



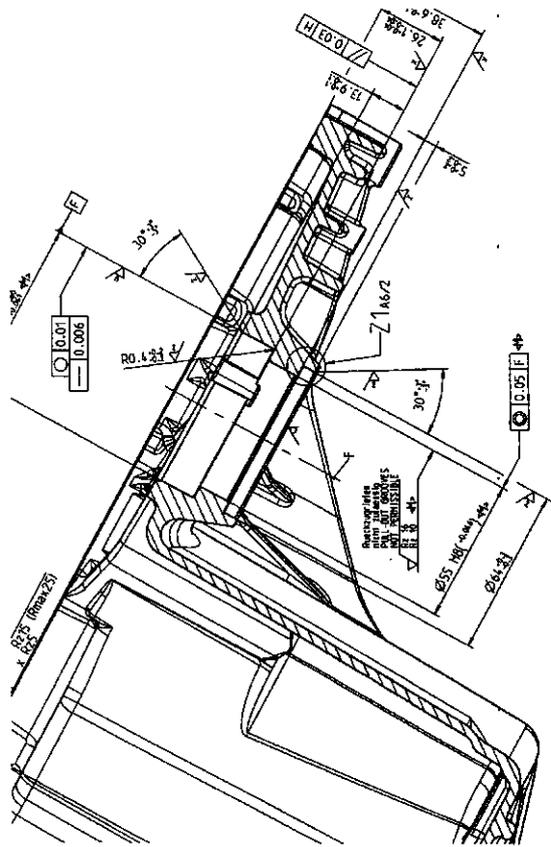
**Precision. Passion. Partnership.**

**<C> Characteristic on DCT250  
Housings**

**Process Control and Traceability  
@ Bari**

## Control strategy @ Bari

- Diameter, Concentricity and Roughness Diam 55 H 8



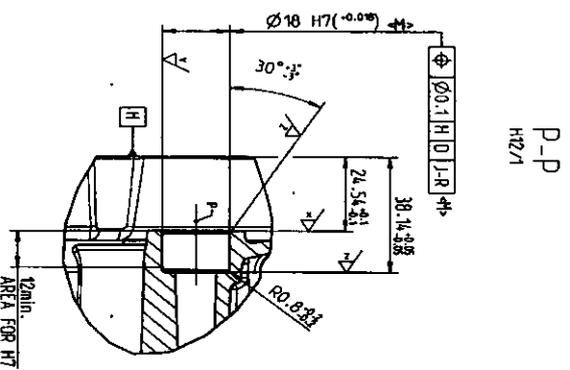
In Production:

- ✓ Demonstration of process capability
- ✓ At the assembly line:
- ✓ Definition of press force window
- ✓ Monitoring 100% press in force

Remark: Current drawings show <M>, change in CCB

# Control strategy @ Bari

- Diameter and Position, Diam 18 H 7



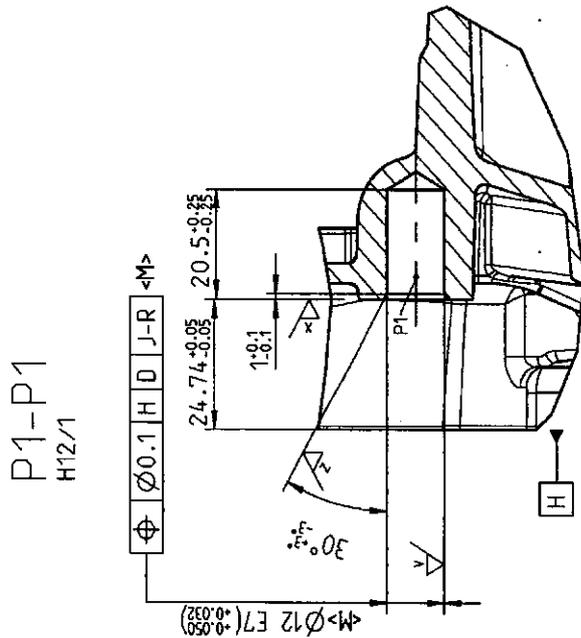
In Production:

- ✓ Demonstration of process capability
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- ✓ Definition of press force window
- ✓ Monitoring 100% press in force

Remark: Current drawings show <M> change in CCB

# Control strategy @ Bari

- Diameter and Position, Diam 12 E7



In Production:

- Demonstration of process capability ✓
- Manual check with go/n-go gauge ✓
- At the assembly line:
- Position ensured by the assy process (assembly possible if position of the two housings is correct) ✓

Remark: Current drawings show  $\langle \text{M} \rangle$ , change in CCB

# Preliminary Process Capability Data (Housing machining)

<C> Characteristic	Housing	Cp	Cpk
Diam. 55 H8	Transmission Clutch	5,21 4,59	4,97 3,85
Concentricity	Transmission Clutch	na na	5,33 2,98
Roughness (Ra)	Transmission Clutch	1,91 2,60	1,57 2,35
Diam. 18 H7	Transmission Clutch	1,53 3,14	1,49 1,39
Position	Transmission Clutch		1,36 2,67
Diam 12 E7	Transmission Clutch	2,07 3,37	1,52 2,81
Position	Transmission Clutch		1,74 1,39

## Traceability

- Traceability of housings to assembled transmission will be ensured by the production batch number, as allowed by GCG\_803301 (new draft version); therefore, there is no Datamatrix code.
  
- Remarks:
  - SPC in housing machining will be maintained and process capability will be always demonstrate
  - Park lock system is checked 100% at EOL
  - The complete control definition was agreed with Central Quality in U-bach
  - In case of housings to be used as spare parts, 100% measurement of <C> characteristics will be applied – a system to identify the parts has to be defined.



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**Thank you for your attention!**