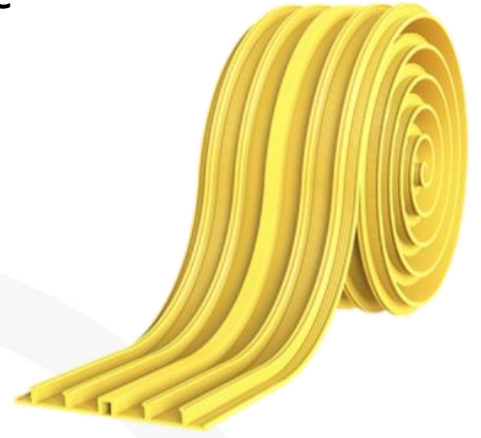


## DA 24-4 TYPE WATERSTOP

### (Expansion Joint Waterstop Placed Outside Concrete)

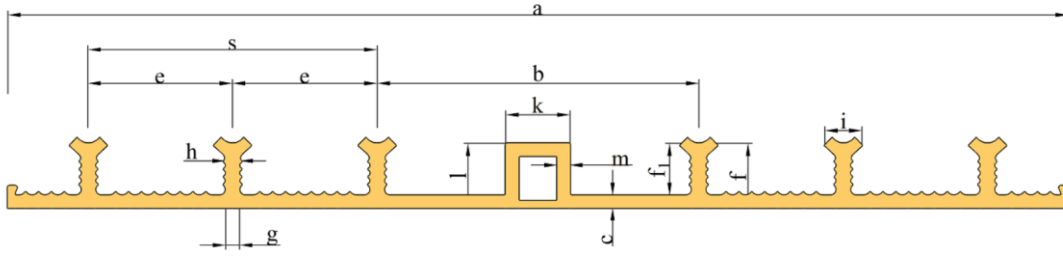
- A waterstop placed on the outer surface of a concrete structural element with a flat outer surface, an expansion gap in the center and parallel profiles on both sides of the gasket sections perpendicular to the longitudinal axis of the gasket to prevent the gasket from peeling out of the concrete.
- Resistant to high water pressures.
- Waterstop tapes can be joined to each other by heat (thermal) welding (150 °C - 180 °C).



## TECHNICAL DATA

### General Application Areas of Waterstop

- Dams,
- Irrigation canals,
- Water tanks, reservoirs,
- Water purification plants,
- Swimming pools,
- Docks Transmission tunnels,
- Hydroelectric power plants,
- Bridges,
- Metro constructions,
- Viaducts,
- Retaining walls,
- Slabs on ground and foundations,
- Industrial structures.
- Production length 20 meters.



- |                      |   |          |   |
|----------------------|---|----------|---|
| <b>a</b>             | Total width   | <b>h</b> | Thickness at the thinnest part of the notched anchor thread |
| <b>b</b>             | Width of the expansion section                          | <b>i</b> | Notched anchor thread head thickness                        |
| <b>c</b>             | Thickness at the thinnest part of the expansion section | <b>k</b> | Expansion gap width   |
| <b>e</b>             | Distance between axes of notched anchor threads         | <b>l</b> | Expansion gap height  |
| <b>f</b>             | Height of notched anchor thread                         | <b>m</b> | Wall thickness at the thinnest part of the expansion gap    |
| <b>f<sub>1</sub></b> | Height of notched anchor thread (excluding thickness)   | <b>N</b> | Number of notched anchor threads                            |
| <b>g</b>             | Thickness of notched anchor thread at the joint         | <b>s</b> | Width of anchor section (e x (N-1))                         |
- Type DA waterstop cross-section*

*Type DA waterstop nominal dimensions (mm)*

Product Code	a Min.	b Min.	c Min.	N Min.	e Min.	f Min.	f <sub>1</sub> Min.	g Min.	h Min.	i Min.	k Min.	l Min.	m Min.
DA 24-4	240	90	4	4	45	20	16	4 ≥ c ≥ 0.2f	4	11 ≥ h+6	20	20	4

*Tolerances for length dimensions*

Nominal Size Range (mm)											
< 3	≥ 3 < 6	≥ 6 < 10	≥ 10 < 18	≥ 18 < 30	≥ 30 < 50	≥ 50 < 80	≥ 80 < 120	≥ 120 < 180	≥ 180 < 250	≥ 250 < 320	≥ 320
± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 1.0	± 1.2	± 1.4	± 1.7	± 2.0	± %0.8

*Tolerances for wall thicknesses*

Nominal Size Range (mm)					
< 1.2	≥ 1.2 < 2.5	≥ 2.5 < 4	≥ 4 < 6.5	≥ 6.5 < 10	≥ 10
± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± %0.8

### Mechanical Properties

<b>Analysis</b>	<b>Standard</b>	<b>Basic requirement</b>
Appearance inspection	TS 3078-2	No gaps, cracks, shrinkage, etc.
Size inspection	TS 3078-2	Dimensions must comply with TS 3078-1
Shore A hardness	TS 3078-2	70 ± 5
Tensile strength	TS 3078-2	≥ 10 MPa
Elongation rate at break	TS 3078-2	≥ %275
Tear resistance	TS 3078-2	≥ 12 kN/m
Low temperature behavior: Elongation at break at -20 °C	TS 3078-2	≥ %200
Behavior: a) After soaking in slaked lime milk b) Behavior in the face of heat c) Behavior after aging Percentage change in the average value compared to the initial value:	TS 3078-2	
Tensile strength		≤ %20
Elongation rate at break		≤ %20
Modulus of elasticity		≤ %50
Joint strength		Rupture outside the weld zone or
Short-term junction factor ( $f_z$ )	TS 3078-2	≥ 0.6
Fire reaction class according to TS EN 13501-1+A1	TS 3078-2	Class E must be
Residue fraction by mass	TS 3078-2	< %5.0