GMTK MULTIPROCESS VERTICAL & HORIZONTAL LATHES

GMTK
MAHER HOLDING

IN GMTK WE COUNT ON THE TECHNOLOGICAL CAPABILITIES OF IK4 TEKNIKER RESEARCH INSTITUTE AND THE HISTORY AND EXPERTICE OF LEADING MACHINE TOOLS GROUP MAHER HOLDING, TO DEVELOP THE BEST MACHINING SOLUTIONS FOR OUR CUSTOMERS.

GMTK counts on one of the most reputed European Research Institute, IK4 TEKNIKER, to support any technological development to be implemented on the marketed solution. **GMTK** performs an intense R&D program in the Advanced Manufacturing Center for Aerospace where **GMTK** is an active founding member.

MAHER HOLDING

GEMINIS MAHER HOLDING | LAGUN MAHER HOLDING | GMTK MAHER HOLDING | ATERA MAHER HOLDING | INTERMAHER MAHER HOLDING | ADDILAN

IK4 TEKNIKER
Research Alliance

GMTK´S VALUES

- ACCURACY
- PRODUCTIVITY
- RELIABILITY
- CUSTOMER ORIENTATION

GMTK´S SERVICES

- TURNKEY PROJECTS
- TRAINING
- AFTER SALES SERVICE

INTEGRATION OF MACHINING PROCESSES AND STRATEGIES

GMTK is a multiprocess lathe developed in order to obtain the highest performance in the machining of complex, accurate and high precision and added value pieces.

The applied technology allows a combination of exceptional dynamics and cutting capacity. This compromise between DYNAMICS and POWER gives the users of **GMTK** the possibility of:

1. **Approaching to the machining of a piece with the most appropriate machining strategy.**
   - Conventional cutting.
   - High feed.
   - High speed.
   - Combination between high feed and high speed.
2. **Integrating different machining processes.**
   - Complete machining solution.
   - Machining processes adapted to their optimal cutting conditions.

All this results in HIGHER PRODUCTIVITY FOR THE CUSTOMER.

ACCESSORIES

The versatility of the base machine of the GMTK range allows an approach to the complete machining of complex pieces. This approach is done by the integration of different accessories directly to the head.

Design and development of these accessories are carried out in order to fulfill the current requirements in complex pieces analyzed by our Applications Engineering Office. They allow a customized and effective integral solution for each user and application.

The determination for applications engineering makes GMTK to constantly dispose and develop new solutions according to market's needs.

GMTK Multiprocess

HORIZONTAL RANGE HR

HR700	HR800	HR1000	HR1200	HR1500
Ø: 700 - 1.500 mm / 1.500 - 10.000 mm / Max 20 Ton				

GMTK
MAHER HOLDING

TECHNICAL CHARACTERISTICS		HR 700	HR 800	HR 1.000	HR 1.200	HR 1.500
WORKING FIELD						
ø Swing over upper slide	mm	720	820	1.020	1.220	1.520
Distance between points	mm	1.500-3.000	2.000-6.000	2.000-8.000	2.000-8.000	2.000-10.000
Maximum workpiece weight	kg	1.500	3.500	10.000	10.000/15.000	15.000/20.000
TURNING HEAD						
Main motor power 100%	kW	22+22/27+27/30+30	22+22/27+27/30+30	28+28/46+46	28+28/46+46/52+52	28+28/46+46/52+52
Maximum chuck speed	rpm	2.700	2.700/1.680	1.650/1.260	1.650/1.260	1.260
Maximum torque 100 % up to	Nm	2.465/3.025/3.360	3.340/5.400	7.700/11.130	7.700/12.575	12.575
ø standard chuck	mm	315/400/500	315/400/500/630	500/630/800	500/630/800/1.000	500/630/800/1.200
ø front bearing	mm	160	160	260	260/320	320
ø spindle pass	mm	115	100	185	185/250	250
Spindle nose (DIN 55026)		A11	A11	A15	A15	A15/B20
C AXIS						
Maximum speed	rpm	80	80	40	40	40
Maximum torque up to	Nm	2.520	4.000	8.350	9.400	9.400
MILLING HEAD						
Milling motor power	kW	27/34/42	27/30	27/30/46/52	27/30/46/52	46/52
Tool speed	rpm	10.000	5.000	5.000/3.000	5.000/3.000	3.000
Maximum torque S1 (100%)	Nm	130/170/201	261/291	261/291/630/712	261/291/630/712	630/712
Tool holder		HSK-A63/Capto C6	HSK-A63/Capto C6	HSK-A63/Capto C6 HSK-A100/Capto C8	HSK-A63/Capto C6 HSK-A100/Capto C8	HSK-A100/Capto C8
ø front bearing	mm	100	100	100/130	100/130	130
Maximum pressure inner coolant	bar	70	70	70	70	70
B AXIS						
Maximum speed	rpm	16	16	16	16	16
Maximum torque	Nm	1.780	1.780	1.780 / 2.430	1.780 / 2.430	2.430
Hirth positioning division	degrees	2,5	2,5	2,5 /1	1	1
Minimum programmable angle	degrees	0,001	0,001	0,001	0,001	0,001
Angle course	degrees	-110 / +110	-110 / +90	-110 / +90	-110 / +90	-110 / +90
X AXIS						
X axis speed	m/min	40	40	40	40	40
Maximum feeding force	daN	1.400	1.305 / 2.700	1.305 / 2.700/3.900	1.305 / 2.700/3.900	2.700/3.900
X axis course	mm	880	930	1.130	1.230	1.330
Y AXIS						
Y axis speed	mm/min	24	40	40	40	40
Maximum feeding force	daN	1.400	1.450	1.450 / 2.850	1.450 / 2.850	2.850
Y axis course	mm	400	400 / 550	550	550/660	830
Z AXIS						
Z axis speed	mm/min	40	40	30	30	30
Maximum feeding force	daN	1.480	1.200 / 2.880	2.880	2.880 / 4.190	2.880 / 4.190
TAILSTOCK						
ø shaft quill	mm	120	180	260	260/320	320
Shaft course quill	mm	150	200	250	250/280	280
TOOLS CHANGER						
Capacity	Number of tools	40/60/80/120 acc. customer				
NUMERIC CONTROL						
Numeric control		Siemens 840D SL				

Other characteristics under request

GMTK Multiprocess

VERTICAL RANGE VR

VR 1.6	VR 2.0	VR 2.4	VR 2.8	VR 3.2	VR 3.6	VR 4.0	VR 4.6	VR5.3	VR 6.3
Ø: 1.600 - 6.300 mm / 1.000 - 5.000 mm / Max 150 Ton									

GMTK
MAHER HOLDING

TECHNICAL CHARACTERISTICS		MONOBLOCK Models					DOUBLE COLUMN Models				
		VR 1.6	VR 2.0	VR 2.4	VR 2.8	VR 3.2	VR 3.6	VR 4.0	VR 4.6	VR 5.3	VR 6.3
GENERALITIES											
Turning ø	mm	1.600	2.000	2.400	2.800	3.200	3.600	4.000	4.600	5.300	6.300
Chuck ø	mm	1.200 ÷ 1.400	1.600 ÷ 1.800	2.000 ÷ 2.200	2.400 ÷ 2.600	2.800 ÷ 3.000	3.000 ÷ 3.200	3.400 ÷ 3.600	3.600 ÷ 4.200	4.300 ÷ 4.800	5.000 ÷ 5.800
Turning height	mm	1.200 ÷ 1.800	1.200 ÷ 2.000	1.200 ÷ 2.400	1.200 ÷ 2.800	1.200 ÷ 3.000	1.200 ÷ 3.200	1.200 ÷ 3.500	1.400 ÷ 4.000	1.400 ÷ 4.500	1.400 ÷ 5.000
Max. piece weight	Ton	8 (12)	10 (15)	15 (20)	25 (30)	30 (40)	40 (55)	50 (65)	70 (90)	90 (110)	120 (150)
CHUCK DRIVE											
Turning power	kW	34 ÷ 60		44 ÷ 104			102 ÷ 186			142 ÷ 290	
Chuck speed	rpm	460 (510)	340 (380)	290 (305)	220 (240)	190	175	155	140	100	90
C axis positioning speed	rpm	20	16	14	12	10	10	10	9	9	8
		bidirectional									
C axis min. positioning angle		0.0001°									
Chuck drive guiding		Hydrostatic									
W DRIVE (CROSS BEAM)											
W axis speed	mm/min	3.500		3.000			2.000		1.500		
W axis drive		Gantry Type (Servo Drive)									
W axis positioning		every 0,01 mm									
X DRIVE											
X axis speed	mm/min	30.000					30.000 (25.000)		25.000 (20.000)		
X axis drive guiding		Hydrostatic									
Z DRIVE											
Z axis speed	mm/min	40.000					40.000 (25.000)		25.000 (20.000)		
Z axis drive guiding		Hydrostatic									
RAM section	mm	270 x 270					270 x 270 (340 x 340)		340 x 340 (400 x 400)		
RAM stroke	mm	1.250 / 1.500					1.250 / 1.500 (2.000 / 2.500)		2.000 / 2.500 (3.000)		
MILLING DRIVE											
Milling power	kW	22 / 37					37 / 51		37 / 51 / 60		
Milling speed	rpm	4.000					3.000 (4.000)		3.000 (4.000)		
Y DRIVE (optional)											
Y axis speed	mm/min	15.000		12.000			10.000		8.000		
Y axis stroke	mm	according to customer's requirements									
RTHC (ROBOTIC TOOLS AND HEADS CHANGER) Patented Solution											
Capacity	Number of tools	24 / 48 / 72 / 96 / 120 / 210 / (acc. customer)									
Max. Tool Ø / Length / Weight		250 / 500 / 35 / (acc. customer)									
Capacity	Number of accesories	2 ÷ 9 (acc. customer)									
AUTOMATIC PALLETS CHANGER											
Number of pallets		2 / (acc. customer)							n.a.		
Changing system		180 ° / Shuttle		Shuttle					n.a.		
SEMI AUTOMATIC PALLETS CHANGER											
Number of pallets		2 / (acc. customer)							n.a.		
Pallets loading		Manual by crane							n.a.		
Pallet clamping and centering system		Hydraulic through pins, centering repeatability 0.01 mm							n.a.		
NUMERIC CONTROL											
Model		Siemens 840 D.SL									

Other characteristics under request

APPLICATIONS

THE END OVER THE MEANS

The philosophy of the **GMTK** range is based on an integral and efficient solution for the machining of complex pieces. The knowledge of **GMTK**'s technicians on components manufacturing processes for different sectors results in a machine adapted to each user and application.

GMTK's Application Engineering Office works actively in searching for new applications and in the study of their manufacturing processes. Depending on the requirements of each application, accessories are developed to grant a complete machining solution.

GMTK has successfully installed solutions for demanding customers in target sectors like aeronautics and energy. These installed solutions and customer satisfaction are the inquestionable validation of the **GMTK** competitive adventages.

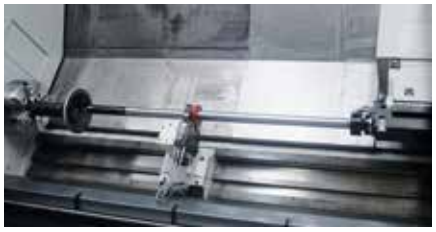
SHIPYARDS

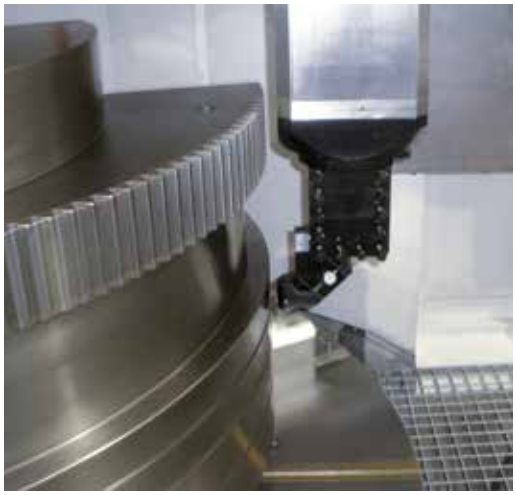
SUBCONTRACTORS

AUTOMOTIVE

AERONAUTIC AND AEROSPACE

ENERGY
(Oil and Gas, Petrol Industry, Windmills)



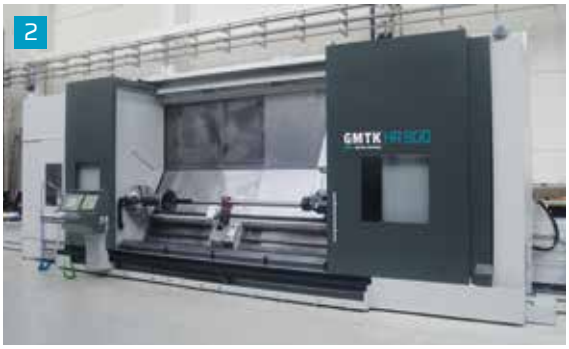


REFERENCES

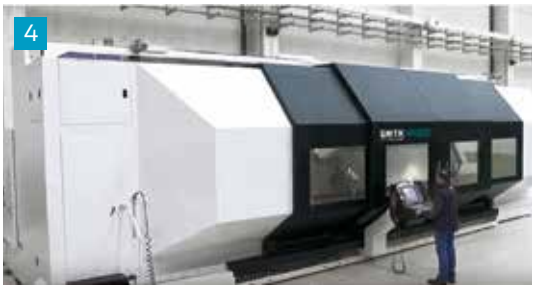
VERTICAL

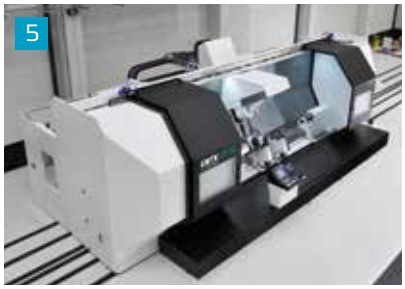
1. Elbe VR2001 & VR2002 Israel.
2. Voith Turbo VR3201 Germany.
3. ITP Aero Rolls Royce VR2.4 Spain.
4. Shenyang Liming Aero Engine VR1602 People's Republic of China.
5. CFAA VR2405 Spain.
6. Siemens Turbo RT3501 Germany.

HORIZONTAL



1. Voith Turbo HR1202 Germany.
2. KLM HR0802 Netherlands.
3. Q-mass HR1201 UK.
4. Gidropress HR0801 Russia.
5. Guiyang Aero Engine Company HR0702 People's Republic of China.





GMTK
MAHER HOLDING

GMTK Multiprocess Machining S.A.
Pol. Sansinenea-Erreka, Parc. A4, Nave 8
20749 Arroa-Behekoa, Zestoa - Gipuzkoa (Spain)

Tel: (+34) 943 868 893
Fax: (+34) 943 868 894
gmtk@gmtk.es

www.gmtk.es
www.maherholding.es