



## ABOUT

## MATERIAL

Hardened steel (nitrocarburized surface)

## DESIGN

Two part assembly for installation into prefabricated coupling components.

Part 1: detent receptacle

Part 2: self-contained, spring loaded plunger module.

The spring force setting is adjustable in the field, with the settings clearly marked on an adjustment scale.

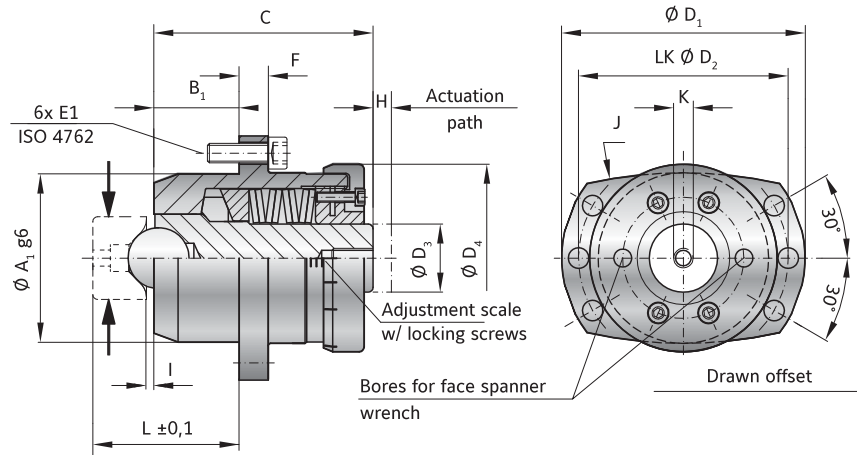
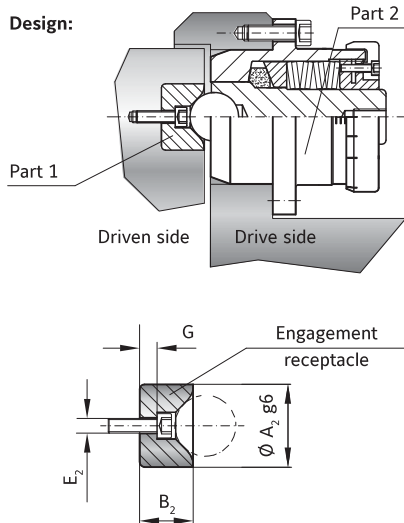
## FIT TOLERANCE

For insertion of the safety elements H7 precision holes should be used for all centered components.

## RE-ENGAGEMENT

When properly located over the detent receptacle the safety element can be re-engaged through the application of pressure to the back side of the plunger core.

## Design:



## MODEL ST

SIZE		15	30	70
Tangential force (KN) Adjustment range available from - to (ranges)	1	1-4	5-10	8-20
	2	2-8	10-20	15-40
	3	6-20	20-35	30-70
Centering diameter of safety element g6 (mm)	A <sub>1</sub>	40	70	90
Centering diameter engagement receptacle g6 (mm)	A <sub>2</sub>	24	34	44
Centering length of safety element (mm)	B <sub>1</sub>	20	35	45
Centering length engagement receptacle (mm)	B <sub>2</sub>	14	22	30
Overall length (mm)	C	70	103	135
Outside diameter (mm)	D <sub>1</sub>	59	100	129
Bolt circle diameter (mm)	D <sub>2</sub>	50	86	110
Diameter plunger (mm)	D <sub>3</sub>	16	28	35
Diameter adjustment nut (mm)	D <sub>4</sub>	44	75	92
Screw / Tightening torque ISO 4762 (mm)	E <sub>1</sub>	6 x M5 x 16 / 10 Nm	6 x M8 x 25 / 40 Nm	6 x M12 x 35 / 120 Nm
Screw / Tightening torque ISO 4762 (mm)	E <sub>2</sub>	M4 x 14 4.5 Nm	M6 x 20 15.5 Nm	M8 x 25 38 Nm
Flange thickness (mm)	F	7	12	16
Distance (mm)	G	5	8	10
Actuation path (mm)	H	4	7.5	10
Distance (mm)	I	2	3	4
Radius (mm)	J	110	200	250
Inner thread (mm)	K	M8 x 15	M10 x 25	M16 x 30
Distance ± 0,1 (mm)	L	36	60	79
Weight (kg)		0.65	2.7	6

axial spring force ≈ tangential force/1.4

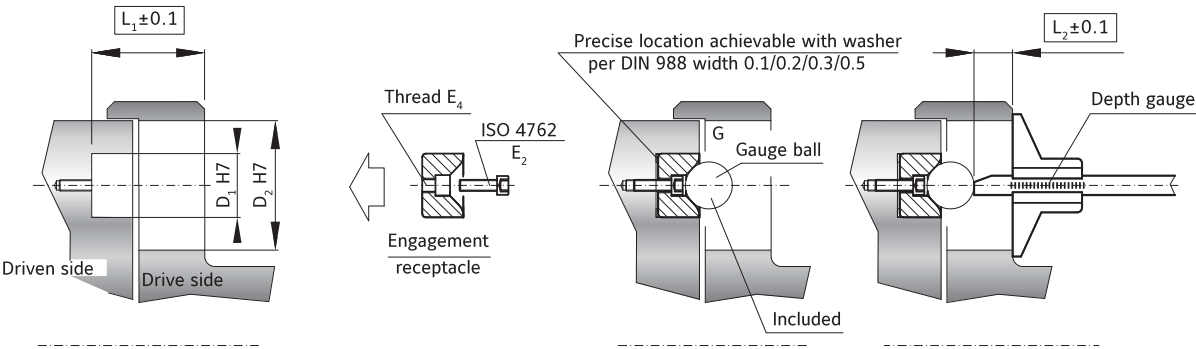
MAINTENANCE

The ST elements are lubricated and sealed for life. Routine maintenance is not required. While the safety elements have an extreme service life, they should be periodically checked to ensure proper functionality.

MOUNTING INSTRUCTIONS ST

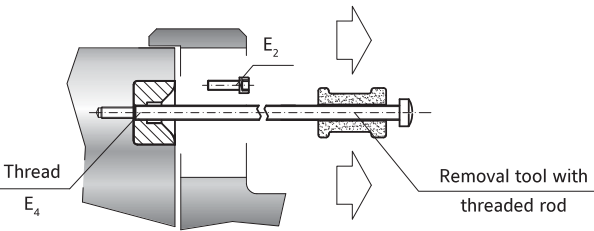
MOUNTING ENGAGEMENT RECEPTACLE

**Note:** Measurements L1 and L2 must be checked prior to installing the safety elements.



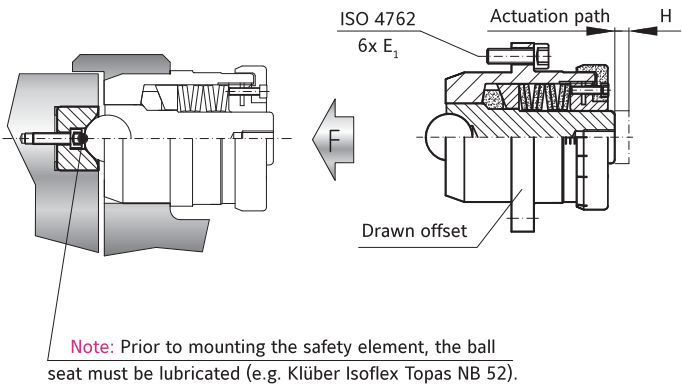
DISMOUNTING OF ENGAGEMENT RECEPTACLE

After loosening the mounting screw E2, the engagement receptacle can be dismantled with a removal tool.



MOUNTING OF SAFETY ELEMENT

SIZE	15	30	70
Screws Tightening torque E <sub>1</sub>	6 x M5 x 16 (12.9) 10 Nm	6 x M8 x 25 (12.9) 40 Nm	6 x M12 x 35 (12.9) 120 Nm
Screws Tightening torque E <sub>2</sub>	1 x M4 x 12 4.5 Nm	1 x M6 x 20 15.5 Nm	1 x M8 x 25 38 Nm
Screws Tightening torque E <sub>3</sub>	4 x M4 x 14 4.5 Nm	4 x M4 x 16 4.5 Nm	4 x M5 x 20 10 Nm
Thread E <sub>4</sub>	M5	M8	M10
Actuation path H	4 mm	7.5 mm	10 mm
Restoring force F	max. 2 KN	max. 4 KN	max. 6 KN
Fit length L <sub>1</sub> ± 0,1	36	60	79
Depth measurement L <sub>2</sub> ± 0,1	10	20.5	29
Gauge ball Ø G	16	25	30



ORDERING EXAMPLE	ST	30	2	12	XX
Model	●				Special designation only (e.g. stainless steel)
Size		●			
Adjustment range 1/2/3			●		
Tangential force (KN)				●	
For custom features place an XX at the end of the part number and describe the special requirements (e.g. ST / 30 / 2 / 12 / XX)					

# ST ACCESSORIES

## SAFETY COUPLINGS

### ENGAGEMENT AND DISENGAGEMENT



engaged element

disengaged element

### ORDER NUMBER

SIZE	ENGAGEMENT / DISENGAGEMENT TOOL
15	Order number AV/0015
30	Order number AV/0030
70	Order number AV/0070

### ADJUSTMENT WRENCH



Adjustment wrench

### ORDER NUMBER

SIZE	ADJUSTMENT WRENCH
15	Order number SLS/0015
30	Order number SLS/0030
70	Order number SLS/0070

### SWITCH PLATE



R+W mechanical limit switch

Switch plate

Actuation distance

Switch plate

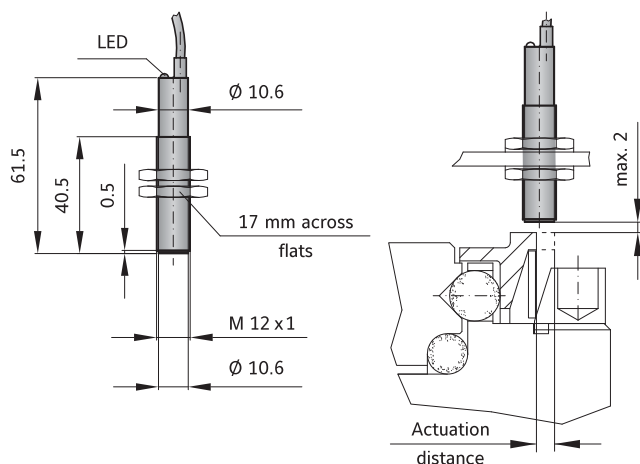
Re-engagement via the switch plate is possible with the use of two pry bars.

SIZE		10	25	60	160
Outside diameter	A	278	328	on request	on request
Distance	B	57	57	on request	on request
Thickness	C	4.5	4.5	on request	on request

It is important the switches be  
100% tested for proper functioning  
after mounting with safety coupling.

## PROXIMITY SWITCH (E-STOP FUNCTION)

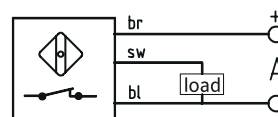
ST



ORDER NUMBER 650.2703.001

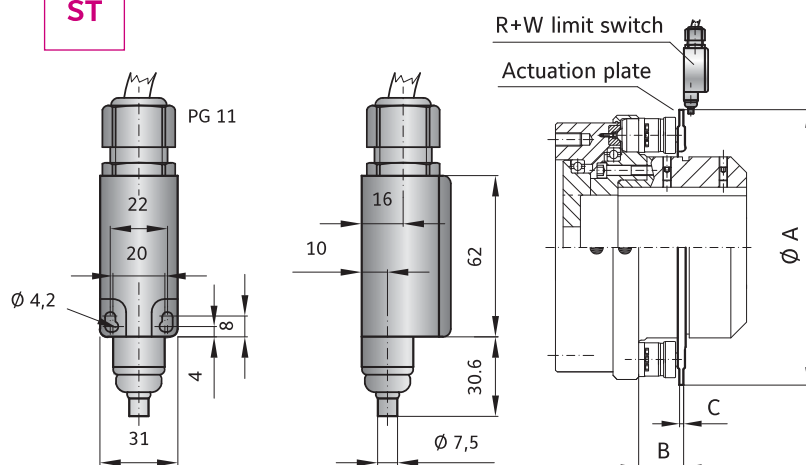
TECHNICAL DATA	ST
Voltage	10 to 30 V DC
Max. output current	200 mA
Max. switch frequency	800 KHz
Temperature range	-25° to +70° C
Protective system	IP 67
Switch type	normally open
Max. detection gap	max. 2 mm

### SWITCH DIAGRAM SK, ES2



## MECHANICAL LIMIT SWITCH (E-STOP FUNCTION)

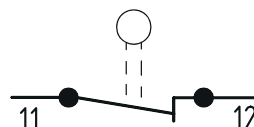
ST



ORDER NUMBER 618.6740.644

TECHNICAL DATA	ST
Max. voltage	250 V AC
MAX. CONSTANT CURRENT:	2.5h A
Protective system	IP 65
Contact system	Opener (forced separating)
Temperature range	-30° to +80° C
Actuation	Plunger (metal)

### SWITCH DIAGRAM ST



The switch plunger (pictured above and right) should be located as close to the actuation ring / limit switch plate as possible (approximately 0.1-0.2mm).