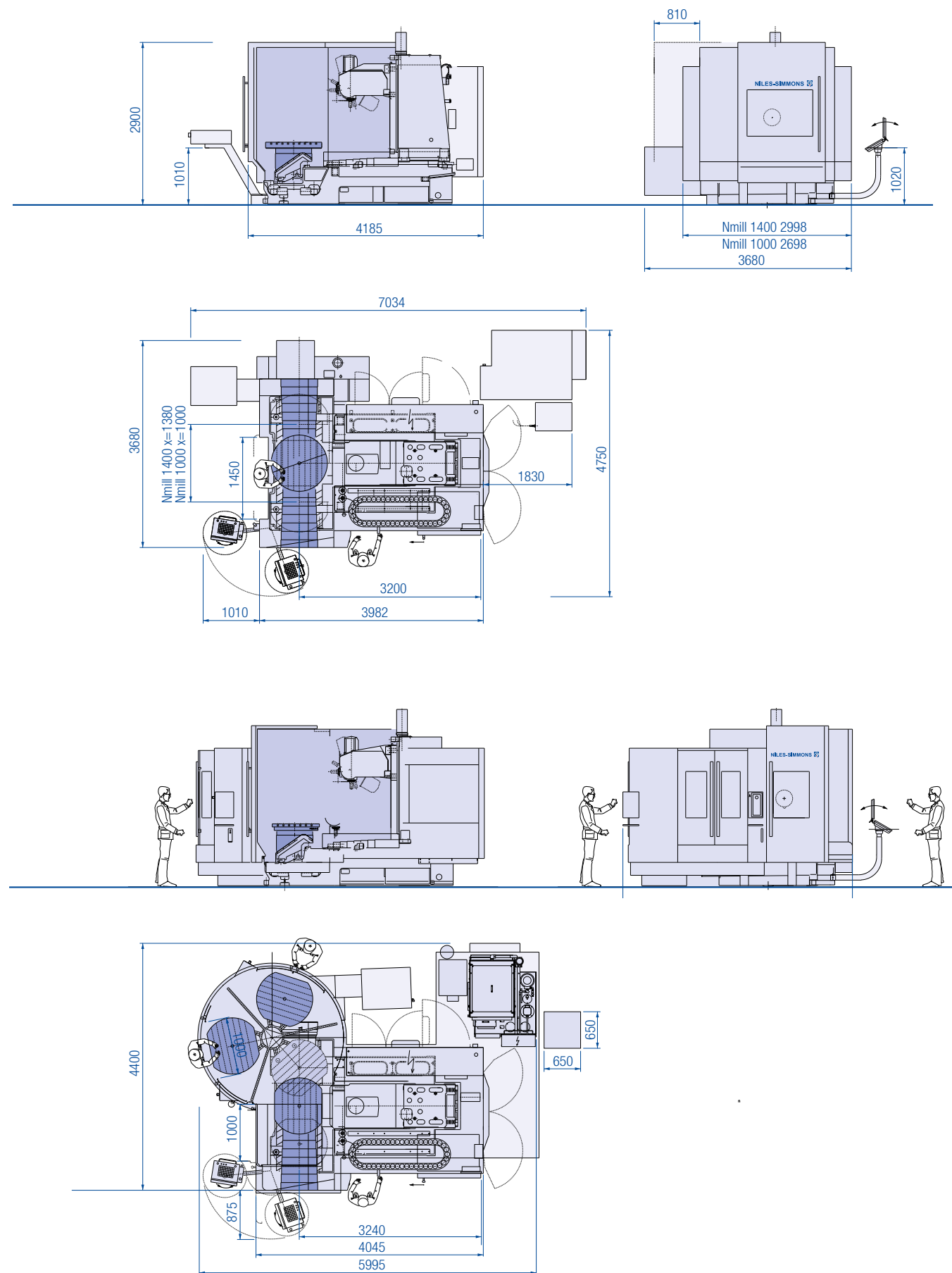
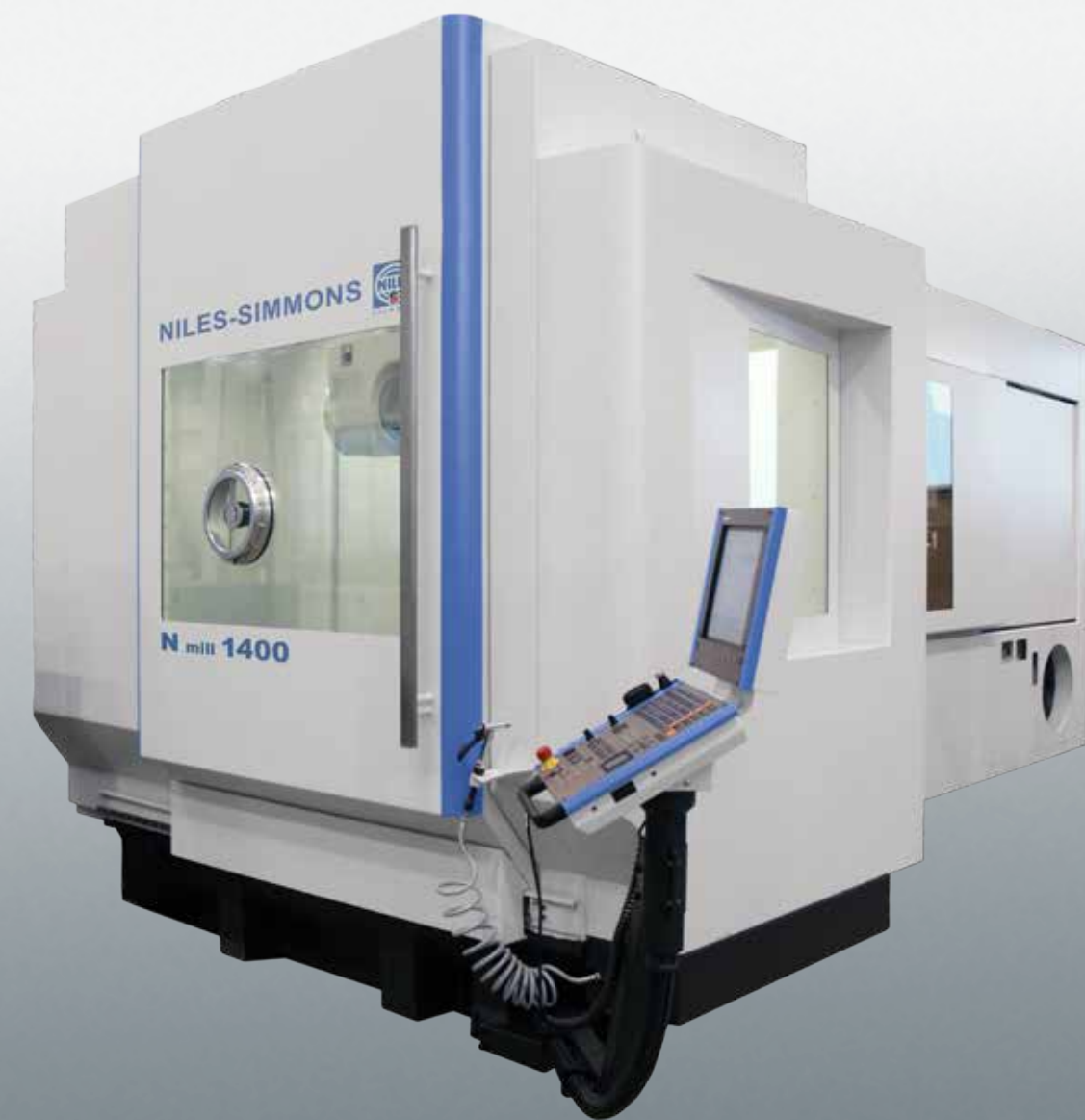




5-Axis Milling Center Nmill 1000/1400

Compact



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NILES-SIMMONS



Compact

- ➔ Large working space with excellent ergonomics and low space requirement
- ➔ Heavy cast-iron base and supports with a high-precision guidance system and thermostable structure
- ➔ NC rotary table with dynamic direct drive with hydraulic clamping at desired angle, rotary transmission for additional functions, optional speed range up to 500 rpm with automatic alignment function
- ➔ Complete machining from roughing to finishing is augmented by milling/turning function
- ➔ Reliable high-precision spindles with oil-air lubricant with HSK63/HSK100 interface, swivelling A-Axis can be hydraulically clamped at desired angle

- ➔ The Nmill design has been proven 100 times
- ➔ Model for turning that has an optional hydraulic clamping function for the spindle
- ➔ Uses the latest generation of control technology from HEIDENHAIN and SIEMENS
- ➔ New comfortable operating design with 19" TFT monitors with NILES-HMI

Technical Features / Options:
The technical features and optional packages of the Nmill 1000 and Nmill1400 are tailored to meet various machining and operating conditions.
The new milling/turning function opens up the area of application and enables complete machining tasks to be executed in a flexible way.

Basic Configuration

- Closed machine housing
- Panes made of composite safety glass
- 2 integrated screw conveyors
- Direct absolute measuring systems
- Integrated safety/functional safety
- 3-point support without foundation
- External coolant/air cooling
- Spray gun
- Front /side chip conveyor
- Mobile handwheel with spiral cable

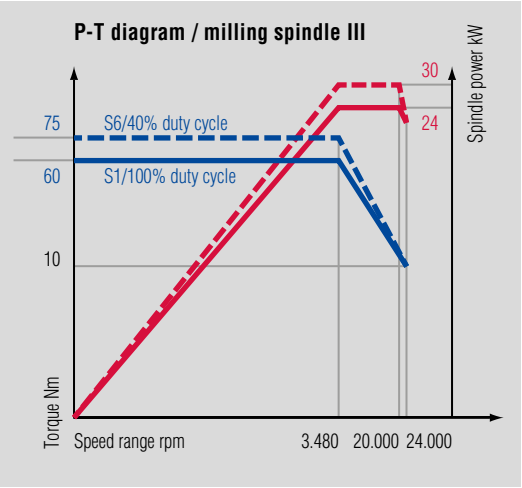
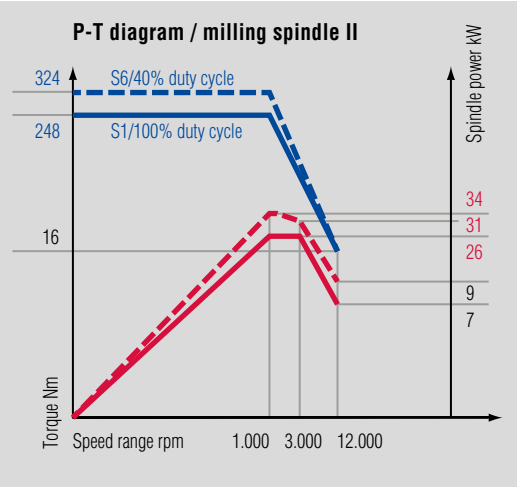
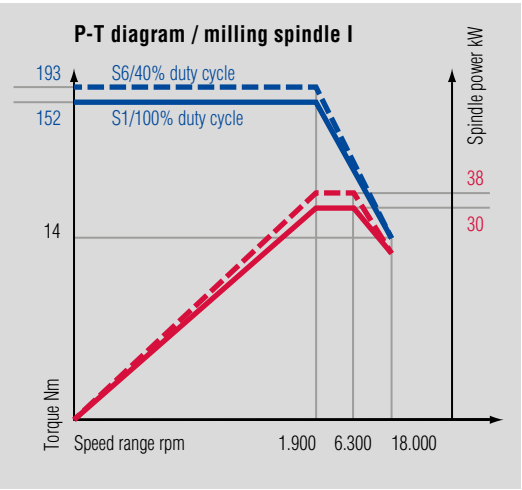
Options

- Triple pallet changer
- Internal coolant supply, unregulated
- 40 bars of pressure | flow rate 25 l/min
- Internal coolant supply, regulated
- 80 bars of pressure | flow rate 18 l/min
- Rotoclear on front/side
- Minimum lubrication
- Coolant Mist extraction
- Tool probing by using lasers
- Table top load cell
- Sensor for measuring workpiece
- Air through the spindle
- Cooling using cooling lubricant
- Higher precision
- Import of CAD data
- Etched table surface
- Thermal and vibration sensors
- Remote diagnosis
- Automatic compensation function
- Tailored solutions

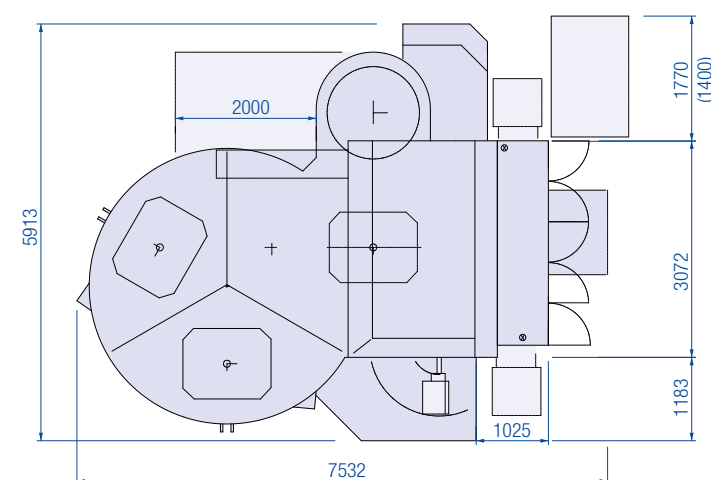
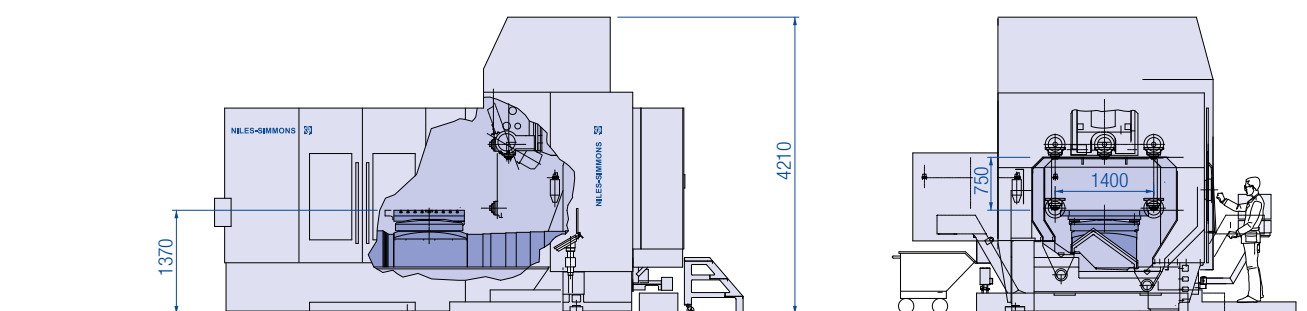
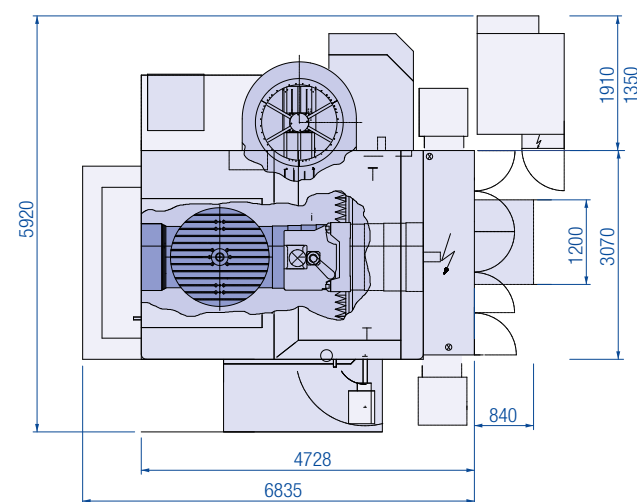
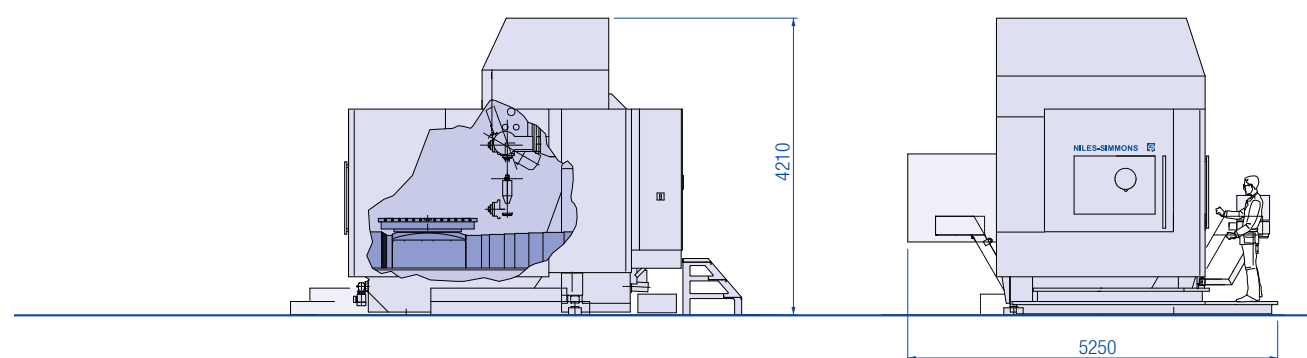
Nmill 1400



100% made in Germany – developed and produced in Chemnitz



Machine Type			Nmill 1000	Nmill 1400	Nmill 1400T
Axes					
Longitudinal	X	mm	1000	1400	1400
Cross	Y	mm	1150	1150	1150
Vertical	Z	mm	895	895	895
Swivel Axis, Spindle	A	degrees	+16/-120	+16/-120	+16/-120
Number of simultaneous axis	n		5	5	5
Work table					
Table size, Dia		mm	1000	1100	1000
Max.Table load		kg	1100	1600	1400
Table slots, distance / width		mm	100/18-H12	100/18-H12	radial/4x18H7; 4x18H12
Max. speed range		rpm	40	40	500
Working Spindle					
Working Spindle HSK A63, 15.000 rpm		kW	38	38	-
Spindle torque 40 % duty cycle		Nm	193	193	-
Working Spindle HSK T63, 18.000 rpm		kW	38	38	38
Spindle torque 40 % duty cycle		Nm	193	193	193
Working Spindle HSK A63, 24.000 rpm		kW	30	30	-
Spindle torque 40 % duty cycle		Nm	75	75	-
Working Spindle HSK A100, 10.000 rpm		kW	-	34	-
Spindle torque 40 % duty cycle		Nm	-	325	-
Working Spindle HSK T100, 12.000 rpm		kW	-	-	34
Spindle torque 40 % duty cycle		Nm	-	-	325
Feed drives					
Max. feed rate		rpm	15	15	15
Rapid Traverse		rpm	30	30	30
Feed force		N	11000	11000	11000
Automation					
Pallet magazine	Pockets		-	3	-
Pallet size	Ø mm		-	1000/840	-
Tool magazine HSK 63	Pockets		30, 46, 92	30, 46, 92	30, 46, 92
Tool magazine HSK 100	Pockets		30/170	30/170	30/170
Max. tool diameter / length	mm		160/400	160/400	160/400
Max. tool weight	kg		12	12	12
Chip-to-chip time	s		11	11	11
Accuracy data					
Positioning deviation M ISO 230-2 (97)	XYZ	mm	0,004	0,004	0,004
Control unit					
HEIDENHAIN			TNC 640	TNC 640	TNC 640
SIEMENS			840 DsL	840 DsL	840 DsL
Machine housing					
Closed machine housing			yes	yes	yes
Opening width Machine/WPC	mm		1450	1450/1000	1450
Chip removal					
Chip conveyor / Discharge	front / lh		yes	yes	yes
Integrated screw conveyor			2	2	2
Coolant					
Dry machining, external air cooling	Nozzles		3	3	3
Wet machining, external coolant supply	Nozzles		3	3	3
Pressure	bar		6	6	6
Flow rate	l/min		25	25	25
Weight					
Machine weight, app.	kg		12000	12600..17100	12600



5-Axis Milling Center Nmill 1900

Proven Technology



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NILES-SIMMONS



Proven Technology

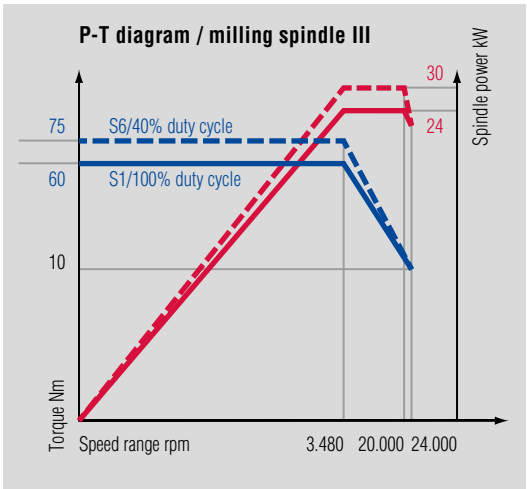
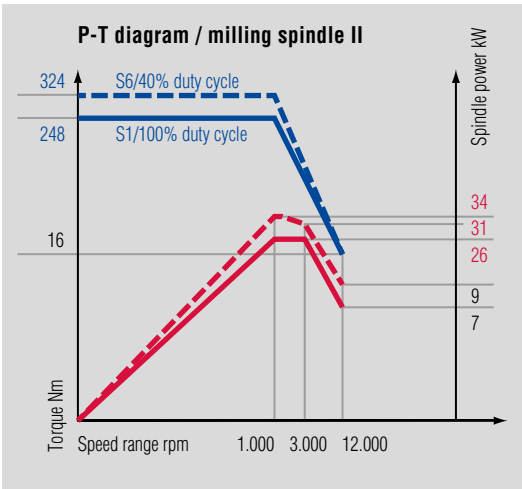
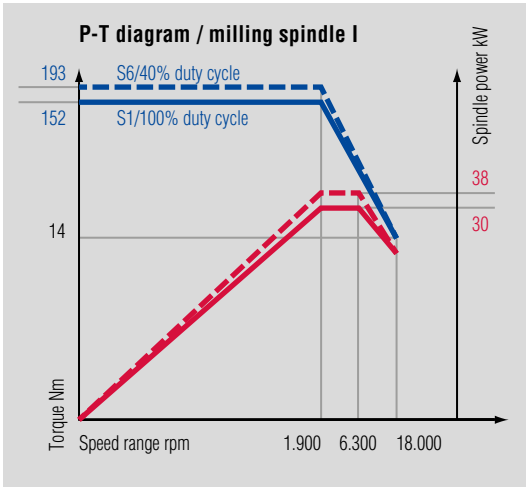
- ➔ Gantry design for maximum robustness with heavy cast iron base and graduated high-precision guidance systems
 - ➔ Z-Axis with milling spindle unit in a weight-saving robust sandwich construction
 - ➔ NC rotary table with a dynamic direct drive with hydraulic clamping at desired angle, rotary transmission for additional functions, optional speed range up to 250 rpm with automatic alignment function
 - ➔ Reliable high-precision spindles with oil-air lubricant with HSK63 and HSK 100 interface, swivelling B-Axis can be hydraulically clamped at desired angle
 - ➔ Model for turning that has an optional hydraulic clamping function for the spindle
- Excellent ergonomics and accessibility

- ➔ Uses the latest generation of control technology from HEIDENHAIN and SIEMENS
 - ➔ New, comfortable operating design with 19" TFT monitors with NILES-HMI
- Technical Features / Options:
The optional packages are tailored to meet various operating conditions. From single-item to small-batch production, this machine guarantees you remain competitive thanks to customised automation solutions and technology packages.
The new milling/turning function opens up the area of application and enables complete machining tasks to be executed in a flexible way.

- Basic Configuration
- Protected operator's cab
 - Panes made of composite safety glass
 - 2 integrated screw conveyors
 - Direct absolute measuring systems
 - Integrated safety/functional safety
 - 3-point support without foundation
 - Outer coolant/air cooling
 - Spray gun
 - Front/side chip conveyor
 - Mobile handwheel with spiral cable

- Options
- Triple pallet changer
 - Internal coolant supply, unregulated 40 bars of pressure | flow rate 25 l/min
 - Internal coolant supply, regulated 80 bars of pressure | flow rate 18 l/min
 - Rotoclear on front/side
 - Minimum lubrication
 - Coolant Mist extraction
 - Tool probing by using lasers
 - Tabletop load cell
 - Sensor for measuring workpiece
 - Air through the spindle
 - Cooling using cooling lubricant
 - Higher precision
 - Import of CAD data
 - Etched table surface
 - Thermal and vibration sensors
 - Remote diagnosis
 - Automatic compensation function
 - Tailored solutions

Nmill 1900



Machine Type		Nmill 1900	Nmill 1900T
Axes			
Longitudinal	X mm	1900	1900
Cross	Y mm	1400	1400
Vertical	Z mm	720/905	720/905
Swivel Axis, Spindle	B degrees	-20/ +120	-20/ +120
Number of simultaneous axis	n	5	5
Work table			
Table size, Dia	mm	1600	1500
Max. Table load	kg	4000	4000
Table slots, distance/ width	mm	100/ 18 H7	radial / 4x18H7; 4x18H12
Max. speed range	rpm	30	250
Working Spindle			
Working Spindle HSK A63, 15.000 rpm	kW	38	-
Spindle torque 40 % duty cycle	Nm	193	-
Working Spindle HSK T63, 18.000 rpm	kW	38	38
Spindle torque 40 % duty cycle	Nm	193	193
Working Spindle HSK A63, 24.000 rpm	kW	30	-
Spindle torque 40 % duty cycle	Nm	75	-
Working Spindle HSK A100, 10.000 rpm	kW	34	-
Spindle torque 40 % duty cycle	Nm	325	-
Working Spindle HSK T100, 12.000 rpm	kW	-	34
Spindle torque 40 % duty cycle	Nm	-	325
Feed drives			
Max. feed rate	rpm	15	15
Rapid Traverse	rpm	40	40
Feed force	N	16000	16000
Automation			
Pallet magazine	Pockets	3	-
Pallet size	Ø mm	1000 x 1250	-
Tool magazine HSK 63	Pockets	45,120, 238	45,120, 238
Tool magazine HSK 100	Pockets	30/170	30/170
Max. tool diameter / length	mm	160/500	160/500
Max. tool weight	kg	12	12
Chip-to-chip time	s	15	15
Accuracy data			
Positioning deviation M ISO 230-2 (97) XYZ	mm	0,004	0,004
Control unit			
HEIDENHAIN		TNC 640	TNC 640
SIEMENS		840 DsL	840 DsL
Machine housing			
Closed machine housing		yes	yes
Opening width Machine/WPC	mm	1730/1600	1730
Chip removal			
Chip conveyor / Discharge	front / back	yes	yes
Integrated screw conveyor		2	2
Coolant			
Dry machining, external air cooling	Nozzles	3	3
Wet machining, external coolant supply	Nozzles	3	3
Pressure	bar	6	6
Flow rate	Liter/min	25	25
Weight			
Machine weight, app.	kg	25000..32000	26000