

MIDA LASER P SYSTEM TECHNICAL DATA

Main features

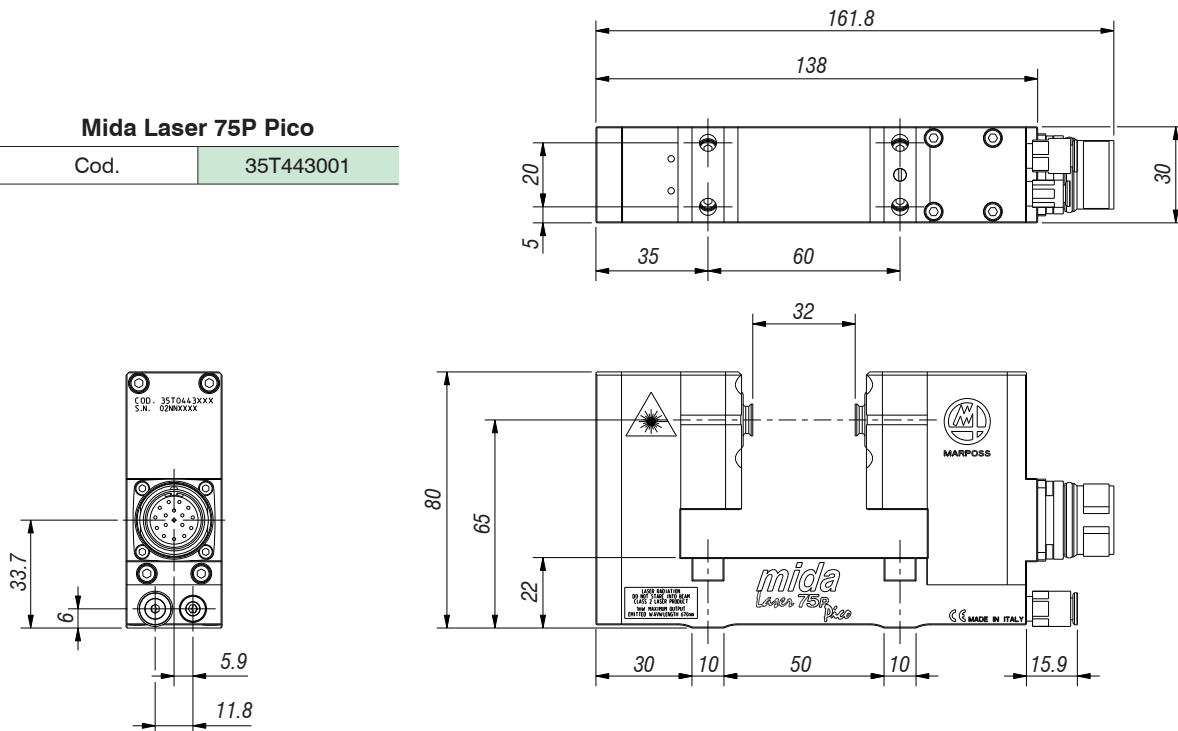
	ML75P	ML105 - 105P
Available types	Stand alone and modular	Modular
Laser beam types	Collimated <i>(only for modular type)</i> Focused <i>(for both types)</i>	Collimated Focused
Laser beam shape	Almost rounded (4/3)	Almost rounded (4/3)
Laser beam dimensions	$\geq 50 \mu\text{m}$ <i>(Pico Laser)</i> $\leq 2 \text{ mm}$ <i>(Collimated)</i>	$\geq 100 \mu\text{m}$ <i>(Focused)</i> $\leq 2 \text{ mm}$ <i>(Collimated)</i>
Wave length	670 nm <i>(visible laser beam Class 2)</i>	670 nm <i>(visible laser beam Class 2)</i>
Power emitted	< 1 mW	< 1 mW
Fork connection position	Lateral, frontal and bottom	/
Fork outlet length <i>for stand alone version</i>	136, 165, 215, 295 and 415 mm*	/
Space between shutters <i>for stand alone version</i>	32, 48, 98, 178 and 298 mm	/
Distance between modules <i>for modular version</i>	$\leq 3 \text{ m}$ <i>(Collimated)</i> $\leq 1.2 \text{ m}$ <i>(Focused)</i>	$\leq 12 \text{ m}$ <i>(Collimated)</i> $\leq 3.6 \text{ m}$ <i>(Focused)</i>
Protection degree <i>(IEC 60529 standard)</i>	IP67	IP67
Repeatability error	$2\sigma \leq 0.2 \mu\text{m}$	$2\sigma \leq 1 \mu\text{m}$ <i>depending on brackets and distance between modules</i>
Cable connection length	10, 20 and 30 m <i>(with or without 5 m protection)</i>	10, 20 and 30 m <i>(with or without 5 m protection)</i>
Cable connection types	Straight and 90°	Straight and 90°
Electronic interface	External with microprocessor	Integrated into receiver module <i>(ML105)</i> External with microprocessor <i>(ML105P)</i>

(*) = it is foreseen the availability of special fork lengths of 600, 800 and 1000 mm

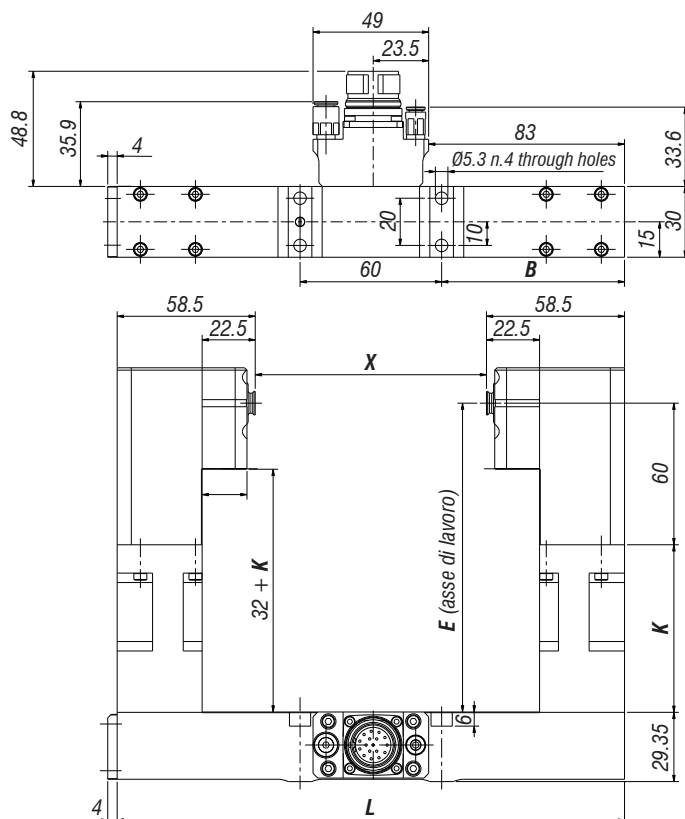
Dimensions and codes

Mida Laser 75P Pico

Cod.	35T443001
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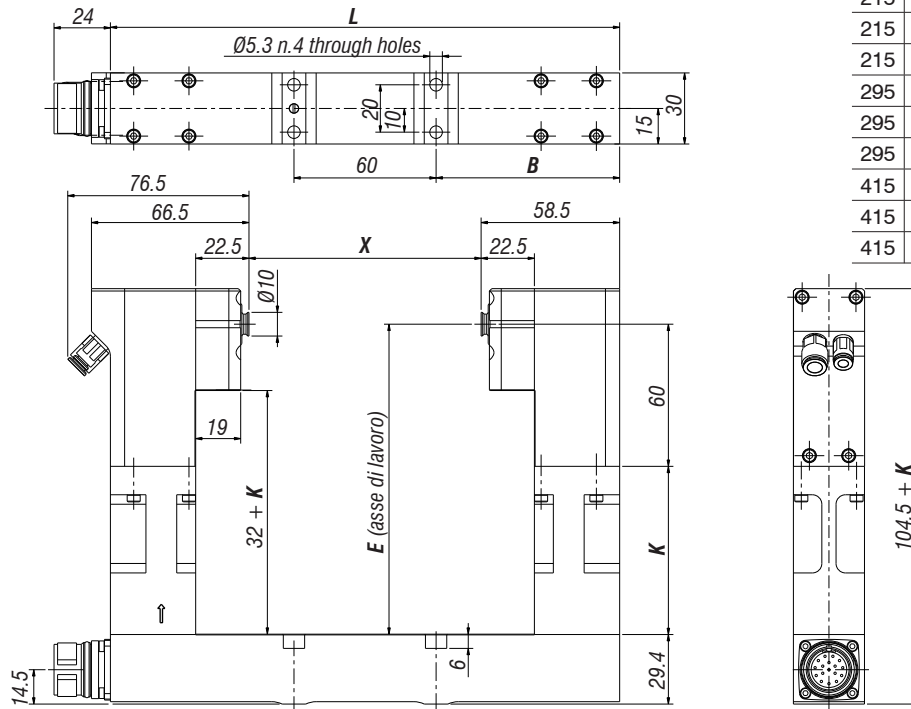


Mida Laser 75P Stand Alone frontal connector with or without extensions



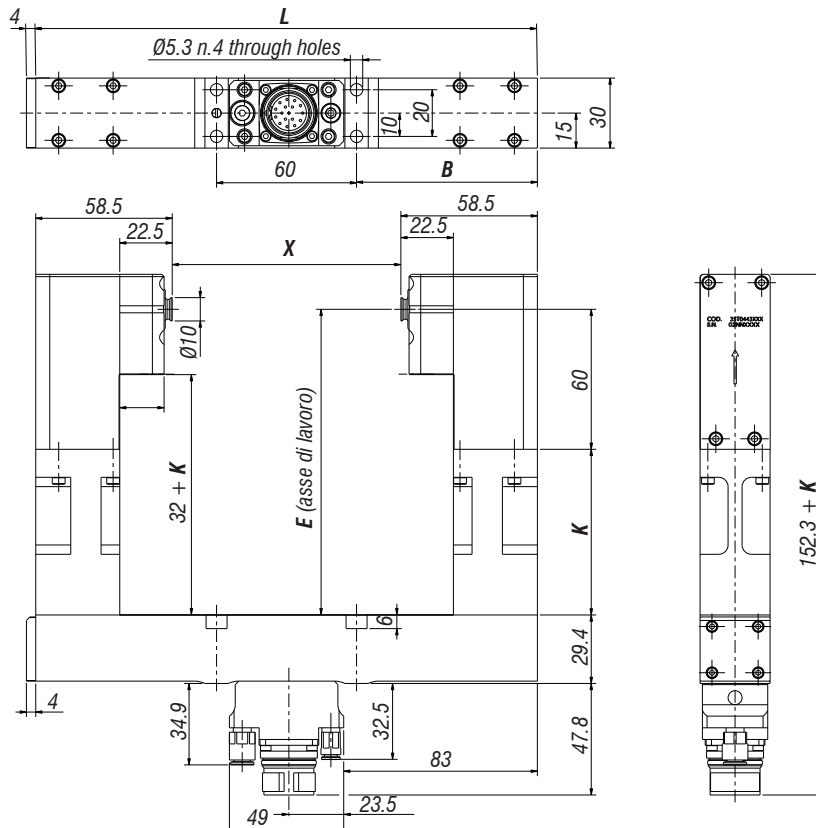
L	B	X	E	K	Code
165	52.2	48	60	0	35T0443128
165	52.2	48	85.4	25.4	35T0443126
165	52.2	48	131	71	35T0443127
215	77.5	98	60	0	35T0443138
215	77.5	98	85.4	25.4	35T0443136
215	77.5	98	131	71	35T0443137
295	117.5	178	60	0	35T0443148
295	117.5	178	85.4	25.4	35T0443146
295	117.5	178	131	71	35T0443147
415	177.5	298	60	0	35T0443158
415	177.5	298	85.4	25.4	35T0443156
415	177.5	298	131	71	35T0443157

**Mida Laser 75P Stand Alone lateral connector
with or without extension**

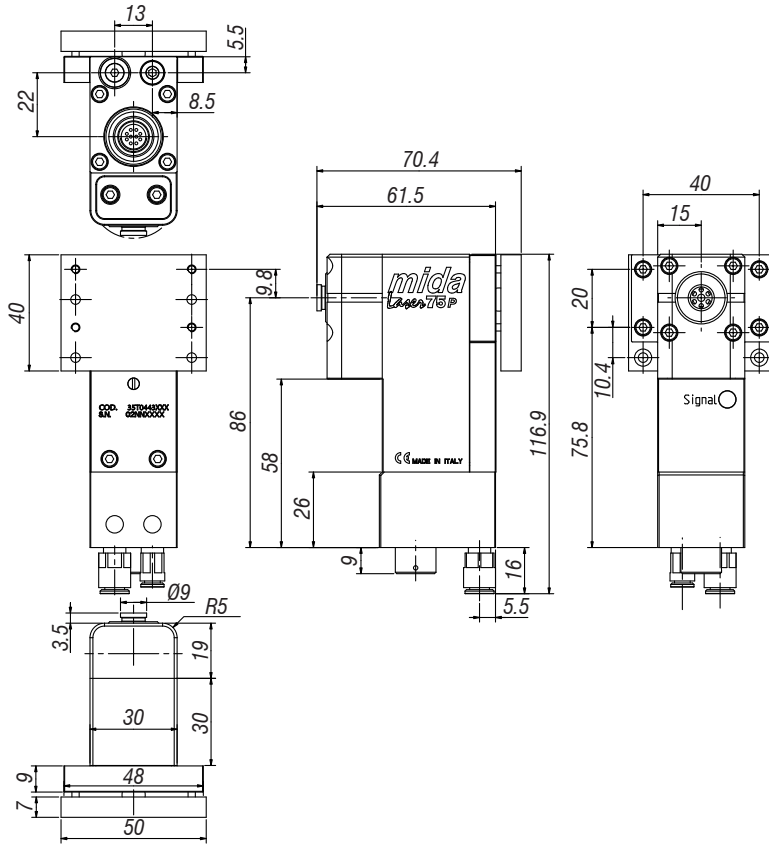


L	B	X	E	K	Code
165	52.2	48	60	0	35T0443160
165	52.2	48	85.4	25.4	35T0443162
165	52.2	48	131	71	35T0443163
215	77.5	98	60	0	35T0443170
215	77.5	98	85.4	25.4	35T0443172
215	77.5	98	131	71	35T0443173
295	117.5	178	60	0	35T0443180
295	117.5	178	85.4	25.4	35T0443182
295	117.5	178	131	71	35T0443183
415	177.5	298	60	0	35T0443190
415	177.5	298	85.4	25.4	35T0443192
415	177.5	298	131	71	35T0443193

**Mida Laser 75P Stand Alone bottom connector
with or without extension**

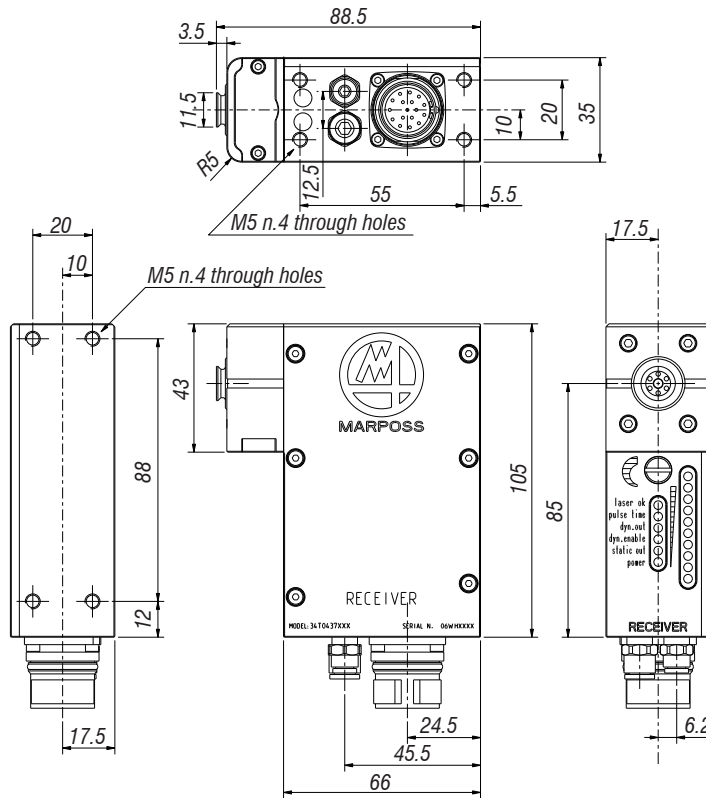


L	B	X	E	K	Code
165	52.5	48	60	0	35T0443120
165	52.5	48	85.4	25.4	35T0443122
165	52.5	48	131	71	35T0443123
215	77.5	98	60	0	35T0443130
215	77.5	98	85.4	25.4	35T0443132
215	77.5	98	131	71	35T0443133
295	117.5	178	60	0	35T0443140
295	117.5	178	85.4	25.4	35T0443142
295	117.5	178	131	71	35T0443143
415	177.5	298	60	0	35T0443150
415	177.5	298	85.4	25.4	35T0443152
415	177.5	298	131	71	35T0443153



Mida Laser 75P Modular

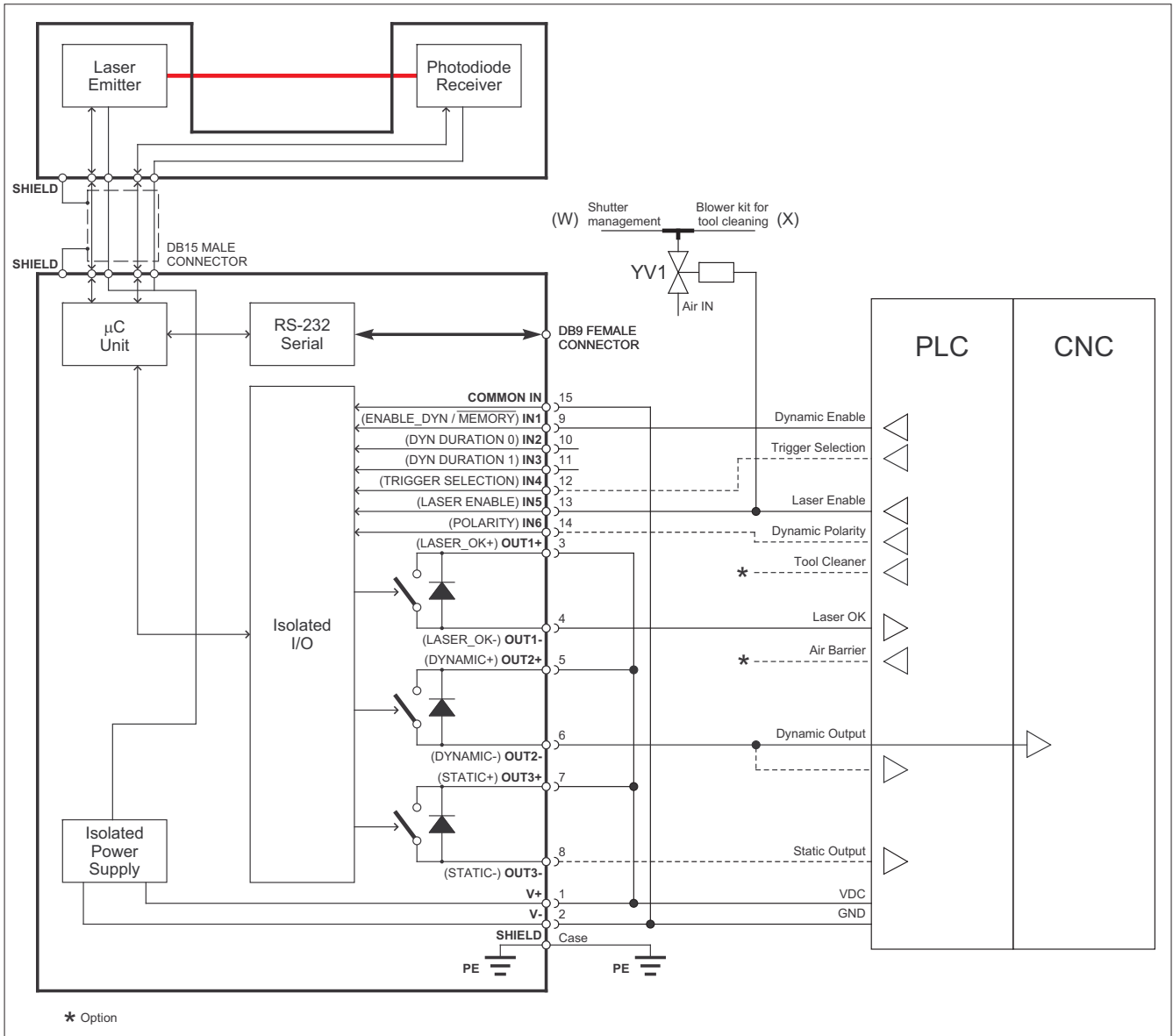
Type	Code
RX	34T0443550
TX (collimated)	34T0443050
TX (focused)	<i>on demand</i>



Mida Laser 105 - 105P Modular

Type	Code
RX	34T0437103
TX (collimated)	34T0437151
TX (focused)	<i>on demand</i>

Interface-PLC/CNC wiring diagram

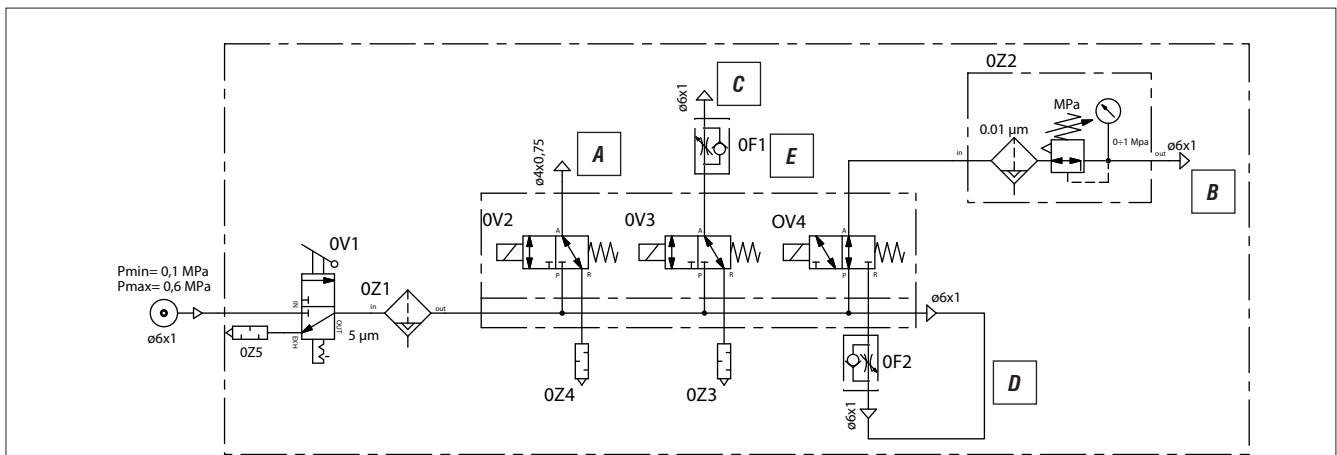
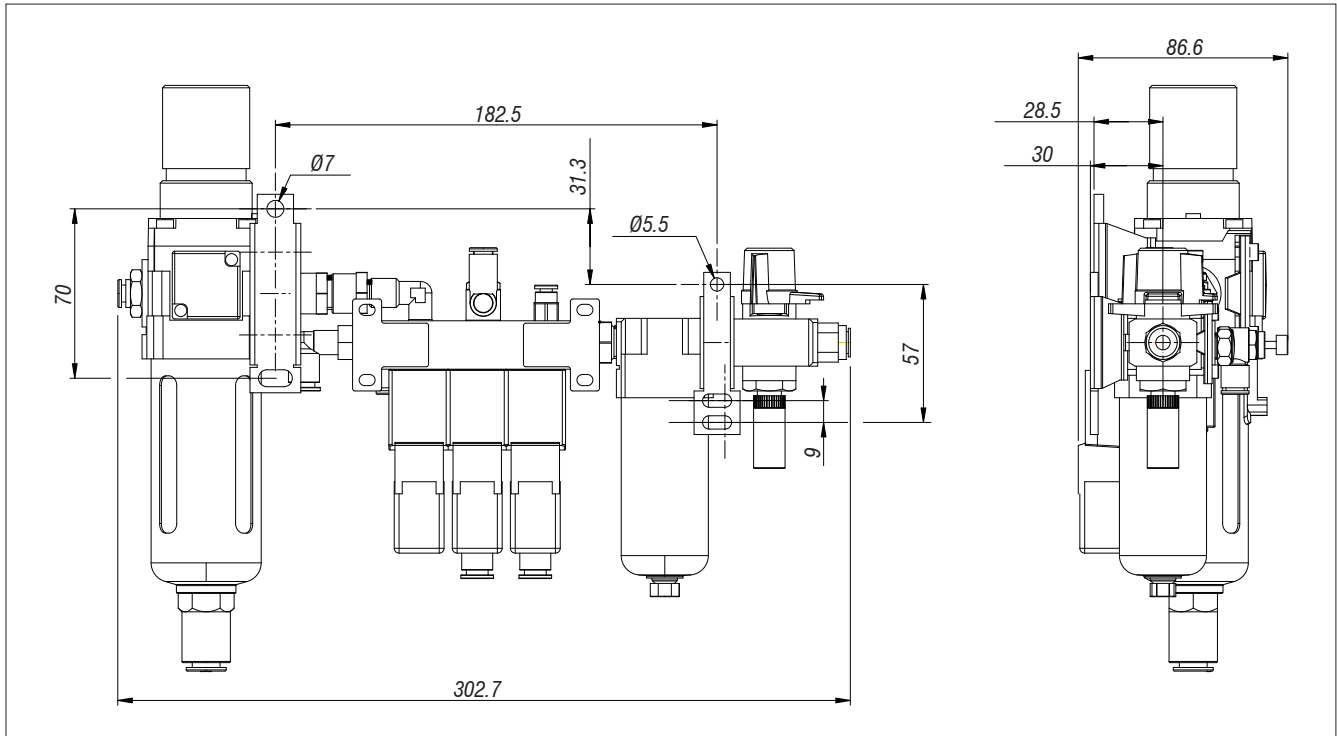


Full installation needs:

1 skip input (a fast input would be suggested), 2 M-Codes (SET/RST) and at least 1 PLC INPUT (Laser OK)

Special cycle can request additional input (Max. 2 more) and output (1 more)

Integrated air filter group



Input air quality (ISO 8573-1 / 7.4.4 standard)	Solid parts	40 µm
	Dew point	3 °C
	Oily part	≤ 5 mg/m ³
Air consumption with tool cleaning blower	≤ 200 l/min	
Power supply	24 Vdc	

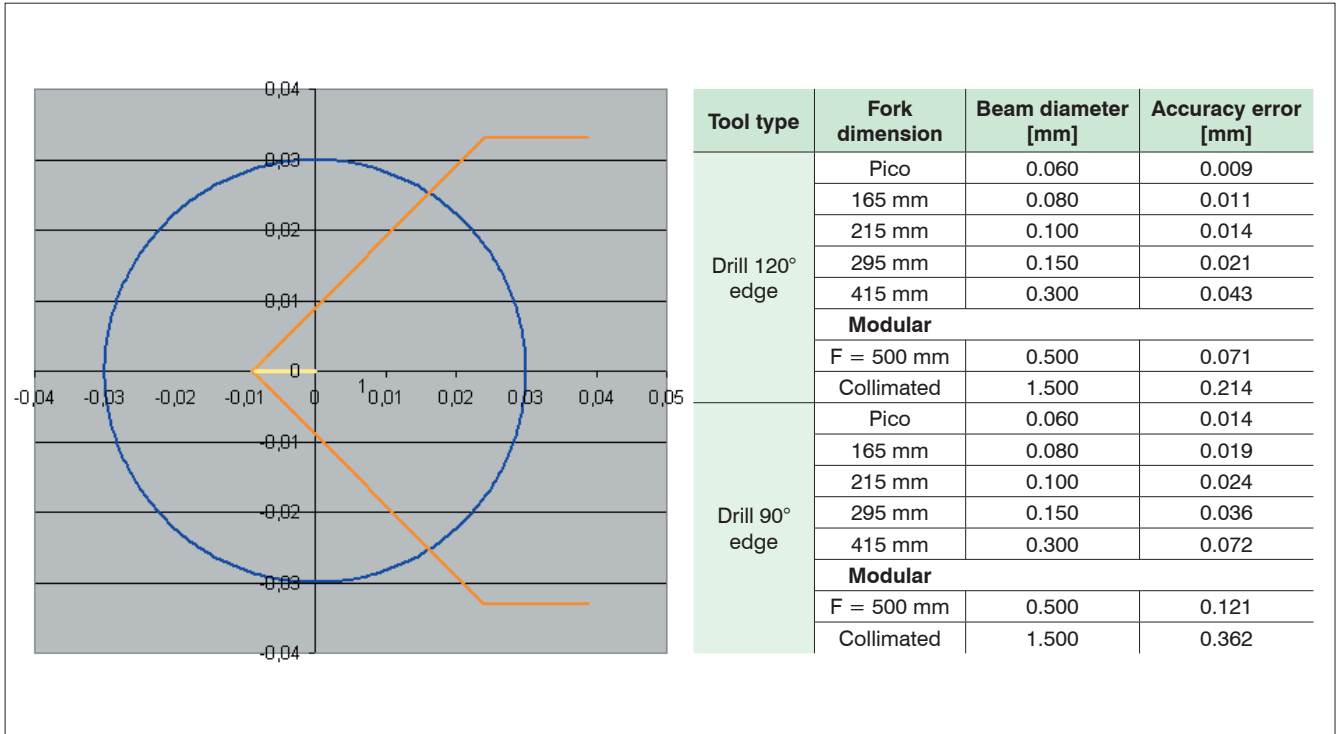
A	Shutter	<ul style="list-style-type: none"> • 3 bar ≤ air pressure ≤ 6 bar • air consumption ≈ 0 • connector Ø4 mm
B	Barrier air	<ul style="list-style-type: none"> • air pressure ≤ (shutter pressure -1.5 bar) • air consumption ≈ 100 l/min • connector Ø6 mm
C	Tool cleaning air jet	<ul style="list-style-type: none"> • air consumption ≤ 70 l/min • connector Ø6 mm
D	Barrier air flow regulation	
E	Tool cleaning air regulation	



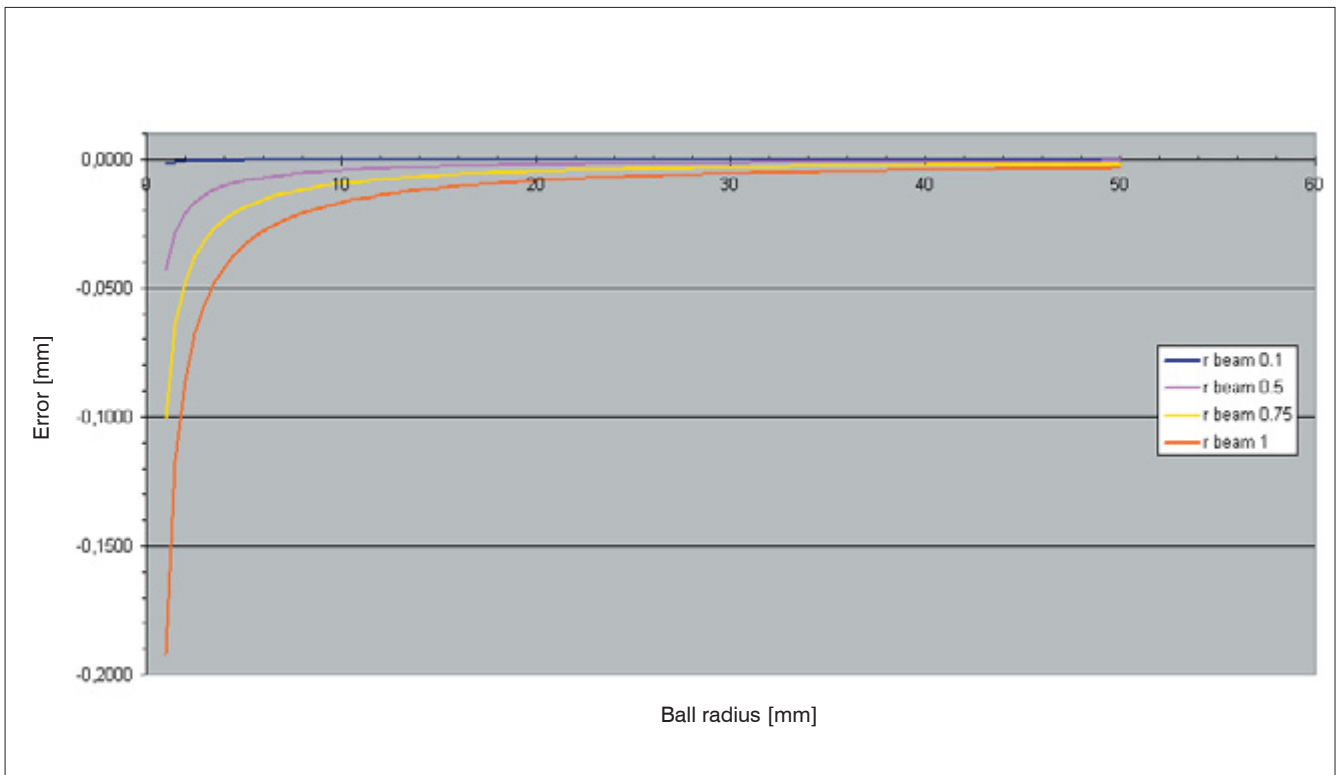
Touch Probes
 Transmission Systems
 Laser
 Software
 Toolsetting Arms
 Tool & Process Monitoring
 Accessories

Accuracy errors

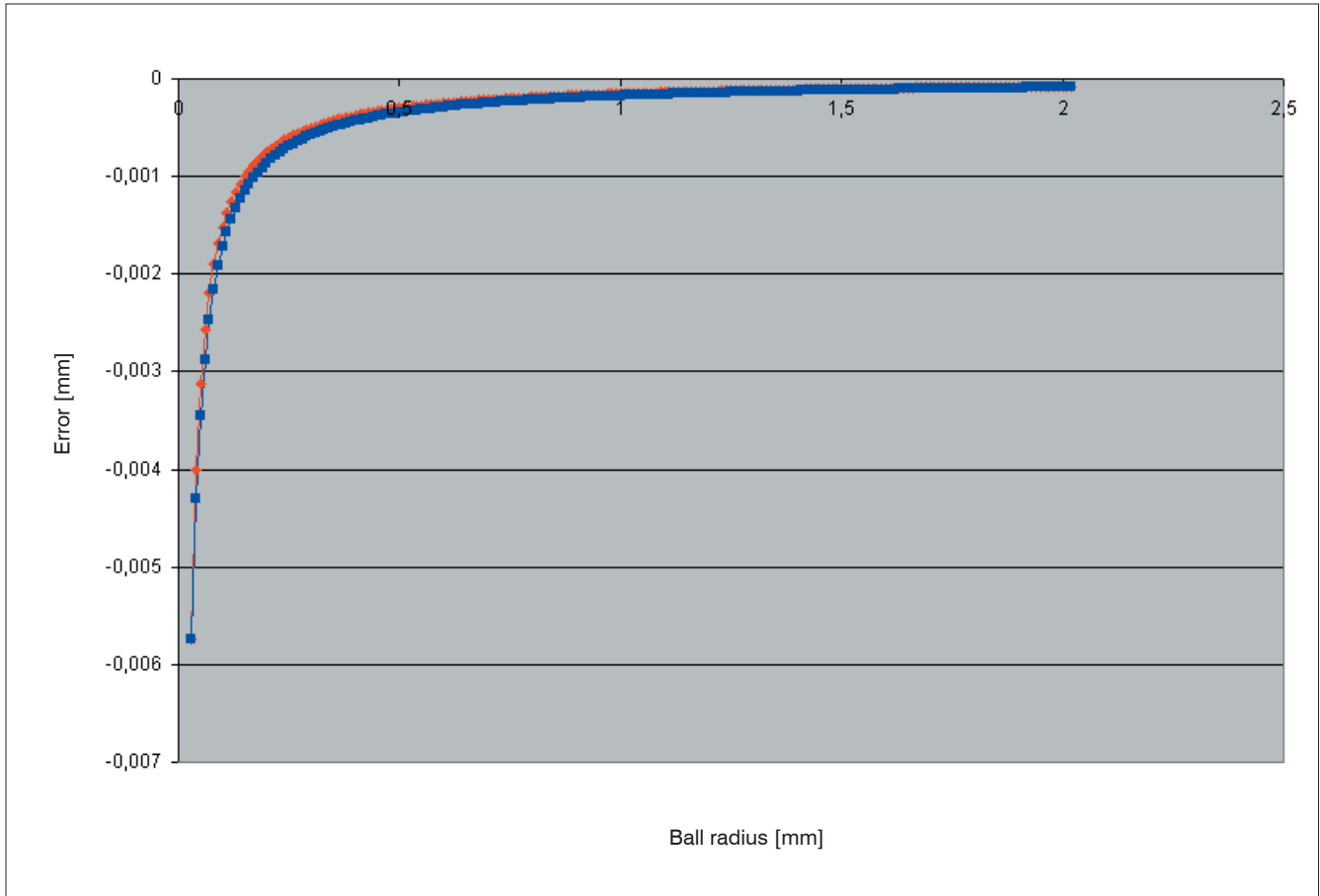
ACCURACY ERROR DUE TO A DRILL CUTTING EDGE



ACCURACY ERROR DUE TO A BALL NOSE TOOL RADIUS



ACCURACY ERROR DUE TO A SMALL BALL NOSE TOOL RADIUS (WITH PICO LASER)



Note:

- red curve = detected values
- blue curve = mathematical function to input into measuring cycles to compensate accuracy error



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For a full list of address locations, please consult the Marposs official website

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