Sealco
Waterproofing Systems

MEMBRANE ACCESSORIES

Outlets and Accessories for Membrane Roofing Systems

Version 19.01

THE WORLD OF SEALCO ACCESSORIES...

Sealco Waterproofing Systems

01

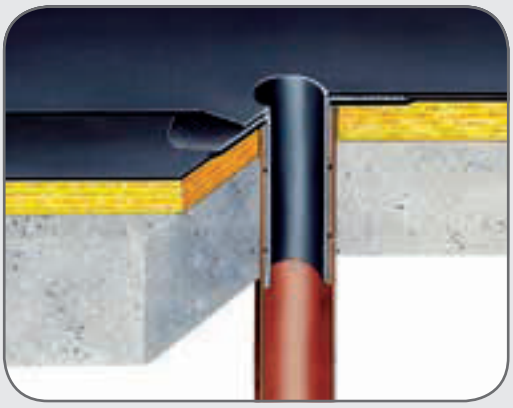
ACCESSORIES FOR BITUMINOUS MEMBRANES

01.1 "UNIVERSAL" ANTI-BACKUP ROOF DRAIN IN IGOM.CE

ART. 26
Leaf grate suitable for roof drains from mm. 75 Ø to mm. 125 Ø

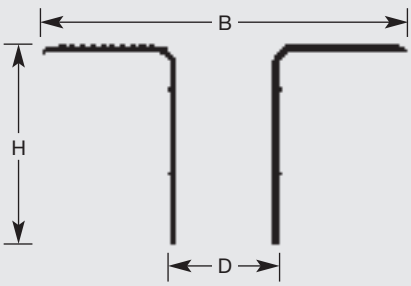
ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø

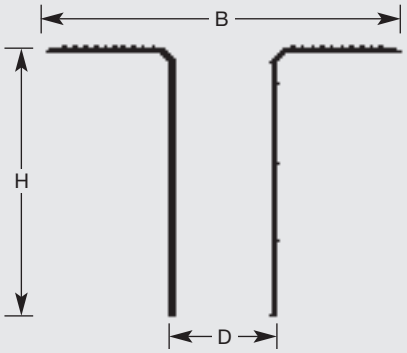
ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø



"UNIVERSAL" ANTI-BACKUP ROOF DRAIN IN IGOM.CE is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties as well as a flexible product. IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to the ribbed flange area all made from the same materials to facilitate adhesion of the membrane. The stem piece of the unit has two or more strategically placed circular ribs which face outwards and when forced into the drain pipe prevent backing-up of water forming a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit they guarantee optimal seal with any type of pipe.
Thanks to the presence of the external seal rings the passage of water vapour or back-up of water into the roofing system is prevented. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing.

> INSTALLATION METHOD PAG. 18





ART.	110	1	5	2	6	3	8	4	9	111
DENOM	50	60	75	80	90	100	110	125	140	160
B	245	245	300	310	320	325	335	350	360	380
H	180	180	180	180	180	180	180	180	180	180
D	50	54	66	73	83	92	100	116	132	148

ART.	150	1.1	13	10	14	11	16	12	17	112
DENOM	50	60	75	80	90	100	110	125	140	160
B	245	245	300	310	320	325	335	350	360	380
H	250	250	250	250	250	250	250	250	250	250
D	42	54	66	73	83	92	100	116	132	148

01.2 EXTRALONG ROOF DRAIN IN IGOM.CE

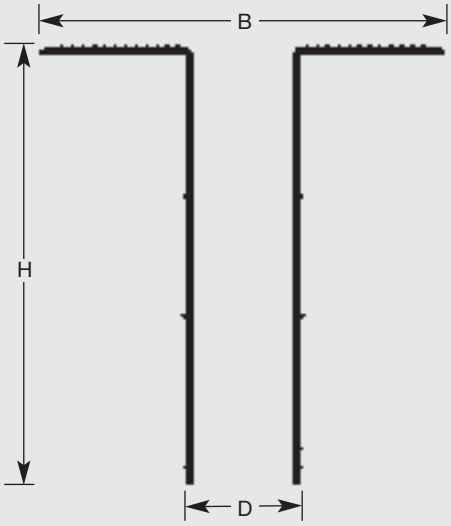
ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø

ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø

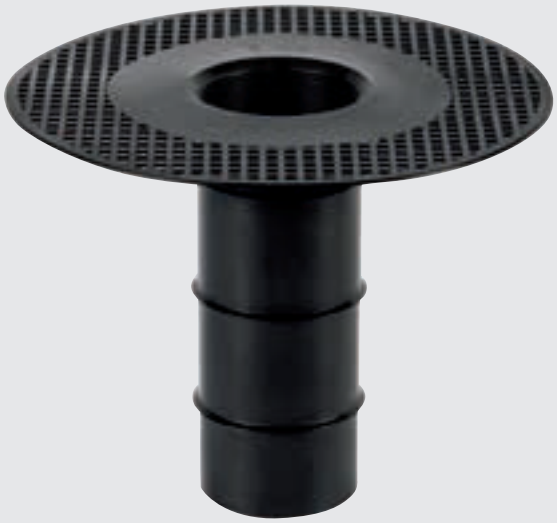
EXTRALONG ROOF DRAIN IN IGOM.CE ANTI-BACKUP ROOF DRAIN is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties as well as a flexible product. IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to the ribbed flange area all made from the same materials to facilitate adhesion of the membrane.
The 485 mm high stem allows for use with thicker substrates thus avoiding the need for any intermediate joints and when inserted into the spigot of down pipe permits a constant and continues flow without losing any of the capacity of the downpipe, it can also be fixed into position previous to installation of the downpipes. Furthermore, this part of the stem has two or more strategically placed circular ribs which face outwards and when forced into the spigot prevent backing-up of water forming a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit they guarantee optimal seal with any type of pipe.
Thanks to the presence of the external seal rings the passage of water vapour or back-up of water into the roofing system is prevented. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing.

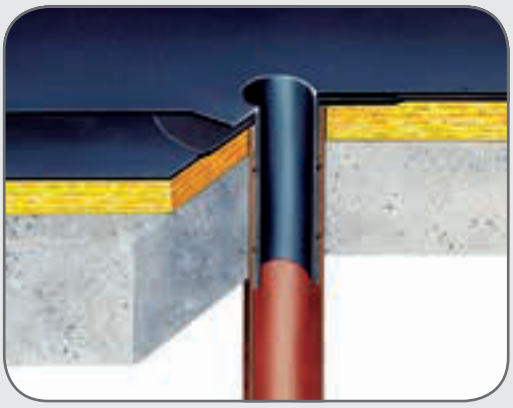
> INSTALLATION METHOD PAG. 19

ART.	101	102	103	104
DENOM	80	100	125	140
B	325	350	370	385
H	485	485	485	485
D	80	100	125	140



01.3 "UNIVERSAL R" ANTI-BACKUP ROOF DRAIN IN IGOM.CE WITH MESHED FLANGE





ART. 26
Leaf grate suitable for roof drains from mm. 75 Ø to mm. 125 Ø

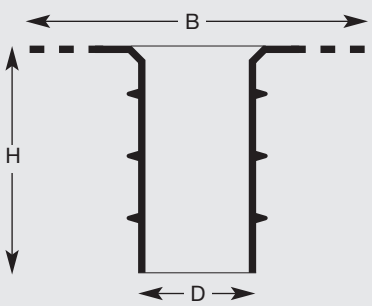
ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø

ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø

"UNIVERSAL R" ANTI-BACKUP ROOF DRAIN IN IGOM.CE WITH MESHED FLANGE is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings, liquid cements polyurethane resins, and two-component waterproofing products. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market.
The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties as well as a flexible product.
IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to the a 5x5mm meshed flange all made from the same materials to increase the adhesion of the waterproofing products.
The stem piece of the unit has two or more strategically placed circular ribs which face outwards and when forced into the drain pipe prevent backing-up and form a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit they guarantee optimal seal with any type of pipe.
Thanks to the presence of the external seal rings the passage of water vapour or back-up of water into the roofing system is prevented. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing.

> INSTALLATION METHOD PAG. 20

ART.	150R	1.1R	13R	10R	14R	11R	16R	12R	17R	112R
DENOM	50	60	75	80	90	100	110	125	140	160
B	245	272	285	288	298	307	320	327	343	365
H	250	250	250	250	250	250	250	250	250	250
D	42	54	66	73	83	92	100	116	132	148



01.4 "NUOVA" ANTI-BACKUP ROOF DRAIN IN IGOM.CE

ART. 38
Leaf and gravel grate suitable for diameters to mm. 160

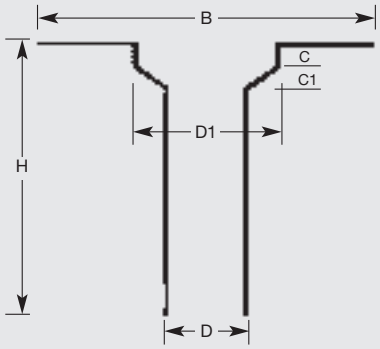
ART. 38 BIS
Leaf and gravel grate suitable for diameters to mm. 160

GRAVEL GRATE RING

"NUOVA" ANTI-BACKUP ROOF DRAIN IN IGOM.CE is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics, in fact, it has a 170 mm diameter by 30 mm deep head which increases the drainage capacity up to 45% compared to a standard drain. The total funnel length of 330 mm allows for use with thicker substrates thus avoiding the need for any intermediate joints and when inserted into the spigot of down pipe permits a constant and continues flow without losing any of the capacity of the downpipe, it can also be fixed into position previous to installation of the downpipes. The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD allow us to obtain high physical, chemical and technical properties as well as a flexible product.
IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide range of temperatures as it is extremely flexible at low temperatures, it is also stable over time thanks to its physical and mechanical properties which therefore assure maximum performance throughout its lifespan.
It has been proved that this roof drain can discharge up to 45% more than a normal drain of the same diameter.
The drain consists of a truncated body available in various diameters solidly attached to the ribbed flange area all made from the same materials to facilitate adhesion of the membrane. The stem piece of the unit has two or more strategically placed circular rings which face outwards and when forced into the drain pipe form a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit, they guarantee optimal seal with any type of pipe and prevent the passage of water vapour or back-up of water into the roofing system. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing. It is highly recommended to use the 200 mm diameter gravel grate directly connected to the slotted ring, the ring ha three slots which allow for the regulation of the height in case of layer variations in the waterproofing system.

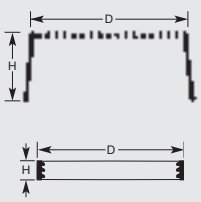
> INSTALLATION METHOD PAG. 21

ART.	107	27	28	109	29	30	91	99
DENOM	75	80	100	110	125	140	160	200
B	400	400	400	400	400	400	400	400
H	330	330	330	330	330	330	330	330
D	75	80	100	110	125	140	151	191
D1	170	170	170	170	170	170	170	-
C	30	30	30	30	30	30	30	-
C1	25	25	25	25	25	25	25	-



LEAF AND GRAVEL GRATE

ART.	38	38bis
D	180	180
H	80	80



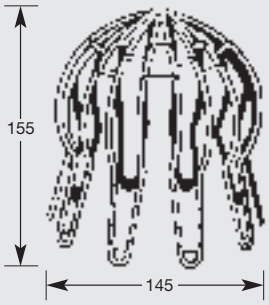
RING

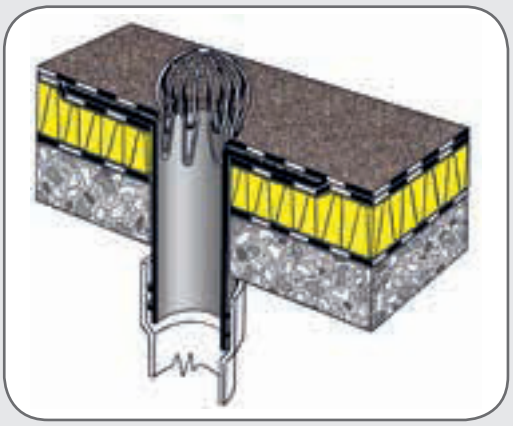
D	170
H	30

NOTE
Art. 38 gap mm. 6.

Art. 38 bis gap mm. 12.

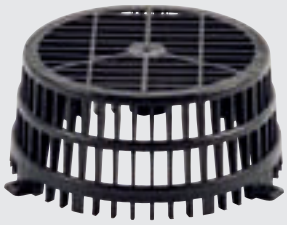
01.5 LEAF AND GRAVEL GRATES

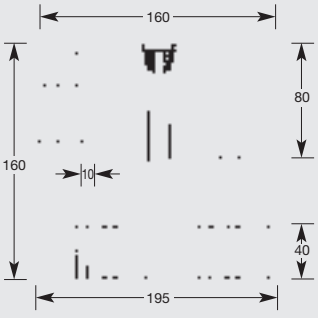


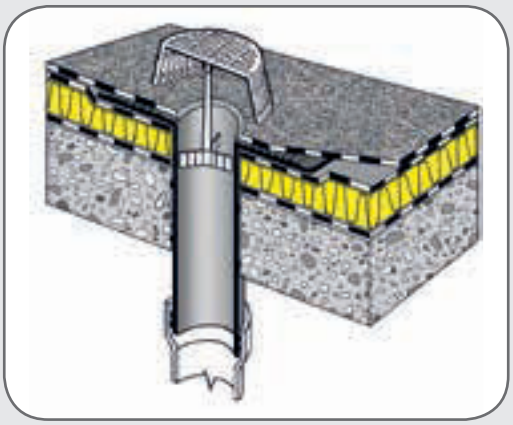


ART. 26
Leaf grate suitable for roof drains from mm. 75 Ø to mm. 125 Ø

Art. 26 LEAF GRATE is suitable for roof drains with diameters from 75 mm to 125 mm, it is made from thermoplastic material and is resistant to degradation caused by the sun, ozone and other atmospheric and chemical agents.
The attachment to the roof drain is optimized by the small hooks present on the inserts of the leaf grate.





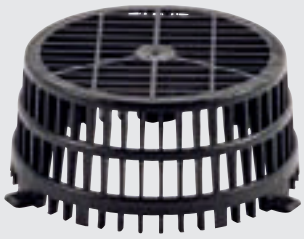


ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø

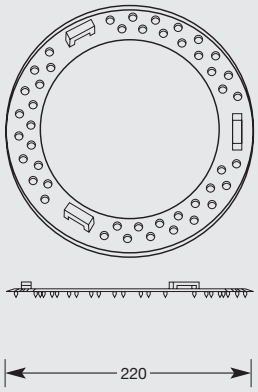
ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø

Art. 24 LEAF AND GRAVEL GRATES are suitable for roof drains from 60 mm to 160 mm in diameter. It has an internal thread into which Art. 24.1 is screwed.
Art. 24 and 24.1 are made from thermoplastic materials which are resistant to degradation caused by sun, ozone and other atmospheric and chemical agents.
The **FIXING PIECE Art. 24.1** must be inserted into the roof drain, when necessary and in particular with smaller diameters, cut the anchoring tabs to suit the diameter the tabs should fit tightly and not bend.

01.5 LEAF AND GRAVEL GRATES



ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø



ART. 82

PERFORATED RING

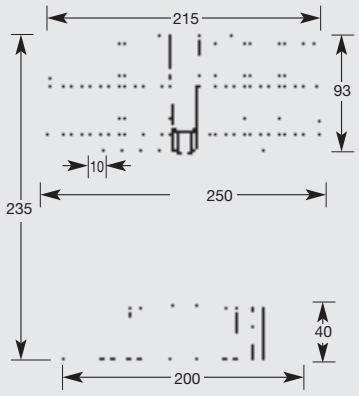
The **PERFORATED RING** has been specially designed to weld on the SEALCO LTD leaf gravel grate. It can be laid on every waterproof surface with bitumen, membranes or sticking material. It is made of IGOM.EE synthetic rubber and is provided on the bottom with small punches. The surface has conical holes and three hooks to secure the gravel grate.

INSTALLATION METHOD ART. 82

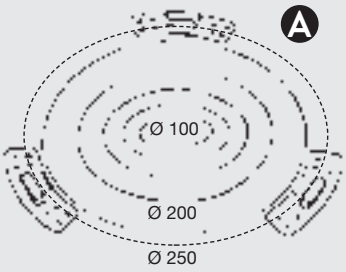
1 - Heat the surface of the membrane around the hole of the roof drain for a diameter of approx 250 mm until softening of the membrane.
2 - Apply the ring, centring it as best as possible and pushing down hard for approx two thirds of the thickness of the membrane forcing the hot compound through the holes thus attaching the bottom of the ring to the membrane.
3 - Heat a piece of membrane and with the use of a trowel, spread the hot compound over the top of the ring filling all of the holes.
4 - After the surface of the ring has completely cooled, insert the tabs of the leaf gravel grate into the slots.

ART. 24.1

ART. 24.2
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 200 Ø

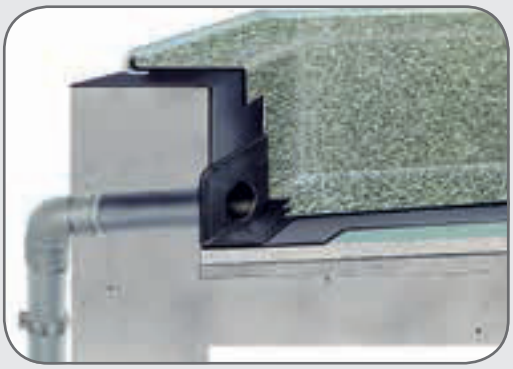


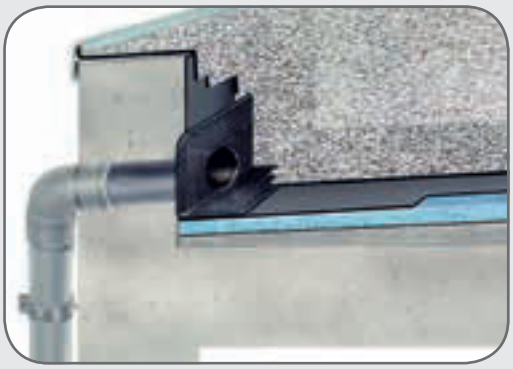
ART. 24.2 LEAF AND GRAVEL GRATES are suitable for roof drains from 60 mm to 200 mm in diameter. It has an internal threaded centre piece of the same height as the leaf/gravel grate its self into which Art. 24.1 is screwed. Art. 24.2 and 24.1 are made from thermoplastic materials which are resistant to degradation caused by sun, ozone and other atmospheric and chemical agents.
The **FIXING PIECE Art. 24.1** must be inserted into the roof drain, when necessary and in particular with smaller diameters, cut the anchoring tabs to suit the diameter the tabs should fit tightly and not bend.



01.6 ANGLED ROOF DRAIN IN IGOM.EE

- ART. 304
- ART. 305
- ART. 307
- ART. 310
- ART. 311
- ART. 312

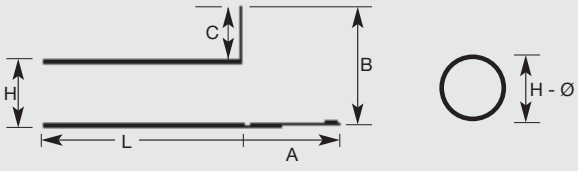




90° ANGLED ROOF DRAIN IN IGOM.EE WITH ROUND PIPE (Art. 304 - 305 - 307 - 310 - 311 - 312). It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.EE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties. IGOM.EE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and it is stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to the perimeter slotted and embossed upper surface flange area all made from the same materials to facilitate adhesion of the membrane.
The angled roof drain with a round pipe as a main characteristic offers the possibility of being used for direct discharge from terraces without being connected to down pipes, it can be used with internal or external down pipes but in particular it can be used horizontally on all types of projects were thicker walls are present. It can also be used in conjunction with fittings and curves with secure seal gaskets and for this reason the connections can be made on the inside of walls or very close to the wall.
It can be used in conjunction with the following curves and gaskets:
- Art. 310 curved fitting Art. 315 - 320 or with other curved fittings that respect UNI EN 1451-1

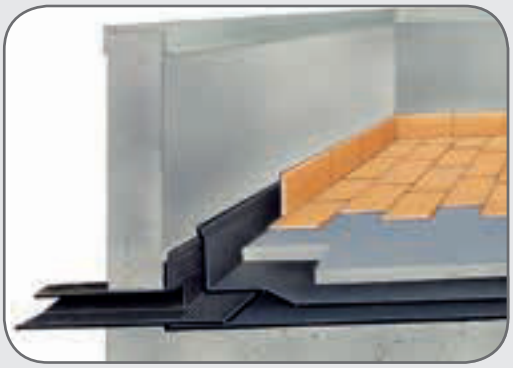
> INSTALLATION METHOD PAG. 22

ART.	304	305	307	310	311	312
H	63	75	80	100	110	125
A	120	120	120	120	120	120
B	170	170	170	170	170	170
C	114	100	95	75	65	50
L	500	500	500	500	500	500



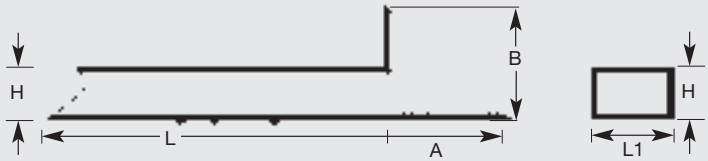
- ART. 117

- ART. 118.5



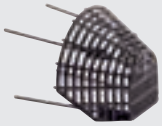
The **90° ANGLED ROOF DRAIN IN IGOM.EE** is particularly suitable for balconies as direct overflows without downpipes, its large flange allows for an optimal connection with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. Made in IGOM.EE. The Art. 118.5 allows for an ample flow and at the same time adds a perfect finish as well as acting as a support for eventual skirting. The fitting can be cut to suit the thickness of each individual pavement.

ART.	117	117.1	117.2	117.3
COLOUR	Black	Grey	Ivory	Brown
A	120	120	120	120
B	98	98	98	98
H	40	40	40	40
L	310	310	310	310
L1	50	50	50	50



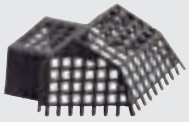
01.6 ANGLED ROOF DRAIN IN IGOM.EE

^ ART. 39

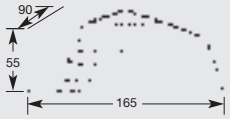


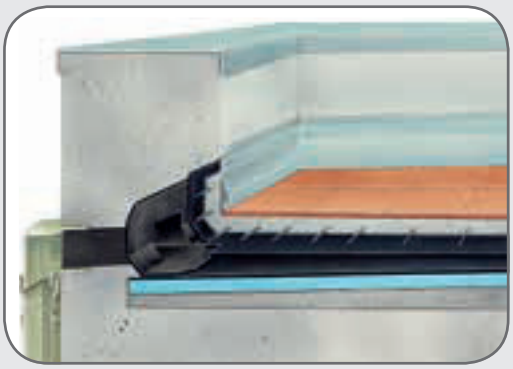
^ ART. 44

^ ART. 45



< ART. 44.1

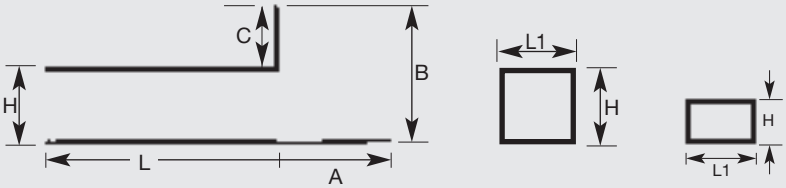




90° ANGLED ROOF DRAIN WITH SQUARE PIPE (Art. 39 - 39.2), RECTANGULAR (Art. 45) IN IGOM.EE. It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.EE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties. IGOM.EE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and it is stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various shapes solidly attached to the perimeter slotted and embossed upper surface flange area all made from the same materials to facilitate adhesion of the membrane.
The angled roof drain with a round pipe as a main characteristic offers the possibility of being used for direct discharge from terraces without being connected to down pipes, it can be used with internal or external down pipes but in particular it can be used horizontally on all types of projects were thicker walls are present.
It can be used in conjunction with the following curves:
- Art. 39 – 39.2 curved fitting Art. 40 - 41 - 42
- Art. 45 curved fitting Art. 46 - 47

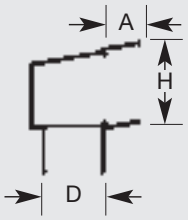
> INSTALLATION METHOD PAG. 23-24

ART.	39	39.2	45
H	100	100	65
L1	100	100	97
A	100	100	120
B	180	180	140
C	80	75	110
L	345	500	500



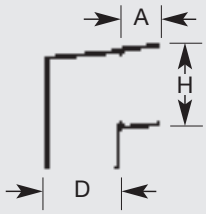
01.7 CURVES, CONNECTIONS, HOPPER

ART. 40
Curve
from 100 square ∅ 80



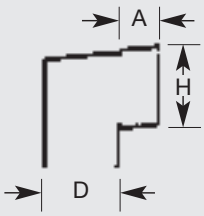
ART. 40

ART. 41
Curve
from 100 square ∅ 100



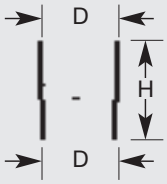
ART. 41

ART. 42
Curve
mm 100x100



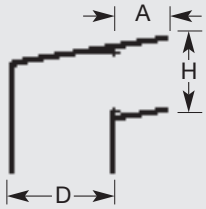
ART. 42

ART. 43
Reducer
mm 100x100 ∅ 100



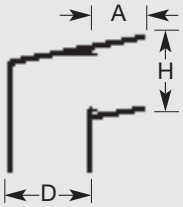
ART. 43

ART. 46
Curve ∅ 80



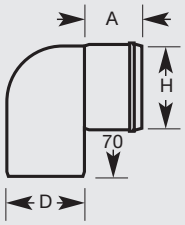
ART. 46

ART. 47
Curve ∅ 100



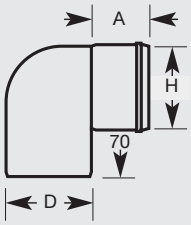
ART. 47

ART. 315
Curve
∅ 100



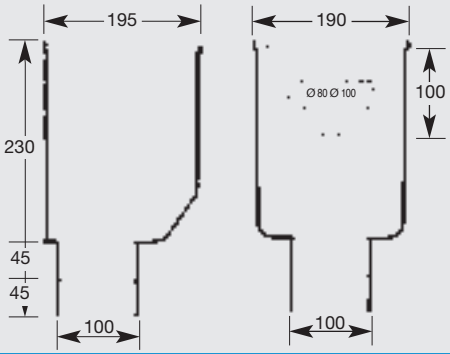
ART. 315

ART. 320
Curve
∅ 110



ART. 320

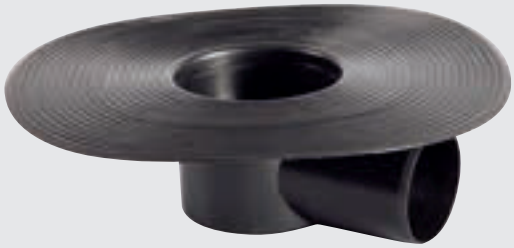
> **ART. 118G**
> **ART. 118GM**
Drain box



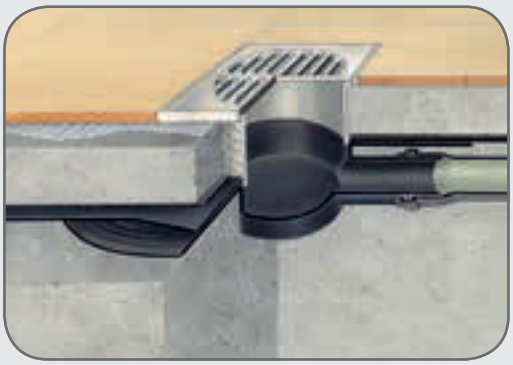
ART.	40	41	42	43
A	50	50	50	50
D	80	100	100x100	100
H	100x100	100x100	100x100	100x100

ART.	46	47	315	320
A	50	50	65	65
D	68x100	68x100	100	Ø110
H	80	100	110	110

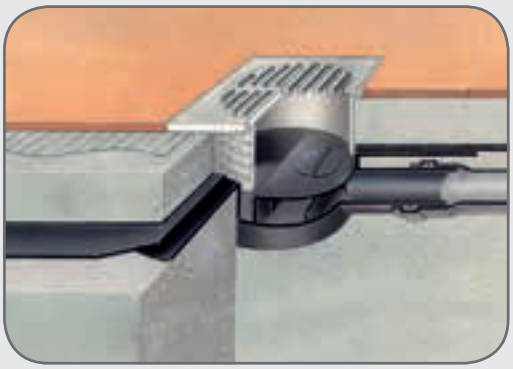
01.8 DRAIN AND SIPHON UNITS WITH LATERAL DISCHARGERS IN IGOM.EE



^ ART. 141 Ø 50 (DN50)
^ ART. 142 Ø 75 (DN70)

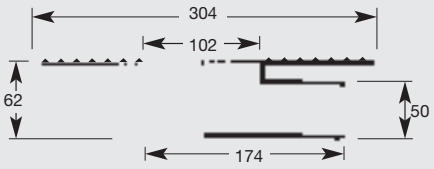


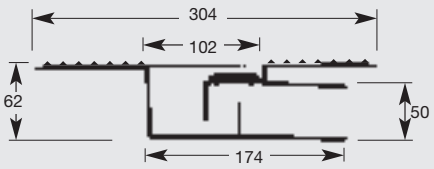
^ ART. 144 Ø 50 (DN50)
^ ART. 145 Ø 75 (DN70)

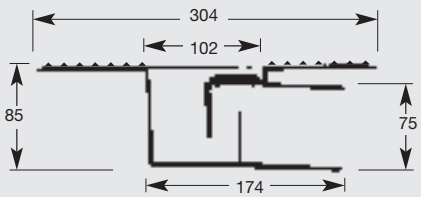


The **DRAIN AND SIPHON UNITS WITH LATERAL DISCHARGERS IN IGOM.EE** are excellent for connections between the waterproofing materials and the down pipes themselves. It is suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings.
This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.EE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties. IGOM.EE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and it is stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan. The drains consist of a cylindrical body with a lateral discharge pipe attached to a ribbed flange all made from the same materials to facilitate adhesion of the membrane.
They are fitted with an adjustable bellows system for use with various thicknesses of paving materials and are available with ABS or stainless steel grilles. The siphon type drains are fitted with a plug for easy cleaning of deposits and can either be welded or sleeve fitted to curves and pipes with gaskets according to UNI EN 1451-1. They are suitable for use on flat roofs, patios, bathrooms, garages, laundry rooms etc.
NOTE: *Siphon drain units should not be used in areas where freezing is likely to occur.*

> INSTALLATION METHOD PAG. 25

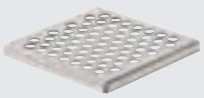




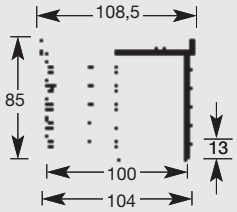


^ ART. 146

^ ART. 143

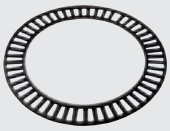


^ ART. 149



01.9 AIR VENTS/VAPOUR EXTRACTORS IN IGOM.EE

< ART. 48

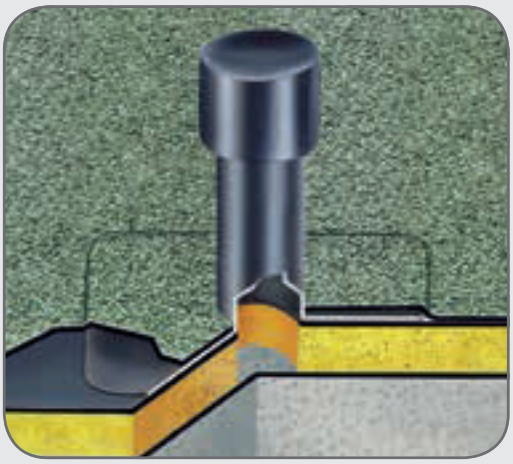


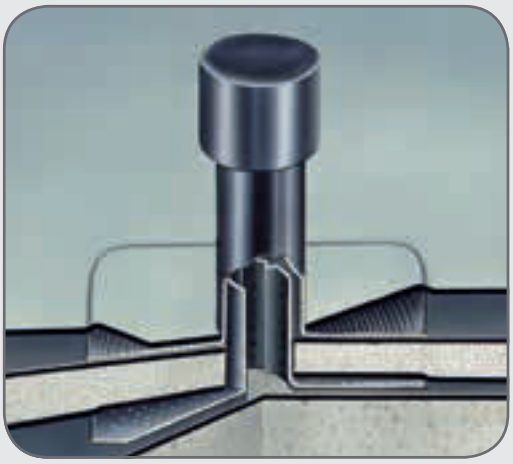
^ ART. 48.3 - 49.7

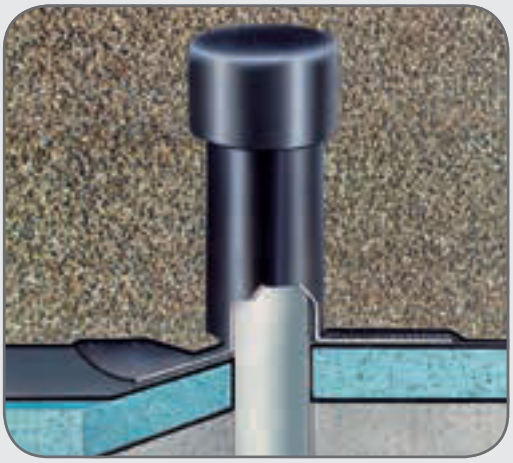
^ ART. 48.8 - 49.8

< ART. 49
< ART. 49.1
< ART. 49.9

^ ART. 51



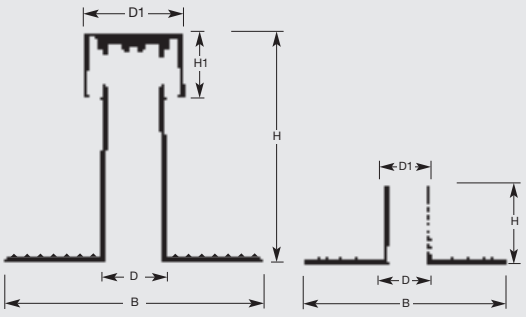




The **AIR VENTS/VAPOUR EXTRACTORS IN IGOM.EE** are particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details in fact, the unit has optimal characteristics that help eliminate serious and typical problems that can appear on a waterproofed roof caused by an imperfect evacuation of vapours, imperfect ventilation or use of incorrect air vents/vapour extractors: swelling of the membrane, moistening of the insulating layer causing a subsequent reduction or loss of original properties.
The Air Vents/Vapour Extractors is made from IGOM.EE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties. IGOM.EE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and it is stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The Air vents/Vapour extractors consist of a protruding element, available in various diameters and heights, solidly attached to a perimeter slotted and ribbed upper surface flange.
The Air Vents /Vapour Extractors designed and patented by SEALCO LTD are one of the most effective ventilation systems as they allow for the total evacuation of vapour build-up under the waterproofing layer.

> INSTALLATION METHOD PAG. 26

ART.	48	49	49.1	49.9	51
B	280x280	315	360	365	365x365
D	75	75	110	110	60
H	200	270	325	500	100
H1	80	80	95	95	
D1	110	110	145	145	67

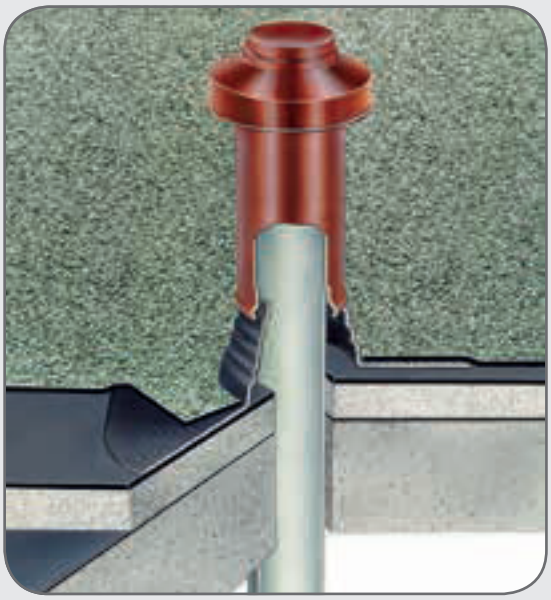


01.10 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN IGOM.CE

< ART. 54
< ART. 56
Grey

< ART. 55
< ART. 57
Brown

< ART. 58



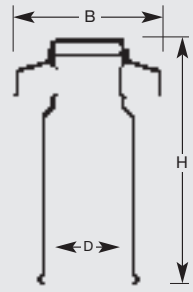
ANTI-CONDENSE EXTRACTOR is suited for bathrooms, kitchens, wet rooms and any other areas where there is a heavy presence of vapour. Because of constructive characteristics it avoids the formation of condense and thus avoids dripping along ventilation pipes. They have been designed to cover protruding pipes and can also be used on flat roofs together with pipe fitting Art. 58, on slopped roofs with traditional tiles together with Art. 60. They are available in colours grey or brown.

> INSTALLATION METHOD PAG. 27

The **FLEXIBLE COLLAR Art. 58** is suitable for connecting protruding pipes with the waterproofing membrane and can be used with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties as well as a flexible product. IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The flexible collar consists of a truncated body available in various diameters solidly attached to the ribbed flange area all made from the same materials to facilitate adhesion of the membrane.

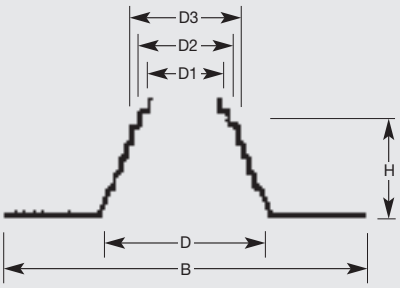
> TECNOLOGIA DI POSA PAG. 27

ART.	54 - 55	56 - 57
D	100	125
D1	120	150
B	180	220
H	300	350



^ ART. 54 - 55 - 56 - 57

ART.	58
B	410
D	190
D1	80
D2	100
D3	125
H	120



^ ART. 58

^ ART. 60

CAP FOR ROOF TILES suitable for connecting protruding pipes on traditional tiled roofs.

^ ART. 83

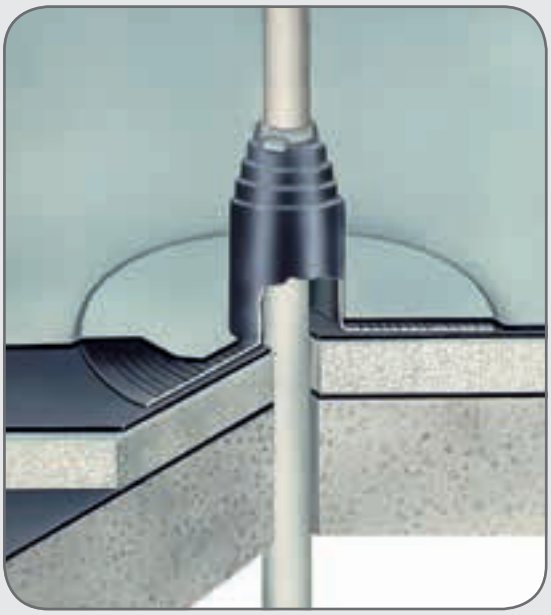
CONE GUARD for the connection of aerials and pipes up to maximum 1" with base Ø 100. It can be used together with Cap for roof tiles Art. 60.

01.11 PIPE WRAP/FITTINGS IN IGOM.CE

ART. 113

ART. 138

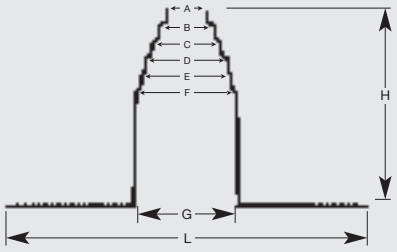
ART. 114



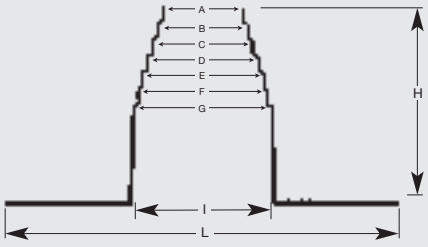
PIPE WRAP/FITTINGS IN IGOM.CE are suitable for connecting protruding pipes with the waterproofing membrane and can be used with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that allow to obtain high physical, chemical and technical properties as well as a flexible product. IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to the ribbed flange area all made from the same materials to facilitate adhesion of the membrane.

> INSTALLATION METHOD PAG. 28

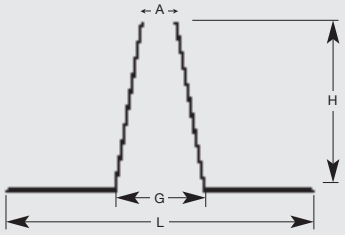
ART.	113	114	138
A	34	75	20
B	50	80	-
C	60	90	-
D	75	100	-
E	80	110	-
F	90	115	-
G	93	125	50
I	-	127	-
L	340	365	200
H	180	180	120



ART. 113



ART. 114



ART. 138

01.12 INTERNAL AND EXTERNAL CORNERS IN IGOM.CE

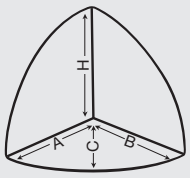
ART. 115.1

ART. 116.1

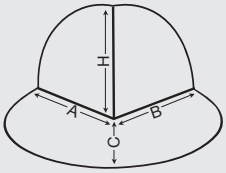
INTERNAL AND EXTERNAL CORNERS IN IGOM.CE are suitable for the reinforcement of the waterproofing in internal and external corners.
The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk because of transversal and horizontal traction of the waterproofing membrane.
It is particularly suitable for use with all kinds of APP, SBS modified bituminous membranes as well as liquid bitumen coatings.
These items are made from IGOM.CE, a specially formulated compound of synthetic rubbers realized by SEALCO LTD that permit to obtain high physical, chemical and technical properties as well as a flexible product. IGOM.CE is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range as it is extremely flexible at low temperatures and stable over time thanks to its physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.

> INSTALLATION METHOD PAG. 29

ART.	115.1	116.1
A	100	97
B	100	97
C	100	85
H	100	100



^ ART. 115.1



^ ART. 116.1

INSTALLATION METHOD

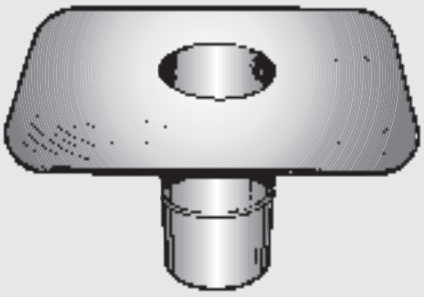
Art. 1 - 5 - 2 - 6 - 3 - 8 - 4 - 9 - 111
Art. 150 - 1.1 - 13 - 10 - 14 - 11 - 16 - 12 - 17 - 112

01.1 "UNIVERSAL" ANTI-BACKUP ROOF DRAIN IN IGOM.CE

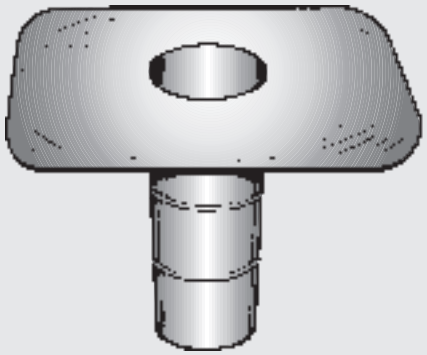
1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 500x500 mm) use the quantities indicated by the producer.
2 - Torch apply first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Heat the surface of the membrane until molten, then place the drain unit into position thus sealing the underside of the drain unit to the waterproofing layer.
4 - Heat a small piece of membrane and spread with a trowel the melted compound in order to cover the ribbed surface of the flange.
5 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer.
6 - Cross cut in the membrane in correspondence to the exit of the drain unit and press around the inside of stem.
7 - Insert the leaf or gravel grate.

NOTE: *If only one layer of membrane is being used, at point 2 apply a 500x500 mm piece of the waterproofing membrane. Ensure that all areas are well pressed and sealed.*

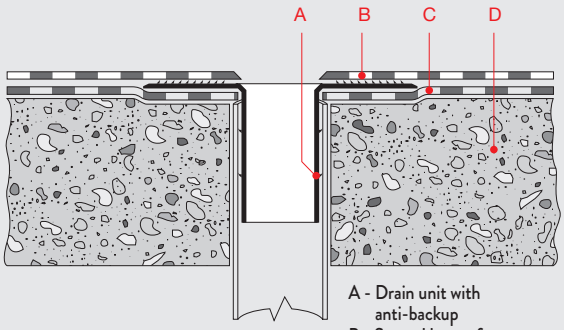
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **"Universal" drain unit** or similar, made from flexible synthetic rubber IGOM.CE, having a ribbed flange which must extend at least 12 cm beyond the circumference of the drain pipe and a 180 or 250 mm long anti-backup stem suitable for pipe Ø..... complete with leaf or gravel grate.



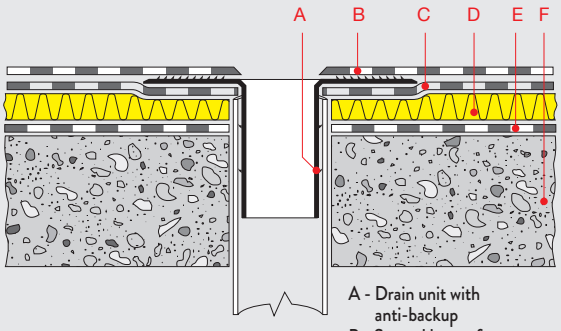
H mm. 180



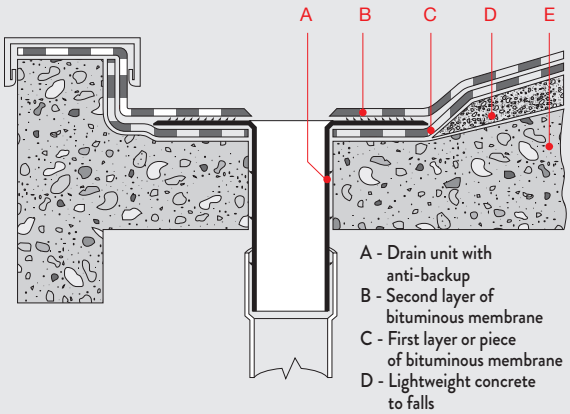
H mm. 250



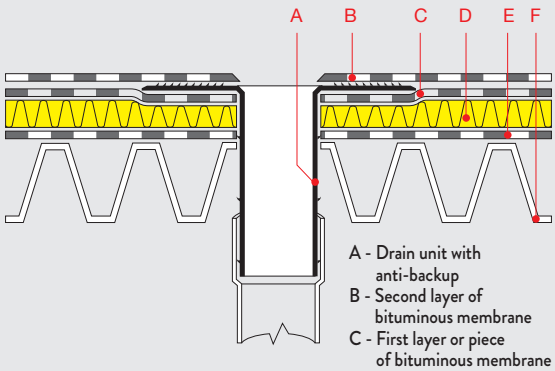
A - Drain unit with anti-backup
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Deck



A - Drain unit with anti-backup
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Deck



A - Drain unit with anti-backup
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Lightweight concrete to falls
E - Deck



A - Drain unit with anti-backup
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Deck

INSTALLATION METHOD

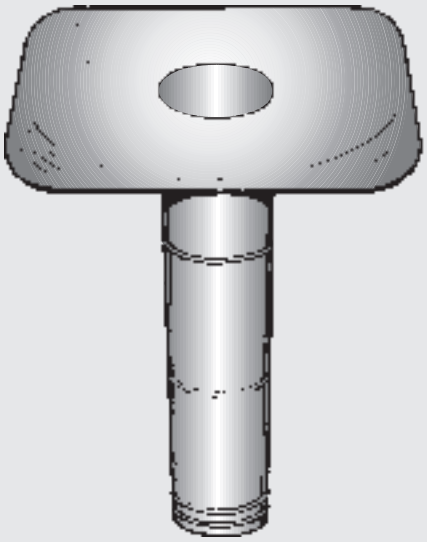
Art. 101 - 102 - 103 - 104

01.2 EXTRALONG ROOF DRAIN IN IGOM.CE

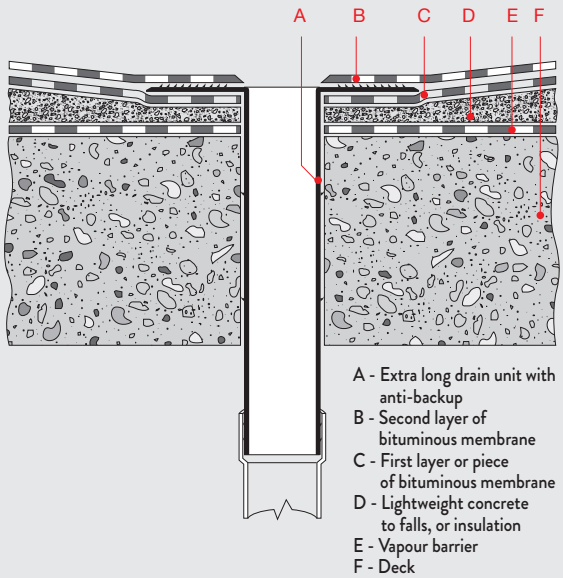
1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 500x500 mm) use the quantities indicated by the producer.
2 - Torch apply first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Heat the surface of the membrane until molten, then place the drain unit into position thus sealing the underside of the drain unit to the waterproofing layer.
4 - Heat a small piece of membrane and spread with a trowel the melted compound in order to cover the ribbed surface of the flange.
5 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer.
6 - Cross cut in the membrane in correspondence to the exit of the drain unit and press around the inside of stem.
7 - Insert the leaf or gravel grate.

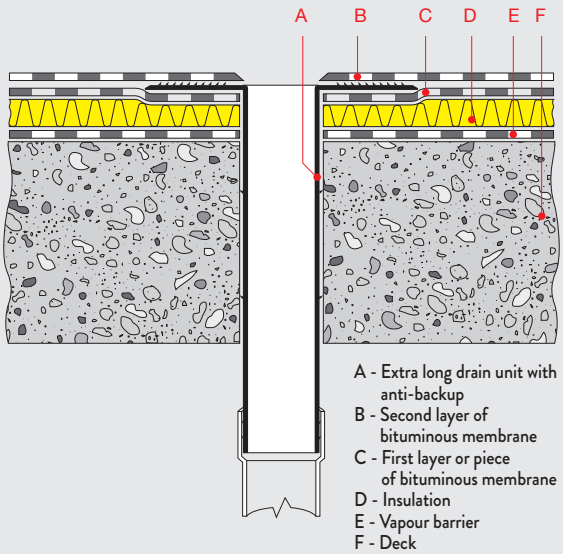
NOTE: *If only one layer of membrane is being used, at point 2 apply a 500x500 mm piece of the waterproofing membrane. Ensure that all areas are well pressed and sealed.*

DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **Extralong drain unit** or similar, made from flexible synthetic rubber IGOM.CE, having a ribbed flange which must extend at least 12 cm beyond the circumference of the drain pipe with a 485 mm long stem with anti-backup rings suitable for pipe Ø..... complete with leaf or gravel grate.



H mm. 485





INSTALLATION METHOD

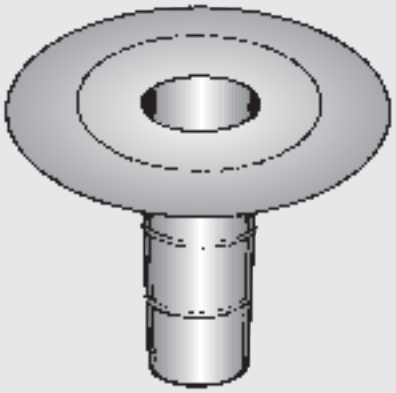
Art. 150R - 11R - 13R - 10R - 14R - 11R - 16R - 12R - 17R - 112R

1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 500x500 mm), use quantities indicated by the producer.
2 - Torch apply first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Heat the surface of the membrane until molten, then place the drain unit into position making sure that compound seeps through the holes of the mesh flange.
4 - Should the seepage of the compound be insufficient, heat a small piece of membrane and with the use of a trowel spread the melted compound over the flange.
5 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer.
6 - Cross cut in the membrane in correspondence to the exit of the drain unit and press around the inside of stem.
7 - Insert the leaf or gravel grate.

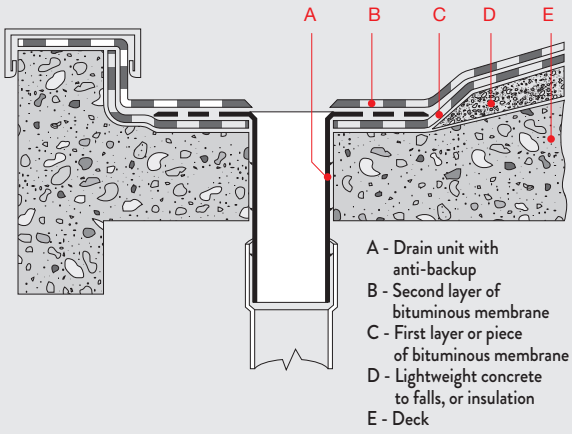
NOTE: *If only one layer of membrane is being used, at point 2 apply a 500x500 mm piece of the waterproofing membrane. Ensure that all areas are well pressed and sealed.*

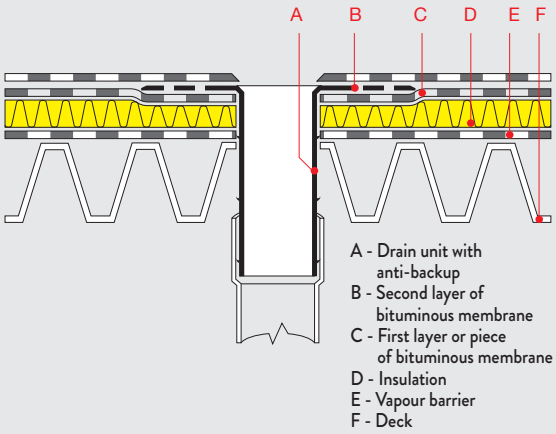
01.3 "UNIVERSAL R" ANTI-BACKUP ROOF DRAIN IN IGOM.CE WITH MESHED FLANGE

DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **"Universal R" roof drain unit** or similar, made from flexible synthetic rubber IGOM.CE, having a meshed flange which must extend at least 10 cm beyond the circumference and the drain pipe, 250 mm long stem with anti-backup rings suitable for pipe Ø..... complete with leaf or gravel grate.



H mm. 250





INSTALLATION METHOD

Art. 107 - 27 - 28 - 109 - 29 - 30 - 91 - 99

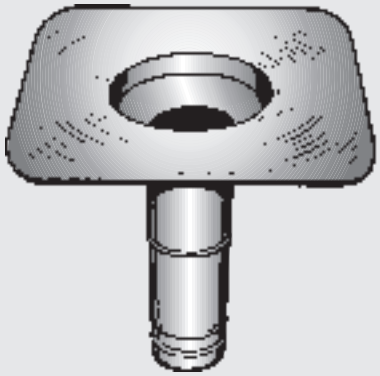
01.4 "NUOVA" ANTI-BACKUP ROOF DRAIN IN IGOM.CE

1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 500x500 mm) use the quantities indicated by the producer.
2 - Torch apply first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Heat the surface of the membrane until molten, then place the drain unit into position thus sealing the underside of the drain unit to the waterproofing layer.
4 - Insert leaf or gravel grate ring.
5 - Heat a small piece of membrane and spread with a trowel the melted compound in order to cover the ribbed surface of the flange.
6 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer.
7 - Cut out a hole in the membrane in correspondence to the exit of the drain unit, the hole must be 20 mm bigger in diameter to that of the roof drain.
8 - Insert the leaf or gravel grate.

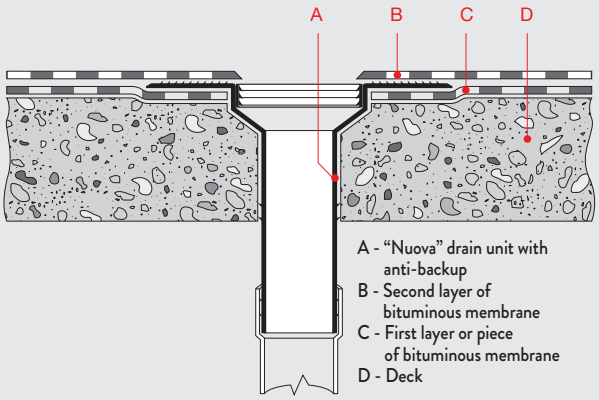
NOTE: *If only one layer of membrane is being used, at point 2 apply a 500x500 mm piece of the waterproofing membrane. Ensure that all areas are well pressed and sealed.*

DESCRIPTION FOR SPECIFICATIONS

Supply and installation of SEALCO LTD **"Nuova" drain unit** or similar, made from flexible synthetic rubber IGOM.CE having a ribbed flange 400x400 mm with an increased 30 mm deep by 170 mm diameter drainage head and a 330 mm long stem with anti back-up rings. Suitable for pipe Ø..... with a spigot, the roof drain comes complete with leaf or gravel grate with 5 or 10 mm meshing.



H mm. 330



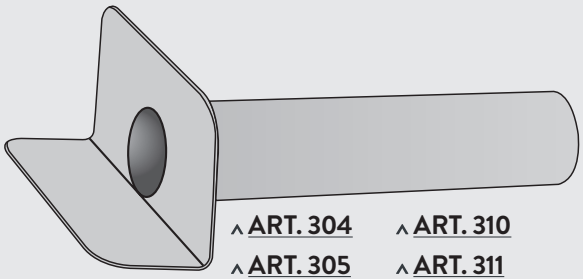
INSTALLATION METHOD

Art. 304 - 305 - 307 - 310 - 311 - 312

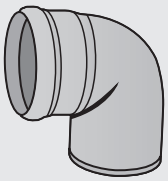
01.6 ANGLED ROOF DRAIN IN IGOM.EE

1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 600x600 mm), use the quantities indicated by the producer.
2 - Torch apply the first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art. 320 - 315, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. A)*.
4 - Heat the previously area of the first layer of waterproofing membrane in correspondence to the hole and press the flange into position.
5 - Heat a piece of membrane and spread the melted compound with a trowel in order to cover the ribbed and slotted surface of the flange.
6 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer and press down strongly.
7 - Before installing the curve fitting, apply a bead of sealant for pipes without gaskets, when possible use curves with gasket.
8 - Insert the leaf or gravel grate, Art. 26.

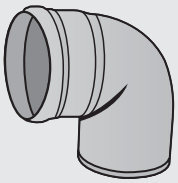
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **90° angled drain unit** or similar, made from flexible synthetic rubber IGOM.EE. Dimensions: 500 mm long stem ..... in Ø with a flexible flange, complete with a curve fitting of ..... in Ø or hopper and leaf or gravel grate.



ART. 304
ART. 305
ART. 307
ART. 310
ART. 311
ART. 312

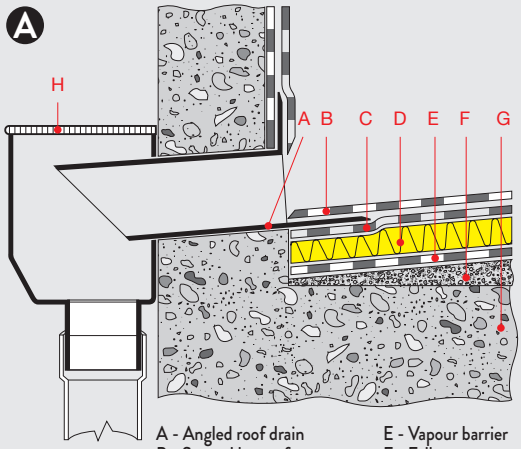


ART. 315



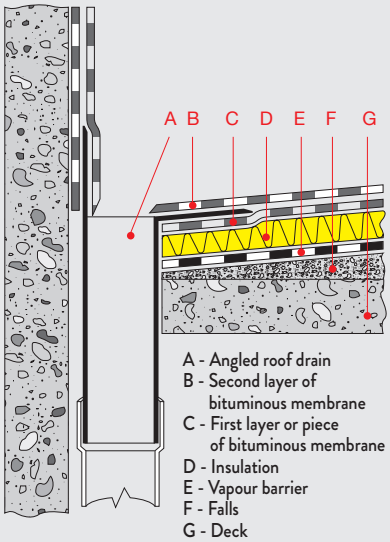
ART. 320

A



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck
H - Hopper

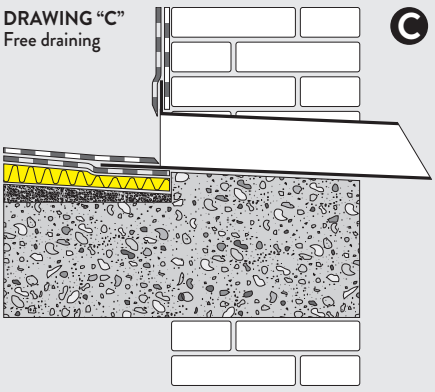
B



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck

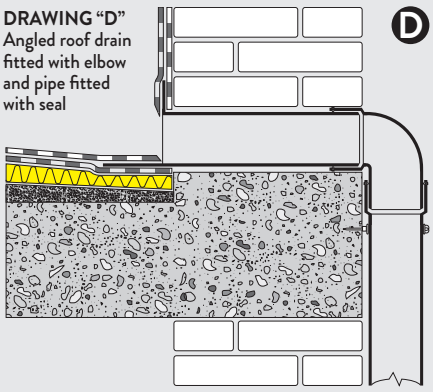
DRAWING "C"
Free draining

C



DRAWING "D"
Angled roof drain fitted with elbow and pipe fitted with seal

D



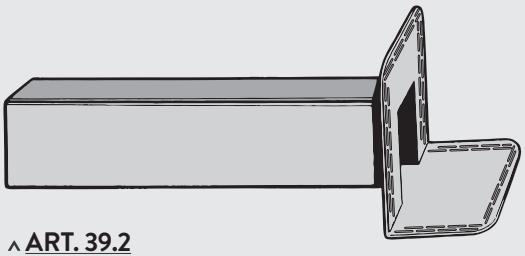
INSTALLATION METHOD

Art. 39 - 39.2

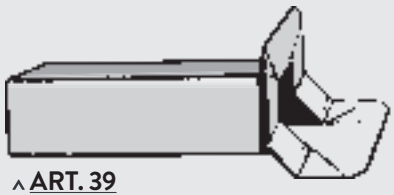
01.6 ANGLED ROOF DRAIN IN IGOM.EE

1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 600x600 mm), use the quantities indicated by the producer.
2 - Torch apply the first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art. 40 - 41 - 42, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. A)*.
4 - Heat the previously area of the first layer of waterproofing membrane in correspondence to the hole and press the flange into position.
5 - Heat a piece of membrane and spread the melted compound with a trowel in order to cover the ribbed and slotted surface of the flange.
6 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer and press down strongly.
7 - Before installing the curve fitting, apply a bead of sealant, make sure that the fitting fits correctly into the tabs of the curve.
8 - Insert the leaf or gravel grate, Art. 26 or 44.

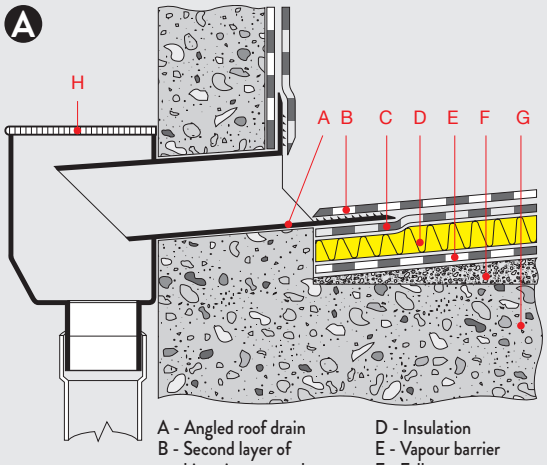
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **90° or 45° angled drain unit** or similar, made from flexible synthetic rubber IGOM.EE. Dimensions: 300 or 500 mm long stem, 100mm in height by 100 mm in width with a flexible flange, complete with 100x100 mm curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper. Leaf or gravel grate.



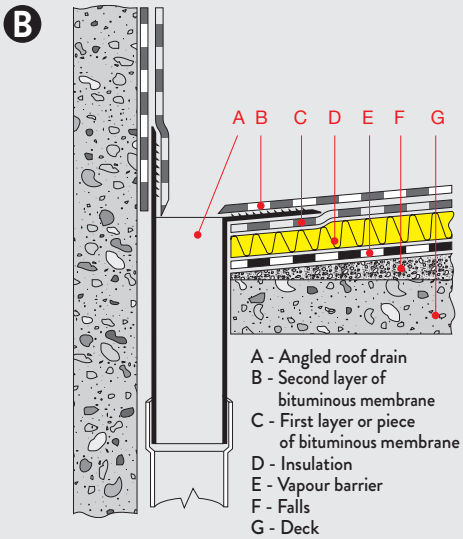
ART. 39.2



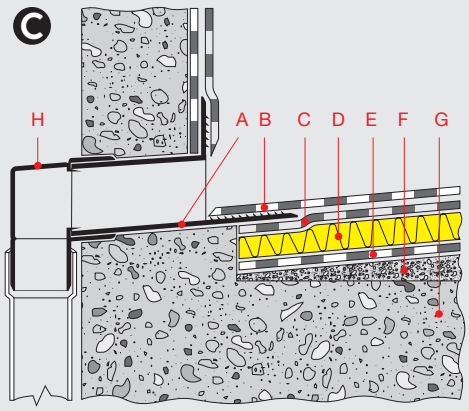
ART. 39



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck
H - Hopper



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck
H - Curve

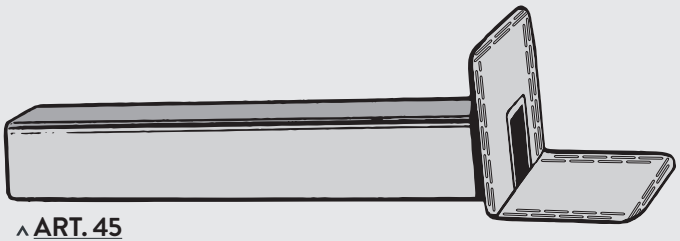
INSTALLATION METHOD

Art. 45

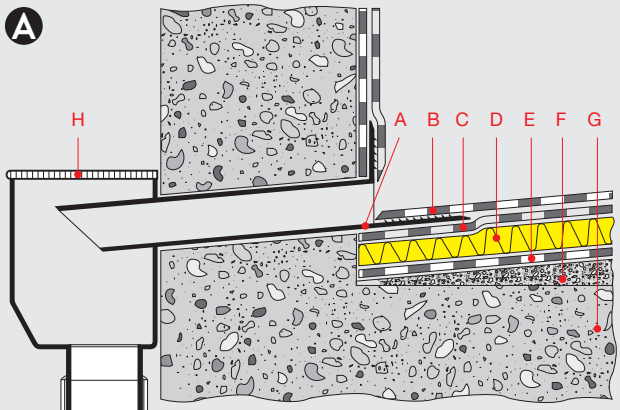
01.6 ANGLED ROOF DRAIN IN IGOM.EE

1 - Apply a layer of primer to the substrate around the area of the drain pipe (approx 600x600 mm), use the quantities indicated by the producer.
2 - Torch apply the first layer of waterproofing membrane and cut out the area in correspondence to the drain pipe.
3 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art. 46 - 47, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. A)*.
4 - Heat the previously area of the first layer of waterproofing membrane in correspondence to the hole and press the flange into position.
5 - Heat a piece of membrane and spread the melted compound with a trowel in order to cover the ribbed and slotted surface of the flange.
6 - Install the second layer of membrane by heating both the previously spread compound as well as the second waterproofing layer and press down strongly.
7 - Before installing the curve fitting, apply a bead of sealant, make sure that the fitting fits correctly into the tabs of the curve.
8 - Insert the leaf or gravel grate, Art. 44.1.

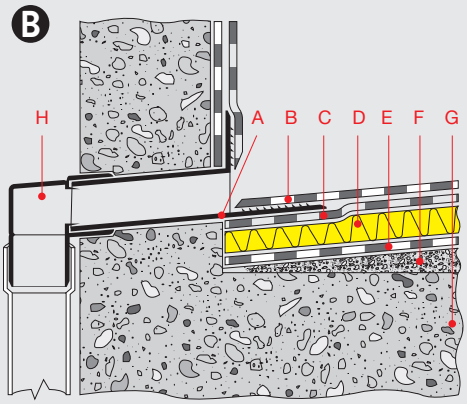
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **90° angled drain unit** or similar, made from flexible synthetic rubber IGOM.EE. Dimensions: 500 mm long stem, 65 mm in height by 100 mm in width with a flexible flange, complete with 65x100 mm curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper, with leaf or gravel grate.



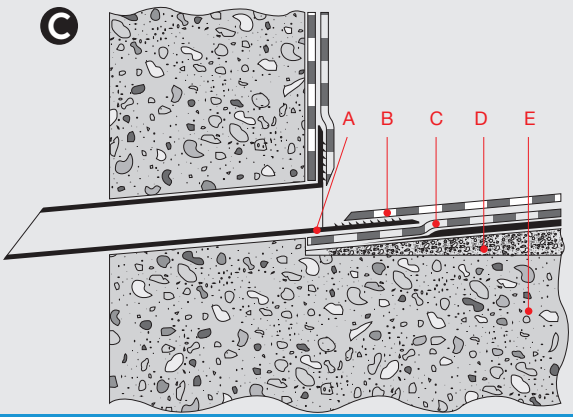
ART. 45



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck
H - Hopper



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Insulation
E - Vapour barrier
F - Falls
G - Deck
H - Curve



A - Angled roof drain
B - Second layer of bituminous membrane
C - First layer or piece of bituminous membrane
D - Falls
E - Deck

INSTALLATION METHOD

Art. 141 - 142 - 144 - 145 - 146 - 143 - 149

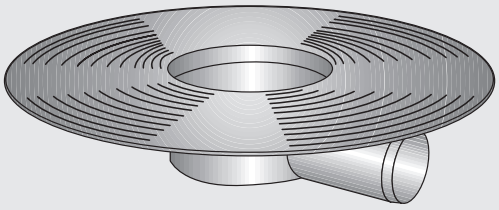
1 - Prepare the area into which the drain will be inserted.
2 - Place the drain into position and insert the stem into a drain pipe with gasket, UNI EN 1451-1.
3 - Fill any empty areas around to be waterproofed around the drain.
4 - Heat a piece of membrane and spread the molten compound with a trowel in order to cover the ribbed surface of the flange.
5 - Install the waterproofing membrane heating both the previously spread compound as well as the waterproofing layer and press down strongly.
6 - Insert the sleeve, Art. 146 and cut to the desired height, insert grill, Art. 143 or 149, complete finishing's.

NOTE: *Do not install drains with syphon where there is a possibility of frost.*

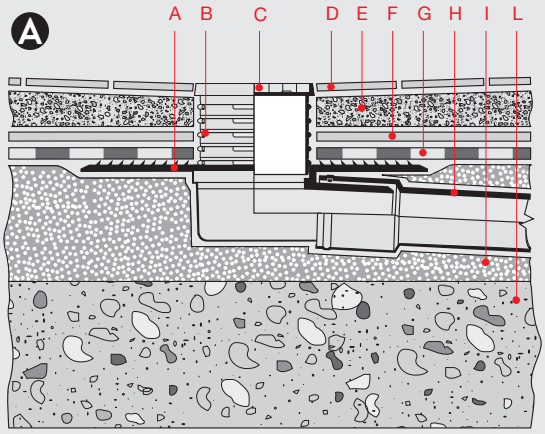
01.8 DRAIN AND SIPHON UNITS WITH LATERAL DISCHARGERS IN IGOM.EE

DESCRIPTION FOR SPECIFICATIONS

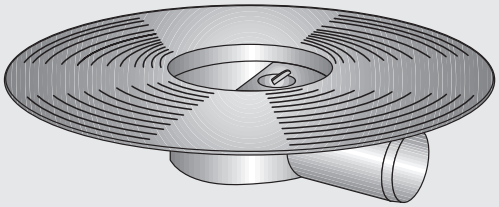
Supply and installation of SEALCO LTD **side discharge drain unit** or similar, with or without a siphon, made from IGOM.EE. For 50 or 75 mm diameter pipes with gaskets according to UNI EN 1451-1.



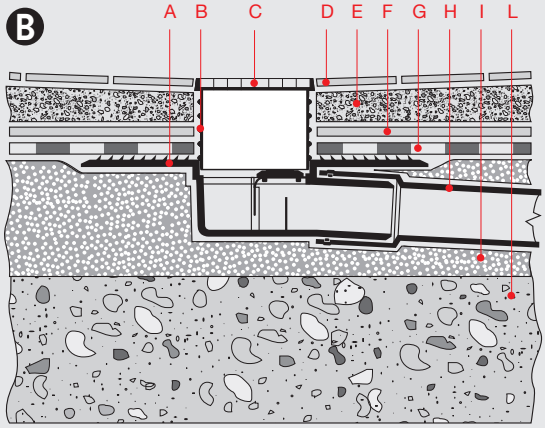
^ ART. 141 - 142



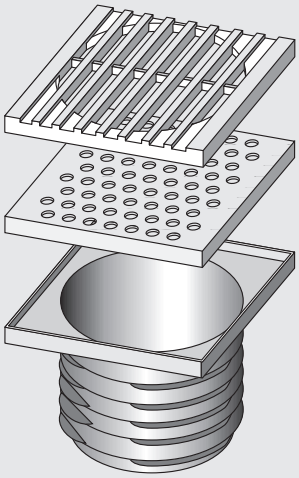
A - Lateral discharge unit
B - Sleeve
C - Grill
D - Tileds
E - Sand cement falls
F - Separation layer
G - Layer of bituminous membrane
H - Pipe with gasket UNI EN 1451-1
I - Fill layer
L - Deck



^ ART. 144 - 145



A - Syphoned lateral discharge unit
B - Sleeve
C - Grill
D - Tileds
E - Sand cement falls
F - Separation layer
G - Layer of bituminous membrane
H - Pipe with gasket UNI EN 1451-1
I - Fill layer
L - Deck



< ART. 143

< ART. 149

< ART. 146

INSTALLATION METHOD

Art. 48 - 49 - 49.1 - 49.9 - 51

01.9 AIR VENTS/VAPOUR EXTRACTORS IN IGOM.EE

1 - Presuming that the diffusion layer has already been installed, place the canalizer in position on top of the diffusion layer towards the top end of the slope *(Fig. A)*.
2 - Install the vapour barrier cutting a hole in correspondence to the canalizer.
3 - Place the thermal insulation into position cutting a hole in correspondence to the canalizer.
4 - Install the first layer of waterproofing membrane, cut a hole in correspondence to the canalizer, heat the membrane around the canalizer, attach the Air vent/Vapour extractor over the top of the canalizer onto the hot membrane ensuring a strong connection between the underside of the flange and the membrane.
5 - Heat a small piece of membrane and spread with a trowel the melted compound in order to cover the ribbed surface of the flange.
6 - Install the second waterproofing layer cutting a hole in correspondence to the Air vent/Vapour extractor heating also the previously applied compound on the flange and press strongly around the base of the extractor.
7 - Attach a suitably cut and shaped piece of membrane around the trunk of the vapour extractor taking special care when attaching it around the base of the trunk of the vapour extractor.
8 - Insert the cover pushing strongly until reaching the locking point.

NOTE: *For the proper Air vents/Vapour extractors it is highly recommended that a hydrometric study be carried out in order to define the correct amount of aerators/extractors to be installed.*

DESCRIPTION FOR SPECIFICATIONS

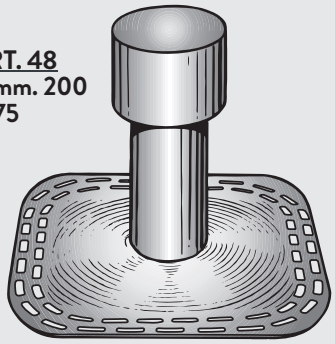
Art. 48 - 49

Supply and installation of SEALCO LTD **Air vents/Vapour extractors** or similar, complete with canalizer Art. 51, anti-insect and protection ring for ventilation and extraction of vapours between the substructure and the vapour barrier. The Air vents/Vapour extractors consist of a 75 mm diameter protruding element , 200-270 mm in height complete with pressure lid, attached all in one piece to a ribbed and slotted flange to be installed between the first and second waterproofing membrane. The Air vents/Vapour extractors must be SEALCO LTD in IGOM.EE or similar and must be installed between the first and second layer.

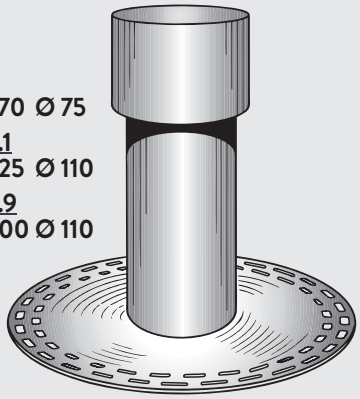
Art. 49.1 - 49.9

Supply and installation of SEALCO LTD **Air vents/Vapour extractors** or similar, for the ventilation of rooms (kitchens, bathrooms etc.), suitable for covering protruding pipes, they are complete with anti-insect and protection ring. The Air vents/Vapour extractors has a cylindrical protruding element suitable for 100 or 110 mm pipes, it is 325 or 500 mm in height complete with pressure lid, attached all in one piece to a ribbed and slotted flange and is inserted between the first and second waterproofing layers. The Air vents/Vapour extractors must be SEALCO LTD in IGOM.EE or similar and must be installed between the first and second layer *(Fig. C)*.

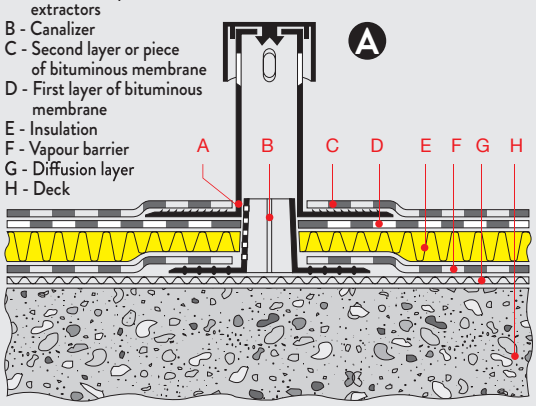
> **ART. 48**
> H mm. 200
> Ø 75



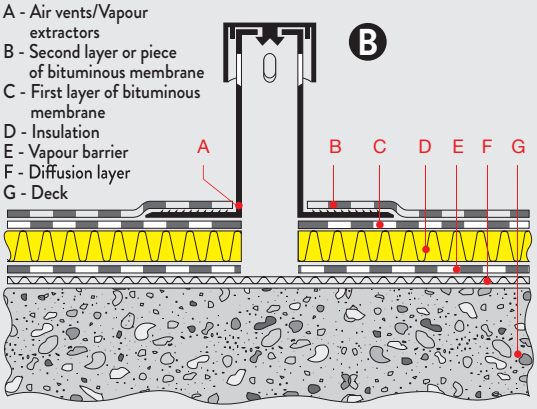
> **ART. 49**
> H mm. 270 Ø 75
> **ART. 49.1**
> H mm. 325 Ø 110
> **ART. 49.9**
> H mm. 500 Ø 110



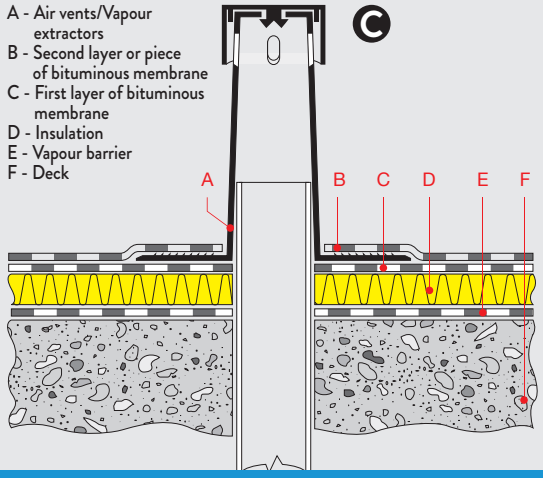
A - Air vents/Vapour extractors
B - Canalizer
C - Second layer or piece of bituminous membrane
D - First layer of bituminous membrane
E - Insulation
F - Vapour barrier
G - Diffusion layer
H - Deck

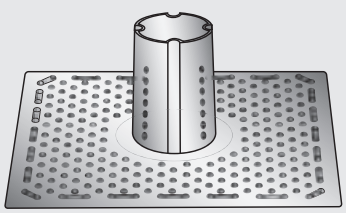


A - Air vents/Vapour extractors
B - Second layer or piece of bituminous membrane
C - First layer of bituminous membrane
D - Insulation
E - Vapour barrier
F - Diffusion layer
G - Deck



A - Air vents/Vapour extractors
B - Second layer or piece of bituminous membrane
C - First layer of bituminous membrane
D - Insulation
E - Vapour barrier
F - Deck





> **ART. 51**
> H mm. 100 Ø 60

INSTALLATION METHOD

Art. 54 - 55 - 56 - 57 - 58 - 60

1 - Prepare the flexible collar by cutting according to the requested diameter of the pipe.
2 - Install the first waterproofing membrane cutting it in correspondence to the protruding pipe.
3 - Heat the surface of the membrane around the protruding pipe and place the flexible collar in position while the surface is still hot in order to ensure the correct attachment to the underside of the flange.
4 - Heat a piece of membrane and with the use of a trowel use the molten compound to fill the ribs of the flange.
5 - Proceed with the installation of the second layer of waterproofing membrane, stay flush with the base of the flexible collar.
6 - Insert the air vent/vapour extractor over the protruding pipe.

On flat surfaces it is necessary that the protruding ventilation pipe protrudes 31 cm above the roof deck for both diameters.
In the case of tiled roofs the ventilation pipe must protrude 30 cm above the tile, the pipes will then be covered by the cap for roof tile and the vent pipe.

NOTE: *In the case of tiled roof the flexible collar must be replaced with the cap piece Art. 60.*

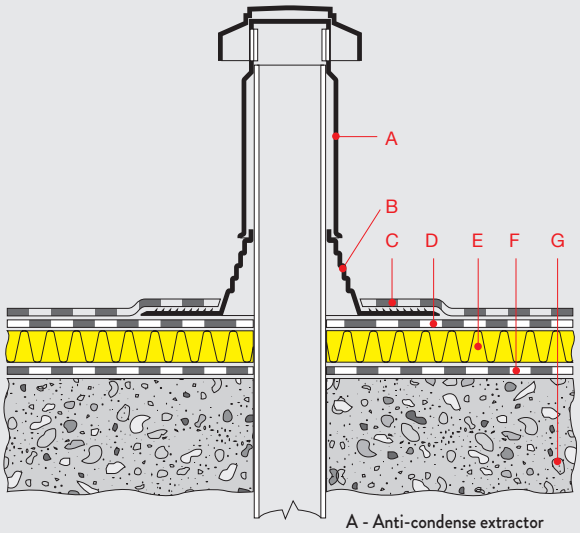
01.10 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN IGOM.CE

DESCRIPTION FOR SPECIFICATIONS

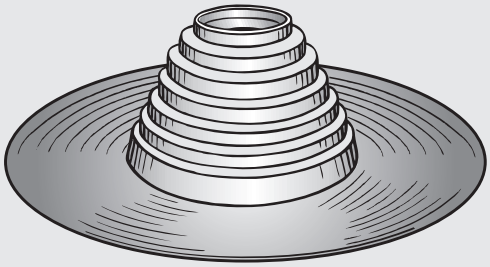
Art. 54 - 56 - 55 - 57
Supply and installation of SEALCO LTD **flexible collar** or similar, made from flexible synthetic rubber IGOM CE having a ribbed flange which must be round and flexible, suitable for protruding pipes with the following diameters: 80-90-100-110-115-125; the clamping rings most be in stainless steel.

Art. 58
Supply and installation of SEALCO LTD **Air vent/Vapour extractors** or similar, for ventilation pipes coming from bathrooms, kitchens etc. Diameter 100 mm, height 305 mm or diameter 125 mm, height 350 mm and relative base connection installed between two waterproofing membranes.

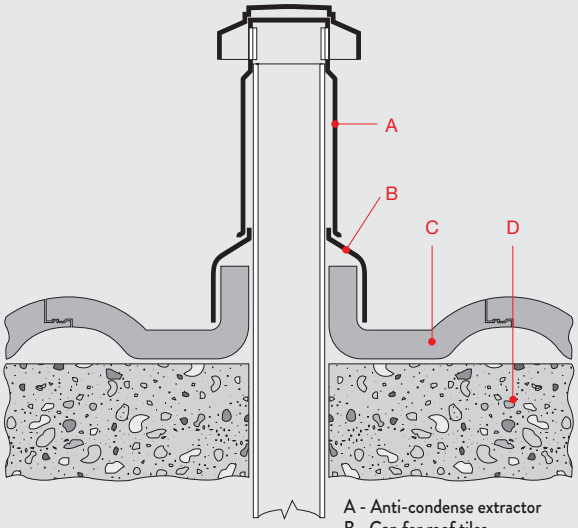
ART. 54 - 56
ART. 55 - 57



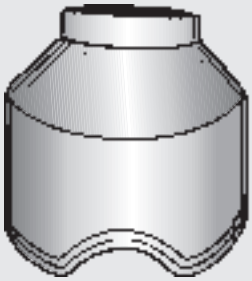
A - Anti-condense extractor
B - Flexible collar
C - Second layer or piece of bituminous membrane
D - First layer of bituminous membrane
E - Insulation
F - Vapour barrier
G - Deck



ART. 58



A - Anti-condense extractor
B - Cap for roof tiles
C - Roof tiles
D - Deck



ART. 60

INSTALLATION METHOD

Art. 113 - 114 - 138

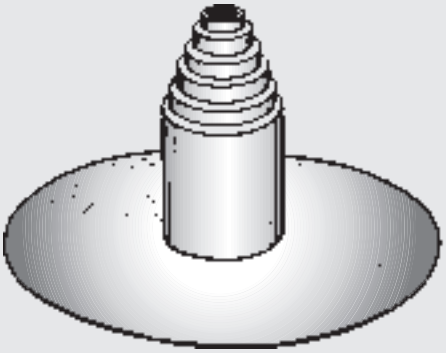
01.11 PIPE WRAP/FITTINGS IN IGOM.CE

1 - Prepare the pipe wrap/fitting by cutting according to the requested diameter of the pipe.
2 - Install the first layer of waterproofing membrane and cut a hole in correspondence to the pipe.
3 - Heat the surface of the membrane around the protruding pipe and place the flexible collar in position while the surface is still hot in order to ensure the correct attachment to the underside of the flange.
4 - Heat a piece of membrane and with the use of a trowel use the molten compound to fill the ribs of the flange.
5 - Cut a hole in the membrane corresponding to the diameter of the base of the pipe fitting and proceed with the installation of the second waterproofing layer.
6 - Install a stainless steel clamping ring at the at the top of the pipe fitting.

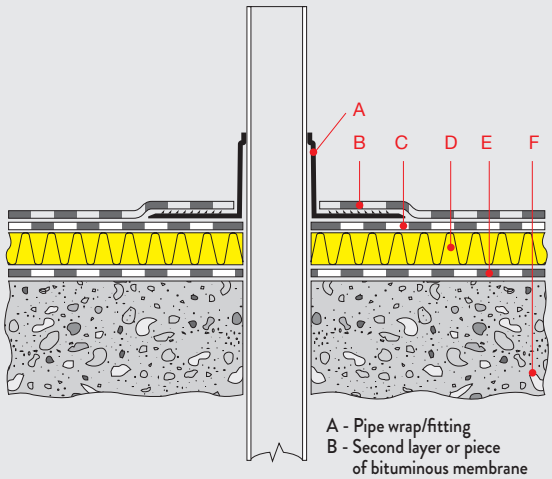
DESCRIPTION FOR SPECIFICATIONS

Art. 113
Supply and installation of SEALCO LTD **pipe wrap/fittings** or similar, made from synthetic rubber IGOM CE, suitable for pipes with the following diameters: 34-50-60-75-80-90; with a round ribbed flange.
The clamping ring must be in stainless steel.

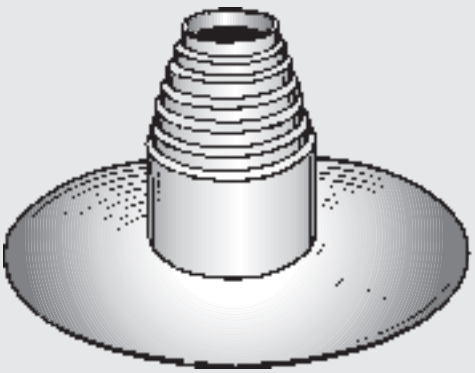
Art. 114
Supply and installation of SEALCO LTD **pipe wrap/fittings** or similar, made from synthetic rubber IGOM CE, suitable for pipes with the following diameters: 75-80-90-100-110-115-125; with a round ribbed flange.
The clamping ring must be in stainless steel.



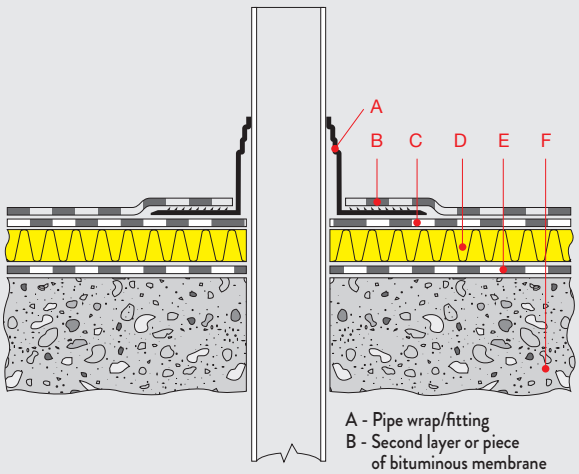
ART. 113



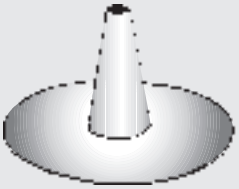
A - Pipe wrap/fitting
B - Second layer or piece of bituminous membrane
C - Fist layer of bituminous membrane
D - Insulation
E - Vapour barrier
F - Deck



ART. 114



A - Pipe wrap/fitting
B - Second layer or piece of bituminous membrane
C - Fist layer of bituminous membrane
D - Insulation
E - Vapour barrier
F - Deck



ART. 138

INSTALLATION METHOD

Art. 115.1 - 116.1

01.12 INTERNAL AND EXTERNAL CORNERS IN IGOM.CE

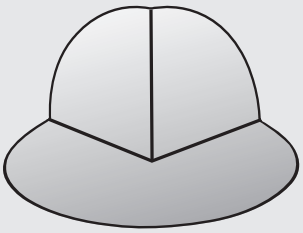
1 - Heat the waterproofing membrane in correspondence to the inside or outside corner.
2 - Install the inside or outside corner while the membrane is still hot pressing down strongly.
3 - Seal the perimeter of the inside or outside corner with the compound that bleeds from below the corner using the point of the trowel.

In the case that the membrane should have a slate finish, scrape away the slate previous to installation. After the corner fitting has been installed, it is possible to apply a patch on top of the corner in order to unify esthetics.

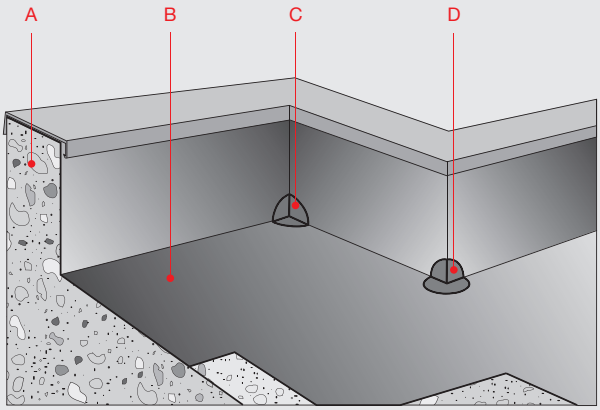
NOTE: *The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk of transversal and horizontal traction of the waterproofing membrane.*

DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **inside and outside corners** or similar, made from synthetic rubber IGOM.CE.

ART. 115.1



ART. 116.1



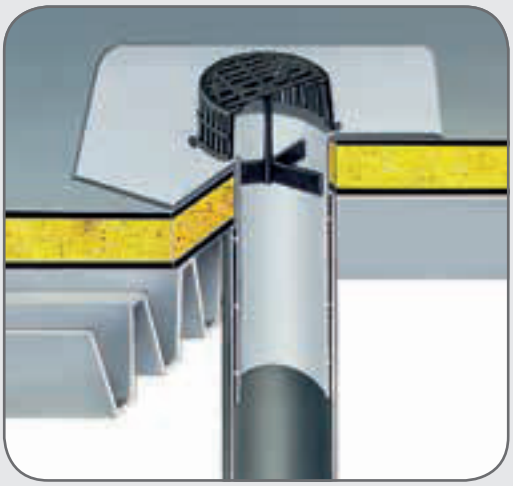
A - Deck
B - Bituminous membrane
C - Internal corner
D - External corner

02

ACCESSORIES FOR SYNTHETIC PVC-P MEMBRANES

02.1 ANTI-BACKUP ROOF DRAIN IN PVC-P

ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø



ART. 26
Leaf grate suitable for roof drains from mm. 75 Ø to mm. 125 Ø

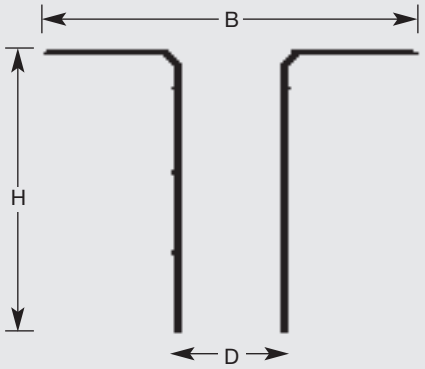
ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø

PVC-P buttonhole plates for leaf and gravel grate

The **ROOF DRAIN IN PVC-P** is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is used for application on roofs waterproofed with PVC-P membranes. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made of soft, flexible and UV stabilized PVC-P. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to a smooth flange. The stem piece of the unit has two or more strategically placed circular ribs which face outwards which when forced into the drain pipe prevent backing-up of water forming a perfect seal. The seal rings are compressed upwards when inserted into the downpipe guaranteeing an optimal seal with any type of pipe.
The presence of the external seal rings avoid the passage of water vapour or back-up water into the roofing build-up, this is particularly important where insulation is involved as it could compromise the insulation, factor that constitutes one of the main problems in roof waterproofing.

> INSTALLATION METHOD PAG. 40

ART.	1.2	13.1	21	14A	22	16.1	23	17A	112A
DENOM	60	75	80	90	100	110	125	140	160
B	245	300	310	320	325	335	350	360	385
H	250	250	250	250	250	250	250	250	250
D	54	66	73	83	92	100	116	132	148



02.2 "NUOVA" ANTI-BACKUP ROOF DRAIN IN PVC-P

ART. 38
Leaf and gravel grate suitable for diameters to mm. 160

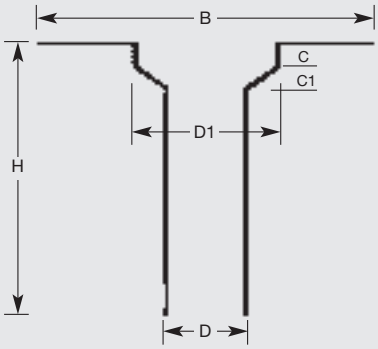
ART. 38 BIS
Leaf and gravel grate suitable for diameters to mm. 160

GRAVEL GRATE RING

The **"NUOVA" ANTI-BACKUP ROOF DRAIN IN PVC-P** is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is used for application on roofs waterproofed with PVC-P membrane. This particular item has been studied right down to its smallest details so as to optimize its characteristics, in fact, it has a 170x30 mm diameter deep head which increases the drainage capacity up to 45% compared to a standard drain. The total funnel length of 330 mm allows for use with thicker substrates thus avoiding the need for any intermediate joints and when inserted into the spigot of down pipe permits a constant and continues flow without losing any of the capacity of the downpipe, it can also be fixed into position previous to installation of the downpipes. The drain is made of soft, flexible and UV stabilized PVC-P. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan. It has been proved that this roof drain can discharge up to 45% more than a normal drain of the same diameter. The drain consists of a truncated body available in various diameters solidly attached to a smooth flange. The stem piece of the unit has two or more strategically placed circular rings which face outwards and when forced into the drain pipe form a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit, they guarantee optimal seal with any type of pipe and prevent the passage of water vapour or back-up of water into the roofing system. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing. It is highly recommended to use the 200 mm diameter gravel grate directly connected to the slotted ring, the ring ha three slots which allow for the regulation of the height in case of layer variations in the waterproofing system.

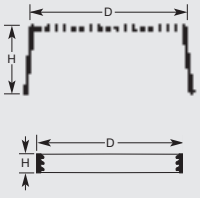
> INSTALLATION METHOD PAG. 41

ART.	108	31	32	109.1	33	34	97	100
DENOM	75	80	100	110	125	140	160	200
B	400	400	400	400	400	400	400	400
H	330	330	330	330	330	330	330	330
D	75	80	100	110	125	140	151	191
D1	170	170	170	170	170	170	170	-
C	30	30	30	30	30	30	30	-
C1	25	25	25	25	25	25	25	-



LEAF AND GRAVEL GRATE

ART.	38	38bis
D	180	180
H	80	80



RING

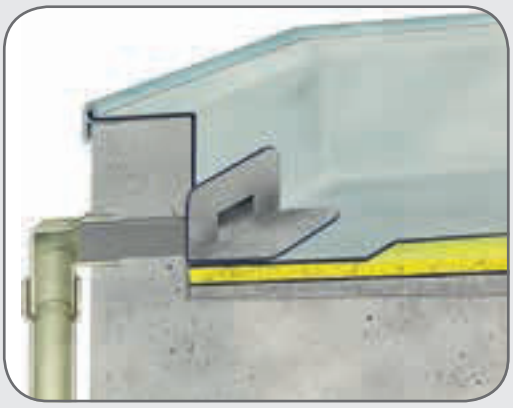
D	170
H	30

NOTE
Art. 38 gap mm. 6.

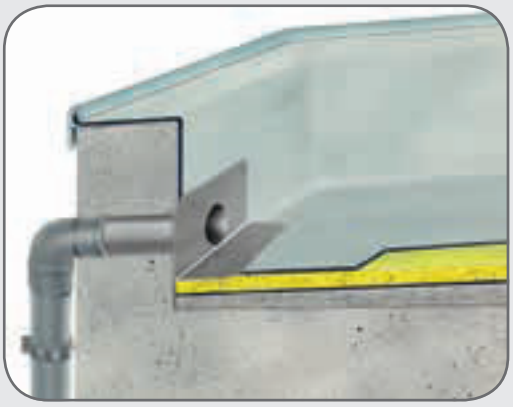
Art. 38 bis gap mm. 12.

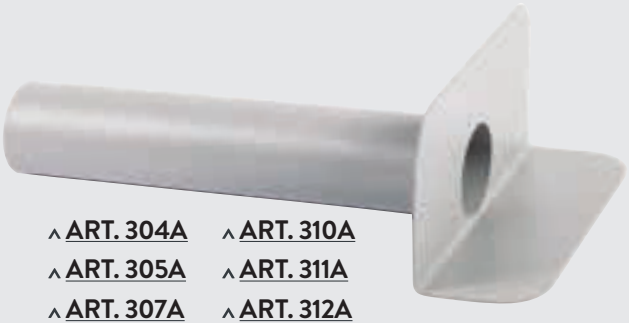
02.3 ANGLED ROOF DRAIN IN PVC-P

ART. 45.1



ART. 39.2A



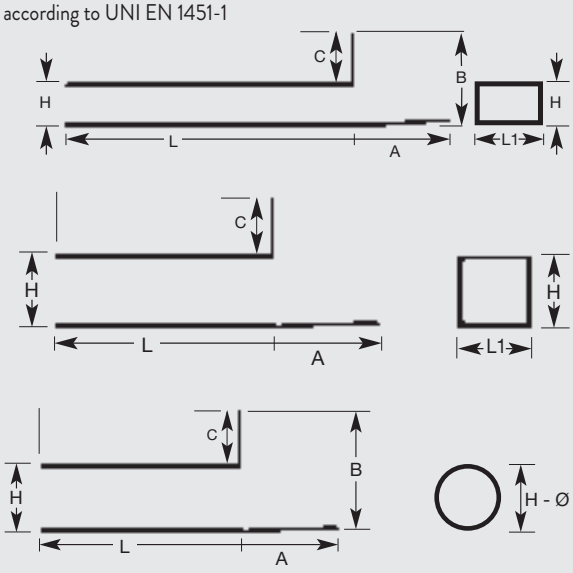


ART. 304A
ART. 305A
ART. 307A
ART. 310A
ART. 311A
ART. 312A

90° PVC-P ANGLED ROOF DRAIN IN PVC-P Art. 45.1, RECTANGULAR, Art. 39.2A, SQUARE AND ROUND Art. 304A - 305A - 307A - 310A - 311A AND 312A particularly suitable for use with all kinds of synthetic PVC-P waterproofing membranes. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The 90° roof drains are made from a flexible and UV stabilized PVC-P. They offer high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan. The drains are consists of a truncated body in various shapes solidly attached to a large and smooth 90° flange.
The 90° angled roof drain offers the possibility of being used for direct discharge from terraces without being connected to down pipes, they also can be used with internal or external down pipes but in particular it can be used horizontally on all types of projects were thicker walls are present.
It can be used in conjunction with the following curves and connections:
- Art. 39.2A curved fitting Art. 40 - 41 - 42
- Art. 45.1 curved fitting Art. 46 - 47
- Art. 304A - 305A - 307A - 310A - 311A - 312A curved fitting Art. 315 - 320 or other curves according to UNI EN 1451-1

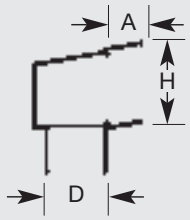
> INSTALLATION METHOD PAG. 42-43

ART.	45.1	39.2A	304A	305A	307A	310A	311A	312A
A	120	100	120	120	120	120	120	120
B	140	180	170	170	170	170	170	170
C	-	39.2	500	500	500	500	500	500
H	65	100	63	75	80	100	110	115
L1	97	100	-	-	-	-	-	-
L	450	500	500	500	500	500	500	500



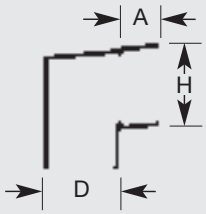
02.4 CURVES, CONNECTIONS, HOPPER

ART. 40
Curve
from 100 square ∅ 80



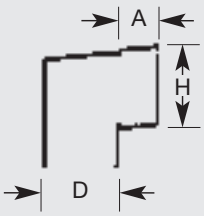
ART. 40

ART. 41
Curve
from 100 square ∅ 100



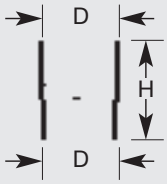
ART. 41

ART. 42
Curve
mm 100x100



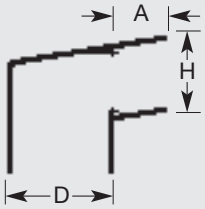
ART. 42

ART. 43
Reducer
mm 100x100 ∅ 100



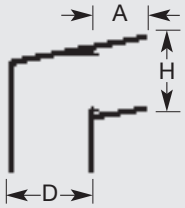
ART. 43

ART. 46
Curve ∅ 80



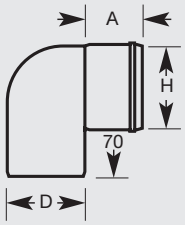
ART. 46

ART. 47
Curve ∅ 100



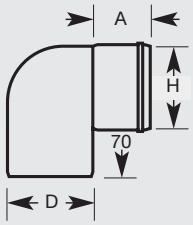
ART. 47

ART. 315
Curve
∅ 100



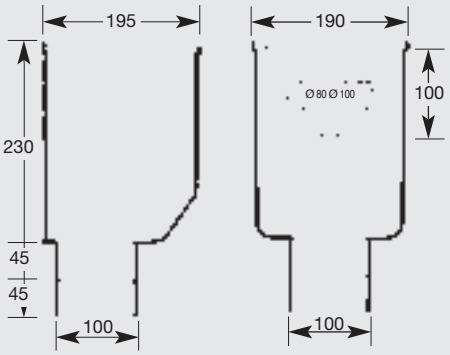
ART. 315

ART. 320
Curve
∅ 110



ART. 320

> ART. 118G
> ART. 118GM
Drain box

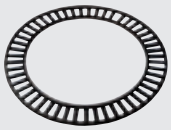


ART.	40	41	42	43
A	50	50	50	50
D	80	100	100x100	100
H	100x100	100x100	100x100	100x100

ART.	46	47	315	320
A	50	50	65	65
D	68x100	68x100	100	110
H	80	100	110	110

02.5 AIR VENTS/VAPOUR EXTRACTORS IN PVC-P

< ART. 50



^ ART. 48.3 - 49.7

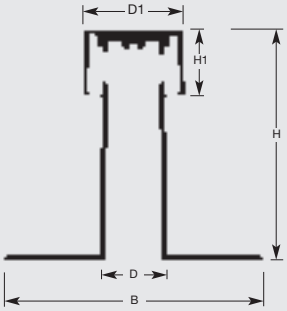
< ART. 49.3

^ ART. 48.8 - 49.8

The **AIR VENTS/VAPOUR EXTRACTORS IN PVC-P** are particularly suitable for use with PVC-P waterproofing membranes. This particular item has been studied right down to its smallest details in fact, the unit has optimal characteristics that help eliminate serious and typical problems that can appear on a waterproofed roof caused by an imperfect evacuation of vapours, imperfect ventilation or use of incorrect air vents/vapour extractors: swelling of the membrane, moistening of the insulating layer causing a subsequent reduction or loss of original properties.
The Air vents/vapour extractors are made from a flexible and UV stabilized PVC-P. They offer high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The Air vents/vapour extractors consist of a protruding body of various diameters directly attached to a smooth large flange.
The air Vents/vapour extractors are designed and patented by SEALCO LTD and are one of the most effective ventilation systems as they allow for the total evacuation of vapour build-up under the waterproofing layer.

> INSTALLATION METHOD PAG. 44

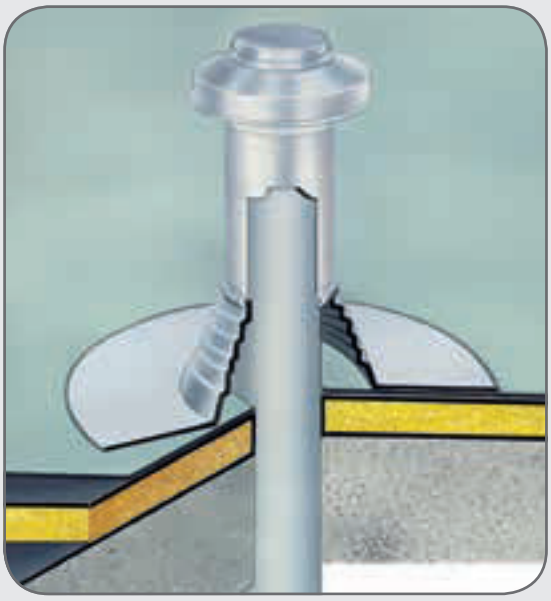
ART.	50	49.3
B	285x285	360
D	75	110
H	200	325
H1	80	95
D1	110	145



02.6 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN PVC-P

< ART. 55
< ART. 57
Grey

< ART. 59



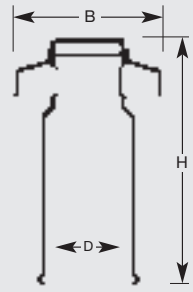
ANTI-CONDENSE EXTRACTOR is suited for the ventilation of bathrooms, kitchens, wet rooms and any other rooms where there is a heavy presence of vapour. Thanks to the constructive characteristics it avoids the formation of condense and thus avoids dripping along ventilation pipes. They are available in colours grey or brown.

> INSTALLATION METHOD PAG. 45

The **FLEXIBLE COLLAR IN PVC-P Art. 59** is suitable for connecting protruding pipes with synthetic waterproofing membranes in PVC-P. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The flexible collar is made of soft, flexible and UV stabilized PVC-P. It offers high physical, chemical and technical properties as well as a flexible product.
It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The flexible collar consist of a truncated body of variable diameters solidly attached to a large smooth surfaced flange.

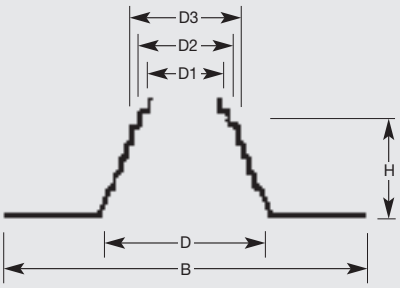
> INSTALLATION METHOD PAG. 45

ART.	54	56
D	100	125
D1	120	150
B	180	220
H	300	350



^ ART. 54 - 55 - 56 - 57

ART.	59
B	410
D	190
D1	80
D2	100
D3	125



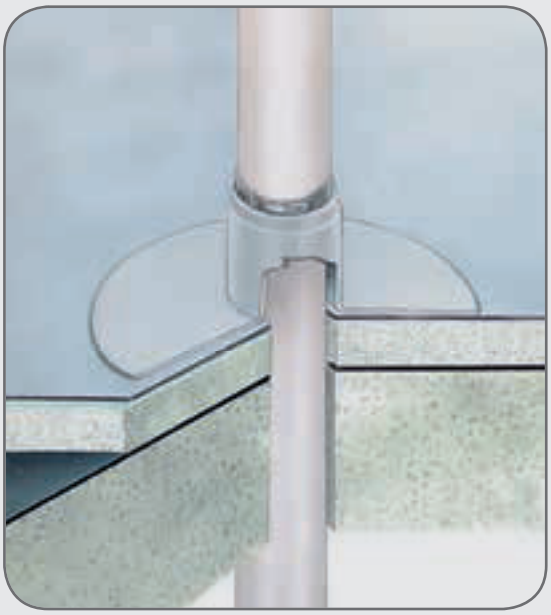
^ ART. 59

02.7 PIPE WRAP/FITTINGS IN PVC-P

^ ART. 113.1

^ ART. 139

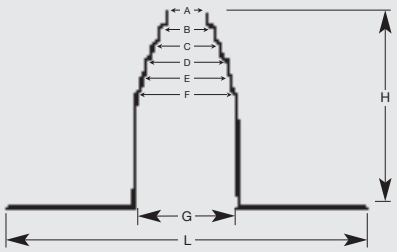
^ ART. 114.1



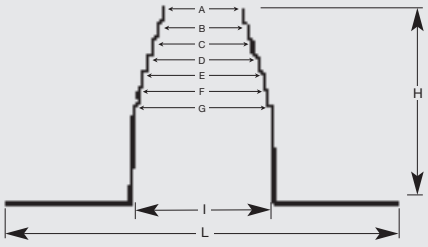
PIPE WRAP/FITTINGS IN PVC-P are suitable for connecting protruding pipes with synthetic waterproofing membranes in PVC-P. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional fittings available in the market. The pipe wrap/fittings is made of soft, flexible and UV stabilized PVC-P. It offers high physical, chemical and technical properties as well as a flexible product.
It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The pipe wrap/fittings consist of a truncated body of variable diameters solidly attached to a large smooth surfaced flange.

> INSTALLATION METHOD PAG. 46

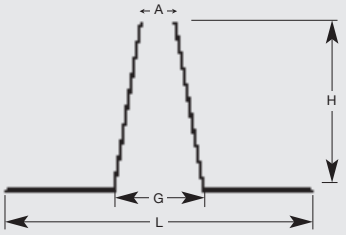
ART.	113.1	114.1	139
A	34	75	20
B	50	80	-
C	60	90	-
D	75	100	-
E	80	110	-
F	90	115	-
G	93	125	50
I	-	127	-
L	340	365	200
H	180	180	120



^ ART. 113.1



^ ART. 114.1



^ ART. 139

02.8 INTERNAL AND EXTERNAL CORNERS IN PVC-P

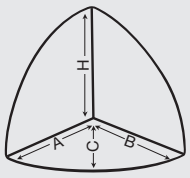
ART. 115

ART. 116

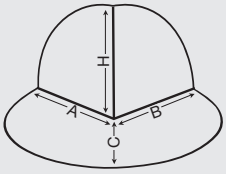
INTERNAL AND EXTERNAL CORNERS IN PVC-P are suitable for the reinforcement of the waterproofing in internal and external corners.
The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk because of transversal and horizontal traction of the waterproofing membrane.
They are used for application on roofs waterproofed with PVC-P membranes
The Internal and external corners are made of soft, flexible and UV stabilized PVC-P. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.

> INSTALLATION METHOD PAG. 47

ART.	115	116
A	100	97
B	100	97
C	100	85
H	100	100



^ ART. 115



^ ART. 116

INSTALLATION METHOD

Art. 1.2 - 13.1 - 21 - 14A - 22 - 16.1 - 23 - 17A - 112A

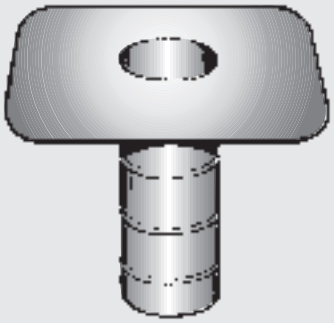
1 - Install the PVC-P membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Mechanically fix the membrane to the substrate around the perimeter of the of the downspout (approx 3 fixings).
3 - Make sure that the welding surfaces are clean and free from any contaminants.
4 - Insert the roof drain into the downspout.
5 - Weld the flange by hot air to the waterproofing membrane, using the welding temperature indicated by the producer of the membrane.
6 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
7 - Insert the leaf or gravel grate.

NOTE: *In those cases where the roof drain is installed below the waterproofing membrane, the flange must be fixed to the substrate (approx 4 fixings) around the outside perimeter of the flange, after which, proceed to weld the membrane to the upper surface of the flange.*

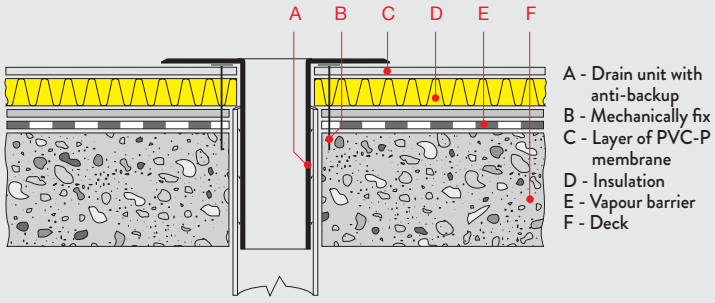
02.1 ANTI-BACKUP ROOF DRAIN IN PVC-P

DESCRIPTION FOR SPECIFICATIONS

Supply and install SEALCO LTD **Universal drain unit** or similar, made of UV stabilized PVC-P with a smooth finished flange, 250 mm long anti-backup stem suitable for pipe Ø..... complete with leaf or gravel grate.



H mm. 250



INSTALLATION METHOD

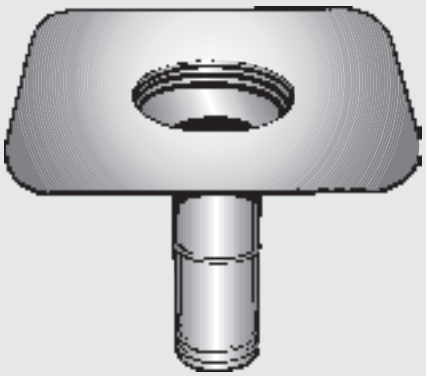
Art. 108 - 31 - 32 - 109.1 - 33 - 34 - 97 - 100

02.2 "NUOVA" ANTI-BACKUP ROOF DRAIN IN PVC-P

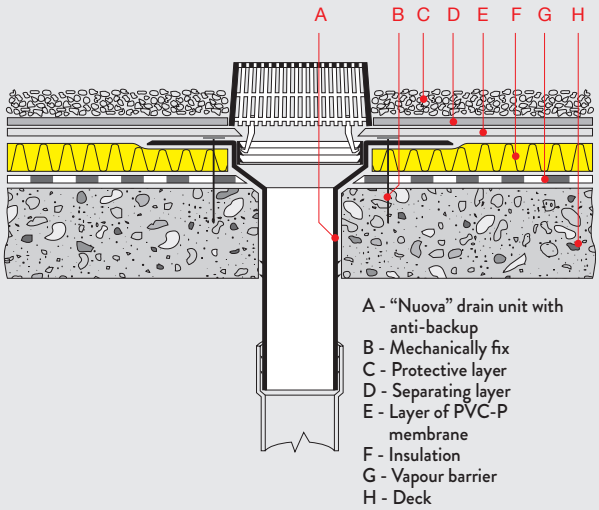
1 - Install the PVC-P membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Mechanically fix the membrane to the substrate around the perimeter of the of the 30 mm deep insert (approx 4 fixings).
3 - Make sure that the welding surfaces are clean and free from any contaminants.
4 - Insert the roof drain into the downspout.
5 - Weld the flange by hot air to the waterproofing membrane, using the welding temperature indicated by the producer of the membrane.
6 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
7 - Push the slotted ring into position and insert the leaf or gravel grate.

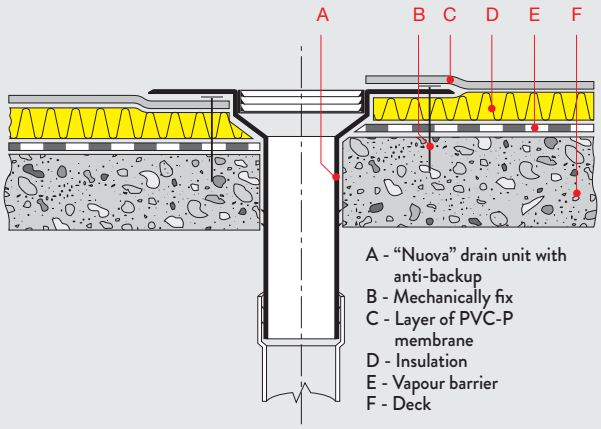
NOTE: *In those cases where the roof drain is installed below the waterproofing membrane, the flange must be fixed to the substrate (approx.. 4 fixings) around the outside perimeter of the flange, after which, proceed to weld the membrane to the upper surface of the flange.*

DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **"Nuova" drain unit** or similar, made of UV stabilized PVC-P with a smooth finished flange, 400x400 mm with an increased 30 mm deep by 170 mm diameter drainage head and a 330 mm long stem with anti back-up rings. Suitable for pipe Ø.....with a spigot and complete with leaf or gravel grate with 5 or 10 mm meshing.



H mm. 330





INSTALLATION METHOD

Art. 39.2A - 45.1

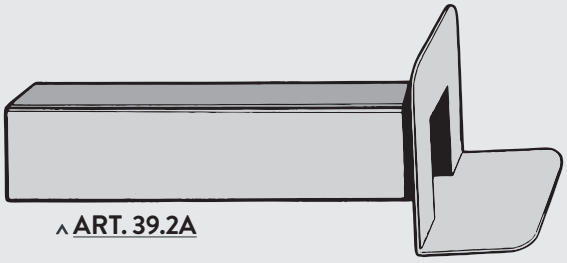
1 - Install the PVC-P membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art. 40-41-42-46-47, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. A)*.
3 - Position the roof drain in place and mechanically fix to the substrate (using appropriate fixings), 2 on the vertical surface and 2 on the horizontal surface.
4 - Cut a piece of membrane, at least 100 mm bigger in every direction than the flange.
5 - Make sure that the welding surfaces are clean and free from any contaminants.
6 - Hot air weld the piece of membrane to the roof drain flange and to the vertical and horizontal membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the leaf or gravel grate Art. 26 or 44.1.

02.2 "NUOVA" ANTI-BACKUP ROOF DRAIN IN PVC-P

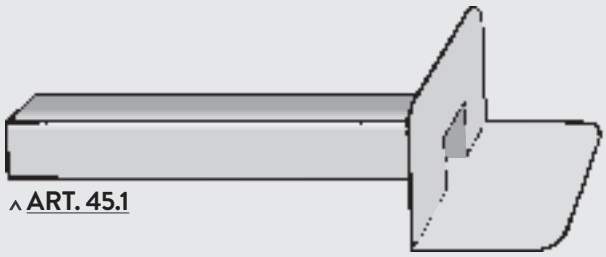
DESCRIPTION FOR SPECIFICATIONS

Art. 39.2A
Supply and installation of SEALCO LTD **90° roof drain unit** or similar, made of UV stabilized PVC-P with the following dimensions: stem length of 500 mm, height 100 mm and a width of 100 mm width with a flexible flange, complete with 100x100 mm curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper. Leaf or gravel grate.

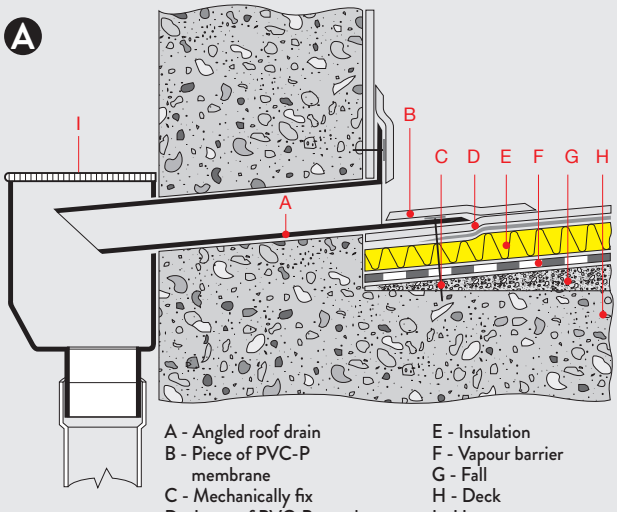
Art. 45.1
Supply and installation of SEALCO LTD **90° roof drain unit** made stabilized PVC-P or similar with the following dimensions: Stem length of 450 mm, height 65mm and a width of 100 mm width with a flexible flange, complete with curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper. Leaf or gravel grate.



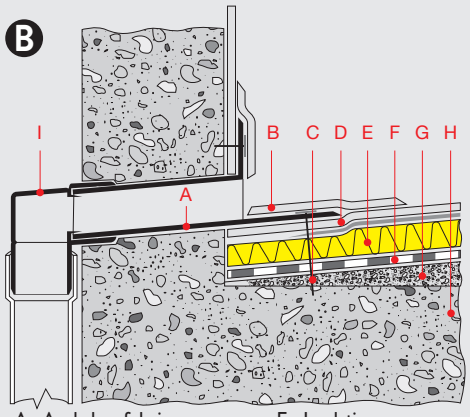
ART. 39.2A



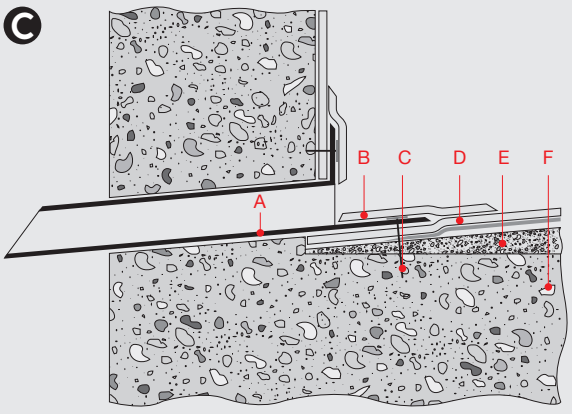
ART. 45.1



A - Angled roof drain
B - Piece of PVC-P membrane
C - Mechanically fix
D - Layer of PVC-P membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Hopper



A - Angled roof drain
B - Piece of PVC-P membrane
C - Mechanically fix
D - Layer of PVC-P membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Curve



A - Angled roof drain
B - Piece of PVC-P membrane
C - Mechanically fix
D - Layer of PVC-P membrane
E - Fall
F - Deck

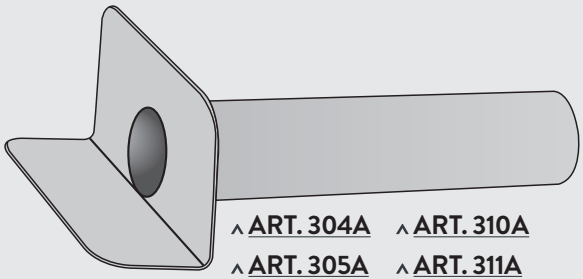
INSTALLATION METHOD

Art. 304A - 305A - 307A - 310A - 311A - 312A

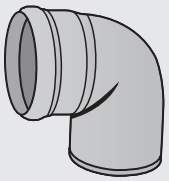
02.3 ANGLED ROOF DRAIN IN PVC-P

1 - Install the PVC-P membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art.315 - 320, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. B)*.
3 - Position the roof drain in place and mechanically fix to the substrate (using appropriate fixings), 2 on the vertical surface and 2 on the horizontal surface.
4 - Cut a piece of membrane, at least 100 mm bigger in every direction than the flange.
5 - Make sure that the welding surfaces are clean and free from any contaminants.
6 - Hot air weld the piece of membrane to the roof drain flange and to the vertical and horizontal membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the leaf or gravel grate Art. 26.

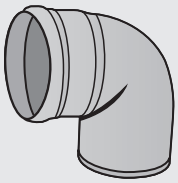
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **90° angled drain unit** or similar, made of UV stabilized PVC-P.
Dimensions: 500 mm long stem .....in Ø with a flexible flange, complete with a curve fitting of ..... in Ø or hopper and leaf or gravel grate.



- ART. 304A
- ART. 305A
- ART. 307A
- ART. 310A
- ART. 311A
- ART. 312A

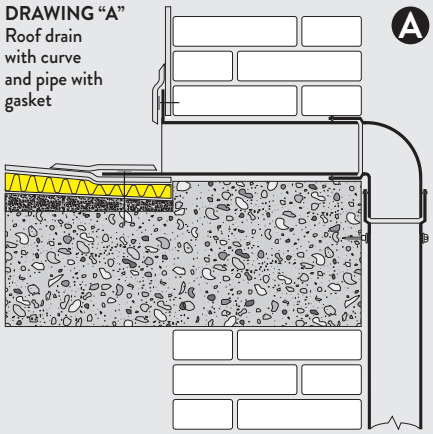


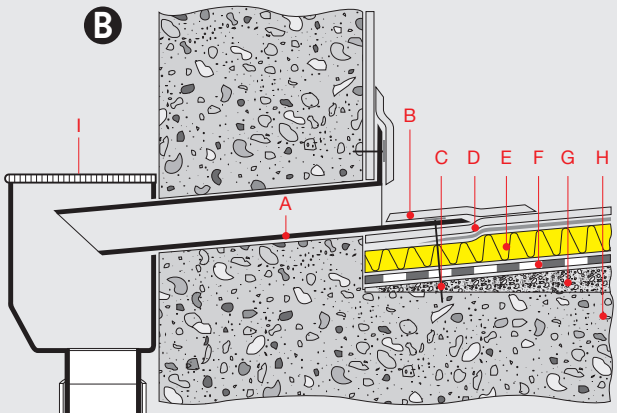
- ART. 315



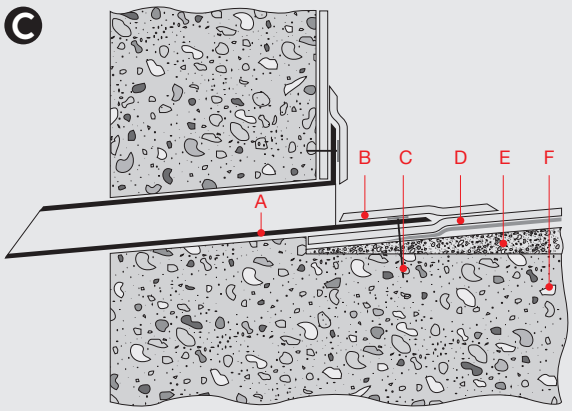
- ART. 320

DRAWING "A"
Roof drain with curve and pipe with gasket





A - Angled roof drain
B - Piece of PVC-P membrane
C - Mechanically fix
D - Layer of PVC-P membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Hopper



A - Angled roof drain
B - Piece of PVC-P membrane
C - Mechanically fix
D - Layer of PVC-P membrane
E - Fall
F - Deck

INSTALLATION METHOD

Art. 49.3 - 50 - 51

1 - Place the canalizer in position towards the top end of the slope.
2 - Install the vapour barrier cutting a hole in correspondence to the canalizer sealing it around the perimeter with double sided tape.
3 - Place the thermal insulation into position cutting a hole in correspondence to the canalizer.
4 - Install the PVC-P membrane cutting a hole in correspondence to the canalizer.
5 - Mechanically fix the membrane to the substrate around the hole (approx 3 fixings) with appropriate fixings.
6 - Make sure that the welding surfaces are clean and free from any contaminants.
7 - Position the Air vent/Vapour extractor in correspondence to the canalizer.
8 - Hot air weld the underside of the flange of the Air vent/Vapour extractor to the waterproofing membrane.
9 - Insert the cover pushing strongly until reaching the locking point.
10 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

02.4 AIR VENTS/VAPOUR EXTRACTORS IN PVC-P

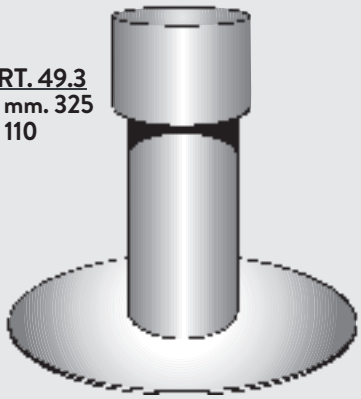
DESCRIPTION FOR SPECIFICATIONS

Art. 49.3
Supply and installation of SEALCO LTD **Air vent/Vapour extractor** or similar, made of UV stabilized PVC-P complete with anti-insect and protection ring for ventilation and extraction of vapours between the substructure and the vapour barrier. The Air vent / Vapour extractor consists of a 110 mm diameter protruding element, 325 mm in height complete with pressure lid, attached all in one piece to a smooth flange hot air weld able to PCV-P membranes.

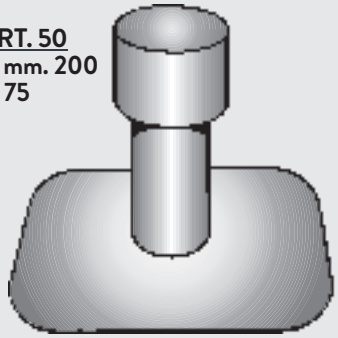
Art. 50
Supply and installation of SEALCO LTD **Air vent/Vapour extractor** or similar, made of UV stabilized PVC-P complete with canalizer Art. 51, anti-insect and protection ring for ventilation and extraction of vapours between the substructure and the vapour barrier.
The Air vent / Vapour extractor consists of a 75 mm diameter protruding element, 200 mm in height complete with pressure lid, attached all in one piece to a smooth flange hot air weld able to PCV-P membranes.

NOTE: *For the proper Air vents/Vapour extractors it is highly recommended that a hydrometric study be carried out in order to define the correct amount of aerators/extractors to be installed.*

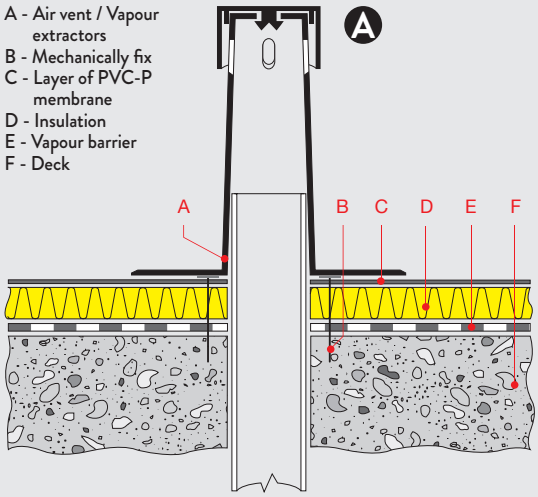
< **ART. 49.3**
H mm. 325
Ø 110



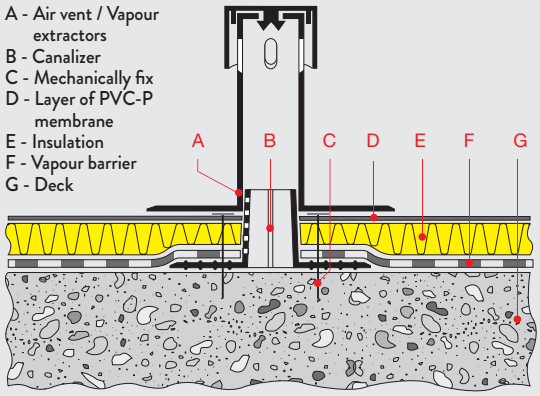
< **ART. 50**
H mm. 200
Ø 75



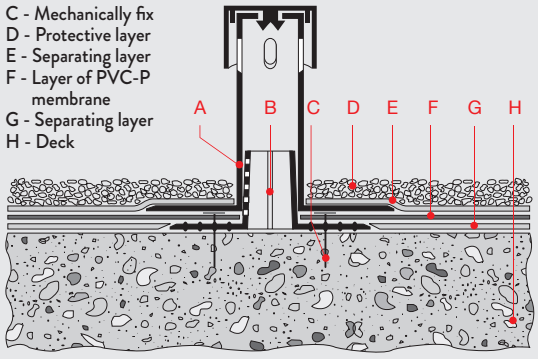
A - Air vent / Vapour extractors
B - Mechanically fix
C - Layer of PVC-P membrane
D - Insulation
E - Vapour barrier
F - Deck

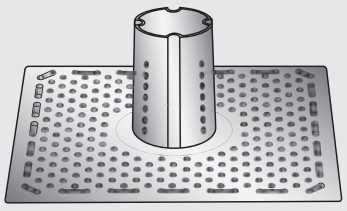


A - Air vent / Vapour extractors
B - Canalizer
C - Mechanically fix
D - Layer of PVC-P membrane
E - Insulation
F - Vapour barrier
G - Deck



A - Air vent / Vapour extractors
B - Canalizer
C - Mechanically fix
D - Protective layer
E - Separating layer
F - Layer of PVC-P membrane
G - Separating layer
H - Deck





^ **ART. 51**
H mm. 100 Ø 60

INSTALLATION METHOD

Art. 54 - 55 - 56 - 57 - 59

1 - Prepare the flexible collar by cutting according to the requested diameter of the pipe.
2 - Install the PVC-P membrane and cut a hole in correspondence to the protruding pipe.
3 - Mechanically fix the membrane to the substrate around the perimeter of the protruding pipe (approx 3 fixings) with appropriate fixings.
4 - Make sure that the welding surfaces are clean and free from any contaminants.
5 - Position the flexible collar over the protruding pipe.
6 - Hot air weld the underside of the flange to the waterproofing membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the Air vent over the top of the protruding pipe.

On flat surfaces it is necessary that the protruding ventilation pipe protrudes 31 cm above the roof deck for both diameters.
In the case of tiled roofs the ventilation pipe must protrude 30 cm above the tile, the pipes will then be covered by the cap for roof tile and the vent pipe.

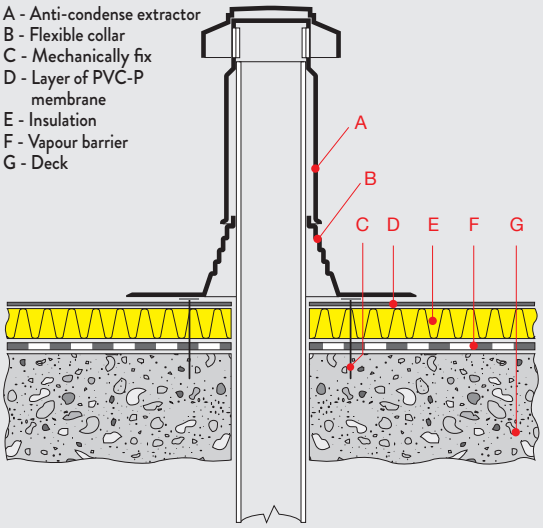
02.5 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN PVC-P

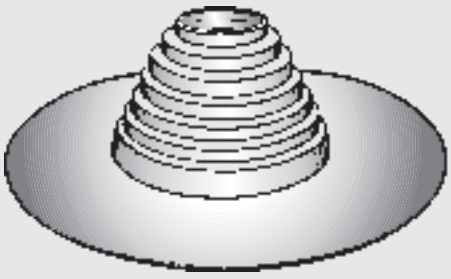
DESCRIPTION FOR SPECIFICATIONS

Art. 54 - 56 - 55 - 57
Supply and installation of **ventilation pipes** coming from bathrooms, kitchens etc. Diameter 100 mm, height 305 mm or diameter 125 mm, height 350 mm and relative base connection installed between two waterproofing membranes.

Art. 59
Supply and installation of **flexible collar** SEALCO LTD or similar, made of UV stabilized PVC-P having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 80-90-100-110-115-125; the clamping rings must be in stainless steel.

ART. 54 - 56
ART. 55 - 57





ART. 59

INSTALLATION METHOD

Art. 113.1 - 114.1 - 139

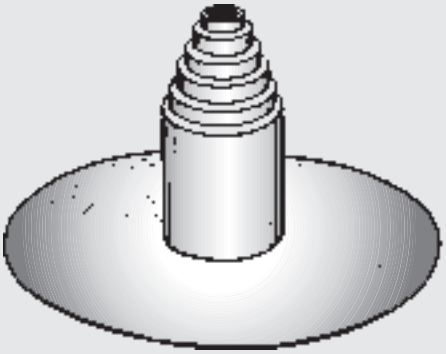
02.6 PIPE WRAP/FITTINGS IN PVC-P

1 - Prepare the pipe wrap/fitting by cutting according to the requested diameter of the pipe.
2 - Install the PVC-P membrane and cut a hole in correspondence to the protruding pipe.
3 - Mechanically fix the membrane to the substrate around the perimeter of the protruding pipe (approx 3 fixings) with appropriate fixings.
4 - Make sure that the welding surfaces are clean and free from any contaminants.
5 - Position the pipe wrap/fitting over the protruding pipe.
6 - Hot air weld the underside of the flange to the waterproofing membrane.
7 - Seal the top of the pipe wrap/fitting with a suitable sealant and add a stainless steel clamping ring at the top.
8 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

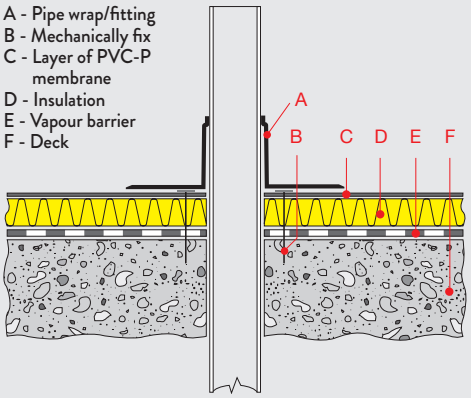
DESCRIPTION FOR SPECIFICATIONS

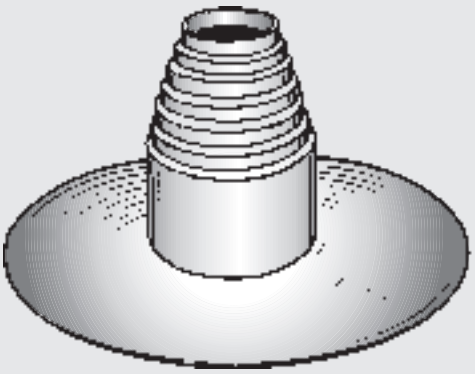
Art. 113.1
Supply and installation of **pipe wrap/fittings** SEALCO LTD or similar, made of UV stabilized PVC-P having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 34-50-60-75-80-90; the clamping rings must be in stainless steel.

Art. 114.1
Supply and installation of **pipe wrap/fittings** SEALCO LTD or similar, made of UV stabilized PVC-P having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 75-80-90-100-110-115-125; the clamping rings must be in stainless steel.

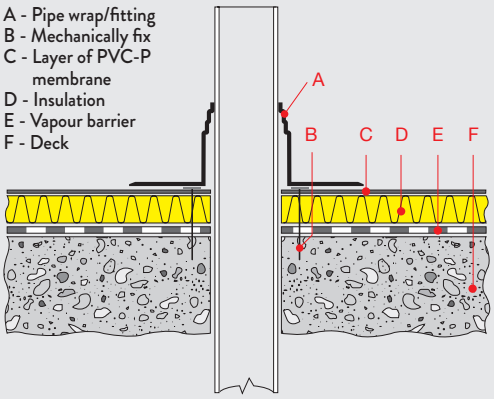


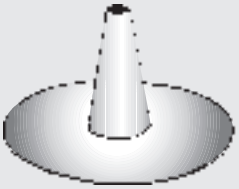
ART. 113.1





ART. 114.1





ART. 139

INSTALLATION METHOD

Art. 115 - 116

1 - Make sure that the welding surfaces are clean and free from any contaminants.
2 - Spot weld the inside/outside corner in order to hold in the requested position.
3 - Weld the perimeter of the inside/outside corner to the waterproofing membrane.
4 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

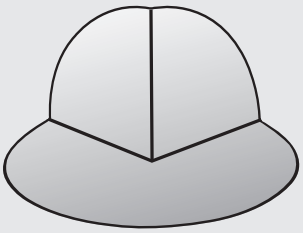
NOTE: *The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk because of transversal and horizontal traction of the waterproofing membrane.*

02.7 INTERNAL AND EXTERNAL CORNERS IN PVC-P

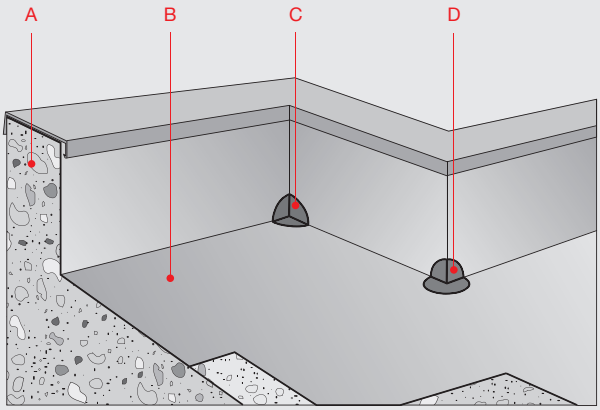
DESCRIPTION FOR SPECIFICATIONS

Supply and install SEALCO LTD **inside and outside corners** or similar, made of UV stabilized PVC-P.

ART. 115



ART. 116



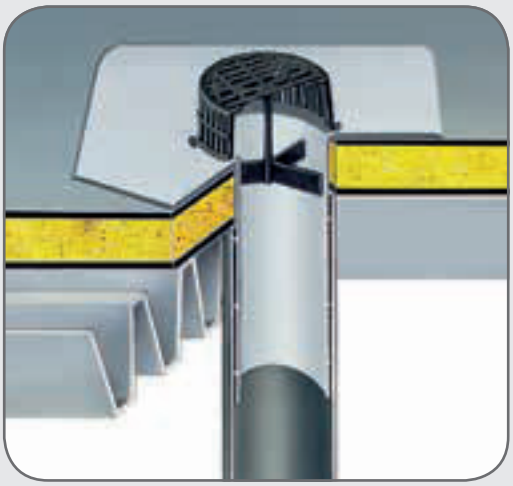
A - Deck
B - Bituminous membrane
C - Internal corner
D - External corner

03

ACCESSORIES FOR SYNTHETIC TPO MEMBRANES

03.1 ANTI-BACKUP ROOF DRAIN IN TPO

ART. 24
Leaf and gravel grate suitable for roof drains from mm. 60 Ø to mm. 160 Ø



ART. 26
Leaf grate suitable for roof drains from mm. 75 Ø to mm. 125 Ø

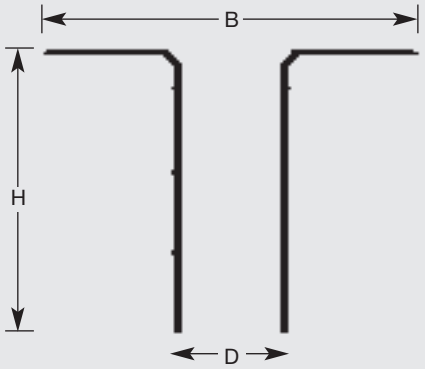
ART. 24.1
Suitable for roof drains from mm. 60 Ø to mm. 200 Ø

PVC-P buttonhole plates for leaf and gravel grate

The **ROOF DRAIN IN TPO** is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is used for application on roofs waterproofed with TPO membranes. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The drain is made of soft, flexible and UV stabilized TPO. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The drain consists of a truncated body available in various diameters solidly attached to a smooth flange. The stem piece of the unit has two or more strategically placed circular ribs which face outwards which when forced into the drain pipe prevent backing-up of water forming a perfect seal. The seal rings are compressed upwards when inserted into the downpipe guaranteeing an optimal seal with any type of pipe.
The presence of the external seal rings avoid the passage of water vapour or back-up water into the roofing build-up, this is particularly important where insulation is involved as it could compromise the insulation, factor that constitutes one of the main problems in roof waterproofing.

> INSTALLATION METHOD PAG. 58

ART.	1.3	13.3	21.3	14P	22.3	16.3	23.3	17P	112P
DENOM	60	75	80	90	100	110	125	140	160
B	245	300	310	320	325	335	350	360	385
H	250	250	250	250	250	250	250	250	250
D	54	66	73	83	92	100	116	132	148



03.2 "NUOVA" ANTI-BACKUP ROOF DRAIN IN TPO

ART. 38
Leaf and gravel grate suitable for diameters to mm. 160

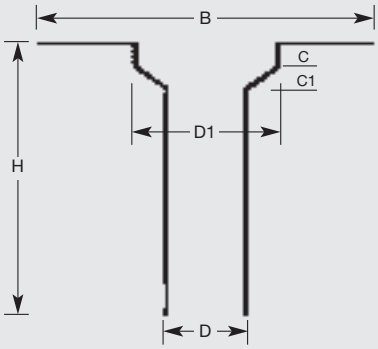
ART. 38 BIS
Leaf and gravel grate suitable for diameters to mm. 160

GRAVEL GRATE RING

The **"NUOVA" ANTI-BACKUP ROOF DRAIN IN TPO** is one of the most valid systems for connecting rainwater pipes and drains on flat roofs, gutters of multi-pitched roofs and industrial buildings. It is used for application on roofs waterproofed with TPO membrane. This particular item has been studied right down to its smallest details so as to optimize its characteristics, in fact, it has a 170x30 mm diameter deep head which increases the drainage capacity up to 45% compared to a standard drain. The total funnel length of 330 mm allows for use with thicker substrates thus avoiding the need for any intermediate joints and when inserted into the spigot of down pipe permits a constant and continues flow without losing any of the capacity of the downpipe, it can also be fixed into position previous to installation of the downpipes. The drain is made of soft, flexible and UV stabilized TPO. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan. It has been proved that this roof drain can discharge up to 45% more than a normal drain of the same diameter. The drain consists of a truncated body available in various diameters solidly attached to a smooth flange. The stem piece of the unit has two or more strategically placed circular rings which face outwards and when forced into the drain pipe form a perfect seal. The seal rings are compressed upwards when inserted into the downpipe and thanks to this pressure fit, they guarantee optimal seal with any type of pipe and prevent the passage of water vapour or back-up of water into the roofing system. This is particularly important where insulation is involved as it could compromise the insulation its self, factor that constitutes one of the main problems in roof waterproofing. It is highly recommended to use the 200 mm diameter gravel grate directly connected to the slotted ring, the ring ha three slots which allow for the regulation of the height in case of layer variations in the waterproofing system.

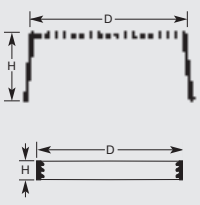
> INSTALLATION METHOD PAG. 59

ART.	108.2	31.2	32.2	109.2	33.2	34.2	97.2	100.2
DENOM	75	80	100	110	125	140	160	200
B	400	400	400	400	400	400	400	400
H	330	330	330	330	330	330	330	330
D	75	80	100	110	125	140	151	191
D1	170	170	170	170	170	170	170	-
C	30	30	30	30	30	30	30	-
C1	25	25	25	25	25	25	25	-



LEAF AND GRAVEL GRATE

ART.	38	38bis
D	180	180
H	80	80



RING

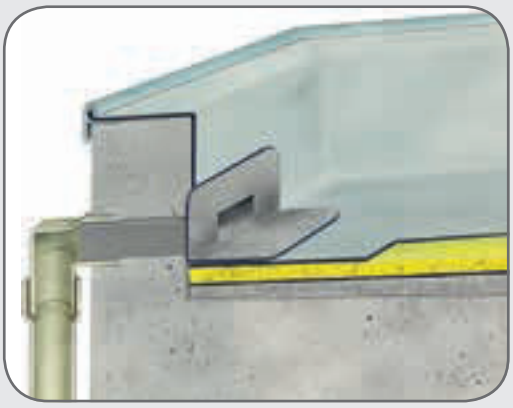
D	170
H	30

NOTE
Art. 38 gap mm. 6.

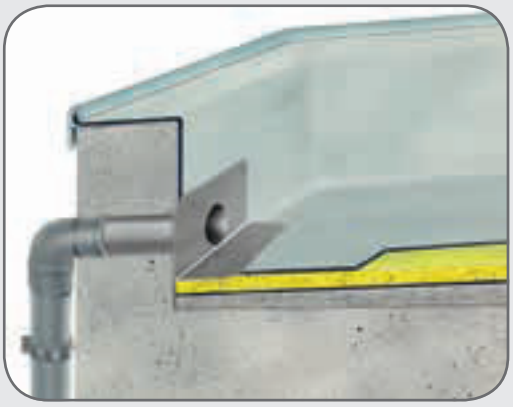
Art. 38 bis gap mm. 12.

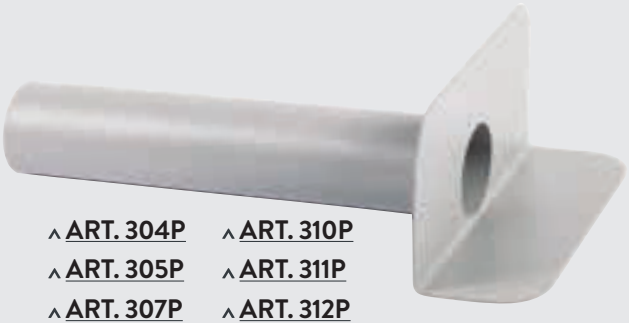
03.3 ANGLED ROOF DRAIN IN TPO

ART. 45.10



ART. 39.2P

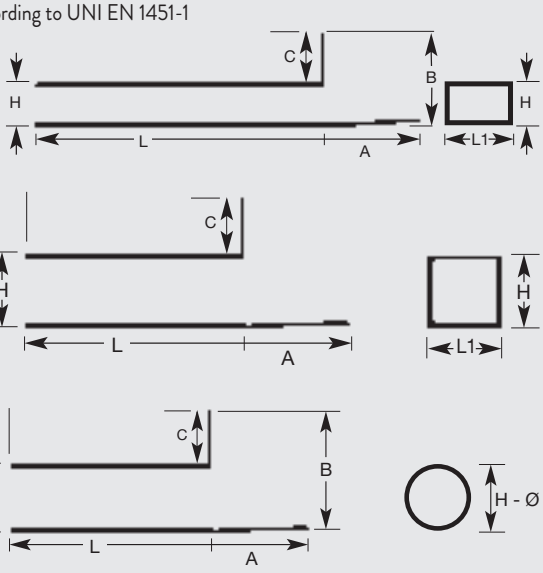




ART. 304P
ART. 305P
ART. 307P
ART. 310P
ART. 311P
ART. 312P

90° TPO ANGLED ROOF DRAIN IN TPO Art. 45.10, RECTANGULAR, Art. 39.2P, SQUARE AND ROUND Art. 304P - 305P - 307P - 310P - 311P AND 312P
particularly suitable for use with all kinds of synthetic TPO waterproofing membranes. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The 90° roof drains are made from a flexible and UV stabilized TPO. They offer high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan. The drains are consists of a truncated body in various shapes solidly attached to a large and smooth 90° flange.
The 90° angled roof drain offers the possibility of being used for direct discharge from terraces without being connected to down pipes, they also can be used with internal or external down pipes but in particular it can be used horizontally on all types of projects were thicker walls are present.
It can be used in conjunction with the following curves and connections:
- Art. 39.2P curved fitting Art. 40 - 41 - 42
- Art. 45.10 curved fitting Art. 46 - 47
- Art. 304P - 305P - 307P - 310P - 311P - 312P curved fitting Art. 315 - 320 or other curves according to UNI EN 1451-1

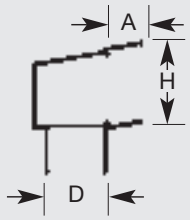
> INSTALLATION METHOD PAG. 60-61



ART.	45.10	39.2P	304P	305P	307P	310P	311P	312P
A	120	100	120	120	120	120	120	120
B	140	180	170	170	170	170	170	170
C	-	39.2	500	500	500	500	500	500
H	65	100	63	75	80	100	110	115
L1	97	100	-	-	-	-	-	-
L	450	500	500	500	500	500	500	500

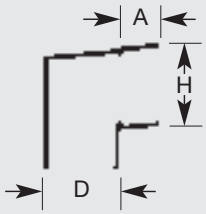
03.4 CURVES, CONNECTIONS, HOPPER

ART. 40
Curve
from 100 square Ø 80



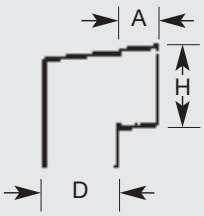
ART. 40

ART. 41
Curve
from 100 square Ø 100



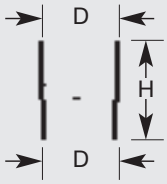
ART. 41

ART. 42
Curve
mm 100x100



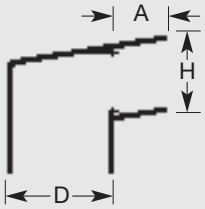
ART. 42

ART. 43
Reducer
mm 100x100 Ø 100



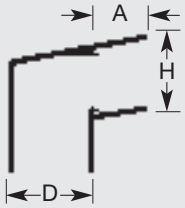
ART. 43

ART. 46
Curve Ø 80



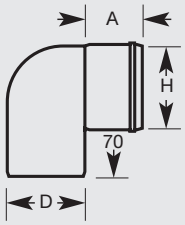
ART. 46

ART. 47
Curve Ø 100



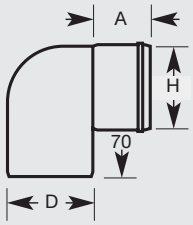
ART. 47

ART. 315
Curve
Ø 100



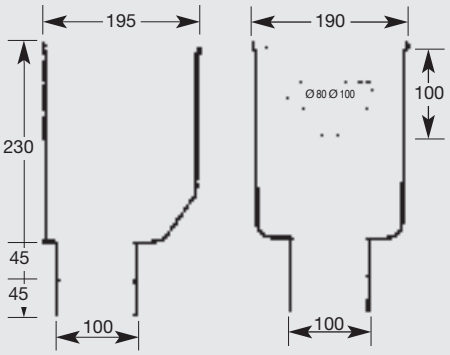
ART. 315

ART. 320
Curve
Ø 110



ART. 320

> ART. 118G
> ART. 118GM
Drain box

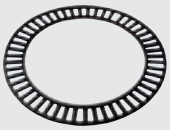


ART.	40	41	42	43
A	50	50	50	50
D	80	100	100x100	100
H	100x100	100x100	100x100	100x100

ART.	46	47	315	320
A	50	50	65	65
D	68x100	68x100	100	110
H	80	100	110	110

03.5 AIR VENTS/VAPOUR EXTRACTORS IN TPO

< ART. 50.3



^ ART. 48.3 - 49.7

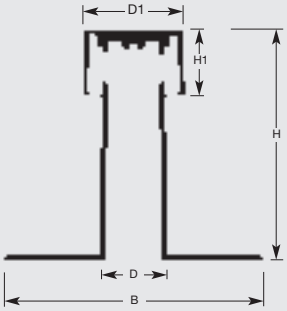
< ART. 49.5

^ ART. 48.8 - 49.8

The **AIR VENTS/VAPOUR EXTRACTORS IN TPO** are particularly suitable for use with TPO waterproofing membranes. This particular item has been studied right down to its smallest details in fact, the unit has optimal characteristics that help eliminate serious and typical problems that can appear on a waterproofed roof caused by an imperfect evacuation of vapours, imperfect ventilation or use of incorrect air vents/vapour extractors: swelling of the membrane, moistening of the insulating layer causing a subsequent reduction or loss of original properties.
The Air vents/vapour extractors are made from a flexible and UV stabilized TPO. They offer high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The Air vents/vapour extractors consist of a protruding body of various diameters directly attached to a smooth large flange.
The air Vents/vapour extractors are designed and patented by SEALCO LTD and are one of the most effective ventilation systems as they allow for the total evacuation of vapour build-up under the waterproofing layer.

> INSTALLATION METHOD PAG. 62

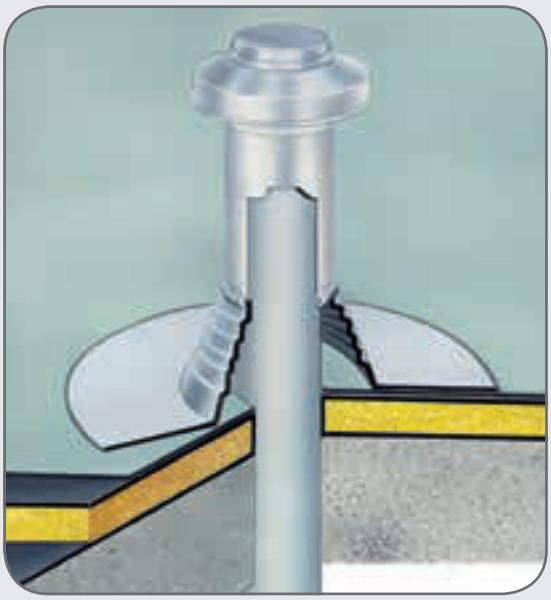
ART.	50.3	49.5
B	285x285	360
D	75	110
H	200	325
H1	80	95
D1	110	145



03.6 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN TPO

< ART. 55
< ART. 57
Grey

< ART. 59.2



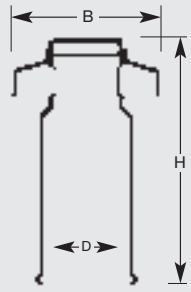
ANTI-CONDENSE EXTRACTOR is suited for the ventilation of bathrooms, kitchens, wet rooms and any other rooms where there is a heavy presence of vapour. Thanks to the constructive characteristics it avoids the formation of condense and thus avoids dripping along ventilation pipes. They are available in colours grey or brown.

> INSTALLATION METHOD PAG. 63

The **FLEXIBLE COLLAR IN TPO Art. 59.2** is suitable for connecting protruding pipes with synthetic waterproofing membranes in TPO. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional drains available in the market. The flexible collar is made of soft, flexible and UV stabilized TPO. It offers high physical, chemical and technical properties as well as a flexible product.
It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The flexible collar consist of a truncated body of variable diameters solidly attached to a large smooth surfaced flange.

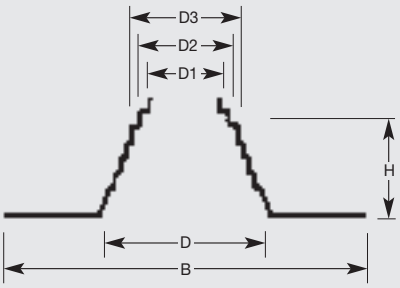
> INSTALLATION METHOD PAG. 63

ART.	54	56
D	100	125
D1	120	150
B	180	220
H	300	350



^ ART. 54 - 55 - 56 - 57

ART.	59.2
B	410
D	190
D1	80
D2	100
D3	125



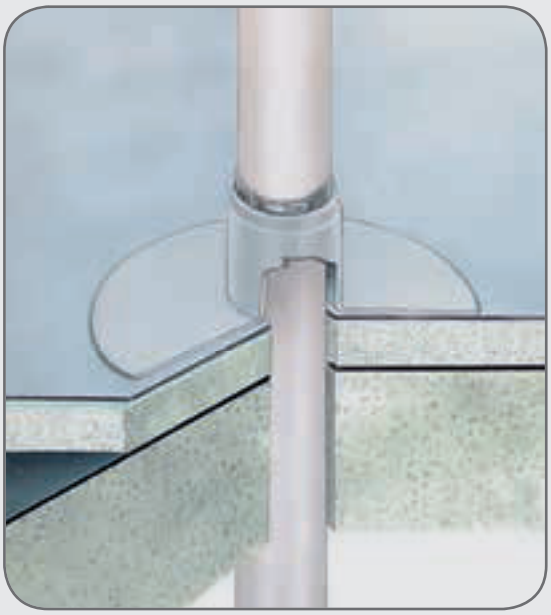
^ ART. 59.2

03.7 PIPE WRAP/FITTINGS IN TPO

^ ART. 113.3

^ ART. 139.2

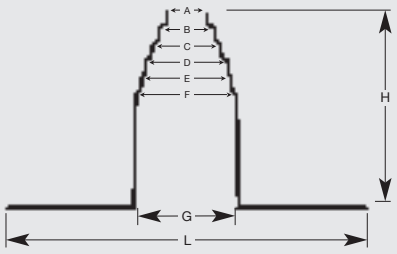
^ ART. 114.3



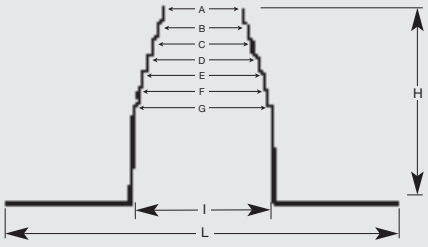
PIPE WRAP/FITTINGS IN TPO are suitable for connecting protruding pipes with synthetic waterproofing membranes in TPO. This particular item has been studied right down to its smallest details so as to optimize its characteristics thus eliminating problems caused by traditional fittings available in the market. The pipe wrap/fittings is made of soft, flexible and UV stabilized TPO. It offers high physical, chemical and technical properties as well as a flexible product.
It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.
The pipe wrap/fittings consist of a truncated body of variable diameters solidly attached to a large smooth surfaced flange.

> INSTALLATION METHOD PAG. 64

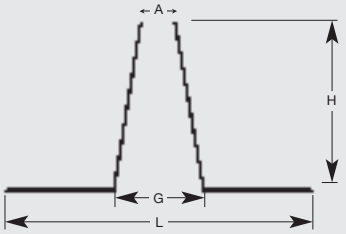
ART.	113.3	114.3	139.2
A	34	75	20
B	50	80	-
C	60	90	-
D	75	100	-
E	80	110	-
F	90	115	-
G	93	125	50
I	-	127	-
L	340	365	200
H	180	180	120



^ ART. 113.3



^ ART. 114.3



^ ART. 139.2

03.8 INTERNAL AND EXTERNAL CORNERS IN TPO

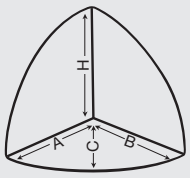
ART. 115.2

ART. 116.2

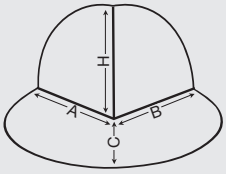
INTERNAL AND EXTERNAL CORNERS IN TPO are suitable for the reinforcement of the waterproofing in internal and external corners.
The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk because of transversal and horizontal traction of the waterproofing membrane.
They are used for application on roofs waterproofed with TPO membranes
The Internal and external corners are made of soft, flexible and UV stabilized TPO. It offers high physical, chemical and technical properties as well as a flexible product. It is highly resistant to UV rays, ozone and other atmospheric and chemical agents. It can be used in a wide temperature range and is extremely flexible at low temperatures, it is stable over time thanks to the physical and mechanical properties, which therefore assure maximum performance throughout its lifespan.

> INSTALLATION METHOD PAG. 65

ART.	115.2	116.2
A	100	97
B	100	97
C	100	85
H	100	100



^ ART. 115.2



^ ART. 116.2

INSTALLATION METHOD

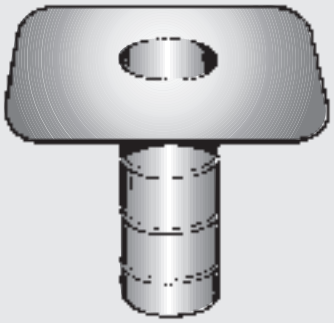
Art. 1.3 - 13.3 - 21.3 - 14P - 22.3 - 16.3 - 23.3 - 17P - 112P

03.1 ANTI-BACKUP ROOF DRAIN IN TPO

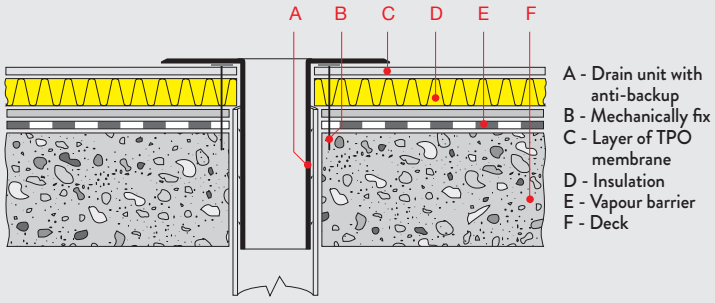
1 - Install the TPO membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Mechanically fix the membrane to the substrate around the perimeter of the of the downspout (approx 3 fixings).
3 - Make sure that the welding surfaces are clean and free from any contaminants.
4 - Insert the roof drain into the downspout.
5 - Weld the flange by hot air to the waterproofing membrane, using the welding temperature indicated by the producer of the membrane.
6 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
7 - Insert the leaf or gravel grate.

NOTE: *In those cases where the roof drain is installed below the waterproofing membrane, the flange must be fixed to the substrate (approx 4 fixings) around the outside perimeter of the flange, after which, proceed to weld the membrane to the upper surface of the flange.*

DESCRIPTION FOR SPECIFICATIONS
Supply and install SEALCO LTD **Universal drain unit** or similar, made of UV stabilized TPO with a smooth finished flange, 250 mm long anti-backup stem suitable for pipe Ø..... complete with leaf or gravel grate.



H mm. 250



INSTALLATION METHOD

Art. 108.2 - 31.2 - 32.2 - 109.2 - 33.2 - 34.2 - 97.2 - 100.2

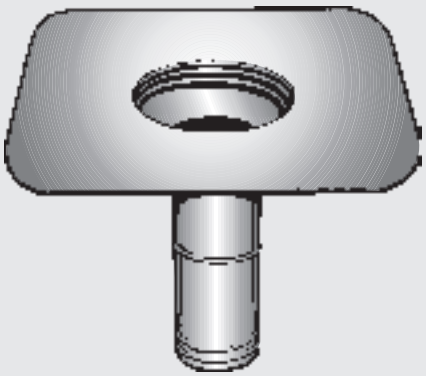
03.2 "NUOVA" ANTI-BACKUP ROOF DRAIN IN TPO

1 - Install the TPO membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Mechanically fix the membrane to the substrate around the perimeter of the of the 30 mm deep insert (approx 4 fixings).
3 - Make sure that the welding surfaces are clean and free from any contaminants.
4 - Insert the roof drain into the downspout.
5 - Weld the flange by hot air to the waterproofing membrane, using the welding temperature indicated by the producer of the membrane.
6 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
7 - Push the slotted ring into position and insert the leaf or gravel grate.

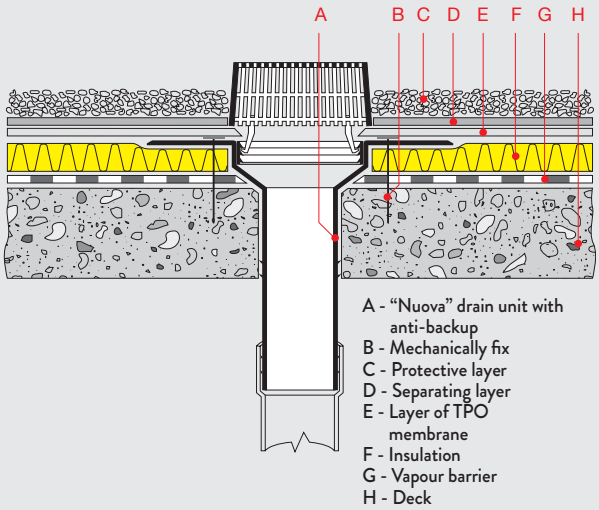
NOTE: *In those cases where the roof drain is installed below the waterproofing membrane, the flange must be fixed to the substrate (approx.. 4 fixings) around the outside perimeter of the flange, after which, proceed to weld the membrane to the upper surface of the flange.*

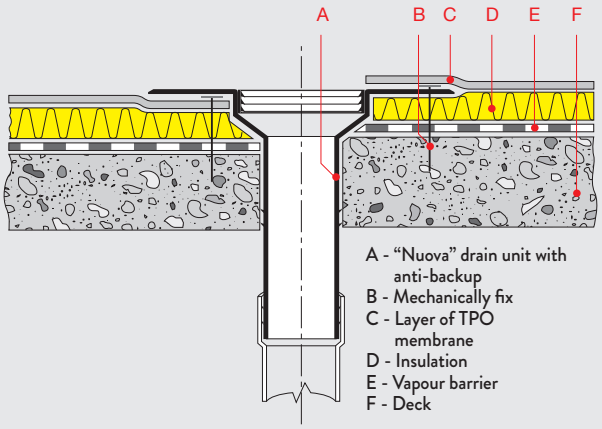
DESCRIPTION FOR SPECIFICATIONS

Supply and installation of SEALCO LTD **"Nuova" drain unit** or similar, made of UV stabilized TPO with a smooth finished flange, 400x400 mm with an increased 30 mm deep by 170 mm diameter drainage head and a 330 mm long stem with anti back-up rings. Suitable for pipe Ø.....with a spigot and complete with leaf or gravel grate with 5 or 10 mm meshing.



H mm. 330





INSTALLATION METHOD

Art. 39.2P - 45.10

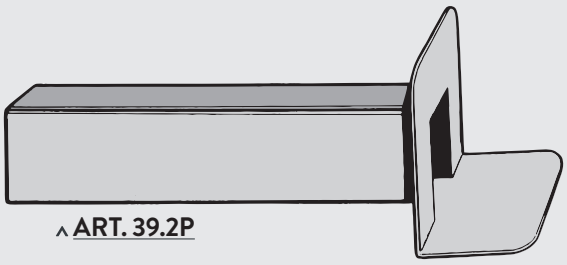
03.3 ANGLED ROOF DRAIN IN TPO

1 - Install the TPO membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art. 40-41-42-46-47, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle (*see Fig. A*).
3 - Position the roof drain in place and mechanically fix to the substrate (using appropriate fixings), 2 on the vertical surface and 2 on the horizontal surface.
4 - Cut a piece of membrane, at least 100 mm bigger in every direction than the flange.
5 - Make sure that the welding surfaces are clean and free from any contaminants.
6 - Hot air weld the piece of membrane to the roof drain flange and to the vertical and horizontal membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the leaf or gravel grate Art. 26 or 44.1.

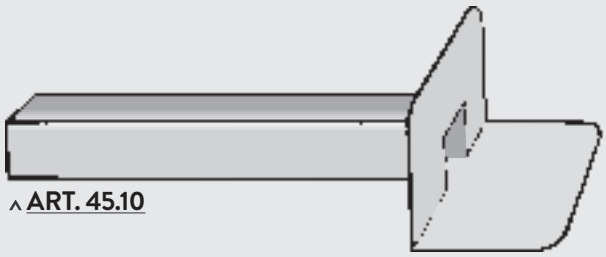
DESCRIPTION FOR SPECIFICATIONS

Art. 39.2P
Supply and installation of SEALCO LTD **90° roof drain unit** or similar, made of UV stabilized TPO with the following dimensions:
Stem length of 500 mm, height 100 mm and a width of 100 mm width with a flexible flange, complete with 100x100 mm curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper. Leaf or gravel grate.

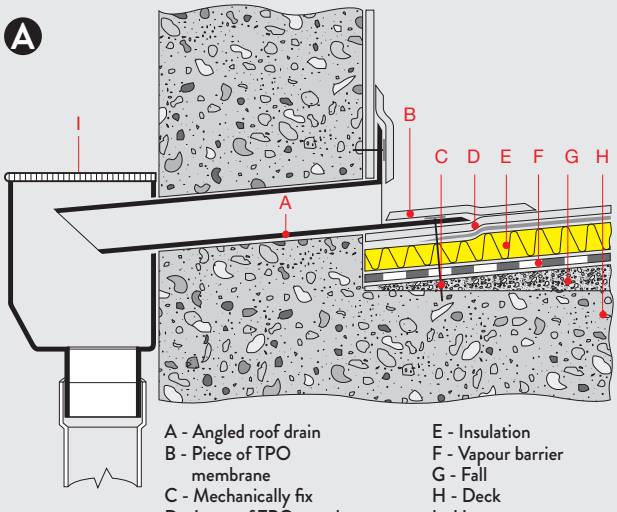
Art. 45.10
Supply and installation of SEALCO LTD **90° roof drain unit** made of UV stabilized TPO or similar with the following dimensions:
Stem length of 450 mm, height 65mm and a width of 100 mm width with a flexible flange, complete with curve fitting with a Ø of 80 or 100 mm for connecting downspout or hopper. Leaf or gravel grate.



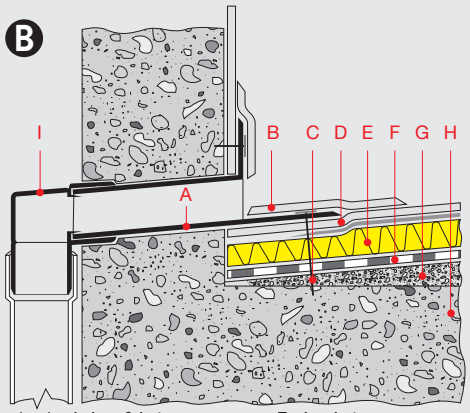
ART. 39.2P



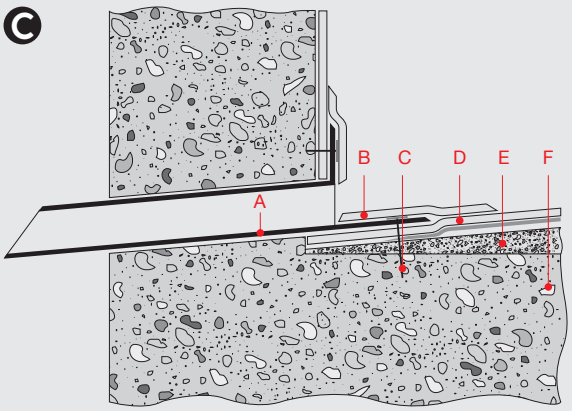
ART. 45.10



A - Angled roof drain
B - Piece of TPO membrane
C - Mechanically fix
D - Layer of TPO membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Hopper



A - Angled roof drain
B - Piece of TPO membrane
C - Mechanically fix
D - Layer of TPO membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Curve



A - Angled roof drain
B - Piece of TPO membrane
C - Mechanically fix
D - Layer of TPO membrane
E - Fall
F - Deck

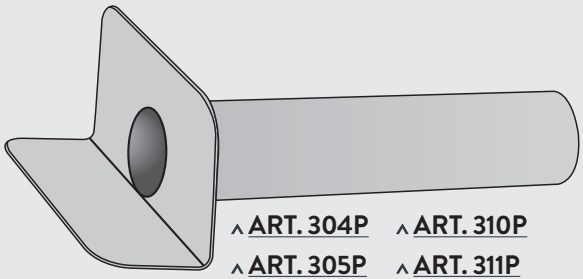
INSTALLATION METHOD

Art. 304P - 305P - 307P - 310P - 311AP- 312P

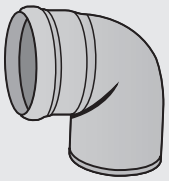
03.3 ANGLED ROOF DRAIN IN TPO

1 - Install the TPO membrane to the substrate, cutting out a hole in correspondence to the downspout.
2 - Make sure that there is at least a 3° slope. Insert the drain into the hole and mark the length for cutting. If the drain should be used together with a curved pipe fitting, Art.315 - 320, the drain should be cut making sure that the lower part is 5 mm longer than the top. If the drain is used with Art. 118, the pipe must be cut at a 45° angle *(see Fig. B)*.
3 - Position the roof drain in place and mechanically fix to the substrate (using appropriate fixings), 2 on the vertical surface and 2 on the horizontal surface.
4 - Cut a piece of membrane, at least 100 mm bigger in every direction than the flange.
5 - Make sure that the welding surfaces are clean and free from any contaminants.
6 - Hot air weld the piece of membrane to the roof drain flange and to the vertical and horizontal membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the leaf or gravel grate Art. 26.

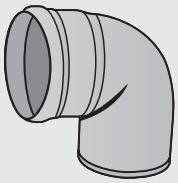
DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD **90° angled drain unit** or similar, made of UV stabilized TPO. Dimensions: 500 mm long stem .....in Ø with a flexible flange, complete with a curve fitting of ..... in Ø or hopper and leaf or gravel grate.



ART. 304P
ART. 305P
ART. 307P
ART. 310P
ART. 311P
ART. 312P

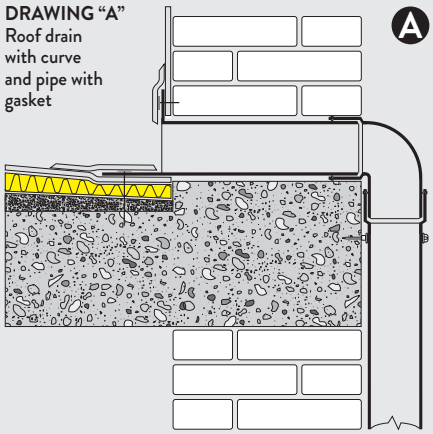


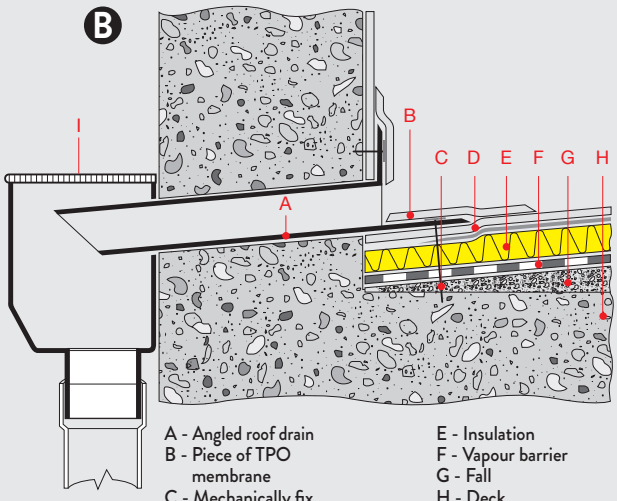
ART. 315



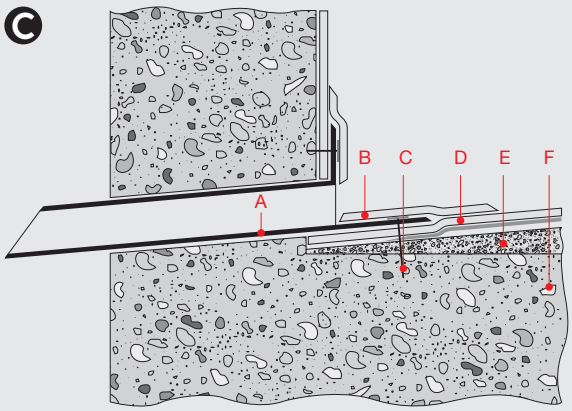
ART. 320

DRAWING "A"
Roof drain with curve and pipe with gasket





A - Angled roof drain
B - Piece of TPO membrane
C - Mechanically fix
D - Layer of TPO membrane
E - Insulation
F - Vapour barrier
G - Fall
H - Deck
I - Hopper



A - Angled roof drain
B - Piece of TPO membrane
C - Mechanically fix
D - Layer of TPO membrane
E - Fall
F - Deck

INSTALLATION METHOD

Art. 49.5 - 50.3 - 51

1 - Place the canalizer in position towards the top end of the slope.
2 - Install the vapour barrier cutting a hole in correspondence to the canalizer sealing it around the perimeter with double sided tape.
3 - Place the thermal insulation into position cutting a hole in correspondence to the canalizer.
4 - Install the TPO membrane cutting a hole in correspondence to the canalizer.
5 - Mechanically fix the membrane to the substrate around the hole (approx 3 fixings) with appropriate fixings.
6 - Make sure that the welding surfaces are clean and free from any contaminants.
7 - Position the Air vent/Vapour extractor in correspondence to the canalizer.
8 - Hot air weld the underside of the flange of the Air vent/Vapour extractor to the waterproofing membrane.
9 - Insert the cover pushing strongly until reaching the locking point.
10 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

03.4 AIR VENTS/VAPOUR EXTRACTORS IN TPO

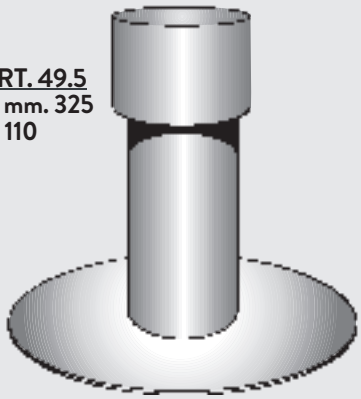
DESCRIPTION FOR SPECIFICATIONS

Art. 49.5
Supply and installation of SEALCO LTD **Air vent/Vapour extractor** or similar, made of UV stabilized TPO complete with anti-insect and protection ring for ventilation and extraction of vapours between the substructure and the vapour barrier. The Air vent / Vapour extractor consists of a 110 mm diameter protruding element, 325 mm in height complete with pressure lid, attached all in one piece to a smooth flange hot air weld able to PCV-P membranes.

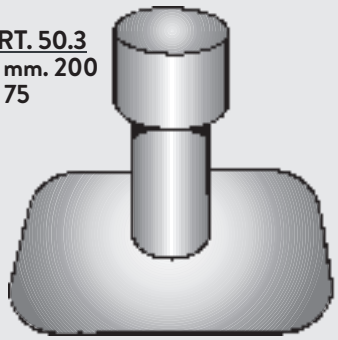
Art. 50.3
Supply and installation of SEALCO LTD **Air vent/Vapour extractor** or similar, made of UV stabilized TPO complete with canalizer Art. 51, anti-insect and protection ring for ventilation and extraction of vapours between the substructure and the vapour barrier. The Air vent / Vapour extractor consists of a 75 mm diameter protruding element, 200 mm in height complete with pressure lid, attached all in one piece to a smooth flange hot air weld able to TPO membranes.

NOTE: *For the proper Air vents/Vapour extractors it is highly recommended that a hydrometric study be carried out in order to define the correct amount of aerators/extractors to be installed.*

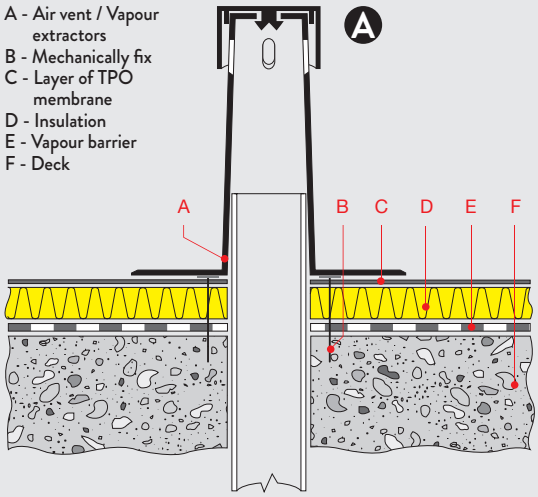
< **ART. 49.5**
H mm. 325
Ø 110



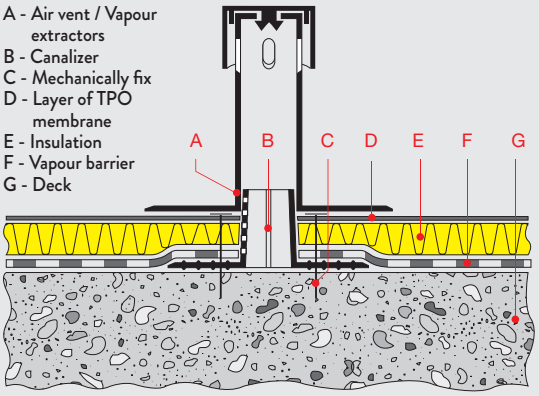
< **ART. 50.3**
H mm. 200
Ø 75



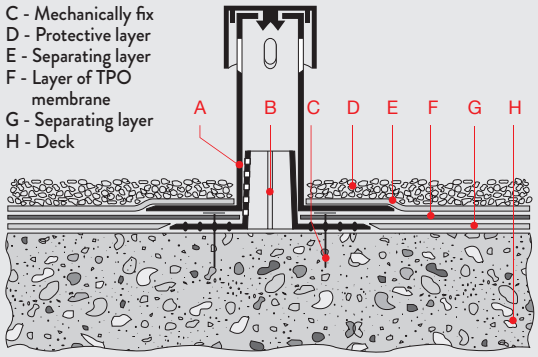
A - Air vent / Vapour extractors
B - Mechanically fix
C - Layer of TPO membrane
D - Insulation
E - Vapour barrier
F - Deck

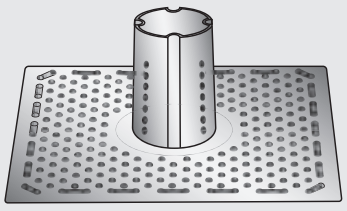


A - Air vent / Vapour extractors
B - Canalizer
C - Mechanically fix
D - Layer of TPO membrane
E - Insulation
F - Vapour barrier
G - Deck



A - Air vent / Vapour extractors
B - Canalizer
C - Mechanically fix
D - Protective layer
E - Separating layer
F - Layer of TPO membrane
G - Separating layer
H - Deck





^ **ART. 51**
H mm. 100 Ø 60

INSTALLATION METHOD

Art. 54 - 55 - 56 - 57 - 59.2

1 - Prepare the flexible collar by cutting according to the requested diameter of the pipe.
2 - Install the TPO membrane and cut a hole in correspondence to the protruding pipe.
3 - Mechanically fix the membrane to the substrate around the perimeter of the protruding pipe (approx 3 fixings) with appropriate fixings.
4 - Make sure that the welding surfaces are clean and free from any contaminants.
5 - Position the flexible collar over the protruding pipe.
6 - Hot air weld the underside of the flange to the waterproofing membrane.
7 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.
8 - Insert the Air vent over the top of the protruding pipe.

On flat surfaces it is necessary that the protruding ventilation pipe protrudes 31 cm above the roof deck for both diameters.
In the case of tiled roofs the ventilation pipe must protrude 30 cm above the tile, the pipes will then be covered by the cap for roof tile and the vent pipe.

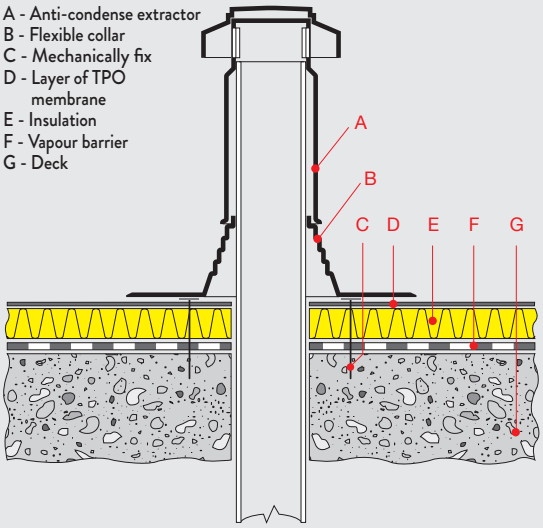
03.5 ANTI-CONDENSE EXTRACTOR, FLEXIBLE COLLAR IN TPO

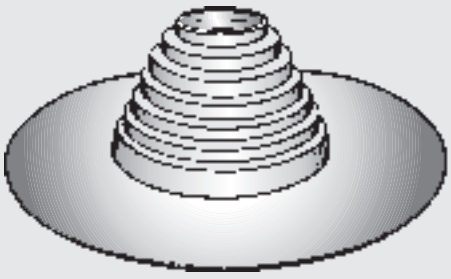
DESCRIPTION FOR SPECIFICATIONS

Art. 54 - 56 - 55 - 57
Supply and installation of **ventilation pipes** coming from bathrooms, kitchens etc. Diameter 100 mm, height 305 mm or diameter 125 mm, height 350 mm and relative base connection installed between two waterproofing membranes.

Art. 59.2
Supply and installation of **flexible collar** SEALCO LTD or similar, made of UV stabilized TPO having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 80-90-100-110-115-125; the clamping rings must be in stainless steel.

ART. 54 - 56
ART. 55 - 57





ART. 59.2

INSTALLATION METHOD

Art. 113.3 - 114.3 - 139.2

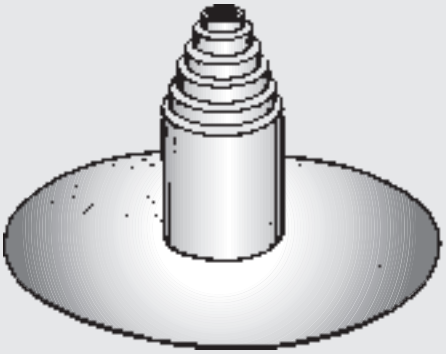
03.6 PIPE WRAP/FITTINGS IN TPO

1 - Prepare the pipe wrap/fitting by cutting according to the requested diameter of the pipe.
2 - Install the TPO membrane and cut a hole in correspondence to the protruding pipe.
3 - Mechanically fix the membrane to the substrate around the perimeter of the protruding pipe (approx 3 fixings) with appropriate fixings.
4 - Make sure that the welding surfaces are clean and free from any contaminants.
5 - Position the pipe wrap/fitting over the protruding pipe.
6 - Hot air weld the underside of the flange to the waterproofing membrane.
7 - Seal the top of the pipe wrap/fitting with a suitable sealant and add a stainless steel clamping ring at the top.
8 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

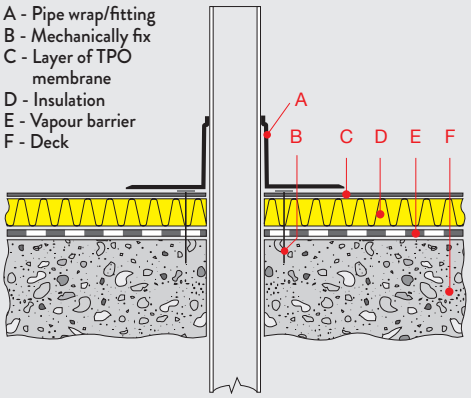
DESCRIPTION FOR SPECIFICATIONS

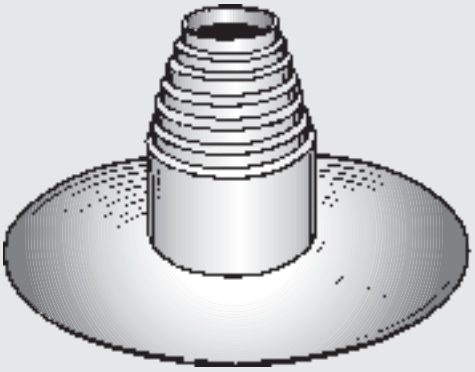
Art. 113.3
Supply and installation of **pipe wrap/fittings** SEALCO LTD or similar, made of UV stabilized in TPO having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 34-50-60-75-80-90;
the clamping rings must be in stainless steel.

Art. 114.3
Supply and installation of **pipe wrap/fittings** SEALCO LTD or similar, made of UV stabilized in TPO having a smooth flange which must be round and flexible, suitable for protruding pipes with the following diameters: 75-80-90-100-110-115-125; the clamping rings must be in stainless steel.

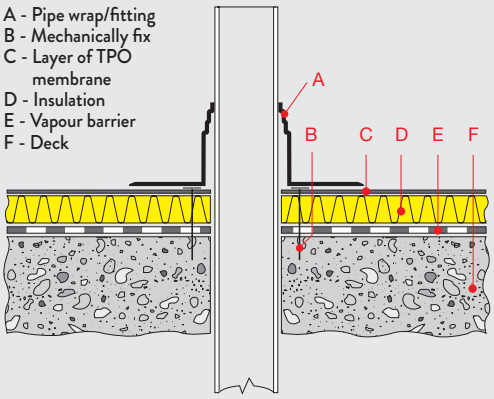


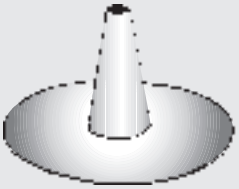
ART. 113.3





ART. 114.3





ART. 139.2

INSTALLATION METHOD

Art. 115.2 - 116.2

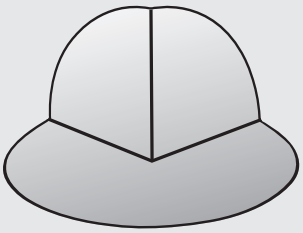
03.7 INTERNAL AND EXTERNAL CORNERS IN TPO

1 - Make sure that the welding surfaces are clean and free from any contaminants.
2 - Spot weld the inside/outside corner in order to hold in the requested position.
3 - Weld the perimeter of the inside/outside corner to the waterproofing membrane.
4 - Check the executed weld with a probing tool, this operation must be carried out only after the weld has cooled completely.

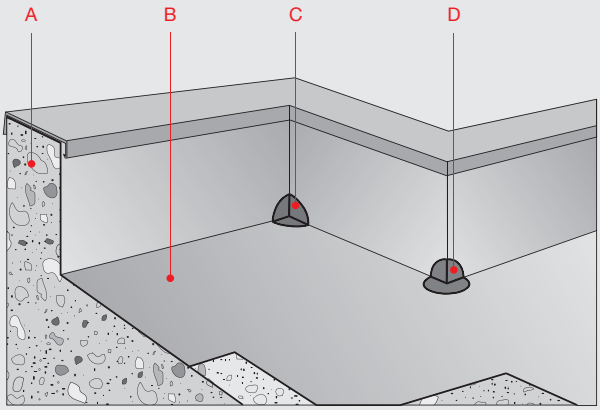
NOTE: *The above elements should not be used as a substitute of the original waterproofing product, they have been created for a secondary protection and reinforcement of those areas of higher risk because of transversal and horizontal traction of the waterproofing membrane.*

DESCRIPTION FOR SPECIFICATIONS
Supply and install SEALCO LTD **inside and outside corners** or similar, made of UV stabilized TPO.

ART. 115.2



ART. 116.2



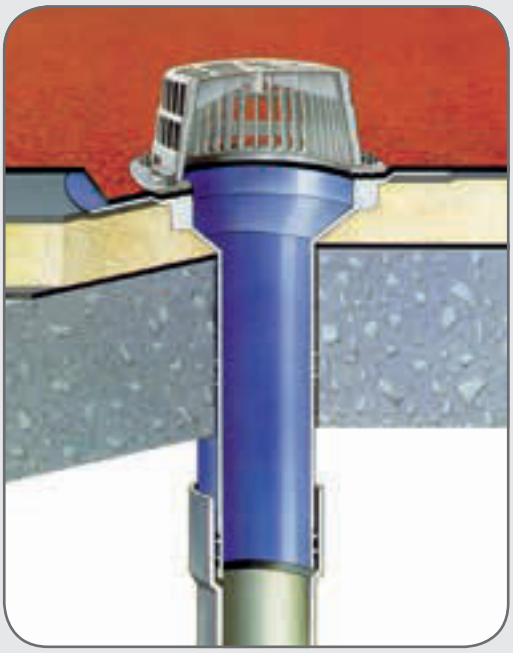
A - Deck
B - Bituminous membrane
C - Internal corner
D - External corner

04

ACCESSORIES FOR MECHANICALLY FIXED SOLUTIONS

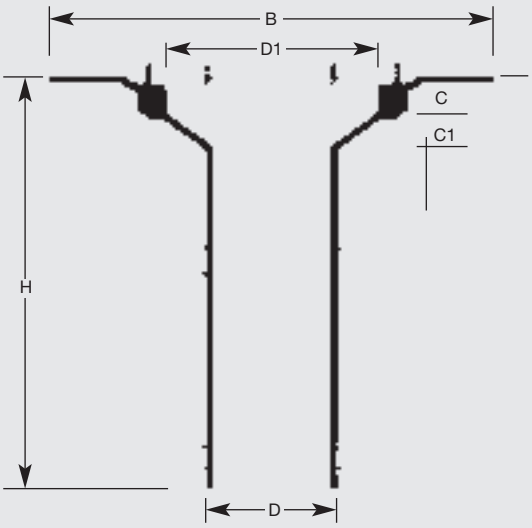
CAN BE USED WITH VARIOUS TYPE OF WATERPROOFING MEMBRANES

04.1 "SUPER SURE FIX" ROOF DRAIN IN IGOM.EE



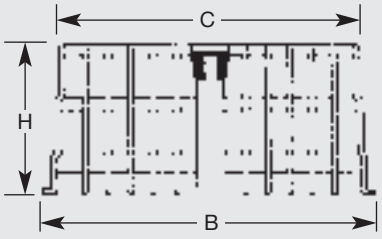
"SUPER SURE FIX" is one of the best means of connecting a roof system to an outlet drain and is particularly indicated for use on flat roof applications for either commercial or residential buildings.
The fastening and the seal between the roof system is achieved mechanically and thanks to its versatility the drain unit can be used with various types of waterproofing membranes. The unit and its accessories have been studied in the minutest detail thus giving a product which far surpasses the characteristics of other normal products currently available.

ART.	129	130	132	133	134	136
DENOM	75	80	100	110	125	150
B	340	340	340	340	340	340
H	330	330	330	330	330	330
D	75	80	100	110	125	150
D1	170	170	170	170	170	170
C	30	30	30	30	30	30
C1	25	25	25	25	25	25



LEAF AND GRAVEL GRATE

ART.	24
B	180
H	80
C	160



04.1 "SUPER SURE FIX" ROOF DRAIN IN IGOM.EE

INSTALLATION METHOD

1 - Place the unit into the drain pipe.
2 - Install the waterproofing membrane.
3 - Press the membrane over the lugs so that their position is evident. Carefully cut the membrane over the lugs so that they protrude through the membrane.
4 - Place the ring over the lugs and hold in position with 2 bolts and cut the membrane inside the ring.
5 - Position and fasten the other bolts and washers, position the leaf or gravel grate.

PRODUCT DATA
The unit consists of a flexible circular flange with 6 stainless steel lugs. A flat funnel 30 mm thick and 170 mm in diameter to ensure that even storm water will flow quickly into the unit.
Standard length is 330 mm. Pipe diameters available are 75-80-100-110-125-150 mm.
The unit is supplied with a 5076 aluminium ring, 3.5 mm thick and a diameter of 220 mm which has 3 locating lugs and 6 holes for the fixing of either a leaf and gravel grate.
Leaf and gravel grate are 80 mm high and have a diameter at the base of 180 mm and 160 mm at the top and clips into position on the locating lugs on the ring. The unit is made from IGOM.EE synthetic rubber which has excellent physical and chemical characteristics and can fulfil all the elastic characteristics required of such an article.
The specially formulated IGOM.EE has extremely high resistance to breakdown by sunlight, ozone and other chemical or atmospheric agents. The unit can be used in a wide range of temperatures giving high flexibility even in temperatures as well as stability in time thanks to its excellent mechanical characteristics. Thanks to their high quality, the materials used will ensure perfect performance through the years.
The aluminium ring is corrosion reistant and the 6 butterfly nuts which are in stainless steel ensure a perfect seal with all types of waterproofing membranes and so there is no need to seal the flange to the membrane.
The drain unit can be dismantled and reused.

DESCRIPTION FOR SPECIFICATIONS
Supply and installation of SEALCO LTD mechanical fix drain super made of synthetic rubber IGOM.EE with a 340 mm round flange, an increased 30 mm deap by 170 mm diameter drainage head and a 330 mm long stem with anti back-up rings or similar. Suitable for pipe Ø..... with spigot and complete with leaf or gravel grate with 5 or 10 mm meshing.

INSTALLATION METHOD

BITUMINOUS MEMBRANES

SYNTHETIC MEMBRANES

04.2 "TOP" DRAIN

< ART. 200 Ø 75
< ART. 202 Ø 110
< ART. 204 Ø 125
< ART. 206 Ø 160

< ART. 200.1 Ø 75
< ART. 202.1 Ø 110
< ART. 204.1 Ø 125
< ART. 206.1 Ø 160

< ART. 200.2 Ø 75
< ART. 202.2 Ø 110
< ART. 204.2 Ø 125
< ART. 206.2 Ø 160

"TOP" DRAIN is one of the best means of connecting to an outlet drain. Its dimensions conform to UNI EN 1451-1, and it fits to bell and spigot jointed pipes without using adhesive.
"Top" drain is particularly suited for use in low pitch roofs, under roof gardens, inverted roof systems and tiled roof areas.
Fixing and fastening to the waterproofing material is by a threaded ring which allows applicator to use it with various types of waterproofing membranes.

> INSTALLATION METHOD PAG. 73

^ ART. 216

^ ART. 218

^ ART. 210.2

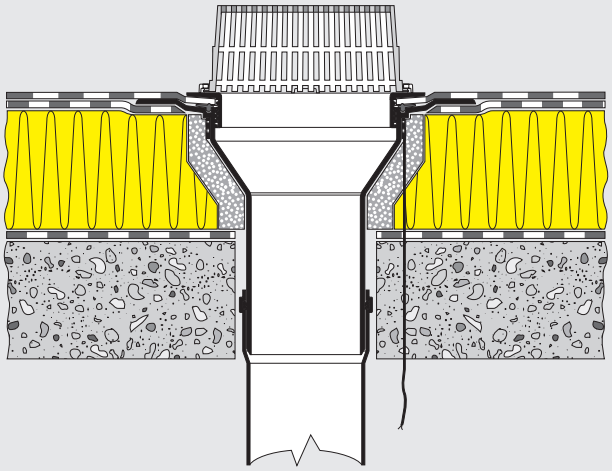
^ ART. 222 Ø 75
^ ART. 224 Ø 110
^ ART. 226 Ø 125
^ ART. 228 Ø 160

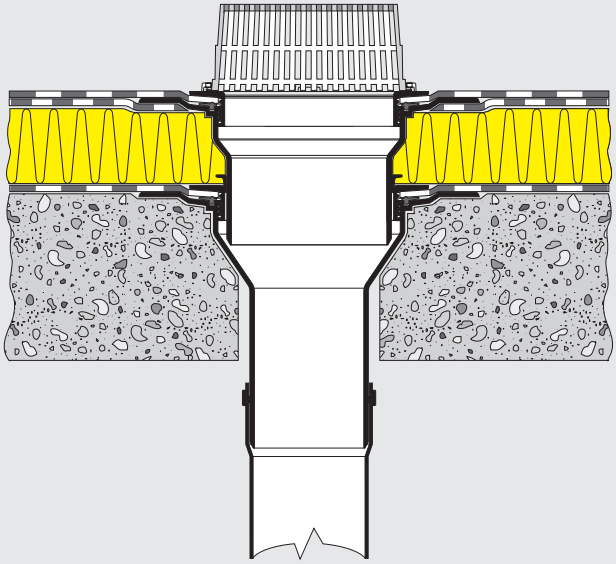
^ ART. 210.3

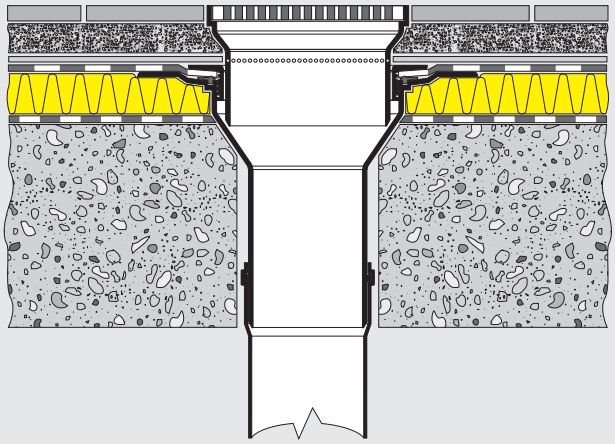
^ ART. 220

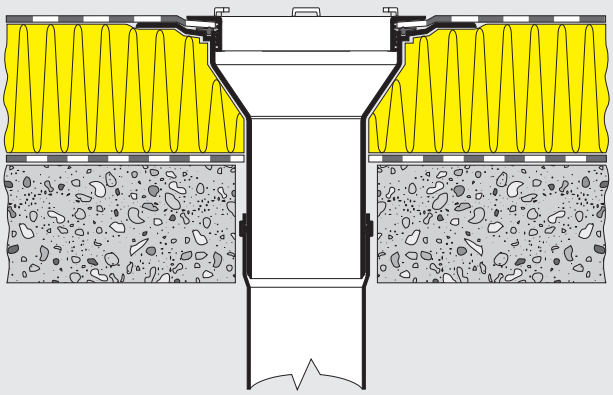
^ ART. 230 Ø 110-100

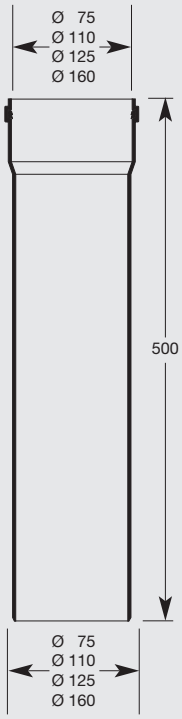
04.2 "TOP" DRAIN (ALL DIMENSIONS ARE IN MILLIMETERS AND HAVE A TOLERANCE OF ± 2)

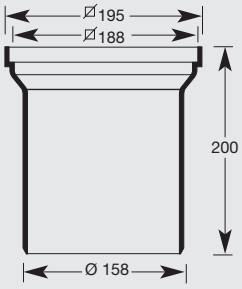


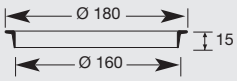


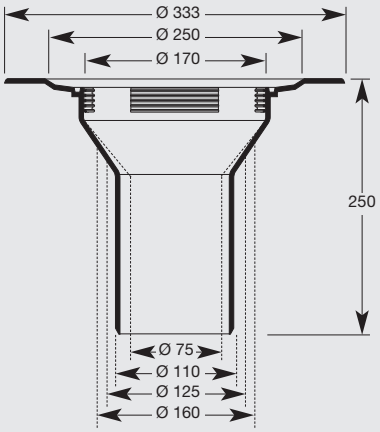


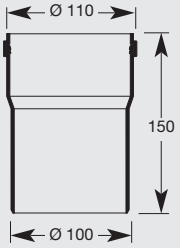


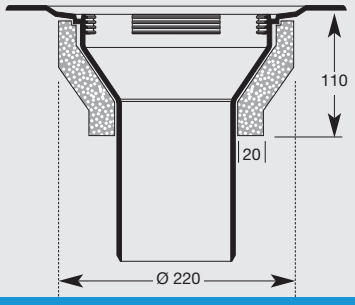






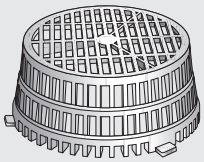


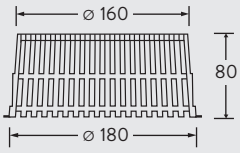




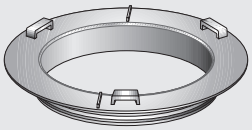
04.2 "TOP" DRAIN

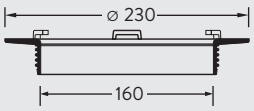
> **ART. 24**
Leaf and gravel grate



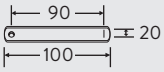


> **ART. 210**
Seal ring

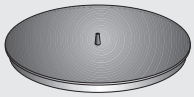


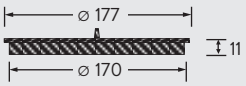


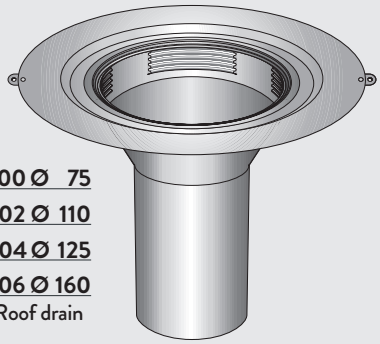
> **ART. 210.2**
Handy cutting guide

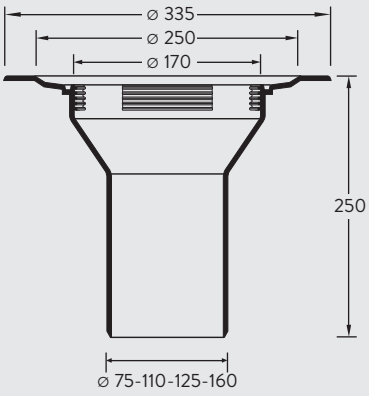


> **ART. 210.3**
Protective cover



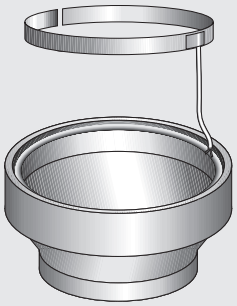




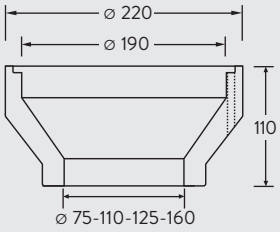


^ **ART. 200 Ø 75**
^ **ART. 202 Ø 110**
^ **ART. 204 Ø 125**
^ **ART. 206 Ø 160**
"TOP" Roof drain

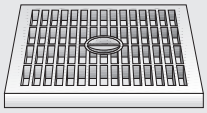
> **ART. 212**
14 Watt heater element



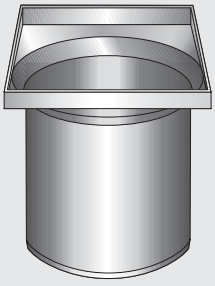
> **ART. 214**
Insulation box

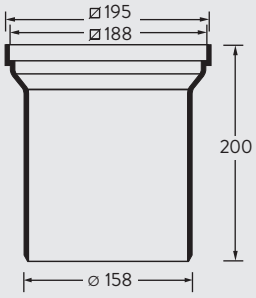


> **ART. 216**
Grate 188x188 Ped.

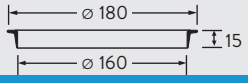


> **ART. 218**
Adaptor piece for fitting a grill





> **ART. 220**
"L" seal piece



TECNICAL CHARACTERISTICS AND ACCESSORIES

- Circular flage Ø 333 mm. with fastening holes.
- Seal ring.
- 165 mm countersuck top and stem Ø 75-110-125-160 mm for a total height of 250 mm.
- Protective cover with a central pin as a handy cutting guide.
- Metal handy cutting guide with slit for blade.
- Threaded ring with 3 locationg holes for leaf or gravel guard positiong and tightening lugs.

OPTIONALS

- Adaptor piece for fitting foot traffic resistant grille.
- 188x188 foot traffic resistant grille.
- L seal piece for positioning pipes or outlets.
- 220 V 14 W heater element.
- High density polyurethane insulation.
- Pipe bell joint and seal Ø 75-110-125-160 mm. 500 high.

"TOP" DRAIN ADVANTAGES

1 - "TOP" drains can be used with all types of waterproofing membranes.
2 - Accessories supplied with "TOP" drain allow it to be used in virtually all applications.
3 - Quick and easy installation often halving installation times.
4 - Can be used with prefabricated membranes.
5 - Large countersunk top makes for easy flow or rainwater and the seal between the outlet and the down pipe ensure that it is fully watertight for all of its circumference.
6 - Warehousing of only one type of drain.

DRAINAGE CAPACITY OF "TOP" DRAIN

- Diam. 75 = 300 lt./min.
- Diam. 110 = 492 lt./min.
- Diam. 125 = 690 lt./min.
- Diam. 160 = 786 lt./min.
- With gravel/grate -20%
- "TOP" drain is re-cycleable

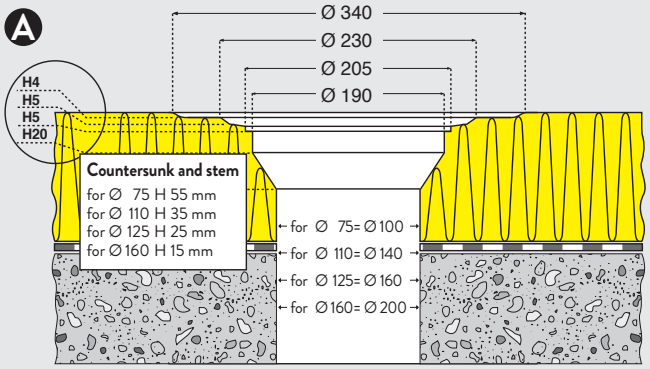
DESCRIPTION FOR SPECIFICATIONS

Supply and installation of SEALCO LTD mechanical fix drain top made of polypropylene with a round..... mm diameter flange, an increased 30 mm deap by 170 mm diameter drainage head with a 250 mm stem or similar. Suitable for down pipes according to UNI EN 1451-1 complete with spigot and washer, with a screw on counter flange, heating element, insulation and a 6 mm leaf or gravel grate.

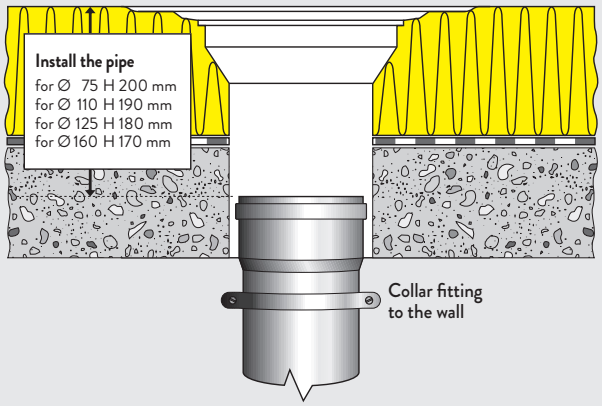
INSTALLATION METHOD

1 - An appropriately dimensioned seat of the drain and the down pipe must be prepared throught the various layers *(fig. A)*.
2 - The down pipe is fitted using the special collars under the bell of the pipe *(fig. B)*.
3 - Insert the drain and cover into the bell or the hose and mail info position *(fig. C)* (check that the seal is correctly positioned in its seat).
4 - In the case a multi-layer waterproofing system, the drain unit be installed on top of the first waterproofing layer. The area around the flange must be heated in proximity of the flange without the flame coming into direct contact with the drain unit, the unit is placed in position, ensuring that the flange is propertly positioned and sealed *(fig. D)*.
5 - Install the waterproofing membrane (in the case of bituminous membranes it should be heated gently and adhered to the cover) avoid forming joints in proximity of the drain unit. After completing installation, press on the central pin so that it protrudes, and using the handy cutting guide and look blade cut the circular piece over the cover itself *(fig. E)*.
6 - Remove the cover, and manually screw down the ring using the lungs until it is sufficienty tight. Position the leaf or gravel guard in the locating holes *(fig. F)*.

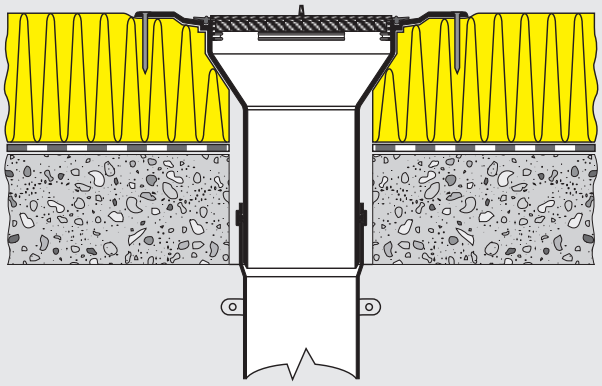
A



B



C



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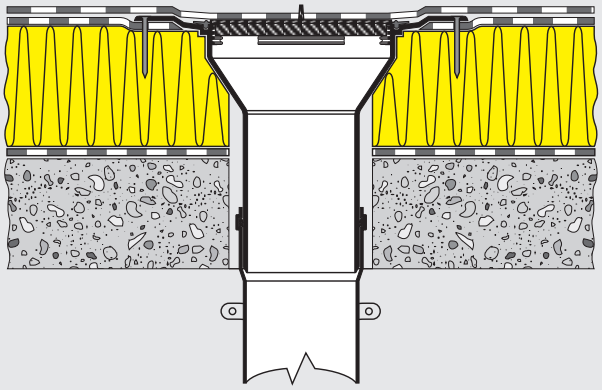
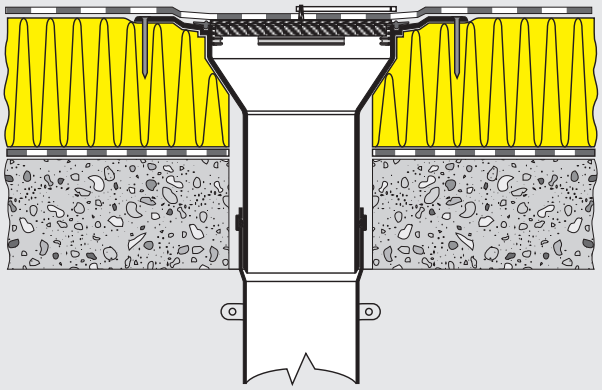
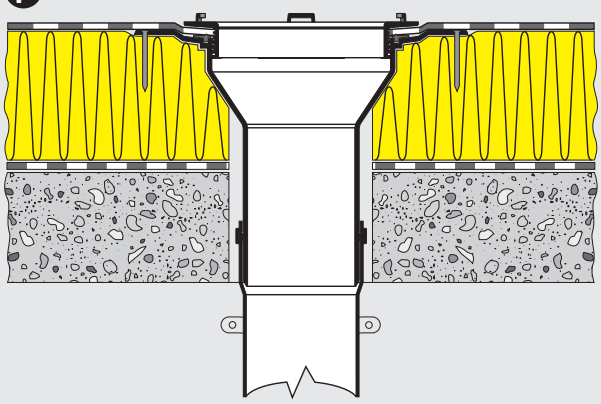


E



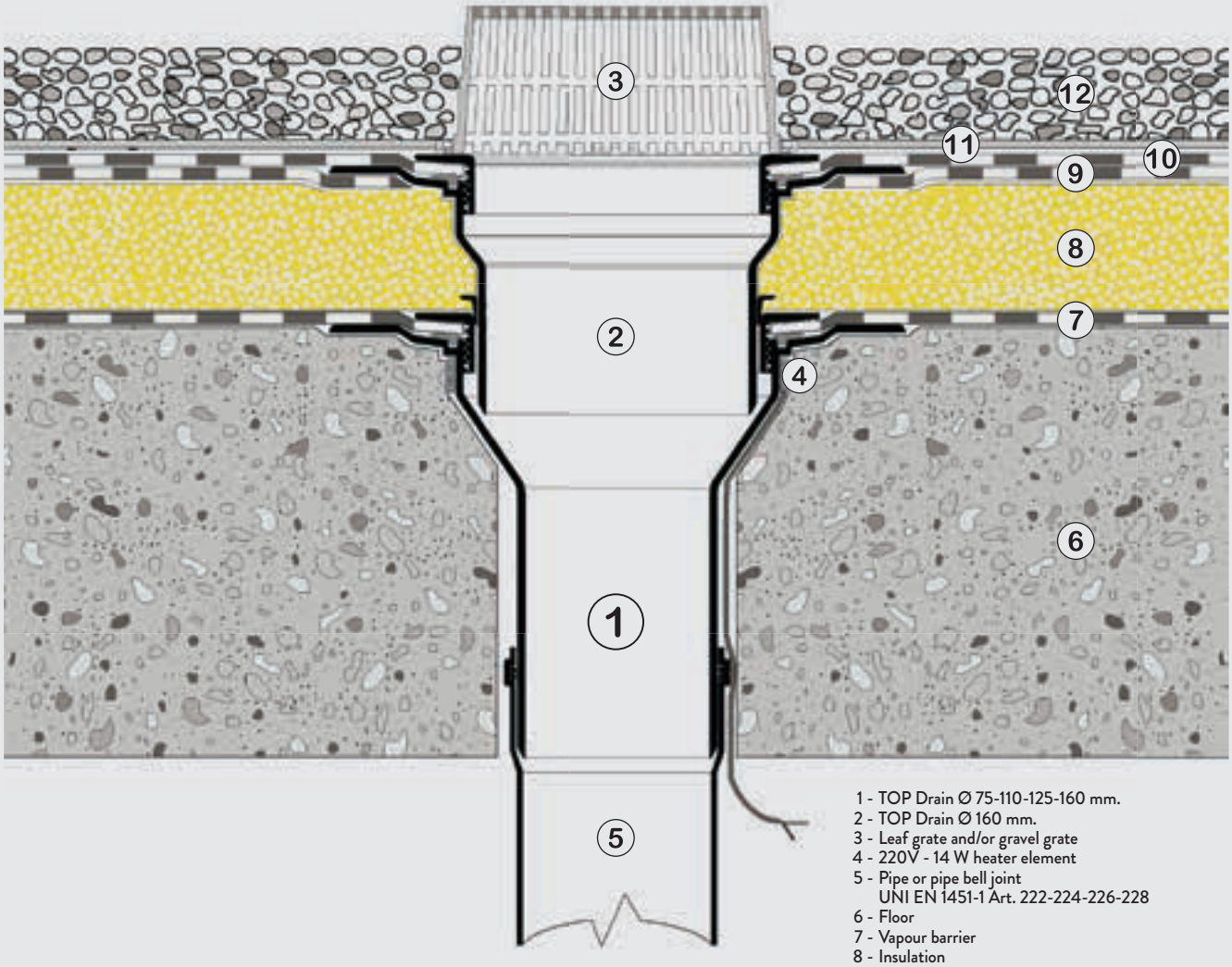
F



INSTALLATION METHOD Example 1

04.2 "TOP" DRAIN

INDUSTRIAL ROOF WITH DOUBLE DRAIN

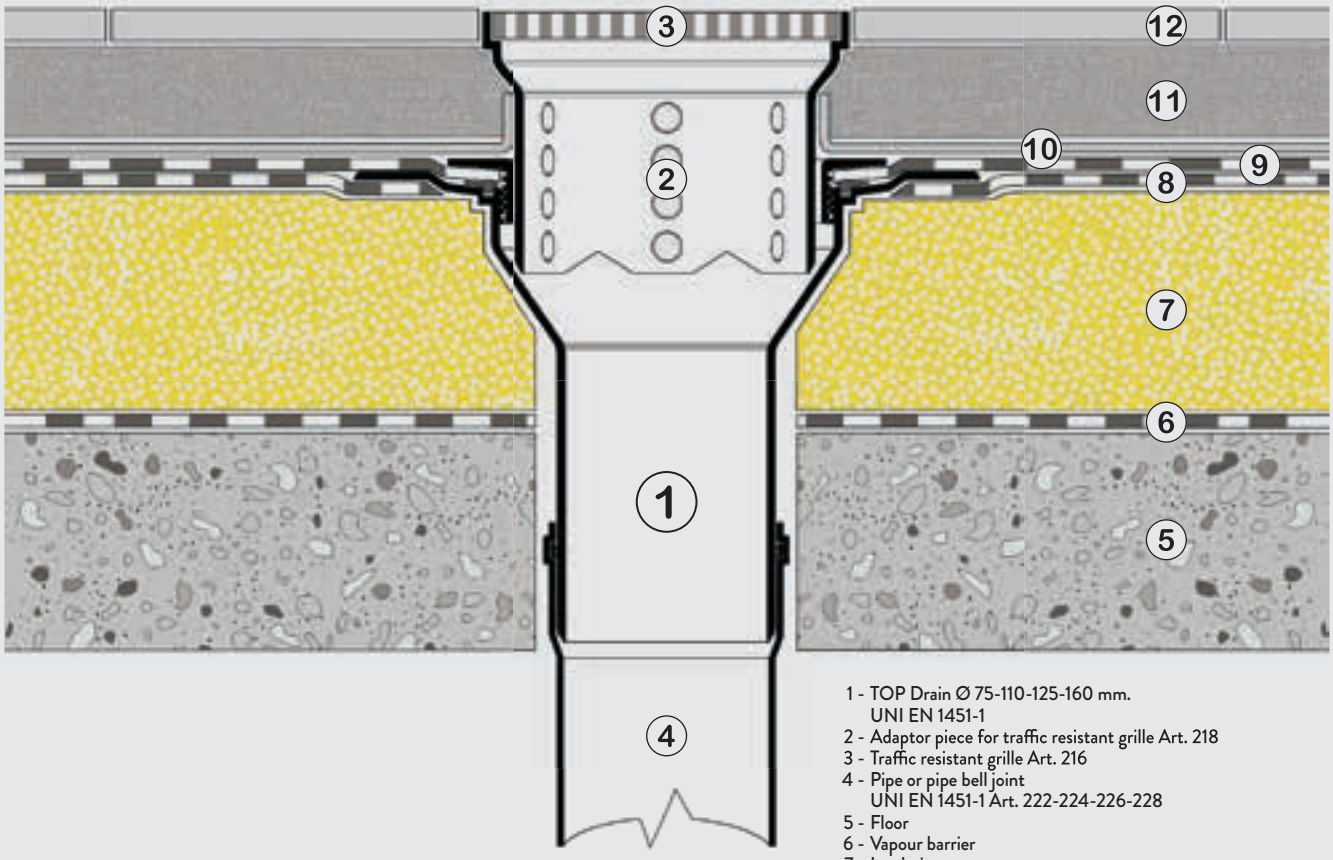


1 - TOP Drain Ø 75-110-125-160 mm.
2 - TOP Drain Ø 160 mm.
3 - Leaf grate and/or gravel grate
4 - 220V - 14 W heater element
5 - Pipe or pipe bell joint
UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First layer of membrane
10 - Second layer of membrane
11 - Non woven fabric
12 - Washed gravel 5-6 cm.

NOTE: *the drawing shows points 8-9 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 2

WALKABLE ROOF



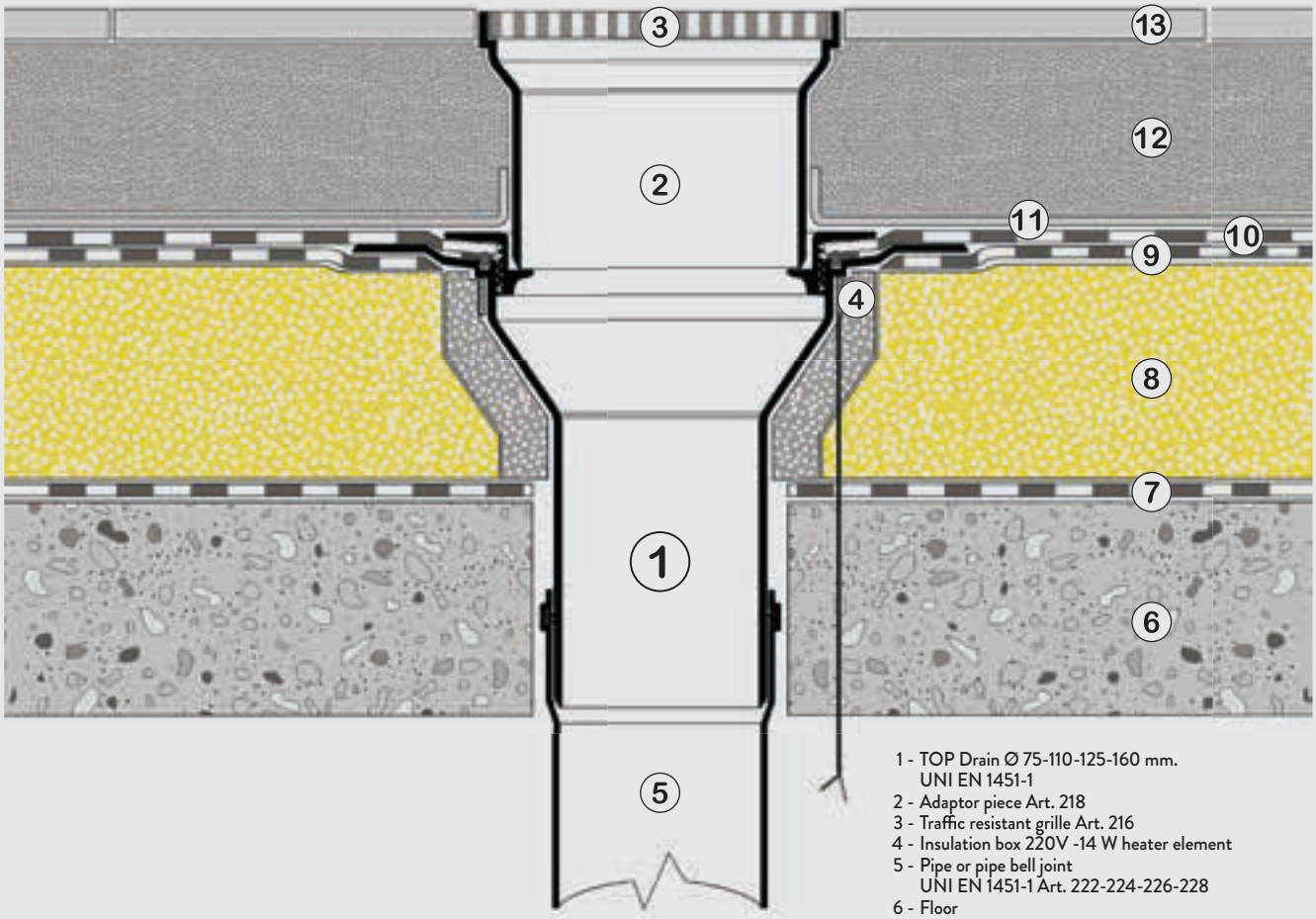
1 - TOP Drain Ø 75-110-125-160 mm.
UNI EN 1451-1
2 - Adaptor piece for traffic resistant grille Art. 218
3 - Traffic resistant grille Art. 216
4 - Pipe or pipe bell joint
UNI EN 1451-1 Art. 222-224-226-228
5 - Floor
6 - Vapour barrier
7 - Insulation
8 - First layer of membrane
9 - Second layer of membrane
10 - Separation layer
11 - Anti slip tiles
12 - Anti slip and anti freezing tiles

NOTE: *the drawing shows points 8-9 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 3

04.2 "TOP" DRAIN

WALKABLE ROOF

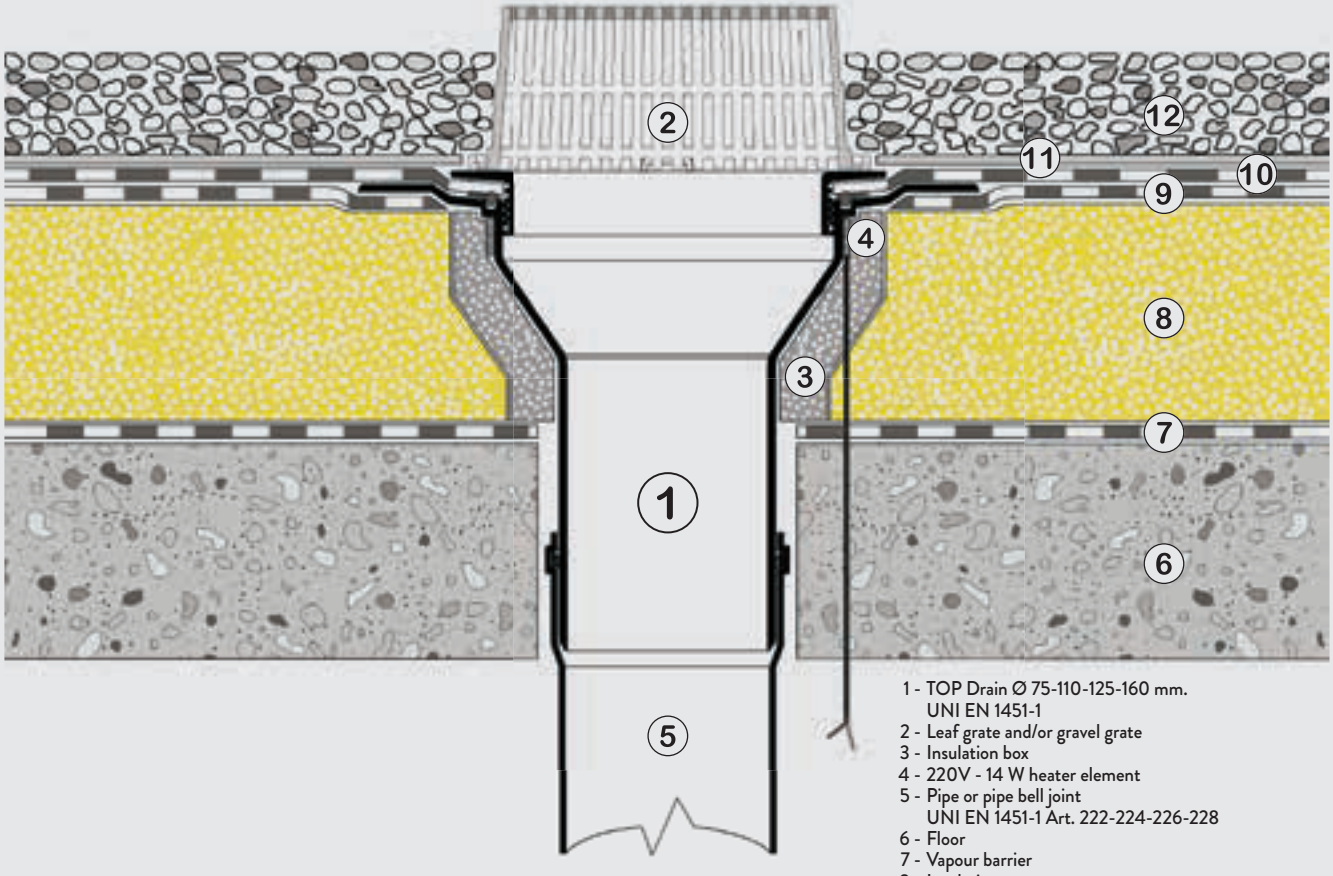


1 - TOP Drain Ø 75-110-125-160 mm. UNI EN 1451-1
2 - Adaptor piece Art. 218
3 - Traffic resistant grille Art. 216
4 - Insulation box 220V -14 W heater element
5 - Pipe or pipe bell joint UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First layer of membrane
10 - Second layer of membrane
11 - Non woven fabric
12 - Concrete deck
13 - Anti slip and anti freezing tiles

NOTE: *the drawing shows points 9-10 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 4

INDUSTRIAL BALASTED ROOF



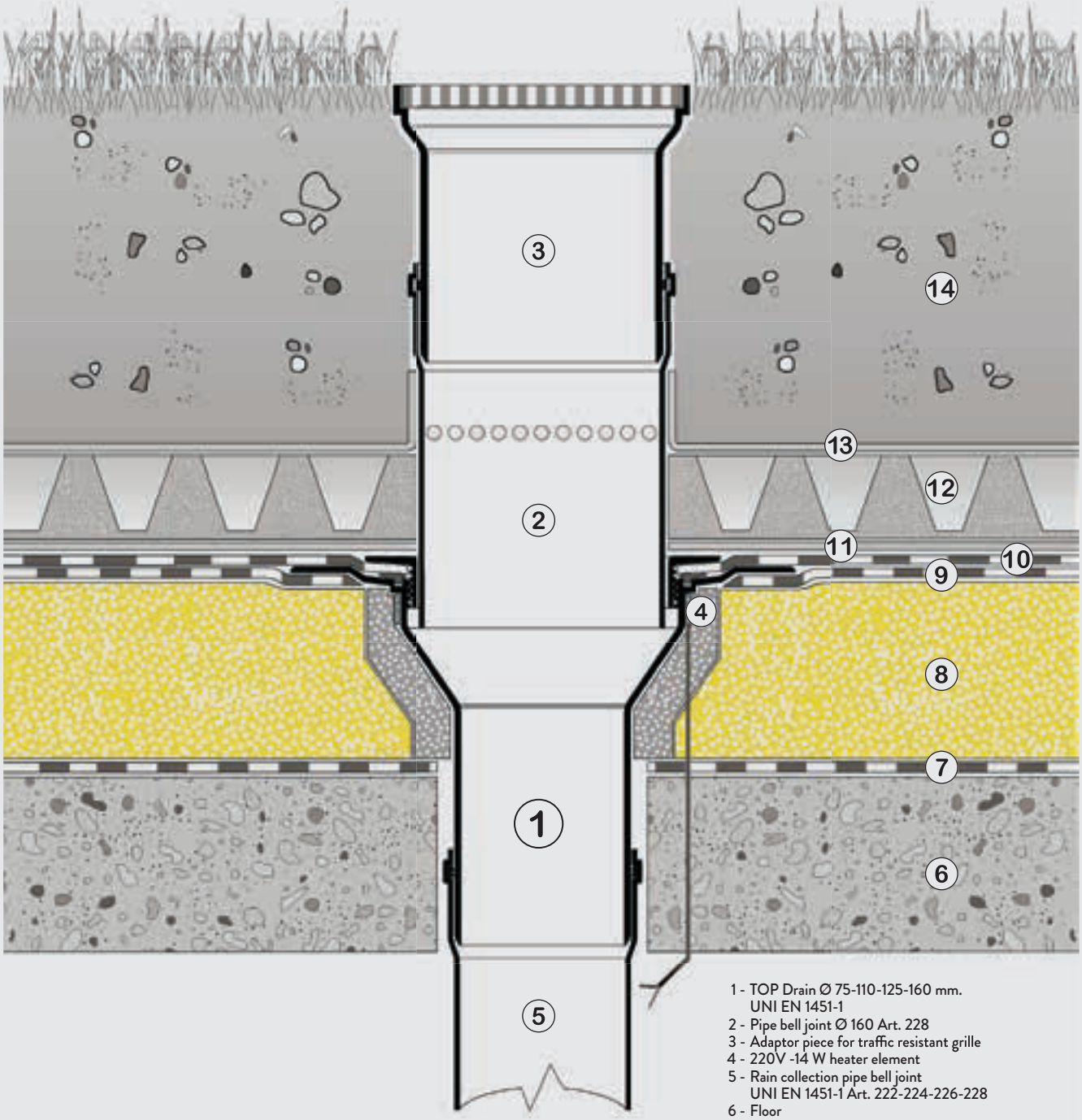
1 - TOP Drain Ø 75-110-125-160 mm.
UNI EN 1451-1
2 - Leaf grate and/or gravel grate
3 - Insulation box
4 - 220V - 14 W heater element
5 - Pipe or pipe bell joint
UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First layer of membrane
10 - Second layer of membrane
11 - Non woven fabric
12 - Washed gravel 5-6 cm.

NOTE: *the drawing shows points 9-10 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 5

04.2 "TOP" DRAIN

ROOF GARDEN

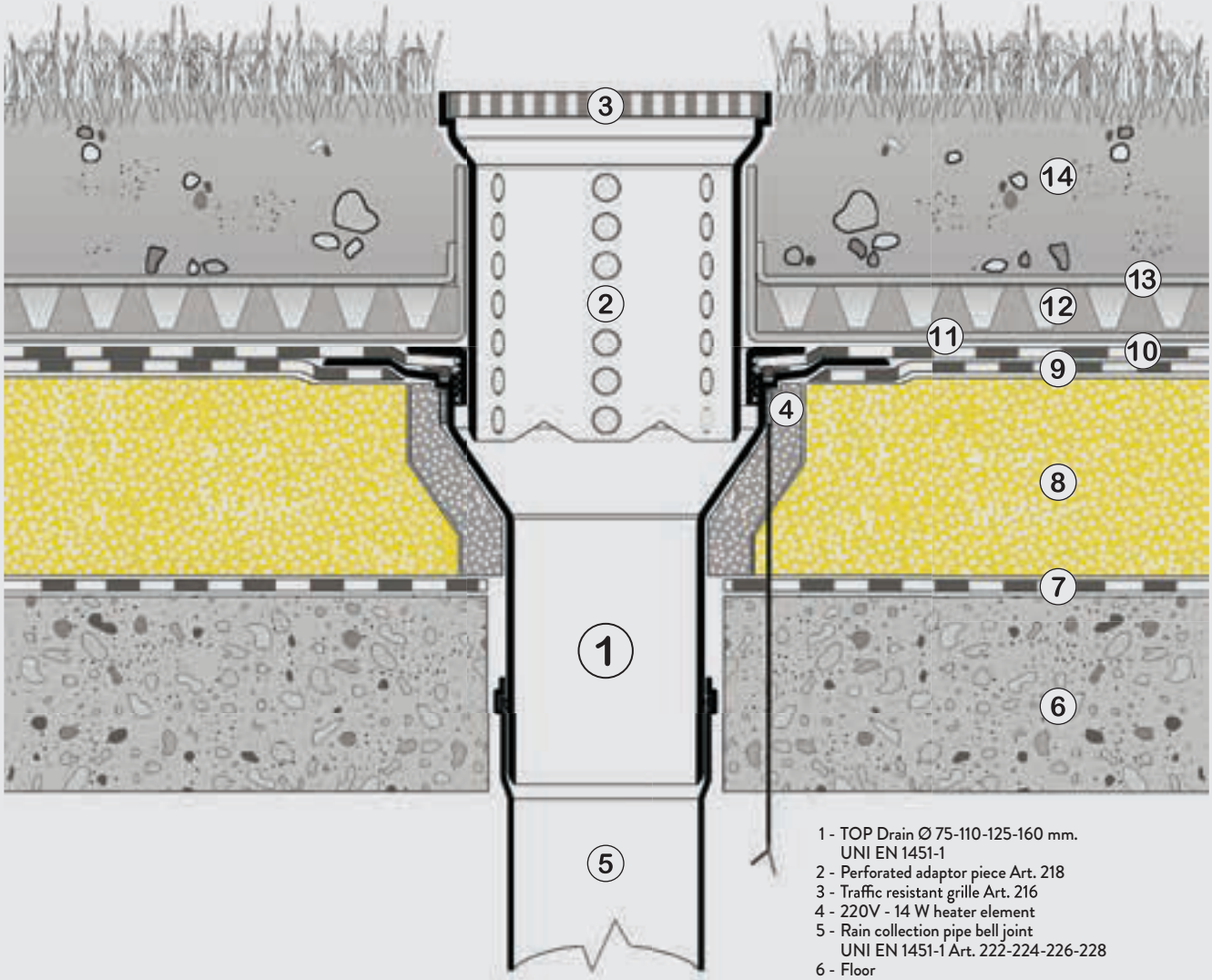


1 - TOP Drain Ø 75-110-125-160 mm. UNI EN 1451-1
2 - Pipe bell joint Ø 160 Art. 228
3 - Adaptor piece for traffic resistant grille
4 - 220V -14 W heater element
5 - Rain collection pipe bell joint UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First anti root layer
10 - Second layer of membrane
11 - Separation layer non woven fabric
12 - Rainwater collection (model Dorken)
13 - Separation layer non woven fabric
14 - Earth for green roof

NOTE: *the drawing shows points 9-10 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 6

ROOF GARDEN



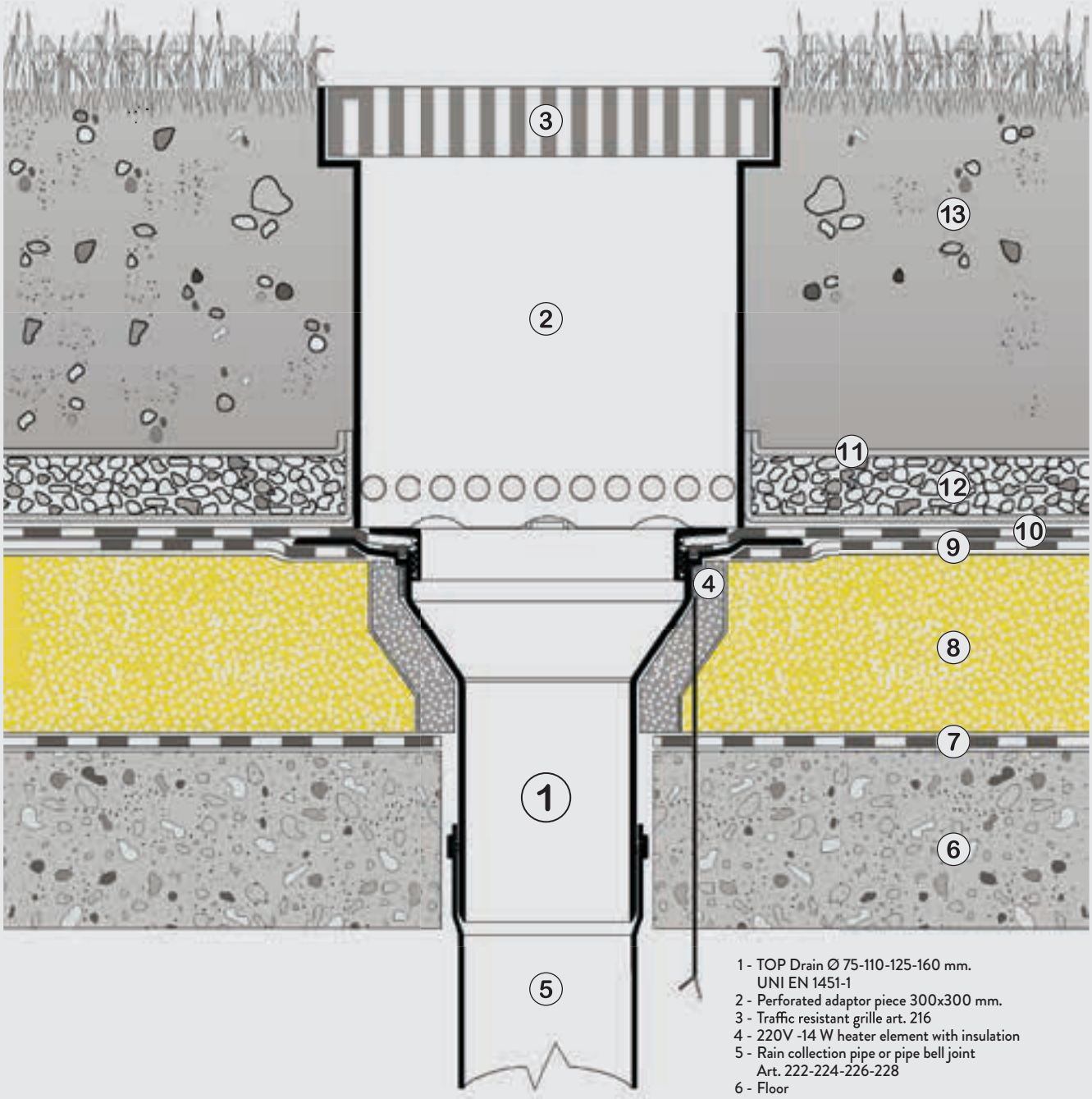
1 - TOP Drain Ø 75-110-125-160 mm. UNI EN 1451-1
2 - Perforated adaptor piece Art. 218
3 - Traffic resistant grille Art. 216
4 - 220V - 14 W heater element
5 - Rain collection pipe bell joint UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First anti root layer
10 - Second layer of membrane
11 - Separation layer non woven fabric
12 - Rainwater collection (model Dorken)
13 - Separation layer non woven fabric
14 - Earth for green roof

NOTE: *the drawing shows points 9-10 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 7

04.2 "TOP" DRAIN

ROOF GARDEN

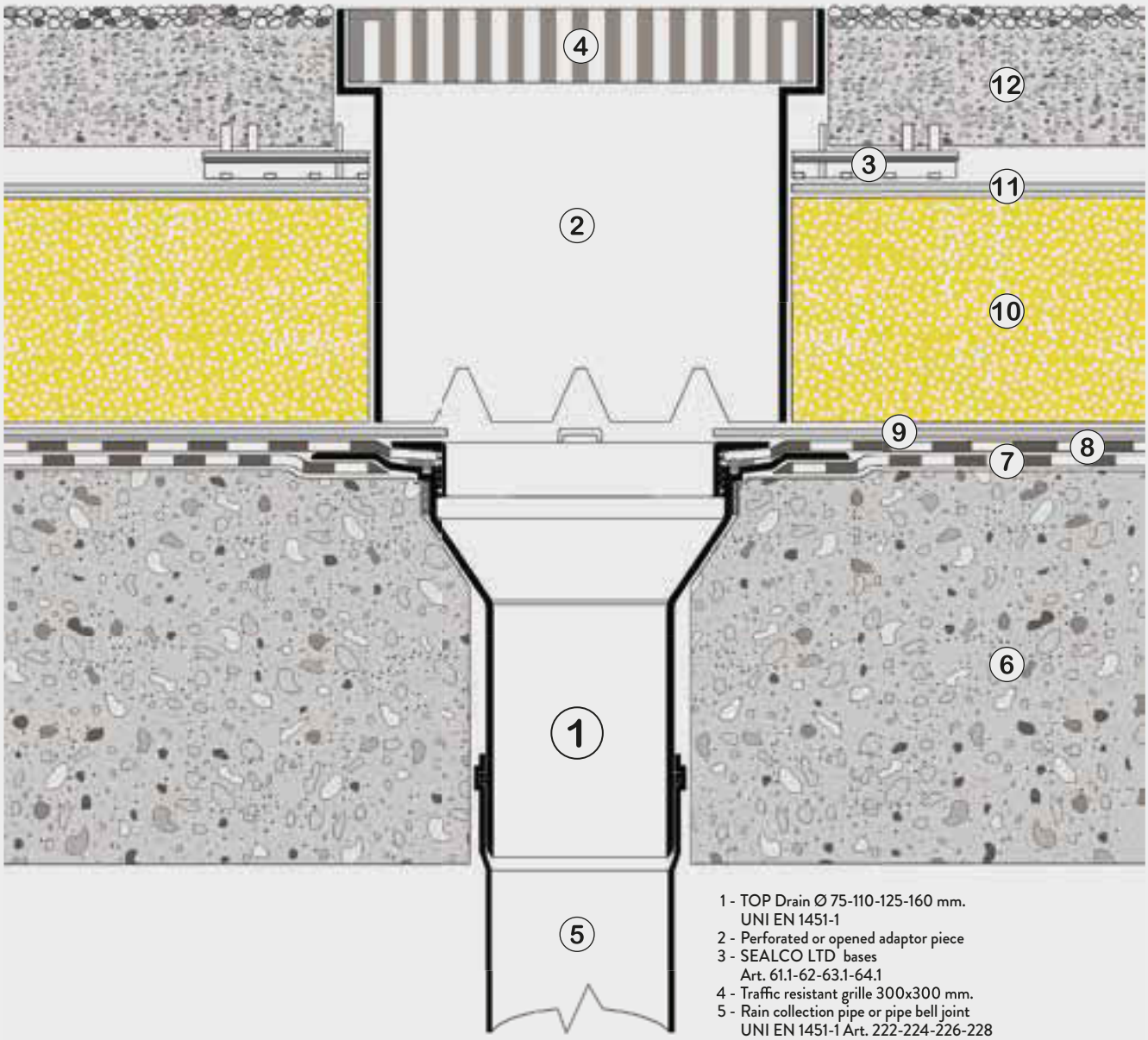


1 - TOP Drain Ø 75-110-125-160 mm. UNI EN 1451-1
2 - Perforated adaptor piece 300x300 mm.
3 - Traffic resistant grille art. 216
4 - 220V -14 W heater element with insulation
5 - Rain collection pipe or pipe bell joint Art. 222-224-226-228
6 - Floor
7 - Vapour barrier
8 - Insulation
9 - First layer of membrane
10 - Second layer of membrane
11 - Filter and separation layers
12 - Gravel (60-70 mm.)
13 - Partially unsued land

NOTE: *the drawing shows points 9-10 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 8

INVERTED ROOF WALKABLE



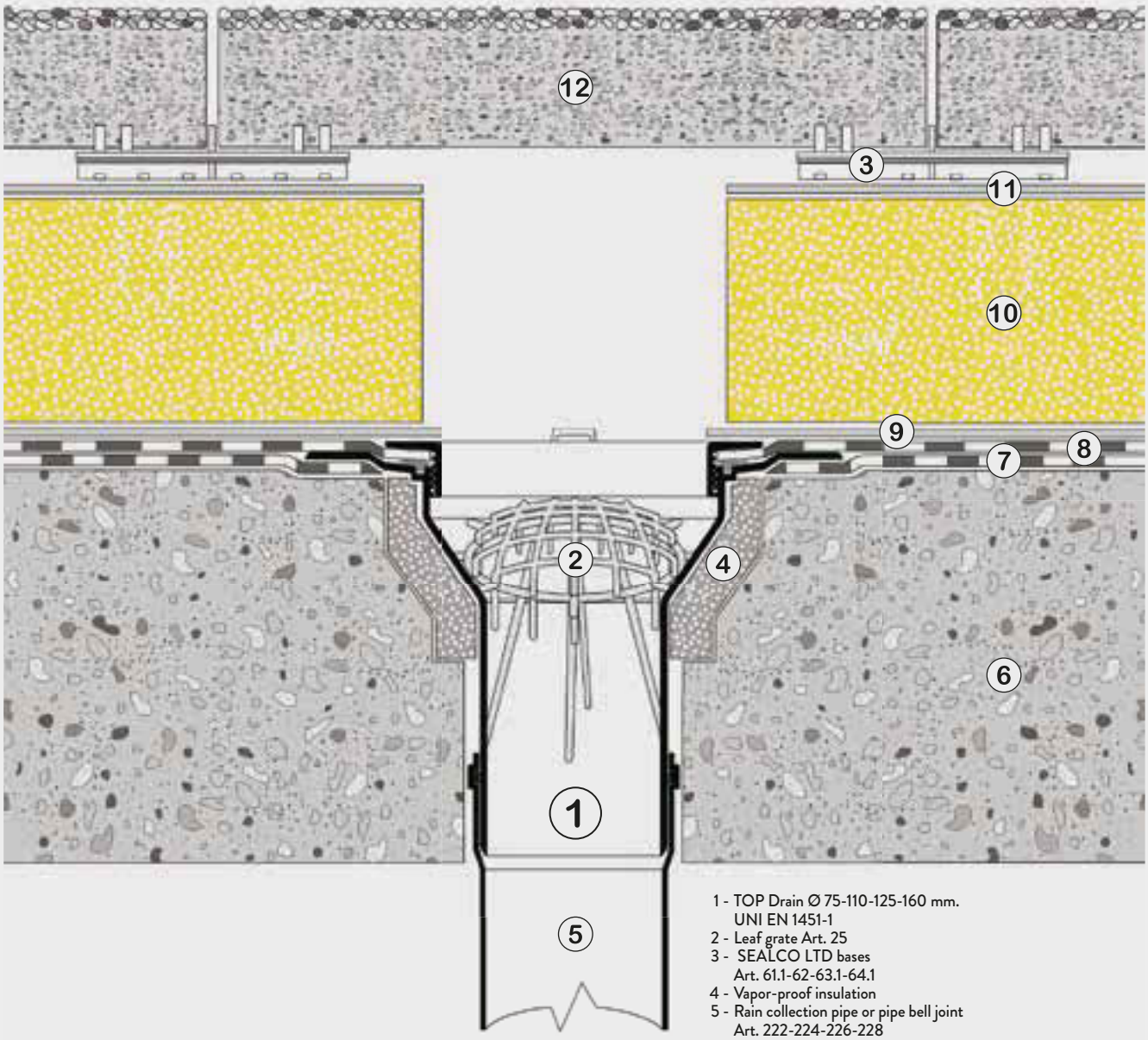
1 - TOP Drain Ø 75-110-125-160 mm.
UNI EN 1451-1
2 - Perforated or opened adaptor piece
3 - SEALCO LTD bases
Art. 61.1-62-63.1-64.1
4 - Traffic resistant grille 300x300 mm.
5 - Rain collection pipe or pipe bell joint
UNI EN 1451-1 Art. 222-224-226-228
6 - Floor
7 - First layer of membrane
8 - Second layer of membrane
9 - Separation layer non woven fabric
10 - Insulation
11 - Separation layer non woven fabric
12 - Prefabricated slabs

NOTE: *the drawing shows points 7-8 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

INSTALLATION METHOD Example 9

04.2 "TOP" DRAIN

INVERTED ROOF WALKABLE



1 - TOP Drain Ø 75-110-125-160 mm. UNI EN 1451-1
2 - Leaf grate Art. 25
3 - SEALCO LTD bases Art. 61.1-62-63.1-64.1
4 - Vapor-proof insulation
5 - Rain collection pipe or pipe bell joint Art. 222-224-226-228
6 - Floor
7 - First layer of membrane
8 - Second layer of membrane
9 - Separation layer non woven fabric
10 - Insulation
11 - Filter separation layer
12 - Walkable slabs

NOTE: *the drawing shows points 7-8 application with two layers of bituminous membranes. This type of membrane can be substituted with other types of single-ply membranes in PVC - ECB - PP - EPDM, etc.*

05

ACCESSORIES FOR PITCHED ROOFS

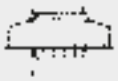
05.1 AIR VENT FOR PITCHED ROOFS

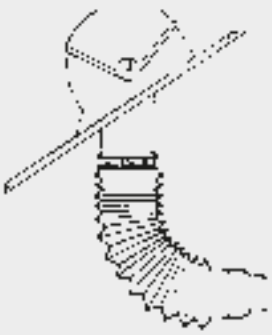
< ART. 154
Red

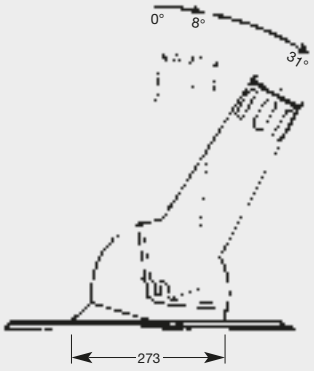
< ART. 155
Black

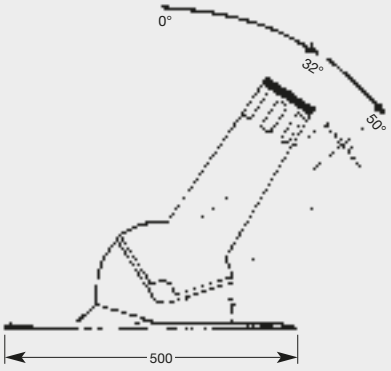
< ART. 156 - 156.1
Flexible pipe

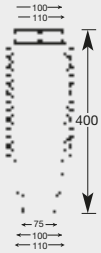
AIR VENT FOR PITCHED ROOFS are suitable for use on roofs having pitches between 8° and 50°.
Suitable for use to aerate attic areas even using an extractor fan thanks to the large diameter of the pipe.
The aereators, apart from the plate and pivoting body, can also be supplied with a bellows adaptor to fit any angle of pipe.
The articles described above can be used on asphalt shingles, modified bitumen, fibrecement, natural slate, ceramic or sheet steel decks roofs.
All the articles are made from IGOM.EE thermoplastic rubber having high mechanical and physical characteristics as well as good resistance to ageing and UV breakdown Ozone and other atmospheric and chemical agents.
Thanks to the characteristics of the materials used the products can be used in working temperature ranges between -25°C and +100°C.









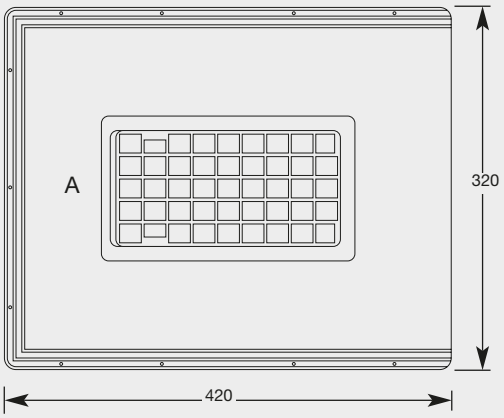


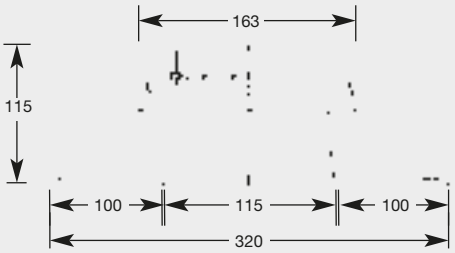
05.1 AIR VENT FOR PITCHED ROOFS

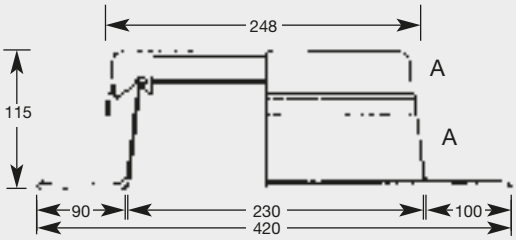
< ART. 157
Black

< ART. 157.1
Brown

AIR VENT FOR PITCHED ROOFS Art. 157 and 157.1 for flat roofs or roofs having pitches between 0° and 50° are ideally suited for the aeration of cavity walls and roof structures and may be connected to pipes coming from beneath.
All articles are made from IGOM.EE thermoplastic rubber and have high mechanical and physical characteristics as well as good resistance to ageing and UV breakdown Ozone and other atmospheric and chemical agents.
Thanks to the characteristics of the materials used the products can be used in working temperature ranges between -25°C and +100°C.







05.1 AIR VENT FOR PITCHED ROOFS

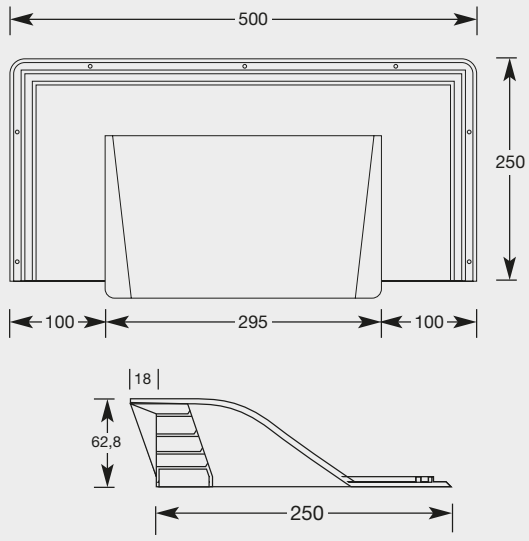
< ART. 158
Black

< ART. 158.1
Brown

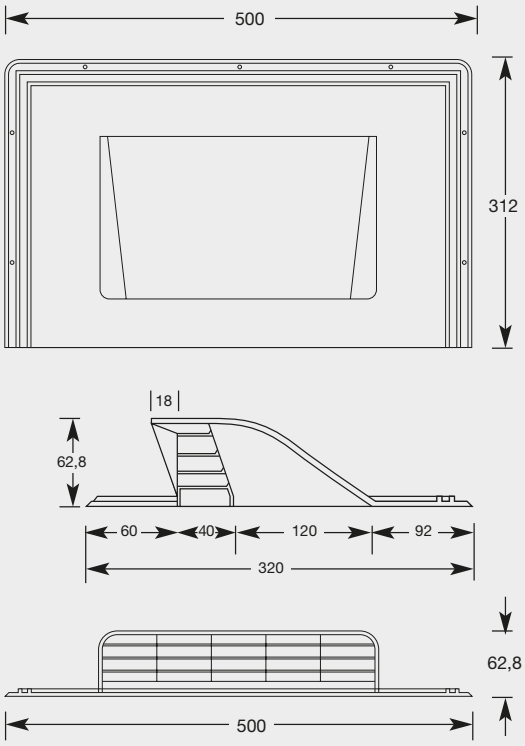
< ART. 159
Black

< ART. 159.1
Brown

AIR VENT FOR PITCHED ROOFS Art. 158 and Art. 158.1 are suitable for use on roofs having pitches between 15° and vertical.
They are used as cavity aerators. They can accommodate pipes up to Ø 110 mm.
Suitable for roofs waterproofed with bituminous shingles, modified bituminous sheet, fibre cement sheets, slates ceramic tiles or metal sheets. The air vent is made with IGOM.EE, a special compound of synthetic rubbers formulated by SEALCO LTD which offer a high physical, properties that protect it againt degrade caused by UV, ozone or other atmospherical agents. It can be in a wide range of temperature from -25° to +100°C and remains stable in time. These materials guarantee perfect performance over the years.



AIR VENT FOR PITCHED ROOFS Art. 159 and Art. 159.1 have the same function but with a front flange where the roofing material can be overlaid giving better safety margins against water back flow into the aerator.
For even higher safety it has a 7 + 3 mm. step. The two sizes are fitted with 18 mm. dripedge.



05.1 AIR VENT FOR PITCHED ROOFS

< ART. 54
< ART. 56
Grey

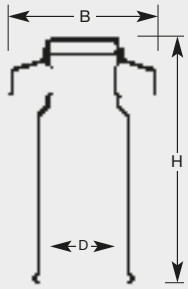
< ART. 55
< ART. 57
Brown

^ ART. 60

ANTI-CONDENSE EXTRACTOR is suited for bathrooms, kitchens, wet rooms any other area where there is a heavy presence of vapour. Because of constructive characteristics it avoids the formation of condense and thus avoids dripping along ventilation pipes. They have been designed to cover protruding pipes and can also be used on slopped roofs with traditional tiles together with Art. 60. They are available in colours grey or brown.

CAP FOR ROOF TILES suitable for connecting protruding pipes on traditional tiled roofs.

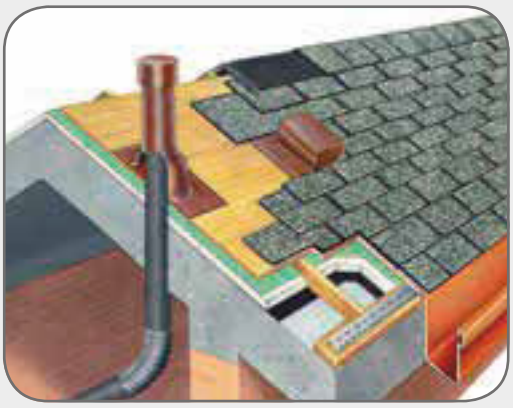
ART.	54 - 55	56 - 57
D	100	125
D1	120	150
B	180	220
H	300	350



^ ART. 54 - 55 - 56 - 57

05.2 VENTILATED RIDGE ELEMENT

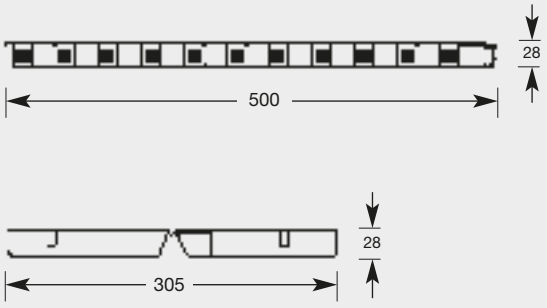
< ART. 2005



^ ART. 2010

< ART. 2005

The **VENTILATED RIDGE ELEMENT** has been carefully developed for the aeration of cavity in cold roofs where bituminous shingles or fibre cement sheeting is used. The ridge can be used on any pitch thanks to the labyrinth design which prevents the back flow of water by even the strongest of winds. It is also easily aligned thanks to a specially designed hook system it has a built in insect net holes are pre-moulded into the ridge elements which are supplied with end closure caps. The ridge is made of moulded thermoplastic which is flexible and resistant at both high and low temperatures.

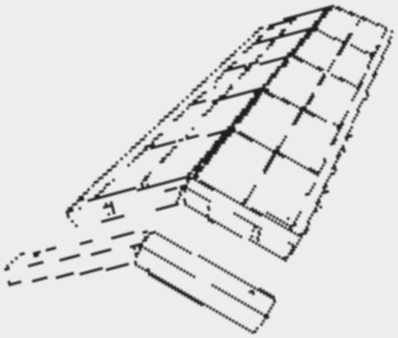


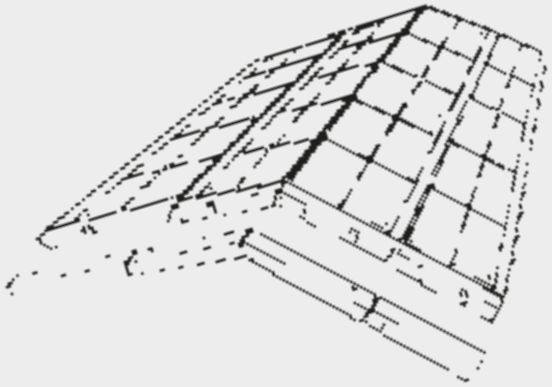
INSTALLATION METHOD

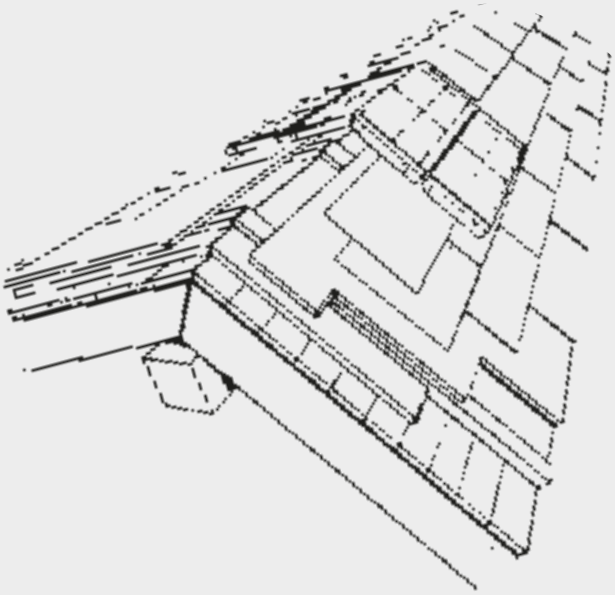
05.2 VENTILATED RIDGE ELEMENT

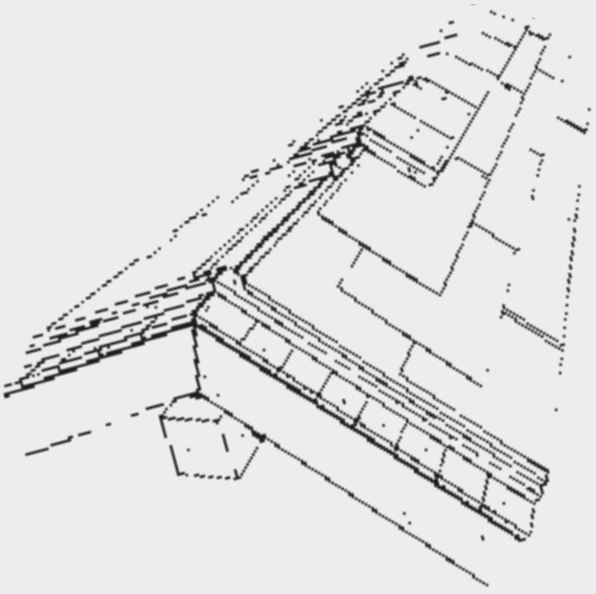
1 - Leave a space of approximately 8 to 10 cm. when fixing the deck at the ridge.
2 - Install as normal the bituminous shingles up to this edge.
3 - Position 2 elements (SEALCO LTD ridge) and mark a line.
4 - Fix the ridge elements in place by cliping into position on to the other and then fix in place using the screws provided through the appropriate holes in the ridge.
5 - Fix the closing elements at the extremities.
6 - Cover the prefabricated ridge using shingle ridge elements which must extend at least 1 cm. over the lower edge of the prefabricated ridge. Nails of sufficient length should be used so that they pass through the shingles, the ridge elements and into the wooden deck.

Should a double width ridge be needed this can be done by cutting the prefabricated ridge element in half and positioning it down slope and covering the whole with shingles.









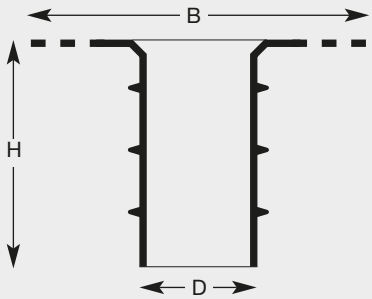
06

ACCESSORIES FOR LIQUID CEMENTS AND LIQUID MEMBRANES

06.1 ANTI-BACKUP ROOF DRAIN R WITH MESHED FLANGE

< ART. 143.5

< ART. 146.5



ANTI-BACKUP ROOF DRAIN R WITH MESHED FLANGE is an ideal means of attaining continuity between the area being waterproofed and the discharge pipe on flat roofs.
Is has been designed for use with two-component cementitious waterproofing and all cold applied liquid membranes.

ART.	150R	1.1R	13R	10R	14R	11R	16R	12R	17R	112R
DENOM	50	60	75	80	90	100	110	125	140	160
B	262	272	285	288	298	307	320	327	343	365
H	250	250	250	250	250	250	250	250	250	250
D	42	54	66	73	83	92	100	116	132	148

INSTALLATION METHOD

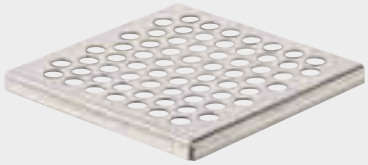
1 - Install the first layer of waterproofing over the whole area, also under the flange after inserting the outlet pipe to the discharge pipe.
2 - Embed the reinforcing net (glass fibre net 5x5 mm mesh) up to the edge of the unit.
3 - Install the second and any successive layers up to the hole.

PRODUCT DATA
- Made from thermoplastic IGOM.EE.
- Flexible flange with 5 mm x 5 mm mesh net Ø mm. .....
- Tail pipe fitted with Ø mm. ..... mm x h 250 mm anti backup.
- PP grille seat h = 10 mm x 150 mm x 150 mm.
- PP or ABS grille h = 9 mm x 143 mm x 143 mm.

DESCRIPTION OF SPECIFICATIONS
Supply and installation of **anti-backup roof drain R with meshed flange** made from thermoplastic rubber, having an anti-backup stem h 250 mm.
Flange provided with meshed net 5x5 mm. along its edges.
Complete with grill seat in ABS mm. 150x150 h mm 10.5.
Grill in ABS mm. 143x143 h mm 9.

06.2 DRAIN UNIT WITH LATERAL DISCHARGER AND MESHED FLANGE

Ø MM. 50-75



< ART. 149

ART. 143 >

< ART. 146.1

ART. 146.2 >

The **DRAIN UNIT WITH LATERAL DISCHARGER AND MESHED FLANGE** is an ideal means of attaining continuity between the area being waterproofed and the discharge pipe from balconies, utility room etc. It has been designed for use with two-component cementitious waterproofing and all cold applied liquid membranes.

INSTALLATION METHOD

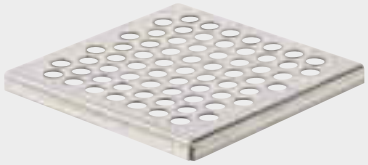
1 - Position the drain unit as required and connect to the discharge pipe using UNI EN 1451-1 pipes of the appropriate diameter.
2 - Create appropriate falls.
3 - Once the falls are set and stabilized, remove the protective nylon cover and make sure that the unit is free of foreign bodies.
4 - Install the first layer of waterproofing also under the flange and embed the reinforcing net (glass fibre net 5x5 mm mesh) up to the edge of the unit.
5 - Install the second and any successive layers up to the hole.
6 - Remove any residue from the edges of the drain unit and insert the grille seat and the grille itself.

DESCRIPTION OF SPECIFICATIONS
Supply and installation of **side discharge drain unit** made from thermoplastic rubbers, having flange Ø 260 mm fitted with a 5x5 mm mesh along its edges, height 62 mm for the Ø 50 mm, and height 85 mm for the Ø 75 mm, connected to drain pipes UNI EN 1451-1 Ø..... Complete with PP grill-bellow seat mm 110x110 h mm 10.5 and ABS or stainless steel grill mm 108x108 h 9.5 mm.

PRODUCT DATA
- Made from thermoplastic IGOM.EE.
- Flange with 5 mm x 5 mm mesh net, Ø 260 mm.
- Pipe in accordance with UNI EN 1451-1 Ø 50 - 75 mm.
- Drain height 62 mm x Ø 50 mm, 85 mm Ø 75 mm.
- PP grille seat mm x 110 x 110 h = 10.5 mm.
- Stainless steel or ABS grille h = 9.5 mm x 108 mm x 108 mm.

06.3 DRAIN UNIT WITH LATERAL DISCHARGER, MESHED FLANGE AND SIPHON

Ø MM. 50-75



< ART. 149

ART. 143 >

< ART. 146.1

ART. 146.2 >

The **DRAIN UNIT WITH LATERAL DISCHARGER, MESHED FLANGE AND SIPHON** is an ideal means of attaining continuity between the area being waterproofed and the discharge pipe from balconies, bathrooms, utility room etc.
It has been designed for use with two-component cementitious waterproofing and all cold applied liquid membranes.

INSTALLATION METHOD

1 - Position the drain unit as required and connect to the discharge pipe using UNI EN 1451-1 pipes of the appropriate diameter.
2 - Create appropriate falls.
3 - Once the falls are set and stabilized, remove the protective nylon cover and make sure that the unit is free of foreign bodies.
4 - Install the first layer of waterproofing also under the flange and embed the reinforcing net (glass fibre net 5x5 mm mesh) up to the edge of the unit.
5 - Install the second and any successive layers up to the hole.
6 - Remove any residue from the edges of the drain unit and insert the grille seat and the grille itself.

NOTE: *The use of siphon type drain units should be avoided in areas where freezing could occur.*

DESCRIPTION OF SPECIFICATIONS
Supply and installation of **drain unit with lateral discharger, meshed flange and siphon** made from thermoplastic rubbers, having flange Ø 260 mm fitted with a 5x5 mm mesh along its edges, height 62 mm for the Ø 50 mm, and height 85 mm for the Ø 75 mm, connected to drain pipes UNI EN 1451-1 Ø.....
Complete with PP grill-bellow seat mm 110x110 h mm 10.5 and ABS or stainless steel grill mm 108x108 h 9.5 mm.

PRODUCT DATA (Art. 144.1 - 145.1)
- Made from thermoplastic IGOM EE.
- Flange with 5 mm x 5 mm mesh net, Ø 260 mm.
- Pipe in accordance with UNI EN 1451-1 Ø 50 - 75 mm.
- Drain height 62 mm x Ø 50 mm, 85 mm Ø 75 mm.
- PP grille seat mm 110 x 110 h 10.5 mm.
- Stainless steel or ABS grille h 9.5 mm x 108 mm x 108 mm.

06.4 87° ANGLED ROOF DRAIN WITH MESHED FLANGE

ROUND PIPE Ø MM. 63-75

The **87° ANGLED ROOF DRAIN WITH MESHED FLANGE** is an ideal means of attaining continuity between the area being waterproofed and the discharge pipe from flat roofs, balconies with free discharge into down-pipes or collector boxes.
It has been designed for use with two-component cementitious waterproofing and all cold applied liquid membranes.

INSTALLATION METHOD

1 - Create appropriate falls then make a suitable hole 63x75 mm inclined 3° (5%).
2 - Position the drain, after installing the first layer of waterproofing under the flange.
3 - Install the first layer of waterproofing over the whole area to be covered before placing the reinforcing net (glass fibre net 5x5 mm mesh) up to the edge of the drain unit.
4 - Install second and thereafter subsequent layers of waterproofing.

NOTE: *The unit discharge drain can be supplied with shaped or standard pipe l. mm. 500.*

PRODUCT DATA
- Made from thermoplastic IGOM.EE.
- Flexible flange side mm 270 h 85 mm L 80 mm with 5 mm x 5 mm mesh net.
- Rigid pipe Ø 63 - 75 mm x L 500 mm.
- 2 sizes of pre-shaped pipe, 200 mm, 300 mm on long side.
- Colours: black, grey, ivory.

DESCRIPTION OF SPECIFICATIONS
Supply and installation of **87° angled roof drain with meshed flange** made from thermoplastic rubbers, having a pipe Ø 63 - 75 x L 500 mm. Flange side mm 270 h 85 mm L 80 mm, supplied with 5x5 mm mesh along its edges and shaped pipe 200 - 300 mm on its long side.
See executive drawing.

06.5 87° ANGLED ROOF DRAIN WITH MESHED FLANGE

RECTANGULAR PIPE MM. 65x97

The **87° ANGLED ROOF DRAIN WITH MESHED FLANGE** is an ideal means of attaining continuity between the area being waterproofed and the discharge pipe from flat roofs, balconies with free discharge into down-pipes or collector boxes.
It has been designed for use with two-component cementitious waterproofing and all cold applied liquid membranes.

INSTALLATION METHOD

1 - Create appropriate falls then make a suitable hole 70x100 mm inclined 3° (5%).
2 - Position the drain, after installing the first layer of waterproofing under the flange.
3 - Install the first layer of waterproofing over the whole area to be covered before placing the reinforcing net (glass fibre net 5x5 mm mesh) up to the edge of the drain unit.
4 - Install second and thereafter subsequent layers of waterproofing.

NOTE: *The unit discharge drain can be supplied with shaped or standard pipe l. mm. 500.*

PRODUCT DATA
- Made from thermoplastic IGOM.EE.
- Flexible flange side mm 270 h 85 mm L 80 mm with 5 mm x 5 mm mesh net.
- Rigid pipe 65 - 97 mm x L 500 mm.
- 2 sizes of pre-shaped pipe, 200 mm, 300 mm on long side.
- Colours: black, grey, ivory.

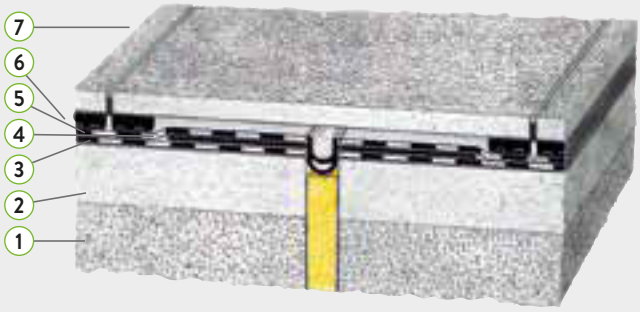
DESCRIPTION OF SPECIFICATIONS
Supply and installation of **87° angled roof drain with meshed flange** made from thermoplastic rubbers, having a pipe 65 - 97 x L 500 mm. Flange side mm 270 h 85 mm L 80 mm, supplied with 5x5 mm mesh along its edges and shaped pipe 200 - 300 mm on its long side.
See executive drawing.

07

JOINTS AND WATERSTOPS

07.1 ELASTIC JOINT

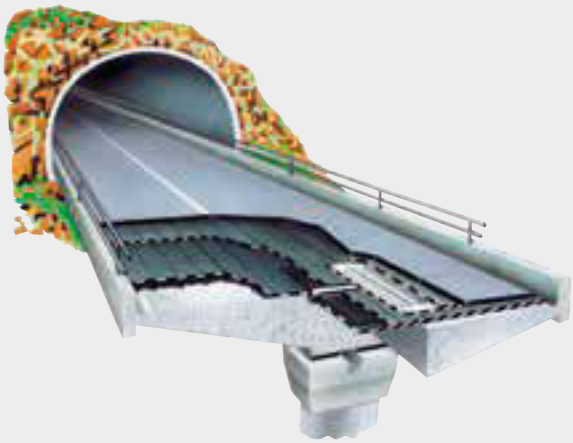
^ **ART. 690**



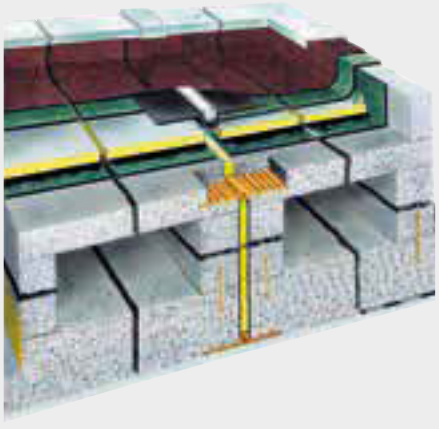
1 Deck 2 Lightweight concrete 3 Membrane 4 Elastic joint
5 Membrane 6 SEALCO LTD supports 7 Paving tiles

^ **ART. 692**

1 Deck 2 Elastic joint 3 PVC-P Membrane
4 Non-woven fabric 5 Insulation 6 Non-woven geo-textile 7 Gravel



1 Deck 2 Insulation 3 Membrane 4 Elastic joint 5 Membrane
6 Double Elastic joint 7 Membrane 8 Double polyurethane foam filler



1 Deck 2 Vapour barrier 3 Insulation 4 Membrane 5 Elastic joint
6 Membrane 7 Polyurethane foam filler 8 Partially attached membrane

Use a 25 mm. diameter closed cell polyurethane rod as filler for the Elastic joints.

07.1 ELASTIC JOINT

EXPANSION JOINTS FOR BITUMINOUS OR PVC-P WATER-PROOFING MEMBRANES FOR USE ON ROOFS, TUNNELS, VIADUCTS ETC.

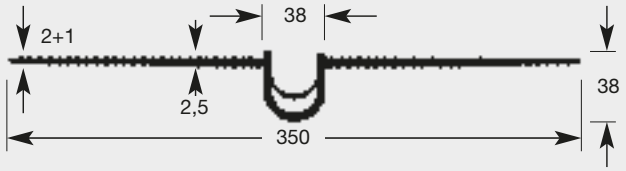
1) The SEALCO LTD **Art. 690** has the following characteristics:
   a - two 150 mm lateral wings with 35°angled ribs at 1 mm in height and a series of slots along the outside edge to ensure sound anchorage to the bitumen and to the bituminous membrane;
   b - a central body with 2 different thicknesses which preform both as an expansion joint and a seal and is 38 mm x 38 mm x 25 metres in length.
2) The joint is extruded using a specially stabilized thermoplastic but "rubbery" type material which is compatible with bitumen and with bituminous membranes. This material has a high mechanical resistance both in expansion and contraction, also at low temperatures and is highly resistant to UV, ozone and other chemical and atmospheric agents.
3) **Art. 692** has the same characteristics as Art. 690 with the exception of the lateral wings which are smooth to facilitate welding to PVC membranes.

NOTE: *Preparatory work before installing the elastic joint.*

1 - Lay out the joint with the bulb facing towards the top.
2 - Leave to relax for 15-20 minutes so that any creases or similar in the materials caused during packaging or shipping are eliminated. This enables the joint to return to its natural state and return to its initial shape.

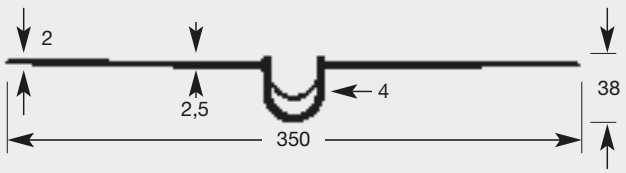
MECHANICAL AND PHYSICAL CHARACTERISTICS - Art. 690

DESCRIPTION	TEST METHOD	UNITS	VALUE
Density	ASTM D 792	g/cm³	1.13
Hardness 15"	ASTM D 2240	Shore A	70
Tear strength without notch	ASTM D624	KN/m	30
Tensile modules 100% elongation	ASTM D 638	MPa	2.5
Tensile moduls 300% elongation	ASTM D 638	MPa	3.2
Tensile strength	ASTM D 638	MPa	5.0
Elongation at break	ASTM D 638	%	580
MFI (190°C, 49.05 N)	ASTM D 1238	g/10 min	5.10

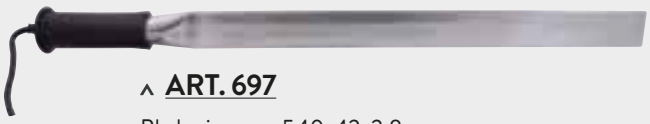


MECHANICAL AND PHYSICAL CHARACTERISTICS - Art. 692

DESCRIPTION	TEST METHOD	UNITS	VALUE
Specific weight	DIN 53457	Kg/dm³	1.30
Hardness shore A	DIN 53505 ASTMD2240	Shore A	68
Flow index	ASTM D1238 N. 21. 18 temp. °C 190	g/600 s	13.0
Tear Strength	DIN 53515 ASTM D624 Without notch	KN/m	53
Ultimate elongation		%	310
Abrasion resistance	DIN 53516	mm³	155
Working range		°C	80
Cold resistance		°C	-35



BLADE HEATER ELEMENT FOR THE MANUAL WELDING OF JOINTS, WATERSTOPS, PVC SHEETS AND SIMILAR



ART. 697

Blade size mm. 540x43x3,8
220 V - 50 Hz single phase power feed
Power rating 465 WatT

INSTALLATION METHOD (SANDWICH SYSTEM)

The area where the joint is to be installed must be 38 to 42 mm wide, 40 mm deep and free from debris and impurities.
1 - Apply a coat of primer 50 to 60 cm wide on either side of the joint.
2 - Torch apply a 30 cm wide strip of APP type membrane to the underside of either wing of material while the joint is in position.
3 - Ensuring that the joint is correctly positioned proceed to raise the membrane which has been welded to either wing and torch apply the same to the deck, making sure that a roller or similar is used to press the membrane into position.
4 - Torch apply a 30 to 40 cm wide strip of membrane over the upper surface of the two wings and fully bond to the underlying membrane and deck.
For other installation systems: see drawing.

NOTE: *When using a roofing torch, heat the membrane avoiding direct contact of the flame with the joint itself.*

JOINTING OF THE ELEMENTS

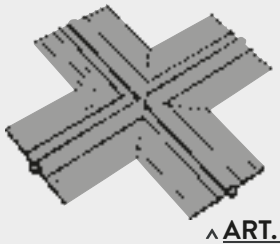
The various profiles can be jointed on site by welding the extremities using a hot air hand welder (Art. 401) or a hot blade, "thermal sword" (Art. 697).
If using a hot blade proceed as follows:
- The edges of the joint must be perfectly squared off.
- Insert the hot blade between the pieces to be jointed and melt the material for approximately 2 mm each side, then press the edges together.
- Hold the pieces in position for approximately 2 minutes but then wait until the connection has cooled completely before handling.

07.2 WATERSTOP JOINTS

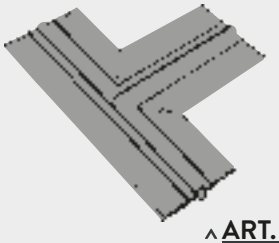
EXPANSION AND SEAL JOINTS FOR CAST-IN-SITU REINFORCED CONCRETE

The **JOINTS** are high quality flexible, stabilized PVC-P profiles for use as take up joints, or vertical and horizontal expansion joints in reinforced concrete guaranteeing a perfect watertight seal even under pressure, or where there are air gaps or foreign bodies in the joints required when building dams, foundations, canals, tunnels and similar. The PVC-P used guarantees a high ageing resistance, as well as excellent resistance to alkalies, brackish water, and acidic environments. Should the structure be continuously exposed to hydrocarbons or vegetable based alkalies, a special type of PVC-P can be supplied.
The various types of waterstop joints are available to resist the high stresses the material will be subjected to during settlement of the building, as well as its normal expansion and contraction due to temperature fluctuations.

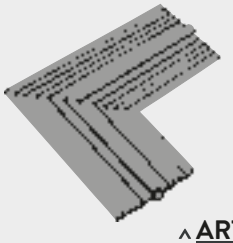
SPECIAL ELEMENTS FOR WATERSTOP JOINTS



ART. 670

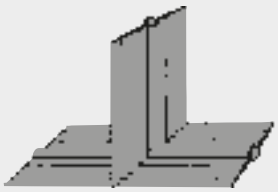


ART. 672

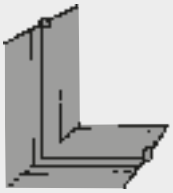


ART. 674

ART. 676

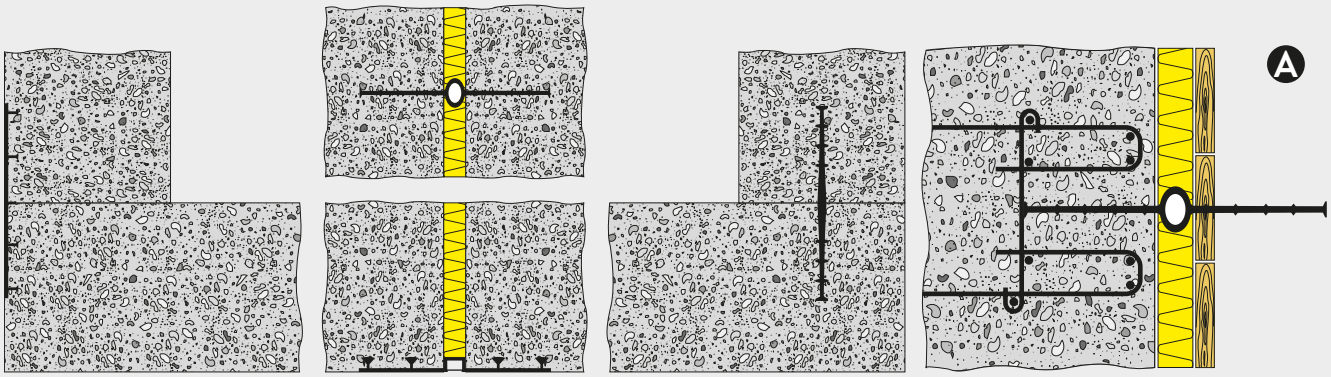


ART. 678



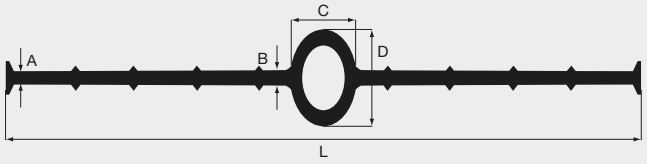
ART. 680

SPECIAL ELEMENTS CAN BE PRODUCED UPON REQUEST WITH DESIGNS



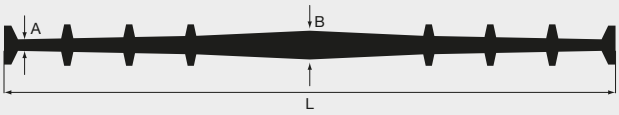
07.2 WATERSTOP JOINTS

INTERNAL EXPANSION JOINT IN PVC-P



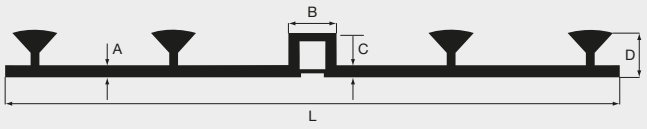
ART.	L mm.	A mm.	B mm.	C mm.	D mm.	ROLLS
600	150	2,3	3,5	23	27	ML. 25
602	200	2,5	3,7	25	30	ML. 25
604	220	2,5	3,7	25	30	ML. 25
606	250	2,5	4,0	25	30	ML. 25
608	300	2,6	4,0	30	38	ML. 20
610	360	4,0	6,4	37	45	ML. 15
612	440	4,0	8,0	48	48	ML. 15

INTERNAL TAKE UP JOINT IN PVC-P



ART.	L mm.	A mm.	B mm.	ROLLS
650	150	2,3	3,05	ML. 50
652	200	3,3	3,3	ML. 50
656	250	2,5	3,4	ML. 25
658	300	3,5	3,5	ML. 25

EXTERNAL EXPANSION JOINT IN PVC-P

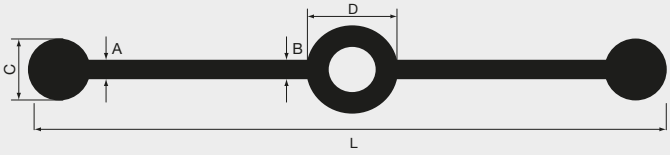


ART.	L mm.	A mm.	B mm.	C mm.	D mm.	ROLLS
630	200	3,2	19	20	17	ML. 25
632	250	3,2	19	22	17	ML. 25
634	320	4,0	30	30	23	ML. 15
636	350	4,5	30	30	24	ML. 15

EXTERNAL TAKE UP JOINT IN PVC-P

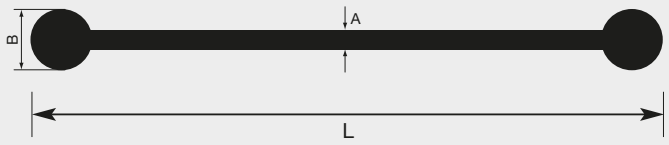
ART.	L mm.	A mm.	D mm.	ROLLS
642	200	3,2	17	ML. 25
644	250	3,2	17	ML. 25
646	320	4,0	24	ML. 15

INTERNAL HIGH RESISTANT EXPANSION JOINT IN PVC-P



ART.	L mm.	A mm.	B mm.	C mm.	D mm.	ROLLS
620	100	4	7,0	13	20	ML. 30
622	250	5,0	5,0	20	25	ML. 20
624	350	7,5	7,5	20	40	ML. 15

INTERNAL HIGH RESISTANT TAKE UP JOINT IN PVC-P



ART.	L mm.	A mm.	B mm.	ROLLS
660	100	5,0	12	ML. 25
662	250	5,0	20	ML. 20
664	350	7,5	20	ML. 15

07.2 WATERSTOP JOINTS

MECHANICAL AND PHYSICAL CHARACTERISTICS

TYPE OF ANALYSIS	METHOD	U.M.	VALUES
Specific weight	ISO 1183	g/cc	1.38 ± 0.03
Shore A hardness	ISO 868		71 ± 3
Tensile strength	ISO 527	N/mm^2	12 ± 2
Elongation at break	ISO 527	%	300 ± 3
Operating temperature	-	°C	-30 / +70
Cold flexibility	ISO 458/2	°C	-30
Flammability	UL94	Classe	V-O
Resistance to oils	Normal resistance in case of short-time contact, not suitable for long term or continuous contact. In the case of long term contact, it is necessary the use of a specific compound.		

ART. 401

ART. 440

ART. 451

ART. 599

ART. 697

INSTALLATION METHOD

In the case of construction joints, after the first part of the structure has been installed, the following concrete pour will be executed taking care care that the profiles are not bent and that there are no air pockets, while in the case of expansion joints, during the pour of the first part of the construction a specific compartment must be designed in order to avoid warping. During the next step a sheet of elastic and rot-proof material of the same thickness as the bulb or to the required size must be inserted (see Fig. A). In cases where the waterstop is to be placed on the outside the structure, the joints must be nailed in the shuttering at the edges, while with metal shuttering they should be secured with suitable adhesives. In the case of flat or bulb joints, the profiles are hung loosely and held in position by fixing the edges of the wings with steel anchoring rings, (Art. 598) closed tightly with appropriate plyers (Art. 597) every 30 to50 cm to reinforcement rods, this is necessary to prevent the profiles from moving or bending during pouring or vibration (compacting) of the concrete. The connection between two waterstop profiles is executed by welding the two heads with hot air or with a special thermal sword at 200° C.

SIZING

The width of the waterstop must be of equal size to the thickness of the cast reinforced concrete (example, for a wall thickness of 200 mm you must use a profile of 200 mm).

WELDING CONNECTION OF TWO ELEMENTS

The connection between the various profiles can be realized directly on the construction site. The two ends are welded together by using a hand held hot air gun (Art. 401) or by means of a thermal sword (Art. 697).

HOT AIR WELDING

1 - The edges of the waterstop joint to be welded must be perfectly square.
2 - Eliminate the fins/ribs for about 5 mm on both sides so as to create a smooth surface to accommodate the cord reinforcement.
3 - Use the hand held hot-air gun to heat and weld two elements together, head to head.
4 - Once the welding between the two elements has been accurately executed, weld a reinforcement cord/strip (Art. 599) on either side of the waterstop profile, rolling it with a PTFE roller (Art. 440).
5 - Wait for the weld to cool completely and test the tightness of the weld with the specific probing tool for testing welds (Art. 451).

WELDING WITH A THERMAL SWORD

1 - The edges of the waterstop joint to be welded must be perfectly square.
2 - Insert the thermal sword heating the ends of both waterstop joint simultaneously, melt approximately 2 mm of both ends, while still hot, press one against the other.
3 - Hold the two welded elements in place for 1-2 minutes until completely cooled before proceeding with testing.

07.3 HYDRO EXPANSIVE JOINT BASED OF POLYETHYLENE, BUTYL RUBBER, RESIN AND ELASTOMERIC BINDERS

PHYSICAL-MECHANICAL CHARATERISTICS

TYPE OF ANALYSIS	METHOD	U.M.	VALUES
Shore A	ISO 868		60
Density	ISO 1183	g/cc	1,26
Tensile strength	ISO 527	N/mm²	25
Elongation at break	ISO 527	%	300
Expansion		%	> 350
Temperature of cold flexibility	ISO 458/2	°C	-20 +50

ART.	⊠ mm.	ROLLS	PACKAGE
850	20x6	ML. 8	ML. 48
852	20x10	ML. 8	ML. 48
856	20x20	ML. 5	ML. 30
858	25x20	ML. 5	ML. 30
860	20x10	ML. 8	ML. 48

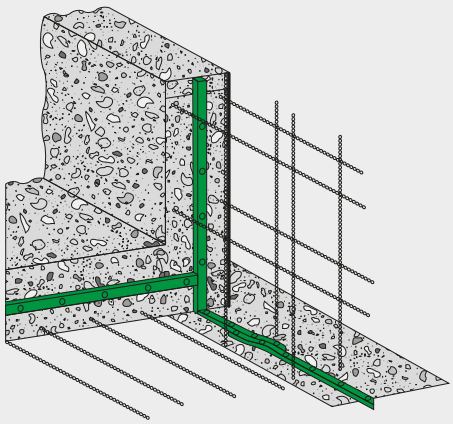
The **HYDRO EXPANSIVE JOINT** has a particular chemical composition which makes it inalterable in time. Even at maximum expansion it is dimensionally stable. After several cycles of hydration and dehydration it retains the ability to increase its volume. The swelling effect of the joint is mechanically very resistant, elastic, in contact with water begins its gradual and controlled expansion, it has been studied in such a way that the fresh cement can attach to it correctly without it undergoing any deformation.

USES:
- All types of construction joints.
- Construction joints subject to both temporary and permanent hydrostatic pressure (Approx. 12 bar).
- Sealing joints between concrete and stone, concrete and masonry.
- Foundations and walls in basements, tunnels, pipes, steel, concrete and precast etc.
- Construction joints in tunnels, hydraulic works, dams, water tanks, swimming pools and sewage treatment plants.

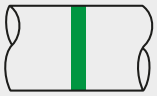
ADVANTAGES:
- **Controlled expansion:** it does not create cracks in the concrete even when not fully matured.
- **Dimensional stability:** maintains cohesiveness even during expansion.
- **High resistance:** resists up to 12 bar of hydrostatic pressure (approx. 120 meters water column).
- **Repeat expansion:** maintains performance even after several cycles of expansion.
- **Very flexible:** it can be fixed easily by means of riveting or by polyurethane based adhesives.
- **Simple joints:** joints executable by simple side by side positioning.

INSTALLATION METHOD

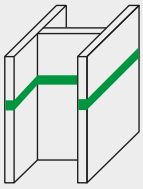
- Apply the joint in the middle of the wall with at least an extra 8/10 cm compared to the concrete.
- In the case of large surfaces, two profiles are to be applied parallel to each other in order to increase the safety margin.
- The installation surface should be clean, compact, vibrated and free of accentuated irregularities.
- Secure the joint with steel nails every 15-20 cm or with adhesive (polyurethane based adhesive or hydro expansive polyurethane).
- Avoid butt-jointing, always ensure a side by side positioning with at least a 5 cm overlap between profile and profile.



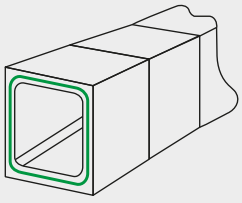
COSTRUCTIONS JOINTS



RENFORCED CONCRETE OR STEEL PIPES



STEEL GIRDERS



RENFORCED CONCRETE PREFABRICATED ELEMENTS

07.4 HYDRO-EXPANSIVE BENTONITE JOINT, BASED OF NATURAL SODIUM BENTONITE

TECHNICAL DATA

Exterior Appearance	Cord of natural sodium bentonite
Composition	75% natural sodium bentonite 25% butyl rubber and aggregates
Specific weight	from 1.4 to 1.5 kg. / dm^3
Expansion volume	> 500%
Tightness	equal to approximately 6 bar of hydrostatic pressure
Application temperature	from -15 ° C to + 50 ° C
Leaching of toxic substances into water	none
Colour	black
Dimensions	20x25 mm.

ART.	⌀ mm.	ROLLS	PACKAGE
862	25x20	L/M 5	L/M 30

ART.		SIZE	PACKAGE
864	Assembly mesh with nails	L/M 1	L/M 20

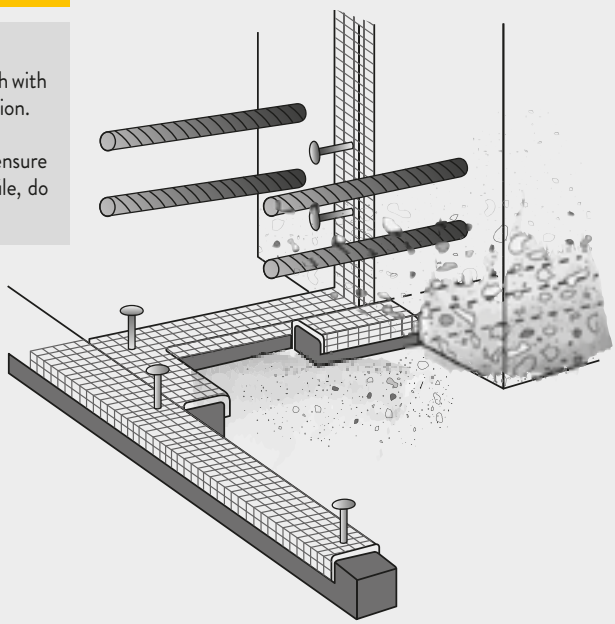
The **HYDRO-EXPANSIVE BENTONITE JOINT** is distinguished by its strong, fast and reliable swelling.
Composed primarily of 75% Natural Sodium Bentonite, 25% Butyl Rubber and aggregate, it is used for sealing hydraulic construction joints in concrete. In contact with water it increases its volume filling the pour joints between sections and any small voids in the gravel, often found on the bottom of the vertical caused by the shrinkage of concrete in insufficient vibration. It offers a perfect way seal to the passage of water.

USES:
- In situ concrete pouring.
- Horizontal joint waterproofing.
- Vertical waterproofing, wall to wall.
- Civil construction, special solutions.

ADVANTAGES:
- Simple to installing.
- Complete with accessories for fixing.
- Ease of work.
- No waste.

INSTALLATION METHOD

- The concrete should be preferably dry, smooth and free from dust.
- The profile is applied in the middle of the seam with an interspace of about 8 cm both with the external and internal armor, in order to absorb the pressure exerted by expansion.
- The wire cage cannot be used on vertical walls.
- For perfect installation, fix approximately every 20/25 cm with steel nails. Always ensure a side by side positioning with at least a 10 cm overlap between profile and profile, do not overlap the ends.



08

HARDWARE, ADHESIVES, REPAIR AND SEALING TAPES

08.1 ADHESIVES FOR SYNTHETIC MEMBRANES AND INSULATION PANNELS

08.1 ITAL GPU SINGLE COMPONENT, MOISTURE CURING POLYURETHANE SOLVENT-FREE ADHESIVE

^ ART. 2015

CHARATERISTICS

Form	Liquid
Colour	Brown
Viscosity	Brookfield at 23°C s4/20rpm 4000 - 6500 mPa*s

ITAL GPU single component, moisture curing polyurethane solvent-free adhesive, specially formulated for total or partial bonding of single-ply synthetic membranes coupled with a non-woven fabric (geo-textiles) or thermal insulation panels onto horizontal substrates.

PRODUCT DESCRIPTION
Single component, moisture curing solvent-free polyurethane adhesive.
Glue D4 according to DIN/EN 204/205.

FIELD OF USE
- Use outdoors or in a well ventilated area.
- Bonding of synthetic membranes coupled with non-woven fabric (geo-textiles) and thermal insulation panels on concrete, metal, wood, insulation and other suitable substrates. ITAL GPU can be used on a wide range of media types and insulating thermal panels for example, extruded or expanded polystyrene, wool stone, fiber cement, chipboard, laminate.
- A preliminary check is recommended to ensure the compatibility of the materials to be bonded.

BEST CONDITIONS FOR USE
- Humidity of the material to be bonded 8-20%
- Temperature of the ambient material and glue 15-23 ° C
- Open time at 20 ° C 20-25 min.
- Setting time at 20 ° C at 65% humidity, 55-65 min.

YIELD
About: 100-250 g/m^2 depending on the material to be bonded.

PACKAGING
10 kg cans.

SAFETY
- The product may be harmful if inhaled and could irritate the eyes, respiratory apparatus and skin. When working with temperatures above 40 ° C it may develop harmful vapors.

Read the safety data sheet before use.

STORAGE
At 20°C in original closed containers, the product will keep for 9 months. storages at temperatures above 30°C and below 5°C may deteriorate the product. The product is hygroscopic and should be protected from contact with moisture.

INSTALLATION METHOD

- The substrates to be bonded must be smooth, dry, free from dust, greece or other contaminants that could affect adversely the bonding performance.
- Apply adhesive to the substrates to be bonded with a roller, brush, trowel or with an airless pump.
- In the case of two non-porous materials, spray a light mist of water on the surface of the nonwoven fabric (geo-textile).
- The setting time will depend on the humidity and the temperature.
- The coupling should be performed within 5-10 minutes (it depends moisture) from the application of the adhesive and pressed evenly with the aid of a roller, repeat the pressing after approximately 10 minutes).

08.2 ADHESIVES FOR SYNTHETIC MEMBRANES

08.2 ITAL C-PVC CONTACT ADHESIVE

^ART. 2016

CHARATERISTICS

Form	Fluid colorless opalescent
Viscosity	3500-5000 mPa.s
Solid content	48 - 54%

ITAL C-PVC contact adhesive is specifically formulated for bonding PVC-P membranes without nonwoven fabric (geo-textile) to vertical supports.

PRODUCT DESCRIPTION
ITAL C-PVC is a contact adhesive based on polyurethane resins and mixtures of organic solvents, specifically designed to reduce the harmful emissions to minimum levels to the environment and the health of operators.

USES
- Bonding of synthetic waterproofing membranes in PVC-P without nonwoven fabric (geo-textiles) to concrete, metal, wood, insulation and other suitable substrates.
- ITAL C-PVC adhesive is compatible with a wide range of substrates and insulating panels which are resistant to solvents, however, a preliminary check is recommended to ensure compatibility.

YIELD
About: 250-500 g/m^2 depending on the type of substrate (consumption can increase on porous concrete or wood).

PACKAGING
15 kg canisters.

SAFETY
- The product is flammable, it can be harmful if inhaled and irritate eyes, respiratory system and skin.
- In case of contact with eyes rinse thoroughly with water.
- If symptoms of inhalation, seek medical advice.
- In case of fire extinguish with water or carbon foam.

Read the safety data sheet before use.

STORAGE
Store at a temperature between 5°C and 25°C in original closed packaging the product has a shelf life of 12 months.
Storage at temperatures below 5°C and above 25°C and can deteriorate the product.

INSTALLATION METHOD

- The substrates to be bonded must be smooth and dry, free from dust, grease or any other contaminants that could affect adversely the bonding performance.
- Use the product outdoors or in a well ventilated environment.
- Shake or stir well before use.
- Apply a thin layer of adhesive on both surfaces to be bonded with the use of roller or brush.
- The drying time will depend on the temperature at the time of application.
- When the adhesive it dry to touch (tactile test), apply the membrane to the substrate.
- Press evenly with the aid of a silicone roller.

08.2 ADHESIVES FOR SYNTHETIC MEMBRANES

08.2 ITAL C-TPO CONTACT ADHESIVE

^ ART. 2017

CHARATERISTICS

Form	Straw yellow or red colour (*)
Viscosity	200 - 400 mPa.s
Dry content	48 - 54 %
Open time	Approximately 90' (*)

(*) Indicative values

ITAL C-TPO contact adhesive is specifically formulated for bonding TPO membranes without nonwoven fabric (geo-textile) to vertical supports.

PRODUCT DESCRIPTION
ITAL C-TPO is a contact adhesive based on polyurethane resins and mixtures of organic solvents, specifically designed to reduce the harmful emissions to minimum levels to the environment and the health of operators.

USES
- Bonding of synthetic waterproofing membranes in TPO without nonwoven fabric (geo-textiles) to concrete, metal, wood, insulation and other suitable substrates.
- ITAL C-TPO adhesive is compatible with a wide range of substrates and insulating panels which are resistant to solvents, however, a preliminary check is recommended to ensure compatibility.

YIELD
About: 350-550 g/m^2 depending on the type of substrate (consumption can increase on porous concrete or wood).

PACKAGING
15 kg canisters.

SAFETY
- The product is flammable, it can be harmful if inhaled and irritate eyes, respiratory system and skin.
- In case of contact with eyes rinse thoroughly with water.
- If symptoms of inhalation, seek medical advice.
- In case of fire extinguish with water or carbon foam.

Read the safety data sheet before use.

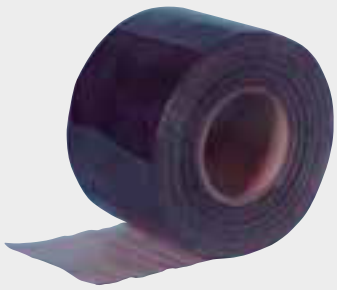
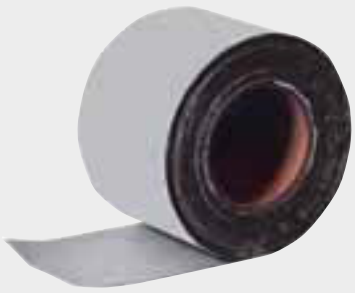
STORAGE
Store at a temperature between 5°C and 25°C in original closed packaging the product has a shelf life of 12 months.
Storage at temperatures below 5°C and above 25°C and can deteriorate the product.

INSTALLATION METHOD

- The substrates to be bonded must be smooth and dry, free from dust, grease or any other contaminants that could affect adversely the bonding performance.
- Use the product outdoors or in a well ventilated environment.
- Shake or stir well before use.
- Apply a thin layer of adhesive on both surfaces to be bonded with the use of roller or brush.
- The drying time will depend on the temperature at the time of application.
- When the adhesive it dry to touch (tactile test), apply the membrane to the substrate.
- Press evenly with the aid of a silicone roller.

08.3 REPAIR AND SEALING TAPES

08.3 ROOFSEAL REPAIR AND SEALING TAPES


PRODUCT DESCRIPTION
For use on virtually all roofs, RoofSeal/OneStep features a UV stable backing that is available in Black, Gray, Tan and White. With the exception of surface prep, RoofSeal/One-Step is a one-step permanent repair system for virtually all roof types, and roof accessories. RoofSeal/OneStep creates a waterproof, moisture, and air tight barrier with no additional sealing required. RoofSeal/OneStep remains flexible to temperatures as low as -56°C making it virtually impossible to thermally shock the seam causing a leak.
RoofSeal/OneStep bonds to a wide range of surfaces including difficult roof materials such as EPDM, TPO, most PVC, CSPE/Hypalon, CPE, SBS, APP modifieds, asphalt BURs, coal tar BURs, all metal roofs, tiles, shingle, aluminum, galvanized steel, gypsum board, wood, polyethylene, propylene, polystyrene, fiberglass, brick, concrete, masonry, OSB, etc.

BASIC USE
RoofSeal/OneStep tape is used to seal roof joints (seams) and tears, flashings, copings, skylights, gutters, etc. Perfect for repairing and restoring roofs on mobile homes and RVs. RoofSeal/OneStep seals to itself so it can be cut and folded around an object.

COMPOSITION
RoofSeal/OneStep utilizes an advanced MicroSealant™ Technology, a 100% solids formulation of synthetic resins, thermoplastics and non-curing rubber with a built-in primer. It is bonded to a UV stable backing. The adhesive coating is protected by a silicone release liner, to be removed prior to application.

SURFACE PREPARATION
Surface must be clean and dry. Moisture, dust, dirt or other foreign matter should be removed. Remove oil and grease, etc. with a non-residue cleaner such as acetone or lacquer thinner. Remove salt and other contaminants.

ARTICLES

Art. 2019N10 Repair tape black l. 100 mm.
Art. 2019N15 Repair tape black l. 152 mm.
Art. 2019G10 Repair tape grey l. 100 mm.
Art. 2019G15 Repair tape grey l. 152 mm.
Art. 2019B10 Repair tape white l. 100 mm.
Art. 2019B15 Repair tape white l. 152 mm.

INSTALLATION METHOD

Install RoofSeal/OneStep over the repair area, removing the release liner gradually to prevent contamination of the adhesive prior to application. Rub or roll with pressure using your hand or a steel roller to activate bonding process. This material may be applied to clean dry surfaces from 65°C to -29°C ambient. Treat surface with Universal Prime for installations from 4°C to -29°C ambient.

08.3 REPAIR AND SEALING TAPES

08.3 COPPERFLASH REPAIR AND SEALING TAPE

PRODUCT DESCRIPTION
Ideal for repair and/or restorations on copper gutters, valleys, and cupolas. For use on virtually all roofs, cupolas, floors, etc. UV stable and moisture tight, CopperFlash provides an air and vapor barrier. The 1 oz. copper combined with a layer of MicroSealant™ adhesive creates a hard surface. CopperFlash will patina over time to match aged copper.
CopperFlash bonds to a wide range of materials including carbon steel, aluminum, galvanized steel, aluminum foil, gypsum board, wood, rubber, tar, polyethylene, polypropylene, polystyrene, fiberglass, brick, concrete, masonry, rubber, thermoplastics, singleply roofing, etc.

BASIC USE
CopperFlash tape is designed to repair leaking seams on copper gutters and roofs, patch copper flashings, repair damaged cupolas, and bay window roofs. CopperFlash can add the beauty of copper to galvanized valley flashings, step flashing, skylight curbs, and gutters. CopperFlash seals to itself so it can be cut and folded around an object. CopperFlash can give the look of copper at a fraction of the cost.

COMPOSITION
CopperFlash utilizes an advanced MicroSealant™ Technology, a 100% solids formulation of synthetic resins, thermoplastics and non-curing rubber with a built-in primer. It is bonded to a 1 oz. copper backing. The adhesive coating is protected by a silicone release liner, to be removed prior to application.

SURFACE PREPARATION
Surface must be clean and dry. Moisture, dust, dirt or other foreign matter should be removed. Remove oil and grease, etc. with a non-residue cleaner such as acetone or lacquer thinner. Remove salt and other contaminants.

ARTICLES

Art. 2019R5 Copper repair tape l. 50 mm.
Art. 2019R10 Copper repair tape l. 100 mm.

INSTALLATION METHOD

Install CopperFlash over the repair area, removing the plastic release liner gradually to prevent contamination of the adhesive prior to application. Rub or roll with pressure using your hand or steel roller to activate bonding process. This material may be applied to clean dry surfaces from 65°C to -29°C ambient. Treat surface with Universal Prime for installations from 4°C to -29°C ambient.

08.3 ALUMIBOND REPAIR AND SEALING TAPE

PRODUCT DESCRIPTION
For use on virtually all roofs, walls, floors, gravity tanks, troughs, etc. UV stable and moisture tight, AlumiBond creates an air and vapor barrier. The thick 4 mil aluminum backing combined with an advanced MicroSealant™ creates a hard surface.
AlumiBond bonds to a wide range of materials including carbon steel, aluminum, galvanized steel, aluminum foil, gypsum board, wood, rubber, tar, polyethylene, polypropylene, polystyrene, fiberglass, brick, concrete, masonry, rubber, thermoplastics, singleply roofing, etc. AlumiBond remains flexible to temperatures as low as -56°C making it virtually impossible to thermally shock the roof causing a leak.
Duct Sealing Tape AlumiBond is a high grade aluminum foil with a hybrid Sealant. Fuses to rigid ductwork. Will never harden, crack or peel and fall off like other duct sealing products. Lasts as long as the ductwork!

BASIC USE
AlumiBond tape is designed for use on metal buildings, trailer/RV roofs and sides, drain pans, drain pipes, duct-work, boats, canoes, and as a protective coating for surfaces where abrasion and corrosion resistance is required. AlumiBond seals to itself so it can be cut and folded around an object.

COMPOSITION
AlumiBond utilizes an advanced MicroSealant™ Technology, a 100% solids formulation of synthetic resins, thermoplastics and non-curing rubber with a built-in primer. It is bonded to a 4-mil aluminum metal backing.The adhesive coating is protected by a silicone release liner, to be removed prior to application.

SURFACE PREPARATION
Surface must be clean and dry. Moisture, dust, dirt or other foreign matter should be removed. Remove oil and grease, etc. with a non-residue cleaner such as acetone or lacquer thinner. Remove salt and other contaminants.

ARTICLES

Art. 2019A5 Aluminum repair tape l. 50 mm.
Art. 2019A10 Aluminum repair tape l. 100 mm.

INSTALLATION METHOD

Install AlumiBond over the repair area, removing the release liner gradually to prevent contamination of the adhesive prior to application. Rub or roll with pressure using your hand or steel roller to activate bonding process. This material may be applied to clean dry surfaces from 65°C to -29°C ambient. Treat surface with Universal Prime for installations from 4°C to -29°C ambient.

08.3 REPAIR AND SEALING TAPES

08.3 DOUBLESTICK DOUBLE-SIDED TAPE

PRODUCT DESCRIPTION
DoubleStick is pure an advanced MicroSealant™ with a removable siliconized release liner on each side. Designed to bond two surfaces, even two surfaces made of two or more dissimilar materials. DoubleStick creates a tight, permanent, waterproof seal. DoubleStick remains flexible to temperatures as low as -56°C making it virtually impossible to thermally shock the seal causing a leak.
DoubleStick bonds to a wide range of surfaces including EPDM, TPO, most PVC, CSPE/Hypalon, CPE, SBS, APP modifieds, asphalt BURs, coal tar BURs, tiles, shingle, coated and non-coated aluminum and metal roofs, galvanized steel, gypsum board, wood, polyethylene, propylene, polystyrene, fiberglass, brick, concrete, masonry, OSB board, shielding membranes, etc.

BASIC USE
DoubleStick tape is a self-sealing adhesive creating a water-tight, conformable seal between two or more irregular surfaces, and/or creates a weather proof, permanent bond between two or more similar or dissimilar surfaces. Use as a lap seal, under the foot of an equipment curb or skylight, or roll it into a bead or ball of MicroSealant™ to form a gasket, seal a gap or seal, or as needed.

COMPOSITION
DoubleSeal utilizes an advanced MicroSealant™ Technology, a 100% solids formulation of synthetic resins, thermoplastics and non-curing rubber with a built-in primer, between two silicone release liners.

SURFACE PREPARATION
Surface must be clean and dry. Moisture, dust, dirt or other foreign matter should be removed. Remove oil and grease, etc. with a non-residue cleaner such as acetone or lacquer thinner. Remove salt and other contaminants.

ARTICLES

Art. 2018.25 Double-sided tape l. 25 mm.
Art. 2018.50 Double-sided tape l. 50 mm.

INSTALLATION METHOD

To apply the DoubleStick, remove one side of the release liner and apply to the surface to be protected or bonded. Rub or roll with pressure using your hand or steel roller to activate bonding process. Remove the second release liner and apply second surface to tape, apply pressure. DoubleStick also can be used as a putty. Remove both release liners and roll into a rope. Place over gap and mold to seal opening.This material may be applied to clean dry surfaces from 65°C to -29°C ambient. Treat surface with Universal Prime for installations from 4°C to -29°C ambient.

08.3 REPAIR AND SEALING TAPES

08.3 UNIVERSAL PRIME PRIMER

PRODUCT DESCRIPTION
Universal Prime is a specially formulated primer developed specifically for repair and sealing tapes. Universal Prime, based on a VOC exempt solvent, meets all federal standards for health and environmental safety.
Universal Prime is designed to work with all repair and sealing tapes and was specifically developed for preparation of surfaces when installing repair and sealing tapes in low ambiant temperatures from 4°C down to -29°. It is also widely used as a coalescing agent on surfaces which have difficult to remove dirt or conditions which may encapsulate the repair and sealing tapes.
**Do not use on PVC.*

BASIC USE
Universal Prime is used to prepare surfaces for application of all repair and sealing tapes. Recommended uses include, but are not limited to dirty surfaces which are difficult to clean completely (tar and gravel), potentially loose surfaces (mortar), porous surfaces (wood or concrete), and anytime the repair and sealing tapes is applied at temperatures below 4°C ambient.

COMPOSITION
Universal Prime is based on a VOC exempt solvent with a blend of our elastomers and resins infused into the solvent.

PRODUCT INFORMATION
Technical Data Application temperature -29°C to 96°C Coverage 28 m^2 per 3,76 lt. Drying time at 15°C 15 minutes. Film thickness 0,03-0,1 mm. when wet. Flash point 43°C. Values are typical performance properties and characteristics based on laboratory testing. This is intended as a guide for comparison purposes and does not constitute a specification or specification range.

SURFACE PREPARATION
Surface must be clean and dry. Remove heavy accumulations of loose rust and scale, dust, talc, and dirt. Oil and grease, and other contaminants should be removed with a non-residue cleaner. Do not use Universal Prime on PVC roofs as reactivation of some plasticizers may occur.

ARTICLES

Art. 2020 Primer for repair tapes lt. 0,95

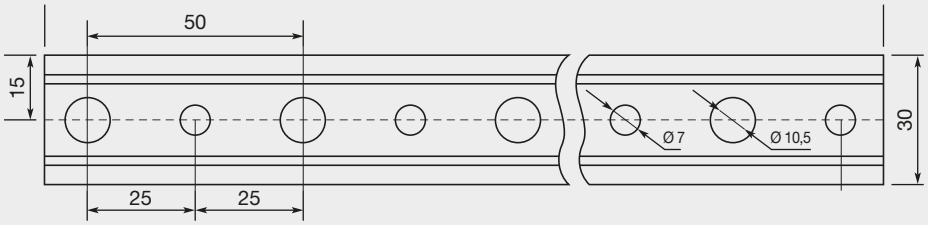
INSTALLATION METHOD

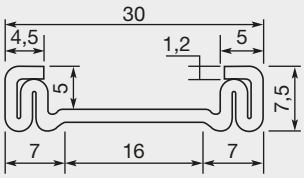
Universal Prime can be sprayed, rolled, or brushed onto sur-face (stir frequently).

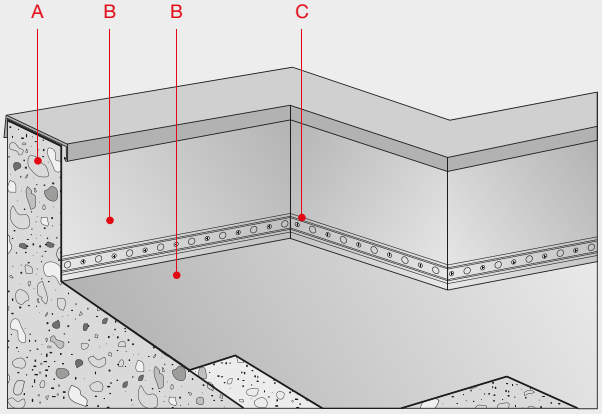
08.4 FIXING BAR FOR WATERPROOFING MEMBRANES

^ART. 3000

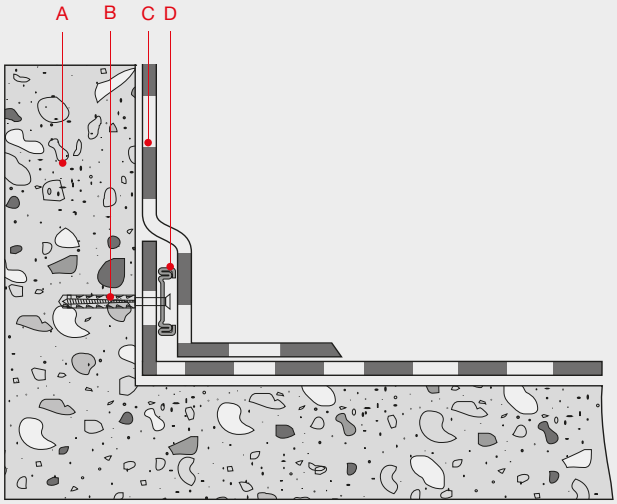
The new predrilled **BAR** is designed to allow mechanical fastening of waterproofing membranes to the support, it ensures the optimum distribution of force of the fasteners over the full length of the bar thus offering greater mechanical resistance to traction of membranes or wind force.
The material used for the realization of the predrilled bar is galvanized steel which provides a prolonged resistance to corrosion.







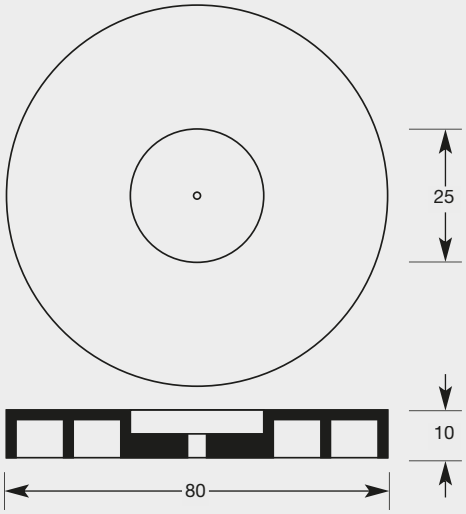
A - Deck
B - Bituminous membrane
C - Bar



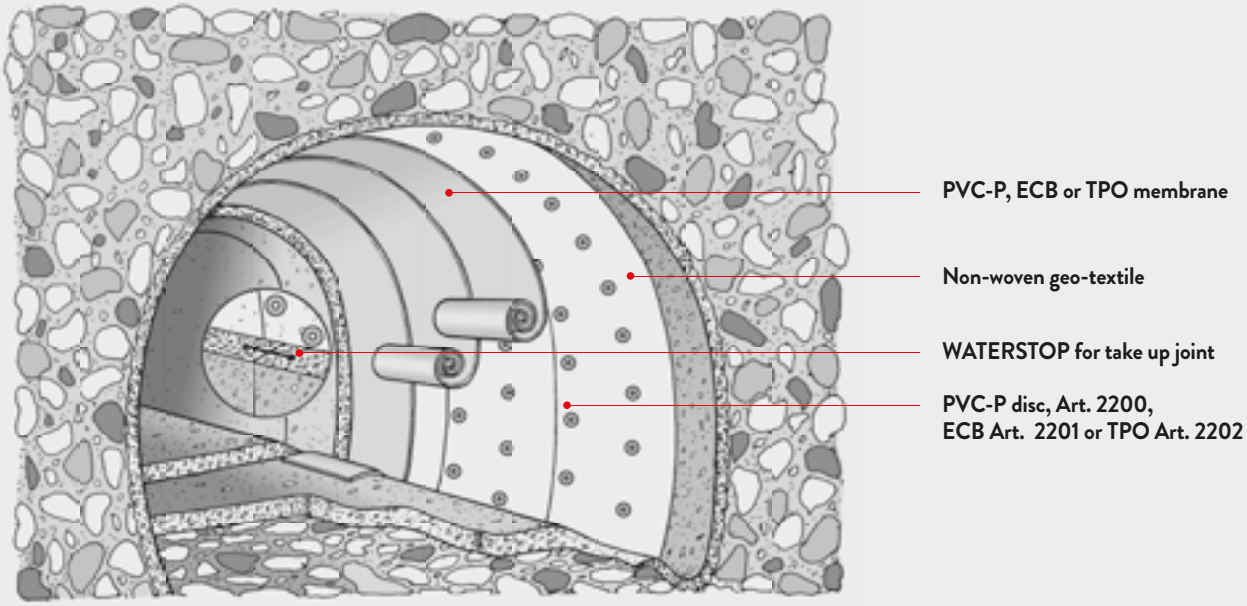
A - Fall
B - Mechanically fix
C - Membrana impermeabile
D - Bar

08.5 FIXING DISCS IN PVC-P, ECB AND TPO FOR INSTALLING WATERPROOFING MEMBRANES IN TUNNELS, FOUNDATIONS ETC.

- ART. 2200 PVC-P
- ART. 2201 ECB
- ART. 2202 TPO



The **DISCS** shown ease the application of PVC-P, ECB or TPO membranes in difficult areas such as tunnels, foundations etc, whatever the application angle.
The discs are fastened to the surface without predrilling using a compressed air nail gun.
The discs are used to fasten diffusion/protection material such as non-woven geo-textile or similar, and as anchoring point for PVC-P or ECB or TPO membrane which are subsequently attached using a hot air hand gun (Art. 401).

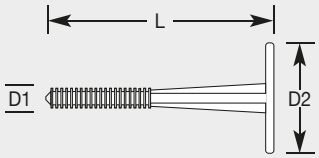


EQUIPMENT AND MATERIALS NEEDED TO INSTALL DISCS

- Compressed air gun, example "PNEUTEK®" fitted with compressor and pressure regulator.
- Anchors (nails) having an 8 mm diameter head, a shank diameter of 3.8 to 4.3 mm, and a shank length of 40 to 70 mm.
- The length of the shank will depend on the type of substrate to which the disc is to be fastened.
- 25 mm diameter stress plate having with a central hole of 3.8 to 4.5 mm diameter.
- Ribbed disc diameter 80 mm and 10 mm thick with a 25 mm shallow central portion and a central hole. The required amount per square metre will depend on the type of project and substrate.
- Hot air hand gun, (Art. 401) for welding the membrane to the discs.

08.6 ANCHORS FOR FIXING INSULATION BOARDS

08.6 PRESSURE ANCHORS FOR FIXING INSULATION BOARDS



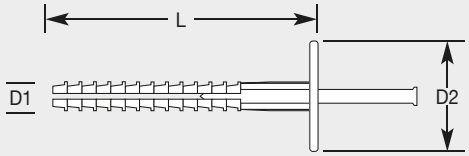
ART.	2202	2204	2206	2208
L mm	50	70	90	110
D1 mm	8	8	8	8
D2 mm	38	38	38	38
MAX. INSULATION THICKNESS	15	30	50	75
MINIMUM DEAPHT IN TO SUBSTRATE	40	40	40	40

The **PRESSURE PLUGS** for insulation boards of various types must be used on substrates of concrete or solid bricks.
They are produced in impact-resistant polypropylene to ensure a sound hold, durability and use with low temperatures.

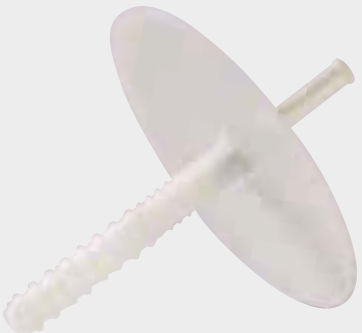
INSTALLATION METHOD

- After marking the fixing points, drill the insulation board and substrate using a drill bit that corresponds to the diameter of the anchor being used. The depth of the hole must be slightly greater than the length of the anchor.
- Clean the hole from any residual dust, insert the anchor and tap the it in with a hammer until flush with insulation panel.
- Operating temperature 0°C + 50°C.

08.6 ETAG 014 CERTIFIED EXPANSION ANCHORS FOR FIXING INSULATION BOARDS



ART.	2213	2214	2216	2218	2219	2220	2221	2222	2223
L mm	60	70	90	120	130	150	170	190	210
D1 mm	10	10	10	10	10	10	10	10	10
D2 mm	45	45	45	50	50	50	50	50	50
MAX. INSULATION THICKNESS	15	30	50	80	90	100	120	140	160
MINIMUM DEAPHT IN TO SUBSTRATE	40	40	40	40	40	50	50	50	50



ART.	1770	1775	1780
L mm	60	70	90
D1 mm	10	10	10
D2 mm	90	90	90
MAX. INSULATION THICKNESS	15	30	50
MINIMUM DEAPHT IN TO SUBSTRATE	40	40	40

The ETAG 014 certified **EXPANSION ANCHORS** for fixing insulation boards of various types can be used on concrete and solid or perforated bricks. The plug is manufactured in anti-shock polypropylene while the nail is made from high impact polystyrene to ensure the complete expansion of the plug.

INSTALLATION METHOD

- After marking the fixing points, drill the insulation board and the substrate with a drill bit with a diameter corresponding to that of the anchor. The depth of the hole must be slightly greater than the length of the plug.
- Clean the hole from any residual dust, insert the plug and tap it in with a hammer until flush with the insulation board, insert the nail and repeat the operation.
- Operating temperature 0°C + 50°C.

08.7 WASHERS, SCREWS, PLUGS, NAILS, ANTI-NESTING COMB

08.7 GALVANIZED PLATES FOR INSULATION BOARDS

ART.	1789	1790	1791	1792
SECTION	☐	Ø	Ø	☐
DIMENSION mm	82x40	70	70	64x64
HOLE mm	5,5	5	8	6

08.7 SELF DRILLING GALVANIZED SCREWS FOR STRESS PLATES

ART.	1783	1784	1786	1787	1788
L mm	90	100	120	130	150
Ø mm	4,8	4,8	4,8	4,8	4,8

08.7 EXPANSION FASTENER WITH COUNTERSUNK HEAD GALVANIZED PHILIPS HEAD SCREW FOR STRESS PLATES

ART.	1783	1784	1786	1787	1786	1787	1787
PLUG							
L mm	40	50	60	80	80	100	120
Ø mm	5	5	6	6	8	8	8
SCREW							
L mm	45	55	65	85	85	105	125
Ø mm	3,4	3,4	3,8	3,8	4,8	10,5	12,5

08.7 GALVANIZED NAILS WITH POLYPROPYLENE HEAD

ART.	1800	1801	1802	1803	1804	1805	1806
L mm	50	60	70	80	90	100	120
Ø NAIL mm	4,5	4,5	4,5	4,5	4,5	4,5	4,5
Ø HEAD mm	50	50	50	50	50	50	50

08.7 ANTI-NESTING COMBS

ANTI-NESTING COMB Art. 2002 - 2003 and 2004
suitable for discontinuous roofs, for example, concrete or clay tiles, cement or fibre-cement roofing sheets.
They help ventilate the roof and also avoid birds nesting.

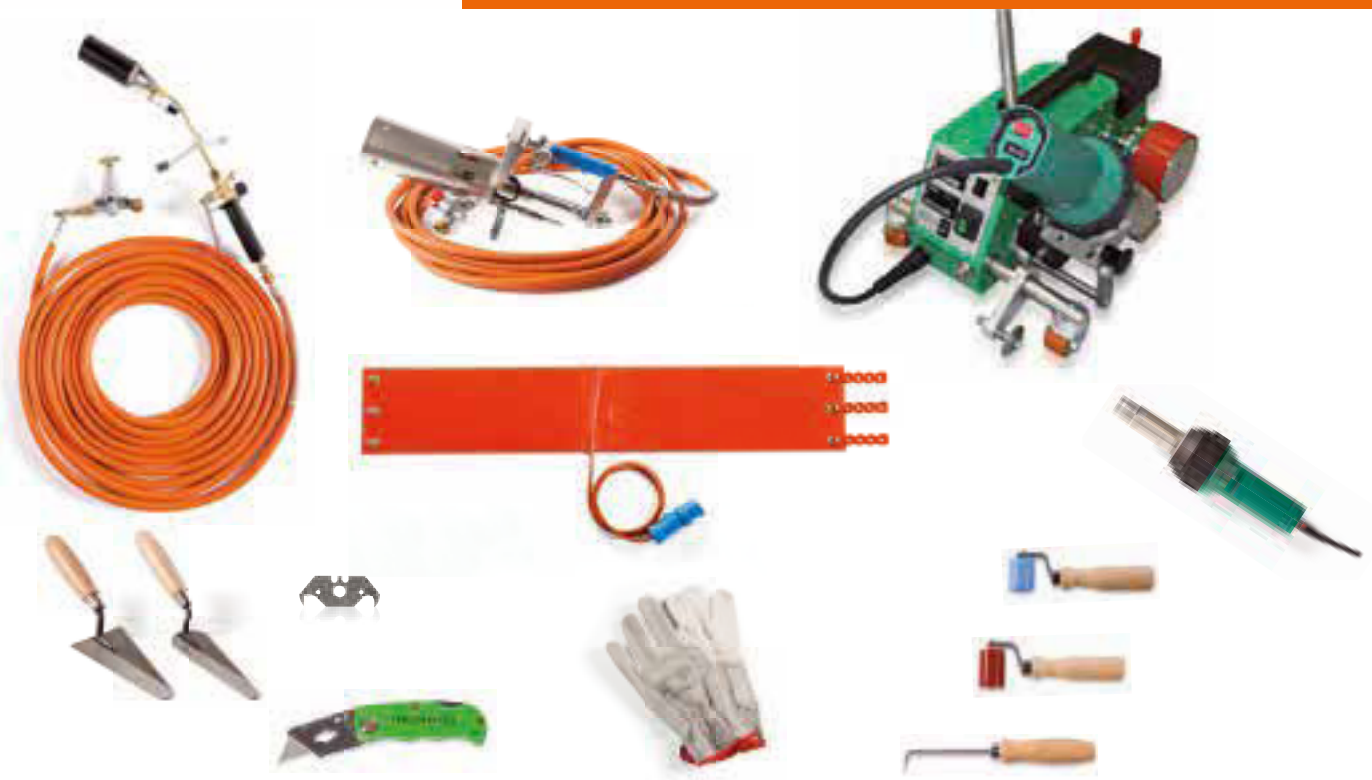
^ **ART. 2002** Lenght mm. 1000 h. mm. 110

^ **ART. 2003** Lenght mm. 1000 h. mm. 80

^ **ART. 2004** Lenght mm. 1000 h. mm. 150

09

INSTALLATION EQUIPMENT



09.1 GAS TORCH KIT DELUXE

09.1 GAS TORCH KIT DELUXE

The **DELUXE ROOFING TORCH KITS** include the following:
- Detachable blowpipe body with double regulator valve, in compliance with European Regulations ISO EN 9012
- Swivel connector
- Electrical ignition
- 10 metre hose with 3/8" couplings, fitted with hose protection spring, in compliance with European Regulations ISO EN 3821
- Flow regulator: maximum capacity 14 kg/hr at 4 bar (max.), in compliance with ISO EN 16129
- Overflow valve: maximum capacity 12 kg/hr at 4 bar (max.), in compliance with DIN 30693
- Metal stand

ART.	460	460.1	461	461.1
TORCH				
L	180	180	350	350
BURNER HEAD				
Ø	50	70	50	70

09.1 GAS TORCH DELUXE

ART.	465	465.1	466	466.1
TORCH				
L	180	180	350	350
BURNER HEAD				
Ø	50	70	50	70

09.1 DELUXE GAS TORCH ACCESSORIES

ART.	DESCRIPTION AND MEASURES
470	Roofing Torch Double Valve Handle Deluxe
471	Roofing Torch Extension Deluxe 180 mm.
472	Roofing Torch Extension Deluxe 350 mm.
473	Complete Burner Head with piezoelectric ignition Ø 50 + Nozzle
474	Complete Burner Head with piezoelectric ignition Ø 70 + Nozzle

09.2 ECOTOP GAS TORCH KIT

09.2 ECOTOP GAS TORCH KIT

The **ECOTOP ROOFING TORCH KIT** include the following:
- Single piece blowpipe body with double regulator valve in compliance with European Regulation ISO EN 9012
- Swivel hose connector
- 10 metre hose with 3/8" couplings, fitted with hose protection spring, in compliance with European Regulations ISO EN 3821
- Mini flow regulator: maximum capacity 7 kg/hr at maximum 4 bar, in compliance with ISO EN 16129
- Metal stand

ART.	462	462.1	463	463.1	464	464.1
TORCH						
L	200	200	300	300	400	400
BURNER HEAD						
Ø	50	70	50	70	50	70

09.2 ECOTOP GAS TORCH

ART.	467	467.1	468	468.1	469	469.1
TORCH						
L	200	200	300	300	400	400
BURNER HEAD						
Ø	50	70	50	70	50	70

09.2 ECOTOP GAS TORCH ACCESSORIES

ART.	DESCRIPTION AND MEASURES
475	Complete Burner Head Ø 50 + Nozzle
476	Complete Burner Head Ø 70 + Nozzle

09.3 GAS HOSES, GAS REGULATORS AND HOT AIR TORCH

09.3 GAS HOSE AND GAS REGULATORS

ART.	DESCRIZIONE
477	Gas pressure regulator 12 kg/h Italian connection CH 25 according to ISO EN16129 with safety valve
478	Gas pressure regulator 12 kg/h Italian connection CH 25 according to ISO EN16129
479	Safety valve for regulator according to ISO EN16129
480	Gas pressure regulator mignon 6 Kg/h Italian connection CH 25 to ISO EN16129
480.1	Gas pressure regulator mignon 6 Kg/h East European connection CH 27 according to ISO EN16129
481	Propane gas hose according to ISO EN3821 lm. 10 - Connected 3/8" - 3/8"
482	Propane gas hose according to ISO EN3821 lm.
483	Gas pressure regulator 8 Kg/h Germany connection CH 30 according to ISO EN16129 with safety valve
484	Gas pressure regulator 8 Kg/h Germany connection CH 30 according to ISO EN16129
485	Gas pressure regulator 12 kg/h UK connection CH 30 according to ISO EN16129 with safety valve
486	Gas pressure regulator 12 kg/h UK connection CH 30 according to ISO EN16129

ART. 477

ART. 478

ART. 479

ART. 480 - 480.1

ART. 483

ART. 484

ART. 485

ART. 486

09.3 HOT AIR TORCH

ART.	DESCRIPTION
495	Hot air torch kit

09.4 MISCELLANEOUS EQUIPMENT

09.4 TROWELS

ART. 160-161

ART. 160.1-161.1

The SEALCO LTD **TROWELS** are made from stainless steel, with a wooden handle. Available in two sizes 140 and 160 mm and two shapes with square or rounded corners, both have a round tip.

ART.	DESCRIPTION AND MEASURES
160	140 mm trowel with rounded tip
161	160 mm trowel with rounded tip
160.1	140 mm trowel with rounded edges and tip
161.1	160 mm trowel with rounded edges and tip

09.4 KNIVES, BLADES AND SCISSORS

ART. 452

ART. 152

ART. 151

ART. 153

ART. 453

ART.	DESCRIPTION
452	Italprofili® foldable Knife with 5 spare blades
151	Stanley knife with fixed blade
152	Hooked blades
153	Hooked blades with central hole
453	Scissors

09.4 BRUSH AND PAINT ROLLER

ART.	DESCRIPTION AND MEASURES
175	Brush cm. 24 x 8 x 8
180	25 cm paint roller

09.4 GLOVES

ART.	DESCRIPTION
170	Leather gloves
170.1	Heavy duty suede gloves

09.5 MANUAL HOT AIR WELDING EQUIPMENT

The **MANUAL HOT AIR WELDING GUNS, RION (without display) AND RION Digital (with digital display)** allow for the gradual adjustment of the temperature up to a maximum of 650°, they have an ergonomic handle and have a complete set of nozzles for different uses. To be purchased separately.

ART.	DESCRIPTION
400	Rion manual hot-air hand welder 230V/1600W
401	Rion Digital manual hot-air hand welder 230V/1600W

TECHNICAL DATA - RION / RION DIGITAL

	U.M.	VALUE
Voltage	V	230
Power	W	1600
Frequency	Hz	50/60
Temperature	°C	20 - 650
Air flow	l/min.	ca. 250
Static pressure	Pa	ca. 3000
Noise level	dB	64
D. Air outlet	mm.	32
Size	mm. (lxlxh)	d. 100x320 handle Ø60
Protection class		II
Weight	Kg.	1,3 with cable
Marked		CE

The **MANUAL HOT AIR WELDING GUN ERON** allows for the gradual adjustment of the temperature up to a maximum of 650 °, they have an ergonomic handle and have a complete set of nozzles for different uses. To be purchased separately.

ART.	DESCRIPTION
402	Eron manual hot-air welding gun for bitumen 230V/3400W

TECHNICAL DATA - ERON

	U.M.	VALUE
Voltage	V	230
Power	W	3400
Frequency	Hz	50/60
Temperature	°C	20 - 650
Air flow	l/min.	ca. 500
Static pressure	Pa	ca. 3000
Noise level	dB	64
D. Air outlet	mm.	50
Size	mm.	d. 94x320 handle Ø64
Protection class		II
Weight	Kg.	1,5 with cable
Marked		CE

09.5 MANUAL HOT AIR WELDING EQUIPMENT

The **MANUAL HOT AIR WELDING GUNS ARION AND ARION WITH SORON BLOWER** are used in industrial applications with high performance is requested.

TECHNICAL DATA - ARION

	U.M.	VALUE
Voltage	V	230
Power	W	1550
Frequency	Hz	50/60
Temperature	°C	20 - 650
Air flow	l/min.	40
D. air inlet	mm.	14
D. Air outlet	mm.	32
Size	mm. (lxlxh)	d. 300x62 handle Ø49
Protection class		II
Weight	Kg.	1,2 with cable and air hose
Marked		CE

ART.	DESCRIPTION
403	Arion manual hot-air hand welder 230V/1150W
404	Arion manual hot-air hand welder with Soron blower 230V/1600W

TECHNICAL DATA - ARION WITH SORON BLOWER

	U.M.	VALUE
Voltage	V	230
Power	W	1600
Frequency	Hz	50/60
Temperature	°C	20 - 650
Air flow	l/min.	ca. 300
D. Air outlet	mm.	32
Protection class		II
Weight	Kg.	2,5
Marked		CE

09.5 NOZZLES FOR HOT AIR MANUAL WELDING EQUIPMENT


ART. 420


ART. 421


ART. 422-423-424


ART. 425


ART. 426


ART. 427


ART. 428


ART. 429


ART. 430


ART. 431


ART. 432


ART. 433


ART. 434


ART. 435


ART. 436

ART.	DESCRIPTION AND SIZES
420	20 mm. wide-tip angled slot nozzle (Ø 32)
421	15° 30x2 mm wide-tip slot nozzle (Ø 32)
422	3 mm. Ø nozzle for welding cords
423	4 mm. Ø nozzle for welding cords
424	5 mm. Ø nozzle for welding cords
425	Adapter nozzle for Art. 422 - 423 - 424 - 434
426	60 mm. wide-tip angled slot nozzle for bitumen(Ø 32)
427	20 mm. wide-tip 60° angled slot nozzle (Ø 32).
428	20 mm. wide-tip 90° angled slot nozzle (Ø 32)
429	20 mm. wide-tip angled slot nozzle (Ø 32)
430	40 mm. wide-tip 60° angled slot nozzle (Ø 32)
431	40 mm. wide-tip angled slot nozzle (Ø 32)
432	80 mm. wide-tip angled slot nozzle (Ø 32)
433	40 mm. perforated wide-tip angled slot nozzle (Ø 32)
434	Welding nozzle for 8 mm. flat cord
435	70x10 mm. wide-tip slot nozzle (Ø 50.5)
436	75x2 mm. perforated wide-tip slot nozzle (Ø 50.5)

09.6 ACCESSORIES FOR MANUAL HOT AIR WELDING

09.6 ROLLERS

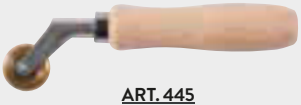
ART. 440

ART. 441

ART. 442

ART. 443

ART. 444



ART. 445

ART. 446

ART. 447

ART. 448

ART. 449

ART. 450

ART. 451

ART. 451.1

ART. 454

Serie **RULLINI** a pressione adatti alle saldature di manti impermeabili.
- Rullo montato su cuscinetti a sfere in acciaio.
- Sostegno in ferro zincato.
- Manico in legno.

ART.	DESCRIPTION AND MEASURES
440	28 mm. PTFE pressure roller
441	40 mm. PTFE pressure roller
442	28 mm. Silicon pressure roller
443	45 mm. Silicon pressure roller
444	90 mm. Silicon pressure roller
445	6 mm. Brass pressure roller
446	4 mm. Nylon pressure roller
447	45 mm. silicon and 6 mm brass combined pressure rollers
448	50 mm. steel pressure roller
449	50 mm. steel rounded edge pressure roller
450	100 mm. steel pressure roller
451	Seam probe for weld inspection
451.1	Contoured seam probe for weld inspection
454	Wire brush

09.7 AUTOMATIC HOT AIR WELDING MACHINES

ART.	DESCRIPTION
405	Roofon Digital automatic welding hot air machine 230V/3,5KW
406	Roofon Digital display automatic hot air welding machine 2 230V/3,5KW

ROOFON DIGITAL AUTOMATIC HOT-AIR WELDING MACHINE for synthetic membrane.
- Guaranteed wrinkle free welds thanks to the excellent weight distribution.
- Fast welding and easy to use.

TECHNICAL DATA - ROOFON DIGITAL

	U.M.	VALUE
Voltage	V	230
Power	W	3400
Weld widths	mm.	20 - 30 - 40
Frequency	Hz	50/60
Temperature	°C	20 - 600
Speed	ml./min	0,5 to 12
Air flow	l/min.	500
Air flow control	%	50 to 100 in continuous
Noise level	dB	50
Size	mm. (lxlxh)	460x360x310
Weight	Kg.	14
Marked		CE

ART.	DESCRIPTION
407	Disamat 801 230V/3600W automatic hot air welding machine
407.1	Disamat 801 400V/5000W automatic hot air welding machine

DISAMAT 801 AUTOMATIC HOT AIR WELDING MACHINE for synthetic membrane.
- Electronic adjustment of temperature, speed and air flow and also saves welding parameters.
- Large display with auto-brightness adjustment. Adjustable positioning for perimeter welding.
- Universal nozzle for welding of all the materials.
- Can be used for welding on flat or slopped surfaces up to 25° and transversal inclinations up to 15°.
- Available in 230 V or 400 V.

TECHNICAL DATA - DISAMAT 801

	U.M.	VALUE
Voltage	V	230 - 400
Power	W	3600 - 5000
Weld widths	mm.	40
Frequency	Hz	50
Temperature	°C	20 - 520
Speed	ml./min	0,2 to 4
Air flow	%	50 to 100 in continuous
Size	mm. (lxlxh)	690x435x380
Weight	Kg.	24
Marked		CE

09.7 AUTOMATIC HOT-AIR WELDING MACHINES

ART.	DESCRIPTION
408	Automatic hot-air welding machine Laron for bitumen 230V/4600W
408.1	Automatic hot-air welding machine Laron for bitumen 400V/5700W

LARON AUTOMATIC HOT-AIR WELDING MACHINE for synthetic membrane.
Designed for continuous use on site even in the most adverse conditions.
- Optimum distribution of weight.
- Guaranteed wrinkle free welds.
- Digital display of temperature and speed.
- Suitable to weld all thermoplastic materials used for waterproofing and for the manufacturing of tarpaulins.
- Available 230 V and 400 V.

TECHNICAL DATA - LARON

	U.M.	VALUE
Voltage	V	230 - 400
Power	W	4600 - 5700
Sealing width	mm.	40
Frequency	Hz	50/60
Temperature	°C	20 - 620
Speed	ml./min	7
Air flow control	%	50 - 100 continuous
Size	mm. (lxlxh)	620x400x320
Weight	Kg.	35
Marked		CE

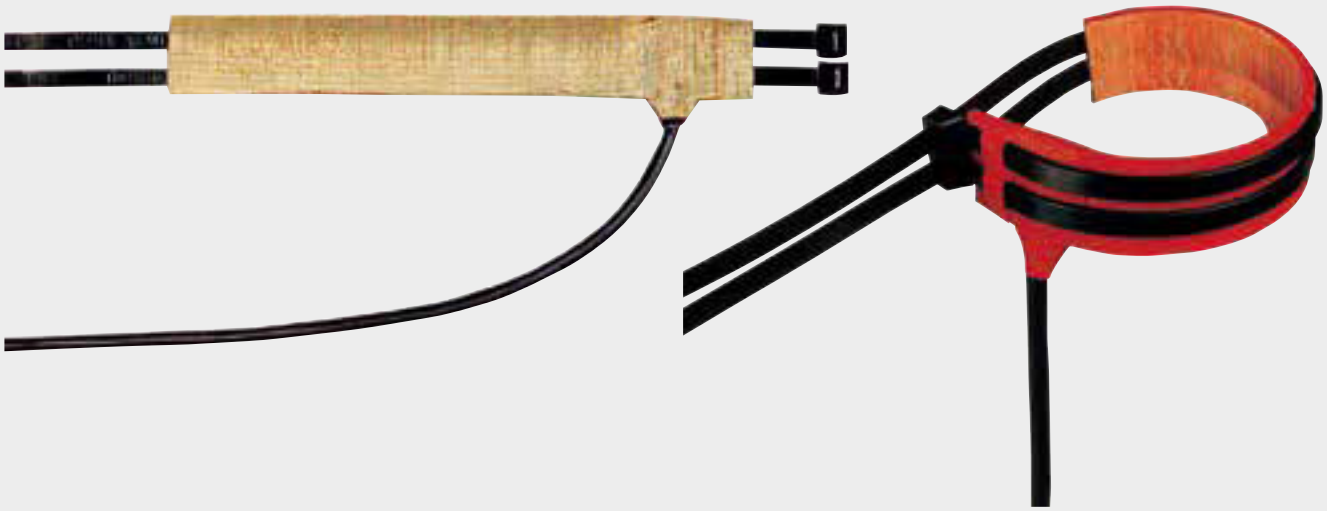
ART.	DESCRIPTION
408.2	Automatic hot-air welding machine Proton 230V/2300W

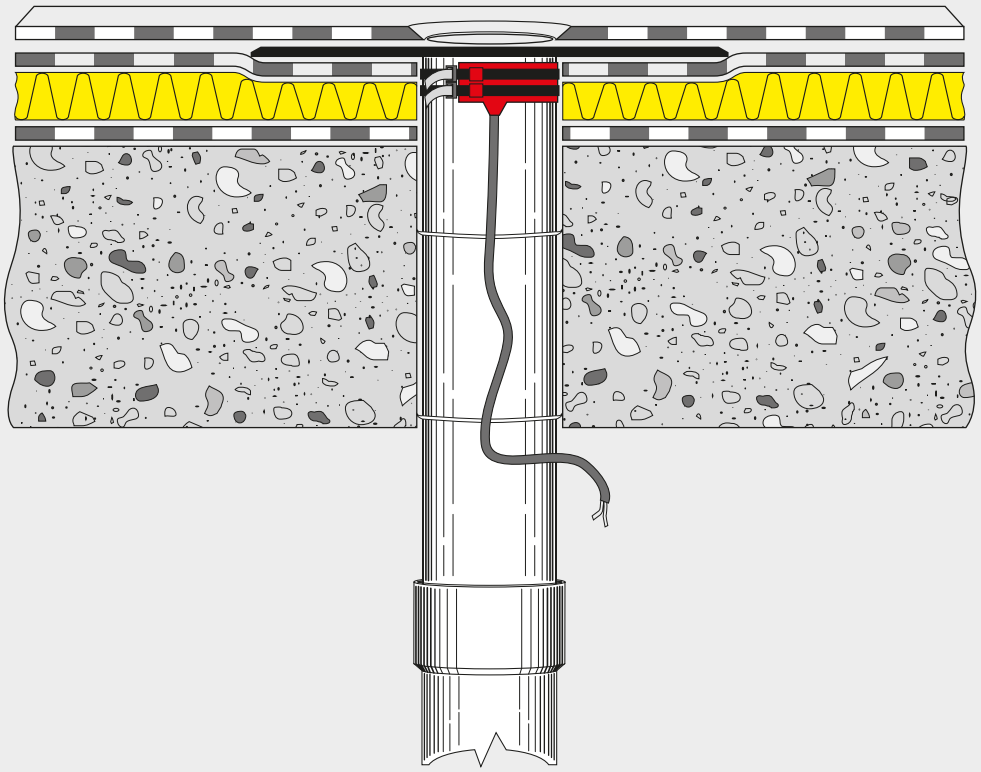
PROTON AUTOMATIC HOT-AIR WELDING MACHINE
The small and light automatic welding machine to weld many different kinds of materials. For civil engineering and tunnel construction. Brush-less drive and heater motor. Combined wedge with hot air and contact.
- User-friendly, robust, compact.
- Small, light and very robust.
- Brush-less drive and heater motor.
- For thin material and overhead welding.
- Simple to operate.
- Step less adjustment of all welding parameters and air flow.
- Material welding range: PE-LD, PE-HD, PVC-P, PP, ECB, EVA, TPO.

TECHNICAL DATA - PROTON

	U.M.	VALORI
Voltage	V	230 - 120
Power consumption	W	2300
Seam dimensions	mm.	15-15-15
Frequency	Hz	50/60
Temperature	°C	max 550
Speed	ml./min	max 5
Welding pressure	N	max 1000
Size	mm. (lxlxh)	370x340x330
Weight	Kg.	9
Markings		CE

09.8 ELECTRIC DRAIN HEATING TAPES





SEALCO LTD **HEATING TAPE SYSTEM** is the perfect answer the overcoming the freezing problem of outlets and pipes of all types, whether fitted on new applications or as a retro fit product. Installation is quick and easy as the tapes need only to be positioned around the pipe and tightened in place using the fasteners.
The tapes run on 220 volt without the need for a transformer.

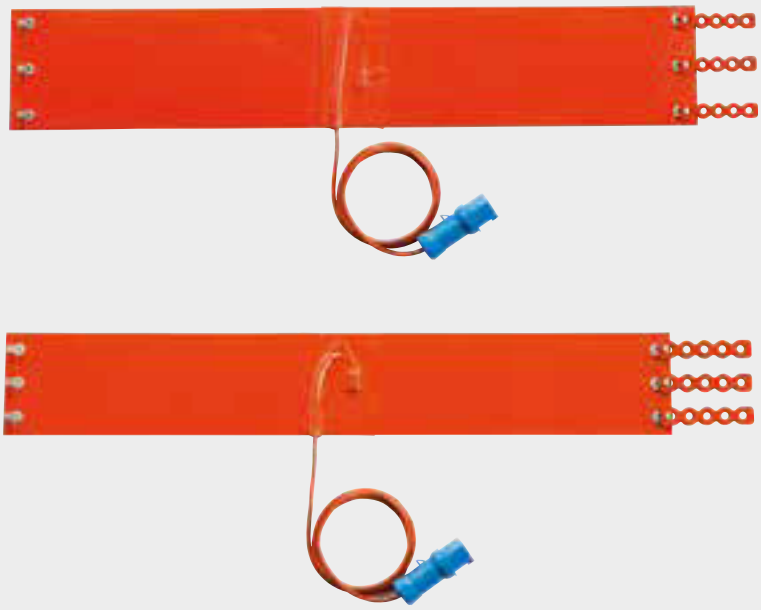
APPLICATIONS
- Roof drains in various thermoplastic materials: IGOM, PVC-P, TPO and HDPE.
- On PVC-P, PP, HDPE and various metal downspouts.

HOW TO USE
The heating tape should have an on/off switch and should only be used when necessary. Continuous use is not recommended.

TECHNICAL DATA SHEET

- Flexible laminate heater element 230 Volts 8 Watt, maximum temperature (175), element temperature 80°C, tested to EN 60335-1 (except paragraph 30).
- Standard technical reference, CEI EN 60335-1:2004 + V1, V2, V3.
- Insulated with vulcanised silicone rubber.
- External glass fabric covering on the outside.
- 2 Polyamide straps 6/6 mm. 750x7,8.
- 2 phase electric cable diam. 6,5 mm. x 500 mm. with vulcanized silicone rubber insulation.
- Dimensions: length 220x32 mm. thickness 3,4 mm.

09.9 GAS CYLINDER HEATER



GAS CYLINDER BAND

The gas cylinder band is an ideal way of eliminating wastage of gas. It is an electrical resistance fitted with a thermostat which under adverse weather conditions (low temperatures) keeps the gas pressure constant and also allows the cylinder to be used until completely empty.

DAMAGE RISKS TO THE BAND

a - The band must not be bent to less than R° 10.
b - The cable attached to the band must not be subjected to being pulling by more than 8 to 10 Kg.
c - The band must not have any weight or sharp objects placed on the heating area.
d - Store in a dry place.

PROPER STORAGE

After use, the band and all of its component parts should be rolled up to a diameter of 15/20 cm. and placed back in its original box.

INSTRUCTIONS FOR USE

1 - Make sure that the outer surface of the cylinder is free from rust, dust and other deposits.
2 - Position the band around the cylinder with the joint above the gas cylinders welded seam.
3 - Hold in position using the central fastener and regulate the fit around the cylinder then close the other 2 fasteners.
4 - The cable should preferably be placed towards the bottom (see drawing).
5 - To avoid damaging the electrical cable it is advisable to fasten the cable to the cylinder using electricians straps or similar.
6 - Switch on 4 to 5 minutes to pre-heat before using the gas.
7 - If the cylinder is not being used for several hours, unplug the unit.

ART.	DESCRIPTION AND MEASURES
119.2	Gas cylinder heater from kg. 15/20 mm. 1000 x 135 - 230 V - 400 Watt
119.3	Gas cylinder heater from kg. 25 mm. 1130 x 200 - 230 V - 700 Watt
119.4	Gas cylinder heater from kg. 15/20 mm. 950 x 135 - 230 V - 400 Watt
119.5	Gas cylinder heater from kg. 15/20 mm. 930 x 145 - 230 V - 700 Watt
119.6	Gas cylinder heater mm. 720 x 195 - 230 V - 450 Watt
119.6A	Gas cylinder heater mm. 720 x 195 - 110 V - 700 Watt

TECHNICAL DATA SHEET

- Flexible laminate heater element 230 Volts 400 and/or 700 Watt, maximum working temperature 175°C, tested to EN 60335-1 (except paragraph 30).
- EU Certificate (European Standard EN 55014-1 A1, 61000-3-2, 61000-3-3).
- Insulated with vulcanised silicone rubber.
- Glass fabric covering on the outer surface.
- Working thermostat 70°C, 100.000 cycles.
- 2 phase electric cable with vulcanised silicone rubber insulation diam. 7 mm., 1500 mm. long.
- 6 metal clips 8,7x8,5 mm.
- 3 silicone elastic straps 26x130 mm.
- 16A - 6h plug 200+250 Volt.

SEALCO LTD MEMBRANE ACCESSORY CATALOGUE

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