

Roof ducts TGR and TGK



EXHAUSTO

FOR A BETTER FLOW



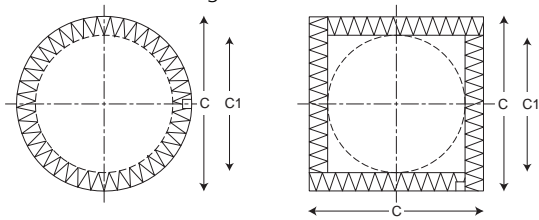
TGR/TGK - Dimensions and technical description

Roof duct TGR (round) and TGK (square) have been specially developed for DTH and DTV roof fans. Combined with diffuser unit FLD, the optimum airhandling solution is obtained. This leads to a minimum of pressure loss and a low sound level, even where large volumes of air pass through. The roof ducts are sound as well as condensate insulated.

The roof fan is fitted directly to the top of the roof duct. The bottom of the roof duct can be connected to any ducting system with standard dimensions in accordance with EUROVENT (nipple dimension). In addition, EXHAUSTO diffuser FLD can be mounted directly in the roof duct. To avoid transferring vibration to the roof duct, a rubber ring has been fitted to the fan.

TGR and TGK have external cladding made of a galvanized plate; this is followed by 45-50 mm of mineral wool, a fine-meshed tissue and - internally - a galvanized, perforated sleeve. The roof ducts have an internal cable duct and an integral, removable anti-back draught shutter. As standard, the roof ducts are supplied in 3 lengths and 6 sizes with lead or zinc flashings to match the roof pitch in question.

TGR/TGK are also available without flashing. Please indicate preference when ordering.



DTH	TGR	Measurements			
Roof fan size	Roof duct round size	C1 mm	C ø mm	L1 mm	Weight* Kg
DTH160	TGR160 - 600	Ø160	Ø268	600	15
	TGR160 - 900	Ø160	Ø268	900	17
	TGR160 - 1200	Ø160	Ø268	1200	20
DTH200	TGR200 - 600	Ø200	Ø305	600	16
	TGR200 - 900	Ø200	Ø305	900	19
	TGR200 - 1200	Ø200	Ø305	1200	22
DTH250	TGR250 - 600	Ø250	Ø370	600	19
	TGR250 - 900	Ø250	Ø370	900	23
	TGR250 - 1200	Ø250	Ø370	1200	27
DTH315	TGR315 - 600	Ø315	Ø440	600	23
	TGR315 - 900	Ø315	Ø440	900	27
	TGR315 - 1200	Ø315	Ø440	1200	32
DTH400	TGR400 - 600	Ø400	Ø510	600	26
	TGR400 - 900	Ø400	Ø510	900	31
	TGR400 - 1200	Ø400	Ø510	1200	37

DTH roof fans can also be fitted to at square roof duct TGK.

DTV	TGK	Measurements			
Roof fan size	Roof duct square size	C1 mm	C mm	L1 mm	Weight* Kg
DTV160	TGK160 - 600	Ø160	□267	600	16
	TGK160 - 900	Ø160	□267	900	20
	TGK160 - 1200	Ø160	□267	1200	24
DTV200	TGK200 - 600	Ø200	□307	600	18
	TGK200 - 900	Ø200	□307	900	22
	TGK200 - 1200	Ø200	□307	1200	26
DTV250	TGK250 - 600	Ø250	□357	600	21
	TGK250 - 900	Ø250	□357	900	27
	TGK250 - 1200	Ø250	□357	1200	32
DTV315	TGK315 - 600	Ø315	□422	600	25
	TGK315 - 900	Ø315	□422	900	31
	TGK315 - 1200	Ø315	□422	1200	37
DTV400	TGK400 - 600	Ø400	□507	600	30
	TGK400 - 900	Ø400	□507	900	36
	TGK400 - 1200	Ø400	□507	1200	43
DTV450	TGK450 - 900	Ø500	□607	900	50
	TGK450 - 1200	Ø500	□607	1200	65

Dimensions in mm.

* Weight incl. AOR and 30° lead flashing

Max. Roof pitch for length L1:

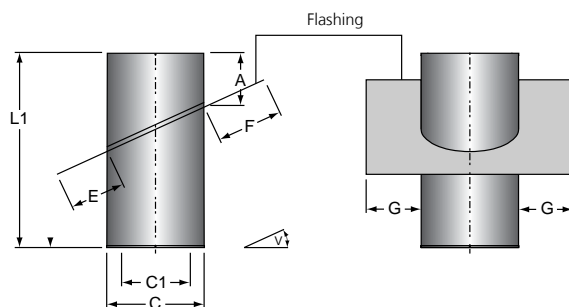
L1 = 600 mm max. 30° lead flashing

L1 = 900 mm max. 45° lead flashing

L1 = 1200 mm TGR/K 160, 200, 250 max. 60° lead flashing

L1 = 1200 mm TGR/K 315 og 400 max. 50° lead flashing.

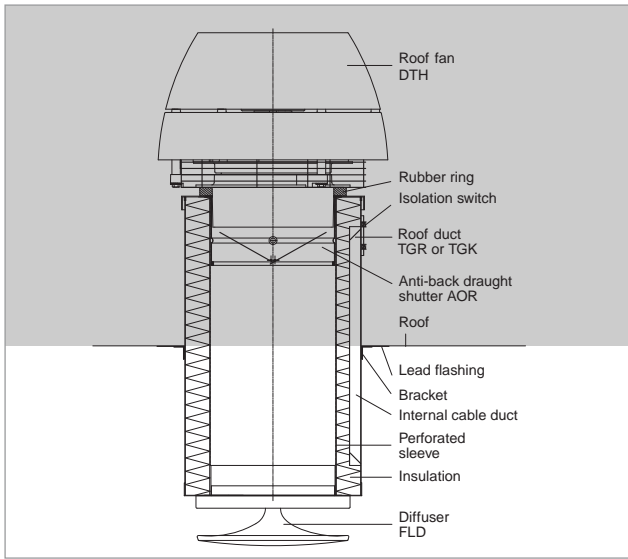
The lead flashing can be adapted within +/- 2.5° from the roof pitch stated.



Angle v	A	E	G	F
0° < v ≤ 2°	300	100	100	100
2° < v ≤ 60°	250	250	250	300

Dimensions in mm.

Measurements E, F and G only apply to lead flashings. If zinc is used, the flashing is always 100 mm..

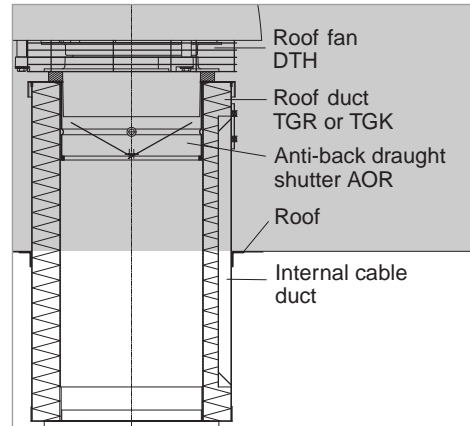


DTV/DTH		160	200	250	315	400	450
Standard integral	AOR size	160	200	250	315	400	450
Extra accessories	FLD size	160	200	250	315	2 pcs. 315	-

TGR/TGK - Connection

Roof ducts have been prepared for cable connection via an integral cable duct. The installation cable is pushed into the cable duct at the bottom and pulled out at the top at the isolation switch, which is normally not supplied by EXHAUSTO.

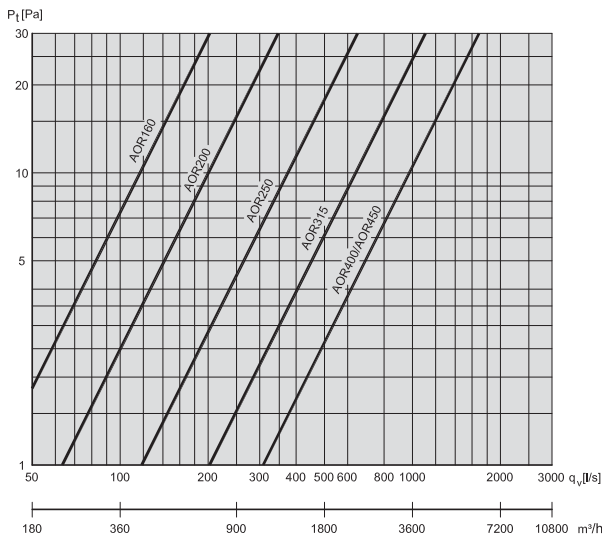
The isolation switch is fitted to the TGR console. For TGK it is fitted directly to the roof duct.



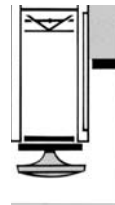
AOR - Anti-back draught shutter

As standard, the roof ducts feature an anti-back draught shutter, AOR, but if specifically ordered, they are also available without such a shutter. When cleaning the roof duct and/or the connection duct, the anti-back draught shutter can easily be removed without requiring any tools. The AOR opens when the fan is in operation.

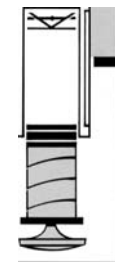
P_t = total pressure loss
 Temperature $t = 20^\circ \text{C}$
 Density $\rho = 1.2 \text{ kg/m}^3$



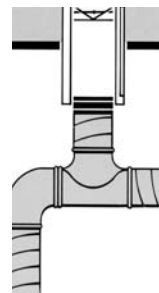
TGR/TGK - Examples of installation



With an EXHAUSTO roof fan, roof duct and diffuser fitted to the bottom of the roof duct, the optimum air-handling solution is obtained for situations that require a minimum of space, e.g. for flat roofs or inclined roofs with a small distance to the place of extraction. bottom of the roof duct.



If there is a long distance between the roof duct and the extraction diffuser, a Spiro tube or similar can be used directly at the bottom of the roof duct.



TGR/TGK - Sound data

TRG/TGK Roof duct size	Insert silencer							Lp DTH dB(A)	Lp DTV dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
TGR/TGK160-600	1	6	22	23	22	12	5	36	33
TGR/TGK160-900	2	8	23	27	28	17	8	34	31
TGR/TGK160-1200	4	11	25	28	33	22	10	32	28
TGR/TGK200-600	3	5	15	25	24	13	5	44	42
TGR/TGK200-900	5	6	20	29	30	18	7	42	40
TGR/TGK200-1200	7	11	26	31	34	23	9	38	36
TGR/TGK250-600	4	7	13	19	12	7	4	47	48
TGR/TGK250-900	5	9	20	26	18	10	6	45	46
TGR/TGK250-1200	6	11	25	30	23	13	7	43	44
TGR/TGK315-600	4	5	11	15	9	4	4	58	58
TGR/TGK315-900	5	8	15	20	12	5	5	55	55
TGR/TGK315-1200	7	10	20	25	15	7	6	53	52
TGR/TGK400-600	2	5	9	11	6	4	3	63	65
TGR/TGK400-900	2	6	14	20	9	6	5	61	62
TGR/TGK400-1200	4	7	14	22	11	7	7	60	61
TGK450-900	2	3	12	17	8	4	4	-	-
TGK450-1200	2	5	14	21	10	6	5	-	-

Lp = sound pressure level dB(A) in the room

Preconditions for Lp:

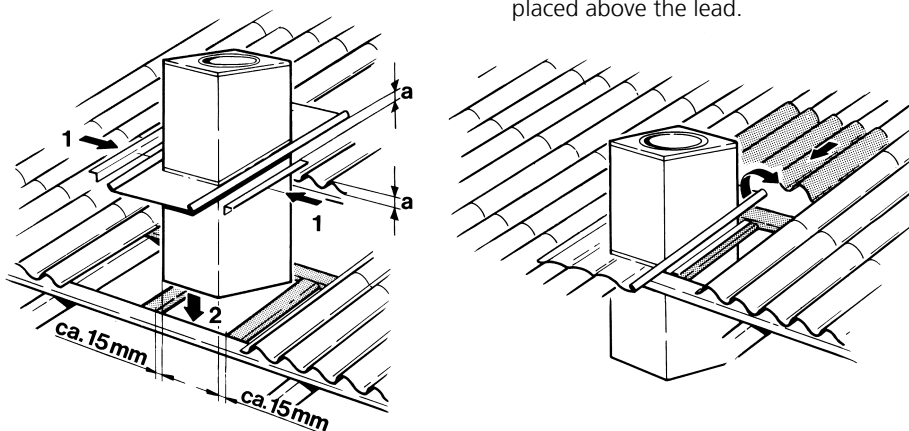
- a. The sound level is stated for an air volume that equals 80% of the max. output for DTH/DTV roof fans
- b. (1400 rpm) in the same size as TGR or TGK
- b. Roof fans DTH/DTV are fitted directly on TGR or TGK without an AOR anti-back draught shutter. If an AOR is integrated, 3 dB(A) must be added.
- c. No fixture at the bottom of TGR or TGK.
- d. The extraction unit is fitted at the middle of the ceiling.
- e. Sound absorption in room = 10 m² sabin.
- f. Measured from the middle of the room.

Tolerance +/- 4dB. Insert silencing is stated without the sound level of the AOR.

TGR/TGK - Installation

A hole is made in the roof, approx. 30 mm wider than the roof duct; the overlying roof tiles/plates are loosened and displaced upwards to make room for the lead flashing work. Battens are placed between the rafters to support the brackets at the same height as the other battens. The

brackets (1) at the side of the roof duct are fitted at a distance (a) under the lead that corresponds to the corrugation height of the roof tile/plate. The roof duct is fitted in the hole (2), the lead is unrolled, tapped gently into shape and the displaced roof tiles/plates are pulled back and placed above the lead.



EXHAUSTO offers a 2 year factory guarantee. EXHAUSTO is certified to ISO 9001.

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