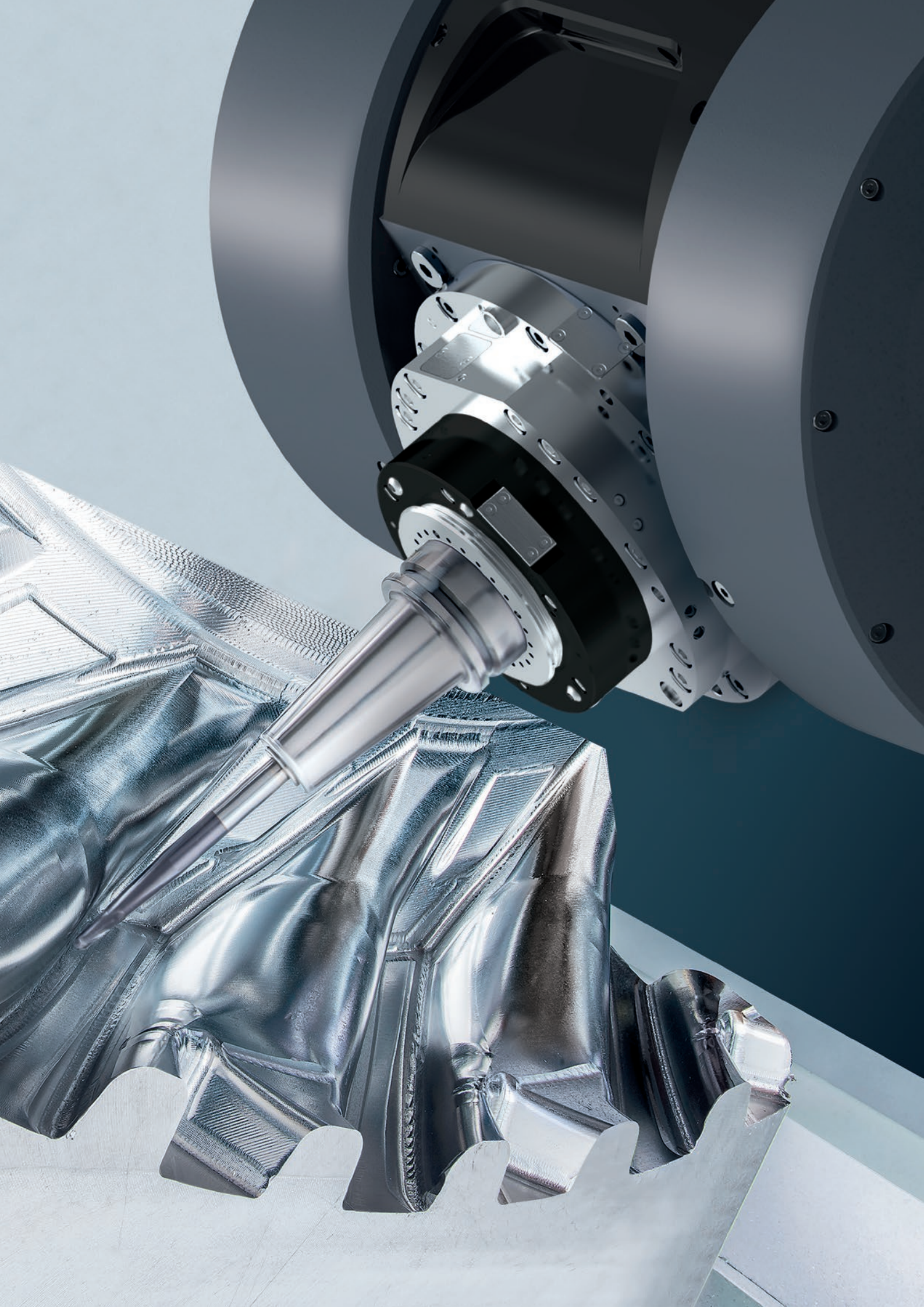


Mill turn spindles / MT LINE

Smart heads





KESSLER SPINDELLINES

Spindle technology with passion and expertise

The KESSLER milling spindles have a modular design.

Configure your own milling spindle model by specifying the installation position, motor, speed, bearing, lubrication and sensor system – the perfect customized solution for your individual branch and application needs.

KESSLER offers more: We are an internationally successful company with specialist expertise that enables us to provide comprehensive consultation in the design and manufacture of individual components, and project planning of complex systems. We use the very latest technology and analytical processes to test our components under realistic conditions, so that our products help your business to stay flexible and maintain its competitive edge.

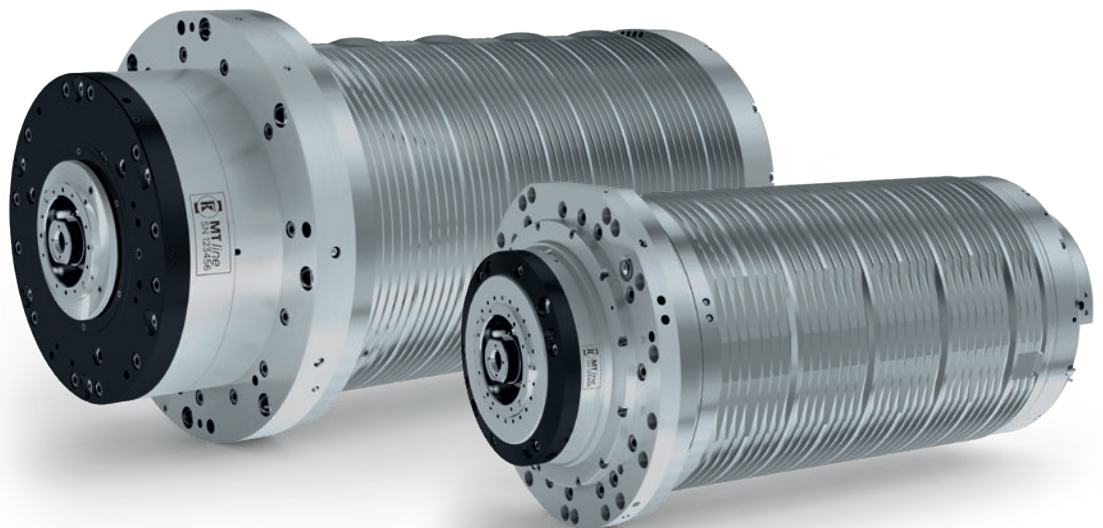
Our in-house development division is supported by extensive calculation and analysis skills and covers everything from direct drive technology to the construction of all-in-one systems. Furthermore, optimized production and assembly lines provide the framework for stable processes and the superior quality of our products.

End-to-end precision from the components to the on-site service

Founded in 1923 by Franz Kessler, the company has developed to become the leading supplier of motor spindles as well as directly driven 2-axis heads and rotary tilt tables for the machine tool industry. KESSLER is proud to list many major companies from the mechanical engineering sector amongst its long-standing customers.






With the expertise of almost 100 years, KESSLER is continuously developing and optimising its products. The KESSLER product range serves a wide range of sectors, processes and applications. Close cooperation with our customers remains our key focus. The extensive product range, from hightech spindles, 2-axis heads, rotary and rotary tilt tables to motors and direct drive systems, enables KESSLER to implement customised solutions with speed and flexibility.

As your service partner, service is our matter of trust and reliability. KESSLER has an established global network of technology and service centres.



Masterpieces

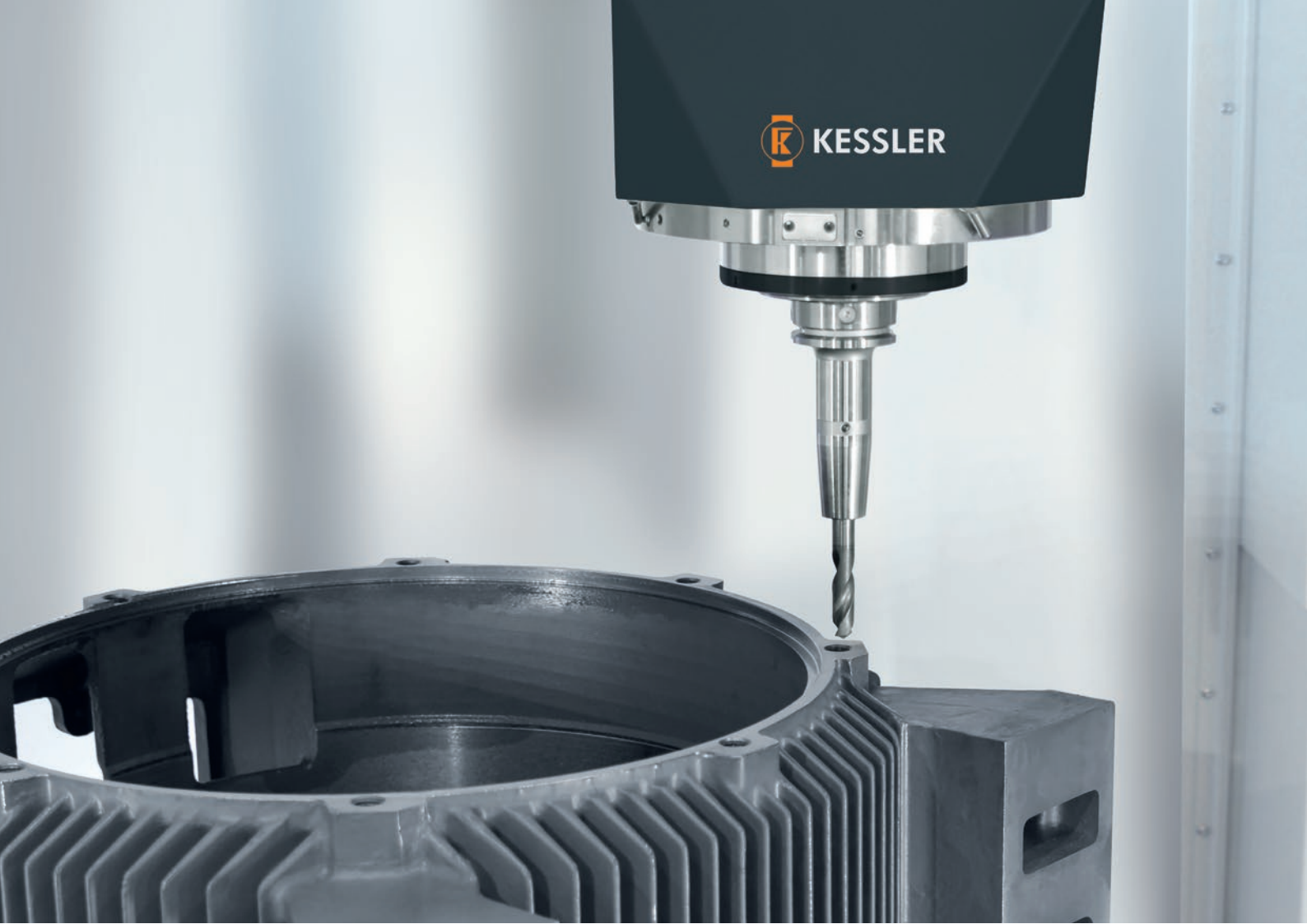
KESSLER provides tailor-made spindle technology to suit your needs:
Individual, flexible, modular and suitable for all areas of application

<p>HCLINE</p> <ul style="list-style-type: none"> ○ Heavy cutting ○ Aerospace titanium machining ○ Machining of large-scale parts 								HC500	HC600	
<p>PCLINE</p> <ul style="list-style-type: none"> ○ High speed ○ High power ○ High accuracy 			PC80		PC100			PC400		
<p>HLINE</p> <ul style="list-style-type: none"> ○ Horizontal installation ○ Very short acceleration and braking times 		H80		H100		H200				
<p>MTLINE</p> <ul style="list-style-type: none"> ○ Very short construction ○ Used in tilting heads, turning and milling operations 		MT80			MT100			MT400	MT500	MT600
<p>VLINE</p> <ul style="list-style-type: none"> ○ Vertical installation ○ Tilting ○ Allrounder 					V100		V200	V400		
Spindle fitting Ø (mm)										
○ Open cooling housing		170	170		200		230	270	325	395
○ Closed with steel sleeve			180		210		240			
○ Closed with solid housing				200	230	240		310		

Availability on request

The MTLINE is all about:

- 5-axis machining
- Very short construction thanks to release unit and rotary union integrated in the shaft
- Can be used in tilting heads
- Processing of different materials
- Machining of workpieces with varying geometries
- Use in small and large-scale production
- Short duration until reaching the stable Tool Centre Point (TCP)
- Optional clamps for turning operations
- Optional measuring of the axial shaft displacement



Our MTLINE variants

Model	MT80	MT100S	MT100L	MT100H	MT400	MT500	MT600
Maximum speed (rpm) to	20,000	20,000	20,000	16,000	15,000	6,000	5,000
Torque S6 / 40 % (Nm) to	95	120	210	235	635	900	1,350
Spindle fitting Ø (mm)	170	202	202	202	270	325	395
Length overall (mm)	475	385	475	530	628	TBD	TBD
Tool interface	HSK 63 Capto C6			HSK 100 Capto C8			HSK 125 Capto C10

Impress with:

- Very short construction
- Very short vector length
- High effective torque at the tool cutting edge
- Quick Connect Cartridge (QCC)* reduced machine downtimes for servicing
- Optional shaft clamping

*Not with MT80 and MT600

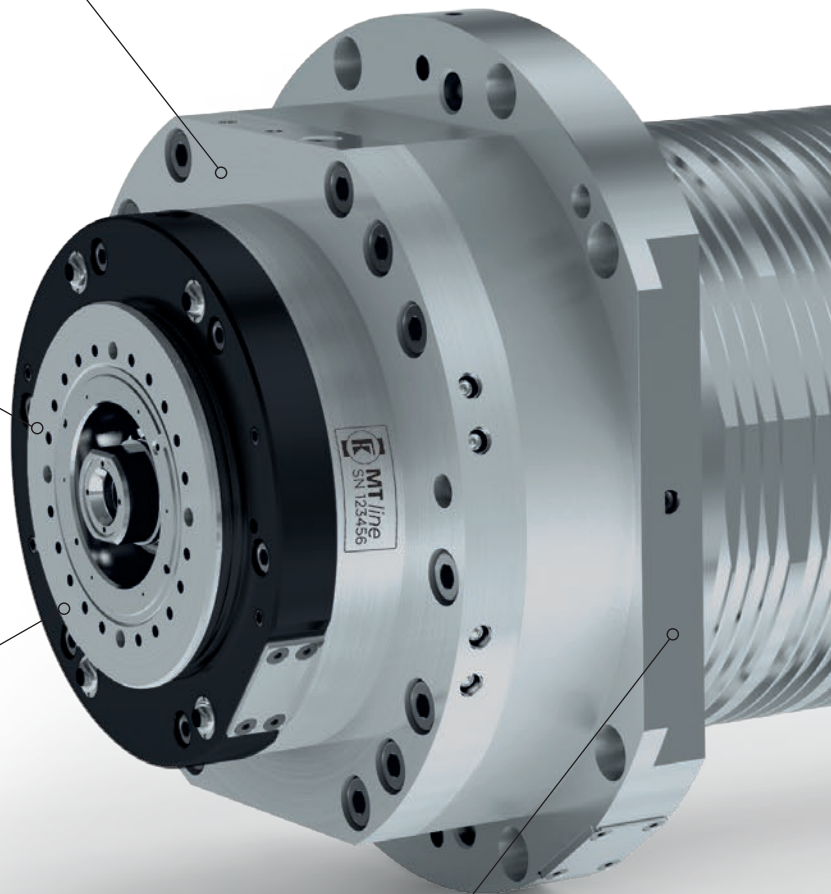
All advantages of the modular system at a glance

- **Robust**
Designed for high load forces in the machining process

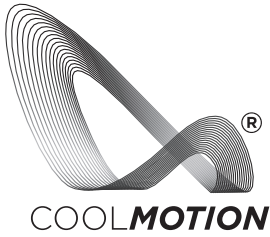
- **High degree of operational safety thanks to LEDs**
for optimal illumination of the tool intervention

- **HSK and Capto tool interfaces**

- **Reduction of TCO (Total Costs of Ownership)**
due to the rapid change of the rotor exchange group (KESSLER QCC)



Advantages



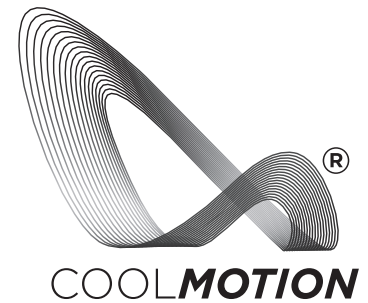
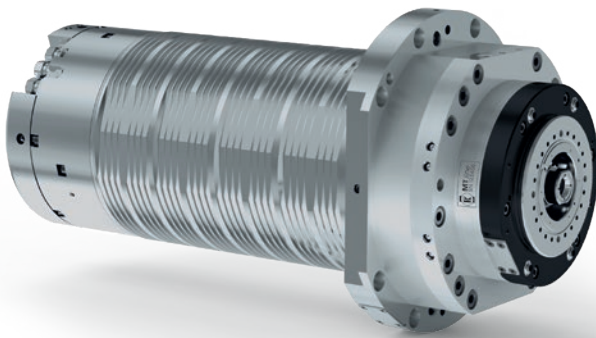
- **The most suitable**
COOLMOTION® motor
for your individual needs:
with very high torque, very high
speed and high-compact design
- **Various bearing lubrication
systems available**
- **Hydraulic release unit**
- **High flexibility:**
KESSLER rotary union for
media: lubrication, dry
operation, compressed air,
MQL capability
- **Process reliability** due to
extensive sensory system
- **Analogue tool clamping
status monitoring**
- **Hydraulic clamping**
for turning operations available
- **High power density,**
due to very compact design
and light weight

HIGH QUALITY

MADE IN GERMANY

Milling spindle/MT80

- **Spindle fitting:** Ø 170 mm
- **KESSLER COOLMOTION® motor**
- **Cooling:** Open cooling housing
- **Bearing lubrication:**
Oil-air / re-greasing



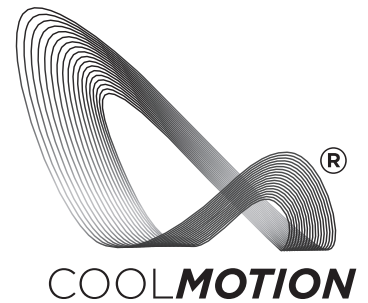
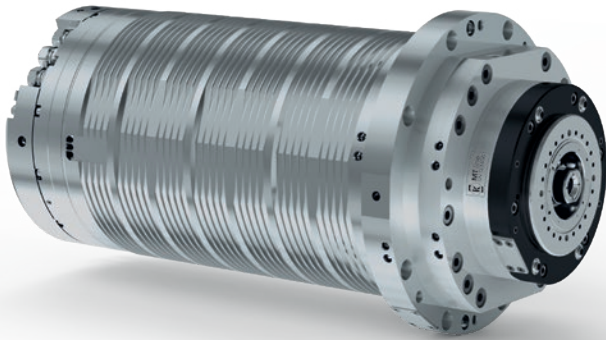
Choose the most suitable COOLMOTION® motor from the list of preferred motors

Model		S1		S6 / 40 %		S6 / 25 %		S6 max.		
	Max. speed (rpm)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	
MT80-S24	20,000	26	20	34	26	38	29	45	34	High speed*
MT80-S20	20,000	80	45	95	45	110	45	145	45	High torque

*Availability on request
Not available with Quick Connect Cartridge (QCC)

Milling spindle/MT100 S/L/H

- **Spindle fitting:** Ø202 mm
- **KESSLER COOLMOTION® motor**
- **Cooling:** Open cooling housing
- **Bearing lubrication:**
Oil-air / re-greasing

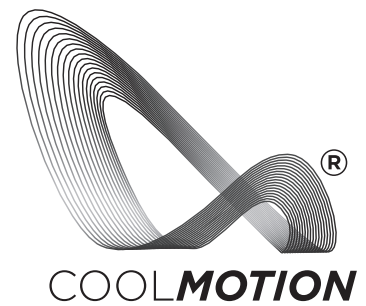
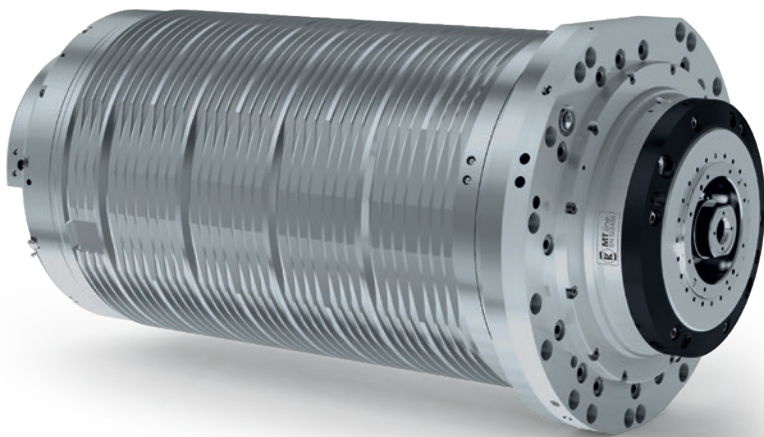


Choose the most suitable COOLMOTION® motor from the list of preferred motors

Model		S1		S6/40%		S6/25%		S6 max.		
	Max. speed (rpm)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	
MT100S-S20	20,000	85	20	100	20	115	20	170	20	High speed
MT100S-S12	12,500	100	36	120	40	130	43	180	48	High torque
MT100L-S20	20,000	130	45	160	45	180	45	200	45	High speed
MT100L-S12	12,500	175	54	210	54	235	54	280	54	High torque
MT100H-S16	16,000	150	40	180	40	200	40	250	40	High speed
MT100H-S12	12,500	200	54	235	54	265	54	315	54	High torque

Milling spindle / MT400

- **Spindle fitting:** Ø 270 mm
- **KESSLER COOLMOTION® motor**
- **Cooling:** Open cooling housing
- **Bearing lubrication:**
Oil-air / re-greasing



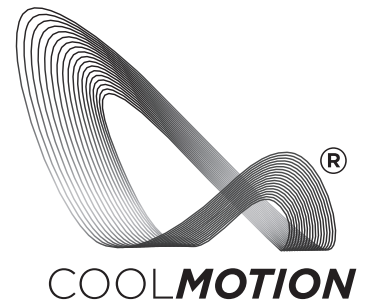
Choose the most suitable COOLMOTION® motor from the list of preferred motors

Model	Max. speed (rpm)	S1		S6 / 40 %		S6 / 25 %		S6 max.		
		Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	
MT400-S15	15,000	315	87	365	87	375	87	390	87	High speed*
MT400-S12	12,000	500	75	635	75	670	75	700	75	High torque*

*Availability on request

Milling spindle/MT500

- Spindle fitting: Ø325 mm
- KESSLER COOLMOTION® motor
- Cooling: Open cooling housing
- Bearing lubrication: Oil-air

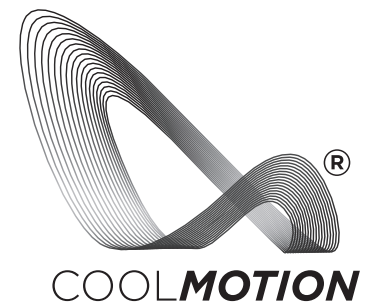


Choose the most suitable COOLMOTION® motor from the list of preferred motors

Model		S1		S6/40 %		S6/25 %		S6 max.	
	Max. speed (rpm)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)
MT500-S6	6,000	800	67	930	67	1,000	67	1,100	67

Milling spindle/MT600

- **Spindle fitting:** Ø 395 mm
- **KESSLER COOLMOTION® motor**
- **Cooling:** Open cooling housing
- **Bearing lubrication:** Oil-air



Choose the most suitable COOLMOTION® motor from the list of preferred motors

Model	Max. speed (rpm)	S1		S6/40 %		S6/25 %		S6 max.	
		Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)	Torque (Nm)	Power (kW)
MT600-S5*	5,000	1,200	75	1,350	75	1,500	75	1,600	75

*Availability on request
Not available with Quick Connect Cartridge (QCC)

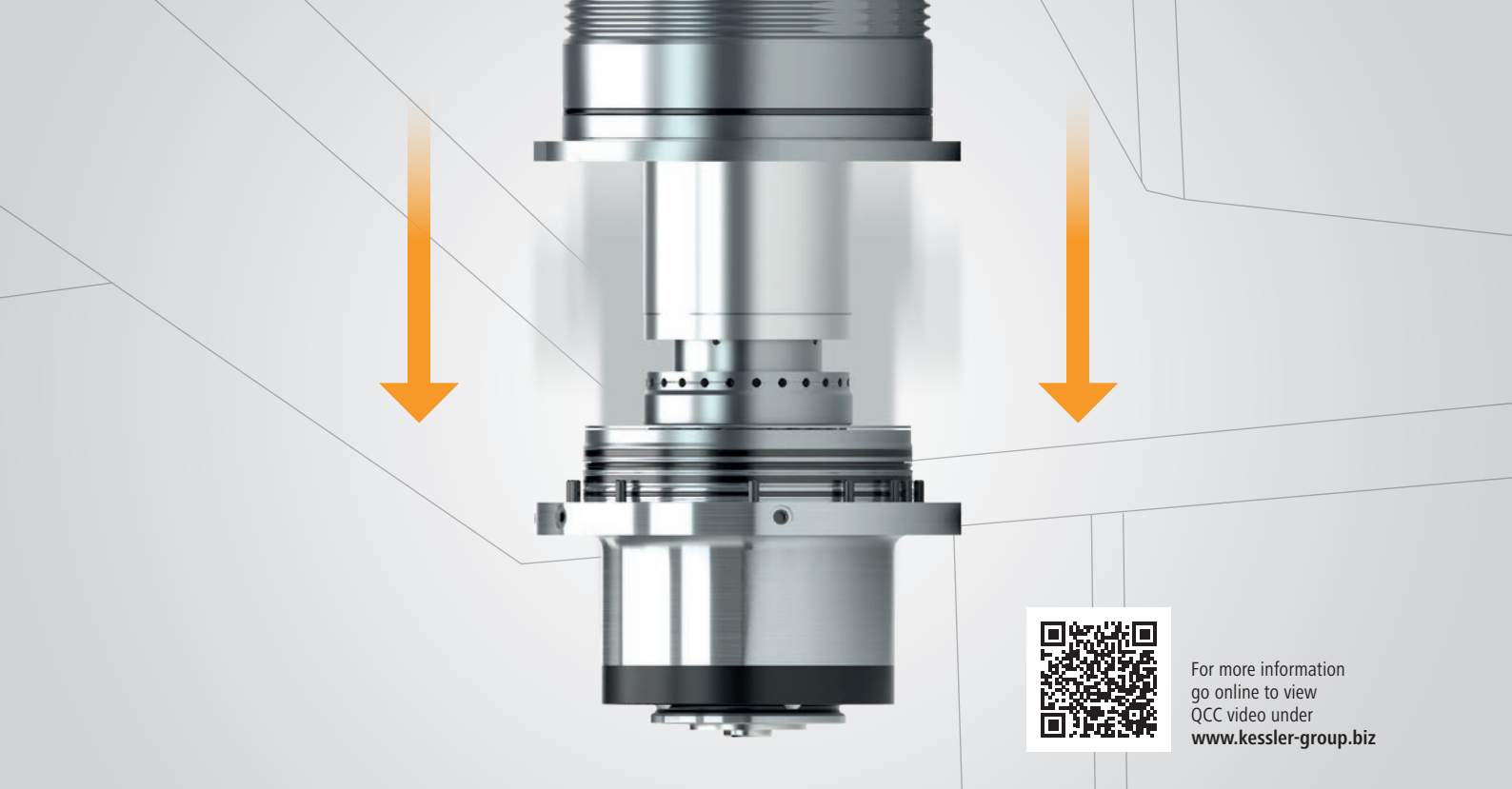


Modular extensions available

- + **Choose the most suitable KESSLER COOLMOTION® motor**
- + **Sensor monitoring system**
 - Vibration sensor
 - Eddy current sensor detects axial shaft displacement
 - Clamping status monitoring
 - Clamping monitoring
 - Temperature sensor PT100
- + **Hydraulic clamping**
- + **Bearing preload variable**
- + **Closed cooling jacket**
- + **Clamping spring package is designed for 3 million tool changes**

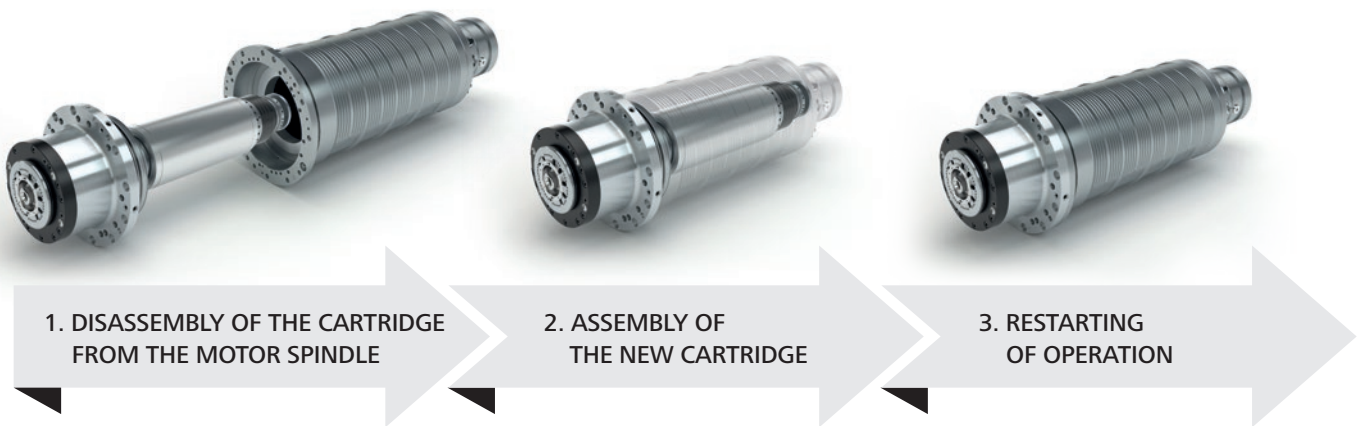
Accessories

- **Oil-air lubrication unit**
- **Re-greasing unit on demand**
- **Direct lubrication on demand**



The built-in spindle housing remains in the headstock of the machine during the replacement procedure

Quick Connect Cartridge (QCC)



Fast replacement of rotor shaft, front/rear bearing and power drawbar on-site



Reduces TCO (Total Costs of Ownership)



Reduces machine downtime

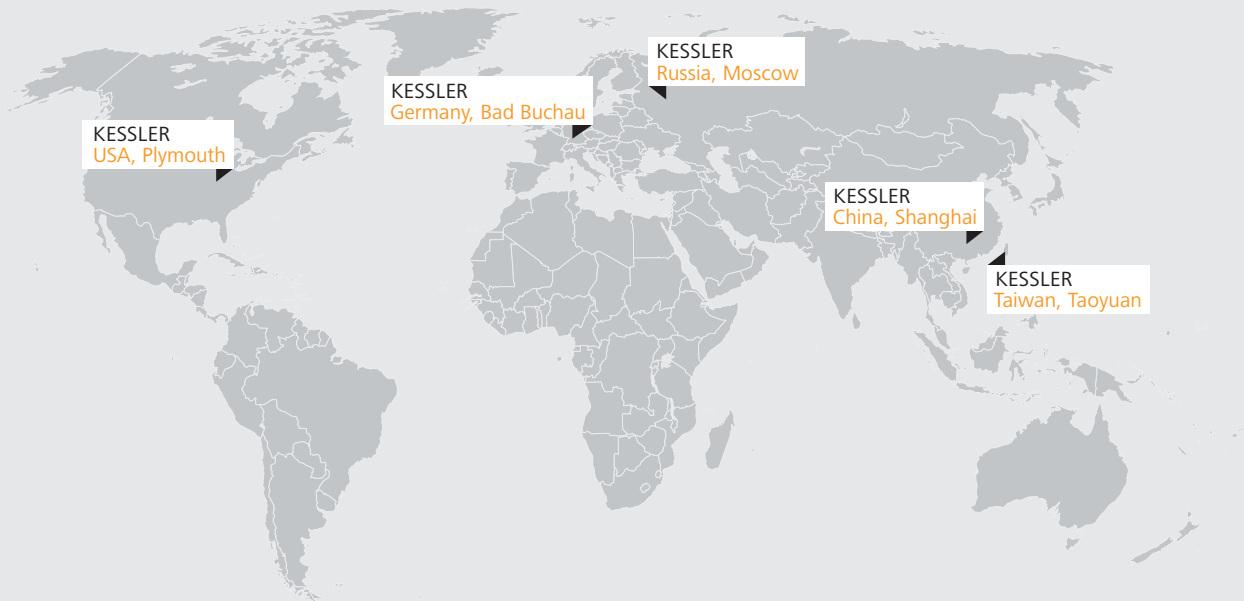


No electrician needed

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Operating Worldwide for our Customers



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