

Maturity Requirements Flyer

KOSTAL maturity / Requirements	GW 5 Preliminary assessment	Awarding	MS 7 Evaluation sample	GW 8 Co serial sample	GW 8.5 Cn serial sample	MS 9 Initial sample ^{1.)}	MS 12 SOP KOSTAL
Component	A-sample		B-sample	C-sample			D-sample
Supplier^{2.)}	Supplier of prototype or series supplier	Supplier of prototype or series supplier	Series supplier				
Tool type	Prototype tool	Prototype tool / close-to-production tool	Series tool				
Location		Prototype construction	Tool and system at series location				
Process capability special characteristic	No requirements	- Measurements report (test batch of 5 parts) - Function report - Material certificate	Short-term process capability Pmk 15 ≥ 2.03 to Pmk 50 ≥ 1.67 or 100% testing		Long-term process capability Cpk 125 ≥ 1.33 or 100% testing		Process stability by means of evidence Cpk 125 ≥ 1.33 (at least 20 days)
Process capability drawing features			Machine capability Cmk 50 ≥ 1.67				Process stability by means of compliance with testing during serial production
Packaging type	Alternative packaging	Alternative packaging	Series packaging with packaging approval		Series packaging in agreed quantity		Checking using requalification
Product approval	Feasibility study	Feasibility study	Feasibility study with production approval (drawing approval)		Initial sample inspection report		
Process approval^{3.)}	Supplier self-disclosure or Potential Analysis	Audit of product / process development Test criterion (P2-P4)		Audit of serial production Test criterion (P5-P7)			
Quantity control during run-up	No requirements	- Planned quantities on annual basis - Flexibility agreement		Planned quantities on monthly basis	Confirmation of output at SOP or year peak (run at rate)		
Risk management (e.g. P-FMEA)		No requirements	Review of process risk assessment	Review of process risk assessment	Review of process risk assessment		
Documents		Project plan, project organisational diagram, process flow chart, parts list (in-house/ bought-in parts)	Production layout, supplier list with selection criteria, training plan, testing plan, control plan (pre-series)	Parts list with product and process approval status, final list of suppliers, maintenance and servicing plan, calibration plan, labelling of parts, traceability	Checklist with handover criteria for serial production, control plan (series), training certificates, qualification matrix, audit program, quality control card, production figures (OEE), control chart		
Description of process		Product manufacture, escalation process, change management (internal/external), choice of supplier		Work instructions, test instructions, complaints management (internal), rework, analysis of damaged parts	CIP procedure, audit planning, complaints mgmt. (external)		

Standard products and raw materials are not subject to the Maturity Requirements Flyer.

- 1.) For MS9 maturity, initial sample satisfy approval with conditions (AMBER status). Evidence can be provided up until the KOSTAL approval process (GW11) (GREEN status).
- 2.) For suppliers of prototypes (e.g. tool constructors), only the process capability requirement is needed. Other requirements are not relevant.
- 3.) Audit criteria are defined according to the process elements of VDA 6.3. The criteria derived from automotive requirements are not applied to the industrial sector. The assessment is based on the risk assessment of the process, product and system.

Should deviations arise, actions, responsible persons and deadlines for attaining objectives are agreed.
The Maturity Requirements Flyer is available in download manager at kostal-industrie-elektrik.com.