



**CySpeed**

Series P12

2.2.14

Milling spindle CS-21-200

| Drive                          |                                       |             |           |
|--------------------------------|---------------------------------------|-------------|-----------|
| Power:                         | 21 kW (S1)                            | 27 kW (S6)  |           |
| Nominal speed:                 | 2.000 r.p.m.                          |             |           |
| Torque max.:                   | 100 Nm (S1)                           | 129 Nm (S6) |           |
| Speed max.:                    | 15.000 r.p.m.                         |             |           |
| Motor type:                    | asynchronous/8 poles                  |             |           |
| Power connection:              | 350 V/ 71 A (S1)                      |             |           |
| Tool system:                   | HSK-A63                               |             |           |
| Clamping system:               | hydraulically operated                |             |           |
| Clamping force:                | 19 kN/50 bar                          |             |           |
| Clamping monitoring:           | CyCon K 11, Analog sensor             |             |           |
| Release pressure:              | 50 - 100 bar                          |             |           |
| Tool cleaning:                 | Air, 3-4 bar                          |             |           |
| Spindle bearing:               | << >> Ø 70 Hybrid                     |             |           |
| Bearing rigidity:              | axial/radial 503 N/µm                 |             |           |
| Bearing lubrication:           | Grease                                |             |           |
| Sealing:                       | with sealing air and labyrinth        |             |           |
| Encoder signal:                | 1 Vpp/256 teeth                       |             |           |
| Spindle cooling:               | liquid cooling (Antifrogen N/Tyfocon) |             |           |
| Power dissipation:             | 2,5 kW                                |             |           |
| Cooling volume flow approx.:   | 8 l/min (2 bar)                       |             |           |
| Metal removal rate:            | Milling                               | Drilling    | Threading |
| Steel                          | 400 cm <sup>3</sup> /min              | Ø 30        | M20       |
| Tool cooling                   |                                       |             |           |
| External coolant supply (ECS): | 4 Spray nozzles                       |             |           |
| Internal coolant supply (ICS): | optional (through spindle shaft)      |             |           |
| max. Pressure/Filter mesh:     | 45 bar (25 l/min)/40 µm               |             |           |
| MQL external:                  | optional                              |             |           |
| MQL internal:                  | optional                              |             |           |

