

C200 tandem

*Double-spindle automatic production lathe
for highly productive bar machining*

INDEX



better.parts.faster.

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.

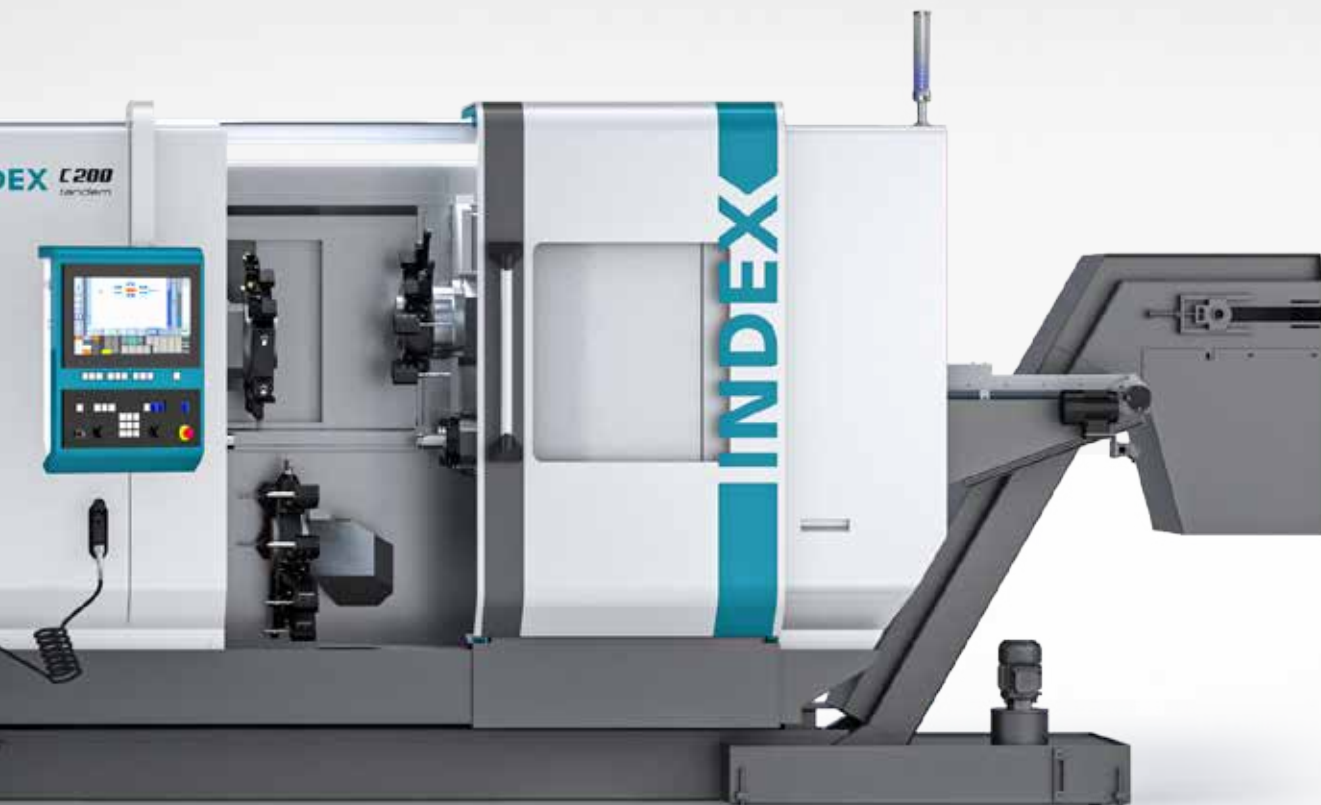
The double-spindle concept makes it possible to unlock further potential in terms of economic efficiency.

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



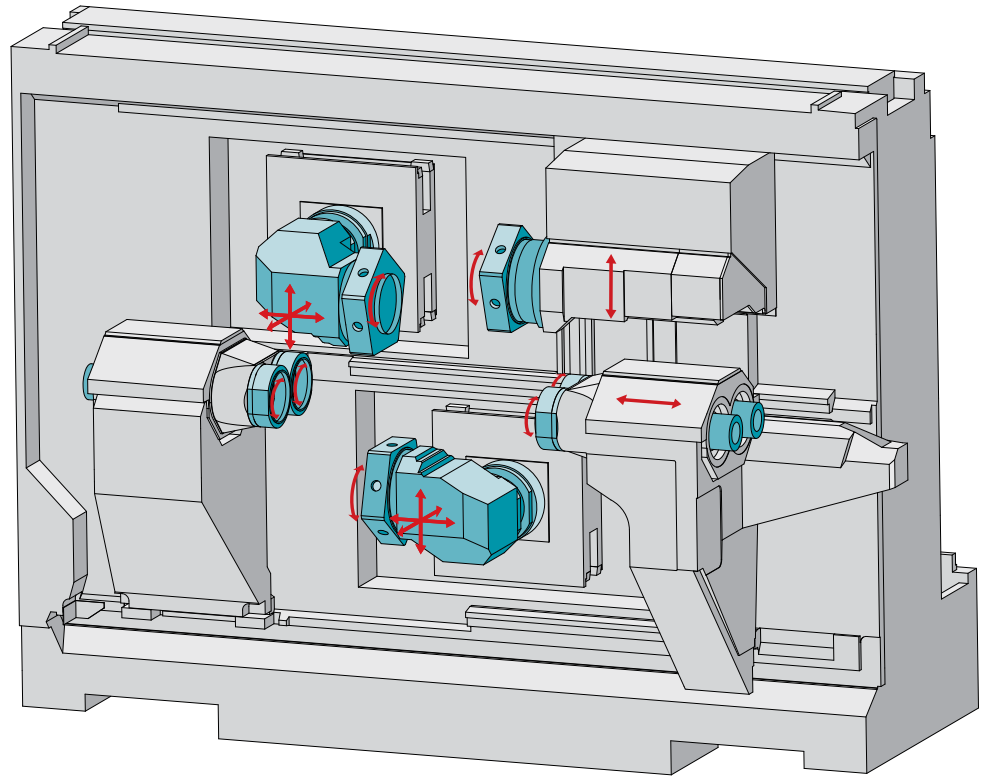
The machine concept

- 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 2 x 5 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. 2 x 15 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.

- Main spindles and counter spindles: each 2 x \varnothing 52 mm; 2 x 4,500 rpm

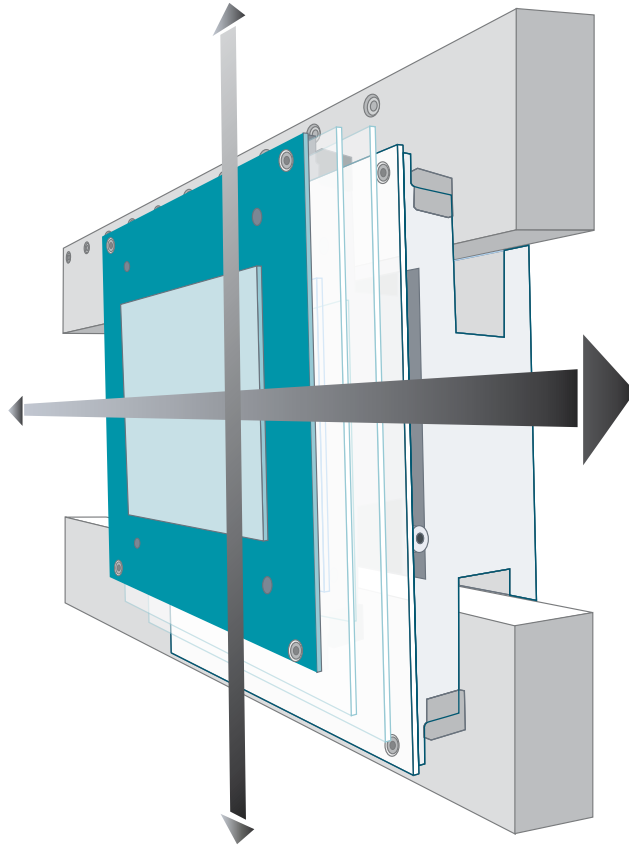
- Only the tools currently in use are driven – at full cutting performance
- 8,000 rpm, 10 kW

- Simultaneous machining on both *tandem* spindles
- 100 mm Y-axis travel
- Stable quill guide

- Workpiece/remnant removal possible from main and counter spindles
- Workpiece weight max.: 2 x 2 kg

INDEX SingleSlide: Better and clearly faster machining

The market demands production turning machines that shorten cycle times, increase tool life and work more economically. The INDEX C200 *tandem* meets these requirements to a high degree. By virtue of the INDEX SingleSlide, a slideway with two degrees of freedom in one plane, the INDEX solution has many advantages compared with conventional machines.



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

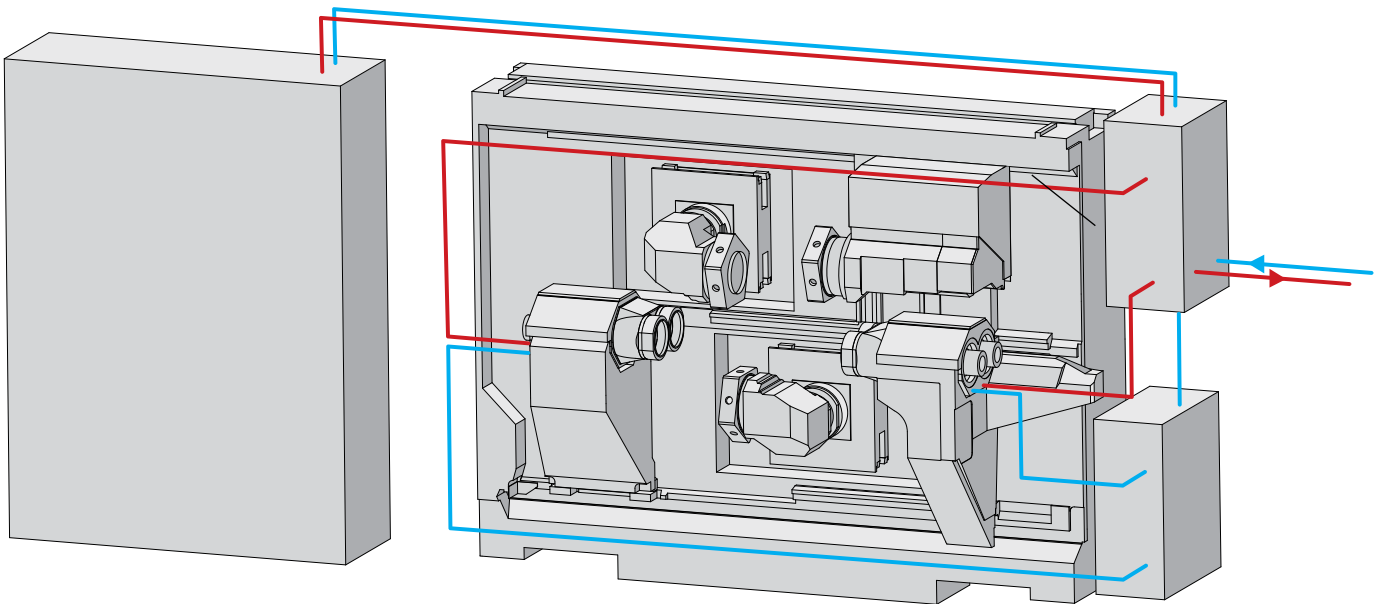
one single medium and not dissipated to the environment of the machine.

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 per-

formance in your production environment. No matter which variant you choose, optimum cooling will be achieved at all times.



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.

Better working environment: cooling takes place away from production

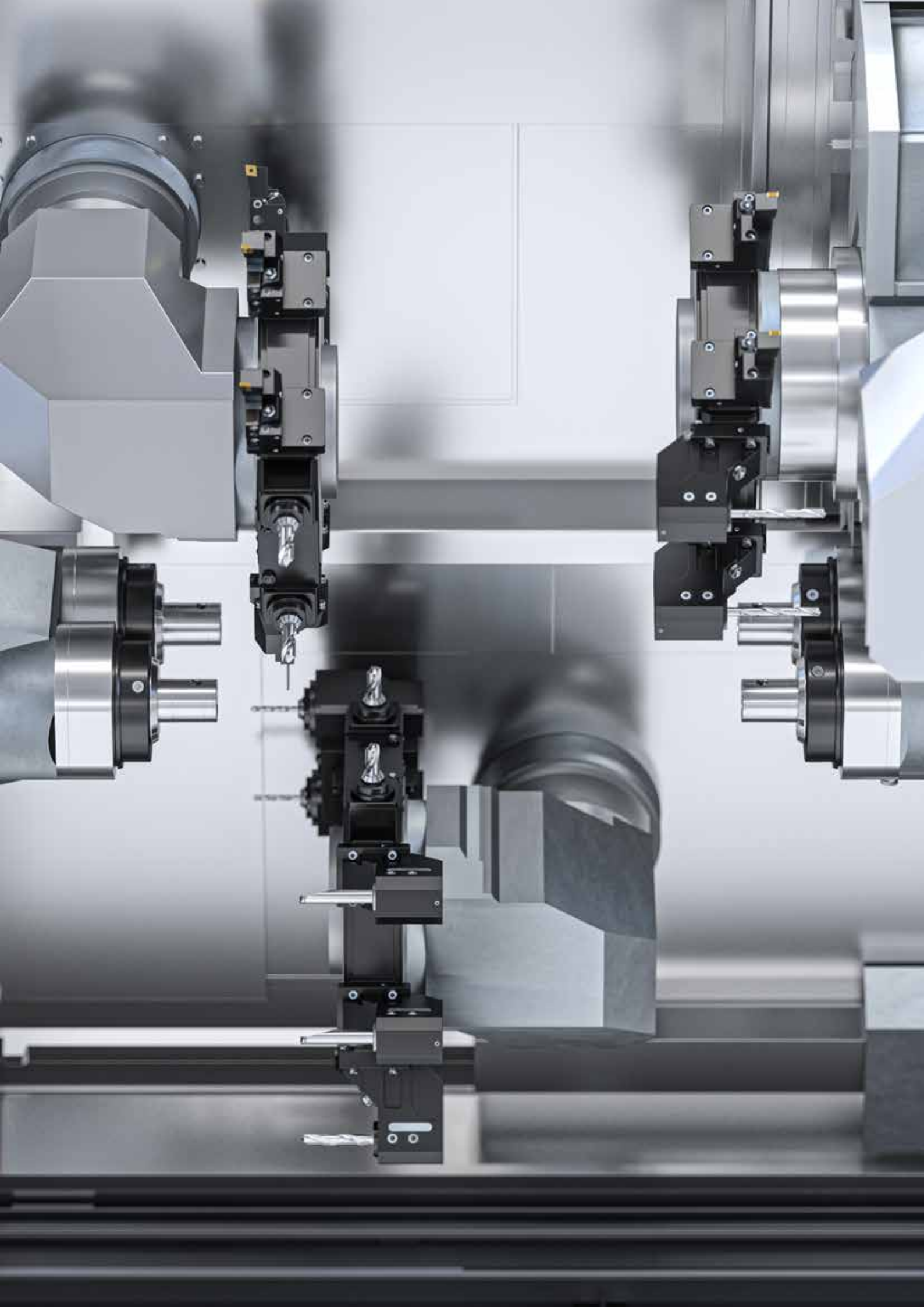
The noise and heat emissions are reduced to a minimum and your staff are not unnecessarily burdened.

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.



The cockpit for easy integration of the machine in your business organization



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.

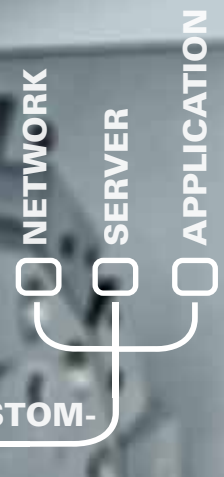
The machine always starts with the control home screen. Other functions can always be displayed on a second screen, and the operator can already enjoy direct, activity-related assistance in the standard version, such as workpiece drawings, setup lists, programming tools, documentation, etc., right at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



18,5" TOUCH-MONITOR

STANDARD included as standard

OPTION

Industry 4.0 features

Order documents	Customer data	Workpiece counter	Production status	Drawings	Setup sheet
Notes	Information center	Maintenance & care	User management	Technology computer	Programming help

VPC Box	Virtual machine 3D simulation
VirtualPro programming studio	Custom applications

+ many more standard features

Technical data INDEX C200 tandem

Working range

Distance between main spindles and counter spindles:	mm	710
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Main spindles

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	KK5
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	KK5
C-axis resolution	Deg.	0.001

Counter spindle slide

Slide travel	mm	700
Rapid traverse rate	m/min	50

Tool turret

Number of stations		5
Tooling system DIN 69880	mm	30 x 55 (VDI 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	16

Tool carrier 1 (top left)

		X	Z	Y
Slide travel	mm	110	320	100
Rapid traverse	m/min	30	50	15

Tool carrier 2 (bottom)

		X	Z	Y
Slide travel	mm	110	550	100
Rapid traverse	m/min	30	50	15

Tool carrier 3 (top right)

		X
Slide travel	mm	180
Rapid traverse	m/min	30

Gantry-type removal unit

Workpiece weight	kg	2 x 2
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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 S840D sl

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

Min.		mm	1,600
Max.		mm	3,200

Feeding speed

Rapid traverse / retraction		m/min	30
Working gear, continuously adjustable / feed rate		m/min	1 - 10

Feed force

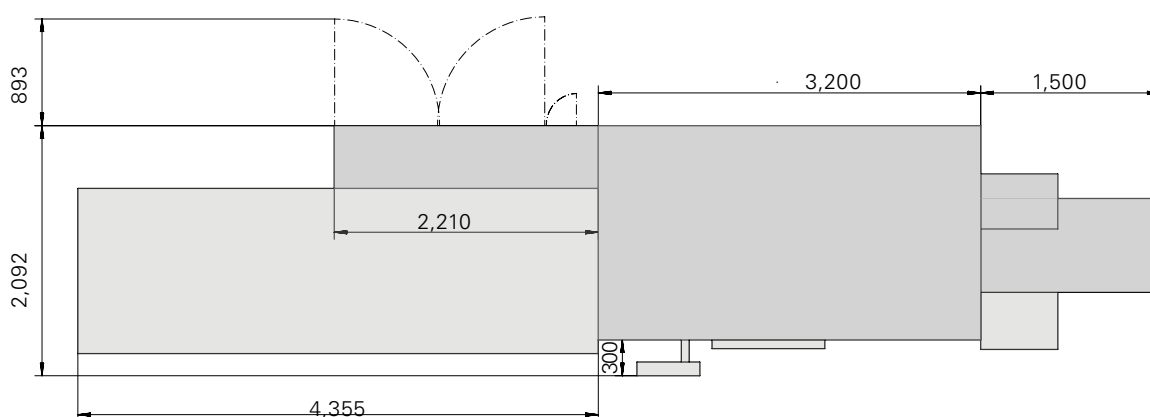
continuously adjustable		N	1,500
Drive			
Servomotor			

Mass

Bar length 3,200		mm	2,200 kg
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INDEX C200 *tandem*

INDEX bar loader MBL52 *tandem*



BRAZIL // Sorocaba

INDEX Tornos Automaticos Ind. e Com. Ltda.
 Rua Joaquim Machado 250
 18087-280 Sorocaba - SP
 Phone +55 15 2102 6017
 vendas@indextornos.com.br
 br.index-traub.com

CHINA // Shanghai

INDEX Trading (Shanghai) Co., Ltd.
 No.526, Fute East 3rd Road
 Shanghai 200131
 Phone +86 21 54176637
 china@index-traub.com
 www.index-traub.cn

CHINA // Dalian

INDEX DALIAN Machine Tool Ltd.
 17 Changxin Road
 Dalian 116600
 Phone +86 411 8761 9788
 dalian@index-traub.com
 www.index-traub.cn

DENMARK // Langeskov

INDEX TRAUB Danmark
 Havretoften 1
 5550 Langeskov
 Phone +45 30681790
 b.olsen@index-traub.dk
 www.index-traub.dk

GERMANY // Esslingen

INDEX-Werke GmbH & Co. KG Hahn & Tessky
 Plochinger Straße 92
 73730 Esslingen
 Phone +49 711 3191-0
 info@index-werke.de
 www.index-werke.de

GERMANY // Deizisau

INDEX-Werke GmbH & Co. KG Hahn & Tessky
 Plochinger Straße 44
 73779 Deizisau
 Phone +49 711 3191-0
 info@index-werke.de
 www.index-werke.de

GERMANY // Reichenbach

INDEX-Werke GmbH & Co. KG Hahn & Tessky
 Hauffstraße 4
 73262 Reichenbach
 Phone +49 7153 502-0
 info@index-werke.de
 www.index-werke.de

FINLAND // Helsinki

INDEX TRAUB Finland
 Hernepellontie 27
 00710 Helsinki
 Phone +35 8 108432001
 pekka.virkki@index-traub.fi
 www.index-traub.fi

FRANCE // Paris

INDEX France Sarl
 1A, Avenue du Québec / Z.A. de Courtabœuf
 91940 Les Ulis / Villebon
 Phone +33 1 69187676
 info@index-france.fr
 www.index-france.fr

FRANCE // Bonneville

INDEX France Sarl
 399, Av. de La Roche Parnale
 74130 Bonneville Cedex
 Phone +33 4 50256534
 info@index-france.fr
 www.index-france.fr

NORWAY // Oslo

INDEX TRAUB Norge
 Postbox 2842
 0204 Oslo
 Phone +46 8 505 979 00
 h.sars@index-traub.se
 www.index-traub.no

RUSSIA // Togliatti

INDEX RUS
 Lesnaya street 66
 445011 Togliatti
 Phone +7 8482 691 600
 info@index-rus.ru
 ru.index-traub.com

SWEDEN // Stockholm

INDEX TRAUB Nordic AB
 Fagerstagatan 2
 16308 Spånga
 Phone +46 8 505 979 00
 h.sars@index-traub.se
 www.index-traub.se

SWITZERLAND // St. Blaise

INDEX Werkzeugmaschinen (Schweiz) AG
 Av. des pâquiers 16
 2072 St. Blaise
 Phone +41 (32) 756 96 10
 info@index-traub.ch
 www.index-traub.ch

SLOVAKIA // Malacky

INDEX Slovakia s.r.o.
 Vinohrádok 5359
 901 01 Malacky
 Phone +34 654 9840
 info@index-werke.de
 www.index-traub.com

UNITED STATES // Noblesville

INDEX Corporation
 14700 North Point Boulevard
 Noblesville, IN 46060
 Phone +1 317 770 6300
 sale@index-usa.com
 www.index-usa.com

better.parts.faster.

INDEX

TRAUB

**INDEX-Werke GmbH & Co. KG
 Hahn & Tessky**

Plochinger Straße 92
 73730 Esslingen

Phone +49 711 3191-0
 Fax +49 711 3191-587
 info@index-werke.de
 www.index-traub.com