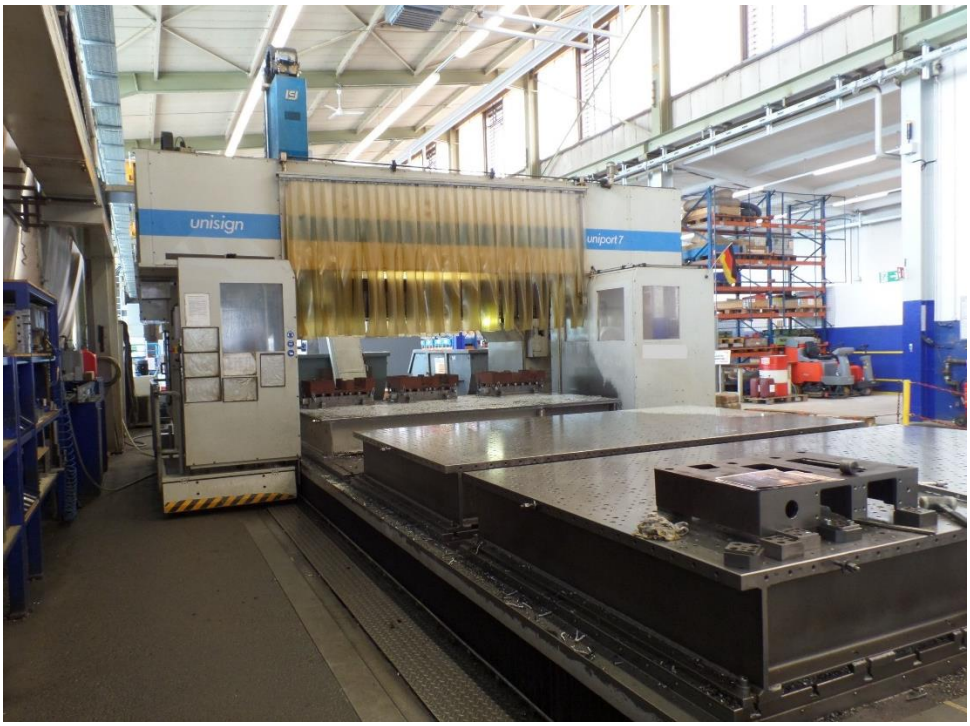
TECHNICAL DATASHEET

CNC – Portal – Machining Centre

manufacturer	**UNISIGN**
type	**UNIPORT 7**
control	**SIEMENS 840 D**
built	**2001**



Working area			
Portal width	4.000	mm	
Portal high	1.500	mm	
Clamping table size	11.000 x 3.670	mm	
Min. / Max. distance spindle nose to table surface	300 / 1.500	mm	
Table load max.	2.000	kg/m²	
T-slot	15	Pc.	size 22H9 bzw. H12
distance T- slot	250	mm	

travels		
X-axis (longitudinal)	10.000	mm
Y-axis (lateral)	4.600	mm
Z-axis (vertical)	1.200	mm

feeds

X-, Y- and Z-axis, stepless	1 - 24.000	mm/min.	
max. feed power, Z-axis	24.000	N	
Rapid in X / Y / Z	36 / 30 / 24	m/min	

Working spindle

AC-main drive – water cooled			
power, S6 -40% ED	42	kW	
Gear steps	2		i = 1:4
speed, stepless	30 – 6.000	1/min	
Max. torque 40% ED	1.430	Nm	
Tool taper		SK 50 – DIN 69871 Form A	
Spindle diam. in front bearing	100	mm	6-fold beared
Max. bore diam.	Ø 120	mm	In Steel C45
Max. Ø rigid tapping	M50		In Steel C45
Max. milling power	800	cm³/min	In Steel St60

Spindle support

- Main spindle bearing 6-fold
- Closed cooling circuit with heat exchanger for spindle bearing, -support and gear
- Hydraulic weight compensation for spindle support
- Spindle support clamping hydraulic

Tool changer

Travelling tool magazine placed on portal column			
Tool places	61		
Tool change time	ca. 5	sec	
Chip to chip time	ca. 25	sec	
Tool diam. Max.	200 / 180	mm	Neighbour places free / occupied
Bridge tools	max. 350 x 100	mm	
Tool length max.	450	mm	
Tool weight max.	25	kg	

CNC-control

SIEMENS SINUMERIK 840 D
Combined with digital drive control, hard disk storage,color screen,
1,5 MB NC storage, control software Windows, external machine control panel,
QWERTY-full keyboard, Non Uniform Rational B-Splines (NURBS), interactive programming, free text entry, drilling and milling cycles, threading without compensation chuck, coordinate transformation (FRAME), program input while editing, spindle power display, electronical handheld terminal, UNISIGN diagnostic system.
Ethernet connection via PCI/EISA network card.

Chip conveyor

- Located in the middle under the machine table
- Ejection left, ca. 300 mm output width
- Discharge high ca. 1.700 mm
- Integrated coolant tank with lifting pump

Guides, drive and measuring system

- All axis drives with AC servomotors
- X-axis driven on both sides and electronically synchronized
- Direct position measurement for X, Y and Z axis
- X- and Y-Axis guiding by roller circulating element (linear guide) for maximum precision and dynamics
- Z-axis guiding through hardened flat guideways with SKC sliding coating for maximum vibration damping
- X- and Y-guideway-covers by bellows

Coolant equipment

- Cooling through spindle including rotary feed with HM/ceramic seal, incl. Rotary filter for throughput max. 70 l/min with emulsion
- Clean water tank ca. 900 l tank, 2 clean water pumps:
- Normal coolant supply 40 l/min 4 bar
- High pressure pump 30 l/min - 20 bar
- Monitoring the coolant pressure
- Internal coolant through spindle centre taper DIN 69871 Form A
- Clamping bolt DIN 69872

Angle milling head

Full automatic angle milling- and boring head – water cooled, automatic changing over moving Pick Up Station

Automatic positioning	72 x 5	°	(Hirth)
speed, stepless	30 – 6.000	1/min	
Max. torque 40% ED	1.430	Nm	
power 40% ED	42	kW	

Speeder milling head

Mechanical Speeder head with transmission 1:2 for doubling the programmed main spindle speeds, auotmatic changing over moving Pick Up Station

Speed, stepless	60 – 12.000	1/min
Max. torque	75	Nm
power max.	20	kW
length	325	mm

Measurement, weight		
Floor space without swith cabinet	ca. 14,1 x 8,2	m
Machine height	ca. 5,1	m
Machine weight ca.	70.000	kg

Electrical supply data		
Total connected load	60	kVA
Operating voltage	400	V
Operating frequency	50	Hz

equipment

- Working area encapsulation through vertical, motoric adjustable PVC-curtains
- Funk touch probe manufacturer M&H
- Angle milling head incl. Pick Up Station
- Speeder head incl. Pick Up Station
- Coolant equipment with 2 coolant circuits and IKZ through spindle
- Chip conveyor
- Cooling unit for spindle and gear cooling
- Div. tool tapers SK50
- 3 pc. Intermediate table size ca. 3.000 x 2.200 x 300 mm
- Div. Clamping elements for workpiece clamping