

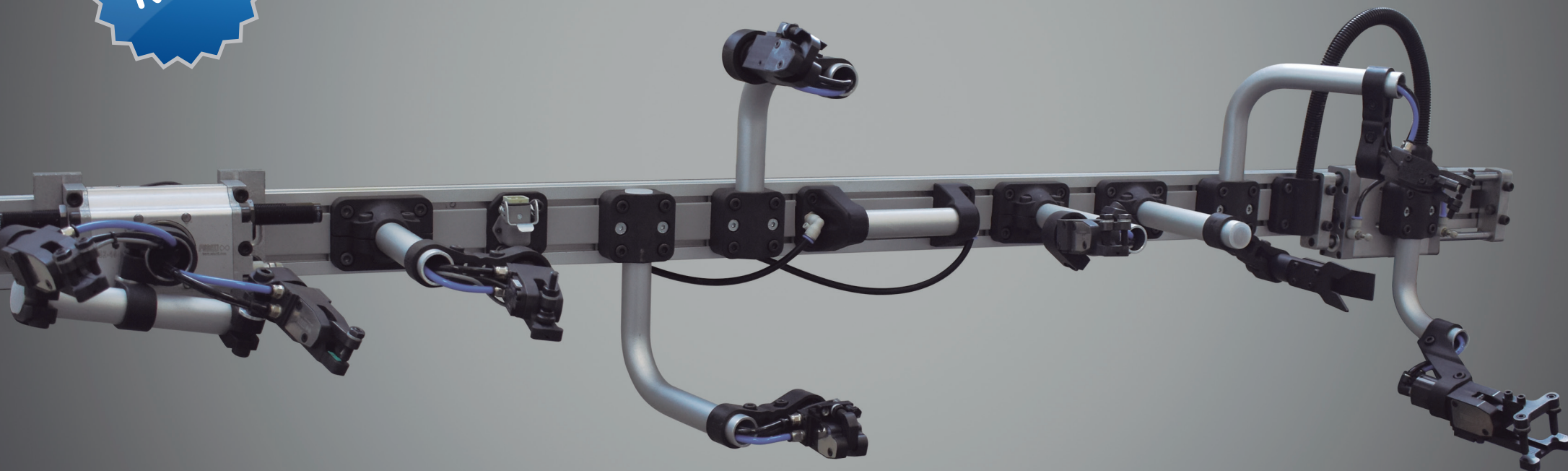
Catalogue

# ULTRALIGHT TRANSFERS

Automation of Transfer Presses



NEW





**MISATI, S.L.**  
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### ABOUT US

As specialists in automating production processes for the automobile industry, Misati can help you to achieve the maximum productivity of your transfer press with the minimum investment.

From the design to the start-up of the transfer, Misati can be with you every step of the process. We can give you technical advice and our know-how to get 30 parts per minute at the lowest possible cost.

### QUALITY PRODUCT



Misati's pneumatic fastening elements are guaranteed for 7 years or 20 million cycles. Quality means less number of spare parts.

### PATENTED TECHNOLOGY



Would you like to know the most advanced and modern technology in transfers? Misati's R&D Dept. designs and develops all our components. All Misati's technology is patented.

### OWN PRODUCTION



Thanks to our mass production, with state-of-the-art CNC machines, we can offer the best quality at the best price.

### DISTRIBUTION NETWORK



We have a worldwide sales network. Please, visit our website [www.misati.com](http://www.misati.com) to contact our sales engineer in your area.

### TRAINING CENTRE



We provide technical training for stamping companies and manufacturers of dies. We focus on how to get the maximum productivity and reliability when stamping transfers.

## RELIABILITY & PRODUCTIVITY FOR YOUR TRANSFER PRESS

Servo presses and transfers become faster and faster, and they can reach up to 45 cycles/ minute.

Characteristics of both the stamping process and sheets don't permit to stamp at such a speed, but should we really be satisfied with low productions?

Which would be the benefits if we get 24 sheets per minute instead of 20?

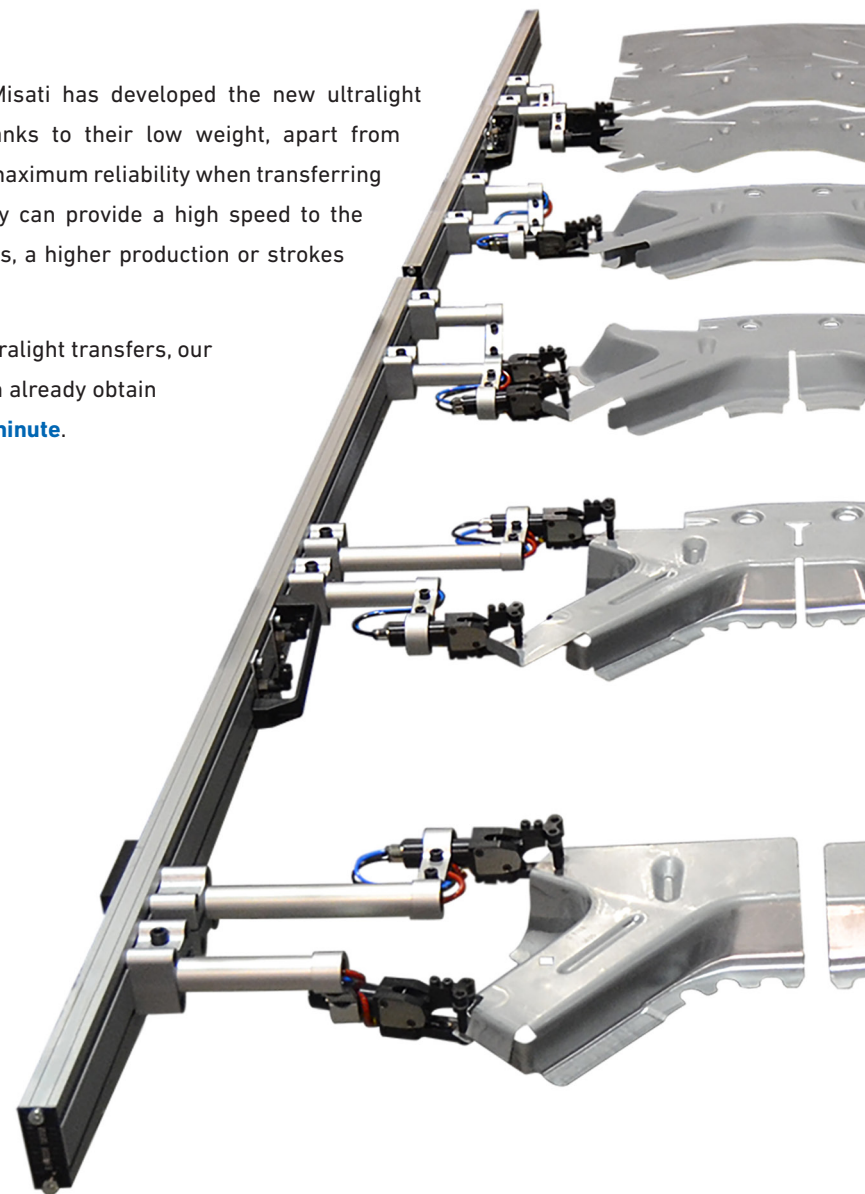
And the most important thing, why isn't our transfer press increasing its production?

**The answer would be the automation of stamping processes.**



This is why Misati has developed the new ultralight transfers. Thanks to their low weight, apart from ensuring the maximum reliability when transferring the sheet, they can provide a high speed to the transfer, that is, a higher production or strokes per minute.

With Misati ultralight transfers, our customers can already obtain **30 parts per minute.**

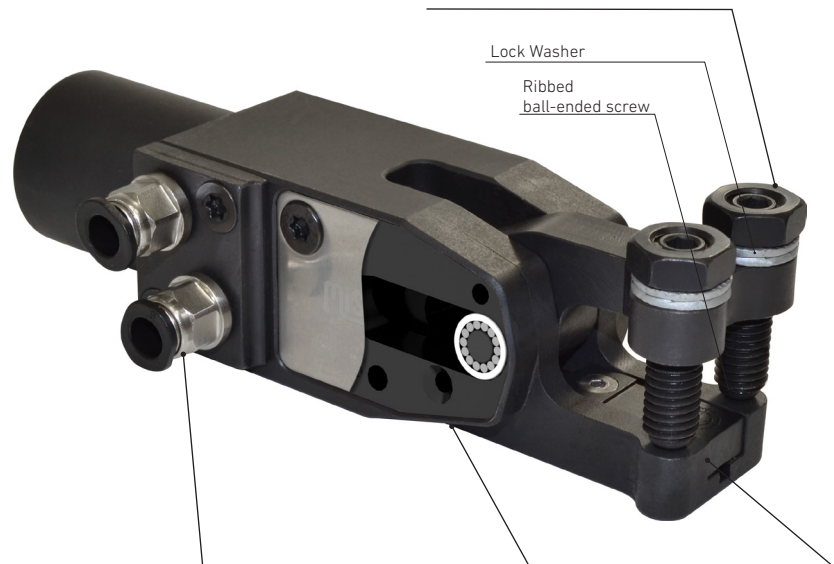


## NEW GENERATION OF PNEUMATIC PINCERS

The free space to automate a transfer is usually very reduced. Pincers must be small, narrow, and also rigid enough to move big cantilever metal sheets just on one side and with one point of contact.

This is why Misati has developed a new generation of high-force pincers, which are shorter and narrower, to meet stamping companies demands.

With a faster opening and closing rate, Misati's new generation of pneumatic pincers can reach up to 300 cycles per minute.



Thanks to its lateral connections, the new TIM2-25-... measures only 130 mm long.

The reaction mounting is part of the body of the pincer, so it is more rigid.

Misati's pincers are equipped with sensors to check the presence or absence of the sheet. They can also detect the double sheet thickness.

### Why is it necessary to get a higher holding force?

Transfers need to obtain high accelerations in order to get more sheets per minute, but... will pincers fasten the sheet safely? or will the sheet slip and fall down onto the die?

Misati's new generation of pincers –with holding forces from 103 daN to 593 daN– guarantee a high security and total reliability of the transfer, even at high accelerations.



In ultralight transfers, tubes and profiles house all pneumatic tubes and cables inside.

180 daN

With a high holding force, minimum size and long working life (20 million cycles or 7 years guarantee), Misati's new generation of pneumatic pincers is the solution to stamp more sheets per minute at a lower cost.



## NEW GENERATION OF TECHNOPOLYMER MOUNTINGS

Our ultralight transfer mountings and brackets are manufactured in technopolymer.

With this new material we can obtain more rigid transfers with half the weight.

The result is a lighter and cheaper transfer which is simpler to design & assemble and more accurate to adjust.

## CHARACTERISTICS OF TECHNOPOLYMER

Technopolymer is a glass fibre polyamide that stands out because of its attributes:

### MECHANICAL PROPERTIES

- High stiffness, toughness and compactness
- Good performance: static & dynamic loads and vibrations
- Improved dimensional stability
- Good elasticity under fatigue and creep
- Impact resistance
- High tensile strength. Lower wear
- Repeated production

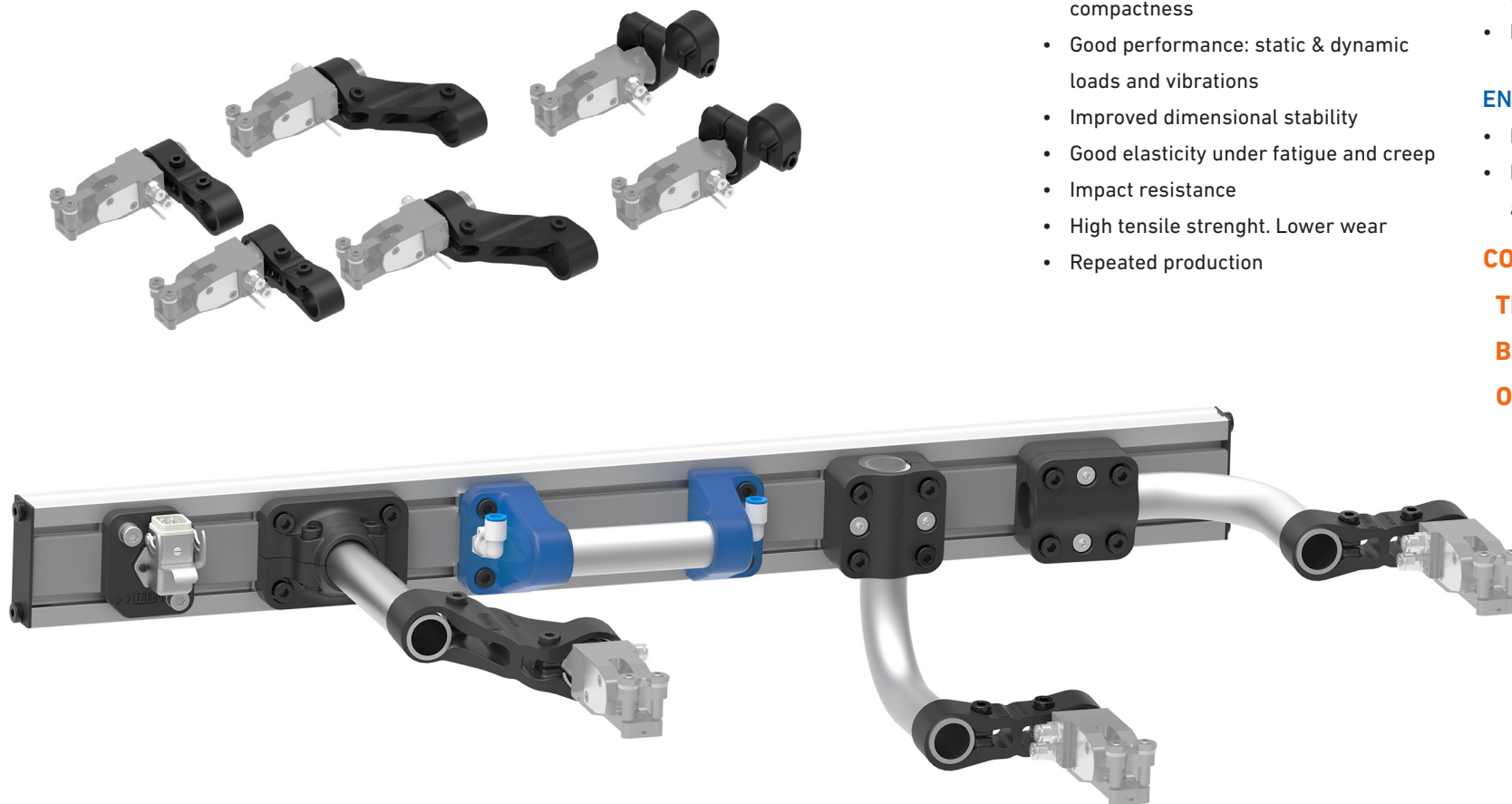
### PHYSICAL PROPERTIES

- Density = 1,56 kg/dm<sup>3</sup>
- Chemical resistance to solvents, fluents, oils, etc.
- Electrical insulator
- Flame-retardant. Heat resistance (above 120°C)
- Good mechanization
- Easy to maintain

### ENVIRONMENTAL FRIENDLY

- Recyclable and pollution-free
- Minor energy consumption than steel or aluminium mountings

**COMPARED TO STEEL MOUNTINGS, TECHNOPOLYMER MOUNTINGS & BRACKETS REDUCE THE WEIGHT OF THE TRANSFER UP TO 41.8%.**



# Ultralight Transfers

## NO ADJUSTMENT NEEDED

Ultralight transfers are **cheaper, more productive and reliable**.

However, the adjustment of a transfer can last many hours, even days. In the meantime, the press will remain stopped without manufacturing anything.

A downtime press is estimated to cost between 450 and 500 €/h. If we add the travelling expenses and the hours spent in the adjustment, which would be the real price paid by the stamping company?

Is there an easier way to put the transfer into operation without stopping the press for days?

Would it be possible to receive a preadjusted transfer that would just need to be connected to begin manufacturing stamped parts?



**Misati's Ultralight Transfers are delivered assembled. No adjustment is needed.**

Misati has a team of technicians who are expert on different areas. They will design, assemble, adjust and verify the geometry of your Ultralight Transfer.

Expensive and never-ending adjustments are over. Your transfer won't stop for some hours or days again.

**Misati will deliver a preadjusted transfer ready to begin producing stamped metal parts.**





1

**ASSEMBLIES**

1-01



2

**MINIPINCERS**

2-01



3

**CENTRING SHOVELS**

3-01



4

**LINEAR UNITS**

4-01



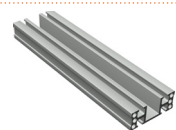
5

**TURNING UNITS**

5-01



6

**MOUNTINGS** (MOUNTINGS, TUBES, BRACKETS, etc...) 6-01

7

**PINCER-HOLDER PROFILES**

7-01



8

**APPLICATIONS**

8-01



9

**TRAINING CENTRE**

9-01

**ASSEMBLIES**

1-01

Examples of Applications

1-08

**MINIPINCERS**

2-01

Which minipincer should I use?

2-03

Ordering information

2-06

Minipincer - TIM2-...

2-07

Minipincer - TIP-...

2-09

Minipincer - TI2-...

2-11

Minipincer - TLM...

2-13

Minipincer - TCM2-...

2-15

Sheet Thickness Control

2-17

Fastening of Cantilever Sheets

2-19

Ball-Ended Screw

2-23

Lower Sheet Detector

2-25

Sheet Detector

2-26

Double-Thickness Sheet Detector

2-27

Lateral Sheet Detector

2-28

Cable &amp; Connector

2-29

Mechanical Spare Parts

2-31

Pneumatic Spare Parts

2-32

**CENTRING SHOVELS**

3-01

Longitudinal Centring Shovel

3-03

Vertical Centring Shovel

3-04

Handle for Shovel

3-05

**LINEAR UNITS**

4-01

Linear Unit

4-03

Examples of Applications

4-05

Position Sensor

4-06

**TURNING UNITS**

5-01

Turning Unit

5-03

Examples of Applications

5-05

Mounting for the Turning Unit

5-06

Position Sensor

5-07

**MOUNTINGS**

6-01

TECHNOPOLYMER MOUNTINGS

6-03

ALUMINIUM MOUNTINGS

6-11

STEEL MOUNTINGS

6-31

**PINCER-HOLDER PROFILES**

7-01

Profile

7-03

Profile Elements

7-04

Fastening Plate

7-05

Quick Change Lever

7-06

Pneumatic &amp; Electrical Connections

7-07

Electrical Connector

7-09

Lever with Pneumatic Connectors

7-11

Cover

7-12

Pneumatic Components

7-13

**APPLICATIONS**

8-01

**TRAINING CENTRE**

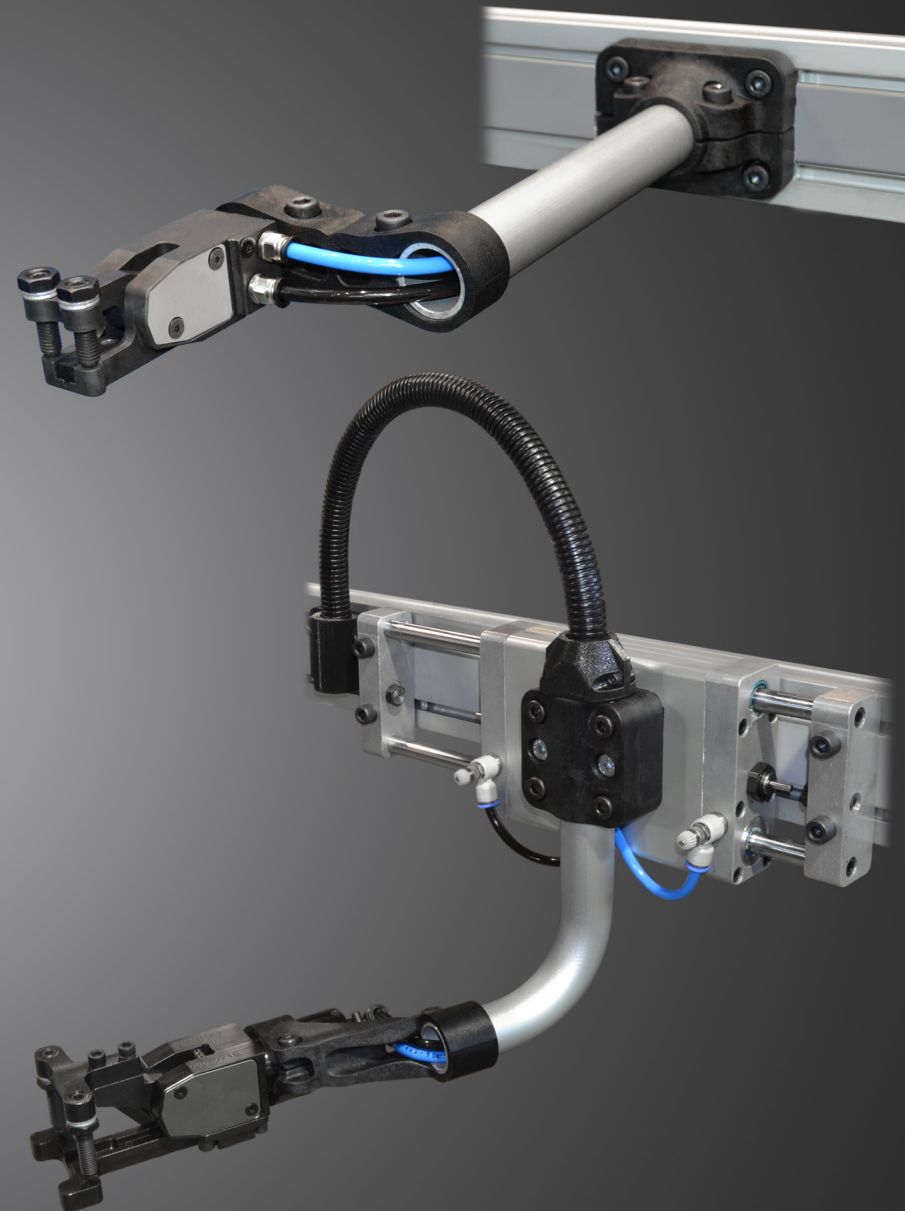
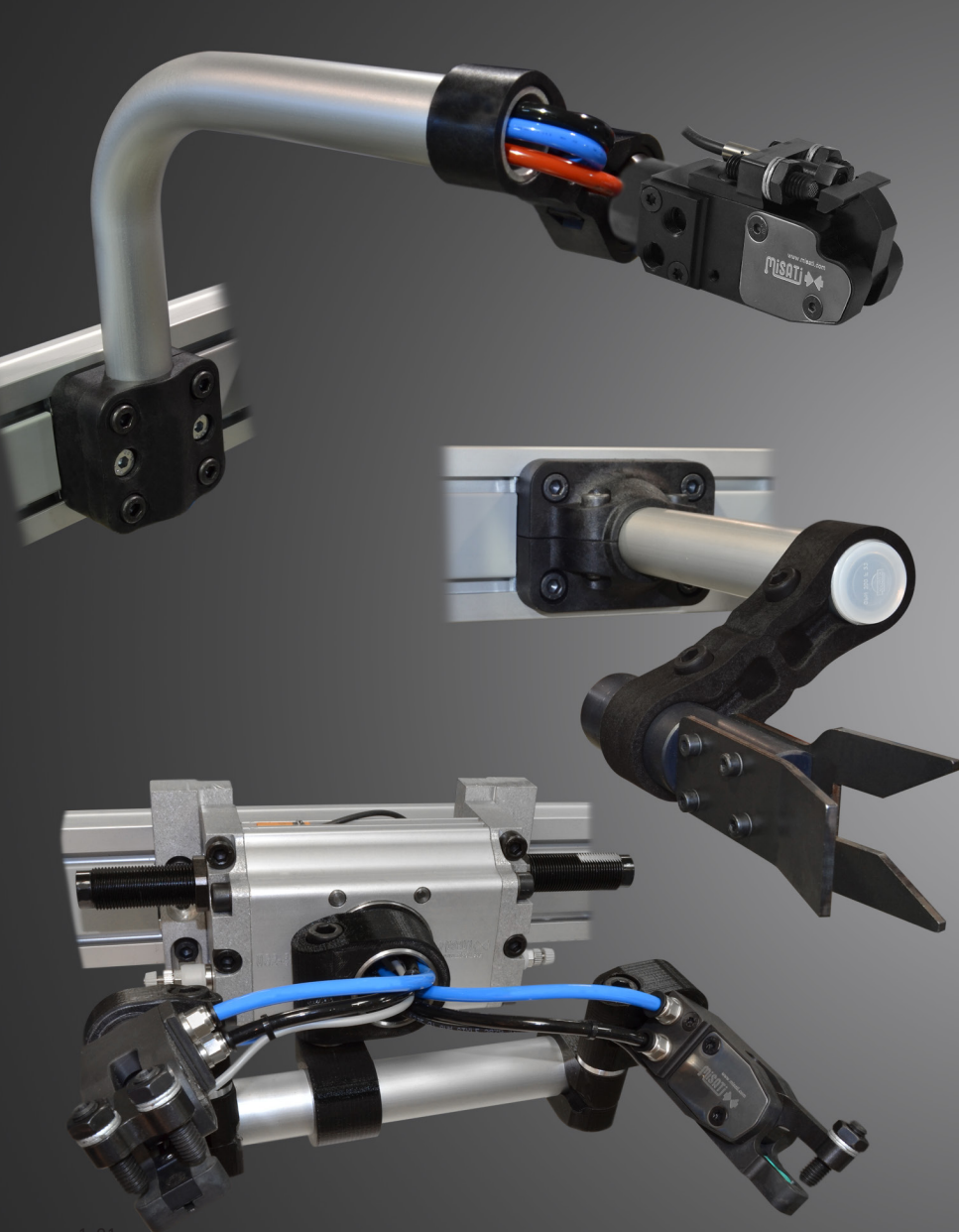
9-01

Handbook of Die Design

9-02



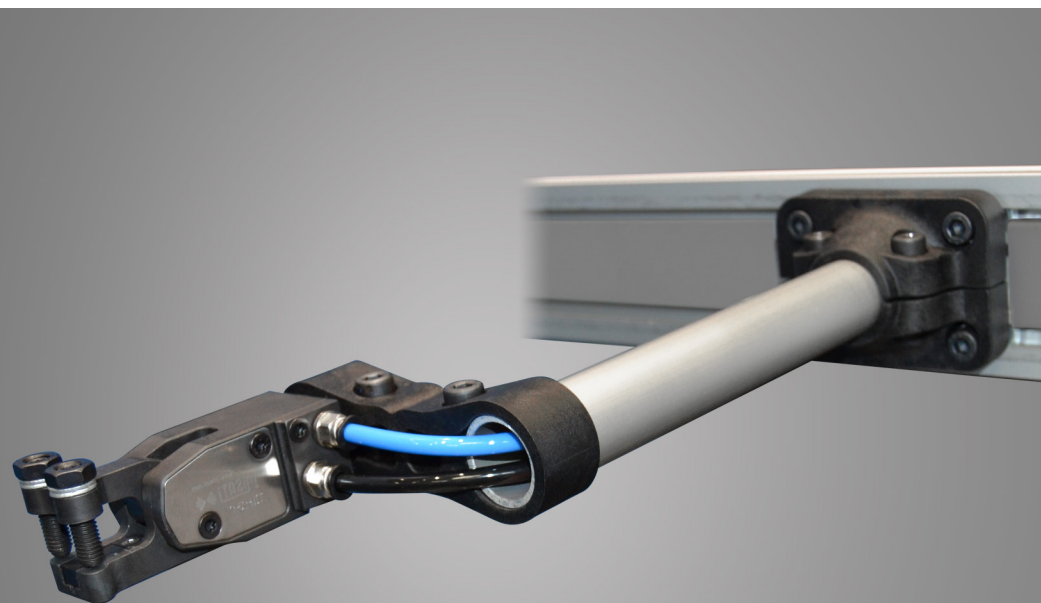
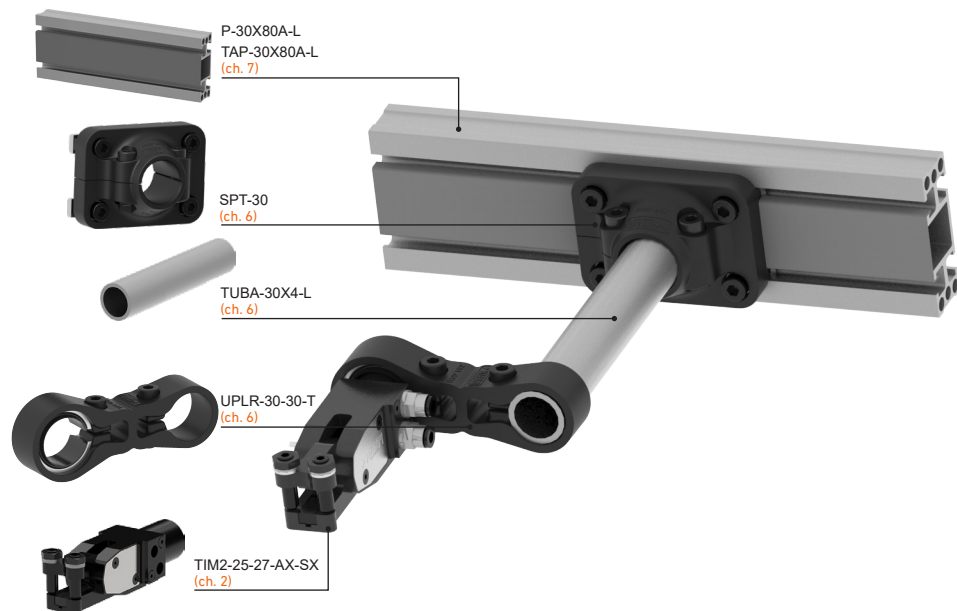
# 1 ASSEMBLIES



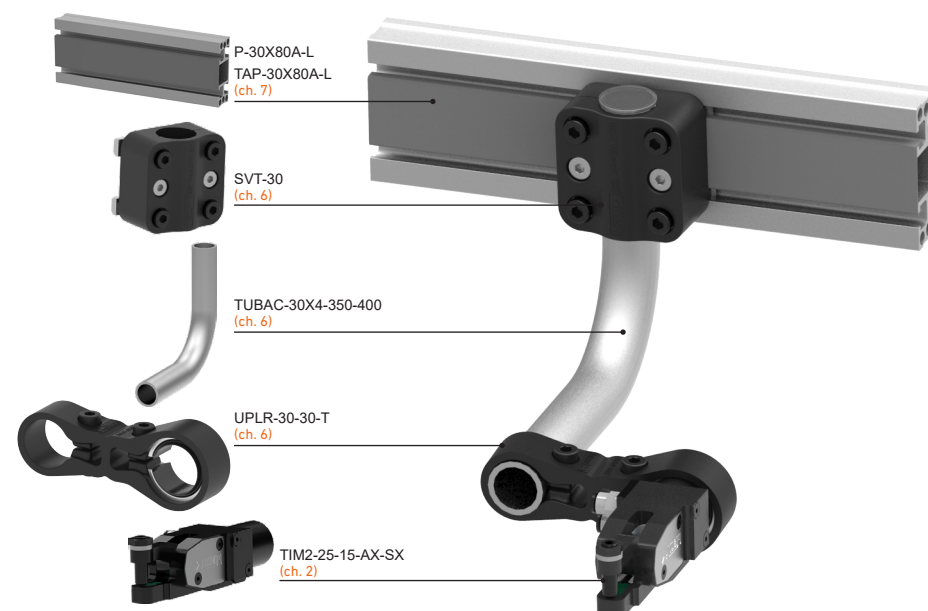




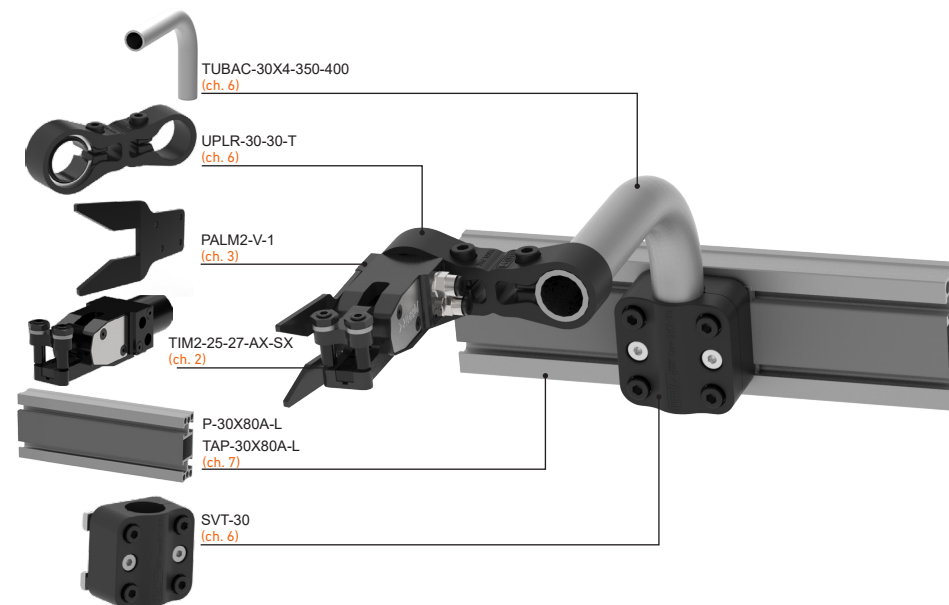
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## Assembly No. 2

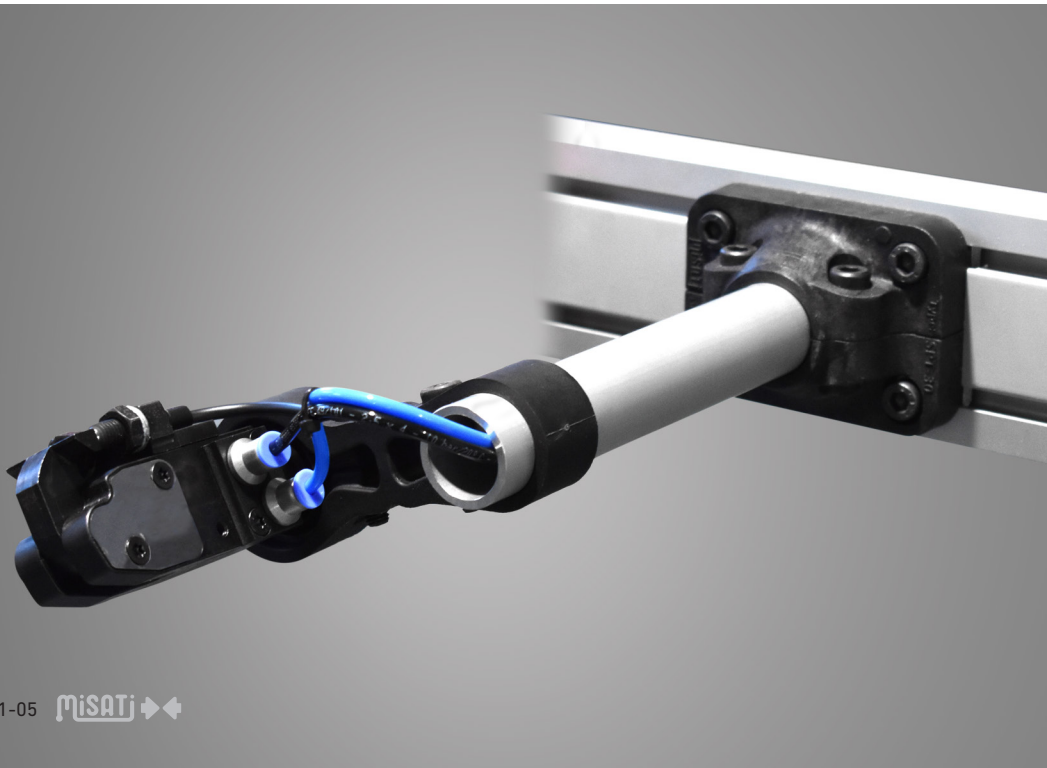
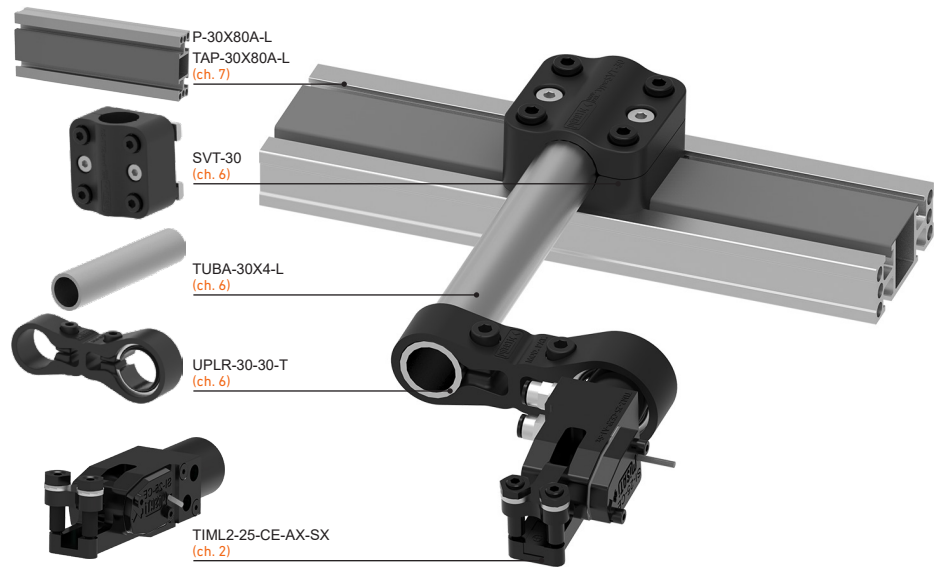


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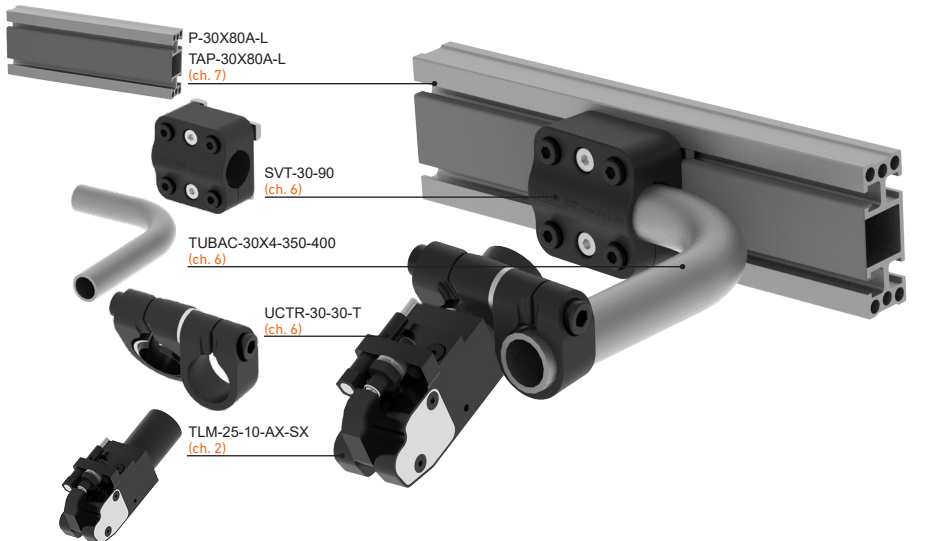




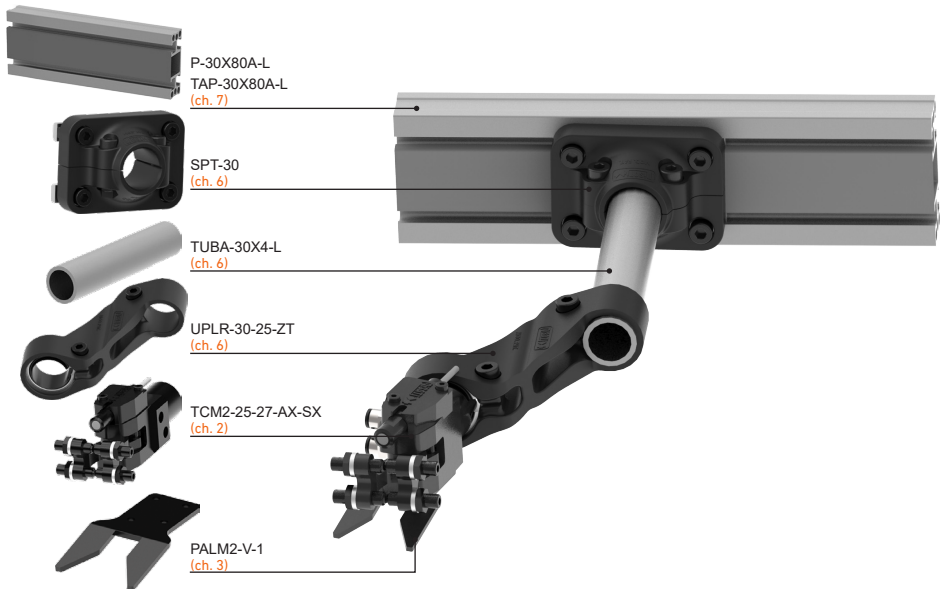
Assembly No. 4



Assembly No. 5

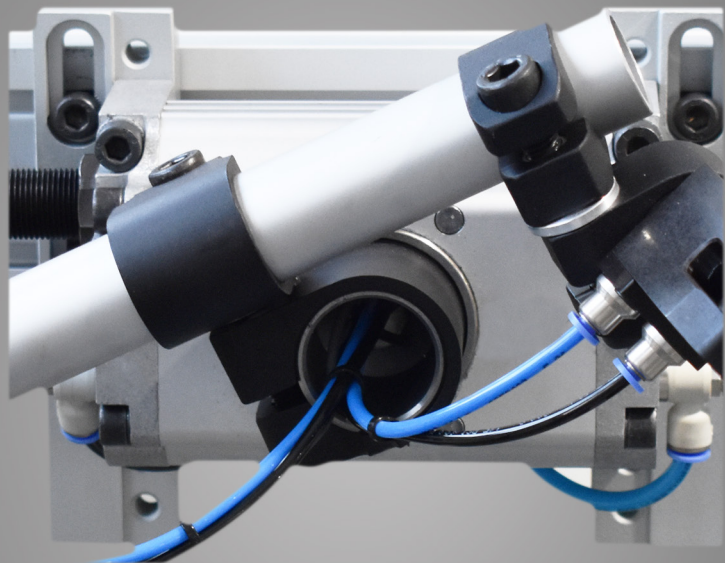
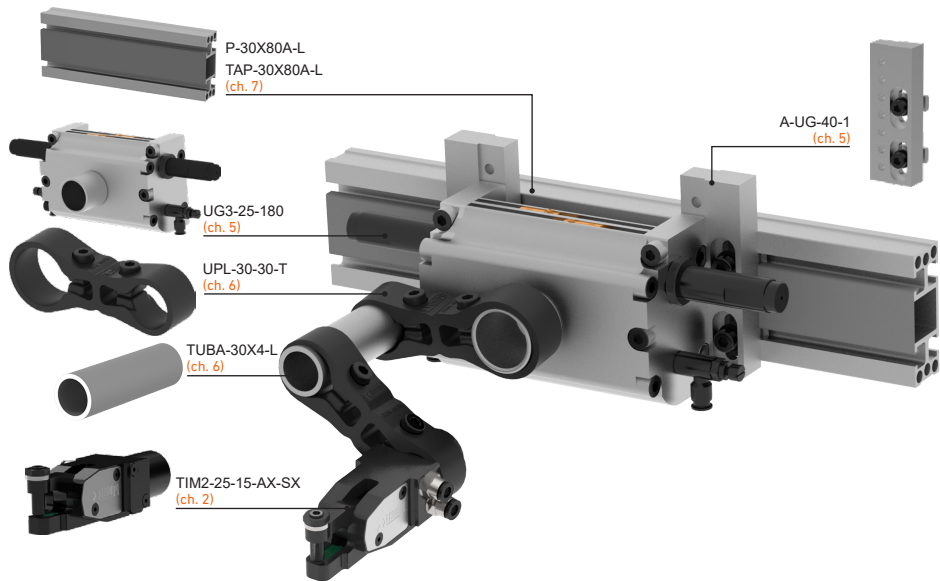


Assembly No. 6

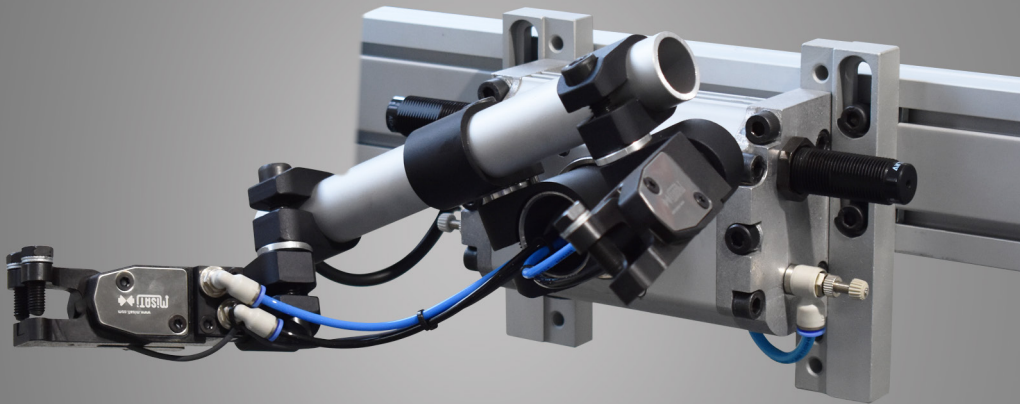
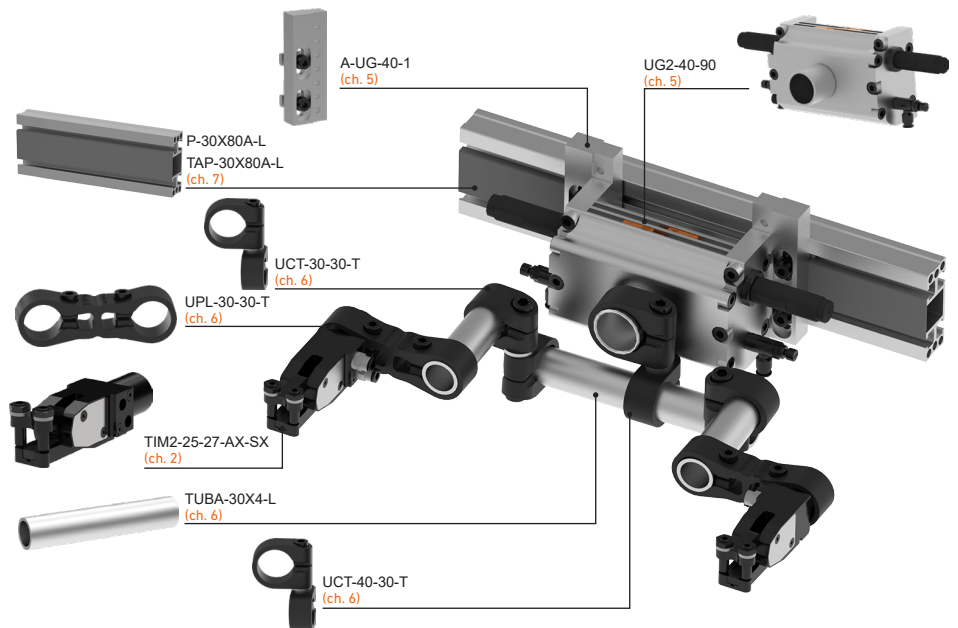




Assembly No. 7

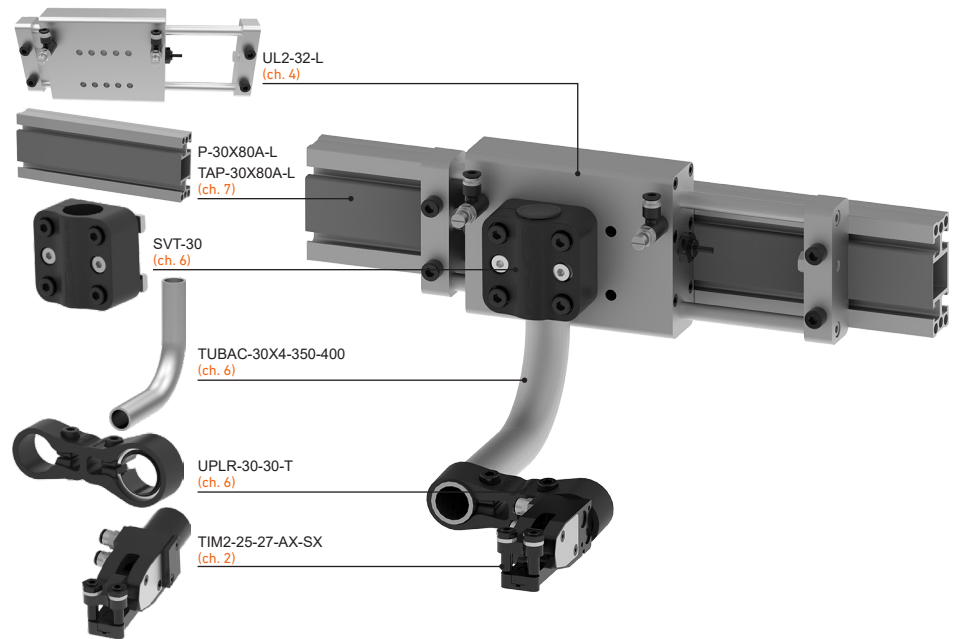


Assembly No. 8

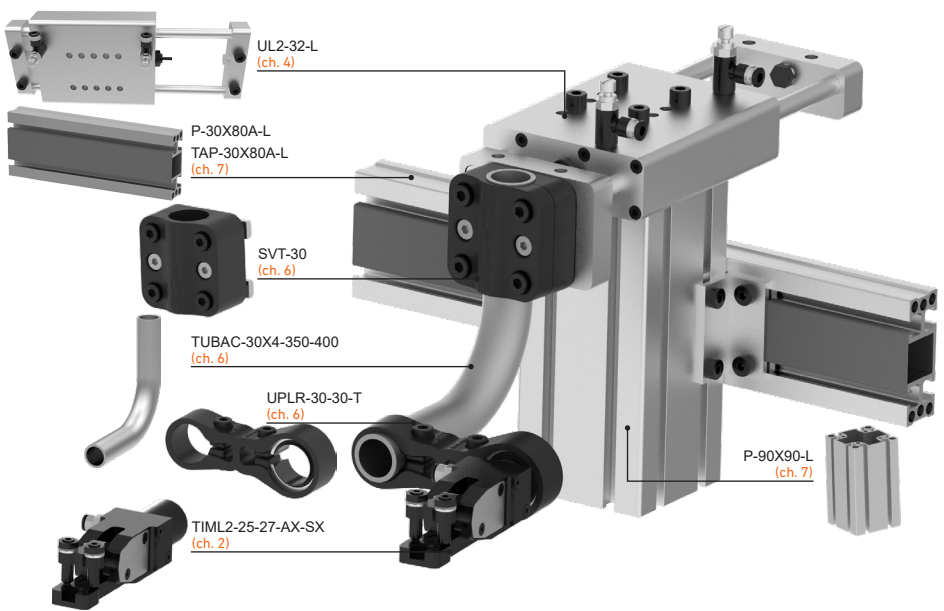




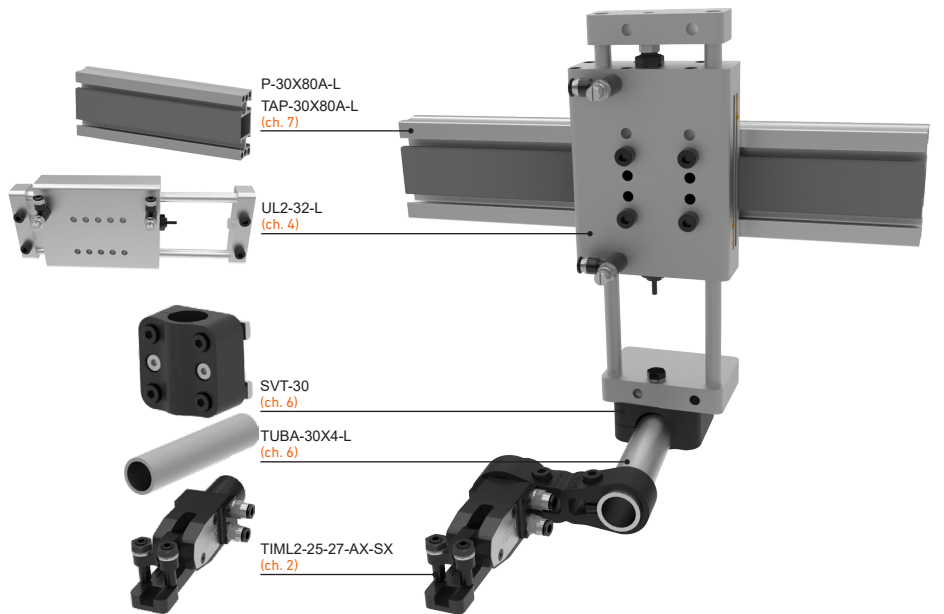
Assembly No. 9



Assembly No. 10



Assembly No. 11





# 2 MINIPINCERS



- Hot Stamping Clamp
- Minipincer TIM2-...
- Minipincer TIP-...
- Minipincer TI2-...
- Minipincer TLM-...
- Minipincer TCM2-...
- Sheet Thickness Control
- Fastening of Cantilever Sheets
- Ball-Ended Screw
- Lower Sheet Detector
- Sheet Detector
- Double-Thickness Sheet Detector
- Lateral Sheet Detector
- Cable & Connector
- Mechanical Spare Parts
- Pneumatic Spare Parts

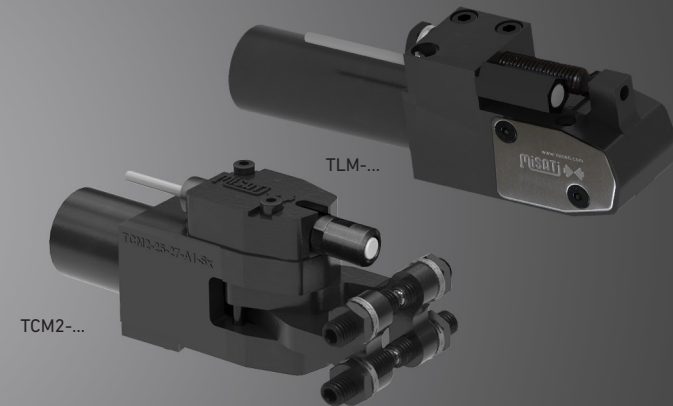


TIM2-...



TIM2-...

TI2-...



TLM-...

TCM2-...



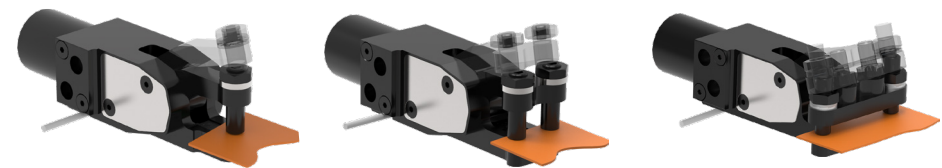
TIM2-...-CE-...



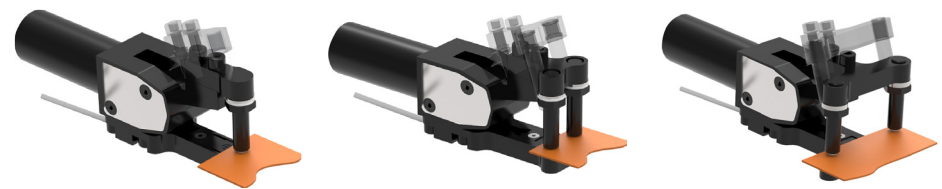
TIML2-...



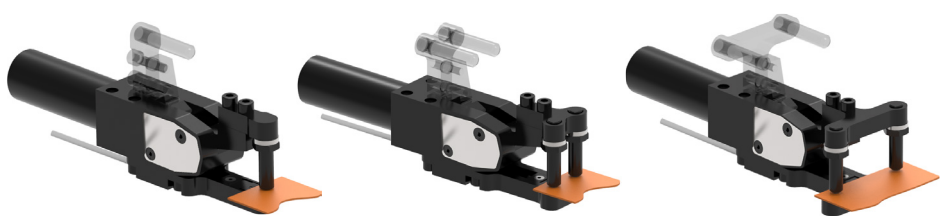
TYPE	PISTON DIAMETER	CLAMPING FORCE	OPENING	POSITION OF SHEET	MOVING ARM	WIDTH (mm)	PAGE
TIM2...	Ø25	180 daN	25°	HORIZONTAL	1	15, 27, 55	2-07



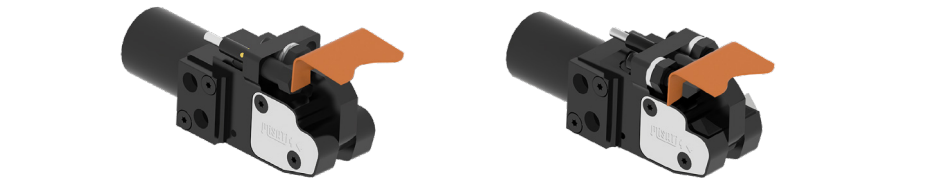
TIP-...	Ø32	205 daN	14°	HORIZONTAL	1	20, 40, 70	2-09
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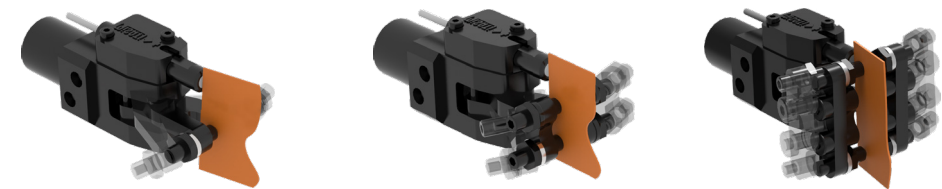
TI2-...	Ø20	103 daN	90°, 45°	HORIZONTAL	1	15, 30, 60	2-11
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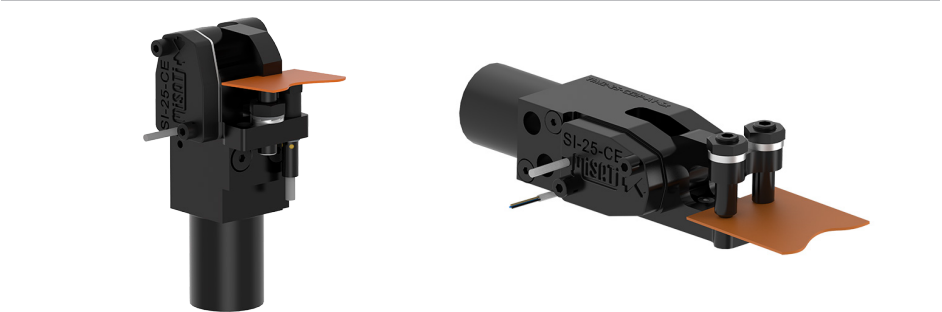
TYPE	PISTON DIAMETER	CLAMPING FORCE	OPENING	POSITION OF SHEET	MOVING ARM	WIDTH (mm)	PAGE
TLM...	Ø25 Ø32	434 daN 434 daN	50°	VERTICAL	1	10, 30	2-13



TCM2-...	Ø25	180 daN	12° + 12°	TRANSVERSE	2	15, 27, 55	2-15
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SHEET THICKNESS CONTROL							
TLM-25-CE...	Ø25	434 daN	50°	HORIZONTAL	1	10	2-17
TIM2-25-27-CE...	Ø25	180 daN	25°	HORIZONTAL	1	27	2-17



MINIPINCERS - Which minipincer should I use?

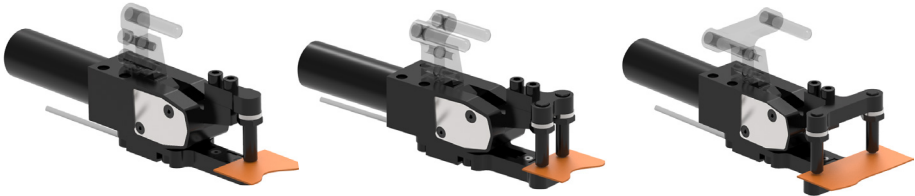


Transfer Press

TYPE	PISTON DIAMETER	CLAMPING FORCE	OPENING	POSITION OF SHEET	MOVING ARM	WIDTH (mm)	PAGE
FASTENING OF CANTILEVER SHEETS							
TIML2...	Ø25	180 daN	25°	HORIZONTAL	1	15, 27, 55	2-19



TIL2...	Ø20	103 daN	90°, 45°	HORIZONTAL	1	15, 30, 60	2-21
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HOT STAMPING CLAMP

Prepared for transferring sheets up to 1,000 °C

EE-xx4/xx9

- **Thermal Protective Coating**  
made of fluoropolymer (Teflon).
- **Viton O-rings**  
Viton is a material which endures high temperatures.
- **Rear Connections**  
away from the heat source.
- **Bearings**  
prepared and reinforced to better withstand heat.



■ TIM2-25-27-A2-S0 (EE-254/259)

Transfer Press



MINIPINCERS - Which minipincer should I use?

**TIM2 - 25 - 27 - A2 - SX**

**MODEL OF THE PINCER**  
TIM2... , TIP, TI2, TLM..., TCM2,TIML2, TIL2  
TLM-25-CE, TIM2-25-27-CE, TIML2,25-CE

**PISTON DIAMETER**  
20, 25, 32

**WIDTH OF THE GRIPPER FINGER**  
15, 20, 27, 30, 40, 55, 60, 70

**SHEET DETECTOR**  
S0, S1, S2

**PNEUMATIC CONNECTIONS**  
A2

PNEUMATIC CONNECTIONS



■ Pneumatic connection outlets according to images above

SHEET DETECTOR

	<b>TIM2-...</b>	<b>TLM...</b>	<b>TCM2</b>
<b>TYPE - XX - XX - A2 - S0</b>			
<b>S0 (WITHOUT SENSOR)</b>			
<b>TYPE - XX - XX - A2 - S1/S2</b>			
<b>S1 (WITH PNP SENSOR)</b>			
<b>S2 (WITH NPN SENSOR)</b>			



TIM2-25-15-A2-S1



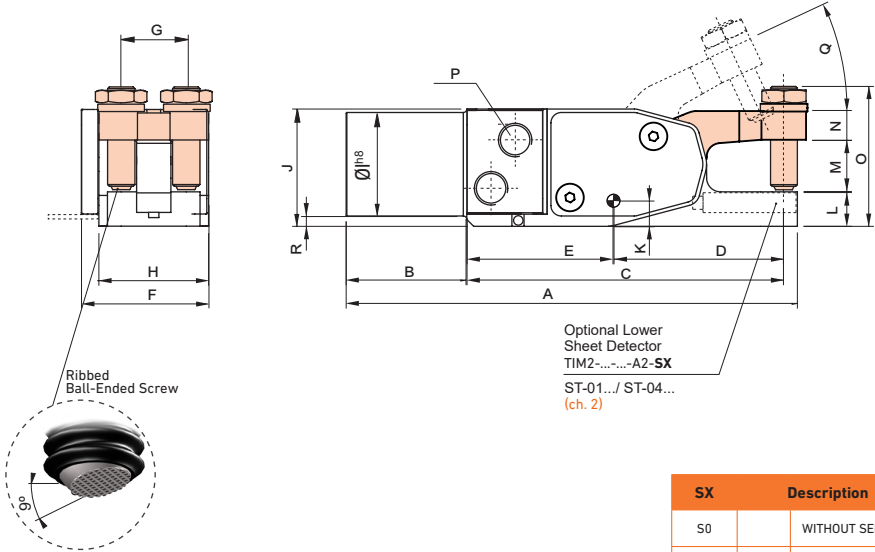
TIM2-25-27-A2-S1



TIM2-25-55-A2-S1

- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TIM2-25-15-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.46 kg
TIM2-25-27-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.49 kg
TIM2-25-55-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.52 kg

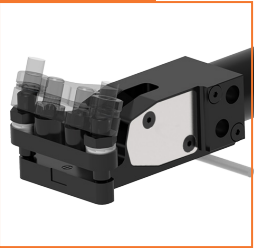


SX	Description
S0	WITHOUT SENSOR
S1	PNP WITH SENSOR
S2	NPN WITH SENSOR

TIM2-25-15-A2-S1



TIM2-25-55-A2-S1



- Gripper fingers for delicate parts
- Available for hot stamping applications
- Pneumatic connections A2 need to be defined (p. 2-06)

TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	Q	R
TIM2-25-15-A2-SX	130	34.75	91.25	49	42.25	37		15	30	34	7.5	10	15	8	40.5	G <sup>1/8</sup>	25°	3
TIM2-25-27-A2-SX	130	34.75	91.25	49	42.25	37	19	27	30	34	7.5	10	15	8	40.5	G <sup>1/8</sup>	25°	3
TIM2-25-55-A2-SX	130	34.75	91.25	49	42.25	37	47	55	30	34	7.5	10	15	8	40.5	G <sup>1/8</sup>	25°	3





TIP-32-20-S1



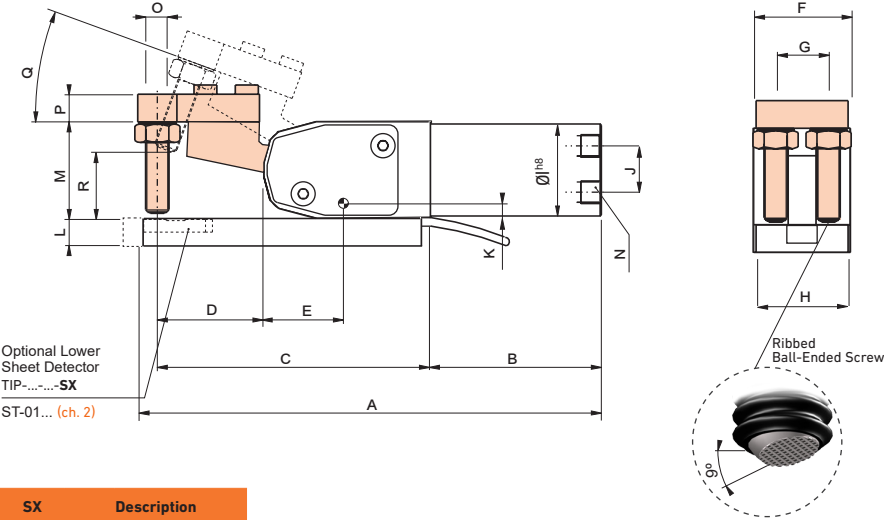
TIP-32-40-S1



TIP-32-70-S1

- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TIP-32-20-SX	169 Nm	205 daN	Ø32	27 cm³	1.35 kg
TIP-32-40-SX	169 Nm	205 daN	Ø32	27 cm³	1.43 kg
TIP-32-70-SX	169 Nm	205 daN	Ø32	27 cm³	1.50 kg



SX	Description
S0	WITHOUT SENSOR
S1	PNP WITH SENSOR
S2	NPN WITH SENSOR



TIP-32-20-S1



TIP-32-40-S1



TIP-32-70-S1

► Available for hot stamping applications

TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	Q	R
TIP-32-20-SX	182	60	113.9	45.9	36.5	42		20	40	18	5.5	12	42	G <sup>1/8</sup>	M10X50	12	14°	21
TIP-32-40-SX	182	60	113.9	45.9	36.5	42	23	40	40	18	5.5	12	42	G <sup>1/8</sup>	M10X50	12	14°	21
TIP-32-70-SX	182	60	113.9	45.9	36.5	42	53	70	40	18	5.5	12	42	G <sup>1/8</sup>	M10X50	12	14°	21



T12-20-15-S1



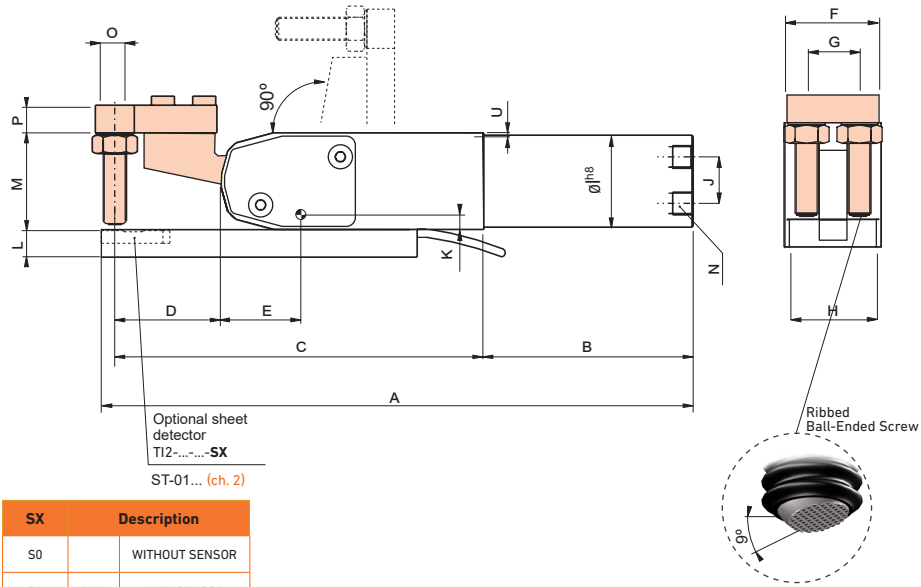
T12-20-30-S1



T12-20-60-S1

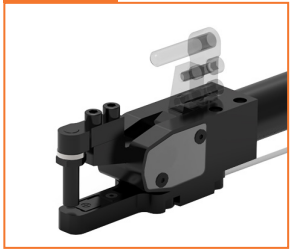
- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
T12-20-15-SX	60 Nm	103 daN	Ø20	16 cm <sup>3</sup>	0.82 kg
T12-20-30-SX	60 Nm	103 daN	Ø20	16.2 cm <sup>3</sup>	0.89 kg
T12-20-60-SX	60 Nm	103 daN	Ø20	16.2 cm <sup>3</sup>	0.94 kg

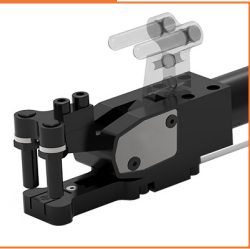


SX	Description	
S0		WITHOUT SENSOR
S1	PNP	WITH SENSOR
S2	NPN	WITH SENSOR

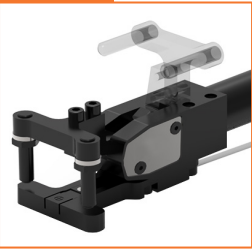
T12-20-15-S1



T12-20-30-S1



T12-20-60-S1



- Gripper fingers for delicate parts
- Available for hot stamping applications

TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	U
T12-20-15-SX	188	70	111.5	31.5	26.5	32		15	30	13	5.5	10	32	M5	M8x40	10	2.1
T12-20-30-SX	188	70	111.5	31.5	26.5	32	19	30	30	13	5.5	10	32	M5	M8x40	10	2.1
T12-20-60-SX	188	70	111.5	31.5	26.5	32	47	60	30	13	5.5	10	32	M5	M8x40	10	2.1



TLM-25-30-A4-S1

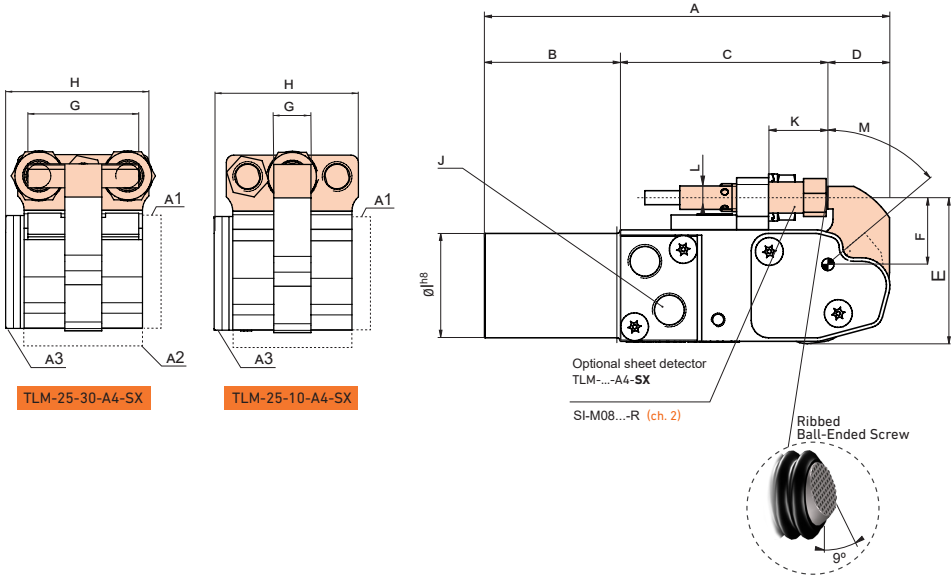


TLM-25-10-A4-S1



- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TLM-25-10-A4-SX	357 Nm	434 daN	Ø25	23.4 cm³	0.49 kg
TLM-25-30-A4-SX	357 Nm	434 daN	Ø25	23.4 cm³	0.56 kg



PNEUMATIC CONNECTIONS

A4

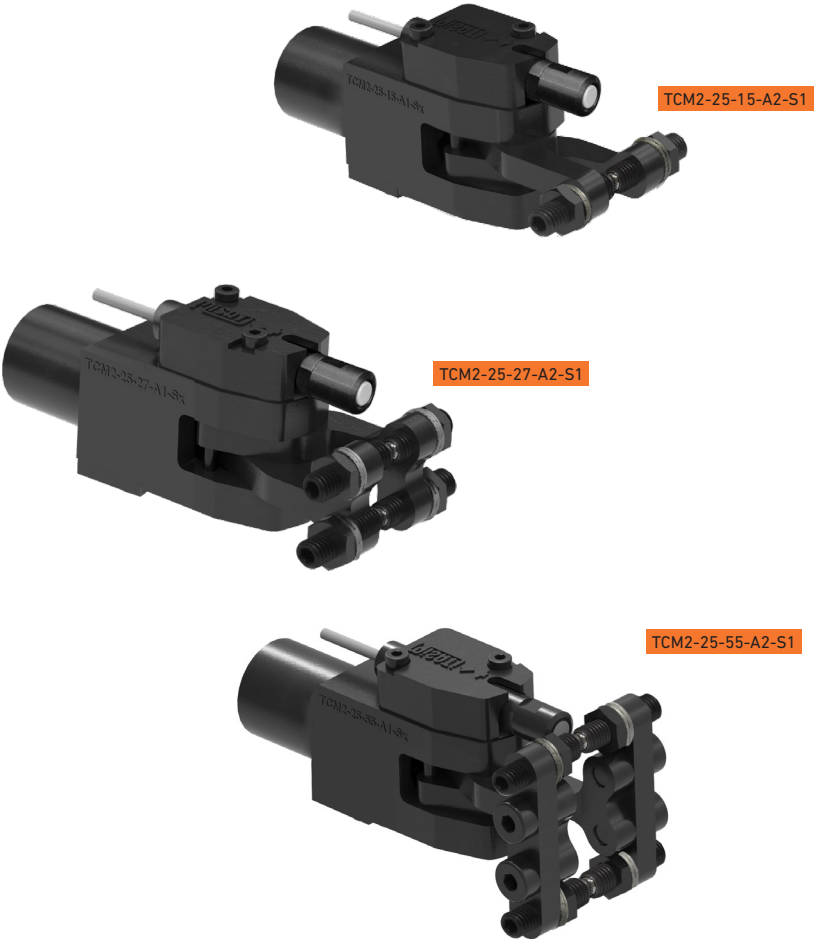


TLM-25-30-A4-S1

SX	Description	
S0		WITHOUT SENSOR
S1	PNP	WITH SENSOR
S2	NPN	WITH SENSOR

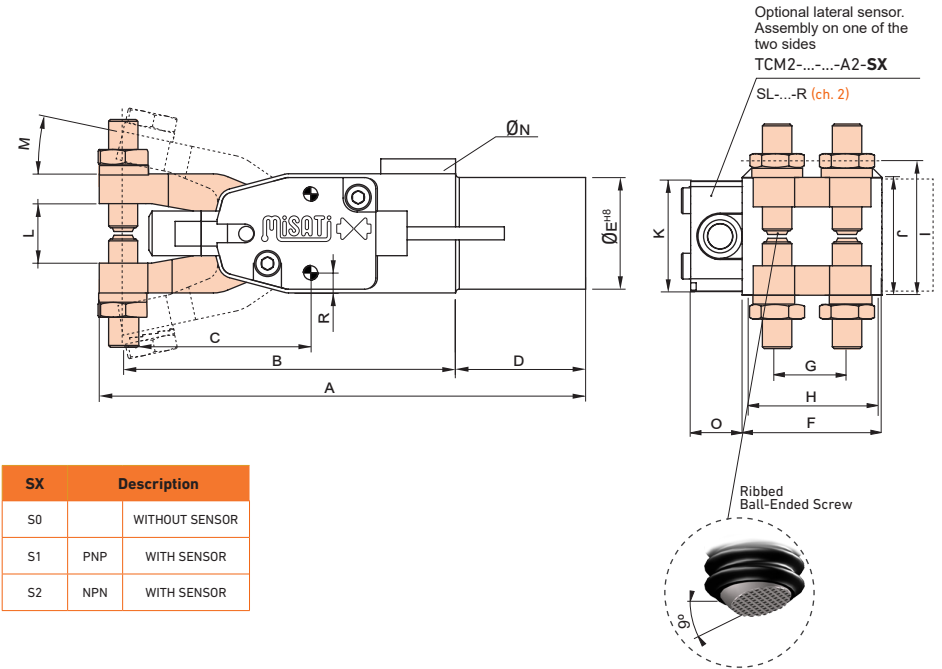
- Gripper fingers for delicate parts
- Available for hot stamping applications

TYPE	A	B	C	D	E	F	G	H	I	J	K	L	M
TLM-25-10-A4-SX	116	39	59,5	17,5	41.25	14.75	10	38.75	Ø30	1/G	18.5	M8	50°
TLM-25-30-A4-SX	116	39	59.5	17.5	41.25	14.75	30	39.8	Ø30	1/G	18.5	M8	50°



- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TCM2-25-15-A2-SX	88 Nm	180 daN	Ø25	13.3 cm³	0.57 kg
TCM2-25-27-A2-SX	88 Nm	180 daN	Ø25	13.3 cm³	0.60 kg
TCM2-25-55-A2-SX	88 Nm	180 daN	Ø25	13.3 cm³	0.80 kg



SX	Description	
S0		WITHOUT SENSOR
S1	PNP	WITH SENSOR
S2	NPN	WITH SENSOR



- Gripper fingers for delicate parts
- Available for hot stamping applications
- Pneumatic connections A2 (p. 2-06)

TYPE	A	B	C	D	ØE	F	G	H	I	J	K	L	M	ØN	O
TCM2-25-15-A2-SX	134	92	50	34.75	30	38		16	16	32	30	16	12°	G <sup>1/8</sup>	19
TCM2-25-27-A2-SX	134	92	50	34.75	30	38	19	32	36	32	30	16	12°	G <sup>1/8</sup>	19
TCM2-25-55-A2-SX	134	92	50	34.75	30	38	47	55	36	32	30	16	12°	G <sup>1/8</sup>	19





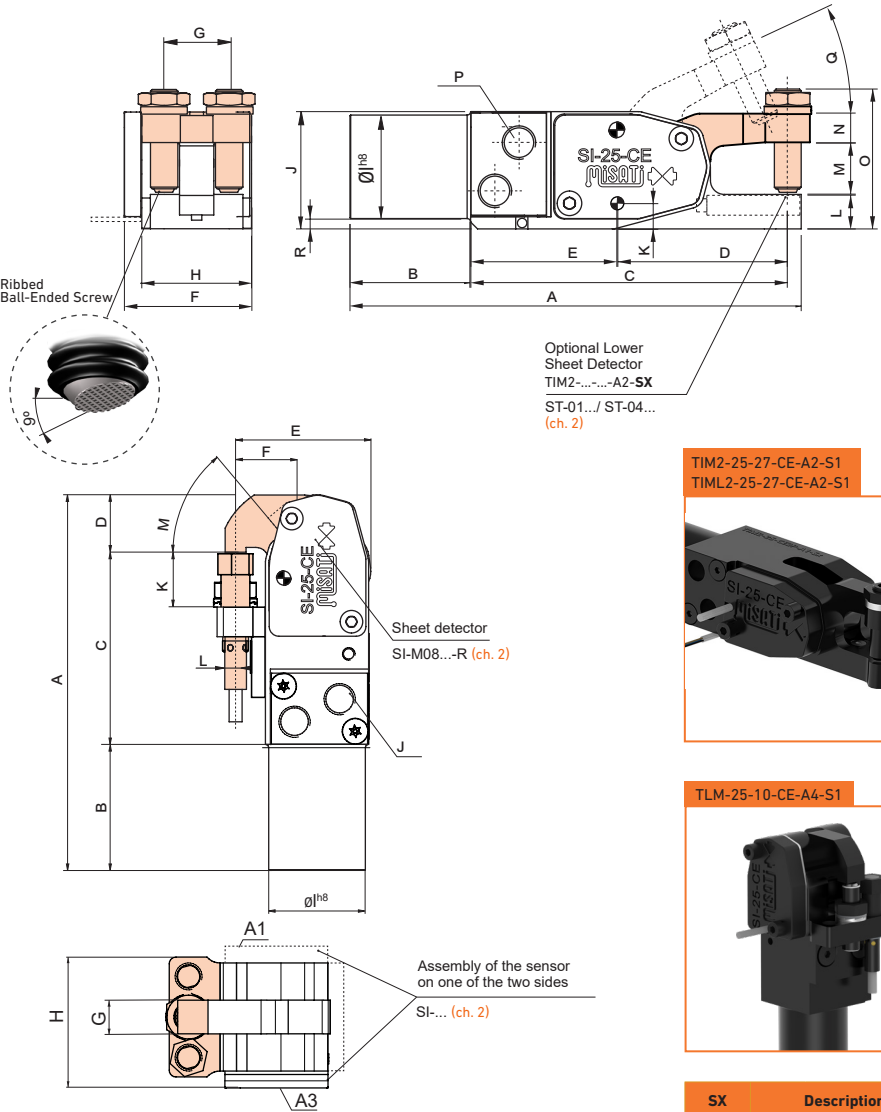
TIM2-25-27-CE-A2-S1  
TIML2-25-27-CE-A2-S1



TLM-25-10-CE-A4-S1

- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TIM2-25-27-CE-A2-SX	88 Nm	238 daN	Ø25	16.5 cm <sup>3</sup>	0.55 kg
TIML2-25-27-CE-A2-SX	88 Nm	238 daN	Ø25	16.5 cm <sup>3</sup>	0.60 kg
TLM-25-10-CE-A4-SX	357Nm	434daN	Ø25	23.4 cm <sup>3</sup>	0.49 kg



TIM2-25-27-CE-A2-S1  
TIML2-25-27-CE-A2-S1



TLM-25-10-CE-A4-S1



- Gripper fingers for delicate parts
- Available for hot stamping applications
- Pneumatic connections A2 or A4 need to be defined (p. 2-06)

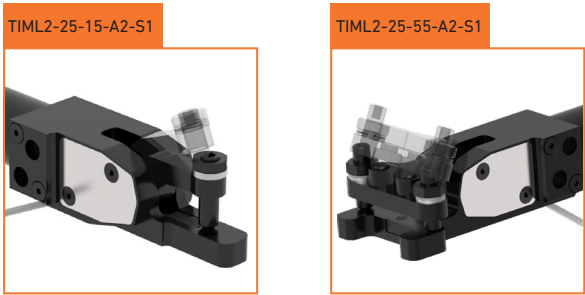
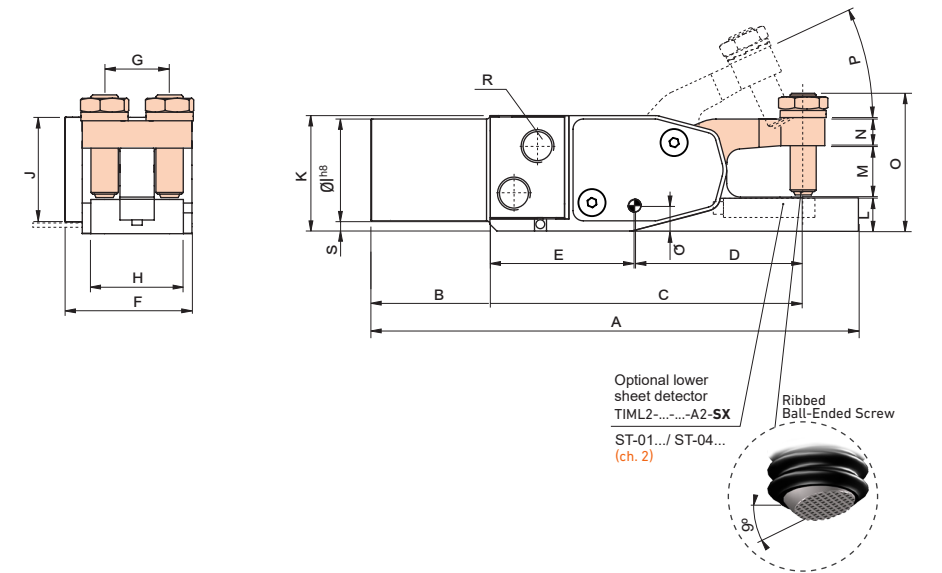
TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	Q	R
TIM2-25-27-CE-A2-SX	130	34.75	91.25	49	42.25	37	19	15	30	34	7.5	10	15	8	40.5	G <sup>1/8</sup>	25°	3
TIML2-25-27-CE-A2-SX	142.5	34.75	91.25	49	42.25	37	19	27	30	37	7.5	10	15	8	40.5	G <sup>1/8</sup>	25°	3
TLM-25-10-CE-A4-SX	116	39	59.5	17.5	41.25	14.75	10	38.75	G <sup>1/8</sup>	1/G	18.5	M8	50°					

SX	Description
S1	PNP WITH SENSOR
S2	NPN WITH SENSOR



- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TIML2-25-15-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.57 Kg
TIML2-25-27-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.62 Kg
TIML2-25-55-A2-SX	88 Nm	180 daN	Ø25	16.5 cm³	0.65 Kg



SX	Description
S0	WITHOUT SENSOR
S1	PNP WITH SENSOR
S2	NPN WITH SENSOR

- Gripper fingers for delicate parts
- Available for hot stamping applications
- Pneumatic connections A2 need to be defined (p. 2-06)

TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	Q	R	S
TIML2-25-15-A2-SX	142.5	34.75	91.25	49	42.25	37	19	15	30	30.5	34	10	15	8	40.5	25°	7.5	G <sup>1/8</sup>	3
TIML2-25-27-A2-SX	142.5	34.75	91.25	49	42.25	37	19	27	30	30.5	34	10	15	8	40.5	25°	7.5	G <sup>1/8</sup>	3
TIML2-25-55-A4-SX	142.5	34.75	91.25	49	42.25	37	47	55	30	30.5	34	10	15	8	40.5	25°	7.5	G <sup>1/8</sup>	3

TIL2-...



TIL2-20-15-S1



TIL2-20-30-S1

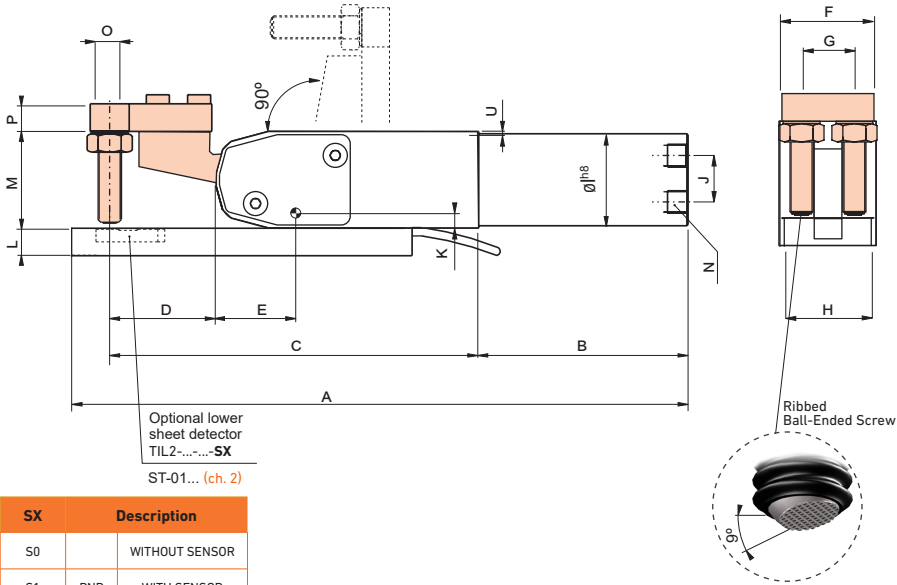


TIL2-20-60-S1

- Working pressure: 6 bar (maximum: 10 bar)
- Material: Machined & hardened carbon steel

TYPE	FASTENING TORQUE	CLAMPING FORCE	PISTON	CONSUMPTION	WEIGHT
TIL2-20-15-SX	60 Nm	103 daN	Ø20	16 cm <sup>3</sup>	0.82 kg
TIL2-20-30-SX	60 Nm	103 daN	Ø20	16.2 cm <sup>3</sup>	0.89 kg
TIL2-20-60-SX	60 Nm	103 daN	Ø20	16.2 cm <sup>3</sup>	0.94 kg

TIL2-...



SX	Description	
S0		WITHOUT SENSOR
S1	PNP	WITH SENSOR
S2	NPN	WITH SENSOR



TIL2-20-15-S1



TIL2-20-30-S1



TIL2-20-60-S1

- Gripper fingers for delicate parts
- Available for hot stamping applications

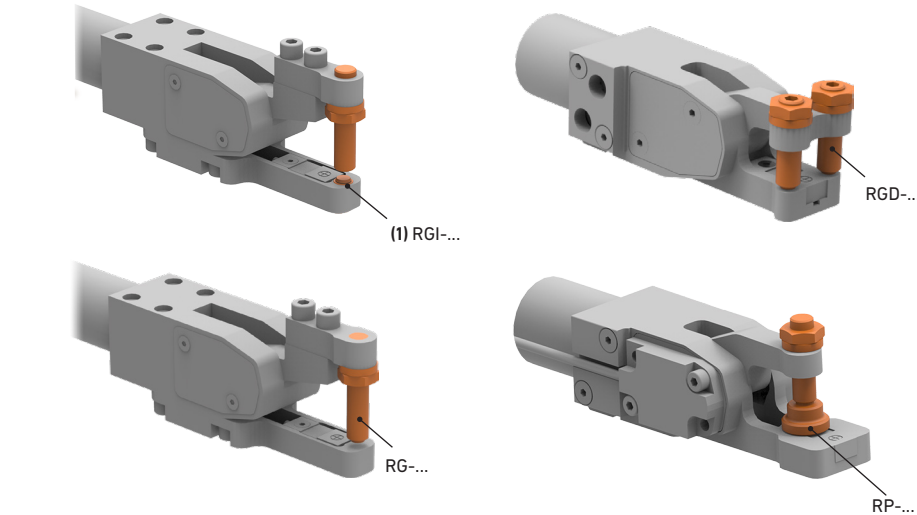
TYPE	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	O	P	U
TIL2-20-15-SX	188	70	111.5	31.5	26.5	32		15	30	13	5.5	10	32	M5	M8x40	10	2.1
TIL2-20-30-SX	188	70	111.5	31.5	26.5	32	19	30	30	13	5.5	10	32	M5	M8x40	10	2.1
TIL2-20-60-SX	188	70	111.5	31.5	26.5	32	47	60	30	13	5.5	10	32	M5	M8x40	10	2.1

R...

Flat surface: Ribbed surface:

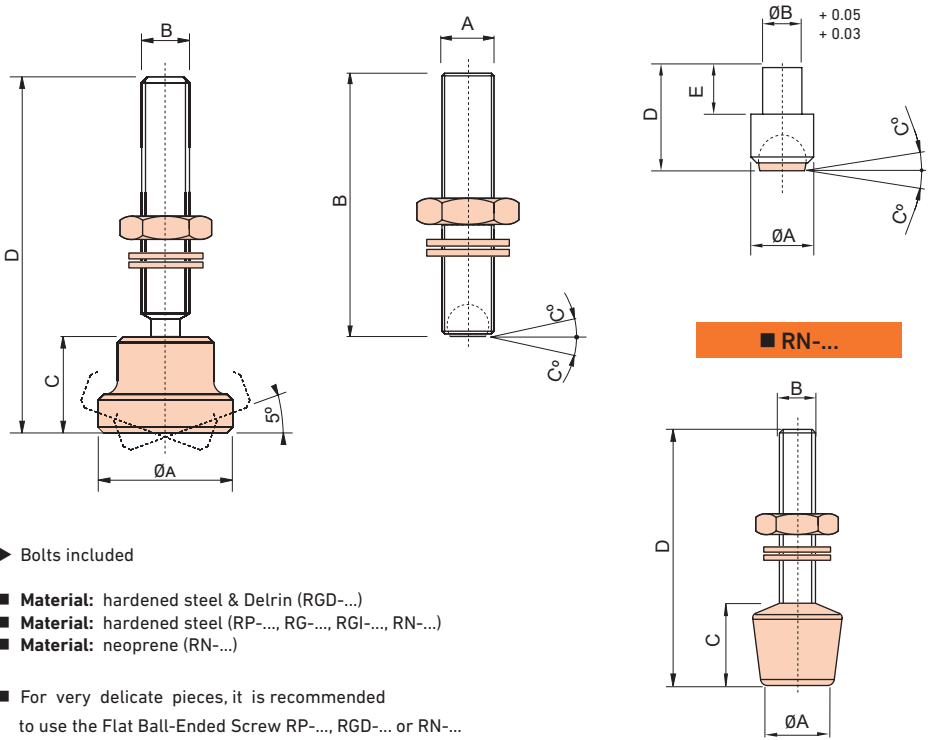
■ RP-... ■ RN-... ■ RGD-...

■ RG-... ■ RGI-...



R...

■ RP-... ■ RGD-... ■ RG-... ■ RGI-...



- Bolts included
- **Material:** hardened steel & Delrin (RGD-...)
  - **Material:** hardened steel (RP-..., RG-..., RGI-..., RN-...)
  - **Material:** neoprene (RN-...)
- For very delicate pieces, it is recommended to use the Flat Ball-Ended Screw RP-..., RGD-... or RN-...

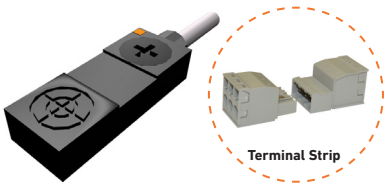
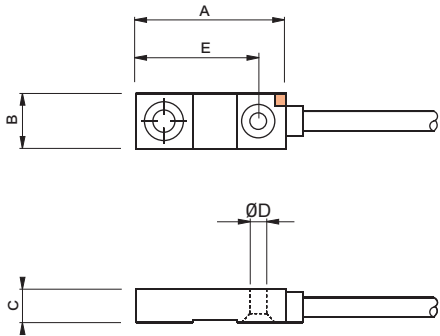
RP							RGD			
TYPE	ØA	B	C	D			TYPE	A	B	C
RP-08/D	16	M8	9	48	63		RGD-20	M8	41.6	0
RP-10/D	20	M10	11	54	64	84	RGD-32	M10	51.9	0

RG				RGI					
TYPE	A	B	C	TYPE	A	ØB	C	D	E
RG-20	M8	40	9	RGI-20	8	5	9	12	6
RG-32	M10	50	9	RGI-32	M10	6	9	14	6
RG-20-30	M8	30	9	RN					
TYPE				A	B	C	D		
RN-08/D				16	M8	18	63		

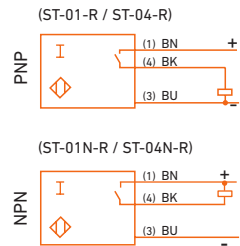
	Weight (kg)
RP-08/D	0.030-0.034
RP-10/D	0.063-0.072
RGD-20	0.011
RGD-32	0.021
RG-20	0.012
RG-32	0.022
RGI-20	0.01
RGI-32	0.02
RN-08/D	0.030-0.034



ST-...



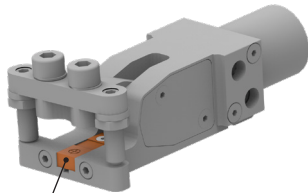
Electrical connections



	Weight (kg)
ST-01-R	0.06
ST-01N-R	0.06
ST-04-R	0.06
ST-04N-R	0.06

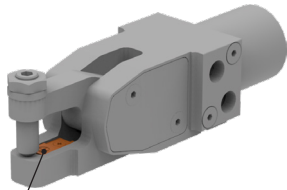
- Bolts & Terminal Strip included
- **Material:** PPS IP67
- **ST-04-R & ST-04N-R** are only used with minipincers TIM2-25-15-A2-SX & TIML2-25-15-A2-SX

Examples of applications



ST-01-R

■ TIM2-25-55-...

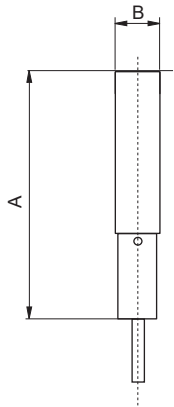


ST-04-R

■ TIM2-25-15-...

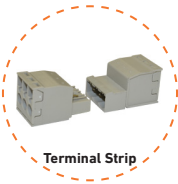
TYPE	A	B	C	ØD	E	Sensing Distance
ST-01-R	27	10	6	3	22	3 mm
ST-01N-R	27	10	6	3	22	3 mm
ST-04-R	20	8	7'4	2.6	15'5	2 mm
ST-04N-R	20	8	7'4	2.6	15'5	2 mm

SI-M08-...-R

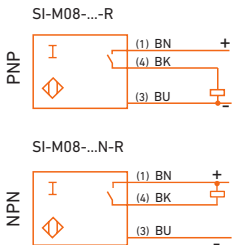


SI-M08-C2-R

SI-M08-C4-R

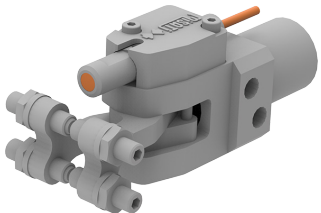
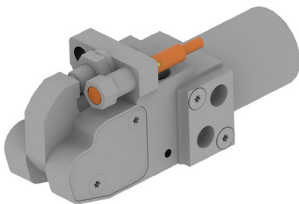


Electrical connections



- Bolts & Terminal Strip included
- **SI-M8-C2-R y SI-M8-C2N-R** are only used with minipincers TLM-...
- **SI-M8-C4-R y SI-M8-C4N-R** are only used with minipincers TCM2-...

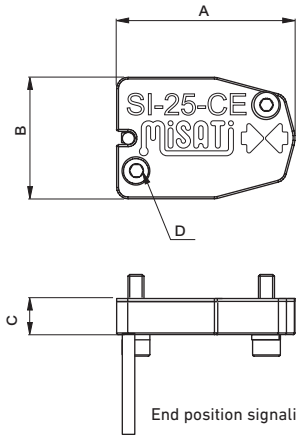
Examples of applications



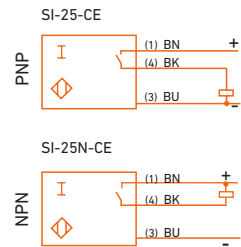
TYPE	A	B	Sensing Distance
SI-M08-C2-R	27	M8X1	2 mm
SI-M08-C2N-R	27	M8X1	2 mm
SI-M08-C4-R	27	M8X1	4 mm
SI-M08-C4N-R	27	M8X1	4 mm

MINIPINCERS - Double-Thickness Sheet Detector

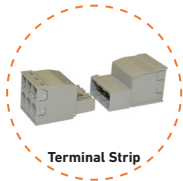
SI-...



Electrical connections

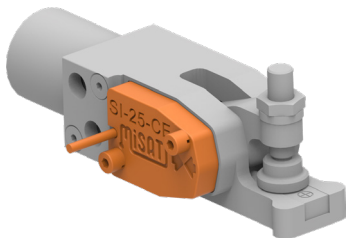


Transfer Press



	Weight (kg)
SI-25-CE	0.02
SI-25N-CE	0.02

- ▶ Bolts included
- **Material:** PLA, PA6 IP65, F114
- Only used with minipincers ...-CE



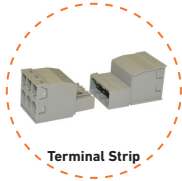
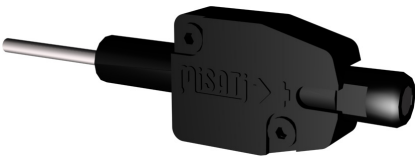
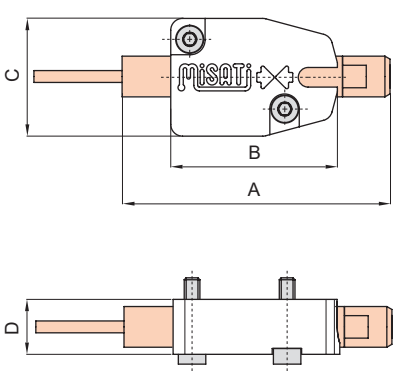
PNP					NPN				
TYPE	A	B	C	D	TYPE	A	B	C	D
SI-25-CE	43	29.6	9	M4	SI-25N-CE	43	29.6	9	M4

Transfer Press

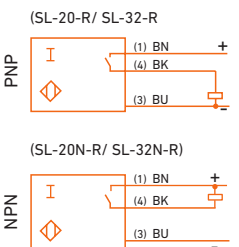


MINIPINCERS - Lateral Sheet Detector

SL-...-R



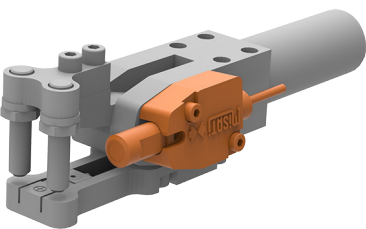
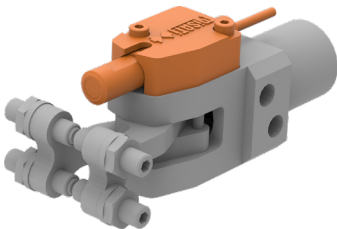
Electrical connections



	Weight (kg)
SL-20-R	0.05
SL-20N-R	0.05
SL-32-R	0.07
SL-32N-R	0.07

- ▶ Bolts & Terminal Strip included
- **Material:** F114, PLA
- Only used with minipincers TIM2-..., TIP-..., TI2-..., TCM2-...

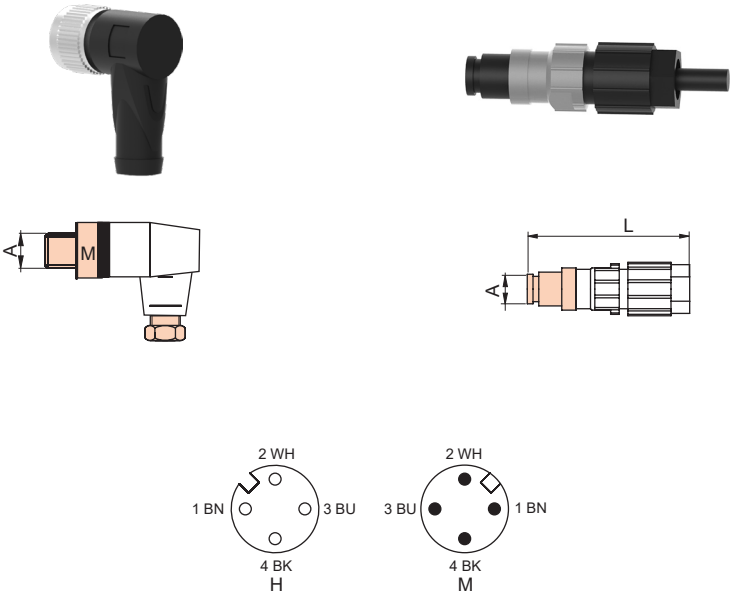
Example of application



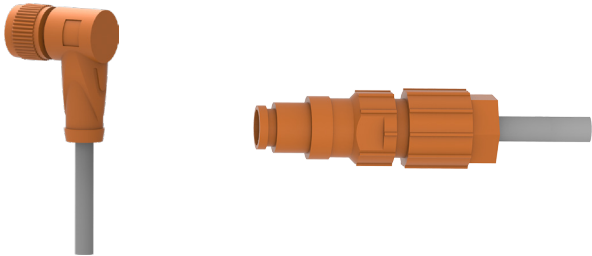
TYPE	A	B	C	D	Sensing Distance
SL-20-R	69	42.5	30	14	4 mm
SL-20N-R	69	42.5	30	14	4 mm
SL-32-R	93	60.5	38.6	14	4 mm
SL-32N-R	93	60.5	38.6	14	4 mm

CS-...

CS-010	CS-013
--------	--------



Examples of applications



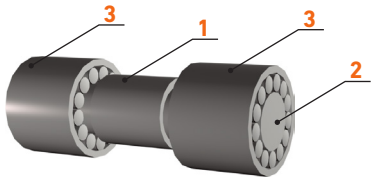
TYPE	L	A
CS-010	28	M12X1
CS-013	56.5	M12X1



KM...

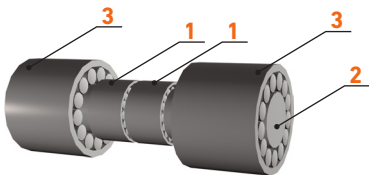
KM-...

- 1 - Internal Bushing
- 2 - Bolt
- 3 - Bearings (x2)



KMC-...

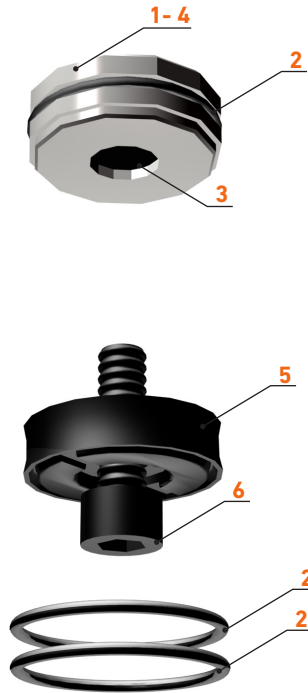
- 1 - Internal Bushings (x2)
- 2 - Bolt
- 3 - Bearings (x2)



TYPE	MINIPINCER
KM-20	TIM2, TI2, TLR3, TIML2, TIL2
KM-32	TI2, TIP, TIL2
KMC-25	TCM2

KJ-...

- 1 - Guide
- 2 - O-ring (x3)
- 3 - Groove Ring
- 4 - Scraper Ring
- 5 - Piston
- 6 - Allen Screw



■ To replace these elements properly, please check the "Technical Data" guide available at [www.misati.com](http://www.misati.com)

TYPE
KJ-20
KJ-25
KJ-32



# 3 CENTRING SHOVELS



- Longitudinal Centring Shovel
- Vertical Centring Shovel
- Handle for Shovel



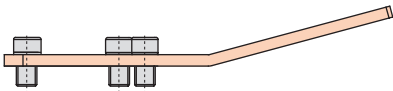
CENTRING SHOVELS - Longitudinal Centring Shovel

PALM2-C-...

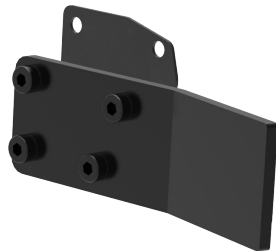
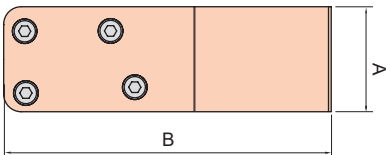
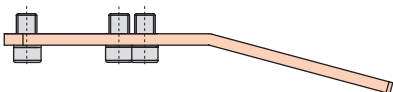


Transfer Press

■ PALM2-C-1



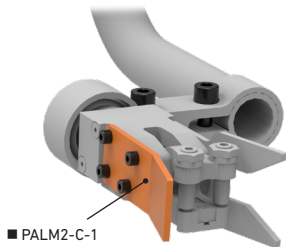
■ PALM2-C-2



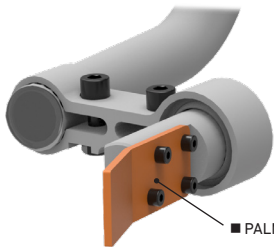
	Weight (kg)
PALM2-C-...	0.09

- Bolts & Bakelite included
- **Material:** hardened steel
- Only used with minipincers  
TIM2-25-15, TIM2-25-27  
TIML2-25-15, TIM2-25-27  
TCM2-25-15, TCM2-25-27  
TIML2-25-CE

Examples of applications



■ PALM2-C-1



■ PALM2-C-2

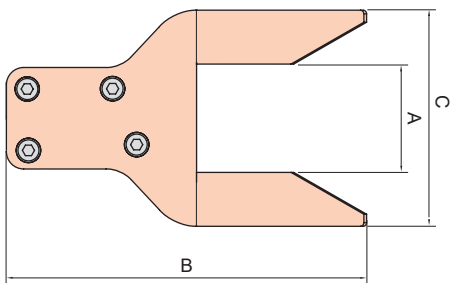
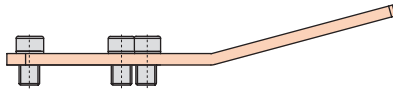
TYPE	A	B	APPLIED ON
PALM2-C-1	30	93	Minipincers (ch. 2)
PALM2-C-2	30	93	PALM2-... (p. 3-07)

CENTRING SHOVELS - Vertical Centring Shovel

PALM2-V-...



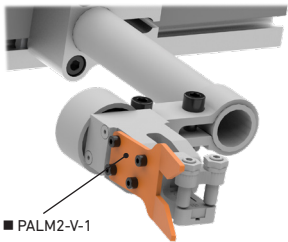
Transfer Press



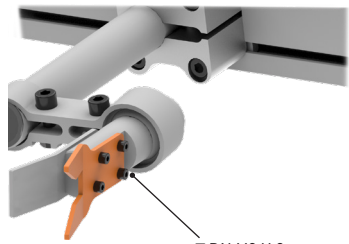
	Weight (kg)
PALM2-V-...	0.07
PALM2L-V-1	0.08

- Bolts & Bakelite included
- **Material:** hardened steel

Examples of applications



■ PALM2-V-1



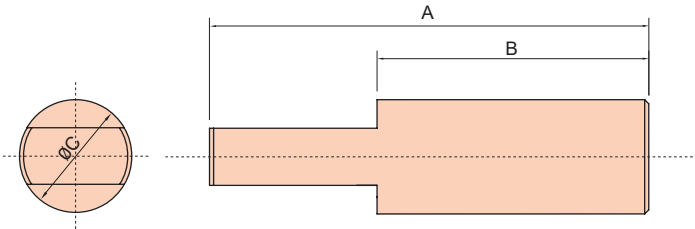
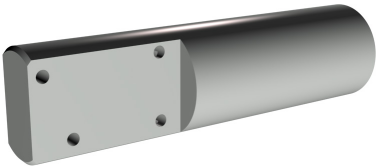
■ PALM2-V-2

TYPE	A	B	C	APPLIED ON
PALM2-V-1	16	93	47	TIM2-TIMC2-TCM2-25-15 / 27 (ch. 2)
PALM2-V-2	16	93	47	PALM2-30 (p. 3-07)
PALML2-V-1	16	105	47	TIML2-25-15 / 27 (ch. 2)

CENTRINGS HOVELS - Handle for Shovel  
PALM2-...



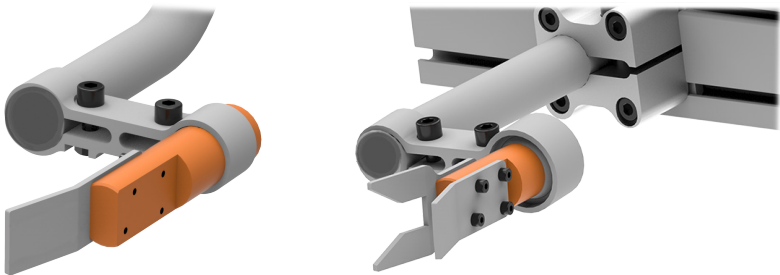
Transfer Press



	Weight (kg)
PALM2-30	0.15

- ▶ Bolts included
- Material: duraluminium

Examples of applications



TYPE	A	B	C
PALM2-30	110	65	30



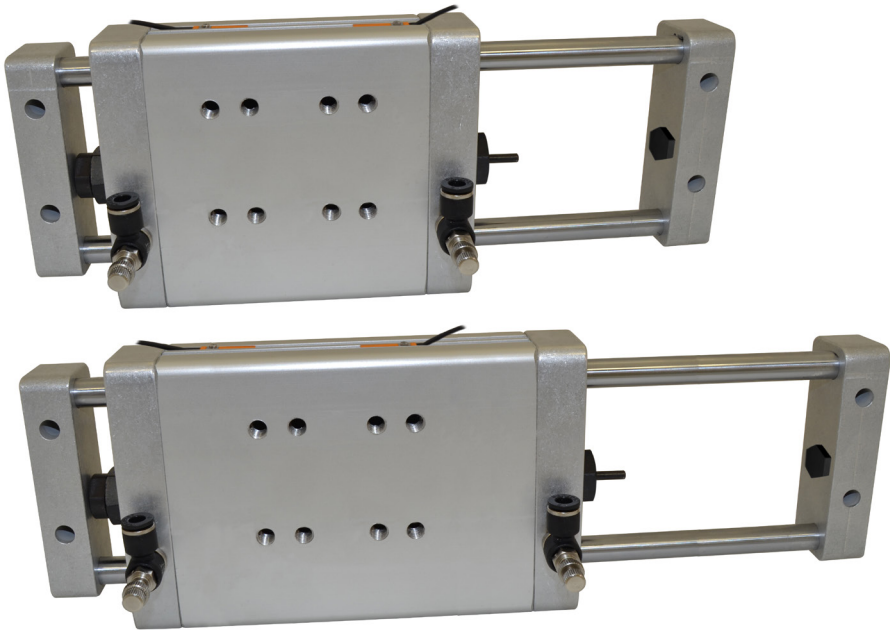
# 4 LINEAR UNITS



- Linear Unit
- Examples of Applications
- Position Sensor

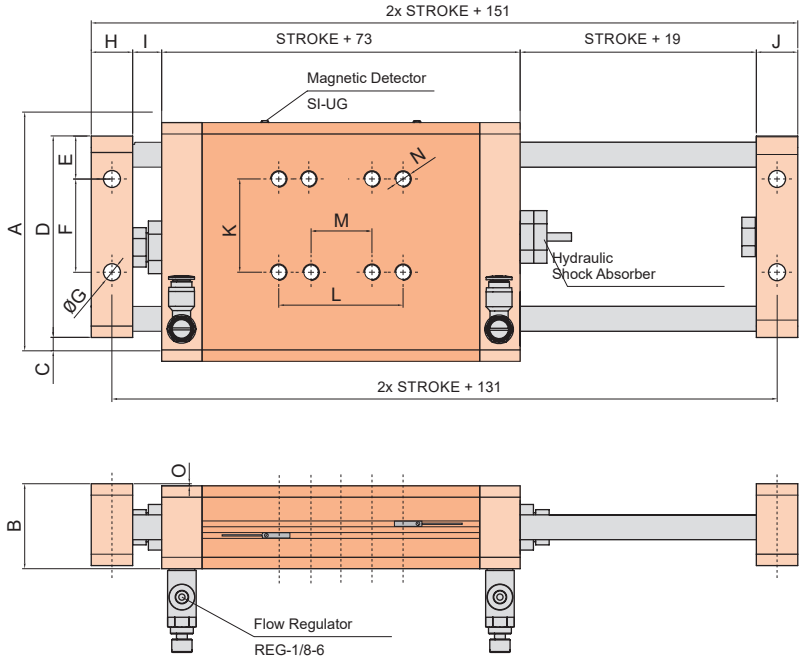






- Working pressure: 6 bar (maximum: 10 bar)
- Material: hardened steel & duraluminium

TYPE	THRUST FORCE	PISTON	OPERATING SPEED	LOAD	PRECISION STOP	WEIGHT
UL3-32-100	25 daN	Ø32	80 to 600 mm/s	0.1 to 15 kg	0.01 mm	2.50 kg
UL3-32-150	25 daN	Ø32	80 to 600 mm/s	0.1 to 15 kg	0.01 mm	3.50 kg
UL3-32-200	25 daN	Ø32	80 to 600 mm/s	0.1 to 15 kg	0.01 mm	4.50 kg



	Weight (kg)
UL3-32-100	2.50
UL3-32-150	3.50
UL3-32-200	4.50

- Bolts included
- Cushioning included
- Detector included
- Flow Regulator included

TYPE	A	B	C	D	E	F	ØG	H	I	J	K	L	M	N	O	STROKE
UL3-32-100	115.2	41	6.5	97.2	20.7	45	8.2	20	18.6	20	45	71	45	M8	1	100
UL3-32-150	115.2	41	6.5	97.2	20.7	45	8.2	20	18.6	20	45	71	45	M8	1	150
UL3-32-200	115.2	41	6.5	97.2	20.7	45	8.2	20	18.6	20	45	71	45	M8	1	200

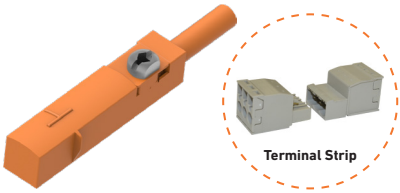
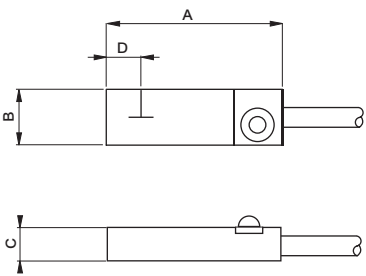
■ Mountings for the Linear Unit can be found in **CHAPTER 6**.



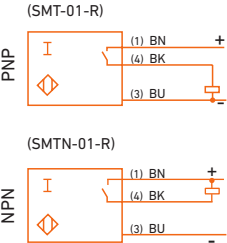
■ Example of assembly to separate or bring sheets closer between dies.

■ Example of assembly to cover the height between dies.

■ Example of assembly to increase or reduce the distance between dies.



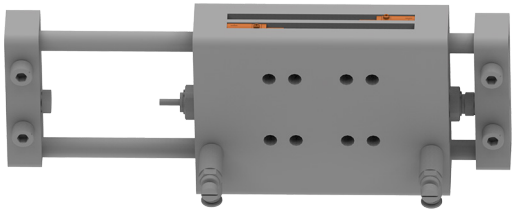
Electrical connections



	Weight (kg)
SMT-01-R	0.06
SMTN-01-R	0.06

- Bolts & Terminal Strip included  
■ **Material:** PPS IP67

Examples of applications

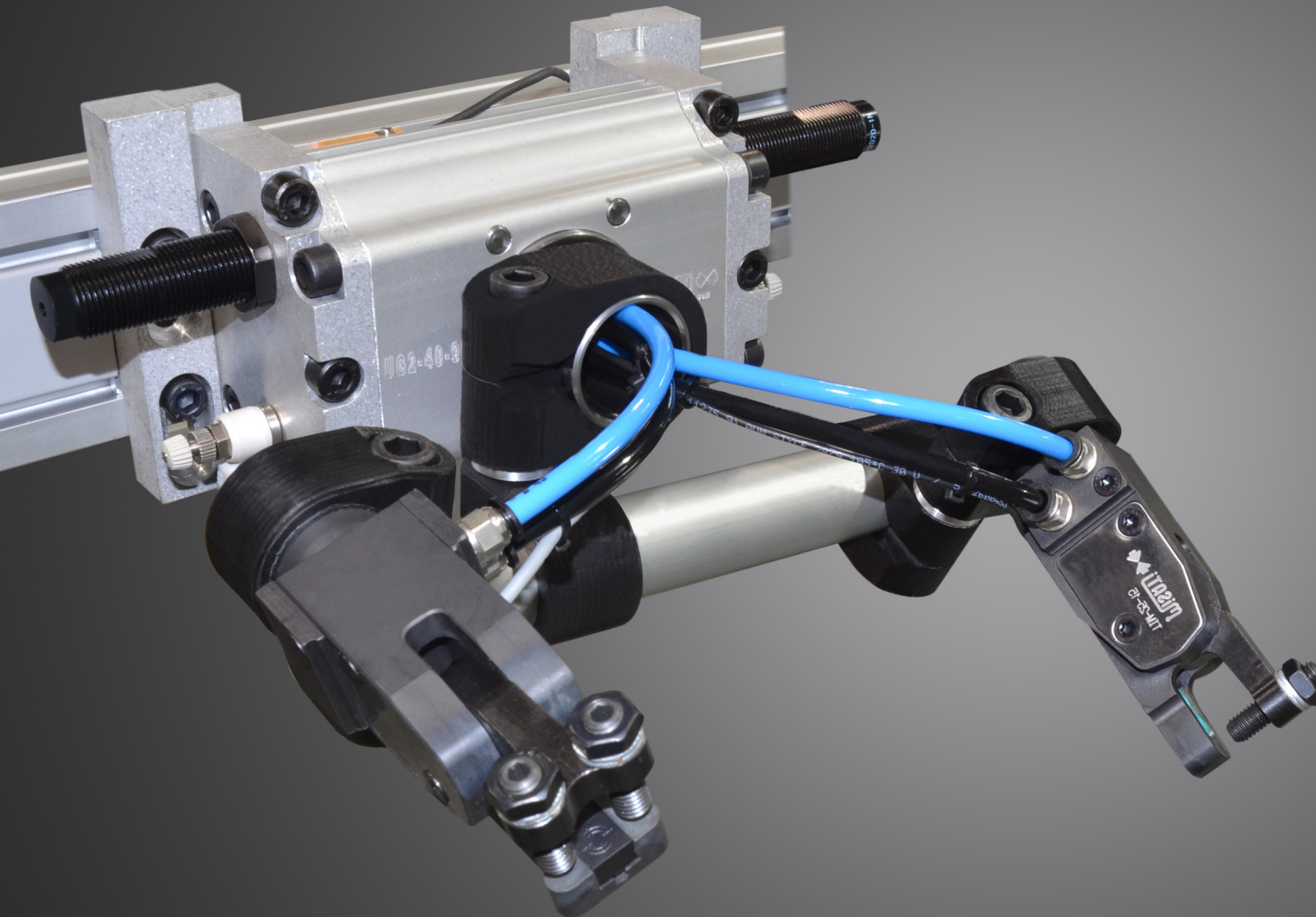


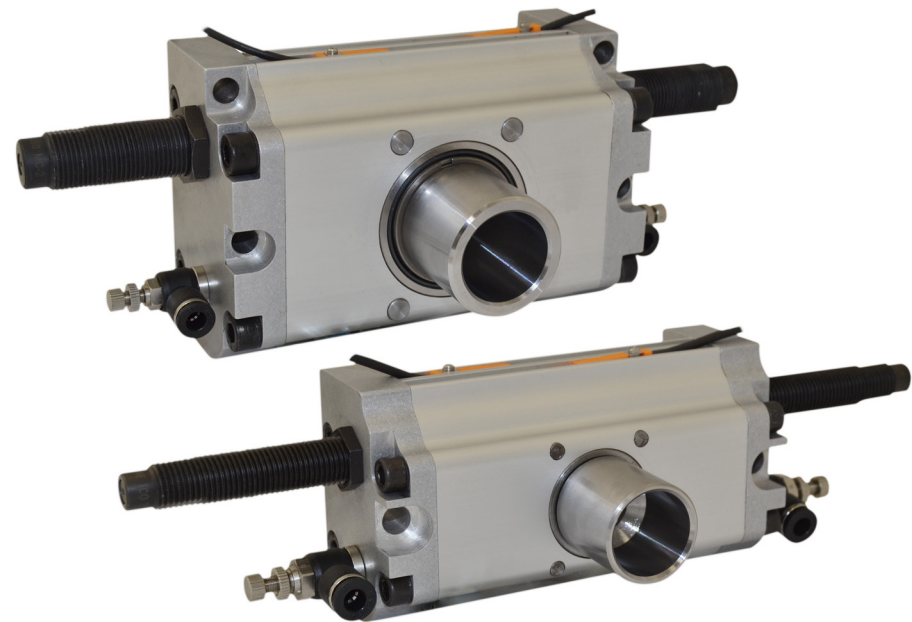
TYPE	A	B	C	D
SMT-01-R	25.3	6.3	5.1	6.2
SMTN-01-R	25.3	6.3	5.1	6.2

# 5 TURNING UNITS



- Turning Unit
- Examples of Applications
- Mounting for the Turning Unit
- Position Sensor

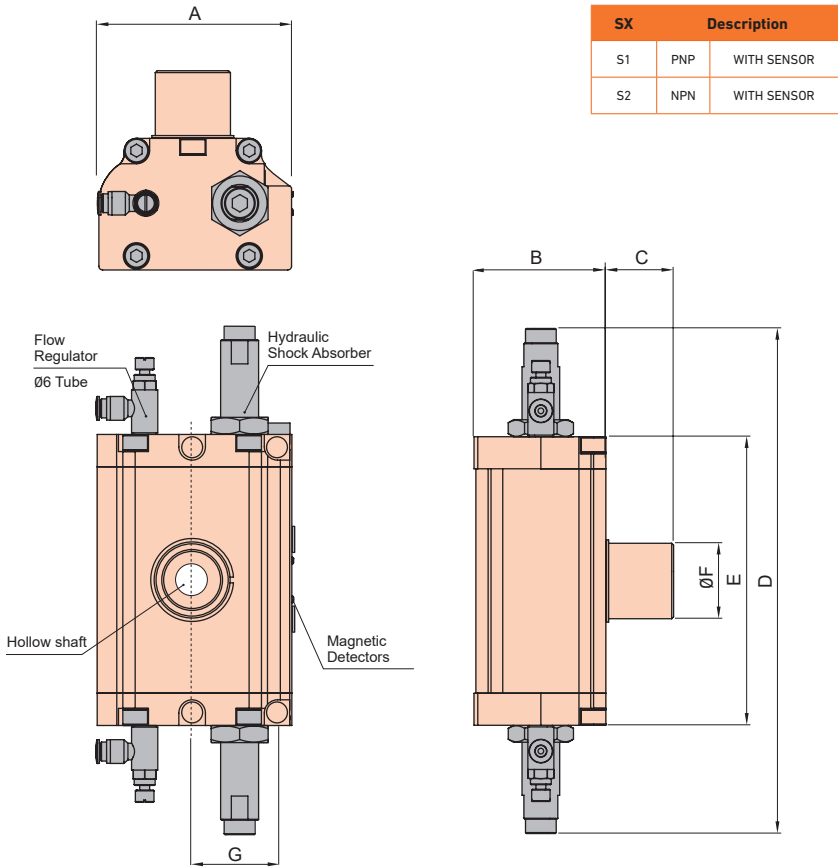




- Working pressure: 6 bar (maximum: 10 bar)
- Mechanism: double rack & pinion
- Material: hardened steel & duraluminium

TYPE	TURNING MOMENT	ROTATION ANGLE	PRECISION STOP (r=40)	SPEED	PISTON	MAXIMUM LOAD	WEIGHT
UG4-25-180-SX	2.7 Nm	0 a 182°	± 0.02 mm	90° / 0.2 s. 90° / 0.15 ÷ 0.25 s.*	Ø25	5 kg	1.27 kg
UG3-40-90-SX	12.1Nm	0 a 92°	± 0.02 mm	90° / 0.3 s.	Ø40	20 kg	2.80 kg
UG3-40-180-SX	12.1Nm	0 a 182°	± 0.02 mm	90° / 0.2 ÷ 0.4 s.*	Ø40	20 kg	3.02 kg

\* The speed depends on the rotation angle and the kinetic energy

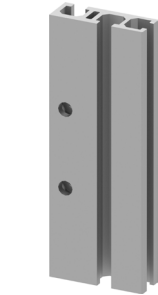
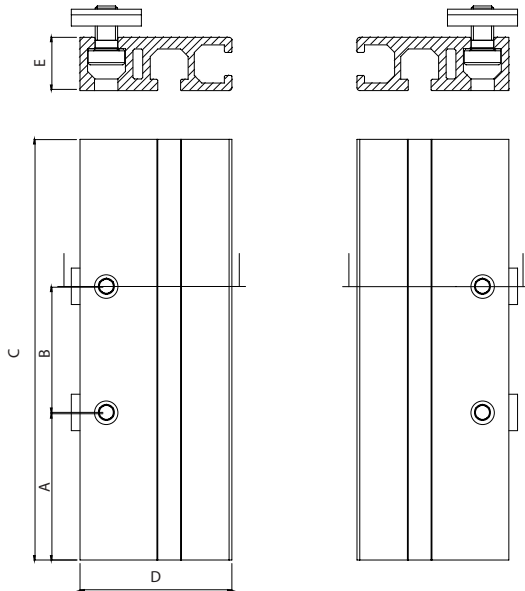
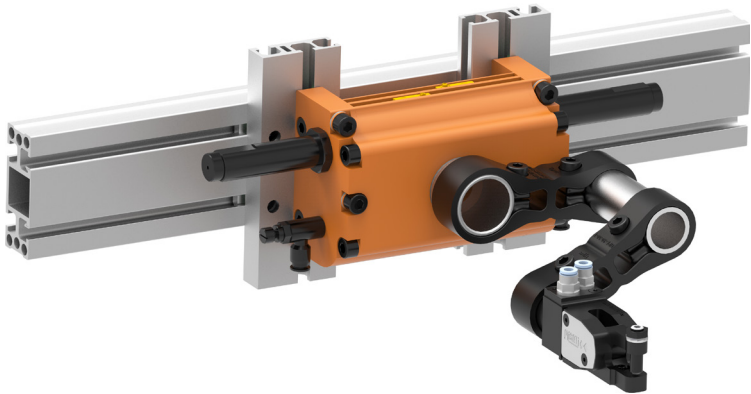


SX	Description	
S1	PNP	WITH SENSOR
S2	NPN	WITH SENSOR

- ▶ Bolts included
- ▶ Cushioning included
- ▶ Detector included
- ▶ Flow Regulator included

TYPE	A	B	F	D	E	ØF	G
UG4-25-180-SX	68	52	31	243	134	30	
UG3-40-90-SX	100	70	36	268	153	40	45
UG3-40-180-SX	100	70	36	218	203	40	45

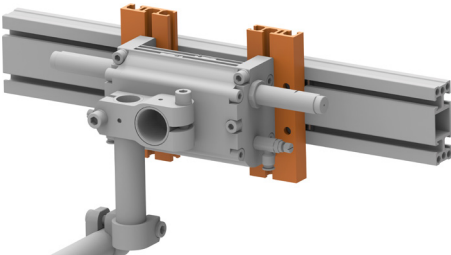




	Weight (kg)
PR-UG-C	0.444
PR-UG-E	0.556

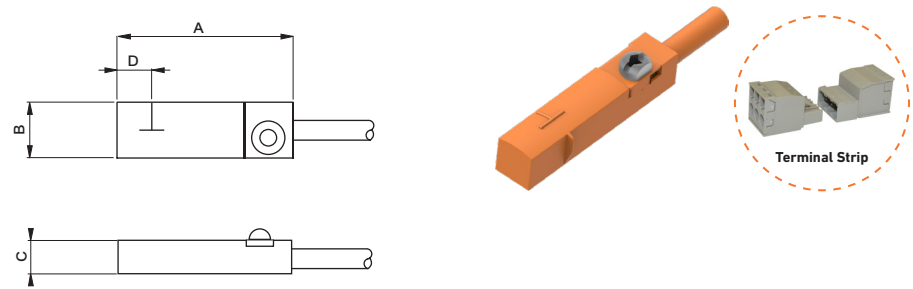
- Bolts included
- Material: duraluminium

Example of application

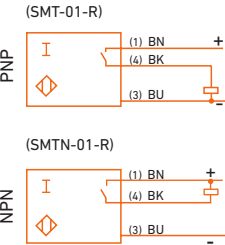


TYPE	A	B	C	D	E
PR-UG-C	52.5	45	150	54.5	19
PR-UG-E	17.5	62.5	200	54.5	19

SMT...



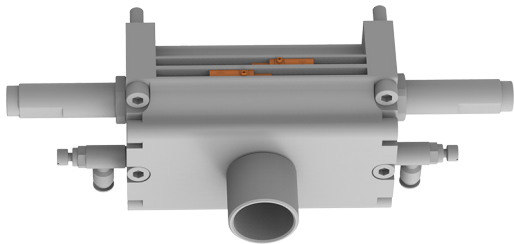
Electrical connections



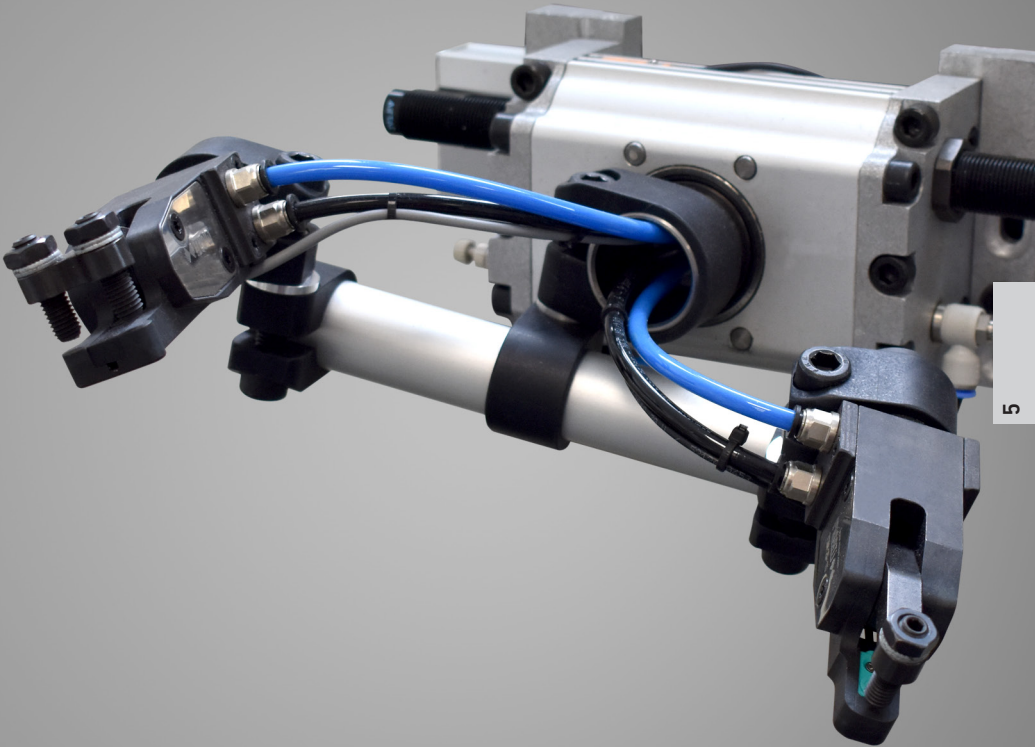
	Weight (kg)
SMT-01-R	0.06
SMTN-01-R	0.06

- Bolts & Terminal Strip included
- Material: PPS IP67

Example of application



TYPE	A	B	C	D
SMT-01-R	25.3	6.3	5.1	6.2
SMTN-01-R	25.3	6.3	5.1	6.2



# 6 MOUNTINGS

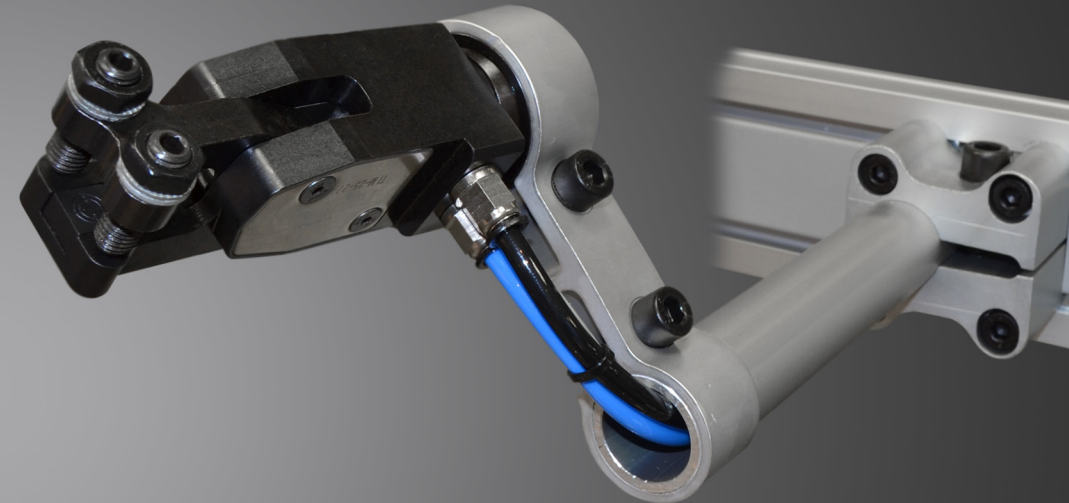
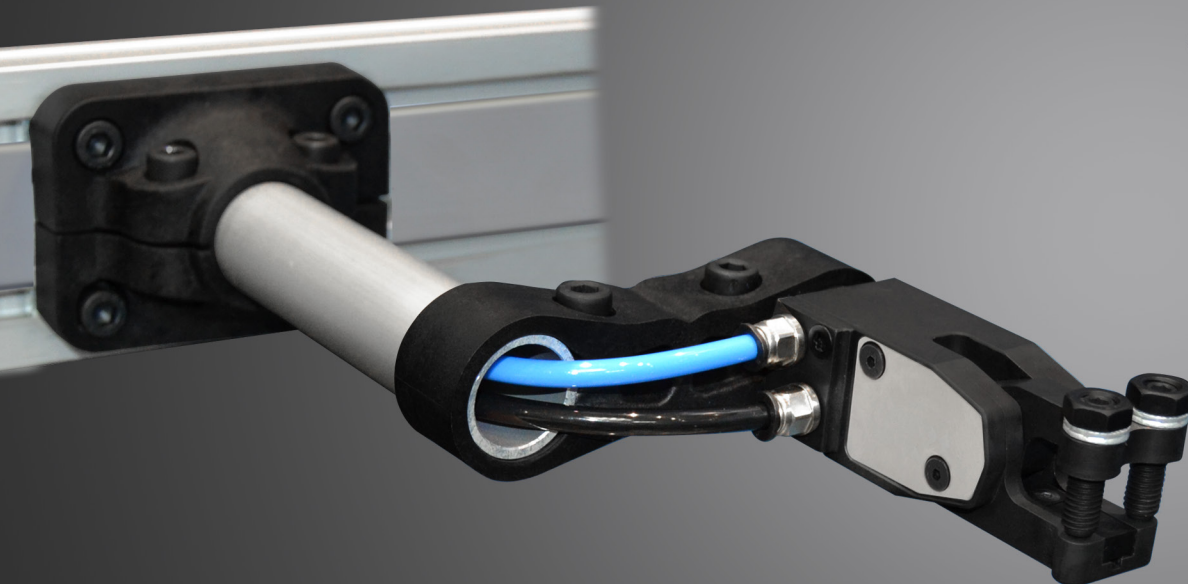


## TECHNOPOLYMER MOUNTINGS

- Tube Mounting
- Parallel Bracket
- Displacement Parallel Bracket
- Rotary Bracket

## ALUMINIUM MOUNTINGS

- Tube
- Parallel Bracket
- Displacement Parallel Bracket
- Fixed Bracket
- Rotary Bracket



TECHNOPOLYMER MOUNTINGS - Which structure should I use? Transfer Press

TYPE	page
SPT-30	6-05
TUBA-30X4-L	6-17
UPL-30-30-T	6-07



TYPE	page
SVT-30	6-06
TUBAC-30X4-...	6-17
UPLR-30-30-T	6-08

TYPE	page
SPT-30	6-05
TUBA-30X4-L	6-17
UPL-30-30-ZT	6-09



TYPE	page
SVT-30	6-06
TUBAC-30X4-...	6-17
UPLR-30-30-ZT	6-10

TYPE	page
SPT-30	6-05
TUBA-30X4-L	6-17
UCT-30-30-L	6-11

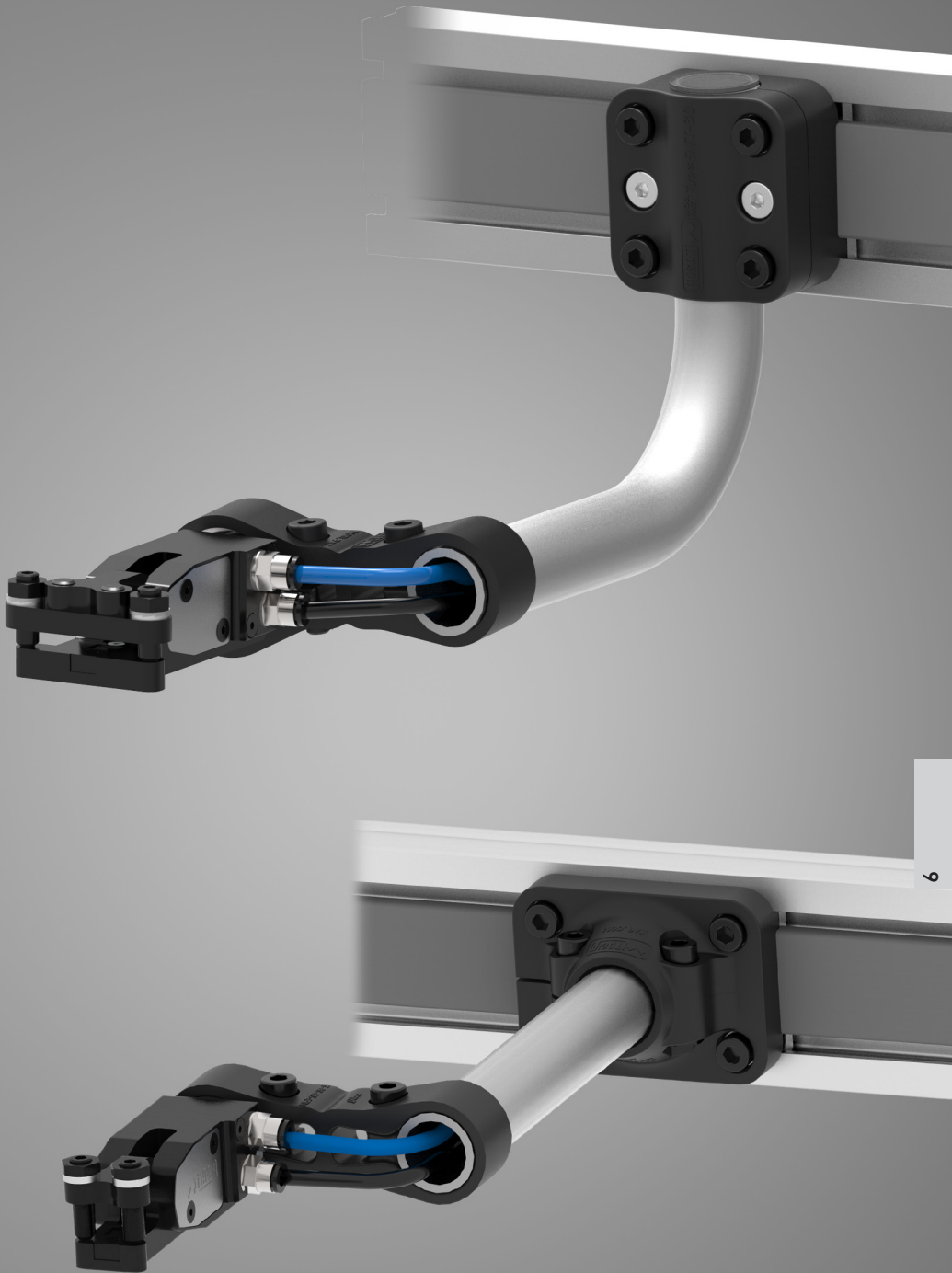


TYPE	page
SVT-30	6-06
TUBAC-30X4-...	6-17
UCTR-30-30-L	6-12

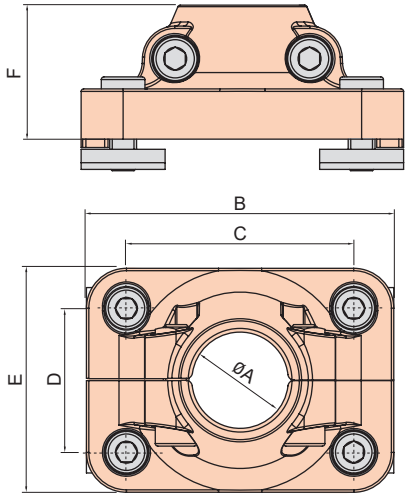
TYPE	page
SVT-30	6-05
TUBA-30X4-L	6-17
UCT-30-30-L	6-31



TYPE	page
SVT-30-90	6-06
TUBAC-30X4-...	6-17
UPL-30-30-T	6-07



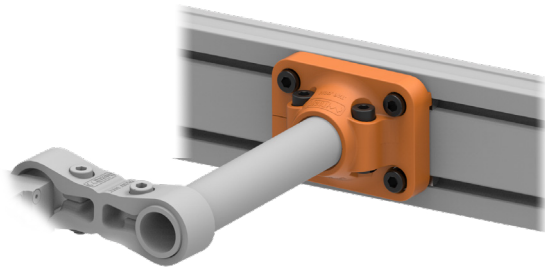




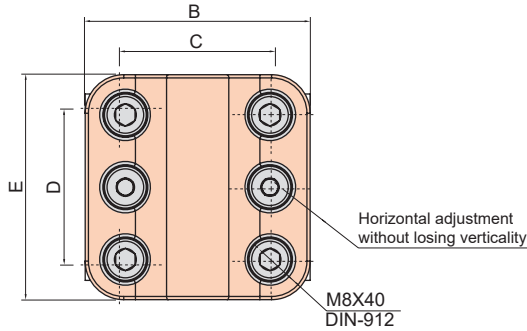
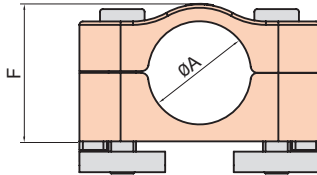
	Weight (kg)
SPT-30	0.28

- Bolts included
- **Material:** Technopolymer

Example of application



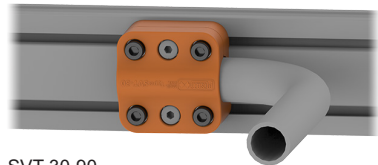
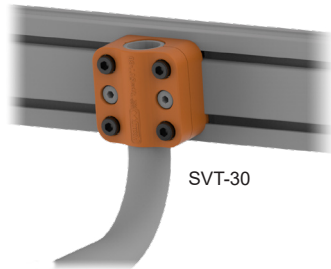
TYPE	ØA	B	C	D	E	F
SPT-30	30	96	71	45	70	40



	Weight (kg)
SVT-30	0.27

- Bolts included
- **Material:** Technopolymer

Example of application

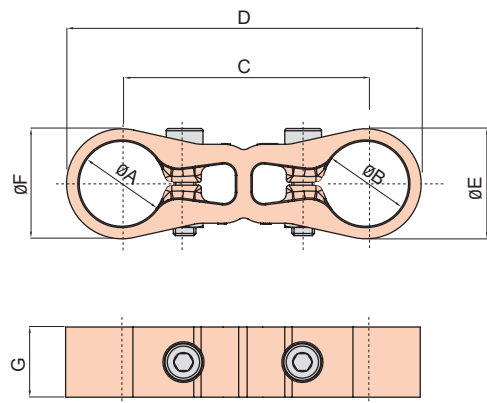


TYPE	A	B	C	D	E	ØF
SVT-30	30	70	45	45	70	40
SVT-30-90	30	70	45	45	70	40

TECHNOPOLYMER MOUNTINGS - Parallel Bracket  
UPL-....-T



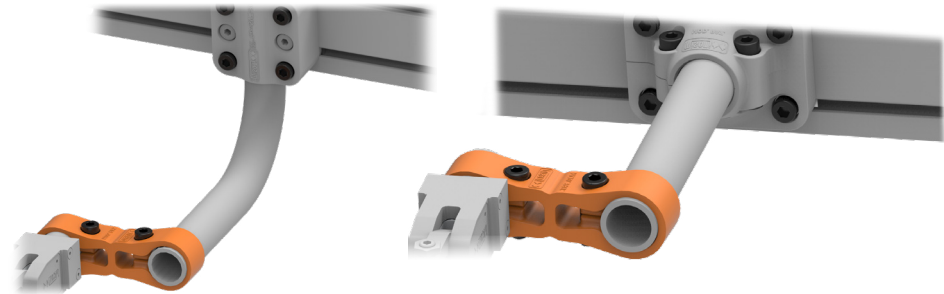
Transfer Press



	Weight (kg)
UPL-30-30-T	0.10
UPL-40-30-T	0.12

- Bolts included
- **Material:** Technopolymer

Examples of applications

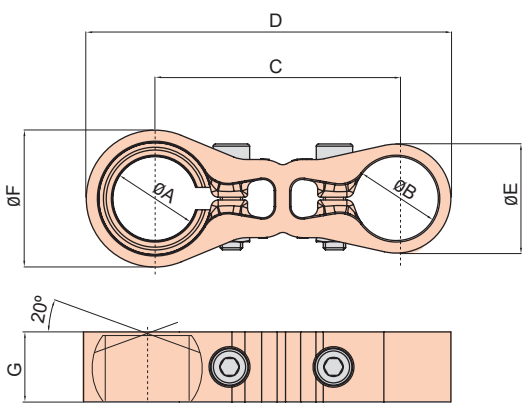


TYPE	ØA	ØB	C	D	ØE	ØF	G
UPL-30-30-T	30	30	86	125	39	39	25
UPL-40-30-T	40	30	86	130	39	49	25

Transfer Press



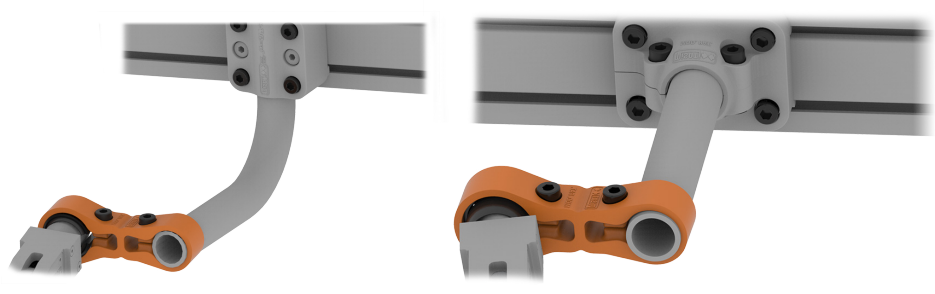
TECHNOPOLYMER MOUNTINGS - Parallel Bracket  
UPLR-....-T



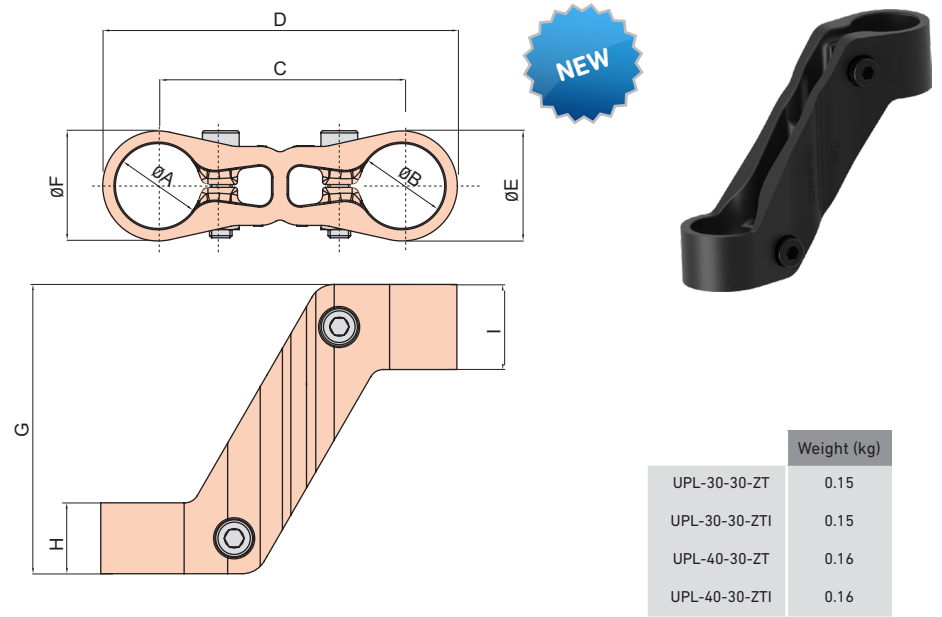
	Weight (kg)
UPLR-25-30-T	0.20
UPLR-28-30-T	0.20
UPLR-30-30-T	0.20

- Bolts included
- **Material:** Technopolymer & machined F-114

Examples of applications

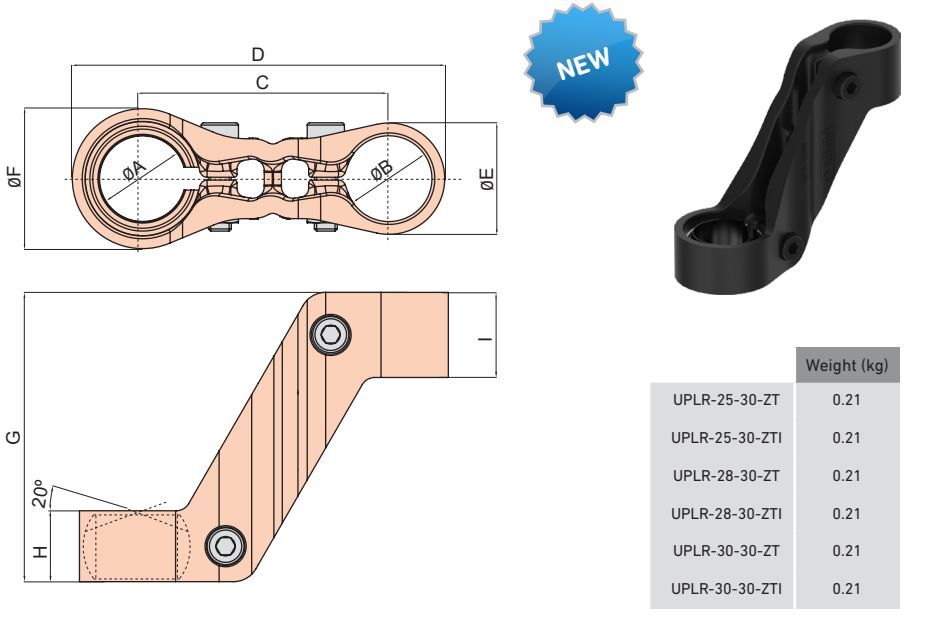
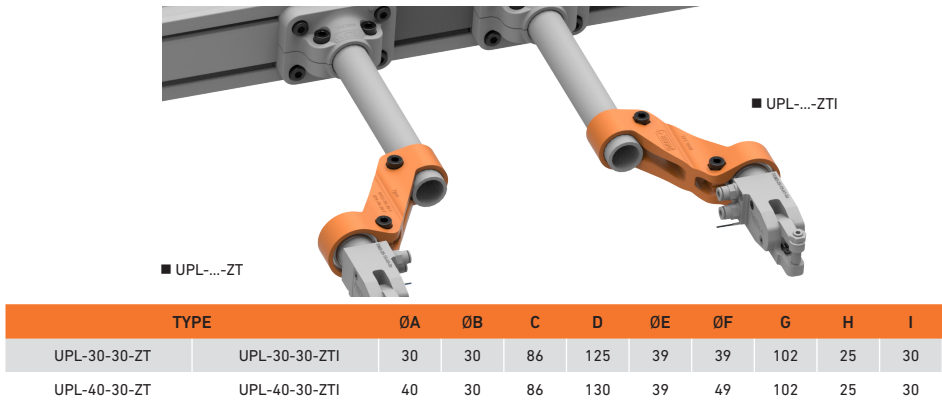


TYPE	ØA	ØB	C	D	ØE	ØF	G
UPLR-25-30-T	25	30	86	130	39	49	25
UPLR-28-30-T	28	30	86	130	39	49	25
UPLR-30-30-T	30	30	86	130	39	49	25



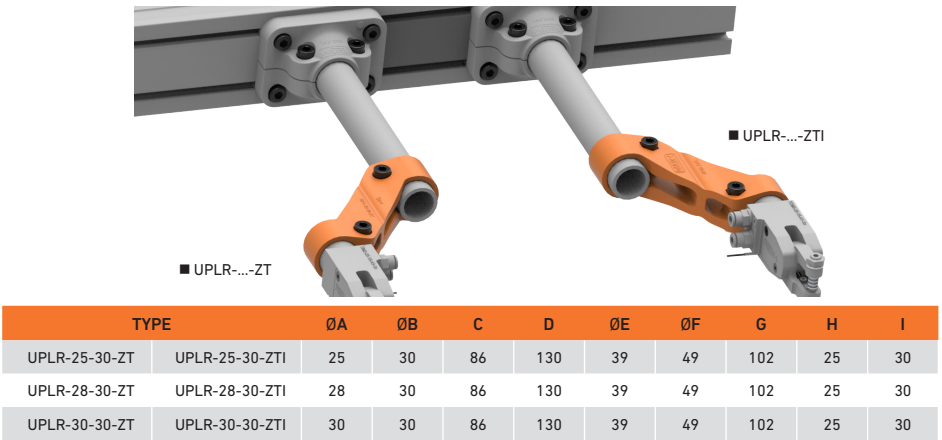
- ▶ Bolts included
- Material: Technopolymer

Examples of applications



- ▶ Bolts included
- Material: Technopolymer & machined F-114

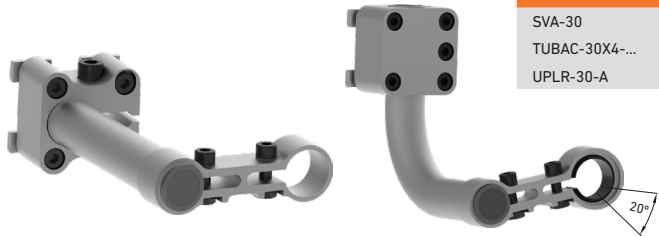
Examples of applications



ALUMINIUM MOUNTINGS - Which structure should I use?



TYPE	page
SPA-30	6-15
TUBA-30X4-L	6-17
UPL-30-A	6-18



TYPE	page
SVA-30	6-16
TUBAC-30X4-...	6-17
UPLR-30-A	6-19

TYPE	page
SPA-30	6-15
TUBA-30X4-L	6-17
UPL-30-ZA	6-18



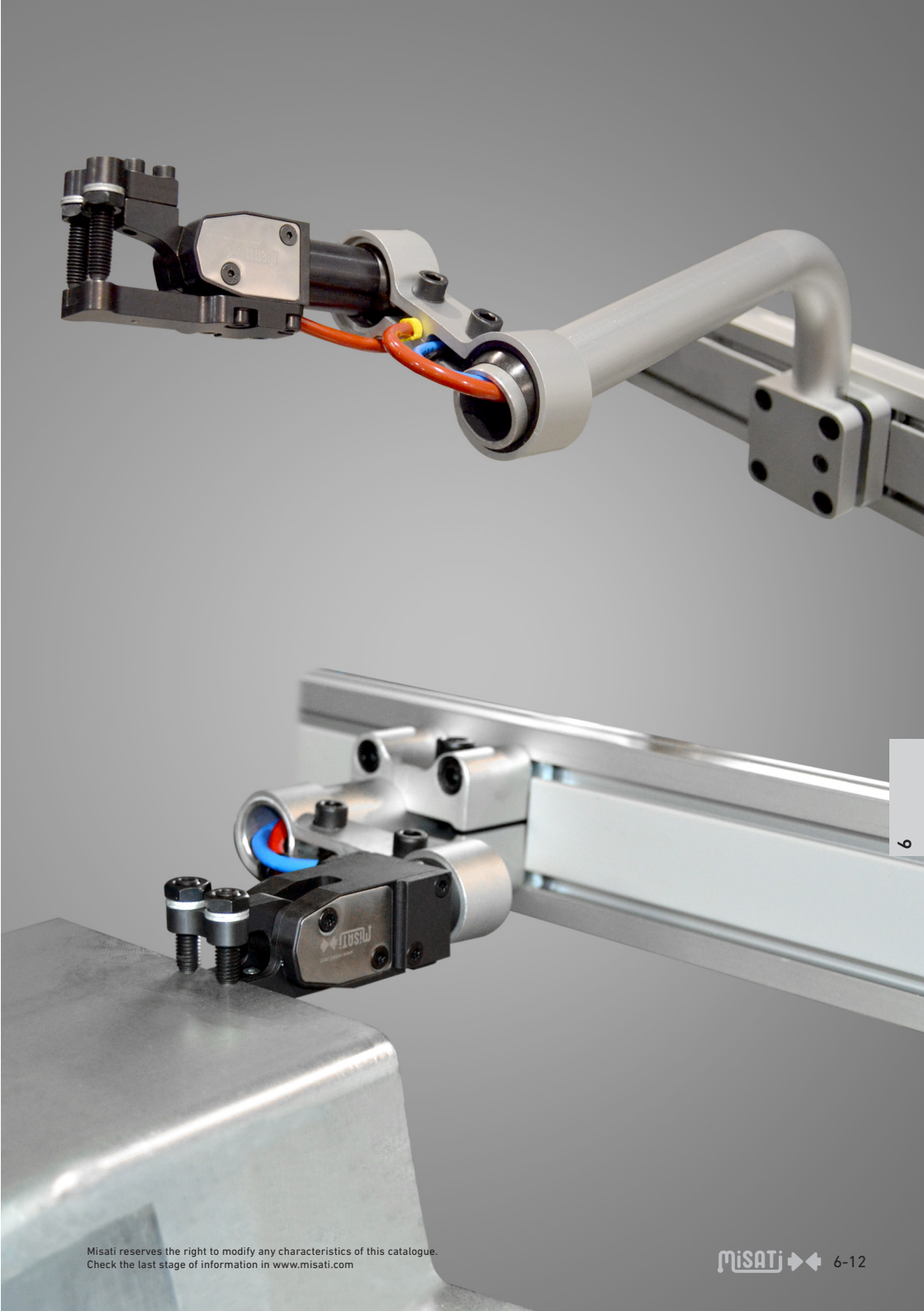
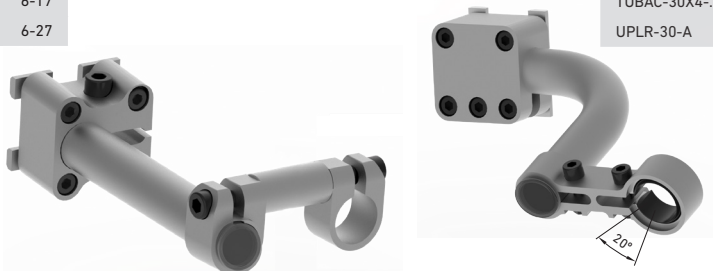
TYPE	page
SVA-30	6-16
TUBAC-30X4-...	6-17
UPLR-30-ZA	6-19

TYPE	page
SPA-30	6-15
TUBA-30X4-L	6-17
UCT0-30-30	6-26

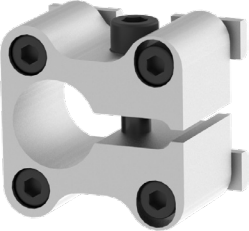
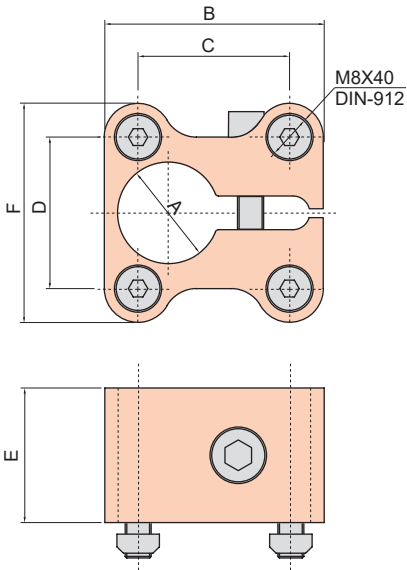


TYPE	page
SVA-30	6-16
TUBAC-30X4-...	6-17
UCTR-30-L	6-28

TYPE	page
SPA-30	6-15
TUBA-30X4-L	6-17
UCT-30-L	6-27



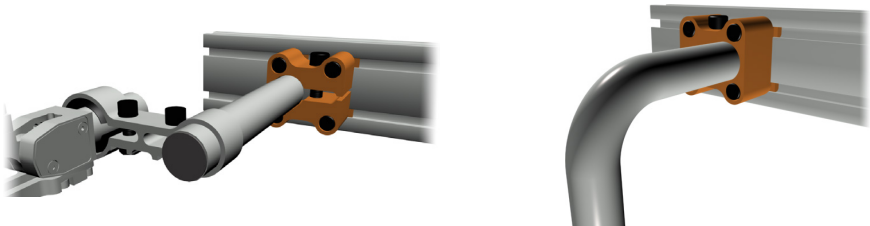




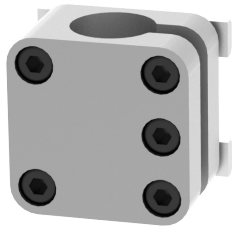
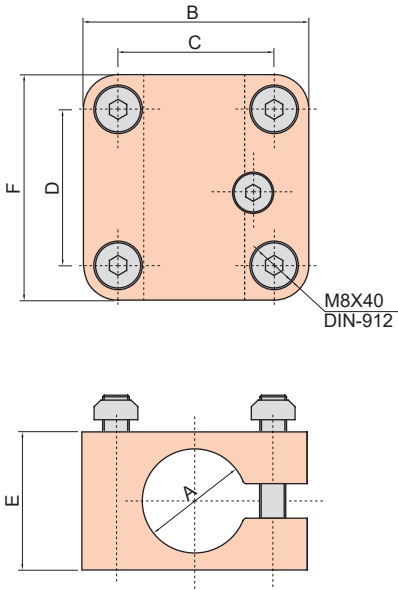
	Weight (kg)
SPA-30	0.38
SPA-30-50	0.40

- Bolts included
- Material: duraluminium

Examples of applications



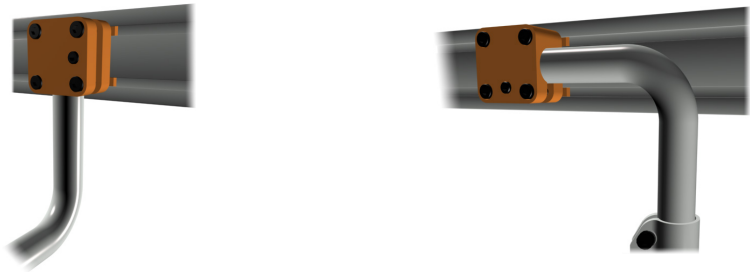
TYPE	ØA	B	C	D	E	F
SPA-30	30	65	45	45	40	65
SPA-30-50	30	70	50	50	40	70



	Weight (kg)
SVA-30	0.38
SVA-30-40	0.32
SVA-30-50	0.35

- Bolts included
- Material: duraluminium

Examples of applications



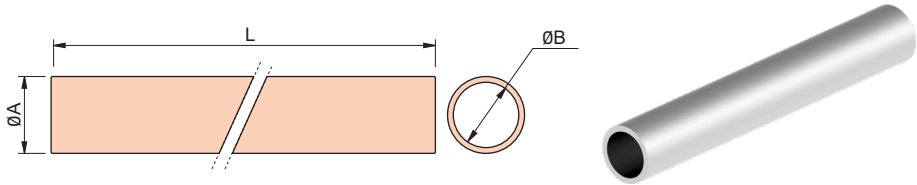
TYPE	ØA	B	C	D	E	ØF
SVA-30	30	65	45	45	40	65
SVA-30-40	30	65	45	40	40	60
SVA-30-50	30	65	45	50	40	70

ALUMINIUM MOUNTINGS - Tube

TUBA-..., TUBAC-...



Transfer Press

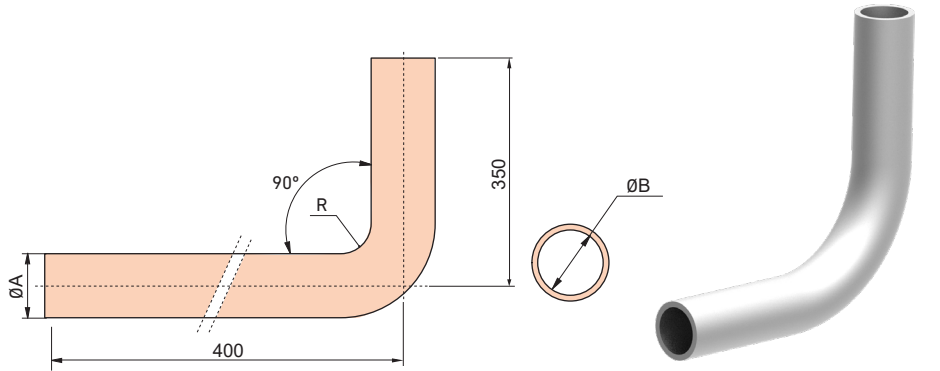


Weight (kg/m)	
TUBA-30X4-L	0.88

■ Material: duraluminium

Tubes can be supplied in cuts multiple of 10mm.

TYPE	ØA	ØB
TUBA-30X4-L	30	22



Weight (kg/m)	
TUBAC-30X4-350-400	0.88

■ Material: duraluminium

Tubes can be supplied in cuts multiple of 10mm.

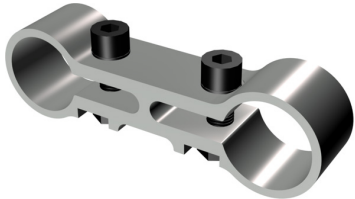
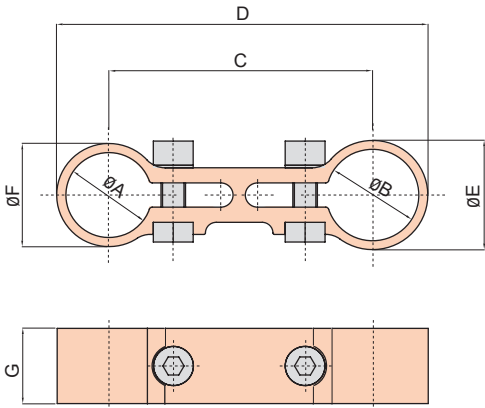
TYPE	ØA	ØB
TUBAC-30X4-350-400	30	22

Transfer Press



ALUMINIUM MOUNTINGS - Parallel Bracket

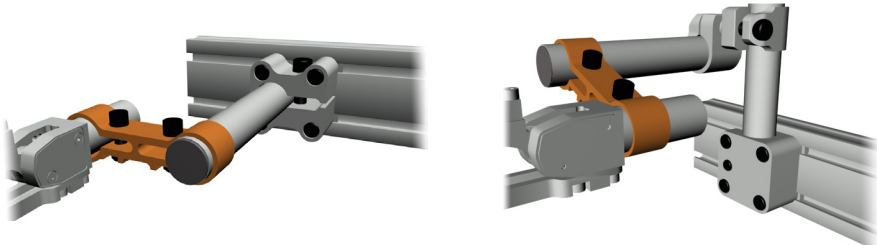
UPL-...-A



Weight (kg)	
UPL-28-30-A	0.11
UPL-30-25-A	0.11
UPL-30-30-A	0.11
UPL-40-25-A	0.12
UPL-40-30-A	0.12
UPL-40-40-A	0.12
UPL-50-30-A	0.12

- Bolts included
- Material: duraluminium

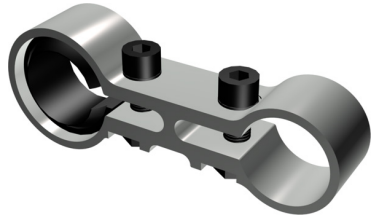
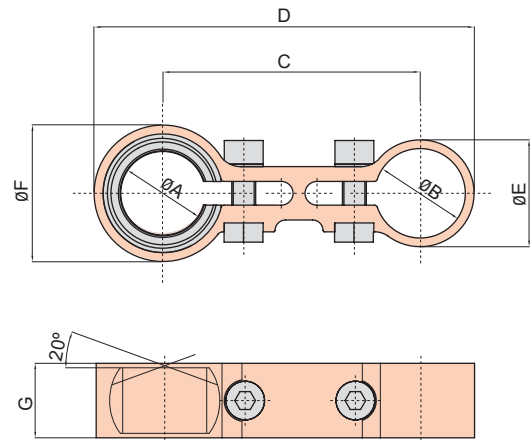
Examples of applications



TYPE	ØA	ØB	C	D	ØE	ØF	G
UPL-28-30-A	28	30	86	121	36	36	25
UPL-30-25-A	30	25	86	119,5	31	36	25
UPL-30-30-A	30	30	86	122	36	34	25
UPL-40-25-A	40	25	86	127	36	46	25
UPL-40-30-A	40	30	86	127	36	46	25
UPL-40-40-A	40	40	86	132	36	46	25
UPL-50-30-A	50	30	86	132	46	56	25

ALUMINIUM MOUNTINGS - Parallel Bracket

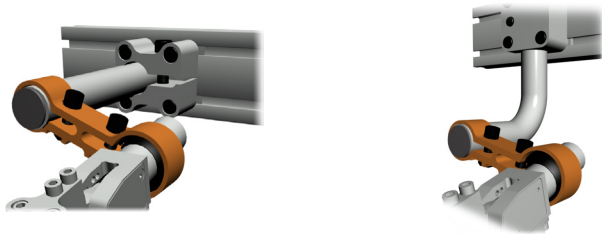
UPLR-...-A



	Weight (kg)
UPLR-25-25-A	0.21
UPLR-25-30-A	0.19
UPLR-25-40-A	0.20
UPLR-28-25-A	0.19
UPLR-28-30-A	0.78
UPLR-28-40-A	0.19
UPLR-30-25-A	0.20
UPLR-30-30-A	0.18
UPLR-30-40-A	0.18
UPLR-40-30-A	0.20

- Bolts included
- Material: duraluminium & machined F-114

Examples of applications

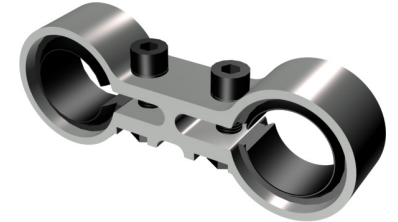
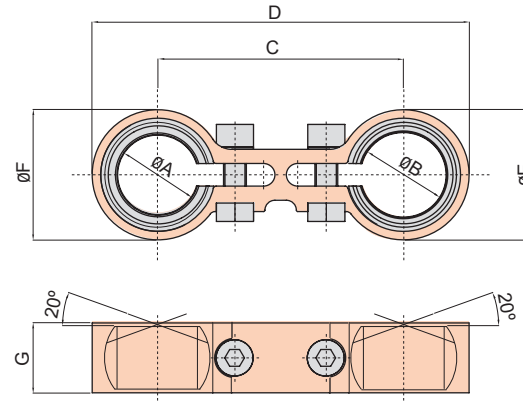


TYPE	ØA	ØB	C	D	ØE	ØF	G
UPLR-25-25-A	25	25	86	127	31	46	25
UPLR-25-30-A	25	30	86	127	36	46	25
UPLR-25-40-A	25	40	86	127	46	46	25
UPLR-28-25-A	28	25	86	127	31	46	25
UPLR-28-30-A	28	30	86	127	36	46	25
UPLR-28-40-A	28	40	86	127	46	46	25
UPLR-30-25-A	30	25	86	132	31	46	25
UPLR-30-30-A	30	30	86	132	36	46	25
UPLR-30-40-A	30	40	86	132	46	46	25
UPLR-40-30-A	40	30	86	132	36	56	25

Transfer Press

ALUMINIUM MOUNTINGS - Parallel Bracket

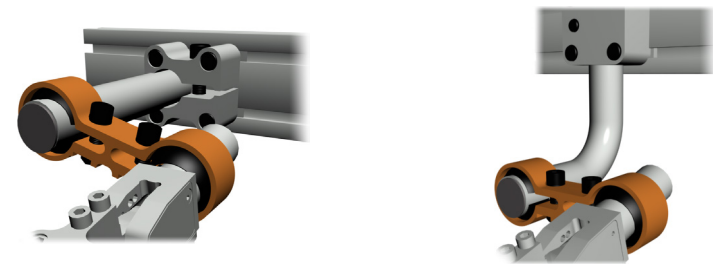
UPL2R-...-A



	Weight (kg)
UPL2R-25-25-A	0.28
UPL2R-28-25-A	0.28
UPL2R-28-30-A	0.27
UPL2R-30-25-A	0.27
UPL2R-30-30-A	0.26

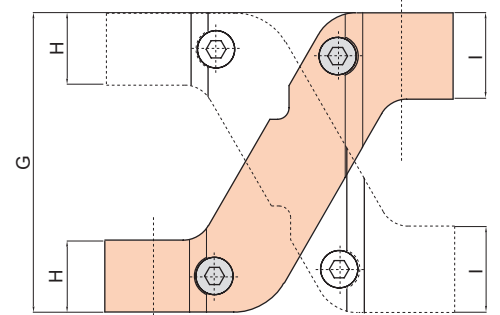
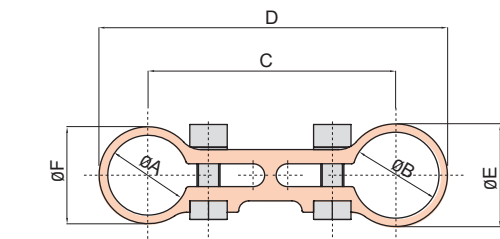
- Bolts included
- Material: duraluminium & machined F-114

Examples of applications



TYPE	ØA	ØB	C	D	ØE	ØF	G
UPL2R-25-25-A	25	25	86	132	46	46	25
UPL2R-28-25-A	28	25	86	132	46	46	25
UPL2R-28-30-A	28	30	86	132	46	46	25
UPL2R-30-25-A	30	25	86	132	46	46	25
UPL2R-30-30-A	30	30	86	132	46	46	25

UPL-...-ZA...



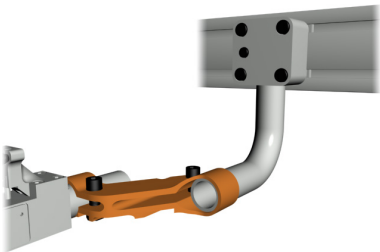
■ UPL-...-ZA                      ■ UPL-...-ZAI



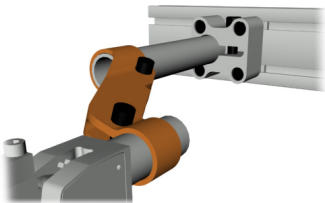
	Weight (kg)
UPL-28-30-ZA...	0.17
UPL-30-25-ZA...	0.17
UPL-30-30-ZA...	0.17
UPL-40-30-ZA...	0.17
UPL-40-40-ZA...	0.19
UPL-50-30-ZA...	0.18

- Bolts included
- Material: duraluminium

Examples of applications



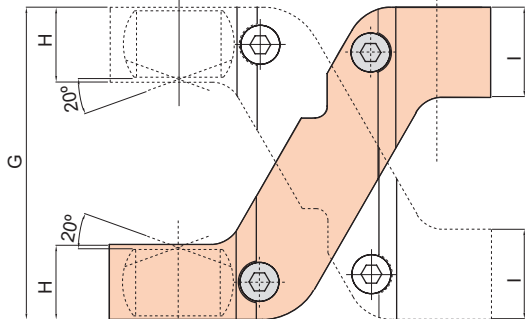
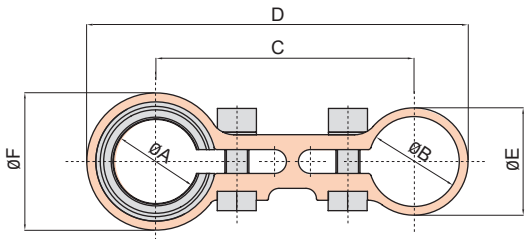
■ UPL-...-ZA



■ UPL-...-ZAI

TYPE		ØA	ØB	C	D	ØE	ØF	G	H	I
UPL-28-30-ZA	UPL-28-30-ZAI	28	30	86	121	36	34	104	25	30
UPL-30-25-ZA	UPL-30-25-ZAI	30	25	86	119.5	31	36	104	25	30
UPL-30-30-ZA	UPL-30-30-ZAI	30	30	86	122	36	36	104	25	30
UPL-40-30-ZA	UPL-40-30-ZAI	40	30	86	127	36	46	104	25	30
UPL-40-40-ZA	UPL-40-40-ZAI	40	30	86	132	36	46	104	25	30
UPL-50-30-ZA	UPL-50-30-ZAI	50	40	86	132	36	56	104	25	30

UPLR-...-ZA...



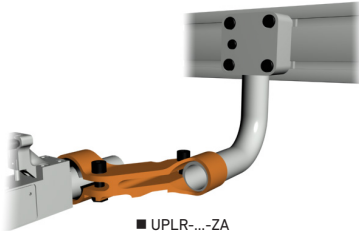
■ UPLR-...-ZA                      ■ UPLR-...-ZAI

- Bolts included
- Material: duraluminium & machined F-114

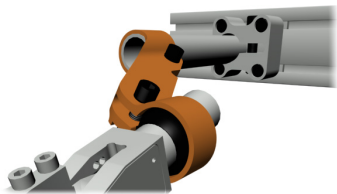


	Weight (kg)
UPLR-25-25-ZA...	0.29
UPLR-25-30-ZA...	0.26
UPLR-25-40-ZA...	0.28
UPLR-28-25-ZA...	0.29
UPLR-28-30-ZA...	0.27
UPLR-28-40-ZA...	0.28
UPLR-30-25-ZA...	0.29
UPLR-30-30-ZA...	0.25
UPLR-30-40-ZA...	0.27
UPLR-40-30-ZA...	0.25

Examples of applications



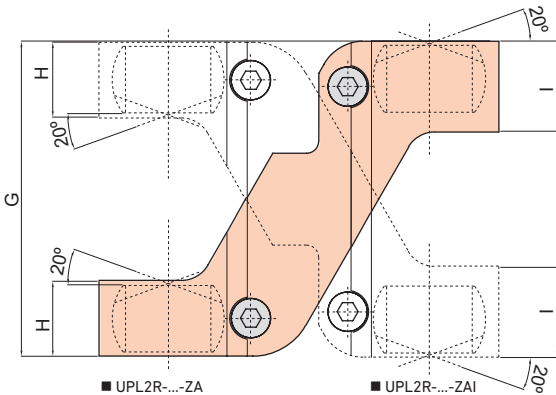
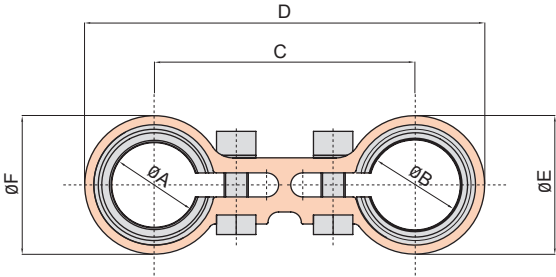
■ UPLR-...-ZA



■ UPLR-...-ZAI

TYPE		A	B	C	ØD	ØE	ØF	G	H	I
UPLR-25-25-ZA	UPLR-25-25-ZAI	25	25	86	127	31	46	104	25	30
UPLR-25-30-ZA	UPLR-25-30-ZAI	25	30	86	127	36	46	104	25	30
UPLR-25-40-ZA	UPLR-25-40-ZAI	25	40	86	127	46	46	104	25	30
UPLR-28-25-ZA	UPLR-28-25-ZAI	28	25	86	127	31	46	104	25	30
UPLR-28-30-ZA	UPLR-28-30-ZAI	28	30	86	127	36	46	104	25	30
UPLR-28-40-ZA	UPLR-28-40-ZAI	28	40	86	132	46	46	104	25	30
UPLR-30-25-ZA	UPLR-30-25-ZAI	30	25	86	132	31	46	104	25	30
UPLR-30-30-ZA	UPLR-30-30-ZAI	30	30	86	132	36	46	104	25	30
UPLR-30-40-ZA	UPLR-30-40-ZAI	30	40	86	132	46	46	104	25	30
UPLR-40-30-ZA	UPLR-40-30-ZAI	40	30	86	132	36	56	104	25	30

UPL2R-...-ZA...



■ UPL2R-...-ZA

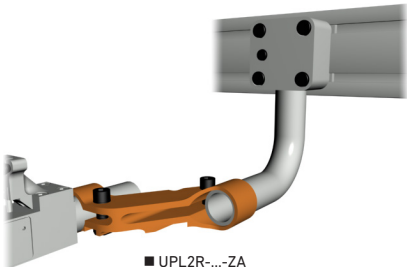
■ UPL2R-...-ZAI

Weight (kg)

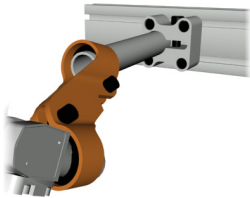
UPL2R-25-25-ZA...	0.37
UPL2R-28-25-ZA...	0.37
UPL2R-28-30-ZA...	0.36
UPL2R-30-25-ZA...	0.36
UPL2R-30-30-ZA...	0.34

- Bolts included
- **Material:** duraluminium & machined F-114

Examples of applications

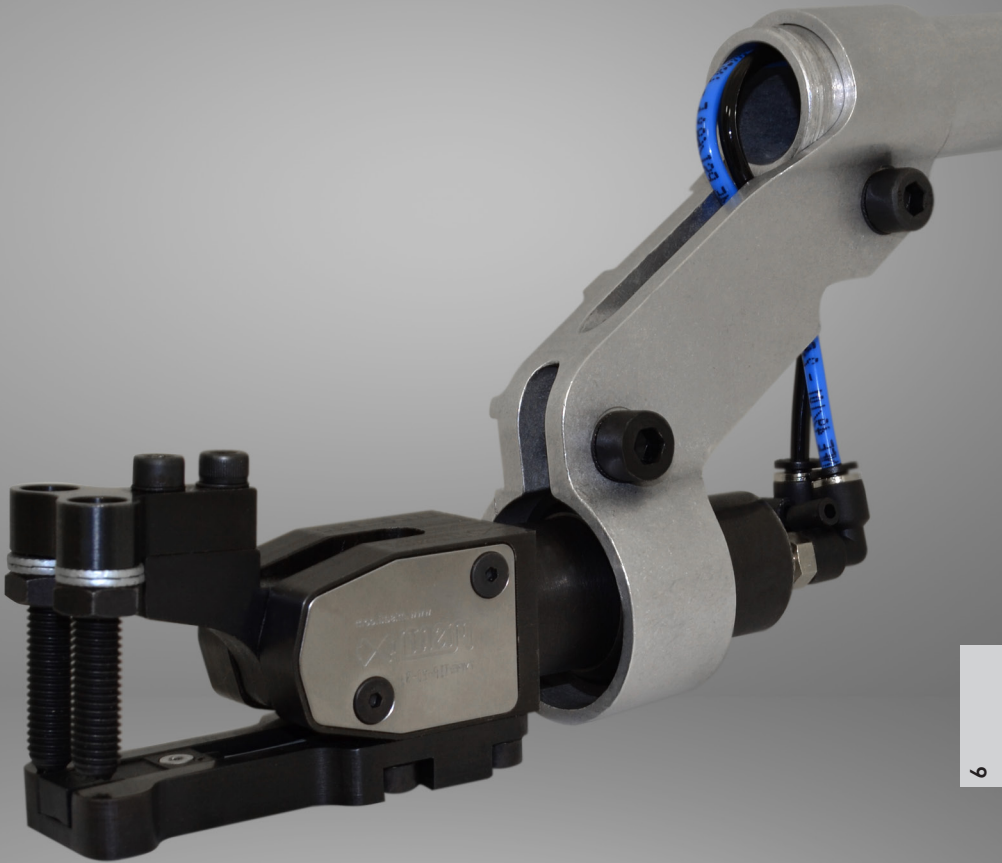


■ UPL2R-...-ZA

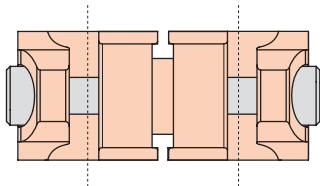
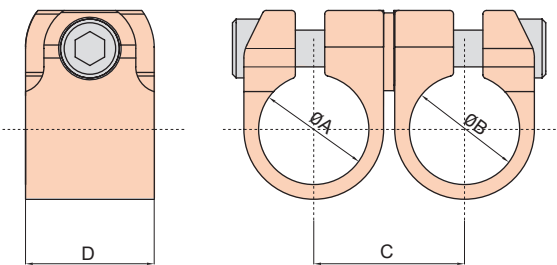


■ UPL2R-...-ZAI

TYPE		ØA	ØB	C	D	ØE	ØF	G	H	I
UPL2R-25-25-ZA	UPL2R-25-25-ZAI	25	25	86	132	46	46	104	25	30
UPL2R-28-25-ZA	UPL2R-28-25-ZAI	28	25	86	132	46	46	104	25	30
UPL2R-28-30-ZA	UPL2R-28-30-ZAI	28	30	86	132	46	46	104	25	30
UPL2R-30-25-ZA	UPL2R-30-25-ZAI	30	25	86	132	46	46	104	25	30
UPL2R-30-30-ZA	UPL2R-30-30-ZAI	30	30	86	132	46	46	104	25	30



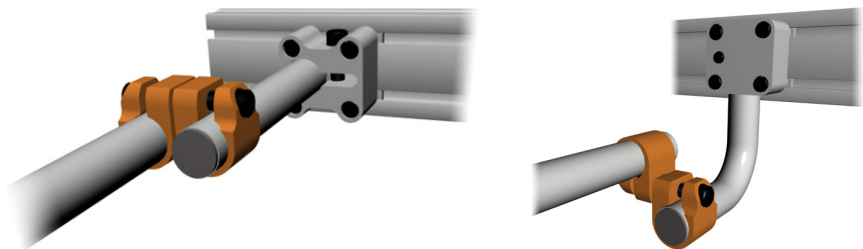




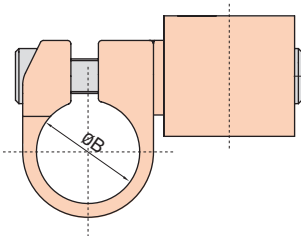
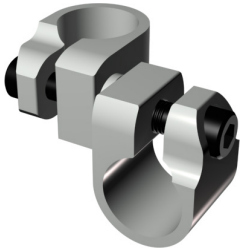
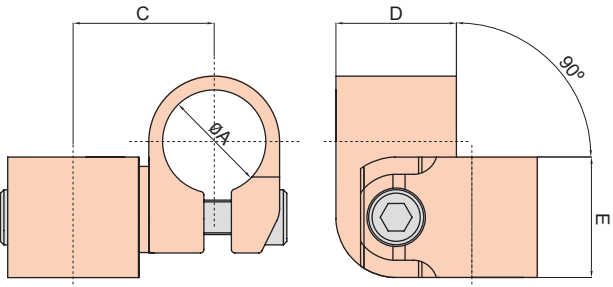
	Weight (kg)
UCT0-25-25	0.16
UCT0-25-30	0.17
UCT0-25-40	0.20
UCT0-30-30	0.18
UCT0-30-40	0.22

- Bolts included
- Material: duraluminium

Examples of applications



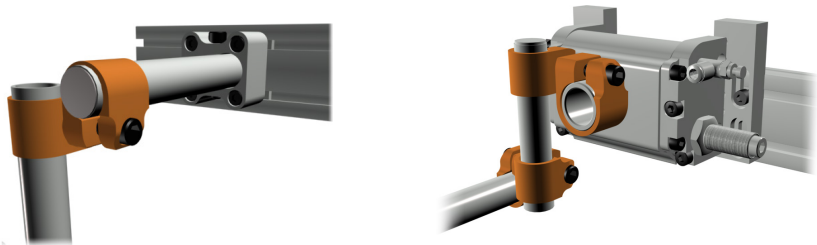
TYPE	ØA	ØB	C	D
UCT0-25-25	25	25	41	35
UCT0-25-30	25	30	41	35
UCT0-25-40	25	40	41	35
UCT0-30-30	30	30	41	35
UCT0-30-40	30	40	46	35



	Weight (kg)
UCT90-25-25	0.16
UCT90-25-30	0.17
UCT90-25-40	0.20
UCT90-30-30	0.18
UCT90-30-40	0.22

- Bolts included
- Material: duraluminium

Examples of applications



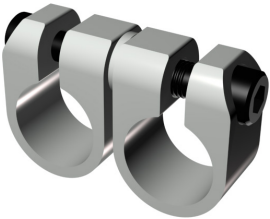
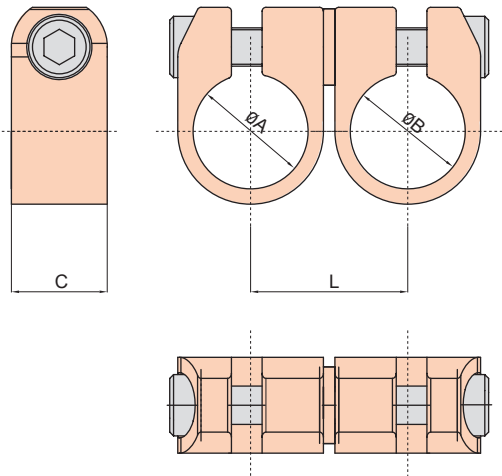
TYPE	ØA	ØB	C	D	E
UCT90-25-25	25	25	41	35	35
UCT90-25-30	25	30	41	35	35
UCT90-25-40	25	40	46	35	35
UCT90-30-30	30	30	41	35	35
UCT90-30-40	30	40	46	35	35

ALUMINIUM MOUNTINGS - Rotary Bracket

UCT-...-L



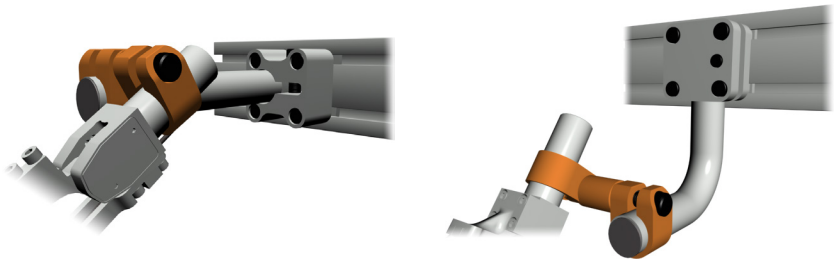
Transfer Press



	Weight (kg)
UCT-25-25-L	0.15
UCT-25-30-L	0.15
UCT-25-40-L	0.17
UCT-28-30-L	0.16
UCT-28-40-L	0.18
UCT-30-30-L	0.16
UCT-30-40-L	0.17
UCT-40-40-L	0.19

- ▶ Bolts included
- Material: duraluminium

Examples of applications



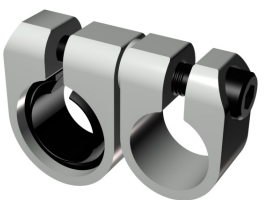
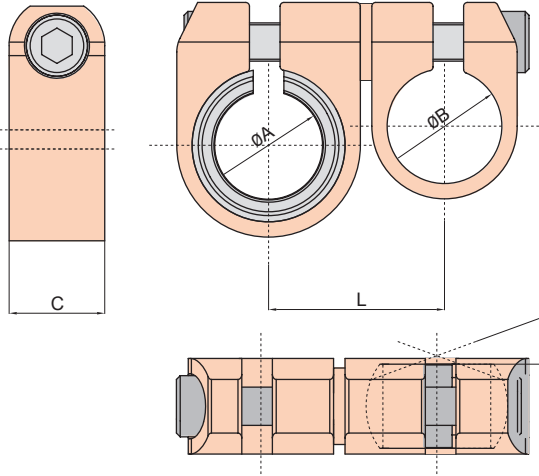
TYPE	ØA	ØB	C	L
UCT-25-25-L	25	25	25	41, 66, 91, 116
UCT-25-30-L	25	30	25	41, 66, 91, 116
UCT-25-40-L	25	40	25	46, 71, 96, 121
UCT-28-30-L	28	30	25	41, 66, 91, 116
UCT-28-40-L	28	40	25	46, 71, 96, 121
UCT-30-30-L	30	30	25	41, 66, 91, 116
UCT-30-40-L	30	40	25	46, 71, 96, 121
UCT-40-40-L	40	40	25	51, 76, 101, 126

Transfer Press



ALUMINIUM MOUNTINGS - Rotary Bracket

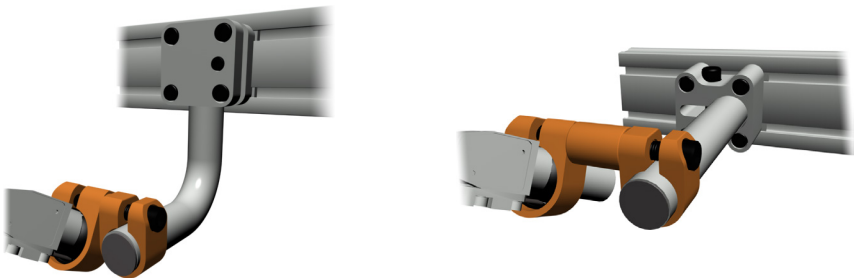
UCTR-...-L



	Weight (kg)
UCTR-25-25-L	0.23
UCTR-25-28-L	0.24
UCTR-25-30-L	0.24
UCTR-25-40-L	0.26
UCTR-28-30-L	0.25
UCTR-28-40-L	0.26
UCTR-30-30-L	0.23
UCTR-30-40-L	0.24
UCTR-40-40-L	0.28

- ▶ Bolts included
- Material: duraluminium & machined F-114

Examples of applications



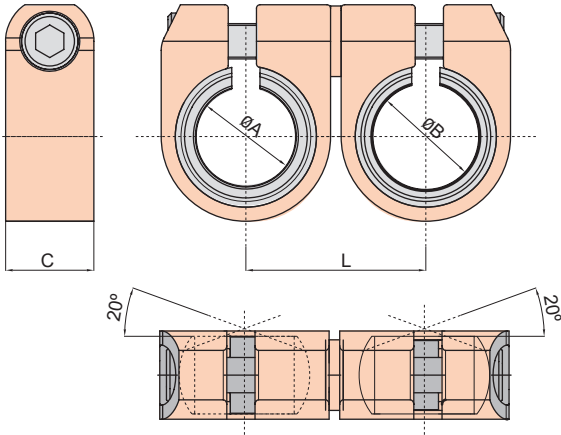
TYPE	ØA	ØB	C	L
UCTR-25-25-L	25	25	25	46, 71, 96, 121
UCTR-25-28-L	25	28	25	46, 71, 96, 121
UCTR-25-30-L	25	30	25	46, 71, 96, 121
UCTR-25-40-L	25	40	25	51, 76, 101, 126
UCTR-28-30-L	28	30	25	46, 71, 96, 121
UCTR-28-40-L	28	40	25	51, 76, 101, 126
UCTR-30-30-L	30	30	25	46, 71, 96, 121
UCTR-30-40-L	30	40	25	51, 76, 101, 126
UCTR-40-40-L	40	40	25	56, 81, 106, 131

ALUMINIUM MOUNTINGS - Rotary Bracket

UCT2R-...-L



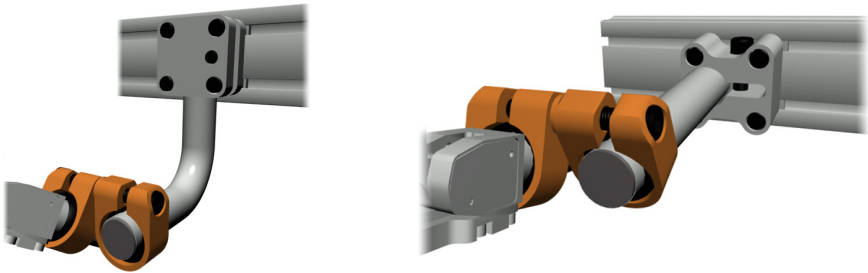
Transfer Press



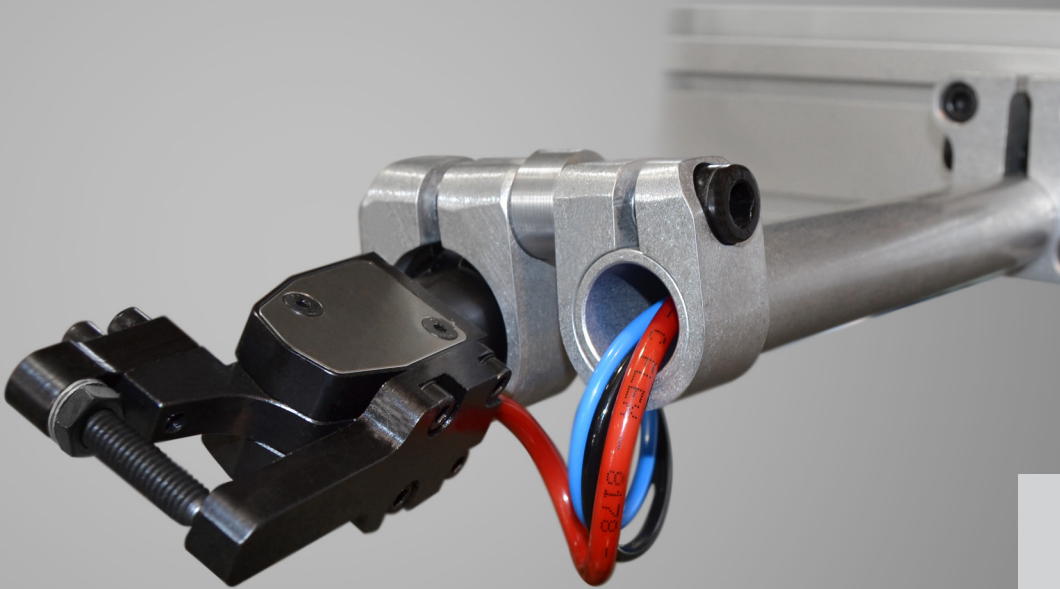
- Bolts included
- **Material:** duraluminium & machined F-114

	Weight (kg)
UCT2R-25-25-L	0.38
UCT2R-25-28-L	0.36
UCT2R-25-30-L	0.35
UCT2R-25-40-L	0.37
UCT2R-28-30-L	0.33
UCT2R-28-40-L	0.38
UCT2R-30-30-L	0.31
UCT2R-30-40-L	0.36
UCT2R-40-40-L	0.43

Examples of applications



TYPE	ØA	ØB	C	L
UCT2R-25-25-L	25	25	25	51, 76, 101, 126
UCT2R-25-28-L	25	28	25	51, 76, 101, 126
UCT2R-25-30-L	25	30	25	51, 76, 101, 126
UCT2R-25-40-L	25	40	25	56, 81, 106, 131
UCT2R-28-30-L	28	30	25	51, 76, 101, 126
UCT2R-28-40-L	28	40	25	56, 81, 106, 131
UCT2R-30-30-L	30	30	25	51, 76, 101, 126
UCT2R-30-40-L	30	40	25	56, 81, 106, 131
UCT2R-40-40-L	40	40	25	61, 86, 111, 136

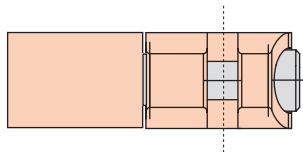
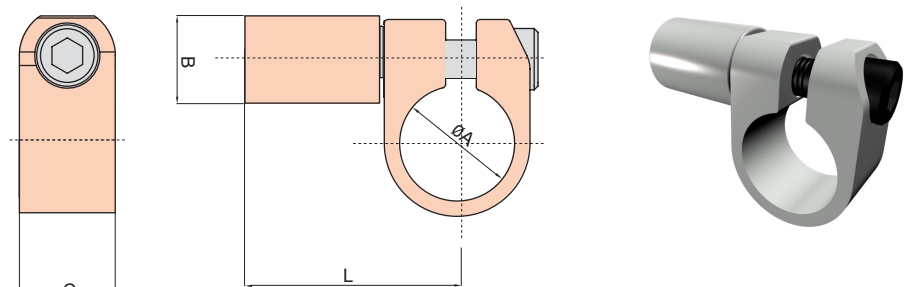


ALUMINIUM MOUNTINGS - Rotary Bracket

UCTL-...-L



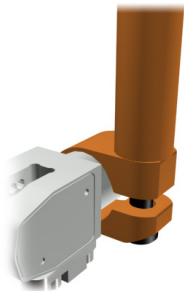
Transfer Press



	Weight (kg)
UCTL-25-L	0.26
UCTL-28-L	0.27
UCTL-30-L	0.28
UCTL-40-L	0.29

- ▶ Bolts included
- Material: duraluminium

Example of application



■ Other lengths can be manufactured upon request.

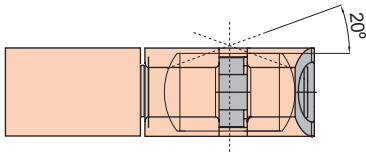
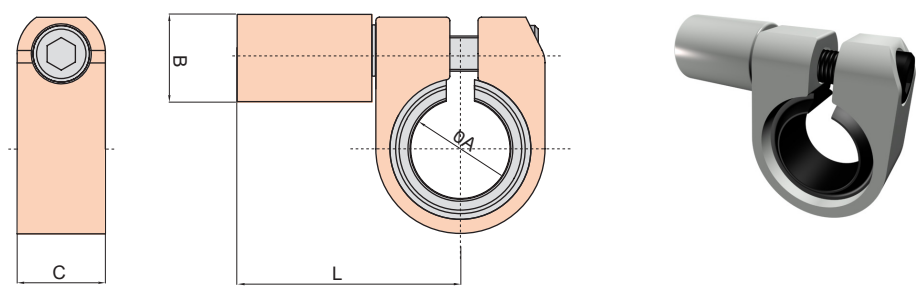
TYPE	ØA	ØB	C	L
UCTL-25-L	25	25	25	100, 200
UCTL-28-L	28	25	25	100, 200
UCTL-30-L	30	25	25	100, 200
UCTL-40-L	40	25	25	100, 200

Transfer Press



ALUMINIUM MOUNTINGS - Rotary Bracket

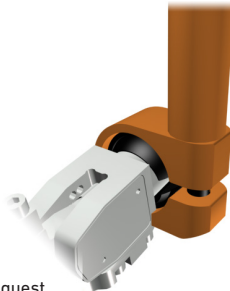
UCTLR-...-L



	Weight (kg)
UCTLR-25-L	0.39
UCTLR-28-L	0.38
UCTLR-30-L	0.35
UCTLR-40-L	0.40

- Material: duraluminium & machined F-114

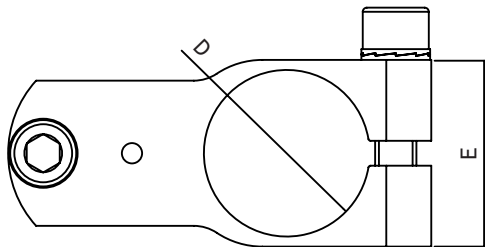
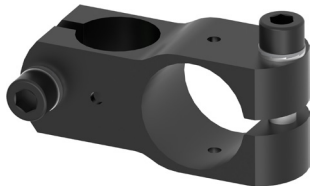
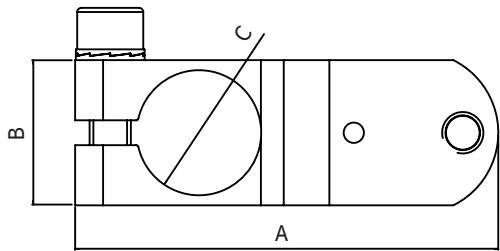
Example of application



■ Other lengths can be manufactured upon request.

TYPE	ØA	ØB	C	L
UCTLR-25-L	25	25	25	100, 200
UCTLR-28-L	28	25	25	100, 200
UCTLR-30-L	30	25	25	100, 200
UCTLR-40-L	40	25	25	100, 200

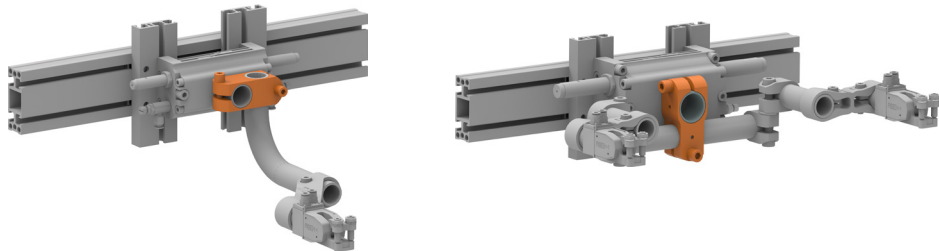
UT2-...-F



	Weight (kg)
UT2-30-30-F	0.544
UT2-40-30	

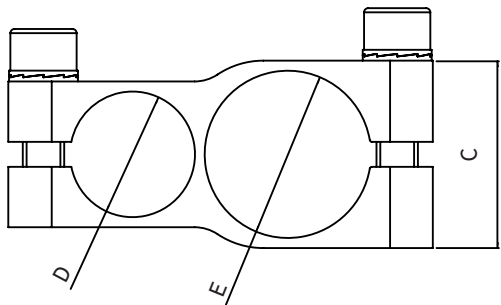
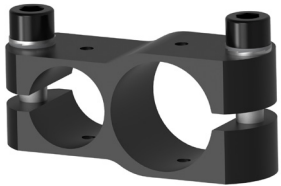
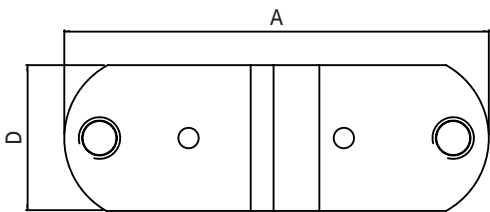
- Bolts included
- Material: Machined F-114

Examples of applications



TYPE	A	B	ØC	ØD	E
UT2-30-30-F	88	35	30	30	35
UT2-40-30-F	102.5	35	30	40	45

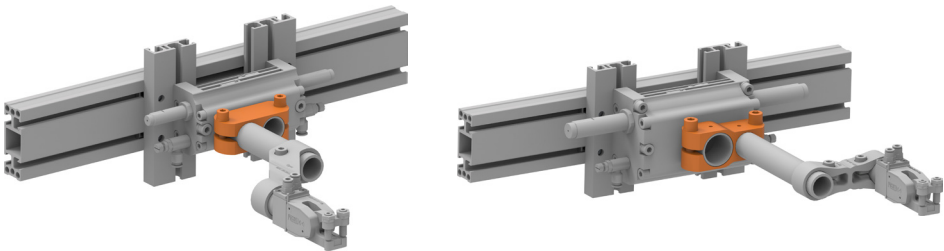
UP2-...-F



	Weight (kg)
UP2-30-30-F	0.544
UP2-40-30-F	

- Bolts included
- Material: Machined F-114

Examples of applications



TYPE	A	B	C	ØD	ØE
UP2-30-30-F	88	35	35	30	30
UP2-40-30-F	102.5	35	45	30	40

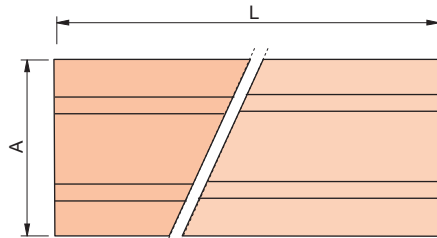
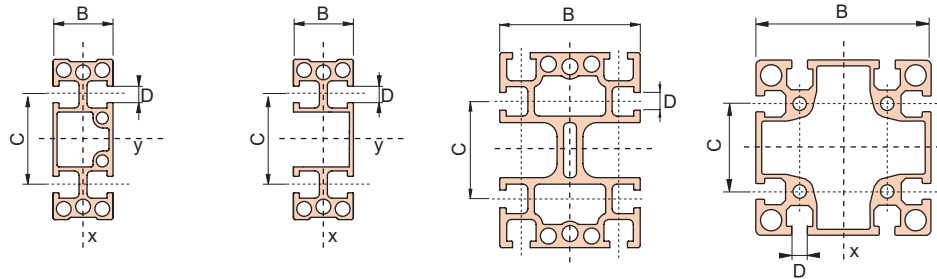
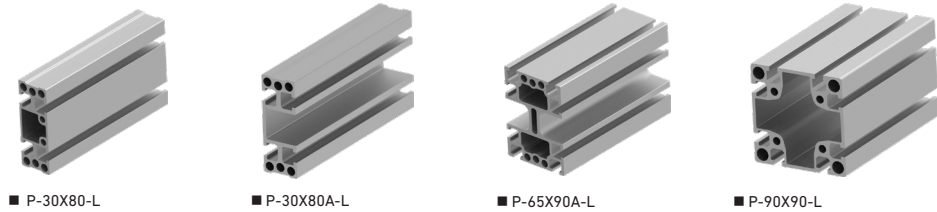


# 7 Pincer-Holder Profiles



- Profile
- Profile Elements
- Fastening Plate
- Quick Change Lever
- Pneumatic & Electrical Connections
- Electrical Connector
- Lever with Pneumatic Connectors
- Cover
- Pneumatic Components

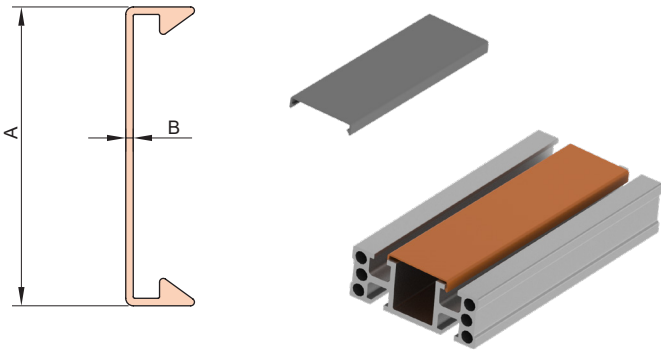




	P-30X80-L	P-30X80A-L	P-65X90A-L	P-90X90-L
lxx' (cm <sup>4</sup> )	7.81	6.86	119.47	186.26
lyy' (cm <sup>4</sup> )	55.68	55.89	61.48	186.26
lx/V1 (cm <sup>3</sup> )	4.99	4.2	26.55	41.39
ly/V2 (cm <sup>3</sup> )	13.92	13.97	18.92	41.39
Weight (kg/m)	2.2	2.1	4.6	5.22
Max. length (m)	3	3	3	3

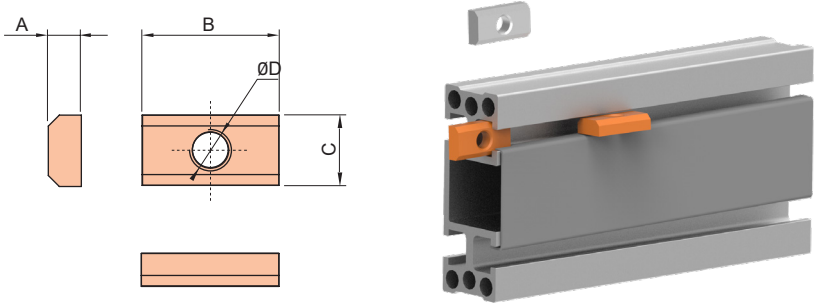
■ Material: duraluminium

TYPE	A	B	C	D
P-30X80-L	80	30	45	8.2
P-30X80A-L	80	30	45	8.2
P-65X90A-L	90	65	45	8.2
P-90X90-L	90	90	45	8.2



■ Material: PVC

TYPE	A	B	C	D	E
TAP-30X80A-L	39	1			

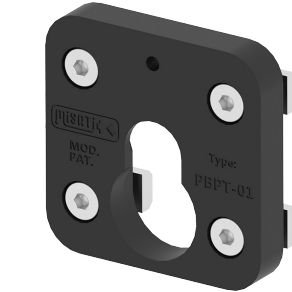
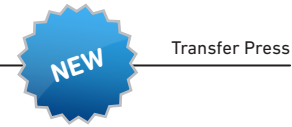
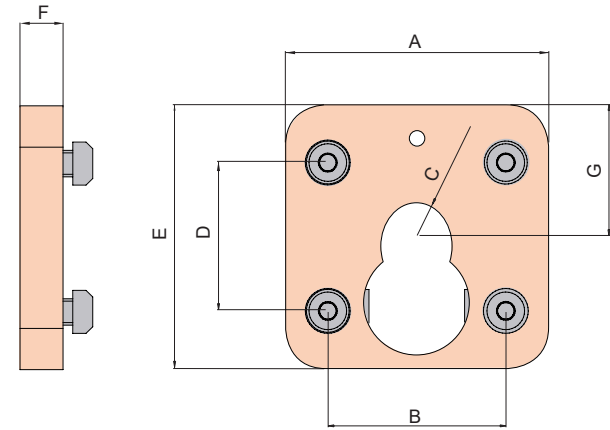


■ Material: steel

TYPE	A	B	C	ØD
ARI2634	6	25	13	M8

PINCER-HOLDER PROFILES - Fastening Plate

PBP...



	Weight (kg)
PBPT-01	0.10
■ Material: Technopolymer	

► Bolts included

Example of application



\* This dimension can be changed upon request.

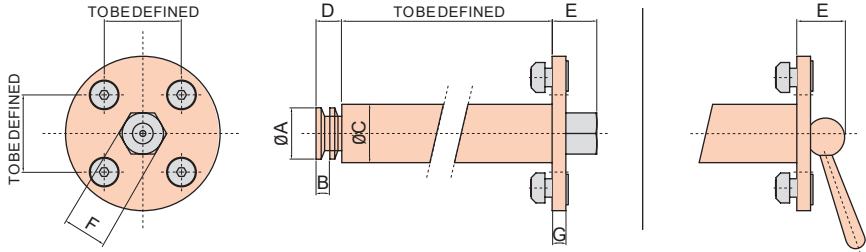
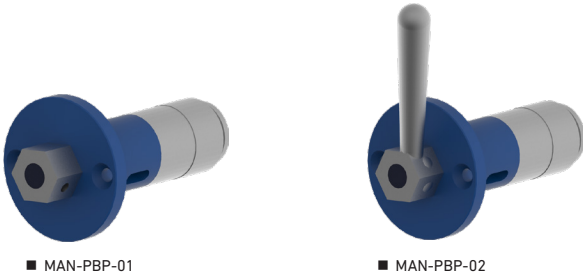
TYPE	A	B	C	D	E	F	G
PBPT-01	80	42	10.5	45*	80	12	40

Transfer Press



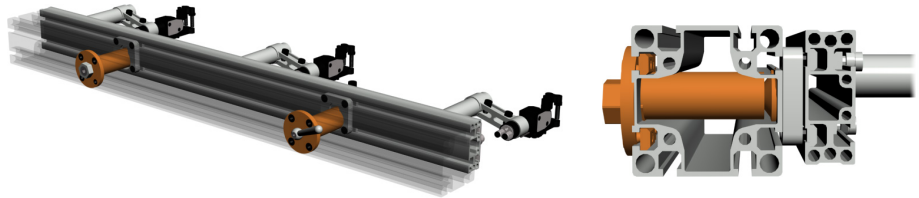
PINCER-HOLDER PROFILES - Quick Change Lever

MAN...

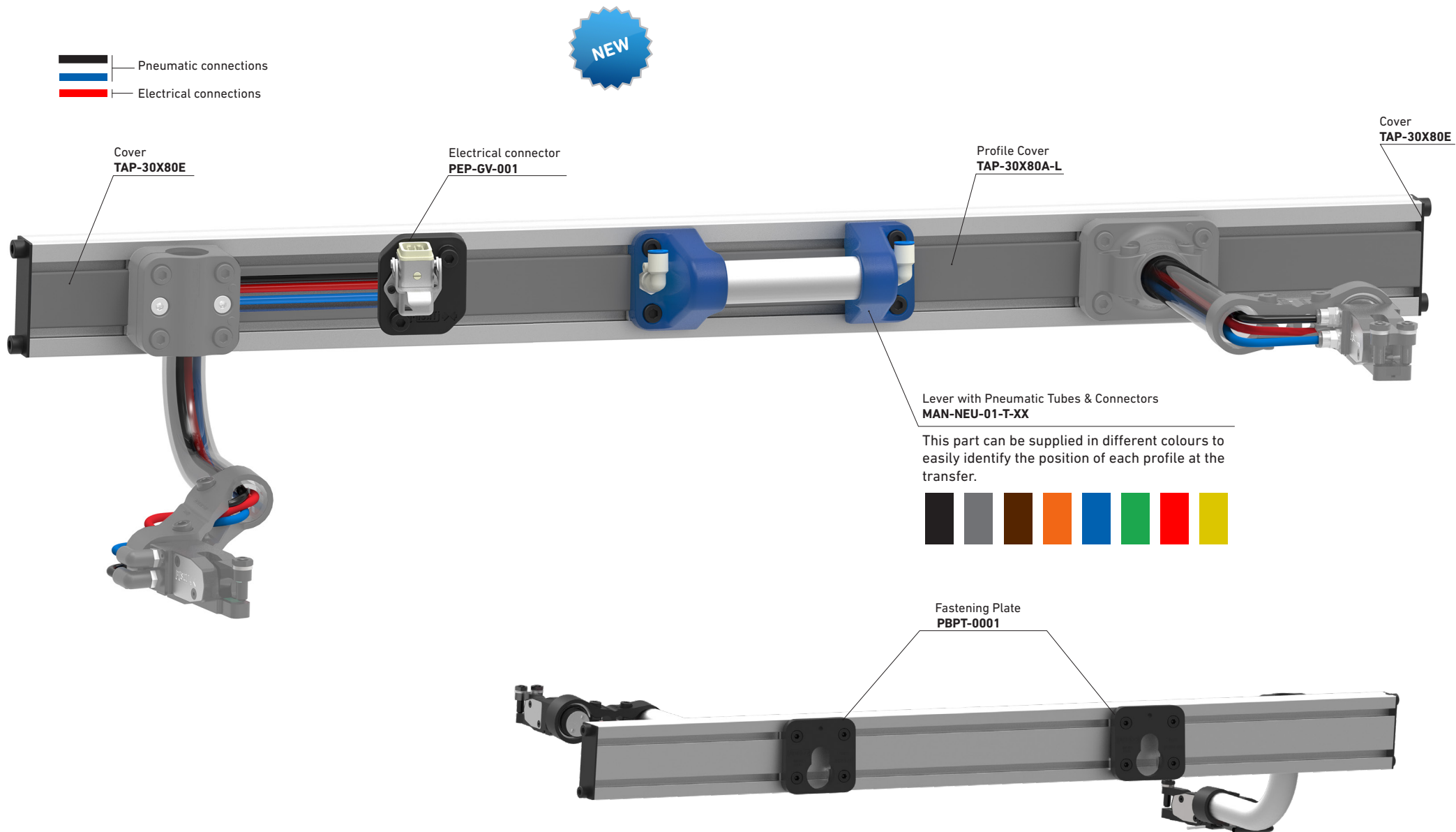


► Bolts included  
■ Material: duraluminium & hardened steel

Examples of applications



TYPE	ØA	B	ØC	D	E	F	G
MAN-PBP-01	30 f7	8	35 f7	15	26	24	8
MAN-PBP-02	30 f7	8	35 f7	15	28		8

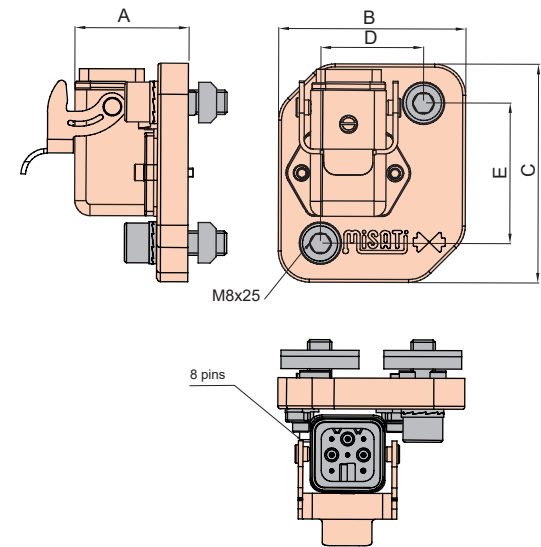


PINCER-HOLDER PROFILES - Electrical Connector

PEP-GV-001



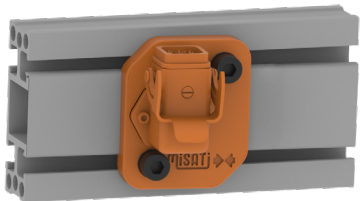
Transfer Press



	Weight (kg)
PEP-GV-001	0.21

► Bolts included

Example of application



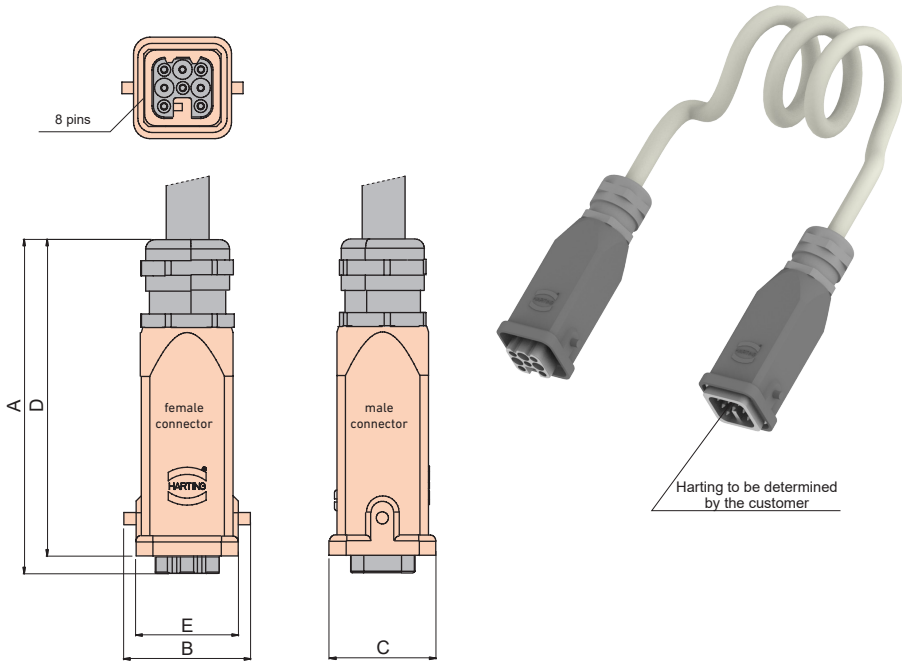
TYPE	A	B	C	D	E
PEP-GV-001	36.5	60	70	33	45

Transfer Press

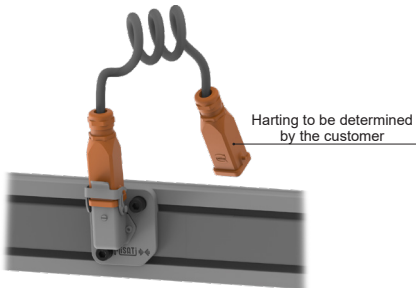


PINCER-HOLDER PROFILES - Electrical Connector

PEP-GV-H-002



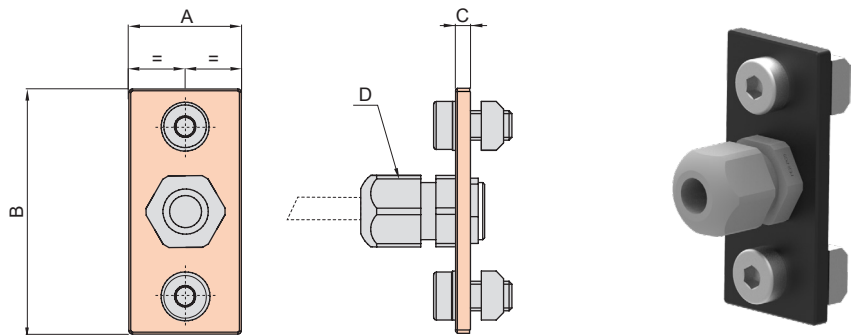
Example of application



TYPE	A	B	C	D	E
PEP-GV-H-002	87.6	33.4	28	83	27

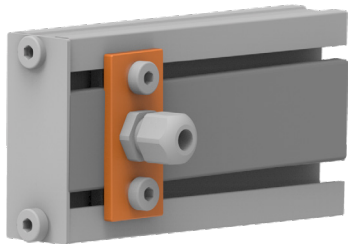


TAPL-...



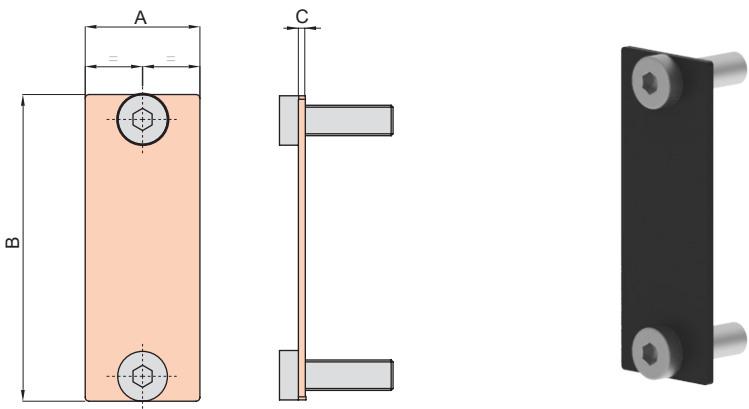
- ▶ Bolts included
- Material: varios

Example of application



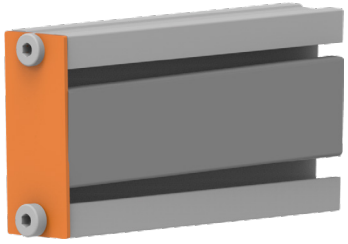
TYPE	A	B	C	D
TAPL-30X80E-PER-PG9	30	65	4	PG9

TAP-...



- ▶ Bolts included
- Material: duraluminium

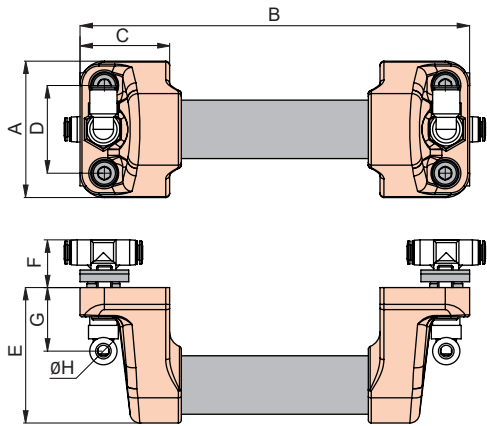
Example of application



TYPE	A	B	C
TAP-30X80E	30	2	80

PINCER-HOLDER PROFILES - Lever with Pneumatic Connectors Transfer Press

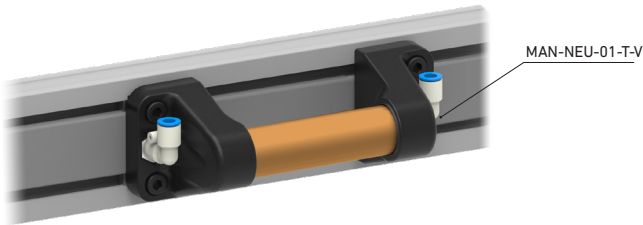
MAN-...



	Weight (kg)
MAN-NEU-01-T	0.30
MAN-NEU-02-T	0.30
MAN-02-T	0.30

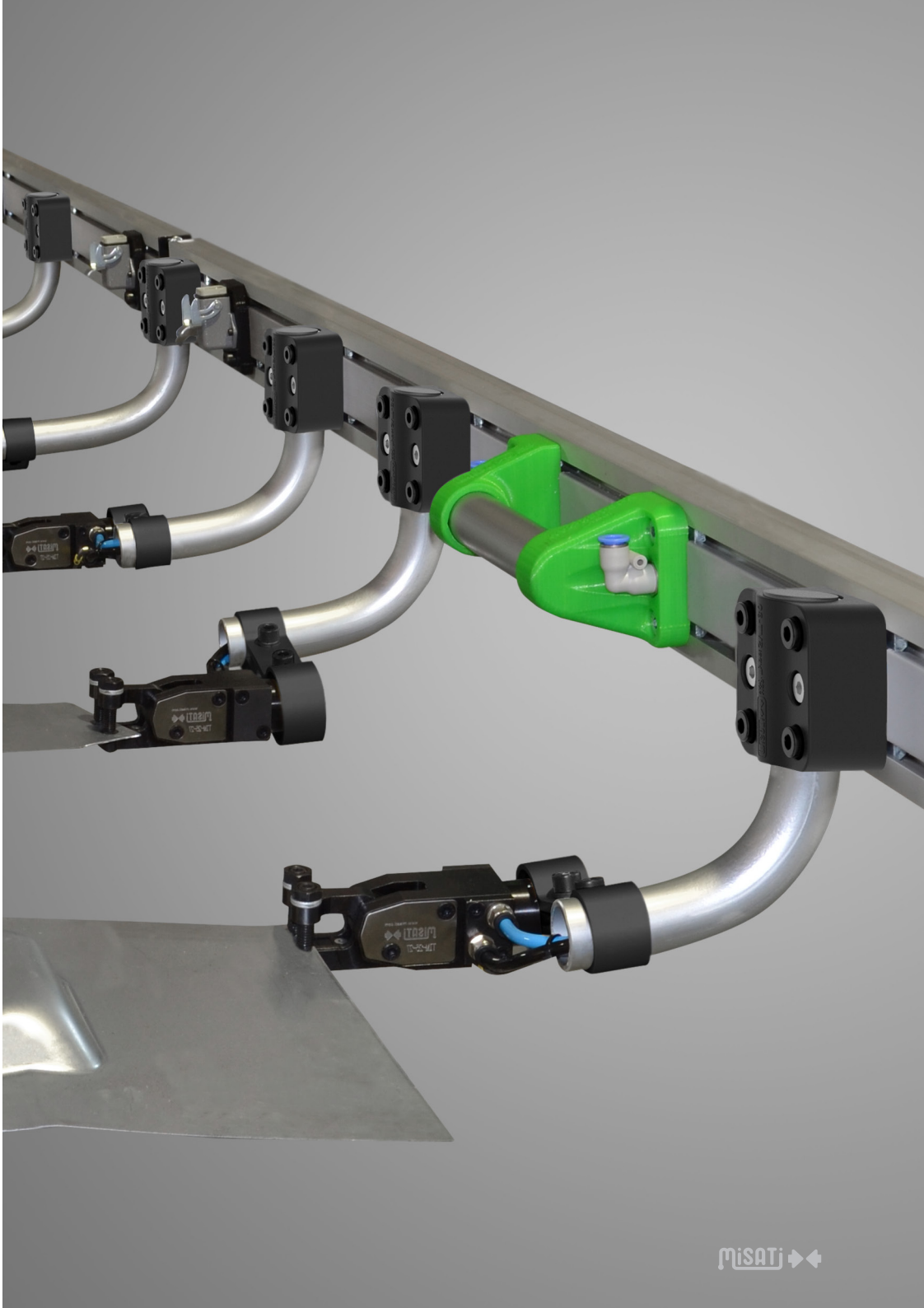
- ▶ Bolts included
- Material: Duraluminium & technopolymer

Example of application

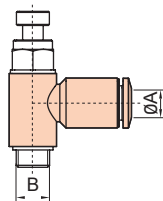


COLOUR REFERENCE ...XX		
	BLACK	...-N
	BLUE	...-A
	RED	...-R
	GOLD	...-O
	GREEN	...-V
	COPPER	...-C
	SILVER	...-P
	ORANGE	...-NA

TYPE	A	B	C	D	E	F	G	ØH	CONNECTOR	OUTPUT
MAN-NEU-01-T-XX	70	200	46	45	69.5	24.5	32.6	8	Pneumatic	2 T-fittings
MAN-NEU-02-T-XX	70	200	46	45	69.5	24.5	32.6	8	Pneumatic	1 Elbow Fitting
MAN-02-T-XX	70	200	46	45	69.5	24.5	32.6	8	No pneumatics	

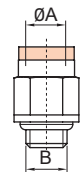


Flow Regulator



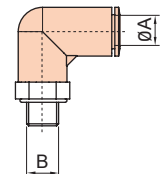
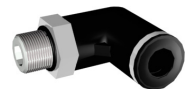
TYPE	ØA	B
REG -M5-4	4	M5
REG -1/8-6	6	G1/8

Fitting



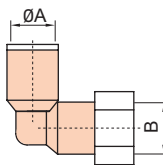
TYPE	ØA	B
R-M5-4	4	M5
R-M5-6	6	M5
R-1/8-4	4	G1/8
R-1/8-6	6	G1/8
R-1/8-8	8	G1/8

Male Elbow Fitting



TYPE	ØA	B
RC-M5-4	4	M5
RCM-1/4-6	6	G1/4
RC-1/4-8	8	G1/4
RC-1/8-6	6	G1/8
RC-1/8-8	8	G1/8

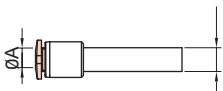
Female Elbow Fitting



TYPE	ØA	B
RCH-1/4-8	8	G1/4

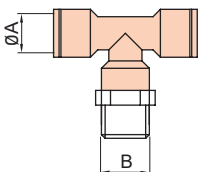
■ Material: Technopolymer & brass, NBR

Reducer



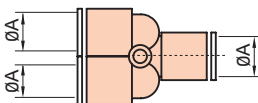
TYPE	ØA	ØB
RR-6-4	4	6

T-Fitting



TYPE	ØA	B
RTM-1/4-6	6	G1/4

Y-Fitting



TYPE	ØA
Y-6-6	6

Cap

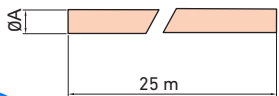
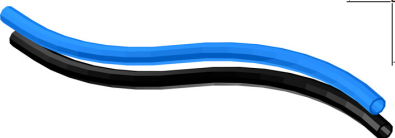


A = Thread



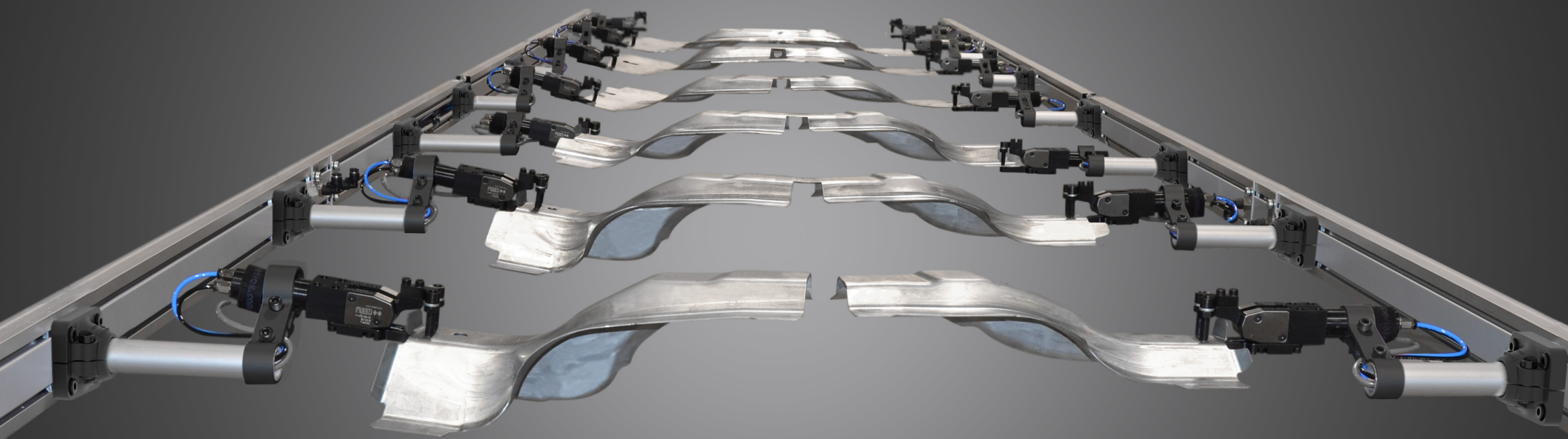
TYPE	A
TAP - 1/8	G1/8

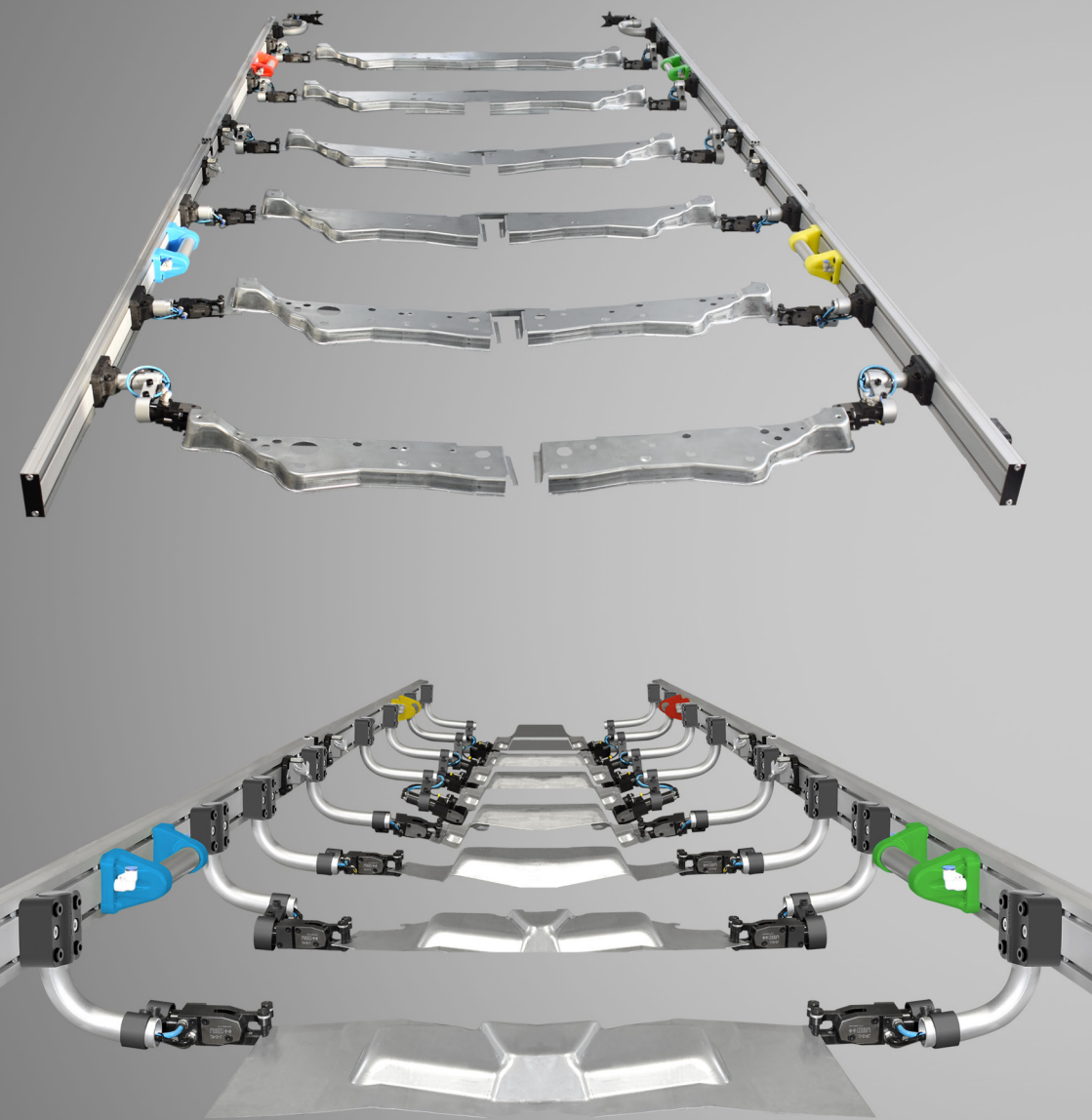
Tube



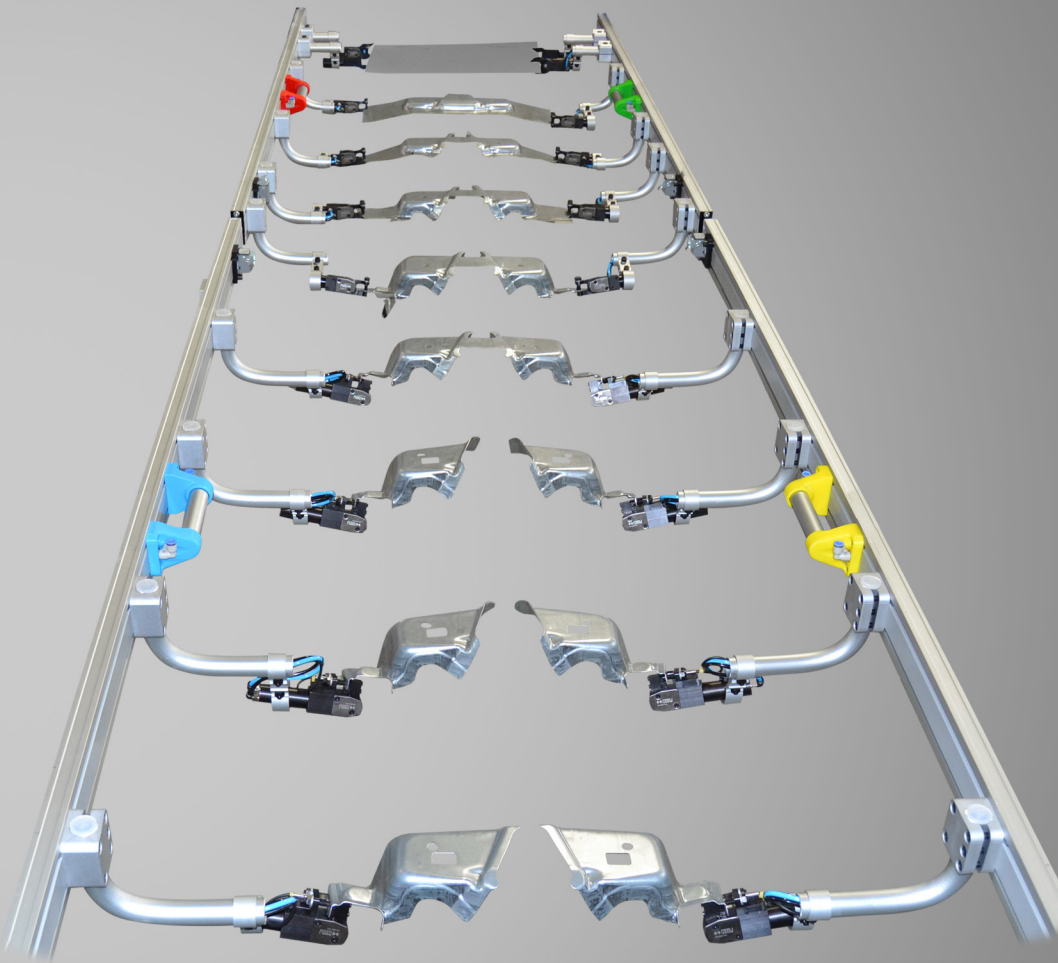
TYPE	ØA	COLOUR
T-4-A	4	BLUE
T-6-A	6	BLUE
T-8-A	8	BLUE
T-4-N	4	BLACK
T-6-N	6	BLACK
T-8-N	8	BLACK

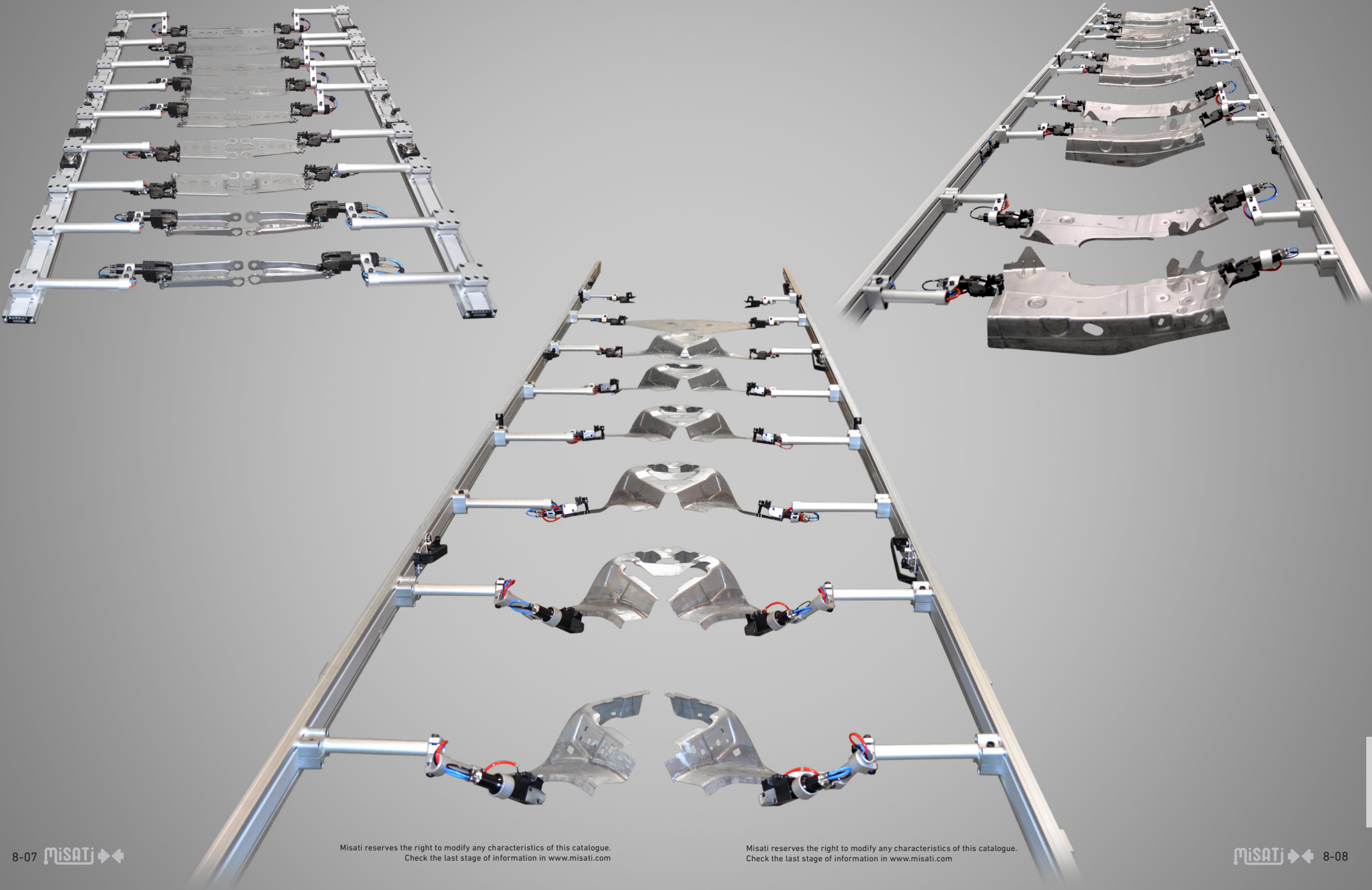
# 8 APPLICATIONS





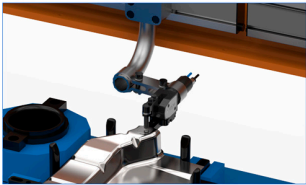








HANDBOOK OF DIE DESIGN  
FOR TRANSFER PRESSES



**2.8 The sheet turns on its transverse shaft**

Las unidades de giro permiten voltear la pieza en un ángulo concreto entre un troquel y el siguiente. Al poder estampar otra cara de la chapa, se simplifica enormemente el troquel.

**4. Fastening Systems for Transfers**

There are different options to handle pieces between the dies of a multi-die press. Naturally, each system has its advantages and disadvantages (see Appendix at the end of this presentation).

Handling with shovels:	Handling with suction pads:	Handling with pinchers:
<ul style="list-style-type: none"><li>Simple system with no pneumatic connections.</li><li>Risk of losing position with high accelerations.</li><li>To be centred during handling, sheets need to have sharp and stable edges on a horizontal plan.</li></ul>	<ul style="list-style-type: none"><li>You can do without raising the sheet on the die once the piece is stamped.</li><li>High energy consumption.</li><li>It can only hold the upper and flat side of the sheet.</li><li>Low acceleration during handling.</li></ul>	<ul style="list-style-type: none"><li>Maximum reliability: total fastening of the piece.</li><li>Low energy consumption.</li><li>Quick amortization thanks to its low consumption and its higher productivity.</li><li>Less initial cost with regard to shovels (11.5%).</li><li>Higher initial cost with regard to suction pads (86%).</li></ul>

Manufacturers of dies, companies stamping metal sheets and engineerings use this Handbook as a guide because it has some **practical tips** about developing **more productive transfers**.

The Handbook of Die Design  
is free to download on  
[www.misati.com](http://www.misati.com)



We provide technical training for companies stamping metal sheets and manufacturers of dies.

We focus on production techniques for stamping automated processes (Transfer Press).





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