General requirements:				
Number of pipe penetrations per cabinet	2			
max. cut-out cross-section per cabinet	1412mm²			
max. pipe diameter (d)	28mm			
max. hose diameter (d)	28mm			
max. cable diameter (3x 1,52) (d)	8mm			
Pipe material	steel /stainless steel			
max. pipe wall thickness	1mm			
max. hose wall thickness	3mm			

Note!

A: Pipes and cables are installed in holes with their nominal diameters (d).

B: Hoses < Ø20mm are installed in holes with their nominal diameters (d).

C: Hoses $\geq \emptyset 20$ mm are wound continuously completely with a layer of intumescent strip (see Fig. 2). Drillhole diameter= nominal diameter (d) + 3,6mm.

D: Drillholes can be designed to the upper tolerance of the nominal diameter (d) or at most be rounded up to the next full millimetre. Gaps between the pipe/ hose/ cable and the insulation must be avoided.

E: Unused drillholes must be closed properly!

F: The minimum distance between the holes must be 15mm (see Fig.3).

The pipe penetration may only be attached in the marked attachment areas

(see page 2-6) for the respective cabinet type! The edge of the frame defines the outer limit of the attachment area.

The drillhole must always be perpendicular to the attachment area.

The door locking must not have any negative effects, when attaching the pipe penetration!

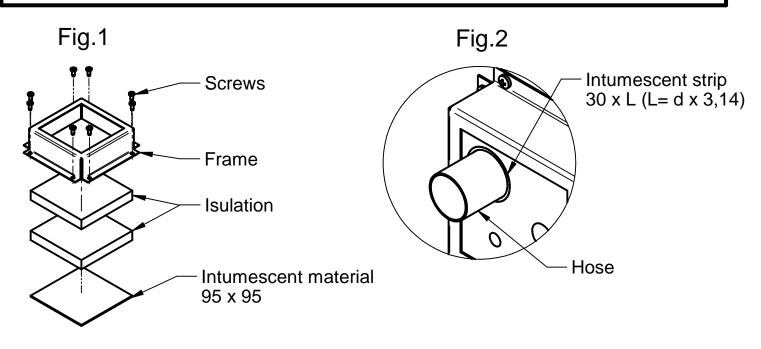
The ventilation shafts (areas above and under the ventilation connections) must not damaged, when attaching the pipe penetration on the rear panel.

The pipes/ hoses/ cables to be fed in must not block the doors!

The pipes/ hoses/ cables to be fed in must not block the inside valve flaps!

The pipe penetration is assembled in the following order in preparation for the attachment: 1. Intumescent material, 2. Insulation, 3. Frame (see Fig. 1)

Use \emptyset 3,5 x 9,5 screws for fixing onto the sides or top and \emptyset 4,5 x 50 screws for fixing onto the rear panel.



Cross-section calculation:

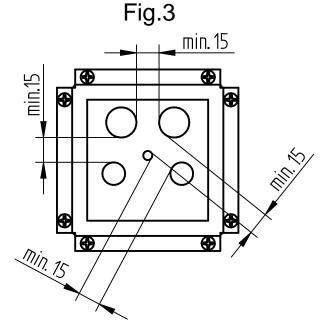
A = Cross-section area = $3,14/4 \times d^2 \approx 0,785 \times d^2$

Example for assignment:

1x Ø20mm + 2x Ø15mm:

 $A = 1x 0,785 \times 20 \text{mm}^2 + 2x 0,785 \times 15 \text{mm}^2$

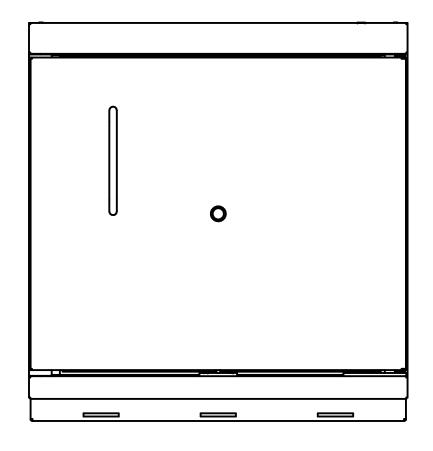
 $A = 667,25 \text{mm}^2$

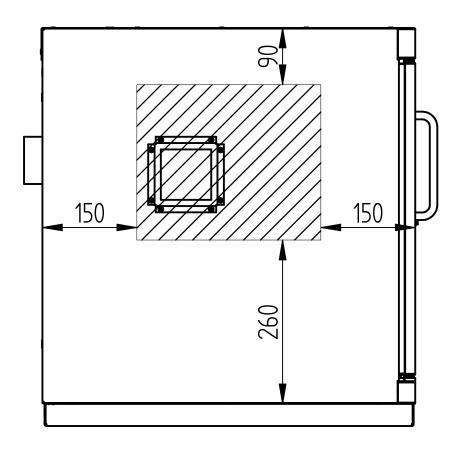


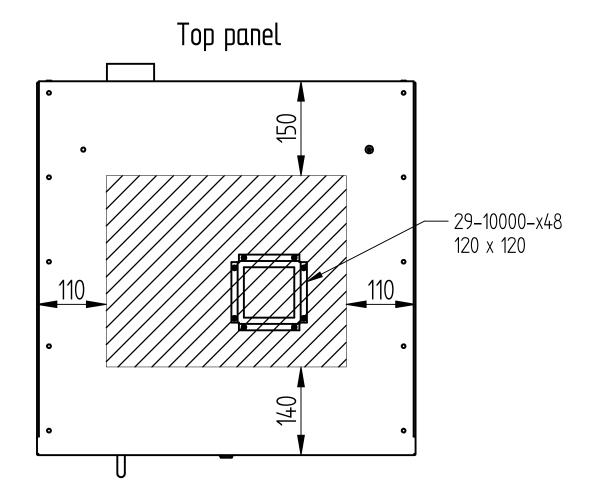
Model type	
S, S-5	page 2
M, M-5	page 3
L, L-5	page 4
LD, LD-5	page 5
XL, XL-5	page 6

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permission.	part number:	55214	drawing numbe	:r: 00	0041135	7
DÜPERTHAL Sicherheitstechnik Frankenstraße 3 D-63791 Karlstein	revision: 05	date:	2024-04-18	page:	1 von 6	
			DÜP	ER	TH/	AL .

Side left / right







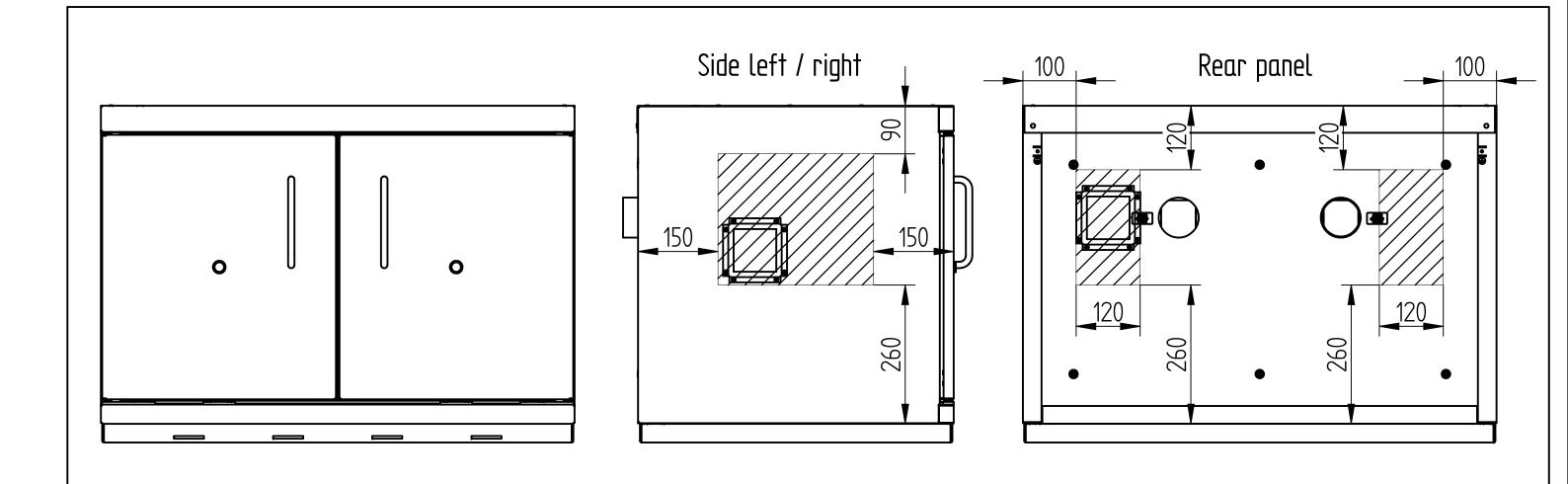
- Description for:
 Classical door technology (door handle) and Push-to-open
 Cabinet depth 600 and 500

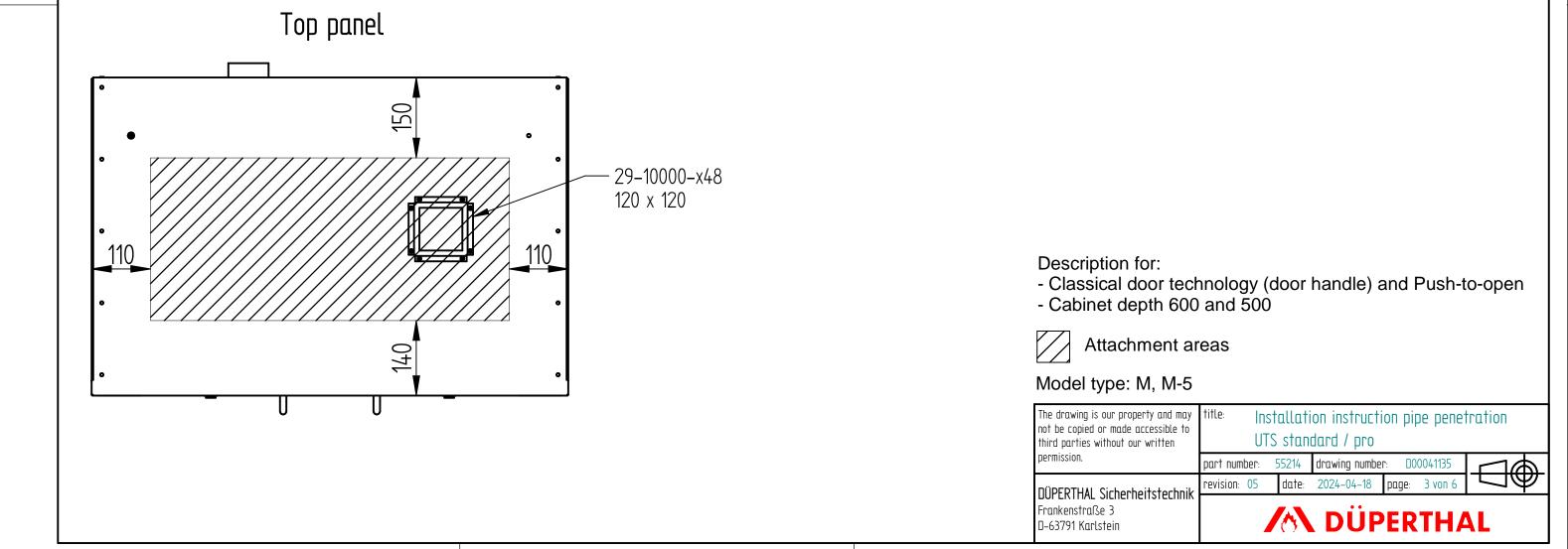


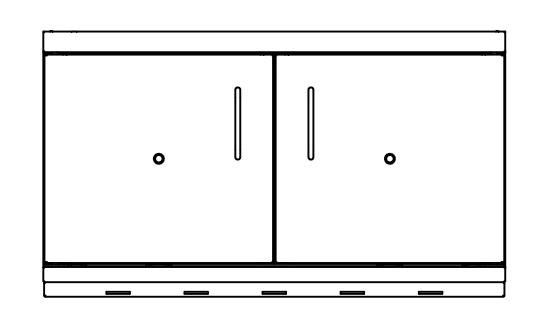
Attachment areas

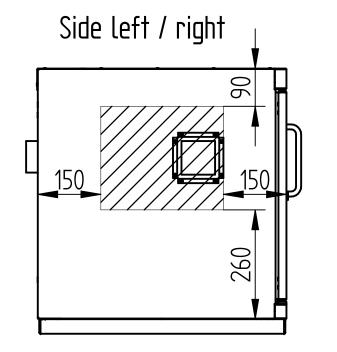
Model type: S, S-5

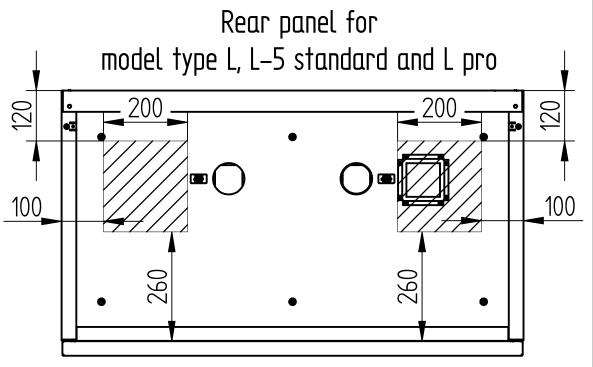
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	part number:	5214	drawing numbe	r: 000041135	
	revision: 05	date:	2024-04-18	page: 2 von 6	
			DÜP	ERTH	4L

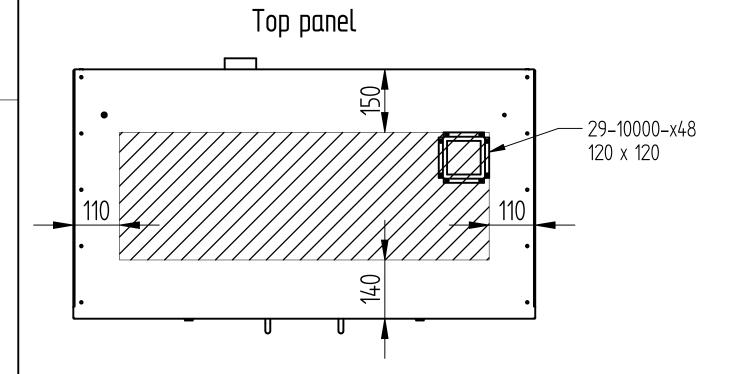


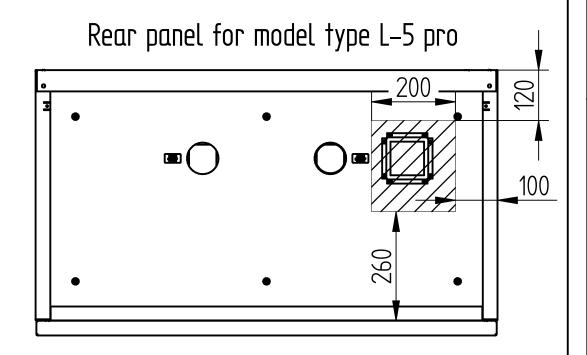






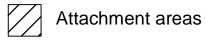






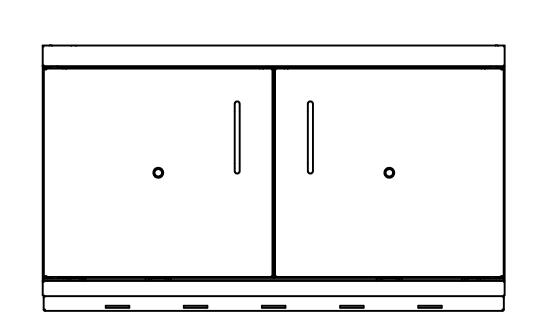
Description for:

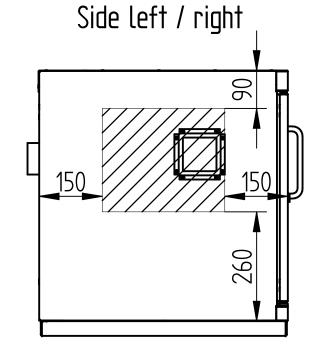
- Classical door technology (door handle) and Push-to-open Cabinet depth 600 and 500

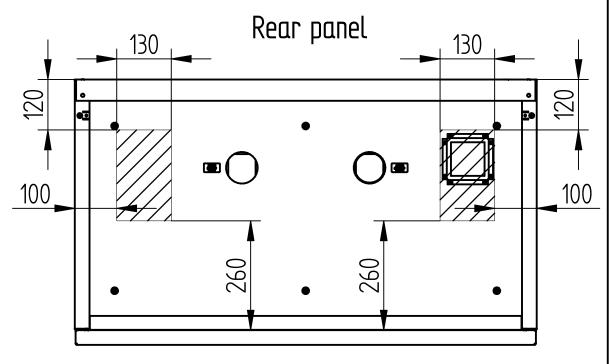


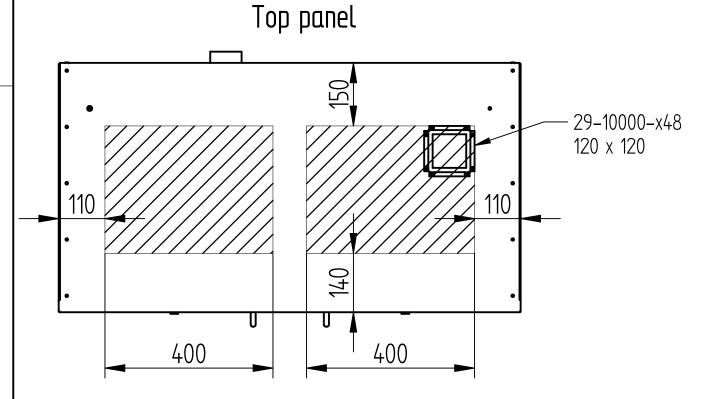
Model type: L, L-5

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			DÜP	ERTH	7L









Description for:

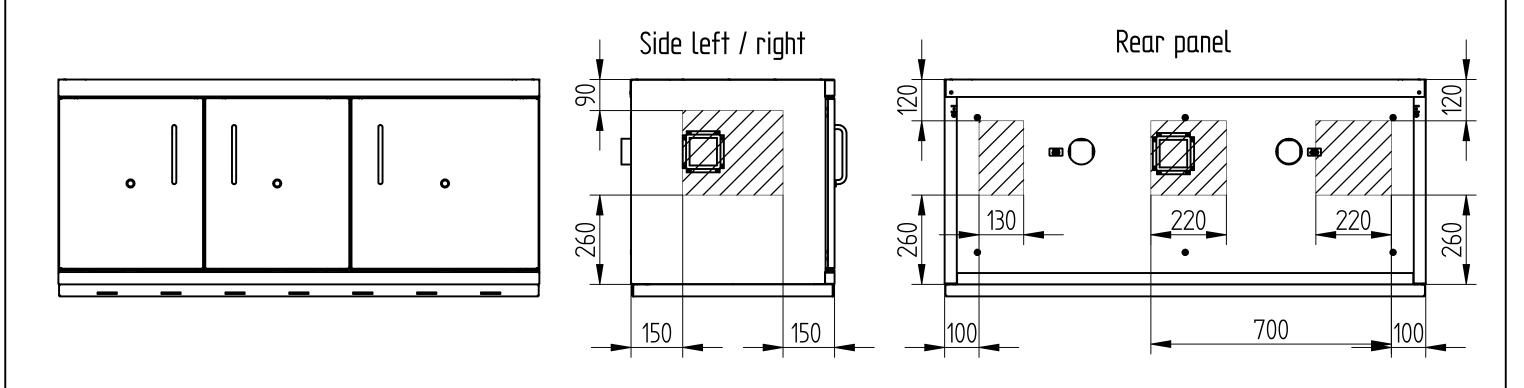
- Classical door technology (door handle) and Push-to-open Cabinet depth 600 and 500

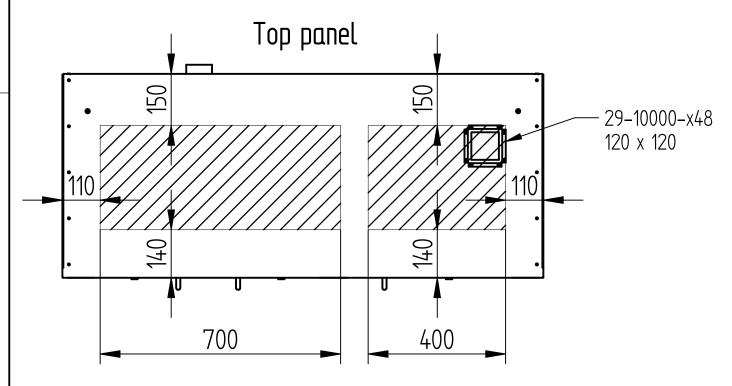


Attachment areas

Model type: LD, LD-5

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Description for:

- Classical door technology (door handle) and Push-to-open Cabinet depth 600 and 500



Model type: XL, XL-5

