sireg

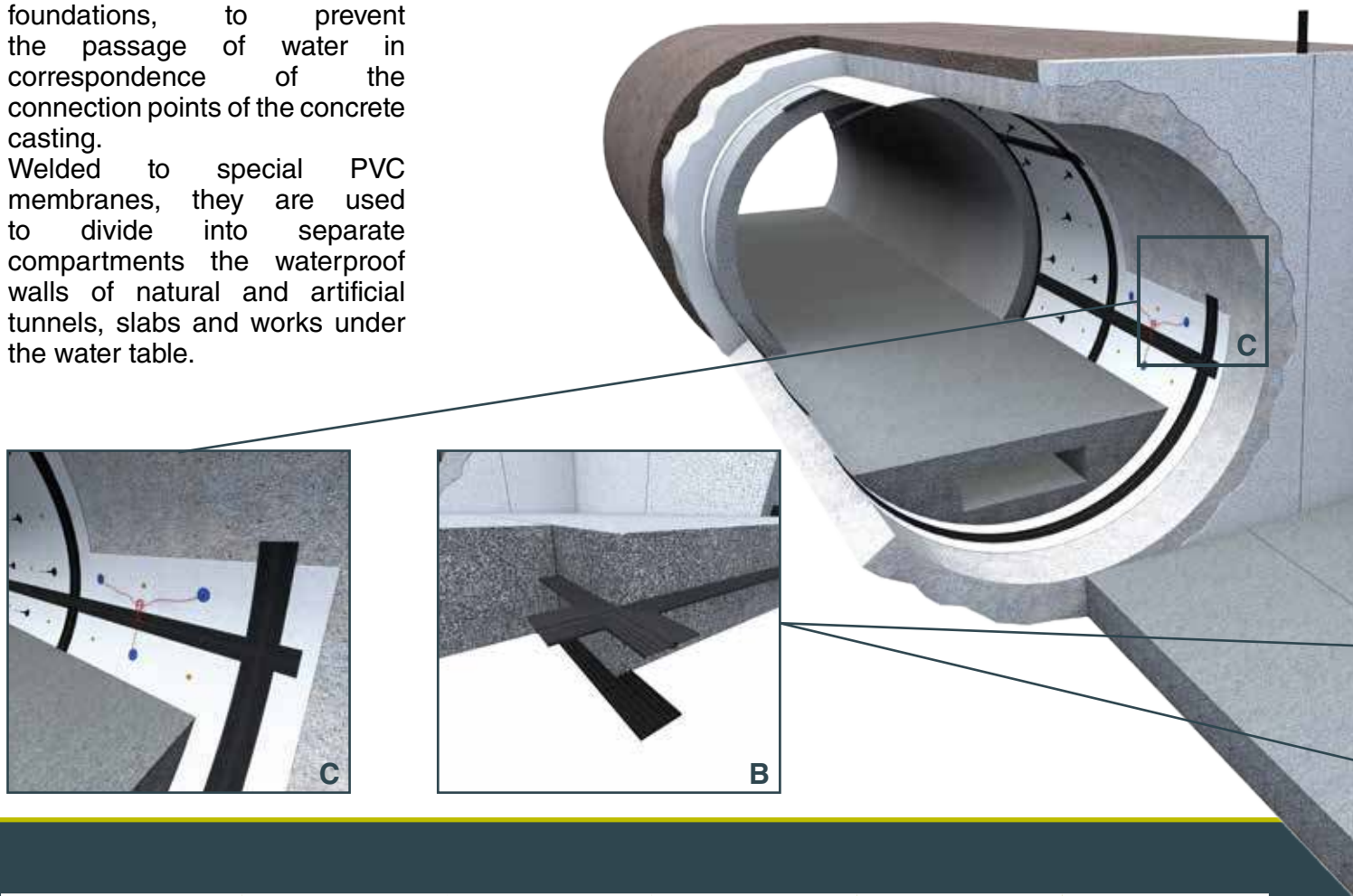
WATERSTOP FLEXVINIL®

WATERSTOP JOINTS FOR DIAPHRAGM WALLS, CONSTRUCTION AND WATERPROOFING

WATERSTOP - FLEXVINIL®

The FLEXVINIL® PVC WATERSTOP joints are waterproof profiles with high mechanical and elastic properties, capable of ensuring a perfect hydraulic sealing and a high absorption capacity of the mechanical stresses.
They are applied in concrete structures such as diaphragm walls, slabs, dams, tanks, foundations, to prevent the passage of water in correspondence of the connection points of the concrete casting.
Welded to special PVC membranes, they are used to divide into separate compartments the waterproof walls of natural and artificial tunnels, slabs and works under the water table.

The FLEXVINIL® PVC WATERSTOP joints have a high resistance to the aggressive action of acid alkaline solutions, aging and brackish waters. On request, it is possible to manufacture profiles by means of special compounds resistant to oils and hydrocarbons.
The various types of profiles have been designed according to their specific use: the width of the WATERSTOP joint is proportional to the thickness of the concrete casting, while its thickness is a function of the hydrostatic pressure that acts on the work.
The range of the available profiles can satisfy all project requirements.

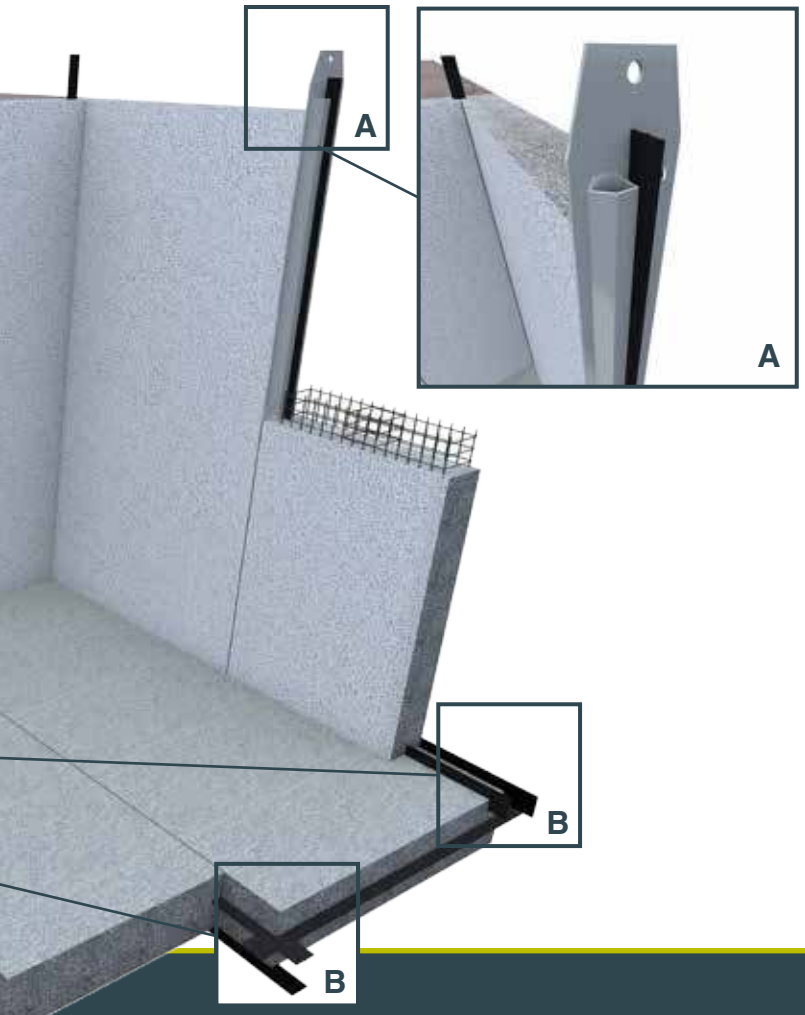


Characteristics	Standard	Unit	Flexvinil® TN	Flexvinil® GX	Flexvinil® HC
Color			Black	Black	Grey
Density	ASTM D 792	g/cm3	1.43	1.26	1.37
Hardness Shore A	ASTM D 2240		75	74	75
Tensile Strength	ASTM D 638	MPa	13	20	14
Elongation at break	ASTM D 638		300%	420%	380%
Cold bending	ASTM D 1043	°C	-32	-35	-40
Immersion in gasoline 70 hours at 22° C			NO	NO	YES
Immersion in oil ASTM/2 52 hours at 70° C			NO	NO	YES
Immersion in vegetable oil			NO	NO	YES

Waterstop Flexvinil® TN, Flexvinil® GX and Flexvinil® HC joints are in accordance with the regulations issued by the Army Corps of Engineers number CRD-C-572-74, BS 2571

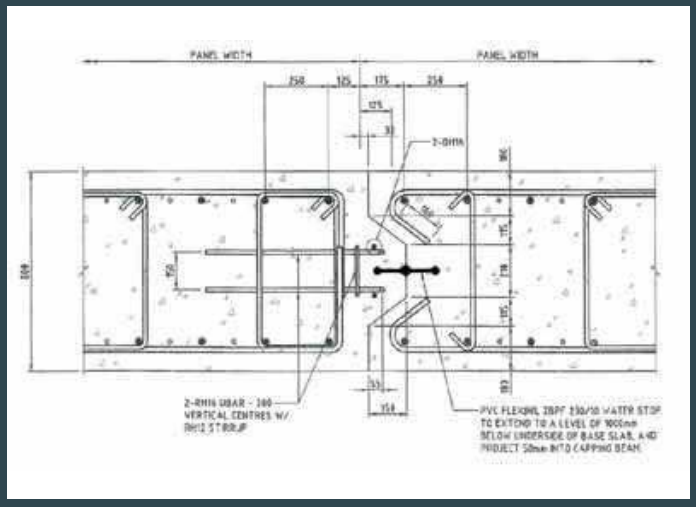
WATERSTOP JOINTS FOR DIAPHRAGM WALLS

A diaphragm wall is a waterproof and structural reinforced concrete wall, constructed in the ground by means of buckets or cutters.
Each diaphragm wall is composed of several adjacent panels.
The PVC FLEXVINIL® WATERSTOP joint is used in a vertical position to ensure the hydraulic sealing between two contiguous panels.
The joint is put in place through the use of appropriate sheet piles (stop end) that hold the waterstop during the installation phase, prior to cementation.



Realization of a diaphragm wall with Waterstop joint

Waterstop joint in the sheet pile (STOP END)



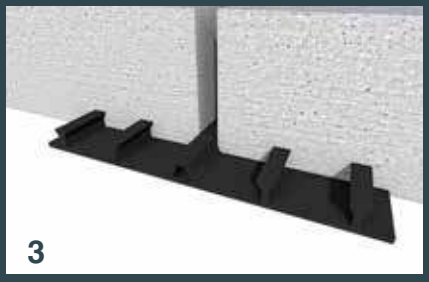
Waterstop joint scheme

WATERSTOP JOINTS FOR CONCRETE CASTING

The FLEXVINIL® PVC WATERSTOP joint ensures a perfect sealing between concrete construction and expansion joints of dams, canals, slabs and foundations.
It is designed to withstand the structure stresses during any possible settlement and to accommodate significant movement due to temperature changes (expansion and contraction).

Application of WATERSTOP BFO joint

Use of a WATERSTOP BFO profile in a horizontal concrete casting

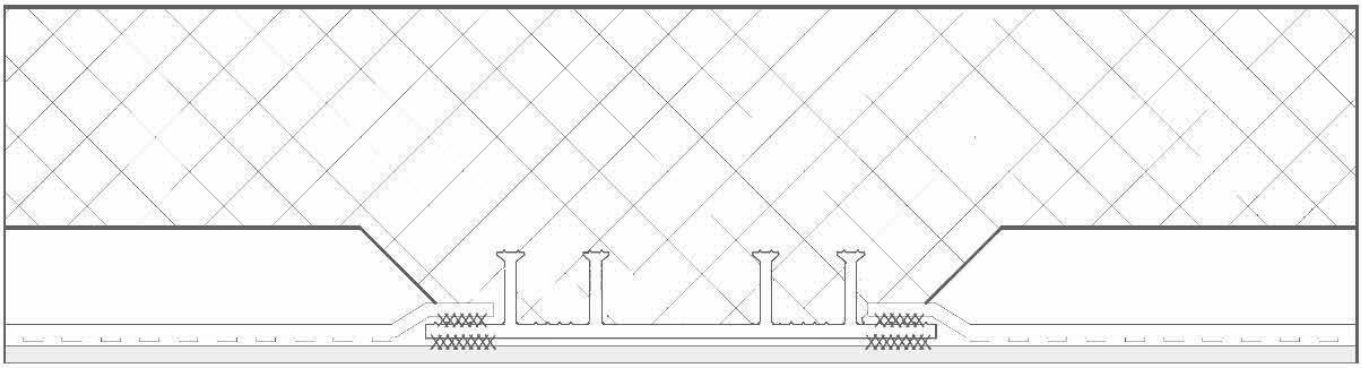


1. Flexvinil® PVC Waterstop expansion joint type BFO for indoor installation
2. Flexvinil® PVC Waterstop construction joint type BP for indoor installation
3. Flexvinil® PVC Waterstop expansion joint type BFAL for outdoor installation
4. Flexvinil® PVC Waterstop construction joint type SA for outdoor installation

COMPARTMENTAL WATERSTOP

During the construction of underground structures, in the presence of water tables, waterproofing is achieved by means of synthetic membranes divided into compartments and welded together by FLEXVINIL® COM flat compartmental joints.
This system allows to control water losses and also to perform local injections, in case of damage of the waterproof membranes. The FLEXVINIL® COM compartmental joint is applied to ensure the hydraulic sealing between the different sectors of the membranes, while granting resistance to acid solutions, alkaline environments and salt water.

Laying of a compartmental joint welded to a PVC membrane



Application scheme of a compartmental joint

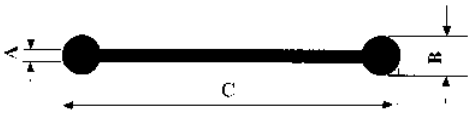
PROFILES

List of the available standard profiles.
On request, we can develop custom profiles.
Sireg Technical Service is at the customers' disposal to meet the most demanding project applications.

Type 1BP

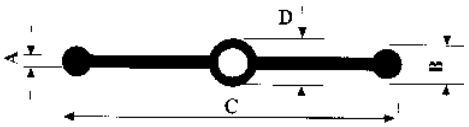
Description		A	B	C
WATERSTOP-1BP195	1BP195	7	20	195

Type 2BP



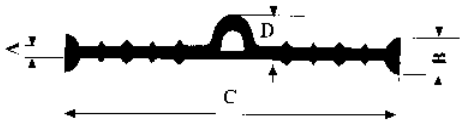
Description		A	B	C
WATERSTOP-2BP100	2BP100	5	12	100
WATERSTOP-2BP150/5	2BP150/5	5	14	150
WATERSTOP-2BP150/10	2BP150/10	10	20	150
WATERSTOP-2BP200	2BP200	5	14	200
WATERSTOP-2BP230/5	2BP230/5	5	19	230
WATERSTOP-2BP230/10	2BP230/10	10	23	230
WATERSTOP-2BP250	2BP250	10	23	250
WATERSTOP-2BP400	2BP400	20	40	400

Type 2BPF



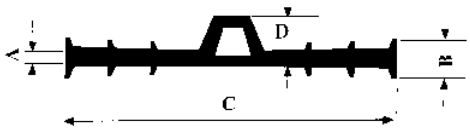
Description		A	B	C	D
WATERSTOP-2BPF100	2BPF100	4,5÷6,5	13	100	22
WATERSTOP-2BPF150/5	2BPF150/5	5	14	150	23
WATERSTOP-2BPF150/10	2BPF150/10	10	20	150	30
WATERSTOP-2BPF200	2BPF200	5	15	250	18
WATERSTOP-2BPF210	2BPF210	10	24	210	35
WATERSTOP-2BPF230/5	2BPF230/5	5	17	230	22
WATERSTOP-2BPF230/10	2BPF230/10	10	23	230	33
WATERSTOP-2BPF240	2BPF240	5	19	240	27
WATERSTOP-2BPF250	2BPF250	10	23	250	33
WATERSTOP-2BPF300	2BPF300	10	26	300	35

Type BF



Description		A	B	C	D
WATERSTOP-BF150/A	BF150/A	3	14	150	18
WATERSTOP-BF150	BF150	5 ÷ 6	20	150	18
WATERSTOP-BF225	BF225	6÷6,5	20	225	18

Type BFA

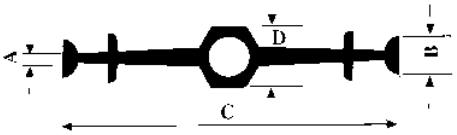


Description		A	B	C	D
WATERSTOP-BFA250	BFA250	7 ÷ 9	27	250	35
WATERSTOP-BFA310	BFA310	5 ÷ 6	16	310	75
WATERSTOP-BFA320/5	BFA320/5	5	25	320	30
WATERSTOP-BFA320/10	BFA320/10	7÷10	24	320	35
WATERSTOP-BFA340	BFA340	5÷10	14	340	50
WATERSTOP-BFA350	BFA350	5÷10	14	350	50
WATERSTOP-BFA360	BFA360	5 ÷ 7	23	360	80
WATERSTOP-BFA400	BFA400	5 ÷ 6	21	400	48
WATERSTOP-BFA520	BFA520	4 ÷ 8	25	520	48

Type BFAL

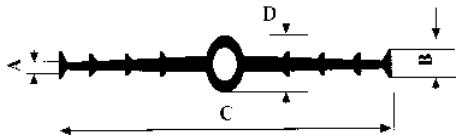
Description		A	B	C
WATERSTOP-BFAL150	BFAL150	7	40	150
WATERSTOP-BFAL200	BFAL200	4	18	200
WATERSTOP-BFAL230	BFAL230	4	18	230
WATERSTOP-BFAL240	BFAL240	4	18	240
WATERSTOP-BFAL275	BFAL275	4	24	275
WATERSTOP-BFAL320	BFAL320	4	21	320
WATERSTOP-BFAL360	BFAL360	7 ÷ 9	35	360

Type BFOP



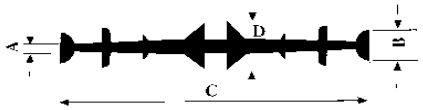
Description		A	B	C	D
WATERSTOP-BFOP140	BFOP140	4 ÷ 5	20	140	18
WATERSTOP-BFOP150	BFOP150	4 ÷ 7	22	150	22

Type BFO



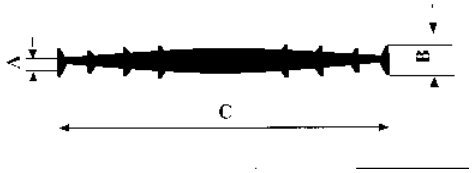
Description		A	B	C	D
WATERSTOP-BFO140	BFO140	3	13	140	30
WATERSTOP-BFO145	BFO145	2,5÷3,5	16	145	30
WATERSTOP-BFO150/A	BFO150/A	2,5	13	150	32
WATERSTOP-BFO150	BFO150	7	20	150	37
WATERSTOP-BFO170	BFO170	3	13	170	30
WATERSTOP-BFO180	BFO180	3 ÷ 6	16	180	33
WATERSTOP-BFO200/A	BFO200/A	2 ÷ 3,5	8	200	30
WATERSTOP-BFO200/6	BFO200/6	4 ÷ 5	15	200	30
WATERSTOP-BFO220/A	BFO220/A	2,5 ÷ 4	9	220	36
WATERSTOP-BFO220	BFO220	3 ÷ 6	15	220	35
WATERSTOP-BFO240	BFO240	3 ÷ 6	16	240	30
WATERSTOP-BFO250/A	BFO250/A	3 ÷ 4	17	250	33
WATERSTOP-BFO250/6	BFO250/6	3 ÷ 4	12	250	39
WATERSTOP-BFO300/A	BFO300/A	3,5	14	300	37
WATERSTOP-BFO300	BFO300	5	15	300	40
WATERSTOP-BFO360/A	BFO360/A	5,5÷7,5	24	360	50
WATERSTOP-BFO360	BFO360	7 ÷ 9	20	360	50
WATERSTOP-BFO375	BFO375	8÷15	25	375	50
WATERSTOP-BFO400	BFO400	5 ÷ 8	21	400	50
WATERSTOP-BFO440	BFO440	5 ÷ 8	21	440	50

Type BKP



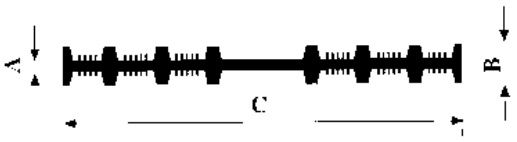
Description		A	B	C	D
WATERSTOP-BKP150	BKP150	5 ÷ 7	20	150	20

Type BP



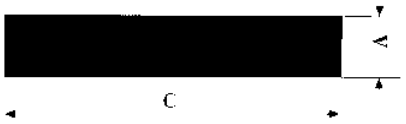
Description		A	B	C
WATERSTOP-BP150/4	BP150/4	3÷4,5	15	150
WATERSTOP-BP150/6	BP150/6	6,4	12	150
WATERSTOP-BP200	BP200	4,5÷6,5	15	200
WATERSTOP-BP200/R	BP200/R	5÷16	17	200
WATERSTOP-BP285	BP285	5 ÷ 7	15	285
WATERSTOP-BP285/R	BP285/R	5÷16	17	285

Type BPP



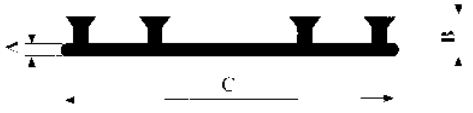
Description		A	B	C
WATERSTOP-BPP150	BPP150	3	12	150
WATERSTOP-BPP200	BPP200	4	10	200
WATERSTOP-BPP250	BPP250	4 ÷ 6	10	250
WATERSTOP-BPP300	BPP300	5	11	300

Type R



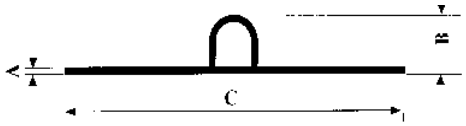
Description		A	B	C
WATERSTOP-R200/5	R200/5	5		200
WATERSTOP-R70/15	R70/15	15		70
WATERSTOP-R70/30	R70/30	30		70
WATERSTOP-R240/15	R240/15	15		240

Type SA



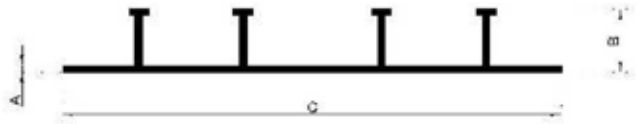
Description		A	B	C
WATERSTOP-SA150	SA150	4	20	150
WATERSTOP-SA200	SA200	4	20	200
WATERSTOP-SA240	SA240	4	20	240
WATERSTOP-SA320	SA320	4	22	320

Type STR



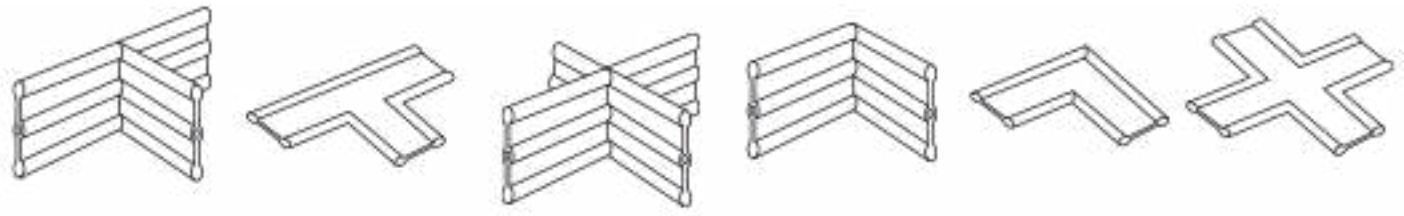
Description		A	B	C
WATERSTOP-STR230	STR230	3,5	50	230
WATERSTOP-STR330	STR330	5	80	330

Type COM



Description		A	B	C
WATERSTOP-COM250/4W/3	COM250/4W/3	3	30	250
WATERSTOP-COM320/4W/3	COM320/4W/3	3	20	320
WATERSTOP-COM320/6W/3	COM320/6W/3	3	25	320
WATERSTOP-COM400/6W/4	COM400/6W/4	4	30	400
WATERSTOP-COM500/6W/4	COM500/6W/4	4	30	500

SPECIAL PIECES



VERTICAL T | FLAT T | VERTICAL CROSS | VERTICAL L | FLAT L | FLAT CROSS

FITTINGS

Sireg provides some fittings for the installation of FLEXVINIL® PVC WATERSTOP joints, such as:

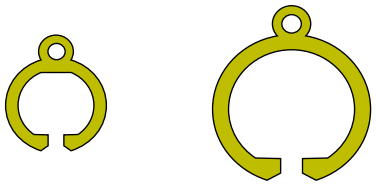
ELECTRICAL BLADE

The 220V electrical blade is used to join by thermo-welding two Waterstop joints.
In a few minutes, the blade reaches and maintains the right temperature to melt and then to weld the two ends.
Before carrying out this operation, the two ends must be cut at right angles, cleaned and placed on a hard floor.
Once heated the blade, about 20 seconds are necessary to perform the welding.

CLAMPS

The clamps are used to facilitate welding of the two joint ends, since they allow to keep the correct alignment of the two edges, of the protrusions and of the bulb, so to ensure the continuity of sealing.

FIXING CLIPS



The plastic fixing clips are attached to the Waterstop ends and are used to fix the joint, by means of an iron wire, to the steel reinforcement.
This is a way to prevent any deformations and wrinkling during concreting.

PACKAGING

The FLEXVINIL® PVC WATERSTOP joints are packed and delivered in rolls of length according to customer needs, in order to avoid any material waste. Special packagings with rigid plans or with anti-UV film can be made on request.

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