

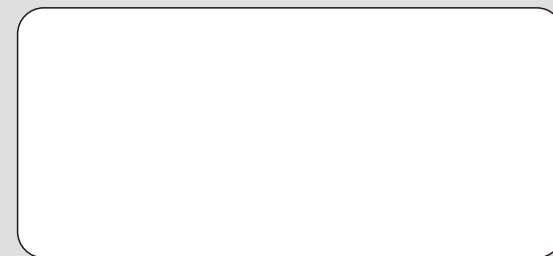


Heavy Duty (Box Ways) Vertical Machining Center

CPV-B Series



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QAC11-01



• Machine specifications and design are subject to change without prior notice due to on-going innovation.

2021-03-V1.0 16P GHxxx US

CE ISO 9001

Campro Precision Machinery Co., Ltd.
www.camprousa.com

Line Up

Machining center with high versatility and stability

Designed to be a highly versatile and efficient machining center. Boxway design provides superior rigidity and accuracy. Constructed with high quality heat-treated cast iron to relieve stress.

CPV-2200B



CPV-850B



CPV-1100B



CPV-1400B



CPV-1600B



CPV-1800B



CPV-1050B



Spindle



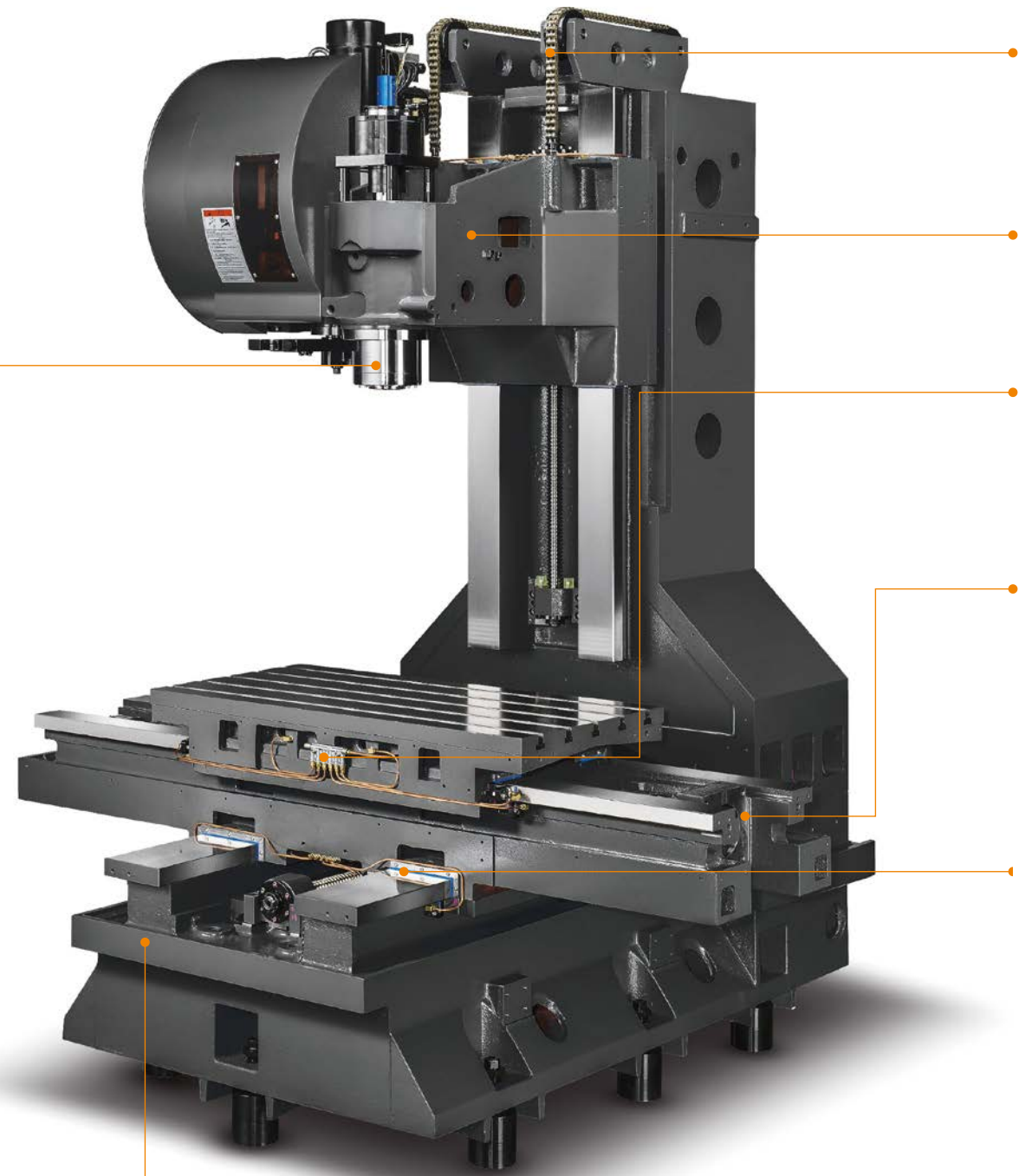
Standard Belt type spindle employs rigid class P4 angular contact ball bearings. Spindle speed 8,000 rpm on No. 40 taper spindle and 6,000 rpm on No. 50 taper spindle.



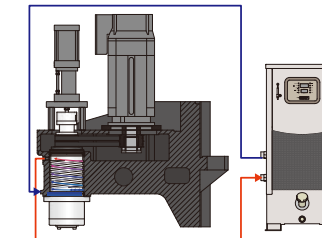
No. 50 taper is available on the CPV-1100B, 1400B, and 1600B. No. 50 taper is standard on the CPV-1800B and 2200B.



Optional Two-speed planetary gear head spindle delivers outstanding heavy cutting performance. (Available on CPV-1400B / 1600B / 1800B / 2200B No. 50 taper spindle)

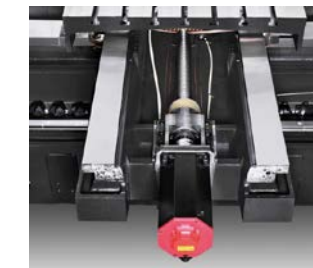


Counter-balance system design effectively increased machine stability during operation.

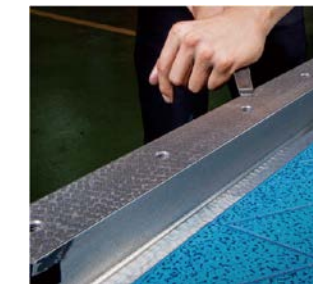


All machines come standard with a spindle oil cooler. The head is designed with a superior circulation system to maintain a constant temperature during operation.

Oil distribution device which pass through the cast iron helps to disperse heat and reduce the chance of thermal deformation.



All three axes feature a direct drive design with a backlash free coupling.



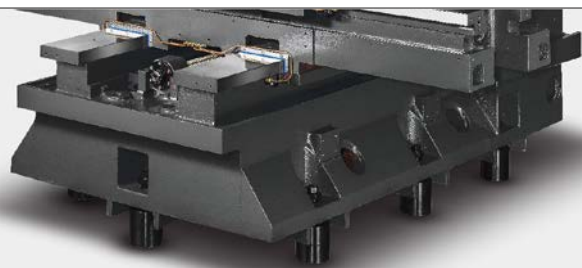
Precision scraping on both bonded Turcite-B and cast iron surfaces helps to reduce wear, maintaining accuracy and machine longevity.



Pretensioned class C3 precision ballscrews on 3 axes help to eliminate backlash.

Table base

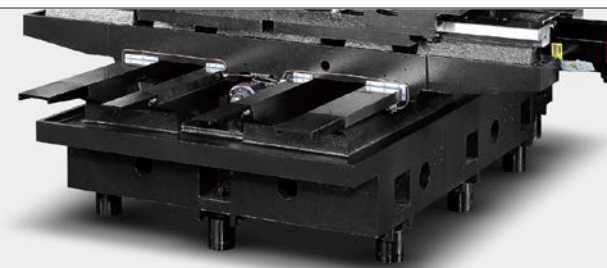
Precisely calculated guide way span helps to disperse vibration during operation.



CPV-850B / 1050B table base design.



CPV-1100B table base design.



CPV-1400B / 1600B / 1800B table base design is with 4 boxway type guideways.



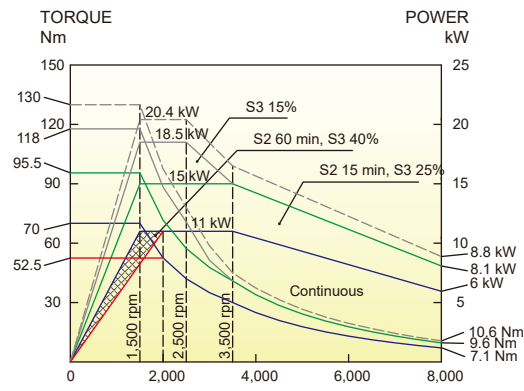
CPV-2200B table base design is with 4 boxway type guideways and 2 linear guideways.

Spindle Diagram

No.40 Belt Type

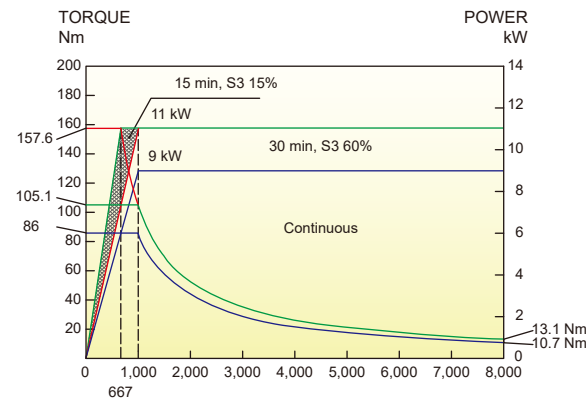
FANUC 20HP

Model : 850B / 1100B



FANUC 15HP High-torque motor

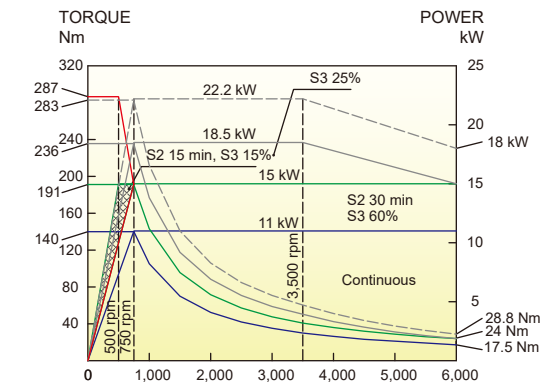
Model : 1400B / 1600B



No.50 Belt Type

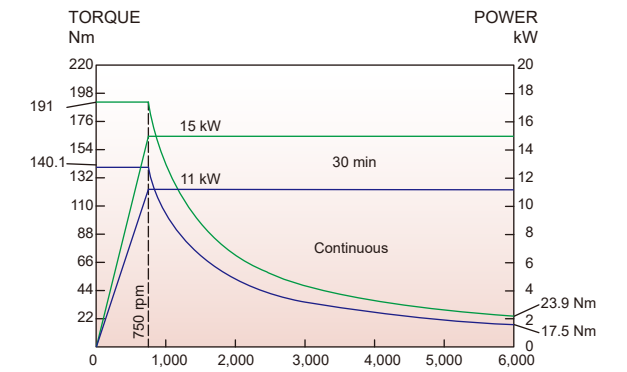
FANUC 20HP

Model : 1100B / 1400B / 1600B / 1800B / 2200B



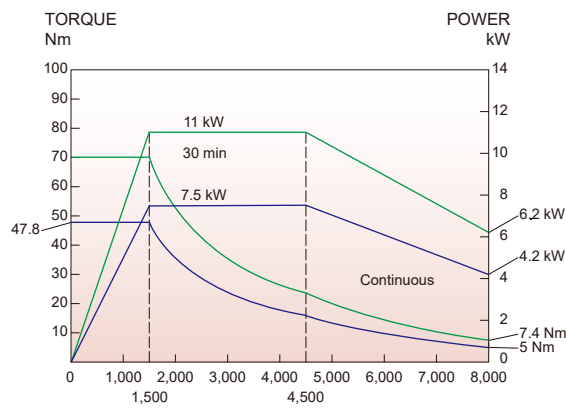
MITSUBISHI 20HP

Model : 1100B / 1400B / 1600B / 1800B / 2200B



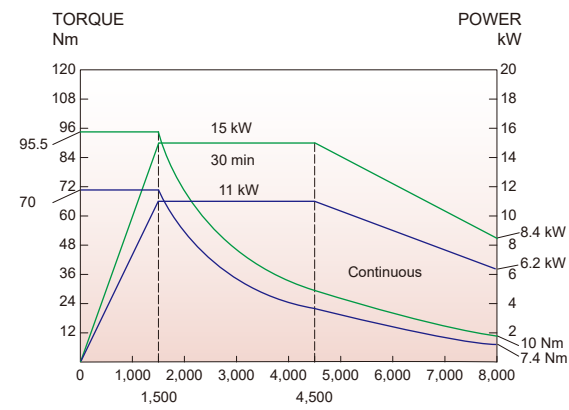
MITSUBISHI 15HP

Model : 850B / 1100B / 1400B / 1600B



MITSUBISHI 20HP (OPT)

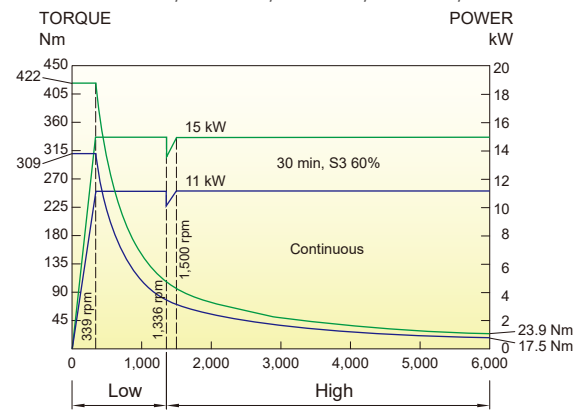
Model : 850B / 1100B / 1400B / 1600B



No.50 Gear Type (OPT)

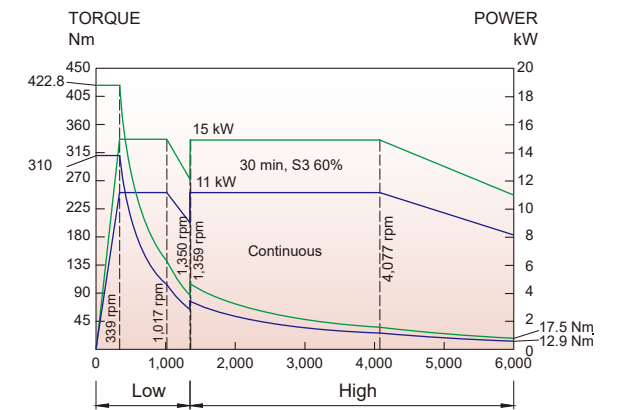
FANUC 20HP

Model : 1100B / 1400B / 1600B / 1800B / 2200B



MITSUBISHI 20HP

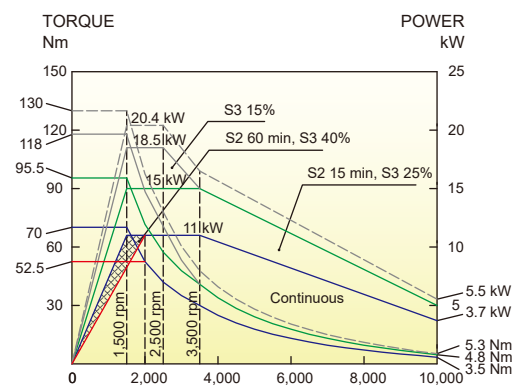
Model : 1100B / 1400B / 1600B / 1800B / 2200B



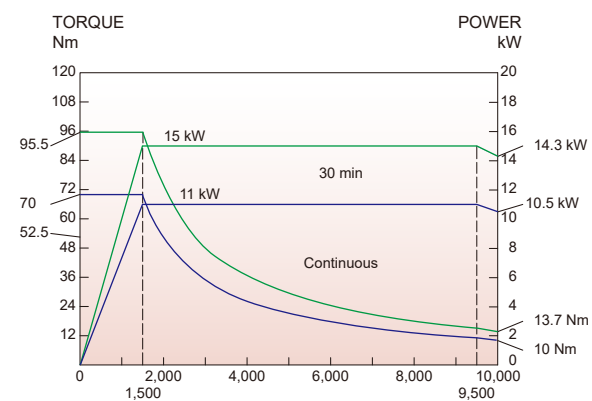
CPV-1050B

No.40 Belt Type 10,000rpm

FANUC 20HP

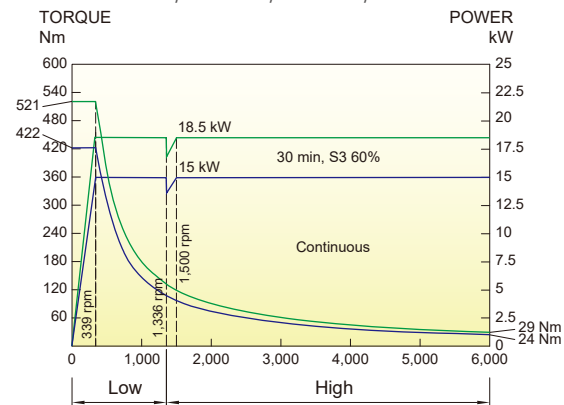


MITSUBISHI 20HP



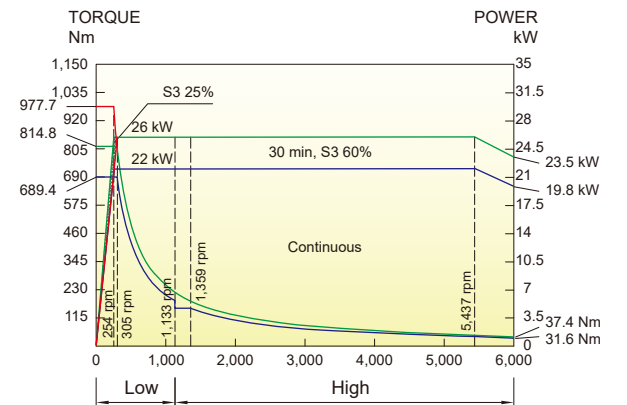
FANUC 25HP

Model : 1400B / 1600B / 1800B / 2200B



FANUC 35HP

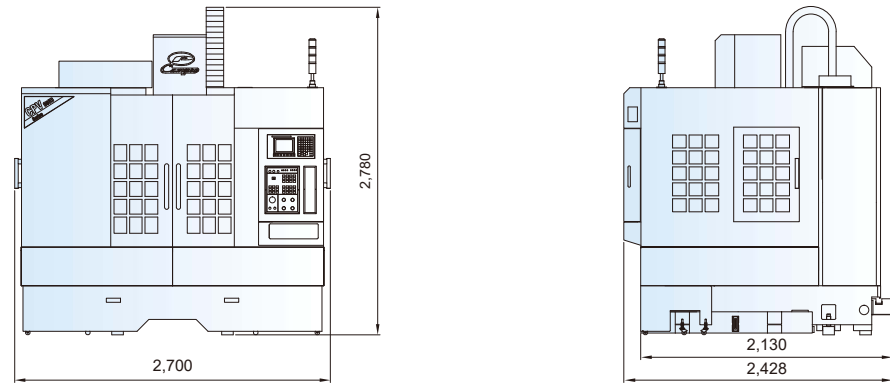
Model : 1400B / 1600B / 1800B / 2200B



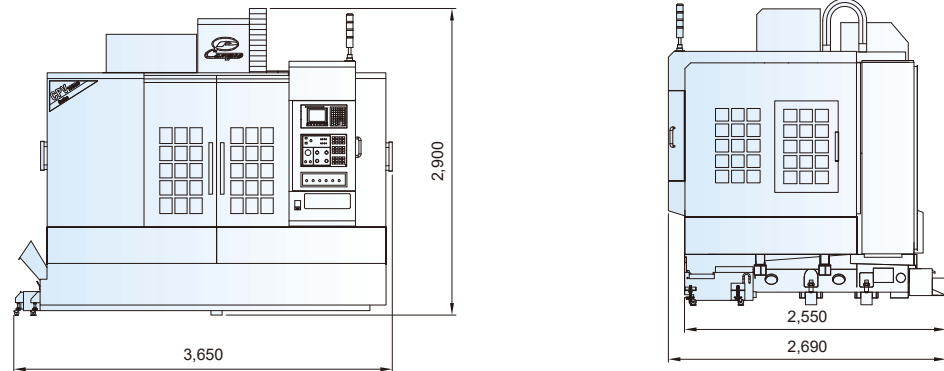
Machine Dimensions

Unit : mm

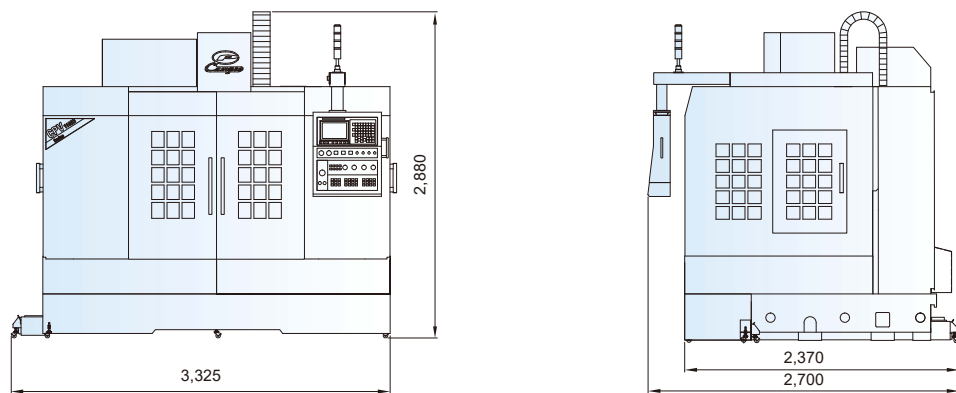
CPV-850B



CPV-1050B

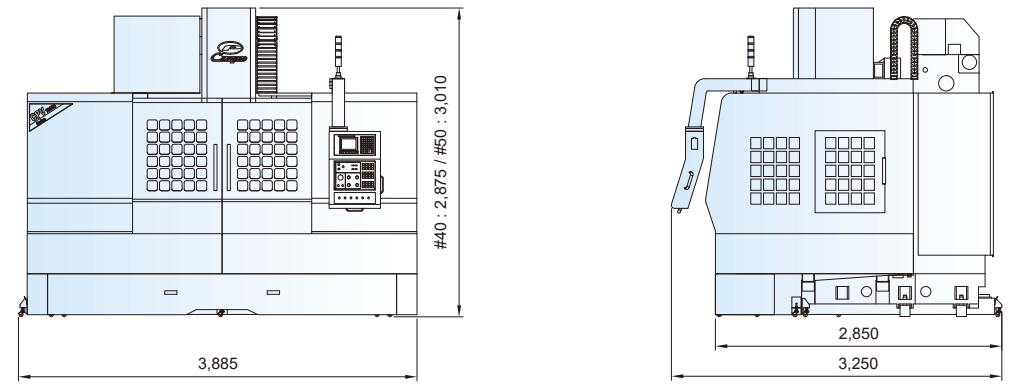


CPV-1100B

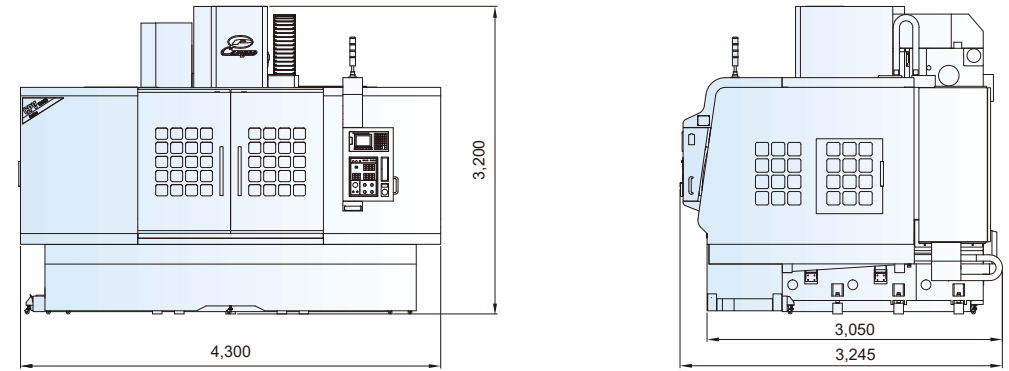


Unit : mm

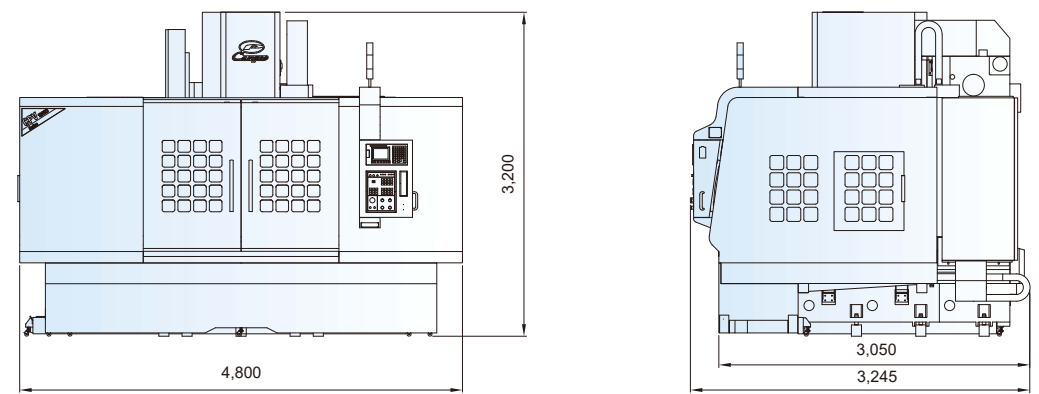
CPV-1400B



CPV-1600B



CPV-1800B



CPV-2200B

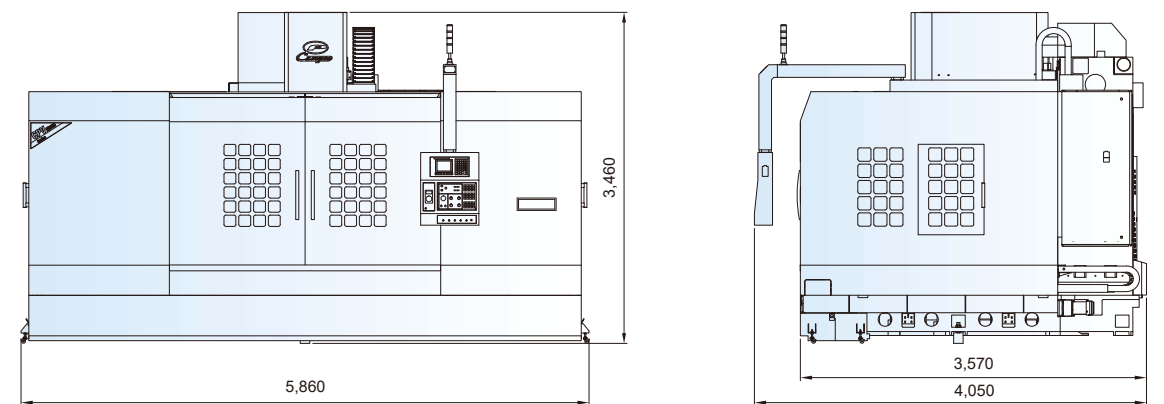
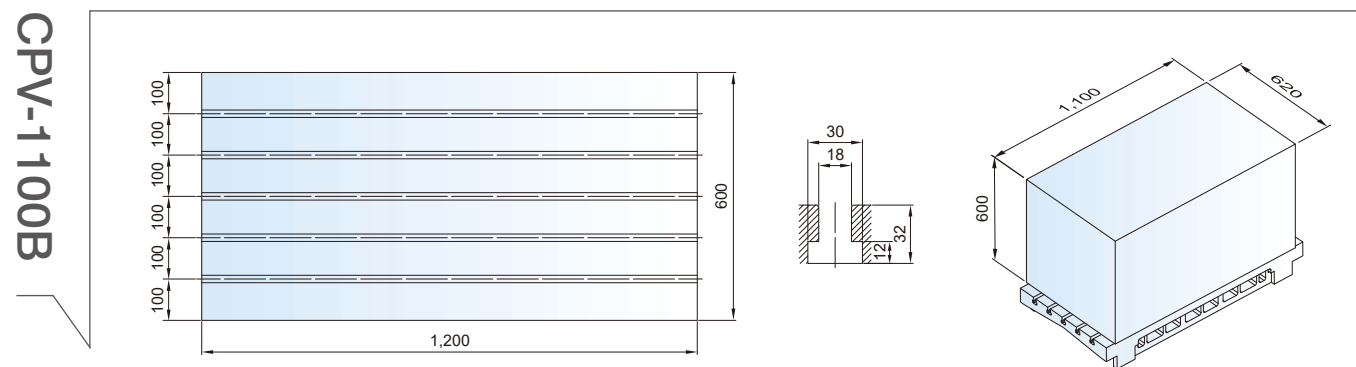
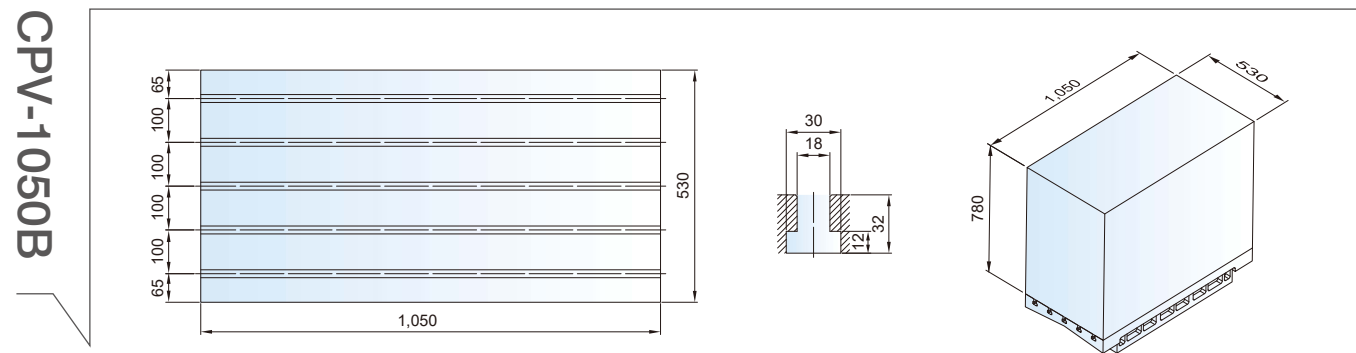
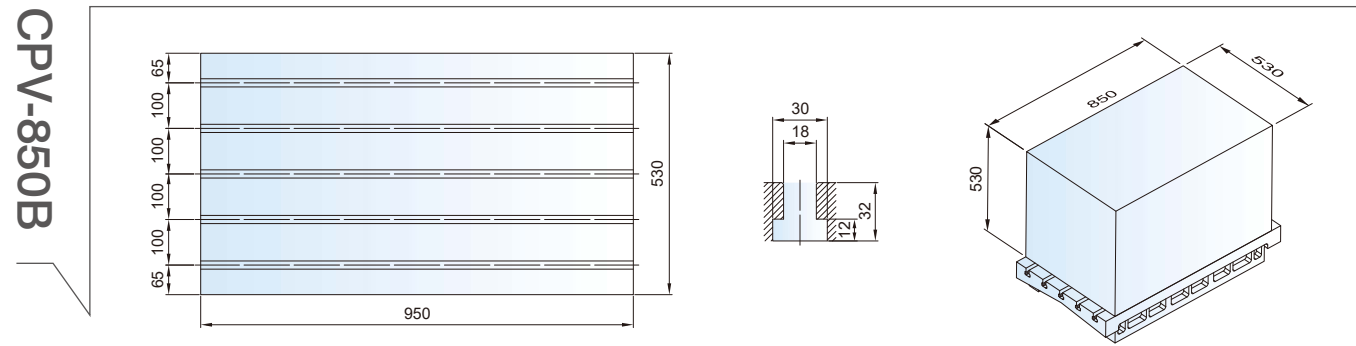
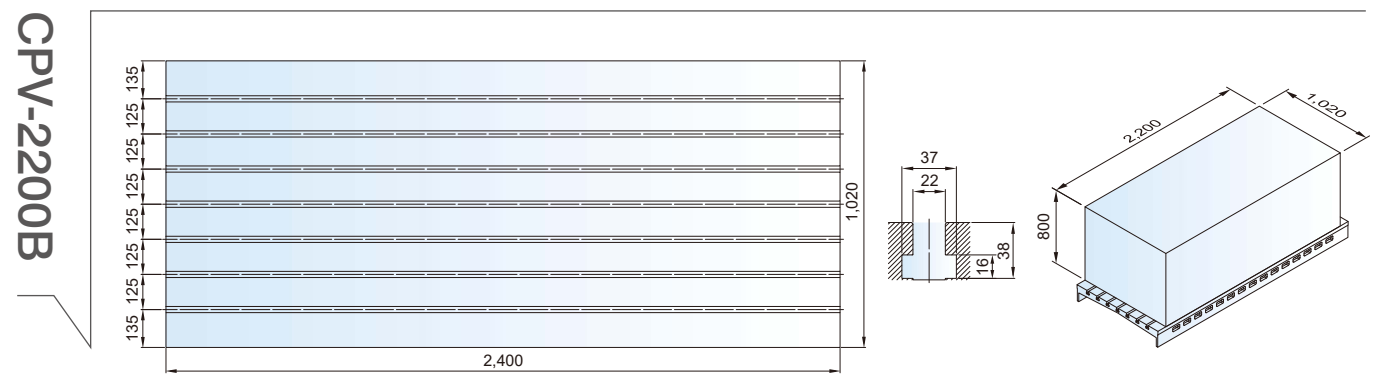
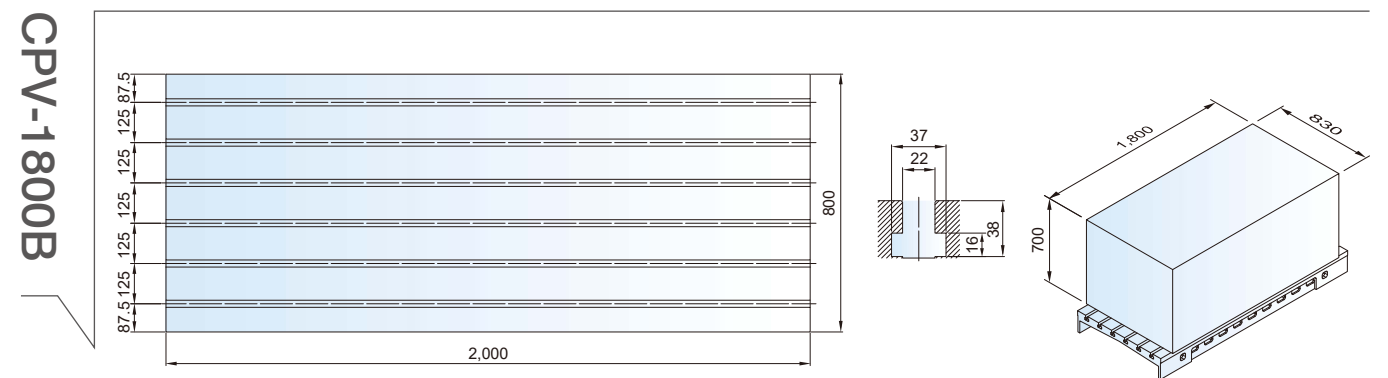
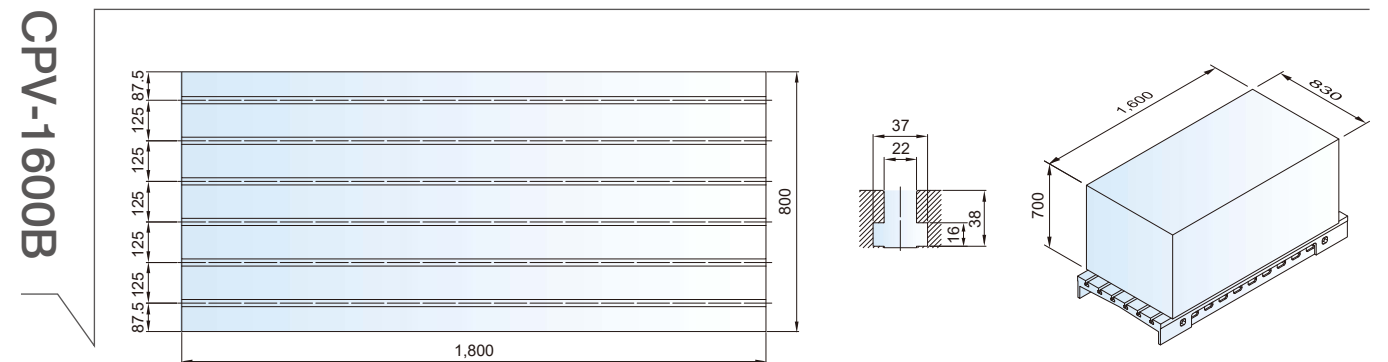
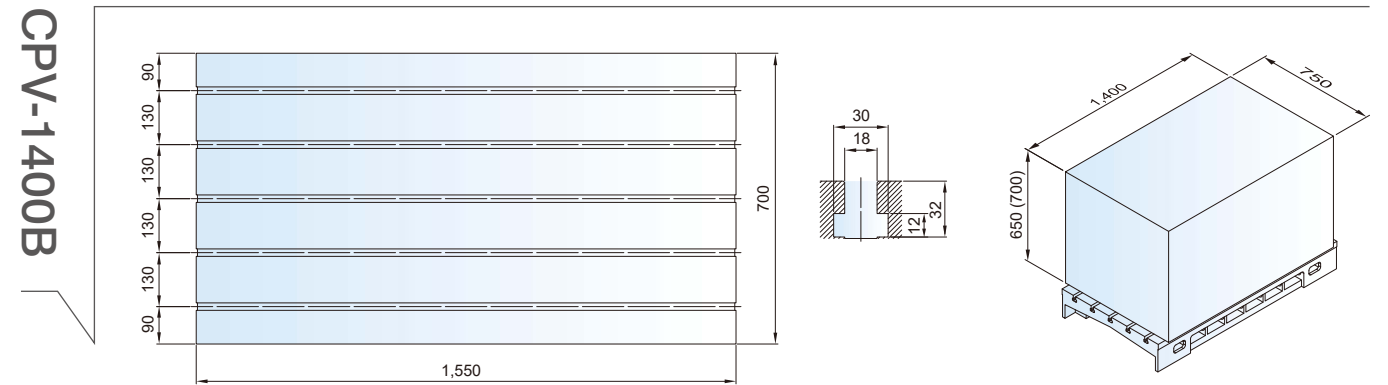


Table Dimensions and Working Capacity

Unit : mm



Unit : mm



Machine Specifications

MODEL	UNIT	CPV-850B	CPV-1050B	CPV-1100B	CPV-1400B	CPV-1600B	CPV-1800B	CPV-2200B
TRAVEL								
X-axis travel	mm (in)	850 (33.4")	1,050 (41.3")	1,100 (43.3")	1,400 (55.1")	1,600 (62.9")	1,800 (70.8")	2,200 (86.6")
Y-axis travel	mm (in)	530 (20.8")	530 (20.8")	620 (24.4")	750 (29.5")	830 (32.6")	830 (32.6")	1,020 (40.1")
Z-axis travel	mm (in)	530 (20.8")	780 (30.7")	600 (23.6")	650 (25.5") 700 (27.5")	700 (27.5")	700 (27.5")	800 (31.4")
Distance from spindle nose to table surface	mm (in)	100 ~ 630 (3.9" ~ 24.8")	100 ~ 880 (3.9" ~ 34.6")	120 ~ 720 (4.7" ~ 28.3")	130 ~ 780 (5.1" ~ 30.7") 150 ~ 850 (5.9" ~ 33.4")	130 ~ 830 (5.1" ~ 32.6") 150 ~ 850 (5.9" ~ 33.4")	150 ~ 850 (5.9" ~ 33.4")	200 ~ 1,000 (7.8" ~ 39.3")
Distance from spindle center to column	mm (in)	590 (23.2")	590 (23.2")	670 (26.3")	780 (30.7")	850 (33.4")	850 (33.4")	1,050 (41.3")
TABLE								
Table dimension	mm (in)	950 x 530 (37.4" x 20.8")	1,050 x 530 (41.3" x 20.8")	1,200 x 600 (47.2" x 23.6")	1,550 x 700 (61" x 27.5")	1,800 x 800 (70.8" x 31.4")	2,000 x 800 (78.7" x 31.4")	2,400 x 1,020 (94.4" x 40.1")
Max. loading weight	kg (lb)	800 (1,763)	1,000 (2,204)	1,100 (2,425)	1,800 (3,968)	2,000 (4,409)	2,200 (4,850)	3,000 (6,613)
T-slots (W x No. x P)	mm (in)	18 x 5 x 100 (0.7" x 5 x 3.9")	18 x 5 x 100 (0.7" x 5 x 3.9")	18 x 5 x 100 (0.7" x 5 x 3.9")	18 x 5 x 100 (0.7" x 5 x 3.9")	22 x 6 x 125 (0.8" x 6 x 4.9")	22 x 6 x 125 (0.8" x 6 x 4.9")	22 x 6 x 125 (0.8" x 6 x 4.9")
SPINDLE								
Spindle speed	rpm	8,000	10,000	8,000	6,000	8,000	6,000	6,000
Spindle motor	kW(HP)	11 / 15 (20HP)	11 / 15 (20HP)	11 / 15 (20HP)	11 / 15 (20HP)	9 / 11 (15HP)	11 / 15 (20HP)	9 / 11 (15HP)
Spindle taper	type	7/24 taper No.40	7/24 taper No.40	7/24 taper No.40	7/24 taper No.40	7/24 taper No.40	7/24 taper No.50	7/24 taper No.50
AUTOMATIC TOOL CHANGER								
ATC type	type	Arm type	Arm type	Arm type	Arm type	Arm type	Arm type	Arm type
Tool shank	type	CAT-40	CAT-40	CAT-40	CAT-50	CAT-40	CAT-50	CAT-50
Pull stud	type	ANSI / ANSI	ANSI / ANSI	ANSI / ANSI	ANSI / ANSI	ANSI / ANSI	ANSI / ANSI	ANSI / ANSI
Tool storage capacity	pcs.	24	24	24	24	24	24	24
Max. tool diameter	mm (in)	Ø80 (3.1")	Ø80 (3.1")	Ø80 (3.1")	Ø110 (4.3")	Ø80 (3.1")	Ø110 (4.3")	Ø110 (4.3")
Max. tool diameter (Adjacent empty)	mm (in)	Ø150 (5.9")	Ø150 (5.9")	Ø150 (5.9")	Ø200 (7.8")	Ø150 (5.9")	Ø200 (7.8")	Ø200 (7.8")
Max. tool length	mm (in)	250 (9.8")	250 (9.8")	250 (9.8")	300 (11.8")	250 (9.8")	300 (11.8")	300 (11.8")
Max. tool weight	kg (lb)	7 (15)	7 (15)	7 (15)	15 (33)	7 (15)	15 (33)	15 (33)
Tool change time (Tool to Tool)	sec.	2.5	2.5	2.5	3.5	2.5	3.5	3.5
Tool change time (Chip to Chip)	sec.	6	6	6	7	6	7	7
FEEDRATE								
Rapid traverse (X / Y / Z)	m (in) / min.	20 / 20 / 20 (787.4 / 787.4 / 787.4)	30 / 30 / 30 (1,181.1 / 1,181.1 / 1,181.1)	20 / 20 / 20 (787.4 / 787.4 / 787.4)	20 / 20 / 15 (787.4 / 787.4 / 590.5)	15 / 15 / 15 (590.5 / 590.5 / 590.5)	15 / 15 / 12 (590.5 / 590.5 / 472.4)	15 / 15 / 12 (590.5 / 590.5 / 472.4)
Cutting feedrate	mm (in) / min.	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)	10,000 (393.7)
OTHERS								
Floor plan (W x D)	mm (in)	2,700 x 2,428 (106" x 95")	3,650 x 2,690 (143" x 105")	3,325 x 2,700 (130" x 106")	3,885 x 3,250 (152" x 127")	4,300 x 3,245 (169" x 127")	4,800 x 3,245 (188" x 127")	5,860 x 4,050 (230" x 159")
Machine weight	kg (lb)	6,000 (13,227)	6,700 (14,770)	6,500 (14,330)	7,000 (15,432)	11,000 (24,250)	11,500 (25,353)	14,500 (31,967)
Max. machine height	mm (in)	2,780 (109")	2,900 (114")	2,880 (113")	2,875 (113")	3,010 (118")	3,200 (125")	3,200 (125")
Air source	kg/cm ² (PSI)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)	6 ~ 8 (85 ~ 113)
Power supply	KVA	20	20	20	25	25	30	30

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Standard accessories / Optional accessories

● Standard ○ Optional X No available

MODLE	CPV-850B	CPV-1050B	CPV-1100B		CPV-1400B		CPV-1600B		CPV-1800B	CPV-2200B
SPINDLE TYPE	No.40	No.40	No.40	No.50	No.40	No.50	No.40	No.50	No.50	No.50
Spindle oil cooler	●	●	●	●	●	●	●	●	●	●
Spindle coolant ring and nozzle	●	●	●	●	●	●	●	●	●	●
Rigid tapping	●	●	●	●	●	●	●	●	●	●
Twin arm type ATC (24T)	●	●	●	●	●	●	●	●	●	●
Working lamp (Standard Q'ty)	1	1	1	1	2	2	2	2	2	2
Auto lubrication system	●	●	●	●	●	●	●	●	●	●
Heat exchanger for electrical cabinet	●	●	●	●	●	●	●	●	●	●
8,000 rpm belt type spindle (No.40)	●	X	●	X	●	X	●	X	X	X
10,000 rpm belt type spindle (No.40)	○	●	○	X	○	X	○	X	X	X
12,000 rpm belt type spindle (No.40)	○	○	○	X	○	X	○	X	X	X
8,000 rpm two-stage gear box (No.40)	○	X	○	X	○	X	○	X	X	X
6,000 rpm belt type spindle (No.50)	X	X	X	●	X	●	X	●	●	●
8,000 rpm belt type spindle (No.50)	X	X	X	○	X	○	X	○	○	○
6,000 rpm two-stage gear-head spindle (No.50)	X	X	X	X	X	○	X	○	○	○
6,000 rpm two-stage gear box (No.50)	X	X	X	○	X	○	X	○	○	○
Coolant through spindle	○	○	○	○	○	○	○	○	○	○
Carrousel type ATC (20T)	○	○	○	X	○	X	○	X	X	X
Twin arm type ATC (30T)	○	○	○	○	○	○	○	○	○	○
Chain type ATC (32T)	X	X	○	X	○	○	○	○	○	○
Chain type ATC (40T)	X	X	X	X	○	○	○	○	○	○
Chip screw conveyor with bucket	○	●	○	○	○	○	○	○	○	○
Chain type chip conveyor with bucket	○	○	○	○	○	○	○	○	○	○
Chip flushing device	○	●	○	○	○	○	○	○	○	○
Workpiece measurement	○	○	○	○	○	○	○	○	○	○
Auto tool length measurement	○	○	○	○	○	○	○	○	○	○
Linear scales	○	○	○	○	○	○	○	○	○	○
Air condition	○	○	○	○	○	○	○	○	○	○
High pressure coolant pump	○	○	○	○	○	○	○	○	○	○
Oil Skimmer	○	○	○	○	○	○	○	○	○	○
CE modification	○	○	○	○	○	○	○	○	○	○

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