

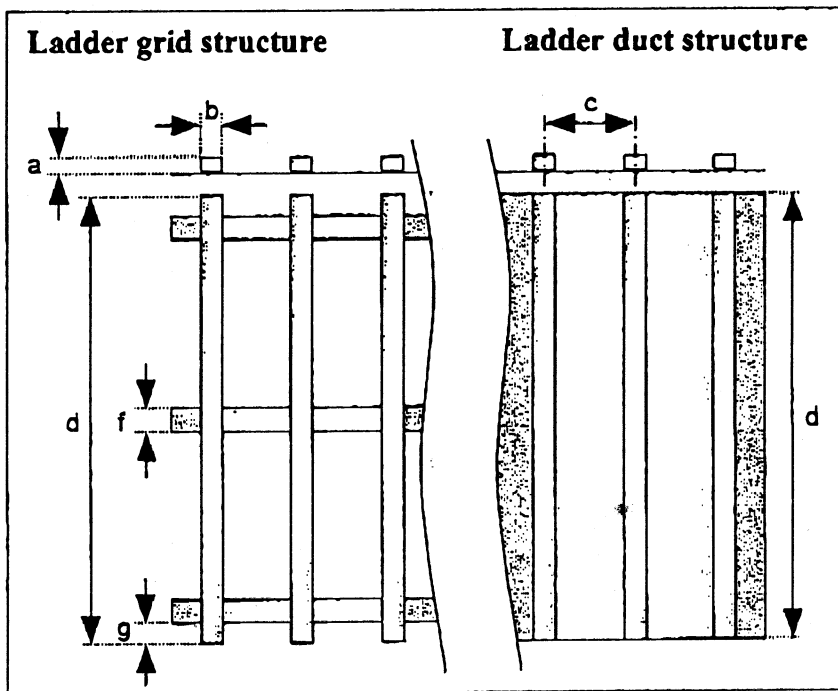
KREMPEL ladder grids and ladder ducts for use in oil-filled transformers

Applications and properties

KREMPEL ladder grids and ladder ducts are used in oil-filled transformers. KREMPEL ladder grids and ladder ducts are the ideal solution in problem assignments where sufficiently wide cooling channels between windings have to be realised.

Use of the proven KREMPEL pressboard PSP 3050 assures very high values for the radial strength even at high mechanical loads caused by short circuits in the coil.

Thanks to the specially rounded design of the ladders there is no damage to insulations even in the event of very high pressures!



Structure and availability

Designation system

Description	a	x	b	x	c	x	d	x	e	-	XX	e.g.	Ladder duct	8	x	12	x	30	x	800	x	0.25	-	DPP
Ladder grid / ladder duct																								
Strip thickness, in mm																								
Strip width, in mm																								
Width of mesh (centre - centre), in mm																								
Overall width, in mm																								
Thickness of the backing material, in mm																								
Any other material used																								

KREMPEL ladder grids and ladder ducts are made entirely from the well-known KREMPEL presspaper products. Used as the backing material are both KREMPEL transformer-grade presspaper as well as different thickness grades of

KREMPEL-DPP (Diamond Dotted Presspaper) with a partial resin coating on one side (refer also to Section 6 of the KREMPEL main product catalogue). Either two or three tapes of backing material of width $f = 30$ mm are used here for KREMPEL ladder grids. The distance from the outside edge, g , then varies between 50 mm for an overall width c , of max. 450 mm and 70 mm for all other wider KREMPEL ladder grids. KREMPEL ladder ducts are backed over the entire width by the desired backing material.

Standard dimensions and formats for KREMPEL ladder grids and ladder ducts

Strip thickness a mm	Strip width b mm	Width of mesh (centre - centre) c mm	Overall width = Ladder length d mm	Thickness of the backing material e mm	Type of backing material used
3	5	25, 30, 35	≤ 500	0.20; 0.25	3055, DPP
3	6	25, 30, 35	≤ 500	0.20; 0.25	3055, DPP
3	7	25, 30, 35	≤ 650	0.20; 0.25	3055, DPP
3	8 - 12	25, 30, 35	≤ 1000	0.20; 0.25	3055, DPP
3	15	30, 35	≤ 1000	0.20; 0.25	3055, DPP
3	17	35	≤ 1000	0.20; 0.25	3055, DPP
4	5	25, 30, 35	≤ 650	0.20; 0.25	3055, DPP
4	6	25, 30, 35	≤ 650	0.20; 0.25	3055, DPP
4	7	25, 30, 35	≤ 650	0.20; 0.25	3055, DPP
4	8 - 12	25, 30, 35	≤ 1000	0.20; 0.25	3055, DPP
4	15	30, 35	≤ 1000	0.20; 0.25	3055, DPP
4	17	35	≤ 1000	0.20; 0.25	3055, DPP
5	5	25, 30, 35	≤ 650	0.20; 0.25	3055, DPP
5 - 6	6 - 12	25, 30, 35	≤ 1000	0.20; 0.25	3055, DPP
5 - 6	15	30, 35	≤ 1000	0.20; 0.25	3055, DPP
5 - 6	17	35	≤ 1000	0.20; 0.25	3055, DPP
7 - 8	7 - 12	25, 30, 35	≤ 1000	0.20; 0.25	3055, DPP
7 - 8	15	30, 35	≤ 1000	0.20; 0.25	3055, DPP
7 - 8	17	35	≤ 1000	0.20; 0.25	3055, DPP
8 - 10	8 - 12	25, 30, 35	≤ 1000	0.20; 0.25	3055, DPP
8 - 10	15	30, 35	≤ 1000	0.20; 0.25	3055, DPP
8 - 10	17	35	≤ 1000	0.20; 0.25	3055, DPP

Special formats available on request.

Availability and storage

KREMPEL ladder grids and ladder ducts are supplied either already cut to size to the dimensions specified by the customer or as reeled material on standard-size cardboard cores (ID70 or 76 mm) in lengths of between 10 and max. 30 metres.

The same storage conditions apply for KREMPEL ladder grids and ladder ducts as for presspaper and pressboard. This means: Storage in the original packaging in a dust-free and temperature-controlled environment. Direct sunshine or any other sources of heat shall be avoided under all circumstances. So as to prevent the product from absorbing too much moisture or from drying out, the ladder grid or ladder duct should only be taken out of its original packaging shortly before being needed for use.

All values stated are to be seen as typical values. We reserve the right to introduce changes within the framework of further technical development. We do not accept any obligations or liabilities in respect of this information. Status: 2/98