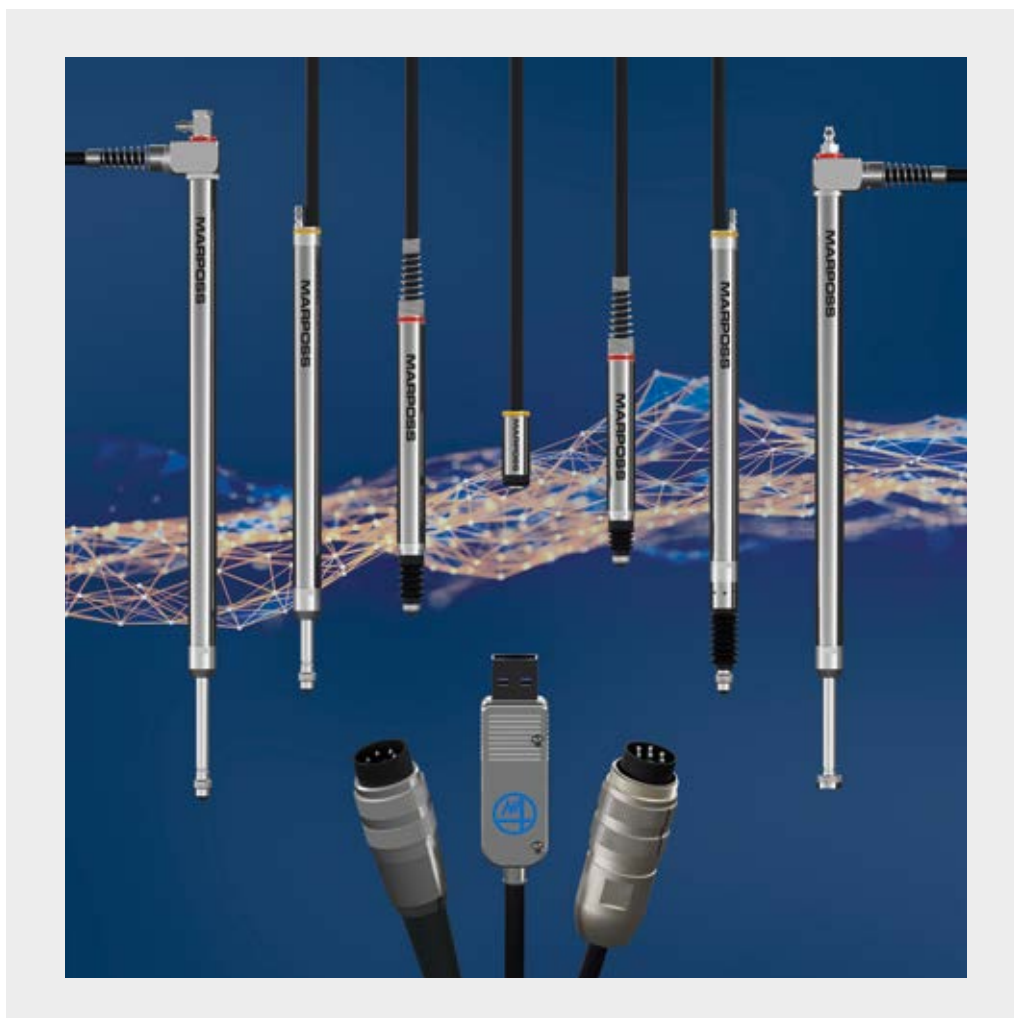




REDCrown2
LINE

THE SECOND GENERATION OF PENCIL PROBES



Displacement Sensors

Evolving from market latest quality requirements **REDCrown2™** is the line of pencil probes developed to meet industry's global performance specifications. As a result of experience in the metrology market place & with input from measurement integrators throughout the world REDCrown2 sets the new metrological standard.

The REDCrown2 line includes also the digitalized (DIGICrown2™) and the USB version (REDCrown2 USB™).

THE PRODUCT LINE

Displacement Sensors



REDCrown2

A line of analogue pencil probes, available with LVDT and HBT circuitry in many compatibility types.

Bore Gauges



DIGICrown2

Digitized version, with high levels of accuracy and versatility used in combination with DIGICrown network system and GAGEPod interface box.

Forks and Ring Gauges



REDCrown2 USB

A probe version linearized with the USB interface integrated in the standard USB connector for direct connection to any USB host device.

Bench Gauges



Indicators and Electronic Display Units



Interface Box- es for Data Acquisition



Software



Standard



Soft touch & Ultra-Soft touch



Product features

The precision engineered design incorporates ball cage movements, improved protection from electrical/magnetical interference, by the introduction of Mu-metal shielding and added robustness throughout, all produced from a refined manufacturing process. Performance of **REDCrown2** is guaranteed to give excellent accuracy under the harshest conditions where high reliability is constantly required in the manufacturing field.

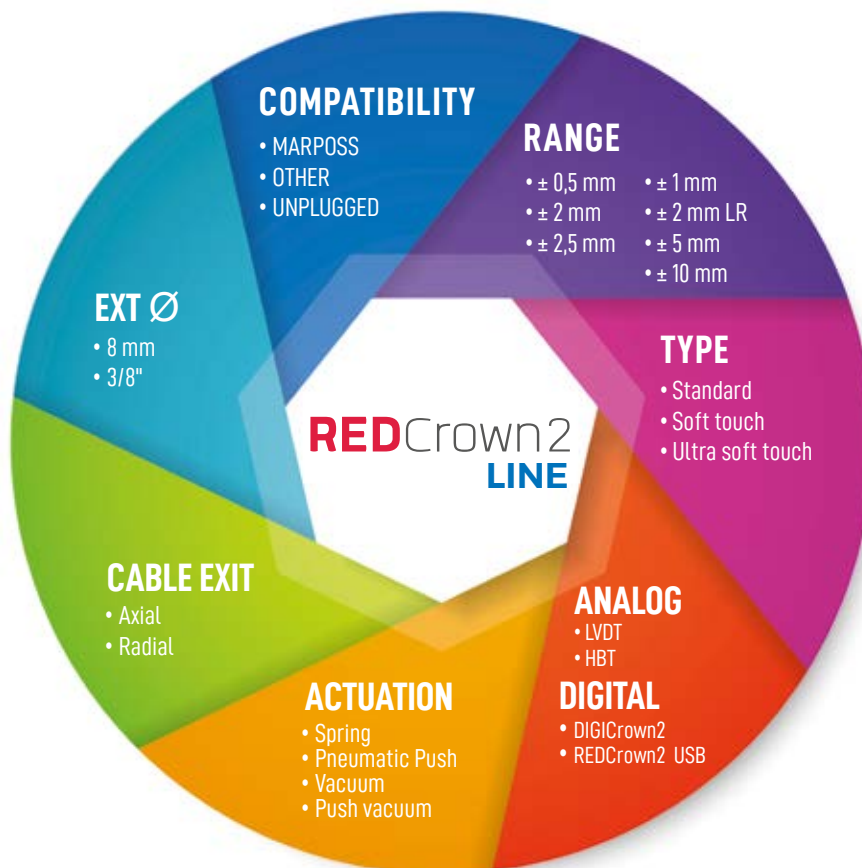
The **REDCrown2** line and its digitized versions **DIGICrown2** and **REDCrown2 USB**, offer a variety of measuring solutions.

The two main families, Standard (with gasket-IP 65) and Soft Touch (without gasket-IP 54), are available with the following options:

- With HBT and LVDT type transducers;
- Seven measuring ranges: $\pm 0,5\text{mm}$, $\pm 1\text{mm}$, $\pm 2\text{mm}$, $\pm 2\text{mmLR}$, $\pm 2,5\text{mm}$, $\pm 5\text{mm}$ and $\pm 10\text{mm}$;
- Actuation / retraction by Spring, Pneumatic or Vacuum methods;
- Analogue connection: Marposs standard connector or compatible connectors for interfacing with competitor's electronics;
- Digital connection for DIGICrown network system™ and GAGEPod;
- Direct USB connector for simple interfacing to computers;
- The unplugged version allows customer to complete the probes using their preferred type of connector;
- OEM "private label" versions with customized body logos, part numbers and dedicated packaging for your product.

Product mix

Please refer to the below reported scheme in order to have the REDCrown2 line product mix overview. In case you are looking for a dedicated solution don't hesitate to contact Marposs.



Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



Application **examples**

Displacement
Sensors



Bore
Gauges



Forks and
Ring Gauges



Bench
Gauges



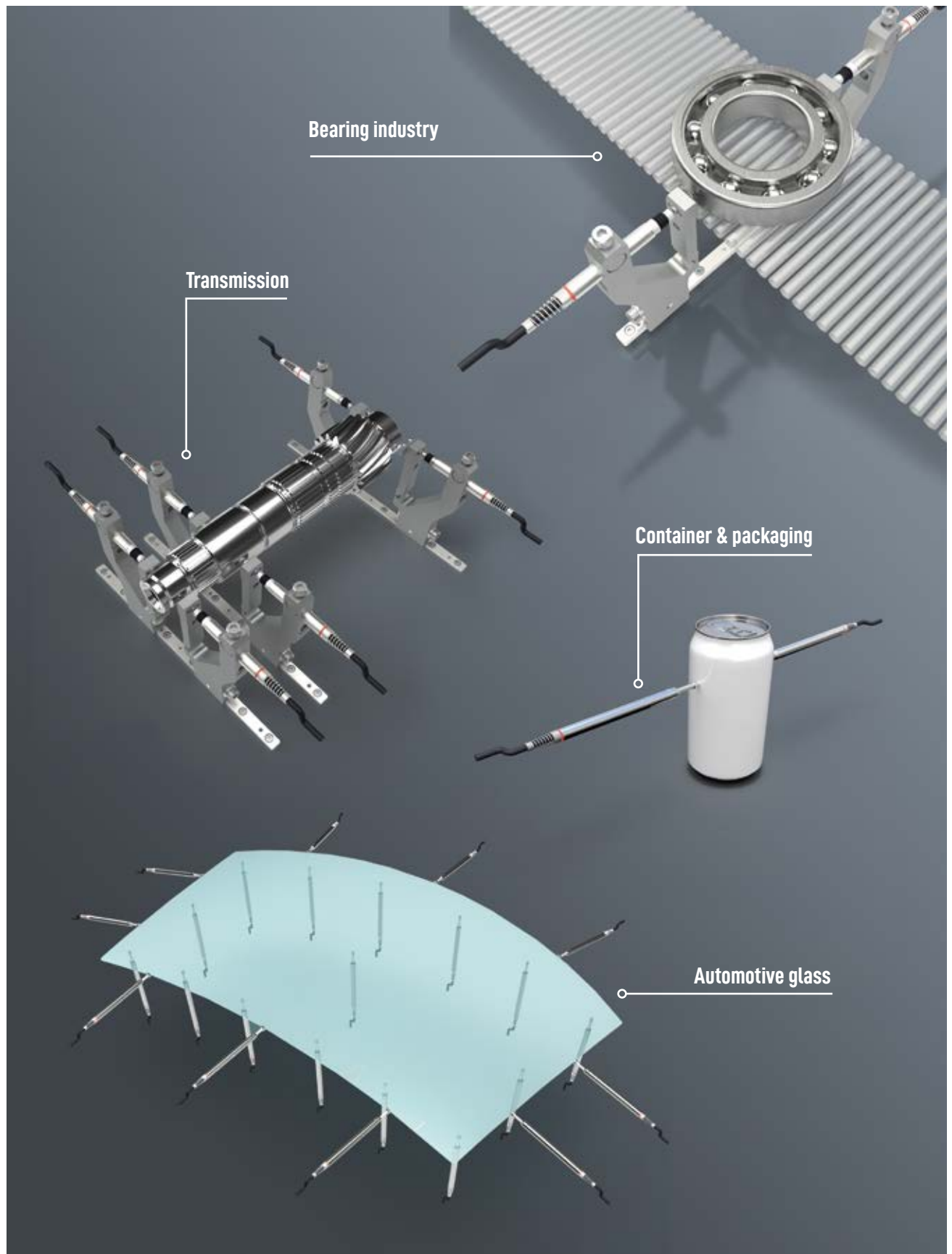
Indicators and
Electronic
Display Units



Interface Box-
es for Data
Acquisition

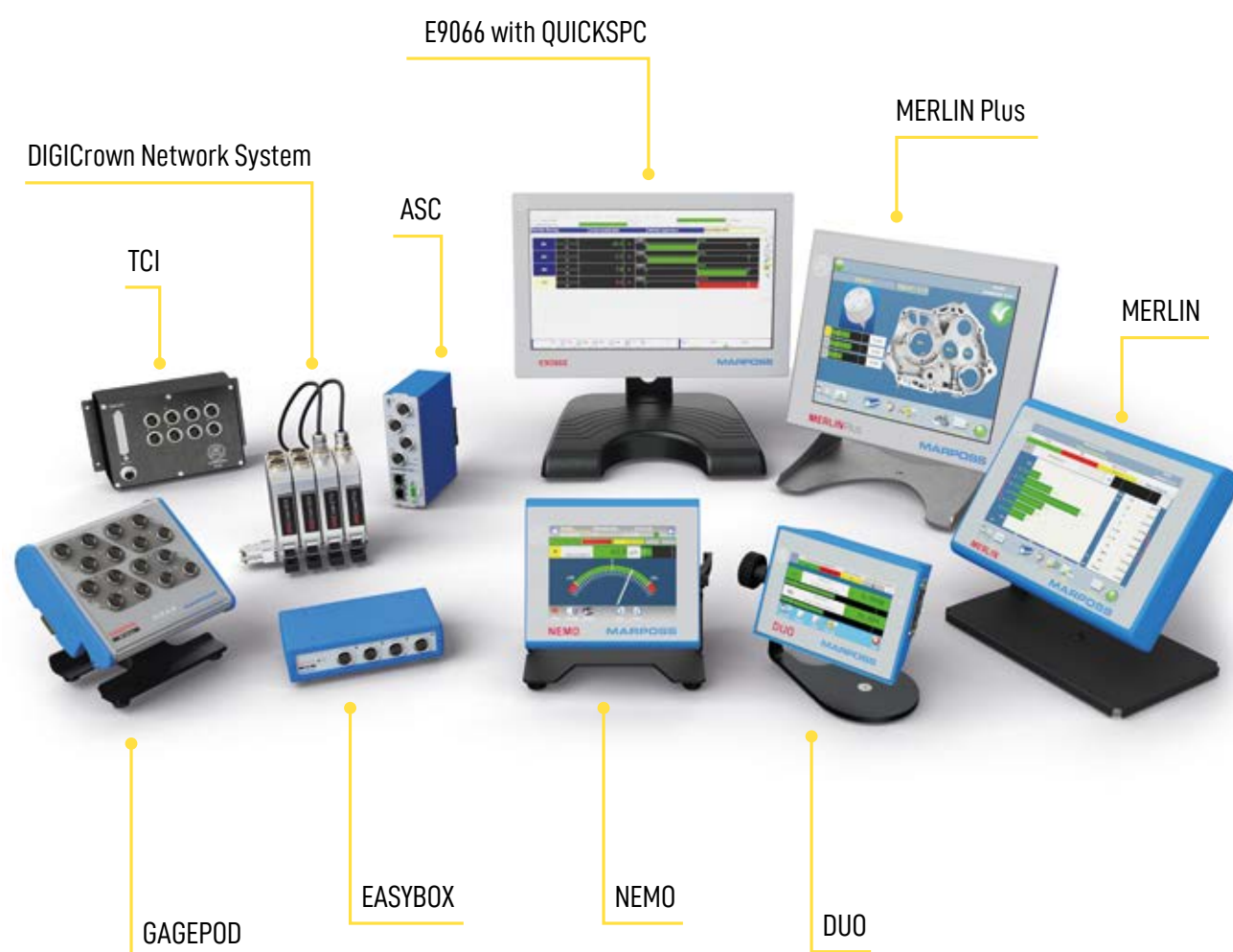


Software



CONNECTIVITIES

Through the Marposs interface boxes, the REDCrown2 line can be connected to all Electronic display units and software.



Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



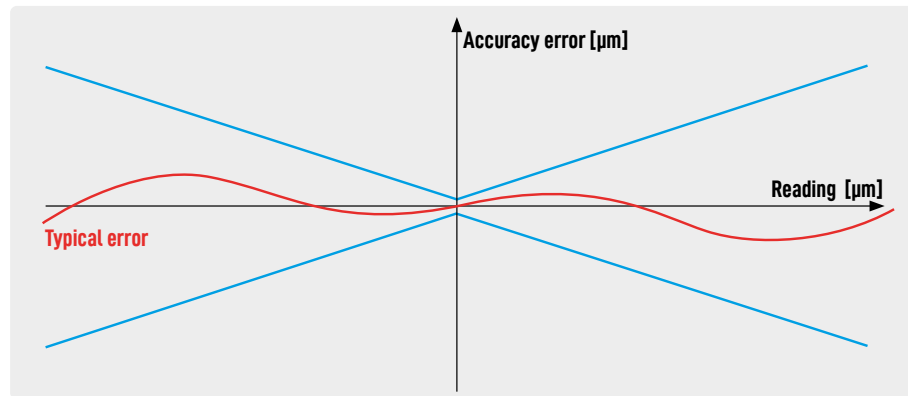
Interface Box- es for Data Acquisition



Software



ACCURACY ERROR



Mechanical specifications		±2,5 mm	±5 mm	±10 mm
Measuring range [mm]		5	10	20
Mechanical travel [mm]		6,6	11	21
Body Ø [mm]		8	8	8
Cable length [m]		2	2	2
Operating temperature [°C]		-10 to +65	-10 to +65	-10 to +65
Storage temperature [°C]		-20 to +100	-20 to +100	-20 to +100
Contact thread		M2,5	M2,5	M2,5
Accuracy error [µm]		±MIN(0,3 + 10* K ; 11 + 2* K)	±MAX(5,0 + 2* K ; 7* K)	±MAX(10 + 2* K ; 7* K)
Repeatability (2.77 σ) [µm]		≤0,15	≤0,15	≤0,15
Zero thermal drift [µm/°C]		<0,25	<0,25	<0,25

Standard MARPOSS (with gasket)		±2,5 mm	±5 mm	±10 mm
Sensitivity [mV/V/mm]		115	115	23
Calibration spec.		3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF	3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF	3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF
Spring strength [N/mm]		0,023	0,03	0,03
Measuring force [N±25%]		0,70	0,7 to 2	0,1
Pneumatic Push pressure	bar	0,5 to 1	0,5 to 1	0,5 to 1
	psi	7,5 to 14,5	7,5 to 14,5	7,5 to 14,5
Vacuum retract pressure	bar	-0,45 to -0,6	-0,45 to -0,6	-
	psi	-6,5 to -8,7	-6,5 to -8,7	-
Gasket		Fluoroelastometer	Fluoroelastometer	Fluoroelastometer
Protection grade		IP65	IP65	IP65
Contact type		carbide	carbide	carbide

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S	PP	V	PV	S	PP	V	PV	S	PP	V	PV	S	PP	V	PV
Trade name	F25	FR25	FPA25	FP25	FVA25	FPV25			F50	FR50	FPA50	FP50	FVA50	FPV50		
Order code	B3PR05L0000	B3PR05L1200	B3PR05L0400	B3PR05L1600	B3PR05L0560	B3PR05L1760			B3PR10L0000	B3PR10L1200	B3PR10L0400	B3PR10L1600	B3PR10L0560	B3PR10L1760		
	B3PR20L0000	B3PR20L1200	B3PR20L0400	B3PR20L1600					B3PR20L0000	B3PR20L1200	B3PR20L0400	B3PR20L1600				

Soft Touch (without gasket)		±2,5 mm	±5 mm	±10 mm
Sensitivity [mV/V/mm]		115	115	23
Calibration spec.		3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF	3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF	3,5355V _{RMS} @7,5kHz with load 1MΩ//360pF
Spring strength [N/mm]		0,016	0,07	0,030
Total Measuring force [N±25%]		0,30	0,18 to 1,9	0,30
Pneumatic Push pressure	bar	0,5 to 2	0,5 to 2	0,5 to 2
	psi	7,3 to 29	7,3 to 29	7,3 to 29
Vacuum retract pressure	bar	-0,45 to -0,6	-0,45 to -0,6	-0,45 to -0,6
	psi	-6,5 to -8,7	-6,5 to -8,7	-6,5 to -8,7
Protection grade		IP50(IP54 PP version)	IP50(IP54 PP version)	IP50(IP54 PP version)
Contact type		Nylon (PA66)	Nylon (PA66)	Nylon (PA66)

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S	PP	V	PV	S	PP	V	PV	S	PP	V	PV	S	PP	V	PV
Trade name	F25L	FR25L	FPA25L	FP25L	F25L	FR25L	FPA25L	FP25L	F50L	FR50L	FPA50L	FP50L	F50L	FR50L	FPA50L	FP50L
Order code	B3PR05L5000	B3PR05L6200	B3PR05L5400	B3PR05L6600	B3PR05L6760	B3PR05L5800	B3PR05L7000		B3PR10L5000	B3PR10L6200	B3PR10L5400	B3PR10L6600	B3PR10L5800	B3PR10L7000		
	B3PR20L5000	B3PR20L6200	B3PR20L5400	B3PR20L6600					B3PR20L5000	B3PR20L6200	B3PR20L5400	B3PR20L6600				
									B3PR20L5800	B3PR20L7000						

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



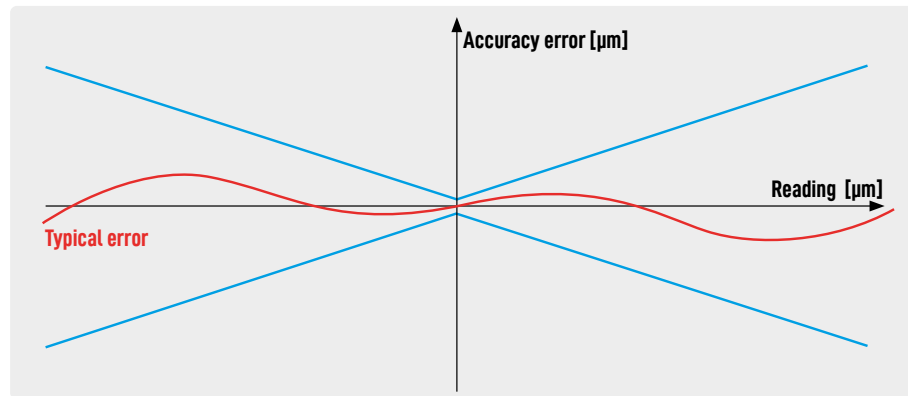
Interface Box- es for Data Acquisition



Software



ACCURACY ERROR



Mechanical specifications	±2,5 mm	±5 mm	±10 mm
Measuring range [mm]	5	10	20
Mechanical travel [mm]	6,6	11	21
Body Ø [mm]	8	8	8
Cable length [m]	2	2	2
Operating temperature [°C]	-10 to +65	-10 to +65	-10 to +65
Storage temperature [°C]	-20 to +100	-20 to +100	-20 to +100
Contact thread	M2,5	M2,5	M2,5
Accuracy error [µm]	±MAX (2,5 + 2* K ; 7* K)	±MAX(5,0 + 2* K ; 7* K)	±MAX(10 + 2* K ; 7* K)
Repeatability (2.77 σ) [µm]	≤0,15	≤0,15	≤0,15
Zero thermal drift [µm/°C]	<0,25	<0,25	<0,25

Standard MARPOSS (with gasket)	±2,5 mm	±5 mm	±10 mm
Sensitivity [mV/V/mm]	36,875	29,5	7,375
Calibration spec.	3,5355V _{RMS} @7,5kHz with load 2KΩ±0,1%	3,5355V _{RMS} @7,5kHz with load 2KΩ±0,1%	3,5355V _{RMS} @7,5kHz with load 2KΩ±0,1%
Spring strength (N/mm)	0,023	0,03	0,03
Measuring force (N±25%)	0,70	0,70	0,1
Pneumatic Push pressure bar	0,5 to 1	0,5 to 1	0,5 to 1
psi	7,5 to 14,5	7,5 to 14,5	7,5 to 14,5
Vacuum retract pressure bar	-0,45 to -0,6	-0,45 to -0,6	-
psi	-6,5 to -8,7	-6,5 to -8,7	-
Gasket	Fluoroelastometer	Fluoroelastometer	Fluoroelastometer
Protection grade	IP65	IP65	IP65
Contact type	carbide	carbide	carbide

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R				
Actuation (*)	S		PP		V		PV		S		PP		V		PV		S		PP		V		PV	
Trade name	H25	HR25	HPA25	HP25	HVA25	HPV25	'	'	H50	HR50	HPA50	HP50	HVA50	HPV50	'	'	H100	HR100	HPA100	HP100	'	'	'	'
Order code	B3PR05N0000	B3PR05N1200	B3PR05N0400	B3PR05N1600	B3PR05N0560	B3PR05N1760	'	'	B3PR10N0000	B3PR10N1200	B3PR10N0400	B3PR10N1600	B3PR10N0560	B3PR10N1760	'	'	B3PR20N0000	B3PR20N1200	B3PR20N0400	B3PR20N1600	'	'	'	'

Soft touch - TESA (without gasket)	±2,5 mm	±5 mm	±10 mm
Sensitivity [mV/V/mm]	73,75	29,5	7,375
Calibration spec.	3V _{RMS} @13KHz with load 2KΩ±0,1%	3V _{RMS} @13KHz with load 2KΩ±0,1%	3V _{RMS} @13KHz with load 2KΩ±0,1%
Spring strength [N/mm]	0,016	0,07	0,030
Total Measuring force [N±25%]	0,30	0,30	0,30
Pneumatic Push pressure bar	0,18 to 1,9	0,18 to 1,9	0,18 to 1,9
psi	0,5 to 2	0,5 to 2	0,5 to 2
Vacuum retract pressure bar	7,3 to 29	7,3 to 29	7,3 to 29
psi	1,825 to 29	1,825 to 29	1,825 to 29
Protection grade	IP50 (IP54 PP version)	IP50 (IP54 PP version)	IP50 (IP54 PP version)
Contact type	Nylon (PA66)	Nylon (PA66)	Nylon (PA66)

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R							
Actuation (*)	S		PP		V		PV		S		PP		V		PV		S		PP		V		PV		
Trade name	H25L	HR25L	HPA25L	HP25L	'	'	HPV25L		H50L	HR50L	HPA50L	HP50L	'	'	HPV50L		H100LL	HR100L	HPA100L	HP100L	'	'	HPV100L		
Order code	B33PR05T5000	B33PR05T6200	B33PR05T5400	B33PR05T6600	'	'	B33PR05T5800		B33PR10T5000	B33PR10T6200	B33PR10T5400	B33PR10T6600	'	'	B33PR10T5800		B33PR20T5000	B33PR20T6200	B33PR20T5400	B33PR20T6600	'	'	B33PR20T5800		B33PR20T7000

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Box- es for Data Acquisition



Software



Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



DIGICrown2, digitized version, is the probe line that provides, combined with the DIGICrown network system following advantages:

- **ACCURACY.** High levels of measuring accuracy is guaranteed by the linearization data stored in the memory of the connector. The DIGICrown box is able to read the error map and perform an automatic compensation.
- **PLUG & GAUGE.** The memory in the connector allows any DIGICrown2 probe to be connected to the DIGICrown network system without requiring individual probe programming.
- **FLEXIBILITY.** The modularity of the system allows to create a network where the least possible number of 2-channel input interface boxes are used to meet the number of probes required by the application. In a comprehensive DIGICrown network the DIGICrown2 can be combined with any type of incremental sensor, with analogue output sensors, and various I/O interfaces to provide a complete machine integration.
- **VERSATILITY.** The application can be designed by selecting the most suitable probe for the measuring task (for any measuring range the models are available with spring or pneumatic push, with axial or radial cable output and with or without gasket), and connecting it to the interface box.
- **APPLICATIONS.** Both static and synchronized dynamic measurements can be performed (maximum sampling frequency 4,000 samples/sec).
- **CONNECTIVITY.** The DIGICrown2 probe is designed for the DIGICrown network and GAGEPod systems.

Mechanical specifications		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Measuring range	[mm]	1	2	2	4
Mechanical travel	[mm]	1,5	3	6,6	11
Body Ø	[mm]	8	8	8	8
Cable length	[m]	2	2	2	2
Operating temperature	[°C]	-10 to +65	-10 to +65	-10 to +65	-10 to +65
Storage temperature	[°C]	-20 to +100	-20 to +100	-20 to +100	-20 to +100
Contact tread		M2,5	M2,5	M2,5	M2,5
Accuracy error	[µm]	±(0,2+K*1)	±(0,2+K*1)	±(0,3+17*K1)	-
Repeatability (2.77 σ)	[µm]	≤0,15	≤0,15	≤0,15	≤0,15
Zero thermal drift	[µm/°C]	<0,25	<0,25	<0,25	<0,25

Standard (with gasket)		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Spring strength	[N/mm]	0,17	0,14	0,03	0,023
Measuring force	[N±25%]	1,00	0,70	0,7 to 2	0,7 to 2
Pneumatic Push pressure	bar psi		0,5 to 1 7,5 to 14,5	0,5 to 1 7,5 to 14,5	0,5 to 1 7,5 to 14,5
Vacuum retract pressure	bar psi		-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7
Gasket		Fluoroelast.	Fluoroelastometer	Fluoroelastometer	Fluoroelastometer
Protection grade		IP65	IP65	IP65	IP65
Contact type		carbide	carbide	carbide	carbide

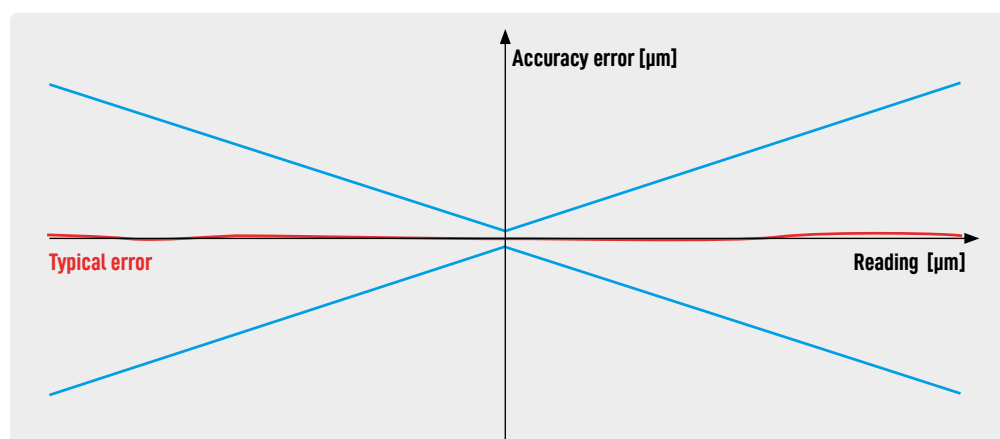
Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		S		PP		V		PV		S		PP		V	
Trade name	D01	R001	D02	R002	PA002	P002	VA002	VD02			D04	R004	PA004	P004	VA004	VD04
Order code	B3P001N0000	B3P001N1200	B3P002N0000	B3P002N1200	B3P002N0400	B3P002N1600	B3P002N0560	B3P002N1760								

Soft touch (without gasket)		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Spring strength	[N/mm]	0,070	0,06	0,016	0,016
Total Measuring force	[N±25%]	0,3	0,30	0,18 to 1,9	0,18 to 1,9
Pneumatic Push pressure	bar psi		0,5 to 2 7,3 to 29	0,5 to 2 7,3 to 29	0,5 to 2 7,3 to 29
Vacuum retract pressure	bar psi		-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7
Protection grade		IP50	IP50 (IP54 PP version)	IP50 (IP54 PP version)	IP50 (IP54 PP version)
Contact type		Nylon (PA66)	Nylon (PA66)	Nylon (PA66)	Nylon (PA66)

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		S		PP		V		PV		S		PP		V	
Trade name	D01L	R001L	D02L	R002L	PA002L	P002L	VA002L	VD02L			D04L	R004L	PA004L	P004L	VA004L	VD04L
Order code	B3P001N5000		B3P002N5000	B3P002N6200	B3P002N5400	B3P002N6600			B3P002N5800	B3P002N7000						

* Movement S= spring - PP= pneumatic push - V= vacuum - PV= push/vacuum - ** Accuracy = +/- MAX(0,5+2*K;K) *** K= Reading (mm)

ACCURACY ERROR



Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



Mechanical specifications		±2,5 mm	±5 mm	±10 mm
Measuring range	[mm]	5	10	20
Mechanical travel	[mm]	6,6	11	21
Body Ø	[mm]	8	8	8
Cable length	[m]	2	2	2
Operating temperature	[°C]	-10 to +65	-10 to +65	-10 to +65
Storage temperature	[°C]	-20 to +100	-20 to +100	-20 to +100
Contact tread		M2,5	M2,5	M2,5
Accuracy error	[µm]	±(0,6+K*2)	±(0,6+K*2)	±(1,2+K*2)
Repeatability (2.77 σ)	[µm]	≤0,15	≤0,15	≤0,15
Zero thermal drift	[µm/°C]	<0.25	<0.25	<0.25

Standard (with gasket)		±2,5 mm				±5 mm				±10 mm			
Spring strength	[N/mm]	0,023	0,03	0,02		0,03	0,02	0,02		0,03	0,016	-	
Measuring force	[N±25%]	0,70	0,7 to 2	0,5		0,70	0,8 to 2	0,4		0,1	0,7 to 2	-	
Pneumatic Push pressure	bar		0,5 to 1				0,5 to 1				0,5 to 1		
	psi		7,5 to 14,5				7,5 to 14,5				7,5 to 14,5		
Vacuum retract pressure	bar		-0,45 to -0,6				-0,45 to -0,6				-		
	psi		-6,5 to -8,7				-6,5 to -8,7				-		
Gasket		Fluoroelastometer				Fluoroelastometer				Fluoroelastometer			
Protection grade		IP65				IP65				IP65			
Contact type		carbide				carbide				carbide			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R				
Actuation (*)	S		PP		V		PV		S		PP		V		PV		S		PP		V		PV	
Trade name	D05	R005	PAD05	PD05	VAD05	VD05	'	'	D10	R010	PAD10	PD10	VAD10	VD10	'	'	D20	R020	PAD20	PD20	'	'	'	'
Order code	33PD05N0000	33PD05N1200	33PD05N0400	33PD05N1600	33PD05N0560	33PD05N1760	'	'	33PD10N0000	33PD10N1200	33PD10N0400	33PD10N1600	33PD10N0560	33PD10N1760	'	'	33PD20N0000	33PD20N1200	33PD20N0400	33PD20N1600	'	'	'	'

Soft touch (without gasket)		±2,5 mm			±5 mm				±10 mm			
Spring strength	[N/mm]	0,016	0,01		0,02	0,07			0,030	0,010		
Total Measuring force	[N±25%]	0,30	0,18 to 1,9	0,14 to 2,3	0,30	0,18 to 1,9	0,14 to 2,3		0,30	0,18 to 1,9	0,14 to 2,3	
Pneumatic Push pressure	bar		0,5 to 2	0,125 to 2		0,5 to 2	0,125 to 2			0,5 to 2	0,125 to 2	
	psi		7,3 to 29	1,825 to 29		7,3 to 29	1,825 to 29			7,3 to 29	1,825 to 29	
Vacuum retract pressure	bar			-0,45 to -0,6			-0,45 to -0,6				-0,45 to -0,6	
	psi			-6,5 to -8,7			-6,5 to -8,7				-6,5 to -8,7	
Protection grade		IP50(IP54 PP version)			IP50(IP54 PP version)				IP50(IP54 PP version)			
Contact type		Nylon (PA66)			Nylon (PA66)				Nylon (PA66)			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R				
Actuation (*)	S		PP		V		PV		S		PP		V		PV		S		PP		V		PV	
Trade name	D05L	R005L	PAD05L	P005L	'	'	PVAD05L	PVD05L	D10L	R010L	PAD10L	P010L	'	'	PVAD10L	PVD10L	D20L	R020L	PAD20L	P020L	'	'	PVAD20L	PVD20L
Order code	33PD05N5000	33PD05N6200	33PD05N5400	33PD05N6600	'	'	33PD05N5800	33PD05N7000	33PD10N5000	33PD10N6200	33PD10N5401	33PD10N6600	'	'	33PD10N5800	33PD10N7000	33PD20N5000	33PD20N6200	33PD20N5400	33PD20N6600	'	'	33PD20N5800	33PD20N7000

REDCROWN2 USB

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Box- es for Data Acquisition



Software



REDCrown2 USB is the version with USB connector, which provides following advantages.

- **ACCURACY.** The high level of accuracy is guaranteed during the production when the compensation of the linearity and sensitivity errors are stored in each probe. Each unique unit is certified and identified by a serial number, to ensure complete traceability.
- **PLUG & GAUGE.** All the conditioning and interface electronics of the transducer are integrated in the USB connector, therefore no additional connecting devices are required to use the product.
- **EASY TO USE.** The measurement can be displayed with Marposs electronics (Nemo, Merlin Line, E9066) or by connecting directly with USB host devices, where REDCrown2 USB is visible as a standard virtual COM.
- **APPLICATIONS.** Both static and dynamic measurements can be performed (maximum sampling frequency 1000 samples/s).
- **SOFTWARE INTERFACES.** For the measurement integration the Marposs software (U-Com, Merlin Plus SW, Easy Acquisition SW and Quick SPC) are available; alternatively a simple list of protocol commands for an easy and quick integration in other programming environments can be used.

Other USB accessories to manage I/O (U2I/O), Encoders (U1-E) and footswitch (U1-FS) are available.

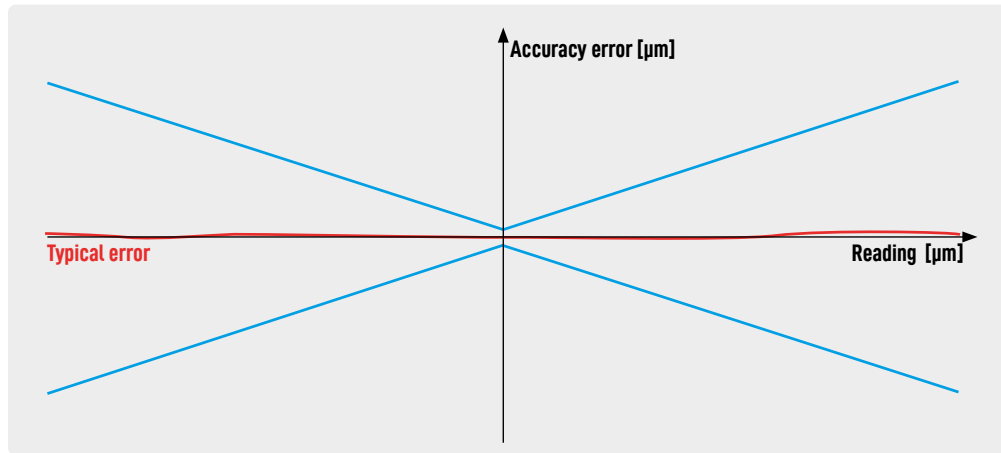
Mechanical specifications		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Measuring range	[mm]	1	2	4	4
Mechanical travel	[mm]	1,5	3	6,6	11
Body Ø	[mm]	8	8	8	8
Cable length	[m]	2	2	2	2
Operating temperature	[°C]	-10 to +65	-10 to +65	-10 to +65	-10 to +65
Storage temperature	[°C]	-20 to +100	-20 to +100	-20 to +100	-20 to +100
Contact tread		M2,5	M2,5	M2,5	M2,5
Accuracy error	[µm]	±(0,2+K*1)	±(0,2+K*1)	±(0,3+17*K1)	-
Repeatability (2.77 σ)	[µm]	≤0,15	≤0,15	≤0,15	≤0,15
Zero thermal drift	[µm/°C]	<0,25	<0,25	<0,25	<0,25

Standard (with gasket)		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Spring strength	[N/mm]	0,17	0,14	0,023	0,023
Measuring force	[N±25%]	1,00	0,70	0,70	0,70
Pneumatic Push pressure	bar psi		0,04 0,8 to 2,2 0,5 to 1 7,5 to 14,5	0,03 0,7 to 2 0,5 to 1 7,5 to 14,5	0,03 0,7 to 2 0,5 to 1 7,5 to 14,5
Vacuum retract pressure	bar psi		-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7
Gasket		Fluoroelast.	Fluoroelastometer	Fluoroelastometer	Fluoroelastometer
Protection grade		IP65	IP65	IP65	IP65
Contact type		carbide	carbide	carbide	carbide
Cable (A=axial - R=radial)		A R	A R A R A R A R	A R A R A R A R	A R A R A R A R
Actuation (*)		S	S PP V PV	S PP V PV	S PP V PV
Trade name		U05 UR05	U10 UR10 UPA10 UP10 UVA10 UV10	U20 UR20 UPA20 UP20 UVA20 UV20	
Order code		B3PR01Y0000 B3PR01Y1200	B3PR02Y0000 B3PR02Y1200 B3PR02Y0400 B3PR02Y1600 B3PR02Y0560 B3PR02Y1760		

Soft touch (without gasket)		±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Spring strength	[N/mm]	0,070	0,06	0,016	0,016
Total Measuring force	[N±25%]	0,3	0,30	0,30	0,30
Pneumatic Push pressure	bar psi		0,045 0,18 to 1,9 0,5 to 2 7,3 to 29	0,01 0,18 to 1,9 0,5 to 2 7,3 to 29	0,010 0,18 to 1,9 0,5 to 2 7,3 to 29
Vacuum retract pressure	bar psi		-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7	-0,45 to -0,6 -6,5 to -8,7
Protection grade		IP50	IP50 (IP54 PP version)	IP50 (IP54 PP version)	IP50 (IP54 PP version)
Contact type		Nylon (PA66)	Nylon (PA66)	Nylon (PA66)	Nylon (PA66)
Cable (A=axial - R=radial)		A R	A R A R A R A R	A R A R A R A R	A R A R A R A R
Actuation (*)		S	S PP V PV	S PP V PV	S PP V PV
Trade name		U05L	U10L UR10L UPA10L UP10L UVA10L UV10L	U20L UR20L UPA20L UP20L UVA20L UV20L	
Order code		B3PR01Y5000	B3PR02Y5000 B3PR02Y6200 B3PR02Y5400 B3PR02Y6600 B3PR02Y5800 B3PR02Y7000		

* Movement S= spring - PP= pneumatic push - V= vacuum - PV= push/vacuum - ** Accuracy = +/- MAX(0,5+2*K;7*K) *** K= Reading (mm)

ACCURACY ERROR



Mechanical specifications		±2,5 mm	±5 mm	±10 mm
Measuring range	[mm]	5	10	20
Mechanical travel	[mm]	6,6	11	21
Body Ø	[mm]	8	8	8
Cable length	[m]	2	2	2
Operating temperature	[°C]	-10 to +65	-10 to +65	-10 to +65
Storage temperature	[°C]	-20 to +100	-20 to +100	-20 to +100
Contact tread		M2,5	M2,5	M2,5
Accuracy error	[µm]	$\pm(0,6+K*2)$	$\pm(0,6+K*2)$	$\pm(1,2+K*2)$
Repeatability (2.77 σ)	[µm]	$\leq 0,15$	$\leq 0,15$	$\leq 0,15$
Zero thermal drift	[µm/°C]	$< 0,25$	$< 0,25$	$< 0,25$

Standard (with gasket)		±2,5 mm				±5 mm				±10 mm			
Spring strength	[N/mm]	0,023	0,03	0,02		0,03	0,02	0,02		0,03	0,016	-	
Measuring force	[N±25%]	0,70	0,7 to 2	0,5		0,70	0,8 to 2	0,4		0,1	0,7 to 2	-	
Pneumatic Push pressure	bar psi		0,5 to 1 7,5 to 14,5				0,5 to 1 7,5 to 14,5				0,5 to 1 7,5 to 14,5		
Vacuum retract pressure	bar psi			-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7				-	
Gasket		Fluoroelastometer				Fluoroelastometer				Fluoroelastometer			
Protection grade		IP65				IP65				IP65			
Contact type		carbide				carbide				carbide			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		PP		V		PV		S		PP		V		PV	
Trade name	U25	UR25	UPA25	UP25	UVA25	UV25			U50	UR50	UPA50	UP50	UVA50	UV50		
Order code	B3PR05Y0000	B3PR05Y1200	B3PR05Y0400	B3PR05Y1600	B3PR05Y0560	B3PR05Y1760			B3PR10Y00000	B3PR10Y1200	B3PR10Y0400	B3PR10Y1600	B3PR10Y0560	B3PR10Y1760		

Soft touch (without gasket)		±2,5 mm				±5 mm				±10 mm			
Spring strength	[N/mm]	0,016	0,01			0,02	0,07			0,030	0,010		
Total Measuring force	[N±25%]	0,30	0,18 to 1,9		0,14 to 2,3	0,30	0,18 to 1,9		0,14 to 2,3	0,30	0,18 to 1,9		0,14 to 2,3
Pneumatic Push pressure	bar psi		0,5 to 2 7,3 to 29		0,125 to 2 1,825 to 29		0,5 to 2 7,3 to 29		0,125 to 2 1,825 to 29		0,5 to 2 7,3 to 29		0,125 to 2 1,825 to 29
Vacuum retract pressure	bar psi				-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7
Protection grade		IP50 (IP54 PP version)				IP50 (IP54 PP version)				IP50 (IP54 PP version)			
Contact type		Nylon (PA66)				Nylon (PA66)				Nylon (PA66)			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		PP		V		PV		S		PP		V		PV	
Trade name	U25L	UR25L	UPA25L	UP25L		UPVA25L	UPV25L		U50L	UR50L	UPA50L	UP50L		UPVA50L	UPV50L	
Order code	B3PR05Y5000	B3PR05Y6200	B3PR05Y5400	B3PR05Y6600		B3PR05Y5800	B3PR05Y7000		B3PR10Y5000	B3PR10Y6200	B3PR10Y5400	B3PR10Y6600		B3PR10Y5800	B3PR10Y7000	

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Box- es for Data Acquisition



Software



DIMENSIONS

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition

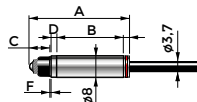


Software

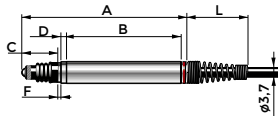


STANDARD

AXIAL SPRING



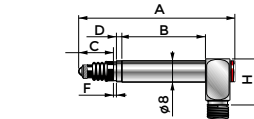
Pencil probe $\pm 0,5\text{mm}$



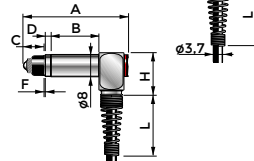
	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	36,20	59,40	83,35	106,35	83,35	114,45	162,45
B	24,35	41,25	61,05	75,50	61,05	86,60	120,65
C	7,10	12,80	17,25	25,30	16,75	22,30	39,45
D	2,00	2,00	2	2,00	2,00	2,00	-
E	2,05	-	-	-	-	-	-
F	0,70	1,30	1	1,50	1,50	1,50	-
G	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-
L	-	22,00	22,00	22,00	22,00	22,00	22,00
M	-	-	-	-	-	-	-

F= Max. pretravel adj. value

RADIAL SPRING



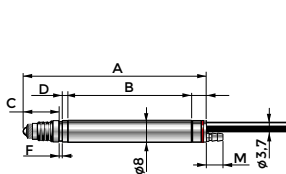
Pencil probe $\pm 0,5\text{mm}$



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	37,50	57,78	84,85	107,85	84,85	115,95	163,95
B	12,20	31,20	54,1	88,58	54,10	79,65	112,50
C	7,10	12,80	17,25	25,30	16,75	22,30	39,45
D	2,00	2,00	2,00	2,00	2,00	2,00	-
E	1,50	-	-	-	-	-	-
F	0,70	1,30	1	1,50	1,50	1,50	-
G	-	-	-	-	-	-	-
H	15,20	15,20	15,20	15,20	15,20	15,20	15,20
L	22,00	22,00	22,00	22,00	22,00	22,00	22,00
M	-	-	-	-	-	-	-

F= Max. pretravel adj. value

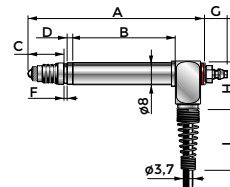
AXIAL PNEUMATIC PUSH



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	-	65,98	86,65	109,65	86,65	117,75	166,75
B	-	44,55	61,05	75,50	61,05	86,60	120,65
C	-	12,80	17,25	25,30	16,75	22,30	39,45
D	-	2,00	2,00	2,00	2,00	2,00	-
E	-	-	-	-	-	-	-
F	-	1,30	1	1,50	1,50	1,50	-
G	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-
M	-	6,00	6,00	6,00	6,00	6,00	6,00

F= Max. pretravel adj. value

RADIAL PNEUMATIC PUSH

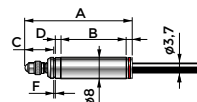


	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	-	71,75	84,85	107,85	84,85	115,95	163,95
B	-	36,10	54,1	68,55	52,60	78,15	112,50
C	-	12,80	17,25	25,30	16,75	22,30	39,45
D	-	2,00	2,00	2,00	2,00	2,00	-
E	-	-	-	-	-	-	-
F	-	1,30	1	1,50	1,50	1,50	-
G	-	7,50	-	7,50	7,50	7,50	7,50
H	-	15,20	15,20	15,20	15,20	15,20	15,20
L	-	22,00	22,00	22,00	22,00	22,00	22,00
M	-	7,5	7,5	7,5	7,5	7,5	7,5

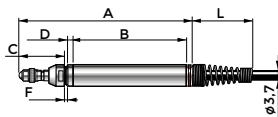
F= Max. pretravel adj. value

SOFT TOUCH

AXIAL SPRING



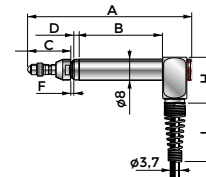
Pencil probe $\pm 0,5\text{mm}$



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	39,90	63,00	87,00	106,35	87,00	114,45	162,45
B	24,35	41,25	61,05	75,50	61,05	86,60	120,65
C	10,65	16,40	20,9	28,80	20,40	22,30	39,45
D	2,00	2,00	2	-	2,00	-	-
E	2,05	-	-	-	-	-	-
F	0,70	1,30	1	-	1,50	-	-
G	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-
L	-	22,00	22,00	22,00	22,00	22,00	22,00
M	-	-	-	-	-	-	-

F= Max. pretravel adj. value

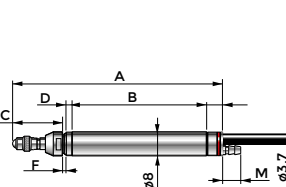
RADIAL SPRING



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	-	61,43	88,50	107,85	88,50	115,95	163,95
B	-	31,20	54,1	68,55	54,10	79,65	112,50
C	-	16,40	20,9	28,80	20,40	16,90	39,45
D	-	2,00	2	-	2,00	-	-
E	-	-	-	-	-	-	-
F	-	1,30	1	-	1,50	-	-
G	-	-	-	-	-	-	-
H	-	15,20	15,20	15,20	15,20	15,20	15,20
L	-	22,00	22,00	22,00	22,00	22,00	22,00
M	-	-	-	-	-	-	-

F= Max. pretravel adj. value

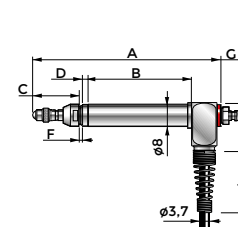
AXIAL PNEUMATIC PUSH



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	-	69,63	90,30	109,65	90,30	117,75	165,75
B	-	44,55	61,05	75,50	61,05	86,60	120,65
C	-	16,40	20,90	28,80	20,40	16,90	39,45
D	-	2,00	2,00	-	2,00	-	-
E	-	-	-	-	-	-	-
F	-	1,30	1	-	1,50	-	-
G	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-
M	-	6,00	6,00	6,00	6,00	6,00	6,00

F= Max. pretravel adj. value

RADIAL PNEUMATIC PUSH



	$\pm 0,5$	± 1	± 2	$\pm 2\text{LR}$	$\pm 2,5$	± 5	± 10
A	-	66,30	88,50	107,85	88,50	115,95	163,95
B	-	36,10	52,6	68,55	52,60	78,15	112,50
C	-	16,40	20,40	28,80	20,40	16,90	39,45
D	-	2,00	2,00	-	2,00	-	-
E	-	-	-	-	-	-	-
F	-	1,30	1	-	1,50	-	-
G	-	7,50	-	7,50	7,50	7,50	7,50
H	-	15,20	15,20	15,20	15,20	15,20	15,20
L	-	22,00	22	22,00	22,00	22,00	22,00
M	-	7,5	7,5	7,5	7,5	7,5	7,5

F= Max. pretravel adj. value

All dimensions are referred to zero position

All drawings and 3D models available on Marpos website



ULTRA-SHORT PROBE The probe model D01S has been designed to offer a total measuring range of 1 mm with a dimension of only 22,4 mm. The high accuracy and the ease of use (same simple fixing as every probe with 8 mm body diameter) allows to extend the use of this model in all applications where compactness is a must.

ULTRA-SOFT TOUCH PROBE The probe model PAD10UL has been designed to grant a measuring force of 0,12 N at 0,2 bar in horizontal position and 0,05 N at 0,2 bar in vertical position with contact upward. This model allows to measure parts with delicate surfaces that cannot be marked by the contact tip, or light components that could be bent by excessive measuring force.

SOFT TOUCH & DUST-PROOF PROBE The PAD10J is a probe model that combines a low measuring force with the use of a front-gasket, to guarantee protection against dust and solid particles. The special design allows to blow air through radial holes located on the jacket, with no deformation of the gasket in operating conditions.

Specifications	±0,5 mm	±5 mm	±5 mm
Cable (A=axial - R=radial)	A	A	A
Actuation (*)	S	PP	PP
Measuring range [mm]	1	10	10
Mechanical travel [mm]	1,5	11	11
Body Ø [mm]	8	8	8
Spring strength [N/mm]	0,17	0,003	0,007
Measuring force [N±25%]	0,60	0,12	0,30
PP pressure bar	-	0,20	0,5 ÷ 2
PP pressure psi	-	2,90	7,3 ÷ 29
Vacuum retract pressure bar	-	-	-
Vacuum retract pressure psi	-	-	-
Cable length [m]	2	2	2
Gasket	Fluoroelastometer	-	Fluoroelastometer
Repeatability (2.77 σ) [μm]	≤0,15	≤0,15	≤0,15
Zero thermal drift [μm/°C]	<0,25	<0,25	<0,25
Operating temperature [°C]	(-10)÷(+65)	(-10)÷(+65)	(-10)÷(+65)
Storage temperature [°C]	(-20)÷(+100)	(-20)÷(+100)	(-20)÷(+100)
Protection grade	IP65	IP54	IP54
Contact type	Carbide	Nylon (PA66)	Nylon (PA66)
Contact thread	M2,5	M2,5	M2,5

DIGITAL HBT MARPOSS	D01S B3PD01S0000	PAD10UL B3PD10N5410	PAD10J B3PD10N0558
Accuracy error [μm]	±(0,2+K*1)	±(0,6+K*2)	±(0,6+K*2)
ANALOG HBT TESA	H05S B3PR01T0100	HPA50UL B3PR10T5410	-
Sensitivity [mV/V/mm]	73,75	29,5	-
Calibration spec.	3,RMS @13KHz with load 2KΩ±0,1%	3,RMS @13KHz with load 2KΩ±0,1%	-
Accuracy error [μm]	±(0,2+K**1)	±(0,2+K**1)	-

* Movement S= spring - PP= pneumatic push. K= Reading [mm]

DIMENSIONS

±0,5 mm	D01S H05S	
±5 mm	PAD10UL HPA50UL	
	PAD10J	

(*) Dimensions at zero position.

For other special models (i.e. Gravity actuation) please contact Marpos

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Box- es for Data Acquisition



Software



STANDARD COMPATIBLE MODELS

Displacement Sensors



TESA (HBT)

Standard	± 0,5 mm		± 1 mm		± 2 mm	
	A	R	A	R	A	R
Spring	B3PR01T0000	B3PR01T1200	B3PR02T0000	B3PR02T0000	B3PR05T0199	B3PR05T1399
Pneum. push	NA	NA	B3PR02T0400	B3PR02T0400	-	-
Vacuum	NA	NA	B3PR02T0560	B3PR02T0560	-	-

Soft touch	± 0,5 mm		± 1 mm		± 2 mm	
	A	R	A	R	A	R
Spring	B3PR01T5000	B3PR01T6200	B3PR02T5000	B3PR02T6200	B3PR05T5199	-
Pneum. push	NA	NA	B3PR02T5400	B3PR02T6600	-	-
Vacuum	NA	NA	B3PR02T5560	B3PR02T6760	-	-

Bore Gauges



MERCER (HBT)

Standard	± 0,5 mm		± 1 mm		± 1,5 mm	
	A	R	A	R	A	R
Spring	B3PR01R0000	B3PR01R1200	B3PR02R0000	B3PR02R1200	B3PR05R0199	-
Pneum. push	NA	NA	B3PR02R0400	B3PR02R1600	-	-
Vacuum	NA	NA	B3PR02T0560	B3PR02T1760	-	-

Forks and Ring Gauges



METEM (HBT)

Standard	± 0,5 mm		± 1 mm		± 2 mm	
	A	R	A	R	A	R
Spring	B3PR01S0000	B3PR01S1200	B3PR02S0000	B3PR02S1200	-	-
Pneum. push	NA	NA	B3PR02S0400	B3PR02S1600	-	-
Vacuum	NA	NA	B3PR02S0560	B3PR02S1760	-	-

Soft touch	± 0,5 mm		± 1 mm		± 2 mm	
	A	R	A	R	A	R
Spring	B3PR01S5000	B3PR01S6200	B3PR02S5000	B3PR02S6200	-	-
Pneum. push	NA	NA	B3PR02S5400	B3PR02S6600	-	-
Vacuum	NA	NA	B3PR02S5560	B3PR02S6760	-	-

Bench Gauges



Indicators and Electronic Display Units



MAHR (HBT)

STANDARD	± 0,5 mm		± 1 mm		± 2 mm	
	A	R	A	R	A	R
Spring	B3PR01P0000	B3PR01P1200	B3PR02P0000	B3PR02P1200	B3PR05P0199	-
Pneum. push	NA	NA	B3PR02P0400	B3PR02P1600	-	-
Vacuum	NA	NA	B3PR02P0560	B3PR02P1760	-	-

Interface Box- es for Data Acquisition



MICROCONTROL (LVDT)

Standard	± 0,5 mm		± 1 mm		± 1,5 mm	
	A	R	A	R	A	R
Spring	B3PR01K0000	B3PR01K1200	B3PR02K0000	B3PR02K1200	-	-
Pneum. push	NA	NA	B3PR02K0400	B3PR02K1600	-	-
Vacuum	NA	NA	B3PR02K0560	B3PR02K1760	-	-

Soft touch	± 0,5 mm		± 1 mm		± 1,5 mm	
	A	R	A	R	A	R
Spring	-	-	-	B3PR02K6200	-	-
Pneum. push	NA	NA	B3PR02K5400	B3PR02K6600	-	-
Vacuum	NA	NA	-	-	-	-

Don't hesitate to contact Marposs for any other compatible model not listed in that pages (i.e. Solartron).



Software

STANDARD COMPATIBLE MODELS

TESA (HBT)

Standard	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	B3PR05T0199	B3PR10T1399	B3PR05T0000	B3PR05T1200	B3PR10T0000	B3PR10T1200	B3PR20T0000	B3PR20T1200
Pneum. push	B3PR10T0559	B3PR10T1759	B3PR05T0400	B3PR05T1600	B3PR10T0400	B3PR10T1600	B3PR20T0400	B3PR20T1600
Vacuum	B3PR10T0599	B3PR10T1799	B3PR05T0560	B3PR05T1760	B3PR10T0560	B3PR10T1760	-	-

Soft touch	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	B3PR10T5199	B3PR10T6399	B3PR05T5000	B3PR05T6200	B3PR10T5000	B3PR10T6200	B3PR20T5000	B3PR20T6200
Pneum. push	B3PR10T5559	B3PR10T6759	B3PR05T5400	B3PR05T6600	B3PR10T5400	B3PR10T6600	B3PR20T5400	B3PR20T6600
Vacuum	B3PR10T5599	B3PR10T6799	B3PR05T5560	B3PR05T6760	B3PR10T5560	B3PR10T6760	B3PR20T5560	B3PR20T6760

MERCER (HBT)

Standard	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	B3PR10T1799	B3PR05R0000	B3PR05R1200	B3PR10R0000	B3PR10R1200	B3PR20R0000	B3PR20R1200
Pneum. push	-	-	B3PR05R0400	B3PR05R1600	B3PR10R0400	B3PR10R1600	B3PR20R0400	B3PR20R1600
Vacuum	B3PR10T0599	-	B3PR05R0560	B3PR05R1760	B3PR10R0560	B3PR10R1760	-	-

METEM (HBT)

Standard	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	-	B3PR05S0000	B3PR05S1200	B3PR10S0000	B3PR10S1200	B3PR20S0000	B3PR20S1200
Pneum. push	-	-	B3PR05S0400	B3PR05S1600	B3PR10S0400	B3PR10S1600	B3PR20S0400	B3PR20S1600
Vacuum	-	-	B3PR05S0560	B3PR05S1760	B3PR10S0560	B3PR10S1760	-	-

Soft touch	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	-	B3PR05S5000	B3PR05S6200	B3PR10S5000	B3PR10S6200	B3PR20S5000	B3PR20S6200
Pneum. push	-	-	B3PR05S5400	B3PR05S6600	B3PR10S5400	B3PR10S6600	B3PR20S5400	B3PR20S6600
Vacuum	-	-	B3PR05S5560	B3PR05S6760	B3PR10S5560	B3PR10S6760	B3PR20S5560	B3PR20S6760

MAHR (HBT)

Standard	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	-	B3PR05P0000	B3PR05P1200	B3PR10P0000	B3PR10P1200	B3PR20P0000	B3PR20P1200
Pneum. push	-	-	B3PR05P0400	B3PR05P1600	B3PR10P0400	B3PR10P1600	B3PR20P0400	B3PR20P1600
Vacuum	-	-	B3PR05P0560	B3PR05P1760	B3PR10P0560	B3PR10P1760	-	-

MICROCONTROL (LVDT)

Standard	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	-	B3PR05K0000	B3PR05K1200	B3PR10K0000	B3PR10K1200	B3PR20K0000	B3PR20K1200
Pneum. push	-	-	B3PR05K0400	B3PR05K1600	B3PR10K0400	B3PR10K1600	B3PR20K0400	B3PR20K1600
Vacuum	-	-	B3PR05K0560	B3PR05K1760	B3PR10K0560	B3PR10K1760	-	-

Soft touch	± 2 mm LongRange		± 2,5 mm		± 5 mm		± 10 mm	
	A	R	A	R	A	R	A	R
Spring	-	-	B3PR05K5000	B3PR05K6200	B3PR10K5000	B3PR10K6200	B3PR20K5000	B3PR20K6200
Pneum. push	-	-	B3PR05K5400	B3PR05K6600	B3PR10K5400	B3PR10K6600	B3PR20K5400	B3PR20K6600
Vacuum	-	-	-	-	B3PR10K5560	-	-	-

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



PNEUMATIC SYSTEM

Displacement Sensors



For applications with pneumatic push and vacuum retraction probe type, the pneumatic system should be sized as shown in the below schemes.

Air supply: air must be dry and unoled, with dew point in the range 2-5 °C and filtered to 5 µm.

Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



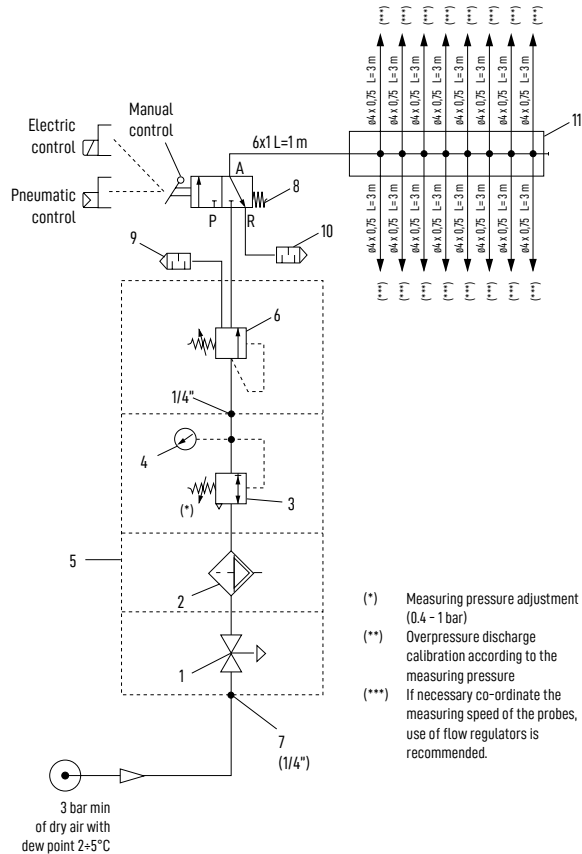
Interface Boxes for Data Acquisition



Software



Pneumatic system for measuring probes

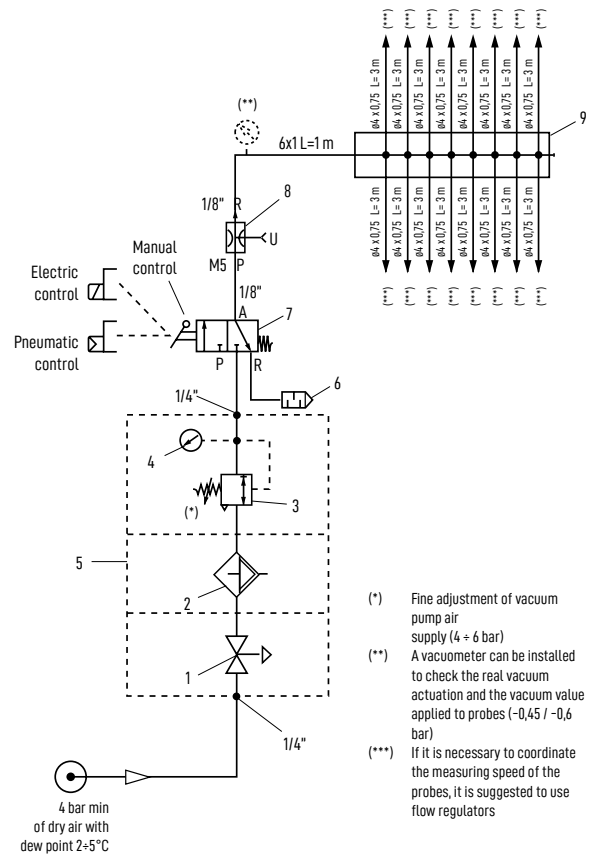


Ref	Q.ty	Description
1	1	ON-OFF valve 1/4"
2	1	Filter 5µ with semi automatic discharge
3	1	Pressure regulator
4	1	Pressure gauge ø 50 1/8" scale 0÷4 bar
5	2	Rapid terminal with bracket 72
6	1	Overpressure discharge valve
7	1	Beam 1/4"
8	1	Monostable lever 3-way 2-position valve
9	1	Silencer 1/2"
10	1	Silencer 1/8"
11	1	Distributor for max 16 probes

Application specs for pneumatic push probes:

- Standard version with gaiter: 0,4÷1 bar
- Version without gaiter: 0,5÷2 bar

Pneumatic layout for vacuum contact retraction



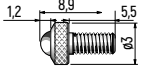
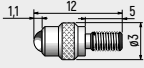
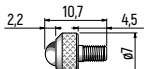
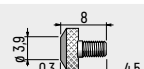
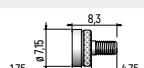
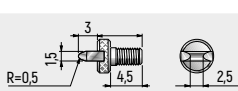
Ref	Q.ty	Description
1	1	ON-OFF valve 1/4"
2	1	Filter 5µ with semi automatic discharge
3	1	Pressure regulator
4	1	Pressure gauge ø 50 1/8" scale 0÷4 bar
5	2	Rapid terminal with bracket 72
6	1	Silencer 1/2"
7	1	Monostable lever 3-way 2-position valve
8	1	Vacuum pump
9	1	Distributor for max 16 probes

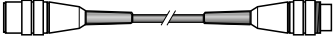
Application specs for probes with spring push and vacuum retraction:

- Standard version with gaiter: -0,45÷ -0,6 bar
- Version without gaiter: 0,5÷2 bar

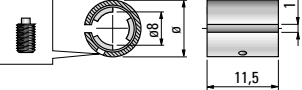
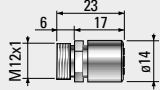
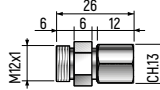
OPTIONAL SPRINGS AND ACCESSORIES

Springs		±0,5 mm	±1 mm	±2 mm	±2LR mm	±2,5 mm	±5 mm	±10 mm
	0,3 (N)	B1024099751	-	-	-	-	-	-
	1 (N)	-	B1042414237	-	-	B1042414435	B1042414537	-
	1,6 (N)	-	-	-	-	B1042414441	B1042414561	B1042414736
	2 (N)	B1024099753	B1042414236	-	-	B1042414436	B1042414536	-
	2,5 (N)	B1024099754	B1042414235	-	-	B1042414437	-	-

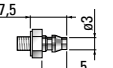
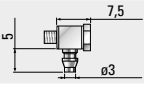
Contacts (thread M2,5)	Description	Order code
	Contact radius R1,5 mm - Widia (standard)	B3394241450
	Contact radius R1,5 mm - Nylon (soft-touch)	B3394156100
	Contact radius R2,5 mm - Widia	B3392409910
	Flat contact - Widia	B3392409912
	Full-Flat contact - Widia	B3394241401
	Cut contact - Widia	B3392409914

Extension cables	Description	Order code
	Cable extension 1 m	B6735932026
	Cable extension 2 m	B6735932015
	Cable extension 5 m	B6735932016
	Cable extension 10 m	B6735932017
	Cable extension 15 m	B6735932037

LVDT / HBT

Clamping	Description	Order code
	Bushing outside $\varnothing$ 10 mm*	B1019826001
	Bushing outside $\varnothing$ 3/8"	B1019826002
	Dowel M3x10	B1024099760
	Dowel 4-40 UNC x .375"	B1024099761
	Tongs bushing $\varnothing$ 8 - Compact version	B2042414100
	Tongs bushing $\varnothing$ 8 - For standard wrench	B2042414200

Wrench	Description	Order code
	Pre-travel regulator wrench	B1346040027

Air adaptors	Description	Order code
	Axial air adaptor	B4430RSMV03
	Radial air adaptor	B4430RSMVAB

* Recommended hole tolerance: G7

Displacement Sensors



Bore Gauges



Forks and Ring Gauges



Bench Gauges



Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



CREATE YOUR OWN PROBE

Scale 1:1

Displacement Sensors



Bore Gauges



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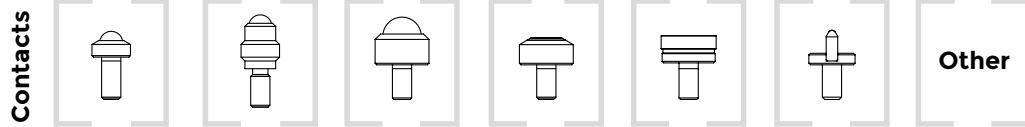
Indicators and Electronic Display Units



Interface Boxes for Data Acquisition



Software



Contact extension (optional)

Gasket

- Yes (standard)
- No (soft touch)

Body

Meas force

Body Ø

- 8 mm
- 3/8"

Transducer type

- LVDT
- HBT
- DIGITAL

Your brand here

Actuation

- Spring
- Pneumatic push
- Vacuum
- Push vacuum

Cable length

- 2 mm
- 3 mm
- 5 mm
- Other

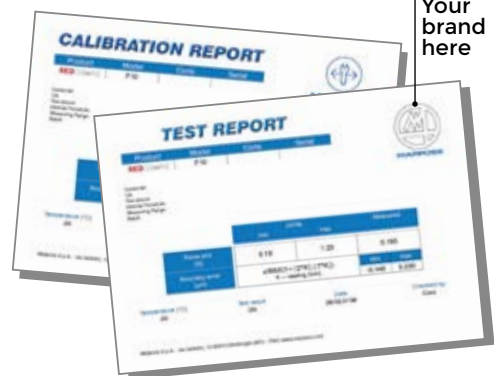
Cable Ø

- 3,8 mm
- 4,7 mm

Air inlet

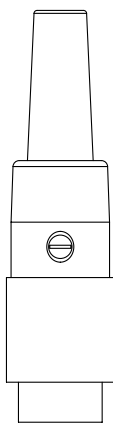
- Axial
- Radial

Cable radial out

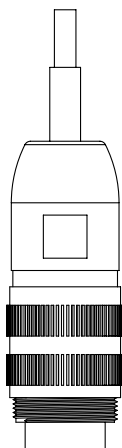


Connectors

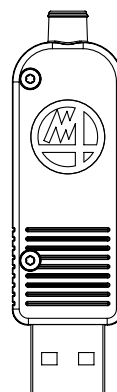
REDCrown2



DIGICrown2



REDCrown2 USB



Unplugged or customer connector



■ 100% made in Marposs

■ Tailor made solution

■ Customizable/private label

■ Test report for each probe

■ Recalibration available (Marposs care)