

AFG VAV DAMPER AIR VOLUME CONTROL

- Combined ATG Damper and FGG Flowgrid
- Airtight Damper construction to DIN 1946 T4
- Compact Constant or Variable Volume control
- Sturdy Actuator drive spindle 12mm Ø
- Embedded quality seals in damper blades
- Special moulded seals on each blade end
- Brass bearings with 'O' ring seals on drive shaft
- Standard Frame sizes 20mm and 30mm
- Height in 100mm and width in 50mm increments
- Works with all CMR actuators and controllers
- CMR standard 24 month warranty
- 30 Years field application experience



Combined ATG Damper with FGG Flowgrid

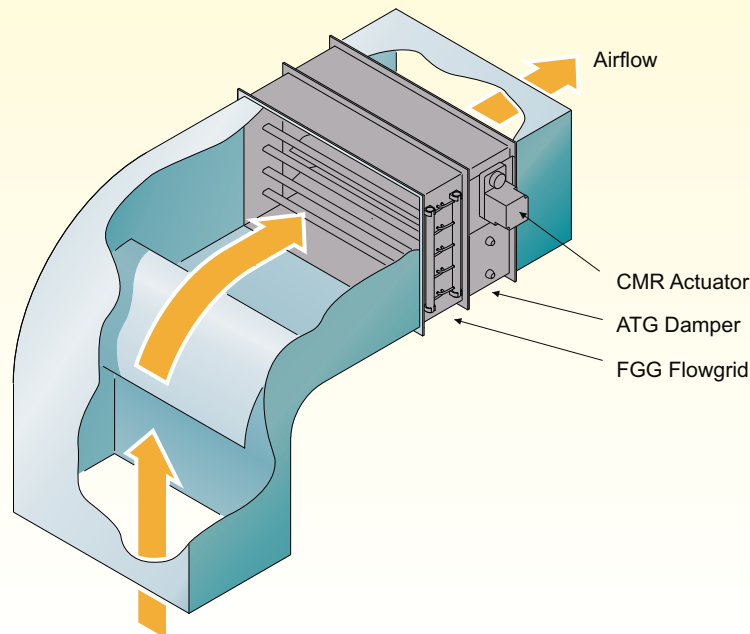
The AFG Volume control Damper has been designed to control air volume in ventilation ducts. The AFG consists of a galvanized steel ATG Damper and a bolted on in FGG Flowgrid. The length is 410mm and has a 30mm flange duct connection to suit standard galvanized steel duct work. The galvanized steel damper blades are fitted across the internal frame area. Each end of the blade is firmly secured in brass bearings which have 'O' ring seals to the outside. A dust protection cap is fitted on the outside over the bearing and shaft. Heavy duty cast aluminium gears are fitted on the drive side of the damper and are located inside the frame. The drive shaft is standard 12mm Ø and an actuator bracket is fitted to suit the CMR actuators. The blades have embedded lip seals and side seals so that the DIN 1946 T4 airtight specification can be achieved.

The AFG DAMPER is a complete assembled construction and are manufactured in standard height increments of 100mm going up to a maximum height of 1200mm. The width of the DAMPER is manufactured in increments of 50mm up to 1200mm.

The AFG Damper has an end stop when it is closed and the seal shall be firmly pressed against the frame. At this point, the actuator needs just a little more torque to seal it. The actuator is factory commissioned to close and open over 90° but angle limit adjustments can be achieved via the actuator. At the entrance of the AFG is the CMR FGG flowgrid fitted which measures both the air flow impact and the static pressure which is the velocity pressure. This velocity pressure is then converted by the CMR P-Sensor into an air volume measurement. to provide total air volume measurement. Dual dampers i.e. a 100mm and a 500mm can be welded together. One DPC controller can drive two actuators and very low and high volumes can be measured and controlled. Turn down rates of 40:1 can be achieved with a dual AFG by carefully selecting the AFG sizes.

The dampers can be operated vertically or horizontally but is not recommended to have the controller and actuator hanging at the bottom of the AFG when installed on site.

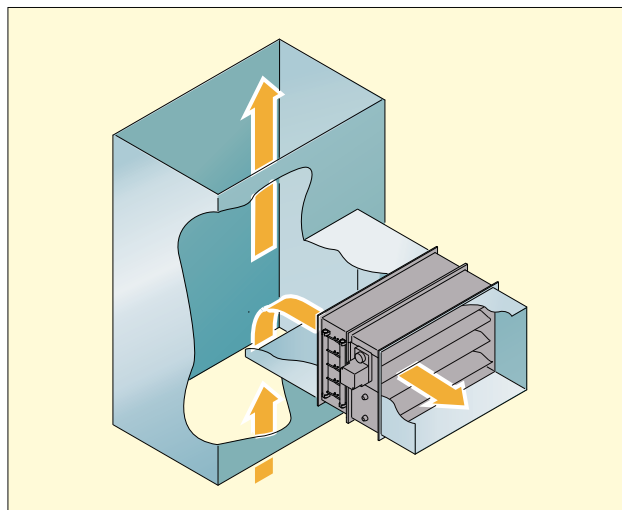
AFG VAV is a combination of an ATG Damper and an FGG Flowgrid providing accurate air volume



AFG FLOW CONTROLLER INSTALLATION

T-JUNCTION

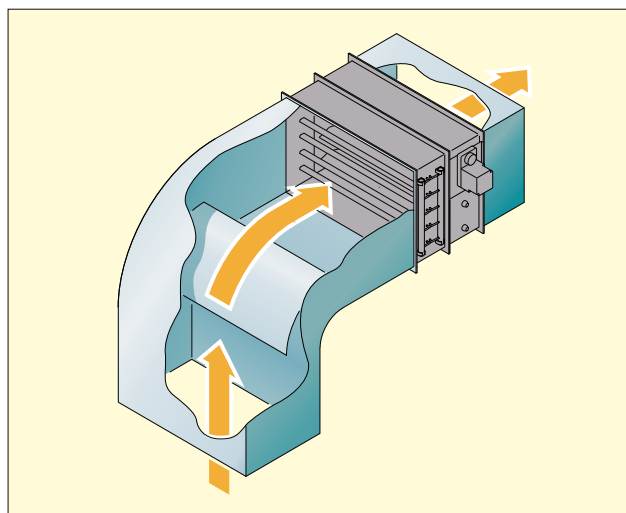
The AFG Flow controller is best installed in a straight duct with a length before the Flowgrid. The AFG Flowgrid can be installed after a T-Section shown on the right but a straight duct section is recommended after the 'T'. The FGG Flowgrid is always on the air entrance of the AFG.



AFG Flow Controller after a T- duct section

ELBOW

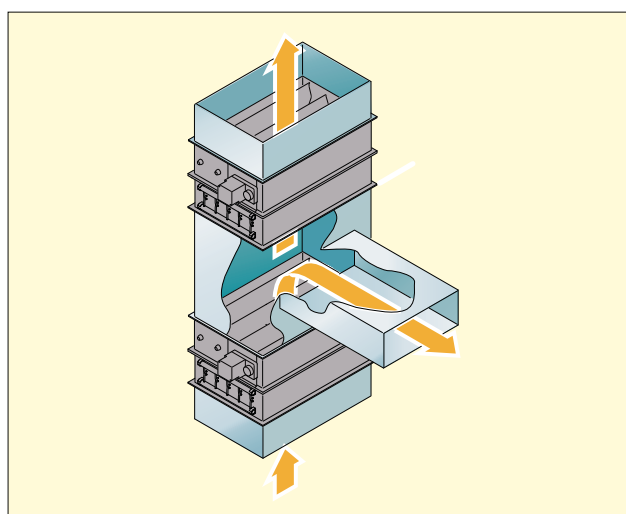
The AFG Flowgrid can be installed after an elbow as shown on the right. Best is to have room for a straight duct before the Flowgrid.



AFG FlowController after an elbow duct section

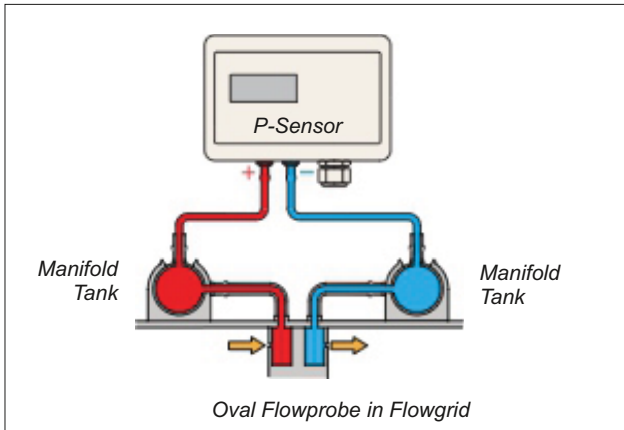
BRANCH

If the duct on the right cannot be fitted with an AFG Flow Controller then the bottom AFG Flowcontroller measures the total volume coming up and the top AFG Flowcontroller measures what is left over. The difference is the volume which passes through the duct on the right, which can be controlled by the two AFGs. It is best to allow for a straight duct length before the FGG Flowgrid.



AFG Flow Controller before and after a T section

AFG FLOWGRID VELOCITY PRESSURES



AFG Flowgrid and P-Sensor tube connections

The velocity pressure is measured by the Oval Flowprobe built into the FGG Flowgrid and the total impact pressure is measured on the positive (+red) and the static pressure is measured on the negative (- blue) manifold tanks. The P-Sensor shall be connected to the corresponding tanks using CMR PVC red and blue tube.

When the P-Sensor is ordered with the AFG Flowgrid then it is pre-adjusted at the factory - i.e. duct width and height, density and AFG Flowgrid Magnification Factor (mf) and the range is in m³/s, m³/h or l/s..

It is ready for connection to the control or monitoring system.

If the P-Sensor was ordered separately and it was not factory adjusted then it is quite simple to adjust the parameters on site.

The P-Sensor has a keyboard and the duct height and width must be entered. The magnification factor of the AFG Flowgrid must be entered which is normally 1.650, if it is installed in a straight duct.

If the volume indicated on the P-Sensor display is deviating from the actual measurements, then the magnification factor can be adjusted to suit the installation abnormalities via the P-Sensor keyboard.

Adjust the fan to a constant volume – start with 50% of the minimum and maximum operating volume and take a pitot travers reading with a CAL150 or other instrument. Once the average volume has been established and it is not the same as displayed on the P-Sensor, then adjust the Magnification Factor (mf) until the same display is achieved. For higher accuracy try this at 25%, 75% and 100% volume set point. The P-Sensor has also parameters to linearize the measurements for more critical applications.

Useful AFG Flowgrid scaling formula:

$$\text{velocity m/s} = \sqrt{\frac{2 \times (\Delta P \text{ in Pa} / \text{mag factor})}{1.2 \text{ Density}}}$$

Example:

$$2 \times (100\text{Pa across AFG} / 1.650 \text{ mf}) = 121.21 / 1.2 = 101.01$$

$$\sqrt{101.01} = 10.05 \text{ m/s}$$

$$10.05 \text{ m/s} \times (\text{duct height 'h' x duct width 'w'}) = \dots \text{ m}^3/\text{s} \times 3600 = \text{m}^3/\text{h}$$

Conversion Table - Velocity in m/s at standard density to Velocity Pressure in Pa

m/s	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	0.00	0.01	0.02	0.05	0.10	0.15	0.22	0.29	0.38	0.49
1	0.60	0.73	0.86	1.01	1.18	1.35	1.54	1.73	1.94	2.17
2	2.40	2.65	2.90	3.17	3.46	3.75	4.06	4.37	4.70	5.05
3	5.40	5.77	6.14	6.53	6.94	7.35	7.78	8.21	8.66	9.13
4	9.60	10.09	10.58	11.09	11.62	12.15	12.70	13.25	13.82	14.41
5	15.00	15.61	16.22	16.85	17.50	18.15	18.82	19.49	20.18	20.89
6	21.60	22.33	23.06	23.81	24.58	25.35	26.14	26.93	27.74	28.57
7	29.40	30.25	31.10	31.97	32.86	33.75	34.66	35.57	36.50	37.45
8	38.40	39.37	40.34	41.33	42.34	43.35	44.38	45.41	46.46	47.53
9	48.60	49.69	50.78	51.89	53.02	54.15	55.30	56.45	57.62	58.81
10	60.00	61.21	62.43	63.65	64.90	66.15	67.42	68.69	69.98	71.29
11	72.60	73.93	75.26	76.61	77.98	79.35	80.74	82.13	83.54	84.97
12	86.40	87.85	89.30	90.77	92.26	93.75	95.26	96.77	98.30	99.85
13	101.40	102.97	104.54	106.23	107.74	109.35	110.98	112.61	114.26	115.93
14	117.60	119.29	120.98	122.69	124.42	126.15	127.90	129.65	131.42	133.21
15	135.00	136.81	138.62	140.45	142.30	144.15	146.02	147.89	149.78	151.69
16	153.60	155.53	157.46	159.41	161.38	163.35	165.34	167.33	169.34	171.36
17	173.40	175.45	177.50	179.57	181.66	183.75	185.86	187.97	190.10	192.25
18	194.40	196.57	198.74	200.93	203.14	205.35	207.58	209.81	212.06	214.33
19	216.60	218.89	221.18	223.49	225.82	228.15	230.50	232.85	235.22	237.61
20	240.00	242.41	244.82	247.25	249.70	252.15	254.62	257.09	259.58	262.09
21	264.60	267.13	269.66	272.21	274.78	277.35	279.94	282.53	285.14	287.77
22	290.40	293.05	295.70	298.37	301.06	303.75	306.46	309.17	311.90	314.65
23	317.40	320.17	322.94	325.73	328.54	331.35	334.18	337.01	339.86	342.73
24	345.60	348.49	351.38	354.29	357.22	360.15	363.10	366.05	369.02	372.01
25	375.00	378.01	381.02	384.05	387.10	390.15	393.22	396.29	399.38	402.49

To get the range of the P-Sensor use the keyboard and display the range. This is the sensor range in m³/s, m³/h or l/s at 10V / 20mA. Enter this range into your control system. No further calculations are necessary. If you want to use the table above, use the range of the transmitter in Pa and divide it by the (mf) of the AFG. Look up the velocity above. i.e. 100Pa / 1.65 = 60.60 Pa. Look up above ~ 60 Pa and read on side and top ~ 10 m/s then multiply with duct area in m² to get m³/s and multiply 3600 to get m³/h.

AFG VOLUME DAMPER SPECIFICATIONS

Selection of Volume Control Damper

It is essential to determine the air volume during the design stage. Normally there is a minimum and a maximum volume which has to be controlled.

The duct area should be calculated so that the velocity is approximately 2.5m/s at the minimum volume and preferably 5m/s at the operating point if possible. If the velocity is more than 5m/s at the maximum volume then the noise level criteria needs to be considered.

The maximum velocity should not exceed 9m/s as the duct resistance shall increase and the overall energy consumption shall go up. Use selection Tables on page 5 to 8.

The AFG Damper has 100mm blades complete with seals and have a long diamond shape with an embedded drive arrangement. The reduced internal area of the damper frame shall increase the velocity pressure momentarily but will have a regain of pressure after passing over the blades, which means that the overall pressure drop can be kept at a minimum.

The heavy duty cast aluminium drive gears are located internally, having seals to the side. The advantage is that the wheels are not on the outside which could cause a hazard for the installation or maintenance engineers in future during automatic operation.

Installation

The AFG Damper works in any position, but it is best if the blades and actuator are positioned horizontally. This way, the weight is reduced on the side seals and provides a long term efficient operation. It is also easier for the maintenance engineers to replace an actuator. When the damper is installed, care must be taken to leave sufficient space for the engineers to inspect and replace the motor - a 500mm space would be perfect.

Hysteresis

The AFG Dampers have a very low hysteresis due to the aluminium precision cast gears and therefore the damper can be moved very accurately to a control position.

Maintenance

The AFG Damper is maintenance free.

Materials

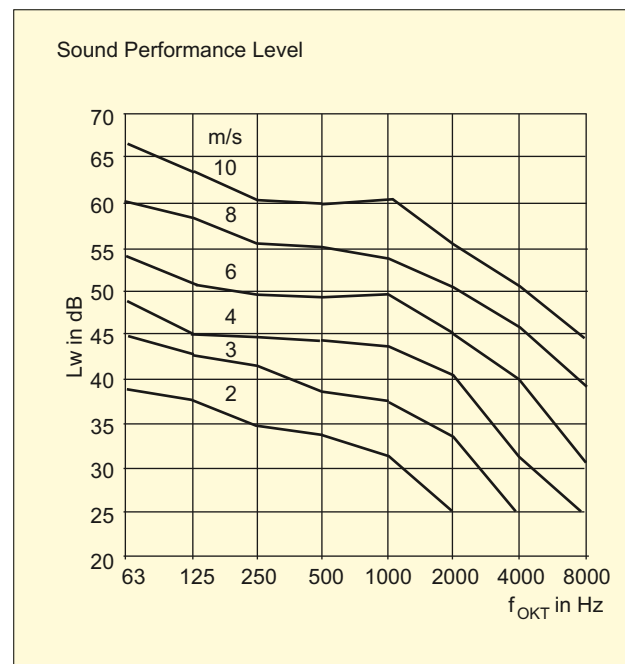
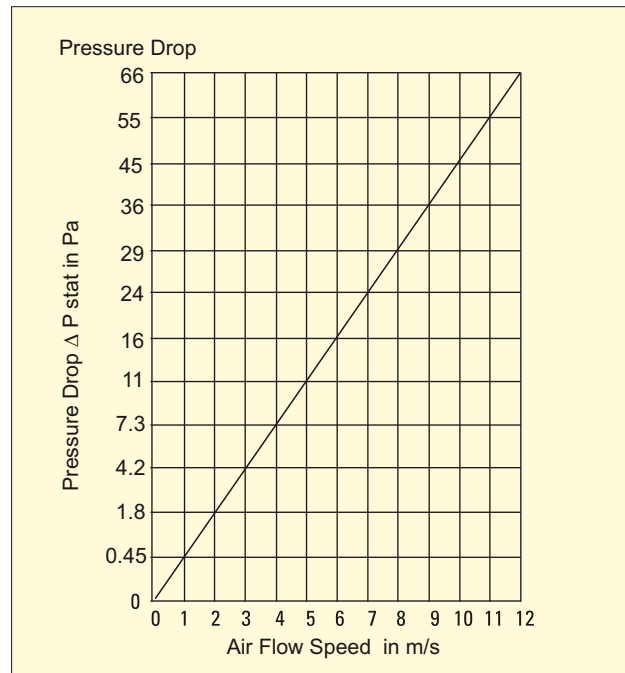
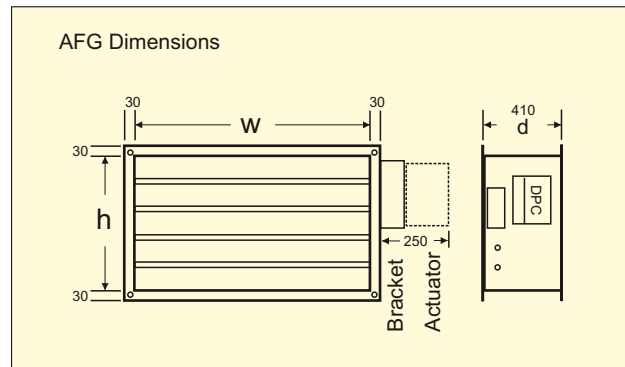
- Frame - Galvanised Sheet Metal
- Blades - Galvanised Sheet Metal
- Drive Wheels - Cast Aluminium
- Drive Shaft - Zinc Plated Steel
- Bearing - Brass with 'O' ring seal
- Seals - EPDM on request
- Actuator Bracket - Galvanised Sheet Metal
- FGG Flowgrid - Anodized Aluminium

Internal height 'h' from 100mm up to 1200mm in 100mm steps
 Internal width 'w' from 100mm up to 1200mm in 50mm steps
 Controller Length 410mm
 Standard Duct Frame 30mm
 Actuator Mounting Bracket with Actuator fitted optional

Specifications

Recommended minimum air velocity is 2.5 m/s
 Recommended operating air velocity is 5 m/s
 Maximum recommended air velocity is 9 m/s

Humidity 10% to 90% non condensing.
 Operating Temperature (dry condition) -5 to 60°C



AFG SELECTIONS

L = 410 C30 Table 1

Part Number	Description	Height	width	depth	Area	Weight	Volume	Volume	Volume	Volume	Volume	Volume
		h mm	w mm	d mm	m ²	kg	at 2 m/s m ³ /s	at 5 m/s m ³ /s	at 9 m/s m ³ /s	at 2 m/s m ³ /h	at 5 m/s m ³ /h	at 9 m/s m ³ /h
AFG-0100-0200-400-C30	Air Tight Volume Damper Galv C30	100	200	400	0.020	4.40	0.040	0.120	0.180	288	360	648
AFG-0100-0250-400-C30	Air Tight Volume Damper Galv C30	100	250	400	0.025	4.75	0.050	0.150	0.225	360	450	810
AFG-0100-0300-400-C30	Air Tight Volume Damper Galv C30	100	300	400	0.030	5.10	0.060	0.180	0.270	432	540	972
AFG-0100-0350-400-C30	Air Tight Volume Damper Galv C30	100	350	400	0.035	5.45	0.070	0.210	0.315	504	630	1134
AFG-0100-0400-400-C30	Air Tight Volume Damper Galv C30	100	400	400	0.040	5.80	0.080	0.240	0.360	576	720	1296
AFG-0100-0450-400-C30	Air Tight Volume Damper Galv C30	100	450	400	0.045	6.15	0.090	0.270	0.405	648	810	1458
AFG-0100-0500-400-C30	Air Tight Volume Damper Galv C30	100	500	400	0.050	6.50	0.100	0.300	0.450	720	900	1620
AFG-0100-0550-400-C30	Air Tight Volume Damper Galv C30	100	550	400	0.055	6.85	0.110	0.330	0.495	792	990	1782
AFG-0100-0600-400-C30	Air Tight Volume Damper Galv C30	100	600	400	0.060	7.20	0.120	0.360	0.540	864	1080	1944
AFG-0200-0200-400-C30	Air Tight Volume Damper Galv C30	200	200	400	0.040	5.80	0.080	0.240	0.360	576	720	1296
AFG-0200-0250-400-C30	Air Tight Volume Damper Galv C30	200	250	400	0.050	6.50	0.100	0.300	0.450	720	900	1620
AFG-0200-0300-400-C30	Air Tight Volume Damper Galv C30	200	300	400	0.060	7.20	0.120	0.360	0.540	864	1080	1944
AFG-0200-0350-400-C30	Air Tight Volume Damper Galv C30	200	350	400	0.070	7.90	0.140	0.420	0.630	1008	1260	2268
AFG-0200-0400-400-C30	Air Tight Volume Damper Galv C30	200	400	400	0.080	8.60	0.160	0.480	0.720	1152	1440	2592
AFG-0200-0450-400-C30	Air Tight Volume Damper Galv C30	200	450	400	0.090	9.30	0.180	0.540	0.810	1296	1620	2916
AFG-0200-0500-400-C30	Air Tight Volume Damper Galv C30	200	500	400	0.100	10.00	0.200	0.600	0.900	1440	1800	3240
AFG-0200-0550-400-C30	Air Tight Volume Damper Galv C30	200	550	400	0.110	10.70	0.220	0.660	0.990	1584	1980	3564
AFG-0200-0600-400-C30	Air Tight Volume Damper Galv C30	200	600	400	0.120	11.40	0.240	0.720	1.080	1728	2160	3888
AFG-0200-0650-400-C30	Air Tight Volume Damper Galv C30	200	650	400	0.130	12.10	0.260	0.780	1.170	1872	2340	4212
AFG-0200-0700-400-C30	Air Tight Volume Damper Galv C30	200	700	400	0.140	12.80	0.280	0.840	1.260	2016	2520	4536
AFG-0200-0750-400-C30	Air Tight Volume Damper Galv C30	200	750	400	0.150	13.50	0.300	0.900	1.350	2160	2700	4860
AFG-0200-0800-400-C30	Air Tight Volume Damper Galv C30	200	800	400	0.160	14.20	0.320	0.960	1.440	2304	2880	5184
AFG-0200-0850-400-C30	Air Tight Volume Damper Galv C30	200	850	400	0.170	14.90	0.340	1.020	1.530	2448	3060	5508
AFG-0200-0900-400-C30	Air Tight Volume Damper Galv C30	200	900	400	0.180	15.60	0.360	1.080	1.620	2592	3240	5832
AFG-0200-0950-400-C30	Air Tight Volume Damper Galv C30	200	950	400	0.190	16.30	0.380	1.140	1.710	2736	3420	6156
AFG-0200-1000-400-C30	Air Tight Volume Damper Galv C30	200	1000	400	0.200	17.00	0.400	1.200	1.800	2880	3600	6480
AFG-0200-1050-400-C30	Air Tight Volume Damper Galv C30	200	1050	400	0.210	17.70	0.420	1.260	1.890	3024	3780	6804
AFG-0200-1100-400-C30	Air Tight Volume Damper Galv C30	200	1100	400	0.220	18.40	0.440	1.320	1.980	3168	3960	7128
AFG-0200-1150-400-C30	Air Tight Volume Damper Galv C30	200	1150	400	0.230	19.10	0.460	1.380	2.070	3312	4140	7452
AFG-0200-1200-400-C30	Air Tight Volume Damper Galv C30	200	1200	400	0.240	19.80	0.480	1.440	2.160	3456	4320	7776
AFG-0300-0200-400-C30	Air Tight Volume Damper Galv C30	300	200	400	0.060	7.20	0.120	0.360	0.540	864	1080	1944
AFG-0300-0250-400-C30	Air Tight Volume Damper Galv C30	300	250	400	0.075	8.25	0.150	0.450	0.675	1080	1350	2430
AFG-0300-0300-400-C30	Air Tight Volume Damper Galv C30	300	300	400	0.090	9.30	0.180	0.540	0.810	1296	1620	2916
AFG-0300-0350-400-C30	Air Tight Volume Damper Galv C30	300	350	400	0.105	10.35	0.210	0.630	0.945	1512	1890	3402
AFG-0300-0400-400-C30	Air Tight Volume Damper Galv C30	300	400	400	0.120	11.40	0.240	0.720	1.080	1728	2160	3888
AFG-0300-0450-400-C30	Air Tight Volume Damper Galv C30	300	450	400	0.135	12.45	0.270	0.810	1.215	1944	2430	4374
AFG-0300-0500-400-C30	Air Tight Volume Damper Galv C30	300	500	400	0.150	13.50	0.300	0.900	1.350	2160	2700	4860
AFG-0300-0550-400-C30	Air Tight Volume Damper Galv C30	300	550	400	0.165	14.55	0.330	0.990	1.485	2376	2970	5346
AFG-0300-0600-400-C30	Air Tight Volume Damper Galv C30	300	600	400	0.180	15.60	0.360	1.080	1.620	2592	3240	5832
AFG-0300-0650-400-C30	Air Tight Volume Damper Galv C30	300	650	400	0.195	16.65	0.390	1.170	1.755	2808	3510	6318
AFG-0300-0700-400-C30	Air Tight Volume Damper Galv C30	300	700	400	0.210	17.70	0.420	1.260	1.890	3024	3780	6804
AFG-0300-0750-400-C30	Air Tight Volume Damper Galv C30	300	750	400	0.225	18.75	0.450	1.350	2.025	3240	4050	7290
AFG-0300-0800-400-C30	Air Tight Volume Damper Galv C30	300	800	400	0.240	19.80	0.480	1.440	2.160	3456	4320	7776
AFG-0300-0850-400-C30	Air Tight Volume Damper Galv C30	300	850	400	0.255	20.85	0.510	1.530	2.295	3672	4590	8262
AFG-0300-0900-400-C30	Air Tight Volume Damper Galv C30	300	900	400	0.270	21.90	0.540	1.620	2.430	3888	4860	8748
AFG-0300-0950-400-C30	Air Tight Volume Damper Galv C30	300	950	400	0.285	22.95	0.570	1.710	2.565	4104	5130	9234
AFG-0300-1000-400-C30	Air Tight Volume Damper Galv C30	300	1000	400	0.300	24.00	0.600	1.800	2.700	4320	5400	9720
AFG-0300-1050-400-C30	Air Tight Volume Damper Galv C30	300	1050	400	0.315	25.05	0.630	1.890	2.835	4536	5670	10206
AFG-0300-1100-400-C30	Air Tight Volume Damper Galv C30	300	1100	400	0.330	26.10	0.660	1.980	2.970	4752	5940	10692
AFG-0300-1150-400-C30	Air Tight Volume Damper Galv C30	300	1150	400	0.345	27.15	0.690	2.070	3.105	4968	6210	11178
AFG-0300-1200-400-C30	Air Tight Volume Damper Galv C30	300	1200	400	0.360	28.20	0.720	2.160	3.240	5184	6480	11664



AFG SELECTIONS

L = 410 C30 Table 2

Part Number	Description	Height	width	depth	Area	Weight	Volume	Volume	Volume	Volume	Volume	Volume
		h	w	d			at 2 m/s	at 5 m/s	at 9 m/s	at 2 m/s	at 5 m/s	at 9 m/s
		mm	mm	mm	m2	kg	m3/s	m3/s	m3/s	m3/h	m3/h	m3/h
AFG-0400-0200-400-C30	Air Tight Volume Damper Galv C30	400	200	400	0.080	8.60	0.160	0.480	0.720	1152	1440	2592
AFG-0400-0250-400-C30	Air Tight Volume Damper Galv C30	400	250	400	0.100	10.00	0.200	0.600	0.900	1440	1800	3240
AFG-0400-0300-400-C30	Air Tight Volume Damper Galv C30	400	300	400	0.120	11.40	0.240	0.720	1.080	1728	2160	3888
AFG-0400-0350-400-C30	Air Tight Volume Damper Galv C30	400	350	400	0.140	12.80	0.280	0.840	1.260	2016	2520	4536
AFG-0400-0400-400-C30	Air Tight Volume Damper Galv C30	400	400	400	0.160	14.20	0.320	0.960	1.440	2304	2880	5184
AFG-0400-0450-400-C30	Air Tight Volume Damper Galv C30	400	450	400	0.180	15.60	0.360	1.080	1.620	2592	3240	5832
AFG-0400-0500-400-C30	Air Tight Volume Damper Galv C30	400	500	400	0.200	17.00	0.400	1.200	1.800	2880	3600	6480
AFG-0400-0550-400-C30	Air Tight Volume Damper Galv C30	400	550	400	0.220	18.40	0.440	1.320	1.980	3168	3960	7128
AFG-0400-0600-400-C30	Air Tight Volume Damper Galv C30	400	600	400	0.240	19.80	0.480	1.440	2.160	3456	4320	7776
AFG-0400-0650-400-C30	Air Tight Volume Damper Galv C30	400	650	400	0.260	21.20	0.520	1.560	2.340	3744	4680	8424
AFG-0400-0700-400-C30	Air Tight Volume Damper Galv C30	400	700	400	0.280	22.60	0.560	1.680	2.520	4032	5040	9072
AFG-0400-0750-400-C30	Air Tight Volume Damper Galv C30	400	750	400	0.300	24.00	0.600	1.800	2.700	4320	5400	9720
AFG-0400-0800-400-C30	Air Tight Volume Damper Galv C30	400	800	400	0.320	25.40	0.640	1.920	2.880	4608	5760	10368
AFG-0400-0850-400-C30	Air Tight Volume Damper Galv C30	400	850	400	0.340	26.80	0.680	2.040	3.060	4896	6120	11016
AFG-0400-0900-400-C30	Air Tight Volume Damper Galv C30	400	900	400	0.360	28.20	0.720	2.160	3.240	5184	6480	11664
AFG-0400-0950-400-C30	Air Tight Volume Damper Galv C30	400	950	400	0.380	29.60	0.760	2.280	3.420	5472	6840	12312
AFG-0400-1000-400-C30	Air Tight Volume Damper Galv C30	400	1000	400	0.400	31.00	0.800	2.400	3.600	5760	7200	12960
AFG-0400-1050-400-C30	Air Tight Volume Damper Galv C30	400	1050	400	0.420	32.40	0.840	2.520	3.780	6048	7560	13608
AFG-0400-1100-400-C30	Air Tight Volume Damper Galv C30	400	1100	400	0.440	33.80	0.880	2.640	3.960	6336	7920	14256
AFG-0400-1150-400-C30	Air Tight Volume Damper Galv C30	400	1150	400	0.460	35.20	0.920	2.760	4.140	6624	8280	14904
AFG-0400-1200-400-C30	Air Tight Volume Damper Galv C30	400	1200	400	0.480	36.60	0.960	2.880	4.320	6912	8640	15552
AFG-0500-0200-400-C30	Air Tight Volume Damper Galv C30	500	200	400	0.100	10.00	0.200	0.600	0.900	1440	1800	3240
AFG-0500-0250-400-C30	Air Tight Volume Damper Galv C30	500	250	400	0.125	11.75	0.250	0.750	1.125	1800	2250	4050
AFG-0500-0300-400-C30	Air Tight Volume Damper Galv C30	500	300	400	0.150	13.50	0.300	0.900	1.350	2160	2700	4860
AFG-0500-0350-400-C30	Air Tight Volume Damper Galv C30	500	350	400	0.175	15.25	0.350	1.050	1.575	2520	3150	5670
AFG-0500-0400-400-C30	Air Tight Volume Damper Galv C30	500	400	400	0.200	17.00	0.400	1.200	1.800	2880	3600	6480
AFG-0500-0450-400-C30	Air Tight Volume Damper Galv C30	500	450	400	0.225	18.75	0.450	1.350	2.025	3240	4050	7290
AFG-0500-0500-400-C30	Air Tight Volume Damper Galv C30	500	500	400	0.250	20.50	0.500	1.500	2.250	3600	4500	8100
AFG-0500-0550-400-C30	Air Tight Volume Damper Galv C30	500	550	400	0.275	22.25	0.550	1.650	2.475	3960	4950	8910
AFG-0500-0600-400-C30	Air Tight Volume Damper Galv C30	500	600	400	0.300	24.00	0.600	1.800	2.700	4320	5400	9720
AFG-0500-0650-400-C30	Air Tight Volume Damper Galv C30	500	650	400	0.325	25.75	0.650	1.950	2.925	4680	5850	10530
AFG-0500-0700-400-C30	Air Tight Volume Damper Galv C30	500	700	400	0.350	27.50	0.700	2.100	3.150	5040	6300	11340
AFG-0500-0750-400-C30	Air Tight Volume Damper Galv C30	500	750	400	0.375	29.25	0.750	2.250	3.375	5400	6750	12150
AFG-0500-0800-400-C30	Air Tight Volume Damper Galv C30	500	800	400	0.400	31.00	0.800	2.400	3.600	5760	7200	12960
AFG-0500-0850-400-C30	Air Tight Volume Damper Galv C30	500	850	400	0.425	32.75	0.850	2.550	3.825	6120	7650	13770
AFG-0500-0900-400-C30	Air Tight Volume Damper Galv C30	500	900	400	0.450	34.50	0.900	2.700	4.050	6480	8100	14580
AFG-0500-0950-400-C30	Air Tight Volume Damper Galv C30	500	950	400	0.475	36.25	0.950	2.850	4.275	6840	8550	15390
AFG-0500-1000-400-C30	Air Tight Volume Damper Galv C30	500	1000	400	0.500	38.00	1.000	3.000	4.500	7200	9000	16200
AFG-0500-1050-400-C30	Air Tight Volume Damper Galv C30	500	1050	400	0.525	39.75	1.050	3.150	4.725	7560	9450	17010
AFG-0500-1100-400-C30	Air Tight Volume Damper Galv C30	500	1100	400	0.550	41.50	1.100	3.300	4.950	7920	9900	17820
AFG-0500-1150-400-C30	Air Tight Volume Damper Galv C30	500	1150	400	0.575	43.25	1.150	3.450	5.175	8280	10350	18630
AFG-0500-1200-400-C30	Air Tight Volume Damper Galv C30	500	1200	400	0.600	45.00	1.200	3.600	5.400	8640	10800	19440
AFG-0600-0200-400-C30	Air Tight Volume Damper Galv C30	600	200	400	0.120	11.40	0.240	0.720	1.080	1728	2160	3888
AFG-0600-0250-400-C30	Air Tight Volume Damper Galv C30	600	250	400	0.150	13.50	0.300	0.900	1.350	2160	2700	4860
AFG-0600-0300-400-C30	Air Tight Volume Damper Galv C30	600	300	400	0.180	15.60	0.360	1.080	1.620	2592	3240	5832
AFG-0600-0350-400-C30	Air Tight Volume Damper Galv C30	600	350	400	0.210	17.70	0.420	1.260	1.890	3024	3780	6804
AFG-0600-0400-400-C30	Air Tight Volume Damper Galv C30	600	400	400	0.240	19.80	0.480	1.440	2.160	3456	4320	7776
AFG-0600-0450-400-C30	Air Tight Volume Damper Galv C30	600	450	400	0.270	21.90	0.540	1.620	2.430	3888	4860	8748
AFG-0600-0500-400-C30	Air Tight Volume Damper Galv C30	600	500	400	0.300	24.00	0.600	1.800	2.700	4320	5400	9720
AFG-0600-0550-400-C30	Air Tight Volume Damper Galv C30	600	550	400	0.330	26.10	0.660	1.980	2.970	4752	5940	10692
AFG-0600-0600-400-C30	Air Tight Volume Damper Galv C30	600	600	400	0.360	28.20	0.720	2.160	3.240	5184	6480	11664
AFG-0600-0650-400-C30	Air Tight Volume Damper Galv C30	600	650	400	0.390	30.30	0.780	2.340	3.510	5616	7020	12636
AFG-0600-0700-400-C30	Air Tight Volume Damper Galv C30	600	700	400	0.420	32.40	0.840	2.520	3.780	6048	7560	13608
AFG-0600-0750-400-C30	Air Tight Volume Damper Galv C30	600	750	400	0.450	34.50	0.900	2.700	4.050	6480	8100	14580
AFG-0600-0800-400-C30	Air Tight Volume Damper Galv C30	600	800	400	0.480	36.60	0.960	2.880	4.320	6912	8640	15552
AFG-0600-0850-400-C30	Air Tight Volume Damper Galv C30	600	850	400	0.510	38.70	1.020	3.060	4.590	7344	9180	16524
AFG-0600-0900-400-C30	Air Tight Volume Damper Galv C30	600	900	400	0.540	40.80	1.080	3.240	4.860	7776	9720	17496
AFG-0600-0950-400-C30	Air Tight Volume Damper Galv C30	600	950	400	0.570	42.90	1.140	3.420	5.130	8208	10260	18468
AFG-0600-1000-400-C30	Air Tight Volume Damper Galv C30	600	1000	400	0.600	45.00	1.200	3.600	5.400	8640	10800	19440
AFG-0600-1050-400-C30	Air Tight Volume Damper Galv C30	600	1050	400	0.630	47.10	1.260	3.780	5.670	9072	11340	20412
AFG-0600-1100-400-C30	Air Tight Volume Damper Galv C30	600	1100	400	0.660	49.20	1.320	3.960	5.940	9504	11880	21384
AFG-0600-1150-400-C30	Air Tight Volume Damper Galv C30	600	1150	400	0.690	51.30	1.380	4.140	6.210	9936	12420	22356
AFG-0600-1200-400-C30	Air Tight Volume Damper Galv C30	600	1200	400	0.720	53.40	1.440	4.320	6.480	10368	12960	23328



