

# Series 5E

Electromechanical axis

Size 50, 65, 80



**Series 5E** axes are mechanical linear actuators in which the rotary movement generated by a motor is converted into a linear movement by means of a toothed belt. The **Series 5E**, available in 3 sizes, 50, 65 and 80, is realized by means of a special self-supporting square profile, in which the components have been completely integrated, assuring compactness and light weight. The presence of a recirculating ball guide grants high stiffness and resistance to external loads. To protect the internal elements from potential contaminants from the external environment, the profile has been closed with a stainless steel plate. The axis is equipped with a magnet that makes it possible to use external proximity switches (Series CSH), allowing operations

like homing or extra-stroke readings to be performed. Moreover, these actuators also have accessories in order to be used with inductive sensors. The **Series 5E** is equipped with specific interface kits making it possible to connect the motor on 4 sides. The use with high dynamics and the possibility to realize multi-axis systems, make the **Series 5E** particularly suitable for the packaging and assembly sectors.

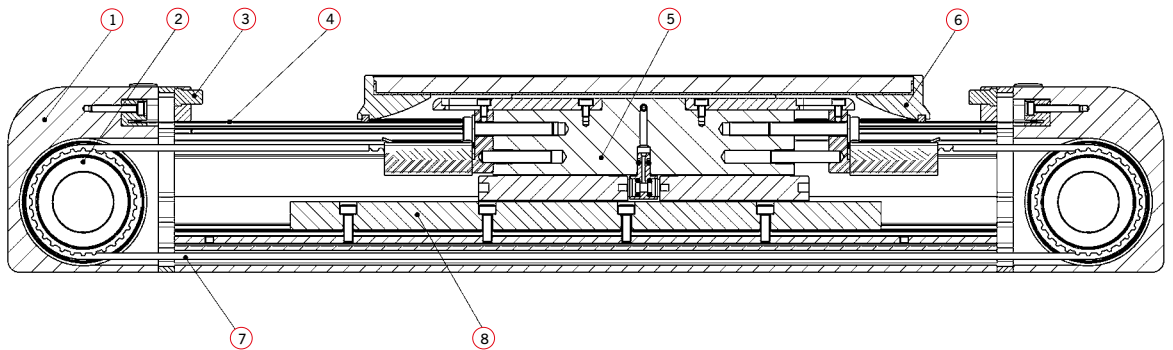
- > MULTIPOSITION SYSTEM WITH TRANSMISSION OF THE MOVEMENT WITH TOOTHED BELT
- > SUITABLE FOR HIGH DYNAMICS
- > POSSIBILITY TO CONNECT THE MOTOR ON 4 SIDES
- > LARGE RANGE OF MOTOR INTERFACES
- > POSSIBILITY TO USE MAGNETIC PROXIMITY SWITCHES AND/OR INDUCTIVE SENSORS
- > IP 40
- > MAX STROKE 6 METERS
- > PLATES TO REALIZE MULTI-AXIS SYSTEMS
- > ACCESSORIES FOR CABLES FIXING
- > PRESENCE OF INTERNAL CHANNELS FOR RELUBRICATION
- > LARGE RANGE OF AXIS MOUNTING ACCESSORIES



DETAIL OF THE HEAD OF THE AXIS

General data

Construction	electromechanical axis with toothed belt
Design	open profile with protection plate
Function	multi-position linear actuator
Sizes	50, 65, 80
Strokes	from 0 to 4000 mm for size 50, from 0 to 6000 mm for size 65 and 80
Guide type	internal, with recirculating balls
Fixing	by means of slots on the profile and special clamps
Motor mounting	on all 4 sides
Operating temperature	from -10°C to +50°C
Storage temperature	from -20°C to +80°C
Protection class	IP40
Lubrication	centralized lubrication by means of internal channels
Repeatability	+/-0.05 mm
Duty cycle	100%
Use with external sensors	Series CSH magnetic switches in special slots or inductives by means of supports



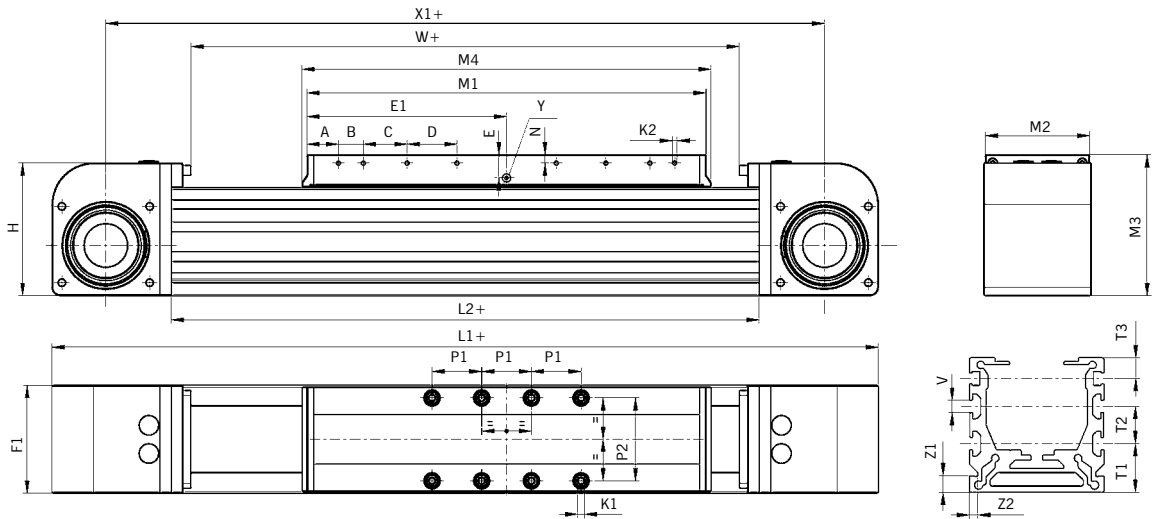
Materials

COMPONENT	MATERIAL
1 End cap	Aluminum
2 Pulley	Steel
3 End cap bumper	Polyurethane
4 Protection plate	Stainless Steel
5 Carriage	Aluminum
6 Bumper	POM
7 Toothed belt	Polyurethane + Steel
8 Recirculating ball guide	Steel

Coding example

5E	S	050	TBL	0200
<b>5E</b>	SERIES			
<b>S</b>	PROFILE: S = squared			
<b>050</b>	FRAME SIZE: 050 = 50x50 mm 065 = 65x65 mm 080 = 80x80 mm			
<b>TBL</b>	VERSION: TBL = Toothed belt			
<b>0200</b>	STROKE: 0 ÷ 4000 mm (for frame size 50x50 mm) 0 ÷ 6000 mm (for frame sizes 65x65 and 80x80 mm)			

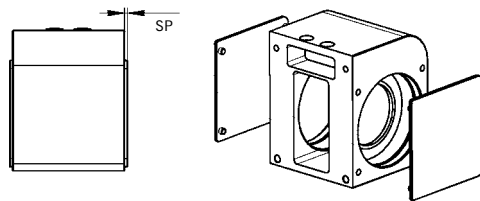
Dimensions



\* In size 50 there is only one slot  
 \*\* Centralized lubrication (grease)

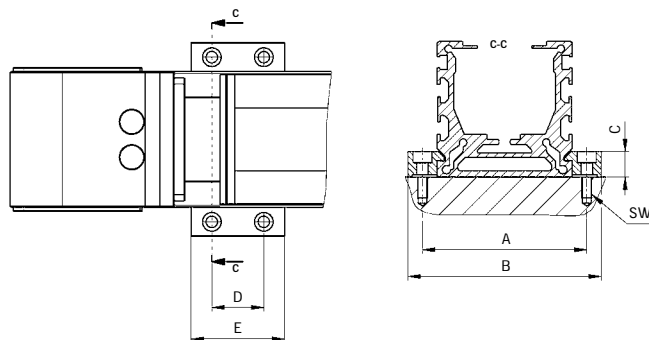
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5ES050...	50	19	15	20	28	5	M3	14	110	220	49.5	70	226	28	36.5	M4	260	398	284	65	50	54	348	20	*	10	6	8	4	**
5ES065...	65	19	15	26.5	30	5	M3	14	120.5	241	63	85	247	30	50	M4	331	499	355	80	65	69	434	23.5	18	10	6	8	4	**
5ES080...	80	25	20	35	30	6	M3	22	190	380	79	110	388	40	58	M6	421	621	445	100	80	84	541	25	25	10	8	8	4	**

End cap covers



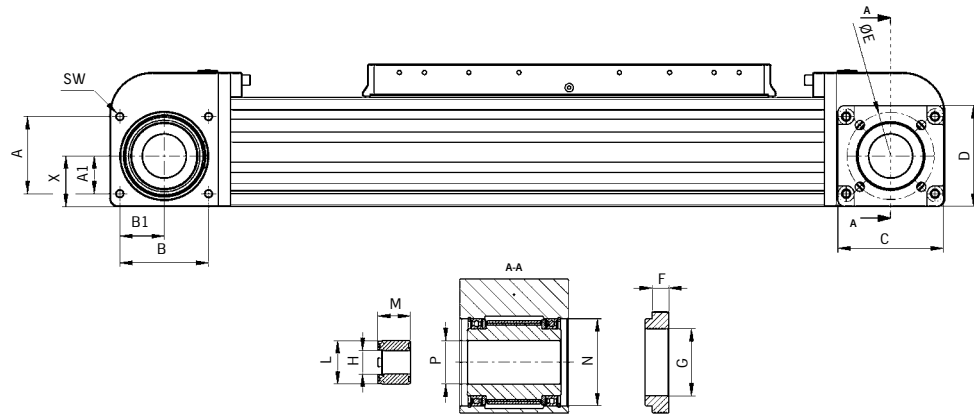
MOD.	∅	SP
5ES050...	50	2
5ES065...	65	2
5ES080...	80	2

Bracket



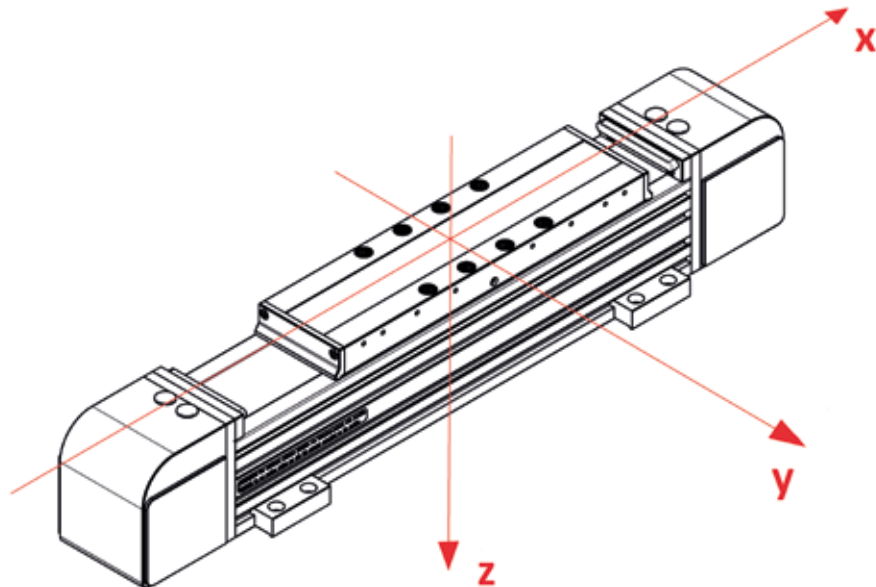
MOD.	∅	A	B	C	D	E	SW
5ES050...	50	64	78	12.3	25	45	M5
5ES065...	65	79	93	12.3	25	45	M5
5ES080...	80	98	112	12.3	25	45	M6

Motor interface



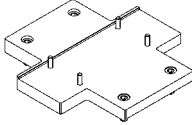
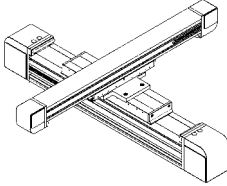
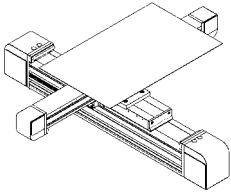
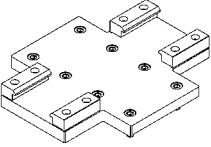
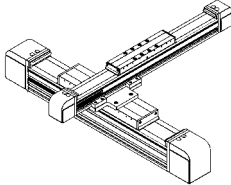
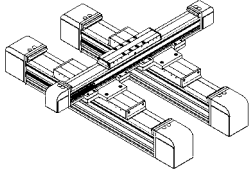
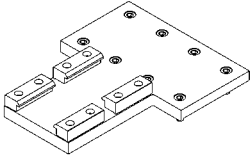
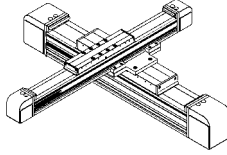
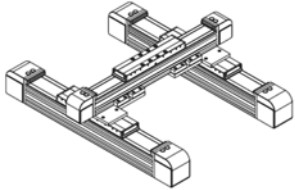
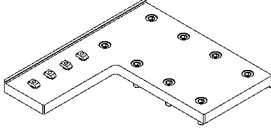
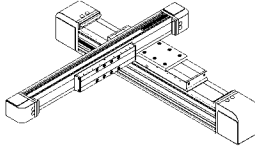
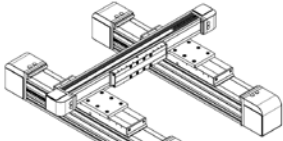
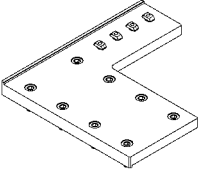
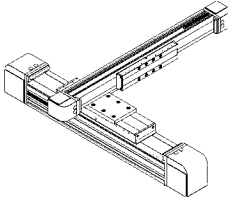
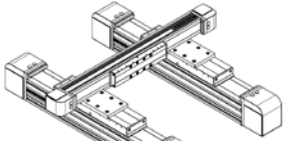
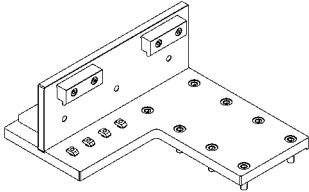
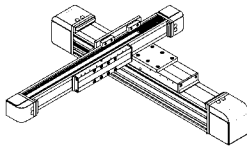
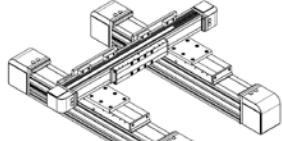
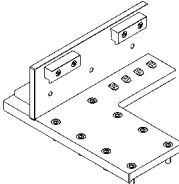
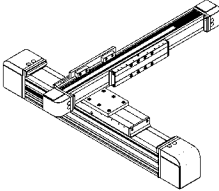
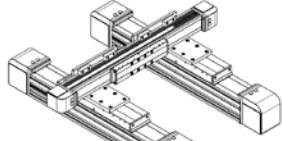
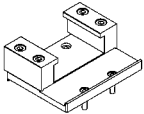
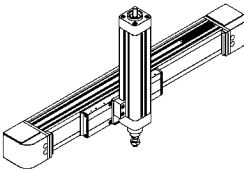
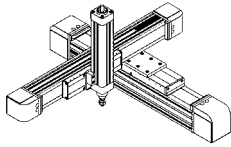
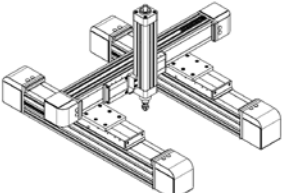
MOD.	∅	A	A1	B	B1	SW	X	N (+0,06/+0,01)	P H 8	C	D	∅E	F	G H7	H	L	M
										INTERFACE FLANGE (optional)				LOCKING SET (optional)			
5ES050...	50	32	15	37	18.5	M4	21.8	37	20	48	43	34	8	26	10	20	15.5
5ES065...	65	46	22.5	53	26.5	M5	30.3	52	26	63	60	52	10	40	14	26	20
5ES080...	80	6.5	30	68	34	M5	40.5	68	38	80	80	70	10	60	20	38	26

Technical data

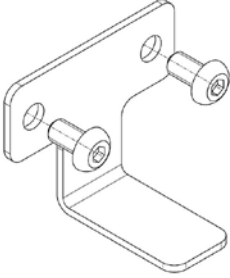
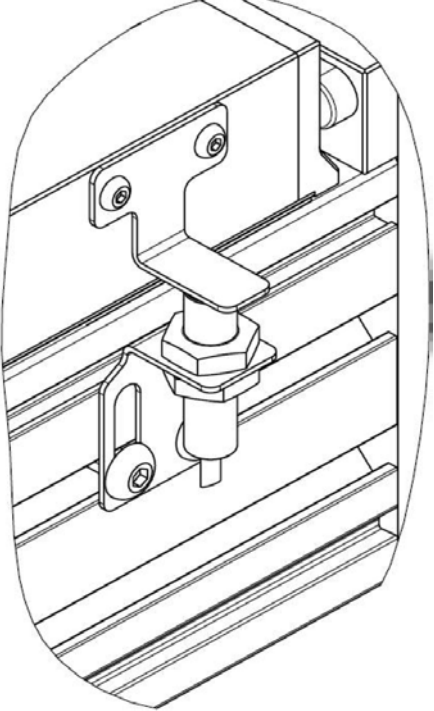


MOD.	∅	BELT TYPE	Dp PULLEY [mm]	Z [n°]	Fx [N]	Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	STROKE FOR EACH PULLEY ROUND [mm/round]	MAX SPEED [m/s]	MAX ACCELERATION [m/s <sup>2</sup> ]
5ES050...	50	20 AT5	31.83	20	1110	3180	18.7	37.75			100	5	50
5ES065...	65	32 AT5	47.75	30	1785	8520	80	224.5			150	5	50
5ES080...	80	32 AT10	63.66	20	4060	13380	180.5	437.5			200	5	50

## Configurations

	KIT	MOUNTING	APPLICATION
PLATE XY - CARRIAGE ON CARRIAGE			
PLATE XY - PROFILE ON CARRIAGE			
PLATE XY - PROFILE ON CARRIAGE LONG ARM			
PLATE XY - PROFILE ON CARRIAGE LEFT POSITION			
PLATE XY - PROFILE ON CARRIAGE RIGHT POSITION			
PLATE XY - PROFILE ON CARRIAGE LEFT POSITION HEAVY APPLICAZION			
PLATE XY - PROFILE ON CARRIAGE RIGHT POSITION HEAVY APPLICAZION			
PLATE XY - CYLINDER SERIES 6E ON CARRIAGE			
			

*Inductive sensors*

	KIT	MOUNTING
SENSOR DOG		
SENSOR FIXING	