

**ECOCAM**

Original accessories and spare parts

Made in Germany

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ECOCAM CNC - Inh. R. Skowron

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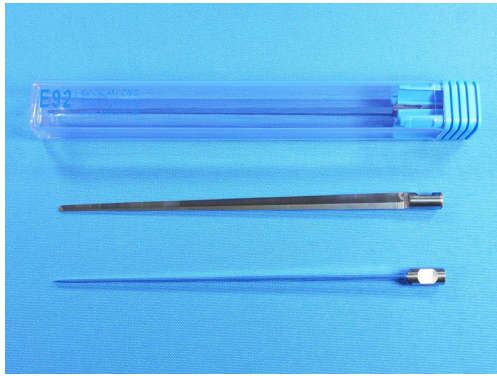
CONTENT	PAGE
1. ECOCAM Solid carbide blades	5
1.1 Carbide blades for module EOT-2 / EOT-3 / EOT-4	5
1.2 Carbide blades for module TCM-3 / TCM-4 / TCM-5	9
2. Gliding elements and spring sets for module TCM-3 / TCM-4 / TCM-5	10
2.1 Teflon gliding elements for module TCM-3 / TCM-4 / TCM-5	10
2.2 Spring sets for different contact pressure forces	13
3. Tool holder and creasing wheels for module TCT-1 / TCT-2 / TCT-3 / TVM-1	18
3.1 Tool holder type KR for creasing wheels with ball bearings	18
3.2 Overview of creasing wheels	19
3.3 Creasing wheels for cardboard - Round top for fine materials	20
3.4 Creasing wheels for cardboard - Flat top for intensive creasing lines	21
3.5 Creasing wheels for corrugated cardboard - Tangential round top	22
3.6 Creasing wheel for polypropylene - Sharp geometry for hard materials	22
4. ECOCAM cutting mat EC-4	23
4.1 Cutting mat ECOCAM EC-4 for vacuum tables	23
5. ECOCAM PLOTBIT - Spring loaded plotter pen for CNC routers	24
5.1 Mounting examples	25
5.2 Diagram pressing force / immersion depth	26
5.3 Dimensional drawings	27
5.4 Replacement large capacity refills	30
6. Spare parts for ECOCAM tangential modules	31
6.1 Spare parts for module EOT-3 / EOT-4	31
6.2 Spare parts for module EOT-2	31
6.3 Spare parts for module TCM-4 / TCM-5	32
6.4 Spare parts for module TCM-3	32

7.	Cable sockets and crimp contacts	35
7.1	Cable sockets and crimp contacts for module EOT-4 / TCM-5 / TCT-3	35
7.2	Cable sockets and crimp contacts for module EOT-3 / TCM-4 / TCT-2	36
7.3	Stripping dimensions for cable assembly	37
7.4	Technical data of the crimp contacts	38
8.	ECOCAM parallel crimping tool T30 with locator	39

1. ECOCAM Solid carbide blades**1.1 Carbide blades for module EOT-2 / EOT-3 / EOT-4**

Blade	Art. No.	Cutting edges	Length cutting edge	Total length	Typical applications
E12	220012	2	12 mm	25 mm	universal blade for various materials as cardboard, gasket material, foam rubber, cork
E18	220025	1	13,5 mm	26,5 mm	universal blade for various materials as cardboard, gasket material, foam rubber, cork
E25	220025	1	25 mm	39 mm	universal blade for various materials as cardboard, gasket material, foam rubber, cork
E28	220028	1	30 mm	45 mm	universal blade for various materials as cardboard, gasket material, foam rubber, cork
E85	220085	1	50 mm	65 mm	special blade for EOT module; e.g. for soft polyurethane foam panels
E87	220087	1	70 mm	83 mm	special blade for EOT module; e.g. for soft polyurethane foam panels
E92	220092	1	120 mm	133 mm	special blade for EOT module; e.g. for soft polyurethane foam panels
W38	220100	1	35 mm	50 mm	special blade for EOT module with wave cut geometry; e.g. for soft polyurethane foam panels
W60	220110	1	58 mm	73 mm	special blade for EOT module with wave cut geometry; e.g. for soft polyurethane foam panels

Art. No.	Description	
220012	E12 - Universal blade for various materials, as cardboard, gasket material, foam rubber, cork, useable on both sides Length of cutting edge : 12 mm Total length : 25 mm Cutting edges : 2 Type : 6mm h7 / Weldon	
220018	E18 - Universal blade for various materials, as cardboard, gasket material, foam rubber, cork, one-sided blade for fine lines Length of cutting edge : 13,5 mm Total length : 26,5 mm Cutting edges : 1 Type : 6mm h7 / Weldon	
220025	E25 - Universal blade for various materials, as cardboard, gasket material, foam rubber, cork, one-sided blade for fine lines Length of cutting edge : 25 mm Total length : 39 mm Cutting edges : 1 Type : 6mm h7 / Weldon	
220028	E28 - Universal blade for various materials, as cardboard, gasket material, foam rubber, cork, one-sided blade for fine lines Length of cutting edge : 30 mm Total length : 45 mm Cutting edges : 1 Type : 6mm h7 / Weldon	

Art. No.	Description	
220085	E85 - Special blade for EOT module; e.g. for soft polyurethane foam panels Length of cutting edge : 50 mm Total length : 65 mm Cutting edges : 1 Type : 6mm h7 / Weldon	
220087	E87 - Special blade for EOT module; e.g. for soft polyurethane foam panels Length of cutting edge : 70 mm Total length : 83 mm Cutting edges : 1 Type : 6mm h7 / Weldon	
220092	E92 - Special blade for EOT module; e.g. for soft polyurethane foam panels Length of cutting edge : 120 mm Total length : 133 mm Cutting edges : 1 Type : 6mm h7 / Weldon	
220100	W38 - Special blade for EOT module with wave cut geometry; e.g. for soft polyurethane foam panels Length of cutting edge : 35 mm Total length : 50 mm Cutting edges : 1 Type : 6mm h7 / Weldon	

Art. No.	Description	
220110	W60 - Special blade for EOT module with wave cut geometry; e.g. for soft polyurethane foam panels Length of cutting edge : 58 mm Total length : 73 mm Cutting edges : 1 Type : 6mm h7 / Weldon	

1.2 Carbide blades for module TCM-3 / TCM-4 / TCM-5

Blade	Art. No.	Cutting edges	Length cutting edge	Total length	Typical applications
E30	220030	1	2,5 mm	25 mm	special blade for TCM; wedge blade 30 degrees for normal foils and writings
E50	220050	1	3,5 mm	25 mm	special blade für TCM; wedge blade 50 degrees for flock textile foils, felt, cardboard
E70	220070	1	8 mm	25 mm	special blade für TCM; wedge blade 70 degrees for flock textile foils, felt, cardboard

Art. No.	Description	
220030	E30 - Special blade for TCM module; wedge blade 30 degrees for normal foils and writings Length of cutting edge : 2,5 mm Total length : 25 mm Cutting edges : 1 Type : 6 mm h7 / Weldon	
220050	E50 - Special blade for TCM module; wedge blade 50 degrees for flock textile foils, felt, cardboard Length of cutting edge : 3,5 mm Total length : 25 mm Cutting edges : 1 Type : 6 mm h7 / Weldon	
220070	E70 - Special blade for TCM module; wedge blade 70 degrees for flock textile foils, felt, cardboard, rubber Length of cutting edge : 8 mm Total length : 25 mm Cutting edges : 1 Type : 6 mm h7 / Weldon	

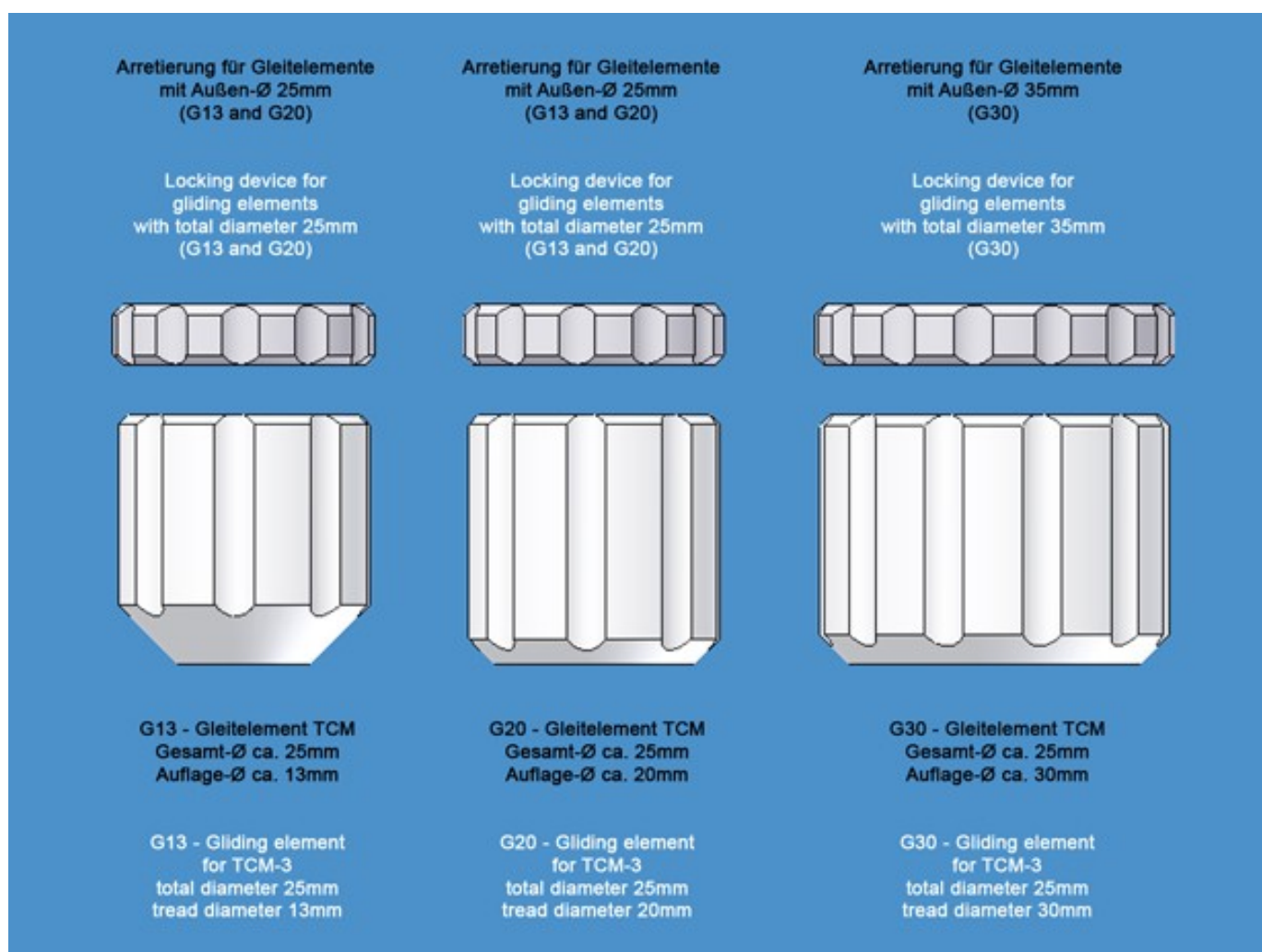
2. Gliding elements and spring sets for module TCM-3 / TCM-4 / TCM-5

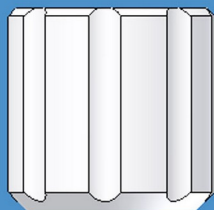
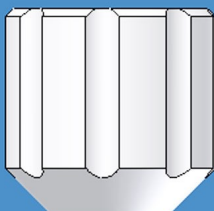
2.1 Teflon gliding elements for module TCM-3 / TCM-4 / TCM-5

The gliding element of the TCM module can be changed for different application needs. Cutting soft materials in particular requires the use of larger contact surfaces.

Gliding elements with tread diameters from 13mm to 30mm are available:

- G13: tread diameter 13mm (Art. 250011) to be used with locking device Art. 250013
- G20: tread diameter 20mm (Art. 250010) to be used with locking device Art. 250013
- G30: tread diameter 30mm (Art. 250012) to be used with locking device Art. 250014



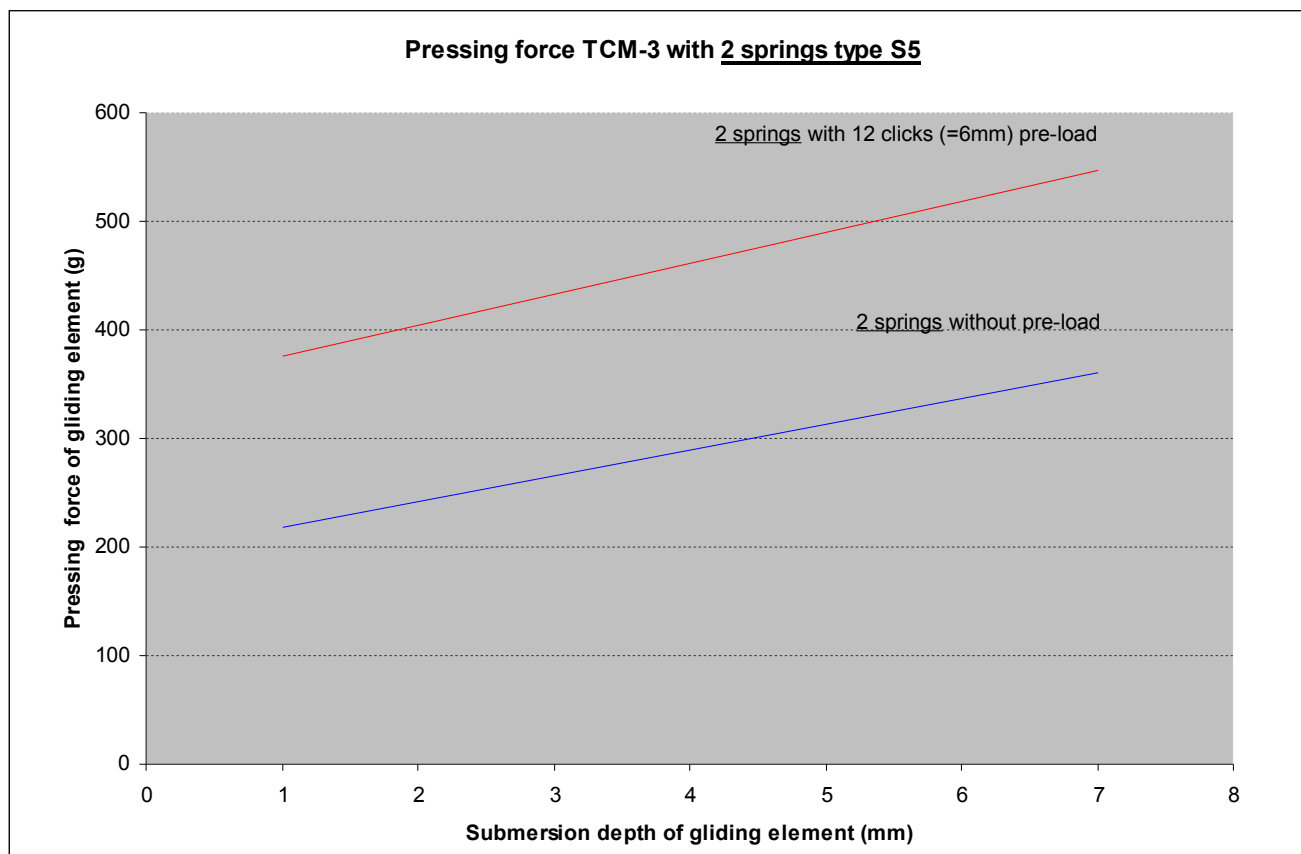
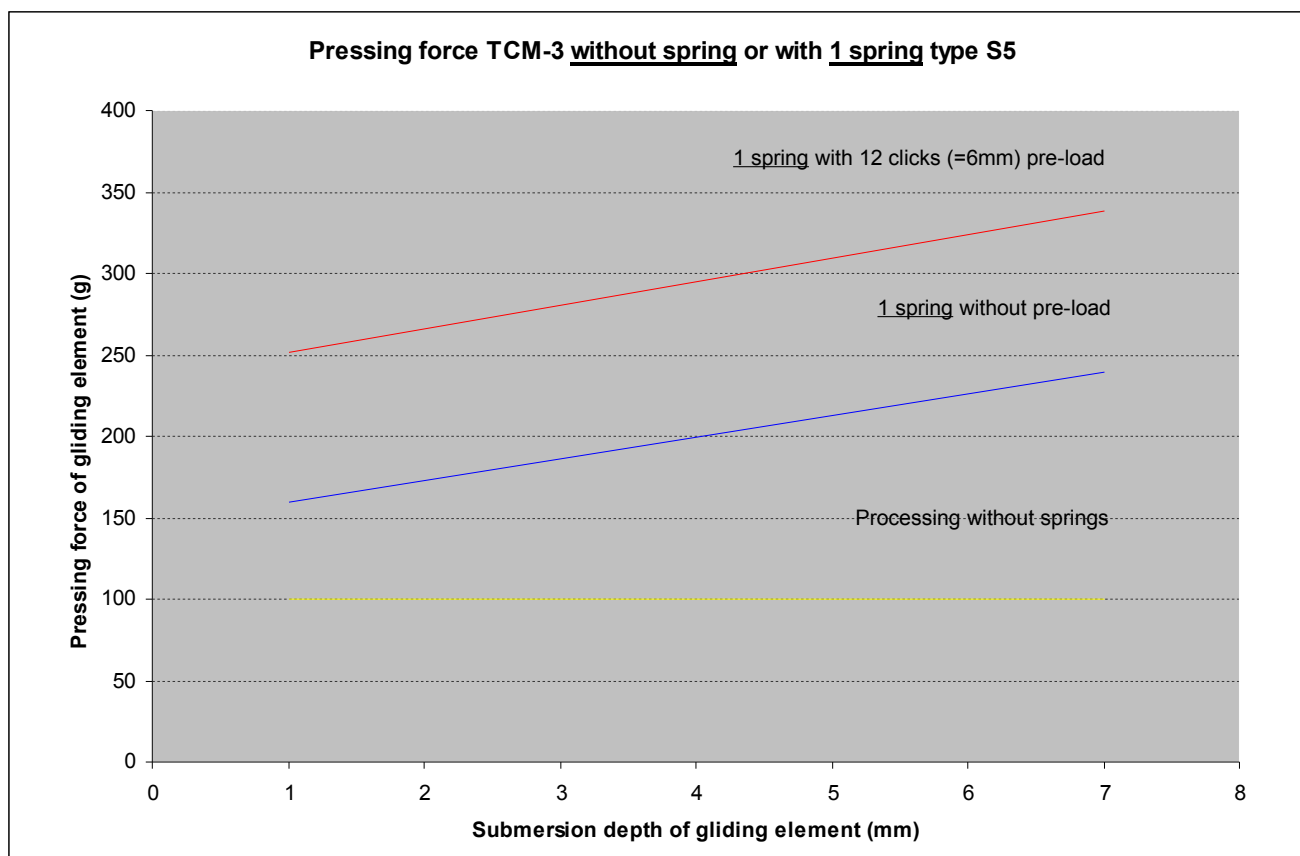
Art. No.	Description	
250010	Gliding element G20 Total diameter : 25mm Tread diameter : 20mm Material : Teflon	 G20 - Gleitelement TCM Gesamt-Ø ca. 25mm Auflage-Ø ca. 20mm G20 - Gliding element for TCM-3 total diameter 25mm tread diameter 20mm
250011	Gliding element G13 Total diameter : 25mm Tread diameter : 13mm Material : Teflon	 G13 - Gleitelement TCM Gesamt-Ø ca. 25mm Auflage-Ø ca. 13mm G13 - Gliding element for TCM-3 total diameter 25mm tread diameter 13mm
250012	Gliding element G30 Total diameter : 35mm Tread diameter : 30mm Material : Teflon	 G30 - Gleitelement TCM Gesamt-Ø ca. 35mm Auflage-Ø ca. 30mm G30 - Gliding element for TCM-3 total diameter 35mm tread diameter 30mm
250013	Locking device for gliding elements with total diameter 25mm Compatible with gliding elements : G20 - Art.-No. 250010 G13 - Art.-No. 250011	Arretierung für Gleitelemente mit Außen-Ø 25mm (G13 and G20)  Locking device for gliding elements with total diameter 25mm (G13 and G20)

Art. No.	Description	
250014	Locking device for gliding elements with total diameter 35mm Compatible with gliding elements : G30 - Art.-No. 250012	Arretierung für Gleitelemente mit Außen-Ø 35mm (G30)  Locking device for gliding elements with total diameter 35mm (G30)

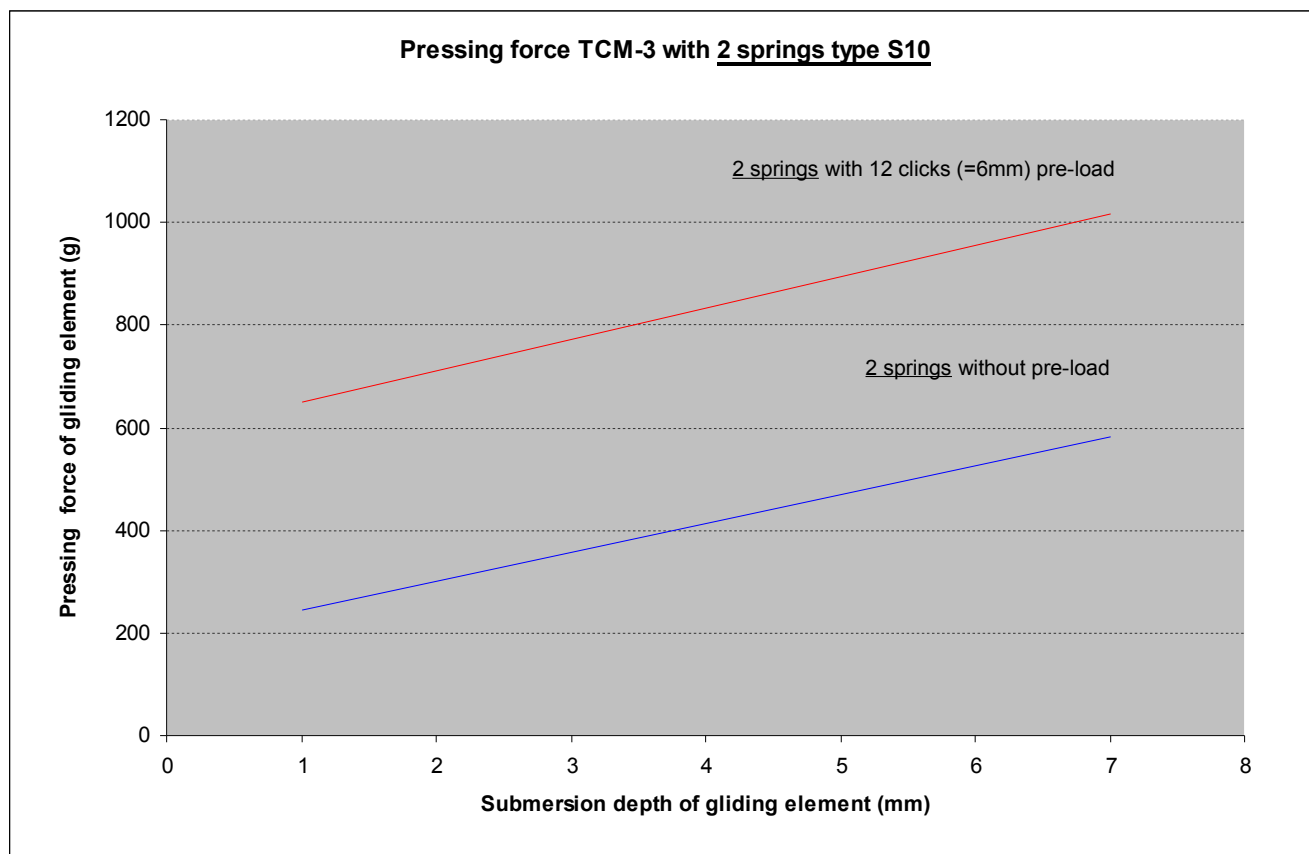
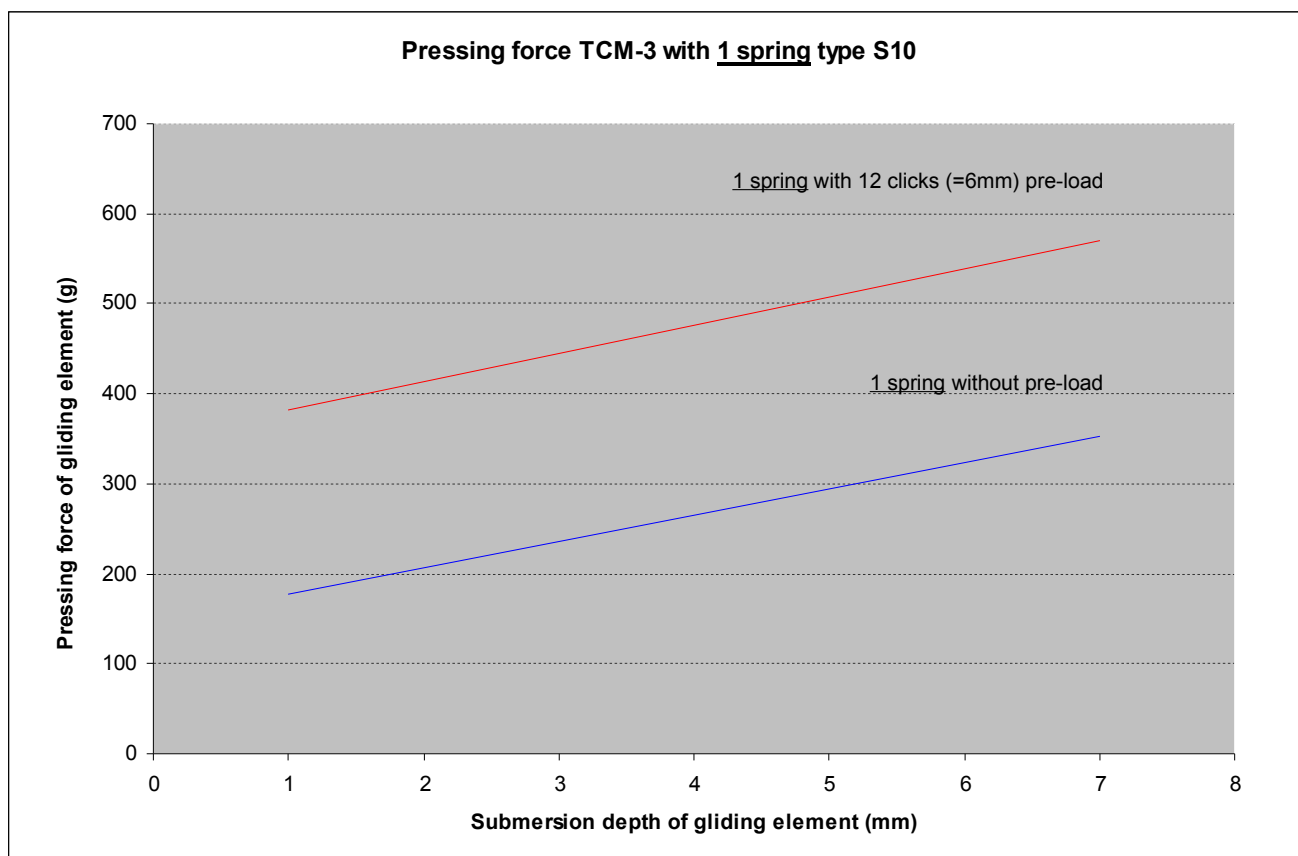
2.2 Spring sets for different contact pressure forces

Art. No.	Description	
250020	S5 - Spring set; pressing force up to approx. 5N / 500g	
250021	S10 - Spring set; pressing force up to approx. 10N / 1.000g	
250022	S18 - Spring set; pressing force up to approx. 18N / 1.800g	
250023	S28 - Spring set; pressing force up to approx. 28N / 2.800g	

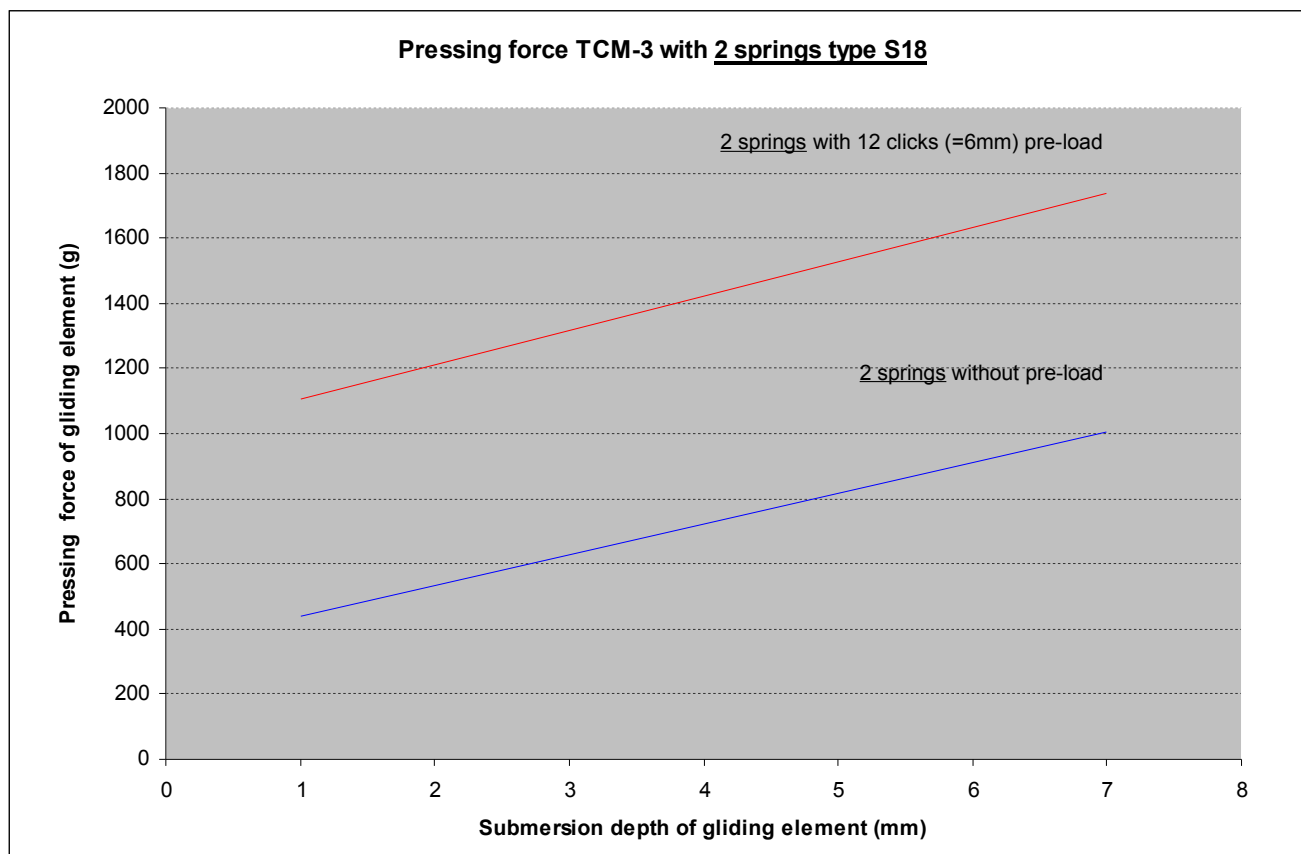
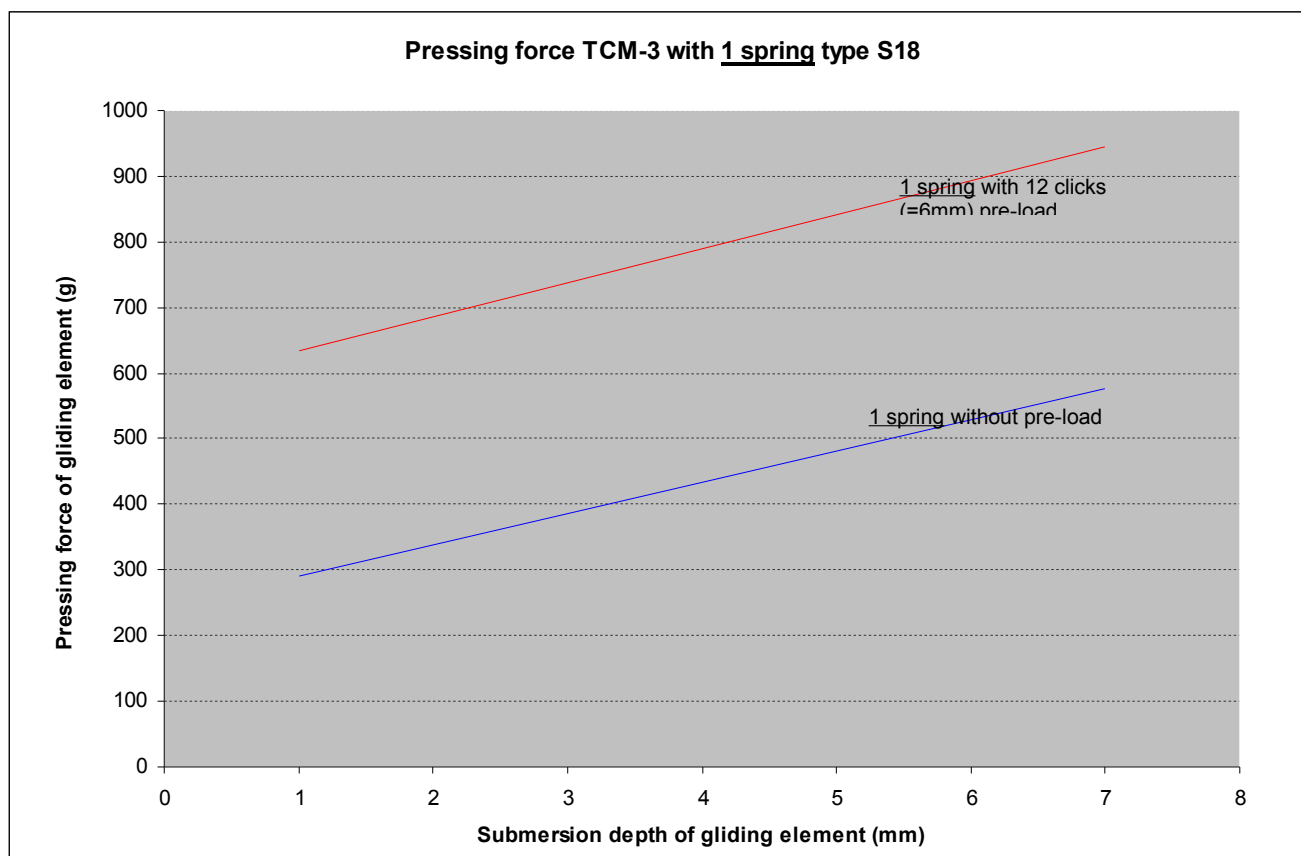
2.2.1 Pressing forces spring set S5



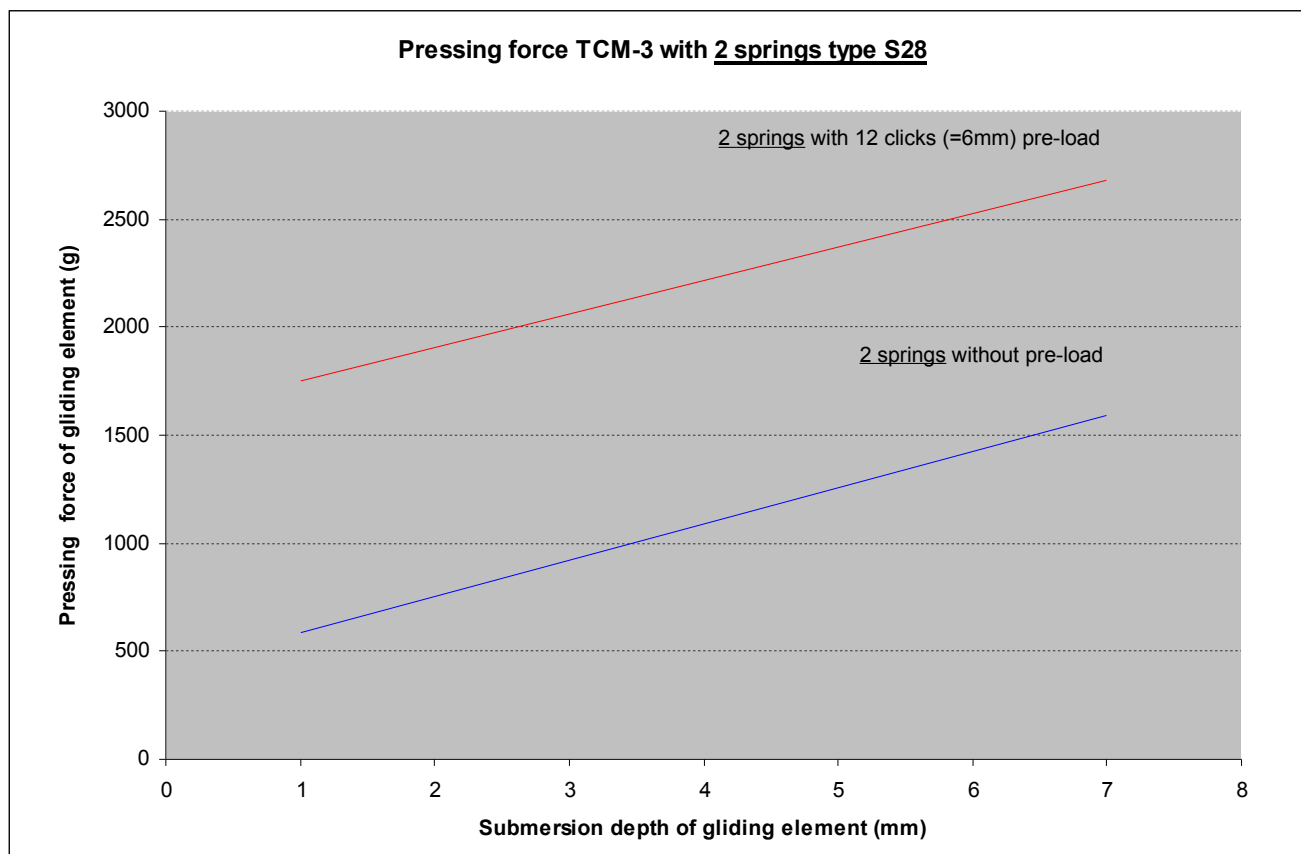
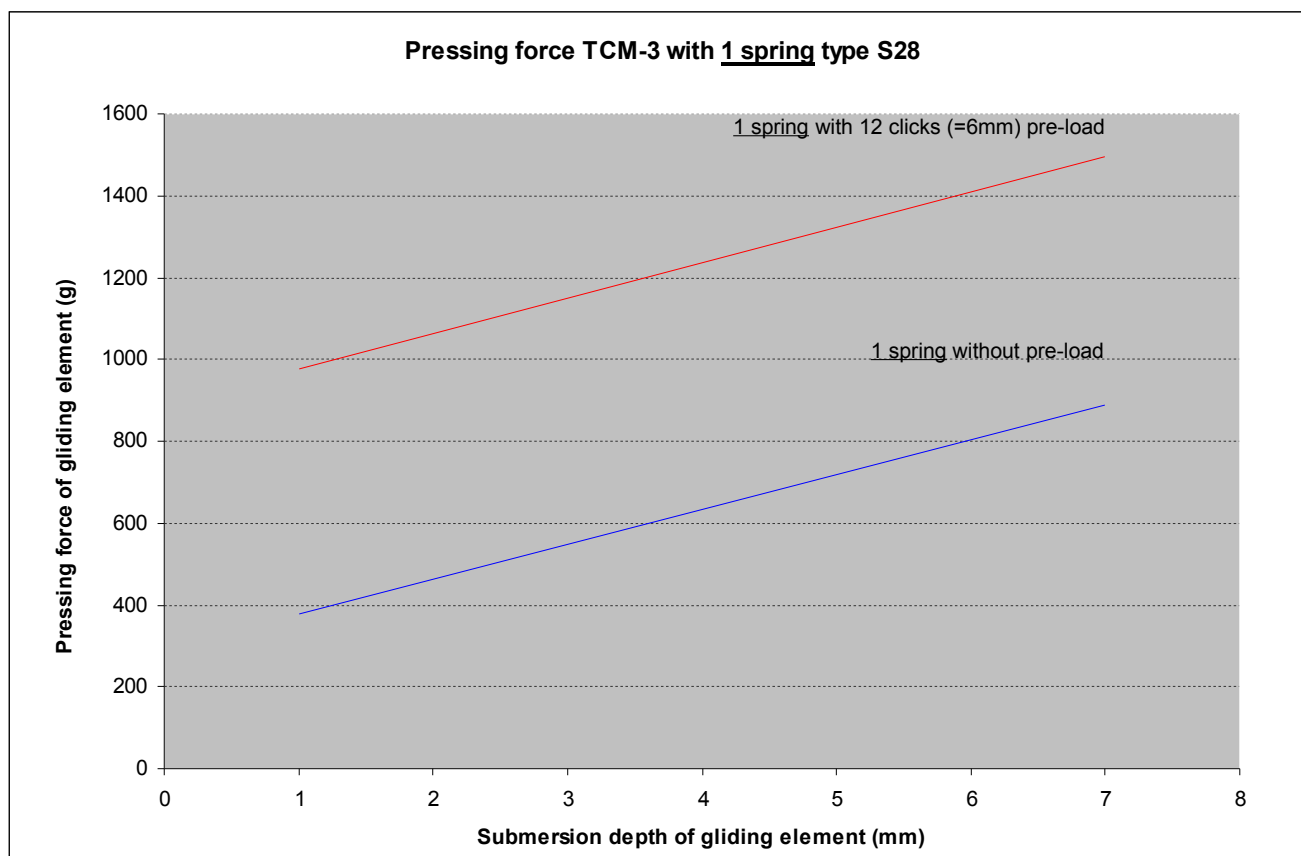
2.2.2 Pressing forces spring set S10



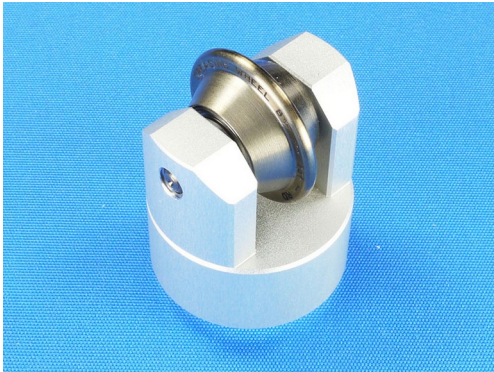
2.2.3 Pressing forces spring set S18



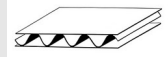
2.2.4 Pressing forces spring set S28



3. Tool holder and creasing wheels for module TCT-1 / TCT-2 / TCT-3 / TVM-1**3.1 Tool holder type KR for creasing wheels with ball bearings**

Art. No.	Description	
260010	Tool holder type KR for creasing wheels with ball bearings (image includes creasing wheel)	

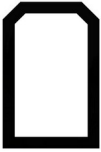
3.2 Overview of creasing wheels

Material	Geometry	Size	Article	Art. No.
Cardboard	 round top for fine materials	2 pt.	B11	260105
		3 pt.	B13	260115
		4 pt.	B15	260125
		6 pt.	B17	260145
		8 pt.	B19	260155
	 flat top for intensive creasing lines	2 pt.	B12	260110
		3 pt.	B14	260120
		4 pt.	B16	260130
		6 pt.	B18	260140
		8 pt.	B20	260150
Corrugated cardboard 	 tangential round top	E + F flute	B22	260210
		B-flute	B24	260220
		C-flute	B26	260230
Poly-propylene	 sharp geometry for hard materials	Poly-propylene 0,5 mm	B32	260310

3.3 Creasing wheels for cardboard - Round top for fine materials

Material	Geometry	Size	Article	Art. No.	
Card-board	 round top for fine materials	2 pt.	B11	260105	
		3 pt.	B13	260115	
		4 pt.	B15	260125	
		6 pt.	B17	260145	
		8 pt.	B19	260155	

3.4 Creasing wheels for cardboard - Flat top for intensive creasing lines

Material	Geometry	Size	Article	Art. No.	
Card-board	 flat top for intensive creasing lines	2 pt.	B12	260110	
		3 pt.	B14	260120	
		4 pt.	B16	260130	
		6 pt.	B18	260140	
		8 pt.	B20	260150	

3.5 Creasing wheels for corrugated cardboard - Tangential round top

Material	Geometry	Size	Article	Art. No.	
Corru- gated card- board 	 tangential round top	E + F flute	B22	260210	
		B flute	B24	260220	
		C flute	B26	260230	

3.6 Creasing wheel for polypropylene - Sharp geometry for hard materials

Material	Geometry	Size	Article	Art. No.	
PP	 sharp geometry for hard materials	Poly- propylene 0,5mm	B32	260310	

4. ECOCAM cutting mat EC-4**4.1 Cutting mat EC-4 for vacuum tables**

Art. No.	Description
230200	ECOCAM EC4 Long life cutting mat EC-4 for vacuum tables Material thickness : 4mm Roll width : 2000mm Colour : grey •Very high air permeability •High compression hardness •Free from abrasive materials •Useable on both sides



5. ECOCAM PLOTBIT - Spring loaded plotter pen for CNC routers

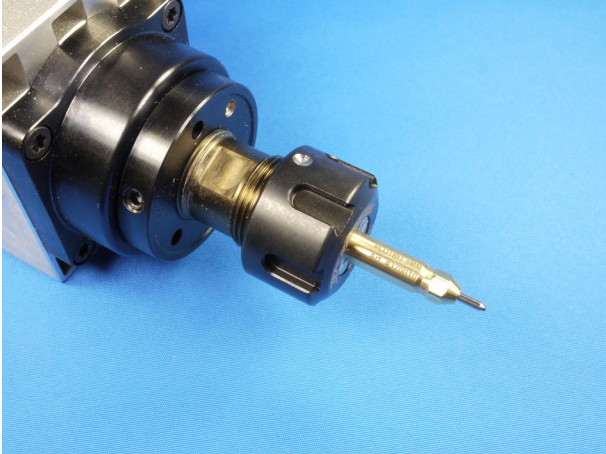
- Spring loaded plotter pen for drawing applications
- Height compensation up to **5mm**
- Length **65mm**
- Progressive spring design, variable pressing force
- Large capacity refills
- Available in different colors and line widths
- Available in various sizes



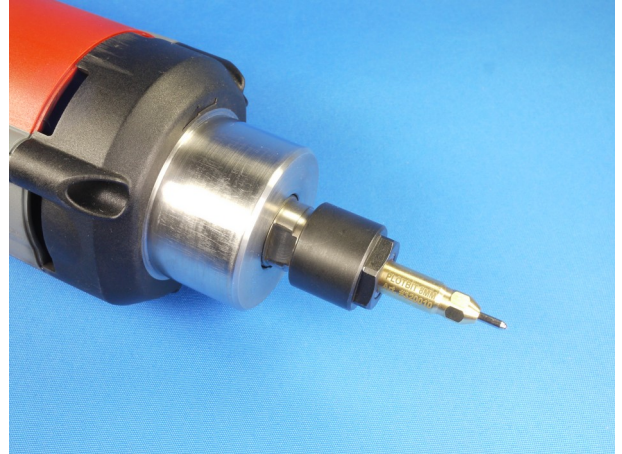
Best.-Nr.	Bezeichnung	
#320010	PLOTBIT - Diameter 8 mm Case length without refill : 65 mm Case length with refill : 71,5 mm Spring travel : 5mm	
# 320020	PLOTBIT - Diameter 10 mm Case length without refill : 65 mm Case length with refill : 71,5 mm Spring travel : 5mm	
# 320030	PLOTBIT - Diameter 3/8 inch (≈9,52 mm) Case length without refill : 65 mm Case length with refill : 71,5 mm Spring travel : 5mm	

5.1 Mounting examples

ER20 collet of a milling motor



collet of a router



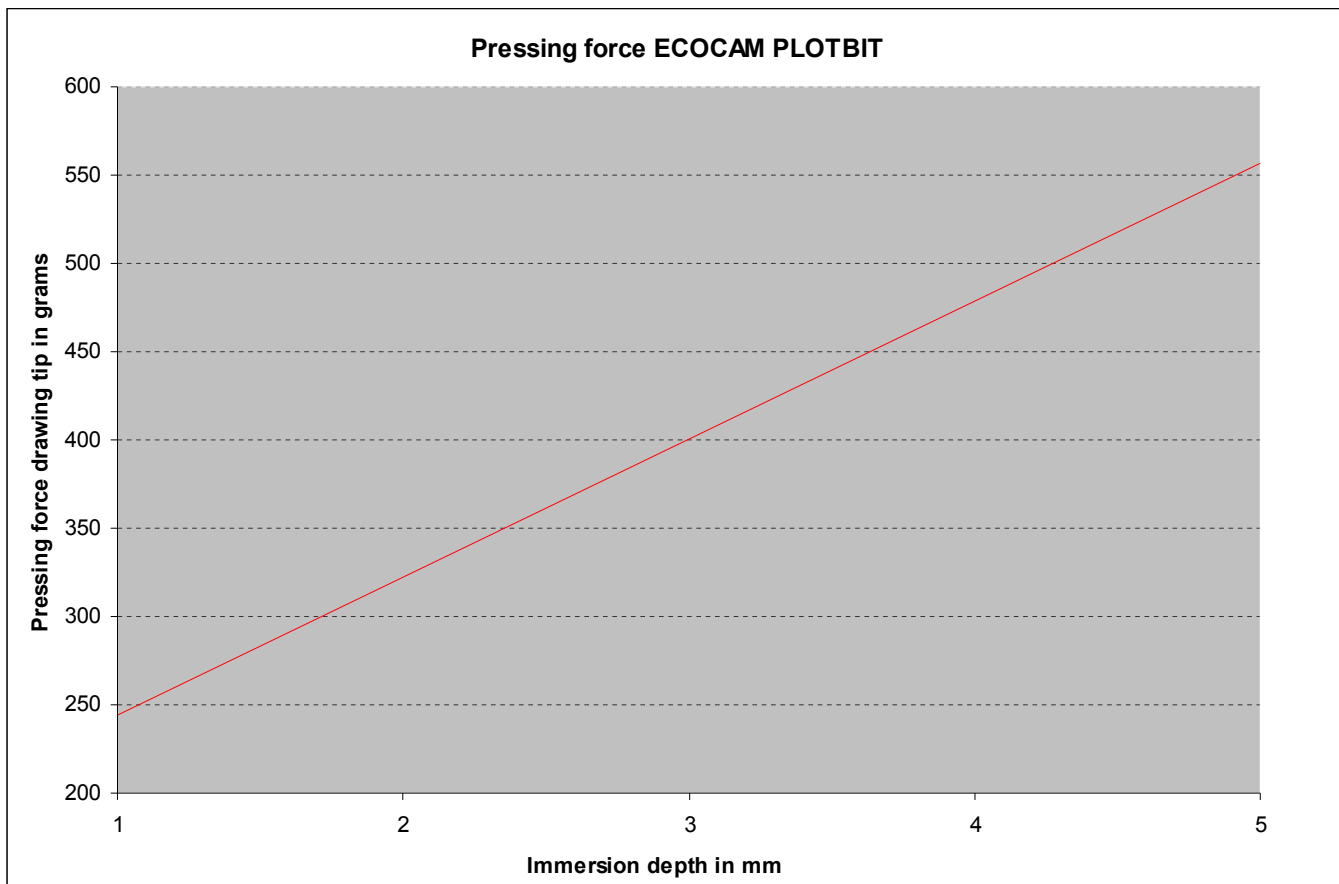
SK40 tool holder



VDI30 tool holder



5.2 Diagram pressing force / immersion depth



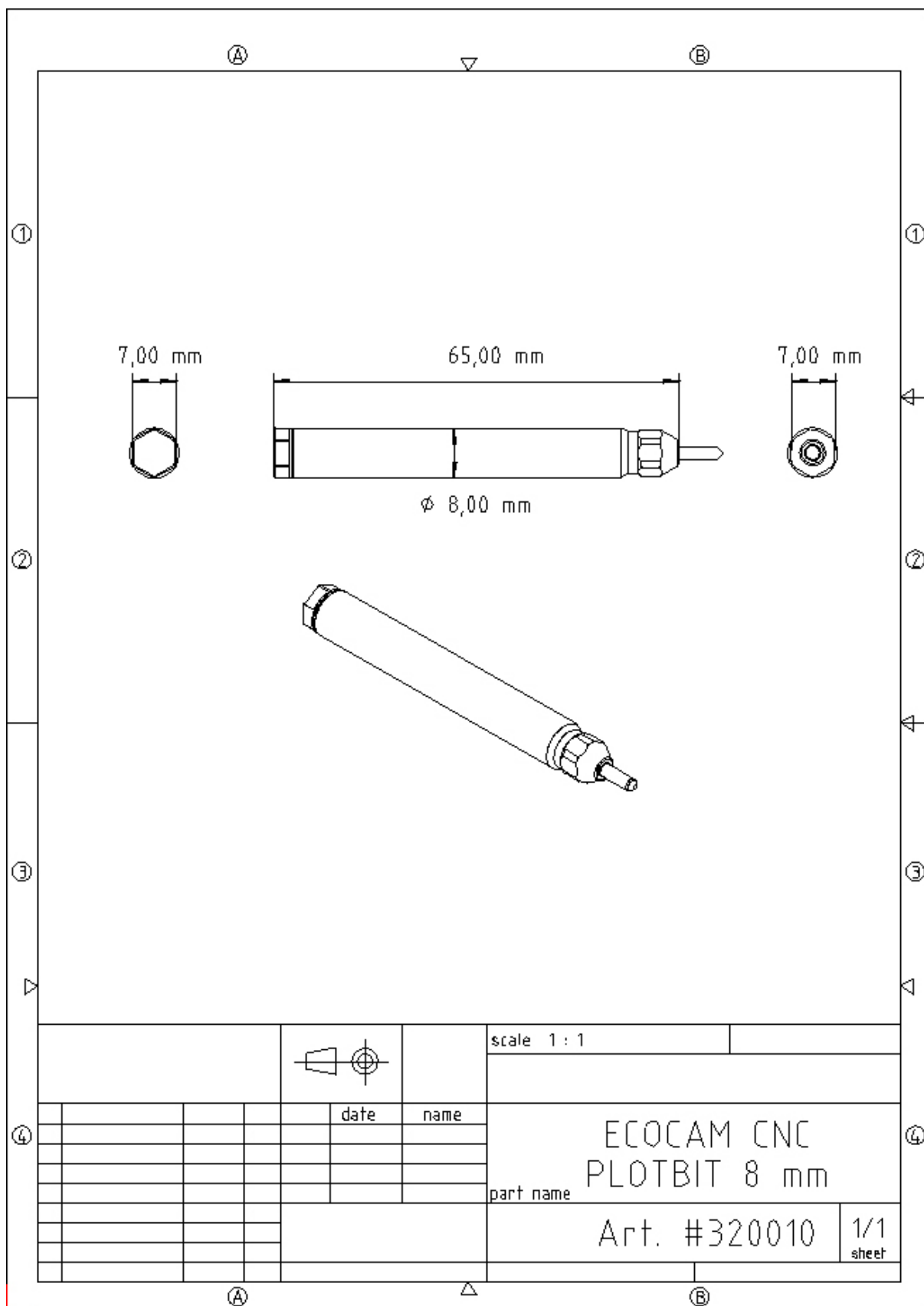
Warning !



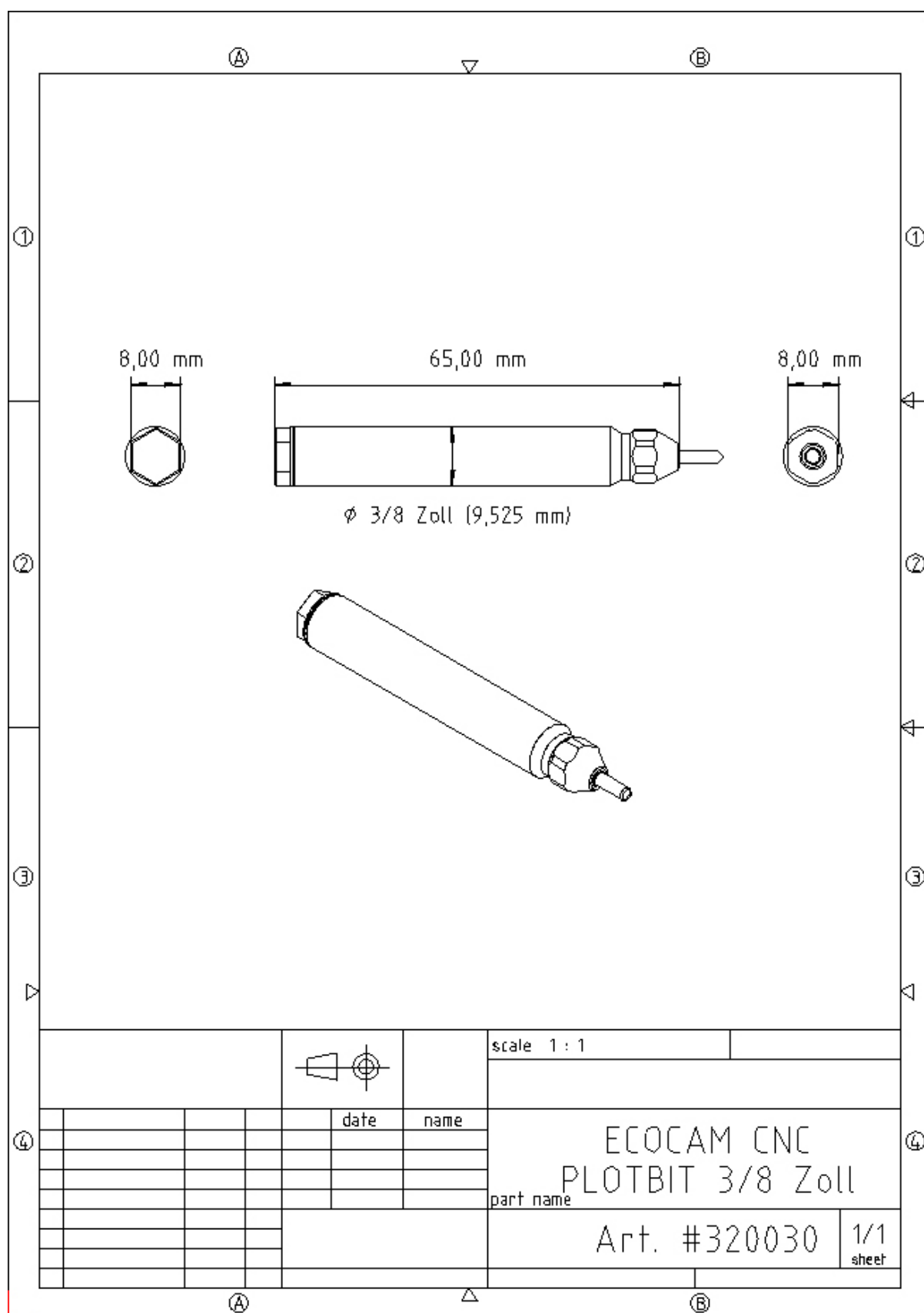
The immersion depth of the drawing tip must never exceed the maximum spring travel of 5 mm. Otherwise, drawing paper or board, the drawing tip, the PLOTBIT, the drawing pad, the vacuum table or the milling spindle could be damaged.

5.3 Dimensional drawings

5.3.1 Dimensional drawing PLOTBIT 8 mm - #320010



5.3.3 Dimensional drawing PLOTBIT 3/8 Zoll (≈9,52 mm)



5.4 Replacement large capacity refills

Art. No.	Description	
320110	Large capacity refill for ECOCAM PLOTBIT Color : BLUE Tip size : FINE	
320120	Large capacity refill for ECOCAM PLOTBIT Color : BLUE Tip size : MEDIUM	
320130	Large capacity refill for ECOCAM PLOTBIT Colour : BLUE Tip size : Broad	
320140	Large capacity refill for ECOCAM PLOTBIT Color : BLACK Tip size : FINE	
320150	Large capacity refill for ECOCAM PLOTBIT Color : BLACK Tip size : MEDIUM	
320160	Large capacity refill for ECOCAM PLOTBIT Color : BLACK Tip size : BROAD	

6. Spare parts for ECOCAM tangential modules**6.1 Spare parts for module EOT-3 / EOT-4**

Best.-Nr.	Bezeichnung
230301	Guidance fork for oscillation axis
240311	Oscillation axis, hardened
240320	Oscillation insert with ball bearing (working stroke 1mm – 5mm)
240331	Compound slide bearing for tangential axis
240410	Electronic module with reference position electronics and sensor
240420	Sensor for electronics module, without cable
240501	Cooler fan DC 5V for motor cooler
240600	DC oscillation motor
300550	Pin crimp contact for housing connector (EOT-4 only), contact diameter 1,0mm, set with 15 pieces, 0,14 - 0,25mm ² / AWG 26 -24
300600	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,14 - 0,25mm ² / AWG 26 -24
300700	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,35 - 0,5mm ² / AWG 22-20
300800	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,75 - 1,0mm ² / AWG18

6.2 Spare parts for module EOT-2

Best.-Nr.	Bezeichnung
230300	Guidance fork V.2 for oscillation axis
240310	Oscillation axis, hardened
240320	Oscillation insert with ball bearing (working stroke 1mm – 5mm)
240330	Compound slide bearing for tangential axis (set of 2 pcs.)
240400	Electronic module with reference position electronics and sensor
240500	Cooler fan DC 12V for motor cooler
240600	DC oscillation motor

6.3 Spare parts for module TCM-4 / TCM-5

Best.-Nr.	Bezeichnung
230301	Guidance fork for oscillation axis
240315	Tangentialachse
240331	Compound slide bearing for tangential axis
240410	Electronic module with reference position electronics and sensor
240420	Sensor for electronics module, without cable
250010	Gliding element G20, total diameter 25mm, tread diameter 20mm
250011	Gliding element G13, total diameter 25mm, tread diameter 13mm
250012	Gliding element G30, total diameter 35mm, tread diameter 30mm
250013	Locking device for gliding elements with total diameter 25mm (G13 and G20)
250014	Locking device for gliding elements with total diameter 35mm (G30)
250020	S5 - Spring set; pressing force up to approx. 5N / 500g
250021	S10 - Spring set; pressing force up to approx. 10N / 1.000g
250022	S18 - Spring set; pressing force up to approx. 18N / 1.800g
250023	S28 - Spring set; pressing force up to approx. 28N / 2.800g
300550	Pin crimp contact for housing connector (TCM-5 only), contact diameter 1,0mm, set with 15 pieces, 0,14 - 0,25mm ² / AWG 26 -24
300600	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,14 - 0,25mm ² / AWG 26 -24
300700	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,35 - 0,5mm ² / AWG 22-20
300800	Pin crimp contact for housing connector contact diameter 1,5mm, set with 10 pieces, 0,75 - 1,0mm ² / AWG18

6.4 Spare parts for module TCM-3

Best.-Nr.	Bezeichnung
240330	Compound slide bearing for tangential axis (set of 2 pcs.)
240400	Electronic module with reference position electronics and sensor
250010	Gliding element G20, total diameter 25mm, tread diameter 20mm
250011	Gliding element G13, total diameter 25mm, tread diameter 13mm
250012	Gliding element G30, total diameter 35mm, tread diameter 30mm
250013	Locking device for gliding elements with total diameter 25mm (G13 and G20)
250014	Locking device for gliding elements with total diameter 35mm (G30)
250020	S5 - Spring set; pressing force up to approx. 5N / 500g
250021	S10 - Spring set; pressing force up to approx. 10N / 1.000g
250022	S18 - Spring set; pressing force up to approx. 18N / 1.800g
250023	S28 - Spring set; pressing force up to approx. 28N / 2.800g

7. Cable sockets and crimp contacts

7.1 Cable sockets and crimp contacts for module EOT-4 / TCM-5 / TCT-3

Cable socket M16, **6 PIN**
ECOCAM order no. 300050

- contact diameter **1,5 mm**
- metal housing
- shieldable
- cable diameter 8-10,5mm



Compatible socket crimp contacts:

Order no. 300300
0,14 - 0,25mm² / AWG 26 -24
Contact diameter 1,5mm,
set with 10 pieces

Order no. 300400
0,35 - 0,5mm² / AWG 22-20
Contact diameter 1,5mm,
set with 10 pieces

Order no. 300500
0,75 - 1,0mm² / AWG18
Contact diameter 1,5mm,
set with 10 pieces

Cable socket M16, **12 PIN**
ECOCAM order no. 300220

- contact diameter **1,0 mm**
- metal housing
- shieldable
- cable diameter 8-10,5mm



Compatible socket crimp contacts:

Order no. 300250
0,14 - 0,25mm² / AWG 26 -24
Contact diameter 1,0mm,
set with 15 pieces

7.2 Cable sockets and crimp contacts for module EOT-3 / TCM-4 / TCT-2

Cable socket M16, 7 PIN
ECOCAM order no. 300100

- contact diameter 1,5 mm
- metal housing
- shieldable
- cable diameter 8-10,5mm



Cable socket M16, 8 PIN
ECOCAM order no. 300200

- contact diameter 1,5 mm
- metal housing
- shieldable
- cable diameter 8-10,5mm

**Compatible socket crimp contacts:****Order no. 300300**

0,14 - 0,25mm² / AWG 26 -24
Contact diameter 1,5mm,
set with 10 pieces

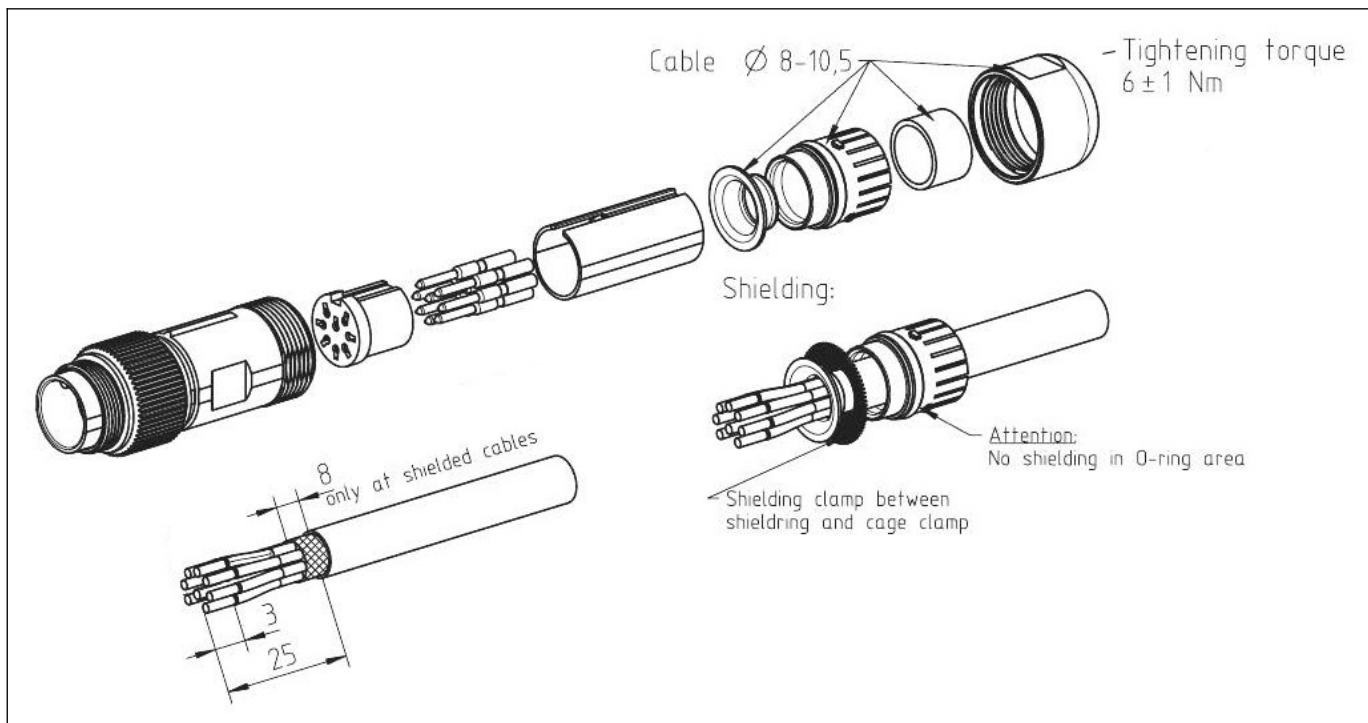
Order no. 300400

0,35 - 0,5mm² / AWG 22-20
Contact diameter 1,5mm,
set with 10 pieces

Order no. 300500

0,75 - 1,0mm² / AWG18
Contact diameter 1,5mm,
set with 10 pieces

7.3 Stripping dimensions for cable assembly



7.4 Technical data of the crimp contacts

Order number	Contact diameter	Connecting range	Wire gauge		Stripping length	Crimp height - Average values	Crimp retention force acc. DIN EN 60352-2
	mm	mm ²	mm ²	AWG	mm	mm	N
#300250 	1	0,14 - 0,25	0,14		3,0 + 0,5	0,86 - 0,9	18
				24			28
			0,25			0,91 - 0,97	32
#300300 	1,5	0,14 - 0,25	0,14		3,0 + 0,5	0,86 - 0,9	18
				24			28
			0,25			0,91 - 0,97	32
#300400 	1,5	0,35 - 0,50	0,35	22	3,0 + 0,5	0,90 - 1,06	40
			0,50	20		0,95 - 1,11	60
#300500 	1,5	0,75 - 1,00	0,75		3,5 + 1,0	1,33 - 1,50	85
				18			90
			1,00			1,36 - 1,53	108

8. ECOCAM parallel crimping tool T30 with locator**300900****ECOCAM T30 parallel crimping tool**

- für pin **and** socket-contacts / D=1,5mm
- with metal locator for precis contact positioning
- **3 crimp stations** for different cable diameters
0,14 - 0,25 mm² = AWG 26 - 24
0,35 - 0,5 mm² = AWG 22 - 21
0,75 - 1,00 mm² = AWG 20 - 18

