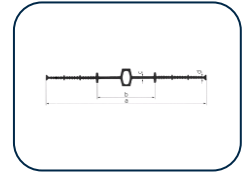


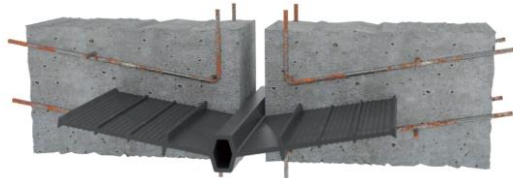
**PLAKA - WATERSTOP**

**Internal expansion joint belt in PVC**

REF 05.03.01 - Version V02 – 02/07/2021



**Description**



Waterstops are made out of PVC with a central hollow core. The waterstops present a ribbed profile on both surfaces.

**Application fields**

Expansion joint belts are applied in expansion joints of concrete structures, where a watertightness is required. Waterstops are installed during the setting of the formwork and placed symmetrically in the middle of the structure. supported by mean of the reinforcement layers.

The thickness of the concrete element must be at least equal of the width of the waterproofing membrane (Exception: a concrete thickness of 300 mm is sufficient for a strip width of 320 mm)

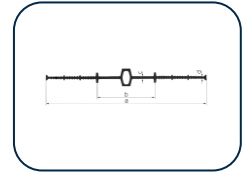
**Properties**

Mechanical properties	
Elastomer	PVC-P
Shore hardness - DIN 53505	72 ± 5 ° Shore A
Tensile strength - ISO 527-2	≥ 10 N/mm <sup>2</sup>
Elongation at break - ISO 527-2	≥ 275%
Colour	black

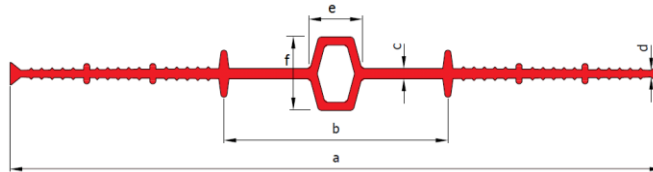
**PLAKA - WATERSTOP**

Internal expansion joint belt in PVC

REF 05.03.01 - Version V02 – 02/07/2021



**Dimensions**



		Material dimensions						m/Box	Weight Kg/m
Code	Type	Widths		Thicknesses		Central hollow core			
		Overall width	Width of expansion element	Thickness of expansion element	Outside thickness (anchorage element)	Width	Thickness		
		a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)		
MID11	D11	110	40	3.5	2.5	6,5	20,0	25	0.75
MID15	D15	150	50	3.5	2.5	8,5	24,0	25	0.90
MID19	D19	190	65	3.5	2.5	8,5	25,0	25	1.15
MID24	D24	240	80	4	3	13,5	30,0	25	1.50
MID32	D32	320	110	5	3.5	16,0	36,0	25	2.30
MIDEM25	DEM25	250	120	6	5	20,0	35,0	Min 250	2.70
MIDEM32	DEM32	320	170	6	5	20,0	36,0	Min 250	3.20

Nominal belt width : 20 - 30 mm

Calculation of the resulting deformation for internal expansion belt:



X Direction : by compression and tension

Y Direction : by shearing

Z Direction : by shearing

$$V_r = \sqrt{V_x^2 + V_y^2 + V_z^2}$$

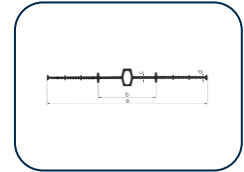
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**PLAKA - WATERSTOP**

Internal expansion joint belt in PVC

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Permissible deformations :

$V_r$  max see rate diagram, in relation to the water pressure

Boundary conditions :

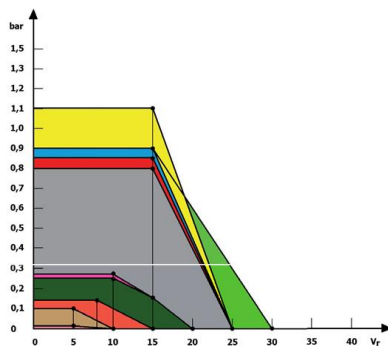
$V_x$  :  $\hat{a} W_{nom} = 20 \text{ mm} : W_{min} \geq 15 \text{ mm}$

$\hat{a} W_{nom} = 30 \text{ mm} : W_{min} \geq 20 \text{ mm}$

$V_y$  :  $\leq W_{nom}$

$V_z$  :  $\leq W_{nom}$

$W_{nom}$  = designed joint width in construction planning at the time of construction creation



Typ	Maximaler Wasserdruck in bar	Maximale resultierende Verformung $V_r$ in mm
DDS 32	1,10	25
D 50	0,90	30
DEM 32	0,90	25
D 35	0,85	25
D 32	0,80	25
DEM 25	0,27	20
D 24	0,25	20
D 19	0,14	15
D 15	0,10	10
D 11	0,01	10

If the value of the selection chart will be exceeded, higher deformation or water pressure could be defined after clearance with the supplier. Therefore, further tests or calculations are necessary. For this purpose, the permission of the client is required.

**Accessories**

Picture	Reference code	Description	Weight Kg/1
	MICH	Heated knife	3,00
	MIV	Vulcanizing strip	0,08/m
	FRCOLPA	Hot air gun	1,15
	MIATTA	Fasteners (per 200 units)	0,01
	MICC	Heated blade	0,89

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