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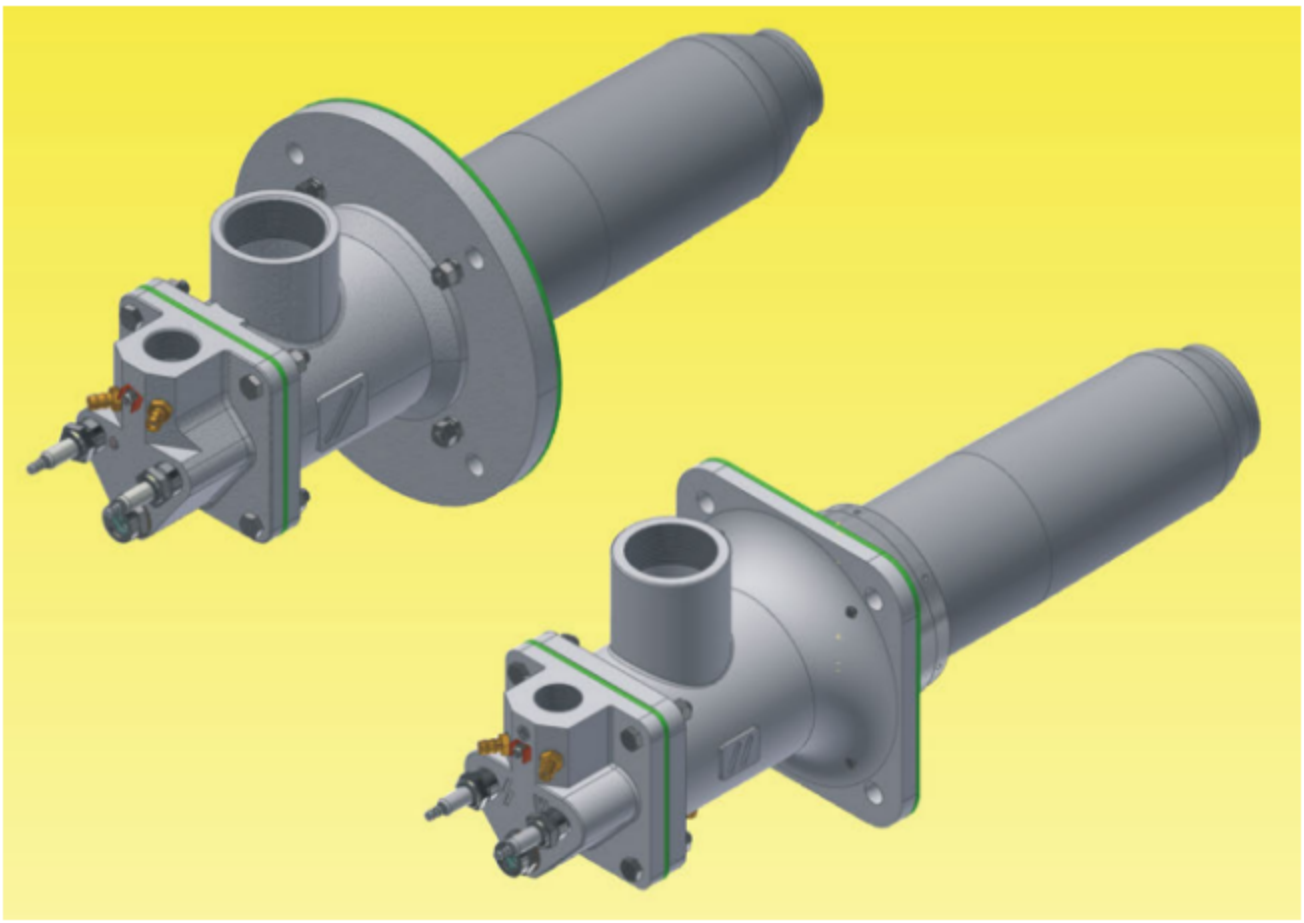
AIC/AICA
Aeries Burner



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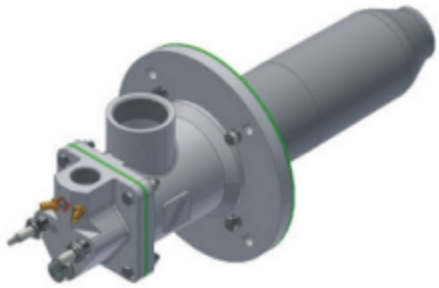
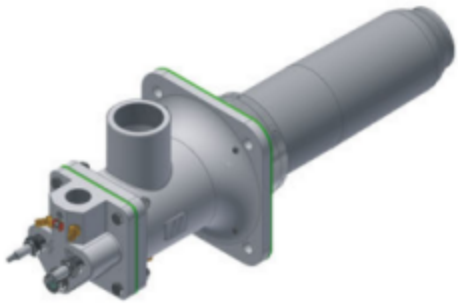
AIC/AICA Aeries Burner

Wide Range of Applications

Features





- Heating method: direct heating or indirect heating
- Control mode: intermittent / continuous
- Hot air temperature: 200/450C
- Flame form: Straight flame(Long flame/Short flame)
- Applicable types of gas: natural gas, liquefied gas, city gas, coke oven gas
- Mode of use: Combined with silicon carbide without using burner bricks
- Flame Outlet Speed: Medium speed, high speed
- Installation method: side wall / furnace top
- Burner structure: Modular design for easy replacement of accessories

Applications

- Iron and Steel Industry
- Precious metals, non-ferrous metals and light alloy industries
- Glass, refractories, ceramics and enamel industries
- Ore and geotechnical roasting industries
- Plastics, fiber materials, paper industries
- Drying equipment and hot air stove

Product Description

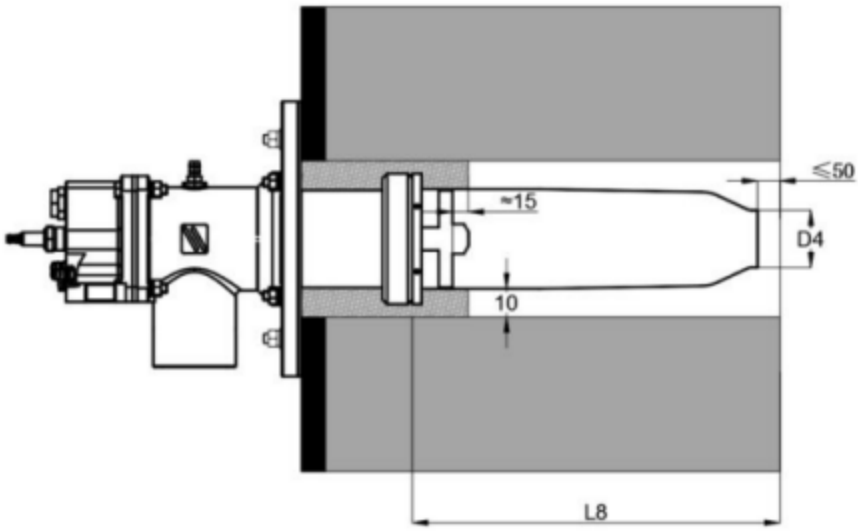
- Air shell: Cast iron / cast aluminum
- Material of air inlet pipe: cast iron / 45# steel
- Applied maximum furnace temperature: 1500℃
- Fire pipe material: SIC-1350/SIC1500
- Combustion head: SUS 310S
- Fixed flange: Q235
- Maximum preheating air temperature: 250 (cast aluminum)/450℃ (cast iron)
- Power: 10~1000KW
- Air inlet pressure: 40mbar
- Gas inlet pressure: 30mbar
- Adjustment ratio: 1: 20

Ignition and Flame Monitoring

- The ignition of the burner can be realized by the ignition electrode (Model EN or WAND).
- Ion electrode and UV ultraviolet can be selected for flame detection.
- When the burner is used in the furnace where the temperature is lower than 750C, it is recommended to install a flame detection system.

Type selection of burner silicon carbide combustor

Furnace temperature, combustion air temperature, type of combustion head and adjustment mode of burner determine the choice of SiC material. The outlet diameter D4 of the ceramic casing determines the burner power and flame outlet velocity. Ceramic sleeves with different lengths match different furnace wall thicknesses. For AIC (A) burners, the clearance between casing and insulation should be larger than 5mm or equipped with lightweight cement insulation pipes that are easy to install.



TSC Ceramic Casing					
Materials	Combustion air temperaturep	Combustion Head Model	Regulation mode	Furnace temperature P	Maximum temperature resistance p
SiC-1350	<150	R	1), 3)	<1250	1350
SiC-1350	<250	H	1), 2), 3)	<1350	1350
SiC-1500	<250	R	1), 3)	<1350	1500
SiC-1500	<450	H	1), 2), 3)	<1450	1500
SiC-1500	<450	H	1), 3)	<1450	1500

Regulation mode:

1) = Impulse control

2) Continuous control

3) Continuous regulation under fixed air flow rate

Choice of silicon carbide outlet										
Specifications	Power Kw	Shape	Outlet diameter D2	Length L8			Combustion head location		Materials	
				200	250	300	35	135	SIC-1350	SIC-1500
65	10	B, S	20	●	-	-	●	-	●	-
65	25	B, S	25	●	-	-	●	-	-	●
65	50	B	33	●	-	-	●	-	●	●
65	50	B	33	-	-	●	●	●	●	●
65	60	B	40	●	-	-	●	-	●	●
65	60	B	40	-	-	●	●	●	●	●
65	70	A	48	●	-	●	-	-	●	●
65	70	A	48	-	-	●	-	●		●
80	105	B	40	-	●	—	●	-	●	●
80	105	B	50	-	●	—	●	-	●	●
100	90	B	50	-	●		●	-	●	●
100	90	B	50	-	-	●	●	-	●	●
100	160	B	65	-	●		●	-	●	●
100	160	B	65	-	-	●	●	-	●	●
100	180	A	82	-	-	●	●	-	●	●
125	200	B	66	-	-	●	●	-	●	●
125	230	B	75	-	-	●	●	-	●	●
125	260	A	100	-	-	●	●	-	●	●
140	270	B	70	-	-	●	●	-	●	●
140	320	B	85	-	-	●	●	-	●	●
140	350	A	120	-	●	●	●	-	●	●

Burner power and other parameters

The fuel used is natural gas.

Model	Silicon Carbide Model	Power[KW]	Wind film type	Flame Length[cm]	Flame Outlet Speed[m/s]
AIC(A)50	ATSC-50B020-300-35	15	H	15	100
AIC(A)50	ATSC-50B028-300-35	30	H	20	110
AIC(A)65	ATSC-65B033-300-35	50	H	27	120
AIC(A)65	ATSC-65B033-300-35	50	R	22	130
AIC(A)65	ATSC-65B040-300-35	60	H	33	100
AIC(A)65	ATSC-65B040-300-35	60	R	25	105
AIC(A)65	ATSC-65A048-300-35	70	H	40	80
AIC(A)65	ATSC-65A048-300-35	70	R	25	85
AIC(A)80	ATSC-80B040-300-35	90	H	40	140
AIC(A)80	ATSC-80B040-300-35	90	R	40	140
AIC(A)80	ATSC-80B050-300-35	105	H	45	105
AIC(A)80	ATSC-80B050-300-35	105	R	45	105
AIC(A)80	ATSC-80A064-300-35	120	H	60	70
AIC(A)80	ATSC-80A064-300-35	120	R	35	75
AIC(A)100	ATSC-100B065-300-35	160	H	65	100

Model	Silicon Carbide Model	Power[KW]	Wind film	Flame	Flame Outlet
AIC(A)100	ATSC-100B065-300-35	160	R	45	105
AIC(A)100	ATSC-100A082-300-35	180	H	60	70
AIC(A)100	ATSC-100A082-300-35	180	R	50	75
AIC(A)125	ATSC-125B066-300-35	200	H	90	110
AIC(A)125	ATSC-125B066-300-35	200	R	40	115
AIC(A)125	ATSC-125B075-300-35	230	H	100	100
AIC(A)125	ATSC-125B075-300-35	230	R	50	100
AIC(A)125	ATSC-125A100-300-35	260	H	120	60
AIC(A)125	ATSC-125A100-300-35	260	R	60	65
AIC(A)140	ATSC-140B070-300-35	270	H	60	145
AIC(A)140	ATSC-140B070-300-35	270	R	40	155
AIC(A)140	ATSC-140B085-300-35	320	H	80	120
AIC(A)140	ATSC-140B085-300-35	320	R	60	125
AIC(A)140	ATSC-140A120-300-35	360	H	90	65
AIC(A)140	ATSC-140A120-300-35	360	R	80	70
AIC(A)165	ATSC-165B120-300-35	550	H	130	80
AIC(A)165	ATSC-165A154-300-35	630	H	150	60
AIC(A)200	ATSC-200A180-300-35	1000	H	180	65

Type selection

Model AIC (A)	100	R	B	100/	85	Note

Burner Specification
65
80
100
125
140
165
200

Flame Shape
Long flame=H, Short flame=R

Gas type
Natural gas=B, Liquefied gas=G, Coke oven gas=D

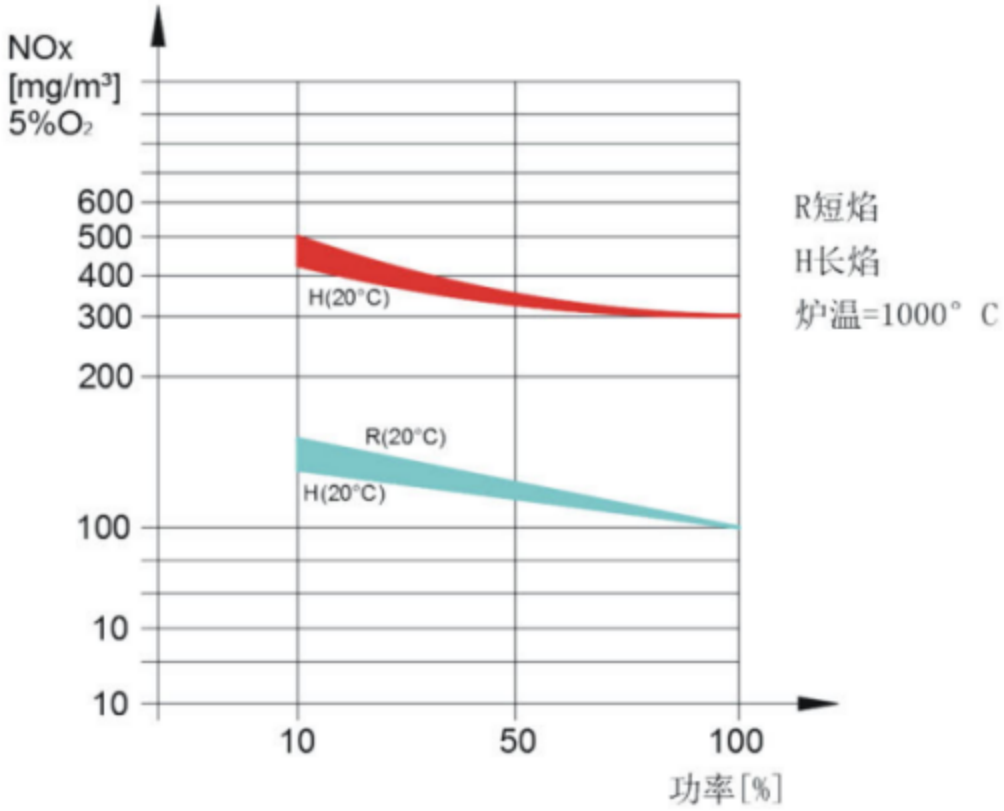
Fire pipe length L1
0, 50, 100... ...

Combustion head location L2
35, 85, 135... ...

Double electrode form =(Blank), Electrode ignition with UV detection = single electrode with UV.

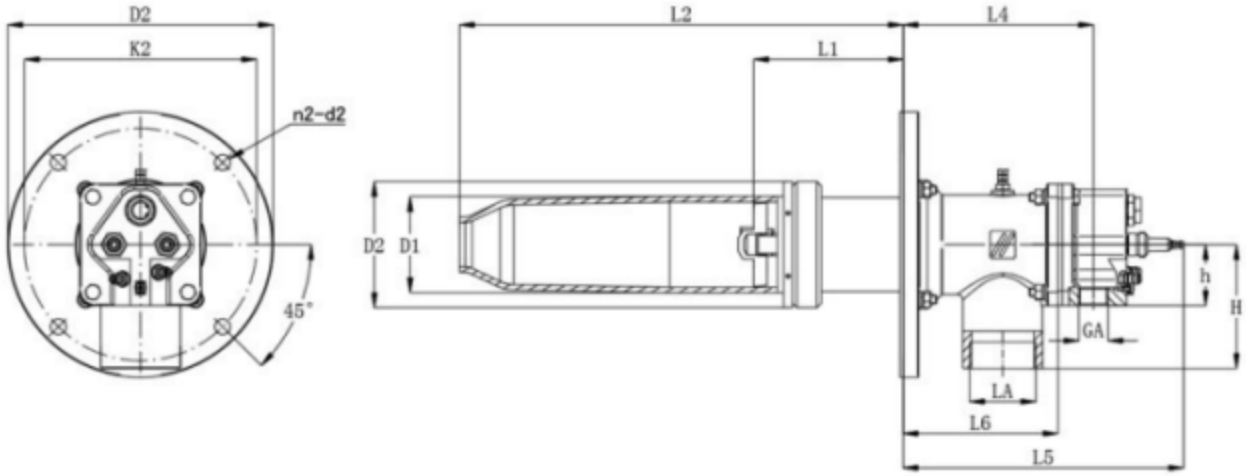
Example:AIC 100HB 100/135

Emission

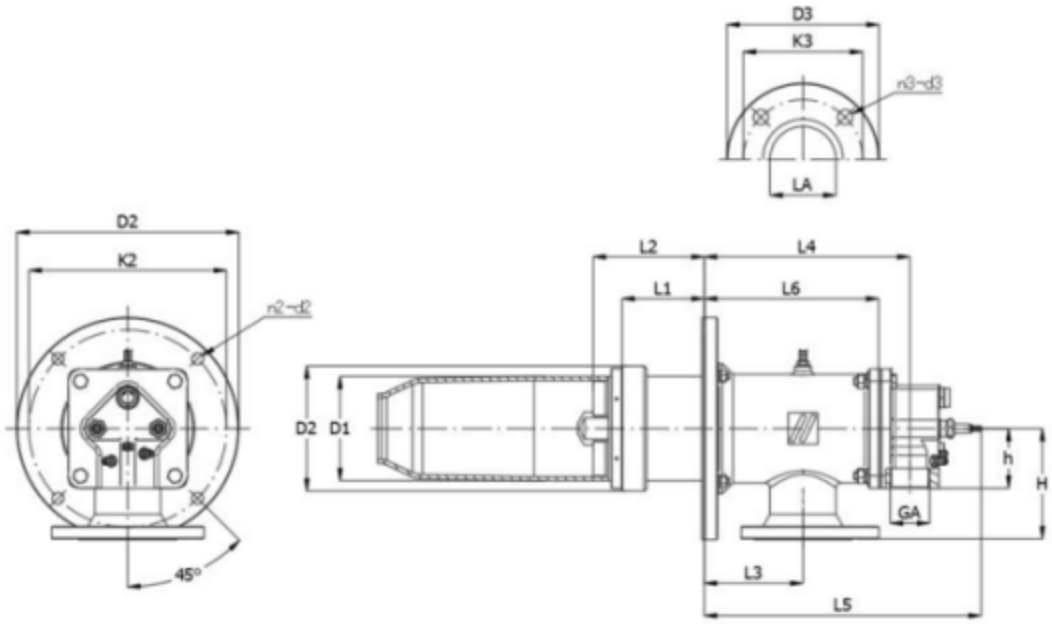


R-Short flame H-Long flame Furnace temperature =1000° C Power(%)

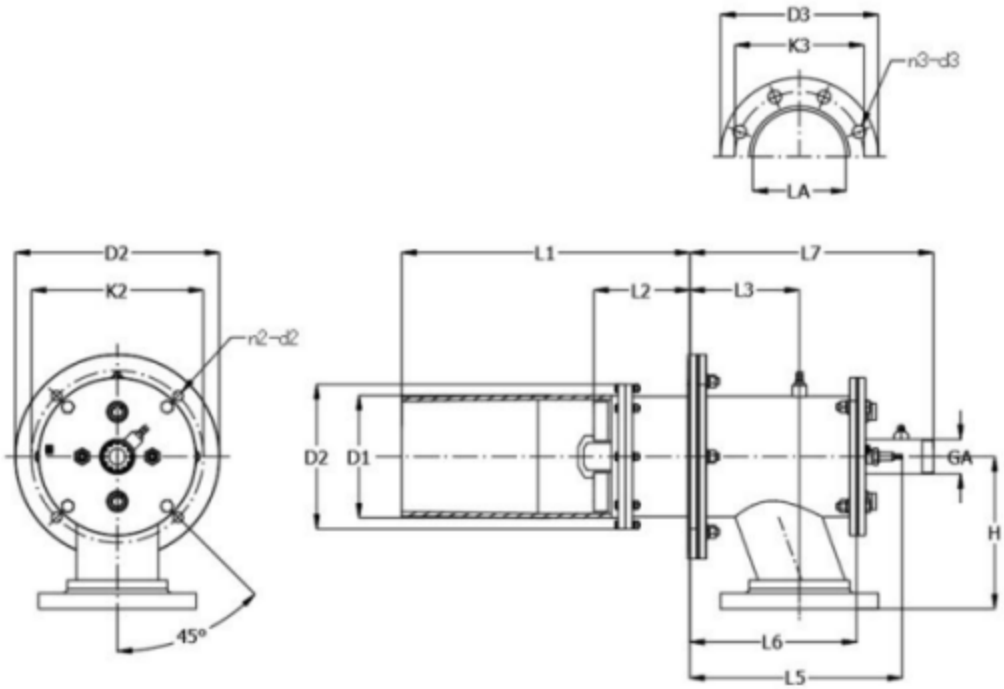
The specific installation dimensions of cast iron shell are shown in the table below.



AIC 65/80/100



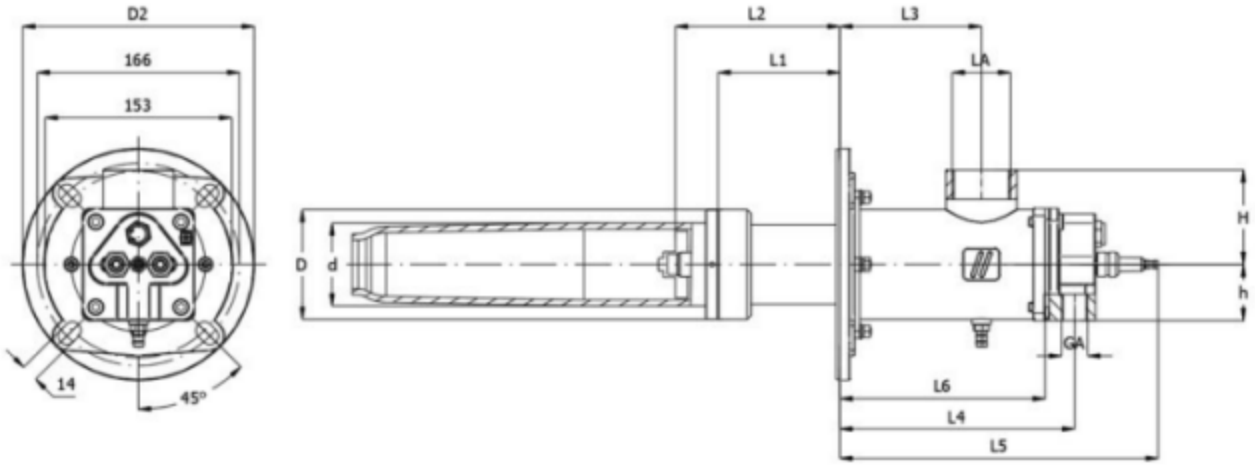
AIC125/140 Installation Dimension



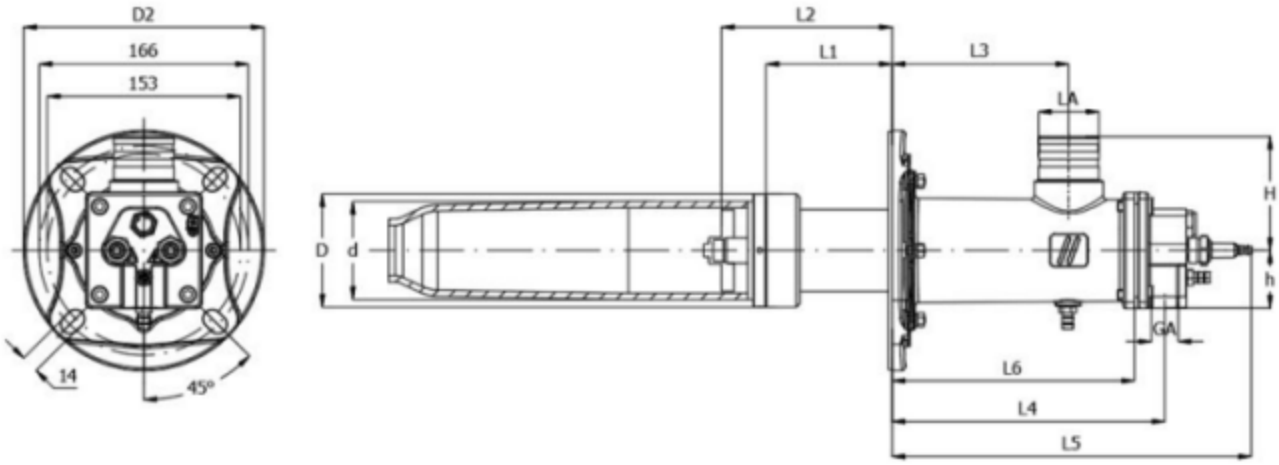
AIC 165/200 Installation Dimension

Model	Specifications	Maximum Power/kW	Dimension/mm								
			D	d	GA	LA	H	h	L3	L4	L5
AICA	65 (thread)	90	65	68	Rp 1/2	Rp 1 1/2	77	46	116	192	261
AICA	65	90	65	68	Rp 1/2	DN 40	90	46	140	192	261
AICA	80	150	85	87	Rp 3/4	Rp 2	100	50	107	186	259
AICA	100	230	102	104	Rp 1	Rp 2	121	61	112	287	265
AICA	125	320	127	127	Rp 1 1/2	Rp 2 1/2	125	75	117	230	319
AICA	140	450	140	142	Rp 1 1/2	DN 80	152	85	130	275	364
			Dimension/mm								
			L6	D2	k2	c!2	n2	D3	k3	d3	n3
AICA	65 (thread)	90	168	190	As shown	As shown	4	-	-	-	-
AICA	65	90	168	190	As shown	As shown	4	-	-	-	-
AICA	80	150	160	160	179	13	4	-	-	-	-
AICA	100	230	153	190	200	15	1	-	-	-	-
AICA	125	320	190	190	200	15	4	-	-	-	-
AICA	140	450	234	300	265	14	4	190	160	18	8

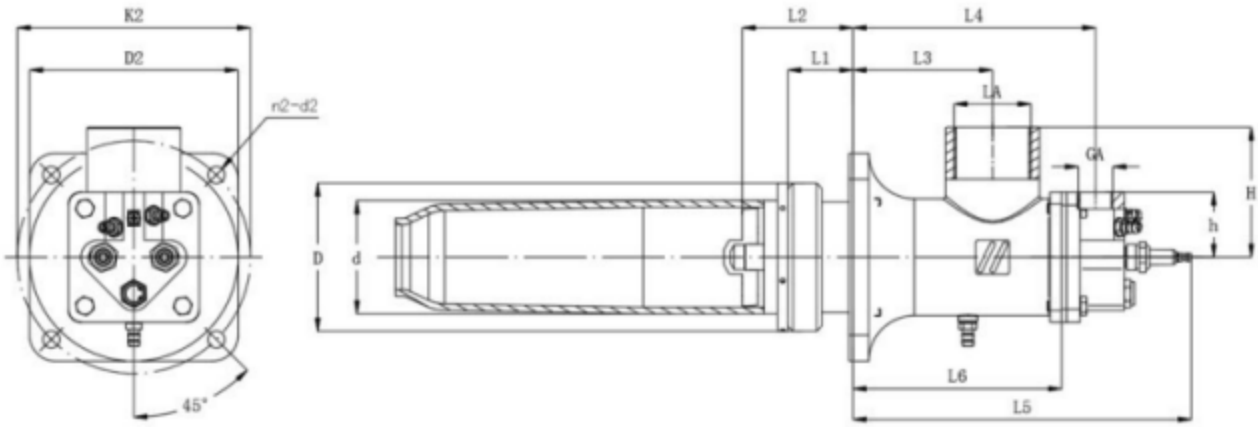
The specific installation Dimensions of cast aluminum shell is shown in the table below.



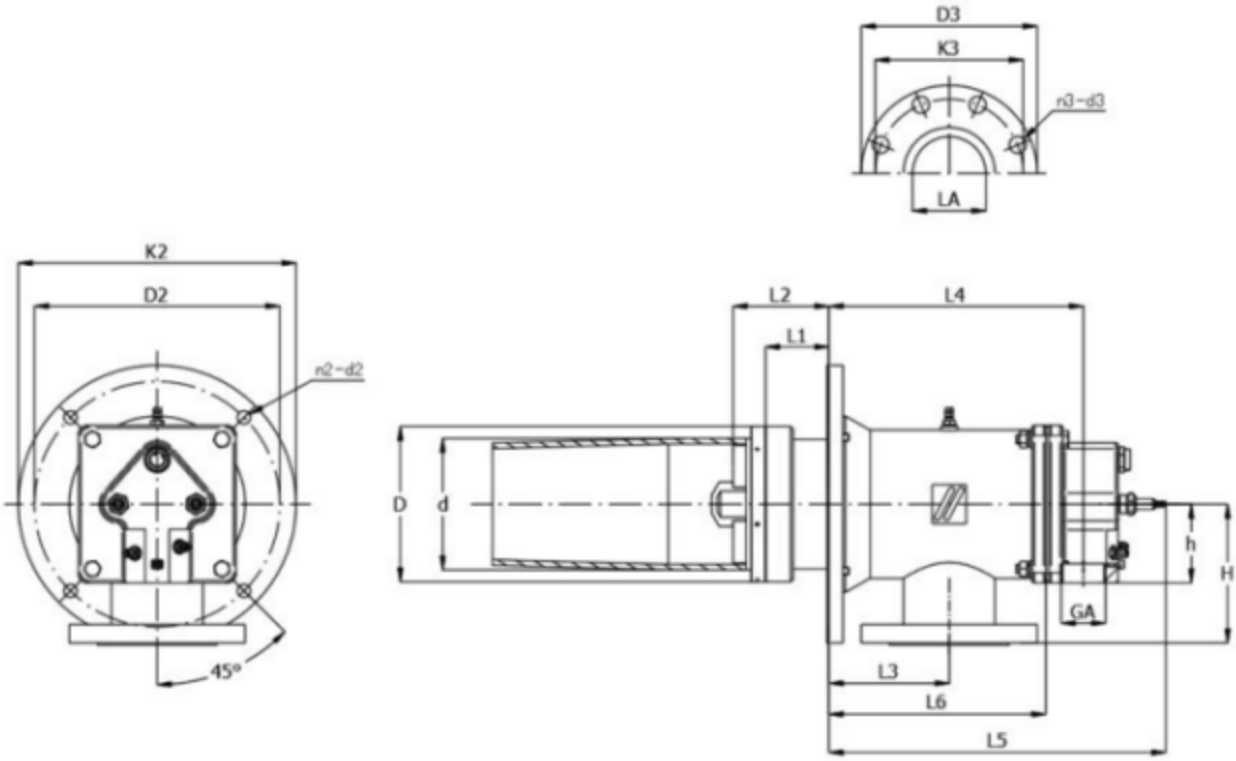
Installation Dimensions of AICA65 Thread Connection



Installation Dimensions of AICA65 Card Buckle Type



AICA80/100/125 Installation Dimension



AICA140 Installation Dimension

Model	Specifications	Maximum Power/kW	Dimension/mm									
			D	d	GA	LA	H	h	L3	L4	L5	L6
AICA	65 (thread)	90	65	68	Rp 1/2	Rp 1 1/2	77	16	116	192	261	168
AICA	65 (buckle)	90	65	68	Rp 1/2	DN 40	90	46	140	192	261	168
AICA	80	150	85	87	Rp 3/4	Rp 2	100	50	107	186	259	160
AICA	100	230	102	101	Rp 1	Rp 2	121	61	112	287	265	153
AICA	125	320	127	127	Rp 1 1/2	Rp 2 1/2	125	75	117	230	319	190
ATCA	140	450	140	142	Rp 1 1/2	DN 80	152	85	130	275	364	234
			Dimension/mm									
			D2	k2	(12	n2	L7	D3	k3	d3	d3	
AICA	65 (thread)	90	190	As shown in the figure	As shown in the figure	4	-	-	-	-	-	/
AICA	65 (buckle)	90	190	As shown in the figure	As shown in the figure	4	-	-	-	-	-	
AICA	80	150	160	179	13	4	-	-	-	-	-	
AICA	100	230	190	200	15	4	-	-	-	-	-	
AICA	125	320	190	200	15	4	-	-	-	-	-	
AICA	140	450	300	265	14	4	-	φ190190	φ190	18	8	