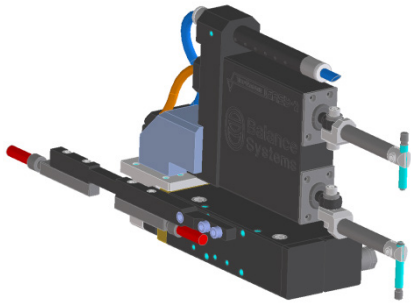


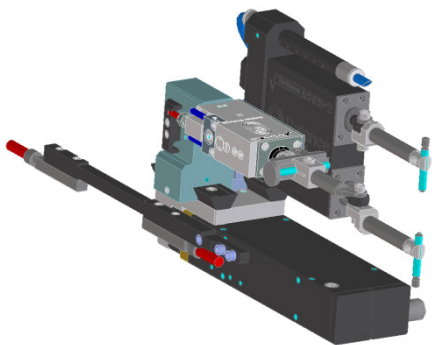
VM9-GA EASY

IN-PROCESS GAUGING SYSTEM
FOR GRINDING MACHINES



EASY-2

Diameter

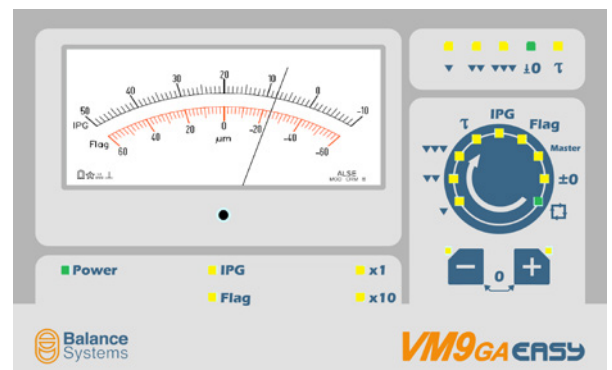


EASY-3

Diameter



Position



VM9GA Easy is an in-process gauging system designed for simple and cost-effective applications. It is available in EASY2 and EASY3 versions. Both versions can measure, in a comparative mode, external diameters on smooth surfaces. Moreover, EASY3 allows the active and passive axial positioning.

Features

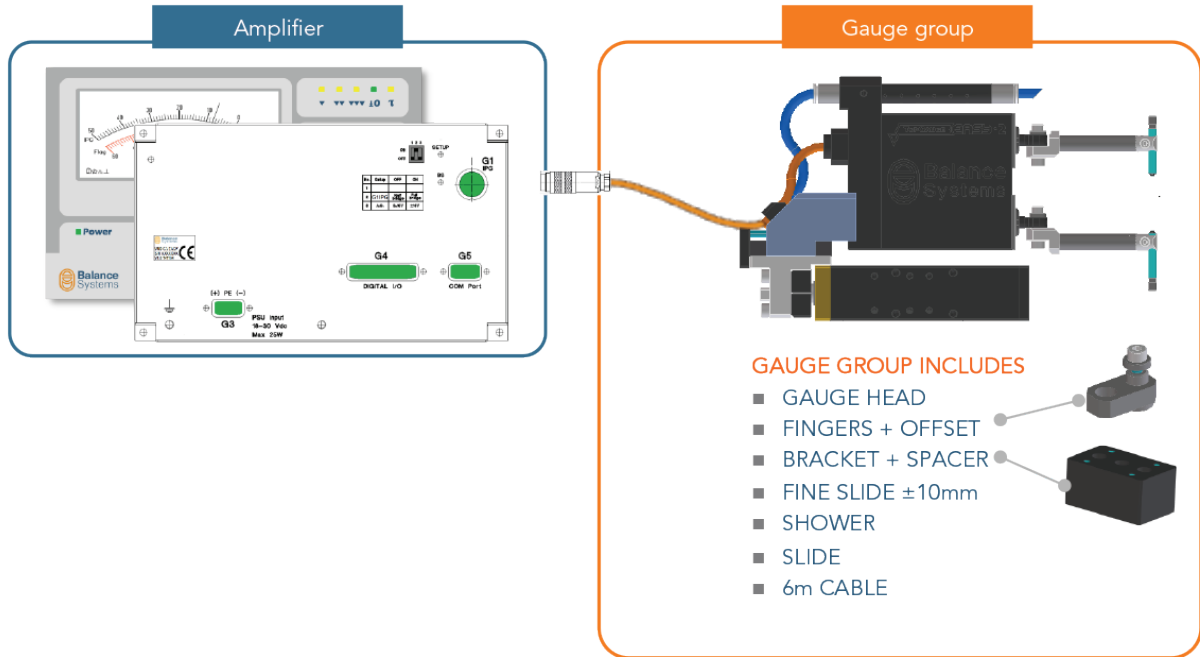
- Compact and reliable, even in rugged environments
- Analog display of the dimension, ergonomic keyboard with a selector and 2 buttons
- 4 commands to control the feed rate (roughing, finishing, dwell, end of cycle)
- Gauging range from 6 to 74 mm with an accuracy and a repeatability lower than 1 μm
- Analog output for passive axial positioning (Flag - EASY 3 only)

Benefits

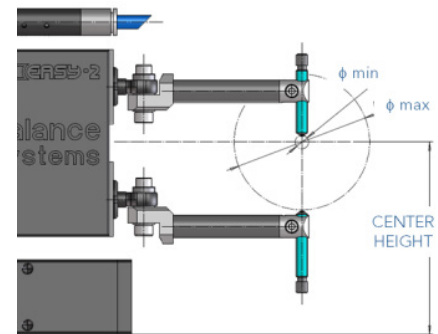
- Makes production stable and consistent with tight tolerances
- Compensates the grinding wheel wear
- Can be installed on any type of grinding machine, both new and retrofitting
- Easy to use
- Does not require surveillance

Configuration of VM9-GA EASY2 gauging system for in-process measuring of smooth diameters

Kit No.	p/n	Description	Amplifier	Gauge Group
1	9GA09E20001000	VM9GA Easy-2 TABLE, Plain OD - 50mm slide	9VM09GAE200000	9TGE2050000000
2	9GA09E20001010	VM9GA Easy-2 RACK, Plain OD - 50mm slide	9VM09GAE200010	9TGE2050000000
3	9GA09E20003000	VM9GA Easy-2 TABLE, Plain OD - 100mm slide	9VM09GAE200000	9TGE2100000000
4	9GA09E20003010	VM9GA Easy-2 RACK, Plain OD - 100mm slide	9VM09GAE200010	9TGE2100000000



Options p/n	Description	Picture
9VM09GAE0SS0500	PNP sensor for 50mm slide	
9VM09GAE0SS1000	PNP sensor for 100mm slide	
9MISCAHYD0A000	Hydraulic fittings for slide	
9MISCAPNE0A000	Pneumatic fittings for slide	
9VM09GAE0PLxx00	8 pole extension cable, xx meters	

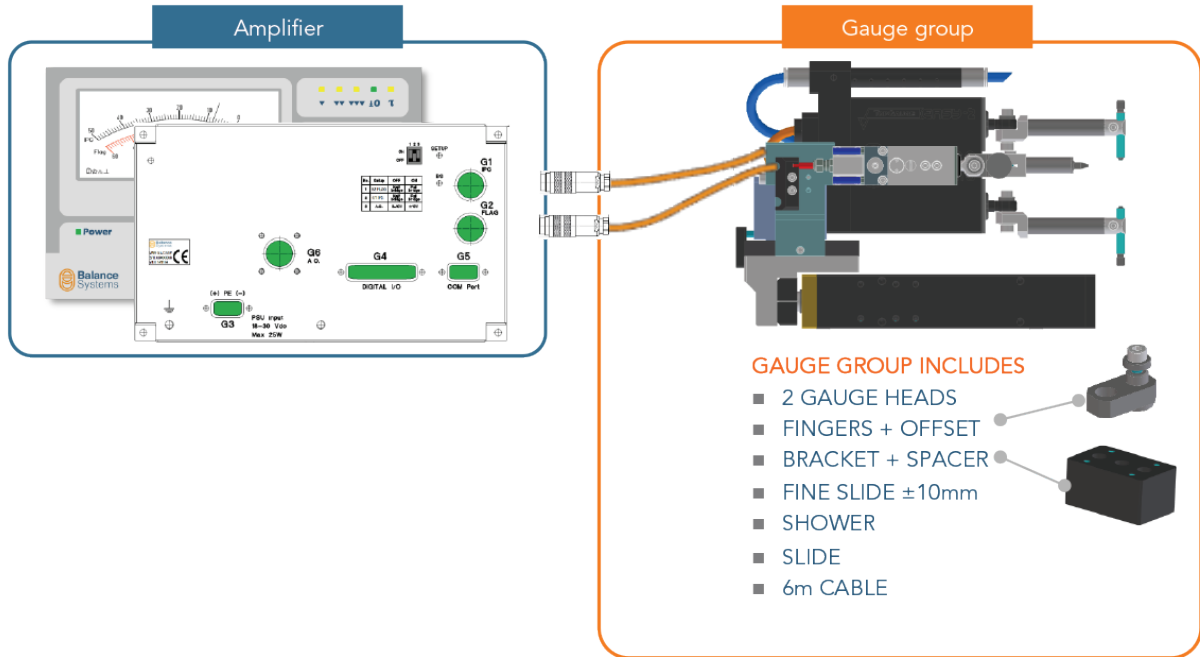


Configuration description	Slide mounting	Center Height [mm]	OD Range [mm]
VM9-GA EASY2 PLAIN DIAMETER SLIDE 50mm		85	H1 6-60 H2 6-74
		110	H3 6-60 H4 6-74
		109	V1 6-60 V2 6-74
		134	V3 6-60 V4 6-74

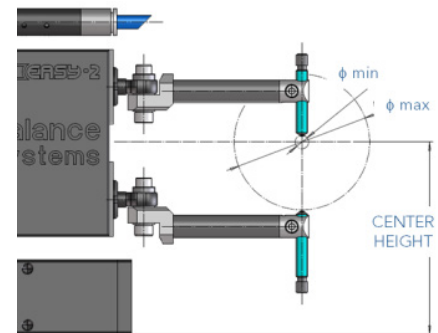
Configuration description	Slide mounting	Center Height [mm]	OD Range [mm]
VM9-GA EASY2 PLAIN DIAMETER SLIDE 100mm		85	H1 6-60 H2 6-74
		110	H3 6-60 H4 6-74
		109	V1 6-60 V2 6-74
		134	V3 6-60 V4 6-74

Configurations of the measuring system VM9-EASY3 for in-process gauging of smooth diameters and axial positioning (active and passive)

Kit No.	p/n	Description	Amplifier	Gauge Group
1	9GA09E30001000	VM9GA Easy-3 TABLE, IPG+FLAG - 100mm slide	9VM09GAE300000	9TGE3100000000
2	9GA09E30001010	VM9GA Easy-2 RACK, IPG+FLAG - 100mm slide	9VM09GAE300010	9TGE3100000000

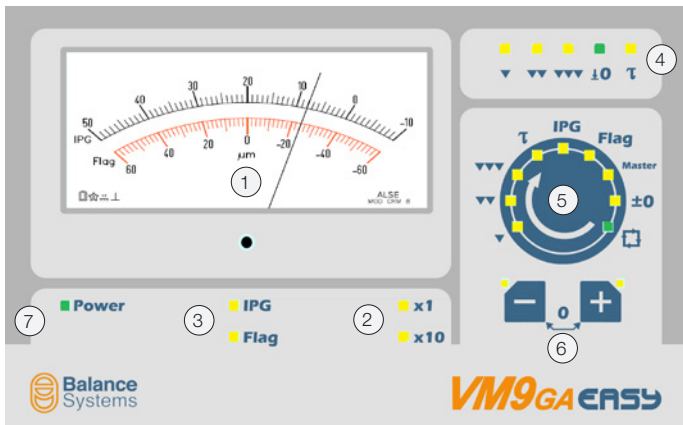


Options p/n	Description	Picture
9VM09GAE0SS1000	PNP sensor for 100mm slide	
9MISCAHYD0A000	Hydraulic fittings for slide	
9MISCAPEN0A000	Pneumatic fittings for slide	
9VM09GAE0PLxx00	8 pole extension cable, xx meters	

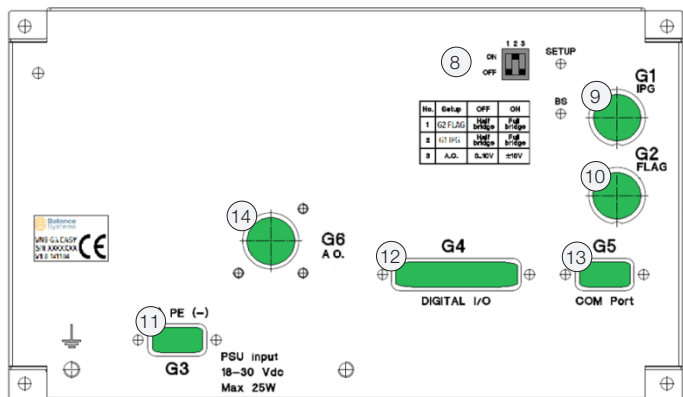


Slide mounting	Center Height [mm]	OD Range [mm]
<p>HORIZONTAL</p>	100	H1 6-50 H2 6-74
	110	H3 6-60 H4 6-74

Configuration of the gauging amplifier VM9-GA EASY



- ① Analog display of dimension with auto-range
- ② Led light of display range
- ③ Led light of part program (IPG = diameter, FLAG = positioner)
- ④ Status signalling of the outputs to control the feed rate
- ⑤ Selector for parameters setup and operating mode
- ⑥ Multi-function keyboard
- ⑦ Led light for a correct power source



- ⑧ Dip switches for hardware and software configuration
- ⑨ [G1] Input of the gauge head No.1
- ⑩ [G2] Input of the gauge head No.2 (EASY 3 only)
- ⑪ [G3] Power source
- ⑫ [G4] Digital I/O
- ⑬ [G5] RS232C serial interface (for service operation)
- ⑭ [G6] Analog interface (EASY3 only)

Technical data	VM9-GA EASY 2	VM9-GA EASY 3
Versions		Rack or table mounting
Power source		18-30 Vdc – max 30 W
Display		Analog with auto-range
Measuring system		Metric
Measuring unit		μm (micro-meters)
Range factor		x1, x10 automatic
Range for the IPG (diameter)		Range x1: -10 .. +50 μm Range x10: -100 .. +500 μm
Range of the Flag (axial position)	n.a.	Range x1: -60 .. +60 μm Range x10: -600 .. +600 μm
Step for offset corrections		1 μm
Program for in-process control of diameter - IPG		4 commands to control the feed rate (roughing, finishing, dwell, end of cycle)
Program for passive axial positioning - Flag	n.a.	Synchronized quota available on analog interface
Kind of measure's transducer		LVDT / HBT
Serial interface	RS232C (reserved for service)	n.a.
Analog output	n.a.	0..10V, -10..+10V, programmable
Interface with PLC/NCU		Digital I/O, 24V opto-isolated sink-source, D-Sub connector with 25 pole
Protection degree (IEC 60529)		IP54 (front side – dashboard panel) – IP20 (rear side)
Keyboard		Multi-function with 3 buttons
Working temperature range		0° .. 55° C
Working relative humidity range		0 .. 98 % without condensation
Dimensions (WxHxP)		108 x 216 x 78 mm
Weight		1,5 Kg



Specifications may be subject to change without notice. © 2016 | 02 | Balance Systems S.r.l.

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