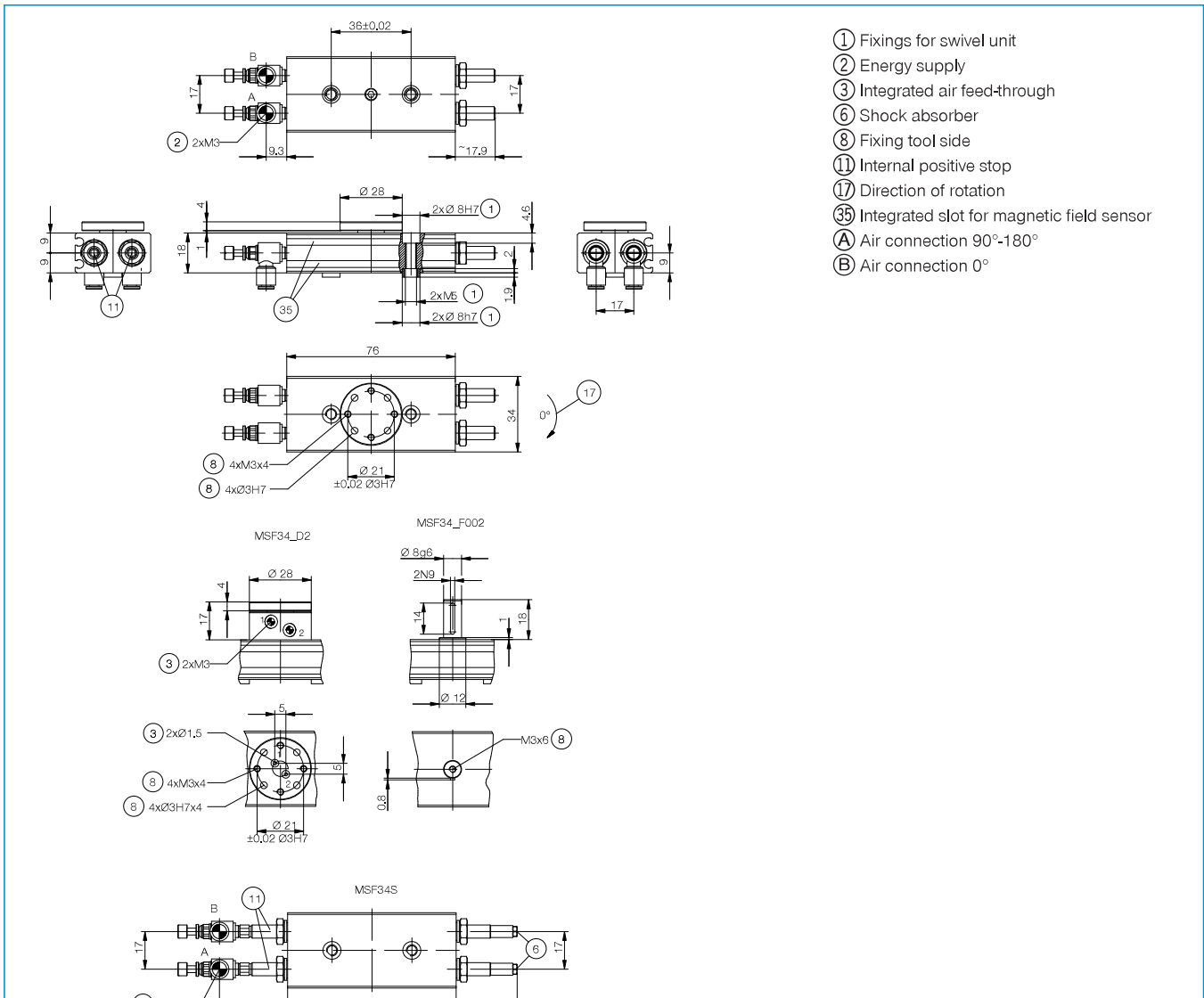
Straight Fittings - Barb Style Connection
GVM3



Pressure Safety Valve
DSV1-8

Order no.	► Technical Data*					
	MSF34N-F001	MSF34S-F001	MSF34N-F002	MSF34S-F002	MSF34N-D2	MSF34S-D2
Swivel angle [°]	90-180	90-180	90-180	90-180	90-180	90-180
Torque [Nm]	0,4	0,4	0,4	0,4	0,3	0,3
End position damping by	Elastomer	PowerStop	Elastomer	PowerStop	Elastomer	PowerStop
Tool holder via	Flange	Flange	Shaft extension	Shaft extension	Flange	Flange
Repetition accuracy +/- [°]	0,07	0,01	0,07	0,01	0,07	0,01
Air feed-through [Quantity]	0	0	0	0	2	2
Axial bearing load [N]	215	215	215	215	215	215
Radial bearing load [Nm]	5,5	5,5	5,5	5,5	5,5	5,5
Operating pressure min. [bar]	3	3	3	3	3	3
Operating pressure max. [bar]	8	8	8	8	8	8
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle 90° [cm³]	3	3	3	3	3	3
Air volume per cycle 180° [cm³]	6	6	6	6	6	6
Weight [kg]	0,17	0,18	0,17	0,18	0,2	0,21

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑪ Internal positive stop
- ⑰ Direction of rotation
- ⑳ Integrated slot for magnetic field sensor
- Ⓐ Air connection 90°-180°
- Ⓑ Air connection 0°

FLAT SWIVEL UNITS

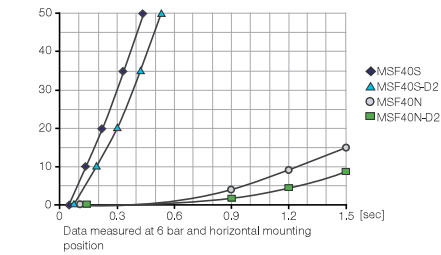
INSTALLATION SIZE MSF40

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRVM3X4



Centering Disc

DST40800

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Angled Cable 0,3 m - Connector M8

MFS103SKHC



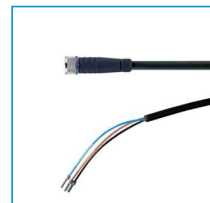
Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



2-Position-Sensor Cable 0,3 m - Connector M8

MFSP2SKHC-02



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



Straight Fittings - Barb Style Connection

GVM3

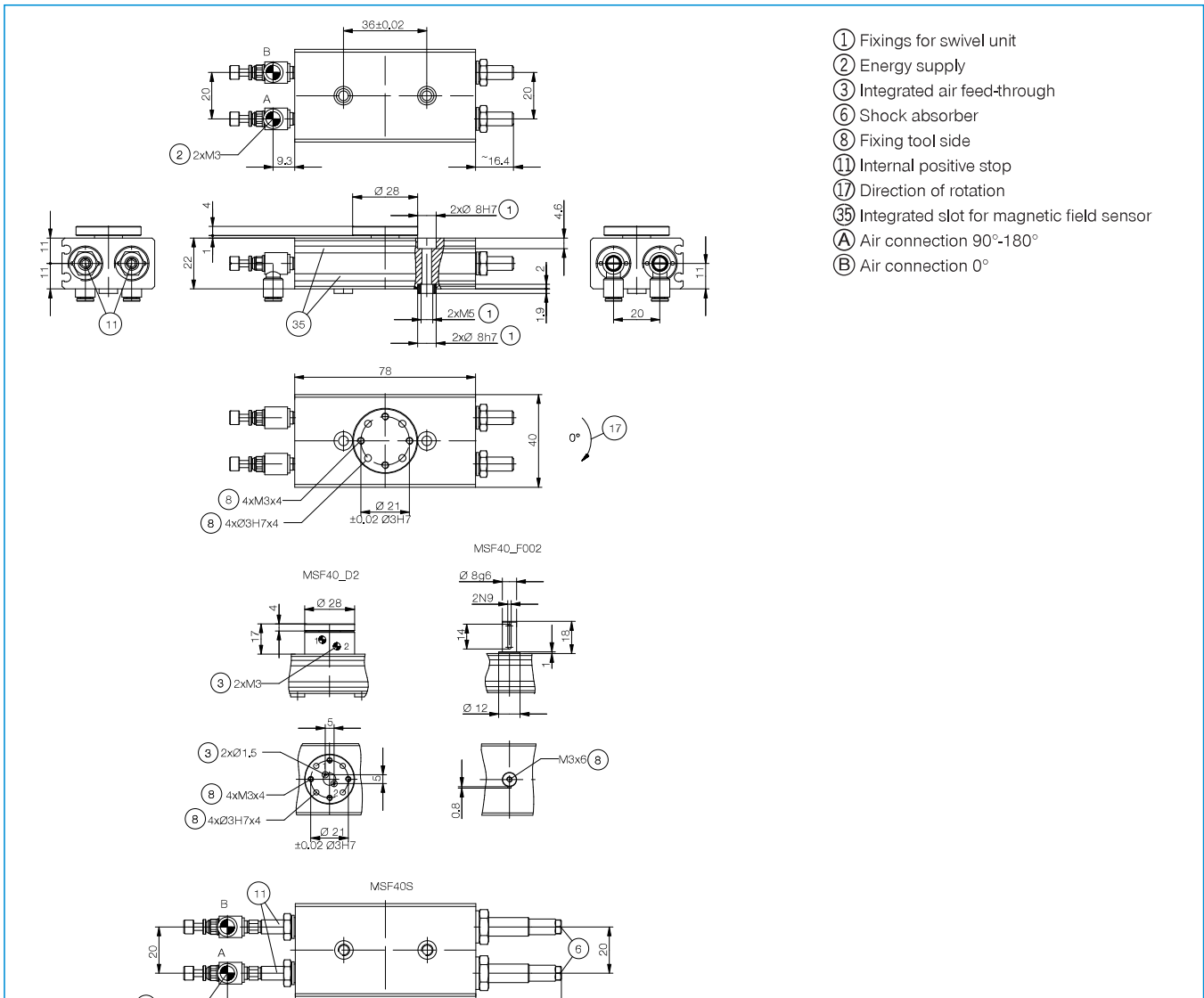


Pressure Safety Valve

DSV1-8

Order no.	► Technical Data*					
	MSF40N-F001	MSF40S-F001	MSF40N-F002	MSF40S-F002	MSF40N-D2	MSF40S-D2
Swivel angle [°]	90-180	90-180	90-180	90-180	90-180	90-180
Torque [Nm]	0.7	0.7	0.7	0.7	0.6	0.6
End position damping by	Elastomer	PowerStop	Elastomer	PowerStop	Elastomer	PowerStop
Tool holder via	Flange	Flange	Shaft extension	Shaft extension	Flange	Flange
Repetition accuracy +/- [°]	0.07	0.01	0.07	0.01	0.07	0.01
Air feed-through [Quantity]	0	0	0	0	2	2
Axial bearing load [N]	215	215	215	215	215	215
Radial bearing load [Nm]	7	7	7	7	7	7
Operating pressure min. [bar]	3	3	3	3	3	3
Operating pressure max. [bar]	8	8	8	8	8	8
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle 90° [cm³]	4.3	4.3	4.3	4.3	4.3	4.3
Air volume per cycle 180° [cm³]	8.6	8.6	8.6	8.6	8.6	8.6
Weight [kg]	0.26	0.27	0.26	0.27	0.28	0.29

*All data measured at 6 bar



FLAT SWIVEL UNITS

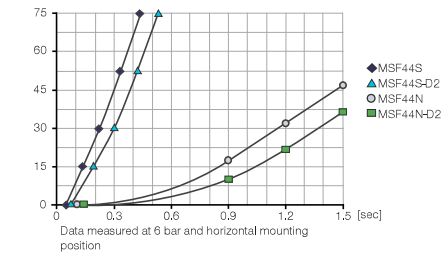
INSTALLATION SIZE MSF44

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg cm²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRVM3X4



Centering Disc

DST40800

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Angled Cable 0,3 m - Connector M8

MFS103SKHC



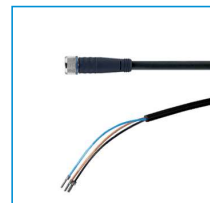
Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



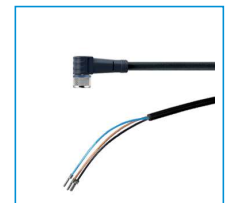
2-Position-Sensor Cable 0,3 m - Connector M8

MFSP2SKHC-02



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



Straight Fittings - Barb Style Connection

GVM3

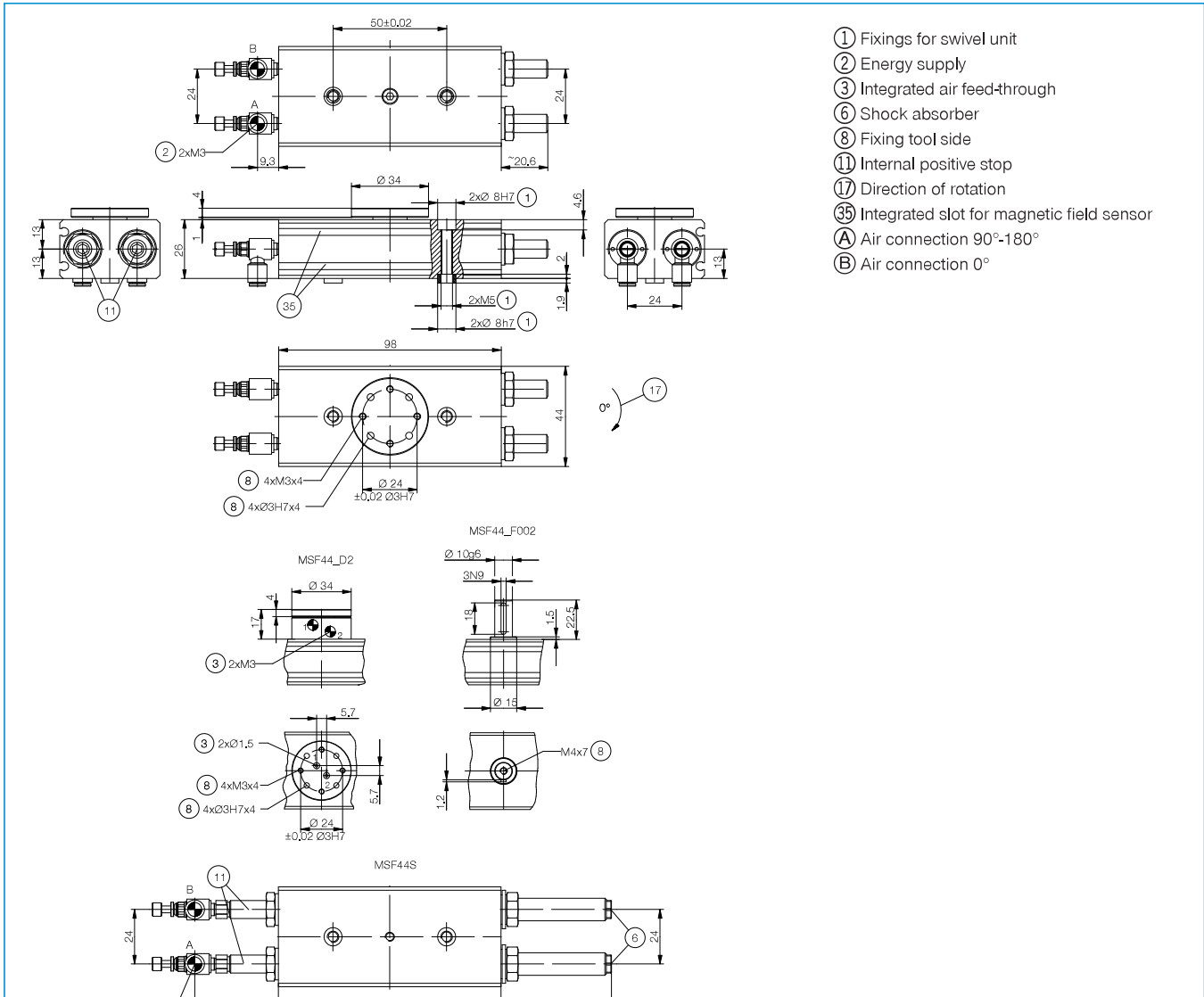


Pressure Safety Valve

DSV1-8

Order no.	► Technical Data*					
	MSF44N-F001	MSF44S-F001	MSF44N-F002	MSF44S-F002	MSF44N-D2	MSF44S-D2
Swivel angle [°]	90-180	90-180	90-180	90-180	90-180	90-180
Torque [Nm]	1.2	1.2	1.2	1.2	1	1
End position damping by	Elastomer	PowerStop	Elastomer	PowerStop	Elastomer	PowerStop
Tool holder via	Flange	Flange	Shaft extension	Shaft extension	Flange	Flange
Repetition accuracy +/- [°]	0.07	0.01	0.07	0.01	0.07	0.01
Air feed-through [Quantity]	0	0	0	0	2	2
Axial bearing load [N]	520	520	520	520	520	520
Radial bearing load [Nm]	19	19	19	19	19	19
Operating pressure min. [bar]	3	3	3	3	3	3
Operating pressure max. [bar]	8	8	8	8	8	8
Operating temperature min. [°C]	5	5	5	5	5	5
Operating temperature max. [°C]	+80	+80	+80	+80	+80	+80
Air volume per cycle 90° [cm³]	7.7	7.7	7.7	7.7	7.7	7.7
Air volume per cycle 180° [cm³]	15.4	15.4	15.4	15.4	15.4	15.4
Weight [kg]	0.41	0.42	0.41	0.42	0.45	0.46

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑪ Internal positive stop
- ⑰ Direction of rotation
- ⑳ Integrated slot for magnetic field sensor
- Ⓐ Air connection 90°-180°
- Ⓑ Air connection 0°

FLAT SWIVEL UNITS

SERIES SF-C

▶ PRODUCT ADVANTAGES



“The superior”

▶ Up to 100% more performance than the benchmark

Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output

▶ Large centre bore

Reduce the interference contours in your application by placing your power supply line directly through the middle of the rotary flange

▶ More than 100% higher radial bearing load than the benchmark

The generously scaled bearings stand for robustness and long service life and provide the highest process reliability for your application

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

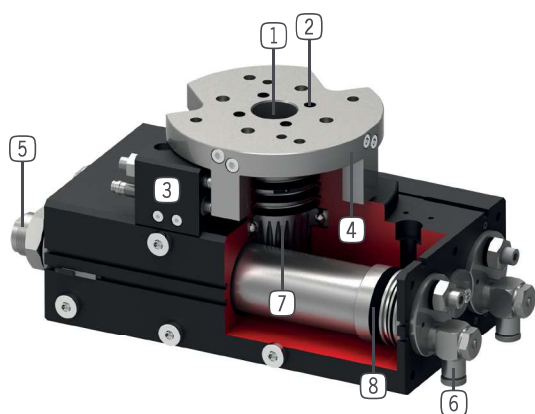
Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

www.zimmer-group.com



► BENEFITS IN DETAIL



- ① **Two way ball bearing hollow shaft**
 - for feedthrough cables and hoses
 - high forces and moments capacity
- ② **Up to 8 way integrated air feed-through**
 - for hoseless air transfer
 - hose package does not have to be pivoted
- ③ **Adjustable end position**
 - +/- 3° adjustable end position
- ④ **Large, precise locating flange**
 - simple tool connection
- ⑤ **Integrated shock absorbers with spiral groove technology**
 - adjustable end position damping
 - heating is prevented through installation in pneumatic pressure chamber
- ⑥ **Air flow control valve**
 - for speed regulation (included in the delivery)
- ⑦ **Force transfer**
 - rack and pinion
- ⑧ **Drive**
 - two double-acting pneumatic cylinders
 - high torque rating

► SERIES CHARACTERISTICS



Number of installation sizes	6
Swivel angle	0° - 180°
Torque	1,5 Nm - 130 Nm
Weight	0,6 kg - 41,1 kg
AP class	3



Powerstop end position damping



fluid feed-through



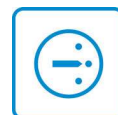
Inductive sensor



Magnetic field sensor



Positionability - 2 positions



Positionability - 3 positions



Adjustable swivel angle



IP64



10 million maintenance-free cycles (max.)

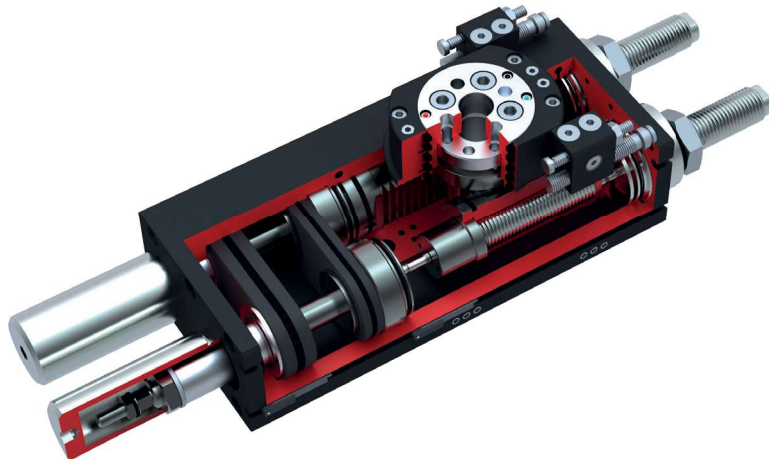
FLAT SWIVEL UNITS

SF SERIES

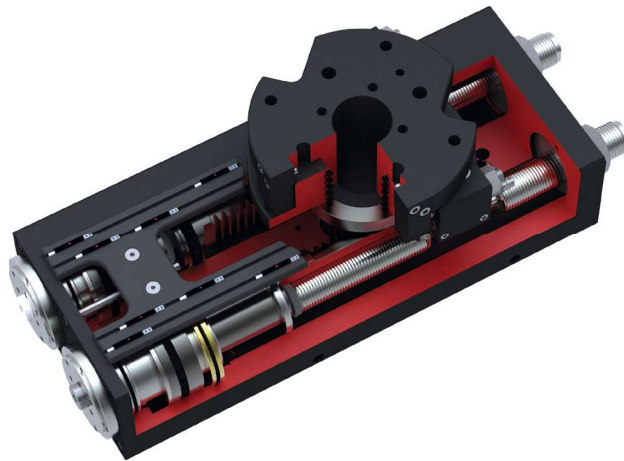
▶ HOW TO ORDER CORRECTLY

Order no.	<input type="checkbox"/>	SF	<input type="checkbox"/>	<input type="checkbox"/>	-C
Clean room class 5	<input checked="" type="checkbox"/>				
Flat swivel units	R				
Installation size			50		
Installation size			74		
Installation size			100		
Installation size			125		
Installation size			155		
Installation size			195		
Swivel angle 0° - 180°, infinitely variable				N	
Integrated hoseless pneumatic feed-through, 4-way				D4	
Integrated hoseless pneumatic feed-through, 6-way				D6	
Integrated hoseless pneumatic feed-through, 8-way				D8	
Rotation angle 90°				-90N	
Integrated hoseless pneumatic feed-through, 4-way				-90D4	
Integrated hoseless pneumatic feed-through, 6-way				-90D6	
Integrated hoseless pneumatic feed-through, 8-way				-90D8	
Rotation angle 180°				-180N	
Integrated hoseless pneumatic feed-through, 4-way				-180D4	
Integrated hoseless pneumatic feed-through, 6-way				-180D6	
Integrated hoseless pneumatic feed-through, 8-way				-180D8	
Version: ML (Size SF50 / SF74 / SF100)					
<ul style="list-style-type: none"> ▶ At -90° and +90° position, mechanical and shock-absorbed fixed stop ▶ 0° position is not locked, as opposed to the M version ▶ For these units, the driven pistons move against dominant limit stop pistons and, like for the locked center position, undergo shock absorption while moving into end position ▶ Simplified activation for horizontal rotary movements 					
Swivel angle -90° - 0° - +90°				ML	
Integrated hoseless pneumatic feed-through, 4-way				MLD4	
Integrated hoseless pneumatic feed-through, 6-way				MLD6	
Integrated hoseless pneumatic feed-through, 8-way				MLD8	
Version: M (Size SF125 / SF155 / SF195)					
<ul style="list-style-type: none"> ▶ All three positions for mechanical and shock-mounted fixed stop ▶ 0° center position using two stopper pistons with integrated shock absorbers ▶ A mechanical fixed stop is generated using ratchet bolts that are pushed through arrester pistons into the ring groove of the stopper piston 					
Swivel angle -90° - 0° - +90°				M	
Integrated hoseless pneumatic feed-through, 4-way				MD4	
Integrated hoseless pneumatic feed-through, 6-way				MD6	
Integrated hoseless pneumatic feed-through, 8-way				MD8	

► VERSION: ML (SIZE SF50 / SF74 / SF100)



► VERSION: M (SIZE SF125 / SF155 / SF195)



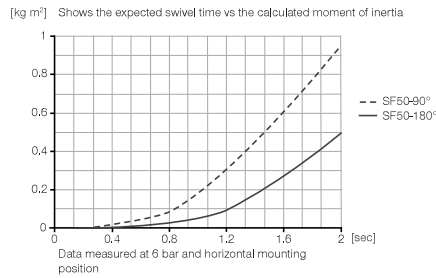
FLAT SWIVEL UNITS

INSTALLATION SIZE SF50N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

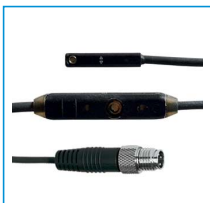


▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4

▶ RECOMMENDED ACCESSORIES



2-Position-Sensor Cable
0,3 m - Connector M8
MFSP2SKHC-02



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



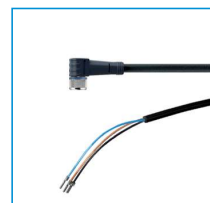
Attachment Kit
ANS0006



Inductive proximity switch
- Cable 5m
NJ8-E2



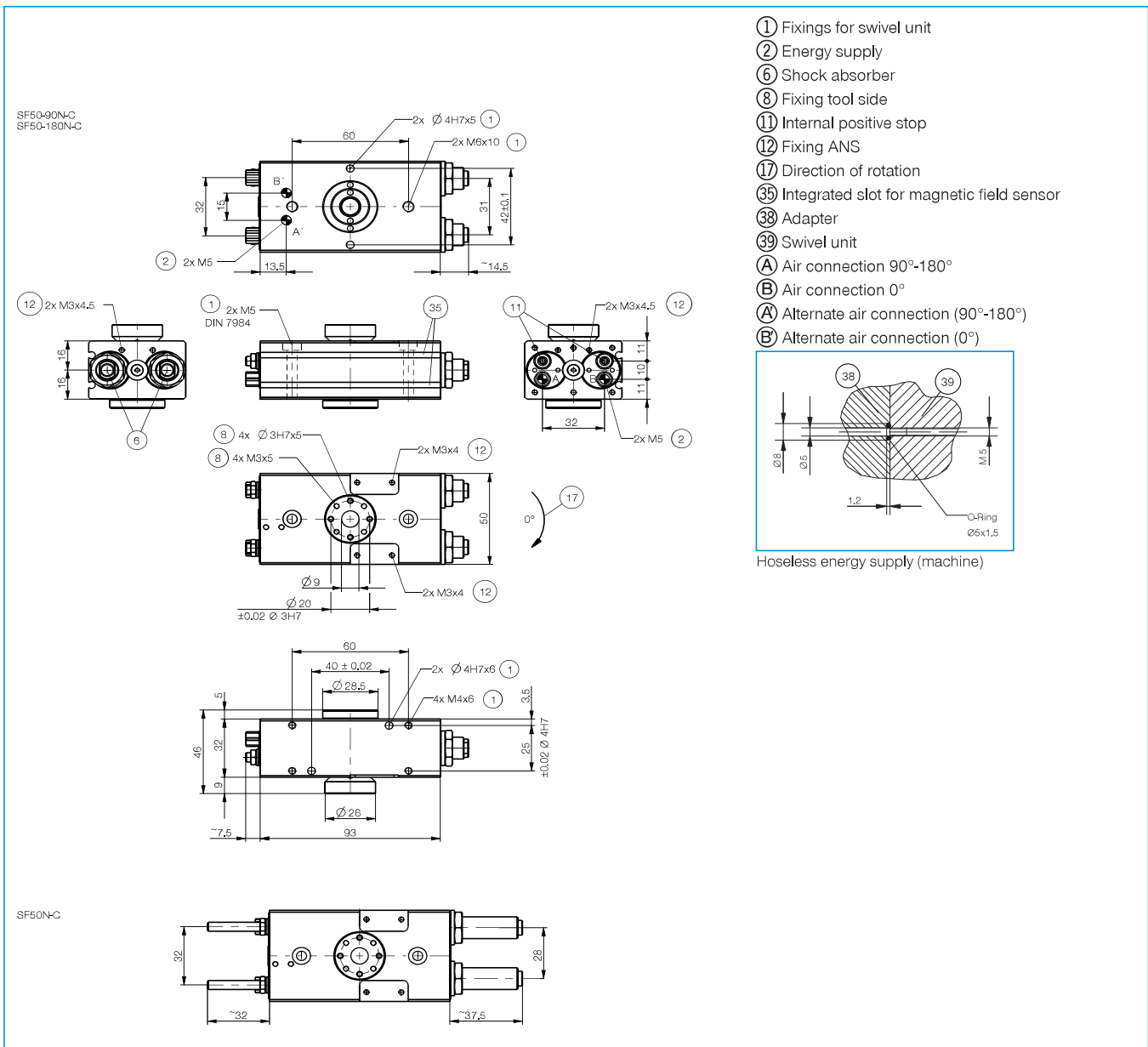
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF50-90N-C	SF50-180N-C	SF50N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	2,4	2,4	2,4
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	9	9	9
Axial bearing load [N]	490	490	490
Radial bearing load [Nm]	24	24	24
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	14	28	28
Weight [kg]	0.6	0.6	0.6

*All data measured at 6 bar



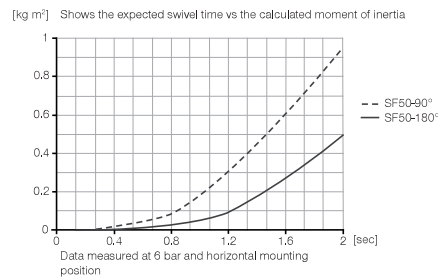
FLAT SWIVEL UNITS

INSTALLATION SIZE SF50D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4



O-Ring
COR0020100

▶ RECOMMENDED ACCESSORIES



2-Position-Sensor Cable
0,3 m - Connector M8
MFSP2SKHC-02



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



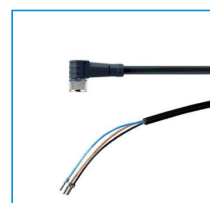
Attachment Kit
ANS0008



Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF50-90D4-C	SF50-180D4-C	SF50D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	1.5	1.5	1.5
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	9	9	9
Axial bearing load [N]	490	490	490
Radial bearing load [Nm]	24	24	24
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	14	28	28
Weight [kg]	0.76	0.76	0.76

*All data measured at 6 bar

SF50-90D4-C
SF50-180D4-C

SF50D4-C

- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑪ Internal positive stop
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑳ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉙ Swivel unit
- Ⓐ Air connection 90°-180°
- Ⓑ Air connection 0°
- Ⓐ Alternate air connection (90°-180°)
- Ⓑ Alternate air connection (0°)

Hoseless pneumatic feed-through (tool)

Hoseless pneumatic feed-through (machine)

Hoseless energy supply (machine)

FLAT SWIVEL UNITS

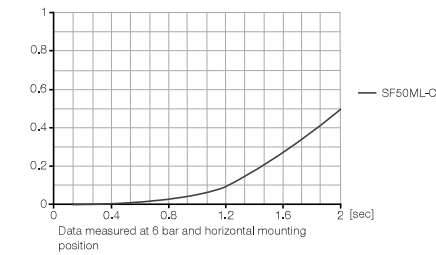
INSTALLATION SIZE SF50ML-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time vs the calculated moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRVM5X4



Attachment Kit

ANS0066



Commissioning USB

052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m

MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



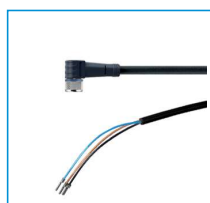
Inductive proximity switch - Cable 5 m

NJ8-E2



Inductive proximity switch - Connector M8

NJ8-E2S

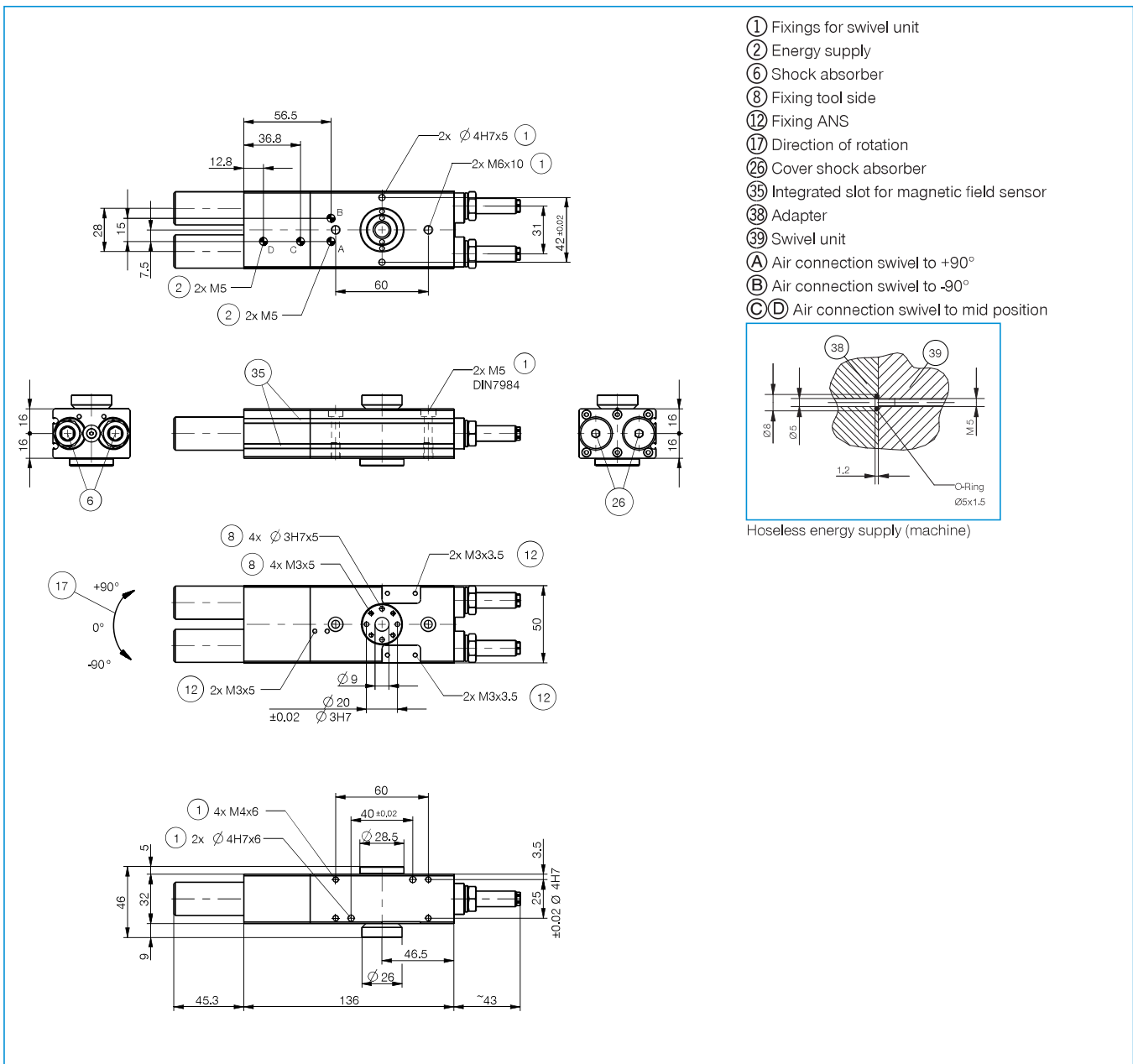


Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	2.4
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	9
Axial bearing load [N]	490
Radial bearing load [Nm]	24
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	44
Weight [kg]	0.98

*All data measured at 6 bar



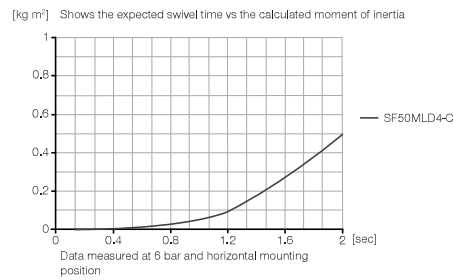
FLAT SWIVEL UNITS

INSTALLATION SIZE SF50MLD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4



O-Ring
COR0020100



Attachment Kit
ANS0067



Commissioning USB
052650

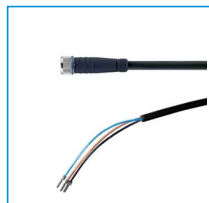
▶ RECOMMENDED ACCESSORY



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

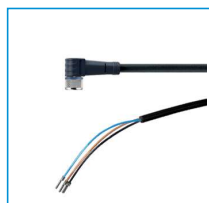
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ8-E2



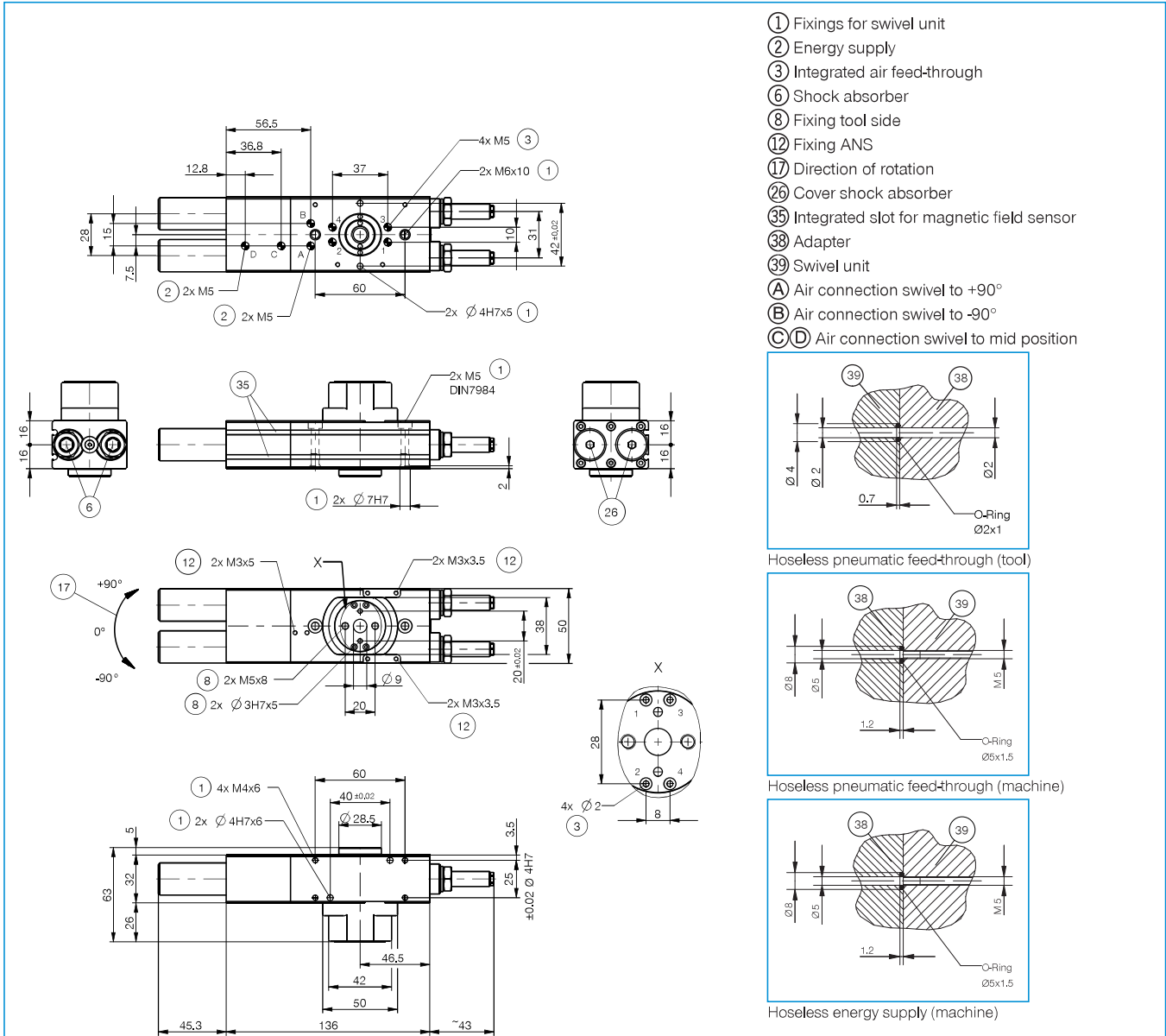
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	1.5
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	9
Axial bearing load [N]	490
Radial bearing load [Nm]	24
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	44
Weight [kg]	1.14

*All data measured at 6 bar



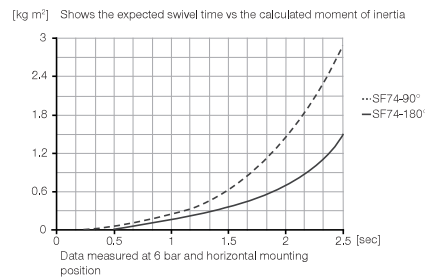
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

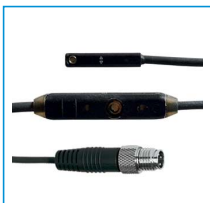


▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6

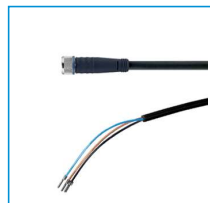
▶ RECOMMENDED ACCESSORIES



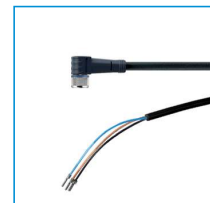
2-Position-Sensor Cable
0,3 m - Connector M8
MFSP2SKHC-02



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



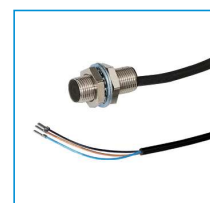
Attachment Kit
ANS0010



Inductive proximity switch
- Cable 5 m
NJ6.5-E2-01



Inductive proximity switch
- Connector M8
NJ6.5-E2S



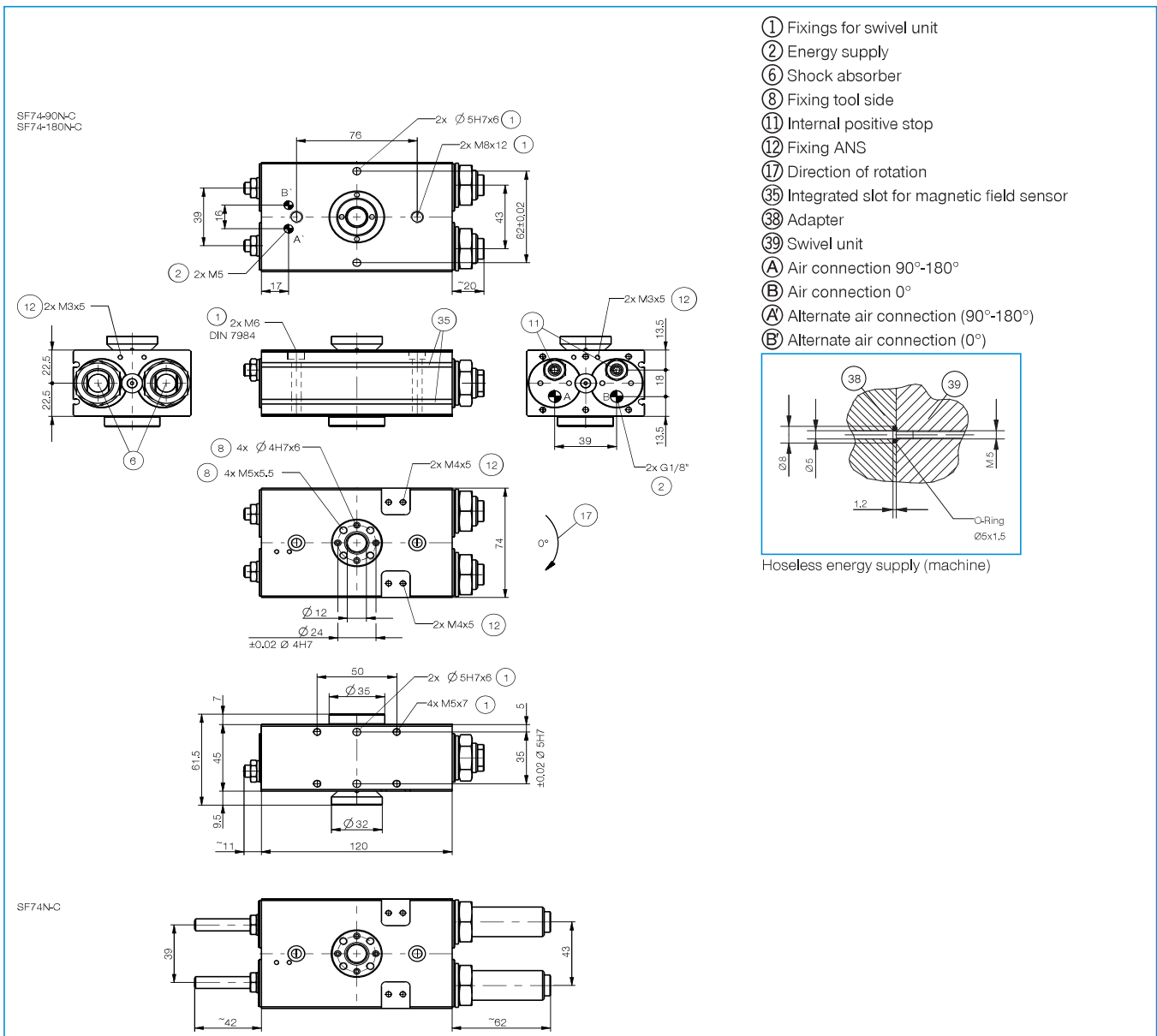
Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Connector M8
NJ8-E2S

Order no.	Technical Data*		
	SF74-90N-C	SF74-180N-C	SF74N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	7,3	7,3	7,3
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	12	12	12
Axial bearing load [N]	1120	1120	1120
Radial bearing load [Nm]	88	88	88
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	42	84	84
Weight [kg]	1.6	1.6	1.6

*All data measured at 6 bar



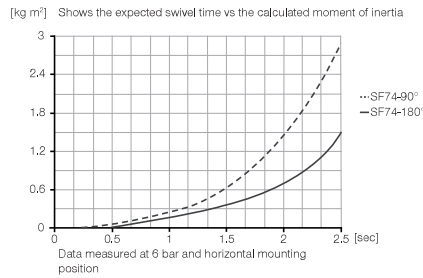
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0020100

▶ RECOMMENDED ACCESSORIES



2-Position-Sensor Cable
0,3 m - Connector M8
MFSP2SKHC-02



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



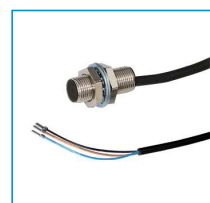
Attachment Kit
ANS0012



Inductive proximity switch
- Cable 5 m
NJ6.5-E2-01



Inductive proximity switch
- Connector M8
NJ6.5-E2S



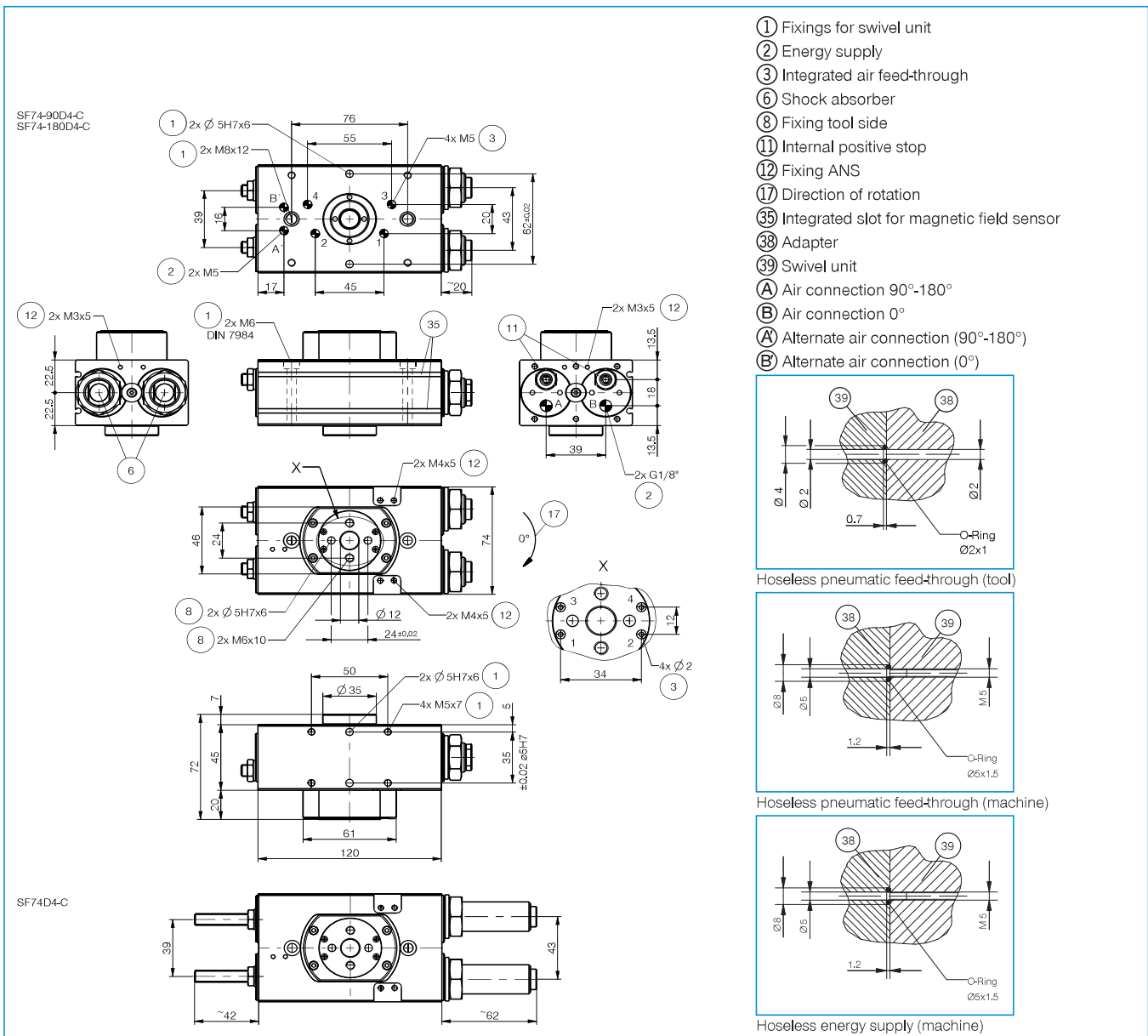
Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Connector M8
NJ8-E2S

Order no.	Technical Data*		
	SF74-90D4-C	SF74-180D4-C	SF74D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	5.5	5.5	5.5
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	12	12	12
Axial bearing load [N]	1120	1120	1120
Radial bearing load [Nm]	88	88	88
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8 </td
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	42	84	84
Weight [kg]	1.8	1.8	1.8

*All data measured at 6 bar



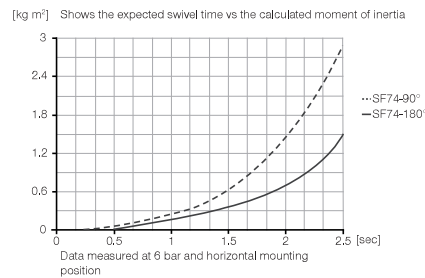
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74D6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0020100

▶ RECOMMENDED ACCESSORIES



2-Position-Sensor Cable
0,3 m - Connector M8
MFSP2SKHC-02



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit
ANS0012



Inductive proximity switch
- Cable 5 m
NJ6.5-E2-01



Inductive proximity switch
- Connector M8
NJ6.5-E2S



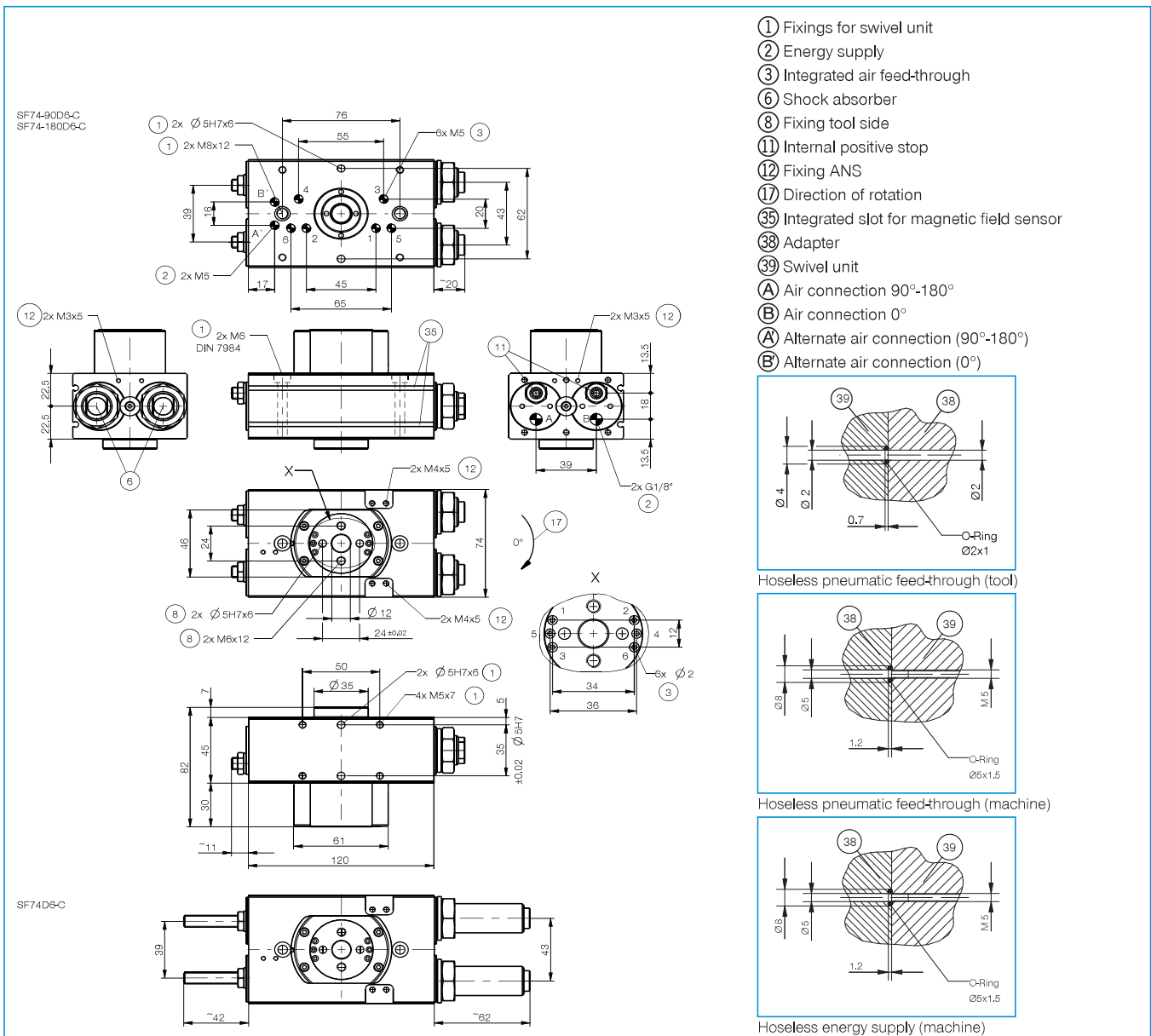
Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Connector M8
NJ8-E2S

Order no.	Technical Data*		
	SF74-90D6-C	SF74-180D6-C	SF74D6-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	4,5	4,5	4,5
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	12	12	12
Axial bearing load [N]	1120	1120	1120
Radial bearing load [Nm]	88	88	88
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	42	84	84
Weight [kg]	1.8	1.8	1.8

*All data measured at 6 bar



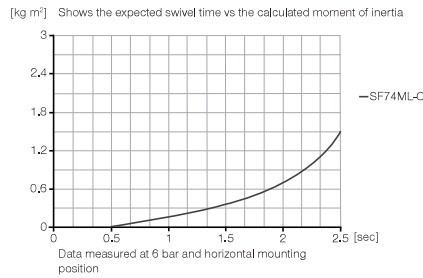
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74ML-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



Attachment Kit
ANS0068



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ6,5-E2-01



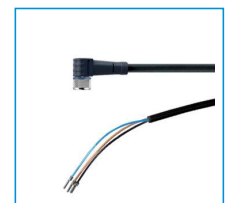
Inductive proximity switch - Connector M8
NJ6,5-E2S



Inductive proximity switch - Cable 5 m
NJ8-E2



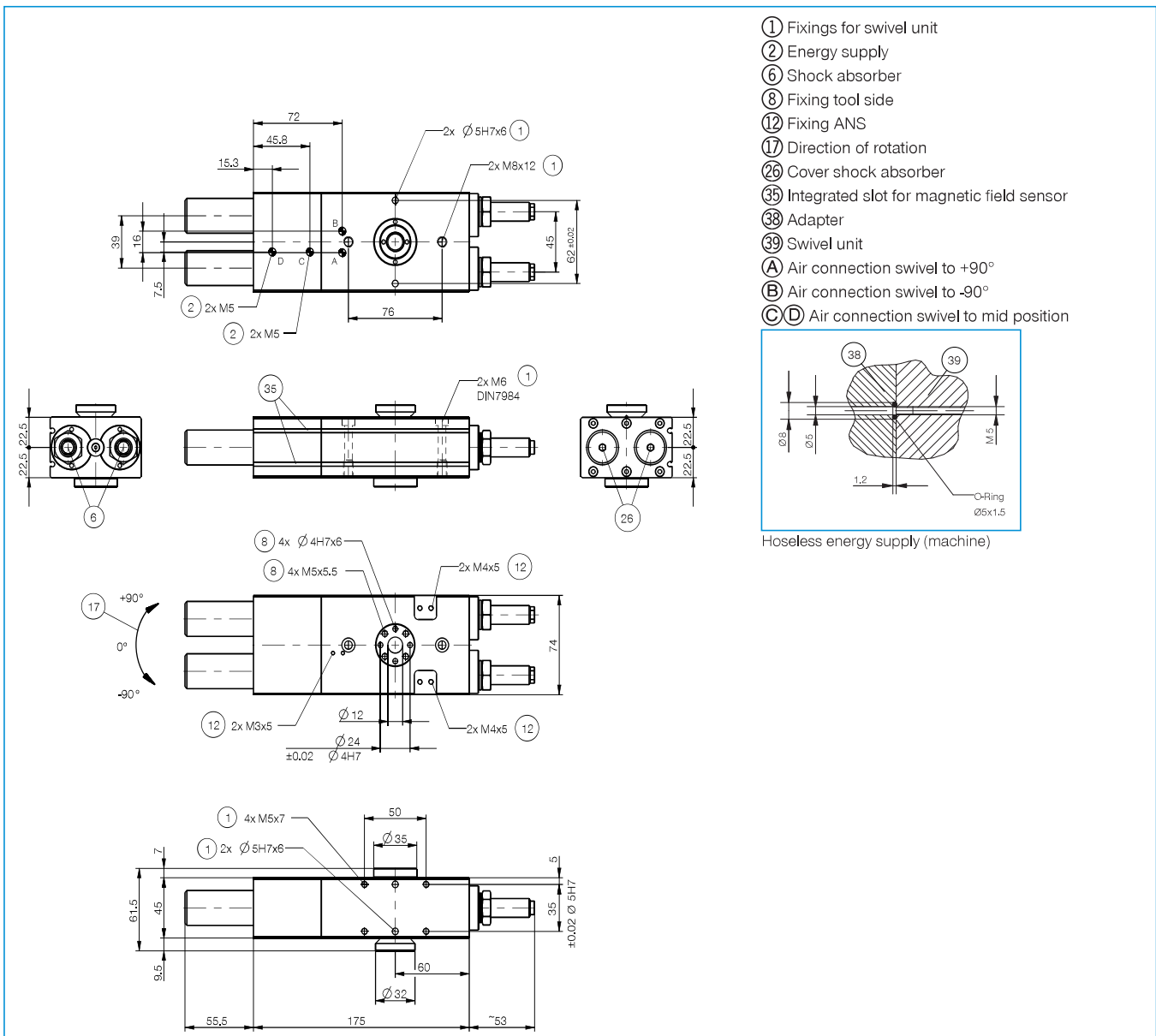
Inductive proximity switch - Connector M8
NJ8-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	7.3
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	12
Axial bearing load [N]	1120
Radial bearing load [Nm]	88
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	125
Weight [kg]	2.4

*All data measured at 6 bar



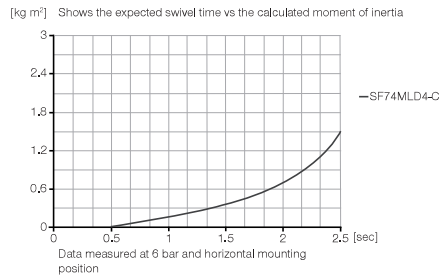
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74MLD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0020100



Attachment Kit
ANS0069



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ6,5-E2-01



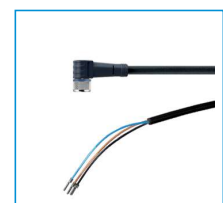
Inductive proximity switch
- Connector M8
NJ6,5-E2S



Inductive proximity switch
- Cable 5 m
NJ8-E2



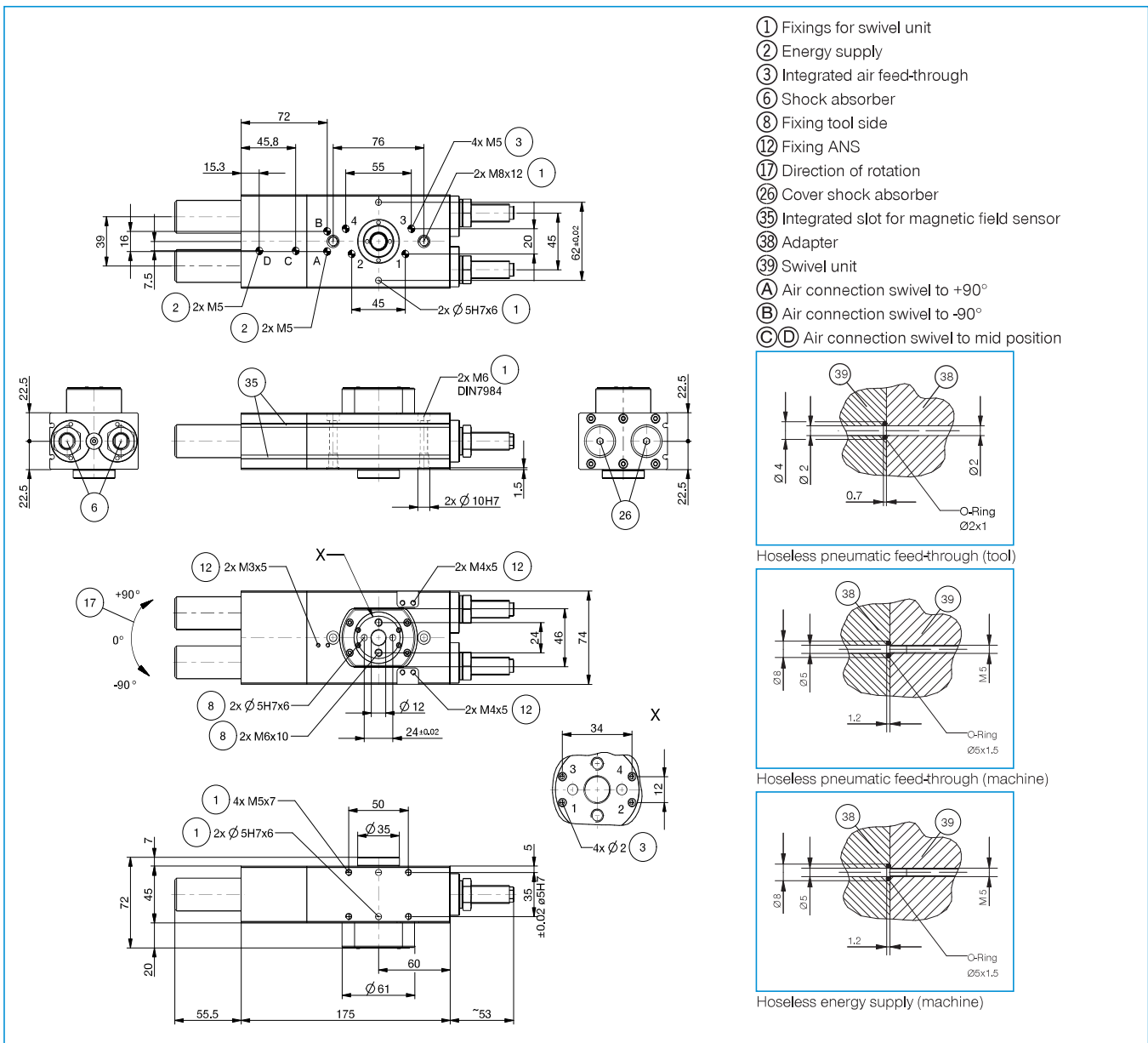
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	5.5
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	12
Axial bearing load [N]	1120
Radial bearing load [Nm]	88
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	125
Weight [kg]	2.6

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑳ Cover shock absorber
- ㉓ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- Ⓐ Air connection swivel to +90°
- Ⓑ Air connection swivel to -90°
- Ⓒ Ⓓ Air connection swivel to mid position

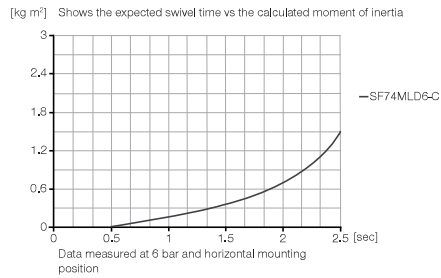
FLAT SWIVEL UNITS

INSTALLATION SIZE SF74MLD6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0020100



Attachment Kit
ANS0070



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ6,5-E2-01



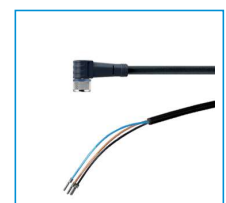
Inductive proximity switch - Connector M8
NJ6,5-E2S



Inductive proximity switch - Cable 5 m
NJ8-E2



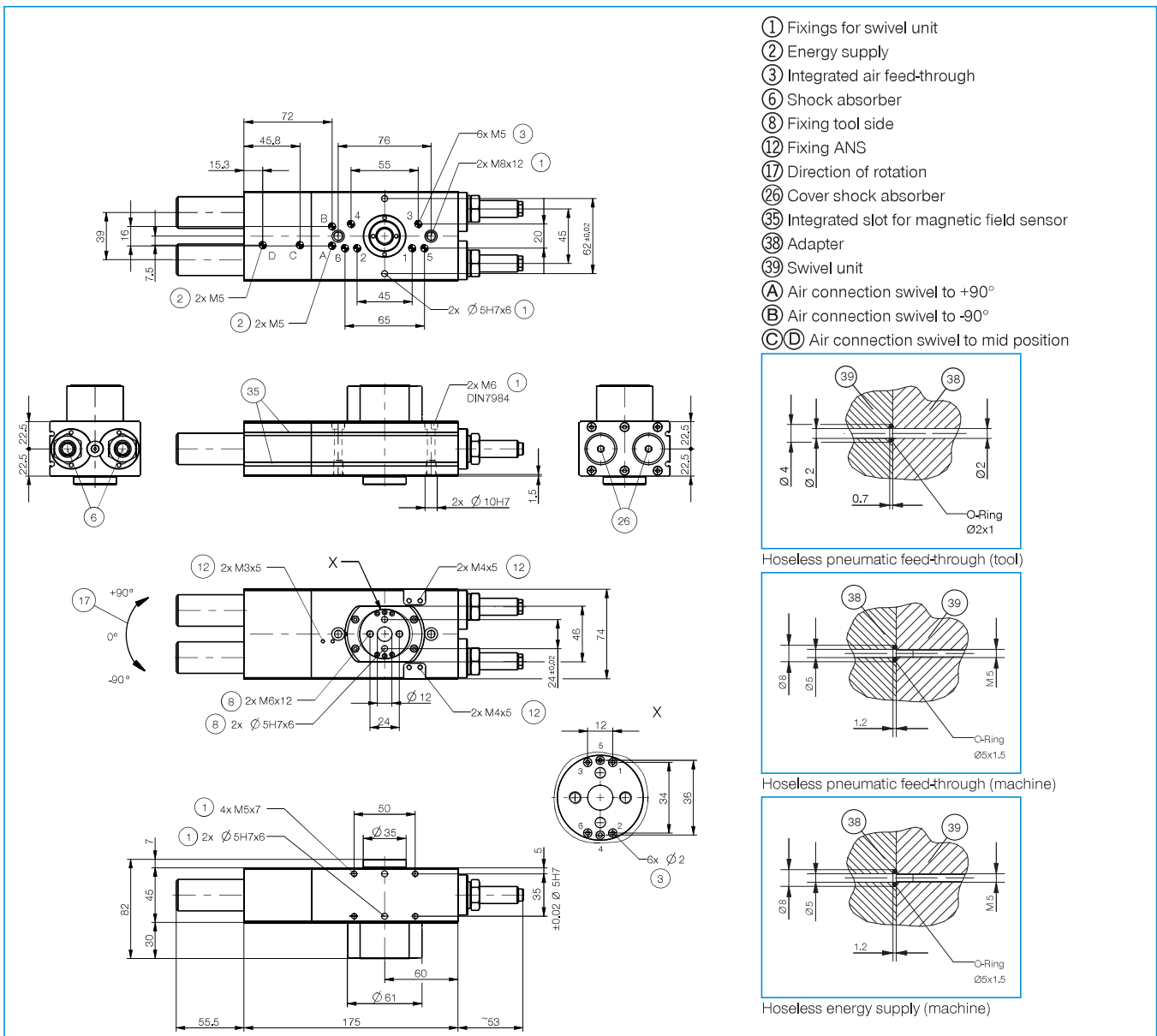
Inductive proximity switch - Connector M8
NJ8-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	4,5
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0,01
Passage bore Ø [mm]	12
Axial bearing load [N]	1120
Radial bearing load [Nm]	88
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	125
Weight [kg]	2,6

*All data measured at 6 bar



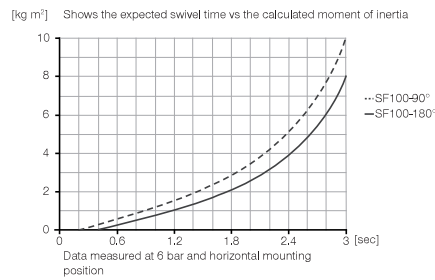
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRV1-8X6

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m

MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit

ANS0015



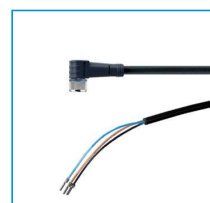
Inductive proximity switch - Cable 5 m

NJ8-E2



Inductive proximity switch - Connector M8

NJ8-E2S

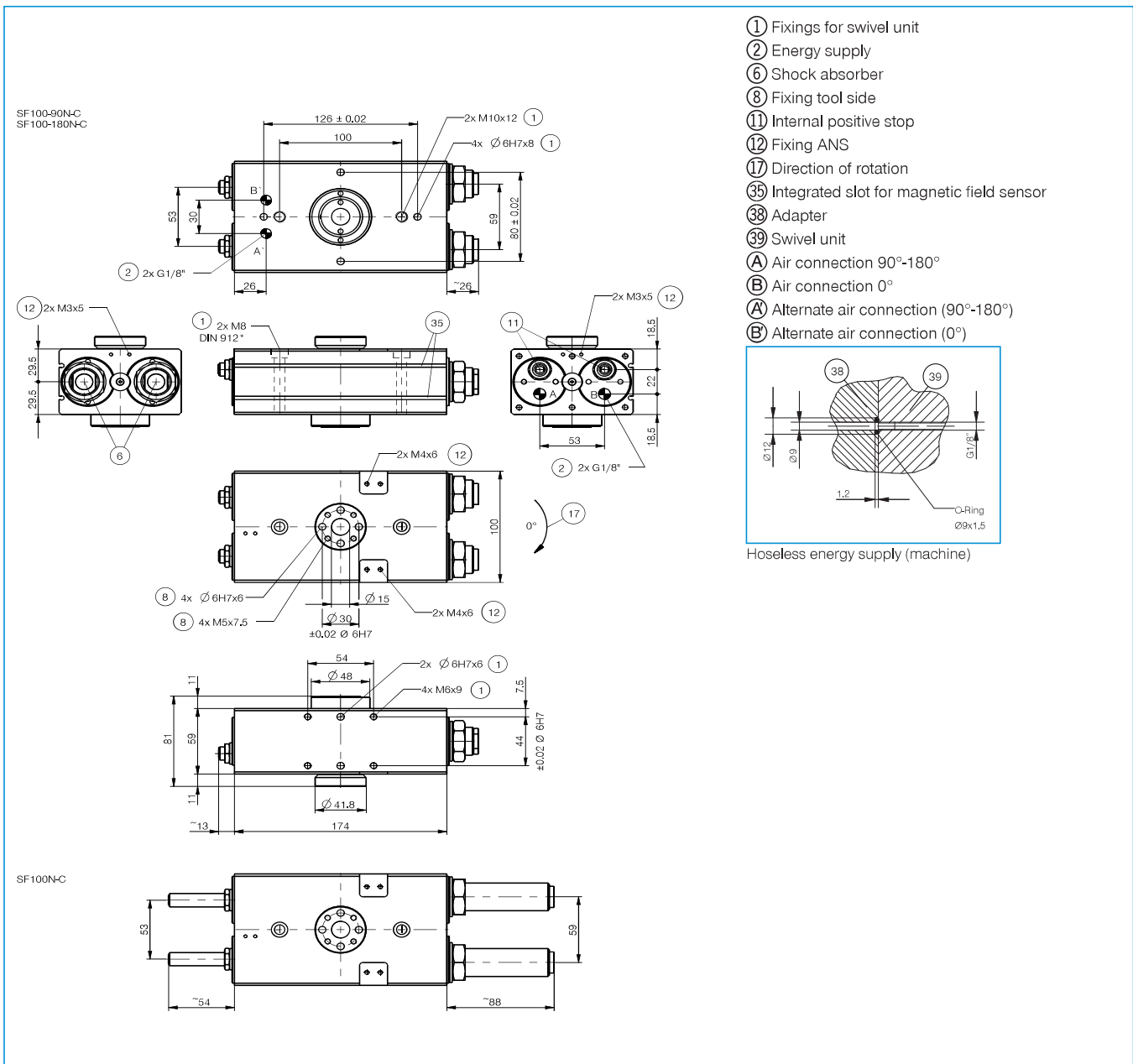


Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500

Order no.	Technical Data*		
	SF100-90N-C	SF100-180N-C	SF100N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	20	20	20
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	15	15	15
Axial bearing load [N]	2500	2500	2500
Radial bearing load [Nm]	155	155	155
Operating pressure min. [bar]	3	3	3 </td
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	103	206	206
Weight [kg]	3.7	3.7	3.7

*All data measured at 6 bar



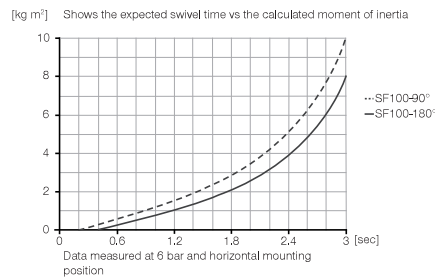
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0030100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



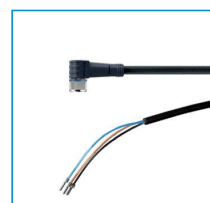
Attachment Kit
ANS0017



Inductive proximity switch
- Cable 5 m
NJ8-E2



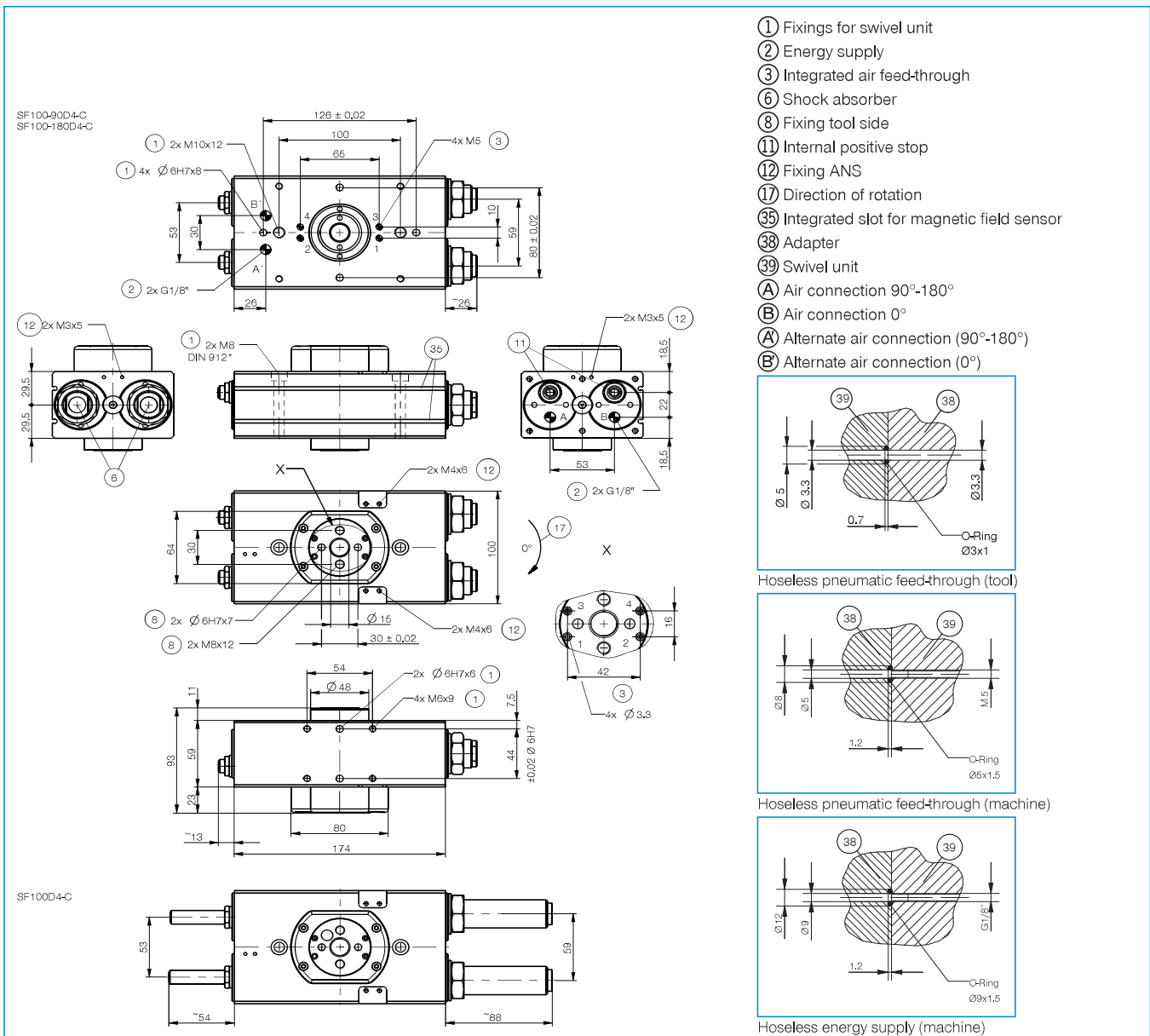
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF100-90D4-C	SF100-180D4-C	SF100D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	15	15	15
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	15	15	15
Axial bearing load [N]	2500	2500	2500
Radial bearing load [Nm]	155	155	155
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	103	206	206
Weight [kg]	4	4	4

*All data measured at 6 bar



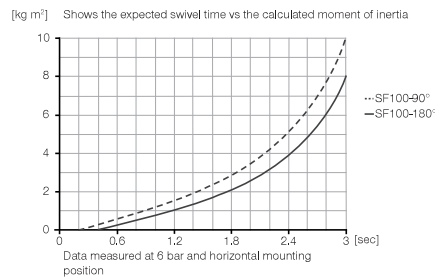
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100D6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0030100

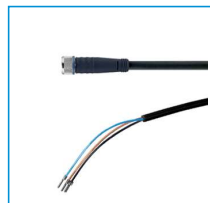
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



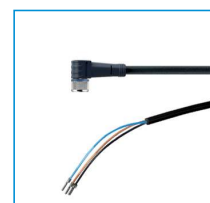
Attachment Kit
ANS0017



Inductive proximity switch
- Cable 5 m
NJ8-E2



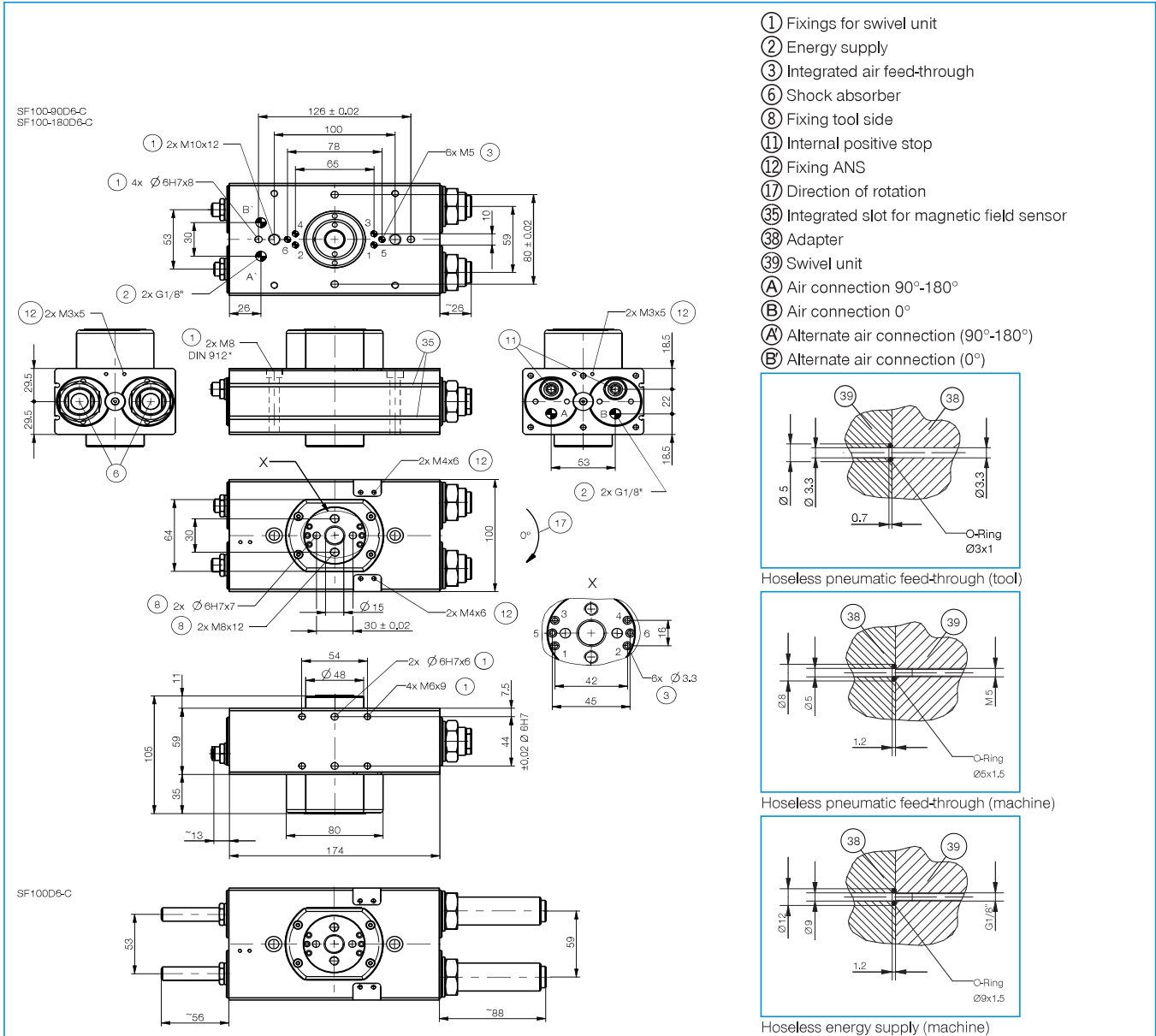
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF100-90D6-C	SF100-180D6-C	SF100D6-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	13	13	13
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	15	15	15
Axial bearing load [N]	2500	2500	2500
Radial bearing load [Nm]	155	155	155
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	103	206	206
Weight [kg]	4.1	4.1	4.1

* All data measured at 6 bar



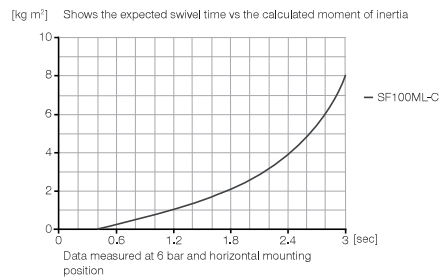
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100ML-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



Attachment Kit
ANS0071



Commissioning USB
052650

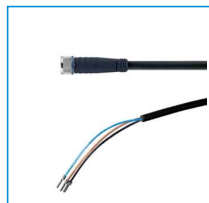
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

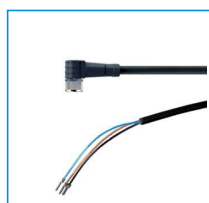
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ8-E2



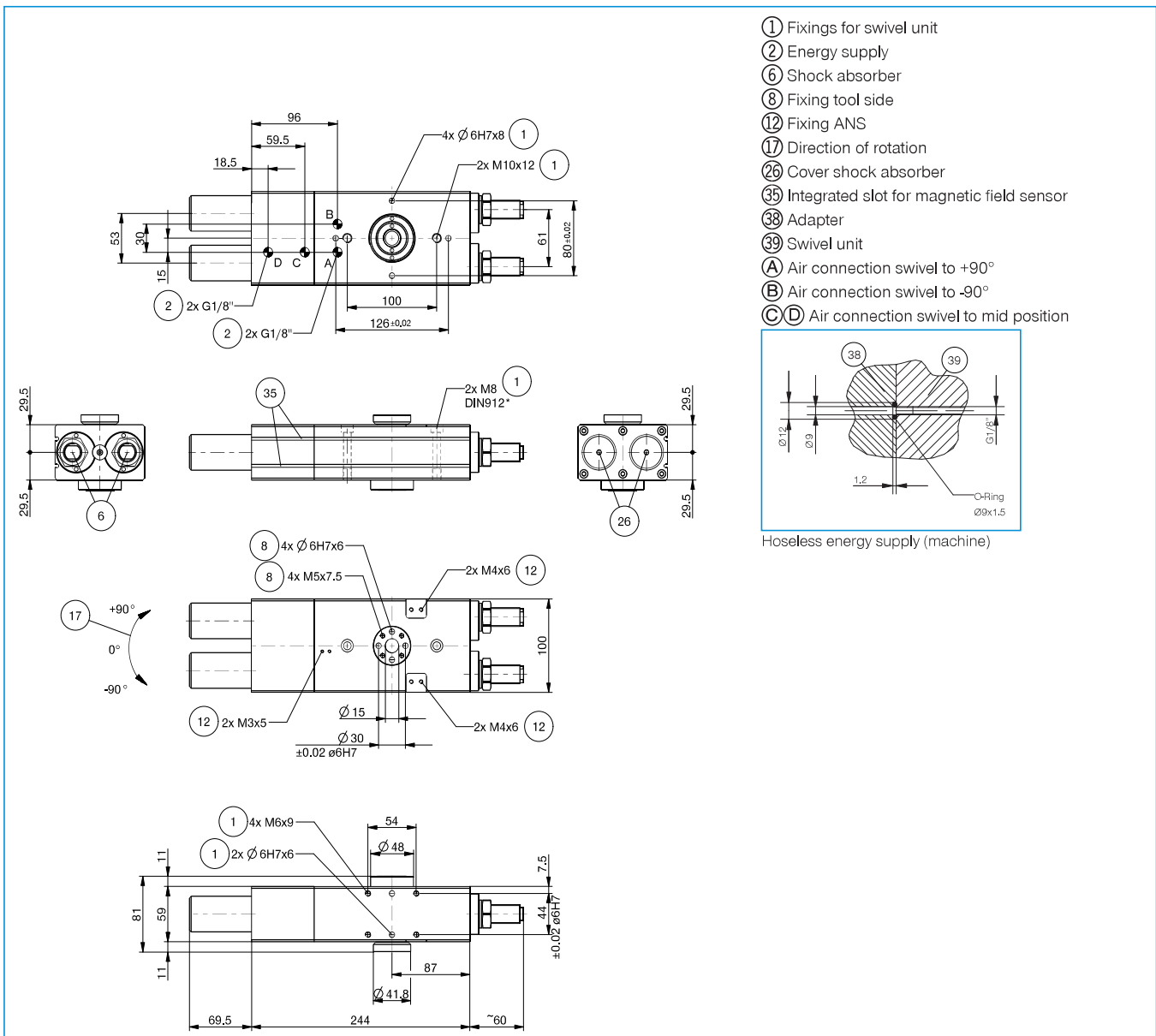
Inductive proximity switch
- Connector M8
NJ8-E2S



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	20
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	15
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	304
Weight [kg]	5.4

* All data measured at 6 bar



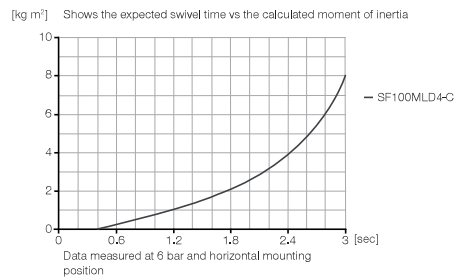
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100MLD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0030100



Attachment Kit
ANS0072



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

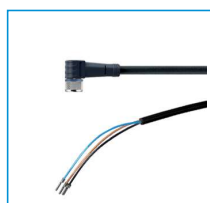
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ8-E2



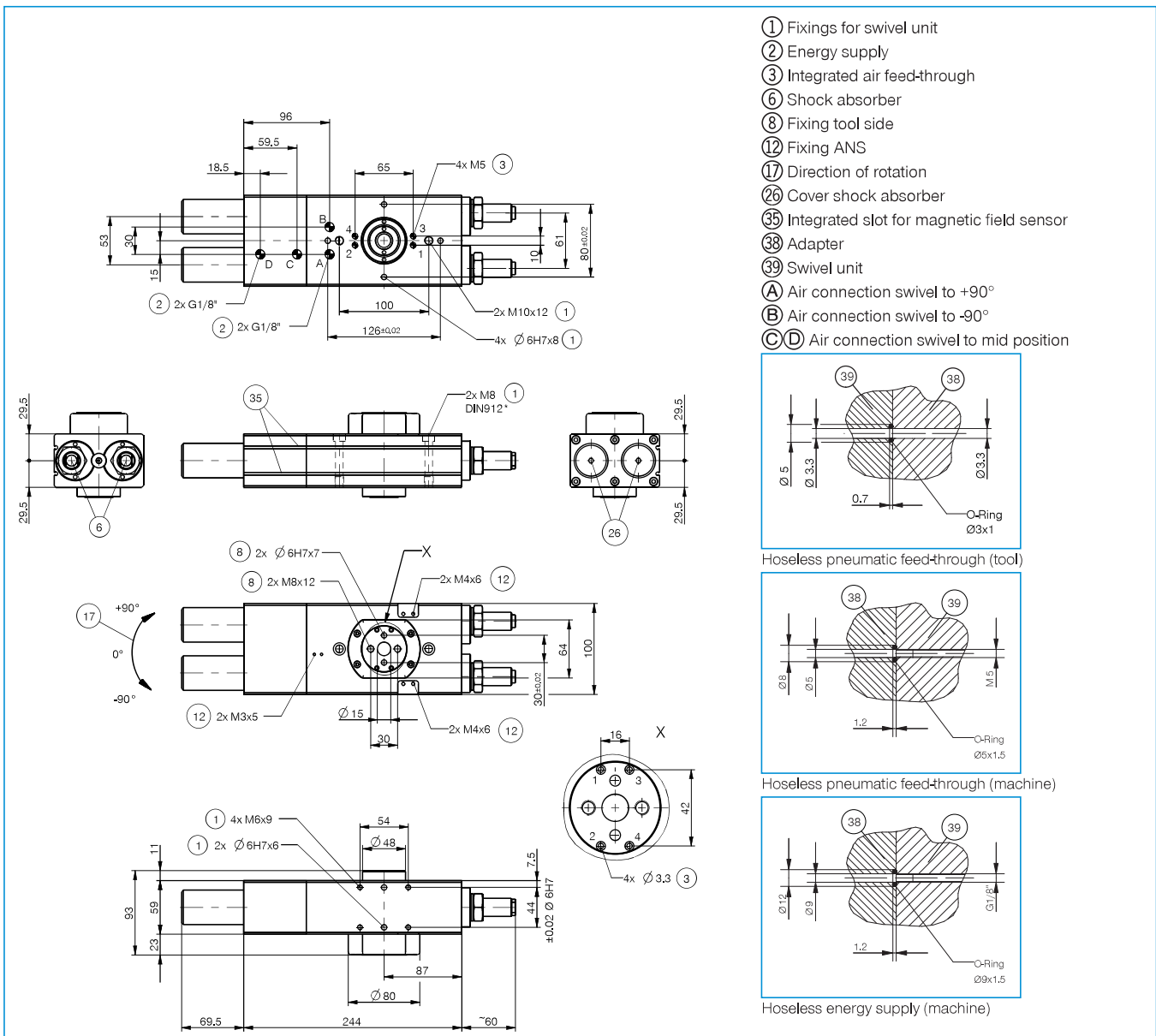
Inductive proximity switch - Connector M8
NJ8-E2S



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	15
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	15
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	304
Weight [kg]	5.7

* All data measured at 6 bar



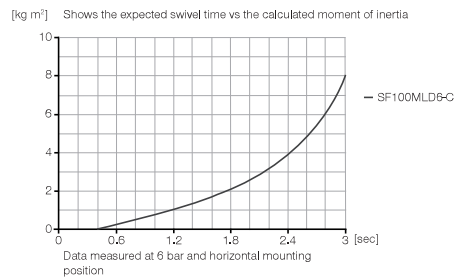
FLAT SWIVEL UNITS

INSTALLATION SIZE SF100MLD6-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0030100



Attachment Kit
ANS0073



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

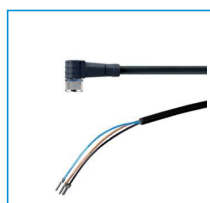
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ8-E2



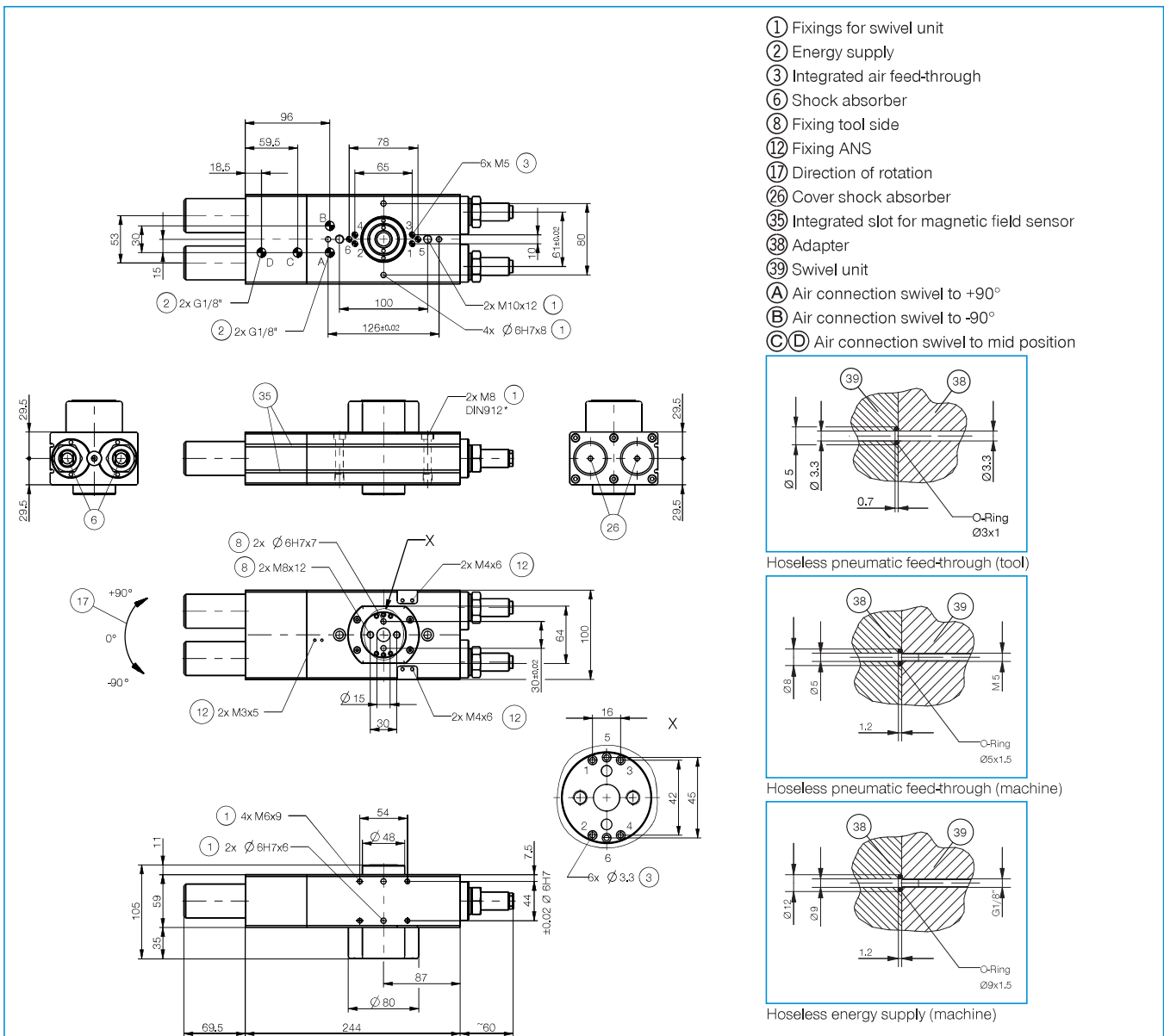
Inductive proximity switch
- Connector M8
NJ8-E2S



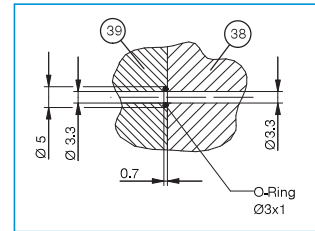
Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	13
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	15
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	304
Weight [kg]	5.8

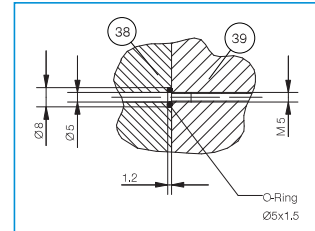
* All data measured at 6 bar



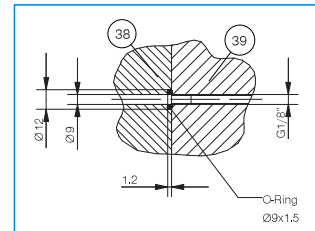
- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑳ Cover shock absorber
- ㉓ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- A Air connection swivel to +90°
- B Air connection swivel to -90°
- C D Air connection swivel to mid position



Hoseless pneumatic feed-through (tool)



Hoseless pneumatic feed-through (machine)



Hoseless energy supply (machine)

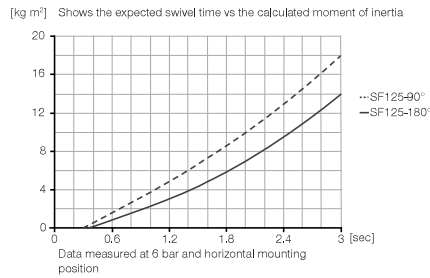
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8

▶ RECOMMENDED ACCESSORIES



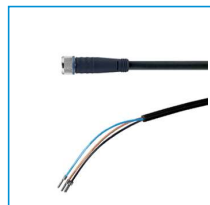
Magnetic field sensor
Straight Cable 5 m

MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8

MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)

KAG500



Plug-in connector
customizable Straight -
Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit

ANS0035



Inductive proximity switch
- Cable 5 m

NJ8-E2

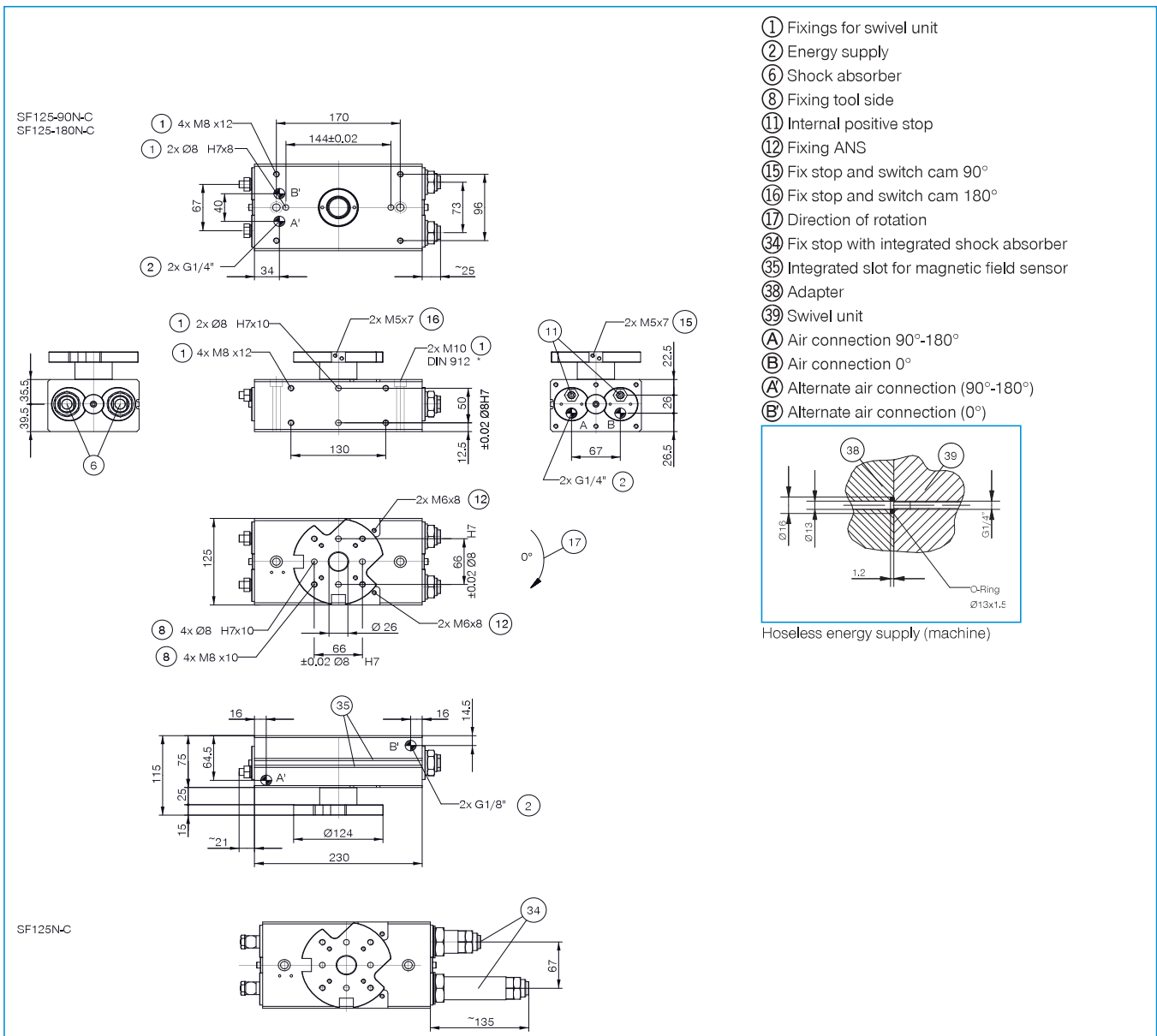


Inductive proximity switch
- Cable 5 m

NJ12-E2

Order no.	Technical Data*		
	SF125-90N-C	SF125-180N-C	SF125N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	38	38	38
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	26	26	26
Axial bearing load [N]	3400	3400	3400
Radial bearing load [Nm]	391	391	391
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	220	440	440
Weight [kg]	8,8	8,8	9,8

*All data measured at 6 bar



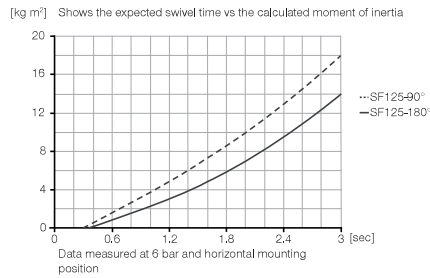
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRV1-4X8



O-Ring

COR0040150

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m

MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit

ANS0036



Inductive proximity switch - Cable 5 m

NJ8-E2

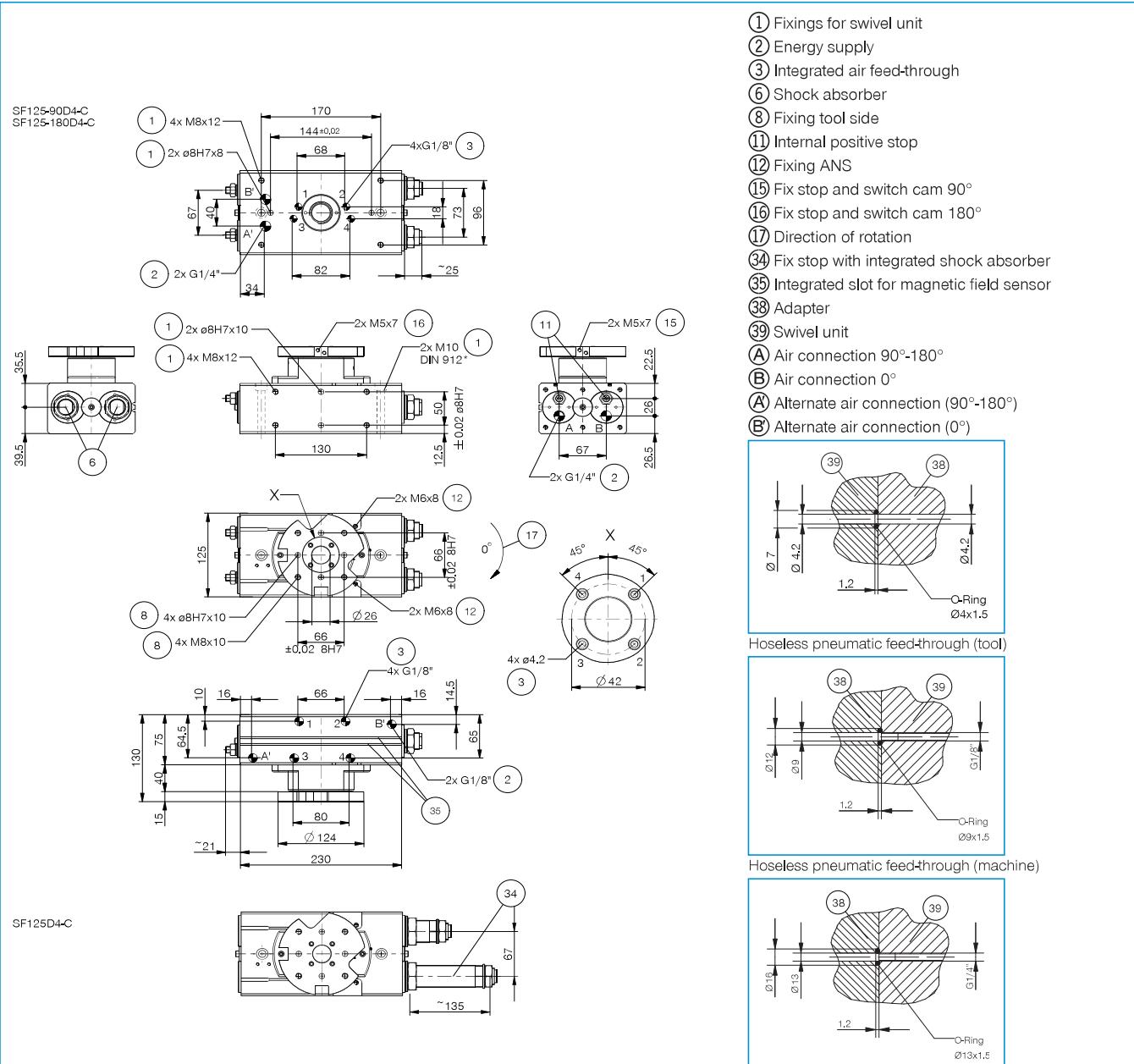


Inductive proximity switch - Cable 5 m

NJ12-E2

Order no.	Technical Data*		
	SF125-90D4-C	SF125-180D4-C	SF125D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	34	34	34
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	26	26	26
Axial bearing load [N]	3400	3400	3400
Radial bearing load [Nm]	391	391	391
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	220	440	440
Weight [kg]	9.5	9.5	10.5

* All data measured at 6 bar



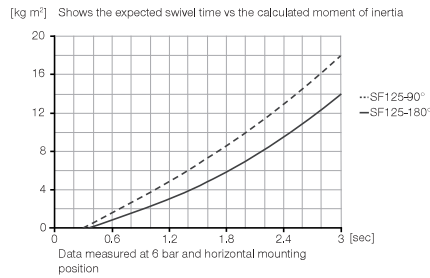
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125D8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit
ANS0037



Inductive proximity switch
- Cable 5 m
NJ8-E2

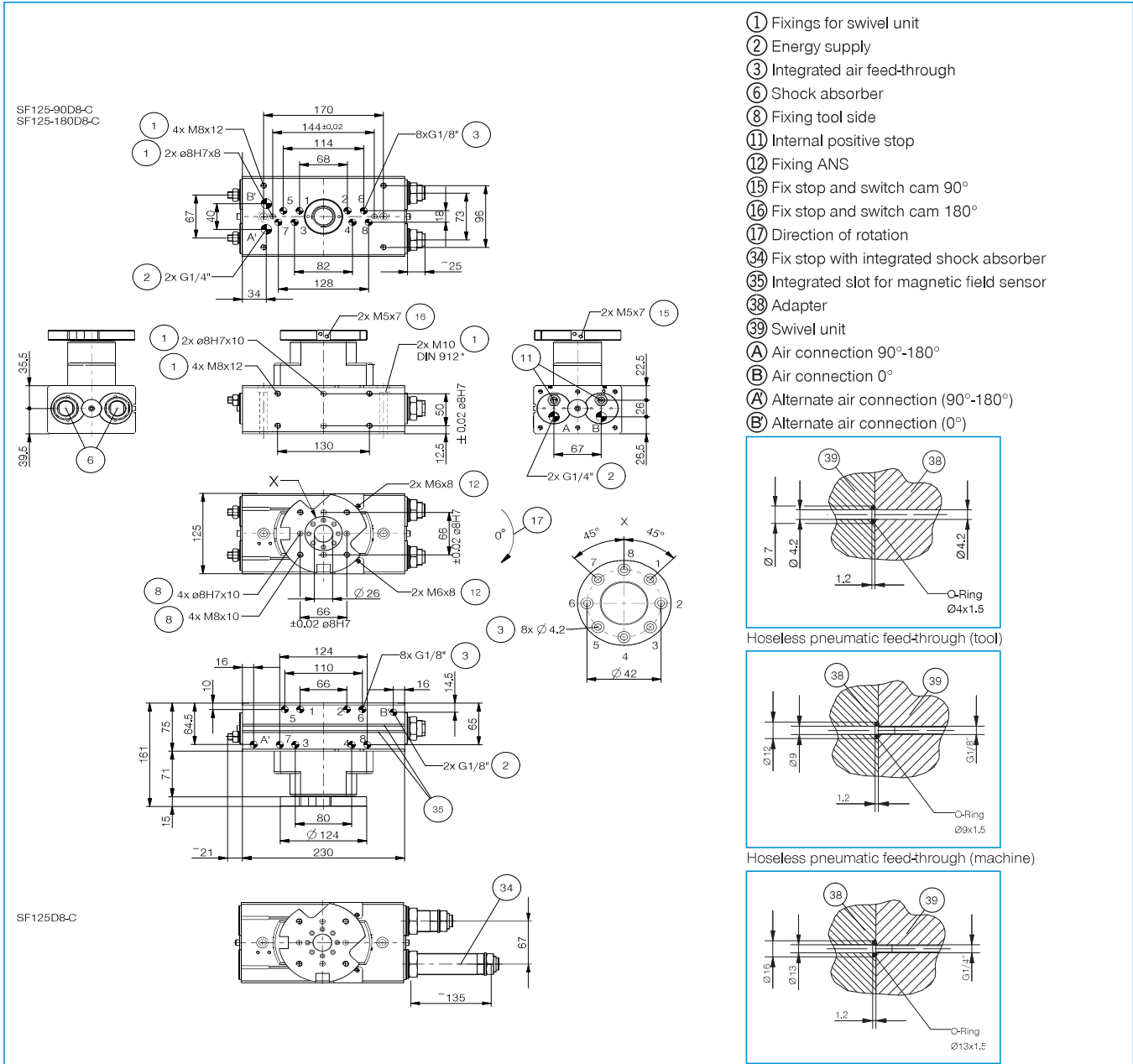


Inductive proximity switch
- Cable 5 m
NJ12-E2

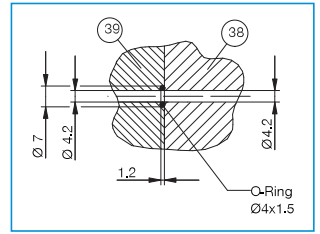
► Technical Data*

Order no.	SF125-90D8-C	SF125-180D8-C	SF125D8-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	32	32	32
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	26	26	26
Axial bearing load [N]	3400	3400	3400
Radial bearing load [Nm]	391	391	391
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	220	440	440
Weight [kg]	10.5	10.5	11.5

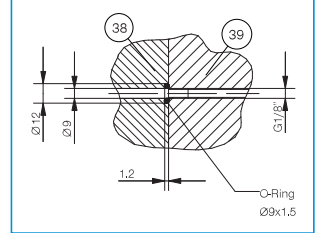
*All data measured at 6 bar



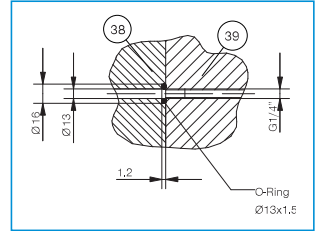
- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑪ Internal positive stop
- ⑫ Fixing ANS
- ⑮ Fix stop and switch cam 90°
- ⑯ Fix stop and switch cam 180°
- ⑰ Direction of rotation
- ⑳ Fix stop with integrated shock absorber
- ㉓ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- A Air connection 90°-180°
- B Air connection 0°
- A' Alternate air connection (90°-180°)
- B' Alternate air connection (0°)



Hoseless pneumatic feed-through (tool)



Hoseless pneumatic feed-through (machine)



Hoseless pneumatic feed-through (machine)

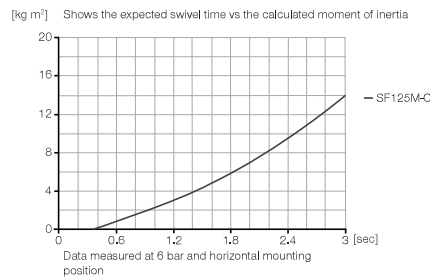
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125M-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



Attachment Kit
ANS0071



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052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



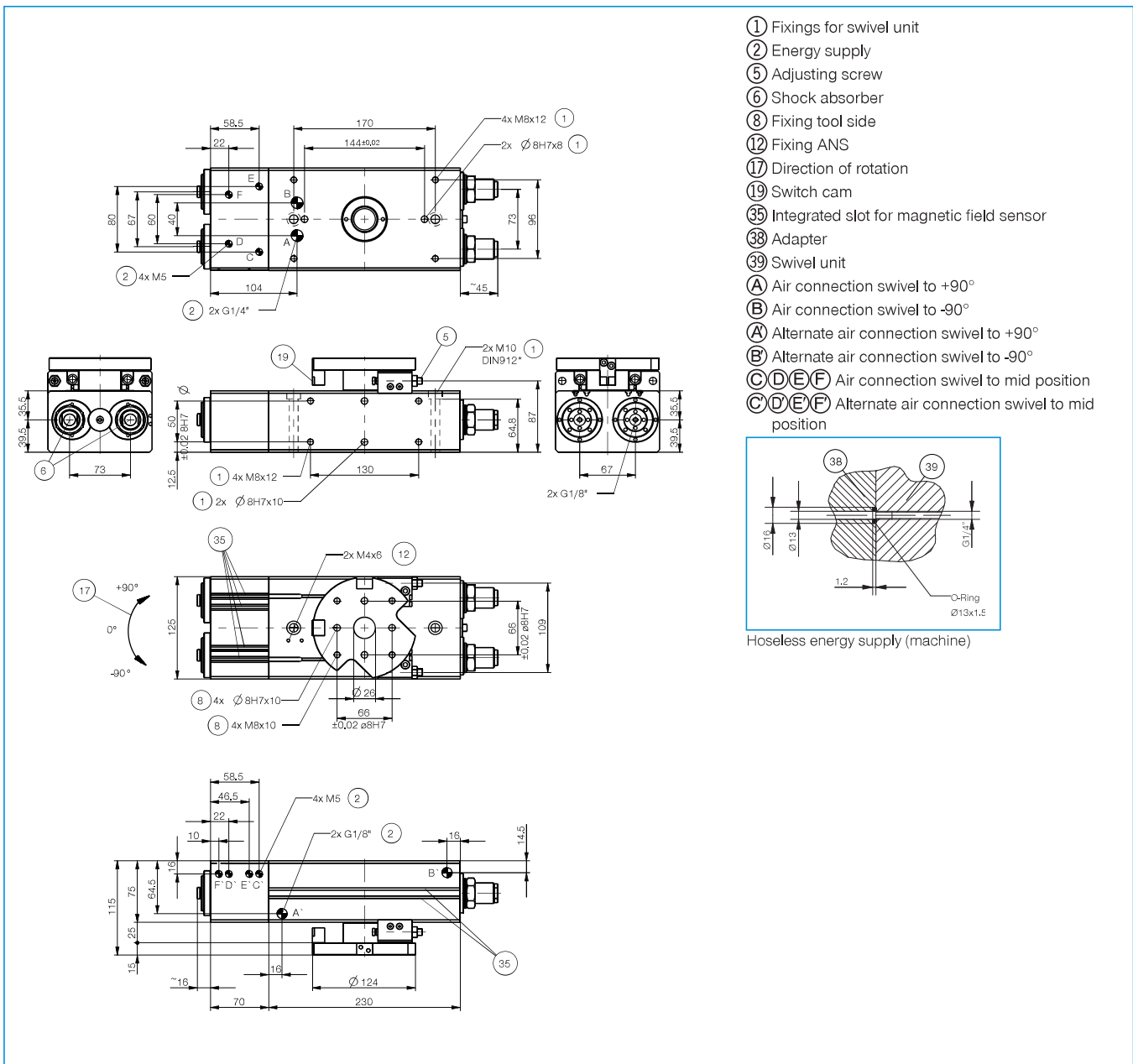
Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Cable 5 m
NJ12-E2

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	38
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	26
Axial bearing load [N]	3400
Radial bearing load [Nm]	391
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	540
Weight [kg]	11.9

* All data measured at 6 bar



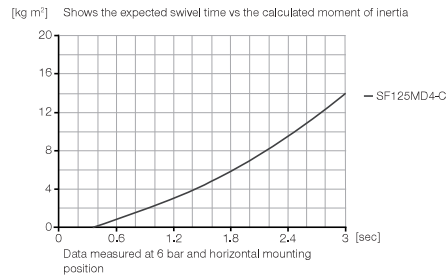
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125MD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150



Attachment Kit
ANS0075



Commissioning USB
052650

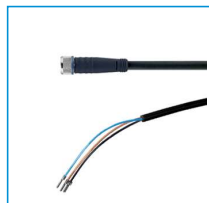
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



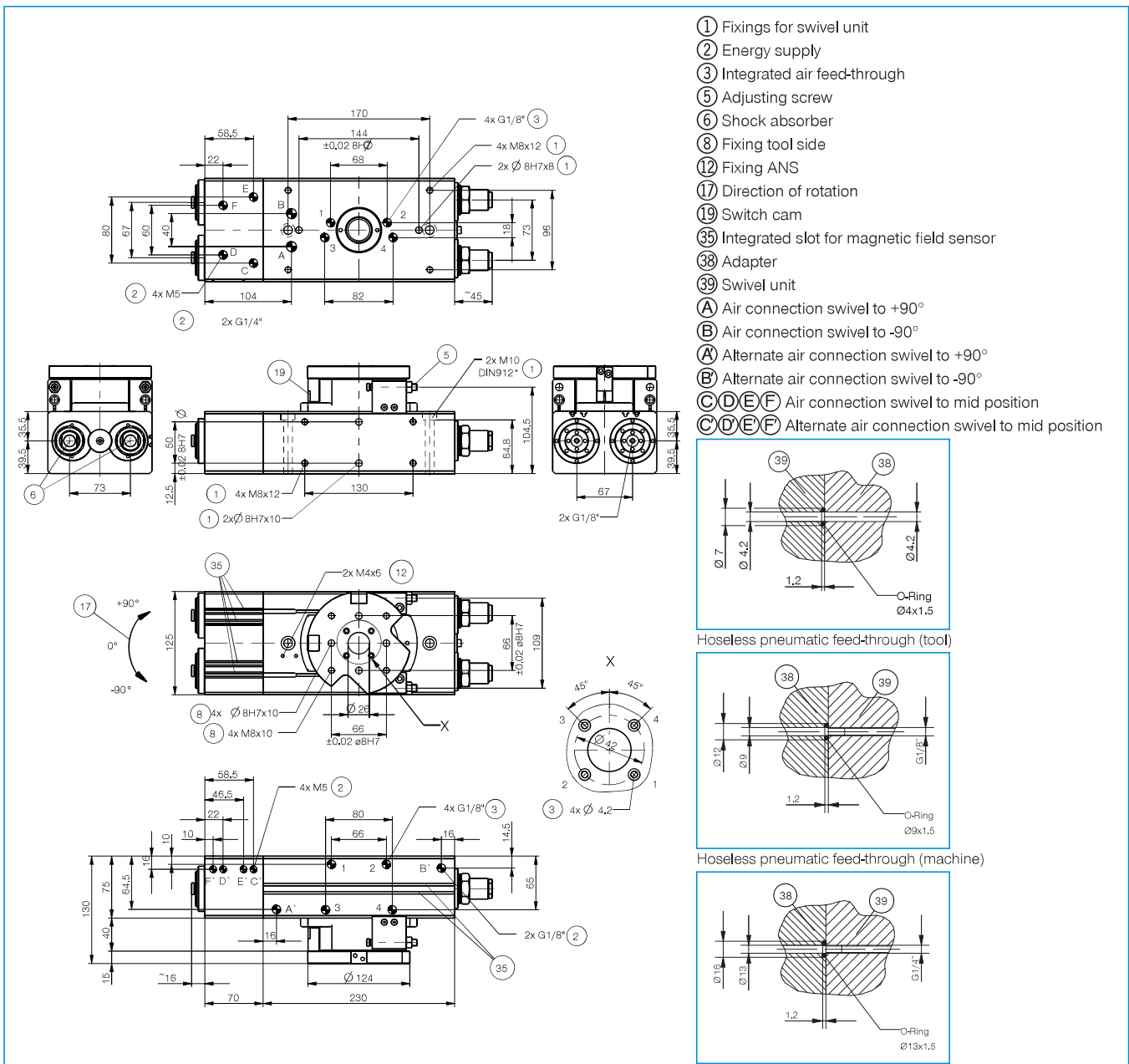
Inductive proximity switch - Cable 5 m
NJ8-E2



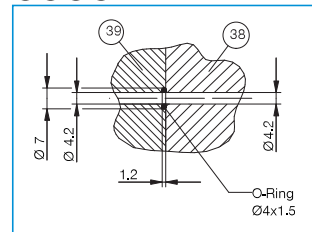
Inductive proximity switch - Cable 5 m
NJ12-E2

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	34
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	26
Axial bearing load [N]	3400
Radial bearing load [Nm]	391
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	540
Weight [kg]	12.9

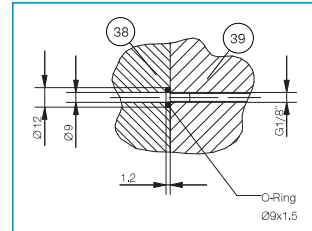
*All data measured at 6 bar



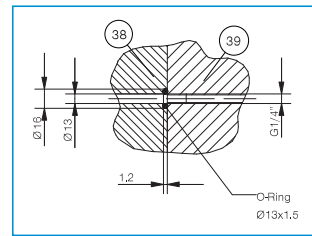
- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑤ Adjusting screw
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑲ Switch cam
- ⑳ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- A Air connection swivel to +90°
- B Air connection swivel to -90°
- A' Alternate air connection swivel to +90°
- B' Alternate air connection swivel to -90°
- C D E F Air connection swivel to mid position
- C' D' E' F' Alternate air connection swivel to mid position



Hoseless pneumatic feed-through (tool)



Hoseless pneumatic feed-through (machine)



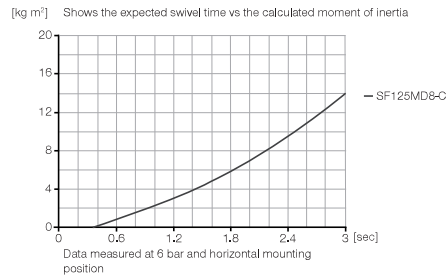
FLAT SWIVEL UNITS

INSTALLATION SIZE SF125MD8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150



Attachment Kit
ANS0076



Commissioning USB
052650

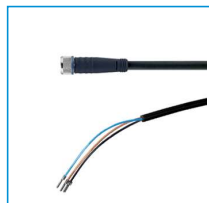
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



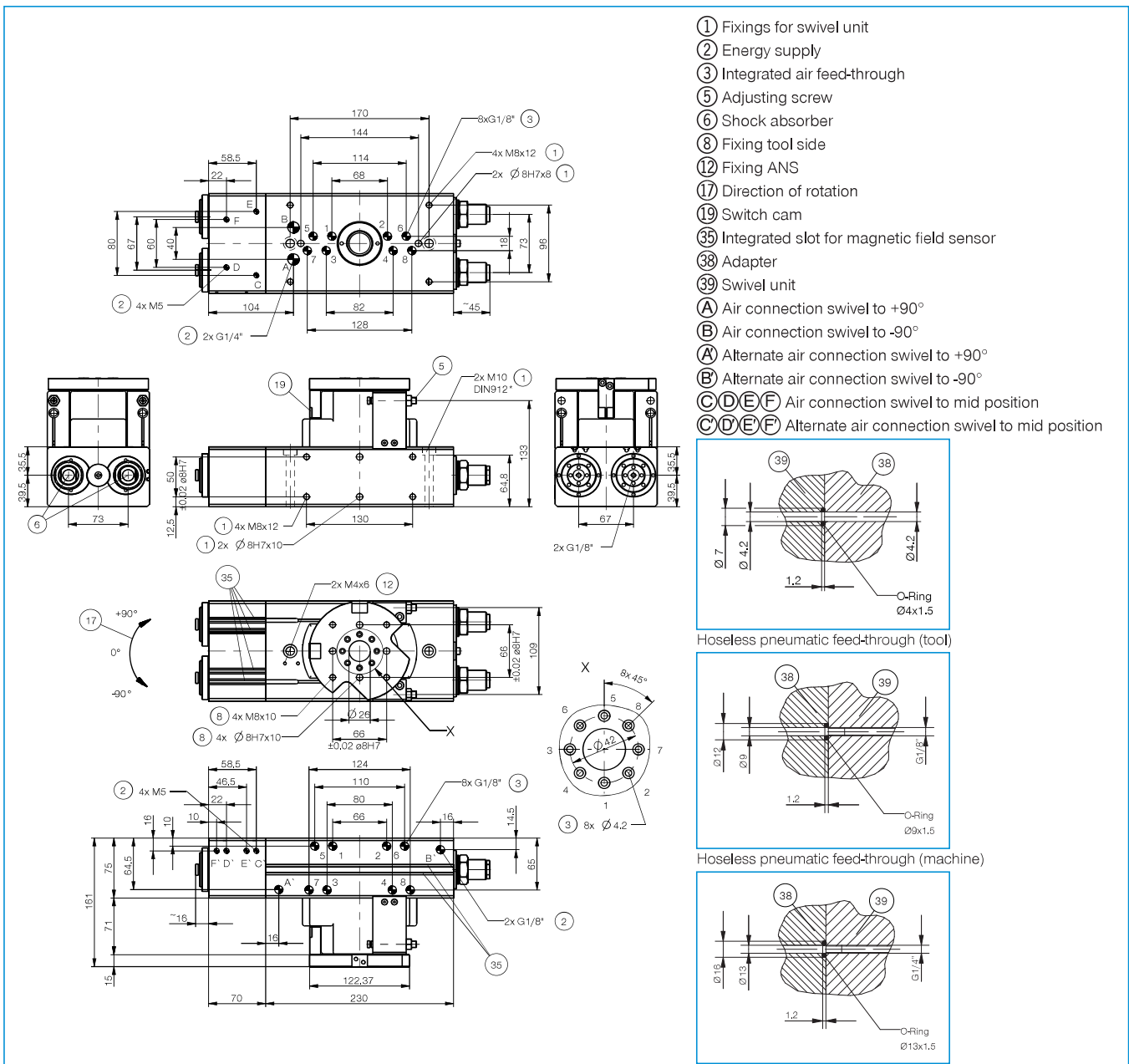
Inductive proximity switch
- Cable 5 m
NJ8-E2



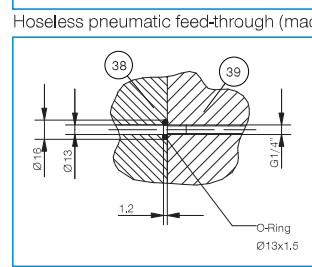
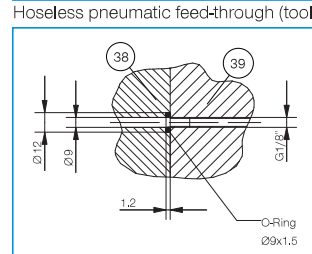
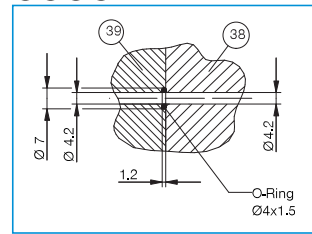
Inductive proximity switch
- Cable 5 m
NJ12-E2

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	32
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	26
Axial bearing load [N]	3400
Radial bearing load [Nm]	391
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	540
Weight [kg]	12.9

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑤ Adjusting screw
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑲ Switch cam
- ⑳ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- A Air connection swivel to +90°
- B Air connection swivel to -90°
- A' Alternate air connection swivel to +90°
- B' Alternate air connection swivel to -90°
- C, D, E, F Air connection swivel to mid position
- C', D', E', F' Alternate air connection swivel to mid position



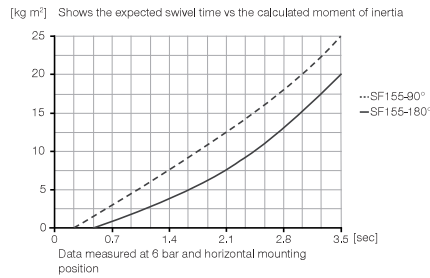
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8

▶ RECOMMENDED ACCESSORIES



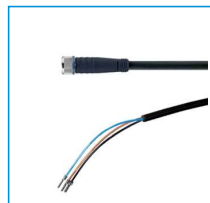
Magnetic field sensor
Straight Cable 5 m

MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8

MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)

KAG500



Plug-in connector
customizable Straight -
Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit

ANS0038



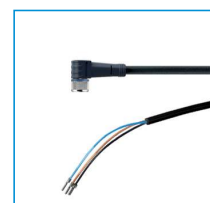
Inductive proximity switch
- Cable 5 m

NJ8-E2



Inductive proximity switch
- Cable 5 m

NJ12-E2

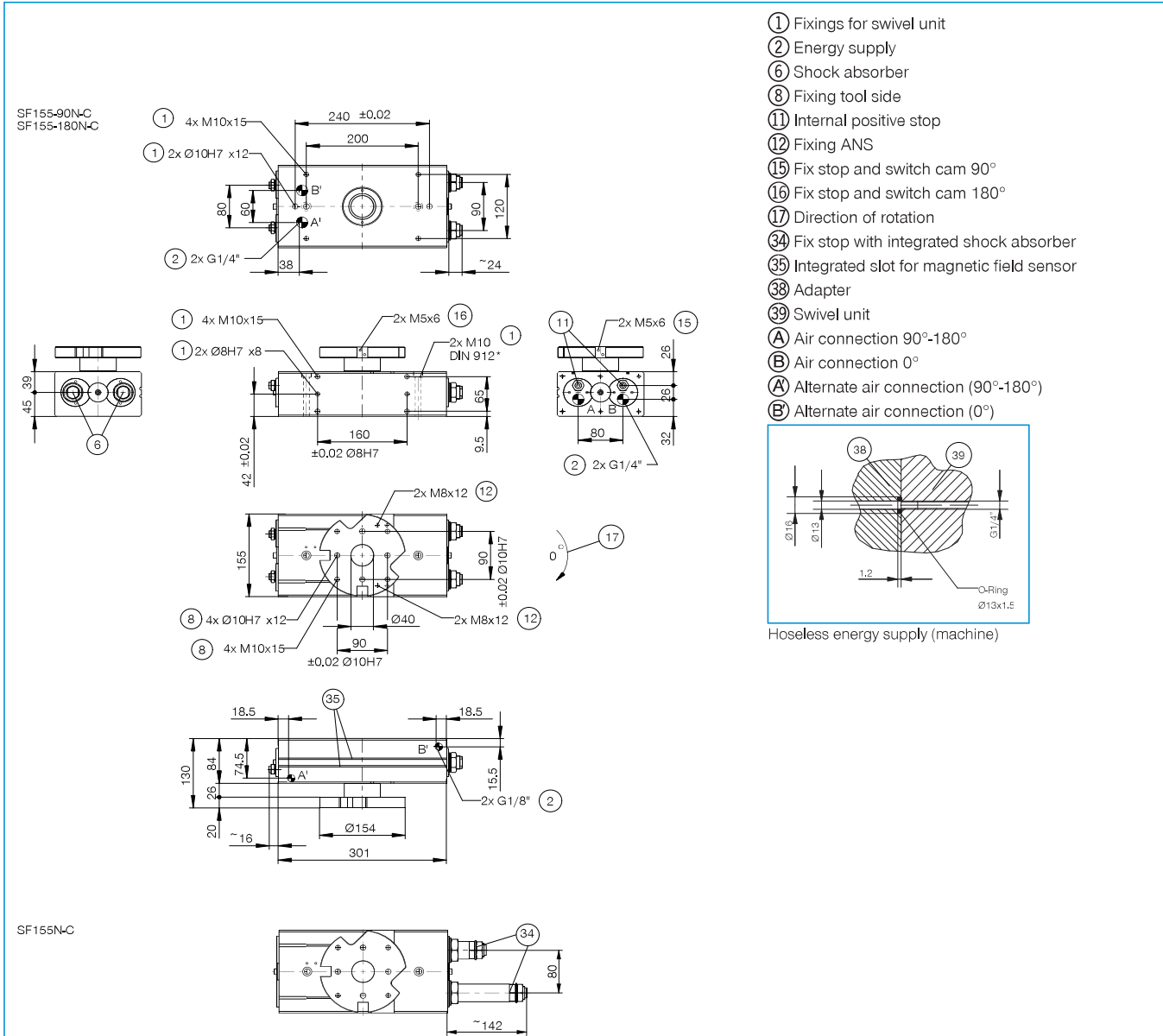


Plug-in connector Angled
Cable 5m - Socket M8
(female)

KAW500

Order no.	► Technical Data*		
	SF155-90N-C	SF155-180N-C	SF155N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	62	62	62
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	5900	5900	5900
Radial bearing load [Nm]	761	761	761
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	350	700	700
Weight [kg]	15	15	16.5

*All data measured at 6 bar



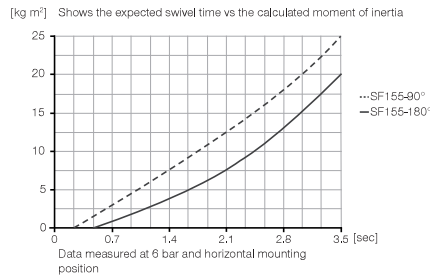
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



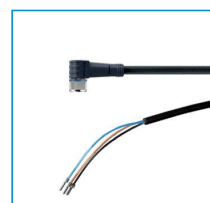
Attachment Kit
ANS0039



Inductive proximity switch
- Cable 5 m
NJ8-E2



Inductive proximity switch
- Cable 5 m
NJ12-E2



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF155-90D4-C	SF155-180D4-C	SF155D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	58	58	58
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	5900	5900	5900
Radial bearing load [Nm]	761	761	761
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	350	700	700
Weight [kg]	16	16	17.5

*All data measured at 6 bar

SF155-90D4-C
SF155-180D4-C

SF155D4-C

- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ④ Shock absorber
- ⑤ Fixing tool side
- ⑥ Internal positive stop
- ⑦ Fixing ANS
- ⑧ Fix stop and switch cam 90°
- ⑨ Fix stop and switch cam 180°
- ⑩ Direction of rotation
- ⑪ Fix stop with integrated shock absorber
- ⑫ Integrated slot for magnetic field sensor
- ⑬ Adapter
- ⑭ Swivel unit
- Ⓐ Air connection 90°-180°
- Ⓑ Air connection 0°
- Ⓐ Alternate air connection (90°-180°)
- Ⓑ Alternate air connection (0°)

Hoseless pneumatic feed-through (tool)

Hoseless pneumatic feed-through (machine)

Hoseless pneumatic feed-through (machine)

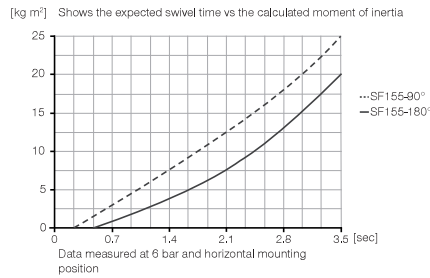
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155D8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



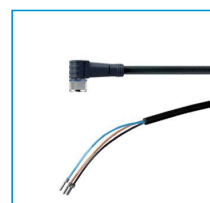
Attachment Kit
ANS0040



Inductive proximity switch
- Cable 5 m
NJ8-E2



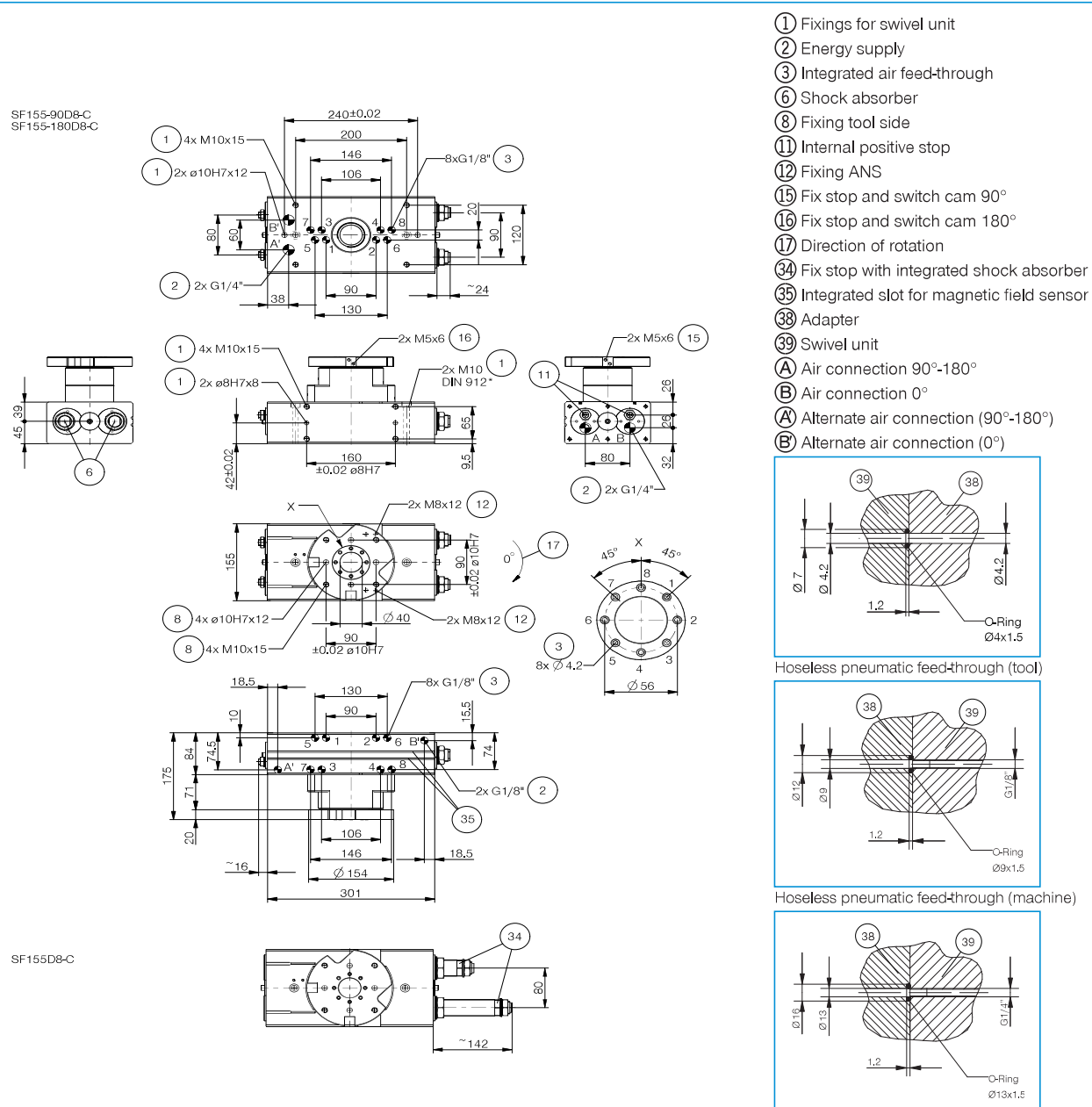
Inductive proximity switch
- Cable 5 m
NJ12-E2



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF155-90D8-C	SF155-180D8-C	SF155D8-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	54	54	54
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	5900	5900	5900
Radial bearing load [Nm]	761	761	761
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	350	700	700
Weight [kg]	17.5	17.5	19

* All data measured at 6 bar



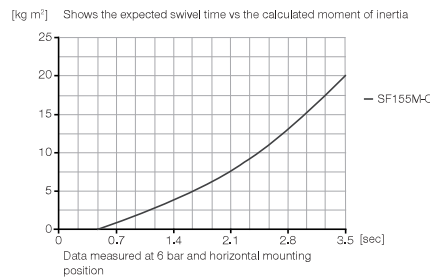
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155M-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



Attachment Kit
ANS0077



Commissioning USB
052650

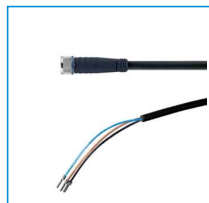
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

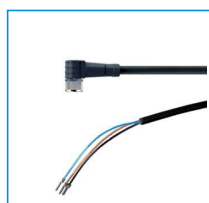
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ8-E2



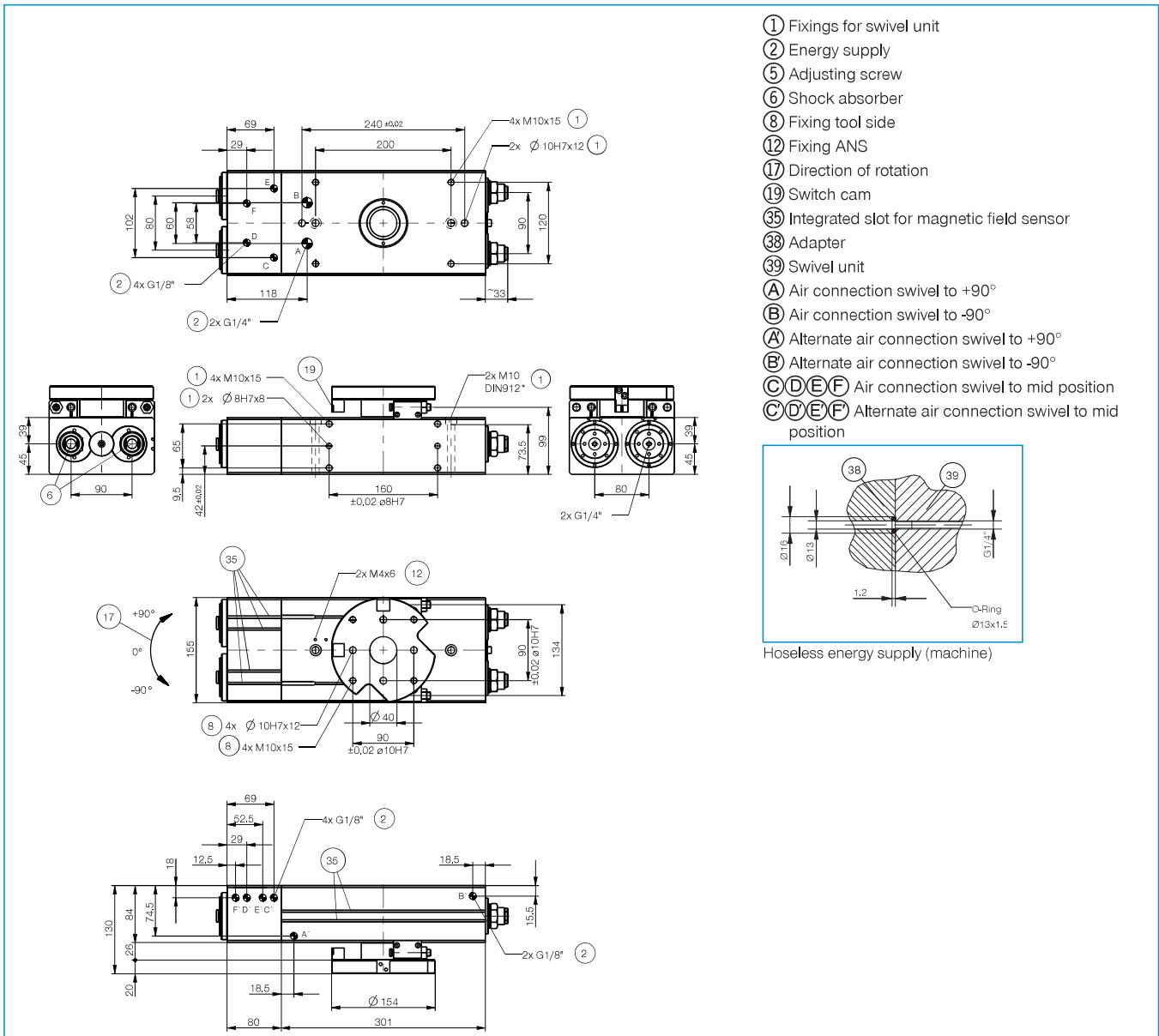
Inductive proximity switch
- Cable 5 m
NJ12-E2



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	62
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1010
Weight [kg]	19.3

*All data measured at 6 bar



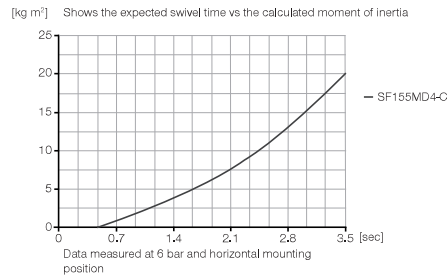
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155MD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150



Attachment Kit
ANS0078



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

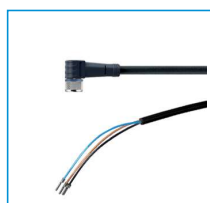
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ8-E2



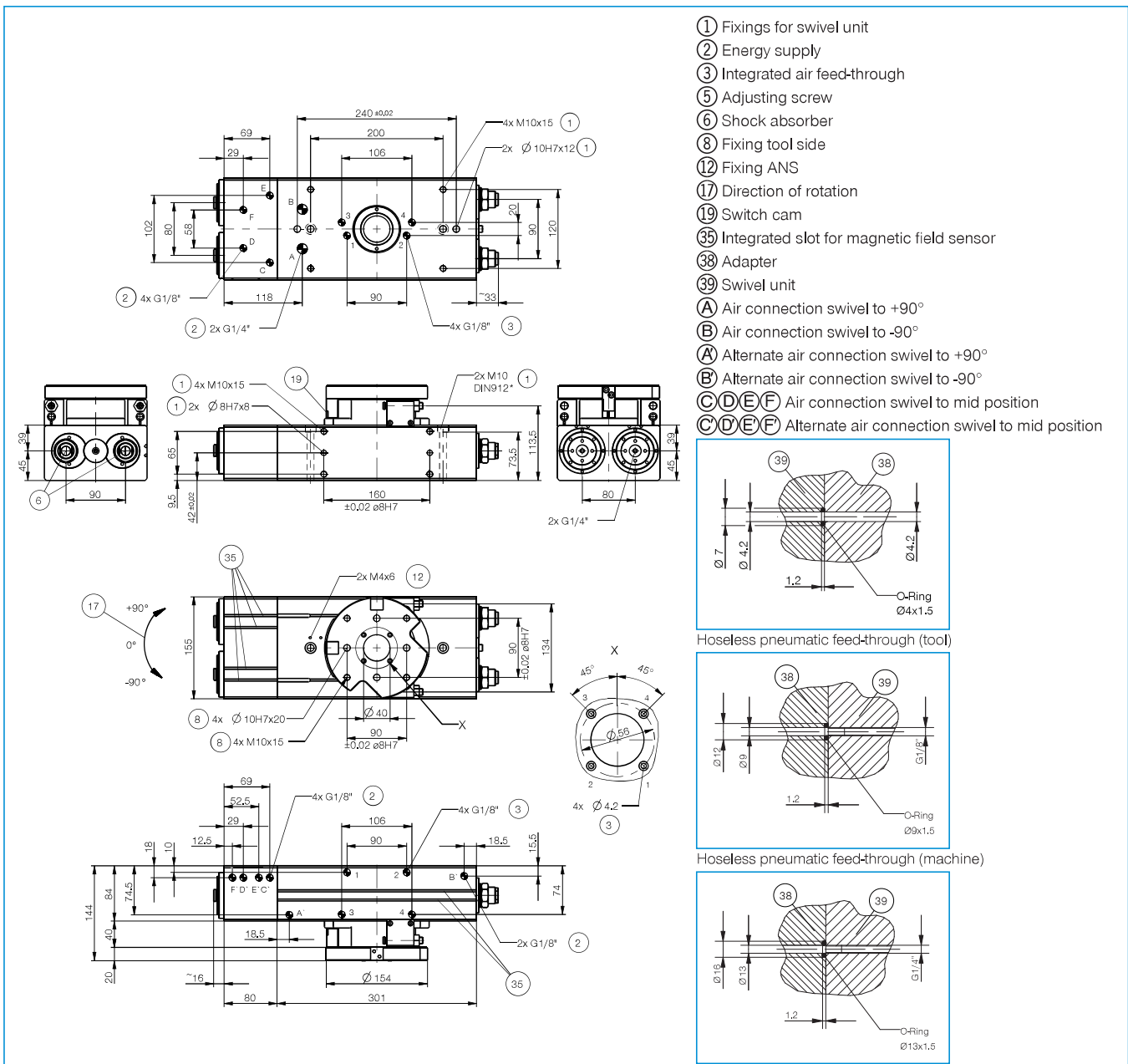
Inductive proximity switch - Cable 5 m
NJ12-E2



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	58
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1010
Weight [kg]	20.3

*All data measured at 6 bar



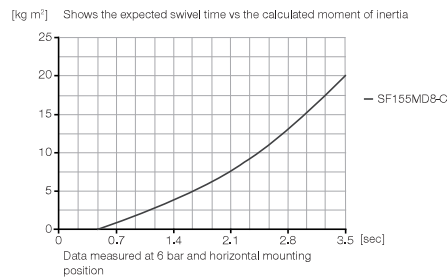
FLAT SWIVEL UNITS

INSTALLATION SIZE SF155MD8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0040150



Attachment Kit
ANS0079



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

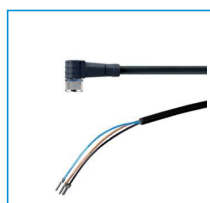
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ8-E2



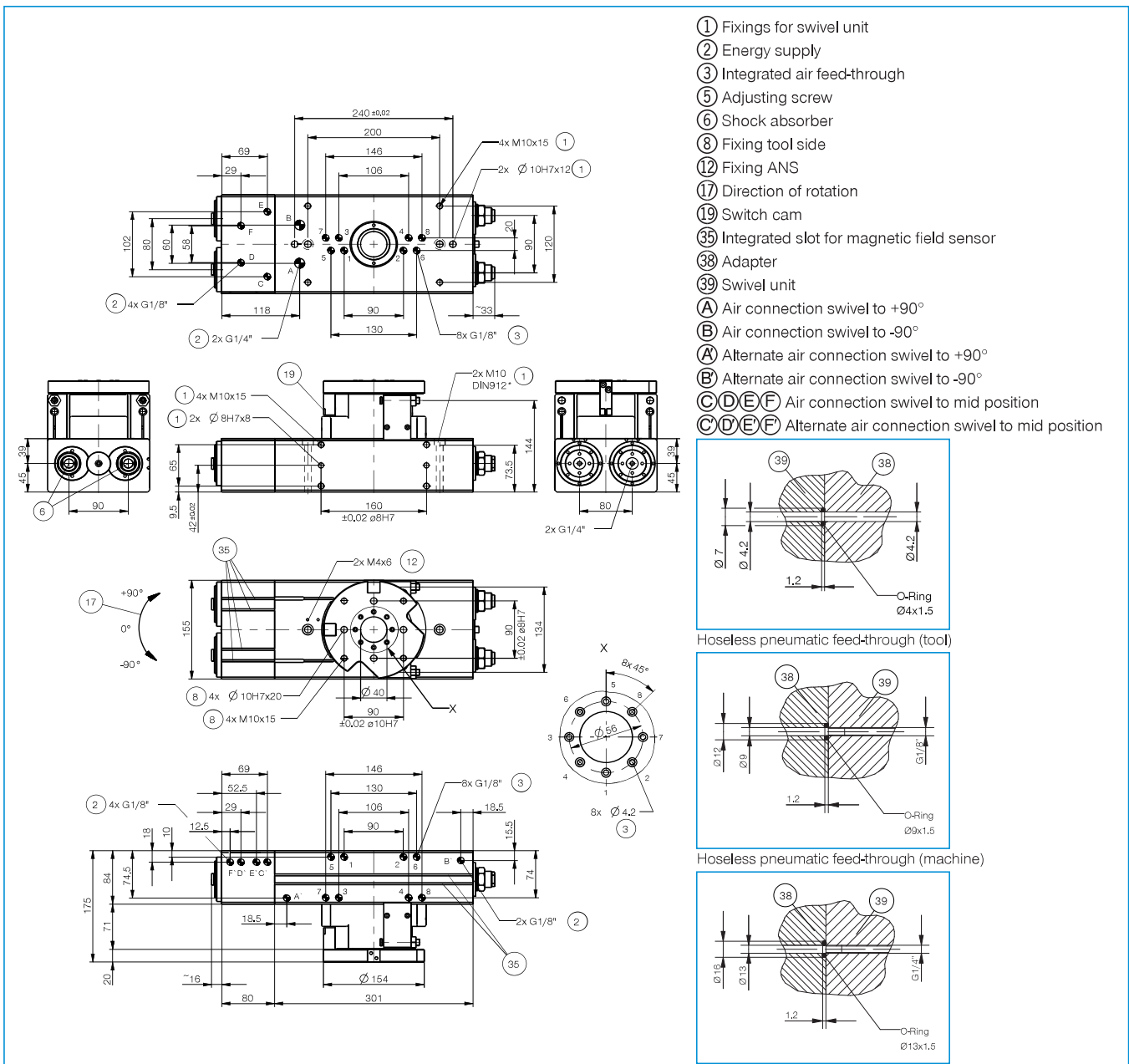
Inductive proximity switch - Cable 5 m
NJ12-E2



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	54
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	5900
Radial bearing load [Nm]	761
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	1010
Weight [kg]	21.8

*All data measured at 6 bar



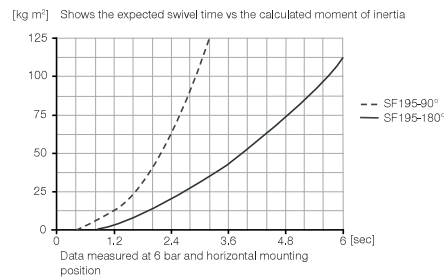
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195N-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint

DRV1-4X8

▶ RECOMMENDED ACCESSORIES



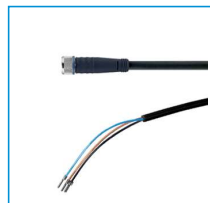
Magnetic field sensor Straight Cable 5 m

MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8

MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Pressure Safety Valve

DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit

ANS0041



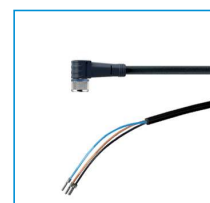
Inductive proximity switch - Cable 5 m

NJ8-E2



Inductive proximity switch - Cable 5 m

NJ12-E2

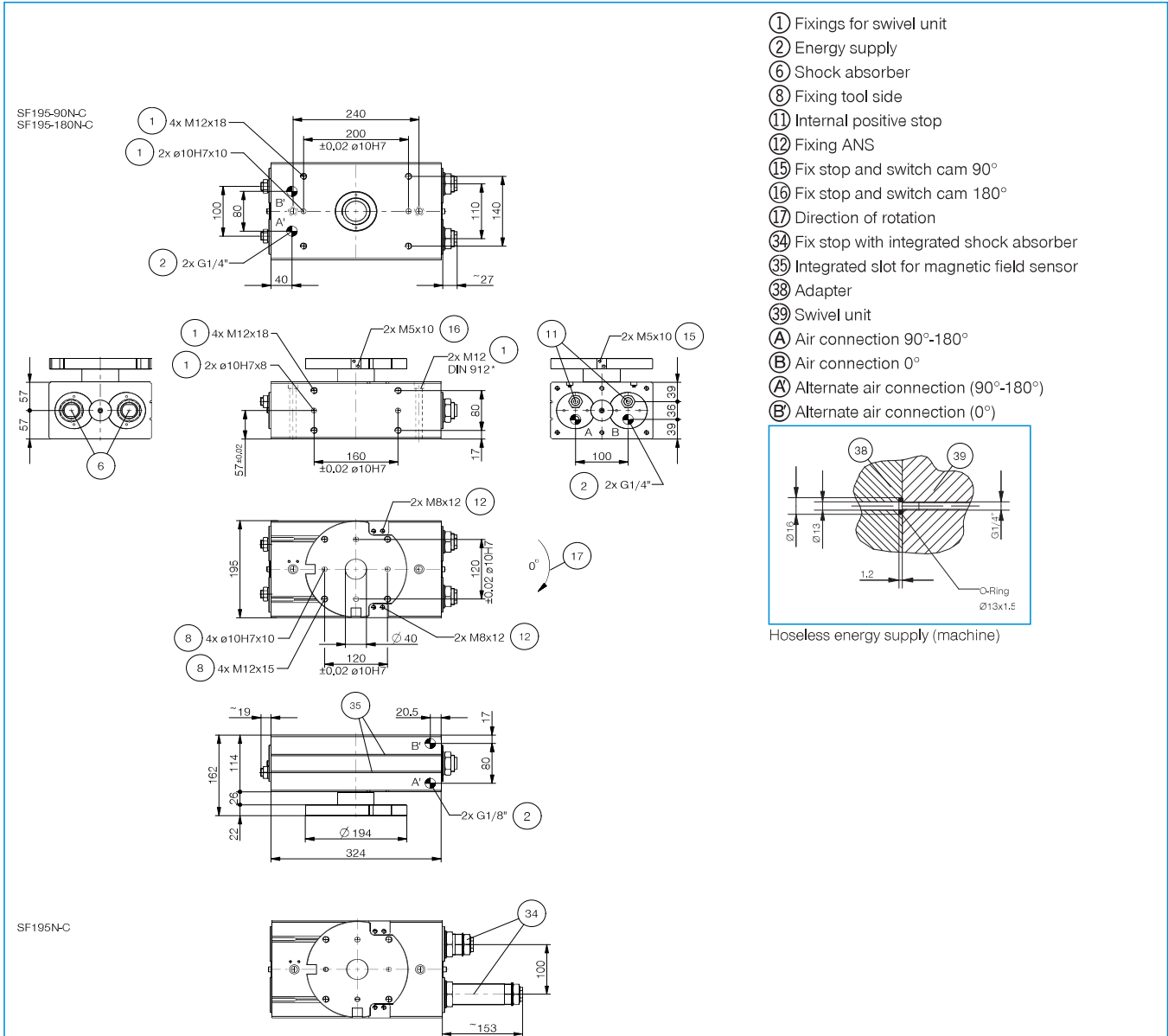


Plug-in connector Angled Cable 5m - Socket M8 (female)

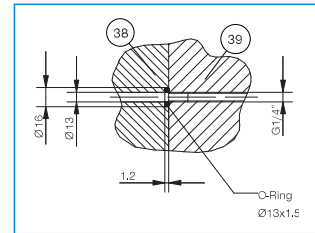
KAW500

Order no.	Technical Data*		
	SF195-90N-C	SF195-180N-C	SF195N-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	130	130	130
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	7000	7000	7000
Radial bearing load [Nm]	1253	1253	1253
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	740	1480	1480
Weight [kg]	27.5	27.5	29.5

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑪ Internal positive stop
- ⑫ Fixing ANS
- ⑮ Fix stop and switch cam 90°
- ⑯ Fix stop and switch cam 180°
- ⑰ Direction of rotation
- ⑳ Fix stop with integrated shock absorber
- ㉑ Integrated slot for magnetic field sensor
- ㉒ Adapter
- ㉓ Swivel unit
- Ⓐ Air connection 90°-180°
- Ⓑ Air connection 0°
- Ⓐ Alternate air connection (90°-180°)
- Ⓑ Alternate air connection (0°)



Hoseless energy supply (machine)

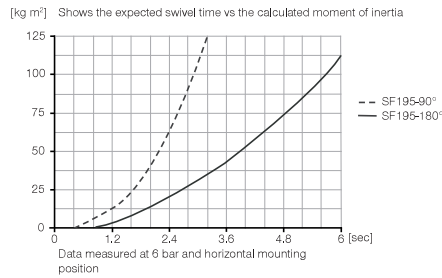
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195D4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



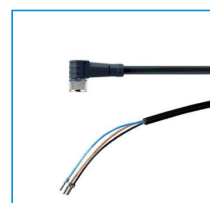
Attachment Kit
ANS0042



Inductive proximity switch
- Cable 5 m
NJ8-E2



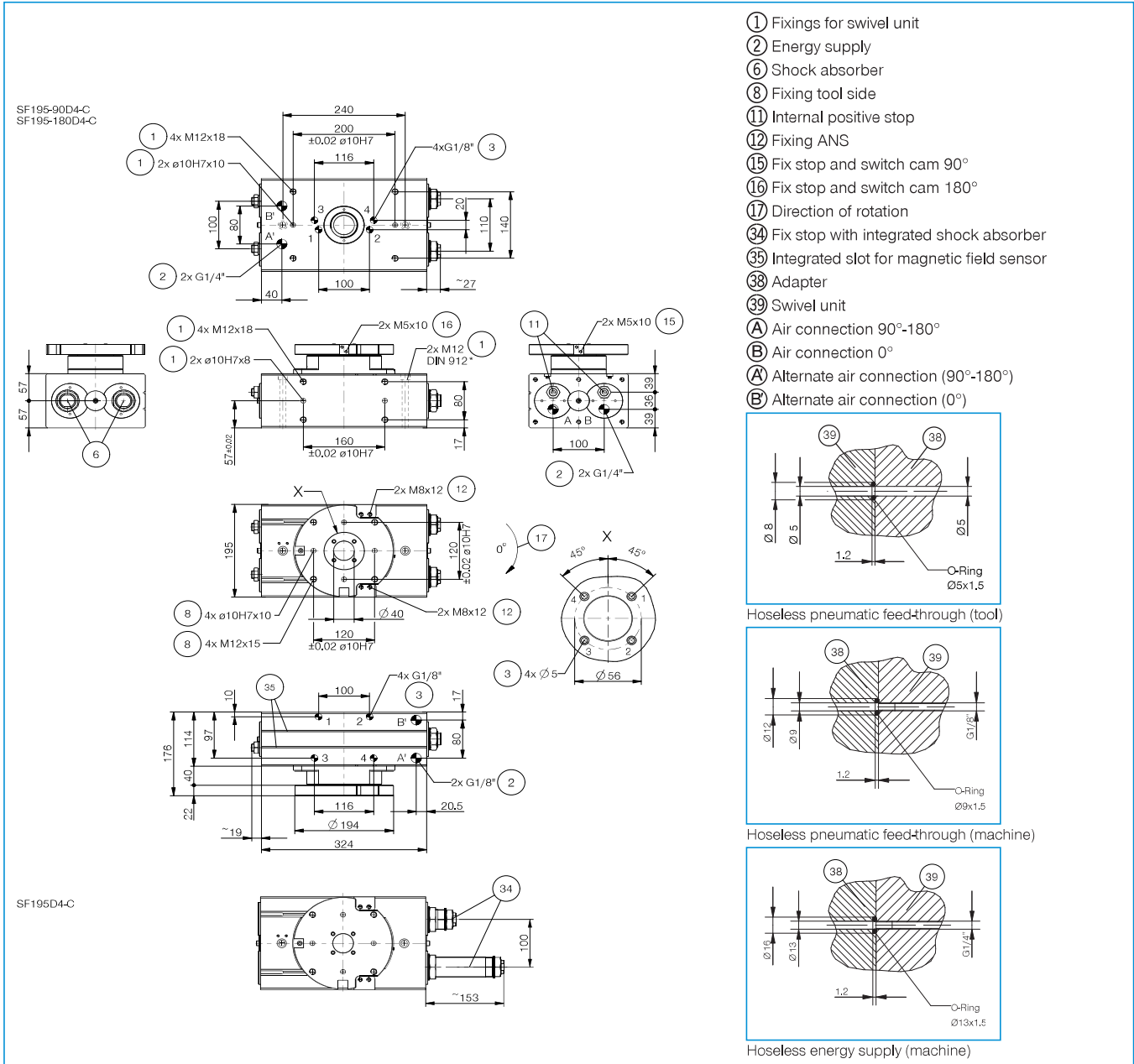
Inductive proximity switch
- Cable 5 m
NJ12-E2



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF195-90D4-C	SF195-180D4-C	SF195D4-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	125	125	125
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	7000	7000	7000
Radial bearing load [Nm]	1253	1253	1253
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	740	1480	1480
Weight [kg]	29	29	31

*All data measured at 6 bar



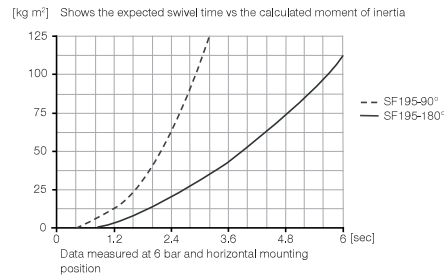
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195D8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



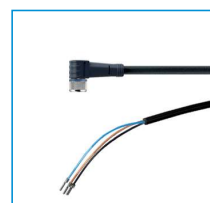
Attachment Kit
ANS0043



Inductive proximity switch
- Cable 5 m
NJ8-E2



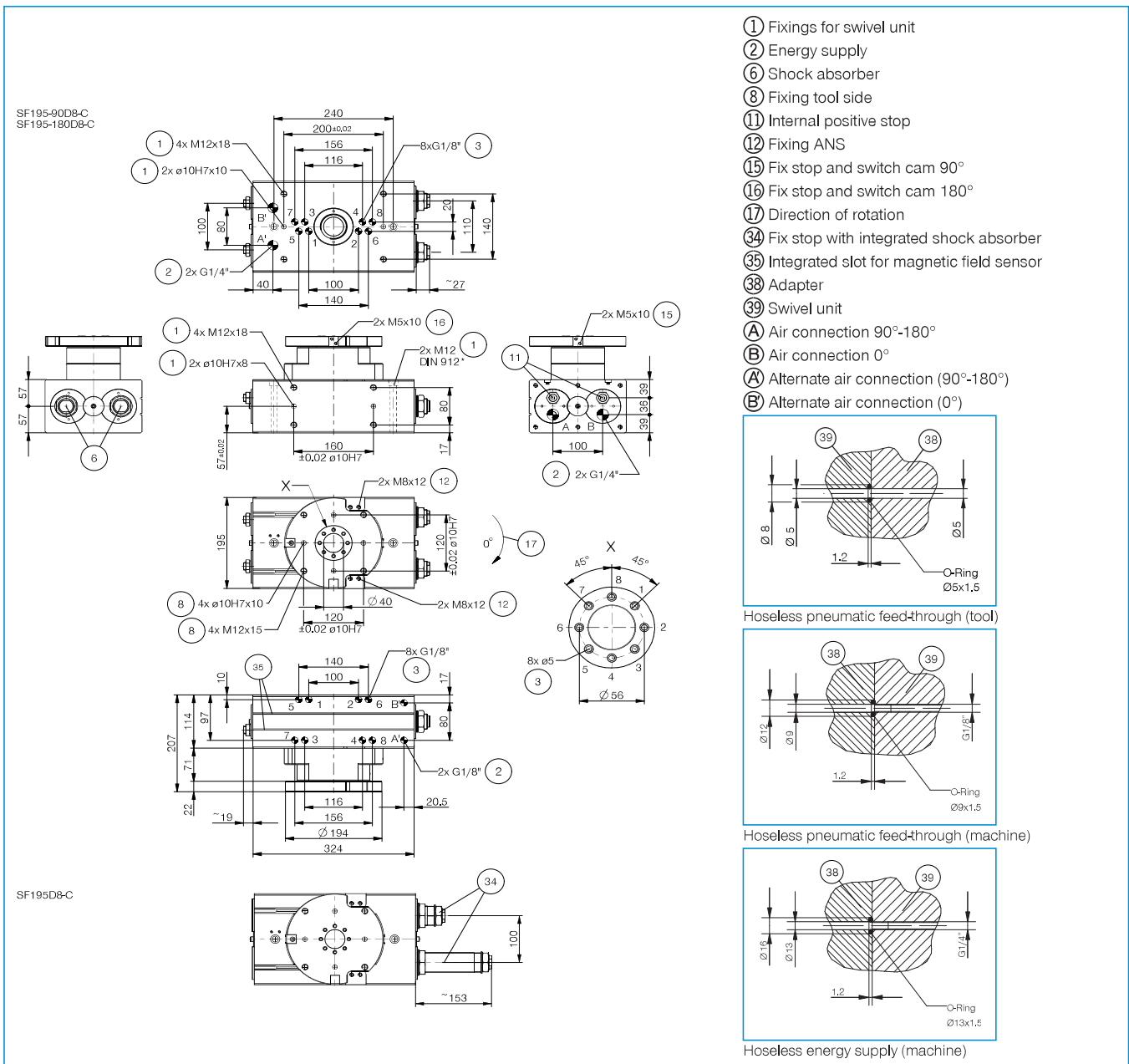
Inductive proximity switch
- Cable 5 m
NJ12-E2



Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*		
	SF195-90D8-C	SF195-180D8-C	SF195D8-C
Swivel angle [°]	90	180	0-180
Torque [Nm]	120	120	120
Swivel angle regulable +/- [°]	3	3	180
Repetition accuracy +/- [°]	0.01	0.01	0.01
Passage bore Ø [mm]	40	40	40
Axial bearing load [N]	7000	7000	7000
Radial bearing load [Nm]	1253	1253	1253
Operating pressure min. [bar]	3	3	3
Operating pressure max. [bar]	8	8	8
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	740	1480	1480
Weight [kg]	31.5	31.5	33.5

*All data measured at 6 bar



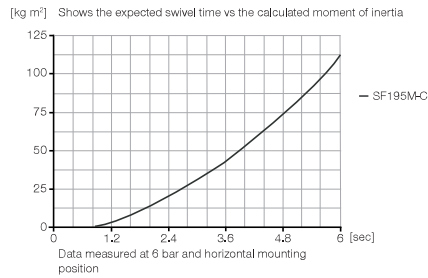
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195M-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



Attachment Kit
ANS0080



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

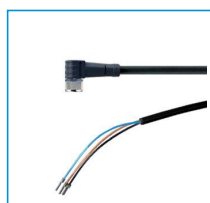
▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch
- Cable 5 m
NJ8-E2



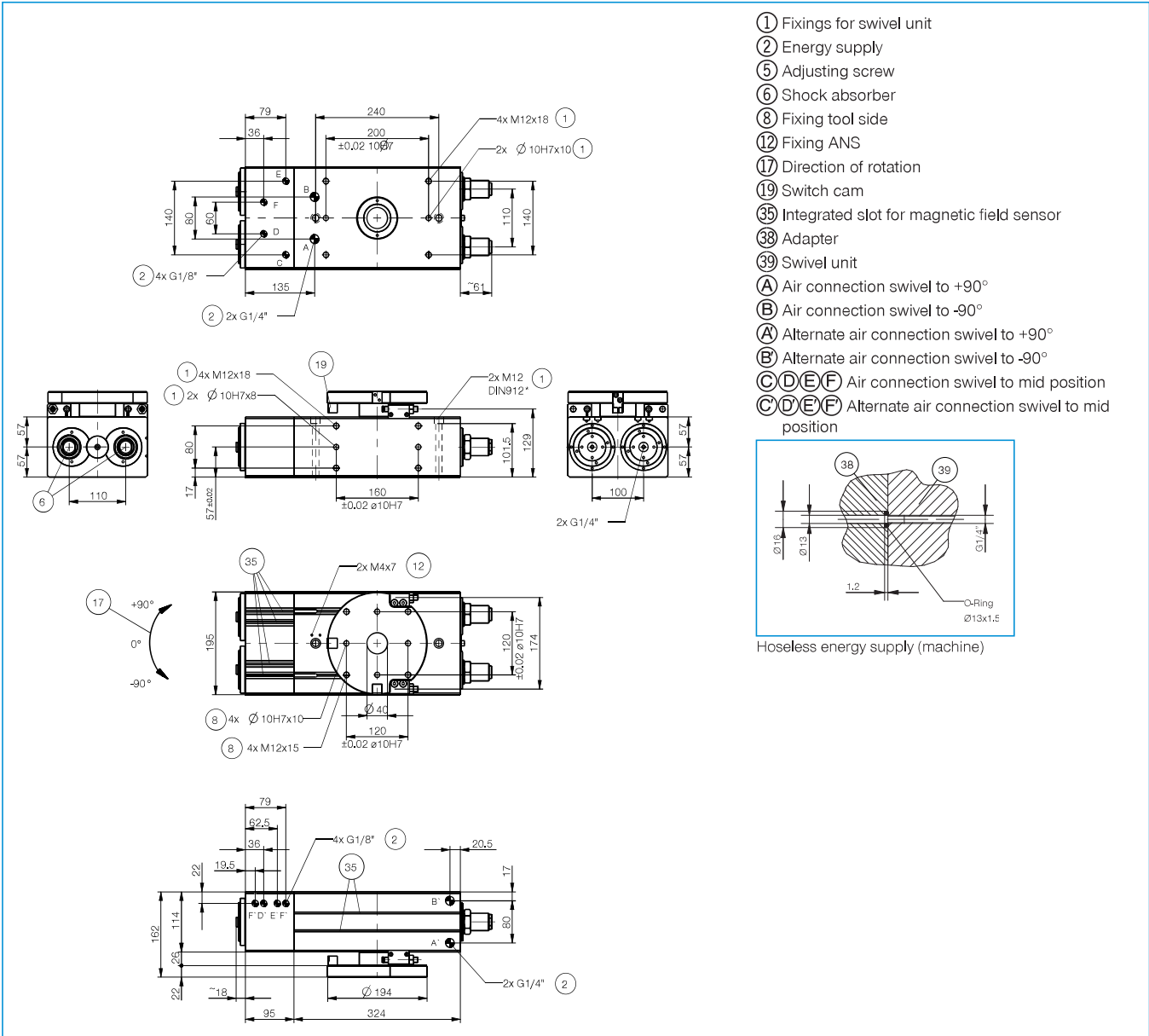
Inductive proximity switch
- Cable 5 m
NJ12-E2



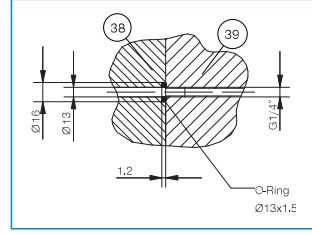
Plug-in connector Angled
Cable 5m - Socket M8
(female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	130
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	7000
Radial bearing load [Nm]	1253
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	2035
Weight [kg]	37.1

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ⑤ Adjusting screw
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑱ Switch cam
- ⑳ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- Ⓐ Air connection swivel to +90°
- Ⓑ Air connection swivel to -90°
- Ⓐ Alternate air connection swivel to +90°
- Ⓑ Alternate air connection swivel to -90°
- ⒸⒹⒺⒻ Air connection swivel to mid position
- ⒸⒹⒺⒻ Alternate air connection swivel to mid position



Hoseless energy supply (machine)

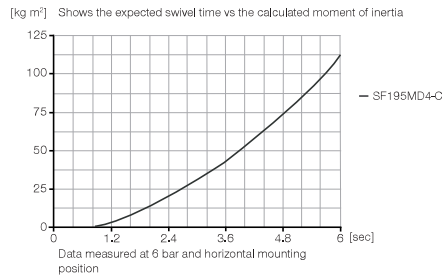
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195MD4-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0050100



Attachment Kit
ANS0081



Commissioning USB
052650

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ8-E2



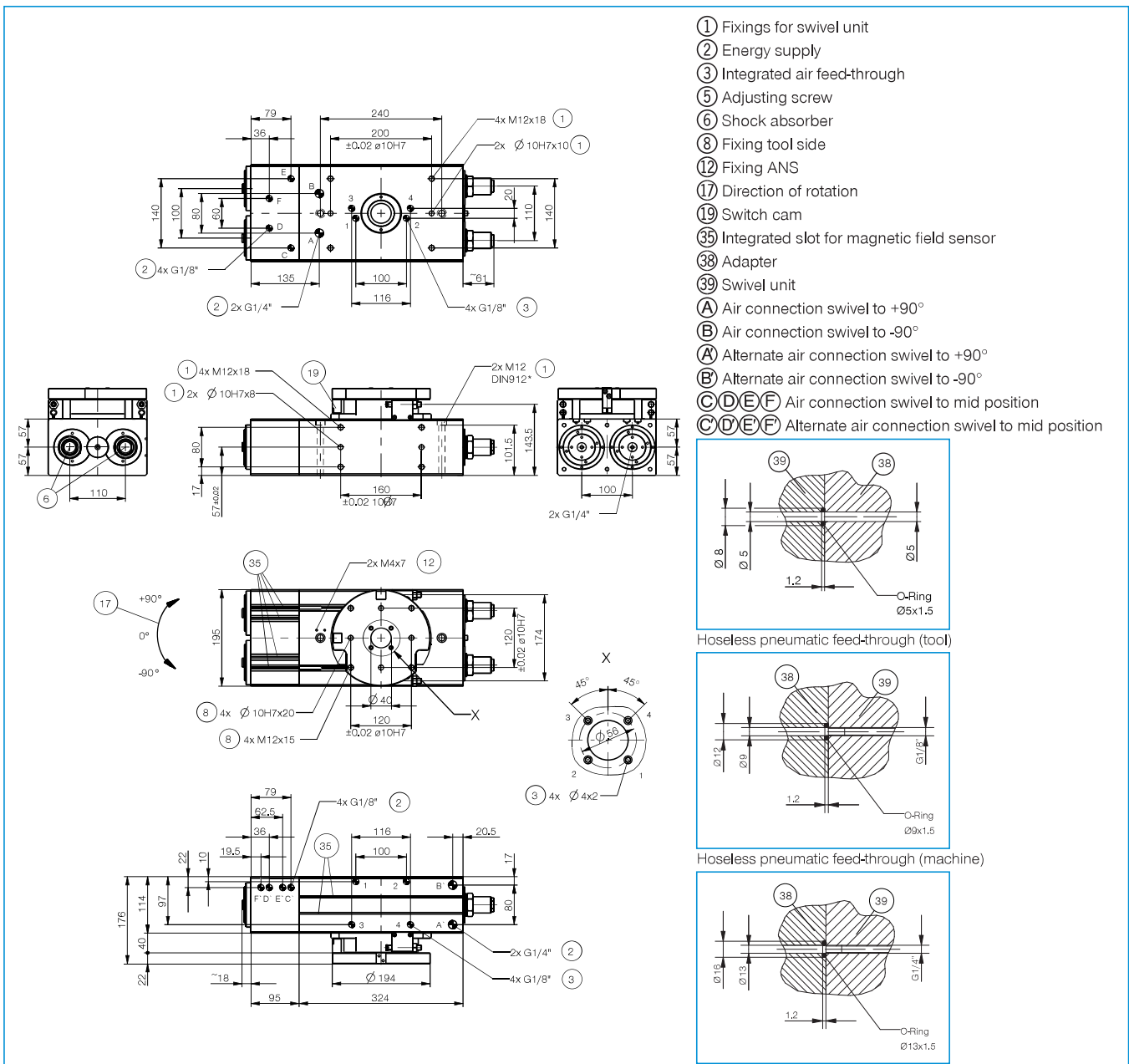
Inductive proximity switch - Cable 5 m
NJ12-E2



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	125
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	7000
Radial bearing load [Nm]	1253
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	2035
Weight [kg]	41.1

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑤ Adjusting screw
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑫ Fixing ANS
- ⑰ Direction of rotation
- ⑲ Switch cam
- ⑳ Integrated slot for magnetic field sensor
- ㉔ Adapter
- ㉕ Swivel unit
- A Air connection swivel to +90°
- B Air connection swivel to -90°
- A Air connection swivel to +90°
- B Air connection swivel to -90°
- C D E F Air connection swivel to mid position
- C D E F Alternate air connection swivel to mid position

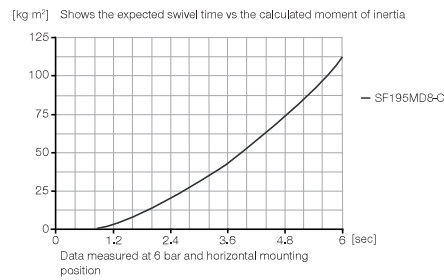
FLAT SWIVEL UNITS

INSTALLATION SIZE SF195MD8-C

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0050100



Attachment Kit
ANS0082



Commissioning USB
052650

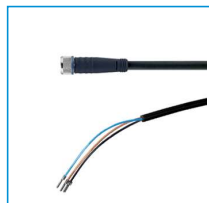
▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Inductive proximity switch - Cable 5 m
NJ8-E2



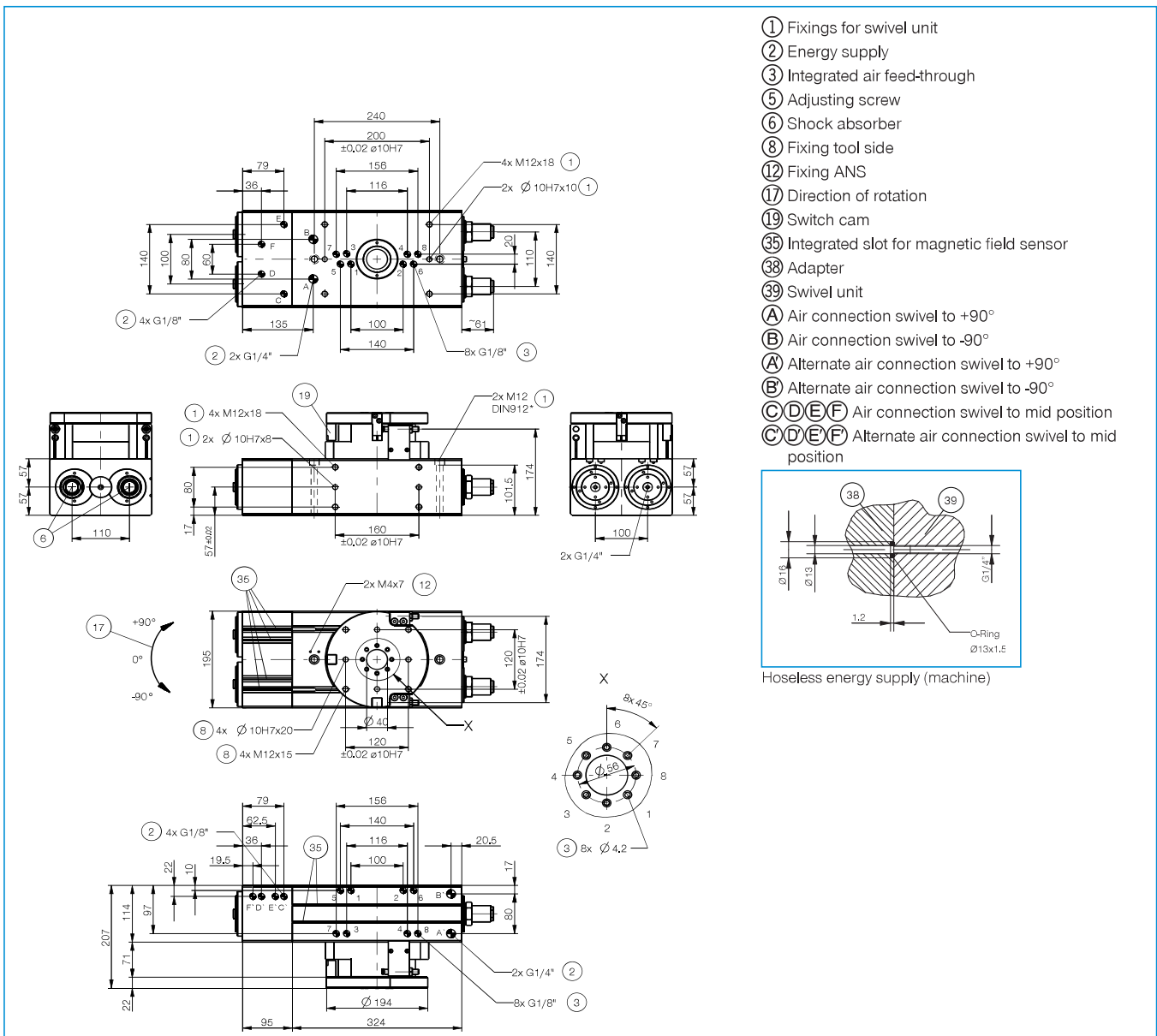
Inductive proximity switch - Cable 5 m
NJ12-E2



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500

Order no.	Technical Data*
Swivel angle [°]	-90 / 0 / +90
Torque [Nm]	120
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.01
Passage bore Ø [mm]	40
Axial bearing load [N]	7000
Radial bearing load [Nm]	1253
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	2035
Weight [kg]	41.1

*All data measured at 6 bar



FLAT SWIVEL UNITS

OVERVIEW OF SERIES



▶ ELECTRICAL



Series DES

656

FLAT SWIVEL UNITS

SERIES DES

▶ PRODUCT ADVANTAGES



“The unique”

▶ Decide for yourself!

With the standard motor or motors from another manufacturer - You decide what harmonises the best with your system

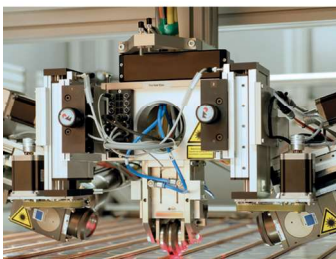
▶ Integrated media transmission

The D1 media exchanger makes cable breaks and undefined interference contours through the power supply line a thing of the past

▶ Freely positionable

No matter whether your task involves rotating, lifting or cycling: The unit is universally usable and can be uniquely adjusted to your application

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

www.zimmer-group.com

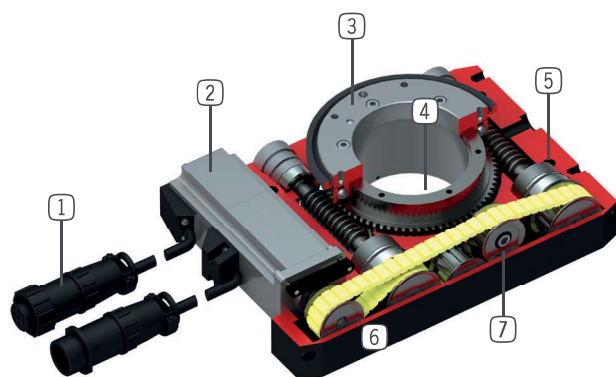
HOW TO ORDER CORRECTLY

- ▶ The product order numbers are arranged according to this diagram:

Order no.	DES140	<input type="checkbox"/>	<input type="checkbox"/>	
Feed-through, 12x electrical, 1x pneumatic		D1		
Unpowered; installation provided by customer			-99	



► BENEFITS IN DETAIL

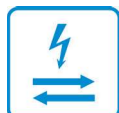


- 1 Energy supply**
 - motor cable, female
 - encoder cable, male
- 2 Drive**
 - AC servo motor
- 3 Intake flange**
 - for connection to application-specific adapter plate (to be produced by the customer)
 - simple tool connection
- 4 Central bore**
 - for cable feed-through
- 5 Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- 6 Robust, lightweight housing**
 - Hard-coated aluminum alloy
- 7 Force transfer**
 - tooth belt/gear rack/worm gear

► SERIES CHARACTERISTICS



Number of installation sizes	2
Swivel angle	∞
Torque	12 Nm - 64 Nm
Weight	4 kg - 15,9 kg
AP class	3



electrical feed-through



fluid feed-through



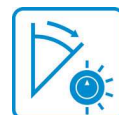
Integrated sensing



Self locking mechanism



Freely selectable positionability



Adjustable swivel angle



IP54



5 million maintenance-free revolutions (max.)

FLAT SWIVEL UNITS

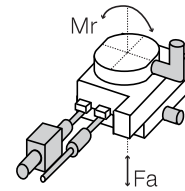
INSTALLATION SIZE DES140

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	7000
Mr [Nm]	400

▶ INCLUDED IN DELIVERY



Commissioning USB

052650

▶ RECOMMENDED ACCESSORIES



Indra Works Drive Start Up CD

ZUBHCSS



Drive controller Profibus

ZUBHCS



Drive control unit SERCOS III, PROFINET IO, EtherNet/IP, EtherCAT

ZUBHCSME



Programming cable

ZUBHCSKAP01



Power cable 5 m

ZUBHCSKAL05



Power cable 10 m

ZUBHCSKAL10



Power cable 25 m

ZUBHCSKAL25



Encoder cable 5 m

ZUBHCSKAG05



Encoder cable 10 m

ZUBHCSKAG10



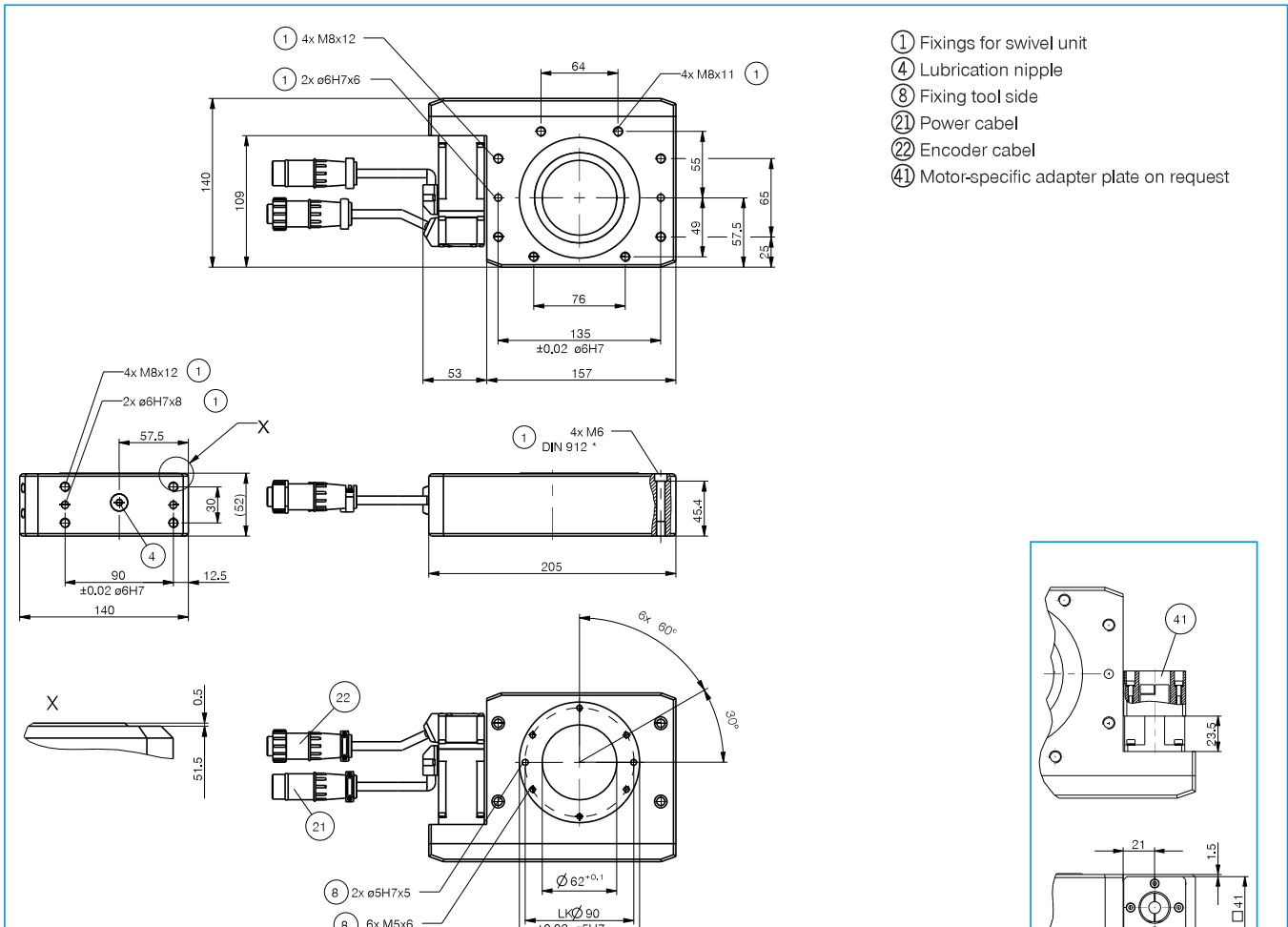
Encoder cable 25 m

ZUBHCSKAG25

Order no.	Technical Data	
	DES140	DES140-99
Drive *	AC servo motor	Specific to the customer*
Rotation angle [°]	unlimited	
Nominal torque [Nm]	9	
Torque max. [Nm]	12	
Nominal speed [rpm]	30	
Max. speed [rpm]	50	
Swivel time 360° with 30 rpm [s] **	2.5	
Swivel time 360° with 50 rpm [s] **	1.8	
Moment of inertia max. [kg m ²]	1	
Jaw speed in positioning mode [rad/s ²]	50	
Positioning delay [rad/s ²]	50	
Electrical energy transfer		
Pneumatic energy transfer [Quantity]		
Self locking mechanism	Helical gear / worm gear	Helical gear / worm gear
Power transfer	Helical gear / worm gear	Helical gear / worm gear
Repetition accuracy +/- [°]	0.1	0.1
Operating temperature [°C]	5 ... +80	5 ... +80
Protection to IEC 60529	IP54	
Net input voltage	1x200-240 VAC 50HZ	
Continuous current [A]	0.9	
Peak current [A]	3	
Weight [kg]	4.2	4

*Select the third-party motor corresponding to the motor performance figures in the DES series - Accessories chapter

**Swivel time does not depend on the moment of inertia (the maximum moment of inertia must not be exceeded)



FLAT SWIVEL UNITS

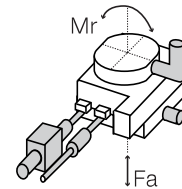
INSTALLATION SIZE DES140D1

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	7000
Mr [Nm]	400

▶ INCLUDED IN DELIVERY



Commissioning USB

052650

▶ RECOMMENDED ACCESSORIES



Indra Works Drive Start Up CD

ZUBHCSS



Drive controller Profibus

ZUBHCS



Drive control unit SER-COS III, PROFINET IO, EtherNet/IP, EtherCAT

ZUBHCSME



Round plug, straight - M23 socket

RSTVSM23G12B-B



Round plug, angular - M23 socket

RSTVSM23W12B-B



Round plug, straight - M23 plug

RSTVSM23G12S-B



Round plug, angular - M23 plug

RSTVSM23W12S-B



Programming cable

ZUBHCSKAP01



Power cable 5 m

ZUBHCSKAL05



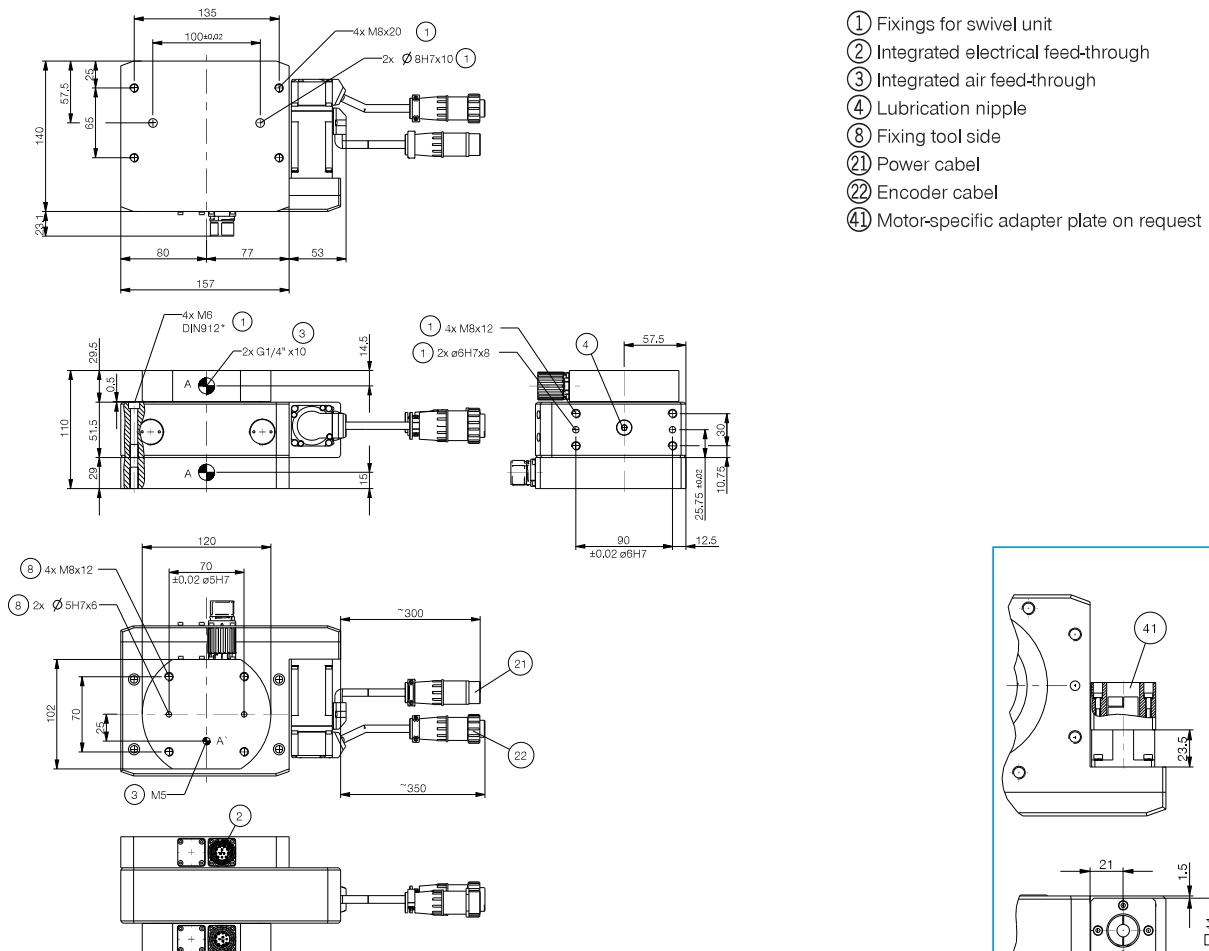
Power cable 10 m

ZUBHCSKAL10

Order no.	► Technical Data	
	DES140D1	DES140D1-99
Drive *	AC servo motor	Specific to the customer*
Rotation angle [°]	unlimited	
Nominal torque [Nm]	7	
Torque max. [Nm]	10	
Nominal speed [rpm]	30	
Max. speed [rpm]	50	
Swivel time 360° with 30 rpm [s] **	2.5	
Swivel time 360° with 50 rpm [s] **	1.8	
Moment of inertia max. [kg m ²]	1	
Jaw speed in positioning mode [rad/s ²]	50	
Positioning delay [rad/s ²]	50	
Electrical energy transfer	12x2A / 12x120V DC	12x2A / 12x120V DC
Pneumatic energy transfer [Quantity]	1	1
Self locking mechanism	Helical gear / worm gear	Helical gear / worm gear
Power transfer	Helical gear / worm gear	Helical gear / worm gear
Repetition accuracy +/- [°]	0.1	0.1
Operating temperature [°C]	5 ... +80	5 ... +80
Protection to IEC 60529	IP54	
Net input voltage	1x200-240 VAC 50HZ	
Continuous current [A]	0.9	
Peak current [A]	3	
Weight [kg]	7	6.8

*Select the third-party motor corresponding to the motor performance figures in the DES series - Accessories chapter

**Swivel time does not depend on the moment of inertia (the maximum moment of inertia must not be exceeded)



FLAT SWIVEL UNITS

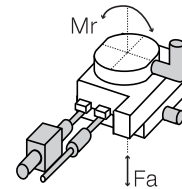
INSTALLATION SIZE DES190

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	8000
Mr [Nm]	525

▶ INCLUDED IN DELIVERY



Commissioning USB

052650

▶ RECOMMENDED ACCESSORIES



Indra Works Drive Start Up CD

ZUBHCSS



Drive controller Profibus

ZUBHCS



Drive control unit SER-COS III, PROFINET IO, EtherNet/IP, EtherCAT

ZUBHCSME



Programming cable

ZUBHCSKAP01



Power cable 5 m

ZUBHCSKAL05



Power cable 10 m

ZUBHCSKAL10



Power cable 25 m

ZUBHCSKAL25



Encoder cable 5 m

ZUBHCSKAG05



Encoder cable 10 m

ZUBHCSKAG10



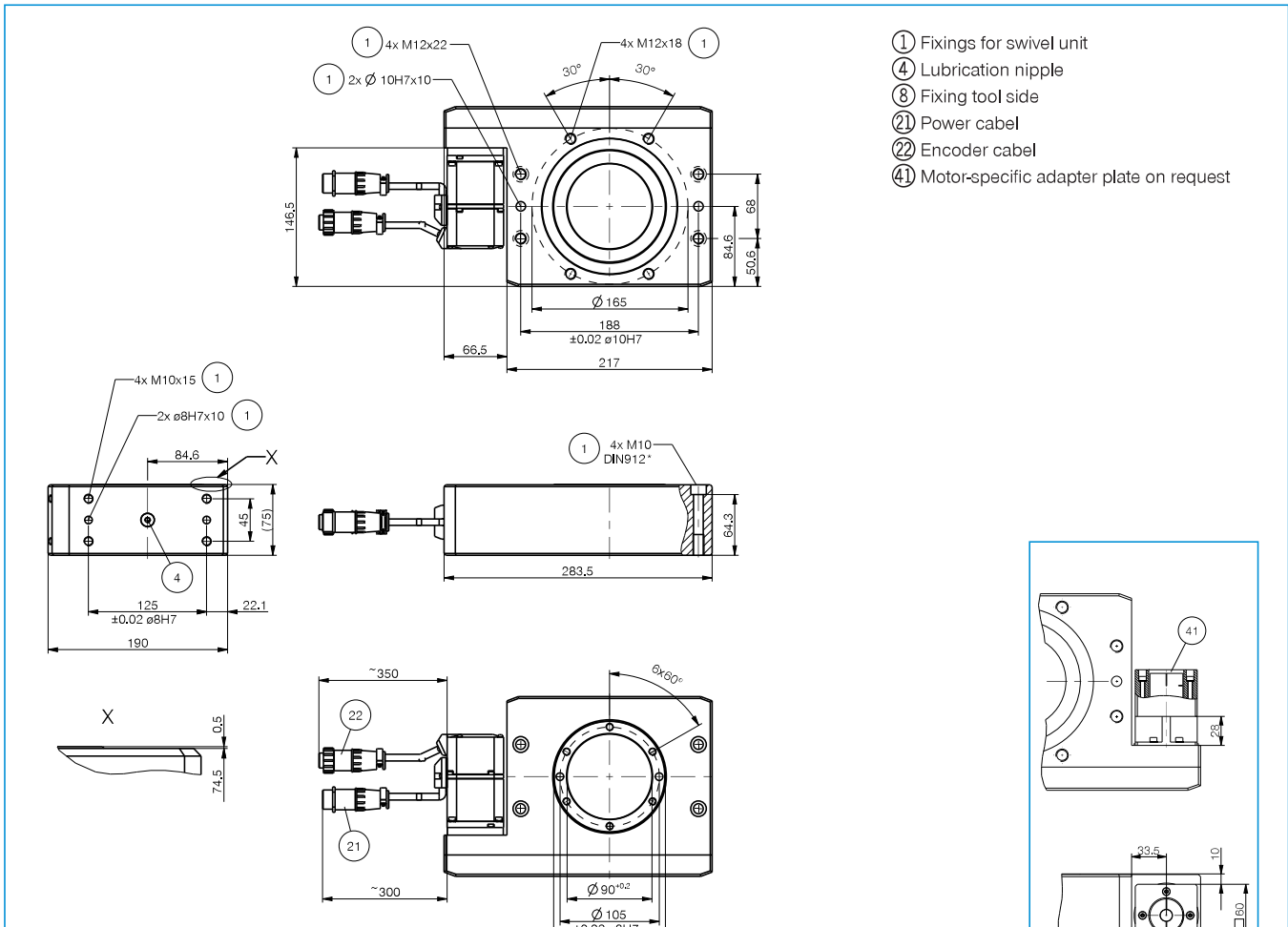
Encoder cable 25 m

ZUBHCSKAG25

Order no.	► Technical Data	
	DES190	DES190-99
Drive *	AC servo motor	Specific to the customer*
Rotation angle [°]	unlimited	
Nominal torque [Nm]	50	
Torque max. [Nm]	64	
Nominal speed [rpm]	15	
Max. speed [rpm]	25	
Swivel time 360° with 15 rpm [s] **	4,6	
Swivel time 360° with 25 rpm [s] **	3	
Moment of inertia max. [kg m ²]	3	
Jaw speed in positioning mode [rad/s ²]	50	
Positioning delay [rad/s ²]	50	
Electrical energy transfer		
Pneumatic energy transfer [Quantity]		
Self locking mechanism	Helical gear / worm gear	Helical gear / worm gear
Power transfer	Helical gear / worm gear	Helical gear / worm gear
Repetition accuracy +/- [°]	0.05	0.05
Operating temperature [°C]	5 ... +80	5 ... +80
Protection to IEC 60529	IP54	
Net input voltage	1x200-240 VAC 50HZ	
Continuous current [A]	2.3	
Peak current [A]	7,4	
Weight [kg]	11.2	10.8

*Select the third-party motor corresponding to the motor performance figures in the DES series - Accessories chapter

**Swivel time does not depend on the moment of inertia (the maximum moment of inertia must not be exceeded)



FLAT SWIVEL UNITS

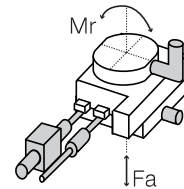
INSTALLATION SIZE DES190D1

▶ PRODUCT SPECIFICATIONS



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	8000
Mr [Nm]	525

▶ INCLUDED IN DELIVERY



Commissioning USB

052650

▶ RECOMMENDED ACCESSORIES



Indra Works Drive Start Up CD

ZUBHCSS



Drive controller Profibus

ZUBHCS



Drive control unit SERCOS III, PROFINET IO, EtherNet/IP, EtherCAT

ZUBHCSME



Round plug, straight - M23 socket

RSTVSM23G12B-B



Round plug, angular - M23 socket

RSTVSM23W12B-B



Round plug, straight - M23 plug

RSTVSM23G12S-B



Round plug, angular - M23 plug

RSTVSM23W12S-B



Programming cable

ZUBHCSKAP01



Power cable 5 m

ZUBHCSKAL05



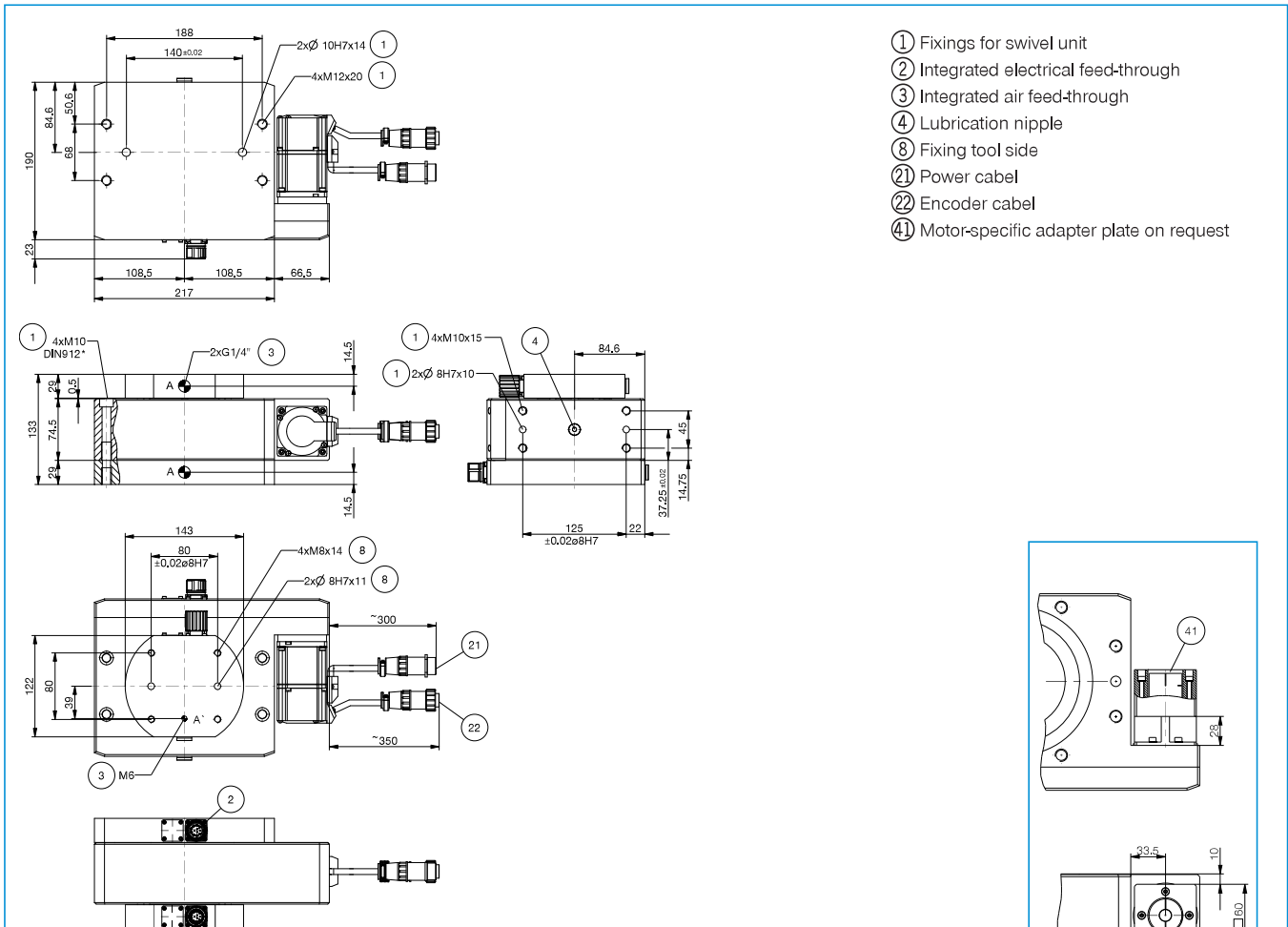
Power cable 10 m

ZUBHCSKAL10

Order no.	► Technical Data	
	DES190D1	DES190D1-99
Drive *	AC servo motor	Specific to the customer*
Rotation angle [°]	unlimited	
Nominal torque [Nm]	48	
Torque max. [Nm]	62	
Nominal speed [rpm]	15	
Max. speed [rpm]	25	
Swivel time 360° with 15 rpm [s] **	4.6	
Swivel time 360° with 25 rpm [s] **	3	
Moment of inertia max. [kg m ²]	3	
Jaw speed in positioning mode [rad/s ²]	50	
Positioning delay [rad/s ²]	50	
Electrical energy transfer	12x2A / 12x48V DC	12x2A / 12x48V DC
Pneumatic energy transfer [Quantity]	1	1
Self locking mechanism	Helical gear / worm gear	Helical gear / worm gear
Power transfer	Helical gear / worm gear	Helical gear / worm gear
Repetition accuracy +/- [°]	0.05	0.05
Operating temperature [°C]	5 ... +80	5 ... +80
Protection to IEC 60529	IP54	
Net input voltage	1x200-240 VAC 50HZ	
Continuous current [A]	2.3	
Peak current [A]	7.4	
Weight [kg]	15.9	15.5

*Select the third-party motor corresponding to the motor performance figures in the DES series - Accessories chapter

**Swivel time does not depend on the moment of inertia (the maximum moment of inertia must not be exceeded)



FLAT SWIVEL UNITS

DES SERIES - ACCESSORIES

▶ RECOMMENDED ACCESSORIES



Indra Works Drive Start Up CD

ZUBHCSS



Drive controller Profibus

ZUBHCS



Drive control unit SERCOS III, PROF-INET IO, EtherNet/IP, EtherCAT

ZUBHCSME



Line filter

ZUBHCSN



Encoder cable 5 m

ZUBHCSKAG05



Encoder cable 10 m

ZUBHCSKAG10



Encoder cable 25 m

ZUBHCSKAG25



Programming cable

ZUBHCSKAP01



Power cable 5 m

ZUBHCSKAL05



Power cable 10 m

ZUBHCSKAL10



Power cable 25 m

ZUBHCSKAL25



Straight Fittings - Quick Connect Style

GV1-8X4



Angled Fittings - Quick Connect Style

WV1-4X8



Round plug, straight - M23 plug

RSTVSM23G12S-B



Round plug, angular - M23 plug

RSTVSM23W12S-B



Round plug, straight - M23 socket

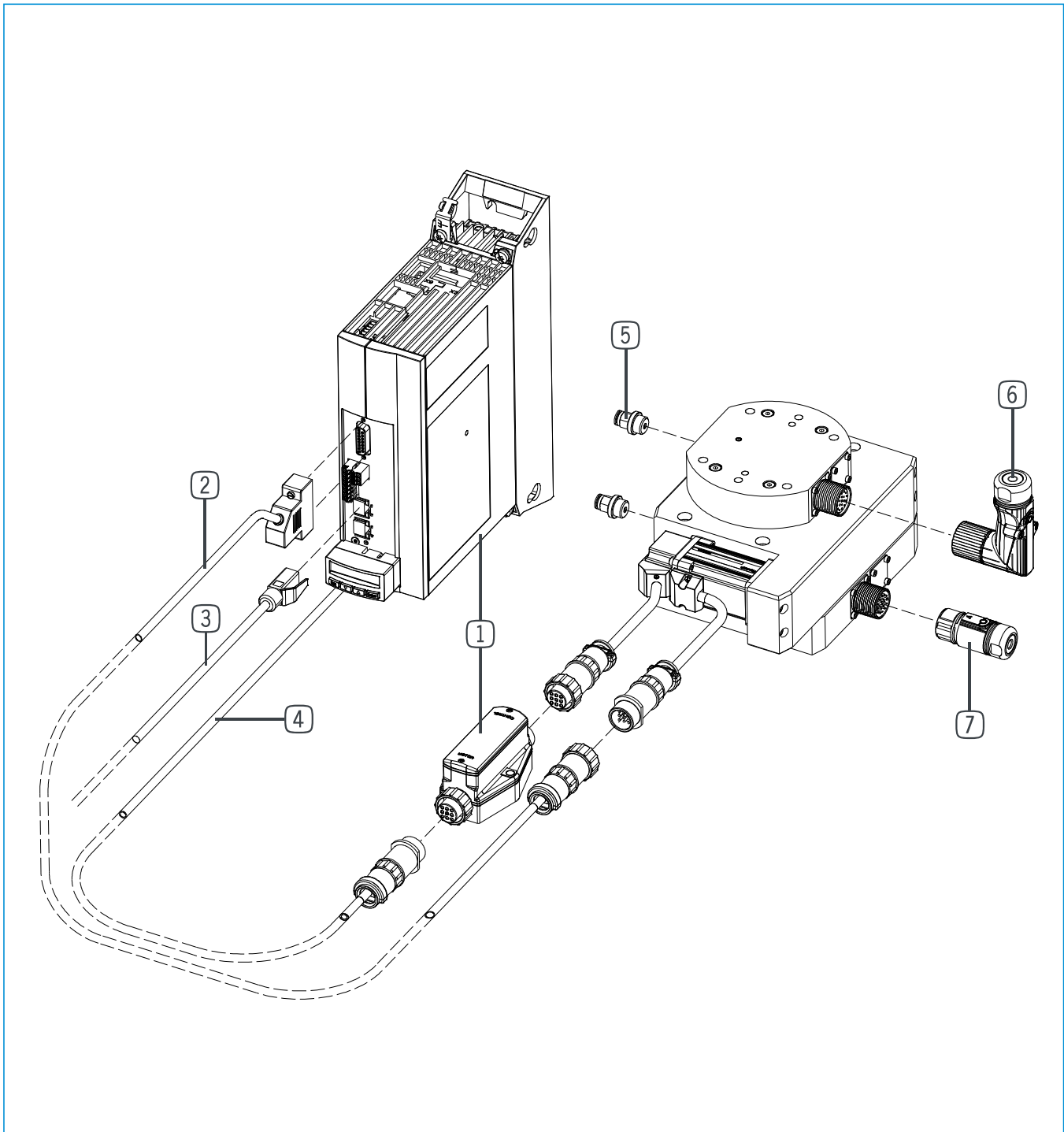
RSTVSM23G12B-B



Round plug, angular - M23 socket

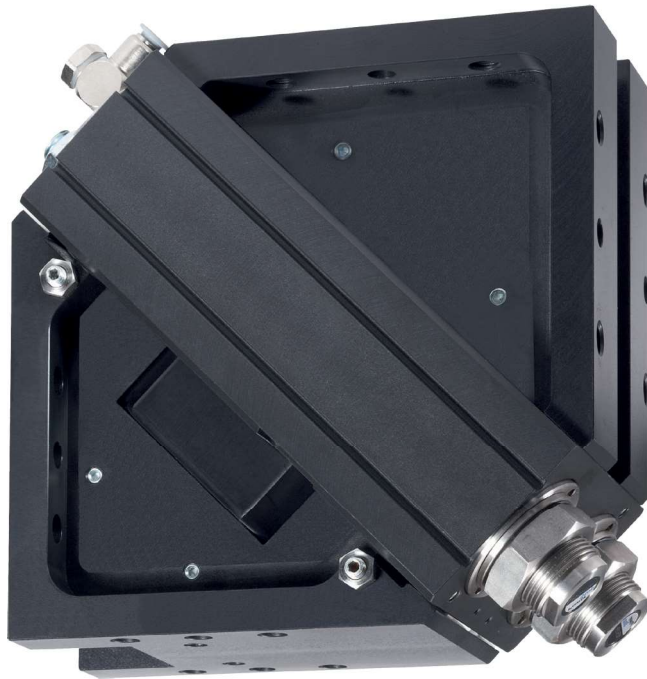
RSTVSM23W12B-B

Order no.	▶ Technical data for motors	
	MSM019B	MSM031C
compatible with	DES140	DES190
Manufacturer	BOSCH	BOSCH
Nominal torque [Nm]	0,32	1,3
Torque max. [Nm]	0,95	3,8
Nominal speed [rpm]	3000	3000
Max. speed [rpm]	5000	5000
Protection to IEC 60529	IP54	IP54



ANGLE PIVOT UNITS

OVERVIEW OF SERIES



▶ PNEUMATIC



Series SWM1000

670



Series SW

680

ANGLE PIVOT UNITS

SERIES SWM1000

▶ PRODUCT ADVANTAGES



“The slim”

▶ Optimised design

Adjusted to a gantry axle, you can integrate the unit in your machine loading system to save space

▶ Large locating flange

The large mounting surface simplifies your design and allows secure attachment of follow-on tools

▶ Failure-free continuous operation

Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free gripping cycles

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

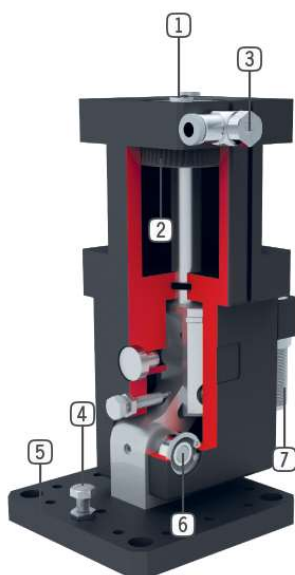
Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

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► BENEFITS IN DETAIL



- ① **Mounting and positioning**
- ② **Drive**
 - double-acting pneumatic cylinder
- ③ **Air flow control valve**
 - for speed regulation
 - included in scope of delivery
- ④ **Adjustable end position**
 - +/- 3° adjustable end position
- ⑤ **Intake flange**
 - for connection to application-specific adapter plate (to be supplied by the customer)
- ⑥ **Force transfer 90° pivoting**
 - toggle lever principle
- ⑦ **Patented, hydraulic shock absorber**
 - adjustable end position damping

► SERIES CHARACTERISTICS



Number of installation sizes	4
Swivel angle	90°
Torque	10 Nm - 64 Nm
Weight	0,65 kg - 3,5 kg
AP class	3



Powerstop end position damping



Magnetic field sensor



Positionability - 2 positions



IP30



10 million maintenance-free cycles (max.)

ANGLE PIVOT UNITS

INSTALLATION SIZE SWM1035

▶ PRODUCT SPECIFICATIONS



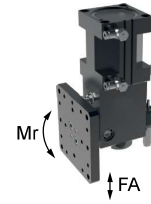
▶ Moment of inertia

Shows the torque when lifting vs the swivel angle.



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	200
Mr [Nm]	10

▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4



Centering Disc
DST60800

▶ RECOMMENDED ACCESSORIES



Attachment Kit
ANS0046



Shock Absorbers
M8X1M



Magnetic field sensor
Angled Cable 5 m
MFS103KHC



Magnetic field sensor
Angled Cable 0,3 m -
Connector M8
MFS103SKHC



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight
Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Ca-
ble 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Ca-
ble 5m - Socket M8 (female)
KAW500



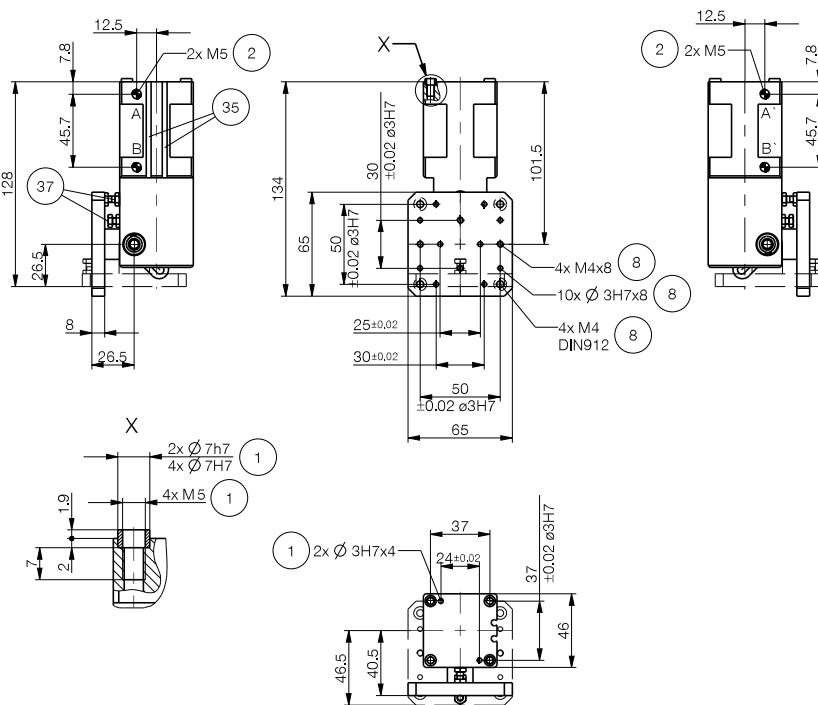
Plug-in connector customiz-
able Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

Order no.	Technical Data*
Swivel angle [°]	90
Swivel angle regulable +/- [°]	3
Torque 0° [Nm]	10
Torque 45° [Nm]	7
Torque 90° [Nm]	10
Repetition accuracy +/- [°]	0.01
Swivel time without extension load [s]	0.3
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	55
Weight [kg]	0.65

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ⑧ Fixing tool side
- ③⑤ Integrated slot for magnetic field sensor
- ③⑦ Adjusting screw end position

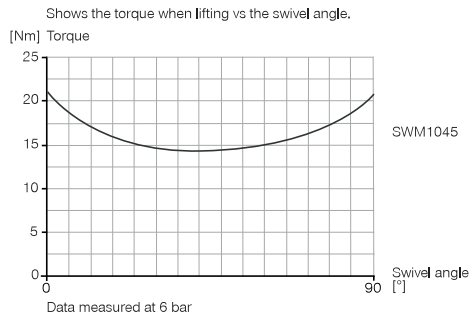
ANGLE PIVOT UNITS

INSTALLATION SIZE SWM1045

▶ PRODUCT SPECIFICATIONS

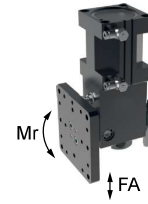


▶ Moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	300
Mr [Nm]	20

▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4



Centering Disc
DST40800

▶ RECOMMENDED ACCESSORIES



Attachment Kit
ANS0047



Shock Absorbers
M10X1H



Magnetic field sensor Angled Cable 5 m
MFS103KHC



Magnetic field sensor Angled Cable 0,3 m - Connector M8
MFS103SKHC



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



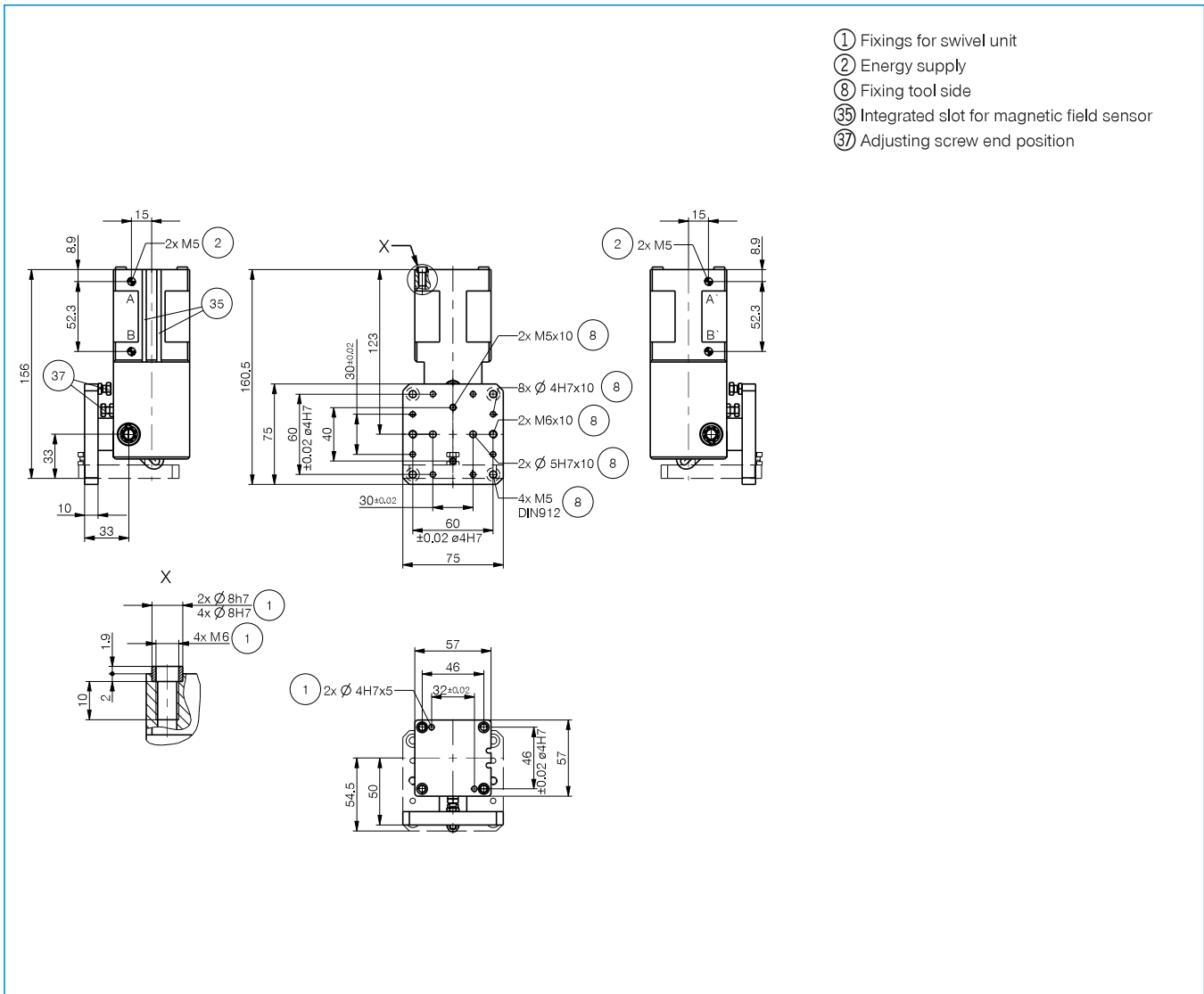
Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

Order no.	▶ Technical Data*
Swivel angle [°]	90
Swivel angle regulable +/- [°]	3
Torque 0° [Nm]	21
Torque 45° [Nm]	14
Torque 90° [Nm]	21
Repetition accuracy +/- [°]	0.01
Swivel time without extension load [s]	0.4
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	110
Weight [kg]	1.2

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ⑧ Fixing tool side
- ③⑤ Integrated slot for magnetic field sensor
- ③⑦ Adjusting screw end position

ANGLE PIVOT UNITS

INSTALLATION SIZE SWM1054

▶ PRODUCT SPECIFICATIONS



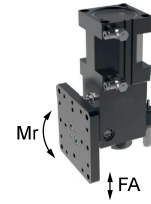
▶ Moment of inertia

Shows the torque when lifting vs the swivel angle.



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	400
Mr [Nm]	30

▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



Centering Disc
DST11500

▶ RECOMMENDED ACCESSORIES



Attachment Kit
ANS0048



Shock Absorbers
M12X1H



Magnetic field sensor Angled Cable 5 m
MFS103KHC



Magnetic field sensor Angled Cable 0,3 m - Connector M8
MFS103SKHC



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



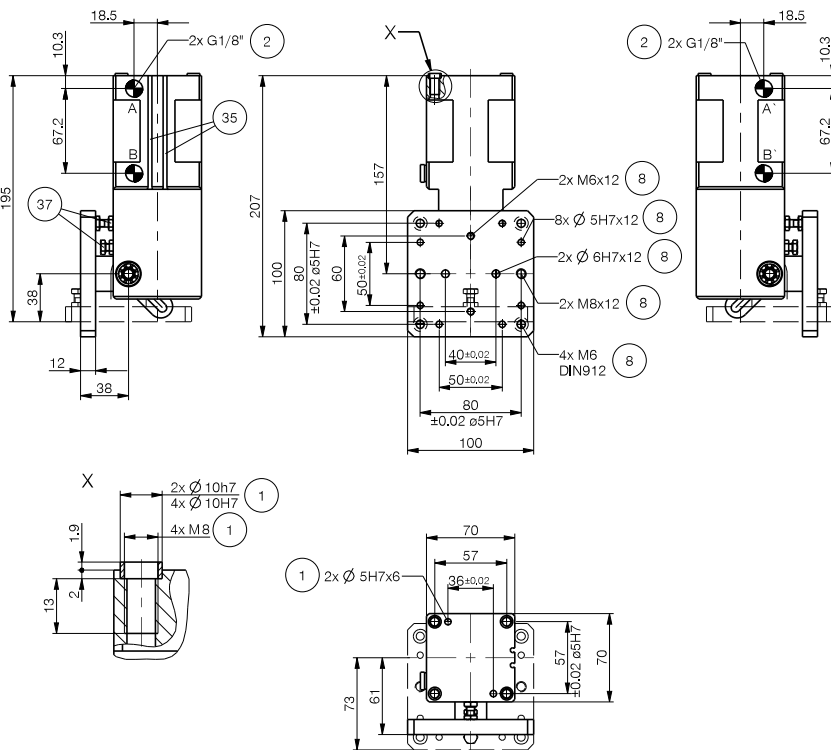
Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

Order no.	Technical Data*
Swivel angle [°]	90
Swivel angle regulable +/- [°]	3
Torque 0° [Nm]	40
Torque 45° [Nm]	29
Torque 90° [Nm]	40
Repetition accuracy +/- [°]	0.01
Swivel time without extension load [s]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	215
Weight [kg]	2.3

*All data measured at 6 bar



- ① Fixings for swivel unit
- ② Energy supply
- ⑧ Fixing tool side
- ③⑤ Integrated slot for magnetic field sensor
- ③⑦ Adjusting screw end position

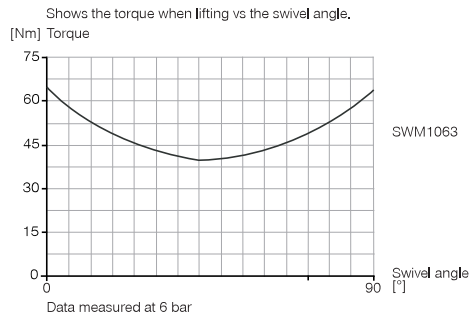
ANGLE PIVOT UNITS

INSTALLATION SIZE SWM1063

▶ PRODUCT SPECIFICATIONS

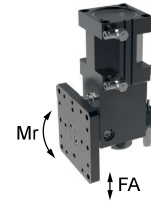


▶ Moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	500
Mr [Nm]	45

▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



Centering Disc
DST42000

▶ RECOMMENDED ACCESSORIES



Attachment Kit
ANS0049



Shock Absorbers
M14X1H



Magnetic field sensor Angled Cable 5 m
MFS103KHC



Magnetic field sensor Angled Cable 0,3 m - Connector M8
MFS103SKHC



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



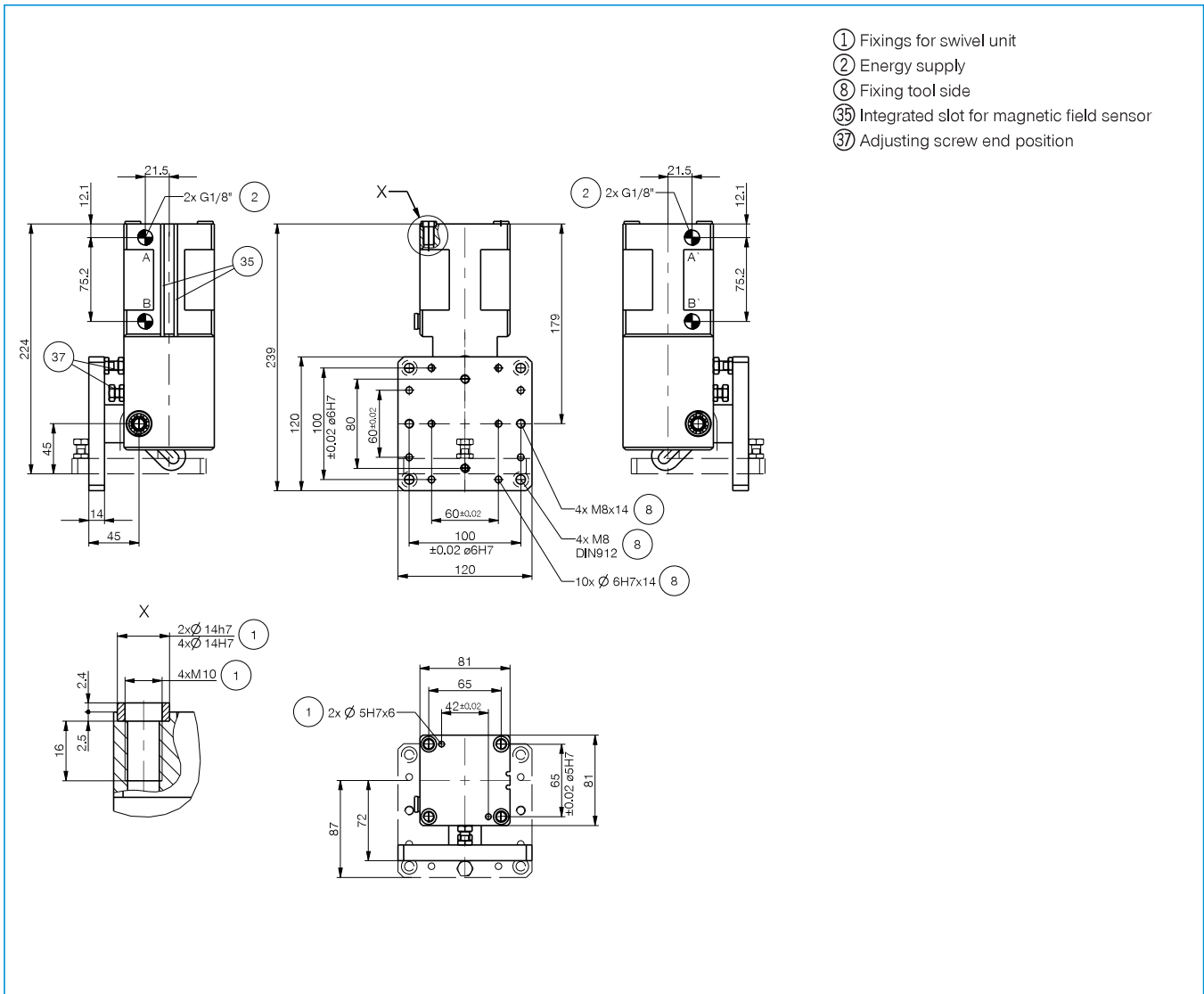
Plug-in connector customizable Straight - Connector M8
S8-G-3



Pressure Safety Valve
DSV1-8

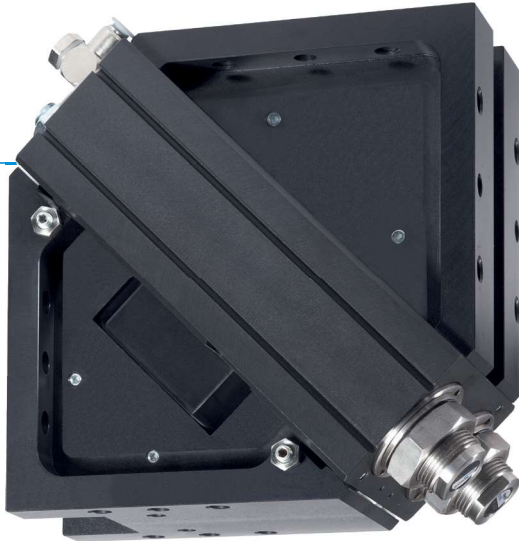
Order no.	▶ Technical Data*
Swivel angle [°]	90
Swivel angle regulable +/- [°]	3
Torque 0° [Nm]	64
Torque 45° [Nm]	39
Torque 90° [Nm]	64
Repetition accuracy +/- [°]	0.01
Swivel time without extension load [s]	0.6
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	340
Weight [kg]	3.5

*All data measured at 6 bar



ANGLE PIVOT UNITS SERIES SW

▶ PRODUCT ADVANTAGES



“The superior”

▶ Up to 100% more performance than the benchmark

Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine’s component output

▶ Includes two angle flanges

Reduce your design and manufacturing efforts with the angle pivot unit aligned on the machine loading system

▶ More than 100% higher radial bearing load than the benchmark

The generously scaled bearings stand for robustness and long service life and provide the highest process reliability for your application

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

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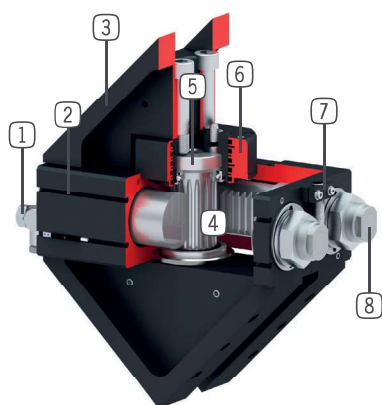
HOW TO ORDER CORRECTLY

- ▶ The product order numbers are arranged according to this diagram:

Order no.	SW50	<input type="checkbox"/>	-C	
two double acting pneumatic cylinders, hoseless pneumatic 4 way rotary distributor		D4		
two double acting pneumatic cylinders, hoseless pneumatic 8 way rotary distributor		D8		



► BENEFITS IN DETAIL



- 1 Air flow control valve**
 - for speed regulation (included in the delivery)
- 2 Sensing slot**
 - mounting and positioning of magnetic field sensors
- 3 Robust, lightweight housing**
 - Hard-coated aluminum alloy
- 4 Force transfer**
 - rack and pinion
- 5 Two way ball bearing hollow shaft**
 - for feedthrough cables and hoses
 - high forces and moments capacity
- 6 Up to 8 way integrated air feed-through**
 - for hoseless air transfer
 - hose package does not have to be pivoted
- 7 Mounting block**
 - mounting for inductive proximity switch
- 8 Integrated and patented hydraulic shock absorbers**
 - adjustable end position damping
 - heating is prevented through installation in pneumatic pressure chamber

► SERIES CHARACTERISTICS



Number of installation sizes	6
Swivel angle	180°
Torque	1,5 Nm - 120 Nm
Weight	1,2 kg - 48,2 kg
AP class	3



Powerstop end position damping



fluid feed-through



Inductive sensor



Magnetic field sensor



Positionability - 2 positions



IP64



10 million maintenance-free cycles (max.)

ANGLE PIVOT UNITS

INSTALLATION SIZE SW50

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRVM5X4

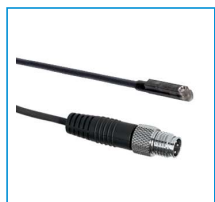


O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector customizable Straight - Connector M12
S12-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit
ANS0062



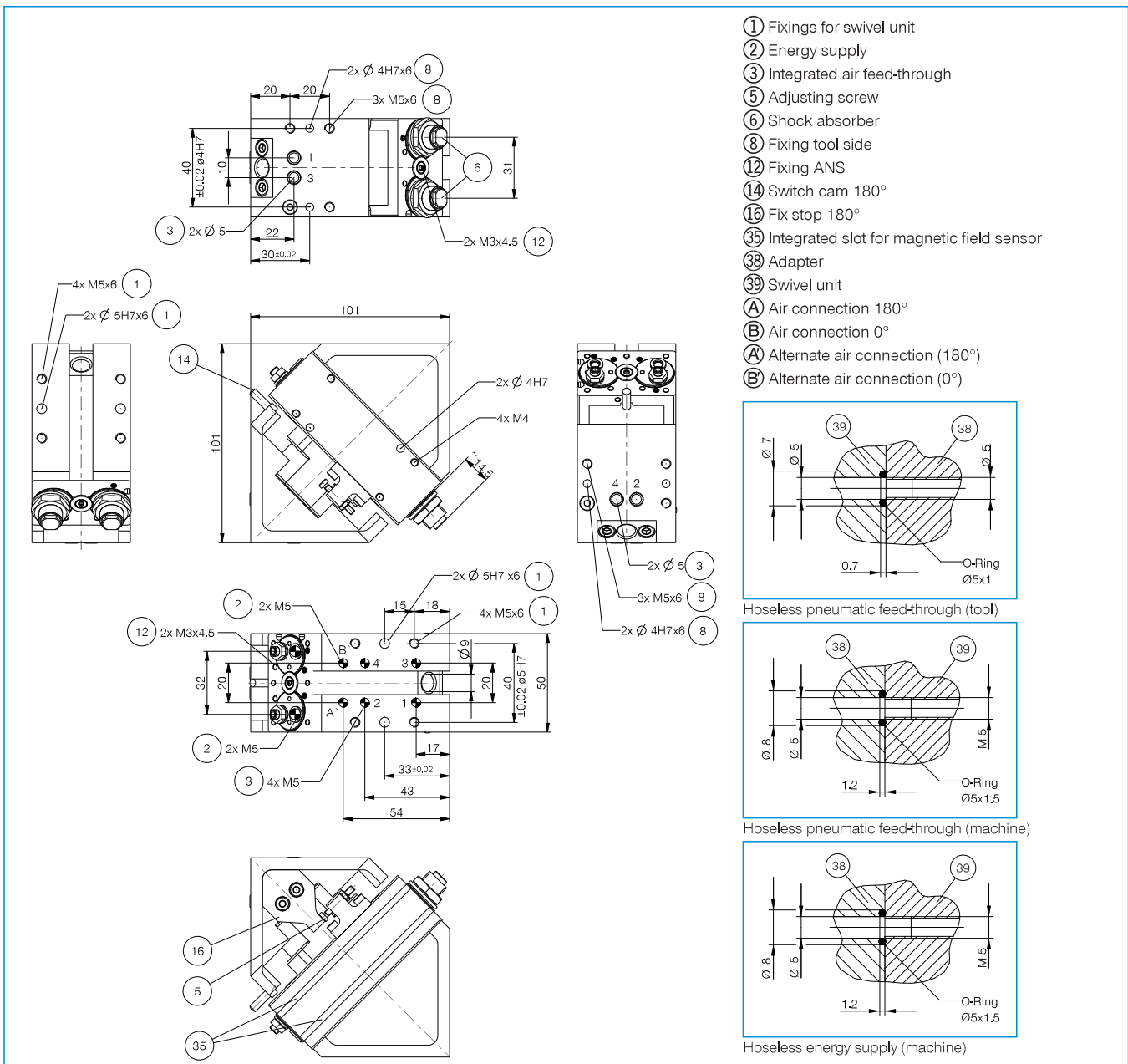
Inductive proximity switch - Cable 5 m
NJ8-E2



Inductive proximity switch - Connector M8
NJ8-E2S

Order no.	Technical Data*
Swivel angle [°]	180
Torque [Nm]	1.5
Repetition accuracy +/- [°]	0.01
Swivel time [s]**	0.3
Passage bore Ø [mm]	9
Axial bearing load [N]	490
Radial bearing load [Nm]	25
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature [°C]	5 ... +80
Air volume per cycle [cm³]	15
Weight [kg]	1.2

*All data measured at 6 bar
 **without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW74

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M12
S12-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit
ANS0063



Inductive proximity switch
- Cable 5 m
NJ8-E2



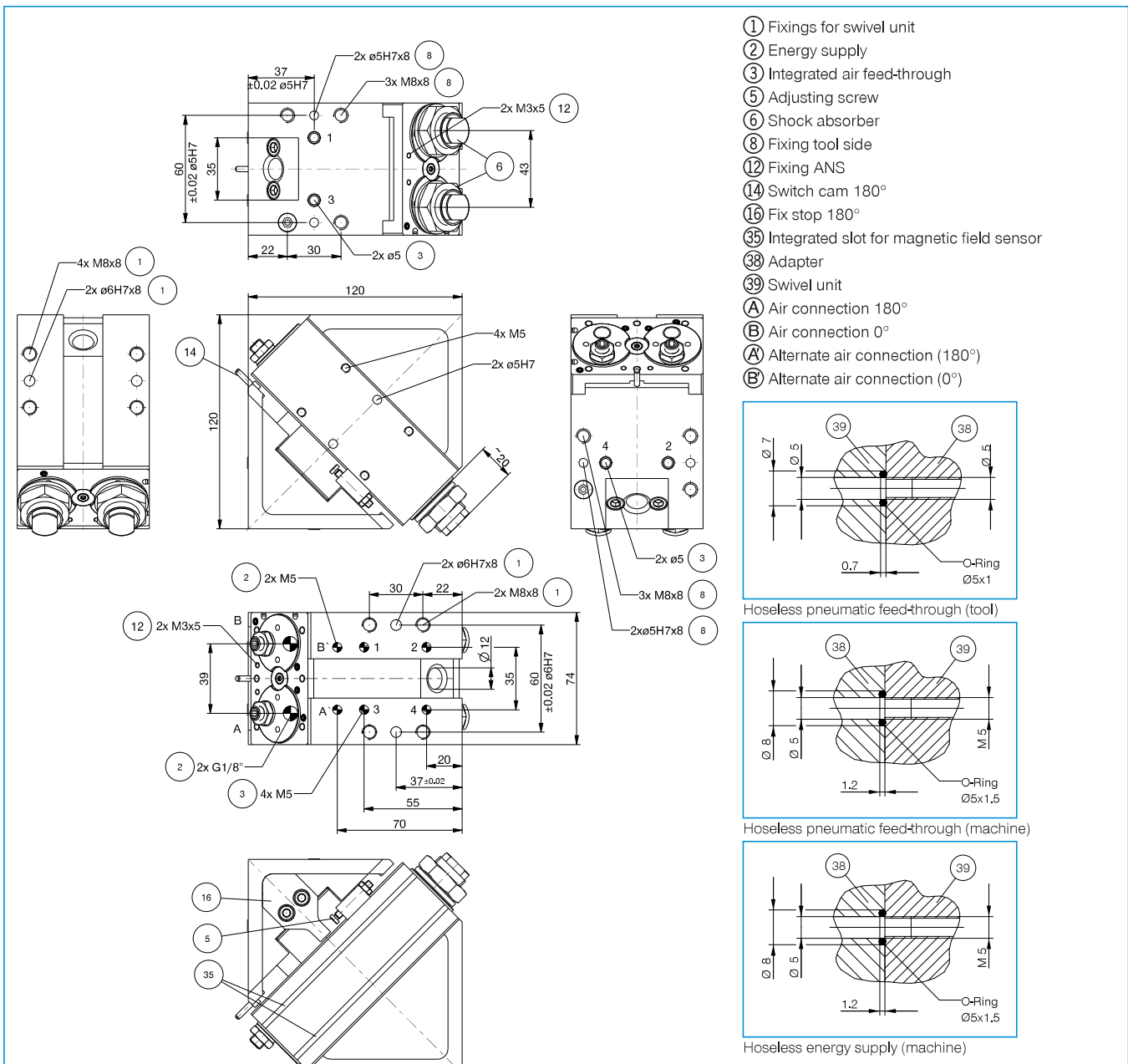
Inductive proximity switch
- Connector M8
NJ8-E2S

Order no.	SW74D4-C
Swivel angle [°]	180
Torque [Nm]	5.5
Repetition accuracy +/- [°]	0.01
Swivel time [s] **	0.3
Passage bore Ø [mm]	12
Axial bearing load [N]	1120
Radial bearing load [Nm]	90
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature [°C]	5 ... +80
Air volume per cycle [cm³]	42
Weight [kg]	2.6

* All data measured at 6 bar

** without extension load

► Technical Data*



ANGLE PIVOT UNITS

INSTALLATION SIZE SW100

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-8X6



O-Ring
COR0050100

▶ RECOMMENDED ACCESSORIES



Magnetic field sensor
Straight Cable 5 m
MFS204KHC



Magnetic field sensor
Straight Cable 0,3 m -
Connector M8
MFS204SKHC



Plug-in connector Straight
Cable 5m - Socket M8
(female)
KAG500



Plug-in connector
customizable Straight -
Connector M12
S12-G-3



Pressure Safety Valve
DSV1-8

▶ RECOMMENDED ACCESSORY ATTACHMENT KIT



Attachment Kit
ANS0064



Inductive proximity switch
- Cable 5 m
NJ8-E2

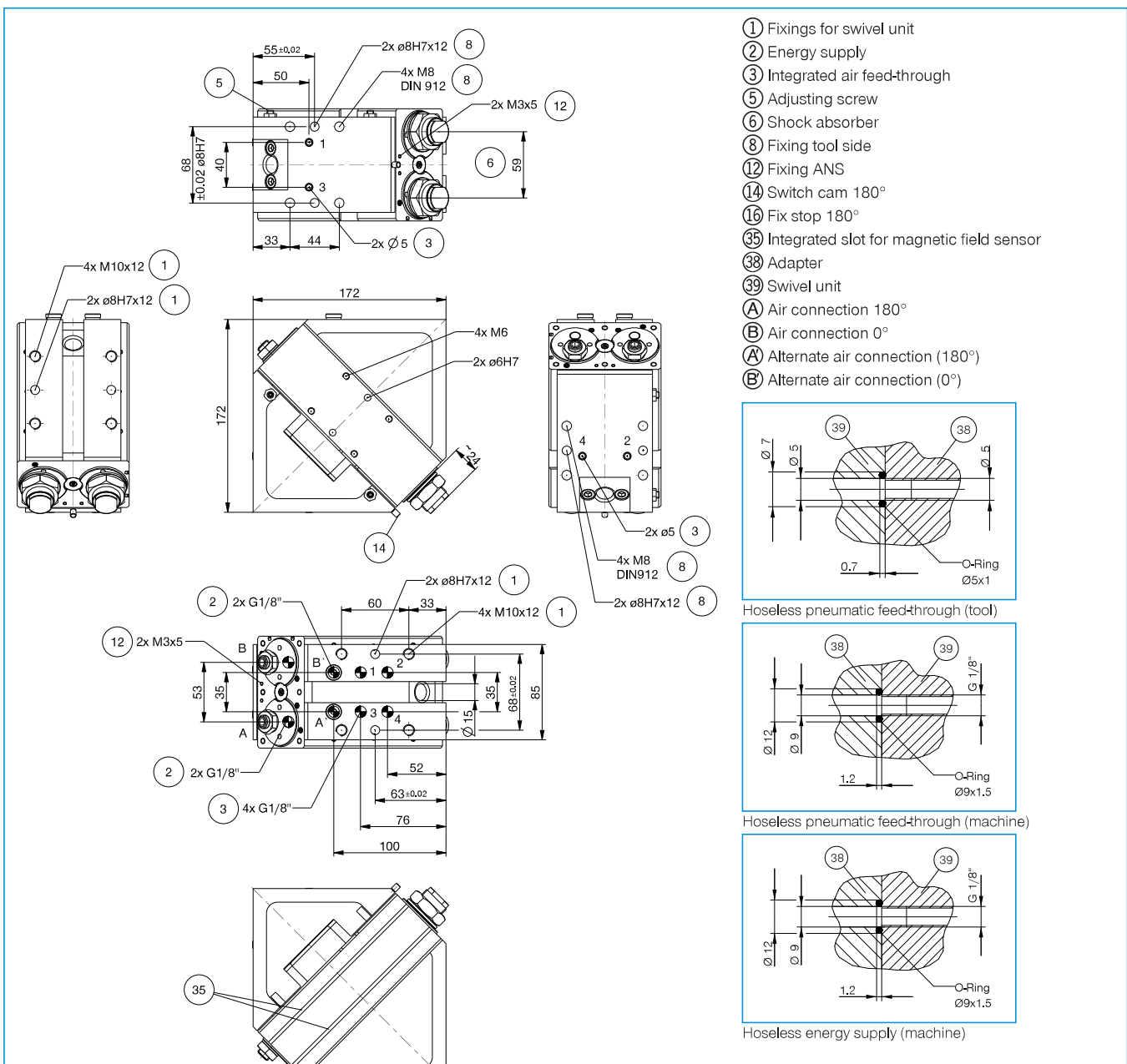


Inductive proximity switch
- Connector M8
NJ8-E2S

Order no.	SW100D4-C
Swivel angle [°]	180
Torque [Nm]	15
Repetition accuracy +/- [°]	0.01
Swivel time [s] **	0.5
Passage bore Ø [mm]	15
Axial bearing load [N]	2500
Radial bearing load [Nm]	155
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature [°C]	5 ... +80
Air volume per cycle [cm³]	108
Weight [kg]	6.3

* All data measured at 6 bar

** without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW125

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0090150

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m
NJ8-E2



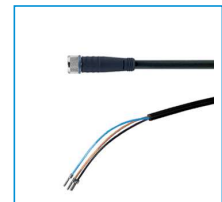
Inductive proximity switch - Cable 5 m
NJ12-E2



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Plug-in connector customizable Straight - Connector M12
S12-G-3



Pressure Safety Valve
DSV1-8

ANGLE PIVOT UNITS

INSTALLATION SIZE SW155

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0090150

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m
NJ8-E2



Inductive proximity switch - Cable 5 m
NJ12-E2



Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



Plug-in connector customizable Straight - Connector M8
S8-G-3



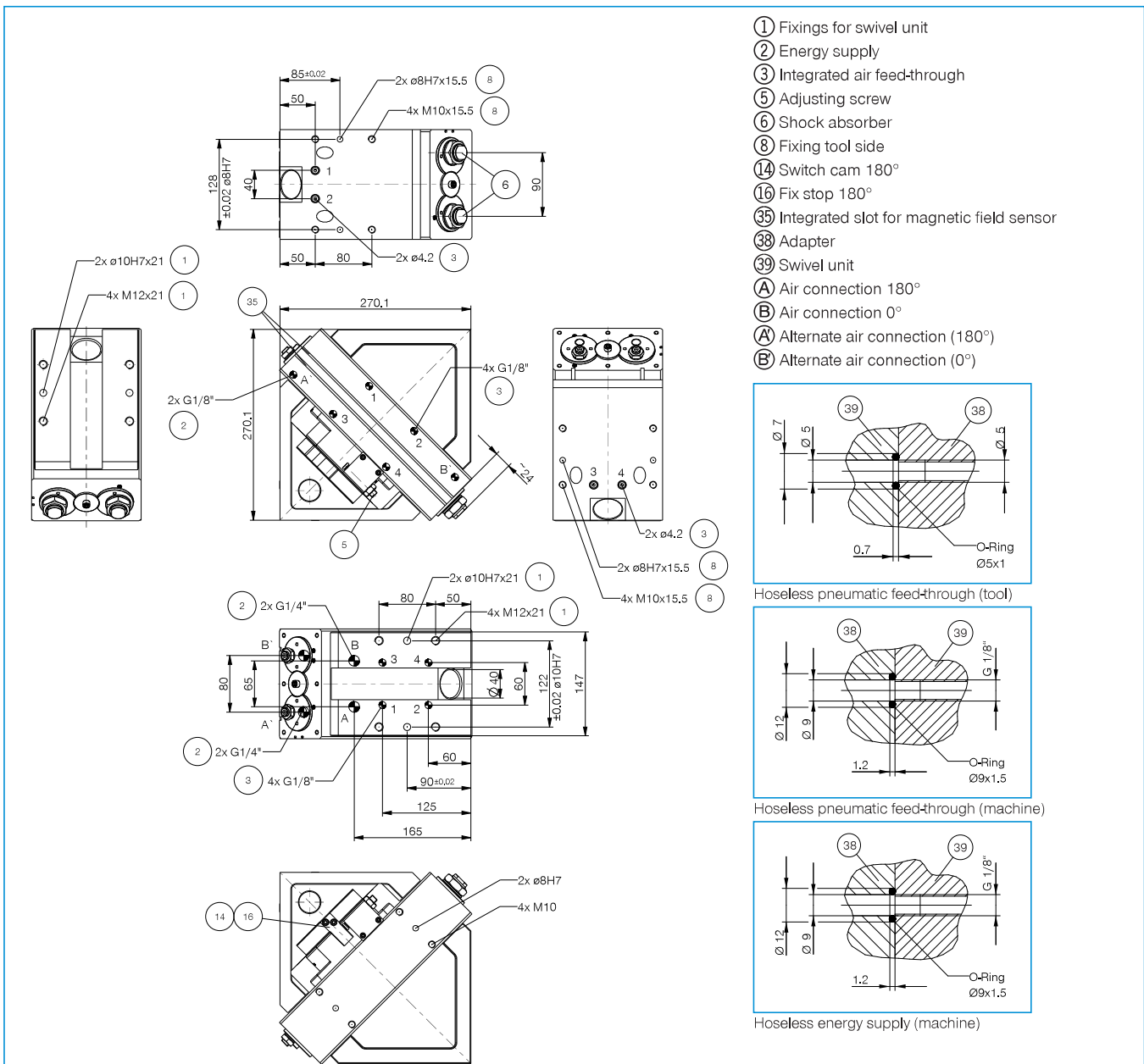
Plug-in connector customizable Straight - Connector M12
S12-G-3



Pressure Safety Valve
DSV1-8

Order no.	Technical Data*
Swivel angle [°]	180
Torque [Nm]	58
Repetition accuracy +/- [°]	0.01
Swivel time [s]**	0.8
Passage bore Ø [mm]	40
Axial bearing load [N]	5900
Radial bearing load [Nm]	760
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature [°C]	5 ... +80
Air volume per cycle [cm³]	730
Weight [kg]	25.3

* All data measured at 6 bar
 ** without extension load



ANGLE PIVOT UNITS

INSTALLATION SIZE SW195

▶ PRODUCT SPECIFICATIONS



▶ INCLUDED IN DELIVERY



Flow Control Valves - with Swivel joint
DRV1-4X8



O-Ring
COR0120150

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m
NJ8-E2



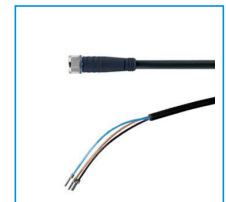
Inductive proximity switch - Cable 5 m
NJ12-E2



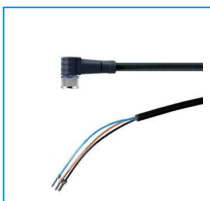
Magnetic field sensor Straight Cable 5 m
MFS204KHC



Magnetic field sensor Straight Cable 0,3 m - Connector M8
MFS204SKHC



Plug-in connector Straight Cable 5m - Socket M8 (female)
KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)
KAW500



Plug-in connector customizable Straight - Connector M8
S8-G-3



Plug-in connector customizable Straight - Connector M12
S12-G-3



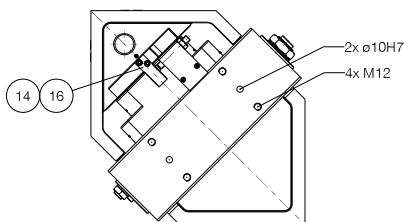
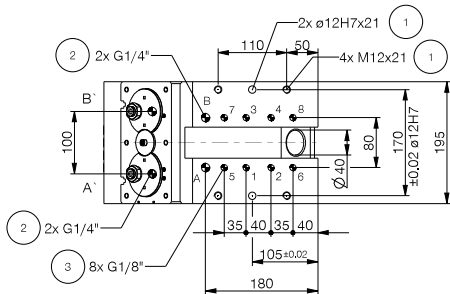
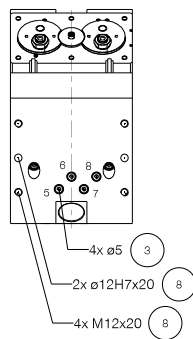
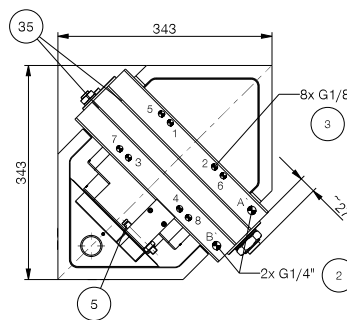
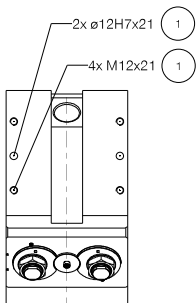
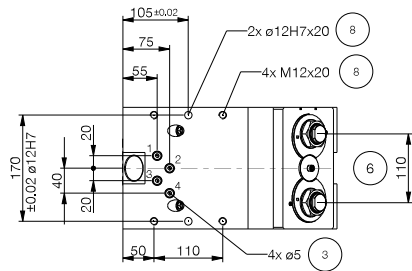
Pressure Safety Valve
DSV1-8

Order no.	SW195D8-C
Swivel angle [°]	180
Torque [Nm]	120
Repetition accuracy +/- [°]	0.01
Swivel time [s]**	1.1
Passage bore Ø [mm]	40
Axial bearing load [N]	7000
Radial bearing load [Nm]	1250
Operating pressure min. [bar]	3
Operating pressure max. [bar]	8
Operating temperature [°C]	5 ... +80
Air volume per cycle [cm³]	1520
Weight [kg]	48.2

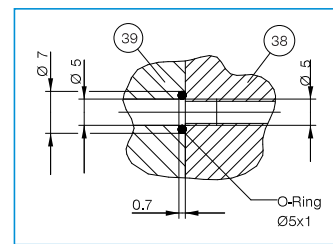
* All data measured at 6 bar

** without extension load

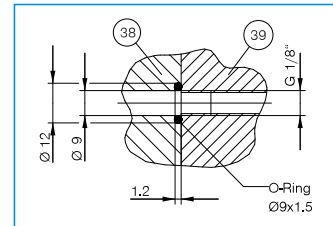
► Technical Data*



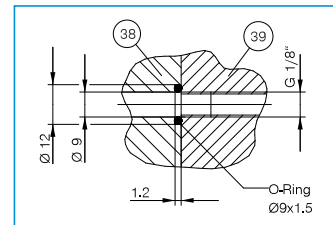
- ① Fixings for swivel unit
- ② Energy supply
- ③ Integrated air feed-through
- ⑤ Adjusting screw
- ⑥ Shock absorber
- ⑧ Fixing tool side
- ⑭ Switch cam 180°
- ⑯ Fix stop 180°
- ⑳ Integrated slot for magnetic field sensor
- ㉑ Adapter
- ㉒ Swivel unit
- Ⓐ Air connection 180°
- Ⓑ Air connection 0°
- Ⓐ Alternate air connection (180°)
- Ⓑ Alternate air connection (0°)



Hoseless pneumatic feed-through (tool)



Hoseless pneumatic feed-through (machine)



Hoseless energy supply (machine)

SWIVEL JAWS

OVERVIEW OF SERIES



▶ PNEUMATIC



Series SB

696

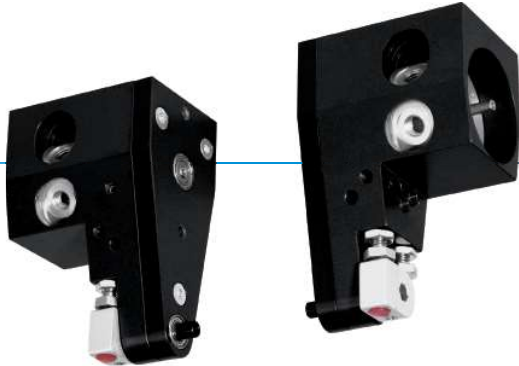


Series SBZ

704

SWIVEL JAWS SERIES SB

▶ PRODUCT ADVANTAGES



“The economical”

▶ Concentration on the essentials

The most cost-effective type of swivelling reduces your production costs

▶ Proven technology

We have more than 20 years of proven reliability, which ensures uninterrupted production for you

▶ Flexible swivel angle

90° or 180°; you decide which using the provided limit stops. This allows you to be flexible while only needing to maintain one product in your system

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

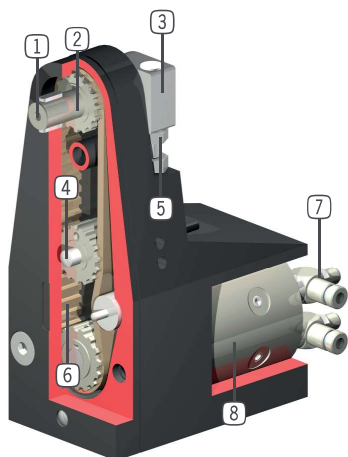
Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

www.zimmer-group.com



► BENEFITS IN DETAIL



- 1 Drive shaft**
 - as hexagonal or round shaft with feather key, depending on design
 - quick and cost effective positioning of application-specific workpiece intakes
- 2 Two way bearing drive shaft**
 - high forces and moments capacity
- 3 Stop**
 - swivel angle of 90 and 180°
 - stable, with Fibroflex stop surface
- 4 Position sensing**
 - inquiry of end positions 0° and 90° (or 180°) via inductive proximity switch
 - integrated in housing, therefore no additional interference contour
- 5 End position**
 - +/- 3° adjustable end position
- 6 Force transfer**
 - stable toothed belt with steel reinforcement
 - quiet, reliable, durable
- 7 Energy supply**
 - possible from several sides
- 8 Drive**
 - double-acting rotor cylinder

► SERIES CHARACTERISTICS



Number of installation sizes	3
Swivel angle	90° - 180°
Torque	0,1 Nm - 1,6 Nm
Weight (pair)	0,3 kg - 2,2 kg
AP class	2



Elastomer end position damping



Inductive sensor



Positionability - 2 positions



Adjustable swivel angle



IP54



10 million maintenance-free cycles (max.)

SWIVEL JAWS

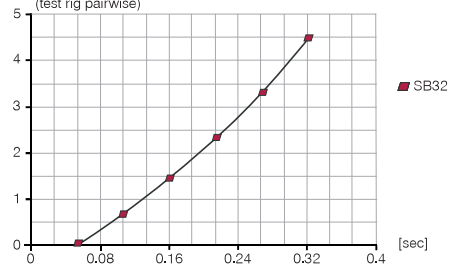
INSTALLATION SIZE SB32

▶ PRODUCT SPECIFICATIONS



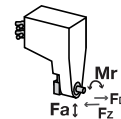
▶ Moment of inertia

[kg cm²] Shows the expected swivel time against the calculated moment of inertia (test rig pairwise)



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	180
Mr [Nm]	2.1
FD [N]**	90
FZ [N]**	90

▶ INCLUDED IN DELIVERY



Stop 90°

GEH03350



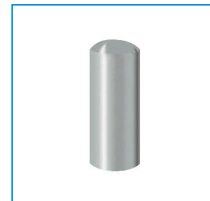
Stop 180°

GEH03340



Sleeve For Proximity Switch

DMS03210



Cylinder Pin

C632504100

▶ RECOMMENDED ACCESSORIES



Basic jaw

SB32-1-B



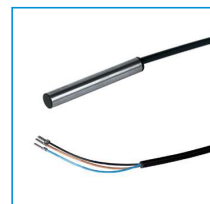
Basic jaw

SB32-1-B-01



Basic Jaw Rubberized

SB32-2-B



Inductive proximity switch - Cable 5 m

NJ4-E2-01



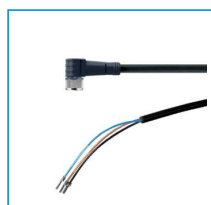
Inductive Proximity Switch Cable 0,3 m - Connector M8

NJ4-E2SK-01



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

SB-G-3



Plug-in connector customizable Straight - Connector M12

SB-G-3

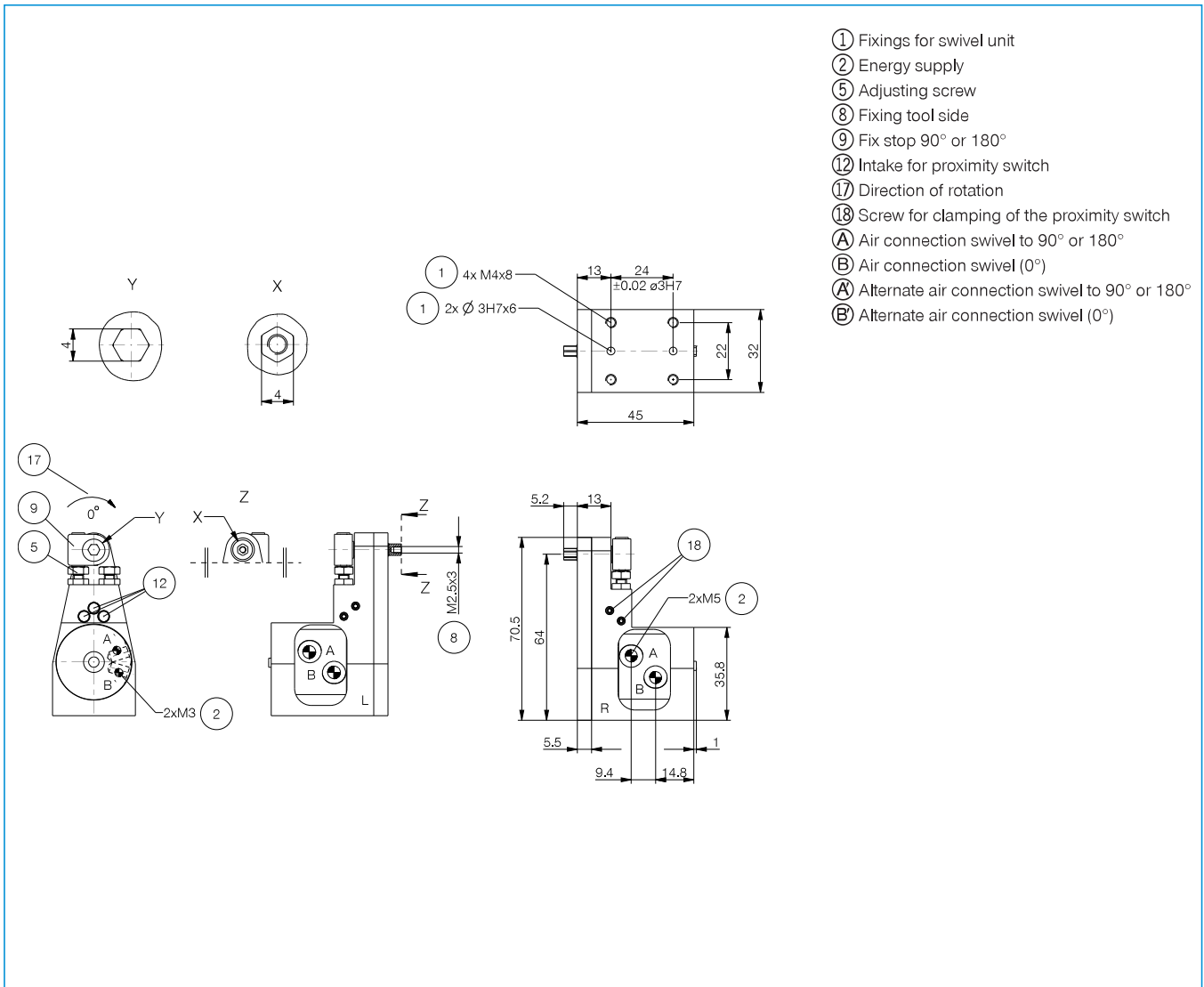


Pressure Safety Valve

DSV1-8

Order no.	▶ Technical Data*
Swivel angle [°]	90 / 180
Torque per jaw [Nm]	0.1
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	2
Weight (pair) [kg]	0.3
FD [N]**	90
FZ [N]**	90

*All data measured at 6 bar
 **Observe the gripper force



- ① Fixings for swivel unit
- ② Energy supply
- ⑤ Adjusting screw
- ⑧ Fixing tool side
- ⑨ Fix stop 90° or 180°
- ⑫ Intake for proximity switch
- ⑰ Direction of rotation
- ⑱ Screw for clamping of the proximity switch
- Ⓐ Air connection swivel to 90° or 180°
- Ⓑ Air connection swivel (0°)
- Ⓐ Alternate air connection swivel to 90° or 180°
- Ⓑ Alternate air connection swivel (0°)

SWIVEL JAWS

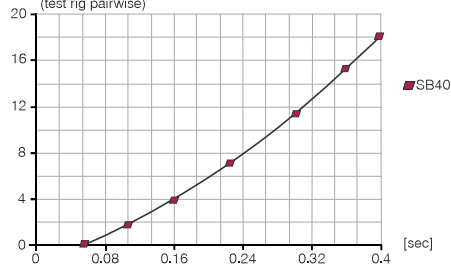
INSTALLATION SIZE SB40

▶ PRODUCT SPECIFICATIONS



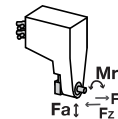
▶ Moment of inertia

[kg cm²] Shows the expected swivel time against the calculated moment of inertia (test rig pairwise)



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	770
Mr [Nm]	10.8
FD [N]**	385
FZ [N]**	385

▶ INCLUDED IN DELIVERY



Stop 90°

GEH04160



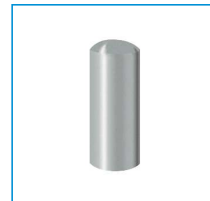
Stop 180°

GEH04150



Sleeve For Proximity Switch

DMS03210



Cylinder Pin

C632504100

▶ RECOMMENDED ACCESSORIES



Basic jaw

SB40-1



Basic Jaw Rubberized

SB40-2



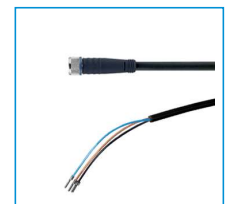
Inductive proximity switch - Cable 5 m

NJ4-E2-01



Inductive Proximity Switch Cable 0,3 m - Connector M8

NJ4-E2SK-01



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



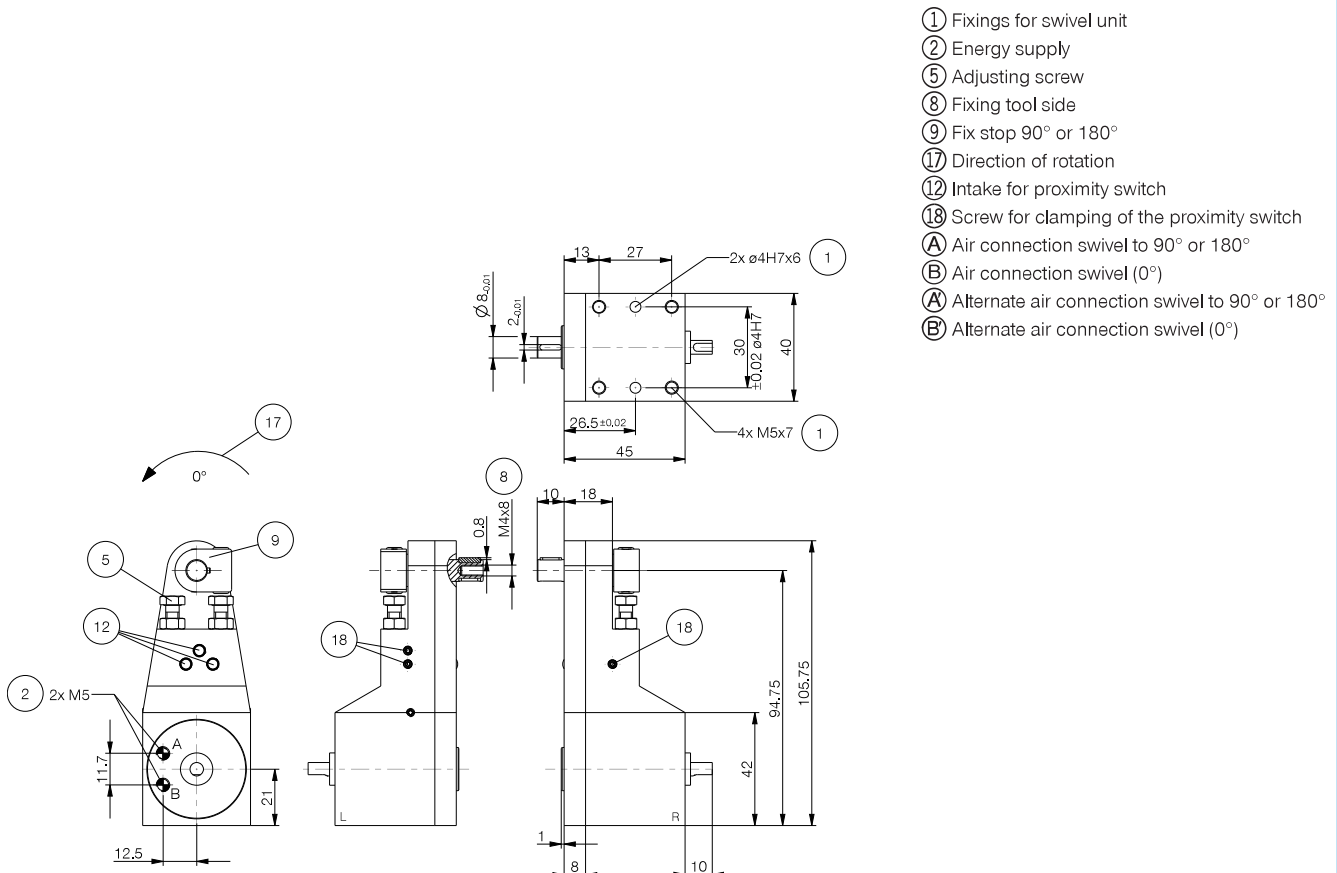
Pressure Safety Valve

DSV1-8

Order no.	SB40-B
Swivel angle [°]	90 / 180
Torque per jaw [Nm]	0.3
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm ³]	4
Weight (pair) [kg]	0.7
FD [N]**	385
FZ [N]**	385

*All data measured at 6 bar

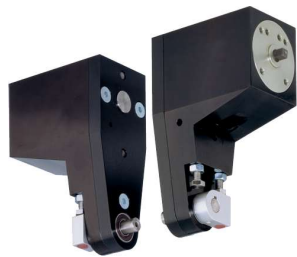
**Observe the gripper force



SWIVEL JAWS

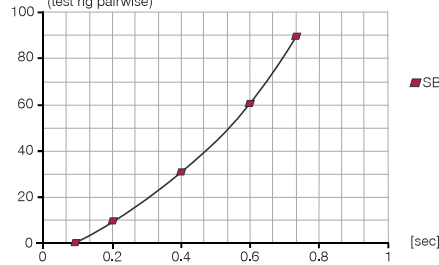
INSTALLATION SIZE SB54

▶ PRODUCT SPECIFICATIONS



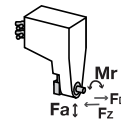
▶ Moment of inertia

[kg cm²] Shows the expected swivel time against the calculated moment of inertia (test rig pairwise)



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	850
Mr [Nm]	15.3
FD [N]**	425
FZ [N]**	425

▶ INCLUDED IN DELIVERY



Stop 90°

GEH05501



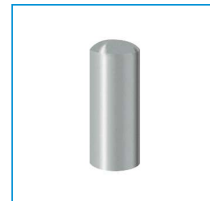
Stop 180°

GEH05491



Sleeve For Proximity Switch

DMS03210



Straight pin

KUN05410

▶ RECOMMENDED ACCESSORIES



Basic jaw

SB54-1



Basic Jaw Rubberized

SB54-2



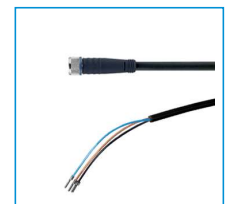
Inductive proximity switch - Cable 5 m

NJ4-E2-01



Inductive Proximity Switch Cable 0,3 m - Connector M8

NJ4-E2SK-01



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3

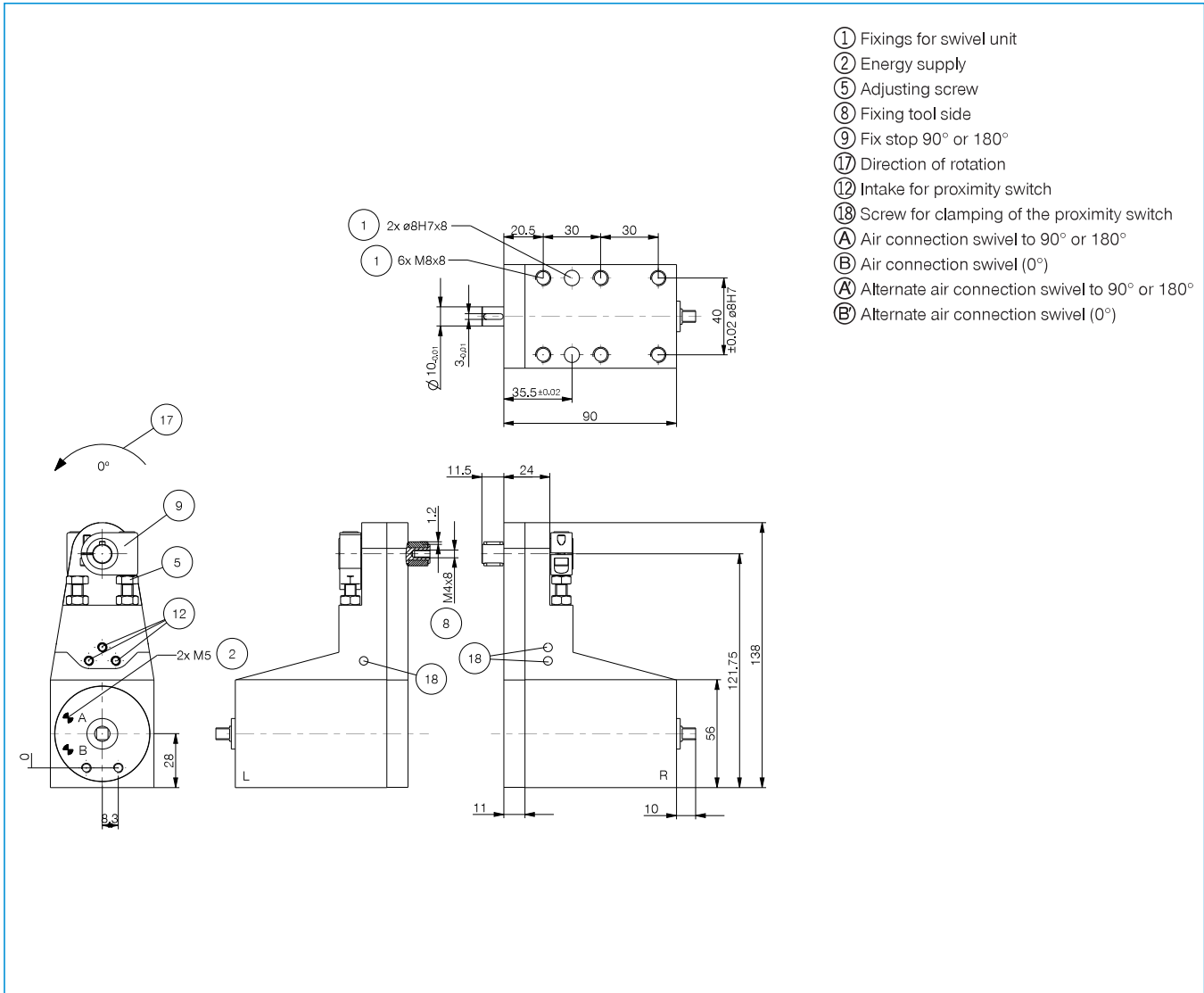


Pressure Safety Valve

DSV1-8

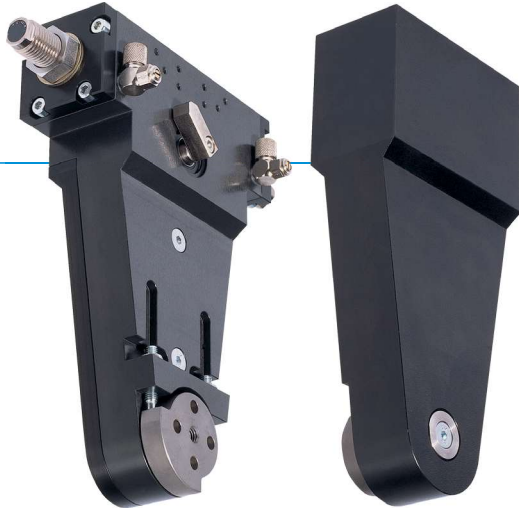
Order no.	SB54-B
Swivel angle [°]	90 / 180
Torque per jaw [Nm]	1.6
Swivel angle regulable +/- [°]	3
Repetition accuracy +/- [°]	0.5
Operating pressure min. [bar]	3
Operating pressure max. [bar]	7
Operating temperature min. [°C]	5
Operating temperature max. [°C]	+80
Air volume per cycle [cm³]	16
Weight (pair) [kg]	2.2
FD [N]**	425
FZ [N]**	425

*All data measured at 6 bar
 **Observe the gripper force



SWIVEL JAWS SERIES SBZ

▶ PRODUCT ADVANTAGES



“The superior”

▶ Shock absorber with spiral groove technology

Superior end position damping lets you swivel more mass in the shortest amount of time, increasing your machine's component output

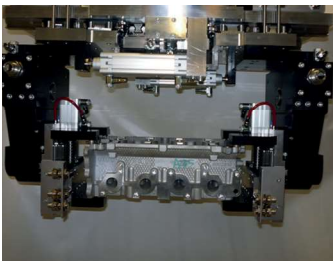
▶ Force transmission via gear wheel set

The robust gear wheels stand for precision, reliability and long service life and guarantee smooth operation

▶ Failure-free continuous operation

Our uncompromising “Made in Germany” quality guarantees up to 10 million maintenance-free gripping cycles

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products love the challenge!

Extreme conditions, all over the world—our tried and tested components and systems give you limitless possibilities:

Find the best product for your specific use:

www.zimmer-group.com

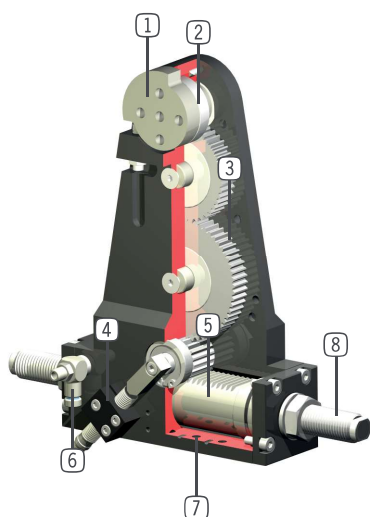
HOW TO ORDER CORRECTLY

- ▶ The product order numbers are arranged according to this diagram:

Order no.	SB100	<input type="checkbox"/>	<input type="checkbox"/>	-B
counter bearing (no drive)		G		
Rotation angle 90°			-90	
Rotation angle 180°			-180	



► BENEFITS IN DETAIL



- 1 Two way bearing drive shaft**
 - high forces and moments capacity
- 2 Drive flange**
 - large size drive flange with end stop and large central hole (from SB150)
- 3 Force transfer**
 - stable gear wheel set
 - precise, reliable, durable
- 4 Position sensing**
 - inquiry of end positions 0° and 90° (or 180°) via inductive proximity switch
 - adjustable on rotatable switch cam
- 5 Drive**
 - double-acting pneumatic cylinder
- 6 Air flow control valve**
 - for speed regulation (included in the delivery)
- 7 Mounting and positioning**
 - mounting possible from several sides for versatile positioning
- 8 Integrated and patented hydraulic shock absorbers**
 - adjustable end position damping

► SERIES CHARACTERISTICS



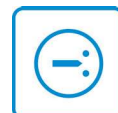
Number of installation sizes	5
Swivel angle	90° - 180°
Torque	1,2 Nm - 57 Nm
Weight	0,45 kg - 28 kg
AP class	3



Powerstop end position damping



Inductive sensor



Positionability - 2 positions



IP54



10 million maintenance-free cycles (max.)

SWIVEL JAWS

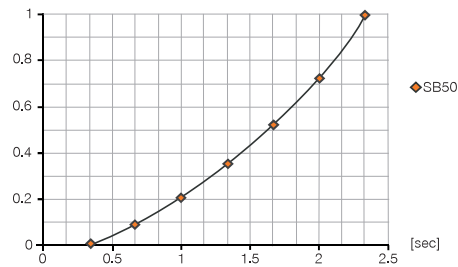
INSTALLATION SIZE SB50

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	1720
Mr [Nm]	15
FD [N]**	860
FZ [N]**	630

▶ INCLUDED IN DELIVERY



Mounting block

KB8K-02



Flow Control Valves - with Swivel joint

DRVM5X4

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m

NJ8-E2



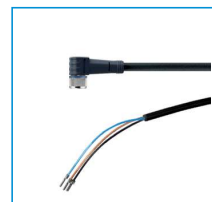
Inductive proximity switch - Connector M8

NJ8-E2S



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3

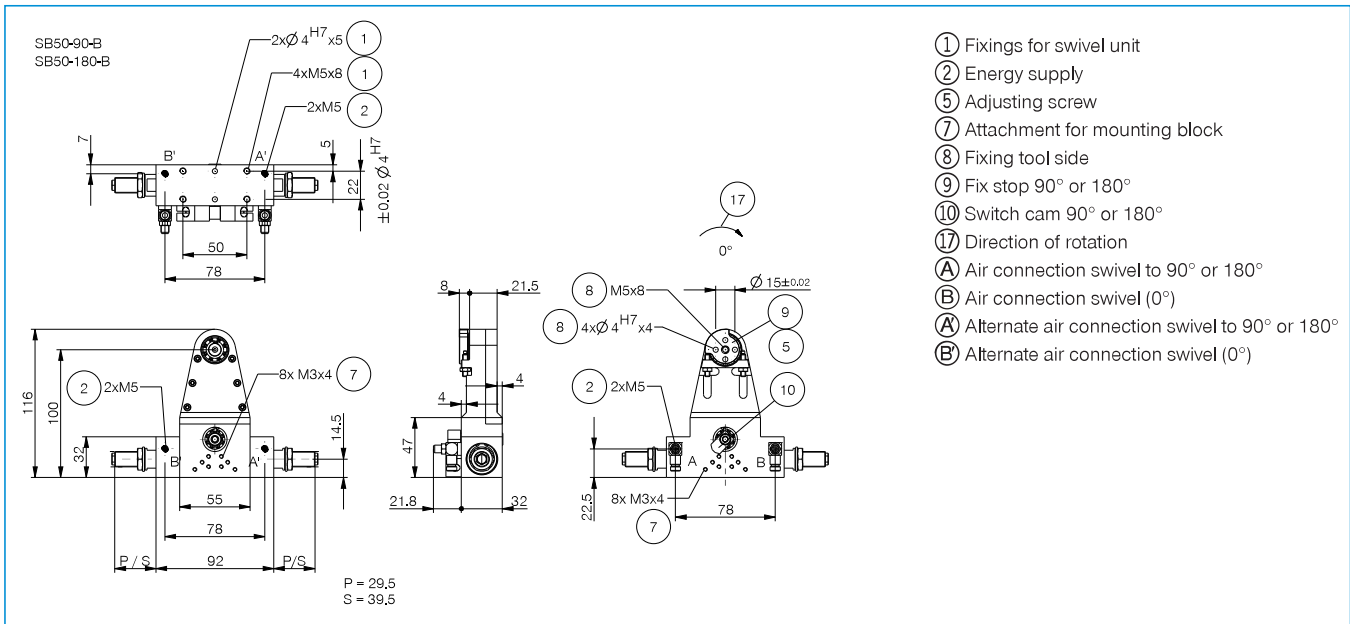


Pressure Safety Valve

DSV1-8

Order no.	Technical Data*		
	SB50-90-B	SB50-180-B	SB50G
Swivel angle [°]	90	180	
Torque per jaw [Nm]	1.2	1.2	
Swivel angle regulable +/- [°]	3	3	
Repetition accuracy +/- [°]	0.01	0.01	
Operating pressure min. [bar]	3	3	
Operating pressure max. [bar]	8	8	
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	5.5	7.5	
Weight [kg]	0.75	0.75	0.45
FD [N]**	860	860	860
FZ [N]**	630	630	630

*All data measured at 6 bar
 **Observe the gripper force



SWIVEL JAWS

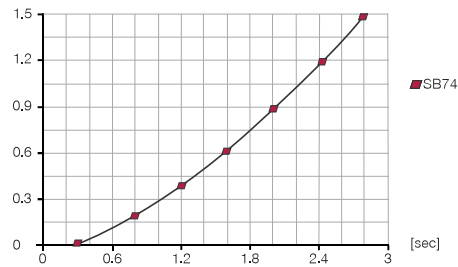
INSTALLATION SIZE SB74

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	2400
Mr [Nm]	20
FD [N]**	1200
FZ [N]**	630

▶ INCLUDED IN DELIVERY



Mounting block

KB8K-02



Flow Control Valves - with Swivel joint

DRVM5X4

▶ RECOMMENDED ACCESSORIES



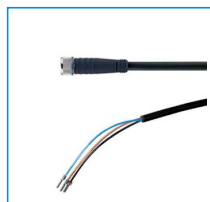
Inductive proximity switch - Cable 5 m

NJ8-E2



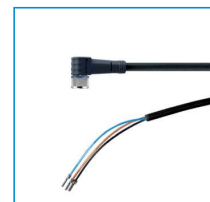
Inductive proximity switch - Connector M8

NJ8-E2S



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



Pressure Safety Valve

DSV1-8

SWIVEL JAWS

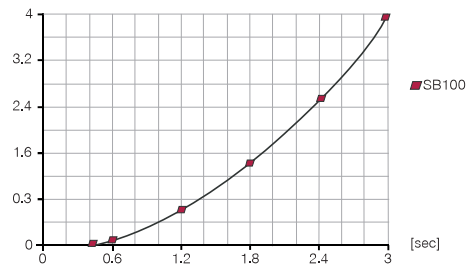
INSTALLATION SIZE SB100

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	4000
Mr [Nm]	70
FD [N]**	2000
FZ [N]**	1200

▶ INCLUDED IN DELIVERY



Mounting block

KB8K-02



Flow Control Valves - with Swivel joint

DRV1-8X6

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m

NJ8-E2



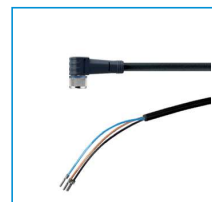
Inductive proximity switch - Connector M8

NJ8-E2S



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



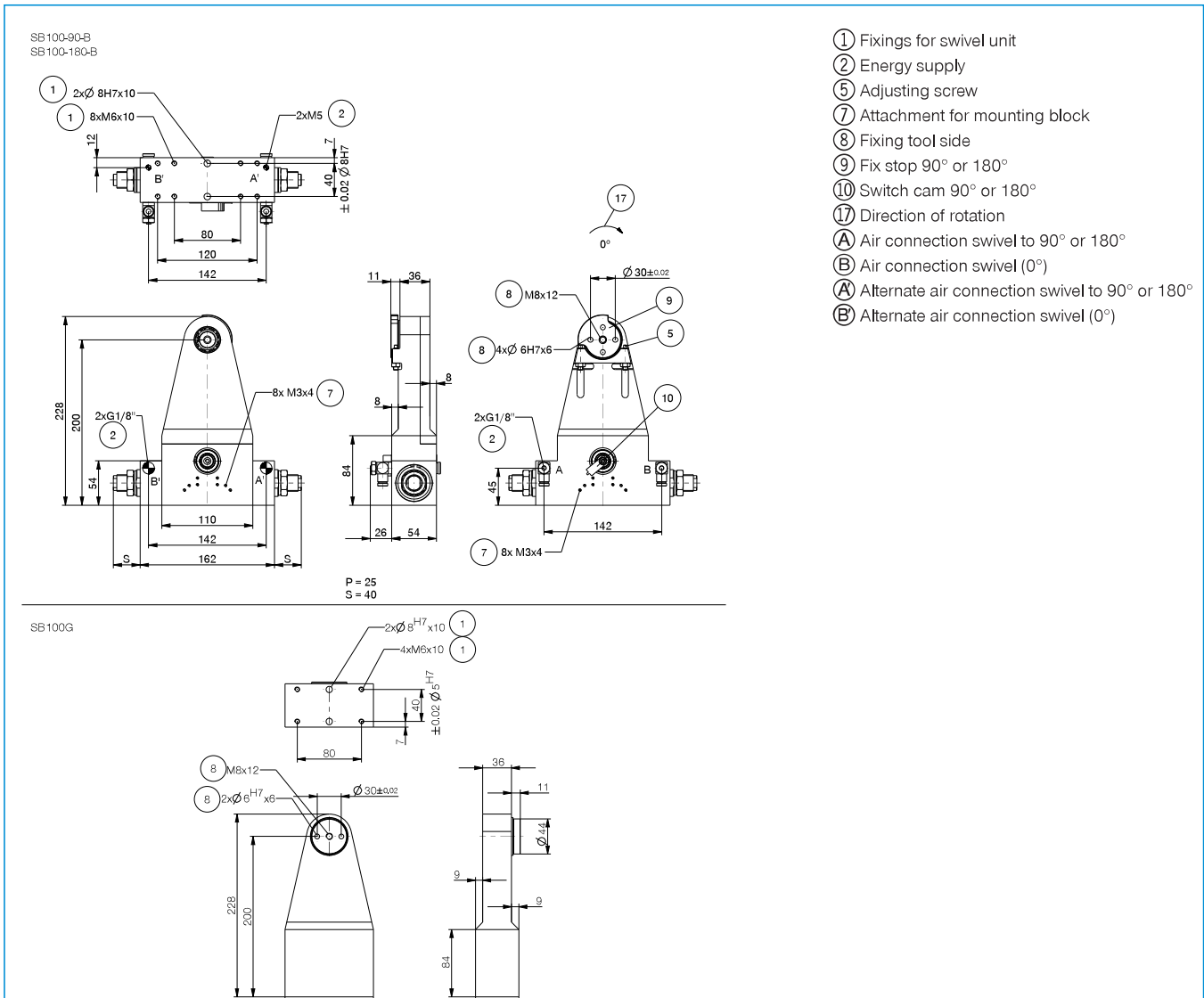
Pressure Safety Valve

DSV1-8

Order no.	▶ Technical Data*		
	SB100-90-B	SB100-180-B	SB100G
Swivel angle [°]	90	180	
Torque per jaw [Nm]	10	10	
Swivel angle regulable +/- [°]	3	3	
Repetition accuracy +/- [°]	0.01	0.01	
Operating pressure min. [bar]	3	3	
Operating pressure max. [bar]	8	8	
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm³]	40	54	
Weight [kg]	4	4	1.5
FD [N]**	2000	2000	2000
FZ [N]**	1200	1200	1200

*All data measured at 6 bar

**Observe the gripper force



SWIVEL JAWS

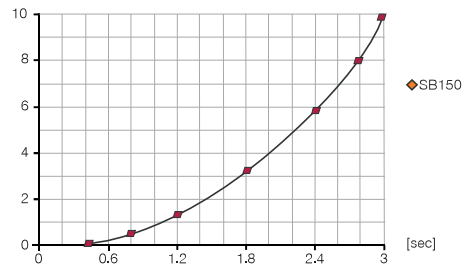
INSTALLATION SIZE SB150

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	15000
Mr [Nm]	270
FD [N]**	7500
FZ [N]**	3700

▶ INCLUDED IN DELIVERY



Mounting block

KB8K



Flow Control Valves - with Swivel joint

DRV1-4X8

▶ RECOMMENDED ACCESSORIES



Inductive proximity switch - Cable 5 m

NJ8-E2



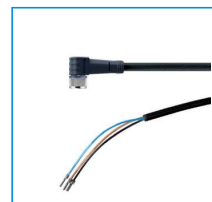
Inductive proximity switch - Connector M8

NJ8-E2S



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3

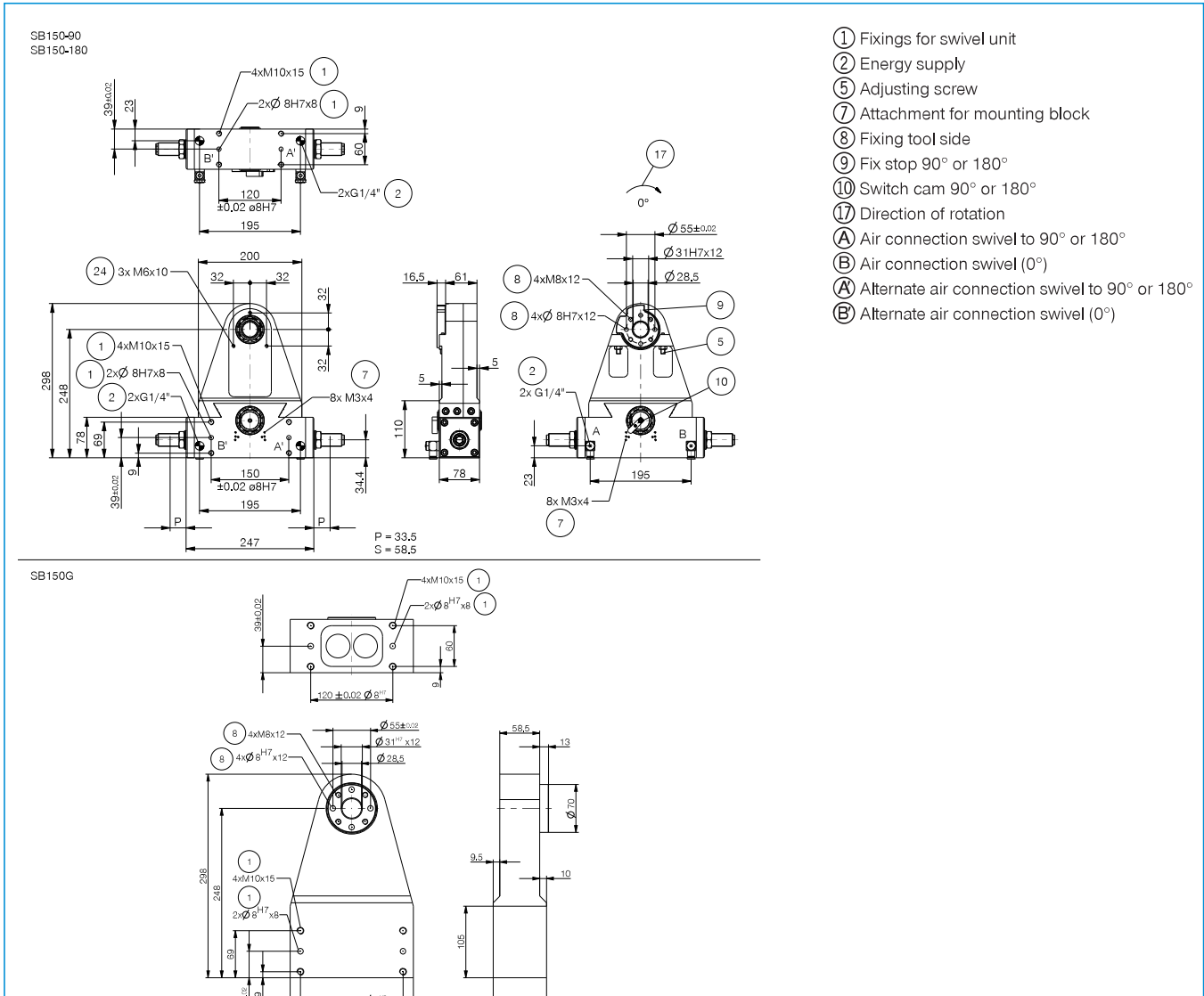


Pressure Safety Valve

DSV1-8

Order no.	Technical Data*		
	SB150-90	SB150-180	SB150G
Swivel angle [°]	90	180	
Torque per jaw [Nm]	23	23	
Swivel angle regulable +/- [°]	3	3	
Repetition accuracy +/- [°]	0.01	0.01	0.01
Operating pressure min. [bar]	3	3	
Operating pressure max. [bar]	8	8	
Operating temperature min. [°C]	5	5	5
Operating temperature max. [°C]	+80	+80	+80
Air volume per cycle [cm ³]	190	260	
Weight [kg]	11	11	6.5
FD [N]**	7500	7500	7500
FZ [N]**	3700	3700	3700

* All data measured at 6 bar
 ** Observe the gripper force



SWIVEL JAWS

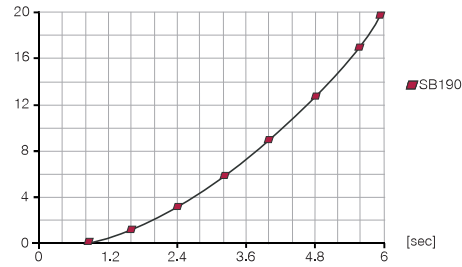
INSTALLATION SIZE SB190

▶ PRODUCT SPECIFICATIONS



▶ Moment of inertia

[kg m²] Shows the expected swivel time against the calculated moment of inertia



▶ Forces and moments

Indicates the static load on the bearing.



Fa [N]	25000
Mr [Nm]	600
FD [N]**	12500
FZ [N]**	6100

▶ INCLUDED IN DELIVERY



Mounting block

KB12-03



Flow Control Valves - with Swivel joint

DRV1-4X8

▶ RECOMMENDED ACCESSORIES



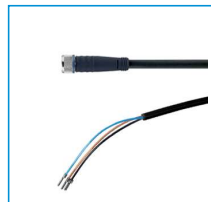
Inductive proximity switch - Cable 5 m

NJ12-E2



Inductive proximity switch - Connector M8

NJ12-E2S



Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500



Plug-in connector Angled Cable 5m - Socket M8 (female)

KAW500



Plug-in connector customizable Straight - Connector M8

S8-G-3



Plug-in connector customizable Straight - Connector M12

S12-G-3



Pressure Safety Valve

DSV1-8

