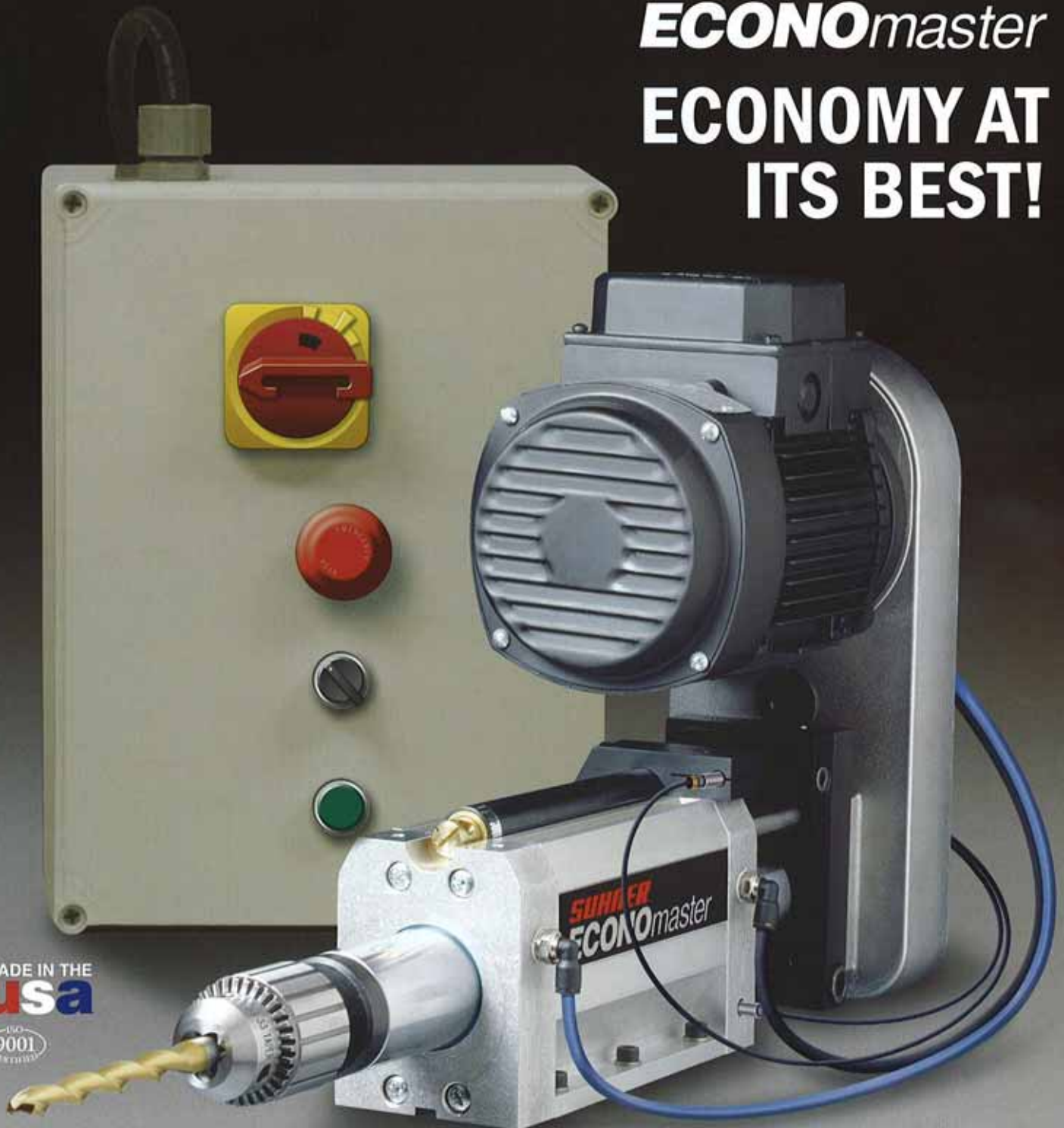




Automation expert.®

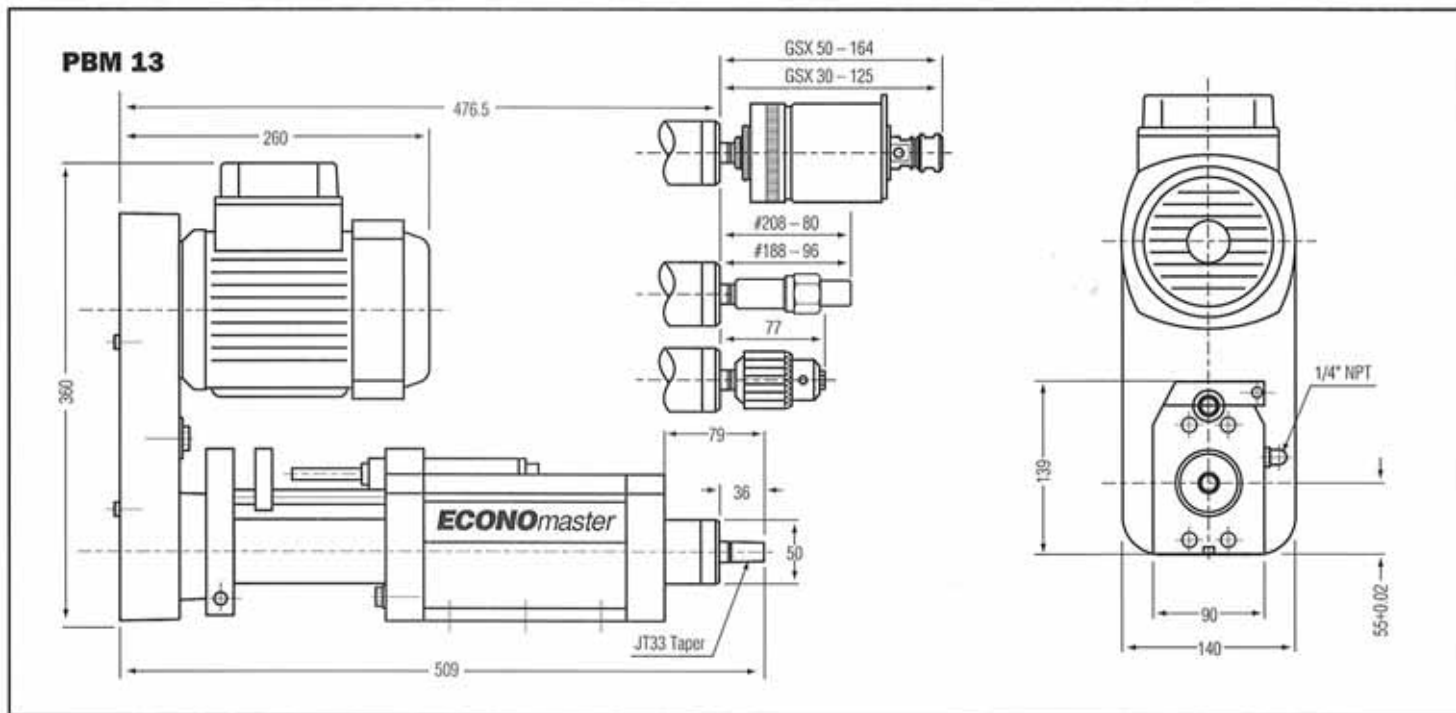
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***ECONO*master**
ECONOMY AT
ITS BEST!



MADE IN THE
usa

ISO
9001
CERTIFIED



Technical Data:

- Total stroke 4.00"
- Total rapid stroke 3.5" with HB25 brake.
- Adjustable feed stroke .50" to 3.00"
- Thrust at 85 Psi. = 400 Lbs.
- Operating pressure Min. 70 Psi. - Max. 110 Psi.
- Motor protection TEFC/IP 56
- Standard voltage 230V/460V
- Running 230V. = 2.8 Amps./460V. = 1.4 Amps.
- Concentricity .002" TIR
- PBM speed range 1.0 Hp motor 1,350 to 9,600 Rpm.
- PBM speed range .75 Hp motor 675 to 4,800 Rpm.
- Air connection retract + advance 1/4" - 27 NPT

Features:

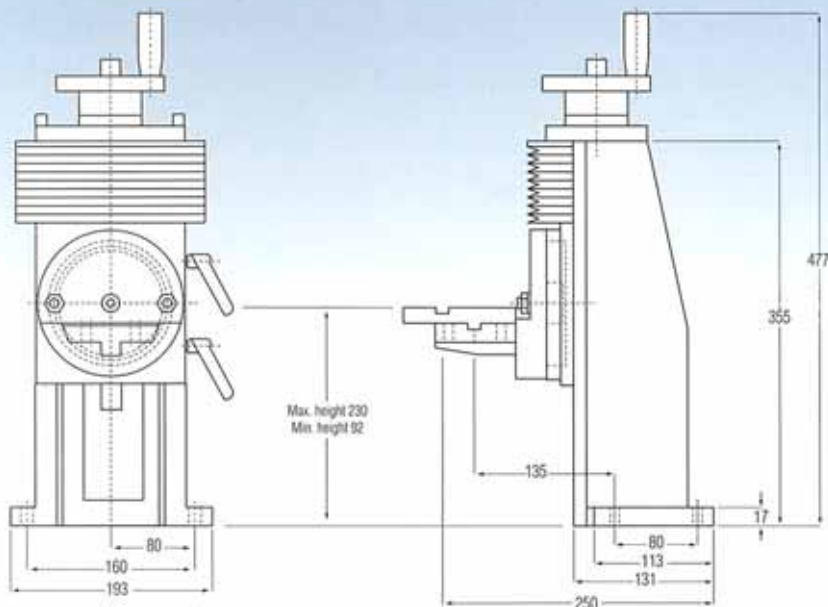
- Low air consumption Cf. per cycle 0.1
- Economically priced
- Adjustable motor housing (4x90°)
- Interchangeable pulleys
- Adjustable total stroke
- Hydraulic feed control cylinder
- J33 taper spindle end
- 0" to 1/2" drill chuck
- Electric front + rear position limit switches
- Belt tensioner
- Chrome plated quill
- PBM Weight 45 Lbs.



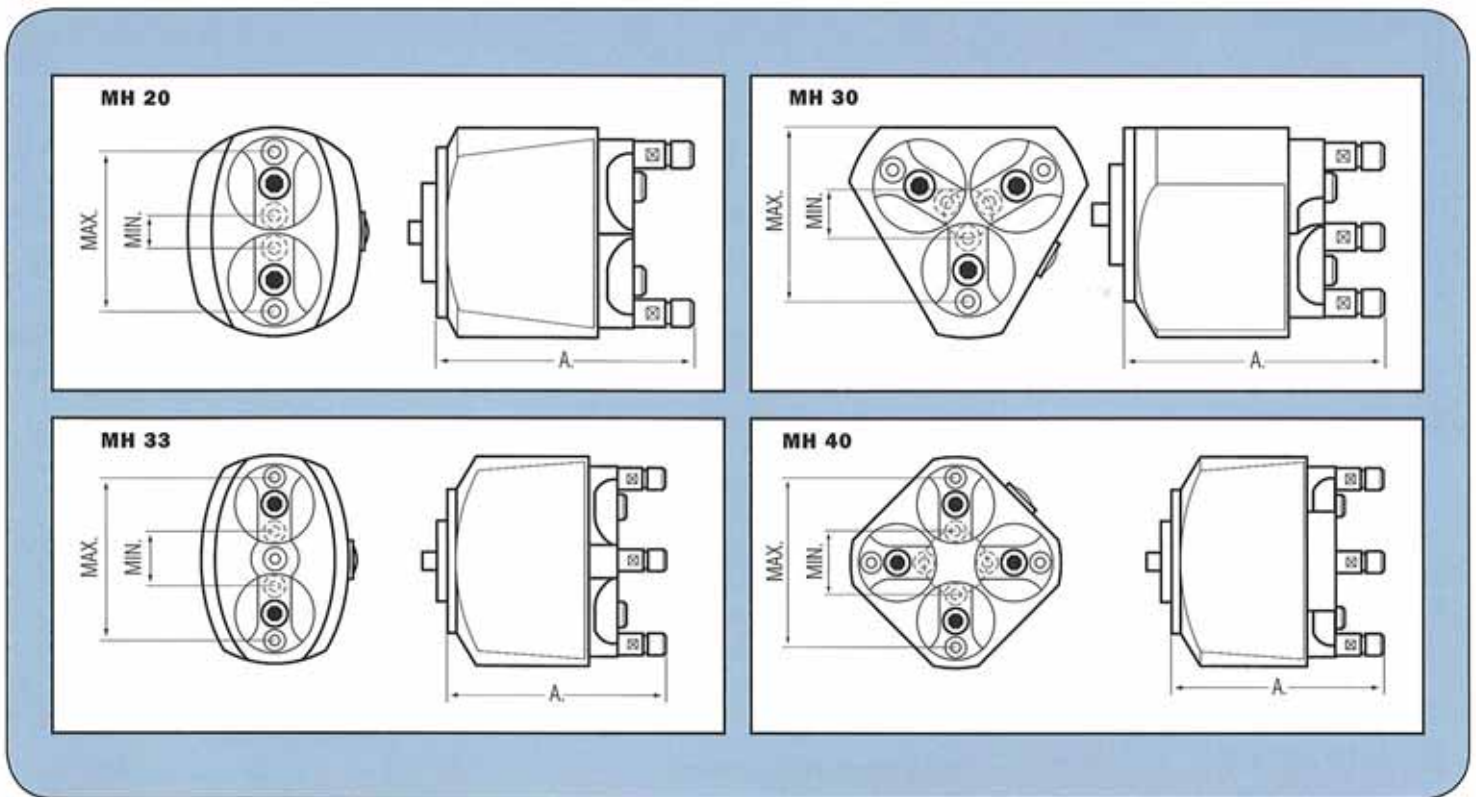
PBM 13 with optional
USB 6/12 adjustable stand

USB 6/12 Adjustable Stand

USB 6/12 - Optional Adjustable Stand #5878501
FP13 - Optional Base Plate #0110235



Multiple Spindle Heads



MH 20 Multiple spindle heads with 2 adjustable spindles

Type	Order Number	In Steel max ø	Adjustment Range min.	Adjustment Range max.	Overall Height (A)	Gear Ratio	Speed	Weight kg (lbs)
MH 20/2	140 105	2.5 mm (0.099)	9 mm (0.355)	53 mm (2.087)	103.5 mm (4.075)	1:1	6000	0.800 (1.7)
MH 20/5	140 107	5 mm (0.197)	13.5 mm (0.532)	73.5 mm (2.894)	117.5 mm (4.626)	1:1	4000	1.400 (3.1)
MH 20/7	140 108	7 mm (0.279)	16 mm (0.630)	90 mm (3.544)	136 mm (5.354)	1:1	4000	2.200 (4.8)
MH 20/10	140 109	10 mm (0.394)	21 mm (0.827)	103 mm (4.056)	166 mm (6.535)	1:1	4000	4.000 (10.2)

MH 30 Multiple spindle heads with 3 adjustable spindles

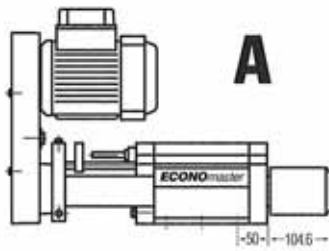
Type	Order Number	In Steel max ø	Adjustment Range min.	Adjustment Range max.	Overall Height (A)	Gear Ratio	Speed	Weight kg (lbs)
MH 30/2	140 143	2.5 mm (0.099)	14.5 mm (0.571)	58.5 mm (2.303)	103.5 mm (4.075)	1:1	6000	0.9 (2.0)
MH 30/5	140 145	5 mm (0.197)	20.5 mm (0.807)	80.5 mm (3.169)	117.5 mm (4.626)	1:1	4000	1.8 (4.0)
MH 30/7	140 146	7 mm (0.276)	24.5 mm (0.965)	98.5 mm (3.878)	136 mm (5.354)	1:1	4000	2.9 (6.4)
MH 30/10	140 147	10 mm (0.394)	31 mm (1.220)	113 mm (4.449)	166 mm (6.535)	1:1	4000	4.8 (10.6)

MH 33 Multiple spindle heads with 3 adjustable spindles

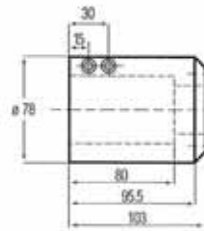
Type	Order Number	In Steel max ø	Adjustment Range min.	Adjustment Range max.	Overall Height (A)	Gear Ratio	Speed	Weight kg (lbs)
MH 33/2	140 126	2.5 mm (0.099)	9.5 mm (0.374)	31.5 mm (1.240)	103.5 mm (4.075)	1:1	6000	0.8 (1.7)
MH 33/5	140 128	5 mm (0.197)	14.0 mm (0.551)	44.0 mm (1.732)	117.5 mm (4.626)	1:1	4000	1.7 (3.7)
MH 33/7	140 129	7 mm (0.279)	16.5 mm (0.650)	53.5 mm (2.106)	136 mm (5.354)	1:1	4000	2.5 (5.5)
MH 33/10	140 139	10 mm (0.394)	21.5 mm (0.846)	62.5 mm (2.461)	166 mm (6.535)	1:1	4000	4.8 (10.5)

MH 40 Multiple spindle heads with 4 adjustable spindles

Type	Order Number	In Steel max ø	Adjustment Range min.	Adjustment Range max.	Overall Height (A)	Gear Ratio	Speed	Weight kg (lbs)
MH 40/2	140 161	2.5 mm (0.099)	22 mm (0.866)	66 mm (2.598)	103.5 mm (4.075)	1:1	6000	1.0 (2.2)
MH 40/5	140 163	5 mm (0.197)	32 mm (1.260)	92 mm (3.622)	117.5 mm (4.626)	1:1	4000	2.3 (5.0)
MH 40/7	140 164	7 mm (0.279)	38 mm (1.496)	112 mm (4.409)	136 mm (5.354)	1:1	4000	3.8 (8.3)
MH 40/10	140 165	10 mm (0.394)	47 mm (1.850)	129 mm (5.079)	166 mm (6.535)	1:1	4000	6.7 (14.7)

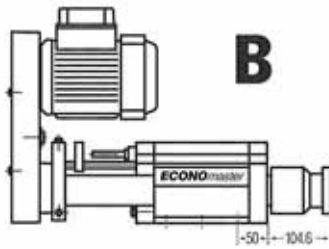


A

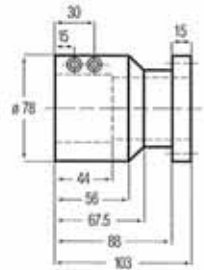


Drill Unit Adapters

Multiple Spindle Head Types	MH 20/2 - 40/2
Order Number	A-011-0379

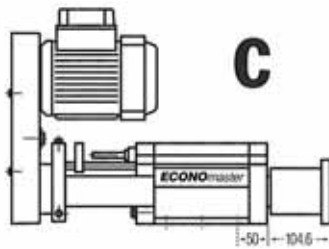


B

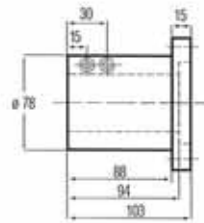


Drill Unit Adapters

Multiple Spindle Head Types	MH 20/5 - 40/5
	MH 20/7 - 40/7
Order Number	A-011-0380



C



Drill Unit Adapters

Multiple Spindle Head Types	MH 20/10 - 40/510
Order Number	A-011-0381

Note: Maximum head and adapter weight not to exceed 20lbs.

Multiple Spindle Head Collet

Dia. mm	Dia. inch	Order Number	2.0	(0.078)	140 219 00	MH/5	Type ER 8	4.5 - 4.0	(0.117-0.157)	140 238	
			2.1	(0.083)	140 219 21	1.0 - 0.5	(0.039-0.019)	140 222	5.0 - 4.5	(0.196-0.177)	140 239
MH/2-MH/3		Type: S 1502	2.2	(0.087)	140 219 22	1.5 - 1.0	(0.059-0.039)	140 223	5.5 - 5.0	(0.216-0.196)	140 240
0.5	(0.019)	140 212 00	2.3	(0.091)	140 219 23	2.0 - 1.5	(0.078-0.059)	140 224	6.0 - 5.5	(0.236-0.216)	140 241
0.6	(0.023)	140 213 00	2.4	(0.094)	140 219 24	2.5 - 2.0	(0.098-0.059)	140 225	6.5 - 6.0	(0.255-0.236)	140 242
0.7	(1.027)	140 214 00	2.5	(0.098)	140 220 00	3.0 - 2.5	(0.118-0.098)	140 226	7.0 - 6.5	(0.275-0.255)	140 243
0.8	(0.031)	140 215 00	2.6	(0.102)	140 220 26	3.5 - 3.0	(0.137-0.118)	140 227	MH/10 Type ER 16		
0.9	(0.035)	140 216 00	2.7	(0.106)	140 220 27	4.0 - 3.5	(0.157-0.137)	140 228	1.0 - 0.5	(0.039-0.019)	142 233
1.0	(0.039)	140 217 00	2.8	(0.110)	140 220 28	4.5 - 4.0	(0.177-0.157)	140 229	2.0 - 1.0	(0.078-0.039)	142 234
1.1	(0.043)	140 217 00	2.9	(0.114)	140 220 29	5.0 - 4.5	(0.196-0.177)	140 230	3.0 - 2.0	(0.118-0.078)	142 237
1.2	(0.047)	140 217 12	3.0	(0.118)	140 221 00	MH/5 Type ER 11		4.0 - 3.0	(0.157-0.118)	142 238	
1.3	(0.051)	140 217 13	3.1	(0.122)	140 221 31	1.0 - 0.5	(0.039-0.019)	140 231	5.0 - 4.0	(0.196-0.157)	142 239
1.4	(0.055)	140 217 14	3.2	(0.126)	140 221 32	1.5 - 1.0	(0.059-0.039)	140 232	6.0 - 5.0	(0.236-0.196)	142 240
1.5	(0.059)	140 218 00	3.3	(0.130)	140 221 33	2.0 - 1.5	(0.078-0.059)	140 233	7.0 - 6.0	(0.275-0.236)	142 241
1.6	(0.063)	140 218 16	3.4	(0.134)	140 221 34	2.5 - 2.0	(0.098-0.078)	140 234	8.0 - 7.0	(0.314-0.275)	142 242
1.7	(0.067)	140 218 17	3.5	(0.138)	140 221 35	3.0 - 2.5	(0.118-0.098)	140 235	9.0 - 8.0	(0.354-0.314)	142 243
1.8	(0.071)	140 219 18				3.5 - 3.0	(0.137-0.118)	140 236	10.0 - 9.0	(0.394-0.354)	142 244
1.9	(0.075)	140 218 19				4.0 - 3.5	(0.157-0.137)	140 237			

Tapping Attachments

D	Capacity In 1010 Mild Steel	Model	Mount	Catalog Number	* Rec. Max. Speed	Weight kg (lbs)	A	B	C	Self feed	Rubber-Flex Collets			
											Collet Series	Catalog Number	Collet Range Tap Size Shank Size	
D	#0-1/4" M1.4 - M6 Roll Form #10 Max.	30X	#33 JT	10333	2000 RPM	0.5 (1.0)	48mm (1.875)	19mm (.750)	113mm (4.45)	3.3mm (.140)	#21000 Series For attachments with capacities (#0 - 1/4")	21600	#0 #8 Standard	.098 - .177
	#6-1/2" M3 - M12 Roll Form 3/8" Max	50X	#33 JT	10533	1500 RPM	1.5 (3.3)	70mm (2.750)	27mm (1.070)	152mm (6.00)	6mm (.235)		21700	#10-1/4" Standard	.177 - .256
											#22000 Series For attachments with capacities (#6 - 1/2")	21500		.040 - .098
												21200		.094 - .146
												22100	#0 #1/4 Standard	.139 - .257
												22200	#1/4-1/2" Standard	.253 - .383
												22300		.090 - .180
												22000		.194 - .318

Spindle Options Part No.

PBM Motor Mounted Unit:

PNP 24V DC.	Std. Prox. switch	5079002
NPN 24V DC.	Upon Request	5079001
24V/240V AC.	Upon Request	5079002C

Drill/Collet Chucks:

0" to 1/2"	Standard (Max. Rpm. 3,600)	0014443
0" to 3/8"	Option (Max. Rpm. 9,600)	70070
1/8" to 3/8"	Option 208 Collet Chuck	208269
1/4" to 3/4"	Option 188 Collet Chuck	188334

Feed Control Cylinders:

HB 25	(Standard)	5880801
HB 50	Upon Request	5880802
HB 75	Upon Request	5880803

Peck Feed Control Cylinders:

HB 25E	Upon Request	5880804
HB 50E	Upon Request	5880805
HB 75E	Upon Request	5880806

Motor Drives:

1,800 Rpm.	.75 Hp.	0110221
3,600 Rpm.	1.0 Hp.	0110222

PBM Belts/Pulleys:

V-Belt 220J8	5058201
30mm pulley	5058202
35mm pulley	5058203
40mm pulley	5058204
50mm pulley	5058205
60mm pulley	5058206
70mm pulley	5058207
80mm pulley	5058208

Repair kits:

Bearing / Seal / Bushings set	A0110236
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Control Box:

Electric / Pneumatic Control	B0160497
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3,600 Rpm. Motor - Pulley Selection:

Rpm.	Motor Pulley	Spindle Pulley
9,600 Rpm. (option)	80mm	30mm
8,228 Rpm. (option)	80mm	35mm
7,200 Rpm. (option)	80mm	40mm
6,300 Rpm. (option)	70mm	40mm
5,040 Rpm. (option)	70mm	50mm
4,320 Rpm. (option)	60mm	50mm
3,600 Rpm.	60mm	60mm
3,000 Rpm.	50mm	60mm
2,572 Rpm.	50mm	70mm
2,057 Rpm.	40mm	70mm
1,800 Rpm.	40mm	80mm
1,575 Rpm.	35mm	80mm
1,350 Rpm.	30mm	80mm

1,800 Rpm. Motor - Pulley Selection:

Rpm.	Motor Pulley	Spindle Pulley
4,800 Rpm. (option)	80mm	30mm
4,114 Rpm. (option)	80mm	35mm
3,600 Rpm.	80mm	40mm
3,150 Rpm.	70mm	40mm
2,520 Rpm.	70mm	50mm
2,160 Rpm.	60mm	50mm
1,800 Rpm.	60mm	60mm
1,500 Rpm.	50mm	60mm
1,286 Rpm.	50mm	70mm
1,028 Rpm.	40mm	70mm
900 Rpm.	40mm	80mm
787 Rpm.	35mm	80mm
675 Rpm.	30mm	80mm

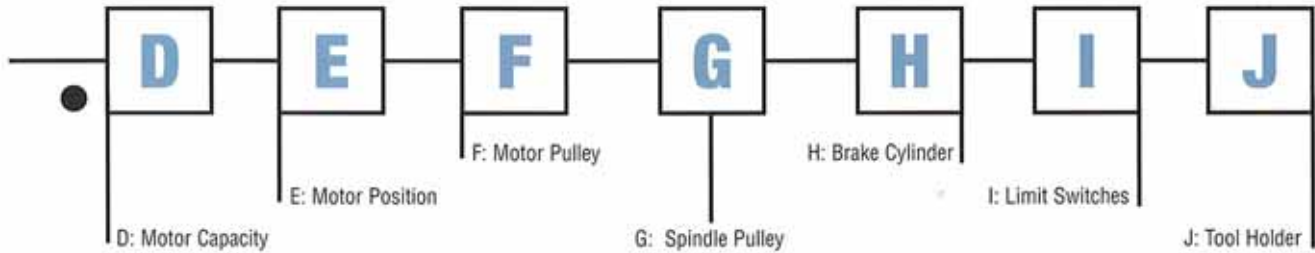
MATERIAL:	Drill Size	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
Mild Steel	RPM	4,280	2,140	1,450	1,250	1,000	720	-
	Feed/IPR	0.001	0.002	0.003	0.004	0.005	0.006	-
	HP	0.01	0.05	0.12	0.21	0.4	0.47	-
	Thrust (Lbs.)	30	80	150	230	340	440	-
	SFM	70	70	70	70	70	70	-
Aluminum Brass	RPM	8,200	6,200	4,100	3,000	2,500	2,050	1,550
	Feed/IPR	0.001	0.003	0.005	0.007	0.008	0.009	0.012
	HP	0.01	0.07	0.11	0.2	0.29	0.38	0.68
	Thrust (Lbs.)	5	25	50	75	100	130	205
	SFM	200	200	200	200	200	200	200
Cast Iron	Rpm	6,100	2,900	1,940	1,450	1,050	950	750
	Feed/IPR	0.001	0.002	0.004	0.005	0.006	0.007	0.008
	HP	0.01	0.04	0.11	0.18	0.27	0.38	0.57
	Thrust (Lbs.)	15	40	100	145	205	260	350
	SFM	95	95	95	95	95	95	95
Wood/Plastic	Rpm	6,300	3,150	2,050	1,575	1,280	1,020	785
	Feed/IPR	0.001	0.002	0.003	0.004	0.004	0.005	0.007
	HP	0.01	0.01	0.03	0.05	0.06	0.08	0.16
	Thrust (Lbs.)	10	20	40	60	70	90	140
	SFM	100	100	100	100	100	100	100

Collets

200DA Series for #208 collet chuck	19/64	200DA-0297	13/64	180DA-0203	31/64	180DA-0484	
Collet Capacity	Order Number	5/16	200DA-0312	7/32	180DA-0219	1/2	180DA-0500
3/64	200DA-0047	21/64	200DA-0328	15/64	180DA-0234	33/64	180DA-0516
1/16	200DA-0062	11/32	200DA-0344	1/4	180DA-0250	17/32	180DA-0531
5/64	200DA-0078	23/64	200DA-0359	17/64	180DA-0266	35/64	180DA-0547
3/32	200DA-0094	3/8	200DA-0375	9/32	180DA-0281	9/16	180DA-0562
7/64	200DA-0109	25/64	200DA-0391	19/64	180DA-0297	37/64	180DA-0578
1/8	200DA-0125	180DA Series for #188 collet chuck		15/16	180DA-0312	19/32	180DA-0594
9/64	200DA-0141	3/64	180DA-0047	21/64	180DA-0328	39/64	180DA-0609
5/32	200DA-0156	1/16	180DA-0062	11/32	180DA-0344	5/8	180DA-0625
11/64	200DA-0172	5/64	180DA-0078	23/64	180DA-0359	41/64	180DA-0641
3/16	200DA-0188	3/32	180DA-0094	3/8	180DA-0375	21/32	180DA-0656
13/64	200DA-0203	7/64	180DA-0109	25/64	180DA-0391	43/64	180DA-0672
7/32	200DA-0219	1/8	180DA-0125	13/32	180DA-0406	11/16	180DA-0688
15/64	200DA-0234	9/64	180DA-0141	27/64	180DA-0422	45/64	180DA-0703
1/4	200DA-0250	5/32	180DA-0156	7/16	180DA-0438	23/32	180DA-0719
7/64	200DA-0266	11/64	180DA-0172	29/64	180DA-0453	47/64	180DA-0734
9/32	200DA-0281	3/16	180DA-0188	15/32	180DA-0469	3/4	180DA-0750

How To Order:

113
Unit Type



D: Motor Capacity

- 0 = No Motor
- 1 = 0.75 HP/1800 RPM
- 2 = 1.0 HP/3600 RPM
- 9 = Special

E: Motor Position

- 0 = No Motor
- 1 = Front Mount (Standard)
- 4 = Rear Mount – (Optional)

F: Motor Pulley Size

- 0 = No Pulley
- 1 = 80mm Pulley
- 2 = 70mm Pulley
- 3 = 60mm Pulley
- 4 = 50mm Pulley
- 5 = 40mm Pulley
- 6 = 35mm Pulley
- 7 = 30mm Pulley
- 9 = Special

G: Spindle Pulley Size

- 0 = No Motor
- 1 = 80mm Pulley
- 2 = 70mm Pulley
- 3 = 60mm Pulley
- 4 = 50mm Pulley
- 5 = 40mm Pulley
- 6 = 35mm Pulley
- 7 = 30mm Pulley
- 9 = Special

H: Brake Cylinder Type

- 0 = No Brake Cylinder
- 1 = HB 25 – (25mm Control Stroke)
- 2 = HB 50 – (50mm Control Stroke)
- 3 = HB 75 – (75mm Control Stroke)
- 4 = HB 25E (Peck feed)
- 5 = HB 50E (Peck feed)
- 6 = HB 75E (Peck feed)
- 7 = Special

I: Limit Switches

- 0 = No Limit Switches
- 1 = PNP
- 2 = NPN
- 3 = 24V/240V AC
- 4 = 24-240 VAC/NO
- 5 = Pneu. (1) Switch
- 9 = Special

J: Spindle Type/Tool Holder

- 0 = No Tool Holder
- 1 = JT 33 Standard 0" to 1/2"
- 2 = 180 DA Collet Chuck
- 3 = 200 DA Collet Chuck
- 9 = Special

Example: 113.11.34.111

PBM 13	113.
D: 1.00 HP/3600 RPM	113.1
E: Front Mount (Standard)	113.11
F: 60mm	113.113
G: 50mm	113.1134
H: HB 25	113.11341
I: 24 V PNP switches	113.113411
J: 0" to 1/2" (Standard)	113.1134111

NEW!

Control Box
B0160497



SUHNER®

SUHNER INDUSTRIAL PRODUCTS CORP.

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Rome, GA 30162-1234
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Fax: 706 235 8045