

Series 5E electromechanical axis

New models

Sizes 50, 65, 80



- » 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
- » Presence of internal channels for re-lubrication
- » Large range of axis mounting accessories

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.

- Versions available:
- » Standard slider
 - » Long slider
 - » Double slider

GENERAL DATA

Construction	electromechanical axis with toothed belt
Design	open profile with protection plate
Operation	multi-position actuator
Sizes	50, 65, 80
Strokes	50 + 4000 mm for size 50; 50 + 6000 mm for sizes 65 and 80
Type of guide	internal, with recirculating balls (cage type)
Fixing	by means of slots on the profile and special clamps
Mounting motor	on all 4 sides
Operating temperature	-10°C + +50°C
Storage temperature	-20°C + +80°C
Protection class	IP 40
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

CODING EXAMPLE

5E	S	050	TBL	0200	A	S	2(500)
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5E	SERIES
S	PROFILE: S = square section
050	FRAME SIZE: 050 = 50x50 mm 065 = 65x65 mm 080 = 80x80 mm
TBL	TRANSMISSION: TBL = toothed belt
0200	STROKE [C]: 0050 ÷ 4000 mm for size 050 0050 ÷ 6000 mm for sizes 065 and 080
A	VERSION: A = standard
S	TYPE OF SLIDER: S = standard L = long
2(500)	NUMBER OF SLIDERS: 1 = 1 slider 2(____) = 2 sliders at (____) mm step [only for sliders type "S"]

MECHANICAL CHARACTERISTICS

(A) Value refers to a covered distance of 2000 Km with fully supported system.

(B) The "suggested" speed is not the mechanical limit of the unit but represents the best compromise between high load applied and high dynamics.

(C) In case of particular requirements, please contact our technical assistance (service@camozzi.com).

(C) Value refers to 1500 rpm.

	Measuring unit	Size 50	Size 50	Size 65	Size 65	Size 80	Size 80
RECIRCULATING BALL GUIDE (CAGE TYPE)							
Type of slider		S	L	S	L	S	L
Number of RDS blocks	pcs	2	3	2	3	2	3
Dynamic load of RDS blocks (C)	N	11640	17460	28400	42600	44600	66900
Max admissible load ($C_{max z}$) ($C_{max y}$)	N	3100(A)	5100(A)	8300(A)	12450(A)	13100(A)	19600(A)
Max admissible moment ($M_{max x}$)	Nm	22.44	31.23	96.00	144.00	216.60	324.9
Max admissible moment ($M_{max y}$) ($M_{max z}$)	Nm	45.30	96.76	269.40	612.64	525.00	1193.17
Max linear speed of mechanics (V_{max})	m/s	5	2.5(B)	5	2.5(B)	5	2.5(B)
Max linear acceleration of mechanics (a_{max})	m/s ²	50	20(B)	50	20(B)	50	20(B)
PROFILE							
Mass in movement	kg	0.45	0.62	1.10	1.51	2.30	3.11
Mass in movement per stroke meter	kg/m	0.13	0.13	0.21	0.21	0.41	0.41
Moment of surface inertia I_y	mm ⁴	$1.89 \cdot 10^5$	$1.89 \cdot 10^5$	$4.94 \cdot 10^5$	$4.94 \cdot 10^5$	$1.23 \cdot 10^6$	$1.23 \cdot 10^6$
Moment of surface inertia I_z	mm ⁴	$2.48 \cdot 10^5$	$2.48 \cdot 10^5$	$6.97 \cdot 10^5$	$6.97 \cdot 10^5$	$1.68 \cdot 10^6$	$1.68 \cdot 10^6$
TOOTHED BELT							
Type		20 AT 5 HP	20 AT 5 HP	32 AT 5 HP	32 AT 5 HP	32 AT 10 HP	32 AT 10 HP
Pitch	mm	5	5	5	5	10	10
Max tensile strength	N	1795	1795	2890	2890	6570	6570
Safe tensile strength	N	1110	1110	1786	1786	4061	4061
Max load at break	N	7180	7180	11570	11570	26295	26295
Max transmittable load ^(C) ($C_{max x}$)	N	480(C)	480(C)	1150(C)	1150(C)	1400(C)	1400(C)
PULLEY							
Primitive pulley diameter	mm	31.83	31.83	47.75	47.75	63.66	63.66
Number of teeth	z	20	20	30	30	20	20
Linear movement per pulley round	mm/round	100	100	150	150	200	200

NOTE: check the nominal admissible torque of the used motion transmission devices.

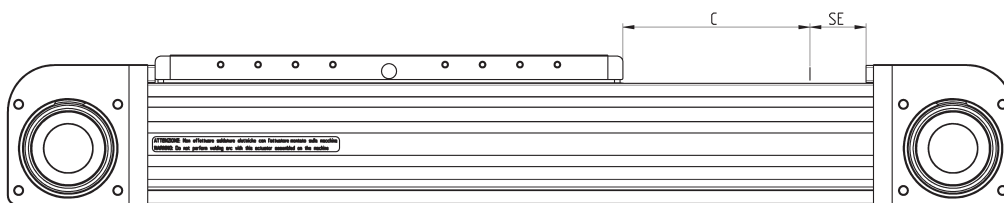
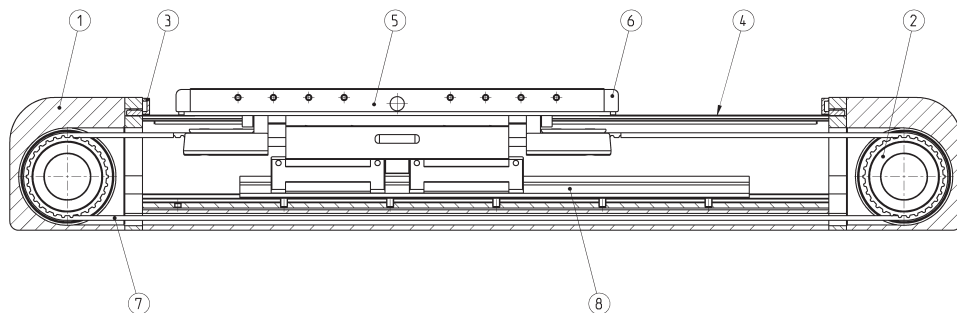
SERIES 5E STROKE
LEGEND:

C = Stroke

 SE = Standard extra-stroke [5ES050.. = 30mm]
 [5ES065.. = 30mm]
 [5ES080.. = 30mm]

NOTES:

- Should an additional extra-stroke be required, it must be foreseen by the client.
- The slider should never work in stop on the header.


SERIES 5E MATERIALS


COMPONENTS	MATERIALS
1. End cap	Aluminium
2. Pulley	Steel
3. End cap bumper	Technopolymer
4. Protection plate	Steel
5. Slider	Aluminium
6. Bumper	Technopolymer
7. Toothed belt	PU + Steel
8. Recirculating ball guide	Steel

How to calculate the life of the axis 5E

1

MOVEMENT

The correct dimensioning of the axis 5E, used individually or in a cartesian system with several axes, you need to consider some facts, both static and dynamic. Among these, the most important are described on the following pages.

CALCULATION OF LIFE [km]

$$L_{eq} = \left(\frac{C_{ma}}{C_{eq} \cdot f_w} \right)^3 \cdot 2000$$

L_{eq} = Life of the axis 5E [km]

C_{ma} = Maximum admissible load [N]

C_{eq} = Equivalent load [N]

f_w = safety coefficient according to the working conditions

CALCULATION OF EQUIVALENT LOAD

$$C_{eq} = |F_y| + |F_z| + C_{ma} \cdot \left| \frac{M_x}{M_{x,ma}} \right| + C_{ma} \cdot \left| \frac{M_y}{M_{y,ma}} \right| + C_{ma} \cdot \left| \frac{M_z}{M_{z,ma}} \right|$$

When compression/traction and side loads as well as bending or torque moments act on the system, you need to calculate the equivalent load acting on the system.

C_{eq} = Equivalent load [N]

F_y = Force acting along the Y-axis [N]

F_z = Force acting along the Z-axis [N]

C_{ma} = Max admissible load [N]

M_x = Moment along X-axis [Nm]

M_y = Moment along Y-axis [Nm]

M_z = Moment along Z-axis [Nm]

$M_{(x, ma)}$ = Max admissible moment along X-axis [Nm]

$M_{(y, ma)}$ = Max admissible moment along Y-axis [Nm]

$M_{(z, ma)}$ = Max admissible moment along Z-axis [Nm]

How to calculate the max deflection and verification of distance between supports

The electromechanical axis 5E is a self-supporting system and can also be used between 2 or more supports without the need of a continuous contact surface.

The maximum value of the deflection generated by the deformation of the system must never exceed the following calculation:

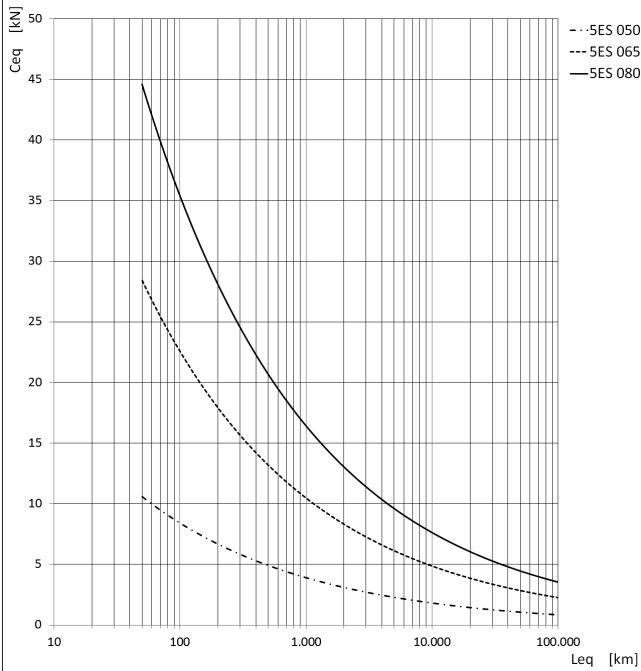
f_{max} = Maximum admissible deflection [mm]

c_{max} = Maximum stroke of axis 5E [mm]

$$f_{max} = c_{max} \cdot 5 \cdot 10^{-4}$$

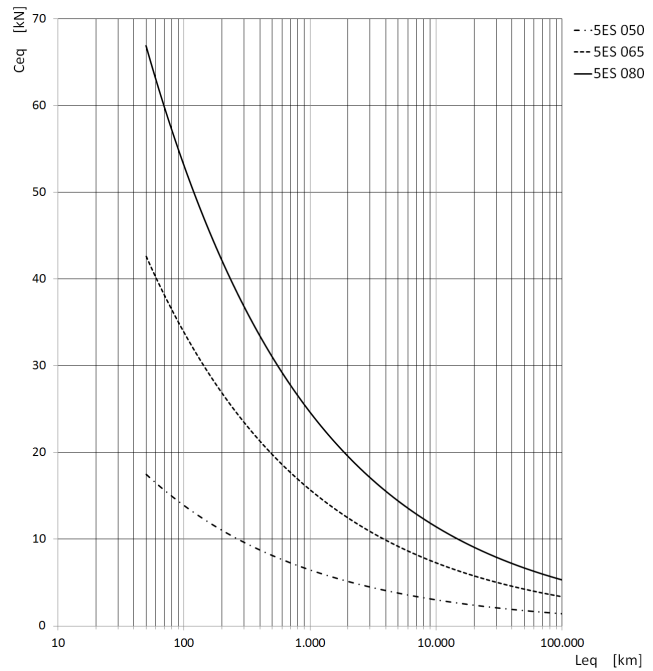
NOTE: for a quicker choice, please see the graphs on the following pages.

APPLICATION	ACCELERATION [m/s ²]	SPEED [m/s]	DUTY CYCLE	f_w
light	< 10	< 1.5	< 35%	1 + 1.25
normal	10 + 25	1.5 + 2.5	35% + 65%	1.25 + 1.5
heavy	> 25	> 2.5	> 65%	1.5 + 3

LIFE OF THE SERIES 5E AXIS ACCORDING TO THE EQUIVALENT LOAD


TYPE OF SLIDER: S

Curves calculated with $f_w = 1$ (see page 1/11.15.04)
 C_{eq} = Equivalent load applied on the axis 5E [kN]
 Leq = Life of the axis 5E [km]



TYPE OF SLIDER: L

Curves calculated with $f_w = 1$ (see page 1/11.15.04)
 C_{eq} = Equivalent load applied on the axis 5E [kN]
 Leq = Life of the axis 5E [km]

EQUIVALENT LOAD

To determine the moment acting on the axis x, M_x , in an accurate way, refer to the following formula:

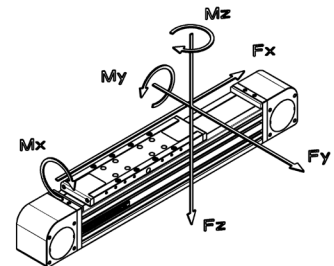
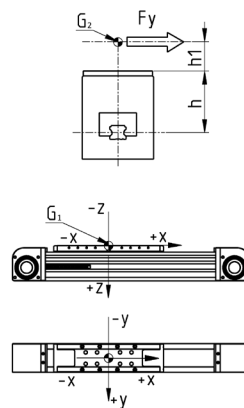
$$M_x = F_y \cdot (h + h_1)$$

where:

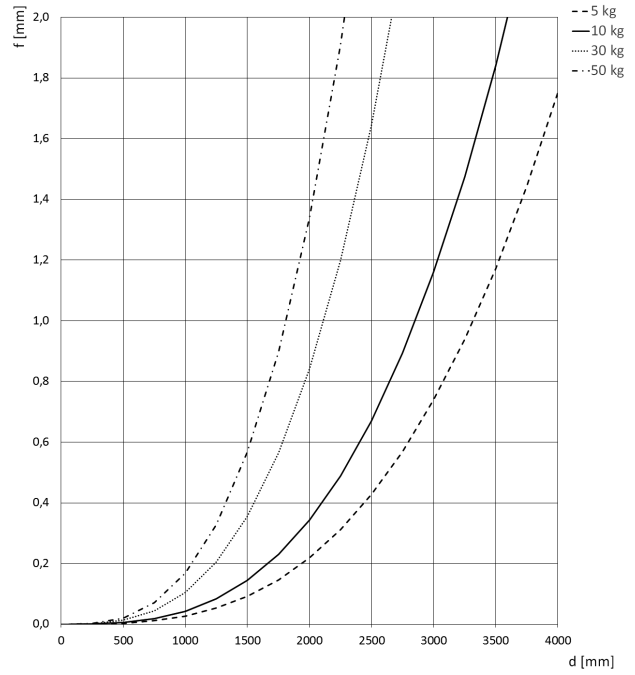
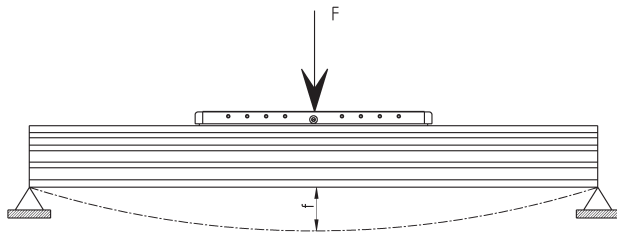
- M_x = Moment along X-axis [Nm]
- F_y = Force acting along the Y-axis [N]
- h = fixed distance for axis 5E [mm]
- h_1 = application arm [mm]
- G_1 = origin of the system of 5E axis coordinates
- G_2 = barycentre of application of acting forces

NOTE: here below, the "h" values are reported for the three sizes.

- $h = 45.5$ mm (5E050)
- $h = 56$ mm (5E065)
- $h = 69.5$ mm (5E080)

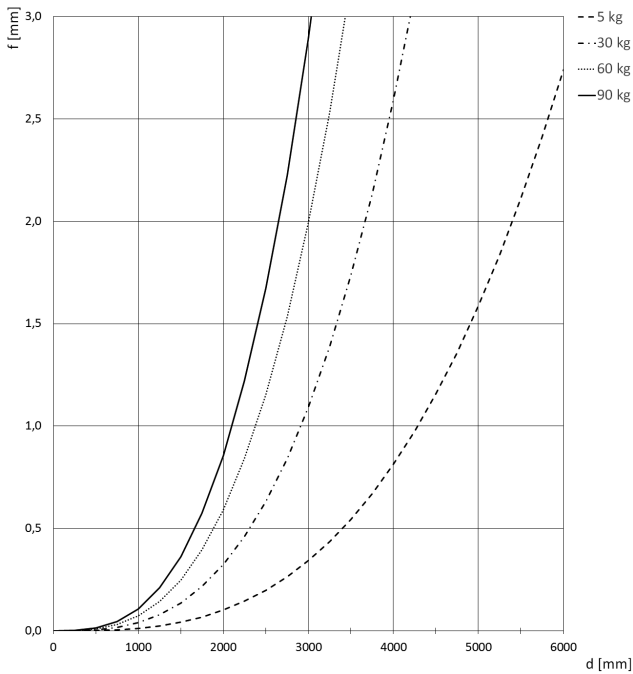


DEFLECTION ACCORDING TO THE DISTANCE OF THE SUPPORTS



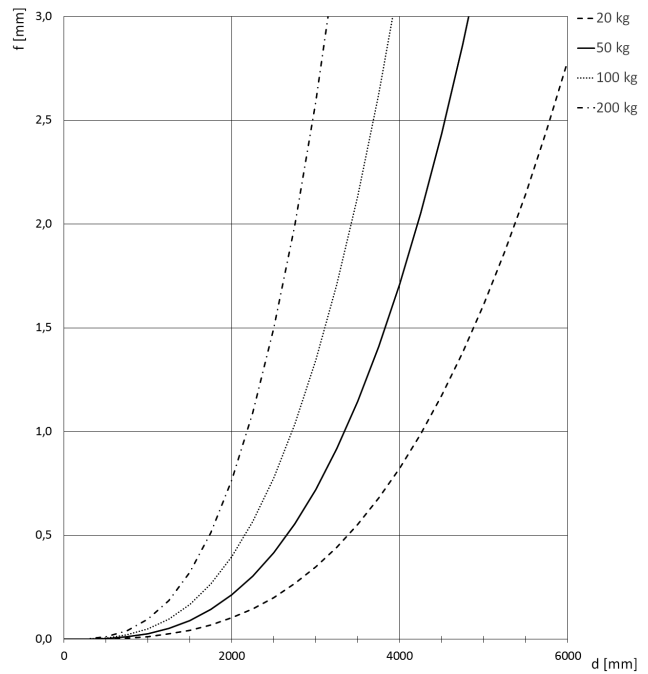
Size 50 x 50

f = deflection generated between the supports [mm]
 d = distance between the supports [mm]



Size 65 x 65

f = deflection generated between the supports [mm]
 d = distance between the supports [mm]

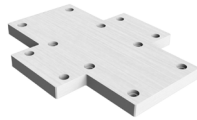


Size 80 x 80

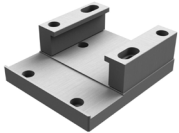
f = deflection generated between the supports [mm]
 d = distance between the supports [mm]

ACCESSORIES FOR SERIES 5E

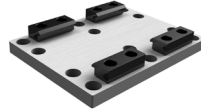
 Side clamping bracket
Mod. BGS

 Perforated side clamping
bracket Mod. BGA

 Interface plate - slider on
slider

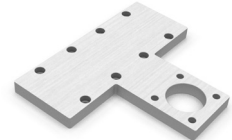
 Interface plate - profile
on slider

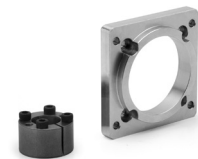
 Interface plate - profile on
slider - long arm

 Interface plate - Series
6E cylinder on slider

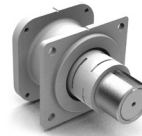
 Interface plate - profile
side on slider, left pos.

 Interf. plate - profile side
on slider, right pos.


Fixed interface plate

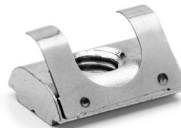

 Interface plate -
Guide S. 45 / Cyl. S. 6E

 Kit to fix the inductive
sensor

 Kit to connect the
gearbox

 Kit to connect the
gearbox, enhanced series

 Direct connection kit for
Stepper motor

 Slot nut
for sensor CSH

 Slot nut 6 -
rectangular type

 Slot nut 6
for front insertion

 Slot nut 8
with flexible flap

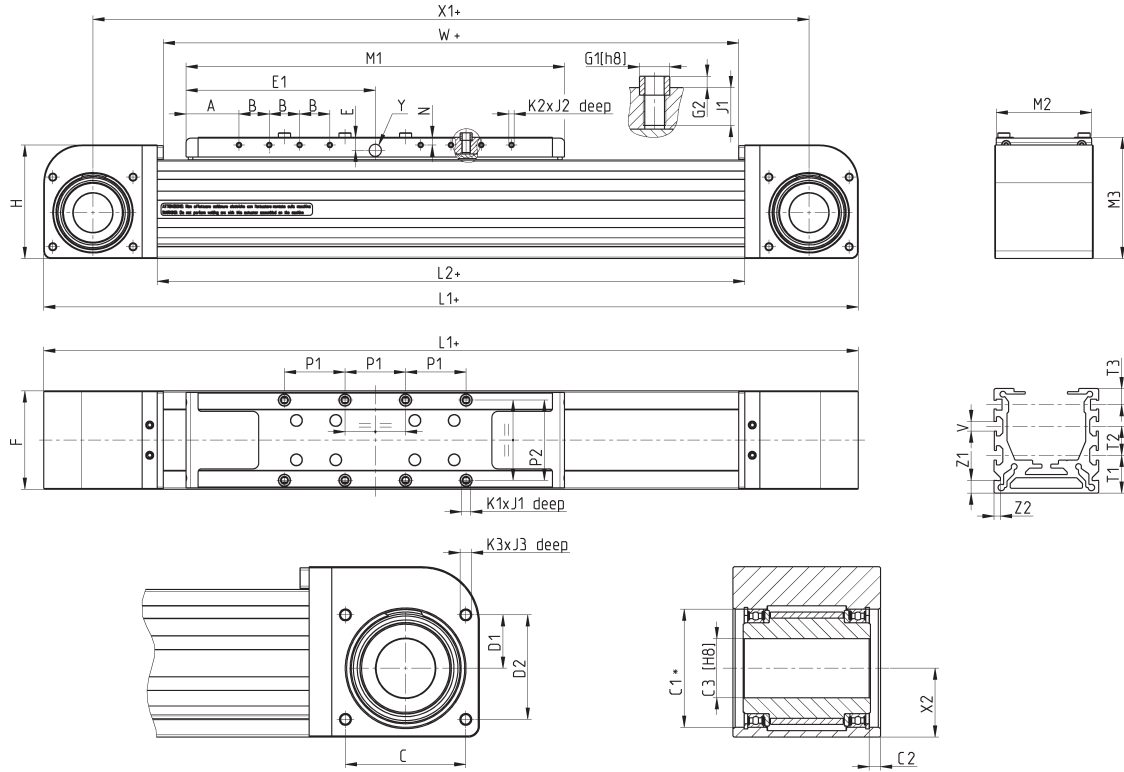

Parallel connection kit



All accessories are supplied separately from the axis.
Together with the axis, a kit is supplied containing:

- covers to close the holes on the endcap
- centering bushings for the slider
- nipples for greasing

Electromechanical axis Mod. 5E...AS1



NOTE:
 * We recommend a coupling with a shaft of tolerance h8.
 ■ Dimension T2 in size 50 is not indicated because there is only one slot.
 • Dimension Y indicates the hole for centralized lubrication by means of grease.

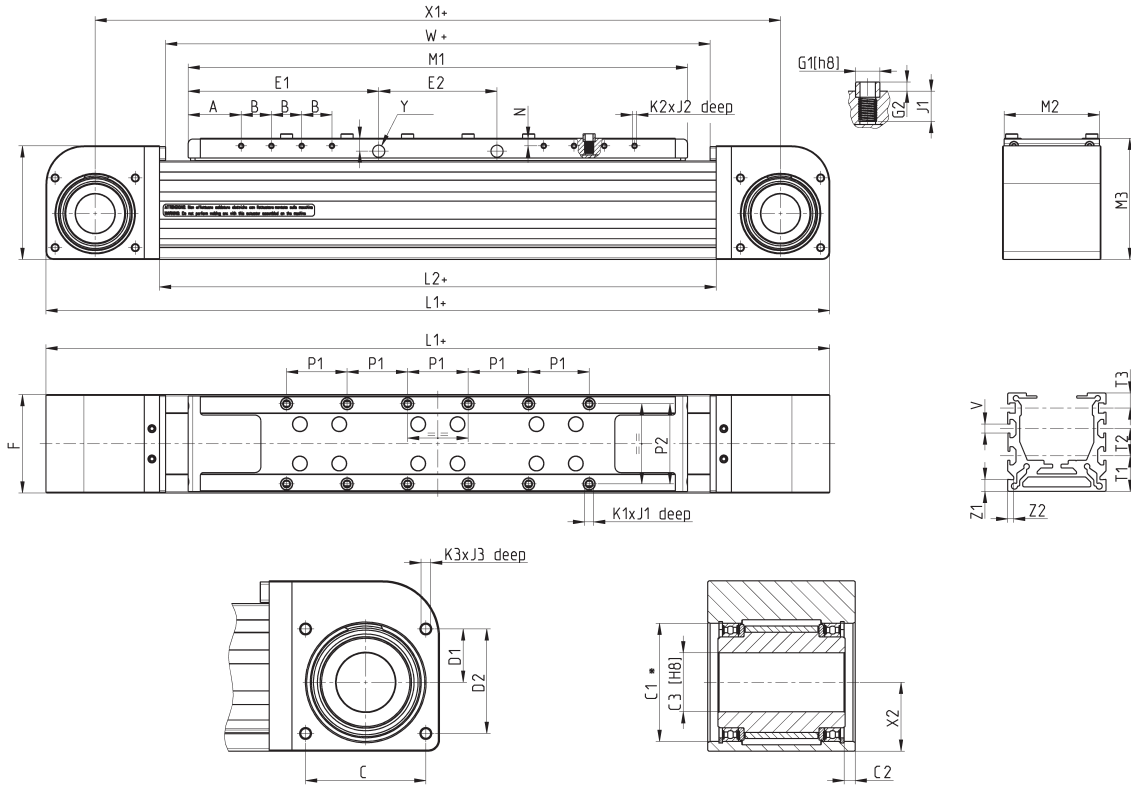
Size	A	B	C	øC1	C2	øC3	D1	D2	E	E1	F	øG1	G2	H	L1	L2	M1	M2	M3	N	P1	P2	K1	J1	K2	J2	K3	J3	T1	T2	T3	V	Y	X1	X2	W	Z1	Z2
50	32.5	15	37	37	4.5	20	17	32	8.5	100	50	6	2	60	354	238	200	48	65	5	30	40	M4	7	M3	5	M4	8	20	■	10	6	•	304	21.8	230	8	4
65	35	20	53	52	5	26	23.5	46	8.5	125	65	8	3	75	438	288	250	63	80	5	40	53	M5	8	M3	6	M5	10	23.5	18	10	6	•	373	30.5	280	8	4
80	35	30	68	68	6.5	38	30.5	60.5	11.5	165	80	10	3	95	548	368	330	78	100	8	55	64	M6	12	M4	8.5	M5	10	25	25	10	8	•	468	40.5	360	8	4

Size	WEIGHT STROKE ZERO [kg]	STROKE WEIGHT PER METER [kg/m]
50	2.15	3.35
65	4.6	5.4
80	8.9	5.9

Electromechanical axis Mod. 5E...AL1

1

MOVEMENT



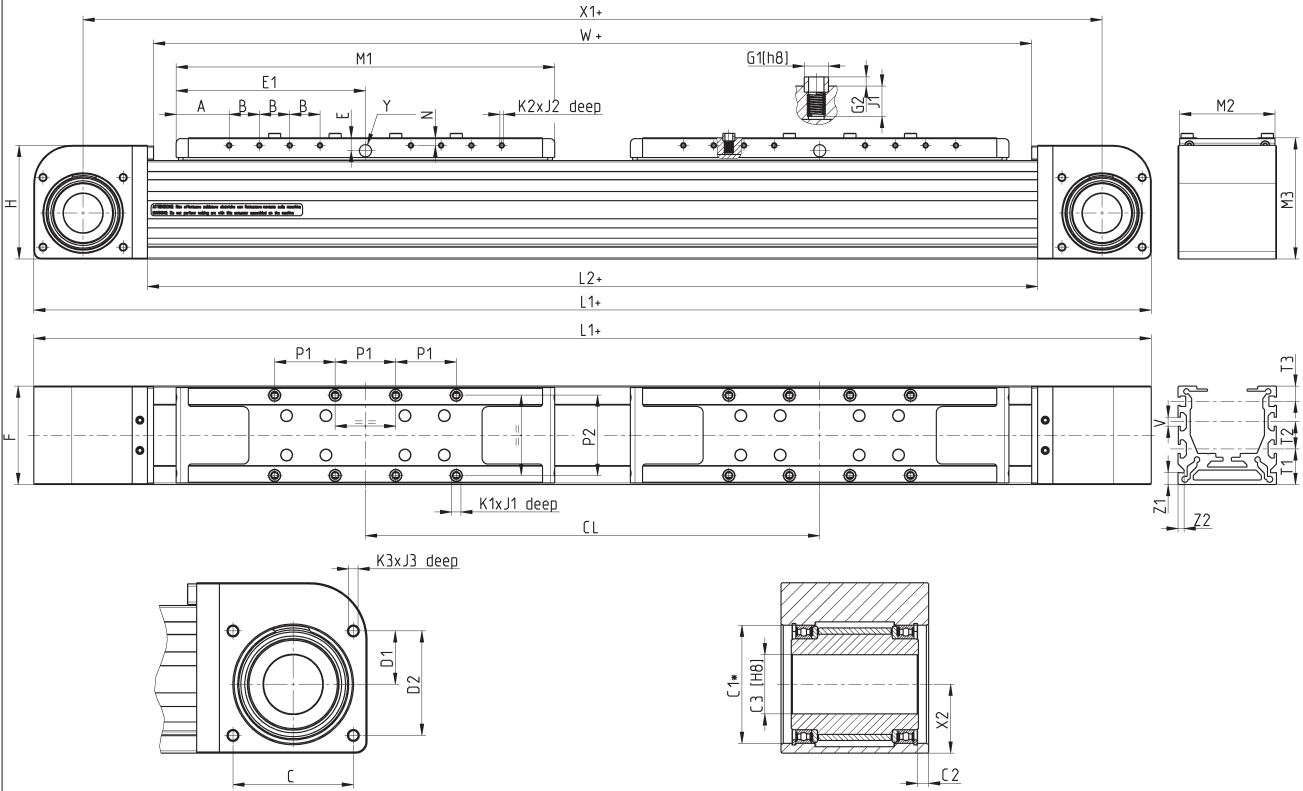
NOTE:

- * We recommend a coupling with a shaft of tolerance h8.
- Dimension T2 in size 50 is not indicated because there is only one slot.
- Dimension Y indicates the hole for centralized lubrication by means of grease.

Size	A	B	C	oC1	C2	oC3	D1	D2	E	E1	E2	F	oG1	G2	H	L1	L2	M1	M2	M3	N	P1	P2	K1	J1	K2	J2	K3	J3	T1	T2	T3	V	X1	X2	W	Z1	Z2	
50	32.5	15	37	37	4.5	20	17	32	8.5	101.5	62	50	6	2	60	419	303	265	48	65	5	30	40	M4	7	M3	5	M4	8	20.0	■	10	6	•	369	21.8	295	8	4
65	35.0	20	53	52	5	26	23.5	46	8.5	126.0	78	65	8	3	75	518	368	330	63	80	5	40	53	M5	8	M3	6	M5	10	23.5	18	10	6	•	453	30.5	360	8	4
80	37.5	30	68	68	6.5	38	30.5	60.58	11.5	167.5	110	80	10	3	95	663	483	445	78	100	8	55	64	M6	12	M4	8.5	M5	10	25.0	25	10	8	•	583	40.5	475	8	4

Size	WEIGHT STROKE ZERO [kg]	STROKE WEIGHT PER METER [kg/m]
50	2.58	3.35
65	5.56	5.4
80	11.10	5.9

Electromechanical axis Mod. 5E...AS2



NOTE:
 * We recommend a coupling with a shaft of tolerance h8.
 ■ Dimension T2 in size 50 is not indicated because there is only one slot.
 • Dimension Y indicates the hole for centralized lubrication by means of grease.

Size	A	B	C	øC1	C2	øC3	D1	D2	E	E1	F	øG1	G2	H	L1	L2	M1	M2	M3	N	P1	P2	K1	J1	K2	J2	K3	J3	T1	T2	T3	V	Y	X1	X2	W	Z1	Z2
50	32.5	15	37	37	4.5	20	17	32	8.5	100	50	6	2	60	604	488	200	48	65	5	30	40	M4	7	M3	5	M4	8	20	■	10	6	•	554	21.8	480	8	4
65	35	20	53	52	5	26	23.5	46	8.5	125	65	8	3	75	738	588	250	63	80	5	40	53	M5	8	M3	6	M5	10	23.5	18	10	6	•	673	30.5	580	8	4
80	35	30	68	68	6.5	38	30.5	60.5	11.5	165	80	10	3	95	948	768	330	78	100	8	55	64	M6	12	M4	8.5	M5	10	25	25	10	8	•	868	40.5	760	8	4

Size	CL min	CL max	Max applicable stroke	WEIGHT STROKE ZERO [kg]	STROKE WEIGHT PER METER [kg/m]
50	250	2000	Smax = 4262 - CL	3.49	3.35
65	300	2000	Smax = 6212 - CL	7.35	5.4
80	400	2000	Smax = 6132 - CL	14.68	5.9

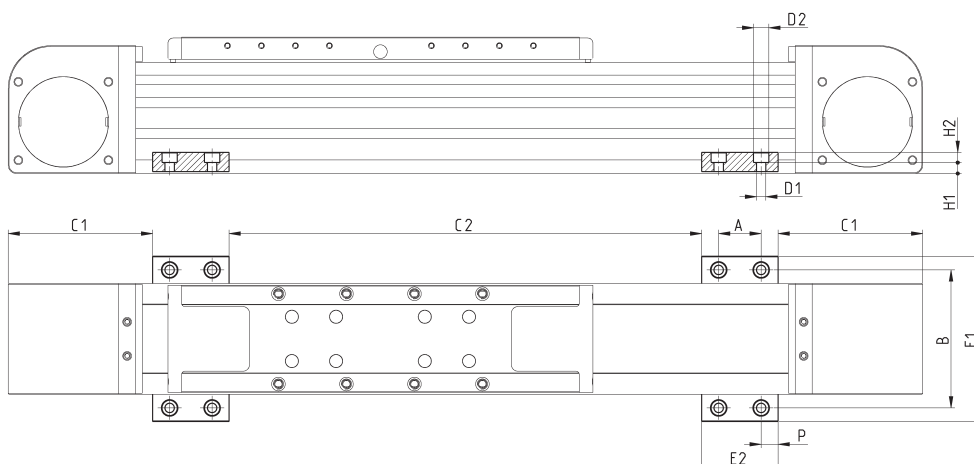
Side clamping bracket Mod. BGS

Material: Aluminium



Supplied with:
2x clamps

TABLE NOTE:
* according to the span
(max admissible deflection)
recommended value 500
mm



Mod.	Size	A	B	C1	C2	∅D1	∅D2	E1	E2	H1	H2	P	Weight (g)
BGS-5E-M5	50	25	66	68	*	5.5	9	82	45	6.4	6	10	45
BGS-5E-M5	65	25	81	85	*	5.5	9	97	45	6.4	6	10	45
BGS-5E-M5	80	25	96	100	*	5.5	9	112	45	6.4	6	10	45
BGS-5E-M6	50	25	66	68	*	6.5	10.5	82	45	5.4	7	10	40
BGS-5E-M6	65	25	81	85	*	6.5	10.5	97	45	5.4	7	10	40
BGS-5E-M6	80	25	96	100	*	6.5	10.5	112	45	5.4	7	10	40

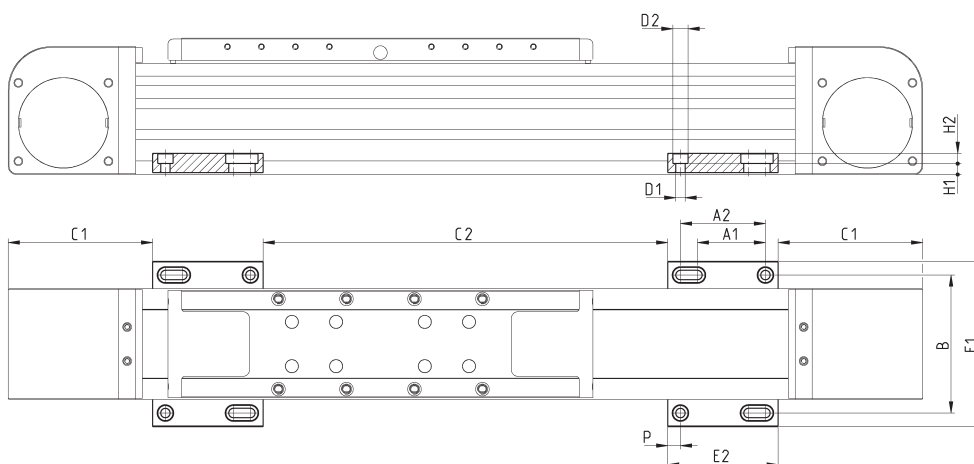
Perforated side clamping bracket Mod. BGA

Material: Aluminium



Supplied with:
2x clamps with perforation

TABLE NOTE:
* according to the span
(max admissible deflection)
recommended value 500
mm

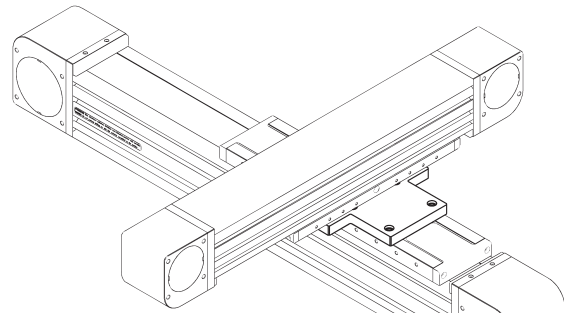
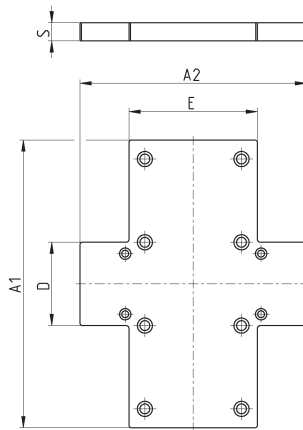


Mod.	Size	A1	A2	B	C1	C2	∅D1	∅D2	E1	E2	H1	H2	P	Weight (g)
BGA-5E-M5	50	40	50	66	68	*	5.5	9	82	65	6.4	6	7.5	60
BGA-5E-M5	65	40	50	81	85	*	5.5	9	97	65	6.4	6	7.5	60
BGA-5E-M5	80	40	50	96	100	*	5.5	9	112	65	6.4	6	7.5	60
BGA-5E-M6	50	40	50	66	68	*	6.5	10.5	82	65	5.4	7	7.5	55
BGA-5E-M6	65	40	50	81	85	*	6.5	10.5	97	65	5.4	7	7.5	55
BGA-5E-M6	80	40	50	96	100	*	6.5	10.5	112	65	5.4	7	7.5	55

Interface plate - slider on slider

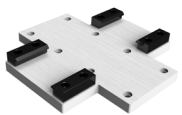


The kit includes:
 1x interface plate
 8x screws + 8x lock washers
 to connect the plate on the
 slider of the main axis
 4x screws + 4x lock washers
 to connect the plate on the
 slider of the secondary axis

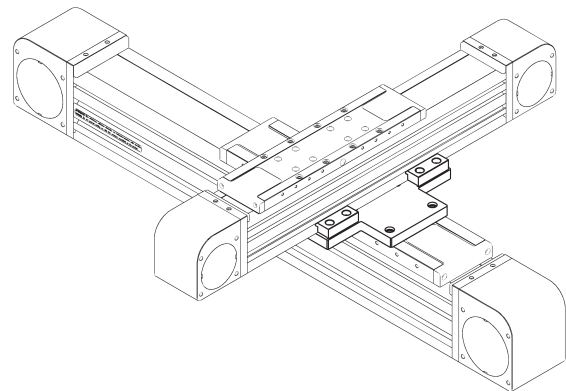
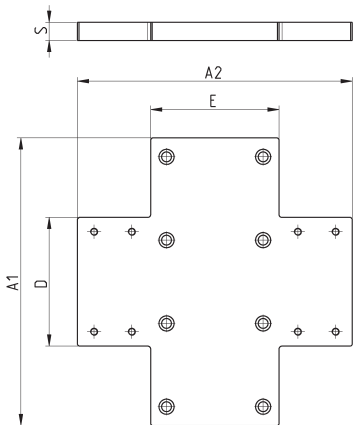


Mod.	Size	A1	A2	D	E	S	Weight (g)
XY-S65-S50	65	150	150	55	70	12	515
XY-S80-S50	80	190	150	55	85	12	690
XY-S80-S65	80	190	150	70	85	12	720

Interface plate - profile on slider



The kit includes:
 1x interface plate
 8x screws + 8x lock washers
 to connect the plate on the
 slider of the main axis
 4x clamps
 8x screws + 8x lock washers
 to connect the secondary
 axis on the plate by means
 of clamps

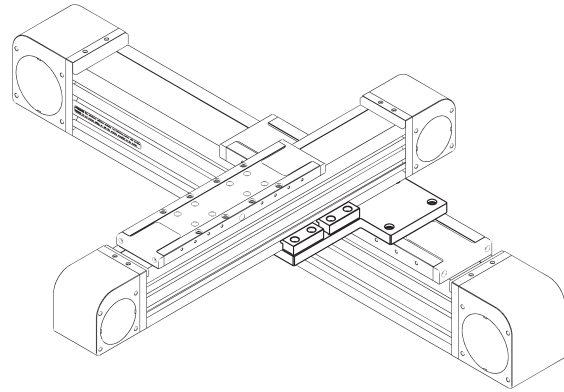
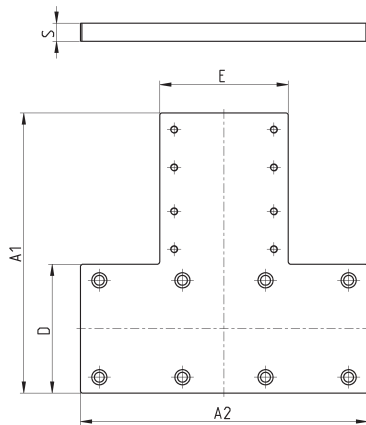


Mod.	Size	A1	A2	D	E	S	Weight (g)
XY-S65-P50	65	150	162	85	70	12	730
XY-S80-P50	80	190	182	85	85	12	945
XY-S80-P65	80	190	185	100	85	12	1000

Interface plate - profile on slider - long arm

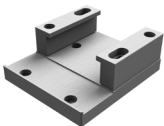


The kit includes:
 1x interface plate
 8x screws + 8x lock washers
 to connect plate on the slider
 of the main axis
 4x clamps
 8x screws + 8x lock washers
 to connect plate on the slider
 of the secondary axis by
 means of clamps

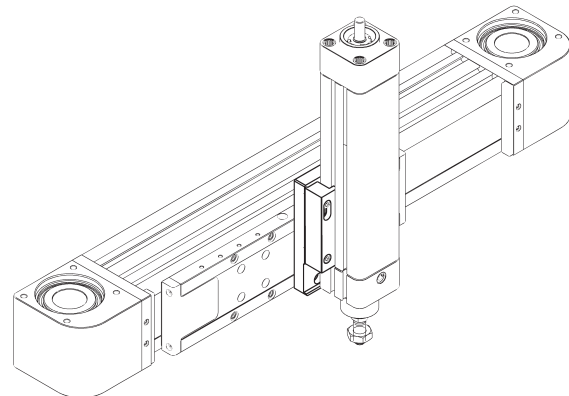
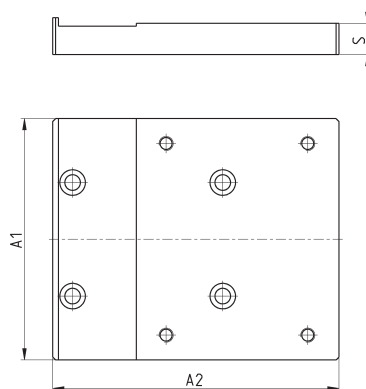


Mod.	Size	A1	A2	D	E	S	Weight (g)
XY-S50-P50-T	50	162	130	50	85	12	600
XY-S65-P50-T	65	170	150	65	85	12	750
XY-S65-P65-T	65	185	170	65	100	12	800
XY-S80-P50-T	80	185	190	85	85	12	960
XY-S80-P65-T	80	185	190	85	100	12	1010
XY-S80-P80-T	80	200	190	85	120	12	1100

Interface plate - Series 6E cylinder on slider



The kit includes:
 1x interface plate
 4x screws + 4x lock washers
 to connect the plate on the
 slider of the axis
 2x clamps
 4x screws + 4x lock washers
 to fix the Series 6E cylinder
 by means of clamps

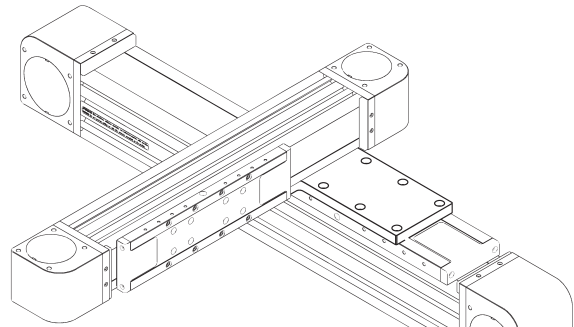
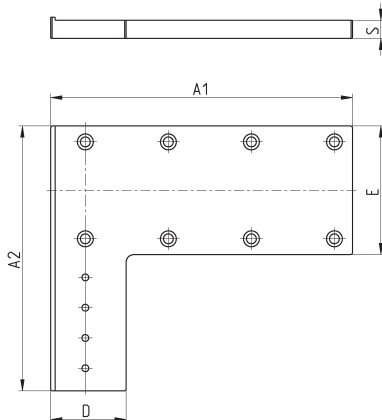


Mod.	Size	A1	A2	S	Weight (g)
XY S50-6E32	50	72	101	11	315
XY-S65-6E32	65	72	101	11	315
XY-S65-6E40	65	85	101	11	350
XY S65-6E50	65	95	110	12	510
XY-S80-6E32	80	75	101	12	385
XY-S80-6E40	80	85	101	12	410
XY-S80-6E50	80	95	110	12	510
XY S80-6E63	80	106	110	12	560

Interface plate - profile side on slider - left position



The kit includes:
 1x interface plate
 8x screws + 8x lock washers
 to connect the plate on the
 slider of the main axis,
 screws and nuts for slot to
 connect the plate on the
 slider of the secondary axis

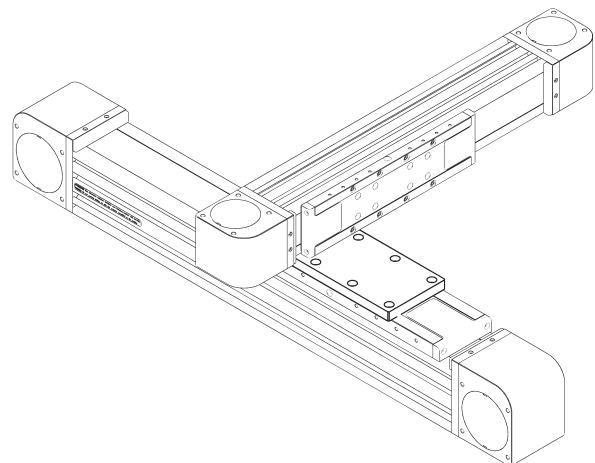
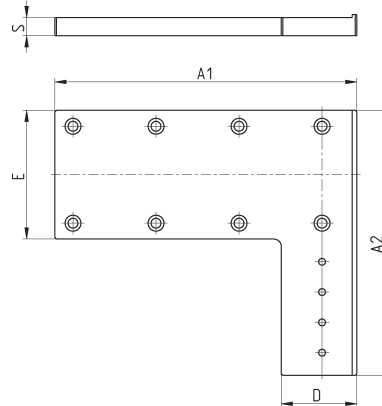


Mod.	Size	A1	A2	D	E	S	Nr of holes	Weight (g)
XY-S50-LL50	50	130	145	50	55	11	4	450
XY-S65-LL50	65	160	160	50	70	11	4	500
XY-S65-LL65	65	170	180	65	70	12	8	550
XY-S80-LL50	80	200	175	50	85	12	4	750
XY-S80-LL65	80	210	195	65	85	12	8	870
XY-S80-LL80	80	210	195	80	85	12	8	900

Interface plate - profile side on slider - right position

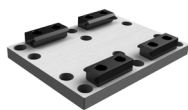


The kit includes:
 1x interface plate
 8x screws + 8x lock washers
 to connect the plate on the
 slider of the main axis,
 screws and nuts for slot to
 connect the plate on the
 slider of the secondary axis

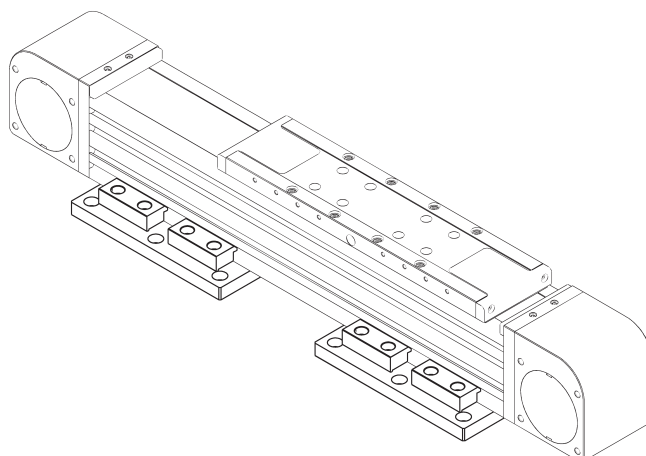
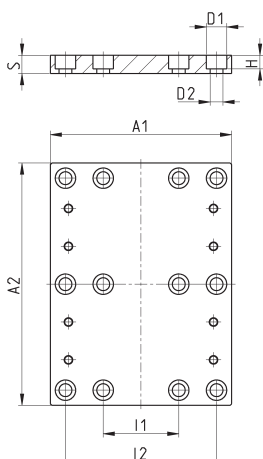


Mod.	Size	A1	A2	D	E	S	Nr of holes	Weight (g)
XY-S50-LR50	50	130	145	50	55	11	4	450
XY-S65-LR50	65	160	160	50	70	11	4	500
XY-S65-LR65	65	170	180	65	70	12	8	550
XY-S80-LR50	80	200	175	50	85	12	4	750
XY-S80-LR65	80	210	195	65	85	12	8	870
XY-S80-LR80	80	210	195	80	85	12	8	900

Fixed interface plate

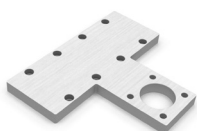


The kit includes:
 1x interface plate
 4x clamps
 8x screws to connect the clamps on the plate

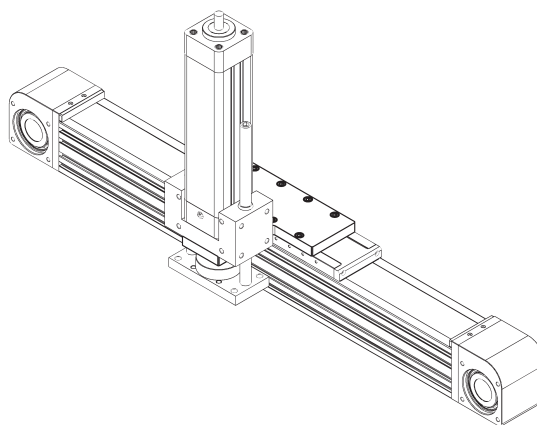
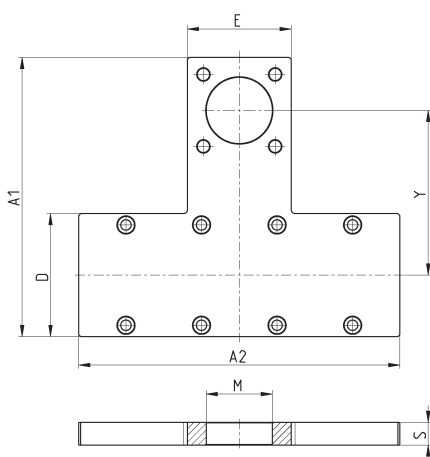


Mod.	Size	A1	A2	\varnothing D1	\varnothing D2	H	I1	I2	S	Weight (g)
X-P50	50	95	140	9	5.5	6	45	80	8	275
X-P65	65	120	140	10.5	6.5	7	50	100	10	430
X-P80	80	120	160	13.5	8.5	9	50	100	12	570

Interface plate - Anti-rotation guides S. 45 / Cylinders S. 6E on slider



The kit includes:
 1x interface plate
 8x screws + 8x lock washers to connect the plate on the slider
 4x screws to connect the cylinder

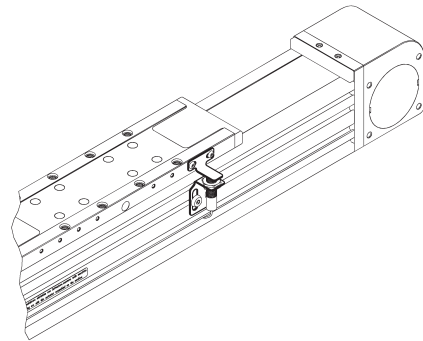
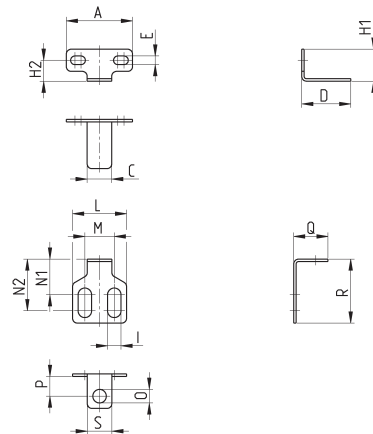


Mod.	Size	A1	A2	D	E	S	\varnothing M [H10]	Y	Weight (g)
XY-S50-45N32	50	124	130	50	49	12	30	75	350
XY-S65-45N32	65	139	170	65	49	12	30	82.5	480
XY-S65-45N40	65	147.5	170	65	55	12	35	87	500
XY-S65-45N50	65	157	170	65	66.5	12	40	91.5	530
XY-S80-45N40	80	167.5	190	85	55	12	35	97	660
XY-S80-45N50	80	177	190	85	65	12	40	101.5	690
XY-S80-45N63	80	190.5	190	85	75	12	45	110	740

Kit to fix the inductive sensor

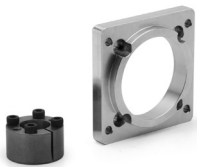


The kit includes:
 1x sensor dog
 2x screws to fix the sensor dog
 1x sensor supporting plate
 2x screws to connect the sensor supporting plate
 2x nuts for the slot

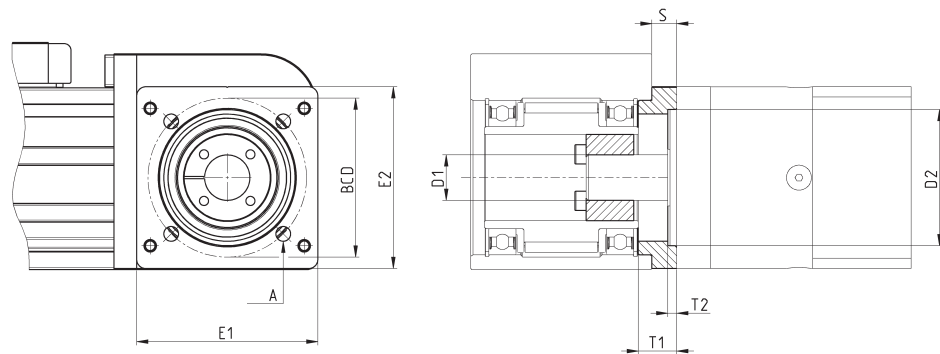


Mod.	Size	A	C	D	E	H1	H2	I	L	M	N1	N2	∅O	P	Q	R	S	Weight (g)
SIS-M5-50/65	50-65	27	10	20	3.5	13	8.5	5.5	22	12	14.5	21	5.5	8	14	26	10	10
SIS-M8-65	65	27	10	20	3.5	13	8.5	5.5	25	15	10.5	24	8.5	10	18.5	30	15	10
SIS-M5-80	80	45	15	20	4.5	16	10.5	5.5	22	12	14.5	21	5.5	8	14	26	10	15
SIS-M8-80	80	45	15	20	4.5	16	10.5	5.5	25	15	10.5	24	8.5	10	18.5	30	15	15

Kit to connect the gearbox



The kit includes:
 1x connection flange
 4x screws + 4x lock washers to connect the flange
 1x locking set
 4x screws + 4x lock washers to connect the gearbox

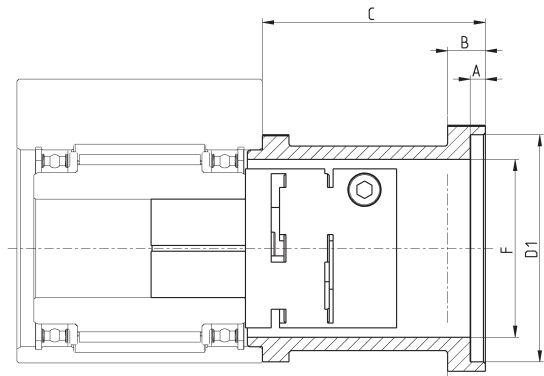
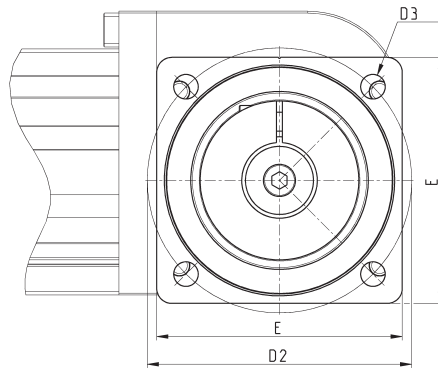


DIMENSIONS												
Mod.	Size	E1	E2	S	BCD	∅A	∅D1	∅D2 [H7]	T1	T2	Weight (g)	
FR-5E-50	50	48	43	6	34	4.5	10	∅26	10	10	85	
FR-5E-65	65	63	60	7	52	5.5	14	∅40	11	11	140	
FR-5E-80	80	80	80	11	70	6.5	20	∅60	17	4	325	

Kit to connect the gearbox - enhanced series



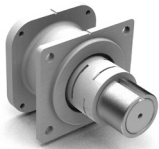
The kit includes:
 1x connection flange
 4x screws + 4x lock washers
 to connect the flange
 1x expansion coupling
 4x screws + 4x lock washers
 to connect the gearbox



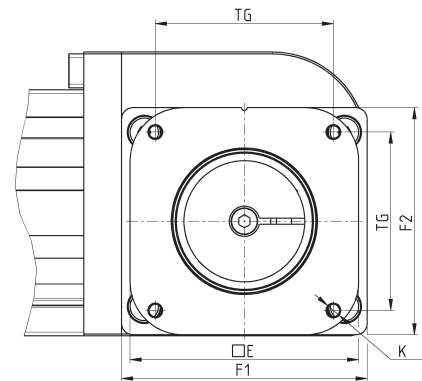
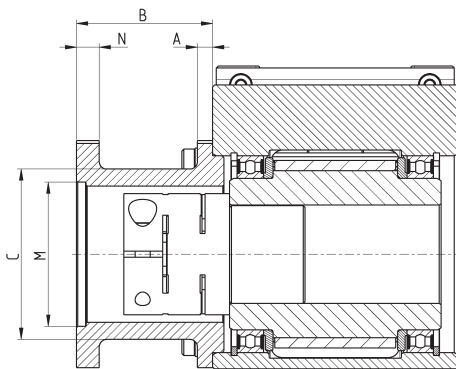
DIMENSIONS

Mod.	Size	$\varnothing D1$ [H7]	A	$\varnothing D2$	$\varnothing D3$	B	C	E	F	Weight (g)
FRH-5E-50	50	40	4	52	5.5	8	51	50	34	170
FRH-5E-65	65	60	4	70	6.5	10	59	65	47	530

Direct connection kit for Stepper motor



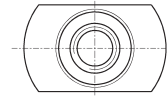
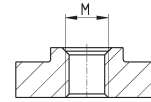
The kit includes:
 1x NEMA 24 connection
 flange
 4x screws + 4 lock washers
 1x coupling Mod. COS
 1x bushing (not present in
 FS-5E-50-0024)



Mod.	Size	Motor	A	B	$\varnothing C$	F1	F2	E	TG	K	$\varnothing M$	N	Weight (g)
FS-5E-50-0024	50	NEMA 24	4	37	41	47	45	60.5	47.1	M4	38.1	2.5	125
FS-5E-65-0024	65	NEMA 24	4	36	45	65	60	60.5	47.1	M4	38.1	2.5	200

Slot nut for sensor CSH

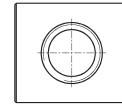
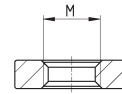
Material: steel

Supplied with:
2x nuts

Mod.	Size	M
PCV-5E-CS-M3	50 - 65 - 80	M3
PCV-5E-CS-M4	50 - 65 - 80	M4

Slot nut 6 - rectangular type

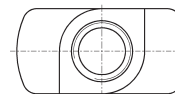
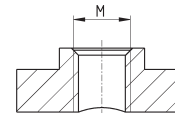
Material: steel

Supplied with:
2x nuts

Mod.	Size	M
PCV-5E-C6-M4Q	50 - 65	M4

Slot nut 6 for front insertion

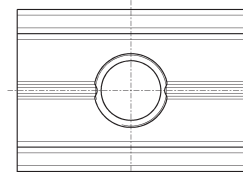
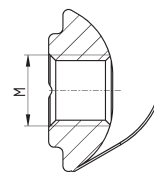
Material: steel

Supplied with:
2x nuts

Mod.	Size	M
PCV-5E-C6-M4R	50 - 65	M4

Slot nut 8 with flexible flap

Material: steel

Supplied with:
2x nuts

Mod.	Size	M
PCV-5E-C8-M5	80	M5
PCV-5E-C8-M6	80	M6

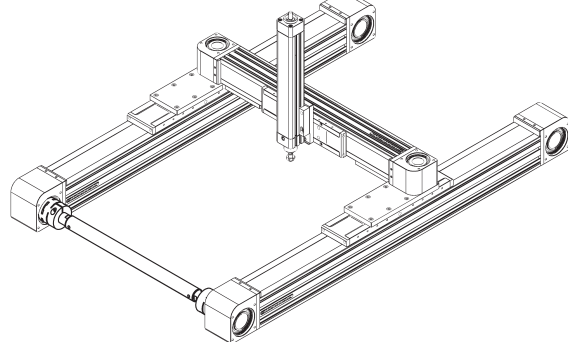
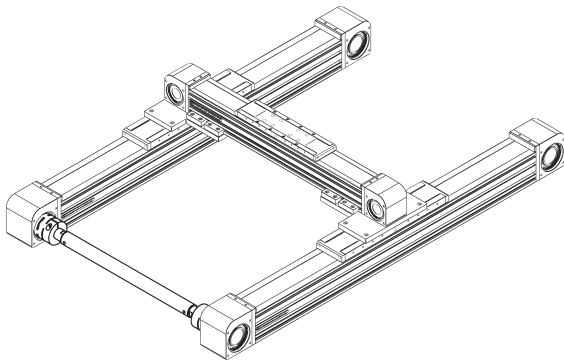
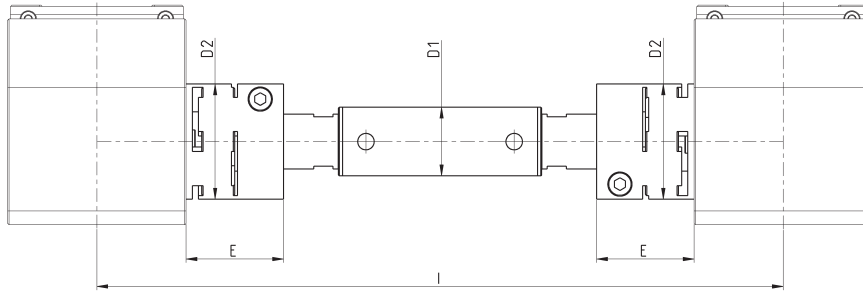
Parallel connection kit

The kit includes:
 1x parallel shaft
 2x expansion couplings



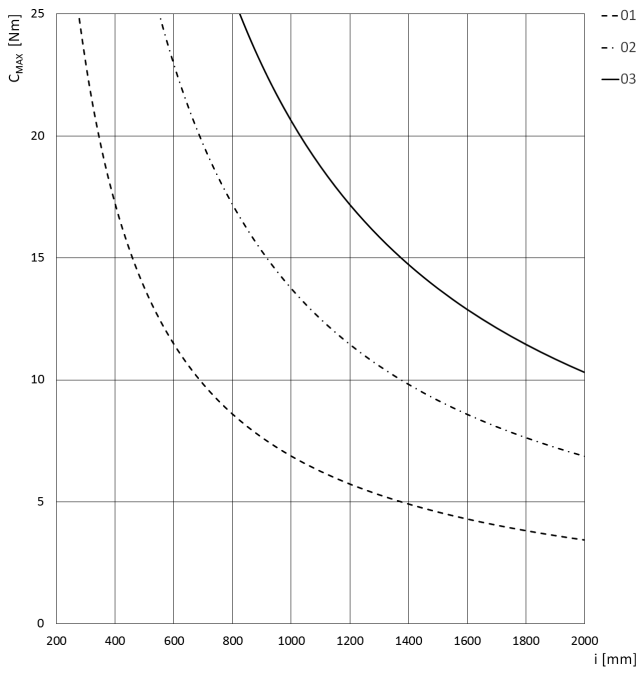
EXAMPLE:

PS-5E-65-1400 corresponds to a parallel connection for axes positioned at interaxis $l = 1400\text{mm}$



Mod.	Size	l min	l max	$\varnothing D1$	$\varnothing D2$	E	Transmission torque
PS-5E-50-0000	50	200	2000	22	32	26	see graph
PS-5E-65-0000	65	250	2000	25	42	35.5	see graph
PS-5E-80-0000	80	300	2000	30	56	40	see graph

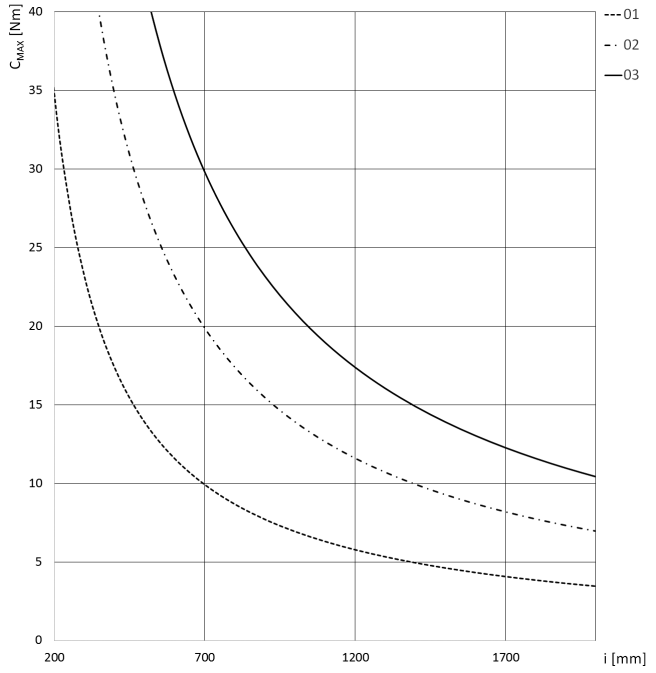
INTERAXIS ACCORDING TO THE MAXIMUM ADMISSIBLE TORQUE



Size 50x50

C_{max} = max applicable torque
i = interaxis between the two 5E axes

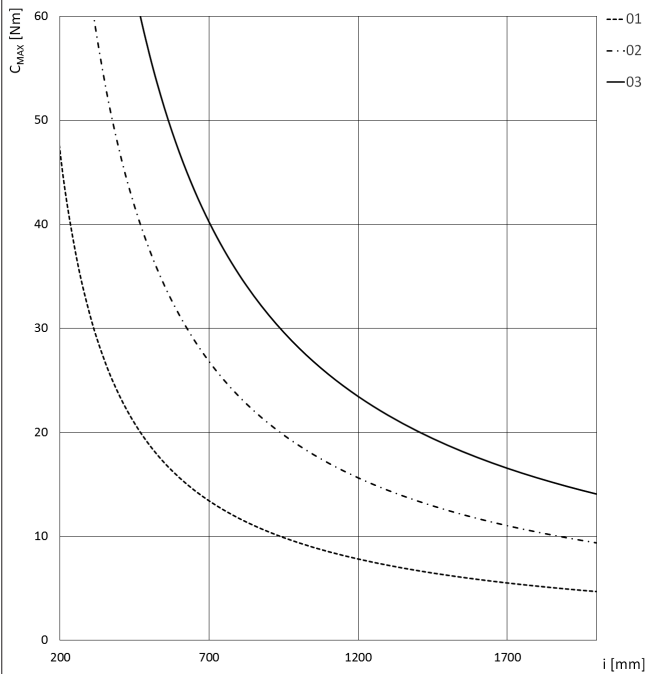
- 01 = lag error 0.1 mm
- 02 = lag error 0.2 mm
- 03 = lag error 0.3 mm



Size 65x65

C_{max} = max applicable torque
i = interaxis between the two 5E axes

- 01 = lag error 0.1 mm
- 02 = lag error 0.2 mm
- 03 = lag error 0.3 mm



Size 80x80

C_{max} = max applicable torque
i = interaxis between the two 5E axes

- 01 = lag error 0.1 mm
- 02 = lag error 0.2 mm
- 03 = lag error 0.3 mm