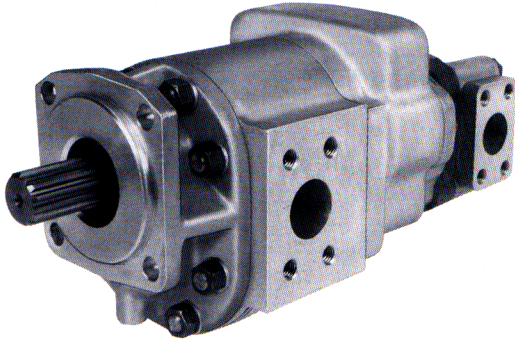


# Model PB20



Description . . . . . Gear Pump  
 Flow Range . . . . . To 98 GPM Per Section (370.9 LTR.)  
 Displacements To 9.10 C.I.R. Per Section (149.12 CC's/REV.)  
 Maximum Pressure to . . . . . 2500 PSI (172 BAR)  
 Maximum Speed to . . . . . 2500 RPM  
 Rotation . . . . . A or C  
 Bearing . . . . . Journal  
 Construction . . . . . Aluminum or Cast Iron\*

## Performance Data

PUMP MODEL	SECTION SIZE	DISPLACEMENT/REVOLUTION (Theoretical)					MAXIMUM PRESSURE		MAXIMUM SPEED
		US Gallons	Cubic Inches	Liters	Cubic Centimeters	Imperial Gallons	PSI	BAR	RPM
PB20	100	.0087	2.01	.0330	32.938	.0072	2500	172	2500
PB20	150	.0131	3.02	.0496	49.498	.0108	2500	172	2500
PB20	200	.0175	4.04	.0662	66.204	.0146	2500	172	2500
PB20	250	.0219	5.06	.0829	82.919	.0182	2500	172	2500
PB20	300	.0262	6.05	.0992	99.142	.0218	2500	172	2500
PB20	350	.0306	7.07	.1158	115.857	.0255	2500	172	2500
PB20	400	.0350	8.08	.1325	132.408	.0292	2500	172	2500
PB20	450	.0394	9.10	.1491	149.123	.0328	2500	172	2500

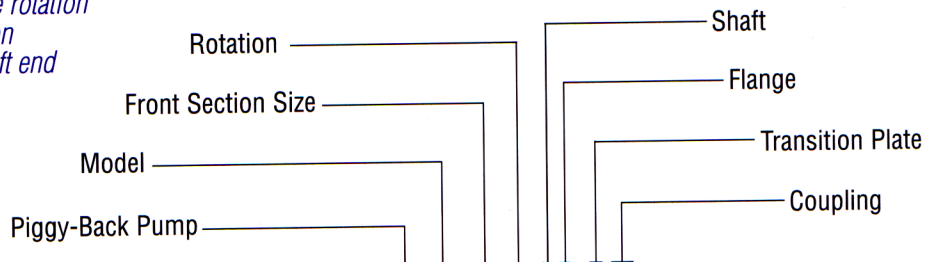
All front section pumps are available with Viton Seals for use with phosphate ester base fluids.  
 \*Cast-iron not available on all models. Consult factory for availability.

**CAUTION:** "Inlet vacuum" should not exceed 5" Hg at normal operating speed and temperature. Operation of pumps in excess of 5" Hg requires factory approval.

When sizing pumps, refer to the performance charts in the back of the catalog to determine the volumetric efficiency and input horsepower requirements.

## How To Order

'A' denotes counterclockwise rotation  
 'C' denotes clockwise rotation  
 When viewed from drive shaft end



**MODEL EXAMPLE (SINGLE SECTION):** PB20150A-1D-A88-( )

**(TWO SECTION):** TPB20150-150A1D-A88-( )

Tandem  
 Second Section Size  
 Insert Model Number of Rear Pump

Note: Add prefix "V" to pump model number (VPB20) when ordering pumps with Viton Seals for use with phosphate ester based fluids.

# Shafts Available

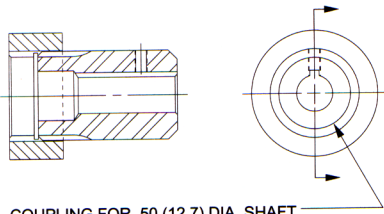
<p><b>1 SAE 'C' 1-1/4" 14 Tooth Flat Root Side Fit</b> Torque limit 655 Lbs. Ft. (888, Nm) "Tandem" Pumps only</p> <p><b>Spline Data</b> Diametral Pitch . . . . . 12/24 Pressure Angle . . . . . 30° No. Of Teeth . . . . . 14</p>	<p><b>3 SAE 'C' 1-1/4" Straight</b> Torque limit 655 Lbs. Ft. (888, Nm) Available on all sizes</p>	<p><b>5 1-1/4" Straight Shaft</b> Torque limit 655 Lbs. Ft. (888, Nm) Available on all sizes</p>
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# Mounting Flanges Available

<p><b>D SAE 'C' 4-Bolt</b></p>	<p><b>E SAE 'B' 4-Bolt</b></p>
<p><b>F SAE 'C' 2-Bolt</b></p>	<p><b>M 'M' Pad Mount</b></p>

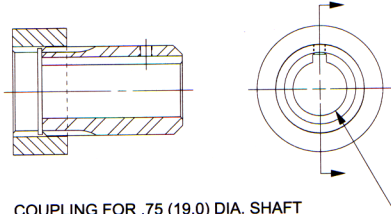
# Couplings Available

**50** 1/2" Straight Kit No. 13974 with 1/8" Square Key



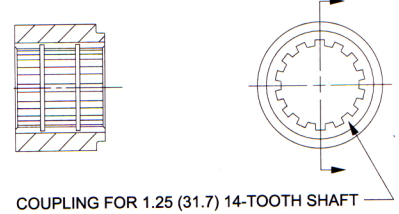
COUPLING FOR .50 (12.7) DIA. SHAFT WITH .125 (3.1) SQUARE KEY

**75** 3/4" Straight Kit No. 13975 with 3/16" Square Key



COUPLING FOR .75 (19.0) DIA. SHAFT WITH .19 (4.8) SQUARE KEY

**88** 7/8" 13 Tooth Kit No. 13976

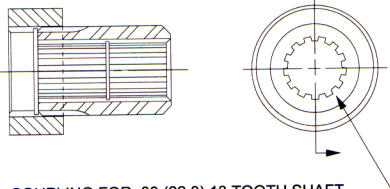


COUPLING FOR 1.25 (31.7) 14-TOOTH SHAFT

**Spline Data**

Diametral Pitch . . . . . 16/32  
Major Dia. . . . . .875-.870  
Minor Dia. . . . . .7533-.7583

**90** 7/8" 13 Tooth Kit No. 13977

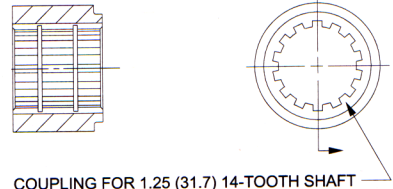


COUPLING FOR .88 (22.3) 13 TOOTH SHAFT

**Spline Data**

Diametral Pitch . . . . . 16/32  
Major Dia. . . . . .875-.870  
Minor Dia. . . . . .7533-.7583

**125** 1-1/4" 14 Tooth Kit No. 13978



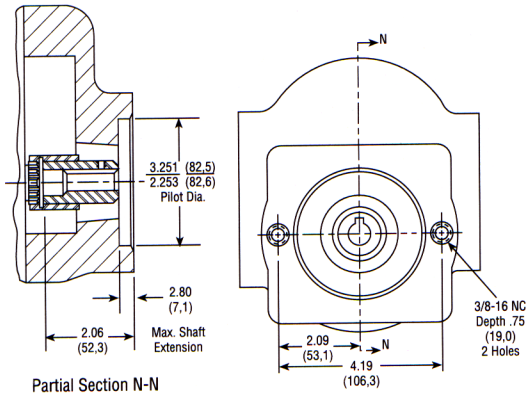
COUPLING FOR 1.25 (31.7) 14-TOOTH SHAFT

**Spline Data**

Diametral Pitch . . . . . 16/32  
Major Dia. . . . . 1.255-1.251  
Minor Dia. . . . . 1.086-1.091

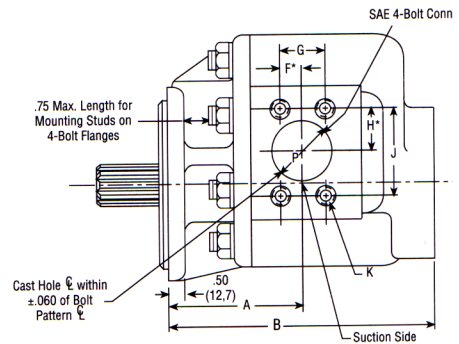
# Transition Plates Available

**A** 2-Bolt 'A'—Shown with No. 50 Coupling

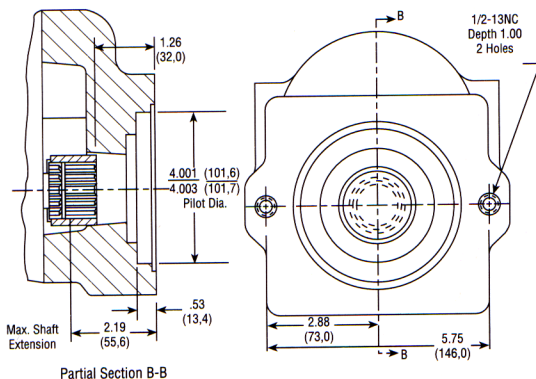


Partial Section N-N

**B** 4-Bolt 'B'—Shown with No. 90 Coupling

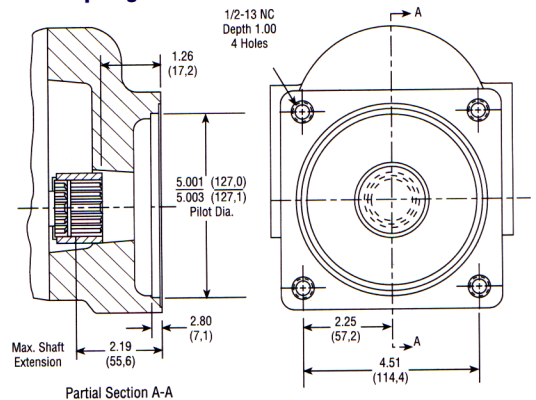


**C** 2-Bolt 'B'—Shown with No. 125 Coupling



Partial Section B-B

**D** 4-Bolt 'C'—Shown with No. 125 Coupling

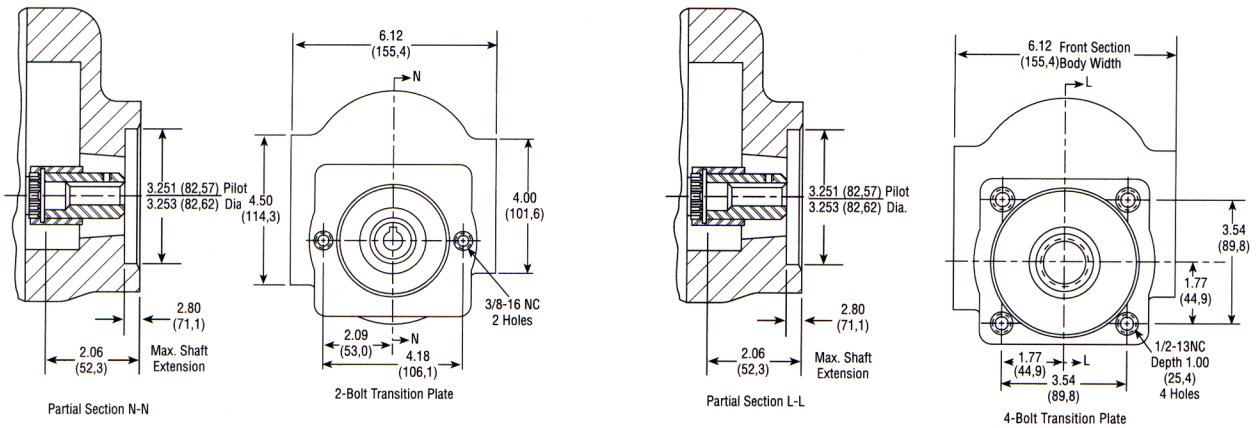
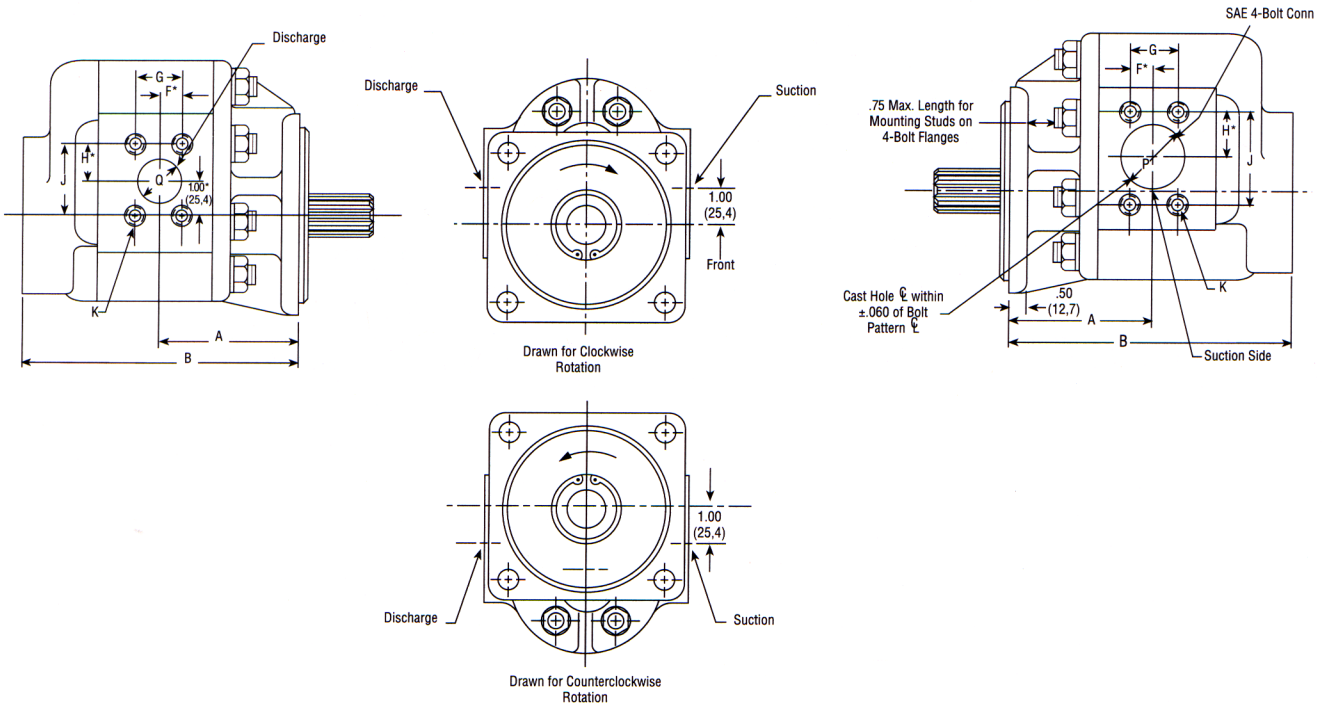


Partial Section A-A

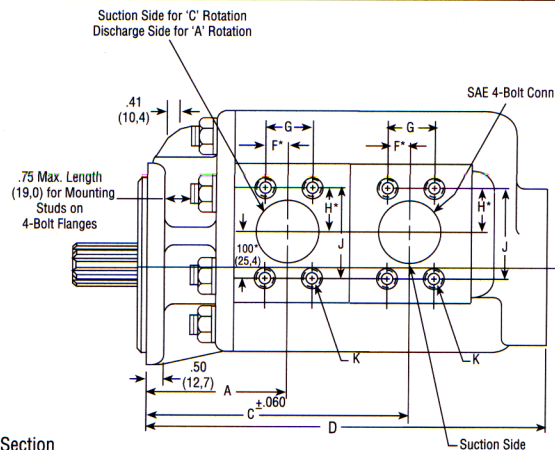


# Dimensional Data

## PB20 Series Front Section — One Place with 2-Bolt Transition Plate



## PB20 Series Front Section — Two Place



SAE 4-Bolt NPT Connectors are available. See Accessory Section



# Dimensional Data

## Port Sizes

PUMP MODEL	Suction		Discharge		MOUNTING DIMENSIONS		SHIPPING WEIGHT	
	Hole Dia 'P'	Conn. Size	Hole Dia 'Q'	Conn. Size	A	B	Lbs.	Kgs.
PB20100	1.25 (31,7)	1 1/4"	.75 (19,0)	3/4"	3.60 (91,4)	7.35 (186,6)	22	8.21
PB20150	1.25 (31,7)	1 1/4"	.75 (19,0)	3/4"	3.60 (91,4)	7.59 (192,7)	22	8.21
PB20200	1.25 (31,7)	1 1/4"	1.00 (25,4)	1.00"	3.75 (92,5)	8.54 (216,9)	24	8.35
PB20250	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	4.00 (101,6)	8.82 (224,0)	25	9.33
PB20300	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	4.14 (105,1)	9.11 (231,3)	26	9.70
PB20350	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	4.35 (110,4)	9.38 (238,2)	30	11.19
PB20400	2.00 (50,8)	2.00"	1.37 (34,7)	1 1/2"	4.35 (110,4)	9.67 (245,6)	32	11.94
PB20450	2.00 (50,8)	2.00"	1.37 (34,7)	1 1/2"	4.66 (118,3)	9.95 (252,7)	36	13.43

## Connector Chart

Conn. Size	F	G	H	J	K
3/4"	.43 (10,9)	.875 (22,2)	.93 (23,6)	1.875 (47,6)	3/8-16NC
1.00	.51 (12,9)	1.031 (26,1)	1.03 (26,1)	2.062 (52,3)	3/8-16NC
1 1/4"	.59 (14,9)	1.188 (30,1)	1.15 (29,2)	2.313 (58,7)	7/16-14NC
1 1/2"	.70 (17,7)	1.406 (35,7)	1.37 (34,7)	2.750 (69,8)	1/2-13NC
2.00	.84 (21,3)	1.688 (42,8)	1.53 (38,8)	3.062 (77,7)	1/2-13NC

SAE 4-Bolt NPT Connectors are available. See Accessory Section

## Port Sizes

SECTION SIZES	SUCTION				DISCHARGE				MOUNTING DIMENSIONS			SHIPPING WEIGHT	
	Hole Dia.	Front Sect. Conn.	Hole Dia.	Center Sect. Conn.	Hole Dia.	Front Sect. Conn.	Hole Dia.	Center Sect. Conn.	A	C	D	Lbs.	Kgs.
PB20150-100A & C	1.25 (31,7)	1 1/4"	1.25 (31,7)	1 1/4"	.75 (19,0)	3/4"	.75 (19,0)	3/4"	3.60 (91,4)	7.96 (202,1)	11.62 (295,1)	36	13.43
PB20150-150A & C	1.25 (31,7)	1 1/4"	1.25 (31,7)	1 1/4"	.75 (19,0)	3/4"	.75 (19,0)	3/4"	3.60 (91,4)	7.96 (202,1)	11.90 (302,2)	36	13.43
PB20200-150A & C	1.25 (31,7)	1 1/4"	1.25 (31,7)	1 1/4"	1.00 (25,4)	1.00"	.75 (19,0)	3/4"	3.75 (95,2)	8.86 (225,0)	12.86 (326,6)	37	13.80
PB20200-200A & C	1.25 (31,7)	1 1/4"	1.25 (31,7)	1 1/4"	1.00 (25,4)	1.00"	1.00 (25,4)	1.00"	3.75 (95,2)	9.50 (241,3)	14.29 (362,9)	42	15.67
PB20250-150A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	.75 (19,0)	3/4"	4.00 (101,6)	9.14 (232,1)	13.14 (333,7)	43	16.04
PB20250-200A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	1.00 (25,4)	1.00"	4.00 (101,6)	9.79 (248,6)	14.57 (370,0)	45	16.79
PB20250-250A & C	1.50 (38,1)	1 1/2"	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	1.19 (30,2)	1 1/4"	4.00 (101,6)	10.03 (254,7)	14.85 (377,1)	46	17.16
PB20300-150A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	.75 (19,0)	3/4"	4.14 (105,1)	9.43 (239,5)	13.43 (341,1)	42	15.67
PB20300-200A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	1.00 (25,4)	1.00"	4.14 (105,1)	10.07 (255,7)	14.86 (377,4)	43	16.04
PB20300-250A & C	1.50 (38,1)	1 1/2"	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	1.19 (30,2)	1 1/4"	4.14 (105,1)	10.32 (262,1)	15.14 (384,5)	45	16.79
PB20300-300A & C	1.50 (38,1)	1 1/2"	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	1.19 (30,2)	1 1/4"	4.14 (105,1)	10.46 (265,6)	15.43 (391,9)	52	19.40
PB20350-150A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	.75 (19,0)	3/4"	4.35 (110,4)	9.70 (246,3)	13.70 (347,9)	44	16.41
PB20350-200A & C	1.50 (38,1)	1 1/2"	1.25 (31,7)	1 1/4"	1.19 (30,2)	1 1/4"	1.00 (25,4)	1.00"	4.35 (110,4)	10.35 (267,8)	15.14 (384,5)	45	16.79
PB20350-250A & C	1.50 (38,1)	1 1/2"	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	1.19 (30,2)	1 1/4"	4.35 (110,4)	10.60 (269,7)	15.43 (391,9)	48	17.90
PB20350-300A & C	1.50 (38,1)	1 1/2"	1.50 (38,1)	1 1/2"	1.19 (30,2)	1 1/4"	1.19 (30,2)	1 1/4"	4.35 (110,4)	10.74 (272,7)	15.71 (399,0)	54	20.14
PB20400-150A & C	2.00 (50,8)	2.00"	1.25 (31,7)	1 1/4"	1.37 (34,7)	1 1/2"	.75 (19,0)	3/4"	4.35 (110,4)	9.98 (253,4)	13.97 (354,8)	43	16.04
PB20400-200A & C	2.00 (50,8)	2.00"	1.25 (31,7)	1 1/4"	1.37 (34,7)	1 1/2"	.75 (19,0)	1.00"	4.35 (110,4)	10.63 (270,0)	15.43 (391,9)	49	18.28
PB20400-250A & C	2.00 (50,8)	2.00"	1.50 (38,1)	1 1/2"	1.37 (34,7)	1 1/2"	1.19 (30,2)	1 1/4"	4.35 (110,4)	10.88 (276,3)	15.71 (399,0)	51	19.02
PB20400-300A & C	2.00 (50,8)	2.00"	1.50 (38,1)	1 1/2"	1.37 (34,7)	1 1/2"	1.19 (30,2)	1 1/4"	4.35 (110,4)	11.02 (279,9)	15.99 (406,1)	55	20.52
PB20450-150A & C	2.00 (50,8)	2.00"	1.25 (31,7)	1 1/4"	1.37 (34,7)	1 1/2"	.75 (19,0)	3/4"	4.66 (118,3)	10.27 (260,8)	14.26 (362,2)	48	17.90
PB20450-200A & C	2.00 (50,8)	2.00"	1.25 (31,7)	1 1/4"	1.37 (34,7)	1 1/2"	1.00 (25,4)	1.00"	4.66 (118,3)	10.92 (277,3)	15.71 (399,0)	50	18.68
PB20450-250A & C	2.00 (50,8)	2.00"	1.50 (38,1)	1 1/2"	1.37 (34,7)	1 1/2"	1.19 (30,2)	1 1/4"	4.66 (118,3)	11.17 (283,7)	15.99 (406,1)	52	19.40
PB20450-300A & C	2.00 (50,8)	2.00"	1.50 (38,1)	1 1/2"	1.37 (34,7)	1 1/2"	1.19 (30,2)	1 1/4"	4.66 (118,3)	11.31 (287,2)	18.28 (464,3)	56	20.89

