

# CPx

Warm Air Cabinet Heater  
Natural Gas / LPG / Oil Fired Options



## Overview

Powrmatic's new ErP compliant CPx range of cabinet type heaters combine installation versatility with a range of Kw outputs to match the most stringent applications. The range can be installed in the heated space, be sited in plant rooms and specified for either vertical or horizontal installation. The CPx EA range can also be specified for external applications.

## Models Available

- CPx UF Upright Freeblowing
- CPx UD Upright Ducted
- CPx HF Horizontal Freeblowing
- CPx HD Horizontal Ducted
- CPx EA UD External Upright Ducted
- CPx EA HD External Horizontal Ducted

## Product Features

- CPx versatility is enhanced with the availability of horizontal types for applications where space and air direction is specific.
- Thirteen outputs ranging from 30kW through to 590kW in both vertical and horizontal arrangement. internal and external design and free blowing or ducted supply air, most customers requirements are covered.
- Low NOx and high energy output with highest efficiency without condensing, simple and efficient high - low burner control.
- Powrmatic working alongside market leading burner manufacturer Riello now utilise a pre-fitted and tested low NOx, high-low control " Gulliver " burner as standard. When specified the heater can be fuelled by Natural Gas, LPG or Oil.

## Specification

- CPx Drum and tube, four pass heat exchanger will be constructed as standard with a stainless steel drum combustion chamber and an aluminised or stainless steel tubular heat exchanger.
- Standard models up to CPx250 will be supplied with a T430 stainless steel drum and T304 rear drum and includes aluminised steel tubes and smoke box.

- Standard models CPx300 and above will be supplied with a T304 stainless steel drum and T304 rear drum and includes aluminised steel tubes and T304 stainless steel smoke box.
- CPx EA Drum and tube will be manufactured from stainless steel T304, this option can be specified on all units.
- Low NOx "Gulliver" high-low fire burners will be fitted as standard, gas fired modulating burners optional.
- Heaters will be supplied to run on either Gas, LPG, 35 or 28 second oil.
- Free blowing heaters will be supplied with between two and eight louvred discharge heads according to heat output.
- Ducted models are available with fan static pressure duties between 188 and 600Pa according to model and options fitted.
- Models up to 90kw will be supplied as standard 1ph, 3ph optional, all other capacities will be supplied 3ph as standard, 1ph optional on standard models 120 and 150 only.
- Soft start fan and motor control will be standard on all models 250 and above.
- Options will include, Modulating gas burner, Inverter drive, 409 stainless steel heat exchanger and Painted RAL colour of choice.
- Accessories of choice for internal heaters, side or rear inlet spigots, screened air intake, inlet filter and air dampers.
- Available accessories for EA external heaters, weatherproof inlet filter, weatherproof inlet dampers with damper motors.
- CPx control is by MC200 as standard, this will be either heater chassis mounted or remote according to model.

# Technical Performance

CPx

Model			30	45	60	90(gas)	90(oil)	120	150	175	200	250	300	360	440	590	
Output		kW	30	45	60	90	90	120	150	175	200	250	290	366	440	586	
Input (nett CV)	G20 Gas	kW	32.6	47.3	65.2	97.8	n/a	127.4	163.0	190.1	217.4	269.2	304.0	399.0	479.6	638.7	
	35sec Oil*	kW	32.0	49.2	63.6	n/a	98.2	129.5	159.5	194.9	213.2	280.7	316.1	391.6	470.8	627.0	
Old Powrmatic Reference		CP	100	150	200	300	300	400	500	600	700	800	1000	1250	1500	2000	
NOx Seasonal (Gross)		mg/kWh	56.0	58.5	59.0	65.5	65.5	67.5	69.2	65.5	84.9	97.3	tbc	tbc	tbc	tbc	
Seasonal Space Heating Energy Efficiency		% $\eta$ s,h	73.6%	74.7%	72.5%	74.2%	74.2%	72.8%	75.2%	72.9%	72.1%	72.5%	tbc	tbc	tbc	tbc	
Thermal Efficiencies (Nett CV)		%	Min 91.5%														
Airflow	Volume	m <sup>3</sup> /s	0.97	0.86	1.01	2.11	1.50	2.30	3.15	3.36	4.00	4.49	5.76	6.49	7.88	10.5	
	Heads	UF / HF	No.	2	2	3	3	3	4	4	4	4	4	4	4	8	8
		Size	mm	203	254	254	305	305	305/358	305/358	358	406	457	457	457	457	457
	Throw	UF / HF	m	15	21	19	24	24	24	29	29	29	41	48	48	30	40
	Fan Static	Standard	Pa	188	222	270	250	200	200	185	290	250	140	140	300	300	300
Up-rated		Pa	250	250	400	500	450	350	400	500	500	450	500	600	600	600	
Electrics	Supply	Standard	V/ph/Hz	230/1/50				400/3/50									
		Optional	V/ph/Hz	400/3/50				230/1/50			n/a						
	Standard Fan	Motor	kW	1.1	1.1	1.6	1.5	2.0	2.6	3.0	4.0	4.0	4.0	7.5	11.0	11.0	15.0
		Run	amp	4.5	5.0	5.0	6.0	8.0	5.0	5.4	8.0	8.0	8.0	11.4	21.3	21.3	28.9
		Start	amp	8.1	17.1	16.1	25.5	28.1	12.4	23.5	23.0	23.0	28.2	50.1	127.2	127.2	182.4
	Up-rated Fan (L.H.P.)	Motor	kW	0.75	0.75	2.2	2.2	2.2	3.0	4.0	5.5	5.5	5.5	11.0	15.0	15.0	18.5
		Run	amp	3.5	4.0	6.0	12.0	8.0	5.4	8.0	9.5	9.5	9.5	12.0	28.9	28.0	35.0
		Start	amp	15.9	15.9	37.8	37.8	27.6	22.1	29.1	38.5	38.5	38.5	75.6	182.4	182.4	221.2
	Fuel	Connection	Oil	BSP/Rc	3/8"	3/8"	3/8"	n/a	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"
Gas			BSP/Rc	1/2"	1/2"	3/4"	3/4"	n/a	3/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Minimum Inlet Pressure		Nat Gas	mbar	17.5				n/a									
		LPG	mbar	37.0				n/a									
Consumption Standard Outputs		Oil	l/h	3.16	4.83	6.38	n/a	9.70	12.95	15.90	18.89	21.17	26.73	31.36	38.82	47.45	63.62
		Nat Gas	m <sup>3</sup> /h	3.45	5.00	6.89	10.34	n/a	13.47	17.23	20.10	22.99	28.43	32.14	41.41	50.61	67.86
	LPG	m <sup>3</sup> /h	1.34	1.98	2.64	4.01	n/a	5.31	6.64	7.72	8.84	11.00	12.84	16.00	19.56	26.23	
Overall Dimensions	UF Upright Freeblowing	Height	mm	2024	2072	2494	2585	2585	2821	2821	3054	3174	3307	3307	3657	4107	4407
		Width	mm	669	669	744	744	744	904	904	904	904	1104	1104	1260	1330	1330
		Depth (Excludes burner)	mm	732	732	927	927	927	1200	1200	1399	1399	1599	1599	1915	2165	2715
Installation Clearances	UF Upright Freeblowing	Front	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
		Side	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
		Blank Side	mm	150	150	150	150	150	150	150	150	150	150	150	n/a	n/a	n/a
		Rear	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Flue Diameter		mm $\phi$	130	130	150	150	150	150	180	180	180	200	200	250	300	300	
Combustion Air Spigot		mm $\phi$	150	150	150	150	150	150	150	150	150	150	150	150	175	175	
Noise Level (See Note Below)		dB(A)	56	61	61	63	63	70	62	73	74	75	77	78	80	82	
Nett Weight (See Note Below)		kg	168	173	231	241	241	341	386	530	530	556	556	1012	1380	1720	
Model			30	45	60	90(gas)	90(oil)	120	150	175	200	250	300	360	440	590	

Notes –

- Fuel consumption and output figures based upon nett calorific values as follows:  
- Class D light distillate fuel oil nett CV 36.28 MJ/l

- Dimensions in table above refer to upright heaters only - for horizontal and counterflow heater dimensions refer to dimensions page.
- Noise levels are applicable to standard UF models and are measured 5m from

\* **Important Note:** For full technical specification notes please refer to the product installation manual on our website at [www.powrmatic.co.uk](http://www.powrmatic.co.uk)

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