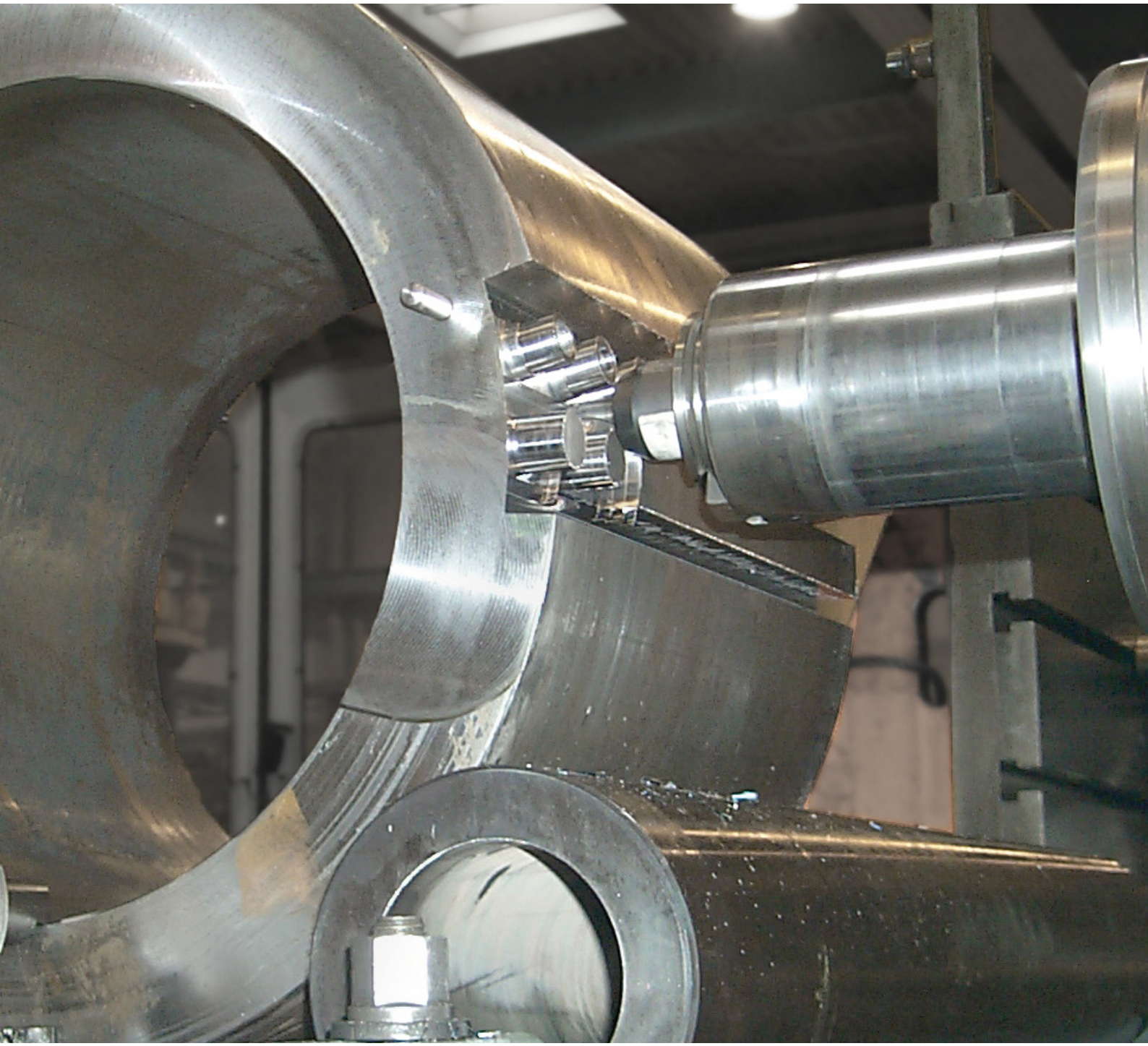
T 110 / T 130 / T 150

Effective multiple side machining



P-SERIES
K-SERIES
T-SERIES
MILLFORCE

UNIONCHEMNITZ

Complete efficient machining of medium-weight, complex work pieces of various sizes and configurations. Used in the power, mining, railroad, shipbuilding, aerospace and machine tool industries to name a few.

The T-Series – CNC horizontal boring and milling machine table type

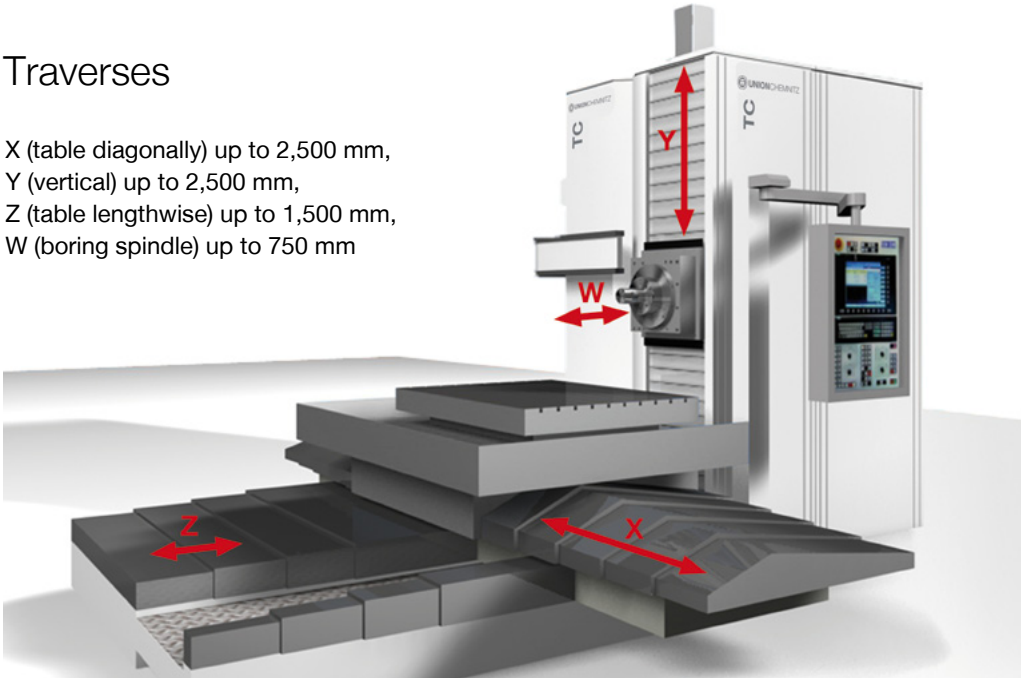
Compact boring machines for effective and cost-efficient multiple side machining of medium-weight, complex work pieces. With effective working envelopes of 2,500 x 2,500 x 1,500 mm, the machines are individually tailored to meet the costumer's needs by selecting from extensive available options and equipment variants.

Your advantages at one glance

- Wide machine bed with four guide ways for stable table longitudinal traverse
- Highly reinforced ribbed, extremely rigid column
- Compact precision roller guide ways promoting the highest accuracies
- Nitrated boring spindle, ceramic-coated on request
- Spindle speeds up to 6,000 rpm with up to 73 kW of power
- High production flexibility due to many available options
- Length compensation of boring spindle

Traverses

X (table diagonally) up to 2,500 mm,
Y (vertical) up to 2,500 mm,
Z (table lengthwise) up to 1,500 mm,
W (boring spindle) up to 750 mm



Classifications

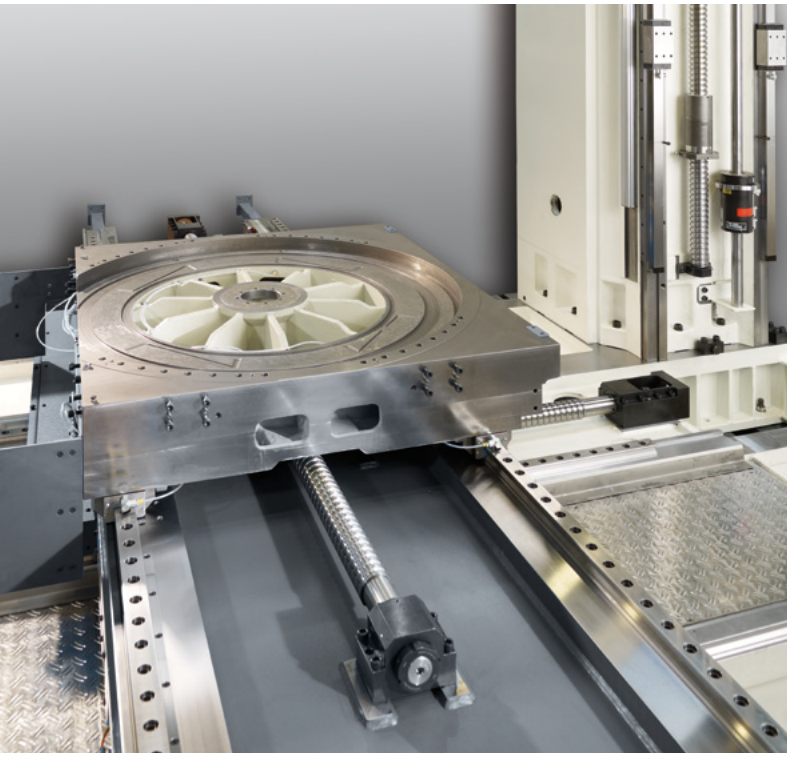
Table type	T
with automatic tool changers	C
with permanently integrated NC facing head	U
Boring spindle diameters available:	110, 130 and 150 mm

Individually adaptable – modular machine technology

Massive design promoting highest accuracies – machine bed and column: a four-way-bed structure with a cast column and carriage allows the high precision machining of the work pieces. In addition, the wide, welded bed results in a broader base and contributes to the machine's extreme high static rigidity. The ribbed cast column reduces vibrations and prevents twisting and flexing. Consecutively, both the preloaded linear compact roller guide ways and the spaciously dimensioned, preloaded ball screws, guarantee the highest precision when machining complex work pieces.

Quality made by UnionChemnitz – headstock and spindle: In order to ensure that the headstocks of the T-series meet the highest quality standards, they are manufactured by UnionChemnitz. The front bearing of the headstock is sealed with pressurized air to protect from the ingress of contaminants. The precision spindle bearing with life-time lubrication, a two range gearbox using circulated lubrication and an oil cooler for temperature stabilization all guarantee low wear and thermal stability combined with high machining quality.

Accurate and backlash-free bearing – the rotating clamping table: an axial-radial cylindrical roller ensures the precise setting of the work piece on the clamping table. The table rotation is facilitated by a special sliding layer. At the same time, the hydraulic clamping system supports the high cutting performance of the boring machine. The table pan on the T-Series machines is accessible.



Robust design with precise guide ways, compact guides and ball screws

User-friendly CNC machine controls

Optionally available

Automatic tool changing
- Tool magazine with up to 120 tools
- Tool gripper SK 50 or HSK 100, others on request
- Changing into the NC facing head
- Changing cycles for heavy tools, tool taper cleaning

Compact coolant units
- External coolant at the headstock with 80 l / 8 bar
- Inner coolant through the middle of the boring spindle / optionally through the milling head spindle with up to 70 bar
- Paper band filter and coolant circulation with timer switch

NC controlled facing head
- Permanent integration into the headstock
- Use of the boring spindle without removal of the facing head
- Unbalance compensation by synchronously extending counter slide
- Automatic tool changer with inner coolant supply

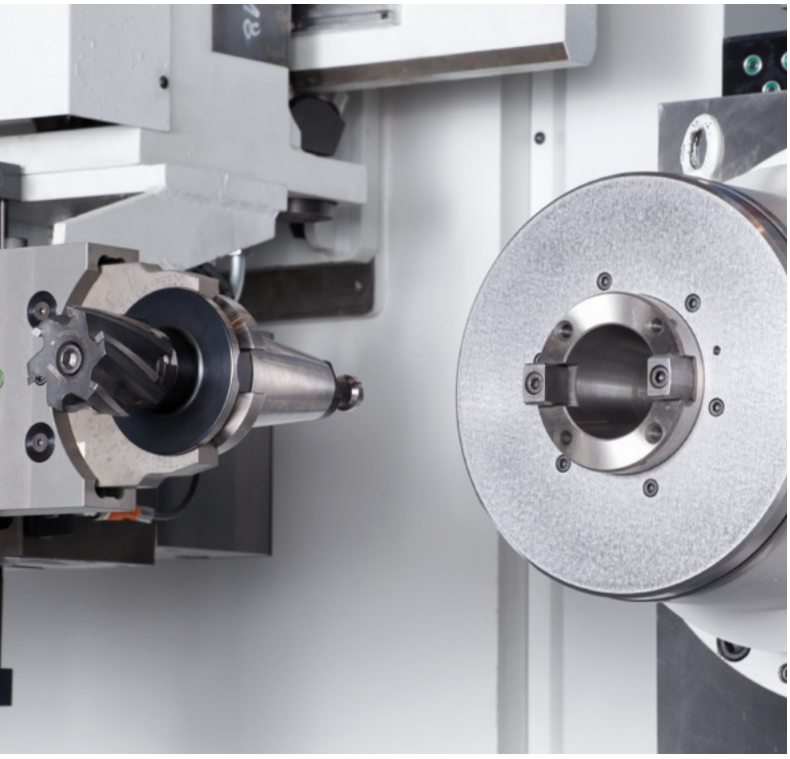
Process optimization
Tool life monitoring, tool breakage monitoring and automatic identification of tools, torque monitoring, data recording, remote touch probe

Work area protection / CE-approved operation
- Operator panel swivelling into working area, optional in angled desk design
- Total enclosure, optionally with exhaust
- Table enclosure

Automatic work piece changing
Standard pallet exchange with up to four stations

CNC controls
Siemens 840 D sl, Heidenhain iTNC 640, Fanuc 31i

// Further options are available upon request.



Automatic tool changing into the support bearing

Equipment variants

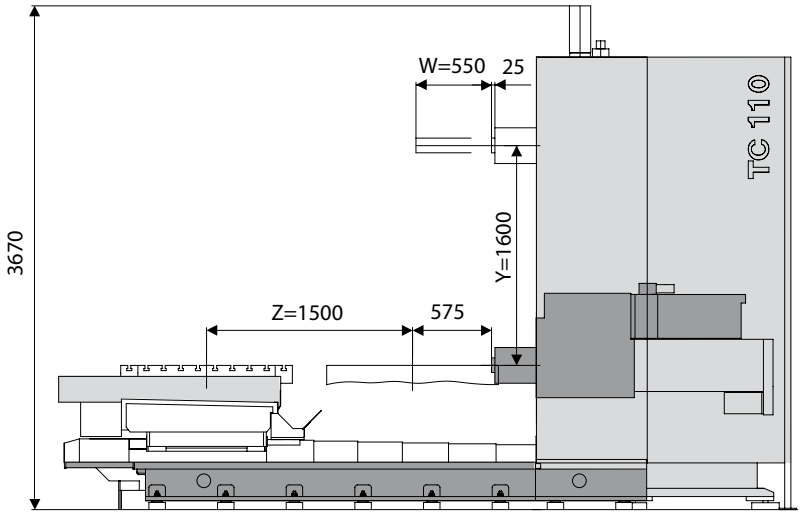
Adapted to each application, UnionChemnitz offers a broad range of milling heads:
- manually adjustable or automatically positional vertical or universal milling heads with speeds up to 3,500 rpm and 60 kW power allowing internal and external coolant capabilities. They are produced within our group of companies.
- manually or loaded automatically above the tool exchange, usable angle milling heads, adaptable to specific tasks
- automatically attachable NC facing head D'Andrea

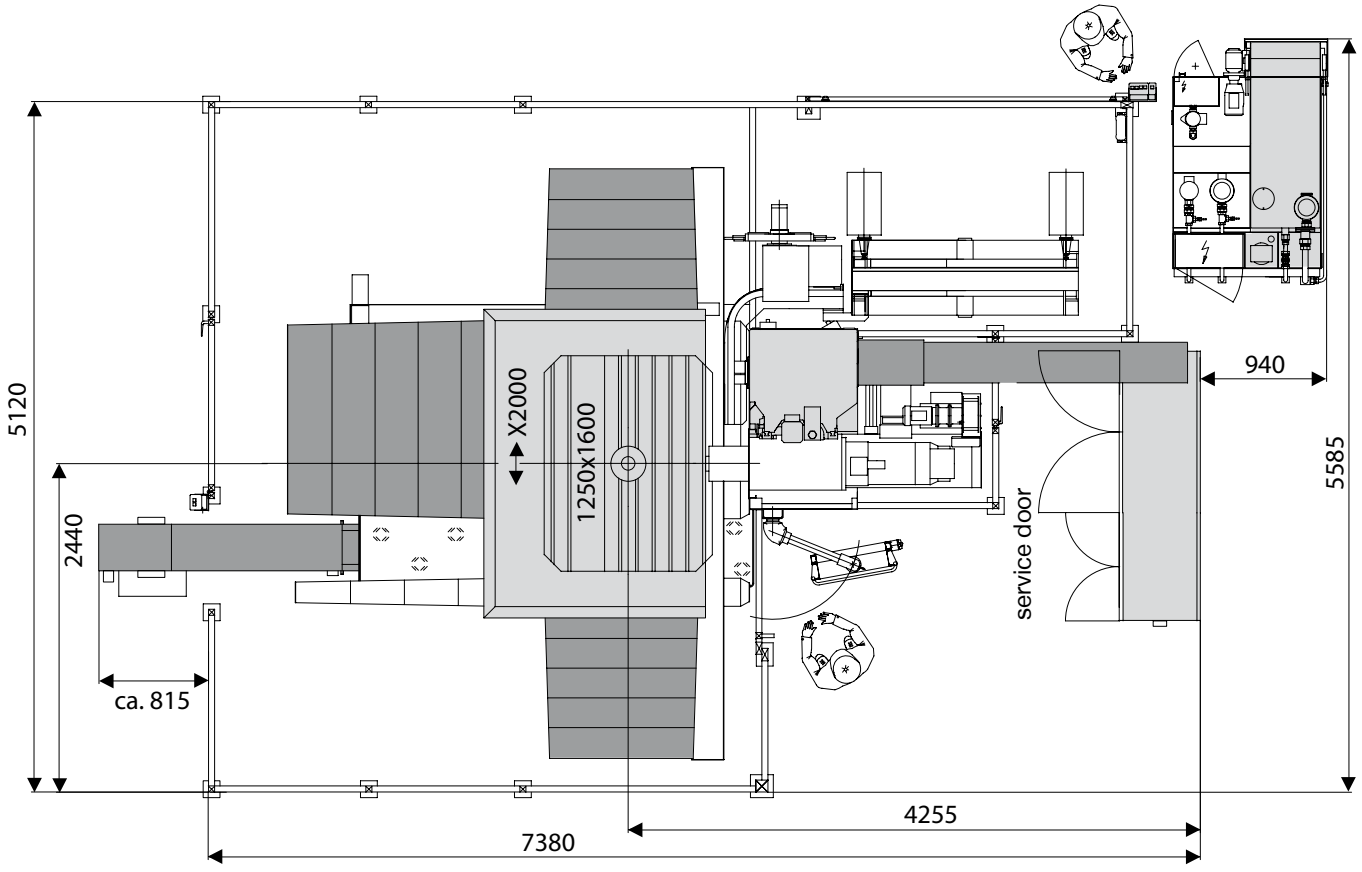
Optimize your machining processes – a 3D measuring probe including measurement cycles for automatic measurement of work pieces or a 3D tool touch probe for tool breakage control and tool measurement can be installed.

We are happy to integrate further solutions upon your request.

Layout of a TC 110

Model with
X = 2,000 mm,
Y = 1,600 mm,
Z = 1,500 mm,
with chip conveyor
and coolant





Technical data

* for headstocks with integrated facing head only

			T / TC 110	T / TC 130	T / TC 150
Boring spindle					
Diameter		mm	110	130	150
Drive power, max. (S6)		kW	37	46	73
Torque, max. (S6)		Nm	2,012	2,179	3,170
Speed range, continuous, max.		min^{-1}	5 ... 5,000	5 ... 4,000	5 ... 3,500
Diameter of the facing head*		mm			700
Speed range, facing head*		min^{-1}			2,5 ... 330
Clamping table					
Size of clamping table		mm	1,000 x 1,250	1,250 x 1,600	1,250 x 1,600
Optional		mm	1,250 x 1,600	up to 1.800 x 2,000	up to 1,800 x 2,000
Table load, max.		kg	7,000	10,000	10,000
Traverses	Axes				
Table cross	X	mm	1,500	2,000	2,000
Optional	X	mm	2,000	2,500	2,500
Headstock vertical	Y	mm	1,250	2,000	2,000
Optional	Y	mm	1,600	2,500	2,500
Table longitudinal	Z	mm	1,000	1,500	1,500
Optional	Z	mm	1,500		
Facing slide radial*	U*	mm			200
Boring spindle axial	W	mm	550	750	750
Feed range / Rapid traverses					
Feed range of all axes		mm / min	1... 6,000	1... 6,000	1... 6,000
Rapid travers linear axes, max.		mm / min	18,000	15,000	15,000
Feed range of the facing slide*	U*	mm / min			1...1,000
Automatic tool changer					
Number of tools in the magazine			40 (up to 120)	40 (up to 120)	40 (up to 120)
Tool diameter, max.		mm	250	250	250
Tool length, max.		mm	500	500	500
Tool weight, max.		kg	36	36	50

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