


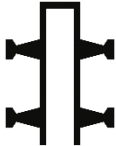

Specifications for the design of waterstops according to DIN 18197



DIN 18197 regulates the design principles, the installation and the joining technology as well as the dimensioning of waterstops, taking into account all the principles mentioned in this DIN.

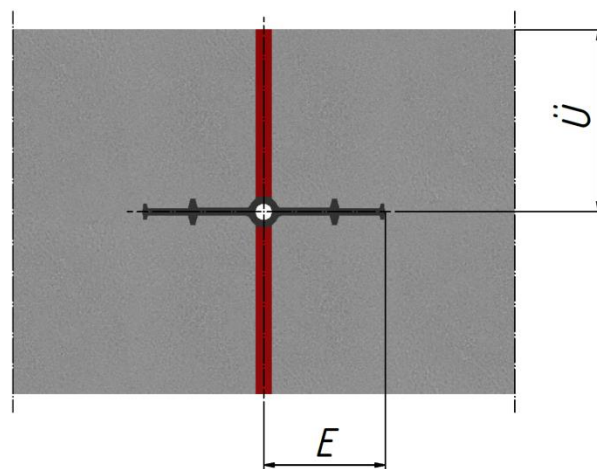
1. Joint width

The design diagrams are valid for an initial joint width / nominal joint W_{nom} width for internal expansion waterstops and cap seal waterstops of 20 - 30 mm and for external expansion waterstops of 20 - 25 mm.

Waterstop	Design / type	Width of joint W_{nom}
	FM, FMS, DA	20 - 30 mm
	FAE, FA	20 - 30 mm
	AM, DA	20 - 25 mm

2. Location in concrete

Concrete cover rule:
anchorage depth $E \leq$ concrete cover \ddot{U}



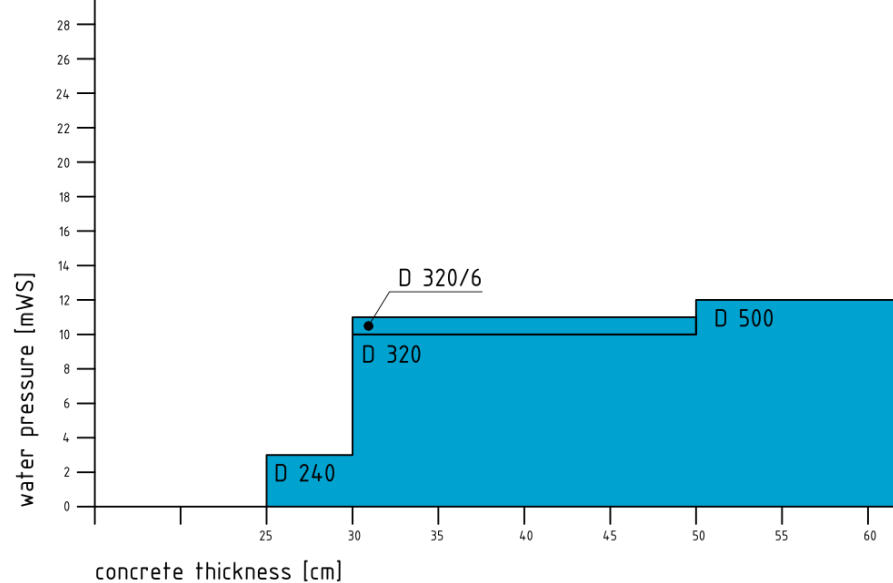
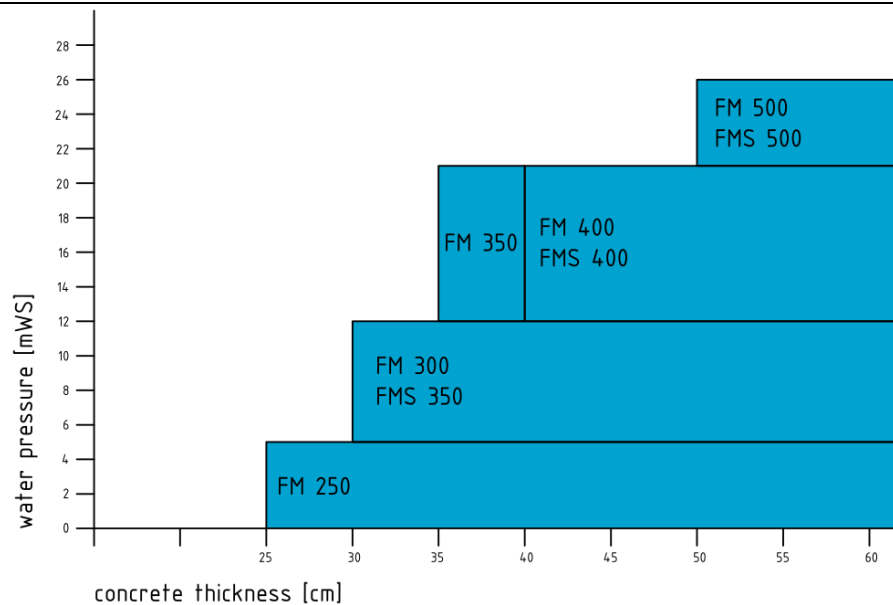
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3. Minimum thickness of concrete for internal waterstops

Rule of thumb:

Concrete thickness in area of the waterstop \geq waterstop width
(with exceptions)



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4. Design (water pressure and movement)

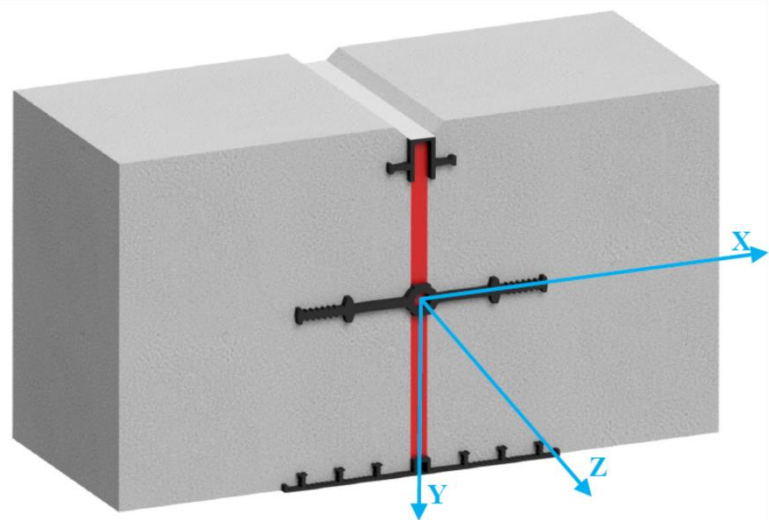
- For waterstops in accordance with DIN 7865 and DIN 18541, the design rules in accordance with DIN 18197 shall apply. Depending on the individual case assessment, the respective profiles may also be suitable for higher loads.
- For PVC-P waterstops, the dimensions given in the ABP (general building inspectorate test certificate) apply.

Design water-level:

The highest expected ground, strata or flood level.

Filling water level in containers.

v_r = resulting movement
 v_x = deformation in x-axis
 v_y = deformation in y-axis
 v_z = deformation in z-axis



$$v_r = \sqrt{v_x^2 + v_y^2 + v_z^2}$$