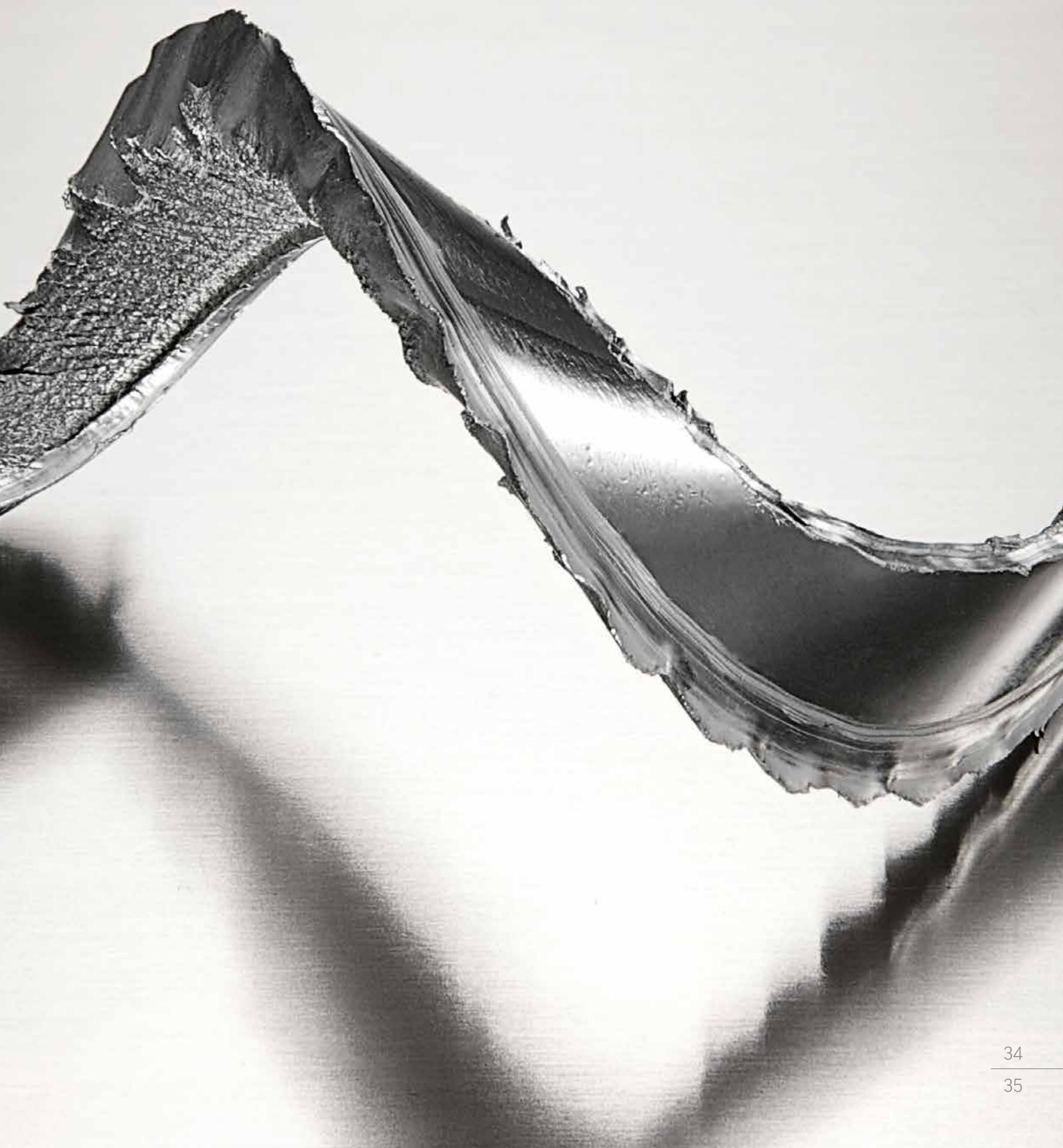


03

# Technical data C 42 GEN2





# 03.1

# Technical data C 42 GEN2

## Working area

|                                          |        |                                            |
|------------------------------------------|--------|--------------------------------------------|
| Traverse                                 | X-axis | 800 mm                                     |
| Traverse                                 | Y-axis | 800 mm                                     |
| Traverse                                 | Z-axis | 550 mm                                     |
| Rapid linear traverse (dynamic)          | X-Y-Z  | 45 - 45 - 40 m/min<br>(60 - 60 - 60 m/min) |
| Linear acceleration (dynamic)            | X-Y-Z  | 6 (10) m/s²                                |
| Linear feed force                        | X-Y-Z  | 8500 N                                     |
| Max. vertical table clearance            |        | 700 mm                                     |
| Max. workpiece diameter                  |        | Ø 800 mm                                   |
| Max. workpiece height                    |        | 560 mm                                     |
| Collision circle (A-axis) in 0° position |        | Ø 990 mm                                   |

## Main spindle drive

|                     |            |                 |   |
|---------------------|------------|-----------------|---|
| Speed               | 15000 rpm  | HSK A 63        | ○ |
| Main power/Torque   | 20% c.d.f. | 31 kW / 194 Nm  |   |
| Speed               | 16000 rpm  | HSK A 63        | ● |
| Main power/Torque   | 20% c.d.f. | 20 kW / 173 Nm  |   |
| Speed               | 20000 rpm  | HSK A 63        | ○ |
| Main power/Torque   | 20% c.d.f. | 42 kW / 148 Nm  |   |
| Speed               | 25000 rpm  | HSK A 63        | ○ |
| Main power/Torque   | 20% c.d.f. | 31 kW / 98 Nm   |   |
| Speed               | 42000 rpm  | HSK E 40        | ○ |
| Main power/Torque   | 20% c.d.f. | 35 kW / 17,5 Nm |   |
| Speed (MT variants) | 15000 rpm  | HSK T 63        | ○ |
| Main power/Torque   | 20% c.d.f. | 31 kW / 194 Nm  |   |
| Speed (MT variants) | 16000 rpm  | HSK T 63        | ● |
| Main power/Torque   | 20% c.d.f. | 20 kW / 173 Nm  |   |
| Speed (MT variants) | 20000 rpm  | HSK T 63        | ○ |
| Main power/Torque   | 20% c.d.f. | 42 kW / 148 Nm  |   |

## Control unit

|            |               |   |
|------------|---------------|---|
| Heidenhain | TNC7          | ● |
| Siemens    | SINUMERIK ONE | ○ |

## Tool changer (pick-up)

|                                                                     |                     |   |                     |   |
|---------------------------------------------------------------------|---------------------|---|---------------------|---|
| Interface                                                           | HSK A/T 63          | ● | HSK E 40            | ○ |
| Magazine pockets                                                    | 42 items            |   | 42 items            |   |
| Chip-to-chip time                                                   | approx. 4.5 s       |   | approx. 4.5 s       |   |
| Max. tool length                                                    | 350 mm              |   | 350 mm              |   |
| Max. tool diameter<br>with corresponding adjacent pocket allocation | Ø 80 mm<br>Ø 125 mm |   | Ø 80 mm<br>Ø 125 mm |   |
| Max. tool weight                                                    | 8 kg                |   | 2.5 kg              |   |
| Max. magazine load                                                  | 168 kg              |   | 105 kg              |   |

● Included in standard delivery  
○ Available upon request

### Extension of tool storage capacity

|                                                                                                     |                              |                     |
|-----------------------------------------------------------------------------------------------------|------------------------------|---------------------|
| Additional tool magazine ZM 30<br>(HSK A 63 / HSK T 63 / HSK E 40)                                  | Additional 30 pockets        | ○                   |
| Additional tool magazine ZM 50<br>(HSK A 63 / HSK T 63 / HSK E 40)                                  | Additional 50 pockets        | ○                   |
| Additional tool magazine ZM 88 k<br>(HSK A 63 / HSK T 63 / HSK E 40)                                | Additional 88 pockets        | ○                   |
| Additional tool magazine single ZM 216<br>(HSK A 63 / HSK T 63)                                     | Additional up to 216 pockets | ○                   |
| Additional tool magazine double ZM 528<br>(HSK A 63 / HSK T 63)                                     | Additional up to 528 pockets | ○                   |
| Interface                                                                                           | HSK A 63 / HSK T 63          | HSK E 40            |
| Max. tool diameter in the additional tool magazine<br>with corresponding adjacent pocket allocation | Ø 80 mm<br>Ø 125 mm          | Ø 80 mm<br>Ø 125 mm |
| Max. tool weight                                                                                    | 8 kg                         | 2.5 kg              |

### Table variants \*

|                           |                |               |                        |
|---------------------------|----------------|---------------|------------------------|
| Swivelling rotary table   | Ø 440          | Ø 440         | Ø 800                  |
| Clamping surface          | Ø 440 mm       | Ø 440 mm      | Ø 800 x 630 mm         |
| Swivelling range          | +/- 130°       | +/- 130°      | +/- 130°               |
| C-axis drive mode         | Worm           | Torque        | Worm                   |
| Swivelling axis A speed   |                |               |                        |
| One-sided drive           | 25 rpm         | -             | 15 rpm                 |
| Tandem drive              | -              | 55 rpm        | -                      |
| Rotary axis C speed       | 30 rpm         | 65 rpm        | 25 rpm                 |
| Max. table load           |                |               |                        |
| One-sided drive           | 450 kg         | -             | 850 kg                 |
| Tandem drive              | -              | 450 kg        | -                      |
| Parallel T grooves        | 5 / 14 H7      | 5 / 14 H7     | 9 / 14 H7              |
| Secondary clamping plates | 920 x 490 mm   | 920 x 490 mm  | -                      |
| Parallel T grooves        | 7 / 14 H7      | 7 / 14 H7     | -                      |
| Swivelling rotary table   | Ø 800          | MT variants ● | Rigid Clamping table ● |
| Clamping surface          | Ø 800 x 630 mm | Ø 750 mm      | 1050 x 805 mm          |
| Swivelling range          | +/- 130°       | +/- 130°      | -                      |
| C-axis drive mode         | Torque         | Torque        | -                      |
| Swivelling axis A speed   |                |               |                        |
| with one-sided drive      | -              | -             | -                      |
| Tandem drive              | 25 rpm         | 25 rpm        | -                      |
| Rotary axis C speed       | 65 rpm         | 800 rpm       | -                      |
| Max. table load           | -              | -             | 2000 kg                |
| One-sided drive           | -              | -             | -                      |
| Tandem drive milling      | 1400 kg        | 1400 kg       | -                      |
| Tandem drive turning      | -              | 700 kg        | -                      |
| Parallel T grooves        | 9 / 14 H7      | -             | 12 / 14 H7             |
| Star-shaped T grooves     | -              | 16 / 14 H7    | -                      |
| Secondary clamping plates | -              | -             | -                      |
| Parallel T grooves        | -              | -             | -                      |

\*All machining tables available on demand

|                                                                     |                                                                                                                                                                                                                                                               |                                                  |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Positioning uncertainty</b>                                      | A in X-Y-Z axes according to ISO 230-2<br>(calculated at a constant ambient temperature of 20 °C +/-1 °C.<br>Our products are subject to the German Export Law and require<br>authorization since the attainable precision may be less/greater<br>than 6 µm.) | ≤ 0.006 mm ●                                     |
| <b>Chip drawer</b>                                                  | Removable chip drawer                                                                                                                                                                                                                                         | ●                                                |
| <b>Chip conveyor</b>                                                | Scraper belt conveyor                                                                                                                                                                                                                                         | ○                                                |
|                                                                     | Hinged belt conveyor                                                                                                                                                                                                                                          | Advanced / Advanced 250 ○                        |
|                                                                     | Chip conveyor ejection height                                                                                                                                                                                                                                 | at least 940 mm                                  |
|                                                                     | Chip cart                                                                                                                                                                                                                                                     | 450 l ○                                          |
| <b>External cooling lubricant supply</b>                            | Capacity of standard tank                                                                                                                                                                                                                                     | 380 l ●                                          |
| <b>Internal cooling lubricant supply<br/>with paper band filter</b> | Capacity of standard tank                                                                                                                                                                                                                                     | 80 l ○                                           |
|                                                                     | Capacity of cooling lubricant tank                                                                                                                                                                                                                            | 860 l at 40 bar / 860 l at 80 bar                |
|                                                                     | Pressure (adjustable up to)                                                                                                                                                                                                                                   | max. 40 bar / 27 l/min<br>max. 80 bar / 22 l/min |
|                                                                     | Mains connection (ICS)                                                                                                                                                                                                                                        | 400 V / 50 Hz   460 V / 60 Hz                    |
|                                                                     | Power consumption (ICS)                                                                                                                                                                                                                                       | up to 12.5 kVA                                   |
|                                                                     | Power consumption (temperature controller)                                                                                                                                                                                                                    | up to 6,0kVA                                     |
| <b>Hydraulics</b>                                                   | Operating pressure                                                                                                                                                                                                                                            | 120 bar ●                                        |
| <b>Central lubrication</b>                                          | Minimum grease lubrication quantity                                                                                                                                                                                                                           | ●                                                |
| <b>Connected loads (machine)</b>                                    | Mains connection                                                                                                                                                                                                                                              | 400 V / 50 Hz   460 V / 60 Hz                    |
|                                                                     | Power consumption C 42                                                                                                                                                                                                                                        | up to 57 kVA                                     |
|                                                                     | Power consumption C 42 MT                                                                                                                                                                                                                                     | up to 61 kVA                                     |
|                                                                     | Compressed air                                                                                                                                                                                                                                                | 6 bar                                            |
| <b>Weight</b>                                                       | (standard version without optional extras, attachments,<br>workpieces and cooling lubricant)                                                                                                                                                                  | Approx. 13.5 t                                   |

- Included in standard delivery
- Available upon request

