M9VG SCAN

VALVE SEAT INSPECTION GAUGE

MARPOSS

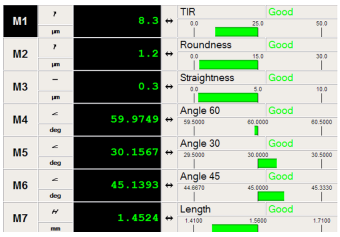
- *Streamline the production process by using profile and form inspection system enclosed in a single product*
- *Boost the manufacturing quality with an extremely precise and robust gauge*
- *Save time and costs through a guided sequence which simplifies the measuring operations*

Marposs introduces the M9VG Scan, a valve seat gauge, which is the latest in hand-held solutions for cylinder head inspection.

M9VG Scan accomplishes the complete check of valve seats, combining perfectly the functions of two measuring systems enclosed in a single product.
First the gauge acquires form parameters through a precise rotation of gauging equipment and then analyzes the seat profile by using a very fine scanning system.

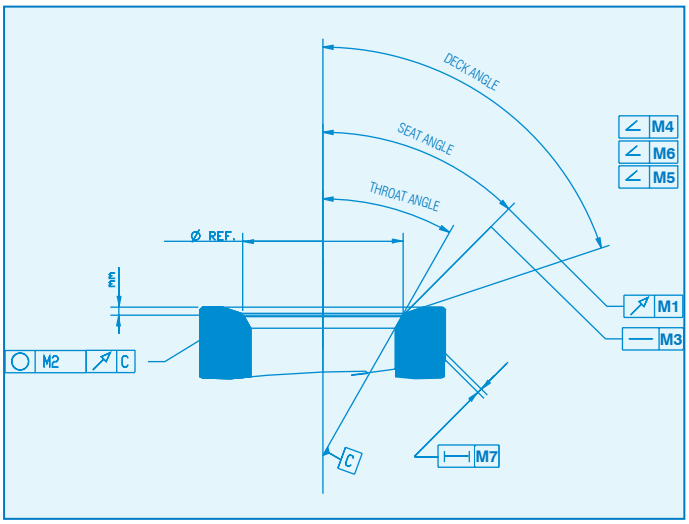
Just one measuring cycle can perform up to 7 high precision measures of:

- Run-out
- Roundness
- Seat Straightness
- Deck Angle
- Throat Angle
- Seat Angle
- Length of the Seal Seat



ROTATION AND SCANNING

According to a pre-defined guided sequence, the gauge is inserted in a valve seat of cylinder head and with the press of a button, it starts the measuring cycle.
The cycle runs and three miniaturized contacts explore fully both the valve guide and all profile of valve seat, including the seal seat and the adjacent angles.
The movements of rotation and scanning are driven by two electrical motors combined to an extremely precise mechanism.
The gauges are supplied for free hand use or moved by using mechanical system to facilitate the inspection operations.

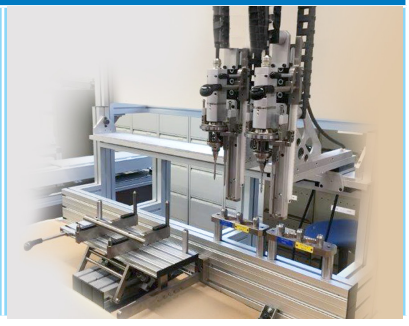


METROLOGICAL PERFORMANCE			
MANUAL PLUG WITH INSERTION GUIDE			**MASTER**
T.I.R. or CONCENTRICITY	Range (4s)	µm	1,5
	Bias		2
ROUNDNESS	Range (4s)	µm	0,8
	Bias		1,5
STRAIGHTNESS	Range (4s)	µm	0,3
	Bias		1,5
DECK ANGLE	Range (4s)	°	0,05
	Bias		0,05
THROAT ANGLE	Range (4s)	°	0,05
	Bias		0,05
SEAT ANGLE	Range (4s)	°	0,02
	Bias		0,02
LENGHT	Range (4s)	µm	6
	Bias		6

NOTE:
- measurements elaborated following ISO 1101:2017 Standard
- Cg and Cgk are obtained by applying the appropriate formula (for example: $Cg=0.2*T/4\sigma$, $Cgk=(0.1*T-|\delta|)/2\sigma$ with δ accuracy error)

TECHNICAL SPECIFICATION			
Gauge Features		**Valve Seat Features (*)**	
Cycle time (s)	<10	Ø Valve guide (mm)	5-6,5
Dimensions (mm) with insertion guide	312 x 70	Ø Valve seat (mm)	20-40
		Seat Length (mm)	1-2
Weight (kg)	1,8	Seat Cone Angle (*)	60-120
Cable Length (m)	5	High and Low Angle (*)	20-40

(*) typical ranges for automotive market

ACCESSORIES	
• Mechanical system for plugs • Master and Plug holder • Adjustable workpiece holder • External push-buttons	

The system can be set easily with Quick SPC software which is installed in a Marposs industrial PC or commercial PC.

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

Marposs has an integrated system to manage the Company quality, the environment and safety, attested by ISO 9001, ISO 14001 and OHSAS 18001 certifications.