



Johnson Make-Up Air Systems

The PR™--- 80/20% Positive Pressurization & Recirculation Unit---Capacity Chart

STANDARD UNIT WITH FORWARD CURVE DWDI FAN

UNIT CFM	Max MBH		MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN											
	Nat. Gas	LP Gas		1.00"		1.25"		1.50"		1.75"		2.00"		2.50"	
				FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP	FAN	BHP
2,000	228	216	PR30	9-7	1.09	9-7	1.18	9-7	1.25	9-7	1.38	10-5	2.40	10-5	2.65
2,500	285	270		10	1.10	10	1.25	10	1.41	9-7	2.15	9-7	2.26	9-7	2.51
3,000	330	315		10	1.50	10	1.70	10	1.85	10	2.10	10	2.29	CF	
3,500	330	315		10	2.10	10	2.30	10	2.50	10	2.70	CF		CF	
3,500	375	355	PR100	12	1.4	10	2.3	10	2.5	10	2.7	10	2.9	10 HD	3.5
4,500	375	355		12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	375	355		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
4,500	513	487	PR200	12	2.4	12	2.6	12	2.8	12	3.0	10 HD	4.7	CF	
5,500	627	595		15	2.6	15	2.9	15	3.3	15-10	3.8	15-10	4.0	15-10	4.5
6,500	720	690		15	3.6	15	4.0	15	4.3	15	4.7	15-10	5.8	15-10	6.2
6,000	684	649	PR300	15	3.0	15	3.4	15	3.7	15-10	4.5	15-10	4.8	CF	
8,000	912	866		18	3.5	18	3.8	15 HD	6.5	15HD	6.9	15 HD	7.4	15 HD	8.4
9,000	1,026	974		18	4.8	18 HD	5.4	18 HD	5.8	18 HD	6.2	18 HD	6.6	18 HD	7.5
10,000	1,140	1,083	PR400	20	4.0	20	4.5	20	5.1	20	5.6	18	7.3	18	8.3
12,000	1,368	1,299		20	5.9	20	6.4	20	6.9	20	7.5	20	8.2	18	11.8
14,000	1,550	1,485		20	8.4	20	9.0	20	9.5	20	10.3	20	11.0	20	12.2
13,000	1,482	1,407	PR500	22	5.6	22	6.1	22	6.7	22	7.3	22	8.1	20	10.8
15,000	1,710	1,624		22	7.4	22	8.2	22	8.9	22	9.5	22	10.4	22	11.8
17,000	1,938	1,841		22	9.8	22	10.8	22	11.5	22	12.3	22	13.0	22	14.6
20,000	2,215	2,125		22	14.3	22	15.6	22	16.5	22	17.2	22	18.2	22	20.0
18,000	2,052	1,949	PR600	25	7.7	25	8.6	25	9.5	25	10.5	25	11.5	25	13.4
21,000	2,394	2,274		25	10.8	25	11.7	25	12.7	25	13.6	25	14.7	25	17.1
23,000	2,622	2,490		25	13.2	25	14.2	25	15.4	25	16.3	25	17.6	25	19.8
25,000	2,770	2,655		25	16.2	25	17.3	25	18.3	25	19.2	25	20.7	25	23.1
26,000	2,964	2,815	PR700	30	10.6	30	11.9	30	13.1	30	14.2	30	15.7	30.0	18.2
30,000	3,420	3,249		30	14.1	30	15.7	30	17.1	30	18.4	30	19.8	30	22.8
35,000	3,880	3,720		30	19.6	30	21.4	30	23.0	30	24.7	30	26.4	30	29.8
34,000	3,876	3,682	PR800	33	16.2	33	17.7	33	19.3	33	21.1	30	25.0	30	28.3
37,000	4,218	4,007		33	19.5	33	21.3	33	23.0	33	24.5	30	29.5	30	33.4
40,000	4,560	4,332		33	23.3	33	25.4	33	27.1	33	28.7	33	31.3	30	38.8
45,000	5,130	4,873		33	30.6	33	32.9	33	35.0	33	36.5	33	39.0	30	48.1

Maximum MBH on re-circulating units limited to the lesser of the MBH shown or temperature

rise of 100°F for natural gas and 95°F for propane (LP) gas.

Above table is subject to change without notice. Consult factory (CF) for specific applications and as noted.



The PR™---80/20% Positive Pressurization & Recirculation Unit

Static Pressure Drop For Unit And Options

Description	Pressure In. w. c.
Base Unit (Cabinet, Burner)	0.90
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 1" Alum. Mesh Filters, CLEAN)	0.10
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.18
3-Way Single Deflection Diffuser (Horizontal Blades)	0.25
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.35
4-Way Single Deflection Diffuser (Horizontal Blades)	0.20
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.25
Side Access Filter Section - 1" Aluminum Mesh (CLEAN)	0.10
Filter-Mix Box - 2" 30% Pleated (CLEAN)	0.20
Filter-Mix Box - 1" Aluminum Mesh (CLEAN)	0.05
Filter-Mix Box - 2" Aluminum Mesh (CLEAN)	0.10
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
Typical CW or DX Coil Box (Estimate)	0.60 - 0.90
Typical Steam or HW Coil Box (Estimate)	0.30 - 0.40

Filters should be changed below 0.60" w. c.

Any external static losses from ductwork or other factors must be added to determine Total Static Pressure

The PR™---80/20% Positive Pressurization & Recirculation Unit---Motor and Fan Requirements

PREMIUM UNIT WITH AIRFOIL PLENUM FAN

UNIT CFM	Max MBH 80/20	MODEL	MOTOR & FAN REQUIREMENTS @ TOTAL STATIC PRESSURE SHOWN															
			1.25"		1.50"		1.75"		2.00"		2.50"		3.00"		3.50"		4.00"	
			HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP	HP	BHP
4,000	475	PR18-3	2	1.4	2	1.6	2	1.8	3	2.0	3	2.5	3	2.9	5	3.4	5	3.9
6,000	713		3	2.7	3	3.0	5	3.3	5	3.6	5	4.2	5	4.8	<u>7.5</u>	<u>5.4</u>	<u>7.5</u>	<u>6.1</u>
6,000	713	PR20-3	3	2.4	3	2.7	3	3.0	5	3.3	5	3.9	5	4.5	<u>7.5</u>	<u>5.2</u>	<u>7.5</u>	<u>5.8</u>
8,000	950		5	4.0	5	4.4	5	4.8	<u>7.5</u>	<u>5.1</u>	<u>7.5</u>	<u>5.9</u>	<u>7.5</u>	<u>6.7</u>	<u>7.5</u>	<u>7.5</u>	<u>10</u>	<u>8.4</u>
7,000	832	PR27-3 PR27-4	2	2.0	3	2.4	3	2.8	5	3.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000	1,188		5	3.3	5	3.8	5	4.2	5	4.7	<u>7.5</u>	<u>5.7</u>	<u>7.5</u>	<u>6.7</u>	<u>10</u>	<u>7.8</u>	<u>10</u>	<u>8.9</u>
13,000	1,544		<u>7.5</u>	<u>5.1</u>	<u>7.5</u>	<u>5.7</u>	<u>7.5</u>	<u>6.3</u>	<u>7.5</u>	<u>6.9</u>	<u>10</u>	<u>8.1</u>	<u>10</u>	<u>9.3</u>	<u>15</u>	<u>10.5</u>	<u>15</u>	<u>11.8</u>
13,000	1,544	PR33-3 PR33-4	5	4.4	5	5.0	<u>7.5</u>	<u>5.6</u>	<u>7.5</u>	<u>6.2</u>	<u>7.5</u>	<u>7.5</u>	<u>10</u>	<u>8.8</u>	<u>15</u>	<u>10.1</u>	<u>15</u>	<u>11.5</u>
15,000	1,782		<u>7.5</u>	<u>5.6</u>	<u>7.5</u>	<u>6.3</u>	<u>7.5</u>	<u>6.9</u>	<u>10</u>	<u>7.6</u>	<u>10</u>	<u>9.0</u>	<u>15</u>	<u>10.5</u>	<u>15</u>	<u>11.9</u>	<u>15</u>	<u>13.4</u>
17,000	2,020		<u>7.5</u>	<u>7.0</u>	<u>10</u>	<u>7.8</u>	<u>10</u>	<u>8.5</u>	<u>10</u>	<u>9.3</u>	<u>15</u>	<u>10.8</u>	<u>15</u>	<u>12.4</u>	<u>15</u>	<u>14.0</u>	<u>20</u>	<u>15.6</u>
17,000	2,020	PR36-3 PR36-4	<u>7.5</u>	<u>5.5</u>	<u>7.5</u>	<u>6.3</u>	<u>7.5</u>	<u>7.1</u>	<u>10</u>	<u>7.9</u>	<u>10</u>	<u>9.6</u>	<u>15</u>	<u>11.4</u>	<u>15</u>	<u>13.2</u>	<u>20</u>	<u>15.1</u>
19,500	2,317		<u>7.5</u>	<u>7.0</u>	<u>10</u>	<u>7.8</u>	<u>10</u>	<u>8.6</u>	<u>10</u>	<u>9.5</u>	<u>15</u>	<u>11.3</u>	<u>15</u>	<u>13.3</u>	<u>20</u>	<u>15.3</u>	<u>20</u>	<u>17.3</u>
22,000	2,614		<u>10</u>	<u>8.7</u>	<u>10</u>	<u>9.6</u>	<u>15</u>	<u>10.5</u>	<u>15</u>	<u>11.5</u>	<u>15</u>	<u>13.5</u>	<u>20</u>	<u>15.5</u>	<u>20</u>	<u>17.6</u>	<u>20</u>	<u>19.8</u>
22,000	2,614	PR40-3 PR40-4	8	7.4	<u>10</u>	<u>8.4</u>	<u>10</u>	<u>9.4</u>	<u>15</u>	<u>10.4</u>	<u>15</u>	<u>12.5</u>	<u>15</u>	<u>14.8</u>	<u>20</u>	<u>17.0</u>	<u>20</u>	<u>19.4</u>
26,000	3,089		<u>10</u>	<u>10.0</u>	<u>15</u>	<u>11.1</u>	<u>15</u>	<u>12.2</u>	<u>15</u>	<u>13.3</u>	<u>20</u>	<u>15.7</u>	<u>20</u>	<u>18.1</u>	<u>25</u>	<u>20.6</u>	<u>25</u>	<u>23.3</u>
30,000	3,564		<u>15</u>	<u>13.4</u>	<u>15</u>	<u>14.6</u>	<u>20</u>	<u>15.7</u>	<u>20</u>	<u>17.0</u>	<u>20</u>	<u>19.5</u>	<u>25</u>	<u>22.2</u>	<u>25</u>	<u>25.0</u>	<u>30</u>	<u>27.8</u>
30,000	3,564	PR44-3 PR44-4	<u>15</u>	<u>10.9</u>	<u>15</u>	<u>12.2</u>	<u>15</u>	<u>13.5</u>	<u>15</u>	<u>14.9</u>	<u>20</u>	<u>17.6</u>	<u>25</u>	<u>20.5</u>	<u>25</u>	<u>23.5</u>	<u>30</u>	<u>26.6</u>
32,500	3,861		<u>15</u>	<u>12.8</u>	<u>15</u>	<u>14.1</u>	<u>20</u>	<u>15.4</u>	<u>20</u>	<u>16.9</u>	<u>20</u>	<u>19.8</u>	<u>25</u>	<u>22.8</u>	<u>30</u>	<u>25.9</u>	<u>30</u>	<u>29.2</u>
35,000	4,158		<u>15</u>	<u>14.8</u>	<u>20</u>	<u>16.2</u>	<u>20</u>	<u>17.6</u>	<u>20</u>	<u>19.1</u>	<u>25</u>	<u>22.1</u>	<u>30</u>	<u>25.2</u>	<u>30</u>	<u>28.6</u>	<u>40</u>	<u>31.9</u>
35,000	4,158	PR49-3 PR49-4	<u>15</u>	<u>12.4</u>	<u>15</u>	<u>13.9</u>	<u>20</u>	<u>15.4</u>	<u>20</u>	<u>17.0</u>	<u>25</u>	<u>20.2</u>	<u>25</u>	<u>23.7</u>	<u>30</u>	<u>27.3</u>	<u>40</u>	<u>31.0</u>
37,500	4,455		<u>15</u>	<u>14.0</u>	<u>20</u>	<u>15.6</u>	<u>20</u>	<u>17.2</u>	<u>20</u>	<u>18.9</u>	<u>25</u>	<u>22.3</u>	<u>30</u>	<u>25.8</u>	<u>30</u>	<u>29.5</u>	<u>40</u>	<u>33.4</u>
40,000	4,752		<u>20</u>	<u>16.0</u>	<u>20</u>	<u>17.5</u>	<u>20</u>	<u>19.2</u>	<u>25</u>	<u>20.9</u>	<u>25</u>	<u>24.5</u>	<u>30</u>	<u>28.2</u>	<u>40</u>	<u>32.0</u>	<u>40</u>	<u>36.0</u>
40,000	4,752	PR54-3 PR54-4	<u>15</u>	<u>13.4</u>	<u>20</u>	<u>15.2</u>	<u>20</u>	<u>17.0</u>	<u>20</u>	<u>18.8</u>	<u>25</u>	<u>22.7</u>	<u>30</u>	<u>26.7</u>	<u>40</u>	<u>30.9</u>	<u>40</u>	<u>35.3</u>
45,000	5,346		<u>20</u>	<u>16.5</u>	<u>20</u>	<u>18.4</u>	<u>25</u>	<u>20.3</u>	<u>25</u>	<u>22.3</u>	<u>30</u>	<u>26.5</u>	<u>40</u>	<u>30.7</u>	<u>40</u>	<u>35.3</u>	<u>40</u>	<u>39.9</u>
50,000	5,940		<u>25</u>	<u>20.3</u>	<u>25</u>	<u>22.2</u>	<u>25</u>	<u>24.3</u>	<u>30</u>	<u>26.5</u>	<u>40</u>	<u>30.9</u>	<u>40</u>	<u>35.5</u>	<u>50</u>	<u>40.1</u>	<u>50</u>	<u>45.1</u>
50,000	5,940	PR60-3 PR60-4	<u>20</u>	<u>17.0</u>	<u>20</u>	<u>19.2</u>	<u>25</u>	<u>21.4</u>	<u>25</u>	<u>23.7</u>	<u>30</u>	<u>28.4</u>	<u>40</u>	<u>33.5</u>	<u>40</u>	<u>38.7</u>	<u>50</u>	<u>44.1</u>
55,000	6,534		<u>25</u>	<u>20.1</u>	<u>25</u>	<u>22.4</u>	<u>25</u>	<u>24.8</u>	<u>30</u>	<u>27.3</u>	<u>40</u>	<u>32.3</u>	<u>40</u>	<u>37.5</u>	<u>50</u>	<u>43.1</u>	<u>50</u>	<u>48.7</u>
60,000	7,128		<u>25</u>	<u>23.9</u>	<u>30</u>	<u>26.2</u>	<u>30</u>	<u>28.7</u>	<u>40</u>	<u>31.3</u>	<u>40</u>	<u>36.6</u>	<u>50</u>	<u>42.2</u>	<u>50</u>	<u>47.8</u>	<u>60</u>	<u>53.8</u>
60,000	7,128	PR66-3 PR66-4	<u>25</u>	<u>20.2</u>	<u>25</u>	<u>22.8</u>	<u>30</u>	<u>25.5</u>	<u>30</u>	<u>28.3</u>	<u>40</u>	<u>34.0</u>	<u>50</u>	<u>40.1</u>	<u>50</u>	<u>46.4</u>	<u>60</u>	<u>52.9</u>
65,000	7,722		<u>25</u>	<u>23.4</u>	<u>30</u>	<u>26.0</u>	<u>30</u>	<u>28.9</u>	<u>40</u>	<u>31.8</u>	<u>40</u>	<u>37.8</u>	<u>50</u>	<u>44.1</u>	<u>60</u>	<u>50.7</u>	<u>60</u>	<u>57.9</u>
70,000	8,316		<u>30</u>	<u>26.8</u>	<u>30</u>	<u>29.6</u>	<u>40</u>	<u>32.6</u>	<u>40</u>	<u>35.7</u>	<u>50</u>	<u>42.0</u>	<u>50</u>	<u>48.5</u>	<u>60</u>	<u>55.3</u>	<u>75</u>	<u>62.4</u>
75,000	8,910		<u>40</u>	<u>30.8</u>	<u>40</u>	<u>33.6</u>	<u>40</u>	<u>36.8</u>	<u>40</u>	<u>40.0</u>	<u>50</u>	<u>46.5</u>	<u>60</u>	<u>53.4</u>	<u>75</u>	<u>60.3</u>	<u>75</u>	<u>67.7</u>
75,000	8,910	PR73-3	<u>30</u>	<u>25.6</u>	<u>30</u>	<u>28.9</u>	<u>40</u>	<u>32.2</u>	<u>40</u>	<u>35.7</u>	<u>50</u>	<u>42.7</u>	<u>60</u>	<u>50.3</u>	<u>60</u>	<u>58.0</u>	<u>75</u>	<u>66.0</u>

80,000	9,504	PR73-4	30	28.8	40	32.2	40	35.6	40	39.2	50	46.6	60	54.3	75	62.4	75	<u>70.7</u>
85,000	10,098		40	32.2	40	35.7	40	39.4	50	43.1	60	50.8	60	58.6	75	67.0	100	<u>75.6</u>
85,000	10,098	PR80-3 PR80-4	30	27.5	40	31.3	40	35.2	40	39.1	50	47.7	60	56.4	75	65.5	75	74.9
92,500	10,989		40	31.8	40	35.8	40	39.9	50	44.1	60	52.8	75	62.0	75	71.6	100	81.4
100,000	11,880		40	36.6	50	40.8	50	45.1	50	49.5	60	58.7	75	68.2	100	78.2	100	<u>88.5</u>
95,000	11,286	PR89-3 PR89-4	30	29.3	40	33.7	40	38.1	50	42.8	60	52.6	75	62.7	75	73.7	100	84.3
110,000	13,068		40	37.2	50	41.9	50	46.9	60	51.9	75	62.4	75	73.5	100	84.9	100	96.7
120,000	14,256		50	43.4	50	48.4	60	53.7	60	59.0	75	70.1	100	81.5	100	93.6	125	<u>106.0</u>

The PR™--- 80/20% Positive Pressurization & Recirculation Unit

<i>PREMIUM UNIT WITH AIRFOIL PLENUM FAN (PR*-3 & 4)</i>	
<i>Static Pressure Drops for Base Cabinets</i>	
	in. w.c.
Horizontal 80/20 Modulating	1.05
Vertical 80/20 Modulating	1.10
<i>Static Pressure Drops for Filters</i>	
	in. w.c.
Side Access Filter Section - 2" 30% Pleated (CLEAN)	0.30
Side Access Filter Section - 2" Aluminum Mesh (CLEAN)	0.15
Side Access Filter Section - 1-1/2" Dust-Lock (CLEAN)	0.20
Filter Mix-Box - 2" 30% Pleated (CLEAN)	0.30
Filter Mix-Box - 2" Aluminum Mesh (CLEAN)	0.15
Filter Mix-Box - 1-1/2" Dust-Lock (CLEAN)	0.20
<i>Static Pressure Drops for Options</i>	
	in. w.c.
Inlet Hood with Birdscreen	0.05
Filtered Inlet Hood (Includes 2" Alum. Mesh Filters, CLEAN)	0.15
Motorized Inlet Damper	0.10
Motorized Discharge Damper	0.20
3-Way Single Deflection Diffuser (Horizontal Blades)	0.20
3-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.25
4-Way Single Deflection Diffuser (Horizontal Blades)	0.10
4-Way Double Deflection Diffuser (Horiz. & Vert. Blades)	0.15
Evaporative Cooling Section (for 6" Thick Media)	0.15
Evaporative Cooling Section (for 12" Thick Media)	0.30
CW or DX Coil Box (Estimate)	0.60 - 0.90
Steam or HW Coil Box (Estimate)	0.30 - 0.40
<i>Static Pressure Drops for Discharge Configurations</i>	
Axial Discharge w/ 3'-0" of Straight Duct (Minimum)	0.15
Axial Discharge w/o 3'-0" of Duct or a Plenum	0.20
Radial Discharge w/ 3'-0" of Duct or a Plenum (Minimum)	0.10
Radial Discharge w/o 3'-0" of Duct or a Plenum	0.10

Filters should be changed below 0.60" w. c.

Any external static losses from ductwork or other factors must be added to determine Total Static Pressure