

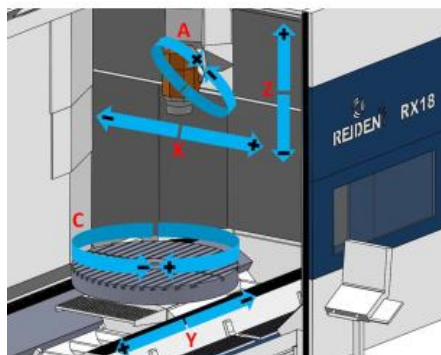
TECHNICAL DATASHEET 5-Axis-Universal Machining Center

manufacturer	REIDEN
type	RX 18
control	2018
built	HEIDENHAIN TNC 640



Travels

X-Axis (Milling head cross)	2,200	mm
Y-Axis (Table group longitudinal)	2,200	mm
Z-Axis (Milling head vertical)	1,610	mm
C-Axis (NC – rotary table)	360.000	°
A-Axis (Milling head swiveling)	-15 to +105	°



Technical data REIDEN RX 18

REIDEN – Trigonal Milling head

The trigonal head is built according to a new milling head concept developed by REIDEN. It combines the advantages of a universal swivel head (swiveling around the 45° plane) with the advantage of being able to machine negative angles despite only one NC axis in the milling head. The trigonal head swivels around a 53° plane and thus achieves the angle of -15° (sub-equatorial). This offers the following advantages:

- Angles from + 105° to -15° (subequatorial) can be machined.
- Enables the "3D basic rotation" function. This means: The workpiece does not necessarily have to be clamped horizontally. The "horizontal plane" of the workpiece is determined with the measuring probe, and the kinematics are "swiveled" accordingly.
- Very compact and therefore stable design. No force deflection by 90° as with an orthogonal or clevis head.

Swivel range	-15/+105	Grad	
A-axis feed torque	2.555	Nm	
Feed rate A-axis	40	U/min	
Holding torque	3.000	Nm	Hydr. Clamping sleeve
Tool adaptor	SK 50		Big Plus

Double Drive Technology DDT - 2 drive motors in one head



1 - High Speed (HS)

Max. Power High Speed Motor	63/75	kW	100/40 % ED
Max. Torque High Speed Motor	200/275	Nm	100/40 % ED
Max. Speed High Speed Motor	10.000	min-1	

2 - High Torque (HT)

Max. Power High Torque Motor	105/125	kW	100/40 % ED
Max. Torque High Torque Motor	898/1.220	Nm	100/40 % ED
Max. Speed High Torque Motor	3.000	min-1	

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NC – Rotary table

Pallet size	1.400 x 1.200	mm	
Max. Speed	10	U/min	
Perforated pallet 130 x Ø 16 F7	100 x 100	mm	Hole pattern
Smallest partial step	0,001	°	
Oscillating circuit (limited)	2.200 (2.600)	mm	
Max. Table load centric	4.000	kg	

Feeds & rapid traverse

Feed range in X-Y-Z axis	1 – 40.000	mm/min
Feed force in X-Y-Z axis 100% ED	22	kN
Rapid traverse speed in X-Y-Z axis	40	m/min
Rapid traverse B-axis (NC - rotary table)	14	m/min

Coolant system with paper belt filter

Internal cooling through the spindle center	50	bar	ca. 28 l/min
External cooling via shower ring			
Paper band filter and additional fine filter	40	my	
Pressure control via M-function			
Belt skimmer			
Tank capacity	2.500	l	
Coolant recooling system 8 kW with 2 kW heating, incl. rack, circulation pump and nominal value control installed above the filter system			

Tool magazine and tool changer

Shelf magazine with 304 storage locations

15 storage places for extra-long tools between 450 and 800mm realized in the magazine. The total number of storage spaces is thus reduced by 15 pieces.

Max. Tool Ø	125	mm	Next pocket occupied
Tool holder	SK 50		BigPlus
Tool Ø with restriction	250	mm	Next pocket free
Tool length max.	600 / 900	mm	

12-fold pallet storage controled via production control system

Pallet size	1.400 x 1.200	mm	
Perforated pallet 130 x Ø 16 F7	100 x 100	mm	Hole pattern
Smallest partial step	0,001	°	
Oscillating circuit (limited)	2.200 (2.600)	mm	
Max. Table load centric	4.000	kg	

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Machine dimensions and connection data

Space requirement	ca. 8,2 x 6,0 x 4,6	m	Machine only
Machine weight	ca. 100.000	kg	
Connected load	173	kVA	
Supply line fuse	250	A	
Operating frequency	50	Hz	
Operating voltage	400	V	3AC

Equipment and accessories

- Machine in basic version with HEIDENHAIN TNC 640
- travels: X - 2.200, Y - 2.200, Z - Axis 1.610 mm
- NC - rotary table, drive by means of preloaded worm drive, pitch 0,001°.
- Trigonal milling head with DDT - Double Drive Technology
- Direct measuring systems on all axes from HEIDENHAIN incl. sealing air
- HEIDENHAIN DCM, collision monitoring between the machine and the tool
- 12-fold pallet storage, pallet size 1,400 x 1,200 mm, 2 separate set-up stations
- Interface connection to SOFLEX Level-Five production control system
- Tool magazine with 304 places SK 50, own operating terminal on the magazine side
- HEIDENHAIN HR550 FS electronic radio handwheel
- 3D radio measuring probe make BLUM, TC60
- KinematicsOpt incl. calibration ball on magnetic stand
- Camera in machining area, delay time 200 ms
- Machine enclosure with completely closed working area, interior covered with chrome steel plate
- 3 chip conveyors lengthwise, 1 chip conveyor crosswise
- Coolant system with paper belt filter, inner coolant supply with frequency-controlled pressure pump max. 50 bar at 28 l/min, outer coolant supply by means of shower ring, belt skimmer, tank capacity 2,500 l, coolant recooling system
- Blow air through spindle center selectable via M-function
- TRS2 tool breakage detection system contactless
- Oil and emulsion mist separator ARNO 3VF A, air capacity 4,000m³/h, 4-stage filtration (metal, glass fiber pocket, panel filter)
- Automatically operated working doors
- Rotating viewing window at the operator station (Visiport)
- Machine hours approx:
Machine ON 22.500h, program run 12.600h, HS spindle ON 5.100h, HT spindle ON 2,600h

