C200 tandem

Double-spindle automatic production lathe for highly productive bar machining
2 x 2 spindles for double productivity

INDEX C series production turning machines have always been among the most productive and reliable automatic turning machines in the world.

The newly developed INDEX C200 tandem double-spindle automatic production lathe builds on the proven basic structure of the C series. The double-spindle concept makes it possible to unlock further potential in terms of economic efficiency.

The unique tandem concept doubles the output of parts without increasing the amount of space, energy or personnel required.

The machine concept
• Clearly structured and ergonomically designed concept for the work area
• 2 x 2 powerful motor spindles of identical design
• Spindle clearance: 2 x 52 mm
• High part diversity thanks to 3 turrets and 5 x 2 tools
• Full rear-end machining by tandem counter spindles
• Machining with bottom turret possible on main and counter spindles
• Very good vibration damping as a result of INDEX SingleSlide
• Integrated removal device
• High productivity per unit area because of extremely compact design
• Siemens Sinumerik 840D solution line control
• Specifically matched bar loader INDEX MBL52 tandem
Excellent productivity – impressive flexibility

The added value in the machine design typical of INDEX manifests itself in many details of the INDEX C200 tandem. Three turrets and a clearly structured work area ramp up productivity. Other details maximize flexibility and the part variety that can be attained in combination with short setup times. The vertical design of the machine bed provides for optimum chip flow and ready access.

Powerful tandem spindles
2 x 2 powerful motor spindles provide for particularly effective cutting. The main and counter spindles have an identical design and are fluid-cooled. The rapid traverse rate of the counter spindle is 50 m/min.

Three turrets with up to 30 tools
The tool pool, including max. 5 x 2 tools for VDI 30 twin-tool mounting with the patented INDEX W-serration, ensures short setup times, even for small batch sizes. The extremely high dynamic response and the quick turret indexing lower the chip-to-chip times.

Two Y axes for optimum distribution of work
2 Y axes on the tandem main spindle or 1 each on the main and counter spindles are possible. This allows an optimum division of operations and a reduction to cycle times.

Integrated handling system for part removal
The integrated gantry-type removal unit allows quick workpiece removal without damage to the workpiece. In addition, the bar remnants can be removed separately from the spindles.

The benefits

Higher workpiece quality thanks to better guides
INDEX SingleSlide is an innovative slideway composed of guide bars with wear and friction-reduced coating and hardened and surface-treated guide plates.

Longer tool life on account of higher damping
The INDEX SingleSlide concept significantly enhances the damping properties compared with conventional systems. Superior properties result in further benefits, such as tool life increased by up to 30% and higher surface quality.

Higher rapid traverse rates and accelerations brought about by increased dynamic response
The turret slides travel on flat, highly innovative slideways in X and Z directions. The two directions of movement are in one traversing plane. The low weight of the one-piece cross slide means that rapid traverse rates of up to 50 m/min and acceleration up to 1g can be reached.

Increased cutting performance because of high rigidity
In conventional linear guideways, it is customary for one drive to support the other one. With the INDEX SingleSlide, a different approach is taken. Two degrees of freedom in one plane of movement produce high rigidity, ensuring maximum cutting performance with excellent damping properties.
The cooling concept: efficient use of energy

The INDEX C200 tandem impresses with its sophisticated cooling concept. Heat that is generated in the spindles, hydraulic unit, and control cabinet is dissipated from the machine through a central fluid circuit. The energy is bound in one single medium and not dissipated to the environment of the machine.

The dissipation: locally or centrally

The innovation from INDEX: You decide which cooling concept you want to use.

The design of the INDEX C200 tandem with an integrated water interface allows two solutions for heat dissipation: connecting to a local cooling unit or alternatively to a central system. This means that you can adapt the machine for ideal performance in your production environment. No matter which variant you choose, optimum cooling will be achieved at all times.

Better working environment: cooling takes place away from production

The noise and heat emissions are reduced to a minimum and your staff are not unnecessarily burdened.

Safe investment

Whether centralized or decentralized, the cooling concept of the INDEX C200 tandem is always economic. You decide which variant matches your production environment best. The centralized system solution offers the advantage that multiple machines can be connected.

Higher reliability

The innovative design allows elimination of components commonly used with conventional cooling principles, such as fans and temperature sensors. This enhances availability and increases profitability. The space required is also reduced.

High manufacturing precision

The spindles, hydraulic system and control cabinet are cooled using a continuous cooling concept. Heat energy is effectively dissipated, and temperature stability is improved, thus supporting a precise and reliable machining process.
Focus on production and control – Industry 4.0 included.
The iXpanel operating concept provides access to networked production. With iXpanel, your operator always has all relevant information for efficient production right at the machine. iXpanel is already included as standard and can be individually extended. You can use iXpanel just as you require it for your business organization – that’s Industry 4.0 tailored to suit your needs.

Future-proof.
iXpanel integrates the latest control generation SIEMENS S840D sl. Use iXpanel intuitively through an 18.5” touch monitor.

Productive.
Machine performance is maximized through comprehensive technology cycles and programming screens, e.g. for optimum turning, milling and drilling, especially when using several tools simultaneously.

Intelligent.
The machine always starts with the control home screen. Other functions can always be displayed on a second screen, and the operator can already enjoy direct, activity-related assistance in the standard version, such as workpiece drawings, setup lists, programming tools, documentation, etc., right at the machine.

Virtual & open.
With the optional VPC box (industrial PC), iXpanel opens up the world of Virtual Machine with 3 operating modes - CrashStop - RealTime - Independent simulation (VM on board) directly in the control system. Thanks to the VPC box, the machine can be integrated into your IT structure without any restrictions.

index-werke.de/ixpanel
## Technical data INDEX C200 tandem

### Working range
- Distance between main spindles and counter spindles: **722 mm**

### Main spindles
- **Spindle clearance**: **2 x 52 mm**
- **Speed max.**: **rpm 2 x 4,500**
- **Power at 100%/40% duty cycle**: **kW 2 x 20/25**
- **Torque at 100%/40% duty cycle**: **Nm 2 x 92/115**
- **Chuck diameter**: **mm 2 x 140**
- **Spindle nose ISO 702/1**: **Size: KXK**
- **C-axis resolution**: **Deg. 0.001**

### Counter spindle
- **Spindle clearance**: **mm 2 x 52**
- **Speed max.**: **rpm 2 x 4,500**
- **Power at 100%/40% duty cycle**: **kW 2 x 20/25**
- **Torque at 100%/40% duty cycle**: **Nm 2 x 92/115**
- **Chuck diameter**: **mm 2 x 140**
- **Spindle nose ISO 702/1**: **Size: KXK**
- **C-axis resolution**: **Deg. 0.001**

### Counter spindle slide
- **Slide travel**: **mm 790**
- **Rapid traverse rate**: **m/min 50**

### Tool turret
- **Number of stations**: 5
- **Tooling system (ISO 6888)**: **10 x 55 (TDE 30 mounting for twin tool holder only)**
- **Tool drive speed**: **rpm 8,000**
- **Power at 25% duty cycle**: **kW 10**
- **Torque at 25% duty cycle**: **Nm 10**

### Tool carrier 1 (top left)
- **Slide travel**: **mm 110**
- **Rapid traverse**: **m/min 30**
- **Z**: 50 15
- **Y**:

### Tool carrier 2 (bottom)
- **Slide travel**: **mm 110**
- **Rapid traverse**: **m/min 30**
- **Z**: 50 15
- **Y**:

### Tool carrier 3 (top right)
- **Slide travel**: **mm 180**
- **Rapid traverse**: **m/min 30**

### Gantry-type removal unit
- **Workpiece weight**: **kg 2 x 2**
- **General data**
  - **Length x width x height**: **mm 6,910 x 2,092 x 2,490**
  - **Weight**: **kg 9,000**
  - **Connecting power**: **72 kW, 84 kVA, 122 A, 400 V, 50/60 Hz**
  - **Control**: Siemens Sinumerik 840D sl

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## Technical data of bar loader INDEX MBL52 tandem

### Bar stock
- **Round**: Ø **mm 10 - 52**
- **Vertical**: **AF** **mm 10 - 45**
- **Square**: **AF** **mm 9 - 36**

### Bar support
- **Capacity**: **max. 11 bars ø 50 mm**
- **max. 6 bars ø > 50 mm**
- **Bar length**: **mm 1,600**

### Feeding speed
- **Rapid traverse / retraction**: **m/min 30**
- **Working gear, continuously adjustable / feed rate**: **m/min 1 - 10**
- **Feed force**: **continuously adjustable**: **N 1,500**

### Drive
- **Servomotor**:

### Mass
- **Bar length 3,200 mm**: **2,210 kg**

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INDEX C200 tandem
INDEX bar loader MBL52 tandem