

Swivel Unit

elektrical

SOMMER
automatic





Order No.	Swivel angle [°]	Torque [Nm]	Page
Product Information			6
DEF60	min. 30 - max. 330	1,6	10



Order No.	Swivel angle	Torque max. [Nm]	Page
Product Information			14
DES140NC	unlimited	12	18





Swivel Unit

electrical



DEF60

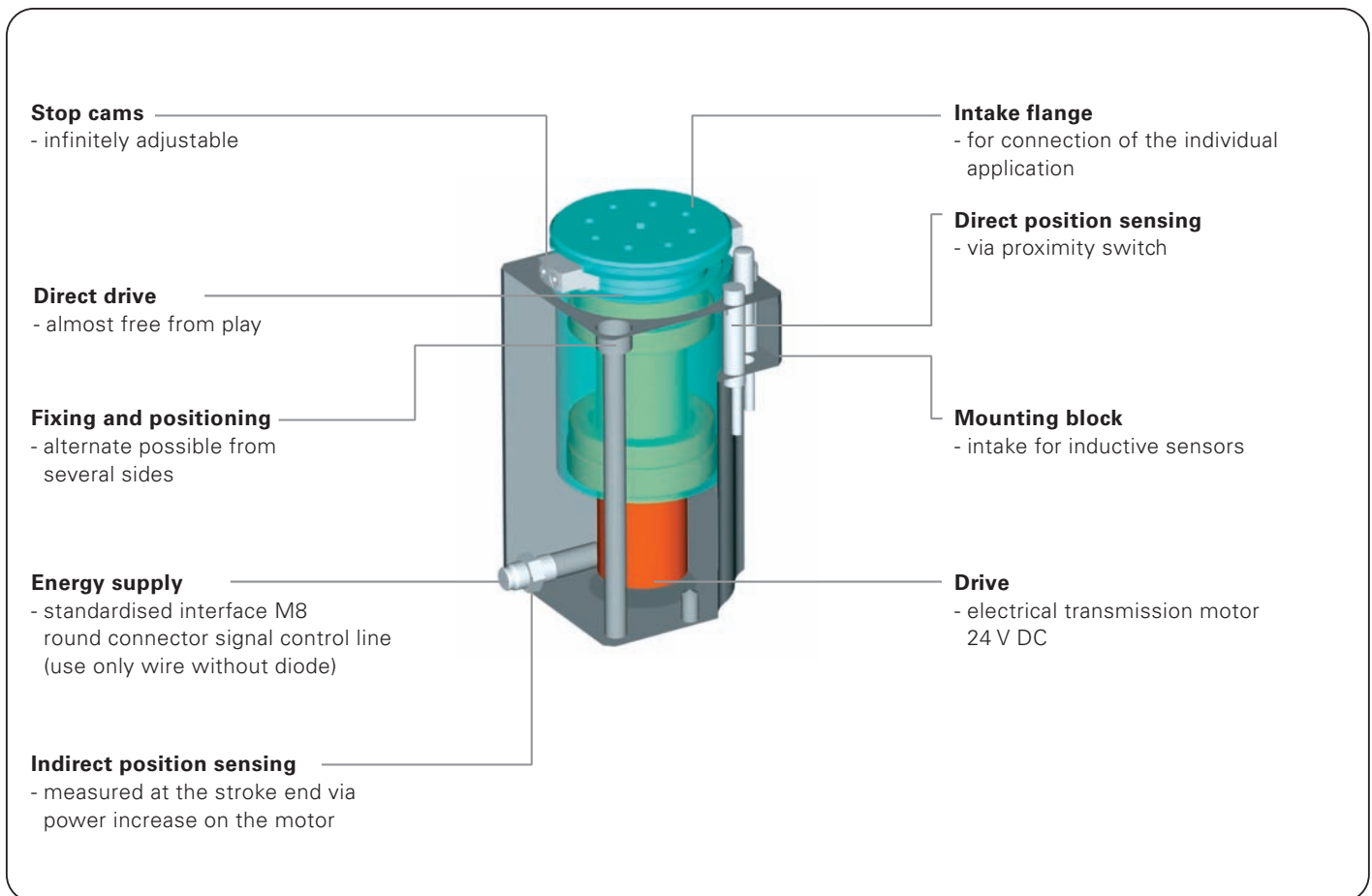
SOMMER
automatic

electrical Swivel Unit

➤ Features

- Compact electrically driven swivel unit with a swivel angle up to 330°
- Easiest energy supply using 24 V machine voltage, independent of pneumatics and hydraulics
- Inductive proximity switch for position recognitions included in delivery

Functional diagram



Terms

Torque:	force moment occuring on the drive edge of the swivel unit
Swivel time:	time required to cover 30°/330° swivel movement
Repeatability:	dispersion of stop positions at 100 consecutive swivel cycles
Cycle:	distance covered by the drive motor in one 0° /330°/0° swivel movement
Maintenance:	maintenance free up to 5 Mio. rotation (please see the owner's manual for conditions, download from www.sommer-automatic.com) <ul style="list-style-type: none"> • long maintenance intervals keep costs down • long durability

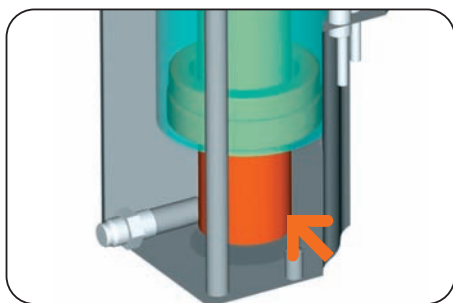
Model

Order no.	Swivel angle	Torque
DEF60	30°* - 330°**	1,6 Nm

* min. swivel angle

** max. swivel angle

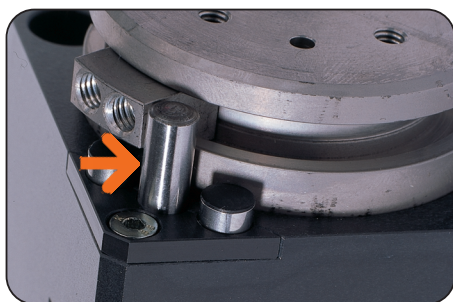
electrical Swivel **Unit**



Drive

Electrical transmission motor 24 V DC

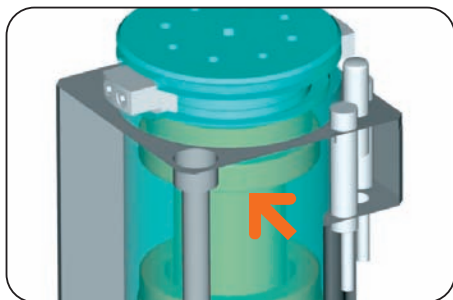
- High torque relative to size
- Rapid cycle times



Swivel angle min. 30°- max. 330°

Adjustable via stop cam

- Infinitely variable alignment possible
- High repeatability



Force transfer

Direct, motor intake flange

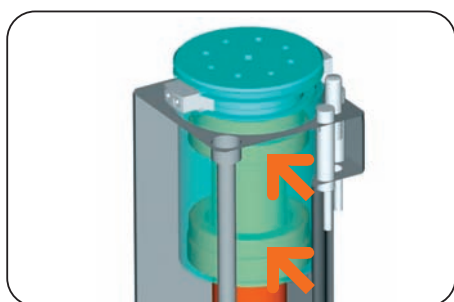
- Almost free from play
- Low loss



Intake flange

For simple connection

- Low construction and extension effort for connection of follow-up tools
- Simplest connection of an adapter plate adapted to the application



Drive

Two way bearing

- Increased torque intake
- High intake flange coaxiality

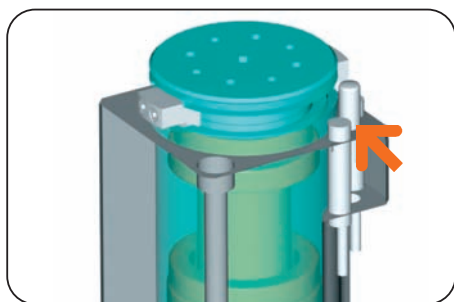


Indirect position sensing

Included in the delivery

- Compact
- No additional interference contours

The control electronics contained include an adjustable min. and max. value for the power. When approaching the end position, the blocked drive motor generates an increase in power. The corresponding output signal can be used as a position sensing.



Direct position sensing

Included in the delivery

- Process safe
- Defined sensing of set end position

electrical Swivel Unit



Included in the delivery

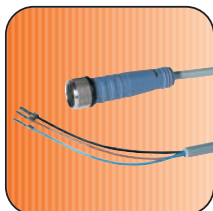


Proximity switch
Order no. NJ6,5-E2/01



Controller
Order no. ELEDEF60

Accessory list



Cable straight plug
Order no. KAG500

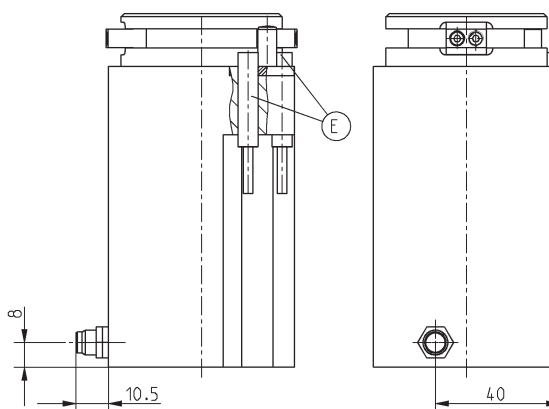


Cable angled plug
Order no. KAW500



Plug 3-pole
Order no. S12-G-3

Accessories



Subject to change without prior notice

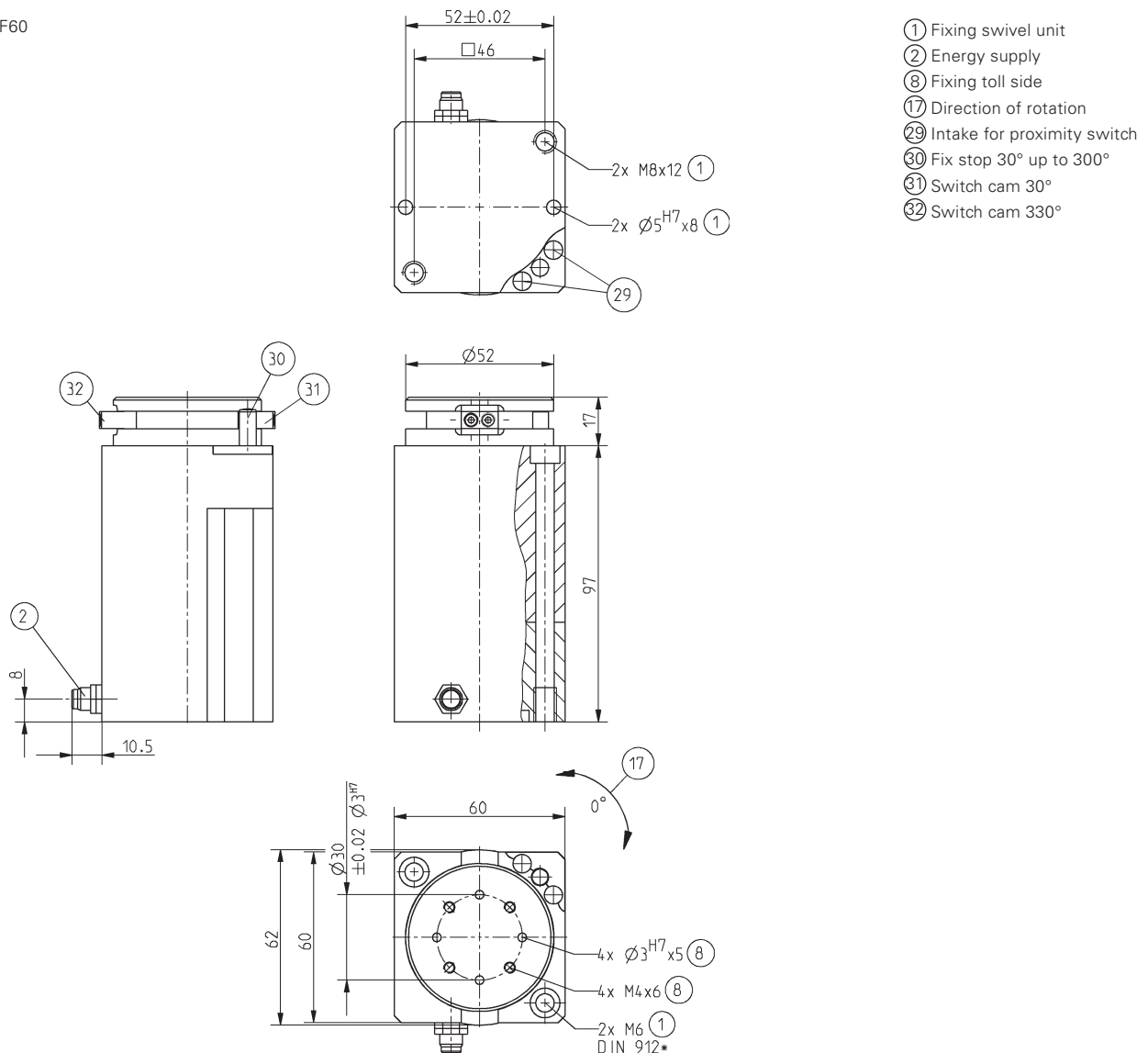


Order no.:	DEF60
Drive:	Electrical transmission motor 24V DC
Swivel angle infinitely adjustable [°]:	330
Torque max. [Nm]:	1,2
Swivel Time 330° [s]*:	2,28
Radial bearing load [Nm]:	65
Axial bearing load [N]:	1400
Repeatability +/- [°]:	0,02
Voltage [V]** :	24
Max. power [mA]:	500
Min./max. operating temperature [°C]:	5/80
Protection class	IP 52
Weight [kg]:	1,6

** voltage 12 Volt on inquiry

* without extension load

DEF60



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Swivel Unit

electrical



DES140NC

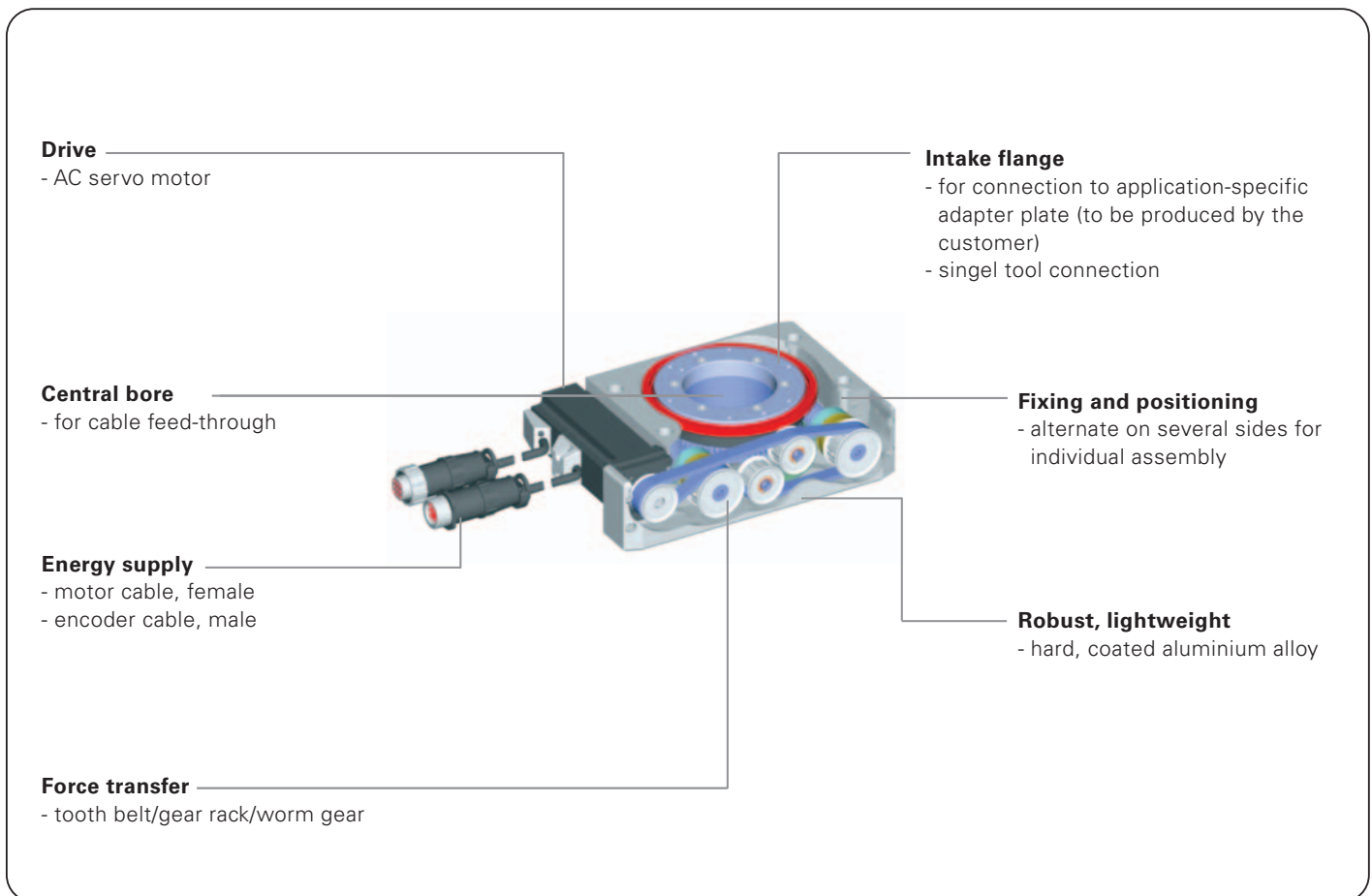
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electrical Swivel Unit

➤ Features

- Driven by an AC servo motor with a torque up to 12 Nm and a speed up to 50 rpm
- Programmable, positionable and regulable torque
- Data interface for standard market systems such as Profibus, Sercos, CANopen and DeviceNet
- Unlimited rotation angle, all positions easily reached
- Extremely flat design, with a height of just 52 mm
- Sealed in accordance with protection category IP 65

Functional diagram





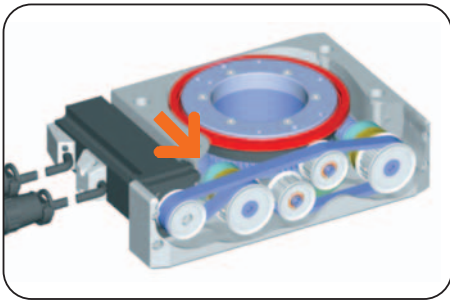
Terms

Torque:	force moment occurring on the drive edge of the swivel unit
Repeatability:	dispersion of stop positions at 100 consecutive swivel cycles
Maintenance:	<div><div>maintenance free up to 5 Mio. rotations (please see the owner's manual for conditions, download from www.sommer-automatic.com)</div><div><ul style="list-style-type: none">• long maintenance intervals keep costs down• long durability</div></div>

Model

Order no.	swivel angle	max. speed	max. torque	center through-bore
DES140NC	unlimited	50	12 Nm	ø 62 mm

electrical Swivel **Unit**



Drive

AC servo motor

In conjunction with tooth belt-gear rack-worm gear

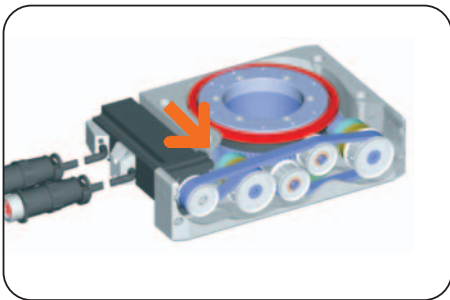
- Regulable torque up to 12 Nm
- Regulable speed up to 50 rpm.
- Programmable and positionable



Central bore

For cable feed-through

- \varnothing 62 mm
- Low torsion on feed-through supply lines



Self limitation

Mechanical via angled gear wheel-worm gear

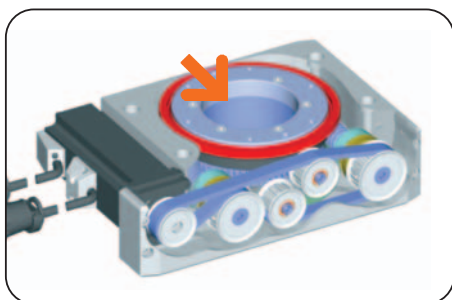
- Position maintenance under drop in voltage
- Low play due to spirals tensioned against one another



Machine connection

Energy supply, attachment and positioning-possibilities on several sides

- Optimum integration into the workroom through individual mounting-situation
- Standardised interface



Intake flange

Direct screwing onto the working flange

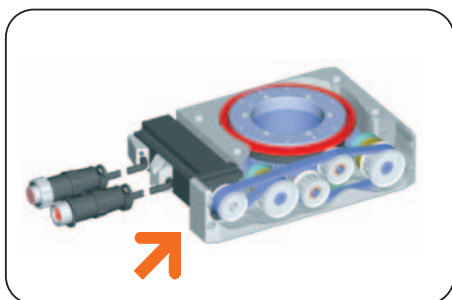
- Low design effort
- Single tool connection by pin and threaded hole



Position sensing

Indirect via absolute encoder

- Process safe due to maintenance of the reference even under drop in voltage
- Precise
- No additional interference contours



Design

Extremely flat design

- Total height of 52 mm
- Low installation space requirement

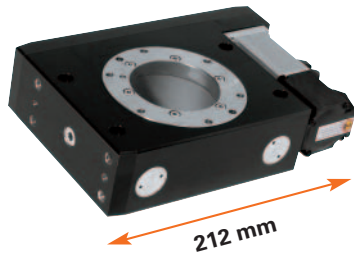


Motor and measuring system connection

Standardised

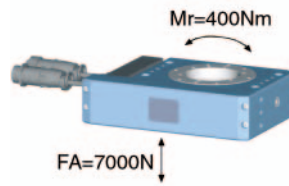
- Connection without increased wiring effort

electrical Swivel Unit



Forces and Moments

Max allowable forces and torques



Included in the delivery



Software CD
Order no. CD0002

Accessory list



Connecting cable motor-servo amplifier (10m)
Order no. ZUBKA-10M



Connecting cable encoder-servo amplifier (10m)
Order no. ZUBKA-10D



Interface cable PC-control unit (5m)
Order no. ZUBKA-05R

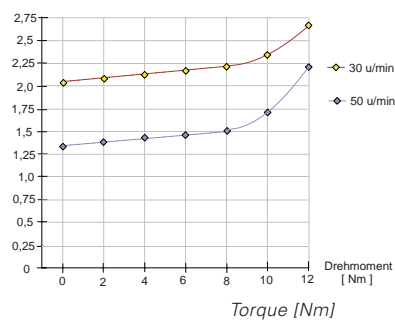


Servo amplifier
Order no. ZUBDKC-C (CANopen)
Order no. ZUBDKC-D (DeviceNet)
Order no. ZUBDKC-P (Profibus)
Order no. ZUBDKC-S (Sercos)
Order no. ZUBDKC-PAI (Parallel Interface)

Swivel time in against the Torque

for 360° included acceleration and deceleration

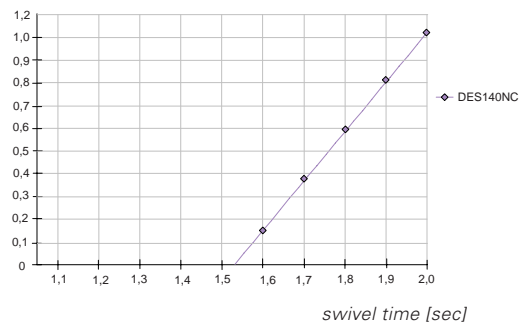
swivel time [sec]



Swivel time in against the moment of inertia

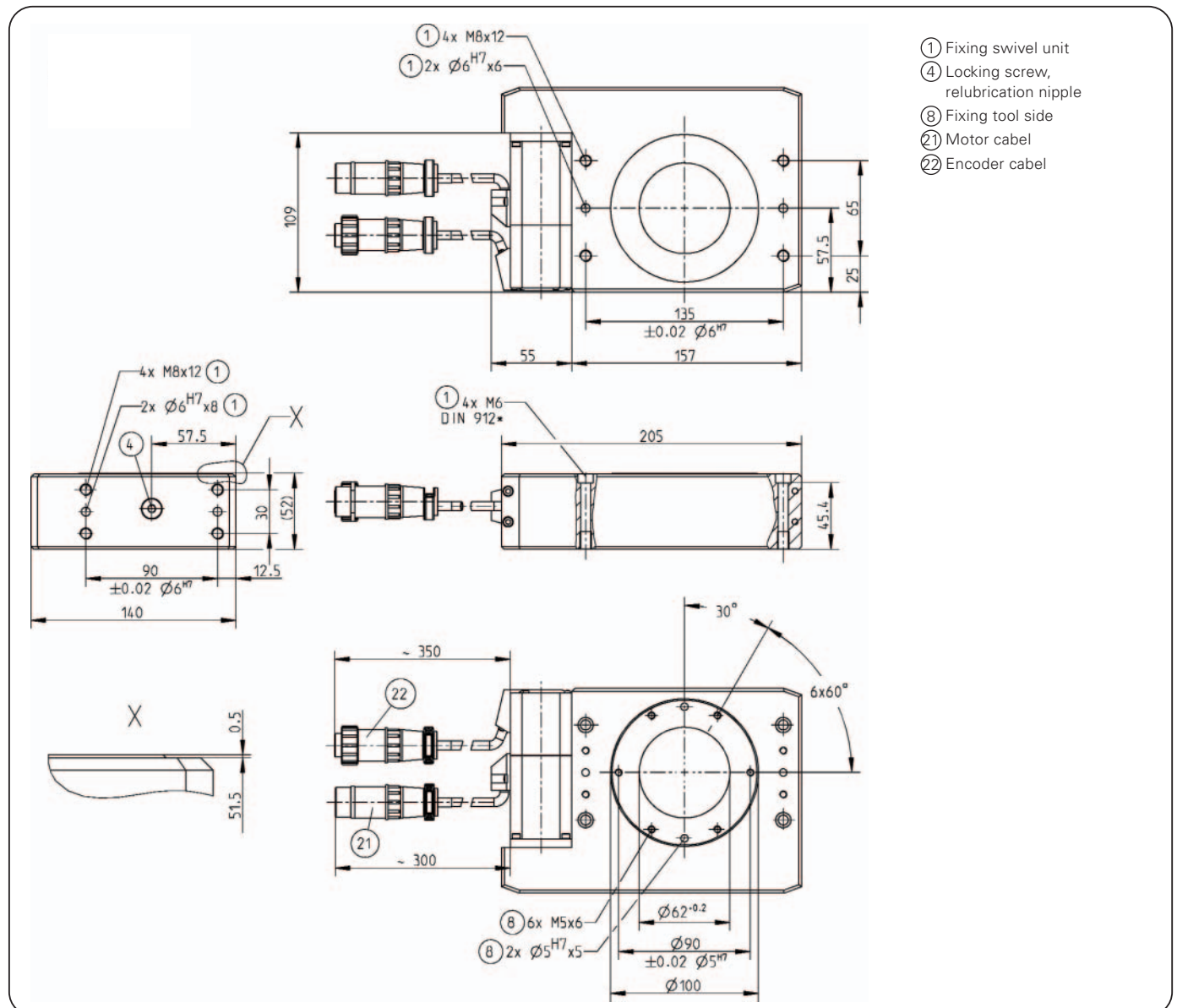
for 360° included acceleration and deceleration

Moment of inertia [kg m²]





Order no.:	DES140NC
Drive:	AC-servo motor
Rotation angle:	unlimited
Nominal torque [Nm]	9
Max. Torque [Nm]	12
Nominal speed [rpm]	30
Max. speed [rpm]	50
Self limitation:	angled gear wheel/worm gear
Force transfer:	tooth belt/worm gear
Repeatability +/- [°]:	0,1
Min./max. operating temperature [°C]:	5/80
Protection class:	IP65
Weight [kg]:	3,2
Power supply servo regulator:	
Net input voltage:	1 x 200-240VAC 50 Hz
Continuous current:	0,9 A
Surge current:	3,0 A
Transmission:	
Load transmission input rotation:	96
Load transmission output rotation:	1



Subject to change without prior notice



➤ Grippers <i>pneumatic</i>	01
➤ Grippers <i>electrical</i>	02
➤ Grippers <i>hydraulic</i>	03
➤ Grippers <i>Special</i>	04
➤ Grip & Rotate Modules <i>pneumatic</i>	05
➤ Separators	06
➤ Swivel Units <i>pneumatic</i>	07
➤ Swivel Units <i>electrical</i>	08
➤ Swivel Units <i>hydraulic</i>	09
➤ Rotation Jaws <i>pneumatic</i>	10
➤ Axial Compensation Modules	11
➤ Tool Changers	12
➤ Robotics Accessories	13
➤ Linear Cylinders	14
➤ Shock Absorber	15
➤ Air Vane Motors	16
➤ Rotary Cylinders	17
➤ Vacuum Components	18
➤ Accessorios	19