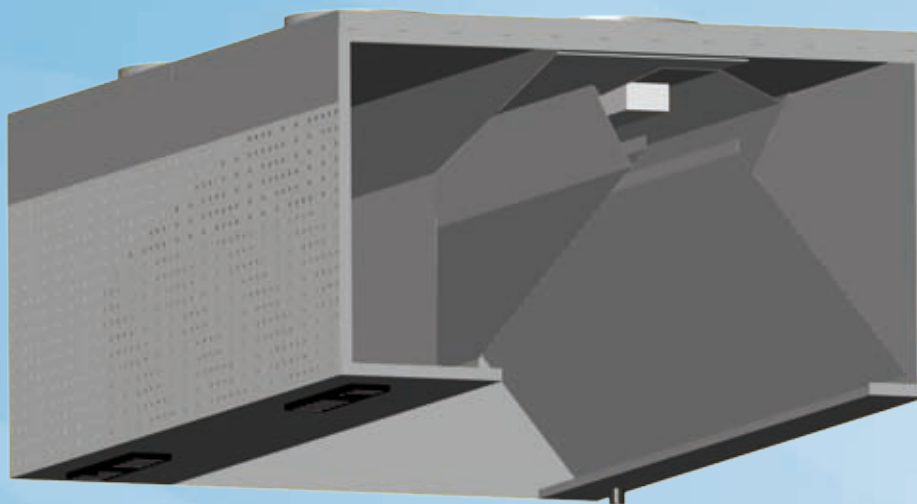


KVD

Steam Extraction Canopy with Supply Air

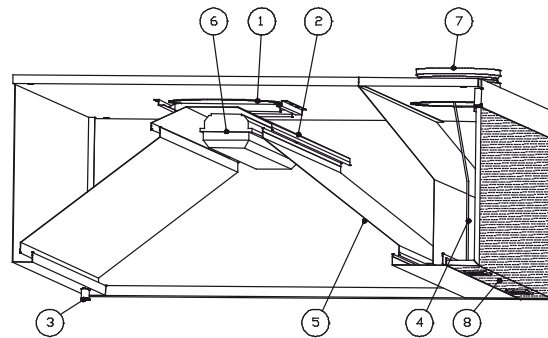
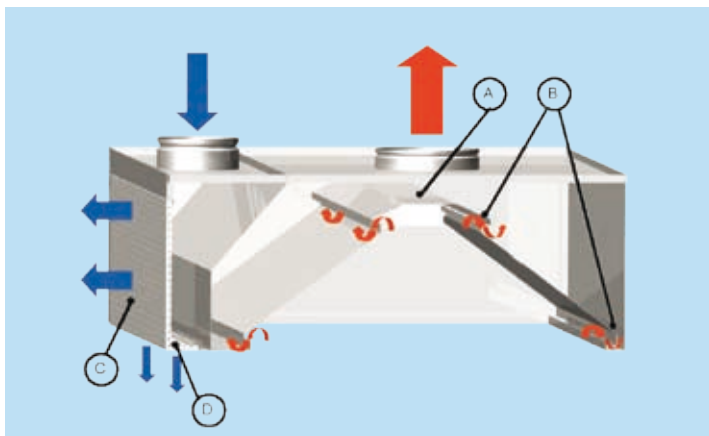


The KVD steam extract canopy has been especially adapted to capture, condense and remove steam produced by industrial dishwashers, cooking pots or where grease filtration is not the main requirement.

- Condensation is achieved by the use of angled internal baffles and deflectors
- Efficient exhaust is maintained by using lateral side slots combined with the large internal volume
- Draft free air distribution directly into the working zone from the front face, low velocity supply diffuser
- Modular construction, simplifies design and installation
- Adjustment and measurement of airflow using the MSM and T.A.B. measuring tap in combination with damper plate within the spigot.
- Manufactured from polished stainless steel AISI 304
- Surface mounted light fittings are available as an accessory

QUICK DATA

L	Recommended Exhaust air volumes		Recommended Supply air volumes	
	l/s	m ³ /h	H=555 mm	H= 400 mm
1000	305	1100	100...200 l/s / meter length or 360...720 m ³ /h / meter length LpA < 50 dB(A)	80...150 l/s / meter length or 288...540 m ³ /h / meter length LpA < 50 dB(A)
1500	445	1600		
2000	610	2200		
2500	805	2900		



Function

The KVD canopy has been specially developed to cover equipment that produces steam and its internal volume enables the removal of large volumes of air, which are then extracted via the upper baffle chicane (A). Two lateral side slots (B) help to prevent the condensing water from dripping on to the work surfaces below. Make-up air is distributed at low velocity into the space through the front face of the canopy (C). Individual supply nozzles (D) are adjustable to produce increased velocities in the working zone near the cooking equipment, which helps to reduce the effect of the radiant heat given off by the cooking equipment.

CODE	DESCRIPTION
1	Exhaust spigot and damper
2	Upper plate
3	Drain nipple
4	MSM
5	Interior baffles, movable
6	Surface light IP65 (1*18W or 1*36W)
7	Supply spigot with MSM
8	Front face with black personal nozzle

Construction

The outer casing is in easy to clean stainless steel AISI 304. The plenum roof, connection spigots and control damper are manufactured from galvanized steel, but can be supplied from stainless steel (AISI 304) as an optional extra (excepted MSM).

All lower joints of the canopy are fully welded and polished which ensures water tightness. KVD is equipped with a draining tap (3) for removal of any collected condensate.

The interior baffles (5) are removable to allow access and cleaning of the inside exhaust plenum.

Adjustment and measurement of the extract and supply airflow is carried out using the adjustable damper plate located within the extract spigot(s) and the supply spigot via the MSM (7).

A surface mounted light fixture can be supplied as an optional extra.

The KVD canopy comprises of a supply air module.

DIMENSIONS

KVD	mm
Length	1000...2500
Width	1000...1500
Height	555, 400

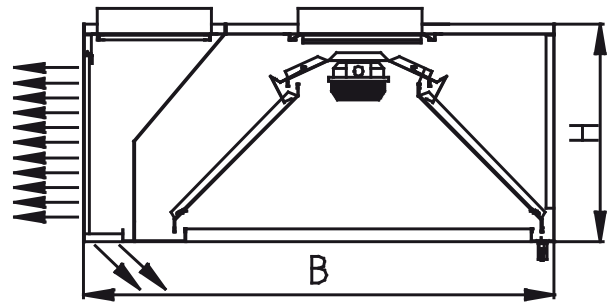
Accessories

- Cover Boards – where canopies are below ceiling level
- Infill Panels
- Surface mounted light – IP65 (maxi. ambient T°: 35°C)
- Non-standard spigots sizes and position
- Exhaust roof in stainless steel
- General Supply (GS)

DIMENSIONS (mm)

KVD – 1- Wall model	
L	1000.....2500
B	1000.....1500
H	555, 400
D1	315
G	(B-200)/2
D2	250
C	180

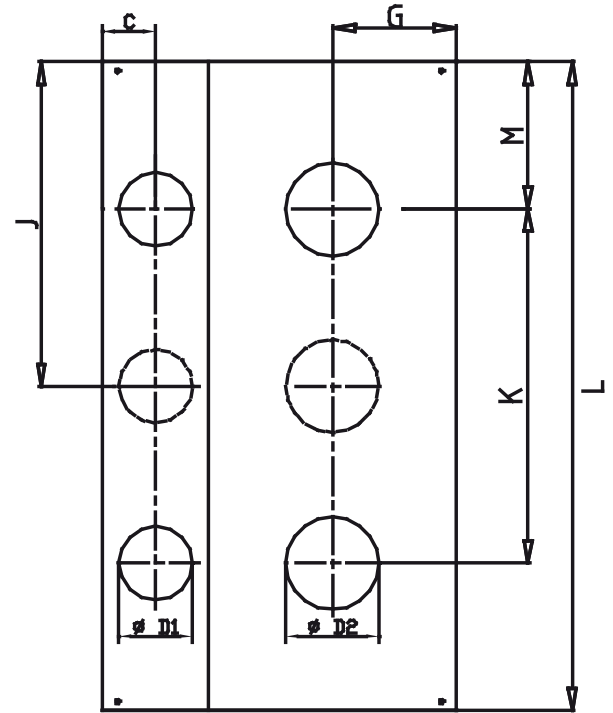
Note: The dimensions above are for modular sections only; larger canopies are assembled using a combination of separate modules, which makes transportation and site handling easier.



LOCATION OF CONNECTIONS (mm)

For typical sizes

L	M	Exhaust		Supply		
		2x315	1x315	2x250	3x250	3x250
		K	J	K	J	K
1000	-	-	L/2	500	-	-
1500	375	750	L/2	750	-	-
2000	500	100	L/2	1000	L/2	1500
2500	500	1500	L/2	1500	L/2	1500



WEIGHTS (KG)

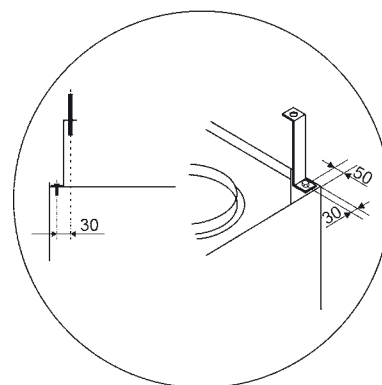
400 mm

L/B	1000	1100	1300	1500
1000	63	67	70	74
1500	74	77	80	84
2000	89	92	96	101
2500	100	103	107	113

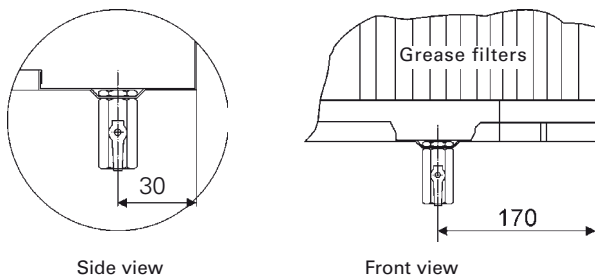
555 mm

L/B	1000	1100	1300	1500
1000	69	73	76	79
1500	81	83	86	89
2000	95	99	94	108
2500	106	111	117	121

Mounting bracket 150 mm high



Position of Drain tap, when fitted



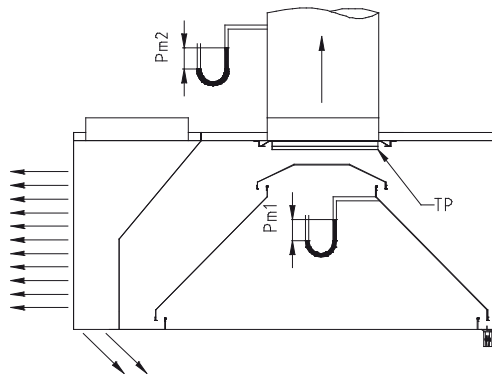
Pressure drop and sound data, exhaust

H = 555/400

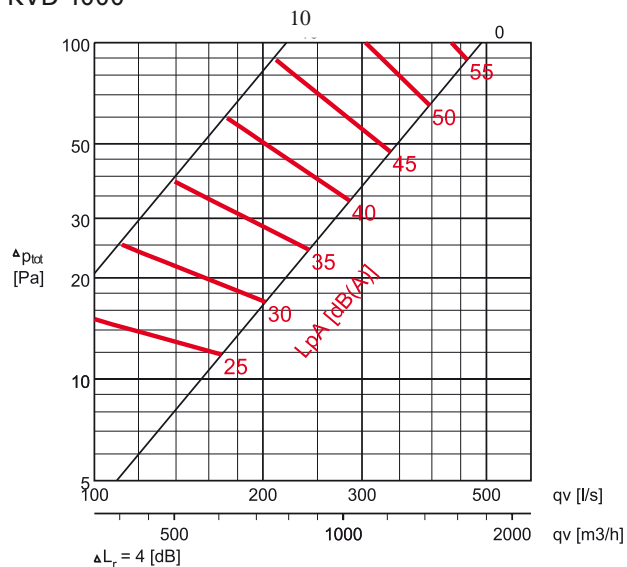
Δp_{m1} = Pressure loss of filters measured from MSM, minimum exhaust pressure loss when the damper plate is open

Δp_{m2} = Maximum exhaust pressure loss when the damper plate is nearly closed.

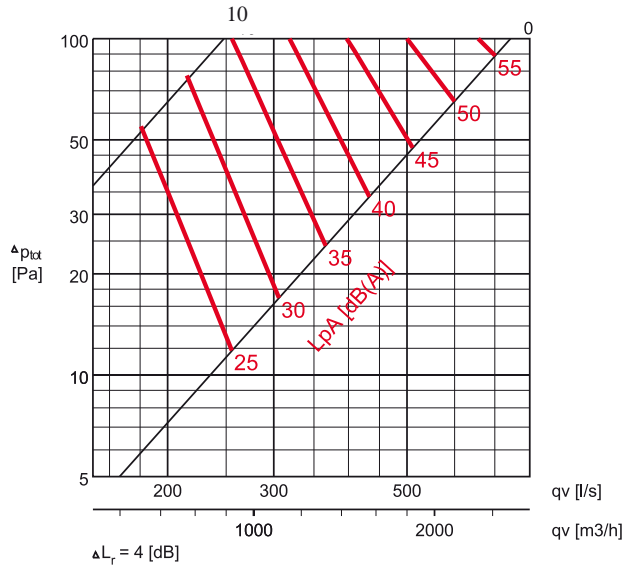
TP = Damper plate



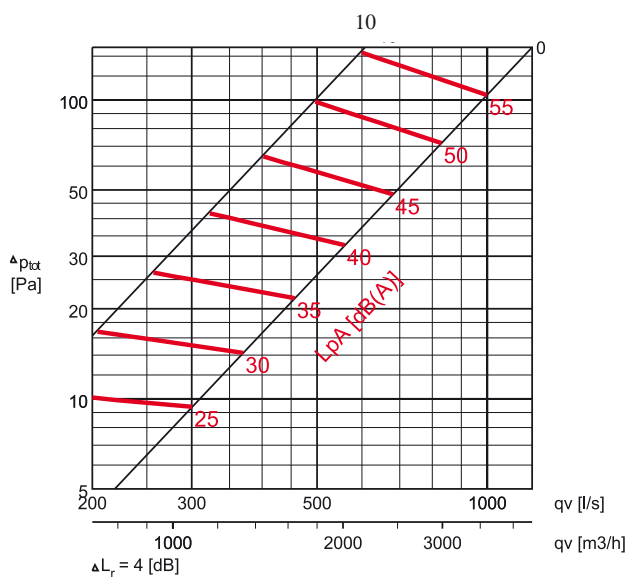
KVD-1000



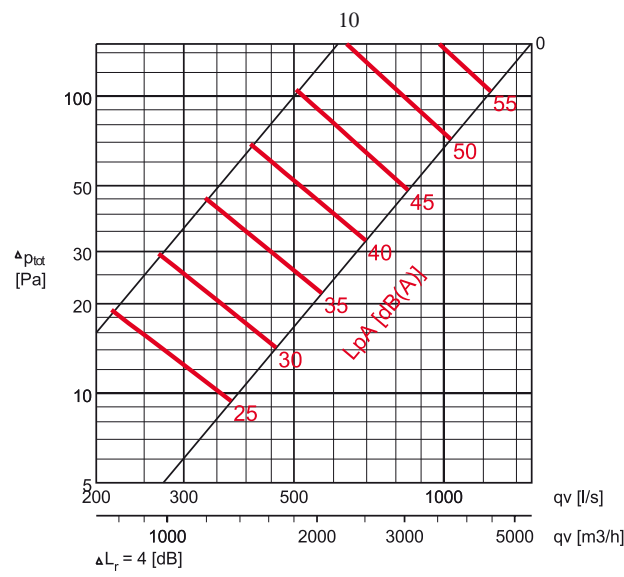
KVD-1500



KVD-2000



KVD-2500



Pressure drop, supply

$$H = 555/400$$

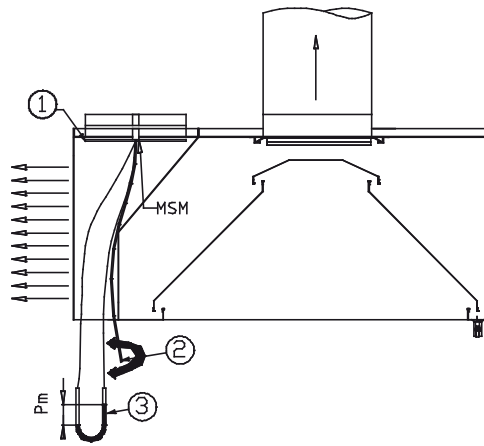
Δp_{m1} = Measure of pressure difference, PA

Δp_{m2} = Maximum supply pressure loss when the damper plate is nearly closed.

MSM = Measurement and adjustment device

The supply air is controlled by adjusting (1) the damper (2) in the supply spigot and the air flow is measured using the measurement tap (3).

$$Q_v = 43,8 \times \sqrt{\Delta P_m}$$



Suggested specifications

General

Kitchen canopies are constructed from stainless steel to material specification AISI 304.

The kitchen canopies shall be supplied complete with outer casing/main body, pressure measurement taps, extract air spigot connections with damper plates MSM, adjustable baffle plates, condensate channel, drain tap or collection tray and hanging brackets.

Outer casing/Main body

Outer casing panels shall be constructed of stainless steel to AISI 304 in brushed satin finish. Each joint shall be spot-welded, riveted or machine stitched. The canopy shall be provided with a full perimeter condense channel and crush folded sloping edges, which are properly deburred.

The joint of lower edge are fully welded, avoiding harmful dripping of water. The plenum roof panels shall be constructed of galvanized sheet steel.

Supply Plenum Area

The supply air plenum shall be insulated with M0 sealed glass wool slab of density 95Kg/m³ and shall be provided with access by removal of main casing perforated stainless steel front panels. The main supply air flow shall be distributed through this panel.

MSM

The MSM shall be located on the inside of the spigot.

Condensate Channels

Condensate channels shall form part of the main construction of the canopy and run the entire length of the canopy and on both sides.

Baffle plates

Condensation is achieved by the use of angled internal baffles and deflectors. Efficient exhaust is maintained by using lateral side slots combined with the large internal volume. The baffle plates shall be movable to allow access to the underside of the canopy roof.

Spigot Connections

The spigot connections for extract air shall be constructed from galvanized steel and shall be supplied with a sealing gasket and air flow balancing damper plate manufactured from galvanized steel. The exhaust damper shall be adjustable and access to it is via high tensile stranded wire cables.

Bulkhead light fixture (optional)

Each canopy can be provided with surface light fixture to provide approximately 500 lux at the cooking appliances work surface. The light fixture shall be suitable for single-phase 230v supply and shall be constructed to protection standard IP65. 3x1 mm², core electrical cable connecting the light fitting to the conduit box containing multiple connectors shall be provided.