ST/SWROTATING UNITS | ST/SW TORQUE ROTATING UNIT



ST AND SW TORQUE ROTARY UNITS

CABLE CONNECTION

Compact connector for any orientation of cable connection

WEISS APPLICATION SOFTWARE

Fast, easy and secure setting through its unique user software





The ST 140 rotary unit operating in perfect harmony with the LS 280 linear assembly system. The installation at Jouhsen-bündgens Maschinenbau GmbH is used to produce medical needles at high speeds. Thanks to the new system, it has been possible to almost double the output.



The ST and SW rotary units with direct drive and absolute encoder are exactly designed to match fast, precise and highly dynamic rotating, tilting and gripping applications. Whether in orientating parts, utilization as a tilting-unit for grippers, or a replacement for standard servomotors with gearbox the ST and SW offer the optimal solution. The compact profile, low weight and various mounting-possibilities as well as the different drive shafts and mechanical configurations open a wide range of applications.

ADVANTAGES

- · User programmable
- · Speed adjustable
- · Acceleration adjustable
- · Extremely dynamic
- · Long lifetime
- · No maintenance cost
- · Hygienic linear drive/no pneumatics
- · Low energy costs
- · Compact design

- · Rigid mechanical design
- · No oil or gears
- · Various sizes and designs
- · High protection degree
- · Useable in cleanroom environment
- · Absolute encoder
- · Light weight
- · High power density
- · Optionally available with electric holding brake

ST 75

TECHNICAL DATA							
	ST 75-1	ST 75-2	ST 75-3		ST 75-1	ST 75-2	ST 75-3
Nom. torque (Nm)	0.50	1.00	1.40	Nom. current (Arms)	0.5	0.6	0.7
Peak torque (Nm)	1.40	2.80	4.20	Peak current (Arms)	1.6	1.9	2.2
Max. speed (rpm)	3500	2000	1800	Radial run out (mm)	0.02	0.02	0.02
Friction (Nm)	0.5	0.5	0.5	Axial run out at Ø 75 (mm)	0.02	0.02	0.02
Typical load (kgcm²)	30	70	90	Thermal sensor	PTC	PTC	PTC
Max. DC voltage (VDC)	800	800	800	Internal inertia (kgcm²)	1	1.1	1.2
Torque of brake (Nm)	10	10	10	Weight (kg)	1.7	2.2	2.7
Weight/inertia given for version v	with standard e	ncoder and v	without brake.				
ENCODER							
Interface	Accuracy	'		Interface	Accuracy	y	
Sick-Stegmann Hiperface	SEK52 ±28 SKS36 ±13			Heidenhain EnDat	:60" 512 cour :20" 2048 cou		
	Max. ax.	load (kg)		Max. rad. load (kg)	M	lax. tilting mo	ment (Nm
ST75-1 ST75-2 ST75-3	1 1	load (kg) 5 5 5		Max. rad. load (kg) 20 22 25	M	lax. tilting mo 20 25 35	oment (Nm
ST75-2	1 1 1	5 5		20 22	M	20 25	ement (Nm
ST75-2 ST75-3	e (static)	5 5		20 22	M	20 25	>
ST75-2 ST75-3 LOAD DATA for rotary plate	e (static) Max. stat. f	5 5 5 5		20 22 25 Wax. stat. force rad. (N)		20 25 35	
ST75-2 ST75-3 LOAD DATA for rotary plate	e (static) Max. stat. f	5 5 5 5 Force ax. (N)		20 22 25 Max. stat. force rad. (N) 500		20 25 35 Max. stat. mor	
ST75-2 ST75-3 LOAD DATA for rotary plate	e (static) Max. stat. f	5 5 5 5		20 22 25 Wax. stat. force rad. (N)		20 25 35	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3	e (static) Max. stat. f	5 5 5 5 5 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		20 22 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1	e (static) Max. stat. f	5 5 5 5 5 Force ax. (N) 000 000	ST 75-2	20 22 25 25 Max. stat. force rad. (N) 500 650 800		20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1	e (static) Max. stat. f	5 5 5 5 5 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	ST 75-2	20 22 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1	e (static) Max. stat. f	5 5 5 5 5 Force ax. (N) 000 000	ST 75-2	20 22 25 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1	e (static) Max. stat. f	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ST 75-2	20 22 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1	e (static) Max. stat. f	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ST75-2	20 22 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	
ST75-2 ST75-3 LOAD DATA for rotary plate ST75-1 ST75-2 ST75-3 TIMING DIAGRAM ST75-1 0,5 0,4 0,4 100,0	e (static) Max. stat. f	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ST 75-2	20 22 25 Max. stat. force rad. (N) 500 650 800	N.	20 25 35 Max. stat. mor 40 50	

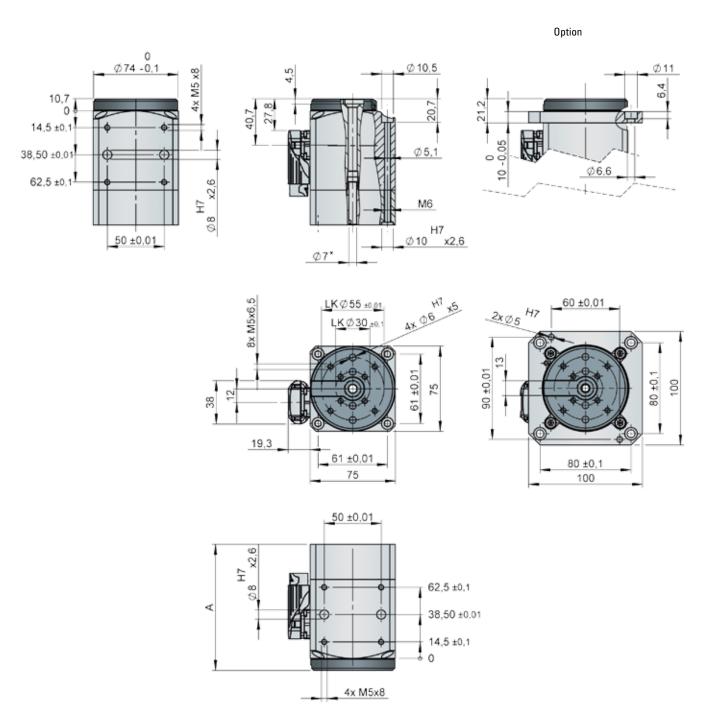
100 kgcm²
30 kgcm²

Angle of rotation [°]

150 kgcm² 70 kgcm² Angle of rotation [°]

200 kgcm² 90 kgcm² Angle of rotation [°]

DIMENSIONS



^{*} only with encoder SEK52"

	А						
	SEK52		SK	S36	ECN	1413	
		Brake		Brake		Brake	
ST0075-1	111	150	123	165	143	181	
ST0075-2	131	170	143	185	163	201	
ST0075-3	151	190	163	205	183	221	

Length depending on encoder and brake options

ST 140

TECHNICAL DATA ST140-1 ST140-2 ST140-1 ST140-2 Nom. torque (Nm) 7.70 15.00 Nom. current (Arms) 1.9 3.5 Peak torque (Nm) 18.00 36.00 Peak current (Arms) 5.6 10.5 Max. speed (rpm) 1400 1200 0.02 0.02 Radial run out (mm) Friction (Nm) 3 3 Axial run out at Ø 140 (mm) 0.02 0.02 PTC Typical load (kgcm²) 180 360 Thermal sensor PTC Max. DC voltage (VDC) 800 800 Internal inertia (kgcm²) 52 58 Torque of brake (Nm) Weight (kg) 6.9 8.6 40 40 Weight/inertia given for version with standard encoder and without brake. **ENCODER** Interface Accuracy Interface Accuracy ECN113 ±25" Sick-Stegmann Hiperface SEK90 ±120" Heidenhain EnDat ECN225 ±15 LOAD DATA (dynamic) m m Max. rad. load (kg) Max. ax. load (kg) Max. tilting moment (Nm) ST 140-1 30 40 ST 140-2 30 50 90 LOAD DATA (static) Max. stat. moment (Nm) Max. stat. force ax. (N) Max. stat. force rad. (N) ST 140-1 800 800 130 ST 140-2 800 1000 130 **TIMING DIAGRAM** ST 140-1 ST 140-2 0,3 0,3 movement time [sec] movement time [sec] 0,2 0,2 0,1 0,1

0

30

400 kgcm²

180 kgcm²

60

90

120

150

Angle of rotation [°]

180

30

800 kgcm²

360 kgcm²

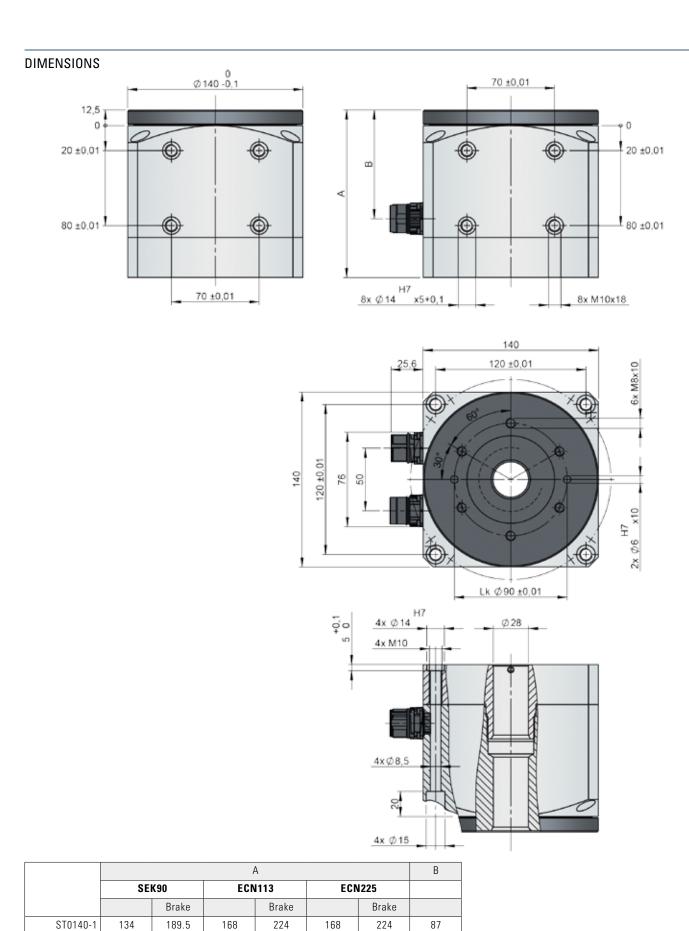
90

120

150

Angle of rotation [°]

180



Length depending on encoder and brake options

161.5

217

ST0140-2

195.5

251.5

195.5

251.5

114.5

SW 140

TECHNICAL DATA				
	SW140			
Nom. torque (Nm)	15.00			
Peak torque (Nm)	36.00			
Max. speed (rpm)	1200			
Friction (Nm)	3			
Typical load (kgcm²)	360			
Max. DC Voltage (VDC)	800			
Torque of brake (Nm)	40			

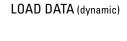
	SW140	
Nom. current (Arms)	3.5	
Peak current (Arms)	10.5	
Radial run out (mm)	0.02	
Axial run out at Ø140 (mm)	0.02	
Thermal sensor	PTC	
Internal inertia (kgcm²)	55	
Weight (kg)	8.2	

Weight/inertia given for version with standard encoder and without brake.

ENCODER

Interface	Accuracy		
Sick-Stegmann Hiperface	SEK90 ±120"		

Interface	Accuracy		
Heidenhain EnDat	ECN113 ±25"		
	FCN225 +15"		





Max. ax. load (kg)



Max. rad. load (kg) 50



Max. tilting moment (Nm)

LOAD DATA (static)

SW 140



Max. stat. force ax. (N)



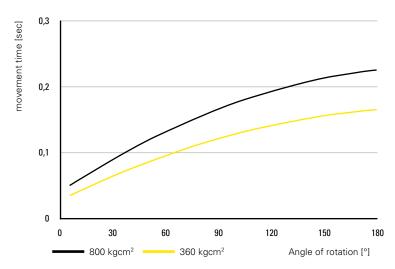
Max. stat. force rad. (N) 1000



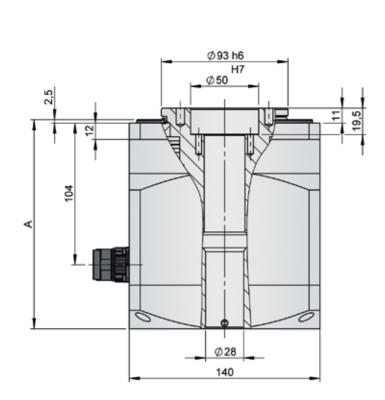
Max. stat. moment (Nm) 180

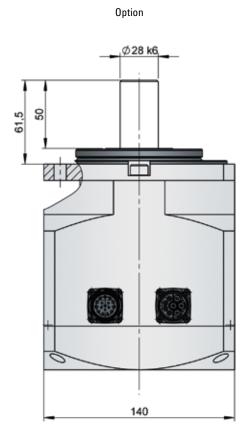
TIMING DIAGRAM

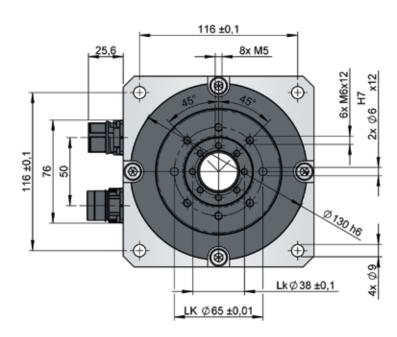
SW 140



DIMENSIONS







	А						
	SE	K90	ECN113		ECN225		
	Brake			Brake		Brake	
SW 0140	153.5	209	187.5	243.5	187.5	243.5	

Length depending on encoder and brake options