#### XY LINEAR ROLLER GUIDEWAYS with Z BOX WAY or Z LINEAR GUIDEWAY

## PRL BRIDGE MILL

# HIGH SPEED PRECISION

**EFFICIENT AND FAST CUTTING** 

Precision - Accuracy positioning: ±0.0002" repeatability: ±0.0001"

Speed - XYZ rapid feedrates up to 472 / 472 / 590 ipm





Exceptional Repeatability Accuracy

PRL Series

2216

3223

4226

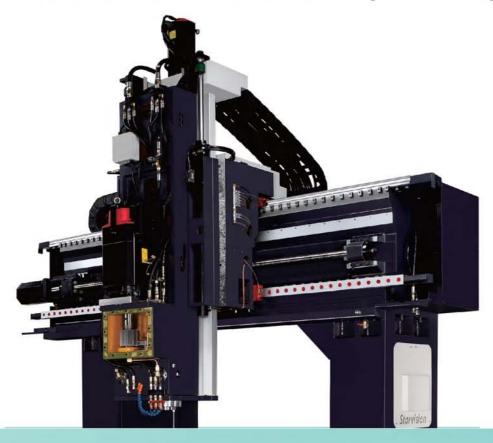
5230



PRL-2216 ~ 4216 • Y-axis = 1600 mm

# HIGH SPEED. FAST AND PRECISE.

PRL Series is built for efficiency, featuring both high speed and accuracy. With a linear guideway design which can achieve a long service life with high accuracy, PRL Series is an excellent solution for both efficient machining and fast cutting.























PRL-3223 ~ 6023 • Y-Axis = 2300 mm

# **GREAT PERFORMANCE.**

Mighty Viper uses advanced design systems including FEA and 3D CAD modeling to design our machine. PRL Series is equipped with two sets of optimal R65 linear guideway in X and Y axis. It is not only reliable, but also represents high value and great performance.









## Linear Guide Series















PRL-3226 ~ 10226 • Y-Axis = 2600 mm

# STABLE IN ACCURACY. FLEXIBLE IN LENGTH.

PRL-3226 ~ 10226 base is equipped with three sets of R55 linear guide way, a wider working table and a prolonged X-travel up to 10,200mm. Our intention is to offer the customer another choice for medium to large size workpiece machining.







3 x 2.4m - 10 x 2.4m



# Linear Guide Series













PRL-4230 ~ 10230 • Y-Axis = 3000 mm

# LARGE CAPACITY.

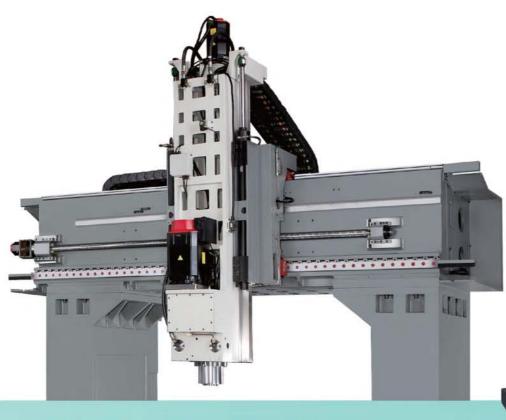
PRL-xx30 Series has a very rigid structure, with of R65 linear guideways on X-axis, ensuring a stable axial movement. It is an excellent choice for arge size workpiece machining and is suitable for all kinds of mold applications.



 Ball screw support unit for travel over 5m in X axis



WITTENSTEIN alpha planetary gearhead represents stability and accuracy

















## Linear Guide Series



4 x 2.8m - 10 x 2.8m (3.5m opt.)











3.2m/3.7m





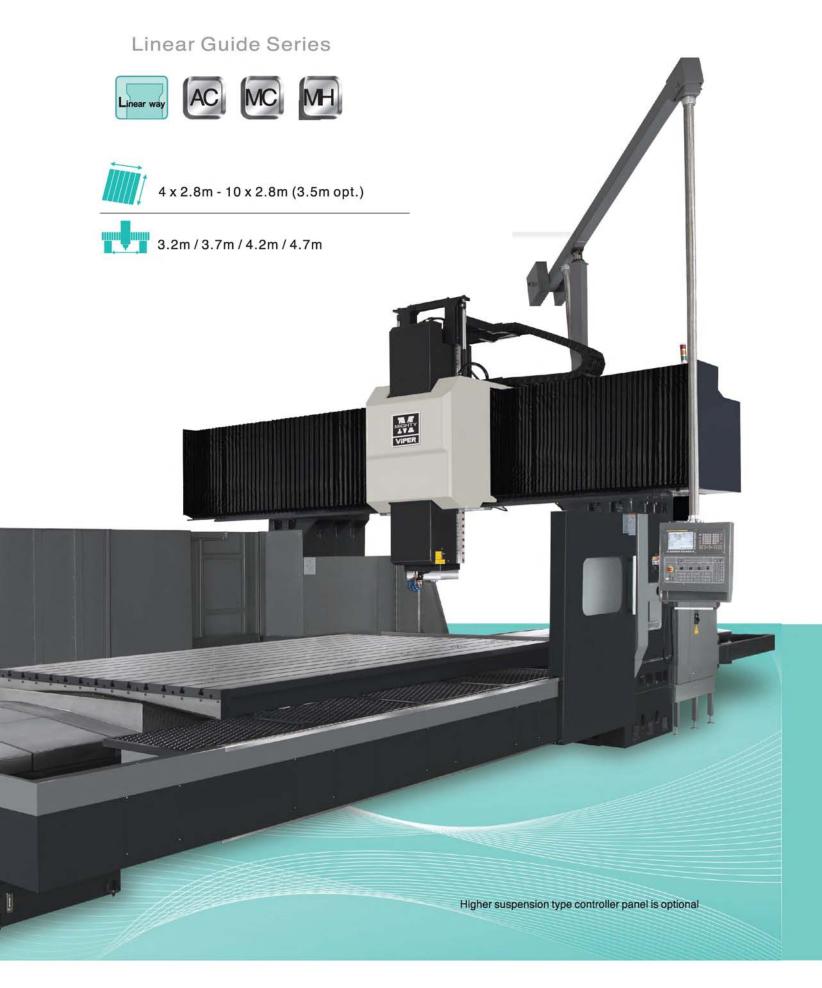
PRL-4235 ~ 10235 • Y-Axis = 3500 mm

# **EXTRA-LARGE CAPACITY. MORE OPTIONS.** WIDER-RANGE OF APPLICATIONS.

PRL-xx35 Series has a very rigid structure, with three sets of R65 linear guideways on X-axis, ensuring a stable axial movement. It is your best choice for large to extra-large size workpiece machining and is suitable for all kinds of mold application.









## >>> Ballscrew Support -

>> Distance Between Columns

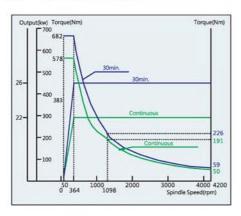
machining requirements.

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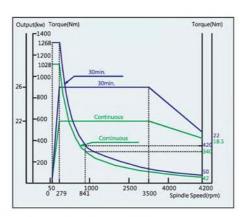
For X-travel over 5 meters (inclusive) and Y-travel over 3.5 meters (inclusive) machine, we will offer an extra ballscrew support for better support and to reduce the deformation. This device will also enhance the bearing life.

From 3,200 to 4,700mm to meet different customer's

## >> Spindle Torque



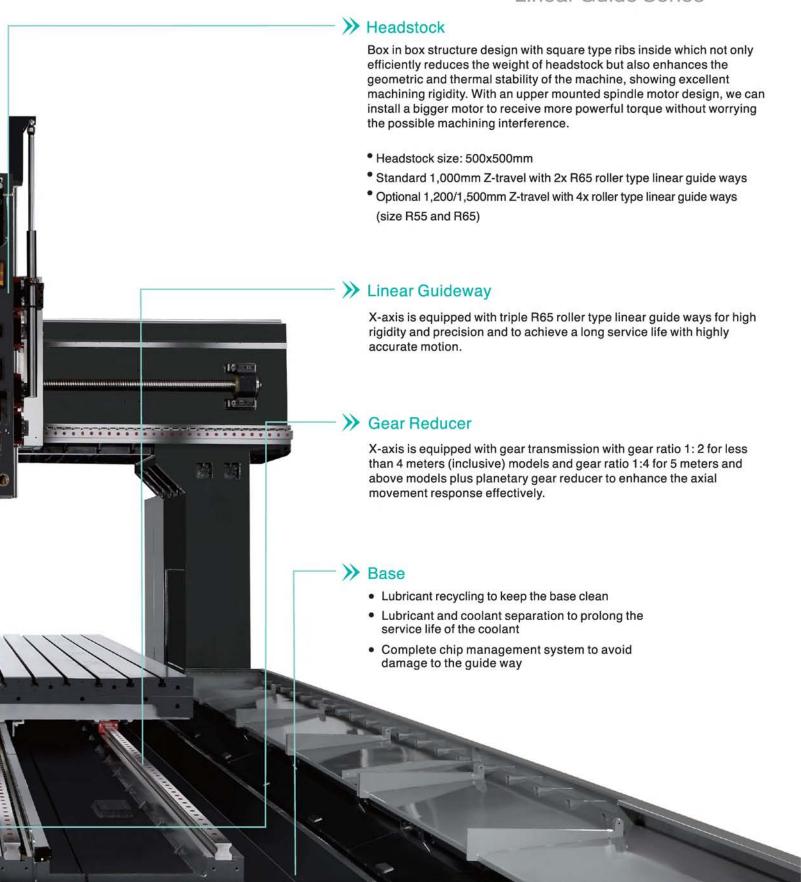
Spindle motor torque chart Motor: FANUC a22 2-step gear type spindle



Spindle motor torque chart Motor: FANUC a30 2-step gear type spindle



#### Linear Guide Series







# **High Precision Spindles**

Various spindle motor selection, featuring high torque, low temperature-rise and long service life, meets different customers' machining requests.



Gear drive spindle



Gear drive spindle



Direct drive spindle BT 50



Direct drive spindle BT 40





## 2-step Gearbox

- Using made in Japan JIS Class 0 gears
- High efficiency power transmission
- Great torque output
- All the bearings, gears and spindle have forced lubrication system to ensure a smooth operation of the gearbox and to make sure a constant temperature at all times

(Big ceramic bearing)



## Linear Guide Series

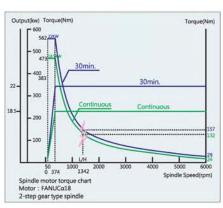


# All New Headstock Design Offers Various Spindle Torques

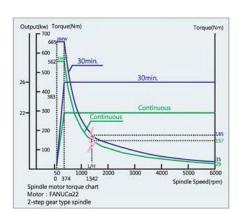
# Spindle Torque

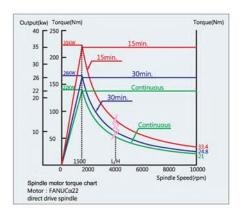
26

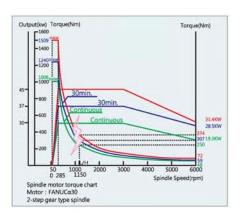
Spindle motor torque chart Motor : FANUCα18 direct drive spindle

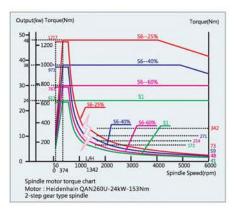














# **VARIOUS MILLING HEADS**

#### **Automatic Clamping**





AC5 Automatic 90° Milling Head



AC300 Automatic Extended Milling Head



AC2 Automatic 2-axis Milling Head



#### **Automatic Indexing & Manual Clamping**





MC5 Semi-automatic 90° Milling Head



MC2 Semi-automatic 2-axis Milling Head



#### **Manual Head**





MHK2 Manual 2-axis Milling Head (8,000 rpm)



MH5 Manual 90 Degree Milling Head



MH2 Manual 2-axis Milling Head



MH300 MH500 MHB480
Manual Extended Manual Extended Manual Extended Manual Boring
Milling Head Milling Head and Milling Head





### Splash Guard Selection



Semi Splash Guard



Fully Enclosed Splash Guard Without Roof



Fully Enclosed Splash Guard With Roof





## **AC Series Milling Heads**

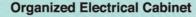
With AHS Automatic head station, a fully automatic solution realizes optimum machining efficiency.

- AHS(H) one head and one cover at operator side
- AHS(S) multi heads and one cover at ATC side









- · Conforms to CE safety regulation.
- · Fully enclosed design.
- · Equipped with a heat exchanger to maintain stable temperature.
- Alarm message and self-diagnosis functions provide safety protection during operation and maintenance.

#### **Convenient Quick Plug**

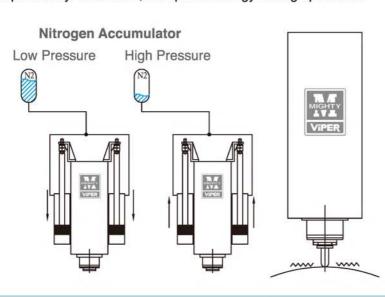
- · One step connection
- Easy maintenance
- Great protection

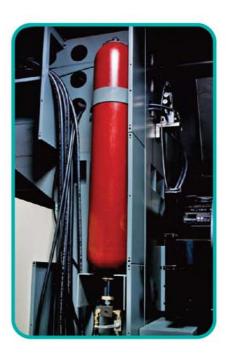




## **Energy Saving Z-Axis Balance System**

Z-axis movement is counter-balanced by twin hydraulic cylinder and nitrogen accumulator. An bladder accumulator can equilibrate hydraulic pulsation caused pressure, such as hysteresis caused overcut. When abnormal power outage occurs, the Z-axis position can be secured. The whole system not only enhances the sensitivity of the Z-axis micro-movement, showing great flexibility and best dynamic stability, but also ensures the machine's optimal repeatability. In addition, it helps the energy saving up to 30%.

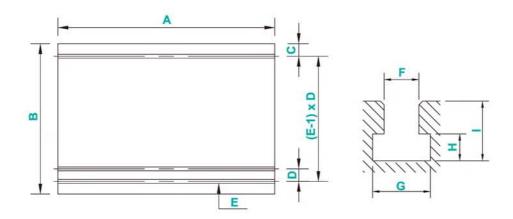






# **Table and T-Slot Dimensions**

Work Table Size



Model	Unit	A	В	С	D	E	F	G	Н	1
PRL-2216	mm	2,000	1,400	160	180	7	22H8	38	16	38
PRL-2716	mm	2,500	1,400	160	180	7	22H8	38	16	38
PRL-3216	mm	3,000	1,400	160	180	7	22H8	38	16	38
PRL-4216	mm	4,000	1,400	160	180	7	22H8	38	16	38
PRL-2220	mm	2,000	1,700	130	180	9	22H8	38	16	38
PRL-2720	mm	2,500	1,700	130	180	9	22H8	38	16	38
PRL-3220	mm	3,000	1,700	130	180	9	22H8	38	16	38
PRL-4220	mm	4,000	1,700	130	180	9	22H8	38	16	38
PRL-3223	mm	3,000	2,000	100	180	11	28H8	48	22	52
PRL-4223	mm	4,000	2,000	100	180	11	28H8	48	22	52
PRL-5223	mm	5,000	2,000	100	180	11	28H8	48	22	52
PRL-6023	mm	6,000	2,000	100	180	11	28H8	48	22	52
PRL-3226	mm	3,000	2,400	120	180	13	28H8	48	22	52
PRL-4226	mm	4,000	2,400	120	180	13	28H8	48	22	52
PRL-5226	mm	5,000	2,400	120	180	13	28H8	48	22	52
PRL-6226	mm	6,000	2,400	120	180	13	28H8	48	22	52
PRL-8226	mm	8,000	2,400	120	180	13	28H8	48	22	52
PRL-10226	mm	10,000	2,400	120	180	13	28H8	48	22	52
PRL-4230/35/40/45	mm	4,000	2,800	400	200	13	28H8	48	22	52
PRL-5230/35/40/45	mm	5,000	2,800	400	200	13	28H8	48	22	52
PRL-6230/35/40/45	mm	6,000	2,800	400	200	13	28H8	48	22	52
PRL-8230/35/40/45	mm	8,000	2,800	400	200	13	28H8	48	22	52
PRL-10230/35/40/45	mm	10,000	2,800	400	200	13	28H8	48	22	52



# **Machining Examples**

Industry specific parts machining

## Automotive Industry







## Aerospace Industry

## **Electronics Industry**

## **Mold Industry**



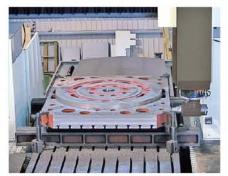




## Industrial Machining



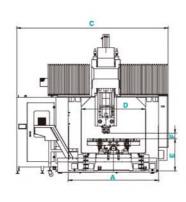


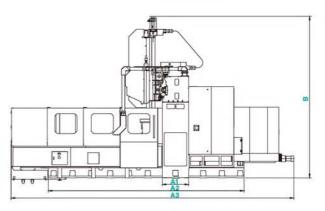




#### Machine Dimensions

PRL-xx16 PRL-xx20





Model	Unit	Α	В	C	D	E	F	A1	A2	A3
PRL-2216	mm	2,400	4,700	4,100	1,700	850	150	700	4,200	6,700
PRL-2716	mm	2,400	4,700	4,100	1,700	850	150	700	5,200	7,700
PRL-3216	mm	2,400	4,700	4,100	1,700	850	150	700	6,200	8,700
PRL-4216	mm	2,400	4,700	4,100	1,700	850	150	700	8,200	10,700
PRL-2220	mm	2,800	4,700	4,500	2,100	850	150	700	4,200	6,700
PRL-2720	mm	2,800	4,700	4,500	2,100	850	150	700	5,200	7,700
PRL-3220	mm	2,800	4,700	4,500	2,100	850	150	700	6,200	8,700
PRL-4220	mm	2,800	4,700	4,500	2,100	850	150	700	8,200	10,700

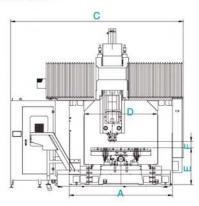
## **Machine Specifications**

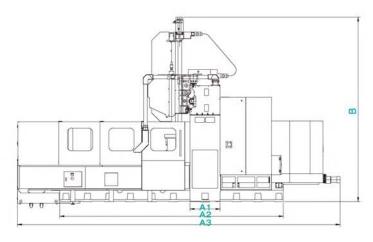
• All specifications are subjected to change without prior notice. \*Approximate value

MODEL	Unit	PRL-2216/20	PRL-2716/20	PRL-3216/20	PRL-4216/20
Travel					Maria de la companya
X axis	mm	2,200	2,700	3,200	4,200
Y axis	mm			/2,000	
Zaxis	mm			000 opt.)	
Spindle nose to table	mm			0 - 1,150 opt.)	
Distance between columns (max. workpiece width)	mm		1,700 (1,650)	/ 2,100 (2,050)	
Table					
Table dimensions (L)	mm	2,000	2,500	3,000	4,000
Table dimensions (W)	mm		1,400	/ 1,700	
T-slot (width x number x pitch)	_		22 x 7 x 180	/ 22 x 9 x 180	
Max. table load	kg	8,000	9,000	10,000	12,000
Spindle					
Spindle motor (cont. / 30 minute rated)	kW		18.5 / 22 (2	22 / 26 opt.)	
Spindle speed (gear box)	rpm		4,500 (6,	,000 opt.)	
Spindle taper			BT-50 / ISO	-50 / CAT-50	
Feed					J
Rapid feed-rate (X/Y/Z)	M/min	1:	2/12/15 (24/24/15 op	t.)	10/12/15 (18/24/15 opt.
Cutting feed-rate	mm/min		7,000 (10	),000 opt.)	
Accuracy					
Positioning accuracy	mm		±0.005/300;±	0.015 / full travel	
Positioning accuracy	mm	P0	.03	P0.	035
Depostobility	mm		±0.	003	
Repeatability	mm	Ps0	.025	Ps0	.028
ATC					
Tool storage capacity	pcs		32T (24T / 40	OT / 60T opt.)	
Max. tool length	mm		39	50	
Max. tool weight	kg		2	0	
Tool size (full tools)	mm		Ø1	25	
Max. tool size (next pockets empty)	mm		Ø	245	
Other					
Power consumption	kVA		6	5	
Compressed air	kg/cm <sup>2</sup>		6	.5	
Machine weight (approx.)	tons	19/21	21/23	23/25	27/29
Machine floor space (LxWxH)*	M	8.4 x 5.1 (5.5) x 4.7	9.4 x 5.1 (5.5) x 4.7	10.4 x 5.1 (5.5) x 4.7	12.4 x 5.1 (5.5) x 4.7



Machine **Dimensions** 





MODEL	Unit	A	В	С	D	E	F	A1	A2	АЗ
PRL-3223	mm	3,500	5,400	5,500	2,500	950	150	1,000	6,200	8,700
PRL-4223	mm	3,500	5,400	5,500	2,500	950	150	1,000	8,200	11,300
PRL-5223	mm	3,500	5,400	5,500	2,500	950	150	1,000	10,200	13,100
PRL-6023	mm	3,500	5,400	5,500	2,500	950	150	1,000	11,200	15,000

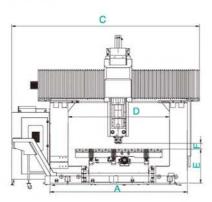
MODEL	Unit	PRL-3223	PRL-4223	PRL-5223	PRL-6023
Travel	1/1				
X axis	mm	3,200	4,200	5,200	6,000
Y axis	mm		2,300	/2,6	
Zaxis	mm		1,000 (1,	200 opt.)	
Spindle nose to table	mm		150 - 1,150 (1	50 - 1,350 opt.)	
Distance between columns (max. workpiece width)	mm		2,500 (2,450)		
Table					
Table dimensions (L)	mm	3,000	4,000	5,000	6,000
Table dimensions (W)	mm		2,0	000	
T-slot (width x number x pitch)	<del></del>		28 x 1	1 x 180	
Max. table load	kg	13,000	15,000	17,000	19,000
Spindle					
Spindle motor (cont. / 30 minute rated)	kW		18.5 / 22 (2	22 / 26 opt.)	
Spindle speed (gear box)	rpm		4,500 (6,	,000 opt.)	
Spindle taper	_		BT-50 / ISO	-50 / CAT-50	
Feed					
Rapid feed-rate (X / Y / Z)	M/min	12/12/12	10/1	12/12	8/12/12
Cutting feed-rate	mm/min		7,0	000	
Accuracy					
Dealleying assures:	mm		±0.005/300;±	0.015 / full travel	
Positioning accuracy	mm	P0.	035	P0.0	045
Downstate Black	mm		±0.	003	
Repeatability	mm	Ps0	.028	Ps0	0.03
ATC					
Tool storage capacity	pcs		32T (24T / 40T	/60T/90T opt.)	
Max. tool length	mm		35	50	
Max. tool weight	kg		2	.0	
Tool size (full tools)	mm		Ø1	25	
Max. tool size (next pockets empty)	mm		Ø2	245	
Other	-				
Power consumption	kVA			5	
Compressed air	kg/cm²		6	.5	
Machine weight (approx.)	tons	34	38	44	49
Machine floor space (L x W x H)*	M	10.4 x 6.5 x 5.4	13.0 x 6.5 x 5.4	14.8 x 6.5 x 5.4	16.7 x 6.5 x 5.4

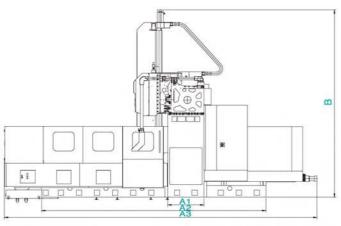


#### Machine Dimensions

#### PRL-xx26

Wider table 400mm larger across Y-axis



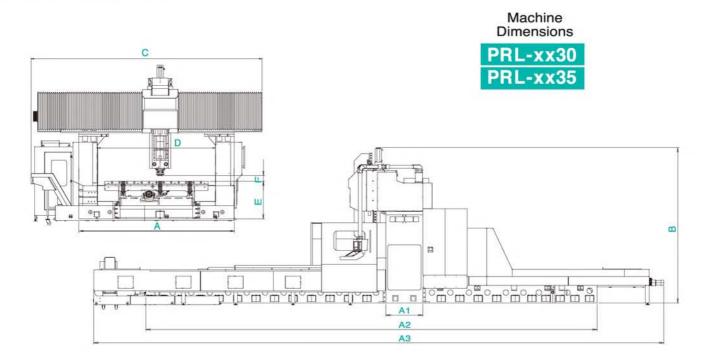


MODEL	Unit	A	В	C	D	E	F	A1	A2	A3
PRL-3226	mm	3,800	5,400	5,800	2,800	950	150	1,000	6,200	8,700
PRL-4226	mm	3,800	5,400	5,800	2,800	950	150	1,000	8,200	11,300
PRL-5226	mm	3,800	5,400	5,800	2,800	950	150	1,000	10,200	13,100
PRL-6226	mm	3,800	5,400	5,800	2,800	950	150	1,000	12,200	15,600
PRL-8226	mm	3,800	5,400	5,800	2,800	950	150	1,000	16,200	20,000
PRL-10226	mm	3,800	5,400	5,800	2,800	950	150	1,000	20,200	24,40

MODEL	Unit	PRL-3226	PRL-4226	PRL-5226	PRL-6226	PRL-8226	PRL-10226
Travel							
X axis	mm	3,200	4,200	5,200	6,200	8,200	10,200
Y axis	mm			2.6	600		
Zaxis	mm			1,000 (1,			
Spindle nose to table	mm			150 - 1,150 (15	THE RESERVE OF THE PARTY OF THE		
Distance between columns (max. workpiece width)	mm				(2,750)		
Table							1
Table dimensions (L)	mm	3,000	4,000	5,000	6,000	8,000	10,000
Table dimensions (W)	mm			2,4	00		1
T-slot (width x number x pitch)	=			28 x 13	3 x 180		
Max. table load	kg	11,000	13,000	15,000	17,000	21,000	25,000
Spindle							
Spindle motor (cont. / 30 minute rated)	kW			18.5 / 22 (2	22 / 26 opt.)		
Spindle speed (gear box)	rpm			4,500 (6,			
Spindle taper	-			BT-50 / ISO-	-50 / CAT-50		
Feed							
Rapid feed-rate (X / Y / Z)	M/min	15/15/12	12/1	5/12		8/12/12	
Cutting feed-rate	mm/min			7,0	000		
Accuracy				refine.			
n w .	mm	1		±0.005/300;±	0.015 / full travel		
Positioning accuracy	mm	P0.	035		P0.	045	
	mm			±0.0	003		
Repeatability	mm	Ps0	.028		T. T. T.	0.03	
ATC							
Tool storage capacity	pcs			32T (24T / 40T /	/60T/90T opt.)		
Max. tool length	mm			35			
Max. tool weight	kg			2	TALKET .		
Tool size (full tools)	mm			Ø1	25		
Max. tool size (next pockets empty)	mm			Ø2	245		
Other							
Power consumption	kVA			6	5		
Compressed air	kg/cm²			6.	<del>7</del>		
Machine weight (approx.)	tons	38	42	48	53	63	83
Machine floor space (L x W x H)*	М	10.4 x 6.8 x 5.4	13.0 x 6.8 x 5.4	14.8 x 6.8 x 5.4	17.3 x 6.8 x 5.4	21.7 x 6.8 x 5.4	26.1 x 6.8 x 5.

<sup>\*</sup> All specification are subjected to change without prior notice. • \*Approximate value





MODEL	Unit	PRL4230	PRL-5230	PRL-6230	PRL-8230	PRL-10230
Travel						
X axis	mm	4,200	5,200	6,200	8,200	10,200
Y axis	mm			3,000		•
Z axis	mm			1,000 (1,200 opt.)		
Spindle nose to table	mm		150	- 1,150 (150 - 1,350	opt.)	
Distance between columns (max. workpiece width)	mm		3,20	0 (3,150) / 3,700 (3,	650)	
Table						
Table dimensions (L)	mm	4,000	5,000	6,000	8,000	10,000
Table dimensions (W)	mm			2,800 (3,500 opt.)		
T-slot (width x number x pitch)			28 x 13	3 x 200 (28 x 17 x 20	00 opt.)	
Max. table load	kg	20,000	24,000	28,000	32,000	40,000
Spindle						
Spindle motor (cont. / 30 minute rated)	kW		1	8.5 / 22 (22 / 26 opt	.)	
Spindle speed (gear box)	rpm			4,500 (6,000 opt.)	₹):	
Spindle taper			B1	-50 / ISO-50 / CAT-	50	
Feed						
Rapid feed-rate (X / Y / Z)	M/min	10/1	10/12		8/10/12	
Cutting feed-rate	mm/min		1600 1100 C	7.000	A Table State Stat	
Accuracy						
	mm		±0.00	5/300;±0.015/full	travel	
Positioning accuracy	mm			P0.045		
	mm			±0.003		
Repeatability	mm			Ps0.03		
ATC						
Tool storage capacity	pcs		32	T (40T / 60T / 90T or	ot.)	
Max. tool length	mm			350		
Max. tool weight	kg			20		
Tool size (full tools)	mm			Ø125		
Max. tool size (next pockets empty)	mm			Ø245		
Other						
Power consumption	kVA			65		
Compressed air	kg/cm²			6.5		
Machine weight (approx.)	tons	55/57	63 / 65	71/73	87/89	101 / 103
Machine floor space (L x W x H)*	M		15.8 x 7.3 (7.8) x 5.4			

<sup>\*</sup> All specification are subjected to change without prior notice.



Model	Unit	Α	В	С	D	E	F	A1	A2	А3
PRL-4230	mm		5,400			1,020	150	1,000	8,200	12,100
PRL-5230	mm		5,400		0,0040-00000	1,020	150	1,000	10,200	14,100
PRL-6230	mm	4,300 / 4,800	5,400	6,300 / 6,800	3,200 / 3,700	1,020	150	1,000	12,200	15,600
PRL-8230	mm	0.55	5,400	- 5/6522	954	1,020	150	1,000	16,200	20,000
PRL-10230	mm		5,400			1,020	150	1,000	20,200	24,400
PRL-4235	mm		5,400			1,020	150	1,100	8,200	12,100
PRL-5235	mm		5,400		3,200	1,020	150	1,100	10,200	14,100
PRL-6235	mm	4,300	5,400	6,300	(3,700 /	1,020	150	1,100	12,200	15,600
PRL-8235	mm	5,300 / 5,800)	5,400	7,300 / 7,800)	4,200 / 4,700)	1,020	150	1,100	16,200	20,000
PRL-10235	mm	359 75 3.59 / A	5,400	0.63.5-26		1,020	150	1,100	20,200	24,400

MODEL	Unit	PRL-4235	PRL-5235	PRL-6235	PRL-8235	PRL-10235
Travel						
X axis	mm	4,200	5,200	6,200	8,200	10,200
Y axis	mm			3,500		
Zaxis	mm		1.0	000 (1,200 / 1,500 o	ot.)	
Spindle nose to table	mm		CONTRACT CONTRACTOR	0 (150 - 1,350 / 150 -	The second secon	
Distance between columns (max. workpiece width)	mm		3,200 (3,150) / 3,70	00 (3,650) / 4,200 (4,	150) / 4,700 (4,650)	
Table					N.	74-
Table dimensions (L)	mm	4,000	5,000	6,000	8,000	10,000
Table dimensions (W)	mm			2,800 (3,500 opt.)		70.7.27
T-slot (width x number x pitch)	_		28 x 1	3 x 200 (28 x 17 x 20	00 opt.)	
Max. table load	kg	20,000	24,000	28,000	32,000	40,000
Spindle						
Spindle motor (cont. / 30 minute rated)	kW			22/26		
Spindle speed (gear box)	rpm			4,200		
Spindle taper	-		B	T-50 / ISO-50 / CAT-	50	
Feed						
Rapid feed-rate (X/Y/Z)	M/min	10/1	0/12		8/10/12	
Cutting feed-rate	mm/min		7,000		6,0	000
Accuracy						
Positioning ageuragy	mm		±0.00	05/300;±0.015/ful	travel	
Positioning accuracy	mm			P0.045		
Departshilib	mm			±0.003		
Repeatability	mm			Ps0.03		
ATC						
Tool storage capacity	pcs		32	T (40T/60T/90To	pt.)	
Max. tool length	mm			350		
Max. tool weight	kg			20		
Tool size (full tools)	mm			Ø125		
Max. tool size (next pockets empty) Other	mm			Ø245		
Power consumption	kVA			65		
Compressed air	kg/cm²			6.5		
Machine weight (approx.)	tons	60/63/66/69	68/71/74/77	76/79/82/85	92/95/98/101	106/109/112/115

 $<sup>{\</sup>rm \divideontimes All\ specification\ are\ subjected\ to\ change\ without\ prior\ notice.\ \char``Approximate\ value'}$ 





# **ACCESSORY LIST**

Category	Description	xx16	xx23	xx26	xx30	xx35
	FANUC 0i-MF controller		•	•	•	•
	FANUC 31i-MB controller	0	0	0	0	0
Controller	MITSUBISHI M70 controller	0	0	0	0	0
	SIEMENS 840D controller	0	0	0	0	0
	HEIDENHAIN TNC640 controller	0	0	0	0	0
	18.5/22 kW spindle motor					X
	22/26 kW spindle motor	0	0	0	0	
Spindle	4,200 2-step gear drive spindle	X	X	X	X	•
Spiridle	4,500 2-step gear drive spindle					X
	6,000 2-step gear drive spindle	0	0	0	0	X
	8,000/10,000rpm direct drive spindle	0	0	0	0	0
	Z travel 800 mm		X	X	Х	X
	Z travel 1,000 mm	0				
	Z travel 1,200 mm	X	0	0	0	0
Z travel extension /	Z travel 1,500 mm	X	X	X	X	0
higher column	100mm higher column (standard Z travel)	X	0	0	X	X
	200mm higher column (standard Z travel)	0	0	0	0	0
	300mm higher column (standard Z travel)	0	0	0	Х	Х
	400mm higher column (standard Z travel)	X	0	0	0	0
	Automatic tool changer 32 tools		•			
ATO	Automatic tool changer 24 tools	0	0	0	X	Х
ATC	Automatic tool changer 40 / 60 tools	0	0	0	0	0
	Automatic tool changer 90 / 120 tools	Х	0	0	0	0
	Manual: 90° angular milling head / high-speed 2-axis head / 2-axis head / extend head / boring head	0	0	0	0	0
	Semi-automatic: 90° angular milling head / 2-axis head / extend head / boring head (Vertical / Horizontal ATC and AHS inapplicable)	0	0	0	0	0
Milling head function	Automatic: 90° angular milling head / 2-axis head / extend head / boring head	х	0	0	0	0
	Vertical / Horizontal automatic tool changer (40 / 60 / 90 tools)	Х	0	0	0	0
	Manual head station (Table type)	0	0	0	0	0
	Manual head station (Arm type)	0	0	0	0	0
	Automatic head station	Х	0	0	0	0





## **ACCESSORY LIST**

Category	Description	xx16	xx23	xx26	xx30	ххЗ
	Semi splash guard	0	0	*		
Splash guard	Fully enclosed splash guard (roof excluded)	•		*	0	0
8 2	Fully enclosed splash guard (roof included)	0	0	*	Х	Х
	X / Y / Z axes absolute pulse coder	•				
	Rigid tapping	•				
	Twin hydraulic cylinders	•				
	Nitrogen balancing system	•				
	Automatic lubrication system	•				
	Spindle oil cooler	•				
	Air blast through spindle					
	Manual pulse generator	•				
	Working lamp	•				
	3-color alarm lamp	•				
	RS-232 interface	•				
	Heat exchanger for electrical cabinet	•				
Mechanical	Water gun and air gun interface	•				
	Cutting coolant unit	•			•	
	Twin auger chip removal system	•				
	Belt type chip conveyor with cart	•				
	Sub-table Sub-table	0	0	0	0	0
	3 axes manual pulse generator for mold processing	0	0	0	0	0
	Coolant through spindle at 20 / 40 / 70 bar	0	0	0	0	0
	Coolant through tool holder interface	0	0	0	0	0
	Air conditioner for electrical cabinet	0	0	0	0	0
	Oil skimmer	0	0	0	0	0
	Transformer	0	0	0	0	0
	Oil mist device	0	0	0	0	0
	HEIDENHAIN linear scale	0	0	0	0	(
Measurement	Automatic tool measuring system	0	0	0	0	0
	Automatic work piece measuring system	0	0	0	0	0
	CNC rotary table	0	0	0	0	0
4th axis function	4th axis preparation	0	0	0	0	0
	Leveling bolts & blocks	•				
Others	Tool box	•				
	CE norm	0	0	0	0	0

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