

ATG DAMPER

AIR VOLUME CONTROL

- Airtight Damper construction to DIN 1946 T4
- Smooth Post Blade damper movement
- Heavy Duty Cast Aluminium precision gears
- 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 - width in 50mm increments
- Works with all CMR actuators and controllers
- CMR standard 24 month warranty
- 30 Years field application experience



ATG DAMPER with VMS30 Actuator

The ATG DAMPER has been designed to control air volume in ventilation ducts. The damper consists of a galvanized steel duct section with a length of 110mm and is available with a 20 or 30mm flange duct connection to suit standard galvanized steel duct work.

The galvanized steel damper blades are fitted across the internal frame area in 100mm spacing. 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.

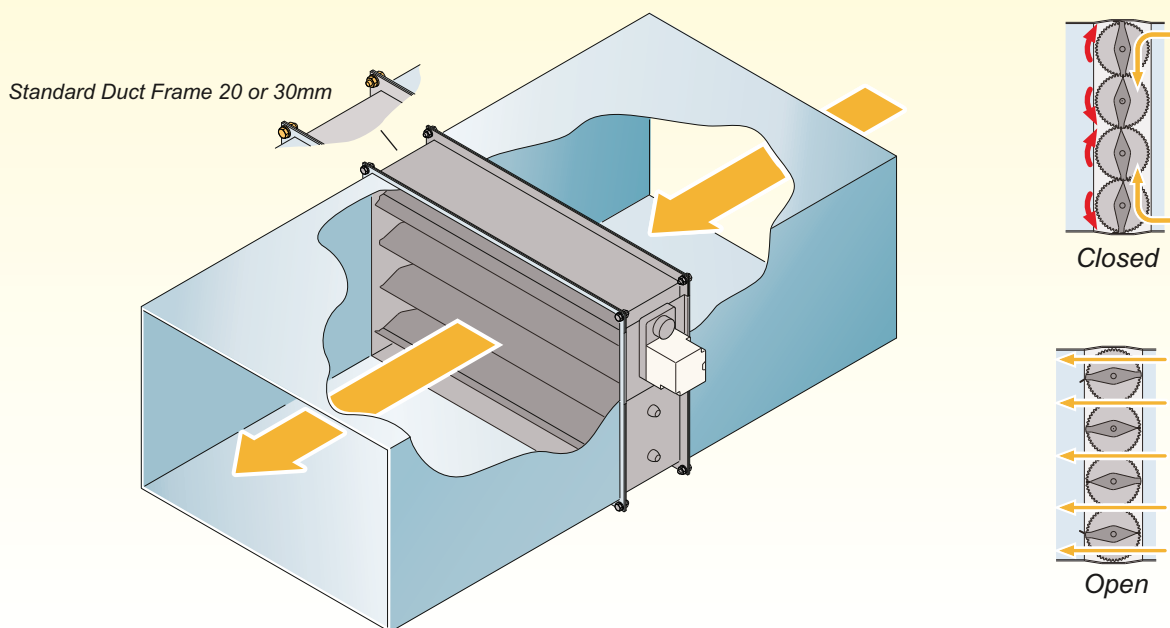
The ATG DAMPER is a complete welded construction and are manufactured in standard height increments of 100mm going up to a maximum height of 1200mm. The width of the DAMPER is manufactured in increments of 50mm up to 1200mm.

The ATG 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.

The dampers can also be manufactured in Stainless Steel, ATEX Execution, Galvanized sheet metal with epoxy coating

Larger Dampers can be manufactured to specification.

ATG DAMPER and Actuator providing accurate and repeatable air volume control



ATG 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 1 to 4 for 20mm Frames page 3 to 6 and 5 to 8 for 30mm frames on page 7 to 10.

The ATG 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 ATG 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 ATG 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 ATG 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	- Brass with 'O' ring seal
Actuator Bracket	- Galvanised Sheet Metal

Internal height 'h' from 100mm up to 1200mm in 100mm steps
 Internal width 'w' from 100mm up to 1200mm in 50mm steps
 Damper Length 110mm
 Standard Duct Frame 20mm or 30mm
 Actuator Mounting Bracket

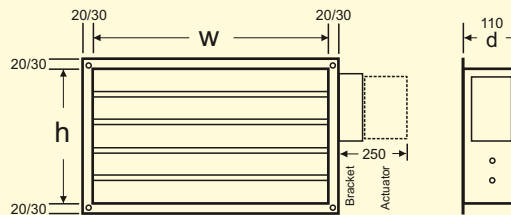
Specifications

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

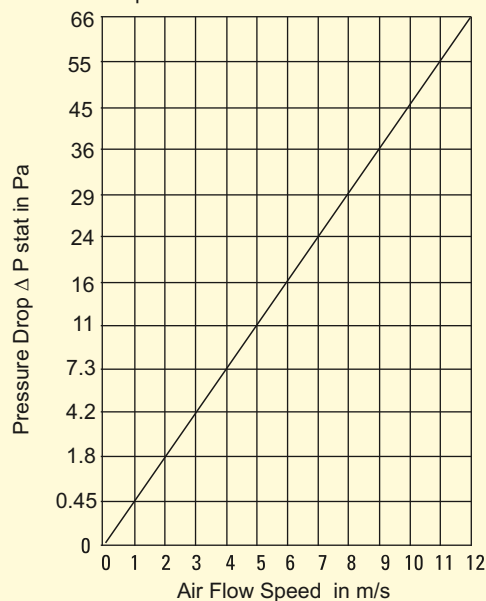
Humidity 10% to 90% non condensing.
 Operating Temperature (dry condition) -20 to 80°C

Free Open Area 75%

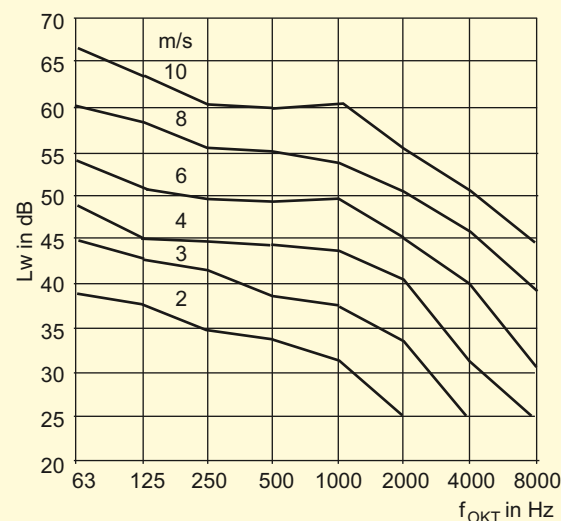
Damper Dimensions



Pressure Drop



Sound Performance Level



ATG DIMENSIONS

L=110 F=20 Table 1

Part Number	Description	Height	width	depth	Area	Volume	Volume	Volume	Volume	Volume	Volume
with C20mm Frame		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
C20	Description	mm	mm	mm	m2	m3/s	m3/s	m3/s	m3/h	m3/h	m3/h
ATG-0100-0200-110-C20	Damper Air Tight 254 Galv C20	100	200	110	0.020	0.040	0.120	0.180	288	360	648
ATG-0100-0250-110-C20	Damper Air Tight 254 Galv C20	100	250	110	0.025	0.050	0.150	0.225	360	450	810
ATG-0100-0300-110-C20	Damper Air Tight 254 Galv C20	100	300	110	0.030	0.060	0.180	0.270	432	540	972
ATG-0100-0350-110-C20	Damper Air Tight 254 Galv C20	100	350	110	0.035	0.070	0.210	0.315	504	630	1134
ATG-0100-0400-110-C20	Damper Air Tight 254 Galv C20	100	400	110	0.040	0.080	0.240	0.360	576	720	1296
ATG-0100-0450-110-C20	Damper Air Tight 254 Galv C20	100	450	110	0.045	0.090	0.270	0.405	648	810	1458
ATG-0100-0500-110-C20	Damper Air Tight 254 Galv C20	100	500	110	0.050	0.100	0.300	0.450	720	900	1620
ATG-0100-0550-110-C20	Damper Air Tight 254 Galv C20	100	550	110	0.055	0.110	0.330	0.495	792	990	1782
ATG-0100-0600-110-C20	Damper Air Tight 254 Galv C20	100	600	110	0.060	0.120	0.360	0.540	864	1080	1944
ATG-0200-0200-110-C20	Damper Air Tight 254 Galv C20	200	200	110	0.040	0.080	0.240	0.360	576	720	1296
ATG-0200-0250-110-C20	Damper Air Tight 254 Galv C20	200	250	110	0.050	0.100	0.300	0.450	720	900	1620
ATG-0200-0300-110-C20	Damper Air Tight 254 Galv C20	200	300	110	0.060	0.120	0.360	0.540	864	1080	1944
ATG-0200-0350-110-C20	Damper Air Tight 254 Galv C20	200	350	110	0.070	0.140	0.420	0.630	1008	1260	2268
ATG-0200-0400-110-C20	Damper Air Tight 254 Galv C20	200	400	110	0.080	0.160	0.480	0.720	1152	1440	2592
ATG-0200-0450-110-C20	Damper Air Tight 254 Galv C20	200	450	110	0.090	0.180	0.540	0.810	1296	1620	2916
ATG-0200-0500-110-C20	Damper Air Tight 254 Galv C20	200	500	110	0.100	0.200	0.600	0.900	1440	1800	3240
ATG-0200-0550-110-C20	Damper Air Tight 254 Galv C20	200	550	110	0.110	0.220	0.660	0.990	1584	1980	3564
ATG-0200-0600-110-C20	Damper Air Tight 254 Galv C20	200	600	110	0.120	0.240	0.720	1.080	1728	2160	3888
ATG-0200-0650-110-C20	Damper Air Tight 254 Galv C20	200	650	110	0.130	0.260	0.780	1.170	1872	2340	4212
ATG-0200-0700-110-C20	Damper Air Tight 254 Galv C20	200	700	110	0.140	0.280	0.840	1.260	2016	2520	4536
ATG-0200-0750-110-C20	Damper Air Tight 254 Galv C20	200	750	110	0.150	0.300	0.900	1.350	2160	2700	4860
ATG-0200-0800-110-C20	Damper Air Tight 254 Galv C20	200	800	110	0.160	0.320	0.960	1.440	2304	2880	5184
ATG-0200-0850-110-C20	Damper Air Tight 254 Galv C20	200	850	110	0.170	0.340	1.020	1.530	2448	3060	5508
ATG-0200-0900-110-C20	Damper Air Tight 254 Galv C20	200	900	110	0.180	0.360	1.080	1.620	2592	3240	5832
ATG-0200-0950-110-C20	Damper Air Tight 254 Galv C20	200	950	110	0.190	0.380	1.140	1.710	2736	3420	6156
ATG-0200-1000-110-C20	Damper Air Tight 254 Galv C20	200	1000	110	0.200	0.400	1.200	1.800	2880	3600	6480
ATG-0200-1050-110-C20	Damper Air Tight 254 Galv C20	200	1050	110	0.210	0.420	1.260	1.890	3024	3780	6804
ATG-0200-1100-110-C20	Damper Air Tight 254 Galv C20	200	1100	110	0.220	0.440	1.320	1.980	3168	3960	7128
ATG-0200-1150-110-C20	Damper Air Tight 254 Galv C20	200	1150	110	0.230	0.460	1.380	2.070	3312	4140	7452
ATG-0200-1200-110-C20	Damper Air Tight 254 Galv C20	200	1200	110	0.240	0.480	1.440	2.160	3456	4320	7776
ATG-0300-0200-110-C20	Damper Air Tight 254 Galv C20	300	200	110	0.060	0.120	0.360	0.540	864	1080	1944
ATG-0300-0250-110-C20	Damper Air Tight 254 Galv C20	300	250	110	0.075	0.150	0.450	0.675	1080	1350	2430
ATG-0300-0300-110-C20	Damper Air Tight 254 Galv C20	300	300	110	0.090	0.180	0.540	0.810	1296	1620	2916
ATG-0300-0350-110-C20	Damper Air Tight 254 Galv C20	300	350	110	0.105	0.210	0.630	0.945	1512	1890	3402
ATG-0300-0400-110-C20	Damper Air Tight 254 Galv C20	300	400	110	0.120	0.240	0.720	1.080	1728	2160	3888
ATG-0300-0450-110-C20	Damper Air Tight 254 Galv C20	300	450	110	0.135	0.270	0.810	1.215	1944	2430	4374
ATG-0300-0500-110-C20	Damper Air Tight 254 Galv C20	300	500	110	0.150	0.300	0.900	1.350	2160	2700	4860
ATG-0300-0550-110-C20	Damper Air Tight 254 Galv C20	300	550	110	0.165	0.330	0.990	1.485	2376	2970	5346
ATG-0300-0600-110-C20	Damper Air Tight 254 Galv C20	300	600	110	0.180	0.360	1.080	1.620	2592	3240	5832
ATG-0300-0650-110-C20	Damper Air Tight 254 Galv C20	300	650	110	0.195	0.390	1.170	1.755	2808	3510	6318
ATG-0300-0700-110-C20	Damper Air Tight 254 Galv C20	300	700	110	0.210	0.420	1.260	1.890	3024	3780	6804
ATG-0300-0750-110-C20	Damper Air Tight 254 Galv C20	300	750	110	0.225	0.450	1.350	2.025	3240	4050	7290
ATG-0300-0800-110-C20	Damper Air Tight 254 Galv C20	300	800	110	0.240	0.480	1.440	2.160	3456	4320	7776
ATG-0300-0850-110-C20	Damper Air Tight 254 Galv C20	300	850	110	0.255	0.510	1.530	2.295	3672	4590	8262
ATG-0300-0900-110-C20	Damper Air Tight 254 Galv C20	300	900	110	0.270	0.540	1.620	2.430	3888	4860	8748
ATG-0300-0950-110-C20	Damper Air Tight 254 Galv C20	300	950	110	0.285	0.570	1.710	2.565	4104	5130	9234
ATG-0300-1000-110-C20	Damper Air Tight 254 Galv C20	300	1000	110	0.300	0.600	1.800	2.700	4320	5400	9720
ATG-0300-1050-110-C20	Damper Air Tight 254 Galv C20	300	1050	110	0.315	0.630	1.890	2.835	4536	5670	10206
ATG-0300-1100-110-C20	Damper Air Tight 254 Galv C20	300	1100	110	0.330	0.660	1.980	2.970	4752	5940	10692
ATG-0300-1150-110-C20	Damper Air Tight 254 Galv C20	300	1150	110	0.345	0.690	2.070	3.105	4968	6210	11178
ATG-0300-1200-110-C20	Damper Air Tight 254 Galv C20	300	1200	110	0.360	0.720	2.160	3.240	5184	6480	11664



ATG DIMENSIONS

L=110

F=30

Table 7

Part Number with C30mm Frame	Description	Height h	width w	depth d	Area m2	Volume at 2 m/s m3/s	Volume at 5 m/s m3/s	Volume at 9 m/s m3/s	Volume at 2 m/s m3/h	Volume at 5 m/s m3/h	Volume at 9 m/s m3/h
C30	Description	mm	mm	mm							
ATG-0700-0200-110-C30	Damper Air Tight 254 Galv C30	700	200	110	0.140	0.280	0.840	1.260	2016	2520	4536
ATG-0700-0250-110-C30	Damper Air Tight 254 Galv C30	700	250	110	0.175	0.350	1.050	1.575	2520	3150	5670
ATG-0700-0300-110-C30	Damper Air Tight 254 Galv C30	700	300	110	0.210	0.420	1.260	1.890	3024	3780	6804
ATG-0700-0350-110-C30	Damper Air Tight 254 Galv C30	700	350	110	0.245	0.490	1.470	2.205	3528	4410	7938
ATG-0700-0400-110-C30	Damper Air Tight 254 Galv C30	700	400	110	0.280	0.560	1.680	2.520	4032	5040	9072
ATG-0700-0450-110-C30	Damper Air Tight 254 Galv C30	700	450	110	0.315	0.630	1.890	2.835	4536	5670	10206
ATG-0700-0500-110-C30	Damper Air Tight 254 Galv C30	700	500	110	0.350	0.700	2.100	3.150	5040	6300	11340
ATG-0700-0550-110-C30	Damper Air Tight 254 Galv C30	700	550	110	0.385	0.770	2.310	3.465	5544	6930	12474
ATG-0700-0600-110-C30	Damper Air Tight 254 Galv C30	700	600	110	0.420	0.840	2.520	3.780	6048	7560	13608
ATG-0700-0650-110-C30	Damper Air Tight 254 Galv C30	700	650	110	0.455	0.910	2.730	4.095	6552	8190	14742
ATG-0700-0700-110-C30	Damper Air Tight 254 Galv C30	700	700	110	0.490	0.980	2.940	4.410	7056	8820	15876
ATG-0700-0750-110-C30	Damper Air Tight 254 Galv C30	700	750	110	0.525	1.050	3.150	4.725	7560	9450	17010
ATG-0700-0800-110-C30	Damper Air Tight 254 Galv C30	700	800	110	0.560	1.120	3.360	5.040	8064	10080	18144
ATG-0700-0850-110-C30	Damper Air Tight 254 Galv C30	700	850	110	0.595	1.190	3.570	5.355	8568	10710	19278
ATG-0700-0900-110-C30	Damper Air Tight 254 Galv C30	700	900	110	0.630	1.260	3.780	5.670	9072	11340	20412
ATG-0700-0950-110-C30	Damper Air Tight 254 Galv C30	700	950	110	0.665	1.330	3.990	5.985	9576	11970	21546
ATG-0700-1000-110-C30	Damper Air Tight 254 Galv C30	700	1000	110	0.700	1.400	4.200	6.300	10080	12600	22680
ATG-0700-1050-110-C30	Damper Air Tight 254 Galv C30	700	1050	110	0.735	1.470	4.410	6.615	10584	13230	23814
ATG-0700-1100-110-C30	Damper Air Tight 254 Galv C30	700	1100	110	0.770	1.540	4.620	6.930	11088	13860	24948
ATG-0700-1150-110-C30	Damper Air Tight 254 Galv C30	700	1150	110	0.805	1.610	4.830	7.245	11592	14490	26082
ATG-0700-1200-110-C30	Damper Air Tight 254 Galv C30	700	1200	110	0.840	1.680	5.040	7.560	12096	15120	27216
ATG-0800-0200-110-C30	Damper Air Tight 254 Galv C30	800	200	110	0.160	0.320	0.960	1.440	2304	2880	5184
ATG-0800-0250-110-C30	Damper Air Tight 254 Galv C30	800	250	110	0.200	0.400	1.200	1.800	2880	3600	6480
ATG-0800-0300-110-C30	Damper Air Tight 254 Galv C30	800	300	110	0.240	0.480	1.440	2.160	3456	4320	7776
ATG-0800-0350-110-C30	Damper Air Tight 254 Galv C30	800	350	110	0.280	0.560	1.680	2.520	4032	5040	9072
ATG-0800-0400-110-C30	Damper Air Tight 254 Galv C30	800	400	110	0.320	0.640	1.920	2.880	4608	5760	10368
ATG-0800-0450-110-C30	Damper Air Tight 254 Galv C30	800	450	110	0.360	0.720	2.160	3.240	5184	6480	11664
ATG-0800-0500-110-C30	Damper Air Tight 254 Galv C30	800	500	110	0.400	0.800	2.400	3.600	5760	7200	12960
ATG-0800-0550-110-C30	Damper Air Tight 254 Galv C30	800	550	110	0.440	0.880	2.640	3.960	6336	7920	14256
ATG-0800-0600-110-C30	Damper Air Tight 254 Galv C30	800	600	110	0.480	0.960	2.880	4.320	6912	8640	15552
ATG-0800-0650-110-C30	Damper Air Tight 254 Galv C30	800	650	110	0.520	1.040	3.120	4.680	7488	9360	16848
ATG-0800-0700-110-C30	Damper Air Tight 254 Galv C30	800	700	110	0.560	1.120	3.360	5.040	8064	10080	18144
ATG-0800-0750-110-C30	Damper Air Tight 254 Galv C30	800	750	110	0.600	1.200	3.600	5.400	8640	10800	19440
ATG-0800-0800-110-C30	Damper Air Tight 254 Galv C30	800	800	110	0.640	1.280	3.840	5.760	9216	11520	20736
ATG-0800-0850-110-C30	Damper Air Tight 254 Galv C30	800	850	110	0.680	1.360	4.080	6.120	9792	12240	22032
ATG-0800-0900-110-C30	Damper Air Tight 254 Galv C30	800	900	110	0.720	1.440	4.320	6.480	10368	12960	23328
ATG-0800-0950-110-C30	Damper Air Tight 254 Galv C30	800	950	110	0.760	1.520	4.560	6.840	10944	13680	24624
ATG-0800-1000-110-C30	Damper Air Tight 254 Galv C30	800	1000	110	0.800	1.600	4.800	7.200	11520	14400	25920
ATG-0800-1050-110-C30	Damper Air Tight 254 Galv C30	800	1050	110	0.840	1.680	5.040	7.560	12096	15120	27216
ATG-0800-1100-110-C30	Damper Air Tight 254 Galv C30	800	1100	110	0.880	1.760	5.280	7.920	12672	15840	28512
ATG-0800-1150-110-C30	Damper Air Tight 254 Galv C30	800	1150	110	0.920	1.840	5.520	8.280	13248	16560	29808
ATG-0800-1200-110-C30	Damper Air Tight 254 Galv C30	800	1200	110	0.960	1.920	5.760	8.640	13824	17280	31104
ATG-0900-0200-110-C30	Damper Air Tight 254 Galv C30	900	200	110	0.180	0.360	1.080	1.620	2592	3240	5832
ATG-0900-0250-110-C30	Damper Air Tight 254 Galv C30	900	250	110	0.225	0.450	1.350	2.025	3240	4050	7290
ATG-0900-0300-110-C30	Damper Air Tight 254 Galv C30	900	300	110	0.270	0.540	1.620	2.430	3888	4860	8748
ATG-0900-0350-110-C30	Damper Air Tight 254 Galv C30	900	350	110	0.315	0.630	1.890	2.835	4536	5670	10206
ATG-0900-0400-110-C30	Damper Air Tight 254 Galv C30	900	400	110	0.360	0.720	2.160	3.240	5184	6480	11664
ATG-0900-0450-110-C30	Damper Air Tight 254 Galv C30	900	450	110	0.405	0.810	2.430	3.645	5832	7290	13122
ATG-0900-0500-110-C30	Damper Air Tight 254 Galv C30	900	500	110	0.450	0.900	2.700	4.050	6480	8100	14580
ATG-0900-0550-110-C30	Damper Air Tight 254 Galv C30	900	550	110	0.495	0.990	2.970	4.455	7128	8910	16038
ATG-0900-0600-110-C30	Damper Air Tight 254 Galv C30	900	600	110	0.540	1.080	3.240	4.860	7776	9720	17496
ATG-0900-0650-110-C30	Damper Air Tight 254 Galv C30	900	650	110	0.585	1.170	3.510	5.265	8424	10530	18954
ATG-0900-0700-110-C30	Damper Air Tight 254 Galv C30	900	700	110	0.630	1.260	3.780	5.670	9072	11340	20412
ATG-0900-0750-110-C30	Damper Air Tight 254 Galv C30	900	750	110	0.675	1.350	4.050	6.075	9720	12150	21870
ATG-0900-0800-110-C30	Damper Air Tight 254 Galv C30	900	800	110	0.720	1.440	4.320	6.480	10368	12960	23328
ATG-0900-0850-110-C30	Damper Air Tight 254 Galv C30	900	850	110	0.765	1.530	4.590	6.885	11016	13770	24786
ATG-0900-0900-110-C30	Damper Air Tight 254 Galv C30	900	900	110	0.810	1.620	4.860	7.290	11664	14580	26244
ATG-0900-0950-110-C30	Damper Air Tight 254 Galv C30	900	950	110	0.855	1.710	5.130	7.695	12312	15390	27702
ATG-0900-1000-110-C30	Damper Air Tight 254 Galv C30	900	1000	110	0.900	1.800	5.400	8.100	12960	16200	29160
ATG-0900-1050-110-C30	Damper Air Tight 254 Galv C30	900	1050	110	0.945	1.890	5.670	8.505	13608	17010	30618
ATG-0900-1100-110-C30	Damper Air Tight 254 Galv C30	900	1100	110	0.990	1.980	5.940	8.910	14256	17820	32076
ATG-0900-1150-110-C30	Damper Air Tight 254 Galv C30	900	1150	110	1.035	2.070	6.210	9.315	14904	18630	33534
ATG-0900-1200-110-C30	Damper Air Tight 254 Galv C30	900	1200	110	1.080	2.160	6.480	9.720	15552	19440	34992



ATG DIMENSIONS

L=110

F=30

Table 8

Part Number with C30mm Frame	Description	Height h	width w	depth d	Area m2	Volume at 2 m/s m3/s	Volume at 5 m/s m3/s	Volume at 9 m/s m3/s	Volume at 2 m/s m3/h	Volume at 5 m/s m3/h	Volume at 9 m/s m3/h
C30	Description	mm	mm	mm	m2	m3/s	m3/s	m3/s	m3/h	m3/h	m3/h
ATG-1000-0200-110-C30	Damper Air Tight 254 Galv C30	1000	200	110	0.200	0.400	1.200	1.800	2880	3600	6480
ATG-1000-0250-110-C30	Damper Air Tight 254 Galv C30	1000	250	110	0.250	0.500	1.500	2.250	3600	4500	8100
ATG-1000-0300-110-C30	Damper Air Tight 254 Galv C30	1000	300	110	0.300	0.600	1.800	2.700	4320	5400	9720
ATG-1000-0350-110-C30	Damper Air Tight 254 Galv C30	1000	350	110	0.350	0.700	2.100	3.150	5040	6300	11340
ATG-1000-0400-110-C30	Damper Air Tight 254 Galv C30	1000	400	110	0.400	0.800	2.400	3.600	5760	7200	12960
ATG-1000-0450-110-C30	Damper Air Tight 254 Galv C30	1000	450	110	0.450	0.900	2.700	4.050	6480	8100	14580
ATG-1000-0500-110-C30	Damper Air Tight 254 Galv C30	1000	500	110	0.500	1.000	3.000	4.500	7200	9000	16200
ATG-1000-0550-110-C30	Damper Air Tight 254 Galv C30	1000	550	110	0.550	1.100	3.300	4.950	7920	9900	17820
ATG-1000-0600-110-C30	Damper Air Tight 254 Galv C30	1000	600	110	0.600	1.200	3.600	5.400	8640	10800	19440
ATG-1000-0650-110-C30	Damper Air Tight 254 Galv C30	1000	650	110	0.650	1.300	3.900	5.850	9360	11700	21060
ATG-1000-0700-110-C30	Damper Air Tight 254 Galv C30	1000	700	110	0.700	1.400	4.200	6.300	10080	12600	22680
ATG-1000-0750-110-C30	Damper Air Tight 254 Galv C30	1000	750	110	0.750	1.500	4.500	6.750	10800	13500	24300
ATG-1000-0800-110-C30	Damper Air Tight 254 Galv C30	1000	800	110	0.800	1.600	4.800	7.200	11520	14400	25920
ATG-1000-0850-110-C30	Damper Air Tight 254 Galv C30	1000	850	110	0.850	1.700	5.100	7.650	12240	15300	27540
ATG-1000-0900-110-C30	Damper Air Tight 254 Galv C30	1000	900	110	0.900	1.800	5.400	8.100	12960	16200	29160
ATG-1000-0950-110-C30	Damper Air Tight 254 Galv C30	1000	950	110	0.950	1.900	5.700	8.550	13680	17100	30780
ATG-1000-1000-110-C30	Damper Air Tight 254 Galv C30	1000	1000	110	1.000	2.000	6.000	9.000	14400	18000	32400
ATG-1000-1050-110-C30	Damper Air Tight 254 Galv C30	1000	1050	110	1.050	2.100	6.300	9.450	15120	18900	34020
ATG-1000-1100-110-C30	Damper Air Tight 254 Galv C30	1000	1100	110	1.100	2.200	6.600	9.900	15840	19800	35640
ATG-1000-1150-110-C30	Damper Air Tight 254 Galv C30	1000	1150	110	1.150	2.300	6.900	10.350	16560	20700	37260
ATG-1000-1200-110-C30	Damper Air Tight 254 Galv C30	1000	1200	110	1.200	2.400	7.200	10.800	17280	21600	38880
ATG-1100-0200-110-C30	Damper Air Tight 254 Galv C30	1100	200	110	0.220	0.440	1.320	1.980	3168	3960	7128
ATG-1100-0250-110-C30	Damper Air Tight 254 Galv C30	1100	250	110	0.275	0.550	1.650	2.475	3960	4950	8910
ATG-1100-0300-110-C30	Damper Air Tight 254 Galv C30	1100	300	110	0.330	0.660	1.980	2.970	4752	5940	10692
ATG-1100-0350-110-C30	Damper Air Tight 254 Galv C30	1100	350	110	0.385	0.770	2.310	3.465	5544	6930	12474
ATG-1100-0400-110-C30	Damper Air Tight 254 Galv C30	1100	400	110	0.440	0.880	2.640	3.960	6336	7920	14256
ATG-1100-0450-110-C30	Damper Air Tight 254 Galv C30	1100	450	110	0.495	0.990	2.970	4.455	7128	8910	16038
ATG-1100-0500-110-C30	Damper Air Tight 254 Galv C30	1100	500	110	0.550	1.100	3.300	4.950	7920	9900	17820
ATG-1100-0550-110-C30	Damper Air Tight 254 Galv C30	1100	550	110	0.605	1.210	3.630	5.445	8712	10890	19602
ATG-1100-0600-110-C30	Damper Air Tight 254 Galv C30	1100	600	110	0.660	1.320	3.960	5.940	9504	11880	21384
ATG-1100-0650-110-C30	Damper Air Tight 254 Galv C30	1100	650	110	0.715	1.430	4.290	6.435	10296	12870	23166
ATG-1100-0700-110-C30	Damper Air Tight 254 Galv C30	1100	700	110	0.770	1.540	4.620	6.930	11088	13860	24948
ATG-1100-0750-110-C30	Damper Air Tight 254 Galv C30	1100	750	110	0.825	1.650	4.950	7.425	11880	14850	26730
ATG-1100-0800-110-C30	Damper Air Tight 254 Galv C30	1100	800	110	0.880	1.760	5.280	7.920	12672	15840	28512
ATG-1100-0850-110-C30	Damper Air Tight 254 Galv C30	1100	850	110	0.935	1.870	5.610	8.415	13464	16830	30294
ATG-1100-0900-110-C30	Damper Air Tight 254 Galv C30	1100	900	110	0.990	1.980	5.940	8.910	14256	17820	32076
ATG-1100-0950-110-C30	Damper Air Tight 254 Galv C30	1100	950	110	1.045	2.090	6.270	9.405	15048	18810	33858
ATG-1100-1000-110-C30	Damper Air Tight 254 Galv C30	1100	1000	110	1.100	2.200	6.600	9.900	15840	19800	35640
ATG-1100-1050-110-C30	Damper Air Tight 254 Galv C30	1100	1050	110	1.155	2.310	6.930	10.395	16632	20790	37422
ATG-1100-1100-110-C30	Damper Air Tight 254 Galv C30	1100	1100	110	1.210	2.420	7.260	10.890	17424	21780	39204
ATG-1100-1150-110-C30	Damper Air Tight 254 Galv C30	1100	1150	110	1.265	2.530	7.590	11.385	18216	22770	40986
ATG-1100-1200-110-C30	Damper Air Tight 254 Galv C30	1100	1200	110	1.320	2.640	7.920	11.880	19008	23760	42768
ATG-1200-0200-110-C30	Damper Air Tight 254 Galv C30	1200	200	110	0.240	0.480	1.440	2.160	3456	4320	7776
ATG-1200-0250-110-C30	Damper Air Tight 254 Galv C30	1200	250	110	0.300	0.600	1.800	2.700	4320	5400	9720
ATG-1200-0300-110-C30	Damper Air Tight 254 Galv C30	1200	300	110	0.360	0.720	2.160	3.240	5184	6480	11664
ATG-1200-0350-110-C30	Damper Air Tight 254 Galv C30	1200	350	110	0.420	0.840	2.520	3.780	6048	7560	13608
ATG-1200-0400-110-C30	Damper Air Tight 254 Galv C30	1200	400	110	0.480	0.960	2.880	4.320	6912	8640	15552
ATG-1200-0450-110-C30	Damper Air Tight 254 Galv C30	1200	450	110	0.540	1.080	3.240	4.860	7776	9720	17496
ATG-1200-0500-110-C30	Damper Air Tight 254 Galv C30	1200	500	110	0.600	1.200	3.600	5.400	8640	10800	19440
ATG-1200-0550-110-C30	Damper Air Tight 254 Galv C30	1200	550	110	0.660	1.320	3.960	5.940	9504	11880	21384
ATG-1200-0600-110-C30	Damper Air Tight 254 Galv C30	1200	600	110	0.720	1.440	4.320	6.480	10368	12960	23328
ATG-1200-0650-110-C30	Damper Air Tight 254 Galv C30	1200	650	110	0.780	1.560	4.680	7.020	11232	14040	25272
ATG-1200-0700-110-C30	Damper Air Tight 254 Galv C30	1200	700	110	0.840	1.680	5.040	7.560	12096	15120	27216
ATG-1200-0750-110-C30	Damper Air Tight 254 Galv C30	1200	750	110	0.900	1.800	5.400	8.100	12960	16200	29160
ATG-1200-0800-110-C30	Damper Air Tight 254 Galv C30	1200	800	110	0.960	1.920	5.760	8.640	13824	17280	31104
ATG-1200-0850-110-C30	Damper Air Tight 254 Galv C30	1200	850	110	1.020	2.040	6.120	9.180	14688	18360	33048
ATG-1200-0900-110-C30	Damper Air Tight 254 Galv C30	1200	900	110	1.080	2.160	6.480	9.720	15552	19440	34992
ATG-1200-0950-110-C30	Damper Air Tight 254 Galv C30	1200	950	110	1.140	2.280	6.840	10.260	16416	20520	36936
ATG-1200-1000-110-C30	Damper Air Tight 254 Galv C30	1200	1000	110	1.200	2.400	7.200	10.800	17280	21600	38880
ATG-1200-1050-110-C30	Damper Air Tight 254 Galv C30	1200	1050	110	1.260	2.520	7.560	11.340	18144	22680	40824
ATG-1200-1100-110-C30	Damper Air Tight 254 Galv C30	1200	1100	110	1.320	2.640	7.920	11.880	19008	23760	42768
ATG-1200-1150-110-C30	Damper Air Tight 254 Galv C30	1200	1150	110	1.380	2.760	8.280	12.420	19872	24840	44712
ATG-1200-1200-110-C30	Damper Air Tight 254 Galv C30	1200	1200	110	1.440	2.880	8.640	12.960	20736	25920	46656

