

I - GENERAL INFORMATION

- For description of operation, technical and design characteristics and on-spindle mounting instructions, refer to the «*DELTA catalog*».
- For procedures concerning jaws choice, use and safety, and determination of gripping forces, refer to the «*GAMET Chuck User Manual*».
- Each DELTA chuck is supplied with a geometric control and gripping force test sheet, a grip force curve with standard jaws, as well as the chuck coefficients to determine the gripping force formula.

- IDENTIFICATION OF COMPONENTS

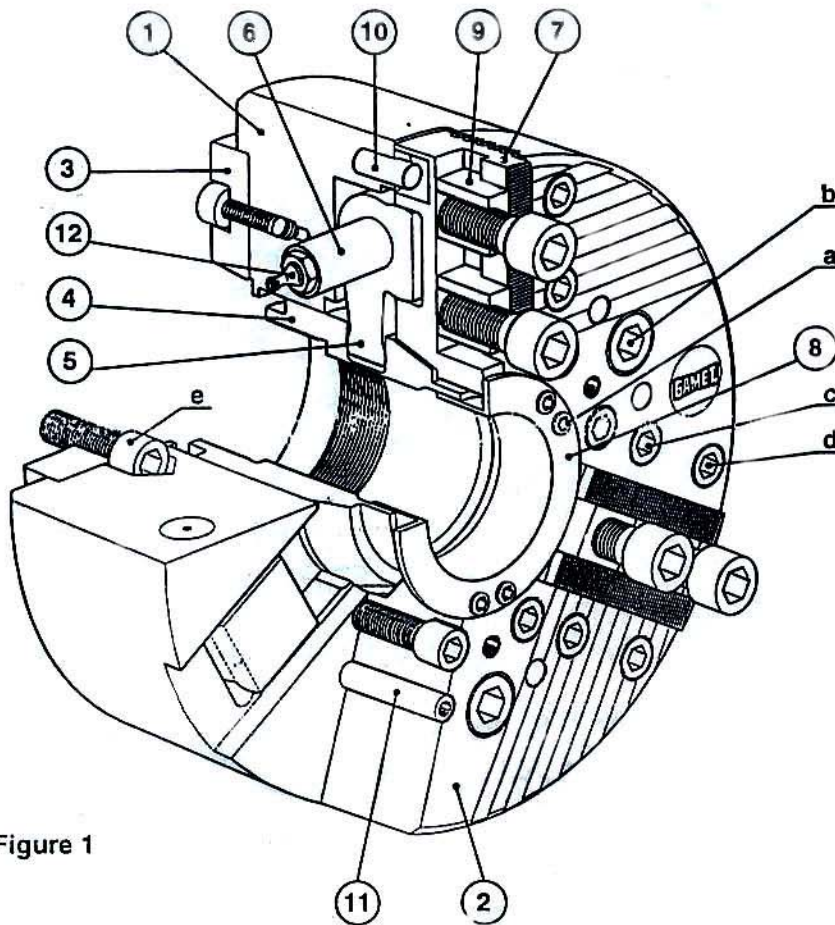


Figure 1

Item	Designation	Item	Designation	Item	Designation
1	Body	5	Lever	9	T-nut
2	Faceplate	6	Pin	10	Safety pin
3	Support ring	7	Jaw holder	11	Taper pin
4	Drive ring	8	Sealing sleeve	12	Grease nipple

- On-Spindle mounting

- Ensure that the spindle nose is clean and check its eccentricity and runout (Figure 2).
- For mounting, refer to the instructions on page 10 of the DELTA catalogue.
- Before final tightening of the retaining bolts (b), check the eccentricity and runout of the chuck (Figure 2), re-center if necessary.
- Check the opening travel of the jaws (inward and outward travel limit stops in the body of the chuck).
- Adjust the travel limit sensors on the cylinder so as to detect the two extreme positions of the chuck, jaws completely open or completely closed. In accordance with machine safety standards, spindle rotation must be prevented in these two cases.
- Adjust the cylinder pressure to the working value.

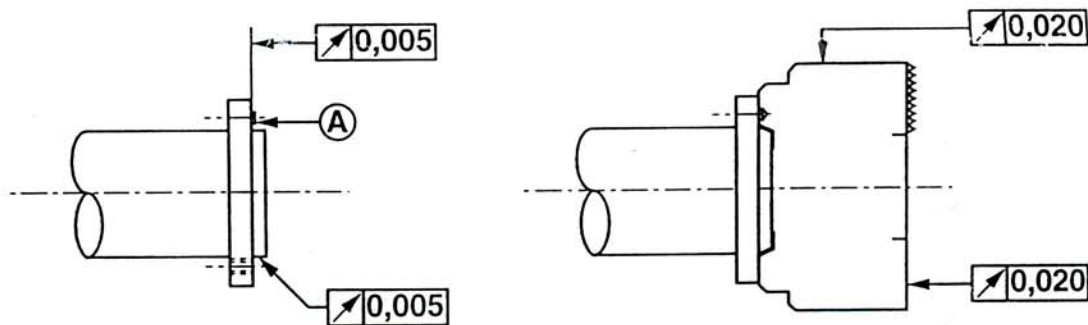


Figure 2

- MAINTENANCE AND LUBRICATION

The DELTA chuck must always be properly lubricated and regularly disassembled for cleaning.

Lubrication:

- A minimum of every 1000 operating cycles and at least once a week with «PTFE» lubricant of the special mounting, antifretting and adhering type compound.
- Recommended lubricants: «KLUBER QNB 50», «KLUBER 46 MR 401», «GLEITMO 805K».

Disassembly and cleaning:

- A minimum of every 100,000 operating cycles (20,000 when machining cast iron!), clean and remove rust from all parts, reassemble with «PTFE» compound.
- As necessary, replace damaged or worn parts (consult «Before reassembly» instructions).

5 - DISASSEMBLY

- Disassemble the sealing ring (8) (bolt (a)).
- Extract the taper pins (11) from the faceplate (use an impact extractor screwed into the tap-pings in the pins).
- Unscrew bolts (c) and (d) and extract the faceplate sections (2), by sliding them radially around the body.
- Extract the jaw holders (7) from the front
- Extract the pins (6) (using a bronze drift pin through the holes opposite the grease nipples)
- Extract the levers (5) and the drive ring (4) from the front.

REASSEMBLY

Before reassembly:

Clean and change any worn part (see parts identified by *)
 Ensure the slide faces of the plates and the jaw holders are smooth.
 Body and faceplates are paired up. If a problem occurs (breakage due to impact for instance), return to GAMET Precision the entire chuck for repair.

On reassembly:

Coat all sliding surfaces with «PTFE» assembly compound.
 Reassemble ring (4), levers (5), pins (6) and jaw holders (7).
 Position the pins so that the two notches enable the faceplate bolts (c) to be inserted (pin blocking system, Figure 3).

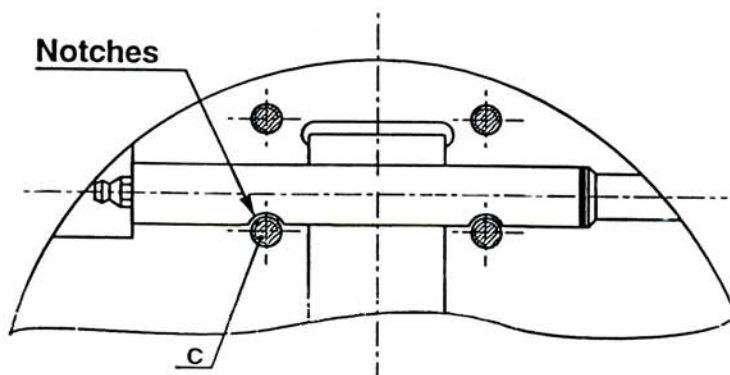


Figure 3

Record the positions of the faceplate sections on the body (distance between pins is different on each section).
 Radially slide the plates over the body until the slide faces engage freely in the jaw holders.
 Install the taper pins which should slip easily into their holes. If they do not, adjust the position of the plates using a rubber mallet.
 Hammer the pins into place with the mallet and fasten bolts (c) and (d), (tighten bolts alternately to the below torque values).

Hex socket head bolt (class 12 - 9)	M 5	M 6	M 8	M 10	M 12	M 16	M 20
Tightening torque (m.daN)	1	1.8	4.3	8.7	15	36.5	71