

# *Model P* Direct-Drive Fans

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 **Moffitt**  
NATURAL VENTILATION SOLUTIONS

# Model P Direct-Drive Wall Fans

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## Model P Direct-Drive Fans Description

### PRODUCT DESCRIPTION

Model P Direct-Drive sidewall propeller fans are for exhaust or supply applications. This includes several different styles of propellers, two-drive configurations, and with a variety of available accessories. Drive frames are built of heavy-gauge construction and built for a lifetime of service.

### STANDARD FEATURES

- Drive: Direct
- Size: 24" - 54"
- Performance: 250 - 100,000 cfm
- Static Pressure: 1.25" w.g.
- Orientation
  - Supply
  - Exhaust
- Motors: Heavy-duty motor for years of trouble-free operation
- Propellers: High performance propeller
- Housing: G90 galvanized steel (mill finish) with flanges for mounting. protective finish.
- Frame: Heavy-gauge construction

### OPTIONAL FEATURES

- Weather Hoods
  - 45° (Relief)
  - 90° (Intake)
- Coatings:
  - Polyurethane
  - Custom

### INDUSTRY APPLICATION

- |                         |                          |              |
|-------------------------|--------------------------|--------------|
| • Aluminum Plants       | • Glass & Glass Products | • Warehouses |
| • Automotive Plants     | • Pulp & Paper Plants    | • Work Rooms |
| • General Manufacturing | • Schools                |              |

# Model P Direct-Drive Wall Fans

## Mounting Options

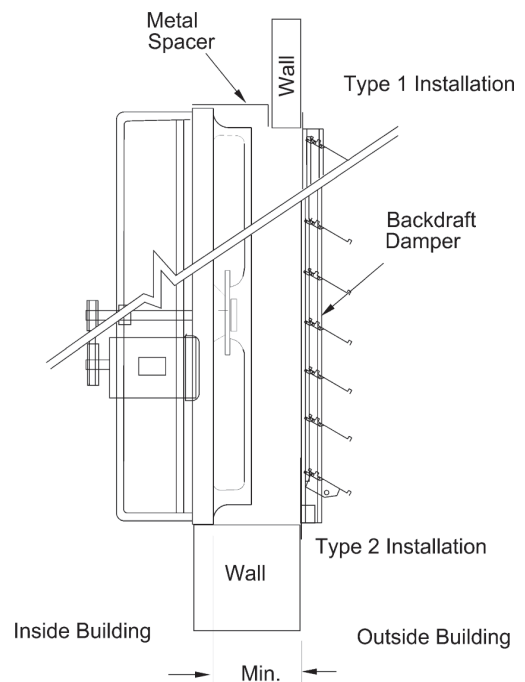
### STANDARD FAN MOUNTING

The split drawing shows a Type 1 and Type 2 installation for mounting fans when a wall housing or wall collar is not used. The wall openings are different on the installations.

On exhaust applications, it is important to maintain minimum dimensions between the propeller and damper for maximum performance.

- Type 1: Installation requires a metal spacer between the fan and the wall to achieve the minimum distance recommendation. This type of installation uses a damper the same size as the fan propeller.
- Type 2: Installation requires a minimum wall opening to allow the fan venturi to fit inside the wall opening. This type uses a damper the same size as the venturi O.D.

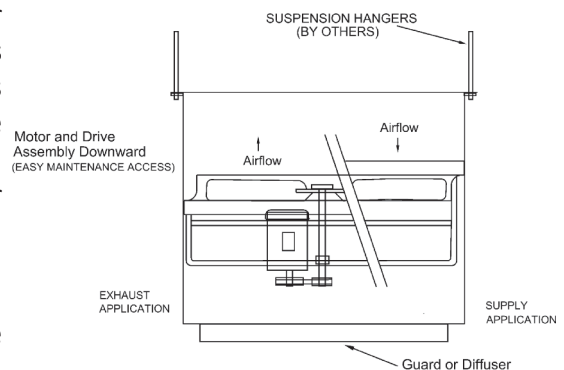
The chart below provides the recommended minimum dimensions and the wall opening dimensions for these two different installations.



### HORIZONTAL FAN MOUNTING

Romlair Sidewall fans can be mounted horizontally for applications that require vertical airflow. Some applications would include mounting fans in a wall housing for use as recirculation fans or install them in ductwork and use them as transfer fans. All models can be mounted horizontally. On horizontal applications, specify motor location and direction of airflow.

Note: Guarding is recommended on this type of application. If guarding is not provided by the factory, it should be supplied by others.



Suspended Installation – Fan Mounted Horizontally in Wall Box Housing

Fan Size	Min. Dimension	Type 1 Wall Opening	Type 2 Wall Opening	Fan Size	Min. Dimension	Type 1 Wall Opening	Type 2 Wall Opening
8	6	8-1/2	11-1/2	30	13	30-1/2	36-3/4
10	6	10-1/2	14-1/2	36	14	36-1/2	42-3/4
12	7	12-1/2	15-3/4	42	15	42-1/2	48-3/4
14	8	14-1/2	18-3/4	48	16	48-1/2	54-3/4
16	9	16-1/2	20-3/4	54	17	54-1/2	60-3/4
18	10	18-1/2	22-3/4	60	19	60-1/2	66-3/4
20	12	20-1/2	24-3/4	72	19	72-1/2	80-3/4
24	13	24-1/2	30-3/4				

# Model P Direct-Drive Wall Fans

## Housing Options

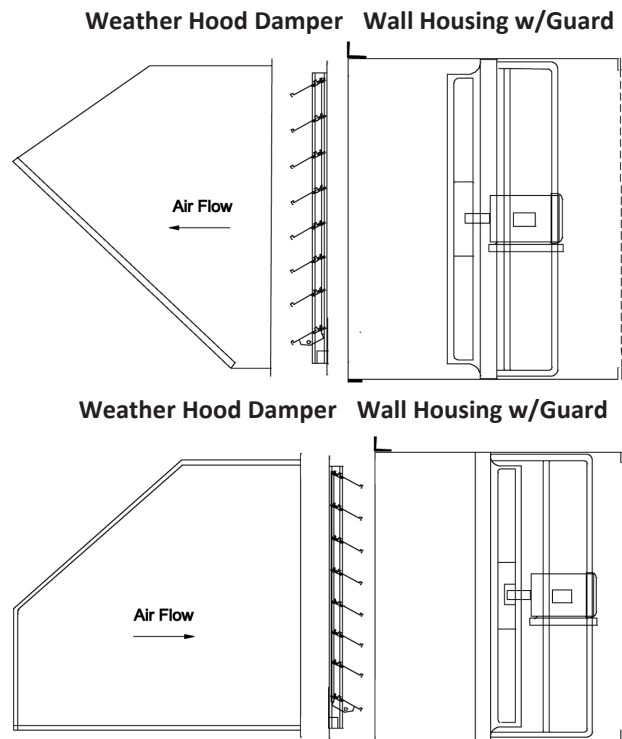
### FAN WALL HOUSING

Wall housing provides weather protection when mounting a fan to a wall. These housings reduce installation time, and allow the attachment of backdraft dampers, guards, and weather hoods on either end of the housing.

Weather hoods are available in both 45° (Relief) and 90° (Intake) configurations. They are recommended to help prevent water entrainment. The hoods are shipped separately.

Housings are constructed of G90 galvanized steel (mill finish) with flanges for mounting. Housings can be coated with an optional polyurethane protective finish.

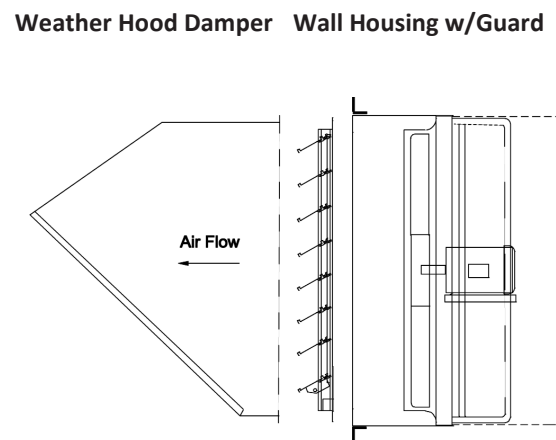
Wall housing, fan, damper, and guards are shipped fully assembled. Weather hoods are shipped loose.



### FAN WALL COLLAR

Fan wall collar is an alternative method of mounting a fan and optional damper in a wall. Housing is constructed of G90 galvanized steel (mill finish) with flanges for mounting. Housing can be coated with an optional polyurethane protective finish. Optional motor side guards must be installed to meet safety requirements (see note below).

Weather hoods are recommended to prevent water entrainment and are available in both 45° (Relief) and 90° (Intake) configurations. Wall collar, fan, damper, and guards are shipped fully assembled. Weather hoods are shipped loose.



**CAUTION!** Guards must be installed when a fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.

# Model P Direct-Drive Wall Fans

## Filtered Supply Wall Housing Options

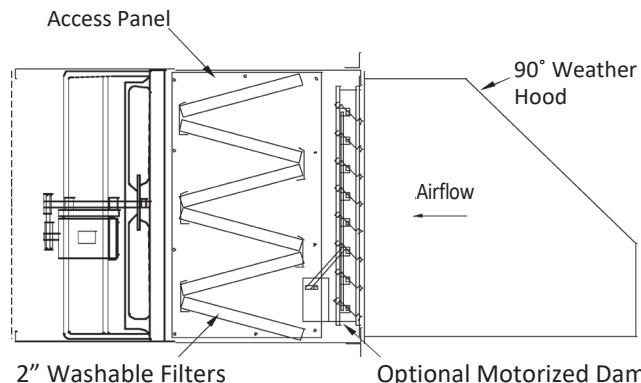
### FILTERED SUPPLY WALL HOUSING

Filtered supply wall housings are available in fan sizes ranging from 24" to 54". Standard construction is painted galvanized steel housing with installed mounting flanges for flush interior or flush exterior mounting. Standard filters are 2-inch washable aluminum filters and are easily accessible through a bolted access panel. Accessories include a 90° intake weather hood, closure angles, and dampers (automatic or motorized).

Diffusers are mounted on fan wall housing and are manually operated. They are available in both 2-way and 4-way models featuring airfoil blade, and heavy-gauge galvanized steel frames. Designed for a maximum velocity of 3000 fpm. Optional closure angles are available to provide a finished appearance on the interior wall opening. *Consult factory for custom designs which include larger sizes, and different filter quantities.*



Typical Installation

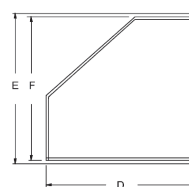


2" Washable Filters

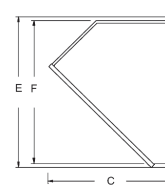
Optional Motorized Damper

Size	Motor Side Guide		Damper	Weather Hood				
	A	B		C	D	E	Width	Gauge
10	N/A	N/A	10	15	13	15.25	13	20
12	14.75	9	12	16.5	15.5	18.25	15.5	20
14	14.75	12	14	17.5	17.5	20.25	17.5	20
16	19.75	12	16	19.5	19.5	22.25	19.5	20
18	21.75	12	18	22	21.5	24.25	21.5	20
20	23.75	12	20	24.5	23.5	26.25	23.5	18
24	29.875	20	24	26.875	27.5	30.25	27.5	18
30	35.875	20	30	31.125	33.5	36.25	33.5	18
36	41.875	20	36	35.375	39.5	42.25	39.5	18
42	47.875	24	42	39.625	45.5	48.25	45.5	18
48	53.875	24	48	43.875	51.5	54.25	51.5	18
54	59.875	24	54	46.625	57.5	60.25	57.5	16
60	65.875	35	60	50.375	63.5	66.25	63.5	16
72	79.875	35	72	54.0	75.5	79.5	75.5	12

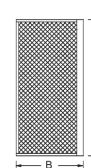
90° Weatherhood



45° Weatherhood



Motor Side Guard



# Model P Direct-Drive Wall Fans

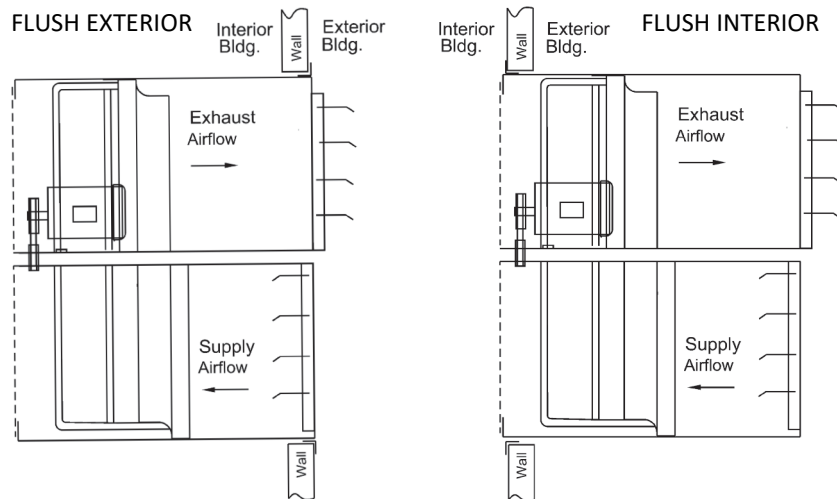
## Mounting Configurations

Different arrangements should be considered depending on several factors.

1. Accessibility for service may be desired from one side of the building vs. the other side.
2. The desired appearance by the designer.
3. Obstruction or space considerations.

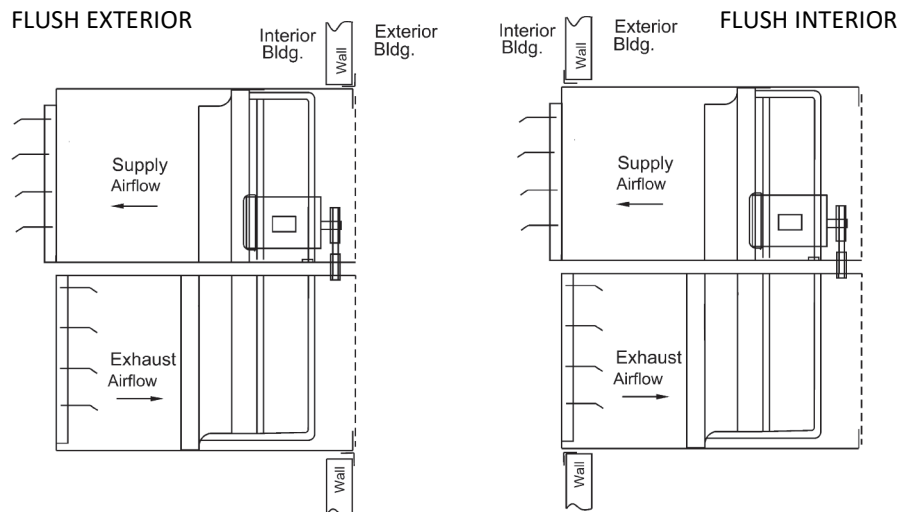
### MOUNTING CONFIGURATION FOR INTERIOR SERVICE

With this arrangement the drive components consisting of belts, pulleys and motors are serviced from inside the building. This is a standard mount wall housing for interior service.



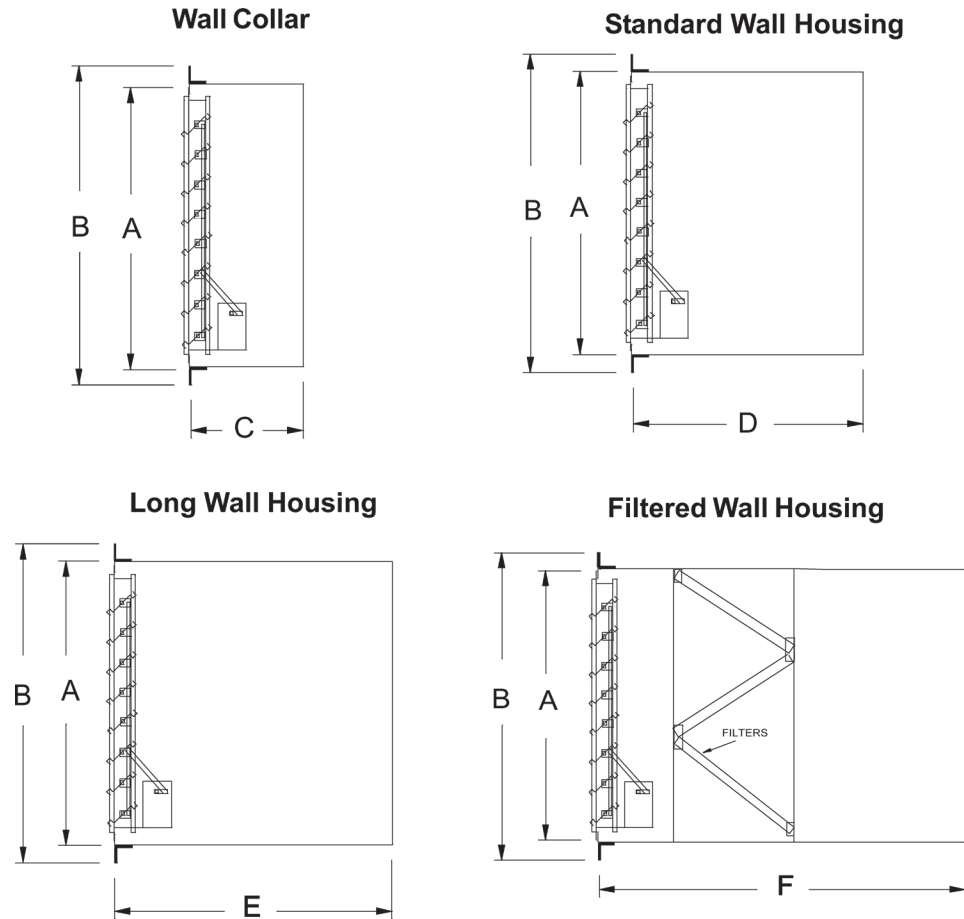
### MOUNTING CONFIGURATION FOR EXTERIOR SERVICE

With this arrangement the drive components consisting of the belts, pulleys, and motors are serviced from outside the building in the opposite direction of the above. This is a reverse mount wall housing for exterior service.



# Model P Direct-Drive Wall Fans

## Wall Collar and Housing Dimensions



Size	Wall Collar and Housings						Wall Opening	Gauge
	A	B	C	D	E	F		
10	15-3/8	18-3/8	16	19	25	–	16-3/8	20
12	18-3/8	21-3/8	16	23	29	–	19-3/8	20
14	20-3/8	23-3/8	18	26	32	–	21-3/8	20
16	22-3/8	25-3/8	18	27	33	–	23-3/8	20
18	24-3/8	27-3/8	18	28	34	–	25-3/8	20
20	26-3/8	29-3/8	18	32	38	–	27-3/8	18
24	30-3/8	36-3/8	18	37	43	63	31-3/8	18
30	36-3/8	42-3/8	18	38	44	65	37-3/8	18
36	42-3/8	48-3/8	18	39	45	67	43-3/8	18
42	48-3/8	54-3/8	19	44	50	73	49-3/8	18
48	54-3/8	60-3/8	19	44	50	73	55-3/8	18
54	60-3/8	66-3/8	20	52	58	80	61-3/8	16
60	66-3/8	72-3/8	21	54	60	–	67-3/8	16
72	80-3/8	86-3/8	22	60	66	–	81-3/8	12

# Model P Direct-Drive Wall Fans

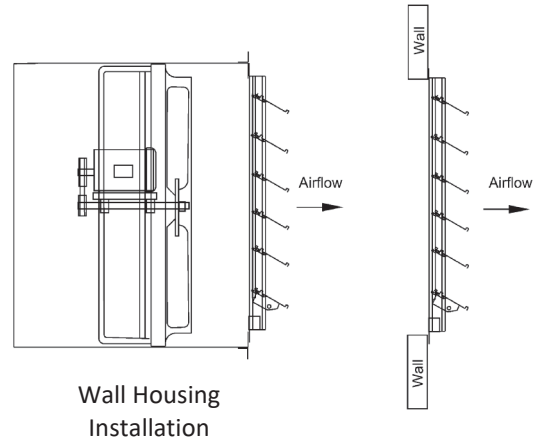
## Backdraft Dampers



Backdraft dampers can be used as stand-alone, or they can be used with both the wall collar and wall housing options. Many types of backdraft dampers are available to fit any requirement. Actuators are available for all electrical voltages. In some cases, a step-down transformer may be required.

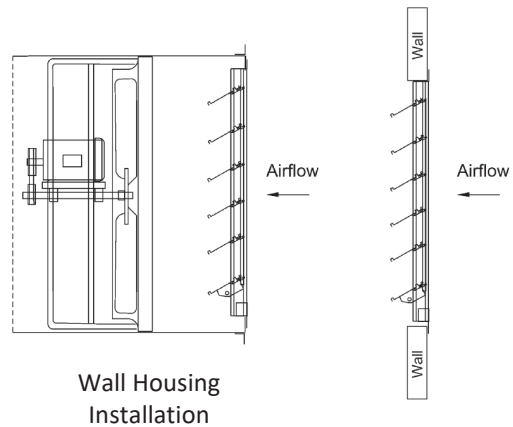
### RWD and RWD-M exhaust

dampers are available as either gravity operated or with motor actuator 115v.



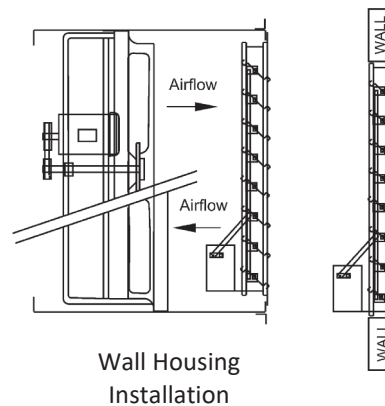
### Supply Dampers

RWD can be used as a supply damper by installing as shown in the Wall housing illustration. RBDS-M should be used for high velocity and motorized supply applications.



### Exhaust or Supply - Heavy Duty Center Pivot

RVC can be used for both exhaust and supply configurations. Can be used with wall housing or alone. Designed for higher air velocities than the standard backdraft dampers. Optional blade and jamb seals are available for low leakage applications.

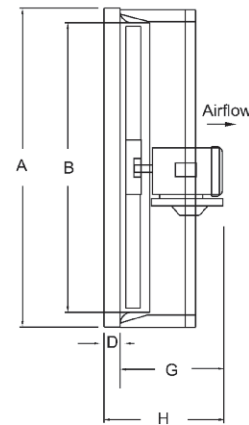
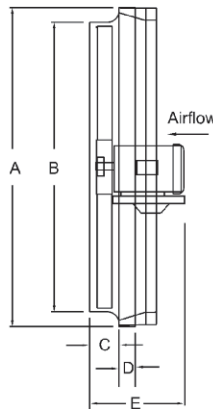
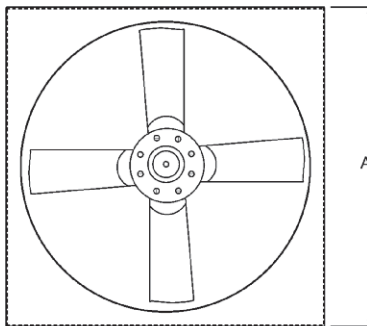




# Model P Direct-Drive Wall Fans

## Model P Fan Dimensional Data

SIZE	DIMENSIONS-INCHES							AVG WT
	A	B	C	D	E	G	H	
24	30	25	5	2-3/4	15-5/8	16-1/8	18-7/8	110
30	36	31	5	2-3/4	15-3/4	16-1/4	19	150
36	42	37	5	2-3/4	21-1/4	19	21-3/4	205
42	48	43	5	2-3/4	21-3/4	20-1/8	22-7/8	270
48	54	49	5	2-3/4	26-3/4	22-5/8	25-3/8	305
54	60	55	5-1/2	2-3/4	26	25-7/8	28-5/8	400
60	66	61	5-1/2	2-3/4	26-1/2	25-7/8	28-5/8	440



# Model P Direct-Drive Wall Fans

## Model P Direct-Drive Performance Data

MODEL	HP	FAN RPM	MAX BHP	*SONES	STATIC PRESSURE/CAPACITY									
					0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	1.00	
P-242-11	0.33	1160	0.39	19	5501	5010	4891	4208	3446					
P-243-11	0.5	1160	0.61	22	6054	5690	5592	5103	4516	3712				
P-244-11	0.75	1160	0.88	25	7321	6941	6840	6311	5648	4821				
P-245-17	1.0	1750	1.18	41	7805	7505	7430	7009	6606	6191	5737	5215		
P-246-17	1.5	1750	1.82	44	8647	8414	8356	8056	7751	7430	7075	6704	5808	
P-247-17	2.0	1750	2.40	52	9818	9596	9541	9251	8932	8573	8210	7835	6955	
P-303-8	0.5	860	0.60	20	9483	8423	8120	6284						
P-304-8	0.75	860	0.88	22	10500	9930	9752	8441	6521					
P-305-8	1.0	860	1.02	22	11304	10488	10284	8986	6938					
P-305-11	1.0	1160	1.22	29	10786	10270	10138	9442	8629	7698	6411			
P-306-11	1.5	1160	1.88	31	13396	12869	12741	12061	11202	10182	8954			
P-307-11	2.0	1160	2.35	35	14927	14302	14145	13352	12500	11388	10025			
P-364-8	0.75	860	0.87	33	13586	12221	11879	9574						
P-365-8	1.0	860	1.20	24	15052	14018	13715	12200	10314					
P-366-8	1.5	860	1.88	29	17378	16299	16005	14470	12314					
P-365-11	1.0	1160	1.19	33	14590	13421	13130	11557	9301					
P-366-11	1.5	1160	1.84	38	17299	16306	16046	14706	13182	11323	8495			
P-367-11	2.0	1160	2.43	42	18082	17340	17155	16175	15142	14037	12558	10606		
P-368-11	3.0	1160	3.55	43	21998	21166	20958	19907	18793	17571	16158	14274		
P-425-8	1.0	860	1.15	34	14917	13745	13422	11639	9375	6578				
P-426-8	1.5	860	1.65	34	17968	16981	16708	15083	13086	10043				
P-427-8	2.0	860	2.23	35	21349	20112	19793	18219	16137	13776				
P-428-8	3.0	860	3.12	35	24484	23339	23018	21392	19302	16745	12328			
P-486-8	1.5	860	1.79	44	23303	21701	21264	18953	16189	12795	7380			
P-487-8	2.0	860	2.35	47	26755	24958	24508	22193	19570	16262	11373			
P-488-8	3.0	860	3.41	50	31811	30082	29650	27274	24783	21435				
P-489-8	5.0	860	5.62	51	3475	37613	37119	34503	31576	28043				
P-4810-8	7.5	860	7.68	52	43722	41737	41152	38122	35212	31038				
P-547-8	2.0	860	2.45	41	26755	24958	24508	22193	19570	16262	11373			
P-548-8	3.0	860	3.52	50	31909	30065	29576	26971	23521	19790	15492	10342		
P-549-8	5.0	860	5.80	45	42794	40911	40440	37609	34898	31383	27518	20263		
P-5410-8	7.5	860	9.00	50	51718	49469	48908	45858	43139	39700	35377	30238		