

Halton – Very specific cooking appliance
calls for very specific solution!



Josper ovens: Very specific cooking appliance calls for very specific solution

Heavy duty cooking appliances, such as charcoal ovens and charbroilers have always been difficult to deal with.

They are indeed characterized by high heat loads leading to high temperatures inside the exhaust ductwork. They also generate a large quantity of FOG (Fat, Oils and Grease) in addition to carbon-based particles, especially in the case of open flame and solid fuel cooking. Josper ovens are no exception to this rule and also have the added problems with smoke each time the oven door is opened.

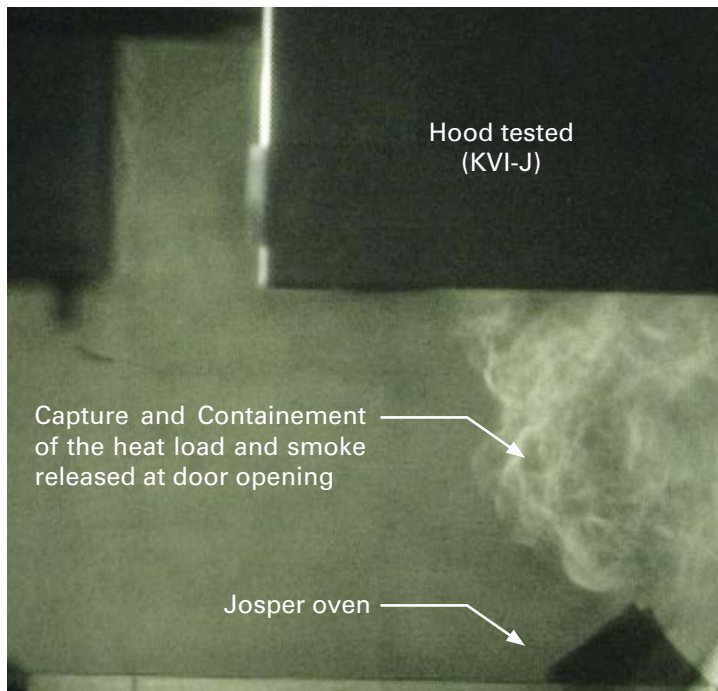


The best Capture and Containment combined with the highest safety and emission control have been the goals of the partnership Josper and Halton have built together. The outcome is two specific ventilation solutions.

KVI-J: The lowest exhaust airflow rate for the best and fully tested Capture efficiency

This first solution is based on a KVI Capture Jet™ hood which reduces the exhaust airflow rates by up to 35 to 40% compared to traditional hoods whilst still removing the same heat load and pollutants. It has been fully tested in our R&D laboratory in real conditions to guarantee the best Capture and Containment efficiency with the lowest exhaust airflow rate, and all this is possible:

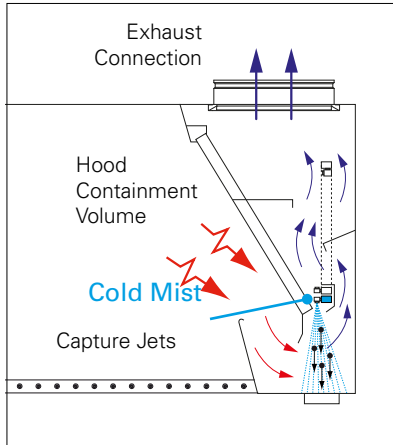
- Whatever the oven configuration (with or without cupboard);
- Whatever the state of the oven (idling or cooking), door closed or opened.



CMW-J (Cold Mist technology): KVI-J capture efficiency with full fire safety

Cold Mist technology is the best solution for efficiently raising the safety of solid fuel appliances up to be on par with standard cooking equipment.

This second solution is based on a similar-looking KVI-J Capture Jet™ hood. However, the exhaust plenum is different in that it features Cold Mist technology. The KVI-J benefits are then combined with the exclusive benefits of the Cold Mist.



- The Cold Mist provides highly efficient filtration:

It creates a Cold water Mist curtain inside the exhaust plenum of the hood. The smoke generated by the cooking appliances is forced to pass through it. Airborne particles and part of the odours are then captured and conveyed to the drain. This is well known, and proven to be a very efficient method of removing FOG (Fats, Oils and Grease) from the air stream.

- The Cold Mist acts as a spark arrester and air cooler:

If sparks enter the hood the Cold Mist takes the heat away through adiabatic and evaporative cooling and therefore greatly reduces the risk of fire propagating in the ductwork. The temperature is at the same time reduced to an acceptable level. The fire risk is reduced to a minimum and “burning on” of the cooking grease is suppressed.

Cold Mist On Demand: Up to 80% water consumption reduction

Halton’s patented IRIS™ sensors control in real time Jospers’ oven door opening to activate the Cold Mist On Demand, in other words only when it is strictly required.



Water is going to be one of the most precious resources. Any water-based product has to be environmentally friendly. Therefore, Halton developed a smart technology that activates the Cold Mist only when it’s strictly required instead of a continuous mist. For Jospers’ ovens, the water supply starts automatically when the chef opens the door and stops when he closes it. Simple and brilliant.

This responsible approach allows up to 80% savings in water consumption as shown in the measurements carried out in the University College of food, Birmingham (UCB) where Mist On Demand technology has been successfully installed.

Type	Water used per month (m³)	Operating cost per month	Footprint per year
Section with Cold Mist On Demand (MOD)	17.3	66 \$ (£ 43)	792 \$
Section with continuous Mist (according program)	95.4	360 \$ (£ 235)	4320 \$
Difference	78.1	294 \$	3528\$

Operating costs based on 2.36 \$ (£ 1.54) per m³ for water supply and 1.40 \$ (£ 0.95) per m³ for water drainage.

Quick selection data

Selection table for KVI-J type Capture Jet hoods

Josper oven type	Halton hood code	Dimensions			LED spot lights	KSA filters	Exhaust connections		Exhaust rate	
		L [mm]	W [mm]	H [mm]	Nbr	Nbr	Ø[mm]	□ [mm]	WITH Heat Cupboard Qv [m³/h] @ ΔP _{stat} [Pa]	WITHOUT Heat Cupboard Qv [m³/h] @ ΔP _{stat} [Pa]
HJ-25	KVI-J25	1100	1300	555	2	2x500x500	355	400x250	2065 @ 75	2685 @ 125
HJ-45	KVI-J45	1600	1300	555	3	3x500x330	355	500x250	2360 @ 140	3070 @ 240
HJ-50	KVI-J50	1600	1600	555	3	3x500x330	355	500x250	2580 @ 170	3360 @ 285
HJ-38	KVI-J38	1100	1300	555	2	2x500x500	315	400x250	1845 @ 60	2400 @ 100

Selection table for CMW-J type Capture Jet hoods with Mist On Demand (MOD) technology

Josper oven type	Halton hood code	KVI dimensions			LED spot lights	KSA filters	Exhaust connections		Exhaust rate	
		L [mm]	W [mm]	H [mm]	Nbr	Nbr	Ø[mm]	□ [mm]	WITH Heat Cupboard Qv [m³/h] @ ΔP _{stat} [Pa]	WITHOUT Heat Cupboard Qv [m³/h] @ ΔP _{stat} [Pa]
HJ-25	CMW-J25	1100	1300	555	2	na	na	400x250	2065 @ 250	2685 @ 250
HJ-45	CMW-J45	1600	1300	555	3	na	na	500x250	2360 @ 250	3070 @ 250
HJ-50	CMW-J50	1600	1600	555	3	na	na	500x250	2580 @ 250	3360 @ 250
HJ-38	CMW-J38	1100	1300	555	2	na	na	400x250	1845 @ 250	2400 @ 250

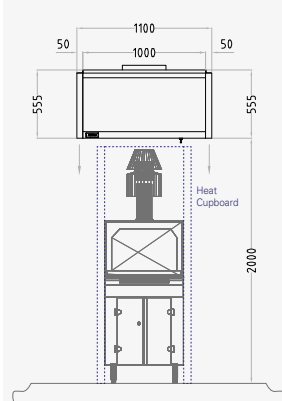
Dimensions and installation principles

Josper
CHARCOAL OVENS HJ25 range

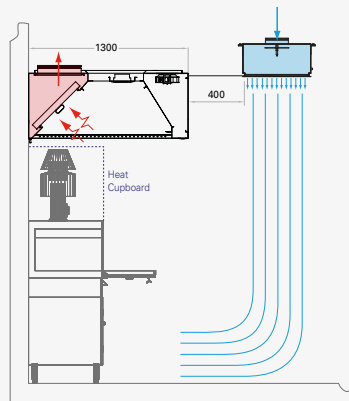
L (mm) 640 / 780
H (mm) 1860
W (mm) 700



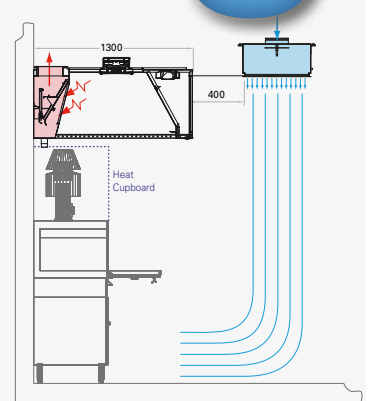
Halton



KVI-J25



CMW-J25

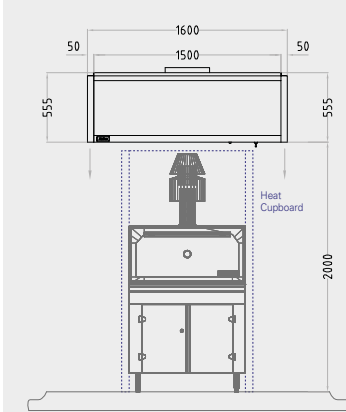


Josper
CHARCOAL OVENS HJ45 range

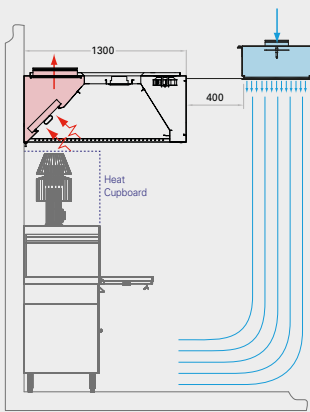
L (mm) 930 / 1070
H (mm) 1905 / 1860
W (mm) 700



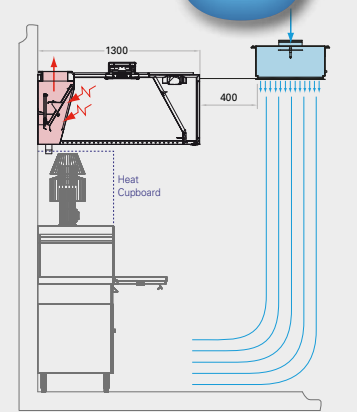
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KVI-J45



CMW-J45



Jasper
CHARCOAL OVENS HJ50 range

L (mm) 930 / 1070
H (mm) 1905 / 1860
W (mm) 960

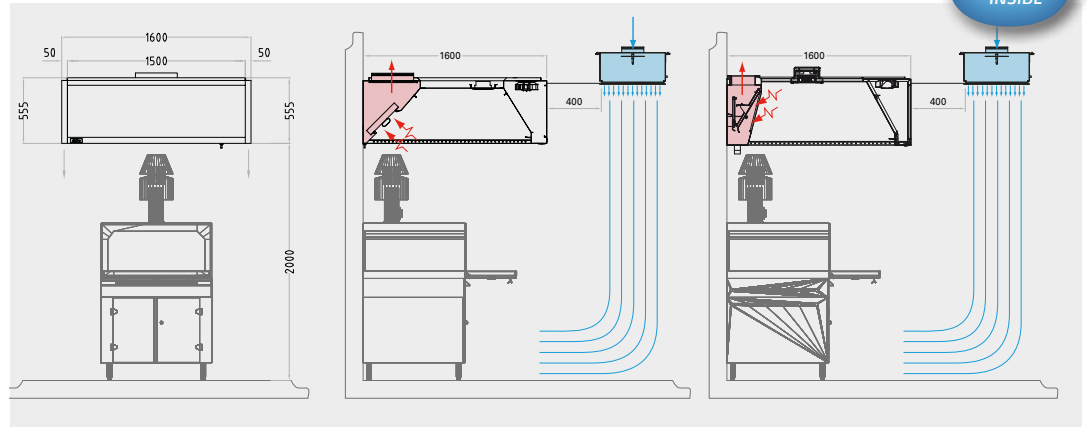


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KVI-J50

CMW-J50

MIST ON DEMAND INSIDE



Jasper
CHARCOAL OVENS HJ38 range

L (mm) 710
H (mm) 1120
W (mm) 520

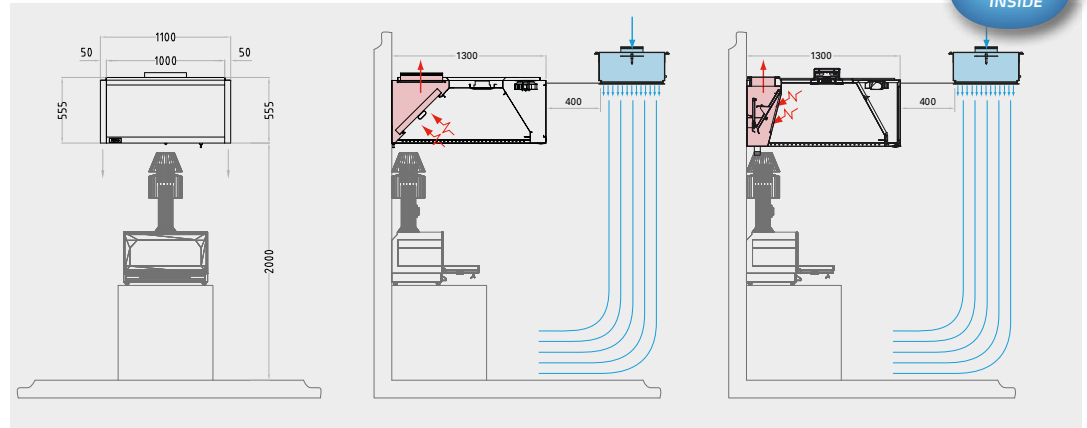


Halton

KVI-J38

CMW-J38

MIST ON DEMAND INSIDE

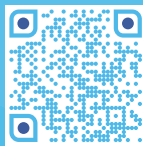


Want to see how a Jasper oven can be used for live cooking in the middle of an exhibition hall?

The CMW-J hood, with integrated Mist On Demand technology, was combined with a Pollustop unit during the biggest foodservice exhibition in the Middle-East. This High Performance Kitchen solution allowed live cooking demonstrations, in the middle of the exhibition hall, without any connection to an exhaust ductwork.

This solution was combining Capture efficiency with the highest safety and emission control. This is just a glimpse of Halton's High Performance Kitchen solutions.





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