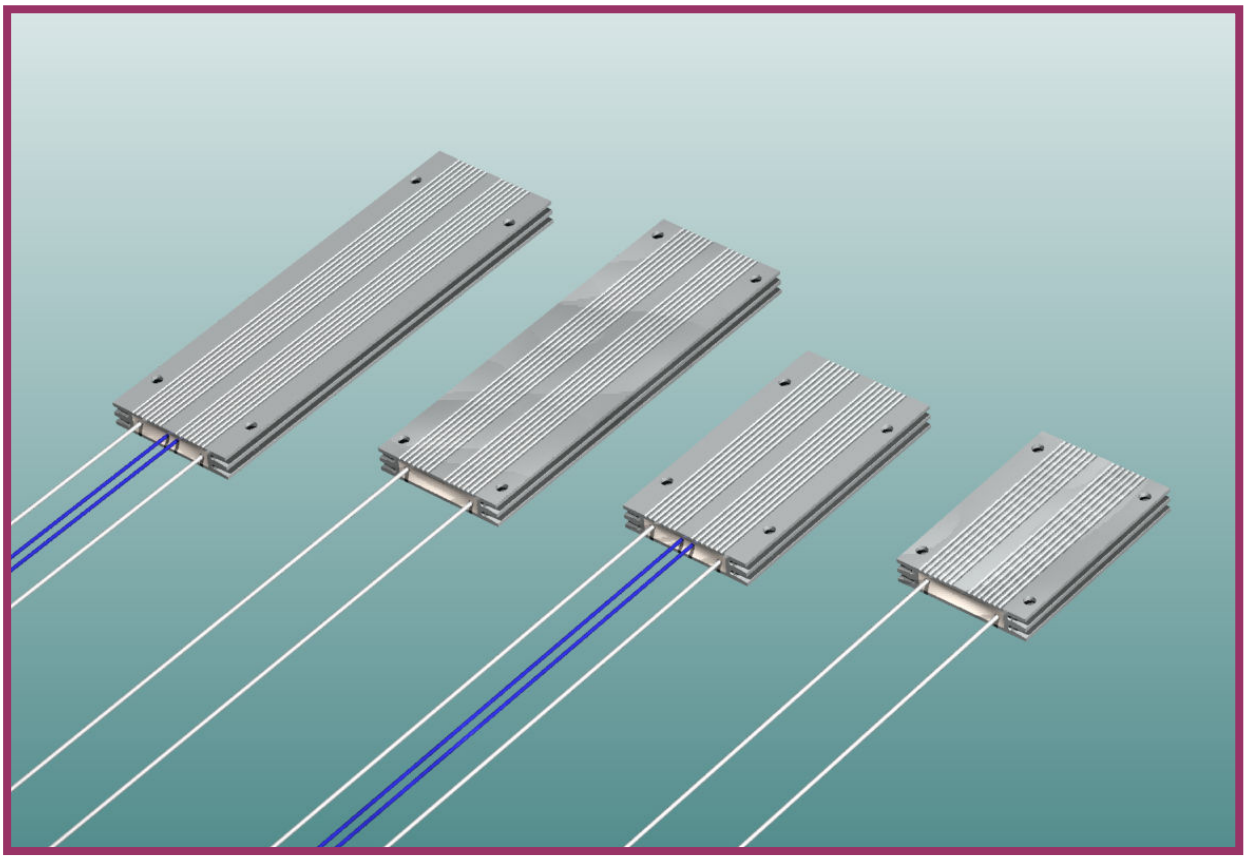
α ALPHA

CDH

ALUMINIUM HOUSED
COMPACT BRAKE RESISTORS



CDH belong to our small range of **ALPHA ALUMINIUM HOUSED COMPACT BRAKE RESISTORS**. The **CDH** resistors are insulated and with small dimensions so that they can easily be fitted into compact constructions.

The resistors are especially designed to withstand high pulse loads compared to their average load.

The **CDH** steady state power range span from **110W** to **205W** and they are designed to endure pulse loads of up to 40 times these values for one second every 120 seconds!

The very flat construction of **CDH** makes it ideal suitable for heat sink cooling and can be used in **liquid cooled** equipment. Improvement in the cooling of the resistor will naturally enhance its power capability!

The **CDH** resistors are available in two different protection degrees: **IP45** or **IP56**, both types are silicone free.

The CDH resistors can be offered with two versions of thermostats: TI normal insulation, T extra insulation.

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Construction

CDH resistors are designed as follows:

The resistor elements are wire wound helix elements mounted in and supported by a ceramic insulator.

The outer housing is an aluminium profile. The resistor elements are symmetrical fixed in the profile by the ceramic insulator. This ensures a symmetric expansion of the resistor elements and thereby achieves a maximum stability to high load impulses.

The aluminium profile with the fixed resistor elements is filled with quarts sand, MgO or Al_2O_3. This ensures a minimum change of the resistor surface temperature even if the resistor element reaches its maximum temperature during a pulse load.

The CDH resistors are delivered with 300mm long style 1659 PTFE cables AWG 18/16/14 in nature colour. We can supply cables in specified length, colours and mounted with cable shoes or connectors. Other cable types like glass fibre silicone insulated cables are also available.

Resistors with integrated thermo watch are available in two versions, one with normal (TI) and one with extra insulation (T). The extra insulated type (T) has the thermo watch mounted in a ceramic insulator which require 25mm longer aluminium profile.

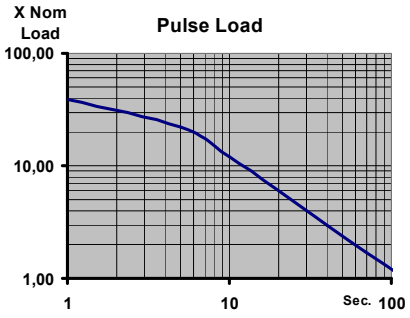
Ratings:

TYPE CDH-	PN W @40°C	Max Surface temp. °C @40°C	Pulse Load in 1s each 120s P1/120 kW @40°C	Pulse Load in 5s each 120s P5/120 kW @40°C	Pulse Load in 10s each 120s P10/120 kW @40°C	Pulse Load in 40s each 120s P40/120 W @40°C	Time Const sec.	R Ω (±5%) ±10%
CDH 102 C(TI)	110	250	4,0	2,5	1,3	330	1000	2,2 – 200
CDH 145 C(TI)	155	255	6,0	3,7	1,86	465	1000	3,3 – 250
CDH 195 C(TI)	205	255	8,0	4,9	2,46	615	1000	3,3 - 300
CDH 130 CT	110	200	4,0	2,5	1,3	330	1000	2,2 – 200
CDH 175 CT	140	200	6,0	3,3	1,68	420	1000	3,3 – 250
CDH 225 CT	180	205	8,0	4,8	2,16	540	1000	3,3 - 300

General Specifications	
Temperature Coefficient:	<±100ppm
Dielectric strength:	3500VAC 1 minute
Working Voltage:	UL: 600VAC / CE: 690VAC; 1100VDC
Isolation Resistance:	> 20 MΩ
Overload, non repeatable:	
CDH 102 C(TI) / CDH 130 CT	5 kW in 5s
CDH 145 C(TI) / CDH 175 CT	8 kW in 5s
CDH 195 C(TI) / CDH 225 CT	10 kW in 5s
Environmental:	-40 °C – 90 °C
De-rating :	Linear: 40°C = P_N to 90°C = 0.75*PN
Optional Thermostat :	Type TI: 160°C, 2A, 250VAC, NC Type T: 160°C, (optional 200°C/180°C), 2A, 250VAC, NC
Approvals	

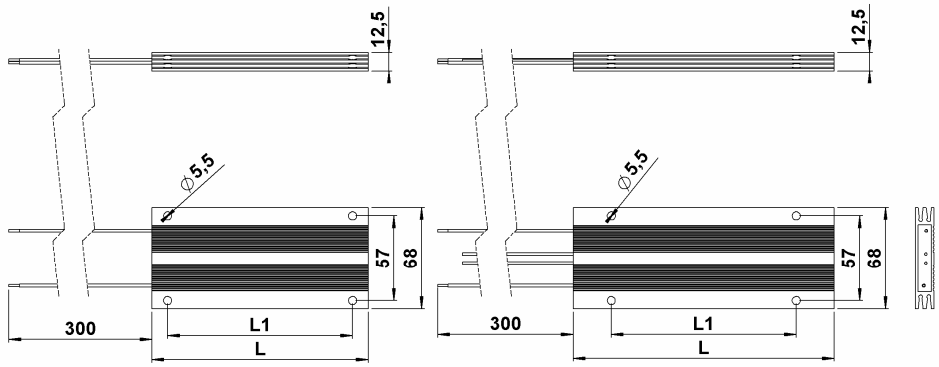
PN: NOMINAL POWER WITH NATURAL COOLING and the CDH mounted in a horizontal position.

PULSE LOAD



This curve show the pulse load capability of the CDH resistors compared to their nominal steady state load under the following conditions: The load is a periodic pulse load with a constant **period time** of **120 seconds** and a pulse width from **one second to 100 seconds.**

Mechanical Data



Type	L ± 2	L1±0.5	W g	Type	L ± 2	L1±0.5	W g
CDH 102 C(TI)	102	81	195	CDH 130 CT	130	81	245
CDH 145 C(TI)	145	124	270	CDH 175 CT	175	124	325
CDH 195 C(TI)	195	174	365	CDH 225 CT	225	174	420

Type identification:

CDH 195 C (TI) A 22R K 001

(X): Only part of ID if option is chosen

001 = Standard, XXX > 400 customer specified versions
Tolerance: **K** = ± 10%; **J** = ± 5 %
Ohm Value (Examples: 2R2=2.2Ω; 22R=22 Ω; 220R=220Ω; 2K2 = 2.2 kΩ)
Protection degree: **A** = Standard IP45, **B** = IP56
T = Thermo watch, internal extra insulated; **TI** = Thermo watch. Standard 160°C
C: Cable terminals
Length of resistor profile in mm.