WFL
MILLTURN TECHNOLOGIES

M20 | M20-G
M30 | M30-G
M35 | M35-G
M40 | M40-G
M40X | M40X-G
M50 | M50-G
M60 | M60-G | M65
M80 | M80-G
M80X | M80X-G
M85 | M85-G
M100 | M120 | M150
M175
M200

[EN]

CLAMP ONCE – MACHINE COMPLETE

GROUP
AUTANIA

MILLTURNs

Tailstock | Counter spindle

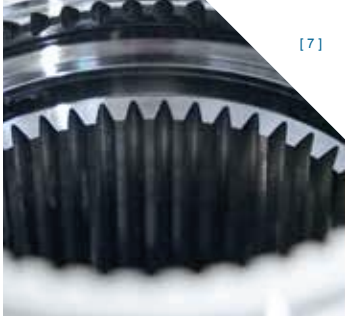
Complete machining of complex chuck and shaft parts

Why use several different machines if one can do the whole job?

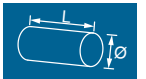
Combining all machining and measuring operations in one single MILLTURN by WFL will raise the efficiency of your production enormously. This is an investment that pays off in virtually no time.

Genious - multifunctional

An enormous technology spectrum is covered by the possibility of interpolating the NC-axis B, C, X, Y, Z. Which makes complete machining by turning, drilling, milling, deep hole drilling, OD- and ID-splining, turn-milling and many more operations without manual interventions a reality.



M20
M20-G

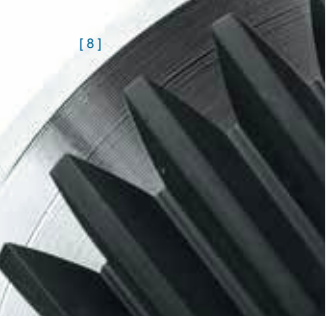


Ø: 500 mm (19,685 in)
L: 3000 mm (118,1102 in)

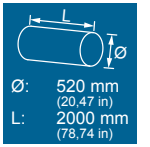
M20 MILLTURN
M20-G MILLTURN

Technical data

		M20	M20-G left // right
Nominal center distance	mm	1000/1500/2000/3000	1000/1500/2000/3000
Swing - ø over Top slide	mm	500	500
Max. power, Turning spindle 40% (100%) duty cycle	kW	44(32)	44(32)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	840(610)	840(610)
Max. spindle speed, Turning spindle	min^{-1}	4000	4000
Max. power, Miling spindle 40% (100%) duty cycle	kW	25(20)	25(20)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	110(85)	110(85)
Max. spindle speed, Milling spindle	min^{-1}	20000	20000
Swiveling angle B - axis	degree	240(-120 … +120)	240(-120 … +120)
Travel Y - axis	mm	260(±130)	260(±130)
Travel X - axis	mm	575(-100…+475)	575(-100…+475)
Tailstock female taper	type	MK5	-
Tool magazine storage system	type	disc I chain	disc I chain
Storage locations (coded)	number	40/80/120 | 80/160	40/80/120 | 80/160
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl



M30
M30-G

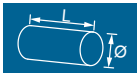


M30 MILLTURN
M30-G MILLTURN

Technical data

		M30	M30-G left // right
Nominal center distance	mm	2000	1800
Swing - ø over Top slide	mm	520	520
Max. power, Turning spindle 40% (100%) duty cycle	kW	44(32)	44(32)//44(32)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	840(610)	840(610)//840(610)
Max. spindle speed, Turning spindle	min^{-1}	4000	4000//4000
Max. power, Miling spindle 40% (100%) duty cycle	kW	20(15)	20(15)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	250(190)/165(125)/125(95)	250(190)/165(125)/125(95)
Max. spindle speed, Milling spindle	min^{-1}	6000/9000/12000	6000/9000/12000
Swiveling angle B - axis	degree	-110...+110	-110...+110
Travel Y - axis	mm	250(-100...+150)	250(-100...+150)
Travel X - axis	mm	600(-20...+580)	600(-20...+580)
Tailstock female taper	type	MK5	-
Tool magazine	number	40/80	40/80
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

M35
M35-G



Ø: 520 mm (20,47 in)
L: 2000 mm (78,74 in)

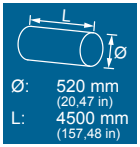
M35 MILLTURN
M35-G MILLTURN

Technical data

		M35	M35-G left // right
Nominal center distance	mm	2000	1800(1680)
Swing - ø over Top slide	mm	520	520
Max. power, Turning spindle 40% (100%) duty cycle	kW	44(32)/54(37)	44(32)/54(37)//44(32)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	840(610)/1600(1100)	840(610)/1600(1100)//840(610)
Max. spindle speed, Turning spindle	min^{-1}	4000/3300	4000/3300//4000
Max. power, Miling spindle 40% (100%) duty cycle	kW	33(27)	33(27)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	284(233)/213(175)	284(233)/213(175)
Max. spindle speed, Milling spindle	min^{-1}	9000/12000/*	9000/12000/*
Swiveling angle B - axis	degree	-110...+110	-110...+110
Travel Y - axis	mm	250(-100...+150)	250(-100...+150)
Travel X - axis	mm	600(-20...+580)	600(-20...+580)
Tailstock female taper	type	MK5	-
Tool magazine	number	40/80/120	40/80/120
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M40
M40-G

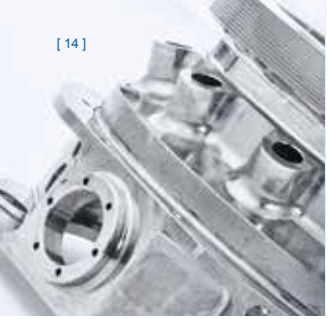


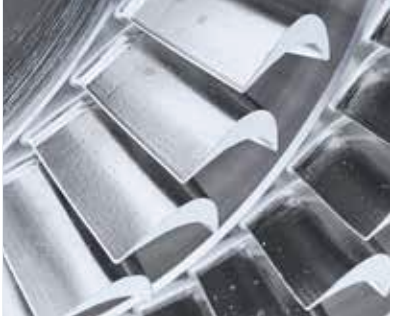
M40 MILLTURN
M40-G MILLTURN

Technical data

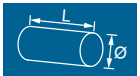
		M40	M40-G left // right
Nominal center distance	mm	1000/2000/3000/4500	1000/2000/3000/4500
Swing - ø over Top slide	mm	520	520
Max. power, Turning spindle 40% (100%) duty cycle	kW	44(32)/54(37)	44(32)/54(37)//44(32)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	840(610)/2000(1400)	840(610)/2000(1400)//840(610)
Max. spindle speed, Turning spindle	min^{-1}	4000/3300	4000/3300//4000
Max. power, Miling spindle 40% (100%) duty cycle	kW	33(27)	33(27)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	284(233)/213(175)	284(233)/213(175)
Max. spindle speed, Milling spindle	min^{-1}	9000/12000/*	9000/12000/*
Swiveling angle B - axis	degree	-110...+110	-110...+110
Travel X - axis	mm	250(-100...+150)	250(-100...+150)
Travel Y - axis	mm	600(-20...+580)	600(-20...+580)
Tailstock female taper	type	MK5	-
Tool magazine	number	50/100/150/200	50/100/150/200
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request





M40X
M40X-G



Ø: 520 mm (20,47 in)
L: 4500 mm (157,48 in)

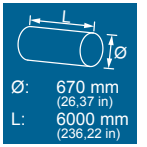
M40X MILLTURN
M40X-G MILLTURN

Technical data

		M40X	M40X-G left // right
Nominal center distance	mm	1000/2000/3000/4500	1000/2000/3000/4500
Swing - ø over Top slide	mm	520	520
Max. power, Turning spindle 40% (100%) duty cycle	kW	44(32)/54(37)	44(32)/54(37)//44(32)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	840(610)/2000(1400)	840(610)/2000(1400)//840(610)
Max. spindle speed, Turning spindle	min^{-1}	4000/3300	4000/3300//4000
Max. power, Miling spindle 40% (100%) duty cycle	kW	33(27)//40(35)	33(27)//40(35)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	284(233)/213(175)//480(420)/300(260)	284(233)/213(175)//480(420)/300(260)
Max. spindle speed, Milling spindle	min^{-1}	9000/12000/*//6000/8000	9000/12000/*//6000/8000
Swiveling angle B - axis	degree	-110...+110	-110...+110
Travel Y - axis	mm	400(-100...+300)	400(-100...+300)
Travel X - axis	mm	800(-20...+780)	800(-20...+780)
Tailstock female taper	type	MK5	-
Tool magazine	number	50/100/150/200//36/72/108/144	50/100/150/200//36/72/108/144
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M50
M50-G



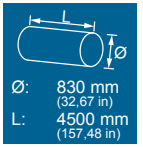
M50 MILLTURN
M50-G MILLTURN

Technical data

		M50	M50-G left /// right
Nominal center distance	mm	1000/2000/3000/4500/6000	1000/2000/3000/4500/6000
Swing - ø over Top slide	mm	670/670/670/670/650	670/670/670/670/650
Max. power, Turning spindle 40% (100%) duty cycle	kW	54(37)/55(45)//56(40)/80(60)	54(37)/55(45)//56(40)/80(60)///55(45)/60(40)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	2000(1400)/1830(1500)//3200(2320)/3600(2740)	2000(1400)/1830(1500)//3200(2320)/3600(2740)///1830(1500)/2850(1900)
Max. spindle speed, Turning spindle	min^{-1}	3300/2500//2600/2600	3300/2500//2600/2600///1800/3300
Max. power, Miling spindle 40% (100%) duty cycle	kW	33(27)//40(35)	33(27)//40(35)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	284(233)/213(175)//480(420)/300(260)	284(233)/213(175)//480(420)/300(260)
Max. spindle speed, Milling spindle	min^{-1}	9000/12000/*//6000/8000	9000/12000/*//6000/8000
Swiveling angle B - axis	degree	-110...+110	-110...+110
Travel Y - axis	mm	400(-175...+225)	400(-175...+225)
Travel X - axis	mm	800(-20...+780)	800(-20...+780)
Tailstock female taper	type	MK6	-
Tool magazine	number	50/100/150/200//36/72/108/144	50/100/150/200//36/72/108/144
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M65
M60
M60-G



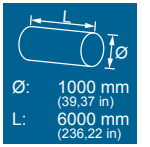
M60 MILLTURN
M60-G MILLTURN
M65 MILLTURN

Technical data

		M60	M60-G left // right	M65
Nominal center distance	mm	1000/2000/3000/4500	2000/3000/4500	1000/2000/3000/4500
Swing - ø over Top slide	mm	690	690	830
Max. power, Turning spindle 100% duty cycle	kW	56(40)/80(60)	56(40)/80(60)//56(40)	56(40)/80(60)
Max. torque, Turning spindle 100% duty cycle	Nm	2500(1830)/3600(2740)	2500(1830)/3600(2740)//2500(1830)	3200(2320)/3600(2740)
Max. spindle speed, Turning spindle	min^{-1}	3300/2600	3300/2600//3300	2600/2600
Max. power, Miling spindle 100% duty cycle	kW	30/55	25	30/55
Max. torque, Milling spindle 100% duty cycle	Nm	315/730	300	315/730
Max. spindle speed, Milling spindle	min^{-1}	6000/3200	4000	6000/3200
Swiveling angle B - axis	degree	-110...+90	-110...+90	-110...+90
Travel Y - axis	mm	-	300(-125 /...+175)	-
Travel Y - axis (option)	mm	600(-125/...+475)	-	600(-200/...+400)
Travel X - axis	mm	720(-20...+700)	700(-30...+670)	720(-20...+700)
Tailstock female taper	Type	MK5	-	MK5
Tool magazine	number	30/60/90	30/60/90	30/60/90
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M80
M80-G



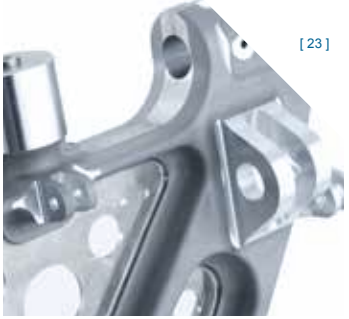
Ø: 1000 mm (39,37 in)
L: 6000 mm (236,22 in)

M80 MILLTURN
M80-G MILLTURN

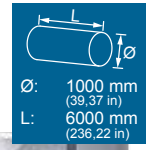
Technical data

		M80	M80-G left // right
Nominal center distance	mm	1000/2000/3000/4500/6000	2000/3000/4500/6000
Swing - ø over Top slide	mm	1000/1000/1000/1000/980	1000/1000/1000/980
Max. power, Turning spindle 40% (100%) duty cycle	kW	56(40)/80(60)	56(40)/80(60)//60(40)/90(60) *
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	3420(2440)/5860(4500) *	3420(2440)/5860(4500)//3000(2000)/4800(3200) *
Max. spindle speed, Turning spindle	min^{-1}	2400/1600 *	2400/1600//2400/1600 *
Max. power, Miling spindle 40% (100%) duty cycle	kW	58(45) *	58(45) *
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	640(500)/400(310)	640(500)/400(310)
Max. spindle speed, Milling spindle	min^{-1}	5000/8000	5000/8000
Swiveling angle B - axis	degree	220(-110...+110)	220(-110...+110)
Travel Y - axis	mm	650(-300...+350)	650(-300...+350)
Travel X - axis	mm	900(-20...+880)	900(-20...+880)
Tailstock female taper	type	MK6	-
Tool magazine	number	36/72/108/200 *	36/72/108/200 *
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request



M80X
M80X-G



Ø: 1000 mm (39,37 in)
L: 6000 mm (236,22 in)

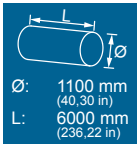
M80X MILLTURN
M80X-G MILLTURN

Technical data

		M80X	M80X-G left // right
Nominal center distance	mm	1000/2000/3000/4500/6000	2000/3000/4500/6000
Swing - ø over Top slide	mm	1000/1000/1000/1000/980	1000/1000/1000/980
Max. power, Turning spindle 40% (100%) duty cycle	kW	56(40)/80(60) *	56(40)/80(60)//60(40)/90(60) *
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	3420(2440)/5860(4500) *	3420(2440)/5860(4500)//3000(2000)/4800(3200) *
Max. spindle speed, Turning spindle	min^{-1}	2400/1600 *	2400/1600//2400/1600 *
Max. power, Miling spindle 40% (100%) duty cycle	kW	58(45)	58(45)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	640(500)/400(310)	640(500)/400(310)
Max. spindle speed, Milling spindle	min^{-1}	5000/8000	5000/8000
Swiveling angle B - axis	degree	220(-110...+110)	220(-110...+110)
Travel Y - axis	mm	650(-300...+350)	650(-300...+350)
Travel X - axis	mm	1050(-20...+1030)	1050(-20...+1030)
Tailstock female taper	type	MK6	-
Tool magazine	number	36/72/108/200 *	36/72/108/200 *
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M85
M85-G



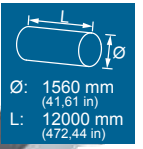
M85 MILLTURN
M85-G MILLTURN

Technical data

		M85	M85-G left // right
Nominal center distance	mm	1000/2000/3000/4500/6000	2000/3000/4500/6000
Swing - ø over Top slide	mm	1100/1100/1100/1100/1080	1100/1100/1100/1080
Max. power, Turning spindle 40% (100%) duty cycle	kW	56(40)/80(60) *	56(40)/80(60)//60(40)/90(60) *
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	3420(2440)/5860(4500) *	3420(2440)/5860(4500)//3000(2000)/4800(3200) *
Max. spindle speed, Turning spindle	min^{-1}	2400/1600 *	2400/1600//2400/1600 *
Max. power, Miling spindle 40% (100%) duty cycle	kW	58(45)	58(45)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	640(500)/400(310)	640(500)/400(310)
Max. spindle speed, Milling spindle	min^{-1}	5000/8000	5000/8000
Swiveling angle B - axis	degree	220(-110...+110)	220(-110...+110)
Travel Y - axis	mm	650(-350...+300)	650(-350...+300)
Travel X - axis	mm	1050(-20...+1030)	1050(-20...+1030)
Tailstock female taper	type	MK6	-
Tool magazine	number	36/72/108/200 *	36/72/108/200 *
Control SIEMENS	type	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M100
M120
M150



Ø: 1560 mm (41,61 in)
L: 12000 mm (472,44 in)

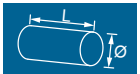
M100 MILLTURN
M120 MILLTURN
M150 MILLTURN

Technical data

		M100	M120	M150
Nominal center distance	mm	2000/3000/5000/6500/8000/10000/12000		
Swing - ø over Top slide	mm	980/940/920/880/860/820/780	1220/1180/1160/1120/1100/1060/1020	1560/1520/1500/1460/1440/1400/1360
Max. power, Turning spindle 40% (100%) duty cycle	kW	103(74) // 113(100)	103(74) // 113(100)	103(74) // 113(100)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	6400(4600)/10160(7300)//8790(7810)/14000(12400)		
Max. spindle speed, Turning spindle	min^{-1}	1600 / 1000 // 1600 /1000	1600/1000//1600/1000	1600/1000//1600/1000
Max. power, Miling spindle 100% duty cycle	kW	30/55	30//45//55	45//55
Max. torque, Milling spindle 100% duty cycle	Nm	315/730	315//500/310//730	500/310//730
Max. spindle speed, Milling spindle	min^{-1}	6000/3200	6000//5000/8000//3200	5000/8000//3200
Swiveling angle B - axis, 30kW, 55kW	degree	- 110/+90	- 110/+90	- 110/+90
Swiveling angle B - axis, 45kW	degree	-	- 110/+110	- 110/+110
Travel Y - axis, 30kW	mm	600(-200...+400)	600(-250...+350)	-
Travel Y - axis, 45kW	mm	-	650(-290...+360)	800(-400...+400)
Travel Y - axis, 55kW	mm	500(-200...+300)	650(-300...+350)	800(-450...+350)
Travel X - axis, 30kW, 55kW	mm	920(-20...+900)	1120(-20...+1100)	1120(-20...+1100)
Travel X - axis, 45kW	mm	-	1100(-20...+1080)	1150(-20...+1130)
Tailstock female taper	Type	MK6	MK6 / Me100	Me100
Tool magazine	number	36/72/108 / *	36/72/108 / *	36/72 /108/ *
Control Siemens	type	SINUMERIK 840D sl	SINUMERIK 840D sl	SINUMERIK 840D sl

*) other values upon request

M175



Ø: 1840 mm
(72,44 in)
L: 12000 mm
(472,44 in)

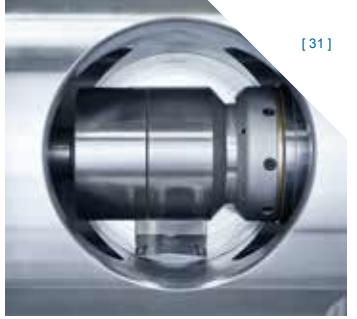
M175 MILLTURN

M175

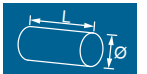
Technical data

Nominal center distance	mm	2000 / 3000 / 5000 / 6500 / 8000 / 10000 / 12000
Swing - ø over Top slide	mm	1840 / 1810 / 1790 / 1750 / 1730 / 1700 / 1660
Max. power, Turning spindle 40% (100%) duty cycle	kW	103(74) // 113(100)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	10160(7300)//14000(12400)
Max. spindle speed, Turning spindle	min^{-1}	1000
Max. power, Miling spindle 40% (100%) duty cycle	kW	58(45)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	640(500)/400(310)
Max. spindle speed, Milling spindle	min^{-1}	5000/8000
Swiveling angle B - axis	degree	- 110/+110
Travel Y - axis	mm	1100 (-550...+550)
Travel X - axis	mm	1620 (-20…+1600)
Tailstock female taper	type	Me100 / WFL-Center
Tool magazine	number	36 / 72 / 108 / *
Control SIEMENS	type	SINUMERIK 840D sl

*) other values upon request



M200



Ø: 2000 mm (78,74 in)
L: 14000 mm (551,18 in)

M200 MILLTURN

Technical data

		M200
Nominal center distance	mm	5000/6500/8000/10000/12000/14000/ *
Swing - ø over Top slide	mm	2000*
Max. power, Turning spindle 40% (100%) duty cycle	kW	113 (100) / 200 (140) / 230 (180) *
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	14000 (12400) / 57000 (40000) / 110000 (87000) *
Max. spindle speed, Turning spindle	min^{-1}	1000/500/350
Max. power, Miling spindle 100% duty cycle	kW	80
Max. torque, Milling spindle 100% duty cycle	Nm	1800
Max. spindle speed, Milling spindle	min^{-1}	3500
Swiveling angle B - axis	degree	220(-110…+110)
Travel Y - axis	mm	1400(-800…+600)
Travel X - axis	mm	2100(-20…+2080)
Tailstock female taper	type	Me100 / WFL-Center
Tool magazine	number	30/60/90/ *
Control SIEMENS	type	SINUMERIK 840D sl

*) other values upon request

Technologies by WFL

Turning

5-axis milling

WFL system boring bar

Turn-milling

In-process measuring

Shaping of gear teeth
(Flanx-Spline)

B-axis turning

Milling of gear teeth
(Flanx-LM)

Drilling

Drilling + ID boring

Special tool heads

Deep hole drilling

Cam milling

Milling of crankshaft pins

CNC special
contour bar

Milling

Hobbing of gear teeth
(Flanx-Hob)

ID machining tool

CNC facing head

Grinding
+ fine machining

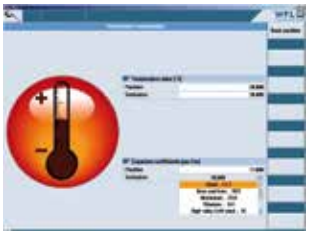
Software solutions by WFL

The Sinumerik 840D sl is tailored for the machining operations and features not only highest possible processing power and exceptionally userfriendly programming but also perfect compatibility with all established CAD-CAM-systems. An LAN connection allows the transfer of NC-programs, technology data, measuring logs, tool data and magazine occupation at any time.

Process monitoring (iControl)

Tool management

Tool offset



Temperature compensation

Millturn PRO program editor

CrashGuard Studio

Programming with 3D simulation software for verification of NC programs on the PC

- Visualisation of all programming steps (incl. WFL/ customer cycles) for error detection at an early stage
- Improved quality of NC programs with respect to efficiency and machine safety
- Shorter set-up times on the machine, thanks to prior simulation
- The machine operator receives a collision tested, finished program
- All 3D geometry data (tools, clamping devices and workpieces) can be used for both CrashGuard and CrashGuard Studio
- Easy to program
- Software maintenance contract available
- Full-featured 3D workspace with collision monitoring

Millturn PRO

Universal and easy to understand programming editor with graphic support, directly on the machine

- Programming directly on the machine possible
- Efficient and easy creation of NC programs

- A cost efficient alternative to big brother „CrashGuard Studio“
- Millturn PRO available in controlpanel-version and additionally for PC
- Allows editing of NC programs created in CrashGuard Studio to be edited directly on the control panel in the interactive screenform
- The tool cutting edge generator makes it possible to create approximate tool models for the material removal simulation
- No maintenance contract
- No 3D workspace

CrashGuard

Software for real time collision prevention, integrated in the interpolator of the CNC system

- Effective protection against collisions in automatic and manual operation
- Collision-free operation even after program interruptions and manual intervention
- At any time, the CNC system is aware of current positions of axes and speeds, PLC signals are also taken into account
- Current settings of the control such as zero offsets, coordinate transformation, etc. are taken into account
- „Reaction time“ = 0 !!! (in real time!)
- All 3D geometry data (tools, clamping devices and workpieces) can be used for both CrashGuard and CrashGuard Studio. The two systems complement each other!

WFL cycles

Programming made easy with WFL program modules

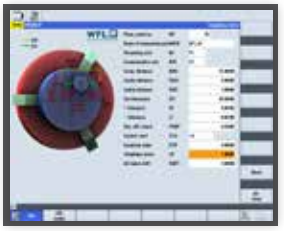
WFL cycles are designed to suit all types of technologies and are completely flexible!

WFL cycle support covers a wide range of standard and special technologies thereby making the programming of machining cycles for both complex and simple workpieces manageable in next to no time. Even advanced CAD/CAM systems cannot map the full functionality of MILLTURN machines when it comes to complex machining tasks. Conversely, the same CAD/CAM systems often prove too laborious for simple operations or create disproportionate data volumes for certain operations.

Shop floor solutions do not constitute a satisfactory alternative either – they only cater for a limited technological range and don't make the grade in the flexibility stakes. WFL solves the problem by offering an unbeatable range of cycles for all conceivable types of applications including in-process measuring.

WFL cycle selection

Deep-hole drilling



Two-point difference check

Gear hobbing

Milling of crankshaft pins

ID spline shaping

Flanx – Gear cutting solutions by WFL

Cycles for the simple machining of external and internal gear teeth

- Flanx-Hob (for hobbing external gear teeth)
- Flanx-Spline (for shaping external and internal gear teeth)
- Flanx-Plus (Flanx-Hob and Flanx-Spline as a cycle package)
- Flanx-Large Module (for milling of large gear teeth with standard milling tools)
- Flanx-InvoMilling™ by Sandvik Coromant (for milling external gear teeth)
- Flanx-Gear Skiving (For manufacturing short external and internal gears with great efficiency)
- WFL GearCAM - software for the production of complex gears

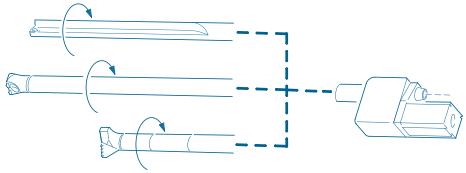
Cranx – WFL cycles for crankshaft machining

Cycles with graphic support for easy programming

- Cranx-Basic (basic cycle package)
- Cranx-Advanced (extended cycle package)
- Cranx-Plus (complete cycle package)

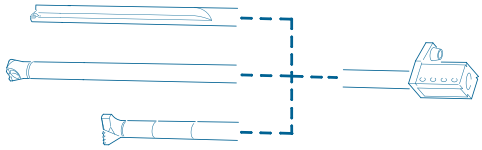
The prismatic tool system

Deep-hole drilling tool
rotating, with coolant supply

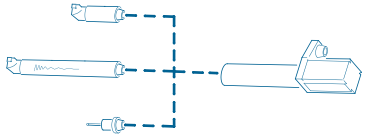


CNC special contour bar
rotating, with radius adjustment (seat pocket machining)

Deep-hole drilling tool
for centric bores

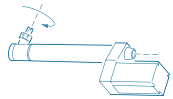


WFL system boring bar
automatic head change

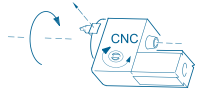


Boring bar
single-piece, vibration damped

ID machining tool
driven



CNC facing head
rotating, with radius adjustment



CNC special contour boring bar
with radius adjustment (bottle boring)

WFL iControl

iCONTROL
PROCESS MONITORING

WFL iControl protects your machine, even during autonomous production throughout the night. Complex, intelligent monitoring options offer comprehensive safety during production.

Advantages

- Greater process reliability thanks to continuous monitoring of machining operations
- Protects the machine against damage
- Increased productivity and workpiece quality
- Tool cost savings and better utilisation of the tool life due to wear monitoring
- Better utilisation of the machine as process signals are shown on the display
- Integration of sensored tools
- Maximum sensitivity thanks to teach-in technology
- Option to perform monitoring without teach-in cut
- Optimum monitoring of machining processes with different cutting depths thanks to adaptive limits
- Option for early detection of machine wear

Monitoring of up to 16 process signals

- Forces and torques of all axes and spindles involved in a machining operation
- External sensors for:
  vibration, pressure, flow, temperature etc.

The process signals are evaluated according to various criteria:

- Collision monitoring
- Process monitoring
- Tool wear monitoring

- Collision Limit

- Red Limit
- Adaptive Limits
- Dynamic Limit
- Continuous Limit

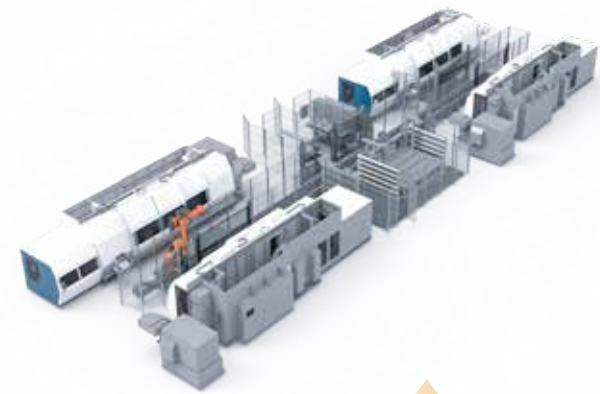
- Yellow Limit
- Energy Limits

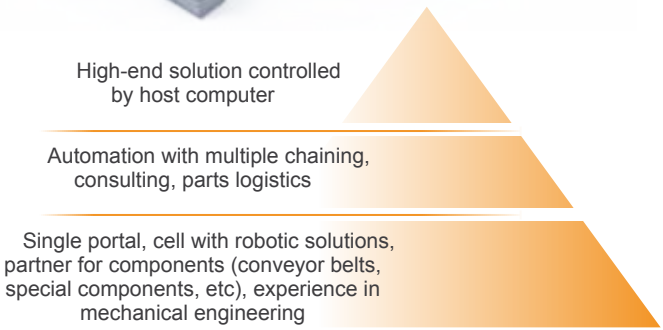
Robotic Technologies

FRAI
ROBOTIC TECHNOLOGIES

WFL Millturn Technologies, together with its subsidiary FRAI Robotic Technologies, has decades of expertise and offers a variety of automation variants for different requirements to maximise productivity.

This experience enables the company to respond to current trends. The product spectrum ranges from bar feeders to gantry loaders through to articulated robots. Automation is even becoming increasingly essential to provide productivity benefits in small-series production.





Advantages of automation

- Maximising of machine capacity/run time
- Continuous production process
- Bridging breaks and night shifts
- Cost reduction when interlinking machinery
- Increased output
- Quality assurance
- Reduce lead time per order
- Release staff for skilled work & increase motivation
- Visualisation and operation possible directly on the WFL operator panel
- Payback period of just a few years
- Flexibility

References




Aerospace




Oil & gas




Hydraulics & pneumatics

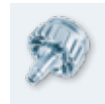



Automotive




Printing machines



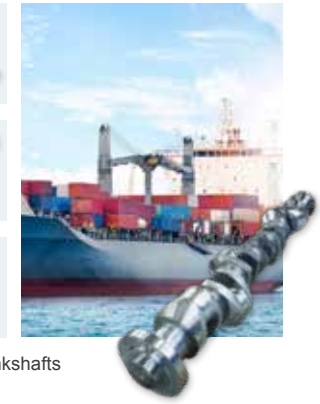



Engineering




Energy



Crankshafts




Plastic machines

WFL MILLTURN TECHNOLOGIES

CRASH GUARD ®

CRASH GUARD STUDIO ®

MILLTURN PRO

FLANX THE TOOTH PROFILER

craNx THE CRANKSHAFT PROFILER

Gear CAM Based on EUKLID GearCAM

WFL TOOLING SOLUTIONS

WFL ROBOTIC SOLUTIONS

utronix THE VIRTUAL U-AXIS

iCONTROL PROCESS MONITORING

myWFL Cockpit

Screw CAM

greenside TECHNOLOGIES

Ready for Industry 4.0

my MILLTURN

AT
WFL Millturn Technologies GmbH&Co.KG
A-4030 Linz | Wahringerstraße 36 | Austria
Tel +43-(0)732-6913-0 | Fax +43-(0)732-6913-8172
E-mail: office@wfl.at | www.wfl.at

FR
WFL Millturn Technologies Gmbh & Co. KG
3 route d'Aussonne | 31700 Cornebarrieu | France
Tel +33 648 776944 | E-Mail office@wfl-france.com
www.wfl-france.com

US
WFL Millturn Technologies, Inc.
Wixom, MI 48393 | 48152 West Road | Autania Tec Center | USA
Tel +1 - 248 347 93 90 | Fax +1 - 248 347 93 92
E-mail: office@wfl-usa.com | www.wfl-usa.com

CN
奥地利WFL车铣技术公司北京代表处
北京市东城区东直门外大街48号东方银座写字楼 F7K
邮编:100027 | 电话: +86 - 10 - 84 54 96 31 | 传真: +86 -10-84 54 96 30
电子邮件: office@wfl-china.com | 网址: www.wfl-china.com

BR
WFL Millturn Technologies Máquinas de Precisão e Serviços Ltda.
Rua José Alexandre de Barros n° 701 | Santa Bárbara d´Oeste - São Paulo
Brasil | Mobile.: +55 (11) 98187 5541 | Office: +55 (19) 3454 0461

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