



CUS
Centrifugal Utility Set

To provide the most reliable and user-friendly air movement & control and air conditioning service.



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📍 Jeddah - Al-Baladiya Street - Al-Sahli Center Building I

Formula Series Principle Product

- Max volume: 40,000 M³/H, Max static pressure: 1000Pa
- "Wind-surfer" Aluminum backward inclined centrifugal wheel
- G2.5 Balancing
- Fully welded casing, suitable for contaminated air
- Compact, space-saving housing design
- Suitable for all outdoor weather conditions

G2.5



Effect of the 3rd generation Wind-Surfer^{III} wheel series

✓ Effect of the 3rd generation Wind-Surfer wheel series

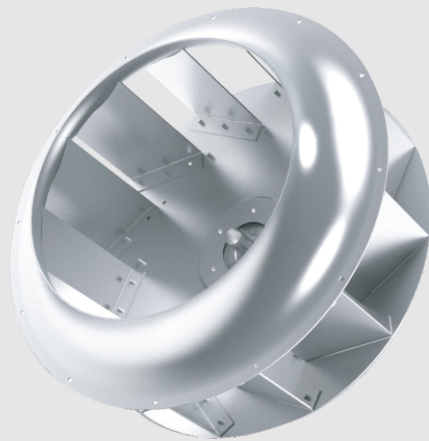
- Excellent aerodynamic characteristics and noise characteristics
- High-efficient area width without overloading
- Balance quality grade up to G2.5 (Typical products are balanced to G6.3 only)

✓ Air performance design

- Optimized design of CFD flow field simulation, repeatedly validated
- Front disc and inlet venture tube according with flow field characteristic
- Flow passage control: matched each other to restrain the air flow better
- Optimize the blade angles

✓ Structure performance design

- Stress analysis of FEA to Improve performance
- Selected the strengthen structure according to different specifications to improve reliability
- Using riveting technology to avoid stress



✓ Improved wheel

- Continues improvement: The wheel has the 3rd generation
- Compared with the 2nd generation: Performance increased by 5-10%in the same parameters
- Compared with the 2nd generation: Noise reduced 2-3 dB(A) in the same parameters

✓ Advanced process

- Inlet venture tube & Front disc: spun process to ensure streamlines aerodynamic characteristics
- Inlet venture tube: replace bell mouth to ensure smooth air flow
- Blades: once punch forming to ensure process quality
- Tooling: dedicated fixture to ensure precise install of the blades

Product Feature

✓ Wide performance range

- Wheel diameter: 300 ~ 1000mm
- Wide rotation speed range, easy to select
- Pulley can be adjusted turns or replaced, motor is replaceable: fine tone fan performance range easily

✓ Compact profile

- Belt drive:AMCA arrangement 10 (motor is under the shaft)
Direct drive:AMCA arrangement 4
- Fan size reduced, expensive mechanical room space saved
- Belt length reduced and belt life extended
- The low center height of scroll leaves more space for duct installation

✓ Housing can be rotated at jobsite

- Scroll is fixed by 8 housing bolts; housing can be rotated at jobsite within limited angle

✓ Spark B resistant construction

- Aluminum wheel & inlet
Natural explosion resistant
- AMCA standard: Spark B



✓AMCA Seal: sound and air performance certified

- The sound & air performance is AMCA Certified
- Sound & Air Performance Seal is applied to each fan

✓ Continuously Welded Housing

- Continuously welded housing : rigid structure
- Suitable for wet or contaminated air compared with mechanical "Pittsburg" lock-seam housing
- Will not leak when liquid gathered inside the scroll
- Suitable for exhaust wet or grease contaminated air

✓ Easy maintenance

- Access doors are available on both sides of motor chamber
- One screw driver finishes all electrical and mechanical inspection: easily and quickly
- Standard scroll access door available

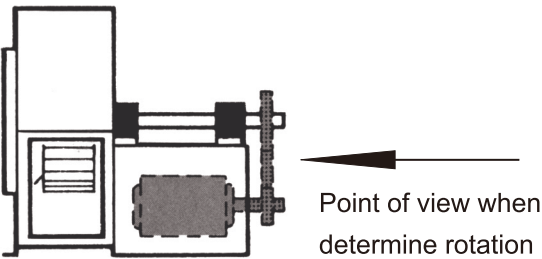
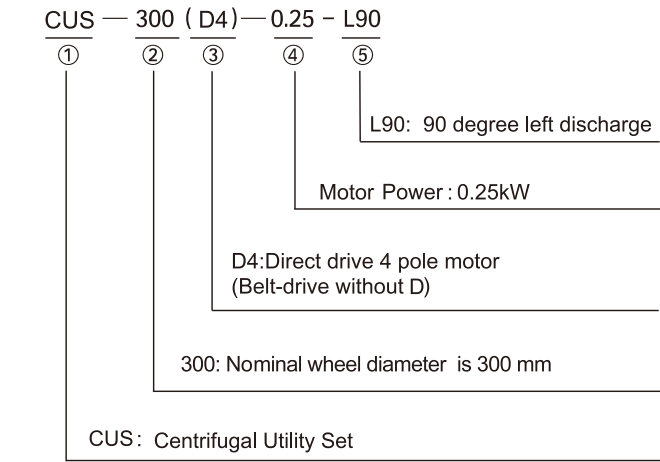
✓ Suitable for outdoor installation

- Optional weather cover: protect the whole drive
- Avoid sunshine, rain, snow directly impact on running parts
- Climate factor on durability and safety of the outdoor-installed fan is reduced

Optional Accesrorries

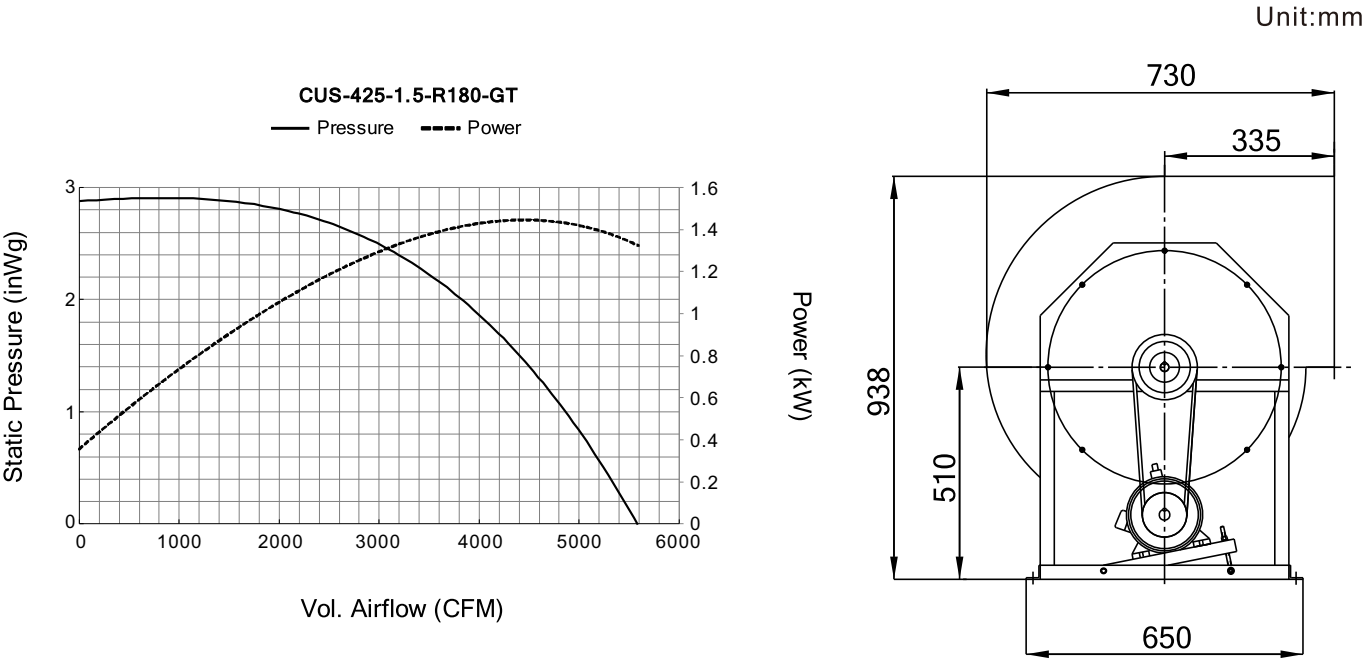
- Inlet/outlet safety screen
Metal safety screen can be installed either on inlet or outlet of the fan. The screen with rigid strength can prevent debris into the fan and duct. The density of the screen is also qualified for labor protection. Either inlet or outlet screen can be ordered separately.
- Weather hood
Standard belt drive CUS fans are equipped for indoor installation, which include a shaft/bearing cover as well as belt cover. When the fan is outdoor installed, weatherhood shall be selected to prevent motor, pulley & bearing from sunshine, rain and snow. Direct drive CUS shall be matched with motor weatherhood when the fan is outdoor installed.
- Drain
Located on the bottom of scroll to discharge contaminated substance such as condensed water, grease etc.
- Vibration isolators
Our Isolators are tested and inspected strictly , the performance is guaranteed.
- Inlet/Outlet Companion Flange
The companion flanges are attached to the ductwork to provide an exact mate to the flanged connection on the fan.
- Inlet/Outlet Flexible Duct Connector
Flexible Duct Connectors provide a flexible connection between the fan and the attached ductwork. This reduces the transmission of noise and vibration to the ductwork as well as allowing for slight misalignment.
- Extended lube lines (Apply to belt drive only)
Use extended lube lines for easy maintenance, avoiding removing bearing cover while oiling .

Naming convention



		L0°	L45°	L90°	L135°	L180°
		R0°	R45°	R90°	R135°	R180°
Dwg. No.		L0	L45	L90	L135	L180
GB	L	L 0°	L 45°	L 90°	L135°	L180°
EUROPE	LG	270	315	0	45	90
AMCA Standard	CCW	BH	BAU	UB	TAU	TH
Dwg.No.		R0	R45	R90	R135	R180
GB	(R)	R 0°	R 45°	R90°	R135°	R180°
EUROPE	RD	270	315	0	45	90
AMCA Standard	CW	BH	BAU	UB	TAU	TH

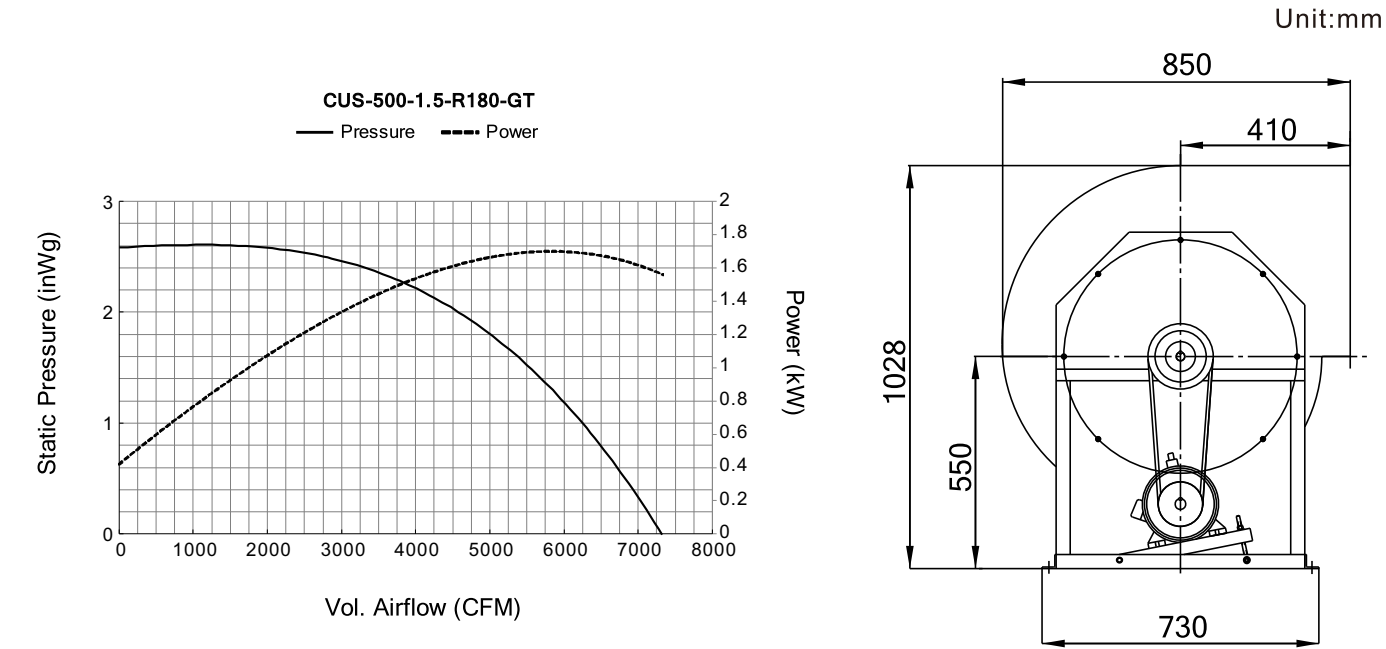
Centrifugal Utility Set
425-1.5-R180-GT



Centrifugal Utility Set 425-1.5-R180-GT		Static Pressure in Inches wg										RPM 1637
		0	0. 25	0. 5	0. 75	1	1.25	1. 5	1. 75	2	2.5	
		CFM	5592	5413	5234	5052	4863	4626	4362	4088	3812	
		dB(A)	66	66	70	71	72	72	73	73	73	
		BKW	0.929	0.928	1.045	1.067	1.078	1.083	1.064	1.032	0.975	

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

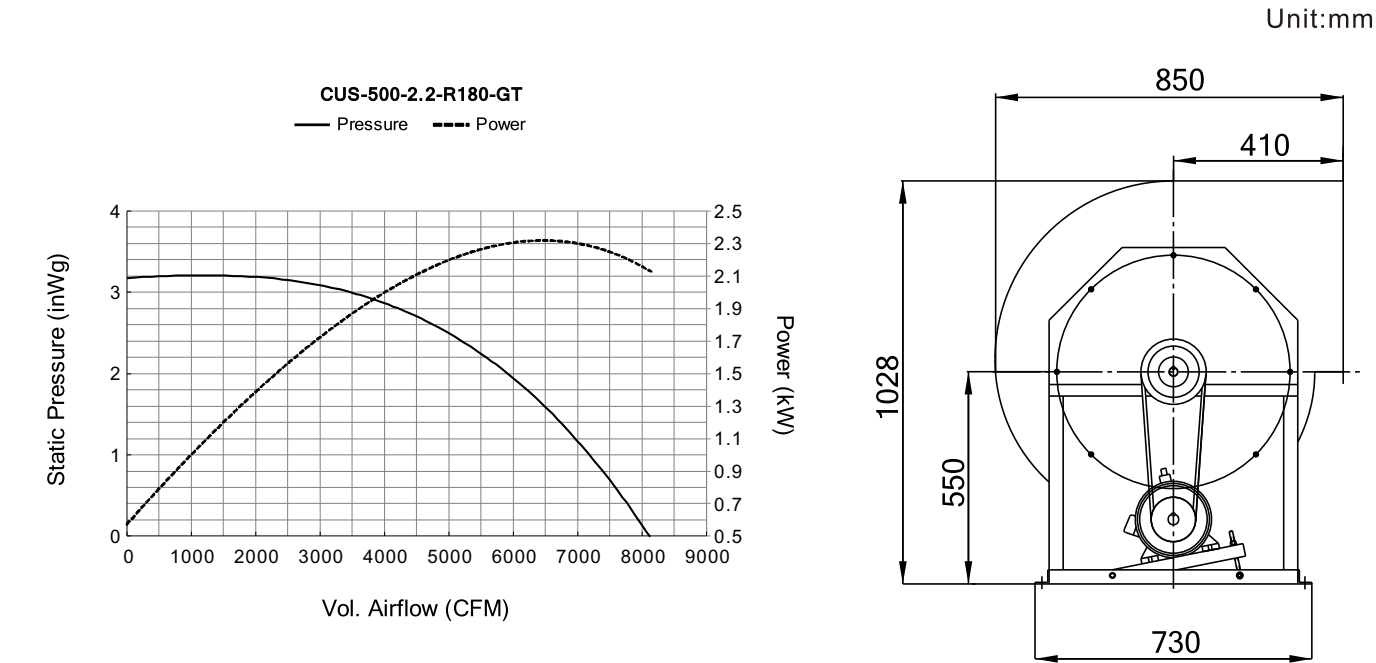
Centrifugal Utility Set
500-1.5-R180-GT



Centrifugal Utility Set 500-1.5-R180-GT		Static Pressure in Inches wg										RPM 1318
		0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.5	
		CFM	7334	7071	6809	6538	6249	5868	5477	5067	4563	
		dB(A)	68	70	71	72	72	73	73	73	72	
		BKW	1.024	1.211	1.247	1.273	1.285	1.283	1.241	1.177	1.062	

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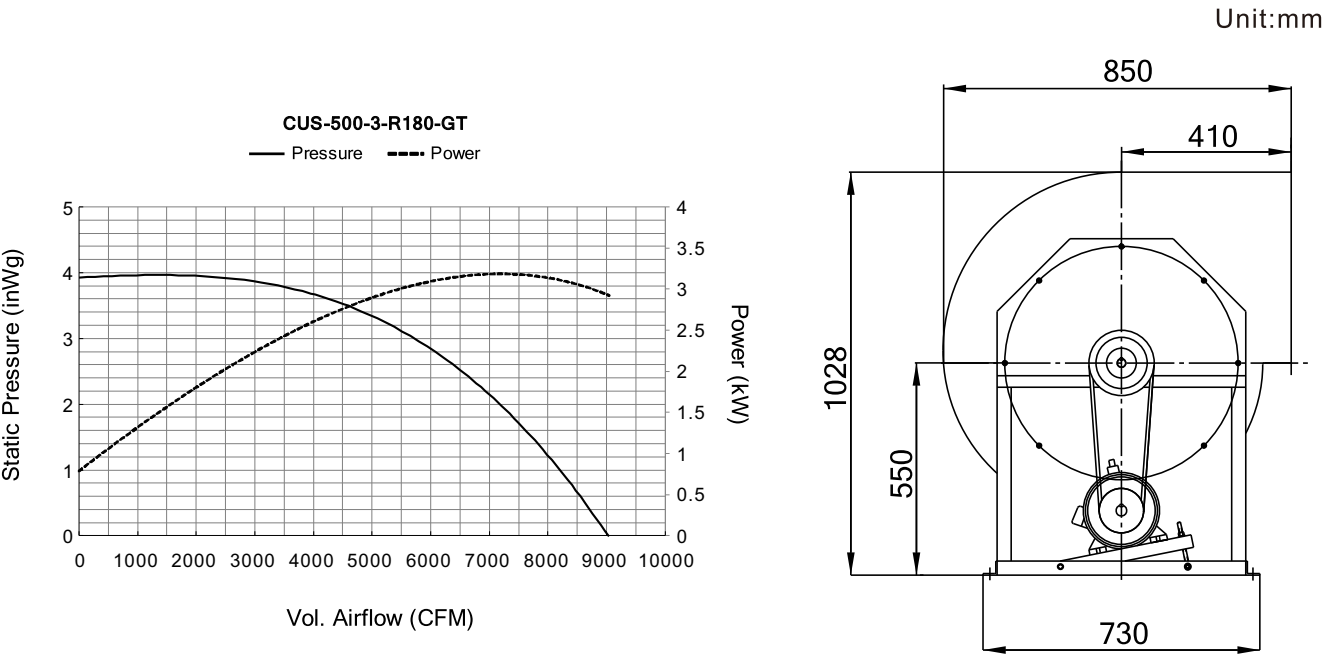
Centrifugal Utility Set
500-2.2-R180-GT



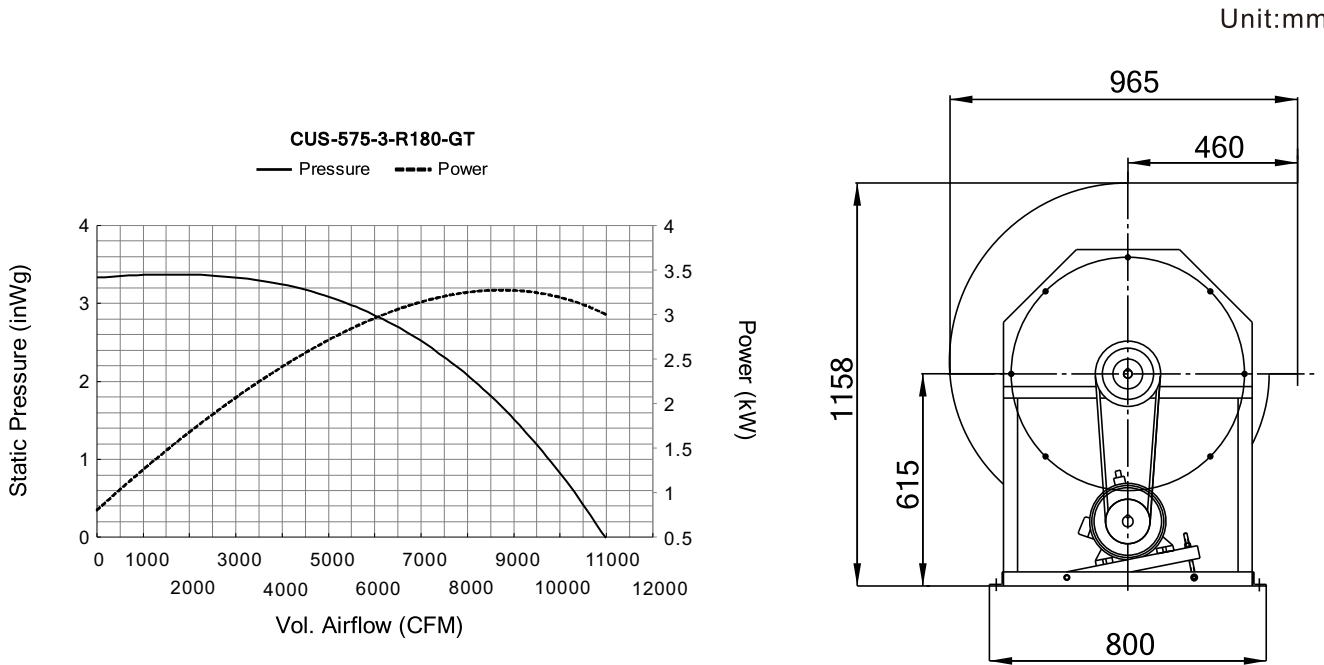
Centrifugal Utility Set 500-2.2-R180-GT		Static Pressure in Inches wg										RPM 1462
		0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.5	
		CFM	8135	7898	7662	7424	7177	6907	6559	6213	5849	4966
		dB(A)	64	73	74	75	76	76	76	77	77	77
		BKW	1.796	1.843	1.884	1.923	1.952	1.966	1.974	1.949	1.9	1.741

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Centrifugal Utility Set
500-3-R180-GT



Centrifugal Utility Set
575-3-R180-GT



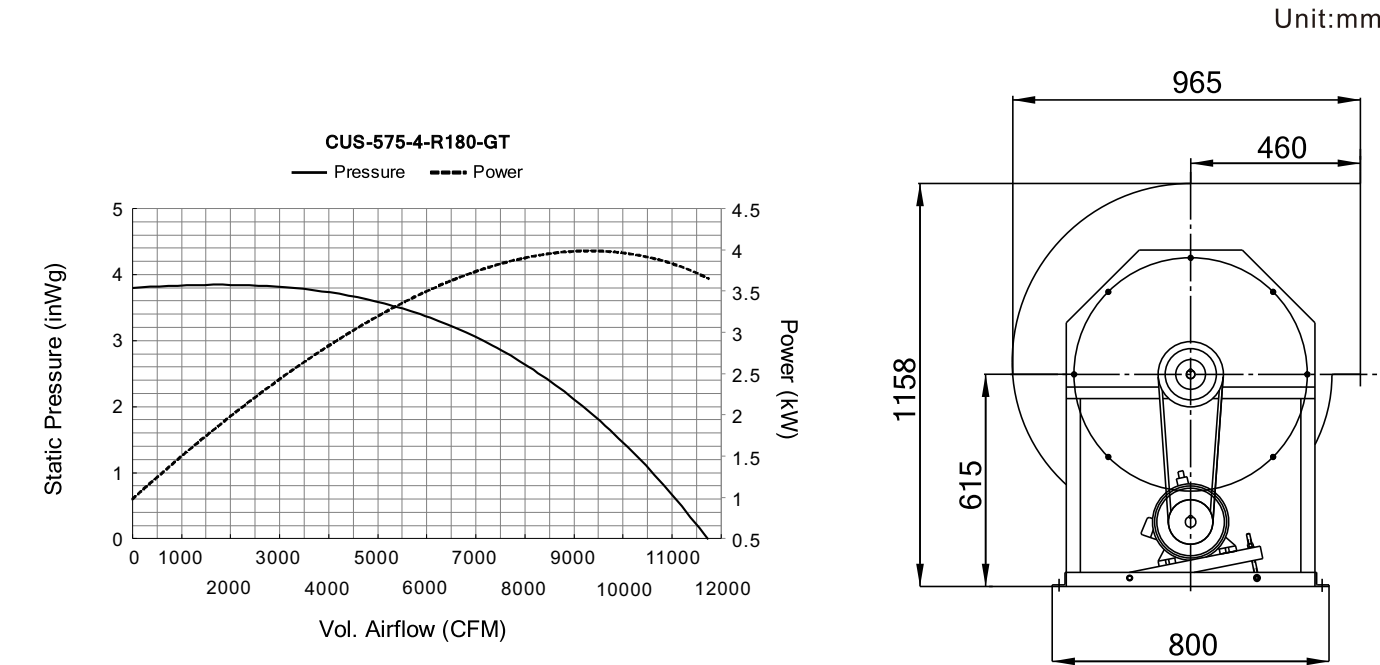
Centrifugal Utility Set 500-3-R180-GT		Static Pressure in Inches wg										RPM 1625
		0	0. 25	0. 5	0. 75	1	1.25	1. 5	1. 75	2	2.5	
		CFM	9042	8829	8616	8402	8189	7964	7730	7418	7107	6463
		dB(A)	75	76	76	77	78	78	78	78	79	79
		BKW	2.384	2.43	2.475	2.521	2.558	2.59	2.603	2.611	2.604	2.497

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Centrifugal Utility Set 575-3-R180-GT		Static Pressure in Inches wg										RPM 1299
		0	0. 25	0. 5	0. 75	1	1.25	1. 5	1. 75	2	2.5	
		CFM	10993	10687	10381	10075	9756	9429	9425	8534	8071	7058
		dB(A)	73	74	74	75	76	76	77	77	77	77
		BKW	2.384	2.43	2.475	2.521	2.558	2.59	2.603	2.611	2.604	2.497

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

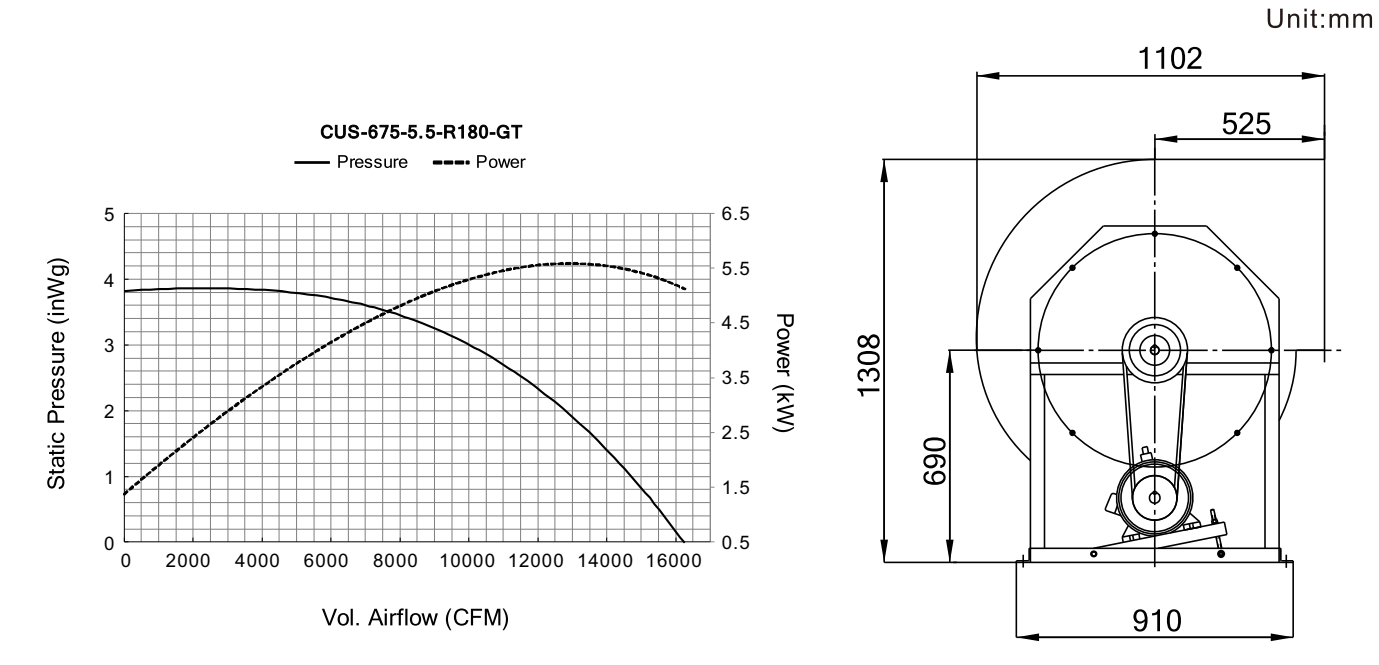
Centrifugal Utility Set
575-4-R180-GT



Centrifugal Utility Set 575-4-R180-GT		Static Pressure in Inches wg										RPM 1387
		0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.5	
		CFM	11737	11451	11164	10877	10586	10283	9942	9523	9103	8265
		dB(A)	76	76	77	78	78	79	79	79	80	80
		BKW	3.148	3.212	3.275	3.335	3.385	3.423	3.441	3.453	3.443	3.301

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

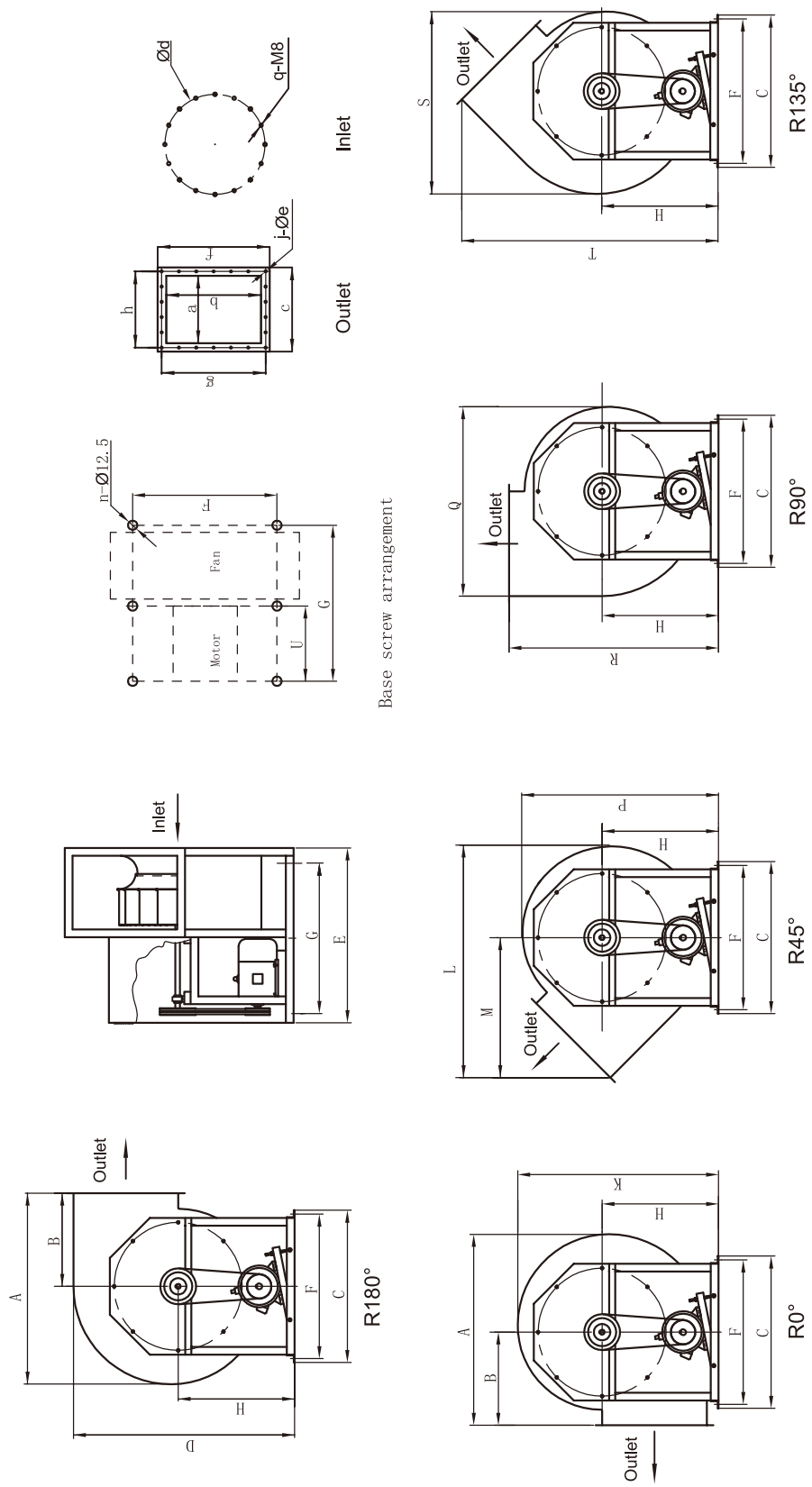
Centrifugal Utility Set
675-5.5-R180-GT



Centrifugal Utility Set 675-5.5-R180-GT		Static Pressure in Inches wg										RPM 1188
		0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.5	
		CFM	16264	15871	15478	15082	14687	14272	13814	13239	12665	11467
		dB(A)	77	78	78	78	80	80	80	80	80	80
		BKW	4.025	4.111	4.195	4.28	4.339	4.388	4.404	4.421	4.365	4.149

Performance certified is for installation type B - free inlet, duct outlet. Power rating (kW) includes transmission losses. Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Belt drive



MODEL	A	B	C	D	E	F	G	H	K	L	M	P	Q	R	S	T	U	a	b	c	d	e	f	g	h	j	n	q	Kg
CUS-300	528	250	490	688	625	440	500	380	608	650	398	587	536	630	507	778	0	215	305	295	350	9	385	3x115	3x85	12	4	8	49
CUS-425	730	335	650	938	740	600	575	510	830	900	540	812	748	845	718	1050	0	300	428	380	495	9	505	4x117.5	3x115	14	4	8	76
CUS-500	850	410	730	1028	845	690	710	550	920	1035	628	898	848	960	815	1178	355	335	475	425	570	11	565	5x105	3x128.5	16	6	8	98
CUS-575	965	460	800	1158	900	750	725	615	1040	1168	708	1015	968	1075	930	1323	363	380	540	480	645	11	640	5x119	3x145	16	6	8	150
CUS-675	1102	525	910	1308	1010	860	825	690	1185	1344	808	1155	1113	1215	1070	1498	413	430	615	530	750	11	715	5x134	4x121.5	18	6	16	215
CUS750	1235	600	980	1430	1135	930	950	750	1296	1490	905	1266	1225	1350	1182	1655	475	475	675	575	825	11	775	5x145	5x105	20	6	16	315
CUS-900	1435	700	1130	1628	1208	1080	1000	850	1498	1737	1046	1468	1426	1550	1384	1896	500	545	775	645	975	11	875	6x137.5	5x119	22	6	16	440
CUS1000	1573	765	1230	1780	1368	1180	1125	925	1640	1905	1145	1608	1570	1690	1525	2070	563	595	850	695	1075	11	950	6x150	5x129	22	6	16	550

Note: The motor weight is not included in the above table.
Fan right rotation sizes are the same as left rotation sizes.

Optional discharge

L	0	45	90	135	180
R	0	45	90	135	180

The rotation is identified from the view of motor side. The fan rotation must be specified before ordering; otherwise the fan is difficult to be installed if the discharge direction is inconsistent with the design.

SIEMENS Motor Weight&Temperature Table

Power(kW)	Motor Weight (kg)	Allowed airtemperature (IEC 60034-1)
1.5	27	-20°C-40°C
2.2	40	-20°C-40°C
3	46	-20°C-40°C
4	52	-20°C-40°C
5.5	71	-20°C-40°C

CUS-425

RPM	VOLUME	Ps	SOUND POWER OCTAVE BANDS								Lw(A)	dB (A)
			1	2	3	4	5	6	7	8		
			1	2	3	4	5	6	7	8		
680	3950	0	71	70	65	63	57	53	46	39	64	52
	2994	70	67	67	65	62	56	51	44	37	63	51
	1397	123	66	65	62	59	55	51	44	37	61	49
	0	125	66	65	62	59	55	51	44	37	61	49
	4183	0	73	71	67	64	58	55	48	41	66	54
720	3170	78	69	68	66	64	58	53	46	39	65	53
	1479	138	68	66	64	61	56	53	46	39	63	51
	0	141	68	66	63	61	56	53	46	39	63	51
784	4554	0	75	72	69	67	61	58	51	44	68	56
	3451	93	72	70	69	67	60	56	49	42	67	55
	1611	164	71	67	66	64	58	56	49	42	65	53
	0	167	71	67	66	64	58	56	49	42	65	53
836	4856	0	76	76	72	68	63	59	53	46	70	58
	3680	105	74	71	70	69	62	58	51	44	69	57
	1717	186	74	68	67	66	60	58	51	44	67	55
	0	189	74	68	67	66	60	58	51	44	67	55
888	5158	0	76	80	75	69	66	60	55	48	72	60
	3909	119	76	72	72	71	64	60	53	46	71	59
	1824	210	76	70	69	68	61	60	53	46	69	57
	0	214	76	69	69	68	61	60	53	46	69	57
960	5577	0	79	82	78	71	68	62	57	50	75	63
	4226	139	78	75	75	73	66	62	55	48	73	61
	1972	246	78	73	72	70	64	62	55	48	71	59
	0	250	78	72	72	70	64	62	55	48	71	59
992	5763	0	79	83	79	72	69	63	58	51	76	64
	4367	148	79	76	76	74	67	63	56	49	74	62
	2038	262	78	74	73	71	65	62	56	49	72	60
	0	267	78	74	73	71	65	62	56	49	72	60
1044	6065	0	81	84	81	74	70	65	60	53	77	65
	4596	164	80	78	78	75	69	64	58	51	76	64
	2145	291	79	76	75	72	66	64	58	51	74	62
	0	295	79	76	75	72	66	64	58	51	73	61
1096	6367	0	82	85	83	75	72	66	61	54	79	67
	4825	181	81	79	80	76	71	66	60	53	77	65
	2252	320	80	78	77	74	68	65	60	53	75	63
	0	326	80	78	77	73	68	65	60	53	75	63
1148	6669	0	84	87	84	77	73	67	63	56	80	68
	5054	199	82	81	81	78	72	67	61	54	79	67
	2358	351	81	79	79	75	70	66	61	54	76	64
	0	357	81	79	79	75	69	66	61	54	76	64
1200	6971	0	85	88	86	78	75	69	64	57	82	70
	5283	217	83	83	83	79	74	68	62	55	80	68
	2465	384	82	81	80	76	71	67	62	55	78	66
	0	390	82	81	80	76	71	67	62	55	78	66
1252	7273	0	86	89	87	79	76	70	66	59	83	71
	5512	236	84	84	84	80	75	69	64	57	81	69
	2572	418	83	83	82	77	72	68	64	57	79	67
	0	425	83	83	82	77	72	68	64	57	79	67
1304	7575	0	88	90	88	81	77	71	67	60	84	72
	5741	256	85	85	85	81	76	70	65	58	83	71
	2679	453	84	84	83	78	74	69	65	58	80	68
	0	461	84	84	82	78	74	69	65	58	80	68
1356	7877	0	89	91	89	82	78	72	68	61	85	73
	5970	277	86	87	86	82	78	71	66	59	84	72
	2786	490	85	86	83	79	75	70	66	59	81	69
	0	498	85	86	83	79	75	70	66	59	81	69
1408	8179	0	90	92	89	83	79	73	69	62	86	74
	6198	299	87	88	86	83	79	73	68	60	85	73
	2893	528	85	87	84	80	76	71	68	61	82	70
	0	537	85	87	84	80	76	71	68	61	82	70
1450	8423	0	91	93	90	84	80	74	70	63	87	75
	6383	317	88	89	87	84	80	73	68	61	85	73
	2979	560	86	89	84	81	77	72	68	61	83	71
	0	570	86	88	84	81	77	71	68	61	83	71
1512	8783	0	92	94	91	85	81	75	72	65	88	76
	6656	345	89	91	88	85	81	74	70	63	87	75
	3106	609	87	90	85	82	78	73	70	63	84	72
	0	620	87	90	85	82	78	72	70	63	84	72
1564	9085	0	93	95	91	86	82	76	73	66	89	77
	6885	369	90	92	88	86	82	75	71	64	87	75
	3213	652	87	91	86	83	80	73	71	64	85	73
	0	663	87	91	86	83	79	73	71	64	85	73
1616	9388	0	93	95	93	88	83	77	73	67	90	78
	7114	394	91	93	89	87	83	76	72	65	88	76
	3320	696	88	93	86	84	81	74	72	65	86	74
	0	708	88	93	86	84	81	74	72	65	86	74
1663	9661	0	93	95	95	89	83	78	74	68	91	79
	7321	417	91	94	89	87	84	77	73	66	89	77
	3417	737	89	94	87	84	82	75	73	66	87	75
	0	750	89	94	87	84	81	75	73	66	87	75

Values shown are for inlet Lw(A) sound power levels for Installation Type B: Free inlet, duct outlet. The sound power level ratings shown are in decibels, referred to as 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Ratings do not include the effects of duct end correction. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5m. Note that dB(A) levels are not licensed by AMCA International.

CUS-500

RPM	VOLUME	Ps	SOUND POWER								Lw(A)	dB(A)
			OCTAVE BANDS									
			1	2	3	4	5	6	7	8		
507	4796	0	69	67	61	59	54	49	42	35	60	48
	3634	54	63	64	63	58	53	47	40	33	60	48
	1696	95	61	61	60	55	53	47	40	33	58	46
	0	96	61	61	60	55	53	47	40	33	58	46
565	5344	0	72	71	65	62	57	52	45	38	64	52
	4050	67	66	68	66	61	56	50	43	36	63	51
	1890	118	65	65	63	59	55	50	43	36	61	49
	0	120	65	65	63	58	55	50	43	36	61	49
623	5893	0	75	74	68	65	59	55	48	41	67	55
	4466	81	70	71	68	64	59	53	46	39	66	54
	2084	143	69	69	65	62	58	53	47	39	64	52
	0	146	69	69	65	62	58	54	47	39	64	52
681	6442	0	77	76	70	68	62	58	51	44	69	57
	4882	97	73	73	71	67	61	56	49	42	68	56
	2278	171	72	71	68	65	60	56	49	42	66	54
	0	174	72	71	68	64	60	56	49	42	66	54
720	6811	0	79	77	72	70	63	60	53	46	71	59
	5161	108	75	74	72	69	63	58	51	44	70	58
	2409	191	74	72	69	66	61	58	51	44	68	56
	0	194	74	71	69	66	61	58	51	44	68	56
797	7539	0	81	79	76	72	66	63	56	49	74	62
	5713	133	79	76	75	73	66	61	54	47	73	61
	2666	234	78	73	72	70	64	61	54	47	71	59
	0	238	78	73	72	70	63	61	54	47	71	59
855	8088	0	82	84	79	73	69	64	58	51	76	64
	6129	153	81	77	77	75	68	64	57	50	75	63
	2860	270	81	75	74	72	65	64	57	50	73	61
	0	274	81	74	74	72	65	64	57	50	73	61
913	8636	0	83	86	82	75	72	66	61	53	79	67
	6545	174	83	79	79	77	70	65	59	52	77	65
	3054	308	83	77	76	74	67	65	59	52	75	63
	0	313	83	76	76	74	67	65	59	52	75	63
960	9081	0	85	88	84	77	73	67	62	55	80	68
	6882	192	84	81	80	78	71	67	60	53	79	67
	3211	340	84	78	78	75	69	67	60	53	76	64
	0	346	84	78	78	75	69	67	60	53	76	64
1029	9733	0	87	90	86	79	75	69	64	57	82	70
	7376	221	86	83	83	80	74	69	62	55	81	69
	3442	391	85	81	80	77	71	68	63	55	78	66
	0	397	85	81	80	77	71	68	63	55	78	66
1087	10282	0	88	91	88	80	77	71	66	59	84	72
	7792	247	87	85	85	81	75	70	64	57	82	70
	3636	436	86	83	82	78	73	70	64	57	80	68
	0	443	86	83	82	78	73	70	64	57	80	68
1145	10831	0	90	93	90	82	78	72	68	61	86	74
	8208	274	89	87	87	83	77	72	66	59	84	72
	3830	484	87	85	84	80	74	71	66	59	82	70
	0	492	87	85	84	80	74	71	66	59	82	70
1203	11379	0	91	94	91	83	80	74	69	62	87	75
	8624	302	90	89	89	84	79	73	67	60	86	74
	4024	534	88	87	86	81	76	72	67	60	83	71
	0	543	88	87	86	81	76	72	67	60	83	71
1261	11928	0	93	95	93	85	81	75	71	64	89	77
	9039	332	91	90	90	85	80	74	69	62	87	75
	4218	587	89	89	88	82	78	73	69	62	85	73
	0	596	89	89	87	82	77	73	69	62	84	72
1319	12477	0	94	96	94	86	82	76	72	65	90	78
	9455	363	92	92	91	86	82	76	70	63	88	76
	4412	642	90	91	88	84	79	74	70	63	86	74
	0	653	90	91	88	83	79	74	70	63	86	74
1377	13025	0	95	97	94	88	84	77	74	67	91	79
	9871	396	93	93	92	88	83	77	72	65	89	77
	4606	699	91	92	89	85	80	75	72	65	87	75
	0	711	91	92	89	85	80	75	72	65	87	75
1450	13716	0	97	99	95	89	85	79	75	68	92	80
	10394	439	94	95	92	89	85	78	73	66	91	79
	4851	776	92	94	90	86	82	77	73	66	88	76
	0	789	92	94	90	86	82	76	73	66	88	76
1493	14123	0	98	100	96	90	86	80	76	69	93	81
	10703	465	95	96	93	90	86	79	74	67	91	79
	4995	822	93	96	91	87	83	77	74	67	89	77
	0	836	93	96	90	87	83	77	74	67	89	77
1551	14671	0	99	101	97	91	87	81	77	70	94	82
	1118	502	96	98	94	91	87	80	76	69	93	81
	5189	887	93	97	91	88	84	78	76	69	90	78
	0	902	93	97	91	88	84	78	76	69	90	78
1600	15135	0	99	101	98	93	88	82	78	71	95	83
	11470	534	97	99	94	92	88	81	77	70	93	81
	5352	944	94	98	92	89	85	79	77	70	91	79
	0	960	94	98	92	89	85	79	77	70	91	79