

Features: All-in-one, plug and play. Can be mounted in any direction. For cooling and heating. Temperature controllers can be integrated with larger coolers. Reliable and virtually maintenance-free.

Air-Air systems (AA)

Air-Air coolers are used to cool (or heat) objects in containers. Heat is absorbed and dissipated by heat exchangers equipped with fans. Simply cut a hole, plug in the assembly and connect it to a power source. Our Air-Air coolers are designed for dependable, compact performance.

Tunnel Series

Two of our smallest coolers, AA-026 and AA-033, are based on a patented 'tunnel' concept, ideal for applications where the air-flow has to travel in a tunnel direction. Other models are available on request.

These products are typically used to cool analytical instruments,

small electronics enclosures and mini-refrigerators.

PowerCool Series

Available in 12 standard versions divided into 8 sizes, our PowerCool range delivers performance from 20 W to 193 W. All models are optimized for a variety of voltages, ΔT and efficiency. Moisture protected versions are optional (see Fans, page 17).

We also provide a selection of temperature controllers. For more information, see pages 14-15.

Typical applications include cooling electronics cabinets, analytical instruments, commercial refrigeration and food transportation boxes.

Product specifications

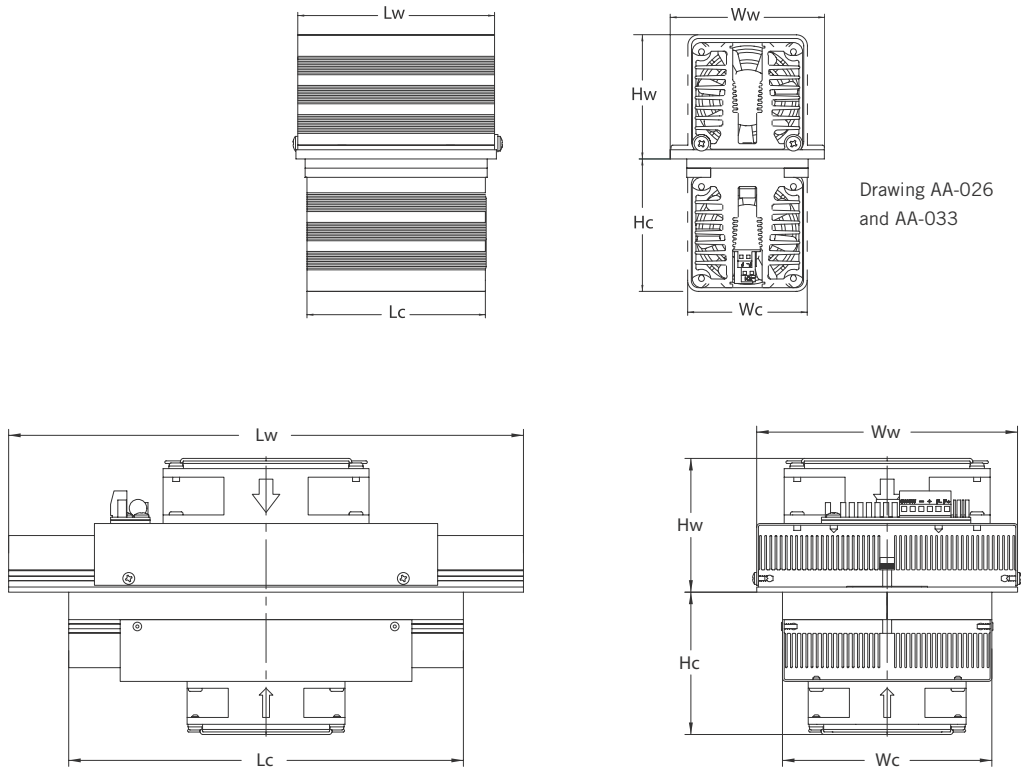
Part # -V*-	Cooling Power P _c max (W)	P _c Curve type	Current (A)	Power input (W)	Ambient max (°C)	Weight (kg)	Dimensions (mm)					
							Lw	Lc	Ww	Wc	Hw	Hc
AA-019-12-22	20	B	2.3	28	52	0.3	80	60	60	40	63	38
AA-024-12-22	25	A	2.4	29	51	0.6	100	80	80	60	63	55
AA-026-12-22	25	D	3.7	44	39	1.0	107	97	84	65	72	67
AA-033-12-22	32	A	3.7	44	48	1.4	180	97	84	65	71	67
AA-034-12-22	33	A	3.5	42	49	0.9	120	100	100	80	64	57
AA-040-12-22	41	C	6.3	76	48	1.8	160	120	122	102	71	76
AA-040-24-22	39	C	2.6	62	52	1.8	160	120	122	102	71	76
AAC050-24-22	49	E	4.7	113	47	2.7	230	180	122	102	71	80
AA-060-12-22	58	B	6.2	74	51	2.5	230	180	122	102	71	81
AA-060-24-22	58	B	3.1	74	51	2.5	230	180	122	102	71	81
AA-070-24-22	71	A	3.8	91	48	2.5	230	180	122	102	71	81
AA-100-24-22	102	C	5.6	134	49	4.0	300	230	152	122	78	83
AA-150-24-22	143	A	7.9	190	48	4.1	300	250	180	152	84	83
AA-200-24-22	193	C	11.3	271	46	7.0	400	350	180	152	89	89

*= Nominal Voltage (V DC)

Specifications apply to ambient temperature 32°C and nominal Voltage.

Tolerances $\pm 10\%$

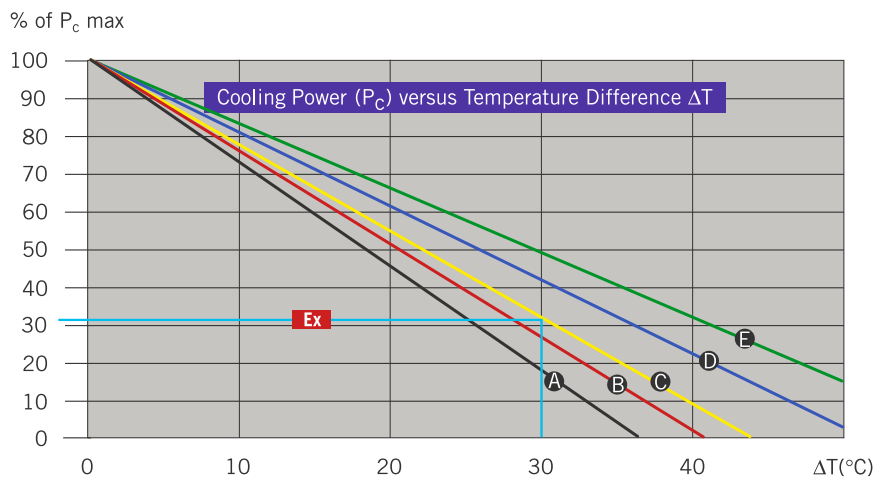
AA-drawings

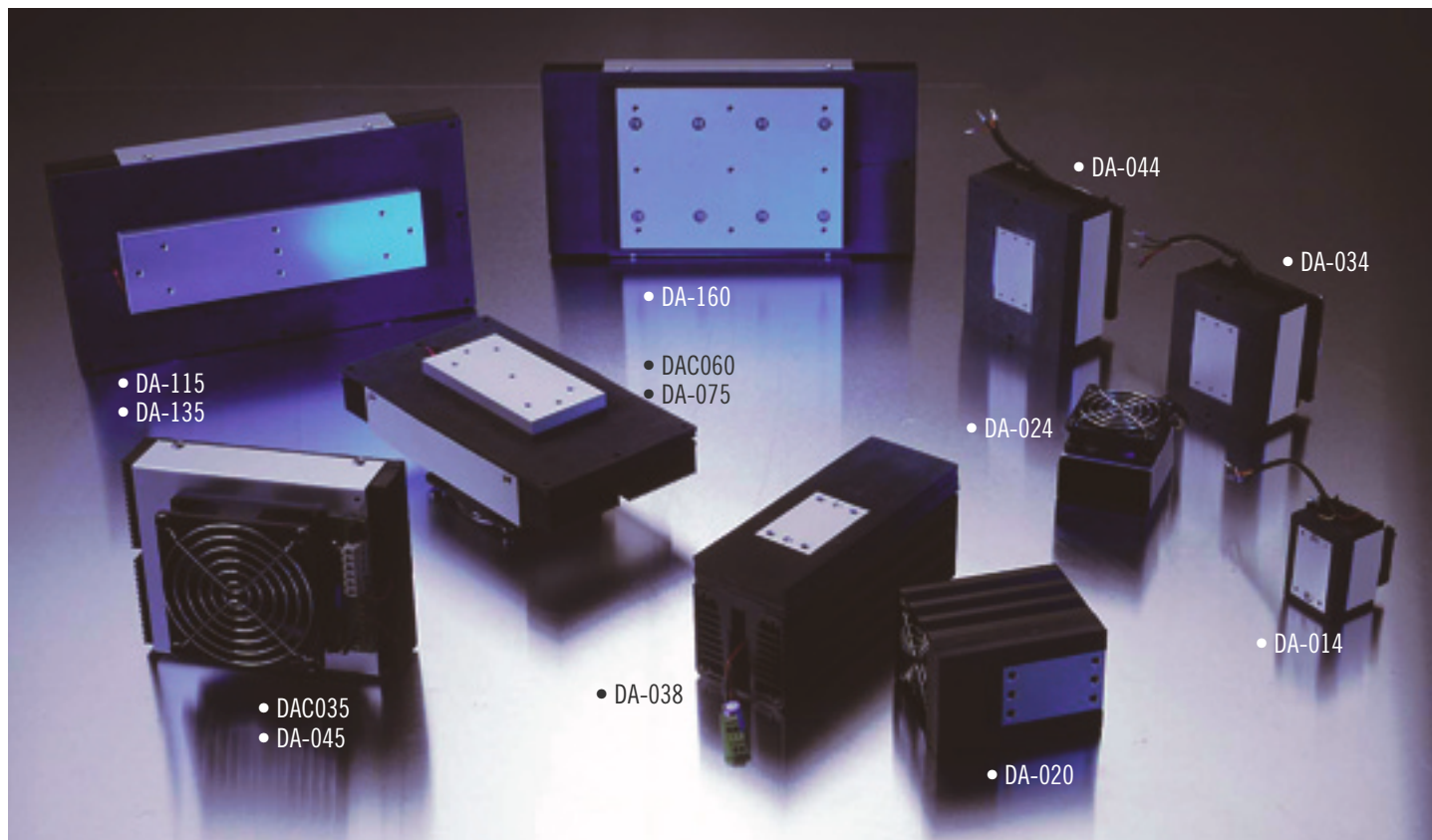


Drawing AA-026 and AA-033

For detailed drawings, please visit our website

Ex = Example: At ambient 32°C and cooled space temperature 2°C ($\Delta T = 30^\circ\text{C}$) the AA-100-24-22 (curve C) cools by 32% of its maximum effect, which gives $P_c = 102 \times 0.32 = 32.6 \text{ W } (\pm 10\%)$





Features: Compact design allows for integration with existing equipment. Versatility, cools enclosures, liquid or objects directly. Easy interfacing to cooled object, all you need are screws and a flat surface. Temperature controllers can be integrated with larger coolers. High reliability, minimum maintenance

Direct-Air systems (DA)

Direct-Air assemblies are used in three key applications, including cooling/heating: 1.) Objects directly on the cold plate, or objects on an additional cold plate of your own design. 2.) Enclosures by attaching a thermal conductive container to the cold plate. 3.) Liquids by attaching a thermal conductive tank or liquid heat sink to the cold plate.

The heat is absorbed by the cold plate, pumped through the TE modules and then dissipated to the air by an air heat sink. Our Direct-Air coolers deliver compact and reliable cooling.

Tunnel Series

Two of our smallest coolers, DA-020 and DA-038, are based

on a patented ‘tunnel’ concept, suitable for applications where the airflow has to travel in a tunnel direction. Other models are available on request. These products are typically used to cool analytical instruments, lasers, small electronics enclosures and mini-refrigerators.

PowerCool Series

Available in 13 standard versions divided into 8 sizes, our PowerCool range delivers cooling power from 12 W to 160 W. All models are optimized for a variety of voltages, ΔT and efficiency. Typical applications include cooling electronics, analytical instruments, lasers and commercial refrigeration.

Product specifications

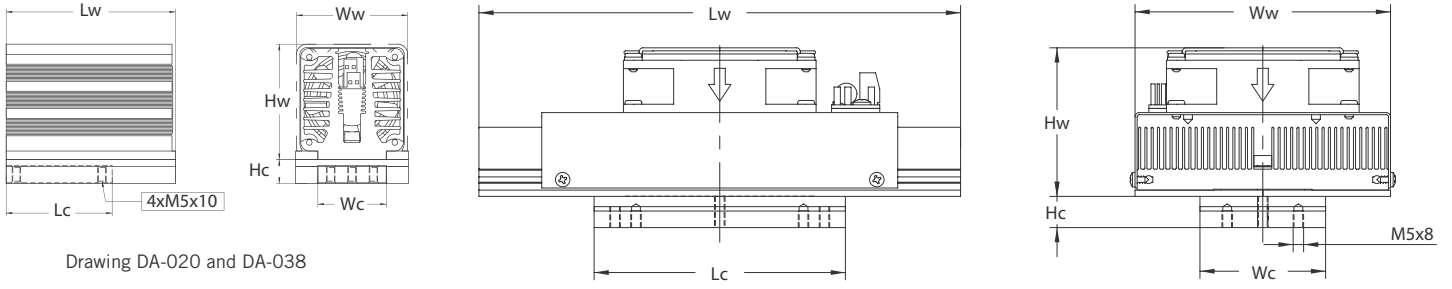
Part # _V*_	Cooling Power P _C max (W)	P _C Curve type	Current (A)	Power input (W)	Ambient max (°C)	Weight (kg)	Dimensions (mm)					
							Lw	Lc	Ww	Wc	Hw	Hc
DA-014-12-02	12	D	1.8	22	44	0.2	60	50	40	30	42	11
DA-020-12-02	19	C	2.7	32	44	0.6	97	62	65	40	68	14
DA-024-12-02	24	C	2.4	29	48	0.3	80	60	60	40	56	13
DA-034-12-02	34	B	2.6	31	46	0.5	100	60	80	40	58	14
DAC035-12-02	31	E	4.8	58	54	1.2	160	60	122	60	71	20
DA-038-12-02	38	A	3.6	43	43	1.2	180	62	65	40	67	14
DA-044-12-02	42	B	3.8	46	46	0.6	120	60	100	40	59	13
DA-045-12-02	48	D	6.1	73	46	1.2	160	60	122	60	71	15
DA-045-24-02	45	D	2.5	60	50	1.2	160	60	122	60	71	15
DAC060-24-02	58	E	4.6	110	48	1.8	230	120	122	60	71	20
DA-075-12-02	71	C	7.2	86	49	1.7	230	120	122	60	71	15
DA-075-24-02	71	C	3.7	89	49	1.7	230	120	122	60	71	15
DA-115-24-02	113	C	5.8	139	47	2.9	300	220	152	60	78	16
DA-135-24-02	135	A	6.9	166	42	2.9	300	220	152	60	78	16
DA-160-24-02	160	B	7.4	178	46	3.5	300	180	152	130	84	16

*= Nominal Voltage (V DC)

Specifications apply to ambient temperature 32°C and nominal Voltage.

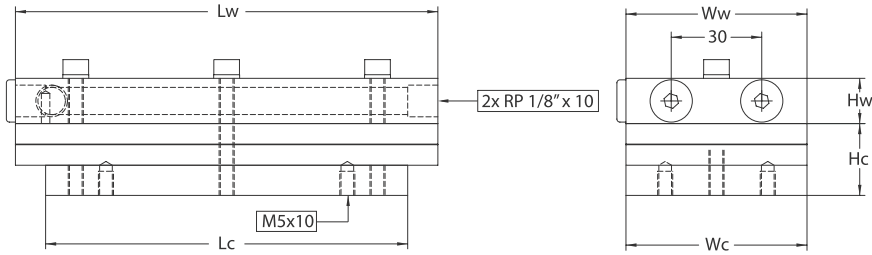
Tolerances $\pm 10\%$

DA-drawing



Drawing DA-020 and DA-038

DL-drawing



For detailed drawings, please visit our website

Ex =Example: At ambient 32°C and cooled space temperature 2°C ($\Delta T = 30^\circ\text{C}$) the DA-075-24-02 (curve C) cools by 32% of its maximum effect, which gives $P_C = 71 \times 0.32 = 22.7 (\pm 10\%)$

