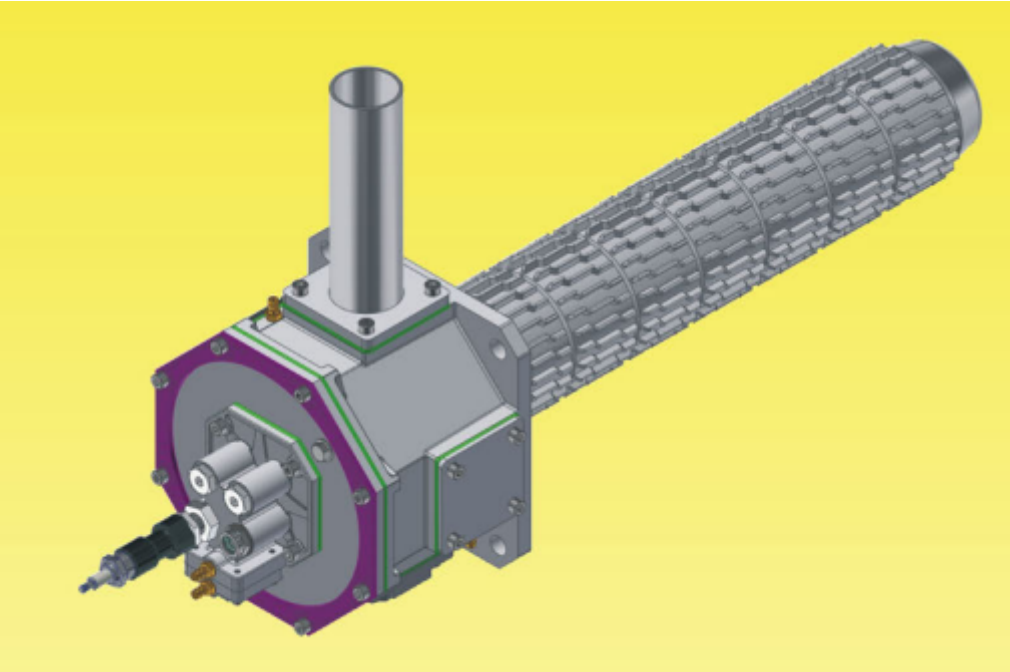
Astechnic
诺 一

A-PRO
Self-Preheating Burner



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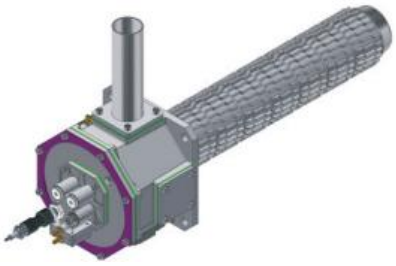
A-PRO Self-Preheating Burner

Energy saving / low nitrogen

Features



- The waste heat is recovered with its own heat exchanger, and the combustion-supporting air can be preheated up to 650 ℃.
- Modular design, each module can be replaced and maintained separately.
- Suitable for pulse control and continuous control.
- Staged combustion, combustion is more environmentally friendly.
- The electrode has its own cooling air protection circuit and has the functions of detection and ignition at the same time.
- Heat-resistant steel heat exchanger, suitable for a variety of heat treatment furnaces below 950℃.

Product Description

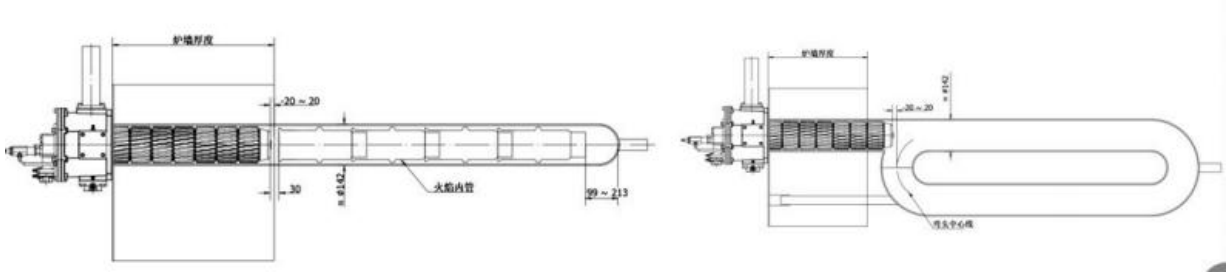
Air shell:	Cast aluminum
Air inlet material:	Cast aluminum
Applied maximum furnace	1250° C
temperature:	2848W5/SUS310s/Silicon carbide
Heat exchanger quality:	SUS 310S/Silicon carbide
Combustion head material:	Cast aluminum/Q235
Fixed flange:	15~250KW
Power:	80mbar
Air inlet pressure:	60mbar
Gas inlet pressure:	NG /LPG/COG
Fuel:	1:3
Adjustment ratio:	1.05

Air excess coefficient

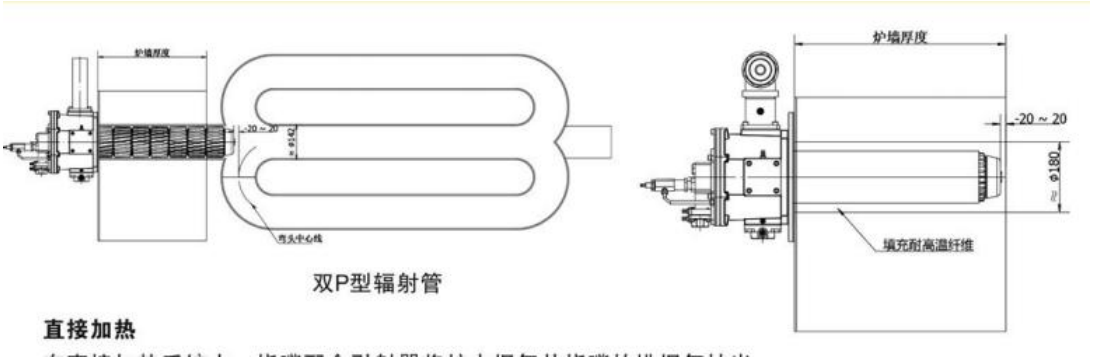
Product performance

A-PRO Self-Preheating Burner is a new generation of high efficiency burners and an upgraded version of the A-MAX series. Compared with A-MAX series, A-PRO uses CFD simulation technology to optimize and reconstruct the heat exchanger structure. Under the condition of weight loss, the heat transfer efficiency is increased by 15%, and the exhaust temperature is lower.

The A-PRO shell adopts die-casting process, which has the advantages of lighter weight, higher structural strength and less flow resistance.



Type I radiation tube　　Type P radiation tube



Double P-type radiation tube Filled with high temperature resistant fiber

Direct heating

In the direct heating system, the burner cooperates with the injector to extract the flue gas from the furnace from the exhaust gas of the burner.

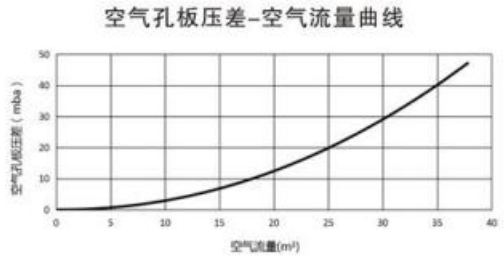
Type selection

Model	A-PRO	1MB	545	I
Rated Power 1MB: 36KW, 2MB: 60KW, 3MB: 100KW, 4MB: 1 80KW, 4MB: 250KW				
Burner Length 545, 595, 645, 545+n*50				
D: Direct heating(Need matching flue gas reflux sleeve and Ejector) I: Indirect heating				

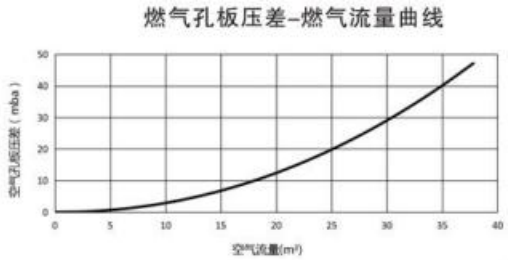
Example: A-PRO 1MB 6451 (Burner Length 645, Indirect heating, no need for flue gas reflux sleeve and ejector)

Pressure-flow characteristics

Air Orifice Plate Pressure Difference-Air Flow Curve

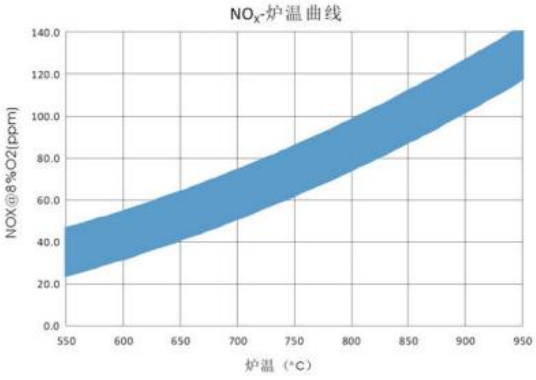


Gas Orifice Plate Pressure Difference-Gas Flow Curve

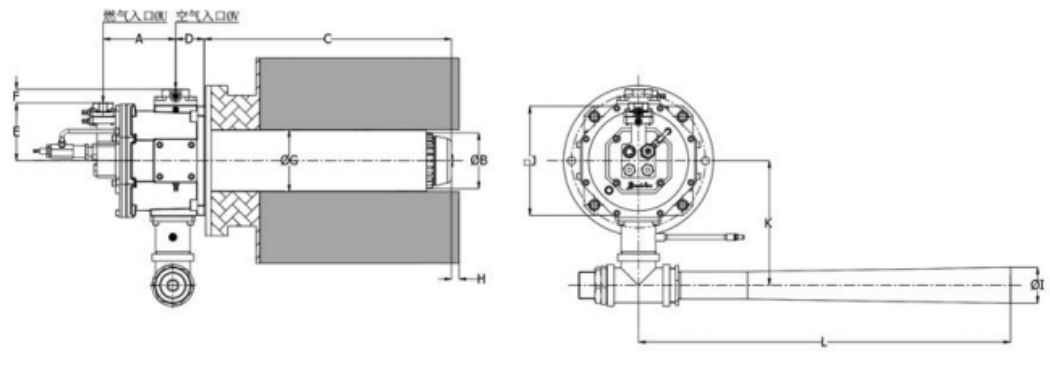


Emission

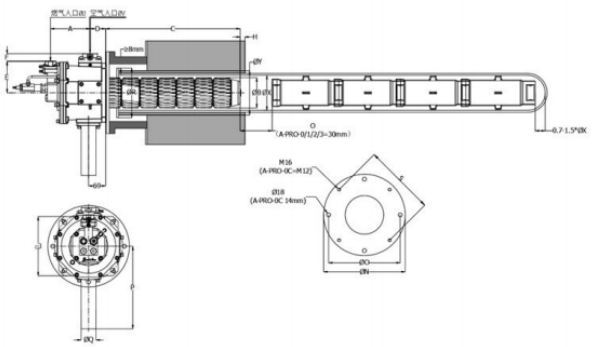
NOx-Furnace Temperature Curve



Specifications



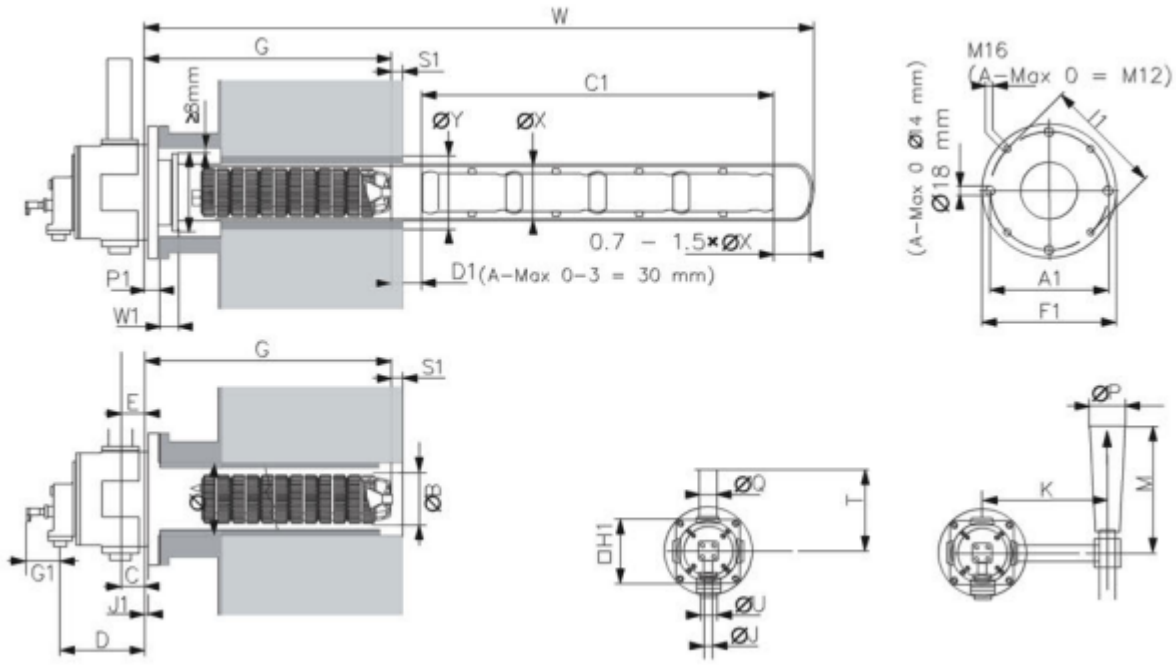
Specifications	Dimension [mm]													
	A	B	C	D	E	F	f G	H	I	J	K	L	U	V
A-PR0-1M	152	123	545-695	60	119	59	180	±20	43	236	269	625	R 1/2	R 1
A-PR0-2M	152	142	545-695	60	119	59	200	±20	73	236	283	625	R 1/2	R11/2
A-PR0-3M	179	178	545-695	83	123	82	236	±20	79	280	292	820	R 1/2	R 2
A-MAX-4M	203	240	545-695	95	157	91	300	±20	98	372	353	820	R 3/4	R 2
A-MAX-5M	203	273	545-695	95	157	91	336	±20	98	372	345	920	R 1	R 2



Specifications	Dimension [mm]													
	A	B	C	D	E	F	G	H	I	□ J	K	L	U	V
A-PR0-1M	152	123	545-695	60	119	59	180	± 20	43	236	269	625	R 1/2	R 1
A-PR0-2M	152	142	545-695	60	119	59	200	±20	73	236	283	625	R 1/2	R11/2
A-PRO-3M	179	178	545-695	83	123	82	236	± 20	79	280	292	820	R 1/2	R 2
A-PR0-4M	203	240	545-695	95	157	91	300	±20	98	372	353	820	R 3/4	R 2
A-PR0-5M	203	273	545-695	95	157	91	336	± 20	98	372	345	920	R 1	R 2

Specifications	Dimension [mm]				
	O	P	Q	R	S
A-PR0-1M	280	331	DN50	200	290
A-PR0-2M	280	331	DN50	220	290
A-PR0-3M	325	353	DN65	260	330
A-PR0-4M	420	399	DN100	-	445
A-PR0-5M	420	399	DN100	-	445

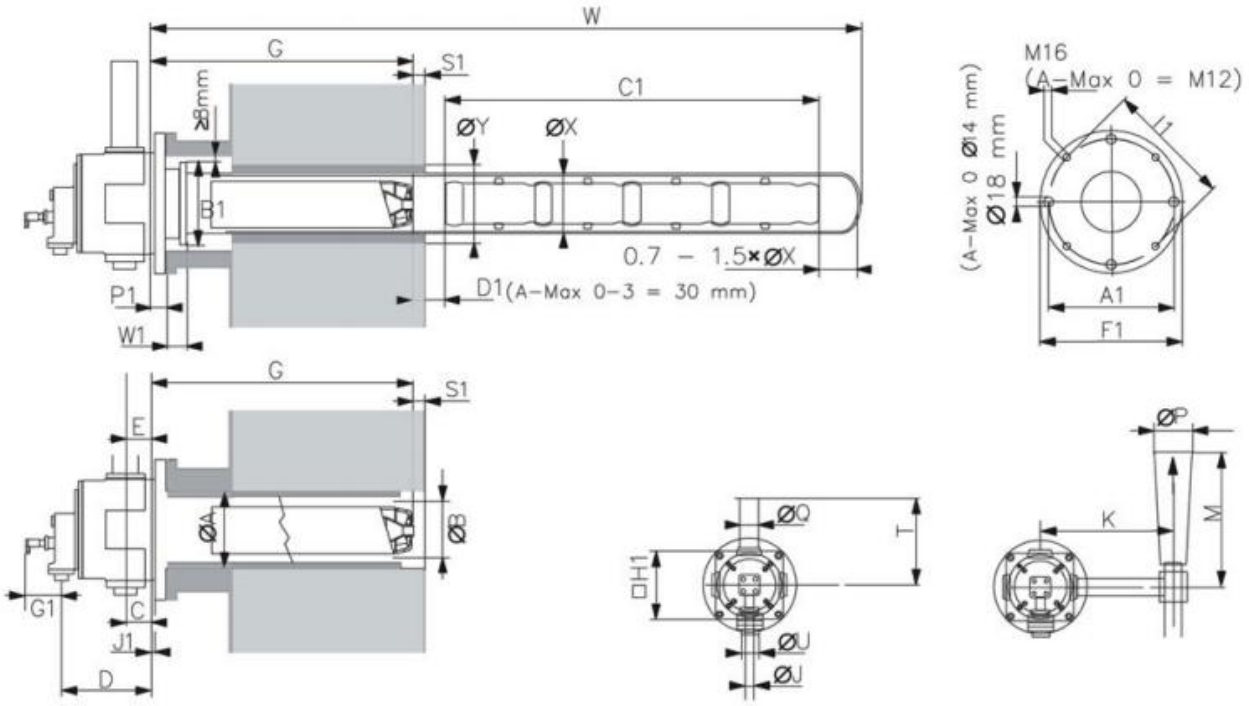
Dimensions of A-MAX-M Self-Preheating Burner



Product Type	[mm]											
	φA	φB	C	D	E	G	φJ	K	M	φP	φQ	T
A-Max 1M	133	123	60	212	60	545-695	R1/2”	269	625	43	DN 50	331
A-Max 2M	156	142	60	212	60	545-695	R1/2”	283	625	73	DN50	331
A-Max 3M	193	178	83	262	83	545-695	R1/2”	292	820	79	DN 65	353
A-Max 4M	254	240	95	298	95	545-695	R3/4”	353	820	98	DN 100	399
A-Max 5M	287	273	95	298	95	695	R1"	345	920	98	DN100	399

Product Type			[mm]										Weight
	φU	W	φX	φY	A1	ΦB1	C1	D1	Φf1	G1	H1	φI1	si	kg
A-Max 1M	R1"	1000-2600	142	182	280	200	C1=nx250+50	30	330	90	236	290	S1=0±20	20
A-Max 2M	R1/2”		162	202	280	220		30	330	90	236	290		25
A-Max 3M	R2"		202	242	325	260		30	385	90	280	330		33
A-Max 4M	R2 1/2”		-	-	420	-		-	480	110	372	445		48
A-Max 5M	R2 1/2”		-	-	420	-		-	480	110	372	445		57

Dimensions of F-TR Self-Preheating Burner



Product Type	[mm]											
	φA	φB	C	D	E	G	φJ	K	M	φP	φQ	T
A-Max 1FTR	180	123	60	212	60	545-695	R1/2”	269	625	43	DN 50	331
A-Max 2FTR	200	142	60	212	60	545-695	R1/2”	283	625	73	DN50	331
A-Max 3F TR	236	178	83	262	83	545-695	R1/2”	292	820	79	DN 65	353
A-Max 4FTR	300	240	95	298	95	545	R3/4”	353	820	98	DN 100	399
A-Max 5FTR	336	273	95	298	95	695	R1"	345	920	98	DN100	399

Product Type			[mm]										Weight
	φU	W	φX	φY	A1	ΦB1	C1	D1	Φf1	G1	H1	φI1	si	kg
A-Max 1FTR	R1"	1000-2600	142	182	280	200	C1=nx250+50	30	330	90	236	290	S1=0±20	20
A-Max 2FTR	R1 1/2”		162	202	280	220		30	330	90	236	290		25
A-Max 3F TR	R2"		202	242	325	260		30	385	90	280	330		33
A-Max 4FTR	R2 1/2”		-	-	420	-		-	480	110	372	445		48
A-Max 5FTR	R2 1/2”		-	-	420	-		-	480	110	372	445		57