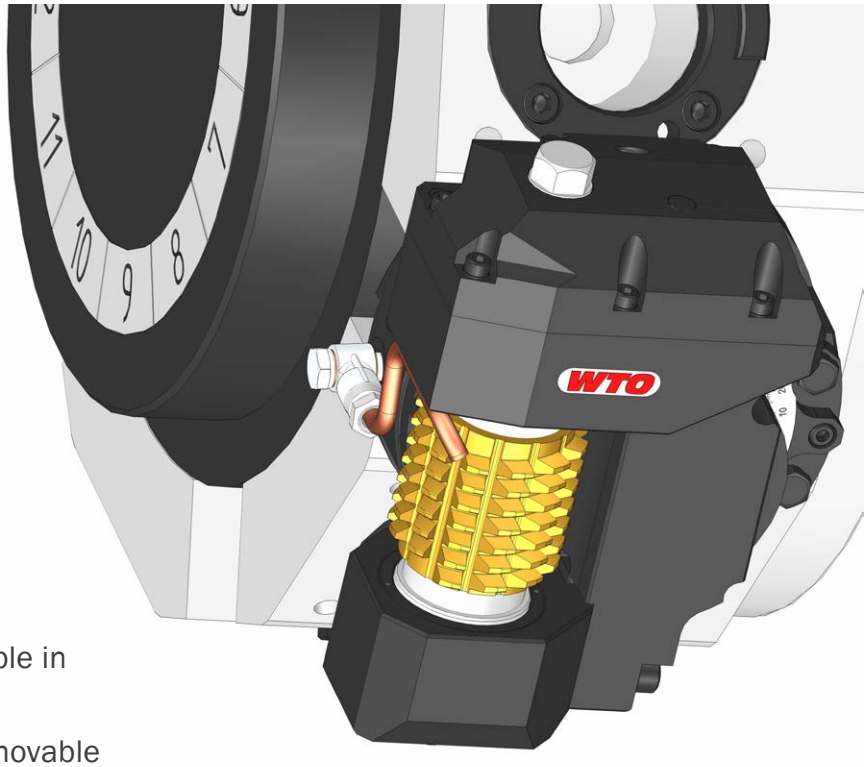
Gear Hobbing Unit

High Productive Manufacturing of Gears
with CNC Turning Centers.

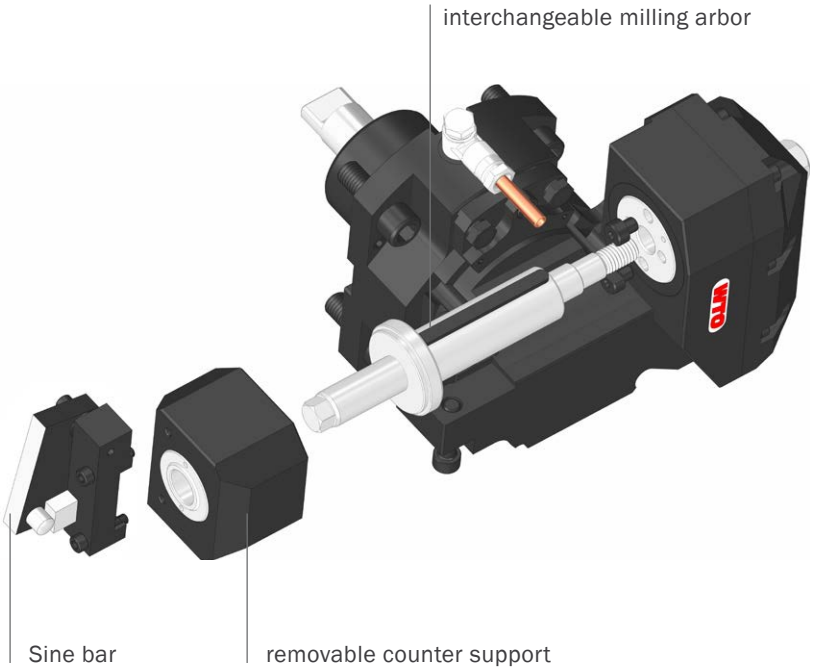
Maximum flexibility, high surface quality, easy handling.

In operation:

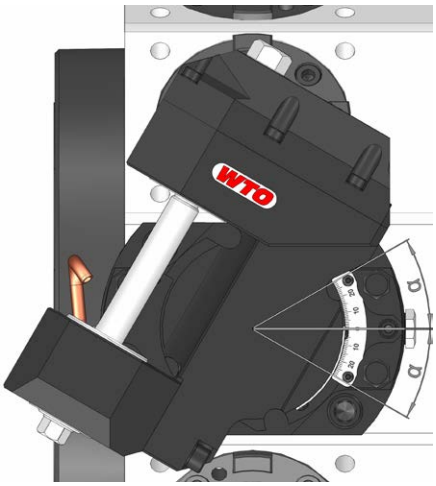
Gear Hobbing Unit for Turn/Mill Centers



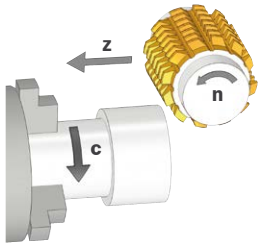
- Usable for machining gear quality according to standard 8 ISO 1328, AGMA 8
- Maximum scale swing of ±30°
- High stiffness and runout accuracy
- Interchangeable milling arbor available in different sizes
- Easy cutting tool change through removable counter support and withdrawal of the complete milling arbor
- Cutting tools can be pre-set
- Sine bar for high accurate angular adjustment



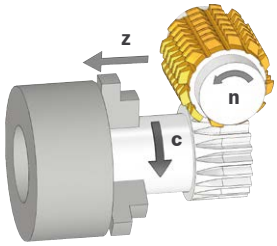
Maximum angular adjustment ±30° with scale and vernier



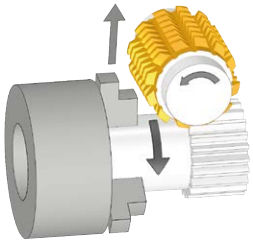
Operation principle: Gear hobbing



Synchronization of work piece and tool rotation.



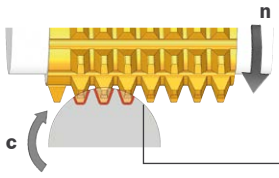
Feed movement in Z axis.



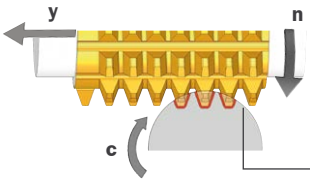
When hobbing is finished the hob has to move towards X.

Please consider:
At the end of the gear/spline there has to be sufficient clearance for the hob.

Shifting



Initial hob position after tool change with new cutting tool.



Hob position at end of cutting tool life.

To optimize the cutting tool life you can move the hob step by step in Y axis direction. This movement enables the usage of all cutting edges of the hob. This procedure is called shifting.

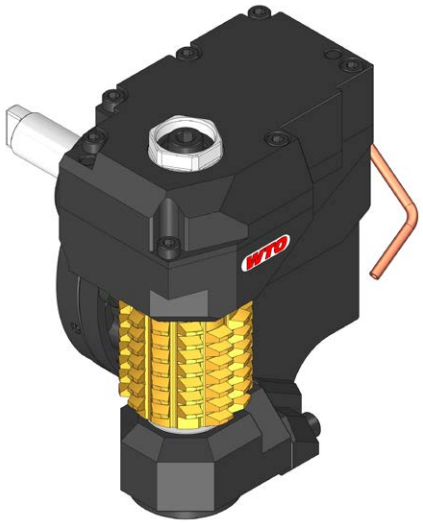
Sample workpieces

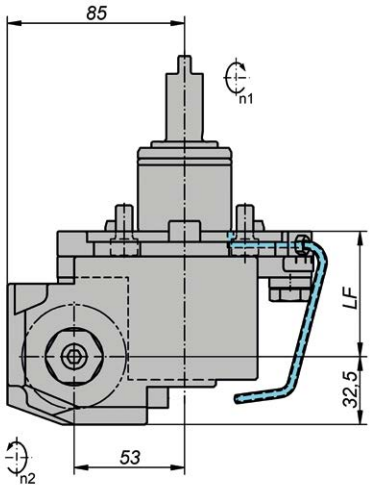
Splines
e.g. DIN 5480, DIN 5482, TORX

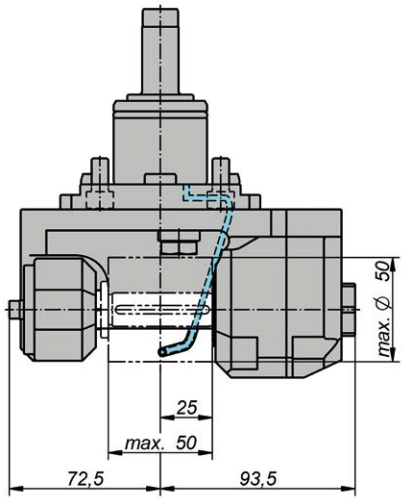
Spur gear

Helical gear

Gear Hobbing Unit type 1 (up to module 2)

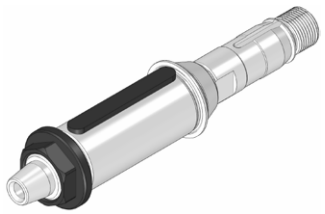


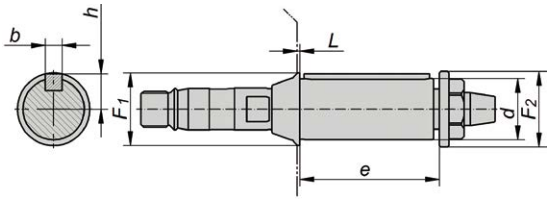




Max. cutting tool size	Ø50x50 mm	Ø50x50 mm
Ratio i (n1:n2)	1:1	2:1
Max. RPM (n2)	6,000	3,000
Max. torque M	30 Nm	50 Nm
Max. scale swing	±30°	±30°

Milling arbor type 1





Item No.	d	e	b	h	L	F1	F2		
160008152	8	35	2	4.7	14	14.0	15.0	104271	98852
160010152	10	40	3	6.20	7	16.0	21.5	20588	86055
160013152	13	50	3	7.70	1	26.0	20.0	87770	86054
160016152	16	50	4	9.20	1	26.0	27.0	20642	97265
160022152	22	50	6	12.60	1	26.0	27.0	20804	97265
160012152	1/2"	50	3/32"	7.54	1	26.0	19.0	51241	106085
160015152	5/8"	50	1/8"	9.53	1	26.0	20.0	44683	86054
160019152	3/4"	50	1/8"	11.11	1	26.0	27.0	44683	97265

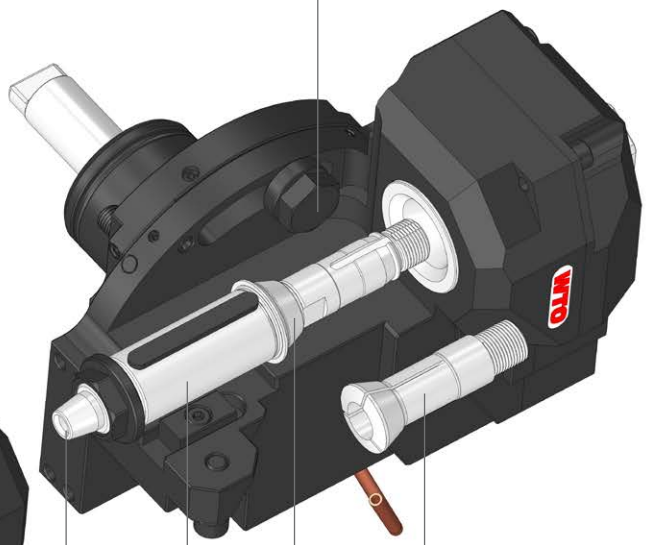
Dimensions in mm

Collet for type 1 (324E-UP)

Item No.	Ø
199015130	13
199015050-in	1/2"

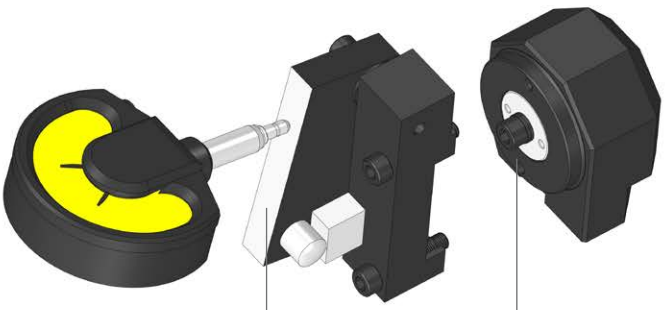
Maximum angular adjustment ±30° with scale and vernier

Clamping of angular position



Optional: High Precision collet

Tapper connection for high accuracy runout



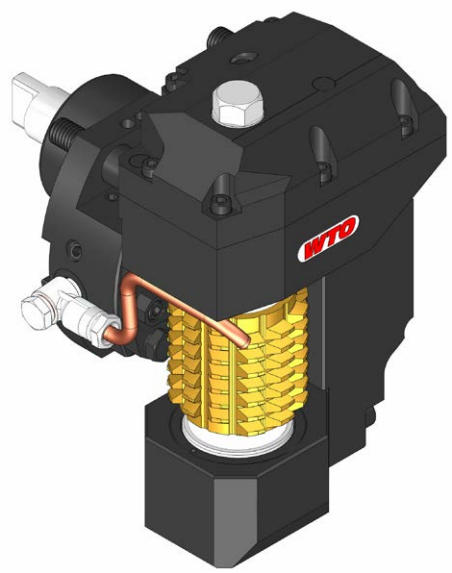
Sine bar for high accurate angular adjustment

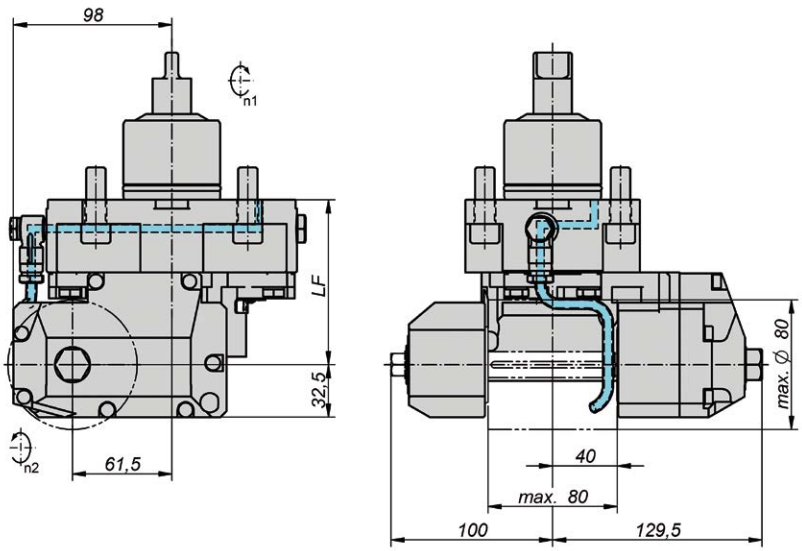
Interchangeable milling arbor

Removable counter support

Tapper support for high accuracy runout

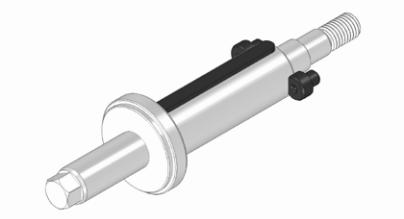
Gear Hobbing Unit type 2 (up to module 3)

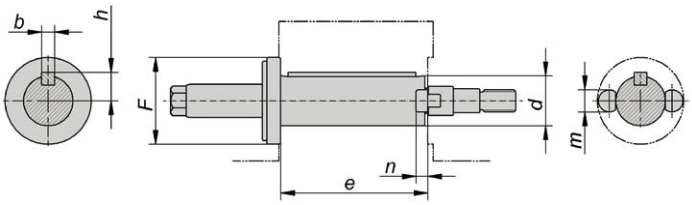




Max. cutting tool size	Ø80x80 mm	Ø80x80 mm
Ratio i (n1:n2)	1:1	2:1
Max. RPM (n2)	6,000	3,000
Max. torque M	60 Nm	80 Nm
Max. scale swing	±30°	±30°

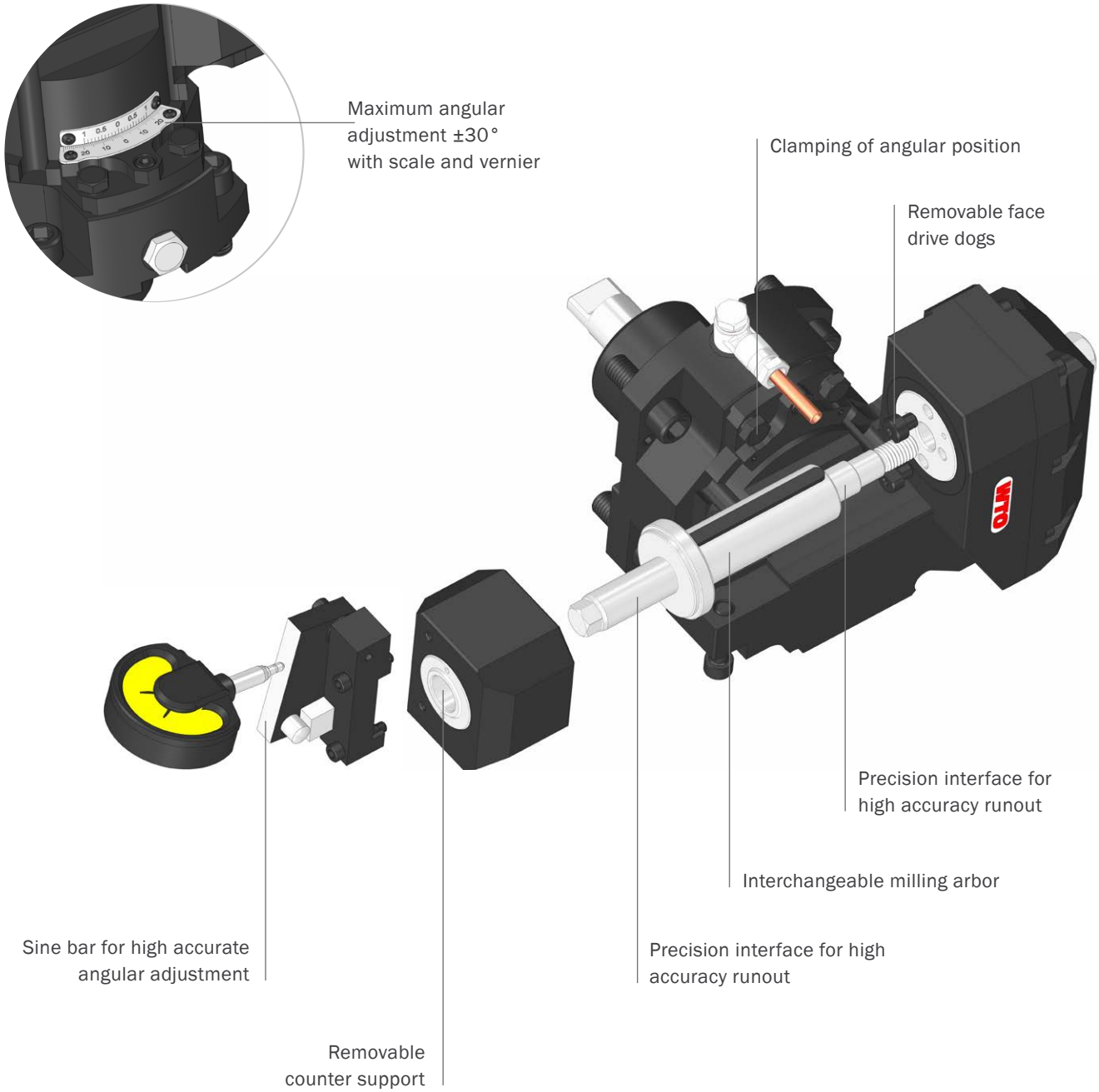
Milling arbor type 2



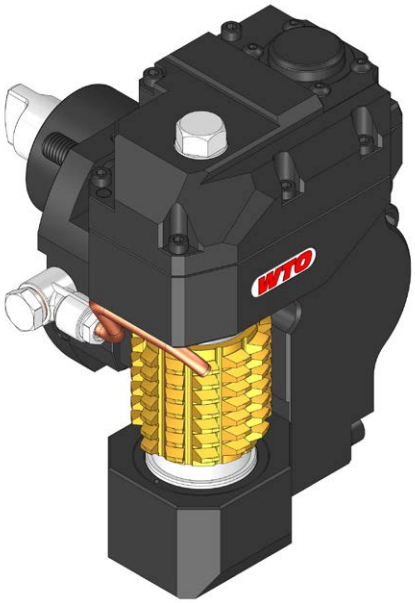


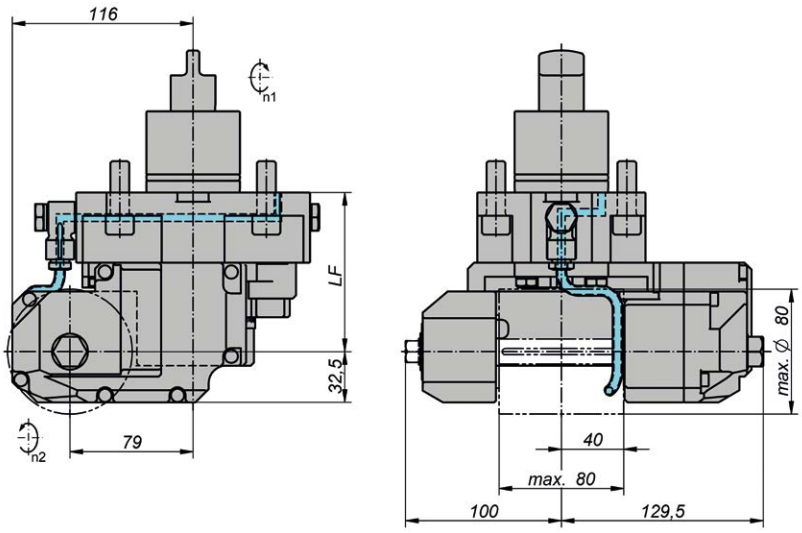
Item No.	d	e	b	h	m	n	F		
160016161	16	80	4	9.2	8	4.5	47	104358	45988
160022161	22	80	6	12.6	10	5.6	47	80120	45151
160027161	27	80	7	15.5	12	6.3	47	77586	77558
160015161	5/8"	80	1/8"	9.53	7.94	4.5	47	77706	77704
160019161	3/4"	80	1/8"	11.11	7.94	4.5	47	77706	77704
160023161	7/8"	80	1/8"	12.7	7.94	4.5	47	77706	91840
160025161	1"	80	3/16"	15.08	9.53	5.0	47	118946	85352
160031161	1 1/4"	80	1/4"	19.06	–	–	47	113932	–

Dimensions in mm


Maximum angular adjustment ±30° with scale and vernier
Clamping of angular position
Removable face drive dogs
Precision interface for high accuracy runout
Interchangeable milling arbor
Sine bar for high accurate angular adjustment
Precision interface for high accuracy runout
Removable counter support

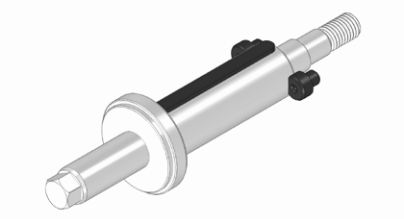
Gear Hobbing Unit type 2S (up to module 4)

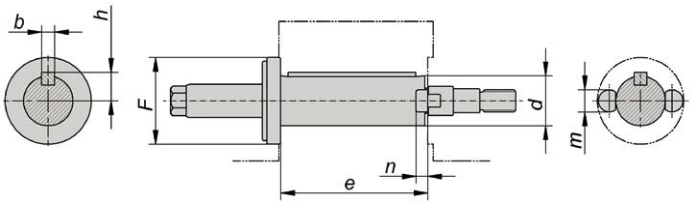




Max. cutting tool size	Ø80x80 mm	Ø80x80 mm
Ratio i (n1:n2)	1:1	2:1
Max. RPM (n2)	6,000	3,000
Max. torque M	90 Nm	120 Nm
Max. scale swing	±30°	±30°

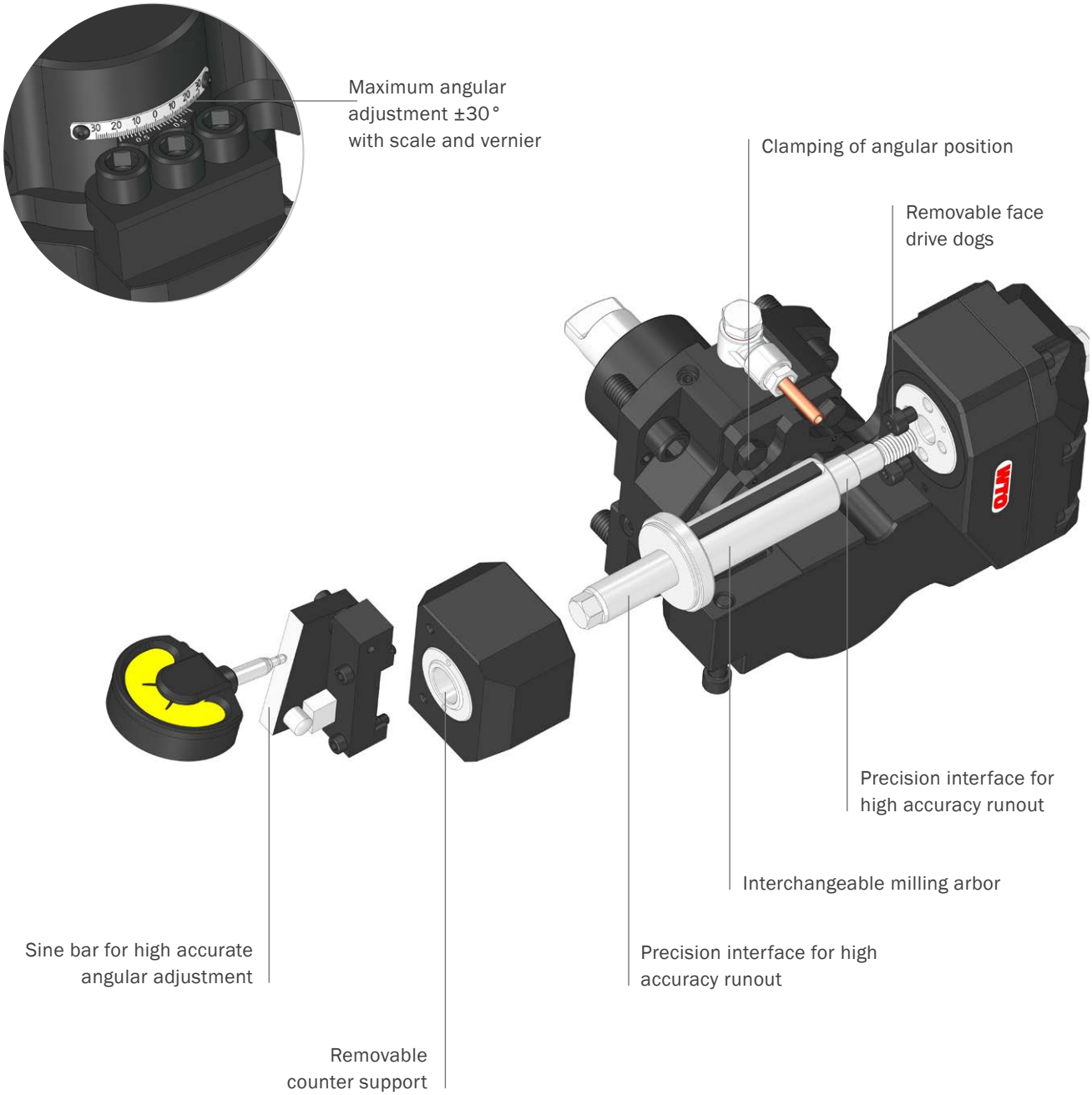
Milling arbor type 2



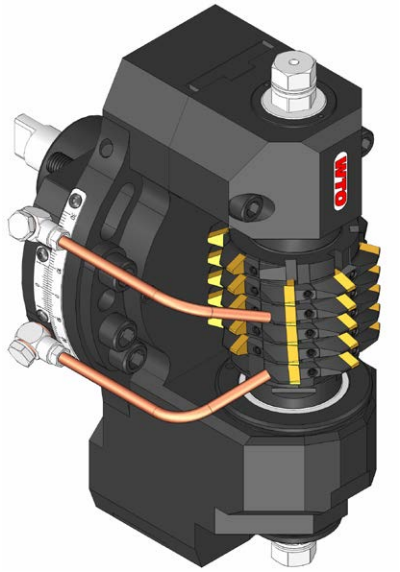


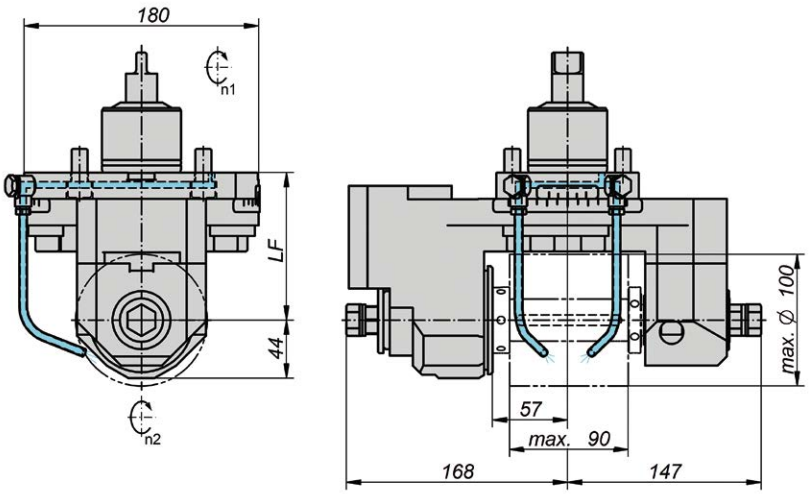
Item No.	d	e	b	h	m	n	F		
160016161	16	80	4	9.2	8	4.5	47	104358	45988
160022161	22	80	6	12.6	10	5.6	47	80120	45151
160027161	27	80	7	15.5	12	6.3	47	77586	77558
160015161	5/8"	80	1/8"	9.53	7.94	4.5	47	77706	77704
160019161	3/4"	80	1/8"	11.11	7.94	4.5	47	77706	77704
160023161	7/8"	80	1/8"	12.7	7.94	4.5	47	77706	91840
160025161	1"	80	3/16"	15.08	9.53	5.0	47	118946	85352
160031161	1 1/4"	80	1/4"	19.06	–	–	47	113932	–

Dimensions in mm


Maximum angular adjustment ±30° with scale and vernier
Clamping of angular position
Removable face drive dogs
Precision interface for high accuracy runout
Interchangeable milling arbor
Sine bar for high accurate angular adjustment
Precision interface for high accuracy runout
Removable counter support

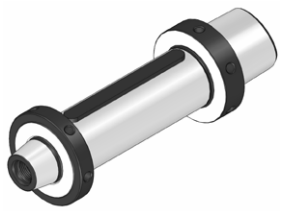
Gear Hobbing Unit type 3 (up to module 6)

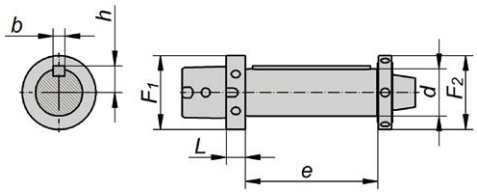




Max. cutting tool size	Ø100x90 mm
Ratio i (n1:n2)	2:1
Max. RPM (n2)	3,000
Max. torque M	150 Nm
Max. scale swing	±30°

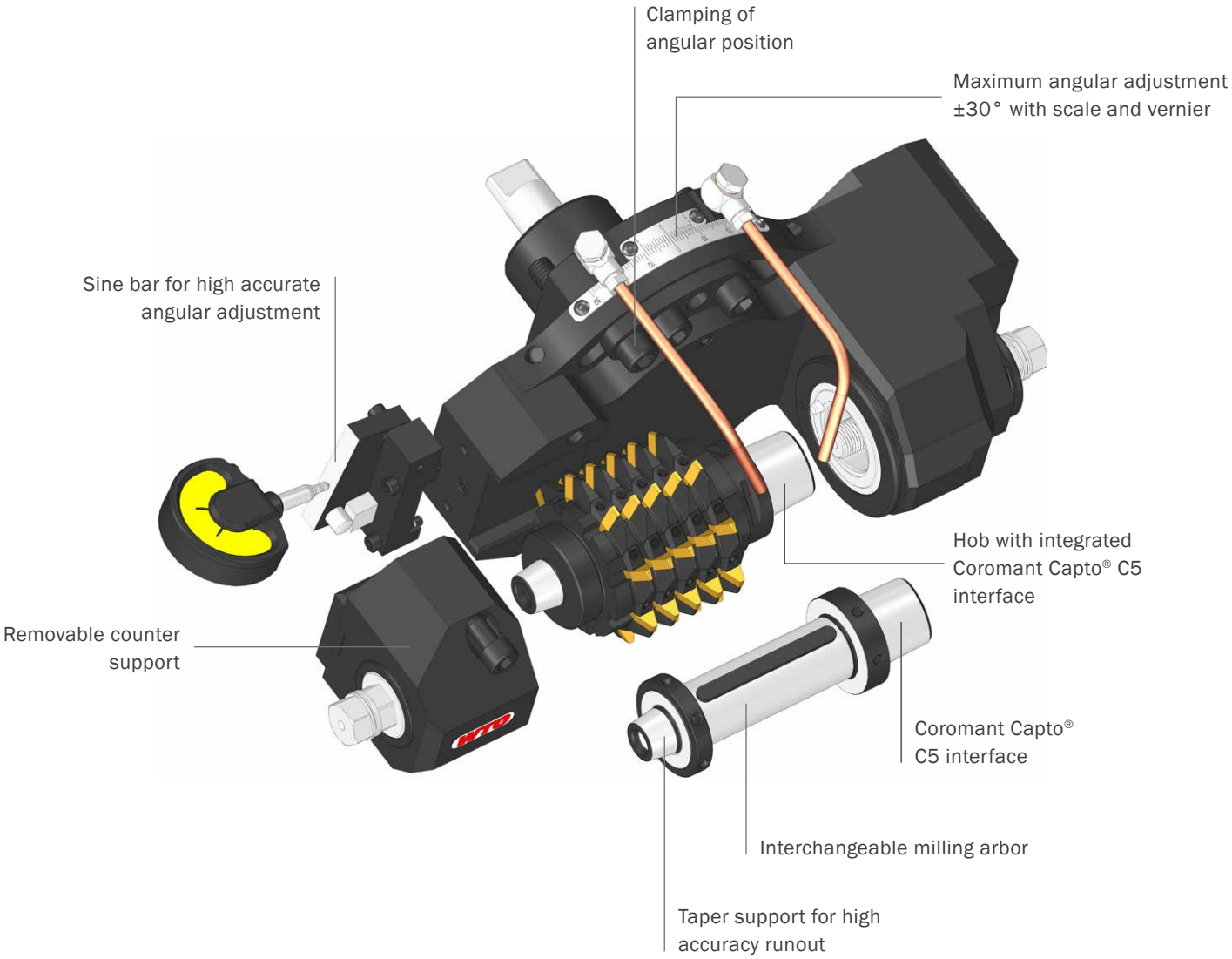
Milling arbor type 3



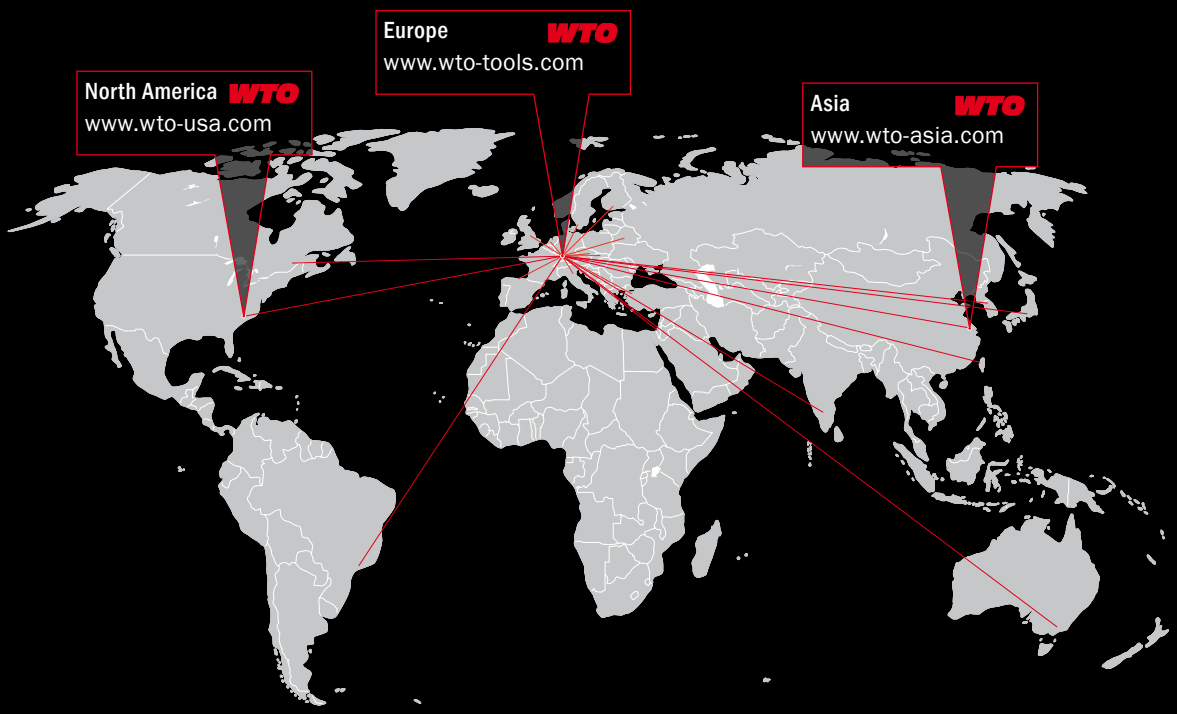


Item No.	d	e	b	h	L	F_1	F_2		
160022C51	22	90	6	12.50	14	50	32	77567	104617
160027C51	27	90	7	15.50	13	50	50	100091	99760
160032C51	32	90	8	18.00	13	50	50	20870	99760
160025C51	1"	90	3/16"	15.08	13	50	50	118946	99760
160031C51	1 1/4"	90	1/4"	19.06	13	50	50	113932	99760

Dimensions in mm



WTO worldwide



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08 I 2025 en