

COMPANY PROFILE



floor type boring and milling machines, boring and milling centers, machining centers, gantry type vertical machining centers





PAMA, Rovereto - ITALY

established in 1926

over 80 years of know-how in the field of boring and milling machines

leader among machine tool manufacturers

factories located in Rovereto and Brescia (Italy)
on an overall indoor area of 300,000 sq.ft.

quality qualified ISO 9001 / Vision 2008

over 80% of production is exported

all main components are internally designed,
manufactured and tested



PAMA, Brescia - ITALY



PAMA, Shanghai - CHINA





SPEEDRAM

floor type boring and milling machines



integral hydrostatic guideways

rectangular ram fully enclosed in a monolithic headstock casting with hydrostatic support on all sides

boring spindle diameter from 5.1" to 10.3"

real time CNC controlled compensation of ram and spindle elongation / contraction (PAMA patents)

high spindle speed, power and torque
optimal axes feedrate

superior machining accuracy

high chip removal rate on cast iron, steel and titanium alloy

versatility of configuration thanks to a wide choice of head attachments, rototraversing tables and accessories

SPEEDRAM

1000 - 2000 - 3000 - 4000 - 5000

WORKING AREA

X axis (column)	in	157 - 236
	in	+N x 39
Y axis (headstock)	in	79 - 315
Z axis (ram)	in	39 - 75
W axis (boring spindle)	in	28 - 63
Z+W axes	in	67 - 138

HEADSTOCK

Ram section	in	14.2 x 15.7 - 22.0 x 23.6
Boring spindle diameter	in	5.1 - 10.3
Max. spindle speed	rpm	4000 - 1600
Spindle gear ranges		2 - 3
Max. spindle power (S1-100%)	HP	50 - 195
Max. spindle torque (S1-100%)	lb / ft	1767 - 18944

AXES RATES

X, Y, Z and W axes feed / rapid	ipm	1181 - 472
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SPEEDRAM



SPEEDMAT HP

boring and milling centers



monolithic casting boring spindle headstock
centrally mounted

real time CNC controlled compensation of
spindle elongation / contraction (PAMA patent)

high spindle speed, power and torque

high axes feedrate

high chip removal rate on cast iron, steel and
titanium alloy

maximum workpiece swing diameter ranging
from 118" to 181"

X and Z beds conceived for positioning at floor
level to reduce installation times and civil works
costs

chip conveyor and coolant recovery systems
integrated with the machine guarding

SPEEDMAT HP

HP 3 - HP 4 - HP 5
HP 6 - HP 7

WORKING AREA

X axis (table)	in	118 - 181
Y axis (headstock)	in	79 - 118
Z axis (column)	in	91 - 126
Max. swing diameter	in	118 - 181

TABLE

Table or pallet size	in	49 x 49 - 79 x 98
Table capacity	lbs	22000 - 55100
Pallet capacity	lbs	17600 - 44100

LINEAR AXES FEATURES (HEADSTOCK H - HV - A)

X axis feed/rapid	ipm	1575 - 984
Y and Z axes feed/rapid	ipm	1772 - 1181
X, Y, Z axes acceleration	ft/s ²	2,5 - 2
X, Y, Z axes thrust	lb / ft	4496

LINEAR AXES FEATURES (HEADSTOCK W)

X axis feed/rapid	ipm	1181 - 984
Y and Z axes feed/rapid	ipm	1181
X, Y, Z axes thrust	lb / ft	4496

MACHINE ACCURACY (ACCORDING TO VDI 3441)

X, Y, Z axes positioning accuracy (P)	in	0.0004
B axis positioning accuracy (P)	arcsec	5
X, Y, Z axes repeatability (Ps)	in	0.0002
B axis repeatability (Ps)	arcsec	3









W



H



H+V



A

HEADSTOCK		W130	W160	WD130	H	HV	A
Boring spindle diameter	in	5.1	6.3	5.1	-	-	-
Max. spindle speed	rpm	4000	3500	5000	4500 - 7000	4500 - 7000	6000 - 8000 - 12000
Spindle gear ranges		2	2	1	1	1	1
Max. spindle power (S1-100%)	HP	50	70	80	67	67 - 67	67 - 72 - 88
Max. spindle torque (S1-100%)	lbs / ft	1128	1767	922	719 - 460	719 - 460	575 - 336 - 236
W axis (boring spindle)	in	31.5	31.5	23.6	-	-	-
W axis feed / rapid	ipm	1181	1181	1181	-	-	-







VERTIRAM

gantry type vertical
machining centers



integral hydrostatic guideways

square ram with hydrostatic support on all sides, fully enclosed in a monolithic headstock casting integral with the Y axis saddle

high spindle speed, power and torque

optimal axes feedrate

superior machining accuracy guaranteed by optimal structural quality and stability and innovative in-process compensation systems (PAMA patents)

high chip removal rate on cast iron, steel and titanium alloy

versatility of configuration thanks to a wide choice of modules, head attachments and accessories

VERTIRAM

5100 - 5600 - 6100 - 6600 - 7100

WORKING AREA

Clearance between columns	in	201 - 280
Max. clearance under spindle	in	157 - 197
X axis (gantry)	in	394
	in	+ N x 39
Y axis (headstock)	in	260 - 339
Z axis (ram)	in	79 - 98
W axis (crossrail)	in	102 - 142

HEADSTOCK

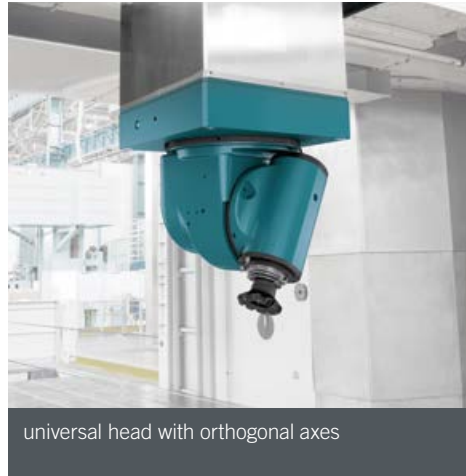
Ram section	in	23.2 x 23.2
Max. spindle speed	rpm	4000
Spindle gear ranges		4
Max. spindle power (S1-100%)	HP	138
Max. spindle torque (S1-100%)	lb / ft	7914
Tool taper		ISO 50 - ISO 60 - HSK B125

AXES RATES

X axis feed / rapid	ipm	787
Y and Z axes feed / rapid	ipm	984
W axis feed / rapid	ipm	118



2 axes contouring head



universal head with orthogonal axes



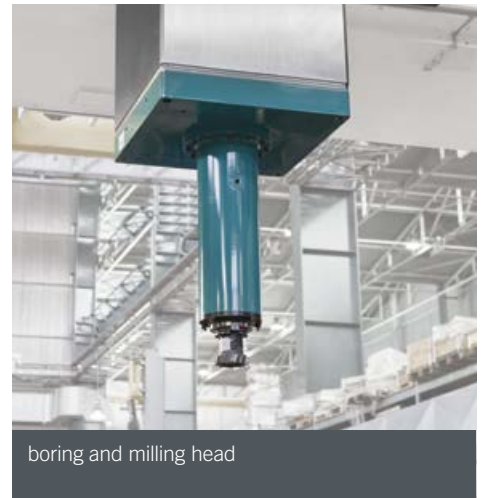
boring and milling head



milling head



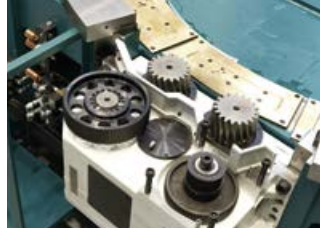
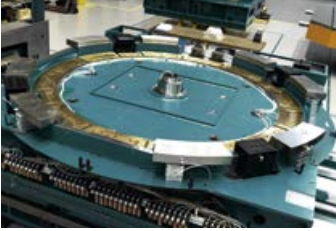
right angle head



boring and milling head







THE ACCESSORIES

hydrostatic rototraversing tables

PAMA floor type boring and milling machines may be equipped by a full range of hydrostatic rototraversing tables with 50 to 600 metric tonne loading capacity (110,000 to 1,323,000 lbs)

Technical features of hydrostatic rototraversing tables

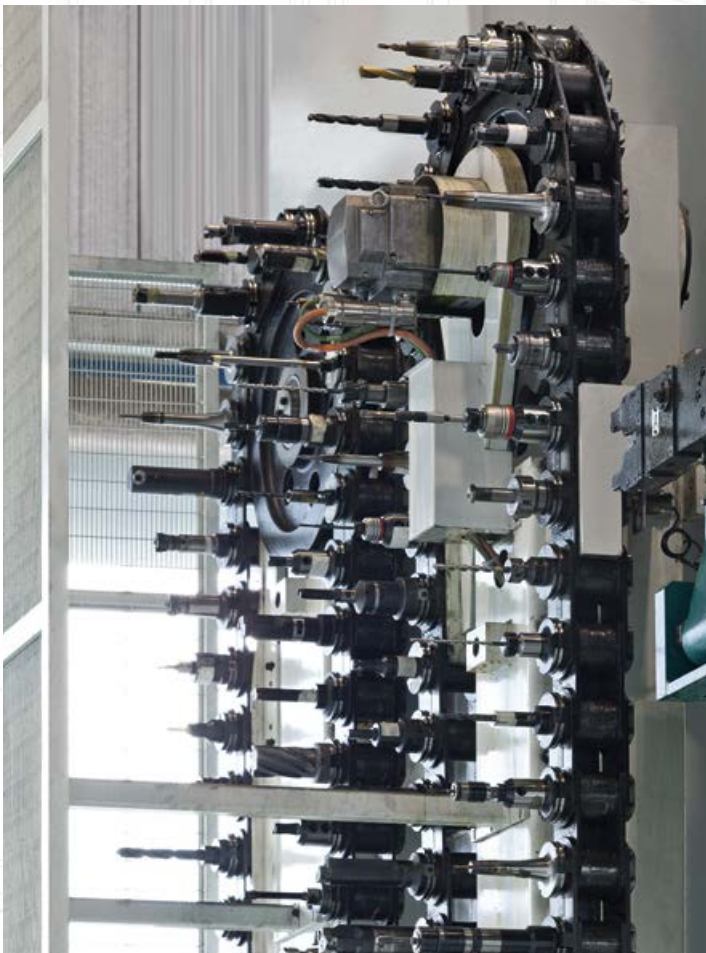
		TH 50	TH 65	TH 80	TH 100	TH 120
Loading capacity	lbs	110000	143000	176000	220000	265000
Min. table surface	in	79 x 79	98 x 98	98 x 98	118 x 118	118 x 118
Max. table surface	in	118 x 118	138 x 138	157 x 157	177 x 177	197 x 197
V axis longitudinal travel	in	59 - 157	59 - 177	59 - 177	79 - 177	79 - 177

		TH 160	TH 250	TH 300	TH 600
Loading capacity	lbs	353000	551000	661000	1323000
Min. table surface	in	157 x 157	177 x 177	197 x 197	236 x 236
Max. table surface	in	236 x 236	236 x 315	236 x 472	315 x 472
V axis longitudinal travel	in	118 - 197	197 - 276	197 - 315	197 - 315

Tables with other dimensions and loading capacity are available upon request

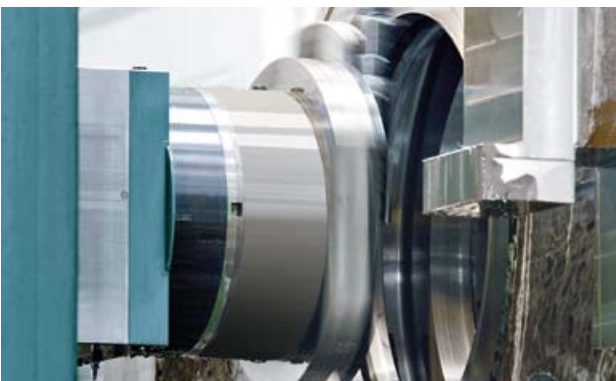
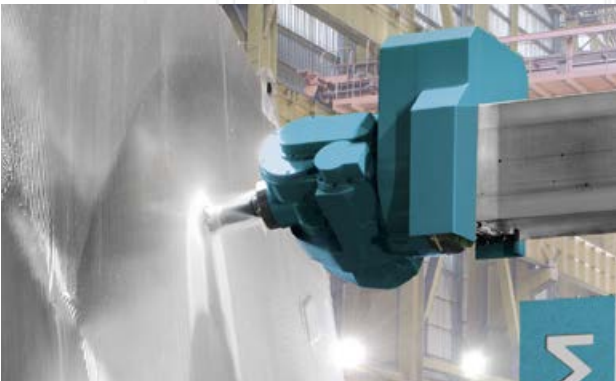
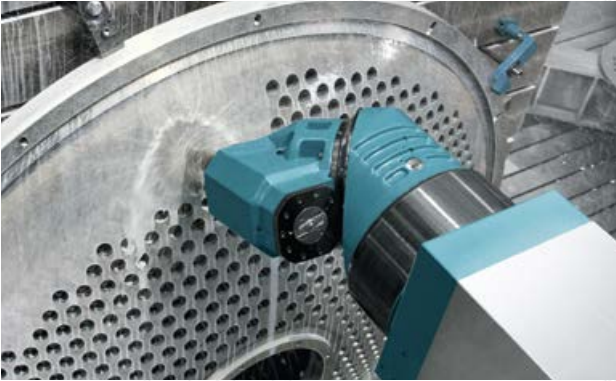
TOOL MAGAZINES

the productivity of all PAMA machines may be further enhanced by a complete range of tool magazine options



HEAD ATTACHMENTS

the versatility of all PAMA machines may be increased by a wide range of head attachments and changers to meet specific needs and satisfy all the requirements in various fields of application

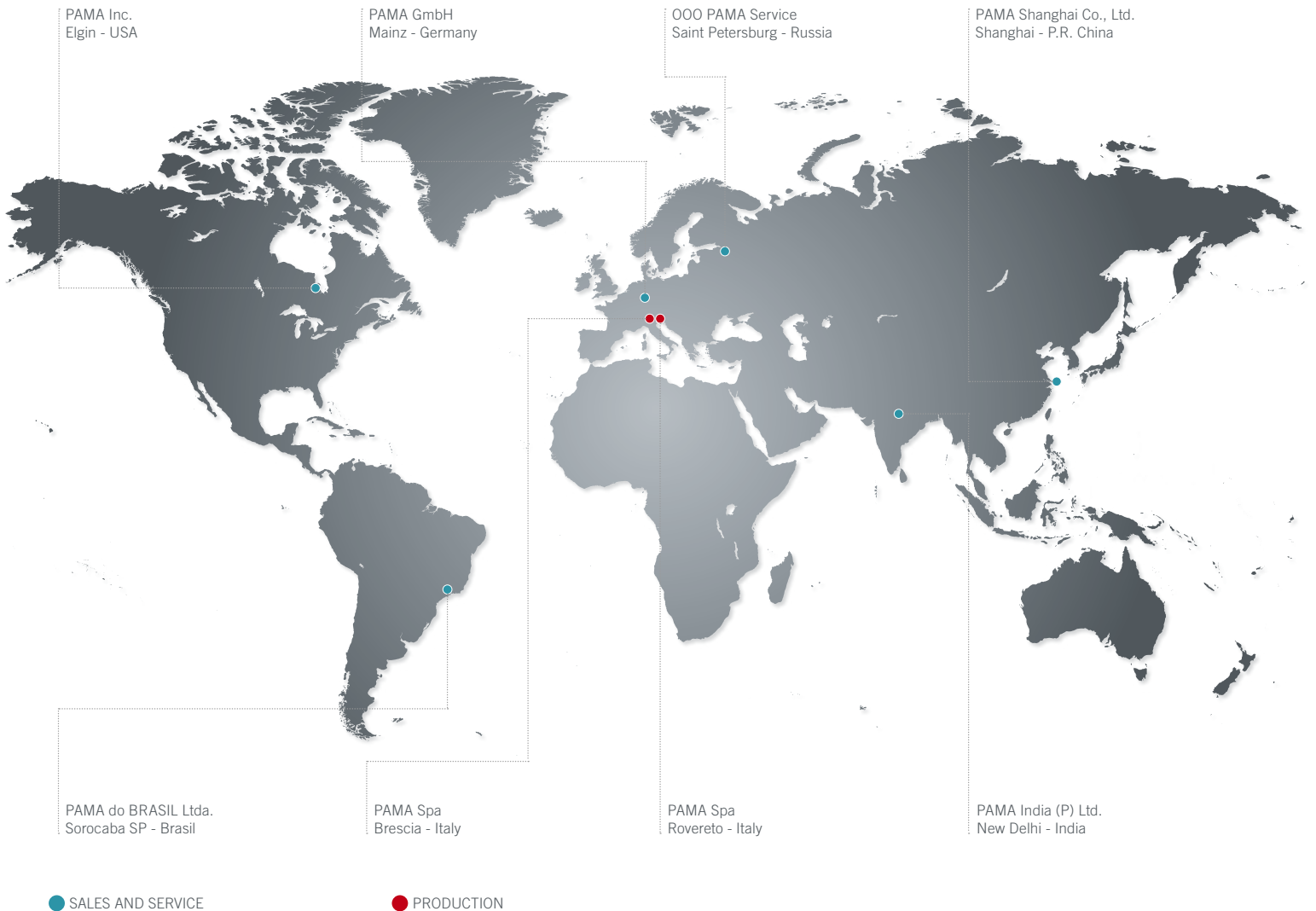


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 CASE NEW HOLLAND
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 DANIELI
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THE MARKET

the partner for
 demanding customers

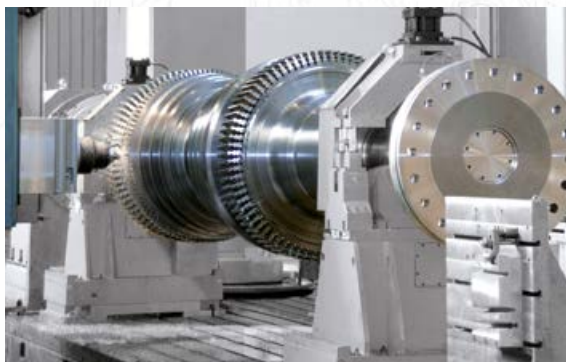
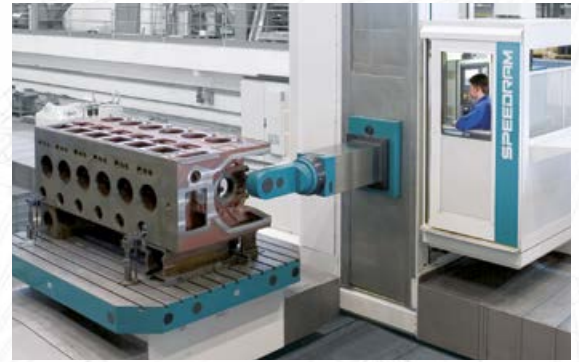
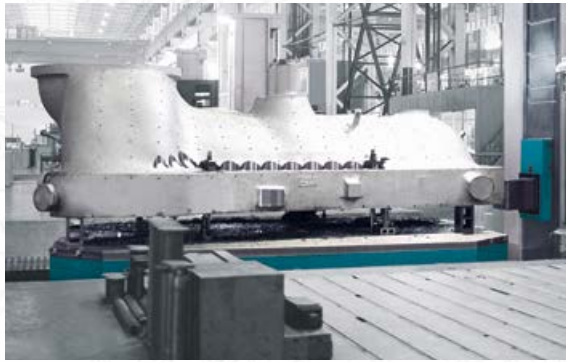


● SALES AND SERVICE

● PRODUCTION

THE APPLICATIONS

power generation, general
machining, earthmoving,
heavy mechanical engineering,
shipbuilding and railway
aerospace





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PAMA has a policy of continuous improvement of its products and reserves the right to change materials and specifications without notice.

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**COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =**

