



Visually Detectable and Metal Detectable components

STANDARD MACHINE ELEMENTS WORLDWIDE



elesa®



Increase the level of safety in your production lines

High cleanability, corrosion resistance, prevention from contaminants, operator safety and efficiency in functionality do not allow any compromise in the food and pharmaceutical sectors where reliable plants are essential.

Food and drugs are mainly produced industrially. Goods and preparations pass through various process stages on complex production lines. Any defects in these systems may cause accidental product contamination with serious consequences for the health of consumers if such defects are not detected.

Always attentive to the demands of the machinery and equipment industry, ELESa presents two new lines of standard components to meet the strict product safety requirements at all stages of a process, from preparation to final product packaging, in the name of contaminants detection.

Visually Detectable components



VTT-SST-VD

Solid Knobs
Visually Detectable
technopolymer,
easy cleaning



page 6



ERZ-SST-VD

Adjustable handles
Visually Detectable
technopolymer,
stainless steel clamping
element



ERGOSTYLE® page 7



M.643-SST-VD

Bridge handles
Visually Detectable
technopolymer



page 8



EKK-SST-VD

Knurled grip knobs
Visually Detectable
technopolymer



ERGOSTYLE® page 9



I.780-VD

Cylindrical handle
Visually Detectable
technopolymer



page 9



CFM-VD

Hinges
Visually Detectable
technopolymer



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Metal Detectable components



VTT-SST-MD

Solid Knobs
Metal Detectable
technopolymer,
easy cleaning



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ERZ-SST-MD

Adjustable handles
Metal Detectable
technopolymer,
stainless steel clamping
element



ERGOSTYLE® page 12



M.643-SST-MD

Bridge handles
Metal Detectable
technopolymer



page 13



EKK-SST-MD

Knurled grip knobs
Metal Detectable
technopolymer



ERGOSTYLE® page 14



I.780-MD

Cylindrical handle
Metal Detectable
technopolymer



page 14



CFM-MD

Hinges
Metal Detectable
technopolymer



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VISUALLY DETECTABLE



Standard components with AISI 304 stainless steel inserts, made of technopolymer, "Signal blue" RAL 5005, material suitable for contact with food (FDA CFR.21 and EU 10/2011), easily detectable and recognisable to the human eye thanks to the specificity and uniqueness of the colour, naturally absent in the environment in which these components are applied.

These characteristics contribute to increasing the levels of safety in food production processes in full compliance with international regulations.

The compliance with FDA regulations allows in addition a high level of prevention against the risk of contamination of the food.

- Machines for the food industry
- Pharmaceutical equipment



METAL DETECTABLE



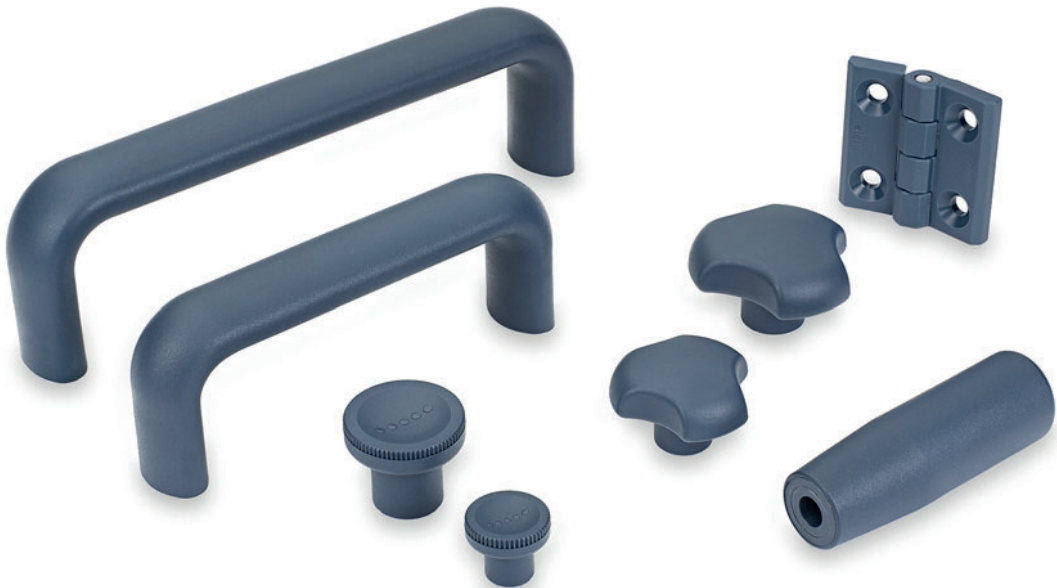
Standard components with AISI 304 stainless steel inserts, made of technopolymer, "Green-blue" RAL 5001, material suitable for contact with food (FDA CFR.21 and EU 10/2011).

The special additive contained in the plastic material, allows the detection of cubic particles of 5 mm by means of a metal detector.

Furthermore, the specificity and uniqueness of the blue colour, naturally absent in the environment in which these components are applied, allow also the visual detection of contaminant parts.

The compliance with FDA regulations allows in addition a high level of prevention against the risk of contamination of the food.

- Machines for the food industry
- Pharmaceutical equipment





MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.
Raw materials suitable for food contact (FDA CFR.21 and EU 10/2011).

STANDARD EXECUTIONS

- **VTT-SST-VD**: AISI 304 stainless steel boss, threaded blind hole.
- **VTT-SST-p-VD**: AISI 304 stainless steel threaded stud, chamfered flat end according to UNI 947 : ISO 4753.

FEATURES AND APPLICATIONS

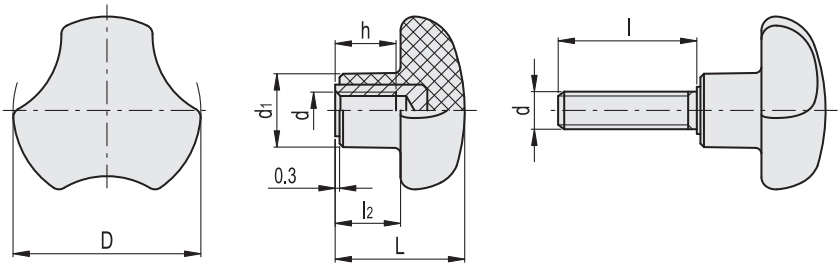
The RAL 5005 blue technopolymer is easily visible in case of accidental food contamination.
Particularly suitable for applications in the food and pharmaceutical industries.
The three-lobe shape with large recesses ensures an effective grip even with work gloves.
The design without rear cavities, generally suitable for reducing thickness, prevents unhealthy residues from depositing, ensuring easy cleaning.
Particularly suitable for applications on machines and equipment whose parts must be frequently cleaned by using water jets or steam.



ELESA Original design

VTT-SST-VD

VTT-SST-p-VD



VTT-SST-VD

Code	Description	D	d6H	L	d1	l2	h	Δ
190346	VTT.40-SST-M8-VD	40	M8	27	16	13.5	13	23
190476	VTT.50-SST-M10-VD	50	M10	30	19	15	17	36



VTT-SST-p-VD

Code	Description	D	d6g	L	d1	l	l2	Δ
190381	VTT.40-SST-p-M8x20-VD	40	M8	27	16	20	13.5	28
190383	VTT.40-SST-p-M8x30-VD	40	M8	27	16	30	13.5	30
190493	VTT.50-SST-p-M10x30-VD	50	M10	30	19	30	15	47
190495	VTT.50-SST-p-M10x40-VD	50	M10	30	19	40	15	52



LEVER BODY

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.

Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).

Built-in zinc alloy toothed insert for coupling to the metal clamping element.

STANDARD EXECUTIONS

- **ERZ-SST-VD**: AISI 303 stainless steel clamping element with threaded hole and retaining screw. AISI 302 stainless steel return spring.
- **ERZ-SST-p-VD**: AISI 303 stainless steel clamping element with threaded stud and retaining screw. AISI 302 stainless steel return spring. Retaining screw with six-lobed socket to fit TORX®*.

FEATURES AND APPLICATIONS

The RAL 5005 blue colour is easily visible in case of accidental food contamination.

Particularly suitable for applications in the food and pharmaceutical industries.

Particularly suitable when the lever turning angle is limited owing to lack of space.

The metal teeth of the built-in zinc alloy insert allow the assembly of clamping elements completely made out of metal, which can be easily modified by machining in case of special assembly requirements.

INSTRUCTIONS OF USE

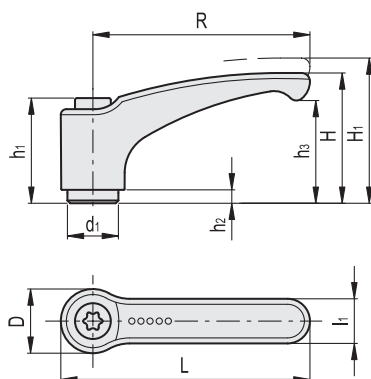
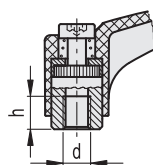
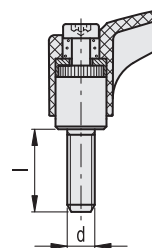
For clamping, lift the lever to disengage the clamping device teeth and bring it back to start position. By releasing the lever, the return spring automatically engages the teeth.

If the lever cannot make a 360° rotation, the clamping element can be easily screwed by means of the six-lobed socket front head screw (after having disengaged the lever).

* Registered trademark by TEXTRON INC.



ERGOSTYLE® ELESA Original design

**ERZ-SST-VD****ERZ-SST-p-VD****ERZ-SST-VD**

Code	Description	R	d	L	D	H	H1	h	h1	h2	h3	d1	l1	Teeth no.	⚖
193135	ERZ.63 SST-M6-VD	63	M6	73.5	19	38.5	42	10	31	3.5	30	13.5	13.5	24	36
193155	ERZ.78 SST-M8-VD	78	M8	90.5	23	45	50.5	14	36	3.5	35	16	16	26	61

INOX
STAINLESS
STEEL**ERZ-SST-p-VD**

Code	Description	R	d	L	D	H	H1	h1	h2	h3	d1	l	l1	Teeth no.	⚖
193429	ERZ.63 SST-p-M6x16-VD	63	M6	73.5	19	38.5	42	31	3.5	30	13.5	16	13.5	24	40
193433	ERZ.63 SST-p-M6x25-VD	63	M6	73.5	19	38.5	42	31	3.5	30	13.5	25	13.5	24	42
193673	ERZ.78 SST-p-M8x20-VD	78	M8	90.5	23	45	50.5	36	3.5	35	16	20	16	26	69
193679	ERZ.78 SST-p-M8x40-VD	78	M8	90.5	23	45	50.5	36	3.5	35	16	40	16	26	80

INOX
STAINLESS
STEEL



MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.
Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).

STANDARD EXECUTION

AISI 303 stainless steel bosses, threaded holes.

FEATURES AND APPLICATIONS

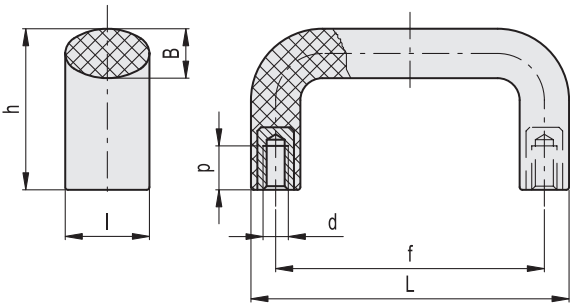
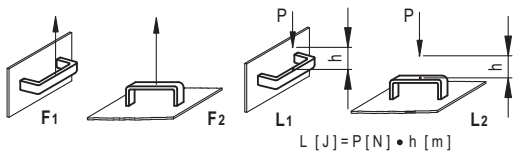
The RAL 5005 blue colour is easily visible in case of accidental food contamination.
Particularly suitable for applications in the food and pharmaceutical industries.

TECHNICAL DATA

Tensile stress and impact strength: F1, F2, L1 and L2 values reported in the table are the result of breaking tests carried out with the appropriate dynamometric equipment under the test conditions shown in the figure with ambient temperature.



ELESA Original design



Code	Description	L	f	d6H	h	B	l	p	F1 [N]	F2 [N]	L1 [J]	L2 [J]	⚖️
194113	M.643/140-117-SST-M8-VD	134	117±0.5	M8	49	15	25	13	3500	4500	8	12	67
194153	M.643/200-SST-M8-VD	196	179±1	M8	57	16	27	13	2500	3000	11	15	130

**MATERIAL**

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.

Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).

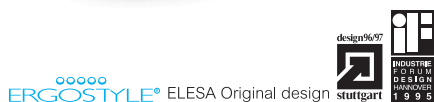
STANDARD EXECUTION

AISI 303 stainless steel boss, threaded blind hole.

FEATURES AND APPLICATIONS

The RAL 5005 blue colour is easily visible in case of accidental food contamination.

Particularly suitable for applications in the food and pharmaceutical industries.

**MATERIAL**

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.

Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).

MOUNTING

Threaded blind hole.

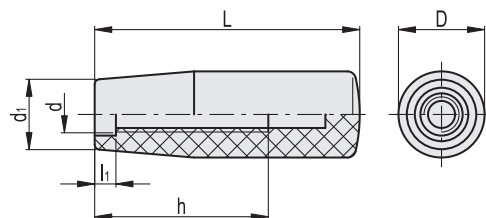
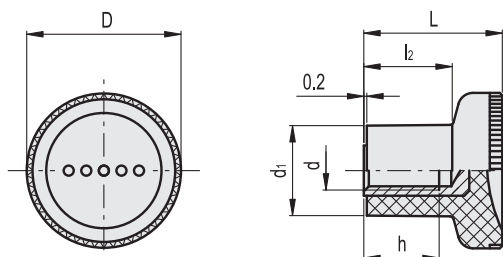
FEATURES AND APPLICATIONS

The RAL 5005 blue colour is easily visible in case of accidental food contamination.

Particularly suitable for applications in the food and pharmaceutical industries.



ELES A Original design



Code	Description	D	L	d6H	d1	h	l2	⚖
194416	EKK.21-SST M5-VD	21	18	M5	12.5	10	10.5	7
194436	EKK.31-SST M8-VD	31	27	M8	18.5	15	17	20

Code	Description	D	L	d	d1	h	l1	⚖
194307	I.780/80-M10-VD	26.5	80	M10	21	55	7	45

MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5005 blue colour, matte finish.

Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).

ROTATING PIN

AISI 303 stainless steel.

STANDARD EXECUTION

Pass-through holes for countersunk head screws.

FEATURES AND APPLICATIONS

The RAL 5005 blue colour is easily visible in case of accidental food contamination.

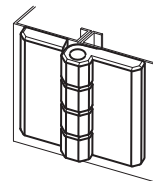
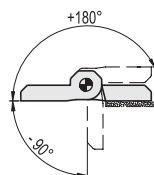
Particularly suitable for applications in the food and pharmaceutical industries.

ROTATION ANGLE (APPROXIMATE VALUE)

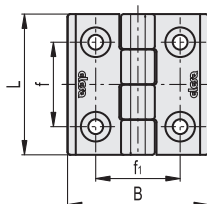
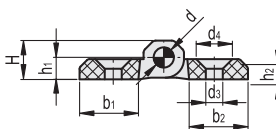
Max 270° (-90° and +180° being 0° the condition where the two interconnected surfaces are on the same plane).

Do not exceed the rotation angle limit so as not to prejudice the hinge mechanical performance.

To choose the convenient type and the right number of hinges for your application, see the Guidelines.



Resistance tests	Axial Stress		Radial Stress		90° Angled Stress	
Description	Maximum working load Ea [N]	Load at breakage Ra [N]	Maximum working load Er [N]	Load at breakage Rr [N]	Maximum working load E90 [N]	Load at breakage R90 [N]
CFM.40 SH-5-VD	100	1600	200	1900	200	1200
CFM.50 SH-6-VD	100	2100	200	3100	200	2000



Code	Description	L	B	f±0.25	f1 ±0.25	H	h1	h2	b1	b2	d	d3	d4	C# [Nm]	⚖
199511	CFM.40-SH-5-VD	40	40	25	25	9	5.5	5	14	14	4	5.5	10.5	3	14
199611	CFM.50-SH-6-VD	50	50	30	30	11.5	6.5	6	18	18	6	6.5	12.5	5	30

MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.

Certified in compliance with FDA (U.S. Food and Drug Administration). The technopolymer contains iron oxide powder for the detectability of the plastic material by means of a metal detector.

STANDARD EXECUTIONS

- **VTT-SST-MD**: AISI 304 stainless steel boss, threaded blind hole.
- **VTT-SST-p-MD**: AISI 304 stainless steel threaded stud, chamfered flat end according to UNI 947 : ISO 4753.

FEATURES AND APPLICATIONS

The RAL 5001 blue technopolymer is easily visible in case of accidental food contamination. Furthermore, the particular material contains iron oxide powder which allows the detection of cubic particles of 5 mm side by means of a metal detector.

In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.

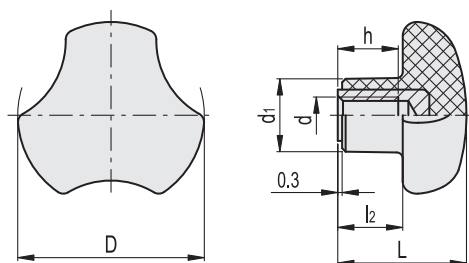
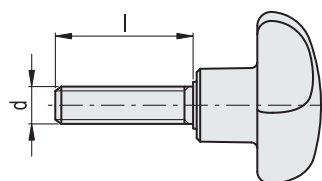
Particularly suitable for applications in the food and pharmaceutical industries.

The three-lobe shape with large recesses ensures an effective grip even with work gloves.

The design without rear cavities, generally suitable for reducing thickness, prevents unhealthy residues from depositing, ensuring easy cleaning. Particularly suitable for applications on machines and equipment whose parts must be frequently cleaned by using water jets or steam.



ELESA Original design

VTT-SST-MD**VTT-SST-p-MD****VTT-SST-MD**

Code	Description	D	d6H	L	d1	l2	h	△
195346	VTT.40-SST-M8-MD	40	M8	27	16	13.5	13	23
195476	VTT.50-SST-M10-MD	50	M10	30	19	15	17	36

VTT-SST-p-MD

Code	Description	D	d6g	L	d1	l	l2	△
195381	VTT.40-SST-p-M8x20-MD	40	M8	27	16	20	13.5	28
195383	VTT.40-SST-p-M8x30-MD	40	M8	27	16	30	13.5	30
195493	VTT.50-SST-p-M10x30-MD	50	M10	30	19	30	15	47
195495	VTT.50-SST-p-M10x40-MD	50	M10	30	19	40	15	52

LEVER BODY

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.

Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011). The special technopolymer contains additives detectable by means of metal detectors.

Built-in zinc alloy toothed insert for coupling to the metal clamping element.

STANDARD EXECUTIONS

- **ERZ-SST-MD**: AISI 303 stainless steel clamping element with threaded hole and retaining screw. AISI 302 stainless steel return spring.
- **ERZ-SST-p-MD**: AISI 303 stainless steel clamping element with threaded stud and retaining screw. AISI 302 stainless steel return spring. Retaining screw with six-lobed socket to fit TORX®.

FEATURES AND APPLICATIONS

The RAL 5001 blue colour is easily visible in case of accidental food contamination. Furthermore the material additives are metal detectable at a cubic particle size of 5mm per side.

In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.

Particularly suitable for applications in the food and pharmaceutical industries.

Particularly suitable when the lever turning angle is limited owing to lack of space.

The metal teeth of the built-in zinc alloy insert allow the assembly of clamping elements completely made out of metal, which can be easily modified by machining in case of special assembly requirements.

* Registered trademark by TEXTRON INC.

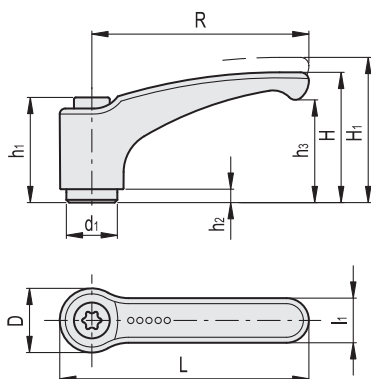
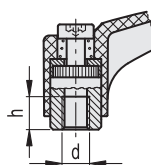
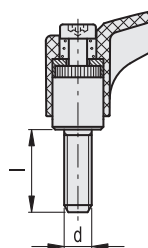


ERGOSTYLE® ELESA Original design

INSTRUCTIONS OF USE

For clamping, lift the lever to disengage the clamping device teeth and bring it back to start position. By releasing the lever, the return spring automatically engages the teeth.

If the lever cannot make a 360° rotation, the clamping element can be easily screwed by means of the six-lobed socket front head screw (after having disengaged the lever).

**ERZ-SST-MD****ERZ-SST-p-MD****ERZ-SST-MD**INOX
STAINLESS
STEEL

Code	Description	R	d	L	D	H	H1	h	h1	h2	h3	d1	l1	Teeth no.	△
198135	ERZ.63 SST-M6-MD	63	M6	73.5	19	38.5	42	10	31	3.5	30	13.5	13.5	24	36
198155	ERZ.78 SST-M8-MD	78	M8	90.5	23	45	50.5	14	36	3.5	35	16	16	26	61

ERZ-SST-p-MDINOX
STAINLESS
STEEL

Code	Description	R	d	L	D	H	H1	h1	h2	h3	d1	l	l1	Teeth no.	△
198429	ERZ.63 SST-p-M6x16-MD	63	M6	73.5	19	38.5	42	31	3.5	30	13.5	16	13.5	24	40
198433	ERZ.63 SST-p-M6x25-MD	63	M6	73.5	19	38.5	42	31	3.5	30	13.5	25	13.5	24	42
198673	ERZ.78 SST-p-M8x20-MD	78	M8	90.5	23	45	50.5	36	3.5	35	16	20	16	26	69
198679	ERZ.78 SST-p-M8x40-MD	78	M8	90.5	23	45	50.5	36	3.5	35	16	40	16	26	80



MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.
Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).
The special technopolymer contains additives detectable by means of metal detectors.

STANDARD EXECUTION

AISI 303 stainless steel bosses, threaded holes.

FEATURES AND APPLICATIONS

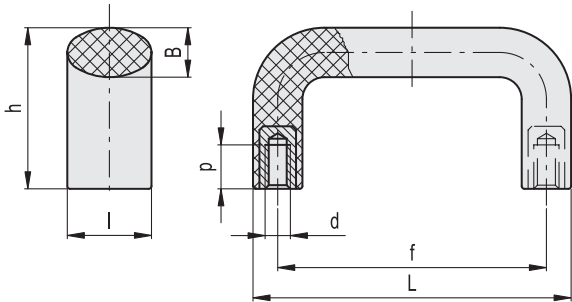
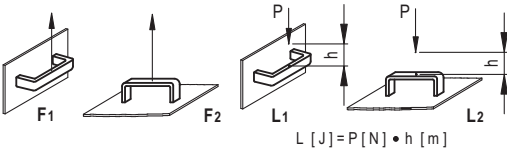
The RAL 5001 blue colour is easily visible in case of accidental food contamination. Furthermore the material additives are metal detectable at a cubic particle size of 5mm per side.
In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.
Particularly suitable for applications in the food and pharmaceutical industries.

TECHNICAL DATA

Tensile stress and impact strength: F1, F2, L1 and L2 values reported in the table are the result of breaking tests carried out with the appropriate dynamometric equipment under the test conditions shown in the figure with ambient temperature.



ELESA Original design



Code	Description	L	f	d6H	h	B	l	p	F1 [N]	F2 [N]	L1 [J]	L2 [J]	⚖
199113	M.643/140-117-SST-M8-MD	134	117±0.5	M8	49	15	25	13	2500	4500	8	12	67
199153	M.643/200-SST-M8-MD	196	179±1	M8	57	16	27	13	2000	3000	11	15	130



MATERIAL
Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.
Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).
The special technopolymer contains additives detectable by means of metal detectors.

STANDARD EXECUTION
AISI 303 stainless steel boss, threaded blind hole.

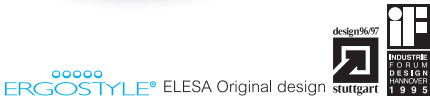
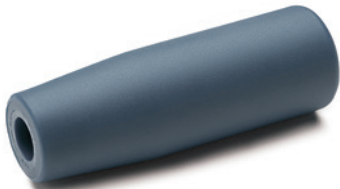
FEATURES AND APPLICATIONS
The RAL 5001 blue colour is easily visible in case of accidental food contamination. Furthermore the material additives are metal detectable at a cubic particle size of 5mm per side.
In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.
Particularly suitable for applications in the food and pharmaceutical industries.



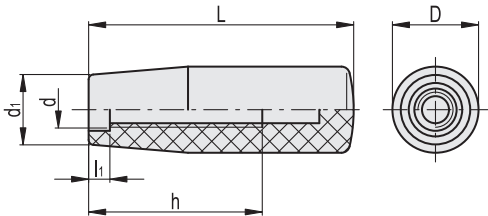
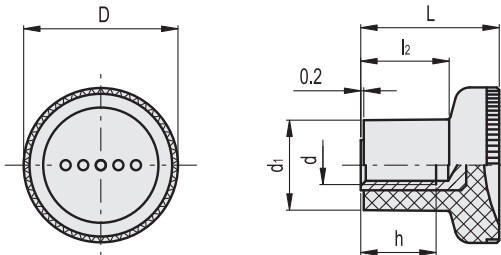
MATERIAL
Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.
Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).
The special technopolymer contains additives detectable by means of metal detectors.

MOUNTING
Threaded blind hole.

FEATURES AND APPLICATIONS
The RAL 5001 blue colour is easily visible in case of accidental food contamination. Furthermore the material additives are metal detectable at a cubic particle size of 5mm per side.
In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.
Particularly suitable for applications in the food and pharmaceutical industries.



ELES Original design



Code	Description	D	L	d6H	d1	h	l2	Δ
199416	EKK.21-SST M5-MD	21	18	M5	12.5	10	10.5	7
199436	EKK.31-SST M8-MD	31	27	M8	18.5	15	17	20

Code	Description	D	L	d	d1	h	l1	Δ
199307	I.780/80-M10-MD	26.5	80	M10	21	55	7	45

MATERIAL

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 5001 blue colour, matte finish.
Produced from FDA compliant raw material (FDA CFR.21 and EU 10/2011).
The special technopolymer contains additives detectable by means of metal detectors.

ROTATING PIN

AISI 303 stainless steel.

STANDARD EXECUTION

Pass-through holes for countersunk head screws.

FEATURES AND APPLICATIONS

The RAL 5001 blue colour is easily visible in case of accidental food contamination. Furthermore the material additives are metal detectable at a cubic particle size of 5mm per side.

In order to improve the detection, the metal detector calibration must take into account the food/substance type at risk of contamination considering the moisture contained in it.

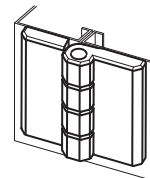
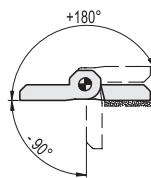
Particularly suitable for applications in the food and pharmaceutical industries.


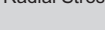
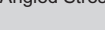
ROTATION ANGLE (APPROXIMATE VALUE)

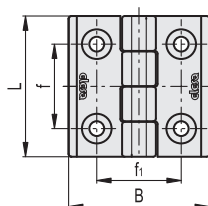
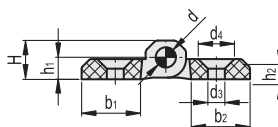
Max 270° (-90° and +180° being 0° the condition where the two interconnected surfaces are on the same plane).

Do not exceed the rotation angle limit so as not to prejudice the hinge mechanical performance.

To choose the convenient type and the right number of hinges for your application, see the Guidelines.

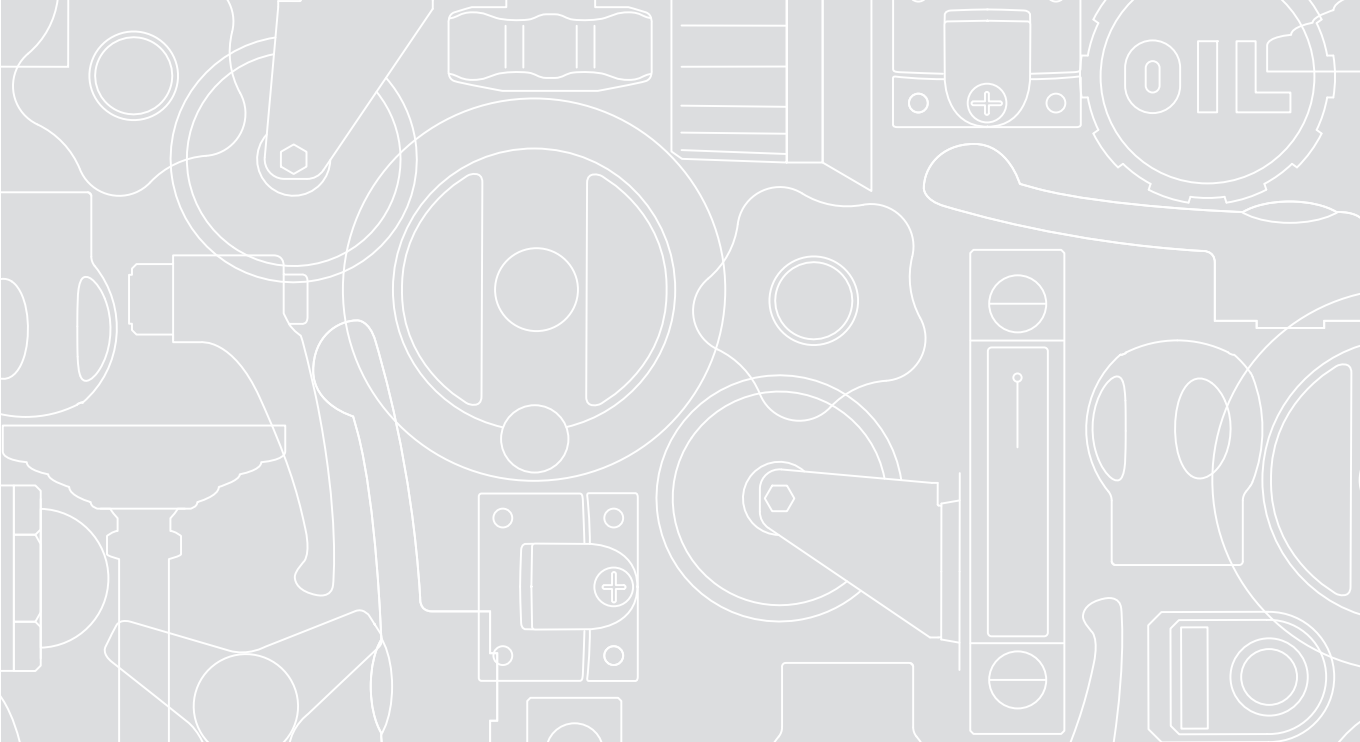


Resistance tests	Axial Stress		Radial Stress		90° Angled Stress	
						
Description	Maximum working load Ea [N]	Load at breakage Ra [N]	Maximum working load Er [N]	Load at breakage Rr [N]	Maximum working load E90 [N]	Load at breakage R90 [N]
CFM.40 SH-5-MD	50	1100	100	1800	100	950
CFM.50 SH-6-MD	50	1900	100	3000	100	1200



Code	Description	L	B	f±0.25	f1±0.25	H	h1	h2	b1	b2	d	d3	d4	C# [Nm]	⚖
197511	CFM.40 SH-5-MD	40	40	25	25	9	5.5	5	14	14	4	5.5	10.5	2	14
197611	CFM.50 SH-6-MD	50	50	30	30	11.5	6.5	6	18	18	6	6.5	12.5	5	30

Suggested tightening torque for assembly screws.



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