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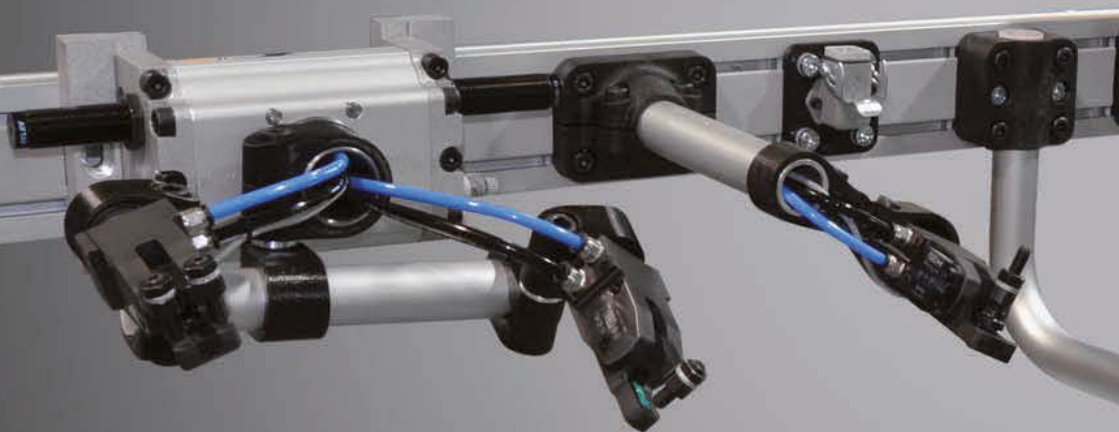
AUTOMATION

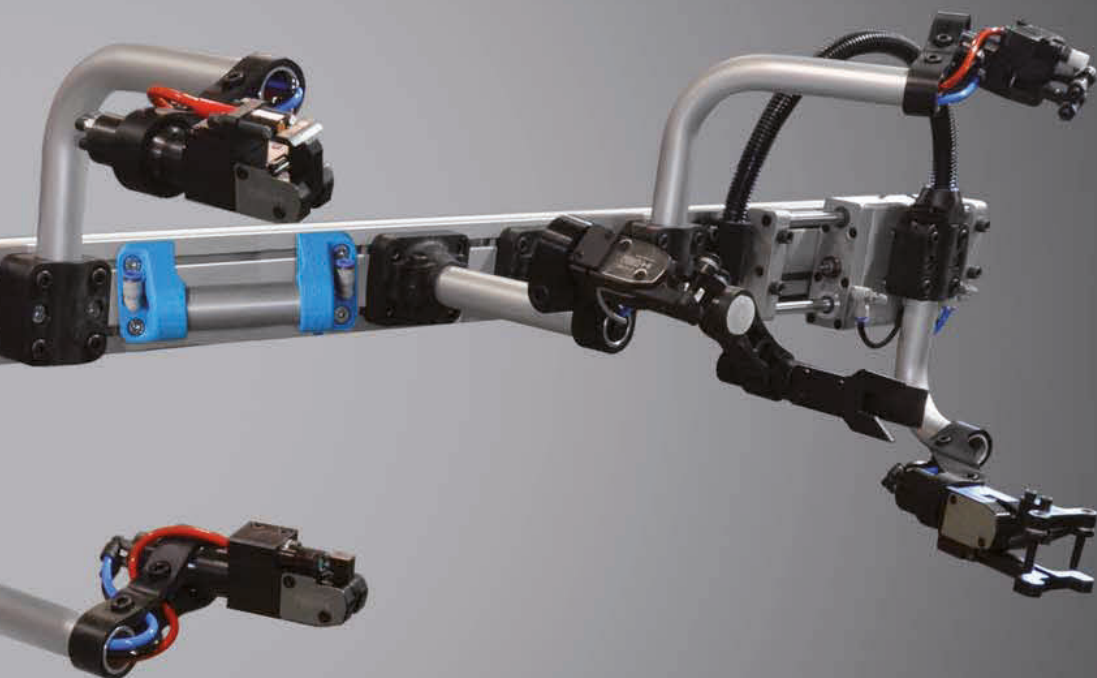


Catalogue

AUTOMATION STAMPING PROCESSES

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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 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.



MiSATi ➡➡

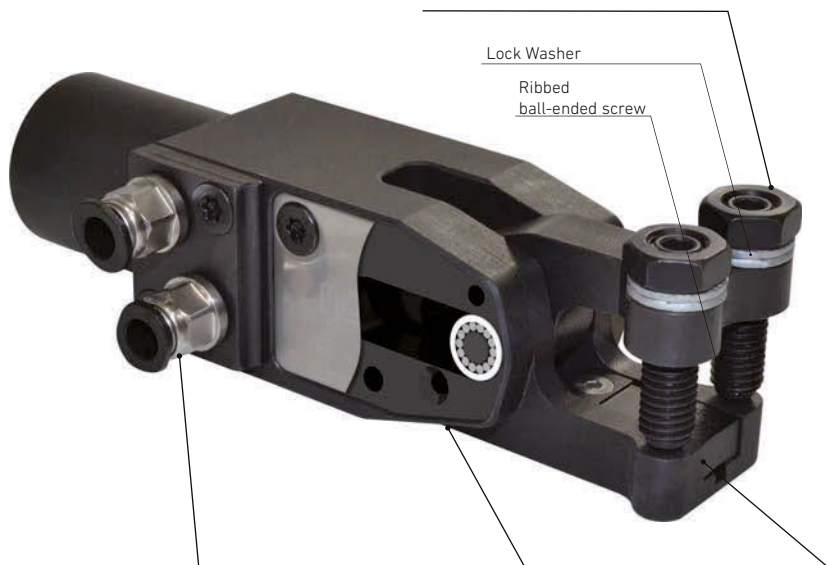


NEW GENERATION OF PNEUMATIC PINCERS

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.



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.

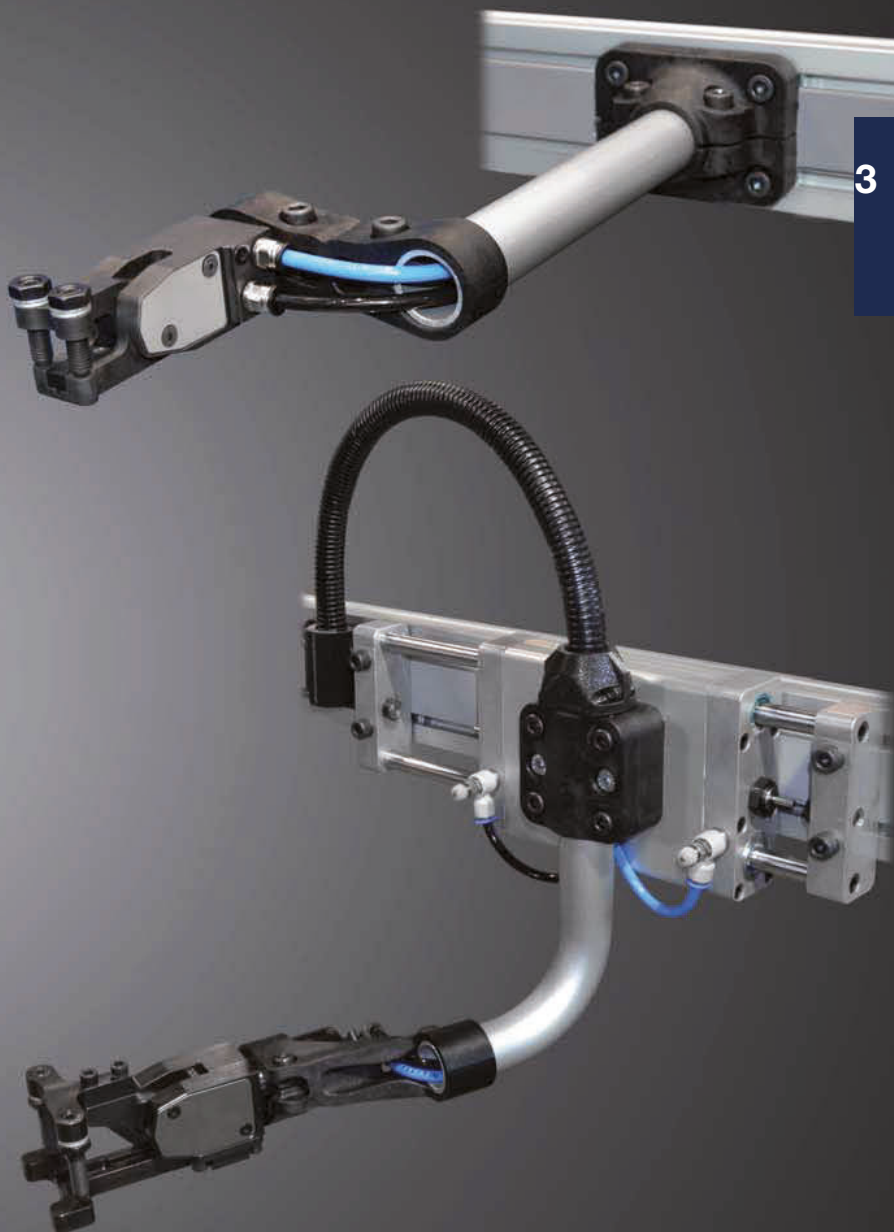


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ASSEMBLIES



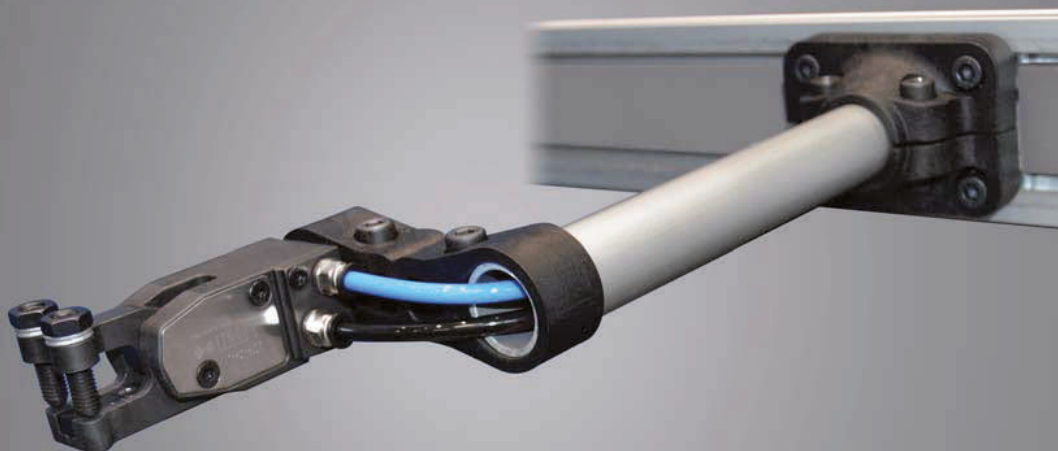
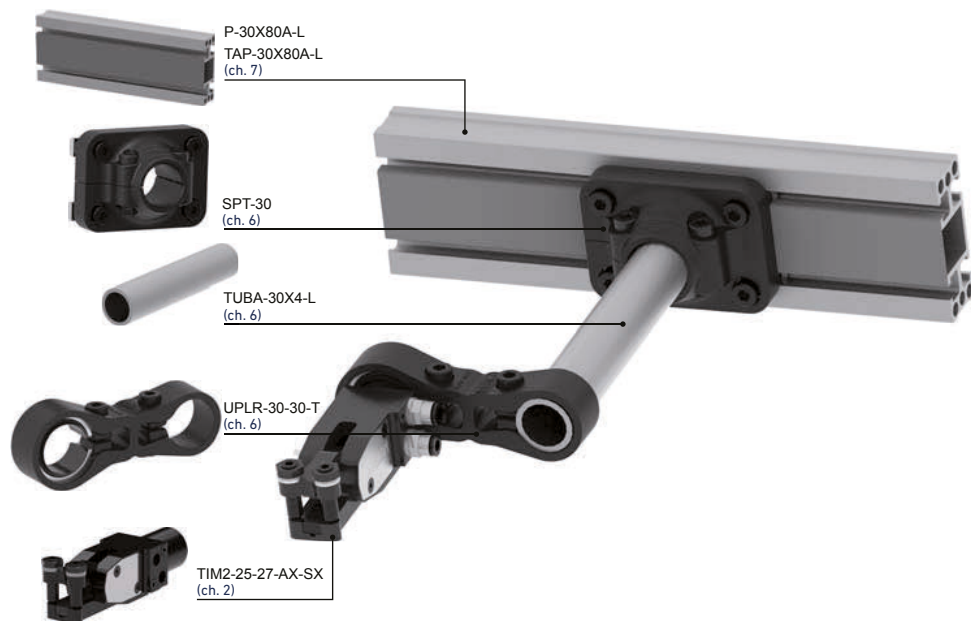
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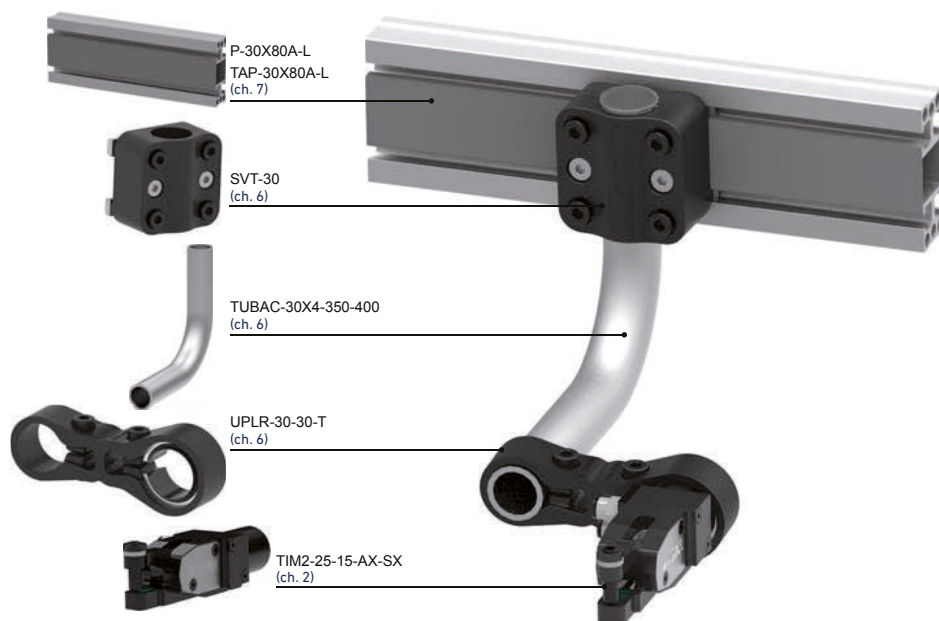
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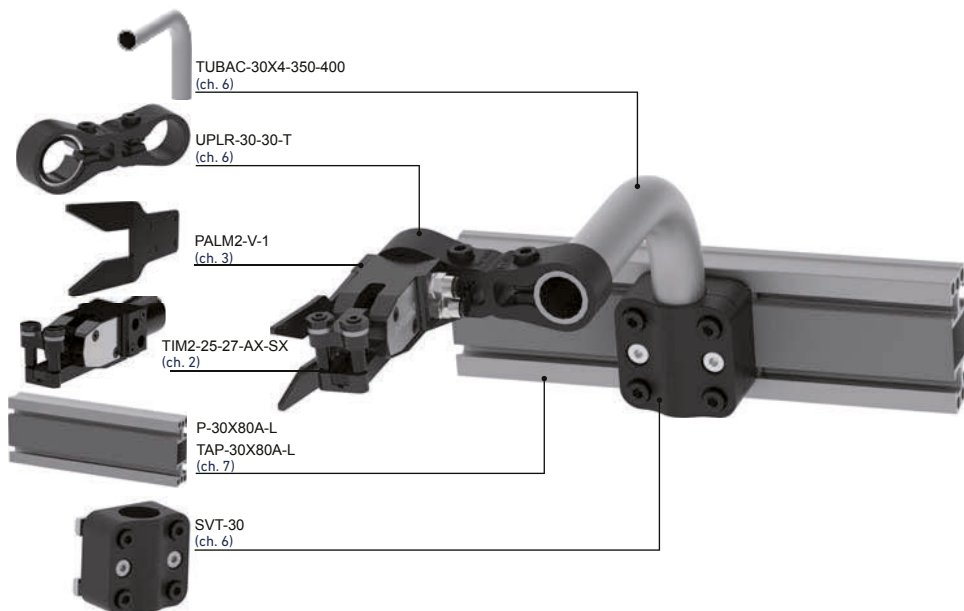
Assembly No. 1



Assembly No. 2



Assembly No. 3



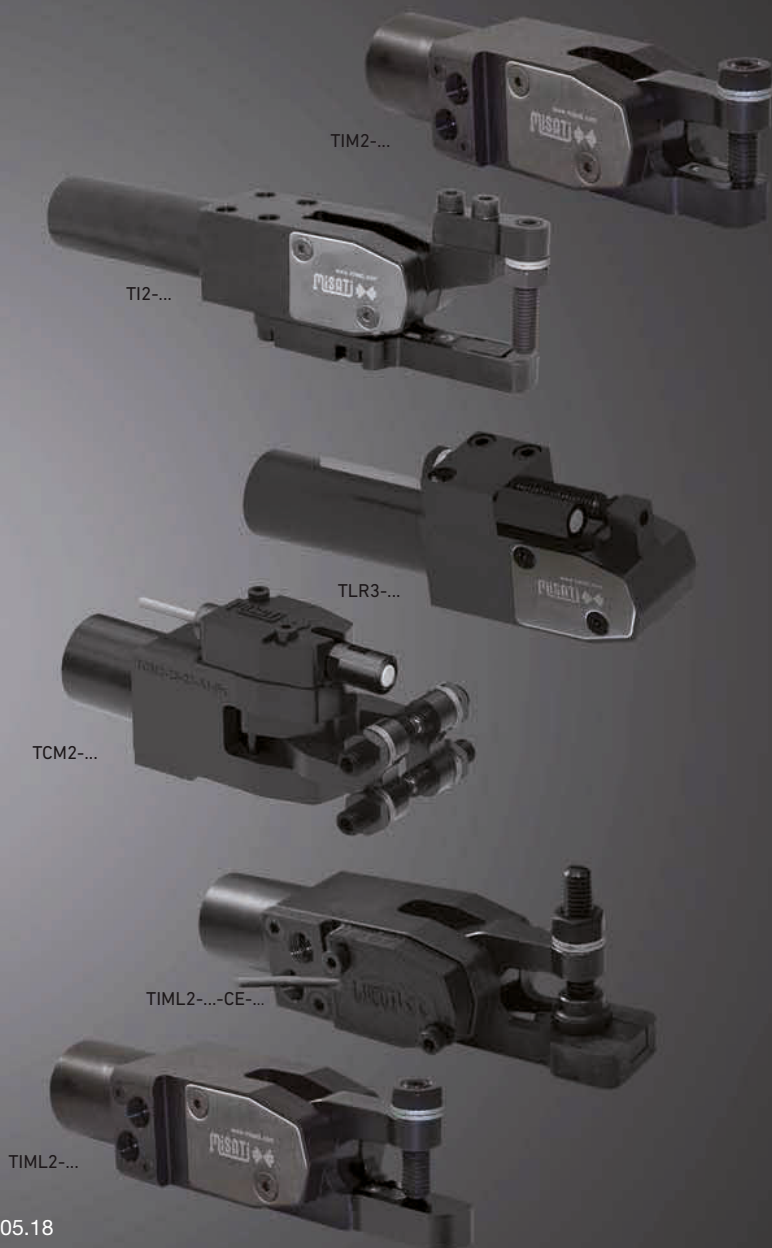


2 MINIPINCERS

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

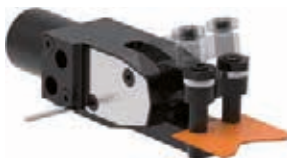


TIM2-...





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	20°	HORIZONTAL	1	20, 40, 70	2-09
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T12-...	Ø20 Ø32	103 daN 205 daN	90°, 45°	HORIZONTAL	1	15, 30, 60 20, 40, 70	2-11
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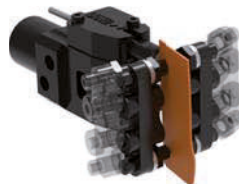


TYPE	PISTON DIAMETER	CLAMPING FORCE	OPENING	POSITION OF SHEET	MOVING ARM	WIDTH (mm)	PAGE
TLR...	Ø20 Ø32	336 daN 593 daN	90°, 45°	VERTICAL	1	10, 27	2-13



3

TCM2-...	Ø25	180 daN	12° + 12° 22,5° + 22,5°	TRANSVERSE	2	15, 27, 55	2-15
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SHEET THICKNESS CONTROL

TLR3-20-CE	Ø20	336 daN	90°	HORIZONTAL	1	15	2-17
TIML2-25-CE...	Ø25	180 daN	25°			27	

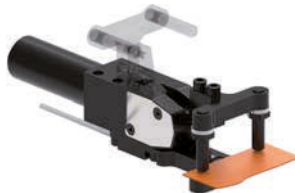




TYPE	PISTON DIAMETER	CLAMPING FORCE	OPENING	POSITION OF SHEET	MOVING ARM	WIDTH (mm)	PAGE
FASTENING OF CANTILEVER SHEETS							
TIML2...	Ø25	180 daN	25°	HORIZONTAL	1	15, 27, 55	2-19



TIL2	Ø20 Ø32	103 daN 205 daN	90°, 45°	HORIZONTAL	1	15, 30, 60 20, 40, 70	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-A1-S0 (EE-254/259)



■ TLR3-20-30-S0 (EE-204/209)

TIM2 - 25 - 27 - AX - SX

MODEL OF THE PINCER

TIM2... , TIP, TI2, TLR..., TCM,
TLR3-20-CE, TIML2-25-CE, TIML2, TIL2

SHEET DETECTOR

S0, S1, S2

PISTON DIAMETER

20, 25, 32

PNEUMATIC

CONNECTIONS

A1, A3

WIDTH OF THE

GRIPPER FINGER

15, 20, 27, 30, 40, 55, 60, 70

PNEUMATIC CONNECTIONS

TYPE - XX - XX - **A1** - SX



TYPE - XX - XX - **A3** - SX



■ Pneumatic connection outlets according to images above

SHEET DETECTOR

TIM2-...

TLR...

TCM2

TYPE - XX - XX - AX - **S0**

S0 (WITHOUT SENSOR)



TYPE - XX - XX - AX - **S1/S2**

S1 (WITH PNP SENSOR)

S2 (WITH NPN SENSOR)





3 CENTRING SHOVELS

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

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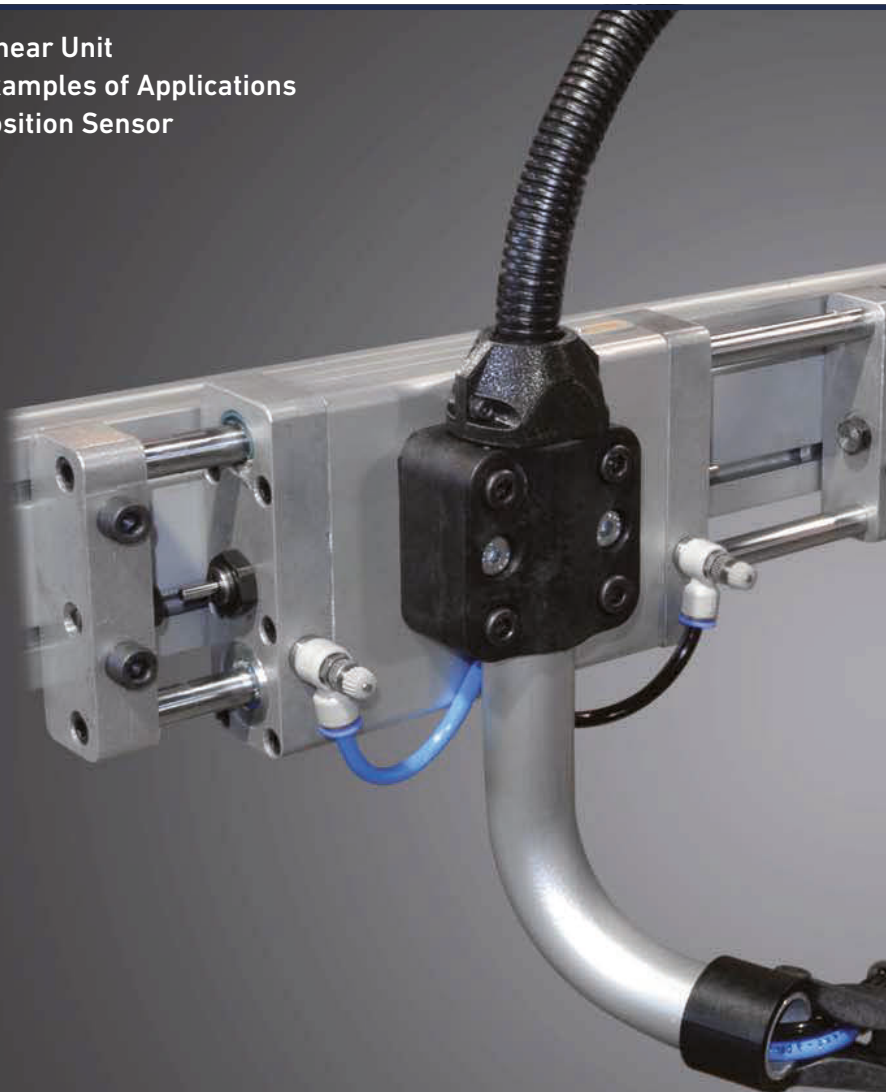




4 LINEAR UNITS

- Linear Unit
- Examples of Applications
- Position Sensor

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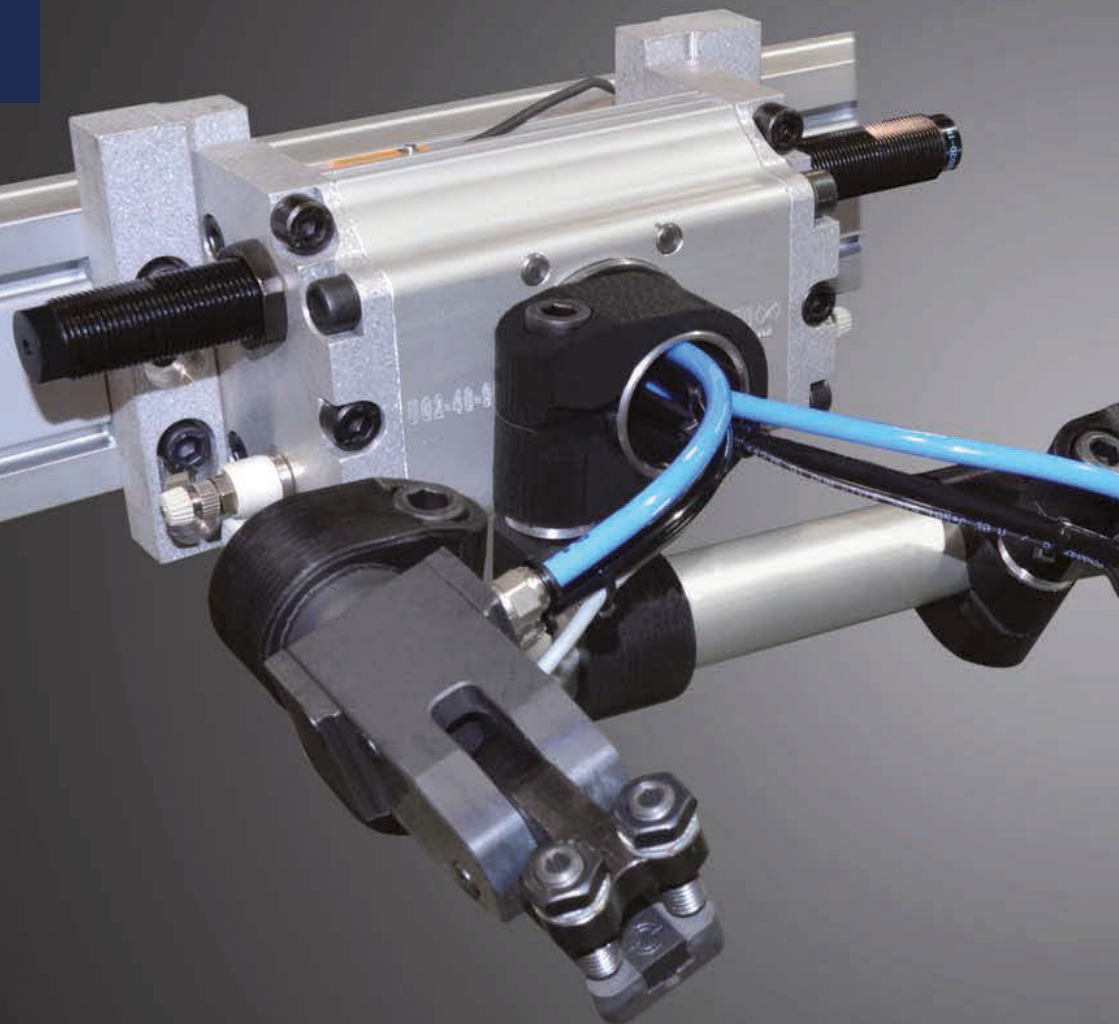




5 TURNING UNITS

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

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8 APPLICATIONS

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MISATI 

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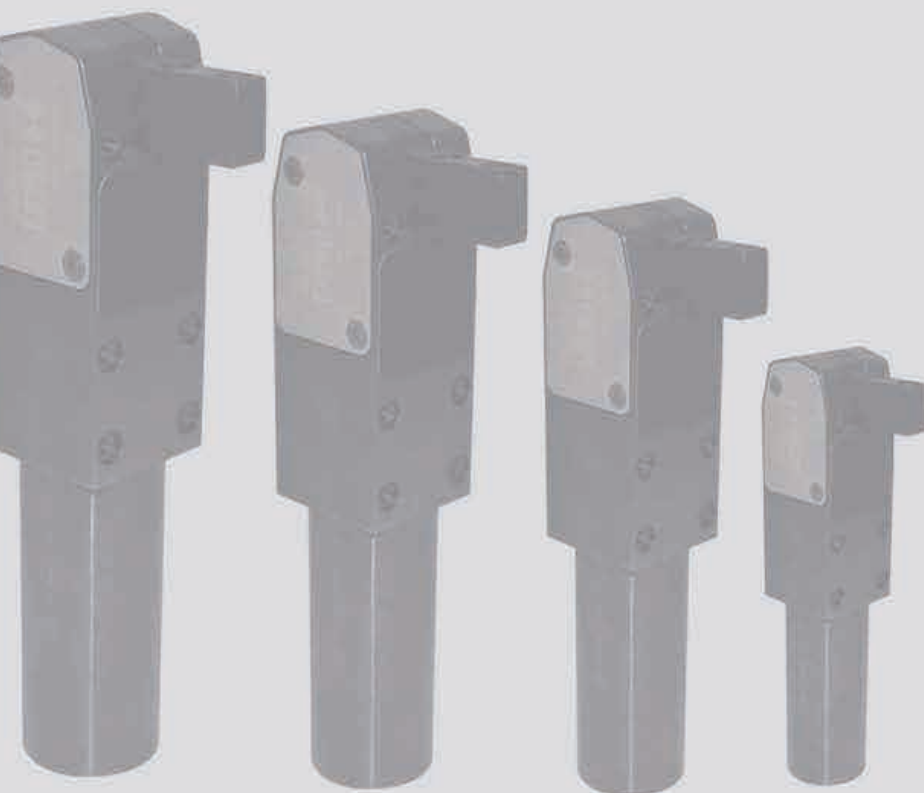




Technical Presentation

FASTENING CLAMP

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WHAT WE DO

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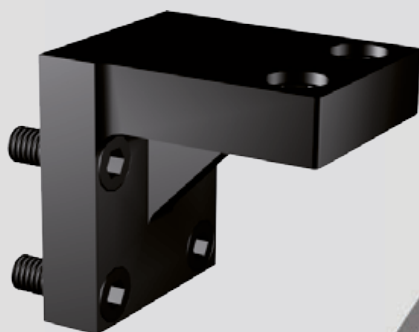
Misati clamps have been designed bearing in mind most usual requirements in tools, so their **unique advantages** give a great **added value** to the user.

These unique advantages represent a step forward in this technical field (worldwide patent).

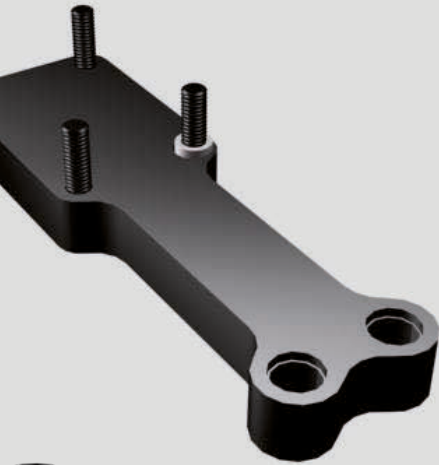
- ✓ **Higher force**
- ✓ **Smaller**
- ✓ **Standard Gripper Fingers**
- ✓ **Welding Anti-spatter**
- ✓ **Lower Consumption**



1. STANDARD COMPONENTS



MISATI has a complete program of standard elements (gripper fingers, mountings, sensors, etc.) which will **simplify the design and save the customer from producing special parts.**

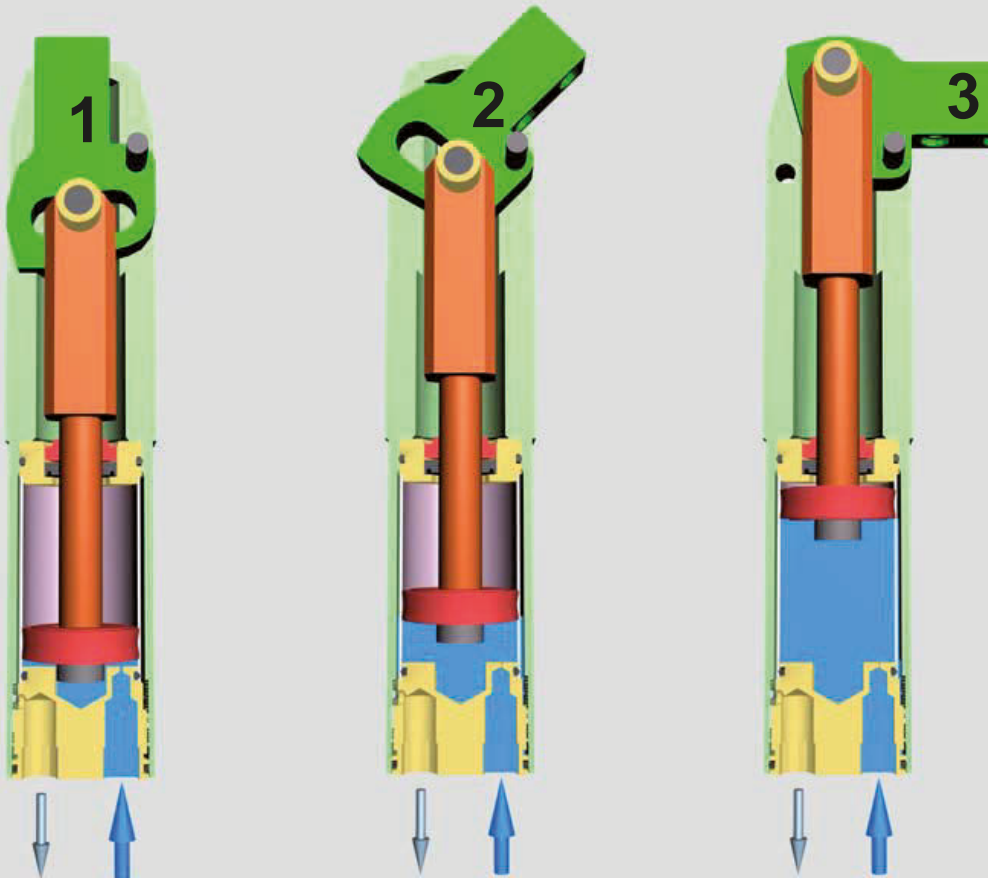




2. OPERATION PRINCIPLE

Closing Clamp

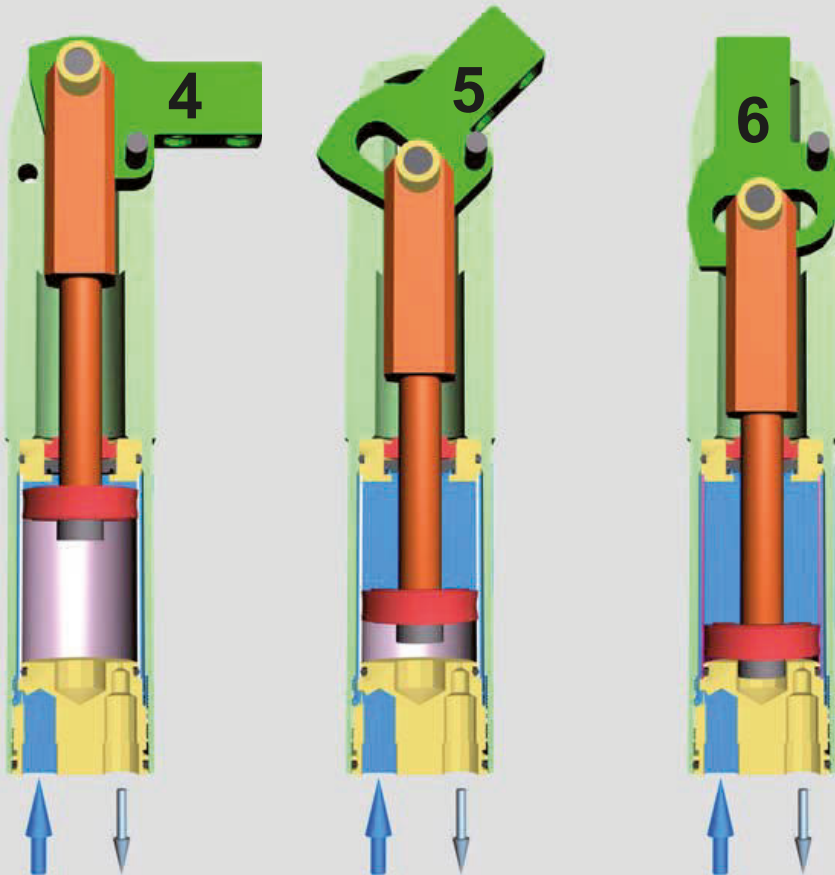
Making force



The clamp has a double-effect pneumatic cylinder which transmits a turning movement to the clamping arm along the shaft. Thanks to the special shape of the oblong hole, the clamp makes a big force (see paper clamp).

Opening Clamp

At rest



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3. UNIQUE ADVANTAGES OF THE M

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**Higher
Holding
Force**

Reduced Size



**Standard Tread
Fingers with
Ribbed Ball-&-
Socket Joint**

**Gripper Fingers
for Moulded
Surfaces**



**Anti-spatter Clamps
for Welding**





**Low Air
Consumption**



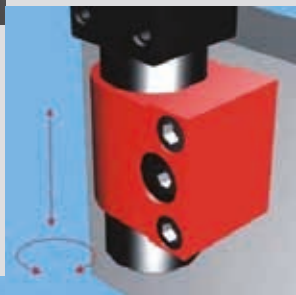
16.2 cm³

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**Rolling System
(20 million
cycles)**



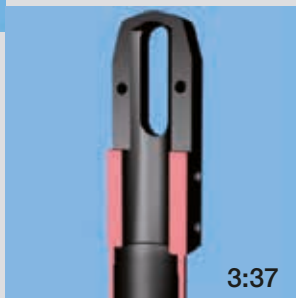
**Fastening
of the
Holding Point**



**Built-in
Connections
with no Flow
Regulators**



**Monobloc Body of
Mechanized &
Treated Steel**





3.4. Study of Special Gripper Fingers

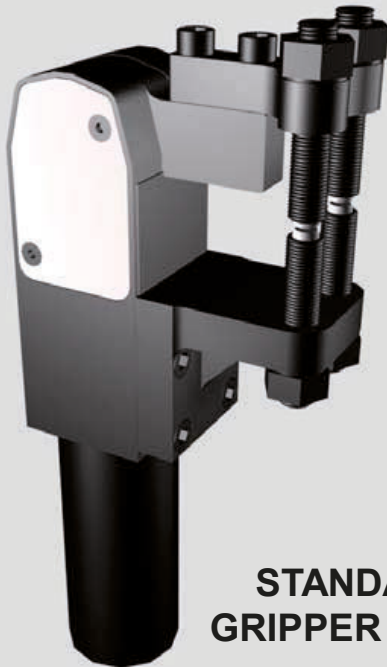
Misati has a wide-ranging program of standard gripper finger study your need and suggest a solution.

Our R&D Dept. will recommend the best solution for your project, **sparing you a significant amount of hours of work.**

Standard Gripper Fingers fasten the workpiece by one or two points.

In this example, the holding force had to be the same on 4 points (on different distance from the turning point of the arm).

Our proposal consisted in a compensation system with rocker arm.



**STANDARD
GRIPPER FINGERS**

ers. However, you may need special gripper fingers. Misati can



**SPECIAL
GRIPPER FINGERS**



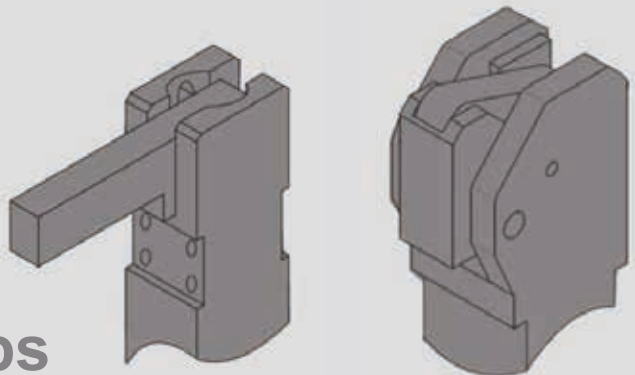
3.5. Anti-spatter coating

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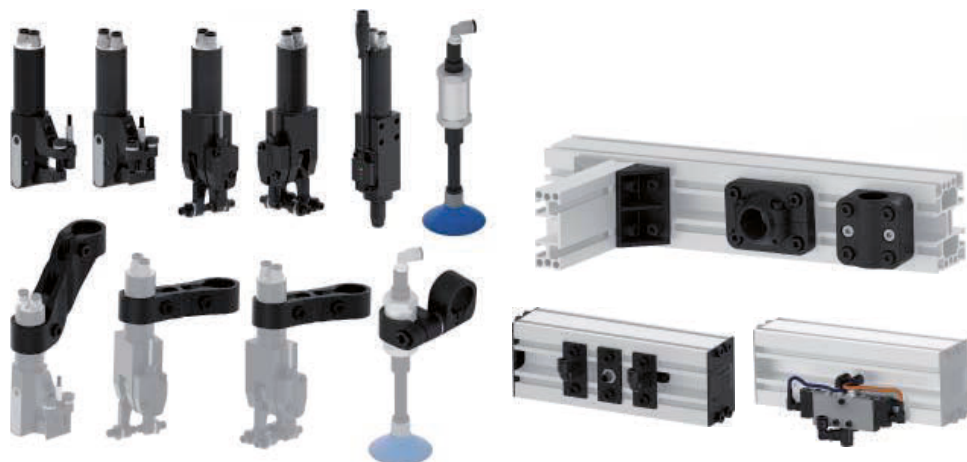


In aggressive environments such as welding (resistance or arc), where there are sparks, we strongly recommend to use protected clamps.

With our full protective anti-spatter coating, sparks will not stick to the clamp. Any **production stoppage will be avoided** and the customer will definitely **save in maintenance**.

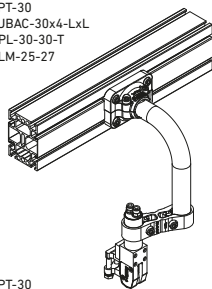


Other Clamps

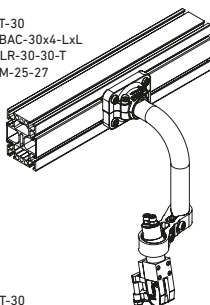


EXAMPLES OF APPLICATIONS:

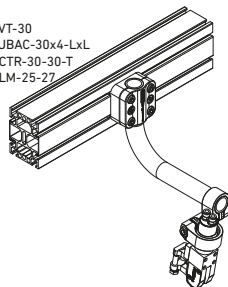
- 1 SPT-30
TUBAC-30x4-LxL
UPL-30-30-T
GLM-25-27



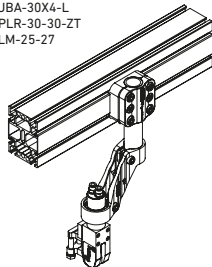
- 2 SVT-30
TUBAC-30x4-LxL
UPLR-30-30-T
GLM-25-27



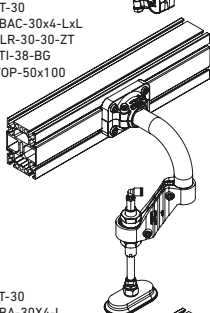
- 3 SVT-30
TUBAC-30x4-LxL
UCTR-30-30-T
GLM-25-27



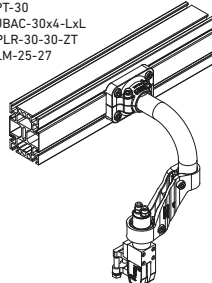
- 4 SPT-30
TUBA-30x4-L
UPLR-30-30-ZT
GLM-25-27



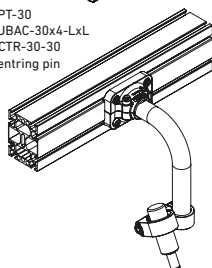
- 5 SPT-30
TUBAC-30x4-LxL
UPLR-30-30-ZT
FSTI-38-BG
MVOP-50x100



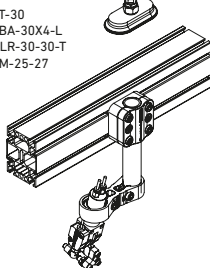
- 6 SPT-30
TUBAC-30x4-LxL
UPLR-30-30-ZT
GLM-25-27



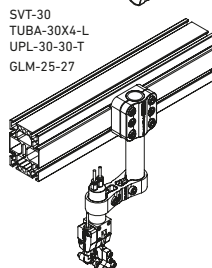
- 7 SPT-30
TUBAC-30x4-L
UCTR-30-30
Centring pin



- 8 SVT-30
TUBA-30x4-L
UPLR-30-30-T
GLM-25-27



- 9 SVT-30
TUBA-30x4-L
UPL-30-30-T
GLM-25-27

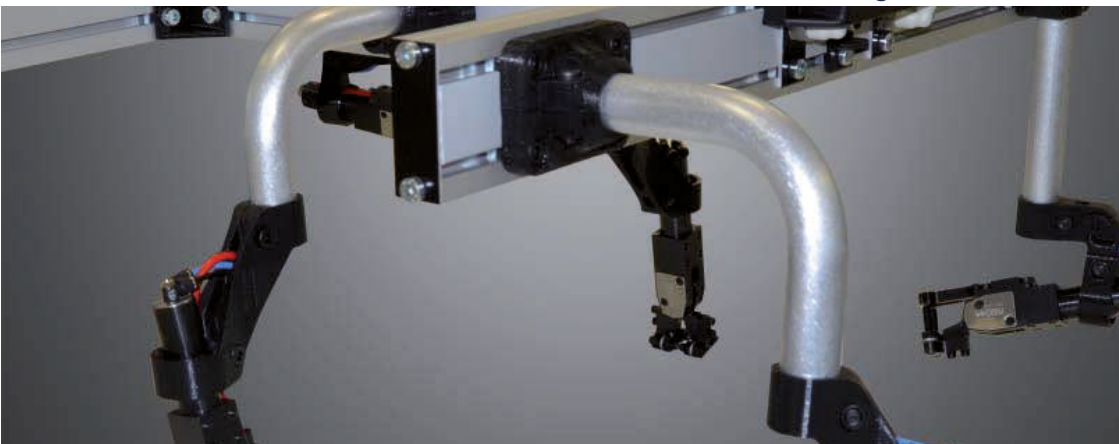


ULTRALIGHT ROBOT GRIP

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TECHNOPOLYMER brackets and mountings



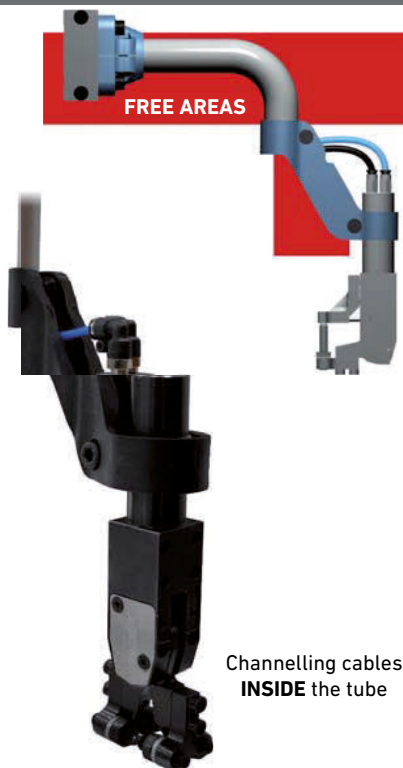
miSATj ➡ ⬅



ULTRALIGHT GRIPS

HIGHER PRODUCTION

- Thanks to the reduced weight of the grip, smaller and more productive Robots may be used.
- The entry and exit of the grip from the tool becomes easier as the ultralight grip occupies less space.
- Production stoppages and incidents are reduced:
 - Sensors control the presence of the sheet and detect the opening and/or closing of the clamp.
 - Perfect fastening of the sheet by using Misati clamps, thanks to their higher force & lower weight, consumption and cost.
 - Protection of electrical and pneumatic cables, which are totally accessible, though.



As our brackets and mountings are manufactured in technopolymer, our new Ultralight Robot Grip has had a drastic reduction in weight compared to the traditional tubular grips (-55,96%).

WITHOUT ADJUSTMENT

- We can revise (or develop) your project of the grip and propose technical improvements to save costs and increase production.
- We can assemble, adjust and check the geometry of your grip in order that you can easily install it on your robot.

LOWER COST

- Less number of parts means a total lower cost of the grip.
- As all the elements of the grip are standard, you save in design. Moreover, it is not required to manufacture any special parts.
- Design and construction of the ultralight grip is simpler, i.e., you need less hours to assemble and adjust the grip.
- Adjustment of the ultralight grip is precise, simple & quick because the 6 degrees of freedom are close to the terminal element (miniclamp).
- Misati ultralight grip can be easily expandable and recoverable, so its elements can be used in other applications.

Number of parts: 4

