

Product catalogue 2023

Infrastructure

Valid from 01.11.2022



SAFETY FITTINGS

In a rapidly changing world, we offer you security and cost-effectiveness for your networks.

Our connection technology for piping systems is the heart of every supply and disposal system – whatever connection you need, we have the right solution for you.

Gas

We are recognised as one of the world's leading providers of highly developed plastic piping systems with approvals around the globe. We provide you with an extremely secure gas supply network that is particularly economical to operate. You also benefit from comprehensive customer service and training. Our comprehensive product selection for outstanding results is reliable, robust and safe.

Water

Potable water networks around the globe have to function perfectly. While „perfectly“ means to us: durable, robust and hygienically safe. We ensure that you can operate the safest water supply network and save time and money. Thanks to high-quality materials, our products have excellent corrosion protection. Therefore avoiding any potential hygiene problems. Our product portfolio includes electrofusion joints, mechanical couplings and tools.

Waste Water

Sewage systems around the globe must cope with billions of cubic meters of wastewater from households, industry and commercial businesses every day as well as surface water. Often these sewage systems are not tight and waste water is lost into the ground. As a pioneer in polyethylene sewer systems, we develop and distribute homogeneously fused pipe connections, domestic service connections, and chamber joints, and this without leakage loss and groundwater pollution. A sustainable solution through reliable fusion results and long service life.

Tool service by manufacturer

Since more than 30 years we are offering complete range of tools and equipment suitable for construction sites. Our service offering around these tools is tailored to your requirements.

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Safety fittings

FRIAFIT®

Sewage system

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Practice oriented and safe training seminars

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FWSG 900 L Scraper tool for pipes d 630 - d 900 (25" - 36" IPS)	100		
FWSG XL Large scraper tool for pipes d 800 to d 1200	100		
FWSG SE Compact scraper tool for pipe ends and saddle surfaces d 63 - d 315	101		
FWSG SE IPS Scraper tool for pipe ends and saddle areas 2 IPS - 12 IPS	101		



WorkFlow works – and this is how:

Everything in sight. Everything under control.

A separate report for each fusion process in the pipeline network with its own fusion protocol, adding, printing and distributing documents, photos and geodata, information on components and map views individually – and all this on endless sheets of paper. Not anymore! Because the smart digital solution manages it for you.



Fuse

Scrape, clean, install the component, scan the barcode, fuse – so far the same. With WorkFlow Mobile support, important information is added to the fusion protocol during the fusion process, e.g. GPS data to record the component's location, or photos to document its proper installation.



Synchronise

Paperless, in real time, with secure encryption: WorkFlow Mobile transfers all data to the WorkFlow cloud, where the data is immediately sorted, processed and stored. The corresponding protocols can be accessed anytime and anywhere by anyone who is authorised to do so – and by no-one else.



Manage

All protocols, images, components and many other pieces of information such as the construction site where each component was installed, or which fusion unit was used – all of this can also be accessed centrally from a desk on the construction site or in the office, via WorkFlow Web. Complete records for each construction site in a separate project.



For further information, please visit our Homepage*:

www.aliaxis.de/en/workflow



Your contact

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* Check out if WorkFlow is available in your country and contact us.

2023 Product range amendments at a glance

FRIALEN safety fittings

UB SDR 11		Coupler without inner stop, SDR 11			
Status	Version	Order No.	Available from/up to	Predecessor /Successor	Page
New	d 250	617278	immediately	612675	20
Omitted	d 250	612675	immediately	617278	
New	d 280	617279	immediately	615073	
Omitted	d 280	615073	immediately	617279	

UB SDR 9		Coupler without inner stop, SDR 9			
Status	Version	Order No.	Available from/up to	Predecessor /Successor	Page
Omitted	d 400	616441	immediately	615075	22
Omitted	d 450	616447	immediately	615076	
Omitted	d 500	616445	immediately	615124	
Omitted	d 560	616446	immediately	616312	
Omitted	d 630	616439	immediately	616269	

REM SDR 17		Reducer, SDR 17 for Relining			
Status	Version	Order No.	Available from/up to	Page	
Discontinued part	d 110/DN100	615569	Q1 / 2023	24	

WFGB		BAIO Elbow with base unit			
Status	Version	Order No.	Available from/up to	Page	
Omitted	d 110/DN 80	616150	immediately		

TGB		T-piece BAIO			
Status	Version	Order No.	Available from/up to	Page	
Omitted	d 110/DN 80	616147	immediately		
Omitted	d 125/DN 80	616148	immediately		
Omitted	d 160/DN 80	616149	immediately		

TA		T-piece with spigot			
Status	Version	Order No.	Available from/up to	Page	
New	d 180/180	617175	Q1/2023	29	
New	d 200/200	617179	Q2/2023		
New	d 225/225	617183	Q2/2023		

TA RED		T-piece with reduced spigot			
Status	Version	Order No.	Available from/up to	Page	
New	d 180/125	617174	Q1/2023	30	
New	d 200/90	617176	Q2/2023		
New	d 200/110	617177	Q2/2023		
New	d 200/160	617178	Q2/2023		
New	d 225/90	617180	Q2/2023		
New	d 225/110	617181	Q2/2023		
New	d 225/160	617182	Q2/2023		

FRIALEN safety fittings

FRIASTOP P		Gas-Stop by Pipeline			
Status	Version	Order No.	Available from/up to	Page	
New	d 32, Typ SOU	617353	immediately	42	
New	d 63, Typ SOU	617354	immediately		

VAM RG		Valve tapping saddle with transition HD-PE/gunmetal			
Status	Version	Order No.	Available from/up to	Page	
Omitted	d 180 x Rp 1 1/2	612774	immediately		
Omitted	d 180 x Rp 2	612776	immediately		

DAV		Tapping valve Classic, SDR 11			
Status	Version	Order No.	Available from/up to	Predecessor /Successor	Page
Omitted	d 90/32	615344	immediately	616960	35
Omitted	d 90/50	615346	immediately	616962	
Omitted	d 90/63	615347	immediately	616963	
Omitted	d 125/32	615352	immediately	616968	
Omitted	d 125/50	615354	immediately	616970	
Omitted	d 125/63	615355	immediately	616971	
Omitted	d 90/40	615617	immediately	616961	
Omitted	d 125/40	615625	immediately	616969	
Omitted	d 140/63	615930	immediately	616973	
Discontinued part	d 50/32	615955	Q1/2023	617024	
Discontinued part	d 63/32	615341	Q1/2023	617025	
Discontinued part	d 63/40	615342	Q1/2023	617026	
Discontinued part	d 75/32	615956	Q1/2023	617027	

DAV ACW		Tapping valve DAV RED SNAP, SDR 11 (closing in an anti-clockwise direction)			
Status	Version	Order No.	Available from/up to	Page	
New	d 50/32 ACW	617127	Q1/2023	34	
New	d 63/32 ACW	617128	Q1/2023		
New	d 63/63 ACW	617129	Q1/2023		
New	d 75/32 ACW	617130	Q1/2023		
New	d 90/32 ACW	617131	Q1/2023		
New	d 90/63 ACW	617132	Q1/2023		
New	d 110/32 ACW	617133	Q1/2023		
New	d 110/63 ACW	617134	Q1/2023		
New	d 125/32 ACW	617135	Q1/2023		
New	d 125/63 ACW	617136	Q1/2023		
New	d 140/32 ACW	617137	Q1/2023		
New	d 140/63 ACW	617138	Q1/2023		
New	d 160/32 ACW	617139	Q1/2023		
New	d 160/63 ACW	617140	Q1/2023		
New	d 180/32 ACW	617141	Q1/2023		
New	d 180/63 ACW	617142	Q1/2023		
New	d 200/32 ACW	617143	Q1/2023		
New	d 200/63 ACW	617144	Q1/2023		
New	d 225/32 ACW	617145	Q1/2023		
New	d 225/63 ACW	617146	Q1/2023		



2023 Product range amendments at a glance

FRIALEN safety fittings

FBS				
Actuating linkage for FRIALOC PE shut-off valves				
Status	Version	Order No.	Available from/up to	Page
Omitted	RD 2,4 - 3,5 stainless steel	616326	immediately	

KBS				
Actuating linkage KBS for ball valves with adapter hexagon socket				
Status	Version	Order No.	Available from/up to	Page
New	d 20-50 RD 0,6-1,0 SW 14	615868	immediately	
New	d 20-50 RD 0,6-1,0 SW 30	615869	immediately	

USTR				
Transition fitting, steel pipe				
Status	Version	Order No.	Available from/up to	Page
Omitted	75/65	612789	immediately	

MUN				
Transition fitting in HD-PE/brass with male thread				
Status	Version	Order No.	Available from/up to	Page
Omitted	d 75 x 2"	612694	immediately	
Omitted	d 75 x 2 1/2"	612695	immediately	

FRIATOOLS technical Equipment

WORKFLOW				
WorkFlow - The digital assistant for construction project management				
Status	Version	Order No.	Available from/up to	Page
New	Package Test Key (runtime 3 months)	610001T	immediately	92
New	Package S Key (runtime 12 months)	610002S	immediately	
New	Package L Key (runtime 12 months)	610003L	immediately	

ALTK FMT				
Transport boxes				
Status	Version	Order No.	Available from/up to	Page
On request	FRIAMAT Units up to model year 2018	627001	immediately	

ALTK FWSG		Transport boxes			
Status	Version	Order No.	Available from/up to	Predecessor /Successor	Page
Omitted	FWSG 225 from 2019	613406	immediately	613309	

FRIAFIT sewage system

ATSR5 45				
Unequal branch 45° with off-center outlet (spigot fitting) in flow direction left				
Status	Version	Order No.	Available from/up to	Page
New	d 315 / d 160 left	682311	immediately	86
New	d 315 / d 225 left	682312	immediately	
New	d 355 / d 160 left	682313	immediately	
New	d 355 / d 225 left	682314	immediately	
New	d 450 / d 160 left	682315	immediately	
New	d 450 / d 225 left	682316	immediately	
New	d 560 / d 160 left	682317	immediately	
New	d 560 / d 225 left	682318	immediately	
New	d 630 / d 160 left	682319	immediately	
New	d 630 / d 225 left	682320	immediately	

ASA TL					
Top-loading sewage saddle					
Status	Version	Order No.	Available from/up to	Predecessor /Successor	Page
Omitted	d 250/d 160	682619	immediately	682613	



Important information regarding safe pipe joints with Aliaxis Deutschland

Stocked status

Please note during your planning and scheduling:

- Items with an stocked status of 1 (MTS = Make to Stock) are usually available from stock.
- Items with an stocked status 3 (MTO = Make to Order) are manufactured to order. Delivery time on request. These articles are excluded from return and exchange.

Packaging units and pallet units

The product catalogue show packaging units (BX) and pallet units (PU). Ordering in complete packages/pallets simplifies the process of receiving your goods and your storage. In addition, it promotes fast commissioning and therefore delivery by us. Product range clearly indicates that we have chosen reasonable and fair units for you.

Returns

The total value of the accepted return / item must be at least € 100.

Returned goods for credit must be approved by us in advance. Please register your return request with us. After successful verification, we will send you a return receipt with a unique number. Processing is not possible without this number. In the context of our quality management, the goods must also fulfil certain criteria. If necessary, we will be pleased to inform you about this separately. If the goods fulfil the criteria and the return is approved, then a credit note will be issued with a deduction of 30% for testing costs.

Inspection test certificates

For inspection test certificates according to DIN EN 10 204 - 3.1 we charge a fee of € 20.00 per order item. You can order an inspection test certificates when placing an order.

In order to avoid unnecessary handling, we can also provide the certificate for FRIALEN articles. This requires only the specification of the component traceability batch, which you will find on the barcode label or in the delivery documents.

Product range

This product catalogue is available in the download area [www.aliaxis.de /en](http://www.aliaxis.de/en)

Quality

FRIALEN safety fittings, FRIALEN large pipe technology, the FRIAFIT sewage system and our FRIATOOLS Technical Equipment are subjected to ongoing quality controls with strict testing regulations, which are part of our comprehensive, certified quality management system according to DIN EN ISO 9001: 2015.

FRIALEN safety fittings, FRIALEN large pipe technology, the FRIAFIT sewage system and our FRIATOOLS technical equipment are fully coordinated. All amendments, alterations and extensions which occur in the course of technical development are taken into account accordingly. Our ongoing quality controls cover the FRIALEN safety fittings, the FRIALEN large pipe technology, the FRIAFIT sewage system, our FRIATOOLS technical equipment and the quality of the fused joints as a result of the interaction of these components. The operation and functional safety of devices from other manufacturers (external devices) are not subjected to our specifications and controls. Please follow our assembly instructions and the respective device operating instructions when laying the system.

Certifications of our management systems

In addition to the certification of the quality management system according to DIN EN ISO 9001:2015, Aliaxis Deutschland GmbH has also received the certifications for the energy management system according to DIN EN ISO 50001:2011 and the environmental management system according to DIN EN ISO 14001:2015. In this way, we underline our aspirations for sustainable development, production and use of our products.

You can find valid certificates in the download area on our homepage.

Processing instructions and additional information

The processing takes place according to our assembly instructions, which are available for download on the Internet at www.aliaxis.de. Technical information regarding processing or use can be enclosed with the product and must be observed.

You can also find further information about the products and their processing, approvals, publications as well as seminar dates and contact persons via the site navigation.

Technical details

The technical details in this product range are not complete. Detailed information can be found in our data sheets, which are available in the download area of the product ranges.

Brand name

For ease of reading, this product range does not include the marking by ® and ™. The following trademarks are registered: FRIALEN®, RED SNAP®, FRIAFIT®, FRIALOC®, FRIATOOLS®, FRIAMAT®, Sentry GS®, BAIO® as well as Gas-Stop™.

Date of printing/technical progress

All details correspond to the current state at the time of printing. We reserve the right to make amendments which are intended for technical progress. We assume no liability for printing errors.



Important information regarding safe pipe joints with Aliaxis Deutschland

List of abbreviations

Abbreviation	Explanation
ABS	Acrylonitrile-Butadiene-Styrene
Art. No.	Article Number
BX	Sales Unit
CR	Chlorobutadiene rubber
CT	Cooling time
de	Pipe outside diameter
DIN	German Institute for Standardisation
DN	Nominal outside diameter
DN/OD	Nominal diameter relative to outside diameter
DVGW	Deutscher Verein des Gas- und Wasserfaches e. V.
DVS	Deutscher Verband für Schweißen und verwandte Verfahren (German Welding Society)
e	Wall thickness
EN	European standard
EPDM	Ethylene-propylene rubber
FKM	Fluororubber
GFK	Glass fibre reinforced plastic
HM	Electrofusion control units
HS	Butt-fusion
LS	Stock status
MOP	Maximum Operating Pressure
MTO	Make to Order
MTS	Make to Stock
NBR	Nitrile butadiene rubber
OP	Operating Pressure
Order No.	Order Number
PA	Polyamide
PE	Polyethylene
PU	Pallet unit
POM	Polyoxymethylene
PP-B	Polypropylene block copolymer
PP-H	Polypropylene homopolymer
PP-R	Polypropylene random copolymer
PTFE	Polytetrafluorethylene
PVC-C	Polyvinyl chloride, post-chlorinated
PVC-U	Polyvinyl chloride, unplasticized
PVDF	Polyvinylidene fluoride
RD	Pipe cover
RG	Discount group
RQ	On request
SBR	Styrene-butadiene rubber
SDR	Standard Dimension Ratio (diameter-wall thickness ratio)
STZ	Clay
SW	Wrench size
Z99, ZZ	Discount on request





FRIALEN safety fittings

For sustainable pipes for gas, water networks and industrial systems made of PE.

Product range ES 43/23

Things worth knowing about FRIALEN safety fittings

Product traceability

Each product is equipped with an additional barcode for traceability. The newly implemented 2D code offers you both, the fusion barcode plus extended traceability data in only one code.

Product Certifications

FRIALEN safety fittings comply with the relevant standard requirements, e.g. for gas EN1555-3, -4, ISO 4437-3, -4 for drinking water and pressure drainage EN12201-3, -4 and ISO 4427-3. Specific fields of application are mentioned in the product description.

Worldwide certifications underline the highest quality level of FRIALEN and FRIAFIT safety fittings, including shut-off valves, which are marked with the following quality brands:

You can find a range of valid product certificates in the download area on our homepage.

The scope of the respective certifications of individual products is based on applicability and market requirements. Please inspect for individual cases whether the required certification is available for the intended application.



H2 Test certificate

Our products are H2-ready-100! The scope of application of our FRIALEN shapes and fittings has been extended to include hydrogen [H2]. This means that our products can be used with the application of 100% hydrogen to MOP 10 bar. This is confirmed by test certificates of the DBI - Gastechnisches Institut GmbH and by Kiwa Gastec according to AR 214.

Suitable products are marked with an H2 icon in the product range. Please contact our sales representatives for a planned assignment.



Fusibility

FRIALEN safety fittings can be fused with pipes with SDR levels 17.6 (e minimum = 3 mm) up to SDR 11. Deviations from these areas are mentioned in the product description. Other levels of SDR can be processed on request.

FRIALEN saddle components / fittings ≤ d 63 are only to be processed with pipes ≤ SDR11. From d 50, pressure tapping tees DAA RED SNAP can also be processed with pipes SDR 17.6 - SDR 11.

Please also note possible restrictions marked on the (bar) code label on the product regarding e.g. the pipe fusion range or for tapping / drilling of saddles the min pipe SDR / max wall thickness with respect to driller length.

Please contact our application technology if you want to process thin-walled pipes > SDR17.6.

FRIALEN safety fittings and FRIAFIT couplers AM can be processed with pipes made of PE 100, PE 100-RC etc. to DIN 8074/75, EN 1555, EN 12201-2, ISO 4437-2 and ISO 4427-2. For PE pipes, a melt flow rate MFR 190/5 in the range from 0.2 to 1.7 g/10 min. applies. For pipes made of other PE material types, e.g. PE-Xa, PE-LD, PE-RT, PE-RD, PE-EL please request confirmation of processability.

For components with MFR < 0.20, a confirmation of suitability is required.

FRIALEN safety fittings made of PE 100 fulfil the requirements of EN 1555-3, EN 12201-3, ISO 4427-3 and ISO 4437-3. The processing of the FRIALEN safety fittings is possible with FRIAMAT fusion units at ambient temperatures between - 10 °C and + 45 °C.

In addition to our assembly instructions, the material- or system-specific standards and assembly guidelines apply to material-transition fittings, e.g. flanges, metal threaded joints or steel pipe ends for welding, particularly with regard to sealing, heat penetration during welding and corrosion protection.

For case-by-case restrictions regarding laying and processing FRIALEN and FRIAFIT safety fittings in general, please read our assembly instructions, which you will find in the respective product range in the download area. Our in-house customer service representatives will also be pleased to answer any questions.

Pressure resistance

The pressure resistance of FRIALEN safety fittings and FRIAFIT couplers AM made of PE 100 is determined by the SDR (standard dimension ratio) designation.

SDR = pipe outside Ø d / pipe wall thickness s

The current standards, as listed under chapter „fusibility“, are decisive for this. Taking into account the design factor C (calculation coefficient for components made of PE and the reference temperature of 20 °C), the following pressure levels result:

Fitting material: PE 100 (FRIALEN standard)	Water	Gas
SDR	Maximum operating (PN or PFA) in bar at C = 1.25	Maximum working pressure in bar at C = 2
26	6	(4)
17	10	5
11	16	10
9	20	-
7,4	25	-



Things worth knowing about FRIALEN safety fittings

Fusion process

FRIALEN and FRIAFIT safety fittings can be processed with universal electrofusion control units, e.g. the FRIAMAT series. The fusion parameters are automatically transmitted by the fitting barcode or 2D code.

FRIALEN safety fittings can also be processed by fusion units with a fixed output voltage of 39.5 V when the fusion time is entered manually. If applicable, for manual input of fusion parameters the specific fusion time in seconds is printed on the bar code label attached to the product.

ATTENTION! When utilising fixed voltage fusion units, the permissible processing range is at ambient temperatures from -5 °C to +35 °C. The fusion time specified on the fitting bar code applies to the entire temperature range.

ATTENTION! The 39.5 V fusion time and the bar coded fusion time can be different!

Cooling time

FRIALEN safety fittings and FRIAFIT couplers as socket fittings:
The cooling times (CT) indicated on the bar code labels are understood to be the times until the movement of the fused joint.

Longer cooling times must be maintained until pressure is applied. Please read our installation manuals.

FRIALEN and FRIAFIT tapping tees, tapping valves, saddles and repair clamps:
The cooling times (CT) indicated on the bar code labels are understood to be the times up to the tapping / drilling.

A pressure test of the saddle fusion joint onto the pipe can be executed earlier. Please read our assembly instructions.

Processing instructions and additional information

The processing takes place according to our assembly instructions, which are also available for download on the Internet at www.aliaxis.de.

You can also find further information about the products and their processing, approvals, publications as well as seminar dates and contact persons via the navigation.

FRIALEN saddle fittings top-loading

The dimension specification, including the values in brackets, indicates the permissible range for assembly and fusion for the saddle fitting. Where applicable, the standard scope of application is restricted due to technical restrictions (e.g. drill length/pipe wall thickness or bore diameter/diameter of the blocking bladder). The suitability must always be inspected with deviating application purposes.





Sustainability

The long term success of our company centres on the protection of the environment and the people living in it. Accordingly, Aliaxis feels its commitment to the United Nations' Sustainable Development Goals (SDGs) and configures its processes and initiatives to the measures these goals need. Our partners and suppliers too pledge their commitment when entering into business with us.

Our contribution to circular economy and CO₂ savings

We are currently working on increasing the recycled fractions we use in order to close the sustainability loop, yet without sacrificing our quality or performance. To this end, we signed the Circular Plastic Alliance Declaration. One of the measures derived from this is the use of recyclates in our wastewater product lines. The power supplied to our Mannheim location is generated by a fuel cell based on an energy concept of many years' standing.

Solutions for durable piping systems and less water loss

As has been proved, fused piping systems of polyethylene rank among the most durable solutions for the distribution of gas and drinking water. Reliable, homogeneous, and permanently tight connections safeguard a long service life in excess of fifty years. Their low weight and simple handling simplify the logistics and transport to the installation site, for less CO₂ emissions. The piping's smooth inner walls prevent deposits and so maintain their low resistance coefficients for the optimal pump performance and less energy consumption. Advanced leakage-locating solutions from Aliaxis Next simplify repair work on existing supply grids and help to plan and coordinate building measures to better effect.



FRIALEN for hydrogen

Our contribution to the thermal energy transition

More even than mobility and electric power, the generation of heat produces the most CO₂ emissions. Our product series FRIALEN and FRIAGRIP are the results of our active role in the transformation of Germany's natural gas grids for the advent of hydrogen. All of the affected products highlighted on the price list have been tested for mixing



ratios of up to 100%. The permeation, function, and leak tests were

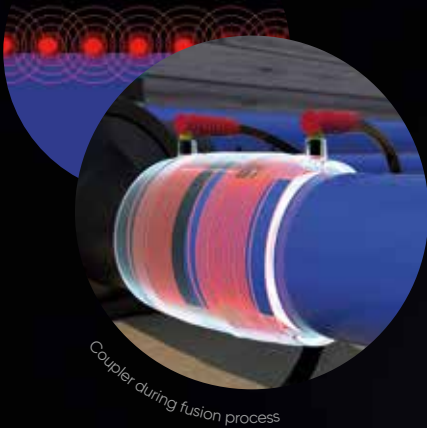
all conducted by DBI Gas- und Umwelttechnik GmbH, which then issued the respective test certificates.

FRIALEN

Safety Technology

Open wire design

Exposed heating coils during fusion process



Delivering the energy to where it is needed - for a **SUPERIOR FUSION RESULT.**

Optimum heat transfer



Immediate heat transfer within the contact area between the surfaces.



Energy-saving through effective energy utilisation.

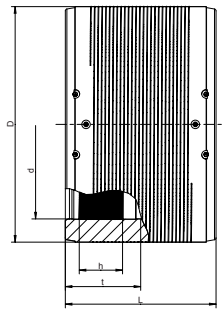


Exposed heating coils made of corrosion-resistant wire.



UB SDR 11

Coupler without inner stop, SDR 11



Coupler UB SDR 11 without inner stop

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248, DV-8606AU2249, DV-8611AU2250 and DW-8610CN04200
- FM Approvals Class: 1613 (d 63 - d 500)

Note:

From nominal size 400 with separate fusion zone and preheating technology.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



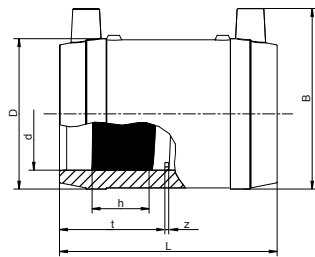
	d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
	16	616577	11	29	60	0.030	135	4320	3
	32	612662	11 - 17,6	45	77	0.064	60	1920	1
	40	612663	11 - 17,6	54	86	0.096	40	1280	1
	50	612664	11 - 17,6	68	98	0.151	25	800	1
	63	612665	11 - 17,6	82	112	0.225	15	480	1
	75	612666	11 - 17,6	98	122	0.360	50	400	1
	90	612667	11 - 17,6	114	157	0.510	30	240	1
	110	612668	11 - 17,6	137	159	0.705	24	192	1
	125	612669	11 - 17,6	156	172	0.946	16	128	1
	140	615001	11 - 17,6	174	184	1.270	12	96	1
	160	612671	11 - 17,6	199	190	1.772	8	64	1
	180	612672	11 - 17,6	220	210	2.088	6	48	1
	200	612673	11 - 17,6	247	220	2.798	1	56	1
	225	612674	11 - 17,6	277	236	3.950	1	36	1
	250	617278	11 - 17,6	309	247	5.418	1	24	1 NEW
	280	617279	11 - 17,6	344	269	7.068	1	18	1 NEW
1)	315	612670	11 - 17,6	390	300	10.040	18	18	1
1)	355	615074	11 - 17,6	445	300	14.600	1	9	1
	400	615075	9 - 17,6	500	320	20.800	1	4	1
	450	615076	9 - 17,6	560	340	30.000	1	4	1
	500	615124	9 - 17,6	630	360	40.000	1	2	1
	560	616312	9 - 17,6	715	380	55.000	1	2	1
	630	616269	9 - 17,6	810	420	79.600	1	2	1
	710	616313	11 - 17,6	900	442	101.000	1	1	1
	800	616314	11 - 17,6	1000	500	138.800	1	1	1
	900	616440	11 - 17,6	1130	600	210.300	1	1	3
	1000	616989	11	1200	680	223.600	1	1	3

1) new design up to Q1/2023



MB SDR 11

Coupler with easily removable inner stop, SDR 11



Coupler MB SDR 11 with inner stop

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Easily removable inner stop
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249

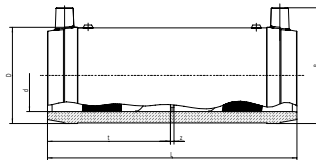
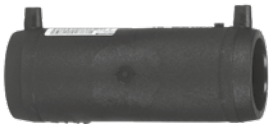


PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
20	612680	11	33	60	0.040	110	3520	1
25	612681	11	38	66	0.047	90	2880	1
32	612682	11 - 17,6	45	78	0.064	60	1920	1
40	612683	11 - 17,6	54	86	0.100	40	1280	1
50	612684	11 - 17,6	68	98	0.150	25	800	1
63	612685	11 - 17,6	82	110	0.221	15	480	1
75	612686	11 - 17,6	98	122	0.360	50	400	1
90	612687	11 - 17,6	114	157	0.510	30	240	1
110	612688	11 - 17,6	137	159	0.710	24	192	1
125	612689	11 - 17,6	156	172	0.950	16	128	1
140	612690	11 - 17,6	174	184	1.270	12	96	1
160	612691	11 - 17,6	199	190	1.770	8	64	1

FRIALONG SDR 11 Long coupler with easily removable inner stop, SDR 11



Long coupler FRIALONG SDR 11 with inner stop

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Easily removable inner stop
- Optimum pipe routing
- Tension-free fusing
- Safety technology
- DVGW test mark: DV-8601AU2248



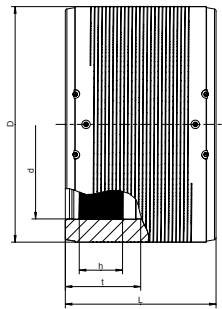
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
32	615736	11 - 17,6	45	136	0.110	40	1280	1
40	615737	11 - 17,6	54	146	0.140	30	960	1
50	615608	11 - 17,6	68	175	0.250	16	512	1
63	615738	11 - 17,6	82	197	0.370	10	320	1

UB SDR 17

Coupler without inner stop, SDR 17



Coupler UB SDR 17 without inner stop

- Gas and water
- Maximum pressure: Gas 5 bar; Water 10 bar
- Material; PE 100
- Safety technology
- Separate fusion zone
- DVGW test mark: DV-8611AU2250 and DW-8610CN0420

Note

From nominal size 560 with preheating technology and from nominal size 1000, only one FRIAMAT XL is to be utilised, which is available as a loan device under Order No. 613091.



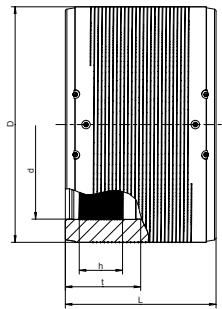
PE 100 SDR 17

Maximum permissible working pressure 10 bar (water) / 5 bar (gas)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
315	616529	17 - 26	356	280	5.880	1	18	1
355	616530	17 - 26	400	290	7.600	1	18	1
400	616531	17 - 26	450	300	10.100	1	9	1
450	616532	17 - 26	506	320	13.650	1	4	1
500	616533	17 - 26	562	350	18.250	1	4	1
560	615706	11-17,6	630	380	24.190	1	2	1
630	615726	11-17,6	710	420	34.870	1	2	1
710	615994	17-33	800	442	46.000	1	2	1
800	616290	17-33	900	500	65.900	1	1	1
900	616345	17	1024	500	91.500	1	1	1
1000	616403	17	1130	610	128.000	1	1	3
1200	616416	17	1356	670	205.000	1	1	3

UB SDR 9

Coupler without inner stop, SDR 9



Coupler UB SDR 9 without inner stop

- Water
- Maximum pressure: Water 20 bar
- Material; PE 100
- Safety technology
- separate fusion zone and preheating technology
- DVGW test mark: DV-8601AU2248, DV-8606AU2249, DV-8611AU2250 and DW-8610CN04200



PE 100 SDR 9

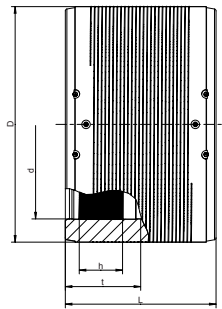
Maximum permissible working pressure 20 bar (water)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
400	615075	9 - 17,6	500	320	20.800	1	4	1
450	615076	9 - 17,6	560	340	30.000	1	4	1
500	615124	9 - 17,6	630	360	40.000	1	2	1
560	616312	9 - 17,6	715	380	55.000	1	2	1
630	616269	9 - 17,6	810	420	79.600	1	2	1



UB SDR 7,4

Coupler without inner stop, SDR 7.4



Coupler UB SDR 7.4 without inner stop

- Water
- Maximum pressure: 25 bar
- Material; PE 100
- Safety technology
- Separate fusion zone from d 280
- DVGW test mark: DV-8606AU2249 and DV-8611AU2250
- FM Approvals Class: 1613 (d 90 - d 355)

Note:

From nominal size 280 with preheating technology and separate fusion zone.



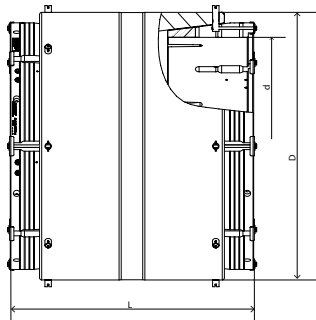
PE 100 SDR 7.4

Maximum permissible working pressure 25 bar (water)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
90	616270	7,4 - 11	117	138	0.530	30	240	1
110	616271	7,4 - 11	142	159	0.870	24	192	1
125	616272	7,4 - 11	160	172	1.230	16	128	1
140	616273	7,4 - 11	181	184	1.640	12	96	1
160	616274	7,4 - 11	206	203	2.360	8	64	1
180	616282	7,4 - 11	225	210	2.700	6	48	1
200	616283	7,4 - 11	250	224	3.610	2	36	1
225	616284	7,4 - 11	280	240	4.900	1	33	1
250	616285	7,4 - 11	315	246	6.700	1	24	1
280	616286	7,4 - 11	355	268	9.300	1	18	3
315	616287	7,4 - 11	400	285	12.100	1	18	1
355	616288	7,4 - 11	450	300	16.700	1	9	1

KM SDR 17

Conical ring coupler, SDR 17



Conical ring coupler KM SDR 17

- Gas and water
- Maximum pressure: Gas 5 bar; Water 10 bar
- Material; PE 100
- Combination of coupler and clamping coupler
- Problem solver (pipe ovality and different diameters)
- Safety technology
- Separate fusion zone

Note:

Only one FRIAMAT XL is to be utilised, which is available as a loan device under the Order No. 613091.

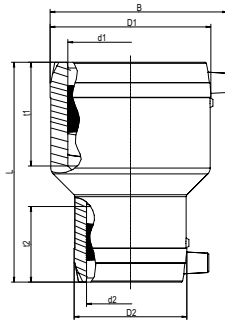


PE 100 SDR 17

Maximum permissible working pressure 10 bar (water) / 5 bar (gas)

d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
355	616535	17 - 26	497	705	36.500	1	1	3
400	616536	17 - 26	550	730	46.000	1	1	3
450	616537	17 - 26	602	750	54.000	1	1	3
560	616539	17 - 26	730	850	88.100	1	1	3
630	616523	17 - 26	805	940	135.000	1	1	3
800	616541	17 - 26	1005	1065	207.000	1	1	3
1000	616434	17 - 26	1245	1145	350.000	1	1	3
1200	616435	17 - 26	1450	1290	500.000	1	1	3

MR SDR 11 Reducer, SDR 11



Reducer MR, SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249
- FM Approvals Class: 1613 (d 90/63 - d 110/63 + d 110/90 - d 125/90 + d 160/110 - d 225/110)

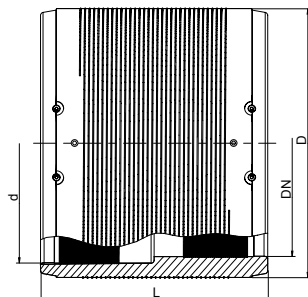


PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d ₁	d ₂	Order No.	SDR range	D ₁ /D ₂	L	Weight [kg]	BX	PU	Stock status
20	16	616824	11 - 17,6	32/28	75	0.035	70	2240	1
32	16	616452	11 - 17,6	45/28	91	0.060	80	2560	1
32	20	615386	11 - 17,6	45/32	88	0.060	80	2560	1
32	25	615502	11 - 17,6	45/38	88	0.070	70	2240	1
40	20	615387	11 - 17,6	54/32	98	0.080	60	1920	1
40	25	616751	11 - 17,6	54/38	101	0.090	120	1280	1
40	32	615388	11 - 17,6	54/45	98	0.090	50	1600	1
50	25	616752	11 - 17,6	66/38	107	0.120	130	960	1
50	32	612070	11 - 17,6	68/45	110	0.140	32	1024	1
50	40	612071	11 - 17,6	68/54	110	0.140	25	800	1
63	32	615389	11 - 17,6	82/45	125	0.210	18	576	1
63	40	615390	11 - 17,6	82/54	125	0.220	16	512	1
63	50	612072	11 - 17,6	82/68	125	0.230	16	512	1
75	63	616583	11 - 17,6	94/79	143	0.325	15	270	1
90	50	615391	11 - 17,6	117/68	160	0.470	15	270	1
90	63	615392	11 - 17,6	117/82	160	0.510	15	270	1
90	75	616582	11 - 17,6	113/94	159	0.505	15	270	1
110	63	615393	11 - 17,6	142/82	160	0.730	10	180	1
110	90	615693	11 - 17,6	140/115	180	0.900	8	144	1
125	90	615694	11 - 17,6	155/115	200	0.980	8	144	1
125	110	616510	11 - 17,6	157/137	202	1.300	16	128	1
160	110	615695	11 - 17,6	201/140	230	1.990	8	64	1
180	125	616511	11 - 17,6	214/155	275	2.600	1	60	1
225	160	616356	11 - 17,6	282/203	270	4.860	1	36	1

REM SDR 17 Reducer, SDR 17 for Relining



Reducer REM, SDR 17 for Relining

- Gas and water
- Maximum pressure: Gas 5 bar; Water 10 bar
- Material; PE 100
- Problem solver for pipe refurbishment work (relining)
- Safety technology
- Separate fusion zone
- Preheating technology



PE 100 SDR 17

Maximum permissible working pressure 10 bar (water) / 5 bar (gas)

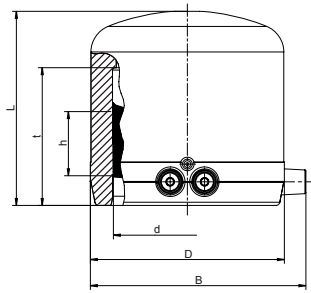
	d/DN	Order No.	SDR range	D	h1	L	Weight [kg]	BX	PU	Stock status
1)	110/100	615569	17 - 26	130	30	160	0.700	24	192	1
	160/150	615571	17 - 26	190	38	180	1.600	12	96	1
	315/300	615576	17 - 26	355	78	300	7.700	1	18	1

1) Discontinued article until Q1/2023



MV SDR 11

Cap, SDR 11



Cap MV SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249
- FM Approvals Class: 1613 (d 63 - d 225)

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

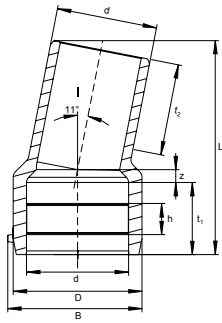


d	Order No.	SDR range	D	L	Weight [kg]	BX	PU	Stock status
20	612025	11 - 17,6	31	62	0.035	50	2500	1
25	612026	11 - 17,6	35	65	0.040	50	2500	1
32	612027	11 - 17,6	44	70	0.060	60	1920	1
40	612028	11 - 17,6	55	75	0.090	50	1600	1
50	612029	11 - 17,6	67	80	0.125	30	960	1
63	612030	11 - 17,6	84	88	0.210	20	640	1
75	612031	11 - 17,6	99	99	0.320	20	640	1
90	612032	11 - 17,6	118	114	0.500	16	288	1
110	612033	11 - 17,6	143	125	0.825	12	216	1
125	612034	11 - 17,6	163	135	1.160	8	144	1
160	612035	11 - 17,6	208	160	2.240	10	60	1
180	616183	11 - 17,6	224	157	2.180	6	48	1
200	616184	11 - 17,6	250,6	167	3.000	4	32	1
225	616185	11 - 17,6	279	184	3.970	4	32	1

FRIALEN shapes

WS11

Elbow 11° with spigot



Elbow WS11 SDR 11 with spigot

- Gas, water and H2
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Angle 11 degrees
- Universal direction alteration
- Multiple combination = elbow 22 degrees and 33 degrees can be implemented
- Safety technology
- DVGW test mark: DV-8606AU2249



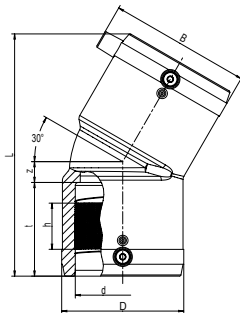
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
110	616139	141	235	0.920	8	144	1
125	616140	160	250	1.250	5	90	1
160	616141	200	295	2.260	8	64	1
180	616142	226	310	3.050	4	32	1
225	616143	280	350	5.280	1	18	1

W30

Elbow 30°



Elbow W30 SDR 11

- Gas, water and H2
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Angle 30 degrees
- Safety technology
- DVGW test mark: DV-8606AU2249
- FM Approvals Class: 1613 (d 90 - d 225)



PE 100 SDR 11

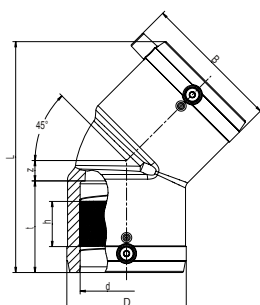
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
90	615272	115	224	0.780	8	144	1
110	615273	142	252	1.260	6	108	1
125	615274	158	270	1.640	4	72	1
160	615340	199	350	3.870	5	40	1
180	616261	229	390	4.990	3	24	1
200	616262	254	412	6.350	1	18	1
225	616263	281	456	8.220	1	18	1



W45

Elbow 45°

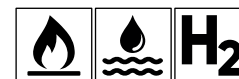


Elbow W45 SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Angle 45 degrees
- Safety technology
- DVGW test mark: DV-8601AU2248, DV-8606AU2249 and DV-8611AU2250
- FM Approvals Class: 1613 (d 63 - d 225)

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

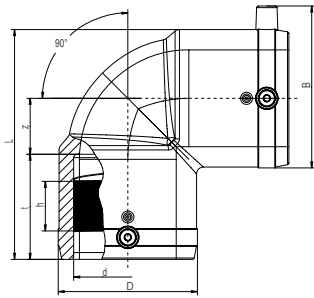


d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
25	616687	35	89	0.050	150	2400	1
32	612092	43	102	0.070	50	1600	1
40	612094	54	120	0.110	30	960	1
50	612096	66	136	0.175	20	640	1
63	612098	82	158	0.295	10	320	1
75	612100	96	198	0.520	14	252	1
90	612102	115	232	0.810	8	144	1
110	612104	138	265	1.320	10	80	1
125	612106	157	279	1.770	10	80	1
160	615275	207	377	4.410	4	32	1
180	615687	228	382	4.610	3	24	1
200	616264	254	415	6.760	1	18	1
225	615688	280	450	8.290	1	8	1
250	616404	310	621	17.300	1	6	1
280	616405	350	702	25.600	1	4	1
315	616406	396	755	36.000	1	2	1

FRIALEN shapes

W90

Elbow 90°



Elbow W90 SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Angle 90 degrees
- Safety technology
- DVGW test mark: DV-8601AU2248, DV-8606AU2249 and DV-8611AU2250
- FM Approvals Class: 1613 (d 63 - d 315)



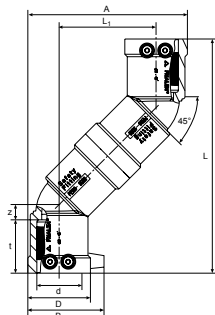
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
20	616686	28,5	71	0.040	200	3200	1
25	612091	37	73	0.060	60	1920	1
32	612093	43	82	0.070	50	1600	1
40	612095	53	96	0.110	30	960	1
50	612097	66	113	0.190	20	640	1
63	612099	83	136	0.340	10	320	1
75	612101	96	170	0.600	12	216	1
90	612103	115	202	0.950	6	108	1
110	612105	138	234	1.560	10	80	1
125	612107	157	254	2.030	8	64	1
160	615276	207	329	4.850	3	24	1
180	615689	228	354	5.760	3	24	1
200	616265	254	392	8.557	2	16	1
225	615690	280	430	10.220	1	8	1
250	616408	310	534	19.100	1	6	1
280	616409	350	621	27.500	1	2	1
315	616410	396	677	40.000	1	2	1

WET

Misalignment bridge



Misalignment bridge WET, SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Bridging when the pipe alignment is offset
- Safety technology
- DVGW test mark: DV-8601AU2248

Note:

At the nominal size 63, 90 degree elbows are utilised.
Ideal for the parallel laying of two main pipes or for the house connection pipe to the tapping valve DAV or the tapping tees DAA.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

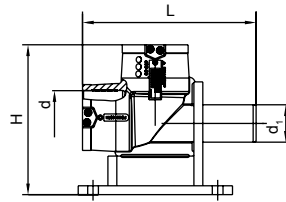
d	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
32	616051	49	177	74	0.220	15	750	1
40	616052	58	215	89	0.330	15	480	1
50	616053	70	242	101	0.510	15	270	1
63	616699	84	172	172	0.670	10	180	1

Successor product available from Q3 / 2023



WF

Elbow with base unit



Elbow with base unit WF SDR 11

- Water
- Maximum pressure: 16 bar
- Material; PE 100
- Angle 90 degrees
- Assembly on the foundation possible
- Safety technology
- DVGW Registration No.: DV-8606AU2249

Note:

Ideal for the hydrant connection adjacent to main pipe. Extra spigot for connection to the house for continuous flow.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

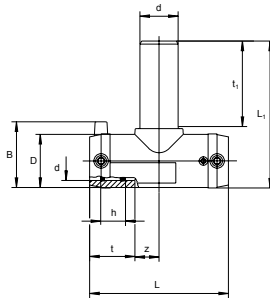


d	d ₁	Order No.	H	L	Weight [kg]	BX	PU	Stock status
90	63	615989	253	293	2.250	3	54	1
110	63	615998	293	346	2.940	1	32	1

Successor product available from Q3 / 2023

TA

T-piece with spigot



T-piece TA SDR 11 with spigot

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Spigot
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



With extra long outlet spigot

d	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
20/20	616685	29	77	95	0.040	200	3200	1
25/25	616338	36	108	110	0.080	50	900	1
32/32	615719	44	116	131	0.120	35	630	1
40/40	615720	53	146	151	0.210	20	360	1
50/50	615721	67	175	186	0.358	10	180	1
63/63	615722	81	197	203	0.530	10	180	1

With standard outlet spigots

d	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
90/90	616677	116	280	219	1.250	12	96	1
110/110	616680	141	310	247	1.950	6	48	1
160/160	616684	203	390	326	4.950	3	24	1
1) 180/180	617175	223	495	389	7.960	2	16	1 NEW
2) 200/200	617179	247	540	425	10.550	1	8	1 NEW
2) 225/225	617183	278	590	469	14.700	1	8	1 NEW

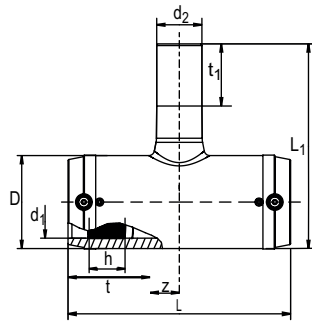
1) Available from Q1 / 2023

2) Available from Q2 / 2023



TA RED

T-piece with reduced spigot



T-piece TA RED SDR 11 with reduced spigot

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Reduced spigots
- Safety technology
- DVGW test mark: DV-8601AU2248, DV-8606AU2249 and DV-8611AU2250

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



With long outlet spigot

d ₁	d ₂	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
32	20	616417	46	116	117	0.110	30	540	1
40	32	616418	55	146	148	0.170	20	360	1
50	32	616419	69	175	158	0.295	10	180	1
50	40	616420	69	175	167	0.315	10	180	1
63	32	616421	84	197	173	0.435	10	180	1
63	40	616422	84	197	182	0.450	10	180	1
63	50	616423	84	197	197	0.490	10	180	1

With standard outlet spigots

d ₁	d ₂	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
90	32	616675	116	280	172	1.050	17	136	1
90	63	616676	116	280	191	1.100	15	120	1
110	63	616678	141	310	216	1.700	8	64	1
110	90	616679	141	310	244	1.850	8	64	1
160	90	616681	203	390	305	4.400	4	32	1
160	110	616682	203	390	308	4.500	4	32	1
160	125	616683	203	390	313	4.600	3	24	1
1) 180	125	617174	223	495	357	7.050	2	16	1 NEW
2) 200	90	617176	247	540	360	8.250	1	8	1 NEW
2) 200	110	617177	247	540	370	7.720	1	8	1 NEW
2) 200	160	617178	247	540	401	9.750	1	8	1 NEW
2) 225	90	617180	278	590	389	11.200	1	8	1 NEW
2) 225	110	617181	278	590	399	11.900	1	8	1 NEW
2) 225	160	617182	278	590	430	13.050	1	8	1 NEW
250	225	616427	310	770	440	23.500	1	2	1
280	225	616429	350	905	475	35.500	1	2	3
315	225	616431	396	940	525	43.500	1	2	1

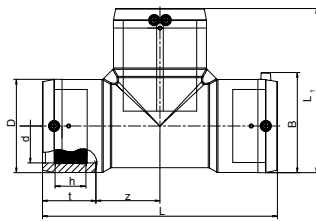
1) Available from Q1 / 2023

2) Available from Q2 / 2023



T

T-piece



T-piece T SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8606AU2249 and DV-8611AU2250
- FM Approvals Class: 1613 (d 75 - d 315)

PE 100 SDR 11

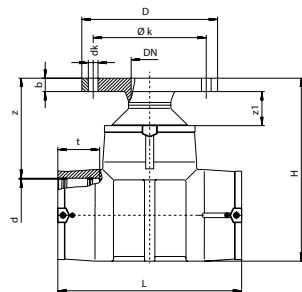
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d	Order No.	D	L	L1	Weight [kg]	BX	PU	Stock status
75	612165	96	278	187	0.980	8	144	1
90	612166	117	305	211	1.650	10	80	1
110	612167	142	355	248	2.580	6	48	1
125	612168	160	384	272	3.520	5	40	1
160	615277	200	430	315	5.820	3	24	1
180	615691	228	480	354	7.900	2	16	1
200	616266	251	550	400	11.130	1	8	1
225	615692	284	580	432	13.900	1	8	1
250	616412	310	770	540	27.400	1	4	1
280	616413	350	905	630	42.200	1	2	1
315	616414	396	940	670	55.900	1	1	1

TFL

Flange T-piece



Flange T-piece TFL

- Water
- Maximum pressure: Water 16 bar (SDR 11), 10 bar (SDR 17)
- Material; PE 100 and metal insert
- Safety technology

Note:

Reduction and fusion flange. Metal insert in flange in order to prevent cold flow.

We recommend GST seals.

Note the screw tightening torques after specifying the seal manufacturer or DVS.

Additional washers are required.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)



d/DN	Order No.	D	d _k	H	L	Ø k	Holes for screws	Weight [kg]	BX	PU	Stock status
110/80	615590	204	17	316	355	160	8	4.920	4	32	1
125/80	615591	204	17	343	384	160	8	5.480	3	24	1
160/80	615592	204	17	390	430	160	8	8.050	2	16	1
180/80	615910	204	17	416	480	160	8	10.000	1	8	1

PE 100 SDR 17

Maximum permissible working pressure 10 bar (water)

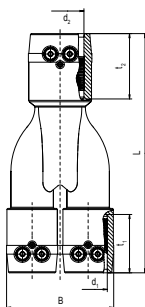


d/DN	Order No.	D	d _k	H	L	Ø k	Holes for screws	Weight [kg]	BX	PU	Stock status
225/80	616031	204	17	465	580	160	8	15.420	2	4	1

FRIALEN shapes

Y

Y-piece



Y-piece Y SDR 11

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248



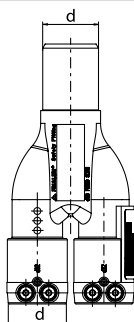
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	L	Weight [kg]	BX	PU	Stock status
32-32-40	640034	205	0.230	28	504	1
40-40-50	640036	219	0.340	18	324	1

YS

Y-piece with spigot



Y-piece YS SDR 11 with spigot

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

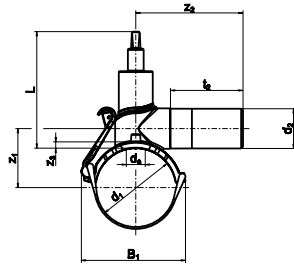
d	Order No.	Weight [kg]	BX	PU	Stock status
32-32-40	640035	0.190	28	504	1
40-40-50	640037	0.300	18	324	1



DAV

Tapping valve RED SNAP, SDR 11

NEW



Tapping valve RED SNAP, SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Quick release mechanism (RED SNAP):
 - Simple and error-free assembly
 - More quality and high security
 - Save 50% of installation time
- Integrated drill with upper and lower inner stop
- Maximum 9 turns for opening and closing
- Safety technology
- DVGW test mark: DV-6611AU2255

Note:

For this purpose, there is a suitable actuating linkage DBS with KlickFix and foam rubber for wrench size SW14.

The output nominal size 63 / 40 is a solution with reducing socket MR.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



	d ₁	d ₂	Order No.	Drilling Ø d _a	L	WS [mm]	Weight [kg]	BX	PU	Stock status
1)	50	32	617024	30	177	14	1.060	16	288	1
1)	63	32	617025	30	177	14	1.100	24	192	1
1)	63	40	617026	30	177	14	1.430	20	160	1
1)	63	63	616952	30	177	14	1.210	20	160	1
1)	75	32	617027	30	177	14	1.120	20	160	1
	90	32	616960	30	183	14	1.230	12	96	1
	90	40	616961	30	183	14	1.240	12	96	1
	90	50	616962	30	183	14	1.280	12	96	1
	90	63	616963	30	183	14	1.350	12	96	1
	110	32	616964	30	183	14	1.229	12	96	1
	110	40	616965	30	183	14	1.239	12	96	1
	110	50	616966	30	183	14	1.284	12	96	1
	110	63	616967	30	183	14	1.356	12	96	1
	125	32	616968	30	183	14	1.270	12	80	1
	125	40	616969	30	183	14	1.280	12	80	1
	125	50	616970	30	183	14	1.330	12	80	1
	125	63	616971	30	183	14	1.400	12	80	1
	140	32	616972	30	183	14	1.300	12	96	1
	140	63	616973	30	183	14	1.430	12	96	1
	160	32	616974	30	208	14	1.440	10	80	1
	160	40	616975	30	208	14	1.450	10	80	1
	160	50	616976	30	208	14	1.490	10	80	1
	160	63	616977	30	208	14	1.570	10	80	1
	180	32	616978	30	208	14	1.440	10	80	1
	180	40	616979	30	208	14	1.450	10	80	1
	180	50	616980	30	208	14	1.500	10	80	1
	180	63	616981	30	208	14	1.570	10	80	1
	200	32	616982	30	208	14	1.450	8	64	1
	200	63	616984	30	208	14	1.590	8	64	1
	225	32	616985	30	208	14	1.470	8	64	1
	225	40	616986	30	208	14	1.490	8	64	1
	225	50	616987	30	208	14	1.540	8	64	1
	225	63	616988	30	208	14	1.620	8	64	1

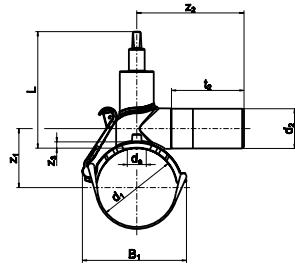
1) New product design with red lever available from Q1/2023.



DAV ACW

Tapping valve DAV RED SNAP, SDR 11 (closing in an anti-clockwise direction)

NEW



Tapping valve DAV RED SNAP ACW, SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Quick release mechanism (RED SNAP):
 - Simple and error-free assembly
 - More quality and high security
 - Save 50% of installation time
- Integrated drill with upper and lower inner stop
- Maximum 9 turns for opening and closing
- Safety technology
- DVGW test mark: DV-6611AU2255

Note:

For this purpose, there is a suitable actuating linkage DBS with KlickFix and foam rubber for wrench size SW14.

The output nominal size 63 / 40 is a solution with reducing socket MR.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



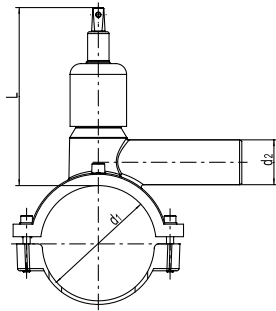
	d ₁	d ₂	Order No.	Drilling Ø d _a	L	WS [mm]	Weight [kg]	BX	PU	Stock status
1)	50	32	617127	30	177	14	1.210	16	288	1
1)	63	32	617128	30	177	14	1.210	24	192	1
1)	63	63	617129	30	177	14	1.330	20	160	1
1)	75	32	617130	30	177	14	1.040	20	160	1
1)	90	32	617131	30	183	14	1.210	12	112	1
1)	90	63	617132	30	183	14	1.330	12	112	1
1)	110	32	617133	30	183	14	1.230	12	112	1
1)	110	63	617134	30	183	14	1.360	12	96	1
1)	125	32	617135	30	183	14	1.260	12	112	1
1)	125	63	617136	30	183	14	1.380	12	112	1
1)	140	32	617137	30	183	14	1.230	12	96	1
1)	140	63	617138	30	183	14	1.360	12	96	1
1)	160	32	617139	30	208	14	1.410	10	80	1
1)	160	63	617140	30	208	14	1.550	10	80	1
1)	180	32	617141	30	208	14	1.440	10	112	1
1)	180	63	617142	30	208	14	1.570	10	112	1
1)	200	32	617143	30	208	14	1.440	8	112	1
1)	200	63	617144	30	208	14	1.590	8	112	1
1)	225	32	617145	30	208	14	1.470	8	112	1
1)	225	63	617146	30	208	14	1.620	8	112	1

1) available from Q1/2023



DAV

Tapping valve Classic, SDR 11



Tapping valve Classic, SDR 11

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Conventional clamping technology (brackets and screws)
- Integrated drill with upper and lower inner stop
- Sealing plug with internal sealing O-ring
- Maximum 10 turns for opening and closing
- Safety technology
- DVGW test mark: DV-6611AU2255

Note:

For this purpose, there is a suitable actuating linkage DBS with KlickFix and foam rubber for wrench size SW14.



PE 100 SDR 11

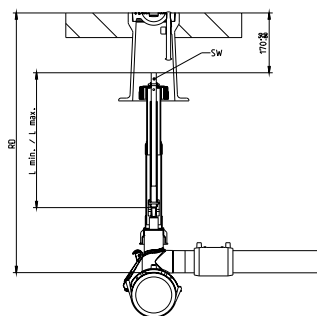
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

	d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
1)	50	32	615955	20	164	1.310	16	288	1
1)	63	32	615341	20	164	0.950	16	288	1
1)	63	40	615342	20	164	0.970	16	288	1
1)	75	32	615956	20	164	1.390	12	216	1

1) Discontinued item, available until end of Q1/2023

DBS

Installation kit for tapping valves



Installation kit DBS

- To operate the DAV RED SNAP from the road cap downwards
- KlickFix (tool-free) with foam rubber
- Wrench size SW14 (14 mm)
- Telescopic bar:
 - Length fitting
 - Continuously adjustable (without tools)
- Self-supporting
- Corrosion free

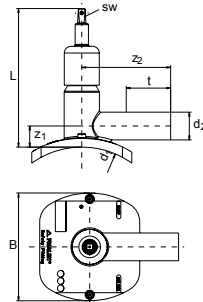
Note:

The installation kit DBS is suitable for use with FRIALEN tapping valves DAV Classic and DAV RED SNAP.

RD [m]	Order No.	WS [mm]	Weight [kg]	BX	PU	Stock status
0,7 - 1,0	616999	14	2.150	1	42	1
0,9 - 1,3	617000	14	2.650	1	42	1
1,2 - 1,8	617001	14	3.600	1	42	1
1,8 - 2,7	617002	14	3.600	1	42	3
2,6 - 3,5	617003	14	4.500	1	42	3

DAV TL

Top-loading tapping valve, SDR 11

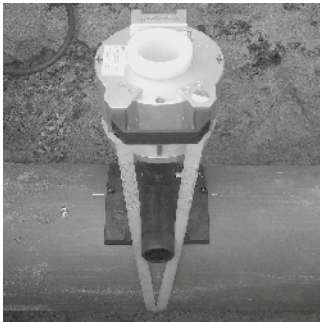


Top-loading tapping valve DAV TL SDR 11

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Universal clamping option (top loading):
 - Safe clamping with FRIATOP
 - Universal adaptation to pipe diameter
- Integrated drill with upper and lower inner stop
- Sealing plug with internal sealing O-ring
- Maximum 10 turns for opening and closing
- Safety technology
- ÖVGW test mark: G2.318, GRISW1.256

Note:

Can only be fused with the clamping device FRIATOP (Order No. 613350). For this purpose, there is a suitable actuating linkage DBS with KlickFix and foam rubber for wrench size SW14 (14 mm).



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

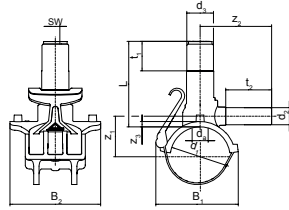


d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
250-315	63	616464	30	251	2.455	7	56	1
355-400	63	616465	30	251	2.459	7	56	1



DAA

Tapping tee RED SNAP, SDR 11



Tapping tee DAA SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Quick release mechanism (RED SNAP):
 - Simple and error-free assembly
 - Increased quality and safety
 - Save 50% of installation time
- Integrated drill with upper and lower inner stop
- Sealing plug with internal sealing O-ring
- Safety technology
- DVGW test mark: DV-6611CS0007



Note:

Only utilise one actuating key FWSS SW 17 (Order No. 613246) for all dimensions.

There is a suitable pressure test adapter FWDPA for DAA RED SNAP (Order No. 613597).

All outlets d₂ with nominal size 40 and 50 are always a solution with reducing socket MR.

When using hydrogen (H₂), the tapping tees DAA must be fitted with a cap DK (Order No. 612310).

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	d ₃	Drilling Ø d _a	L	WS [mm]	Weight [kg]	BX	PU	Stock status
40	20	612630	50	25	120	17	0.370	30	240	1
40	25	616473	50	25	120	17	0.380	30	240	1
40	32	616474	50	25	120	17	0.385	30	240	1
50	20	616475	50	25	120	17	0.385	28	224	1
50	25	612702	50	25	120	17	0.390	28	224	1
50	32	615080	50	25	120	17	0.400	28	224	1
63	20	612631	50	25	130	17	0.450	20	160	1
63	25	612633	50	25	130	17	0.460	20	160	1
63	32	612632	50	25	130	17	0.465	20	160	1
63	40	616472	50	30	160	17	0.855	16	128	1
63	63	616334	50	30	160	17	0.635	16	128	1
75	32	616482	50	25	130	17	0.485	24	192	1
90	20	616483	50	30	160	17	0.600	14	112	1
90	25	616484	50	30	160	17	0.610	14	112	1
90	32	612634	50	30	160	17	0.615	14	112	1
90	40	615656	50	30	160	17	0.950	14	112	1
90	50	616476	50	30	160	17	0.960	14	112	1
90	63	612701	50	30	160	17	0.730	14	112	1
110	20	616487	50	30	160	17	0.620	14	112	1
110	25	616488	50	30	160	17	0.625	14	112	1
110	32	612637	50	30	160	17	0.630	14	112	1
110	40	615662	50	30	160	17	1.000	14	112	1
110	50	616477	50	30	160	17	1.010	14	112	1
110	63	612624	50	30	160	17	0.780	14	112	1
125	20	616491	50	30	160	17	0.650	12	96	1
125	25	616492	50	30	160	17	0.655	12	96	1
125	32	612649	50	30	160	17	0.670	12	96	1
125	40	615668	50	30	160	17	1.020	12	96	1
125	50	616478	50	30	160	17	1.030	12	96	1
125	63	612309	50	30	160	17	0.800	12	96	1
140	32	616495	50	30	160	17	0.700	12	96	1
140	63	616496	50	30	160	17	0.830	12	96	1
160	20	616497	50	30	160	17	0.730	10	80	1
160	25	616498	50	30	160	17	0.735	10	80	1
160	32	612641	50	30	160	17	0.745	10	80	1
160	40	615675	50	30	160	17	1.095	10	80	1
160	50	616480	50	30	160	17	1.105	10	80	1
160	63	612650	50	30	160	17	0.875	10	80	1



FRIALEN tapping tees

DAA

Tapping tee RED SNAP, SDR 11

PE 100 SDR 11

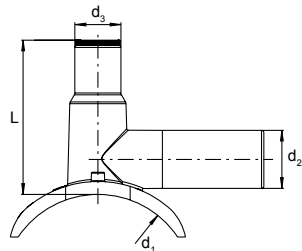
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	d ₃	Drilling Ø d _a	L	WS [mm]	Weight [kg]	BX	PU	Stock status
180	20	616501	50	30	190	17	0.785	10	80	3
180	25	616502	50	30	190	17	0.790	10	80	1
180	32	612651	50	30	190	17	0.790	10	80	1
180	50	616481	50	30	190	17	1.170	10	80	1
180	63	612652	50	30	190	17	0.940	10	80	1
200	32	612654	50	30	190	17	0.810	8	64	1
200	63	612659	50	30	190	17	0.950	8	64	1
225	32	612657	50	30	190	17	0.835	8	64	1
225	50	616486	50	30	190	17	1.210	8	64	1
225	63	612655	50	30	190	17	0.980	8	64	1

DAA TL

Top-loading tapping tee, SDR 11



Top-loading tapping tee DAA TL SDR 11

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Universal clamping option (top loading):
 - Safe clamping with FRIATOP
 - Universal adaptation to pipe diameter
- Leak test possible before drilling
- Integrated drill with upper and lower inner stop
- Sealing plug with internal sealing O-ring
- Safety technology
- DVGW test mark: DV-8606AU2249 and DV-8611AU2250



Note:

Can only be fused with the clamping device FRIATOP (Order No. 613350). Only one actuating key FWSS SW 19 (Order No. 613250) for all dimensions.
There is a suitable pressure test adapter FWDPA for DAA TL (Order No. 613595).
When using hydrogen (H₂), the tapping tees DAA must be fitted with a cap DK (Order No. 612310).
From nominal size 315 to 400, the DAA TL is only suitable for SDR 17 pipes.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

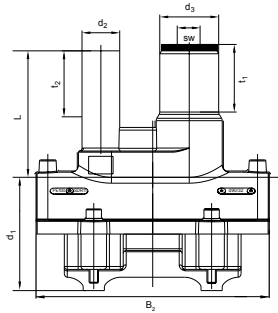


d ₁	d ₂	Order No.	d ₃	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
250-315 (- 400)	63	615339	50	30	167	1.360	4	72	1



DAP

Vertical tapping tee, SDR 11



Vertical tapping tee DAP SDR 11

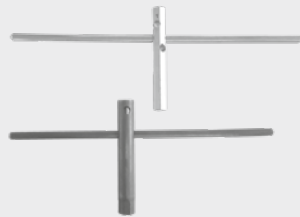
- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Conventional clamping technology (brackets and screws)
- Vertical outlet for special solutions:
 - Space-saving installation
 - With 90 degree elbow and ball valve = Rotatable dome 360 degrees
- Leak test possible before drilling.
- Integrated drill with upper and lower inner stop
- Sealing plug with internal sealing O-ring
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249

Note:

Utilise the operating key FWSS SW 17 for d 63 (Order No. 613246) or FWSS SW 19 from d 90 (Order No. 613250).

There is a suitable pressure test adapter FWDPA for DAP (Order No. 613595).

When using hydrogen (H₂), the tapping tees DAA must be fitted with a cap DK (Order No. 612310).



PE 100 SDR 11

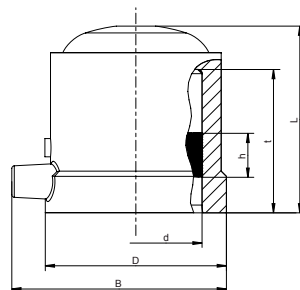
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d ₁	d ₂	Order No.	d ₃	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
63	32	616042	40	21	125	0.630	16	288	1
110	32	615581	50	30	158	1.280	12	96	1
110	50	615606	50	30	158	1.380	12	96	1
125	32	615711	50	30	158	1.310	12	96	1
125	50	615712	50	30	158	1.360	12	96	1
160	32	615713	50	30	170	1.540	8	64	1
160	50	615714	50	30	170	1.560	8	64	1
180	32	615715	50	30	170	1.540	6	48	1
180	50	615716	50	30	170	1.560	6	48	1
1) 225	32	615717	50	30	170	1.570	6	48	3
225	50	615718	50	30	170	1.590	6	48	1

1) Minimum purchase quantity is a complete packaging unit (BX).

DK

Cap for tapping tees, SDR 11



Cap for tapping tees DK SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Safety technology
- DVGW test mark: DV-8601AU2248

Note:

When using hydrogen (H₂), the tapping tees DAA, DAA TL and DAP must be fitted with a closure cap DK.



PE 100 SDR 11

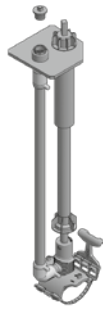
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
50	612310	69	72	0.110	30	960	1

FRIALEN tapping tees

GAB

Purge stack for venting gas pipes



Purge stack GAB for venting PE gas pipes

- Gas and H₂
- Maximum pressure: 10 bar
- Material; PE 100
- Blow-out aperture: 1" and 2"
- With DAV RED SNAP
- Telescopic bar:
 - Length adjustment
 - Continuously adjustable (without tools)
- Maximum 9 turns for opening and closing
- Safety technology
- DVGW test mark: DV-6611AU2255

Note:

The GAB is delivered without additional tools.

PE 100 SDR 11

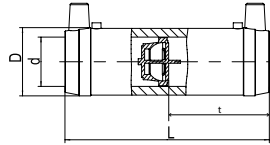
Maximum permissible working pressure 10 bar (gas)



d ₁	R	RD [m]	Order No.	Weight [kg]	BX	PU	Stock status
63	1"	0,7 - 1,0	2006380	4.440	1	1	1
63	2"	0,7 - 1,0	2006383	6.710	1	1	1
90	1"	0,7 - 1,0	2009080	5.240	1	1	3
90	2"	0,7 - 1,0	2009083	7.400	1	1	3
110	1"	0,7 - 1,0	2011080	4.740	1	1	3
110	2"	0,7 - 1,0	2011083	6.800	1	1	1
125	1"	0,7 - 1,0	2012580	5.700	1	1	3
125	2"	0,7 - 1,0	2012583	7.850	1	1	3
160	1"	0,7 - 1,0	2016080	6.200	1	1	3
160	2"	0,7 - 1,0	2016083	8.330	1	1	3
180	1"	0,7 - 1,0	2018080	6.200	1	1	3
180	2"	0,7 - 1,0	2018083	8.340	1	1	3
225	1"	0,7 - 1,0	2022580	6.300	1	1	3
225	2"	0,7 - 1,0	2022583	8.440	1	1	3



FRIASTOP M Gas-Stop SENTRI GS by Maxitrol



Gas-Stop FRIASTOP with SENTRI GS System by Maxitrol

- Gas and H₂ (20 %)
- Maximum pressure:
 - Type Z and B 5 bar gas
 - Type D 1 bar gas
- Material; PE 100
- Overflow device for Type D and Z
- Function with admixture of 20 % hydrogen
- Safety technology
- DVGW test mark: DV-8601AU2248 and DG-4360BO0438



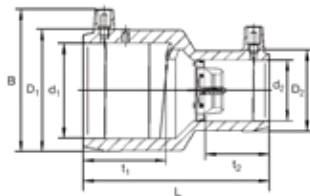
PE 100 SDR 11

Maximum permissible working pressure Type Z, B: 5 bar (gas), Type D: 1 bar (gas)

d	Operating pressure range $p_{min} - p_{max}$	Order No.	Type	D	L	VN	Weight [kg]	BX	PU	Stock status
32	35 mbar - 5 bar	616187	Z	45	136	17 - 40	0.140	40	1280	1
40	35 mbar - 5 bar	616188	Z	54	146	26 - 62	0.220	30	960	1
50	35 mbar - 5 bar	616189	Z	68	175	41 - 99	0.380	16	512	1
63	35 mbar - 5 bar	616190	Z	82	197	66 - 158	0.530	10	320	1
32	25 mbar - 1 bar	616191	D	45	136	11 - 16	0.140	40	1280	1
40	25 mbar - 1 bar	616193	D	54	146	19 - 27	0.220	30	960	3
50	25 mbar - 1 bar	616195	D	68	175	28 - 40	0.380	16	512	1
63	25 mbar - 1 bar	616197	D	82	197	51 - 72	0.530	10	320	1
32	100 mbar - 5 bar	616192	B	45	136	26 - 60	0.140	40	1280	1

Acceptance only in complete packaging units.

MR STOP Gas-Stop SENTRI GS by Maxitrol in Reducer



Gas-Stop MR STOP with SENTRI GS System by Maxitrol in Reducer

- Gas and H₂ (20 %)
- Maximum pressure:
 - Type Z 5 bar gas
 - Type D 1 bar gas
- Material; PE 100
- Overflow device for Type Z and D
- Function with admixture of 20 % hydrogen
- Safety technology
- DVGW test mark: DV-8601AU2248 and DG-4360BO0438



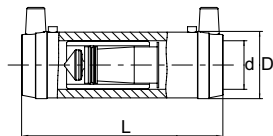
PE 100 SDR 11

Maximum permissible working pressure Type Z: 5 bar (gas), Type D: 1 bar (gas)

d ₁	d ₂	Operating pressure range $p_{min} - p_{max}$	Order No.	Type	D ₁ /D ₂	L	VN	Weight [kg]	BX	PU	Stock status
50	40	35 mbar - 5 bar	616218	Z	68/54	110	26 - 62	0.210	12	600	3
63	32	35 mbar - 5 bar	616219	Z	82/45	125	17 - 40	0.240	18	576	1
63	40	35 mbar - 5 bar	616220	Z	82/54	125	26 - 62	0.290	8	400	3
63	50	35 mbar - 5 bar	616221	Z	82/68	125	41 - 99	0.360	8	400	1
63	32	25 mbar - 1 bar	616238	D	82/45	125	11 - 16	0.240	10	500	1
63	50	25 mbar - 1 bar	616240	D	82/68	125	28 - 40	0.360	16	512	1

Acceptance only in complete packaging units.

FRIASTOP P Gas-Stop by Pipelife



Gas-Stop FRIASTOP with integrated Gas-Stop System by Pipelife

- Gas and H₂ (30 %)
- Maximum pressure:
 - Type U, UUE and S, SOU 5 bar gas
 - Type A/D 1 bar gas
- Material; PE 100
- Overflow device for Type A/D, UUE and S
- Without overflow device for Type U and SOU
- Function to admixture of 30 % hydrogen
- Safety technology
- DVGW test mark: DV-8601AU2248 and DG-4360BP0060 (DVGW G 5305-2)

PE 100 SDR 11

Maximum permissible working pressure Type U, UUE, S, SOU: 5 bar (gas), Type A/D: 1 bar (gas)



H₂ (30 %)

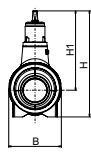
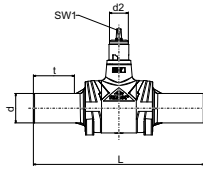
d	Operating pressure range $p_{min} - p_{max}$	Order No.	Type	D	L	VN	Weight [kg]	BX	PU	Stock status
32	35 mbar - 5 bar	616199	U	45	136	16 - 38	0.140	40	1280	1
50	35 mbar - 5 bar	616201	U	68	175	38 - 91	0.350	20	640	1
63	35 mbar - 5 bar	616203	U	82	197	58 - 140	0.560	12	384	1
32	35 mbar - 5 bar	616200	UUE	45	136	16 - 38	0.140	40	1280	1
50	35 mbar - 5 bar	616202	UUE	68	175	38 - 91	0.350	20	640	1
63	35 mbar - 5 bar	616204	UUE	82	197	58 - 140	0.560	12	384	1
32	25 mbar - 1 bar	616205	A/D	45	136	10 - 14	0.140	40	1280	1
50	25 mbar - 1 bar	616207	A/D	68	175	25 - 36	0.350	20	640	1
63	25 mbar - 1 bar	616209	A/D	82	197	40 - 55	0.560	12	384	1
32	200 mbar - 5 bar	616339	S	45	136	36 - 80	0.140	40	1280	1
50	200 mbar - 5 bar	616340	S	68	175	110 - 240	0.350	20	640	3
63	200 mbar - 5 bar	616341	S	82	197	180 - 400	0.560	12	384	3
32	200 mbar - 5 bar	617353	SOU	45	136	36 - 80	0.140	40	1280	3 NEW
63	200 mbar - 5 bar	617354	SOU	82	197	180 - 400	0.560	12	384	3 NEW

Acceptance only in complete packaging units.



FRIALOC

PE shut-off valve without flow losses



Shut-off valve FRIALOC

- Water
- Maximum pressure: 16 bar
- Material; PE 100
- Double shut-off function
- No cavities and stagnation
- No flow losses
- Maximum 14 turns for opening and closing
- DVGW test mark: DW-6210BT0171

Note:

The nominal sizes 200 to 250 have a restricted passage of d 180.

There is a suitable installation kit FBS with KlickFix for wrench size SW19 (19 mm).

Value da is the maximum tapping diameter of the external tapping device.

PE 100 SDR 11

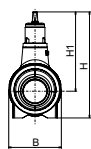
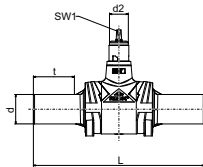
Maximum permissible working pressure 16 bar (water)



d	d ₂	Order No.	da_klein	H	L	WS1 [mm]	Weight [kg]	BX	PU	Stock status
90	80	616293	65	450	720	19	13.900	1	8	1
110	80	616294	84	450	720	19	14.200	1	8	1
125	80	616295	84	450	720	19	14.500	1	8	1
160	80	616296	123	608	1010	19	37.900	1	2	1
180	80	616297	123	608	1030	19	39.000	1	2	1
200	80	616453	123	608	1030	19	40.500		2	3
225	80	616298	123	608	1030	19	40.500	1	2	1
250	80	616438	123	608	1030	19	41.940		2	3

FRIALOC ACW

PE shut-off valve without flow losses (closing in a clockwise direction)



Shut-off valve FRIALOC ACW

- Water
- Maximum pressure: 16 bar
- Material; PE 100
- Double shut-off function
- No cavities and stagnation
- No flow losses
- Maximum 14 turns for opening and closing
- Closing operation, anti-clockwise
- DVGW test mark: DW-6210BT0171

Note:

The nominal sizes 200 to 225 have a limited passage of d 180.

There is a suitable installation kit FBS with KlickFix for wrench size SW19 (19 mm).

Value da is the maximum tapping diameter of the external tapping device.

PE 100 SDR 11

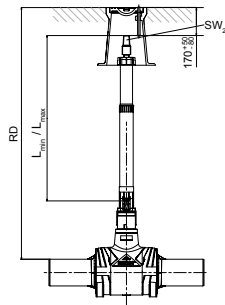
Maximum permissible working pressure 16 bar (water)



d	d ₂	Order No.	da_klein	H	L	WS1 [mm]	Weight [kg]	BX	PU	Stock status
90	80	616991	65	450	720	19	13.900	1	8	1
110	80	616992	84	450	720	19	14.200	1	8	1
125	80	616993	84	450	720	19	14.500	1	8	1
160	80	616994	123	608	1010	19	37.900	1	2	1
180	80	616995	123	608	1030	19	39.000	1	2	1
200	80	616996	123	608	1030	19	40.500	1	2	3
225	80	616997	123	608	1030	19	40.500	1	2	1

FBS

Actuating linkage for FRIALOC PE shut-off valves



Actuating linkage FBS for FRIALOC

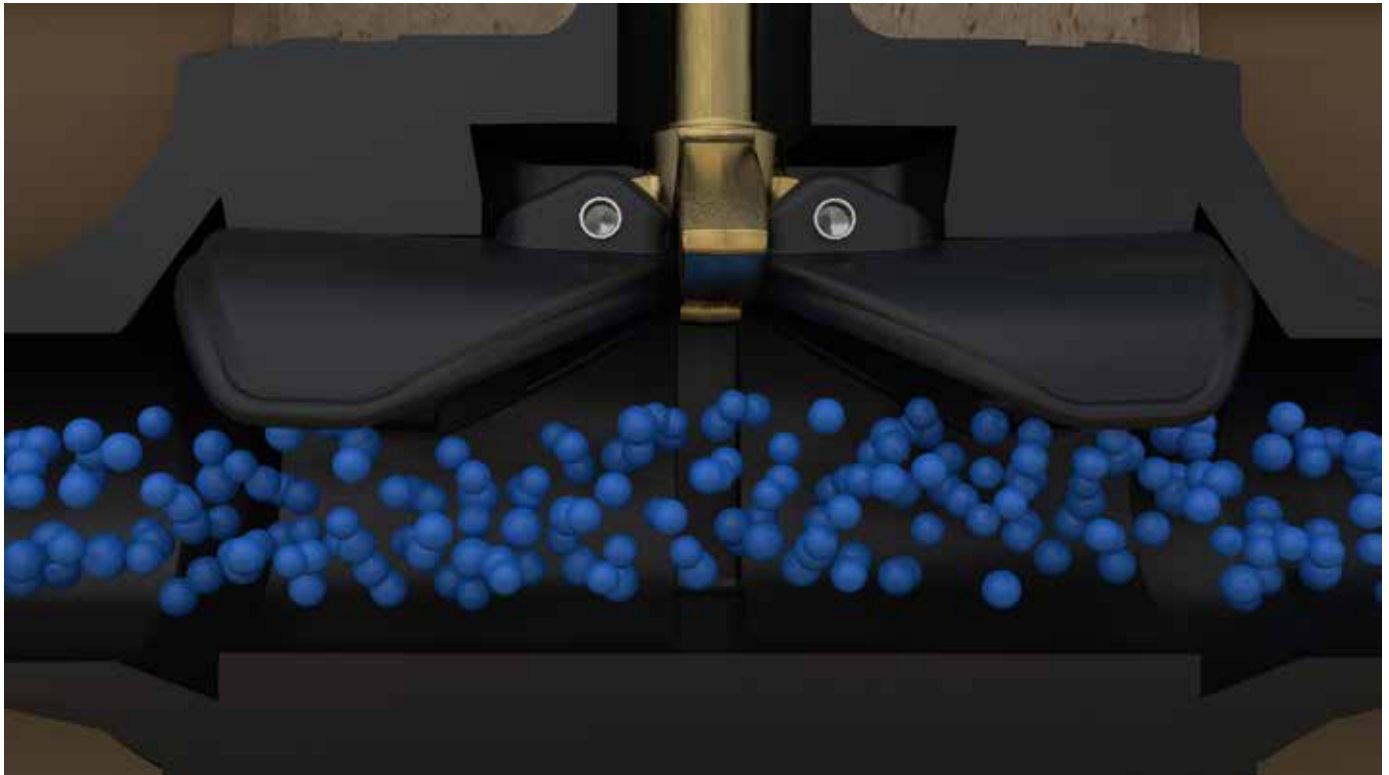
- To operate the FRIALOC from the road cap downwards
- ClickFix (tool-free)
- Wrench size SW19 (19 mm)
- Telescopic bar:
 - Length fitting
 - Continuously adjustable (without tools)
- Self-supporting
- Corrosion free

Steel linkage, hot-dipped galvanised

RD [m]	Order No.	WS2 [mm]	Weight [kg]	BX	PU	Stock status
0,75 - 1,0	616308	30	2.500	1	42	1
0,9 - 1,3	616309	30	2.950	1	42	1
1,2 - 1,8	616310	30	3.850	1	42	1
1,5 - 2,3	616318	30	4.400	1	42	1

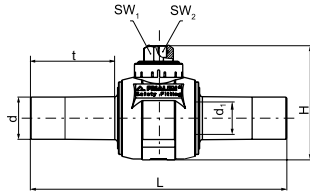
Stainless steel linkage

RD [m]	Order No.	WS2 [mm]	Weight [kg]	BX	PU	Stock status
0,75 - 1,0	616315	30	2.400	1	42	3
0,9 - 1,3	616316	30	2.800	1	42	1
1,2 - 1,8	616317	30	3.450	1	42	1
1,5 - 2,3	616319	30	4.150	1	42	3



KHP

Ball valve for gas



Ball valve for gas KHP

- Gas and H₂
- Maximum pressure: 10 bar
- Material: PE 100
- Gasket: NBR
- 1/4 turns for opening and closing
- DVGW test mark: DG-8631AU2251, DG-8631AU2252 and DG-8631AU2253

Note:

For this purpose, there is a suitable actuating linkage KBS for wrench sizes SW14 (14 mm) and SW30 (30 mm).



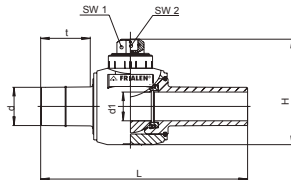
PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)

d	d ₁	Order No.	H	L	WS1 [mm]	WS2 [mm]	Weight [kg]	BX	PU	Stock status
32	24	612490	136	310	50 x 50	20	0.540	1	170	1
40	24	612497	136	310	50 x 50	20	0.580	1	170	1
50	24	612492	136	310	50 x 50	20	0.680	1	170	1
63	43	612494	193	410	50 x 50	25	2.300	1	50	1
90	67	612495	241	553	50 x 50	25	4.200	1	24	1
110	67	612493	241	553	50 x 50	25	4.500	1	24	1
125	67	612496	241	553	50 x 50	25	5.200	1	24	1
160	98	612483	332	539	50 x 50	25	12.000	1	8	1
180	98	615309	332	539	50 x 50	25	12.500	1	8	1
200	98	612480	332	539	50 x 50	25	13.500	1	8	1
225	98	616186	332	539	50 x 50	25	14.500	1	8	1

KH

Ball valve for gas without flow losses



Ball valve for gas KH without flow losses

- Gas and H₂
- Maximum pressure: 10 bar
- Material: PE 100
- Gasket: NBR
- No flow losses
- 1/4 turns for opening and closing
- DVGW test mark: DG-8631AU2251 and DG-8631AU2252

Note:

For this purpose, there is a suitable actuating linkage KBS for wrench sizes SW14 (14 mm) and SW30 (30 mm).

From nominal size 50, utilise a KBS d 63 - d 225.



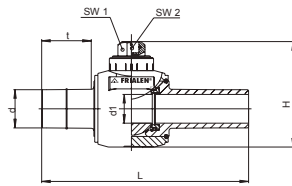
PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)

d	d ₁	Order No.	H	L	WS1 [mm]	WS2 [mm]	Weight [kg]	BX	PU	Stock status
20	24	616470	138	310	50 x 50	20	0.500	1	170	3
25	24	616471	138	310	50 x 50	20	0.550	1	170	1
32	34	616176	156	324	50 x 50	20	0.770	1	100	1
40	34	616177	156	324	50 x 50	20	0.800	1	100	1
50	51	616178	193	405	50 x 50	25	2.240	1	50	1
63	51	616179	206	410	50 x 50	25	2.420	1	50	1
90	98	616180	288	577	50 x 50	25	6.600	1	18	1
110	98	616181	288	577	50 x 50	25	6.750	1	18	1
125	98	616182	288	577	50 x 50	25	6.900	1	18	1

KHW

Ball valve for water



Ball valve KHW for water

- Water
- Maximum pressure: 16 bar
- Material: PE 100
- Gasket: EPDM
- 1/4 turns for opening and closing
- DVGW test mark: DW-6210CQ0059

Note:

For this purpose, there is a suitable actuating linkage KBS for wrench sizes SW14 (14 mm) and SW30 (30 mm).

From nominal size 50, utilise a KBS d 63 - d 225.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

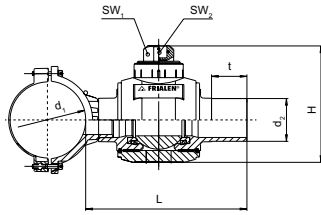


d	d ₁	Order No.	H	L	WS1 [mm]	WS2 [mm]	Weight [kg]	BX	PU	Stock status
32	34	616656	156	324	50 x 50	20	0.770	1	100	1
40	34	616657	156	324	50 x 50	20	0.800	1	100	1
50	43	616658	193	405	50 x 50	25	2.240	1	50	1
63	51	616659	206	410	50 x 50	25	2.420	1	50	1



AKHP

Tapping ball valve for side tapping gas under pressure



Tapping ball valve AKHP for gas

- Gas and H₂
- Maximum pressure: 10 bar
- Material: PE 100
- Gasket: NBR
- 1/4 turns for opening and closing
- Saddle component with clamp
- Safety technology
- DVGW test mark: DG-8631AU2252 and DG-8631AU2253

Note:

For this purpose, there is a suitable actuating linkage KBS for wrench sizes SW14 (14 mm) and SW30 (30 mm).

For tapping under pressure, we recommend the tapping tool from Hütz & Baumgarten (www.huetz-baumgarten.de).



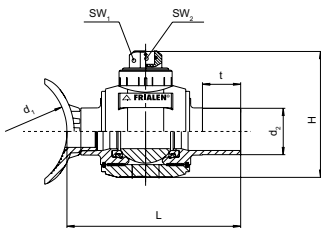
PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)

d ₁	d ₂	Order No.	Drilling Ø d _a	H	L	WS1 [mm]	WS2 [mm]	Weight [kg]	BX	PU	Stock status
110	63	615427	42	180	330	50 x 50	25	3.070	6	48	1
110	90	615428	60	240	335	50 x 50	25	4.670	4	32	1
125	90	615431	60	240	335	50 x 50	25	4.790	4	32	1
160	63	615433	42	180	330	50 x 50	25	3.300	4	32	1
160	90	615434	60	240	335	50 x 50	25	5.000	4	32	1
180	90	615437	60	240	335	50 x 50	25	5.000	4	32	1
225	90	615440	60	240	335	50 x 50	25	5.000	4	32	1

AKHP TL

Tapping ball valve Top loading for gas for side tapping under pressure



Tapping ball valve AKHP TL for gas

- Gas and H₂
- Maximum pressure: 10 bar
- Material: PE 100
- Gasket: NBR
- 1/4 turns for opening and closing
- Top load saddle
- Safety technology
- DVGW test mark: DG-8631AU2252 and DG-8631AU2253

Note:

Can only be used with the clamping device FRIATOP (Order No. 613350).

For this purpose, there is a suitable actuating linkage KBS for wrench sizes SW14 (14 mm) and SW30 (30 mm).

For tapping under pressure, we recommend the drilling tool from Hütz & Baumgarten (www.huetz-baumgarten.de).

From nominal size 450 to 560 only suitable for SDR17.



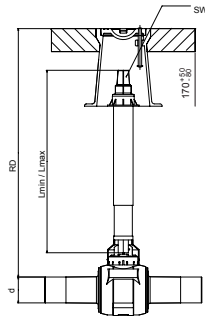
PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)

d ₁	d ₂	Order No.	Drilling Ø d _a	H	L	WS1 [mm]	WS2 [mm]	Weight [kg]	BX	PU	Stock status
250-450 (- 560)	90	615526	60	240	335	50 x 50	25	4.470	4	32	1

KBS

Actuating linkage for ball valves



Actuating linkage KBS for ball valves

- To operate the ball valves from the road cap downwards
- Wrench size SW14 (14 mm) and SW30 (30 mm)
- Telescopic bar:
 - Length fitting
 - Continuously adjustable (without tools)
- Self-supporting
- Corrosion free

Note:

Stable seating for the sleeve pipe bell at the nominal size of 20-50, by means of a design comprising a housing.

d	RD [m]	Order No.	WS [mm]	Weight [kg]	BX	PU	Stock status
20-50	0,45 - 0,7	615741	30	1.800	1	42	1
20-50	0,6 - 1,0	615957	14	2.700	1	42	1
20-50	0,6 - 1,0	615328	30	2.000	1	42	1
20-50	1,0 - 1,5	616466	14	3.400	1	42	1
20-50	1,0 - 1,5	615330	30	3.400	1	42	1
20-50	1,2 - 2,0	616068	14	3.450	1	42	1
20-50	1,2 - 2,0	615329	30	3.650	1	42	1
63-225	0,6 - 1,0	615958	14	2.050	1	42	1
63-225	0,6 - 1,0	615310	30	3.050	1	42	1
63-225	1,0 - 1,5	616467	14	4.150	1	42	1
63-225	1,0 - 1,5	615331	30	4.150	1	42	1
63-225	1,2 - 2,0	616069	14	3.600	1	42	1
63-225	1,2 - 2,0	615311	30	5.250	1	42	1

KBS

Actuating linkage KBS for ball valves with adapter hexagon socket

Actuating linkage KBS for ball valves with adapter hexagon socket

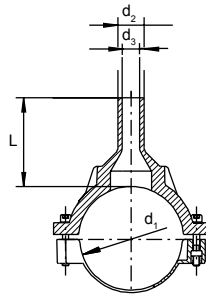
- Long dome plus coupling sleeve for external hexagon of the ball valve (KH, KHP, KHW)

d	RD [m]	Order No.	WS [mm]	Weight [kg]	BX	PU	Stock status
20-50	0,6 - 1,0	615868	14	1.490	1	42	3
20-50	0,6 - 1,0	615869	30	1.600	1	42	1



SA

Saddle with spigot, SDR 11



Saddle with spigot SA SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Saddle component with clamp
- Tapping under pressure possible
- Safety technology
- DVGW test mark: DV-8601AU2248 and DV-8606AU2249.

Note:

For the pressure-free tapping, there is our drilling device FWAB.

For tapping under pressure, we recommend the drilling tool from Hütz & Baumgarten (www.huetz-baumgarten.de).

If required, please contact our hotline: +49 621 486-2325.

PE 100 SDR 11

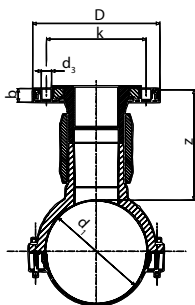
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	d ₃	Drilling Ø d ₄	L	Weight [kg]	BX	PU	Stock status
63	32	612757	22	20	100	0.330	20	360	1
63	50	612759	37	36	113	0.370	20	360	1
75	50	615020	38	36	82	0.430	15	270	1
90	32	615285	21	20	103	0.700	20	160	1
90	63	612819	50	46	103	0.720	20	160	1
110	32	615334	24	20	125	0.788	12	96	1
110	50	615031	39	36	132	0.816	12	96	1
110	63	612760	49	46	150	0.868	12	96	1
110	90	615411	70	65	115	0.960	12	96	1
125	32	615087	21	20	109	0.945	12	96	1
125	63	612761	47	46	109	0.990	12	96	1
125	90	615412	70	65	116	1.080	12	96	1
125	110	615584	86	84	116	1.150	10	80	1
160	32	612886	21	20	126	1.440	8	64	1
160	63	612762	47	46	140	1.520	6	48	1
160	90	615413	70	65	140	1.640	2	36	1
160	110	615739	86	84	140	1.765	2	36	1
160	125	615585	98	95	140	1.880	2	36	1
180	63	612763	47	46	109	1.190	6	48	1
180	90	615414	70	65	116	1.820	2	36	1
180	110	615948	86	84	136	1.960	2	36	1
180	125	615740	98	95	141	2.110	2	36	1
200	63	612764	47	46	109	1.260	5	40	1
225	63	612765	47	46	109	1.210	5	40	1
225	90	615415	70	65	130	1.950	5	40	1
225	110	616044	86	84	140	1.960	5	40	1
225	125	616045	97	95	146	2.240	4	32	1
225	160	616046	125	123	157	2.580	4	32	1

SAFL

Spigot saddle with flange outlet, SDR 11



Spigot saddle with flange outlet SAFL SDR 11

- Gas and water
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Saddle component with clamp and flange
- Tapping under pressure possible
- Safety technology
- DVGW test mark: DV-8606AU2249

Note:

For pressure-free tapping, we recommend our FWAB drilling device.

For tapping under pressure, we recommend the drilling tool from Hütz & Baumgarten (www.huetz-baumgarten.de).

Note the screw tightening torques after specifying the seal manufacturer and/or DVS and the utilisation of a GST seal.

If required, please contact our hotline: +49 621 486-2325.



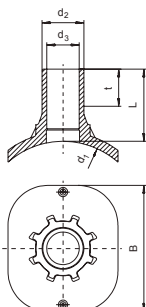
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d ₁ /DN	Order No.	D	d _k	Drilling Ø d _a	H	L	Ø k	Holes for screws	Weight [kg]	BX	PU	Stock status
110/80	616016	204	16.5	65	296	190	160	8	3.700	3	54	1
125/80	616017	204	16.5	65	311	205	160	8	3.940	2	36	1
160/80	616018	204	16.5	65	346	245	160	8	4.320	2	36	1
180/80	616019	204	16.5	65	366	285	160	8	4.610	2	36	1
225/80	616020	204	16.5	65	411	284	160	8	4.720	2	16	1
160/100	616022	224	16.5	84	346	245	180	8	5.270	2	36	1
225/100	616024	224	16.5	84	411	284	180	8	5.635	2	16	1

SA TL

Top-loading spigot saddle, SDR 11



Top-loading spigot saddle SA TL SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Universal clamping option (top loading):
 - Safe clamping with FRIATOP
 - Universal adaptation to pipe diameter
 - Tapping under pressure possible
- Safety technology
- DVGW test mark: DV-8606AU2249 and DV-8611AU2250

Note:

Can only be used with the clamping device FRIATOP (Order No. 613350).

For pressure-free tapping, we recommend the drilling device from Hütz & Baumgarten (www.huetz-baumgarten.de).

For tapping under pressure, please contact our hotline: +49 621 486-2325.



PE 100 SDR 11

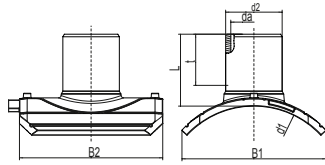
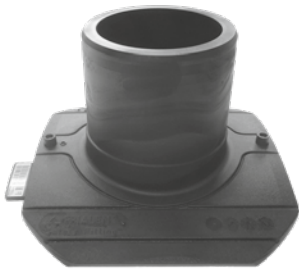
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d ₁	d ₂	Order No.	d ₃	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
250-560	32	615465	21	20	109	0.621	5	90	1
250-560	63	615466	47	46	109	0.676	5	90	1



SA UNI

Saddle with outlet spigot Universal SDR 11



Saddle with outlet spigot Universal SA UNI SDR 11

Gas, water and H₂

■ Maximum pressure: Gas 10 bar; Water 16 bar

■ Material; PE 100

■ Universal clamping option (balanced loading):

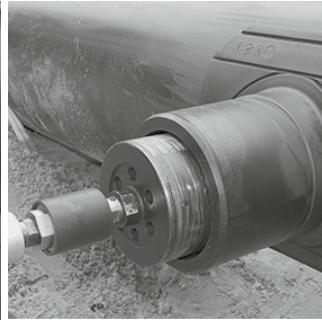
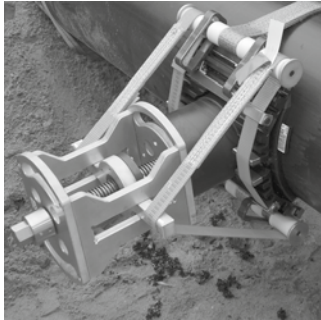
- Safe clamping with UNITOP
- Ideal distribution of force application
- Perfect adaptation to pipe diameter

■ Pressure test of the fusing before tapping possible

■ Tapping under pressure possible

■ Safety technology

■ DVGW test mark: DV-8611AU2250



Note:

Can only be used with the clamping device UNITOP (Order No. 613385).

For pressure-free tapping, we recommend our FWAB drilling device.

Pressure test of the fusing before tapping with pressure test adapter FWDPA (Order No. 613596).

For tapping under pressure, please contact our hotline: +49 621 486-2325.

Also suitable for all special dimensions in relining application. For intermediate sizes in the diameter range d 280 - < d 315, please use SA UNI d 250 - 280.



PE 100 SDR 11

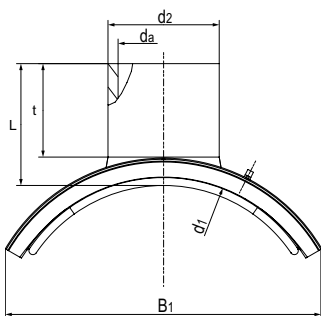
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
250-280	90	616553	65	130	1.465	5	40	1
250-280	110	616554	84	140	1.610	5	40	1
250-280	125	616555	95	146	1.790	5	40	1
250-280	160	616556	123	158	2.180	5	40	1
315-400	90	616557	65	130	1.485	5	40	1
315-400	110	616558	84	140	1.630	5	40	1
315-400	125	616559	95	146	1.810	5	40	1
315-400	160	616560	123	158	2.190	5	40	1
450-900	90	616561	65	130	1.500	5	40	1
450-900	110	616562	84	140	1.645	5	40	1
450-900	125	616563	95	146	1.820	5	40	1
450-900	160	616564	123	158	2.200	5	40	1

SA VL

Vacuum-loading spigot saddle, SDR 11



Vacuum-loading spigot saddle SA VL SDR 11 (and SDR 17)

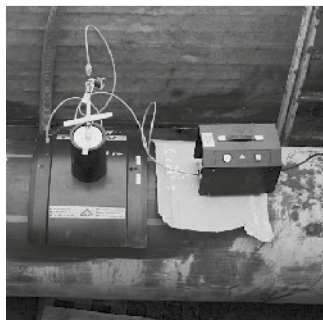
- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Vacuum clamping option (vacuum-loading):
 - Safe clamping with vacuum technology
 - Ideal contact with the pipe
 - Without wrapping around the pipe
- Tapping under pressure possible
- Safety technology

Note:

Can only be used with the vacuum pump VACUPUMP only (Order No. 613827) and the corresponding plunger PRESSKO (Order No. 613823).

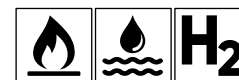
For pressure-free tapping, we recommend our FWAB drilling device.

For proper use and tapping under pressure, please contact our hotline: +49 621 486-2325



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
400	225	616469	172	263	14.700	1	4	3
400	250	616779	187	261	15.200	1	4	3
450	225	616780	172	267	17.500	1	4	3
450	250	616781	187	272	18.000	1	4	3
500	225	616391	172	265	14.500	1	4	3
500	250	616782	187	263	15.500	1	4	3
500	280	616783	225	265	15.600	1	4	3
500	315	616784	254	268	21.600	1	4	3
560	225	616392	172	263	15.700	1	4	3
560	250	616785	187	263	17.000	1	4	3
560	280	616786	225	265	17.000	1	4	3
560	315	616787	254	268	19.800	1	4	3
560	355	616788	286	260	26.000	1	4	3
560	400	616789	322	260	27.200	1	4	3
630	225	616393	172	265	17.000	1	4	3
630	250	616790	187	267	17.500	1	4	3
630	280	616791	225	263	18.000	1	4	3
630	315	616792	254	265	20.900	1	4	3
630	355	616793	286	269	23.800	1	4	3
630	400	616794	322	267	25.000	1	4	3
710	225	616394	172	270	20.500	1	4	3
710	250	616795	187	265	22.100	1	4	3
710	280	616796	225	268	21.500	1	4	3
710	315	616797	254	268	23.800	1	4	3
710	355	616798	286	285	28.500	1	4	3
710	400	616762	322	275	29.500	1	4	3
800	225	616395	172	270	17.300	1	4	3
800	250	616799	187	275	18.600	1	4	3
800	280	616800	225	268	18.600	1	4	3
800	315	616801	254	268	20.500	1	4	3
800	355	616802	286	290	31.200	1	4	3
800	400	616803	322	275	31.600	1	4	3



FRIALEN saddles

SA VL

Vacuum-loading spigot saddle, SDR 11

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
900	225	616396	172	268	19.000	1	4	3
900	250	616804	187	278	20.700	1	4	3
900	280	616805	225	268	20.300	1	4	3
900	315	616806	254	269	23.000	1	4	3
900	355	616807	286	305	27.300	1	4	3
900	400	616808	322	275	28.000	1	4	3
1000	225	616397	172	270	18.000	1	4	3
1000	250	616809	187	280	19.300	1	4	3
1000	280	616810	225	270	19.000	1	4	3
1000	315	616811	254	270	21.000	1	4	3
1000	355	616812	286	305	30.800	1	4	3
1000	400	616813	322	278	31.300	1	4	3
1200	225	616384	172	270	17.500	1	4	3
1200	250	616814	187	284	19.200	1	4	3
1200	280	616815	225	270	18.600	1	4	3
1200	315	616816	254	270	20.800	1	4	3
1200	355	616817	286	305	29.600	1	4	3
1200	400	616818	322	278	30.300	1	4	3

PE 100 SDR 17

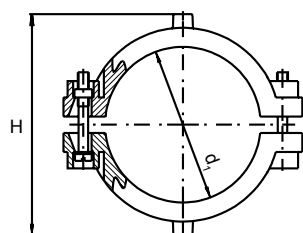
Maximum permissible working pressure 10 bar (water) / 5 bar (gas)



d ₁	d ₂	Order No.	Drilling Ø d _a	L	Weight [kg]	BX	PU	Stock status
1000	160	616378	123	300	17.350	1	4	3
1200	160	616383	123	300	17.200	1	4	3

RS

Repair Saddle, SDR 11



Repair saddle RS SDR 11

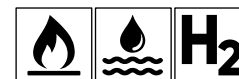
- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material: PE 100
- Saddle component with clamp
- Safety technology

Note:

Only apply to minor pipe damage.
The damage must be located within the repair area and not in the fusion zone.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



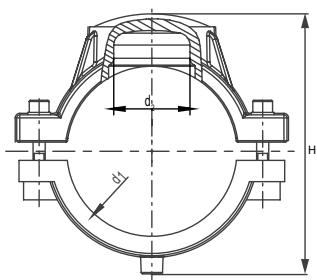
d ₁	Order No.	H	Weight [kg]	BX	PU	Stock status
63	612519	106	0.260	20	360	1



FRIALEN saddles

RSV

Repair and reinforcement saddle, SDR11



Repair and reinforcement saddle RSV SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- 2 combined saddle components
- Safety technology

Note:

Only apply to minor pipe damage.
The damage must be located within the repair area and not in the fusion zone.

PE 100 SDR 11

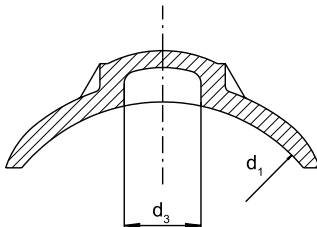
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	d ₂	Order No.	H	Weight [kg]	BX	PU	Stock status
90	50	615164	148	0.920	24	192	1
110	50	615165	170	1.162	16	128	1
125	50	615166	183	1.360	15	120	1
160	50	615168	218	1.670	10	80	1
180	50	615169	238	1.810	6	48	1
200	50	615170	258	1.820	5	40	1
225	50	615171	283	1.900	5	40	1

RS TL

Repair saddle for top loading, SDR11



Repair saddle Top-Loading RS TL SDR 11

- Gas, water and H₂
- Maximum pressure: Gas 10 bar; Water 16 bar
- Material; PE 100
- Universal clamping option (top loading):
 - Safe clamping with FRIATOP
 - Universal adaptation to pipe diameter
- Safety technology
- DVGW test mark: DV-8611AU2250

Note:

Can only be used with the clamping device FRIATOP (Order No. 613350).
Only apply to minor pipe damage.
The damage must be located within the repair area and not in the fusion zone.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

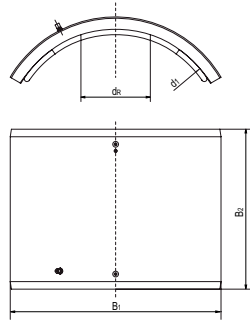


d ₁	Order No.	d ₃	Weight [kg]	BX	PU	Stock status
250-560	615397	50	0.570	10	180	1



RS VL

Vacuum-loading repair saddle SDR 17



- Vacuum-loading repair saddle RS VL SDR 17
- Gas, water and H₂
 - Maximum pressure: Gas 5 bar; Water 10 bar
 - Material; PE 100
 - Vacuum clamping option (vacuum-loading):
 - Safe clamping with vacuum technology
 - Ideal contact with the pipe
 - Without wrapping around the pipe
 - Safety technology

Note:

Can only be used with the vacuum pump VACUPUMP (Order No. 613827). Only apply to minor pipe damage. The damage must be located within the repair area and not in the fusion zone.



PE 100 SDR 17

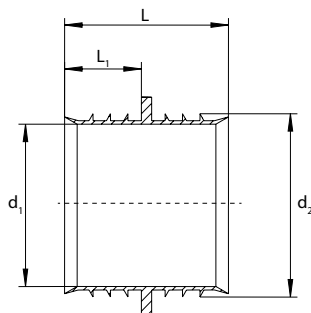
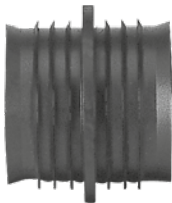
Maximum permissible working pressure 10 bar (water) / 5 bar (gas)



d ₁	Order No.	Repair area d _R	Weight [kg]	BX	PU	Stock status
500	616366	230	13.600	1	4	3
560	616367	230	14.300	1	4	3
630	616368	230	15.000	1	4	3
710	616369	230	18.900	1	4	3
800	616370	230	15.800	1	4	3
900	616371	230	17.600	1	4	3
1000	616372	230	16.400	1	4	3
1200	616379	230	16.250	1	2	3

RW

Repair sleeve



Repair sleeve RW

- For the repair of water-house connection pipes in a pressure-free condition.
- Prevents water from entering the fusion zone of the FRIALEN couplers MB or UB.

Note:

Dimension d means: Repair sleeve for pipe d xy.

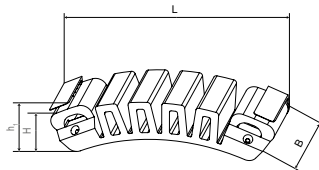


Only suitable for pipe SDR 11

d	d ₁	d ₂	Order No.	L	L1	Weight [kg]	BX	PU	Stock status
32	21	27	615127	35	16	0.004	50	4500	1
40	28	34	615128	35	16	0.005	50	2500	1
50	36	42	615129	35	16	0.007	50	2500	1
63	46	53	615130	47	22	0.012	40	2000	1

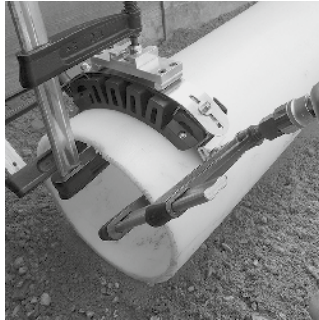
FIXBLOC

Fixation for absorbing axial thrust and tensile forces



Fixation for absorbing axial thrust and tensile forces FIXBLOC

- For the production of a fixed point on a PE pipeline, as a pull-out fuse, installation aid or fixing to pipe supports
- Strength per fixed point up to 40 kN
- Multiple applications possible around the pipe circumference
- Processing is carried out with commercially available tensioning straps with a belt width of 50 mm, which are securely guided by two straps (easily removable)
- Minimum length approx. 3.5 x d pipe (longer for multiple applications)
- If the belt around the pipe circumference is not accessible, the clamping device FIXBLOC FWFB (Order No. 613380), e.g. in the case of a PE liner, which must be anchored relative to a shaft wall.



PE 100

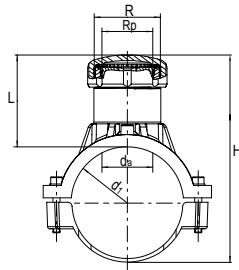
Maximum shear load per FIXBLOC: 40 kN

d ₁	Order No.	H	h1	L	Weight [kg]	BX	PU	Stock status
160 - 1600	680600	40	45	220	0.310	15	750	1



SPA

Balloon shut off saddle



Balloon shut off saddle SPA

- Gas, water and H₂
- Maximum pressure: Water 16 bar; Gas 10 bar
- Material; PE 100 and brass
- Saddle component with clamp
- Safety technology

Note:

Brass female and male threads are anchored in the HD-PE in a non-detachable and non-rotatable manner.

Including brass plug with recessed square. For the accommodation of commercially available balloon setting devices.

Access protection for the dome by means of the supplied screw cap or by fusion on a FRIALEN SPAK (for d 63 by cap DK, Order No. 612310).

When using hydrogen, the SPA Balloon shut off saddle is only in conjunction with the cap SPAK (Order No. 612311).



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



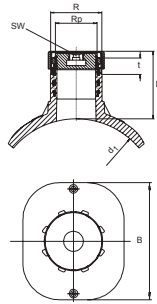
	d ₁	R	R _p	Order No.	Drilling Ø d _a	H	L	Weight [kg]	BX	PU	Stock status
1)	63	1 1/2"	1 1/8"	612753	31	151	80	0.610	20	360	1
	90	2 1/2"	2"	612677	56,5	197	104	1.380	16	128	1
	110	2 1/2"	2"	612750	56,5	217	104	1.540	12	96	1
	125	2 1/2"	2"	612751	56,5	232	104	1.710	12	96	1
	160	2 1/2"	2"	612752	56,5	267	104	1.823	8	64	1
	180	2 1/2"	2"	612754	56,5	287	104	1.860	7	56	1
	200	2 1/2"	2"	612755	56,5	307	104	1.830	6	48	1
	225	2 1/2"	2"	612756	56,5	332	104	1.850	5	40	1

1) SPA d 63 can only be fused with pipes of the SDR level 11.

FRIALEN saddles

SPA TL

Balloon shut off saddle top-loading



Balloon shut off saddle top-loading SPA TL

- Gas, water and H₂
- Maximum pressure: Water 16 bar; Gas 10 bar
- Material; PE 100 and brass
 - Universal clamping option (top loading):
 - Safe clamping with FRIATOP
- Safety technology

Note:

Can only be used with the clamping device FRIATOP (Order No. 613350). Brass female and male threads are anchored in the HD-PE in a non-detachable and non-rotatable manner.

Including brass plug with recessed square. For the accommodation of commercially available bubble setting devices.

Access protection for the dome by means of the supplied screw cap or by fusion on a FRIALEN SPAK.

When using hydrogen, the SPA balloon shut off saddle is only available in conjunction with the closure cap SPAK (Order No. 612311).



PE 100 SDR 11

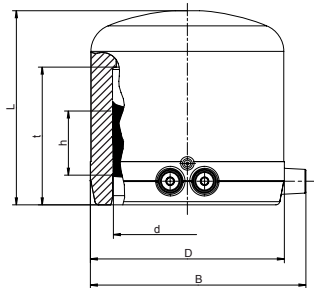
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)



d ₁	R	Rp	Order No.	Drilling Ø d _a	L	WS [mm]	Weight [kg]	BX	PU	Stock status
250-355 (560)	2 1/2"	2"	615395	56,5	115	19	1.358	18	144	1

SPAK

Cap for balloon shut off saddles



Cap for balloon shut off saddles SPAK

With open-wire technology for optimal heat transfer, large insertion depths, wide fusion zone and cold zone preventing the flow of melt.

When using hydrogen, the cap SPAK with the balloon shut off saddle SPA must be used.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

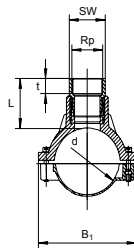
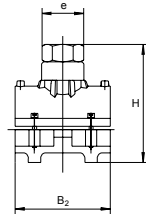


d	Order No.	D	L	Weight [kg]	BX	PU	Stock status
75	612311	99	99	0.280	20	640	1



VAM RG

Valve tapping saddle with transition HD-PE/gunmetal



Valve tapping saddle with transition HD-PE/gunmetal VAM RG

- Gas, water
- Maximum pressure: Water 16 bar; Gas 10 bar
- Material; PE 100 and gunmetal (female thread)
- Saddle component with clamp
- Safety technology
- Metals in contact with water according to UBA recommendation

Note:

For accommodating commercially available brass valves.
As a complete solution, we recommend our DAV tapping valve.



PE 100 SDR 11

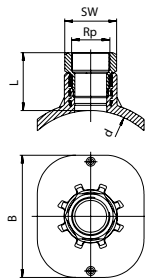
Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

	d	Rp	Order No.	H	L	Weight [kg]	BX	PU	Stock status
1)	63	1 1/4"	612794	146	75	0.730	20	360	3
	63	1 1/2"	612743	149	78	0.780	20	360	1
	75	1 1/4"	615213	161	76	0.850	15	270	1
	90	1 1/2"	612798	172	68	1.370	16	128	1
1)	90	2"	612778	199	95	1.560	16	128	3
	110	1 1/2"	612732	182	70	1.488	12	96	1
	110	2"	612733	205	92	1.684	12	96	1
1)	125	1 1/2"	612734	207	68	1.610	12	96	3
	125	2"	612735	234	95	1.850	12	96	1
1)	160	1 1/2"	612728	242	68	1.800	8	64	3
	160	2"	612729	269	95	2.040	8	64	1
	225	2"	612827	322	95	1.990	5	40	1

1) Minimum purchase quantity is a packaging unit (BX).

VAM RG TL

Valve tapping saddle top-loading with HD-PE/gunmetal adapter



Valve tapping saddle with HD-PE/gunmetal adapter VAM RG TL

- Gas, water
- Maximum pressure: Water 16 bar; Gas 10 bar
- Material; PE 100 and gunmetal (female thread)
 - Universal clamping option (top loading):
 - Safe clamping with FRIATOP
- Safety technology
- Metals in contact with water according to UBA (Federal Environment Agency, Germany) recommendation

Note:

Can only be used with the clamping device FRIATOP (Order No. 613350).
For accommodating commercially available brass valves.
Dimension range d 250 - d 560 can be fused as standard in the top loading process.

As a complete solution, we recommend our DAV tapping valve.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

d	Rp	Order No.	L	Weight [kg]	BX	PU	Stock status
250 - 560	2"	615470	90	1.505	8	144	1

Fusion-capable main pipe dimension up to d 560. Observe the notes on the boarding equipment.
DIN EN 10226-1, ISO 7-1



USTR

Transition fitting, steel pipe

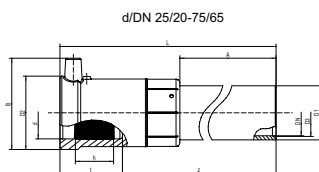
Transition fitting, steel pipe USTR

- Gas and H₂
- Maximum pressure: Gas 10 bar
- Material: PE 100 and steel [EN 10220 / EN 10216-1 - P235TR2]
- Safety technology

Note:

Anchored the steel side non-detachable and non-rotatable in the PE.
Self-sealing, patented sealing geometry without elastomeric gasket for use in gas applications.

Steel pipe batch characterised by re-stamping of the pipe connection.



PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)



	d/DN	Order No.	D1	L	Weight [kg]	BX	PU	Stock status
1)	32/25	612780	34	387	0.820	15	360	1
1)	40/32	612781	42	393	1.070	10	240	1
1)	50/40	612782	48	409	1.320	8	192	1
1)	63/50	612783	60	410	1.880	6	144	1
1)	90/80	612784	89	405	5.350	1	77	1
1)	110/100	612785	114	420	8.380	1	54	1
1)	125/100	612786	114	425	8.870	1	45	1
	160/150	612787	168	484	17.000	1	24	1
	180/150	615030	171	500	21.250	1	18	1
	200/200	612795	219	480	27.020	1	12	1
	225/200	612370	219	505	27.350	1	11	1

1) Pipe seamless, welded ends according to standard: DIN EN 10220/EN 10216-1, ASTM A106/A106M-14



FRIALEN transition fittings

USTRS

Transition fitting, steel pipe, spigot

Transition fitting for steel pipe, spigot USTRS

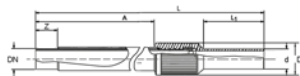
- Gas
- Maximum pressure: Gas 10 bar
- Material; PE 100 and steel [ISO 3183 / API5L]

Note:

To be utilised with the fusion couplers UB.

Anchored the steel side non-detachable and non-rotatable in the PE.

Steel pipe batch characterised by re-stamping of the pipe connection.



PE 100 SDR 11

Maximum permissible working pressure 10 bar (gas)



d/DN	Order No.	D	L	L1	w	Weight [kg]	BX	PU	Stock status
20/15	616632	45	425	80	2,60	0.450	21	630	3
25/20	616633	45	460	90	2,60	0.650	21	630	1
32/25	616634	51	460	95	3,20	0.950	18	540	1
40/32	616635	63	470	100	3,20	1.250	12	360	3
50/40	616636	70	480	110	3,20	1.450	8	240	1
63/50	616637	89	480	110	3,60	2.150	6	216	1
75/65	616638	95	540	130	3,60	2.950	2	98	3
90/80	616639	117	580	140	4,00	3.950	2	98	1
110/100	616640	150	585	145	5,40	7.050	2	50	1
125/100	616641	150	585	150	5,40	7.300	2	50	1
140/125	616642	163	580	155	5,00	8.000	1	25	3
160/150	616643	210	610	160	5,00	10.500	1	25	1
180/150	616644	210	610	170	5,00	11.000	1	25	1
200/200	616645	259	630	155	6,30	17.500	1	16	1
225/200	616646	259	610	145	6,30	18.000	1	16	1
250/250	616647	324	640	140	6,30	30.500	1	8	3
280/250	616648	324	640	160	6,30	31.000	1	8	3
315/300	616649	368	725	220	8,80	46.500	1	6	1
355/300	616650	368	735	260	8,80	48.000	1	6	3
400/400	616651	475	770	190	8,80	83.200	1	3	3
500/500	616652	590	1050	365	10,00	127.500	1	2	3
630/600	616653	735	1100	430	12,70	242.000	1	2	3

UFLG

Transition fitting HD-PE/copper (spigot fitting)

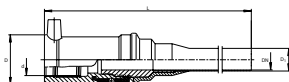
Transition fitting as copper pipe UFLG

- Gas
- Maximum pressure: Gas 5 bar
- Material; PE 100 and copper [SF Cu-F25, DIN EN 1057-R250]
- Safety technology

Note:

Secure the copper side in the PE.

Self-sealing, patented sealing geometry without elastomeric gasket for use in gas applications.



PE 100 SDR 11

Maximum permissible working pressure 5 bar (gas)



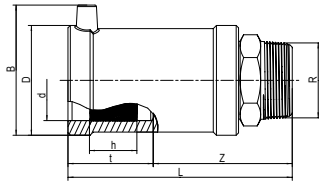
d/DN	Order No.	D	D1	L	Weight [kg]	BX	PU	Stock status
32/20	615733	49	22	340	0.510	25	750	1



FRIALEN transition fittings

USTN

Transition fitting HD-PE/steel with male thread



Transition fitting, steel pipe USTN

- Gas and H₂
- Maximum pressure: Gas 5 bar
- Material; PE 100 and steel [EN 10278; EN 10277-3 - 11SMn30+C -, thread to EN 10226-1]
- Safety technology

Note:

Anchored the steel side non-detachable and non-rotatable in the PE.
Self-sealing, patented sealing geometry without elastomeric gasket for use in gas applications.

Other thread dimensions available on request.



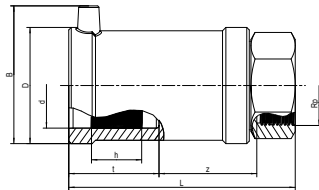
PE 100 SDR 11

Maximum permissible working pressure 5 bar (gas)

d	R	Order No.	D	L	Weight [kg]	BX	PU	Stock status
32	1"	612580	47	119	0.345	20	1080	1
40	1 1/4"	612582	58	131	0.530	20	800	1
50	1 1/2"	612584	70	146	0.700	15	600	1
63	2"	612586	84	152	1.050	10	400	1

USTM

Transition fitting HD-PE/steel with female thread



Transition fitting steel pipe USTM

- Gas and H₂
- Maximum pressure: Gas 5 bar
- Material; PE 100 and steel [EN 10278; EN 10277-3 - 11SMn30+C -, thread to EN 10226-1]
- Safety technology

Note:

Anchored the steel side non-detachable and non-rotatable in the PE.
Self-sealing, patented sealing geometry without elastomeric gasket for use in gas applications.

Other thread dimensions available on request.



PE 100 SDR 11

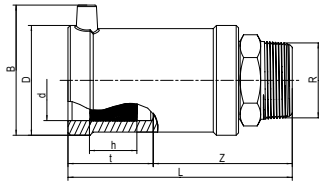
Maximum permissible working pressure 5 bar (gas)

d	Rp	Order No.	D	L	Weight [kg]	BX	PU	Stock status
32	1"	612570	47	112	0.340	20	1080	1
40	1 1/4"	612572	58	121	0.500	20	800	1
50	1 1/2"	612574	70	136	0.650	15	600	1
63	2"	612576	84	141	1.010	10	400	1



MUN

Transition fitting in HD-PE/brass with male thread



Brass pipe transition fitting MUN

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and brass [EN 12168 - CW617N, thread according to EN 10226-1]
- Safety technology

Note:

The brass side is anchored as non-detachable and non-rotatable in PE.
Self-sealing, patented sealing geometry without elastomeric seal for utilisation in water areas.
Default: Brass, gunmetal on request.
Other thread dimensions available on request.



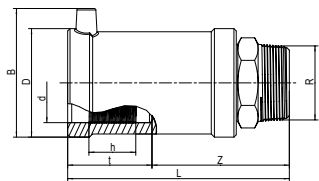
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

d	R	Order No.	D	L	Weight [kg]	BX	PU	Stock status
32	1"	612712	47	112	0.310	20	1440	1
32	1 1/4"	612709	47	120	0.390	20	1080	1
32	1 1/2"	612698	47	121	0.450	15	810	1
40	1"	612721	58	123	0.480	20	800	1
40	1 1/4"	612713	58	126	0.460	20	800	1
40	1 1/2"	612718	58	127	0.520	20	800	1
40	2"	612725	58	132	0.680	20	600	1
50	1"	612719	70	134	0.620	15	600	1
50	1 1/4"	612716	70	136	0.610	15	600	1
50	1 1/2"	612714	70	137	0.620	15	600	1
50	2"	612706	70	147	0.760	15	600	1
63	1 1/4"	612722	84	138	0.910	10	400	1
63	1 1/2"	612717	84	137	0.890	10	400	1
63	2"	612715	84	142	0.920	10	400	1

MUN V2A

Transition fitting HD-PE/V2A with male thread



Transition fitting V2A pipe MUN V2A

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and V2A [EN 10278 ; EN 10088-3 - 1.4305 -X8CrNiS18-9, thread according to EN 10226-1]
- Safety technology

Note:

V2A side is anchored in the PE so that it cannot be rotated.
Self-sealing, patented sealing geometry without elastomeric seal for utilisation in water areas.
Other thread dimensions available on request.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

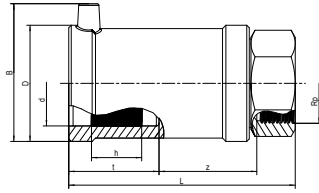
	d	R	Order No.	D	L	Weight [kg]	BX	PU	Stock status
1)	40	1"	616516	58	123	0.460	20	800	3
	40	1 1/2"	612727	58	127	0.495	20	800	1
	50	1 1/2"	612726	70	137	0.600	15	600	1
	63	1 1/2"	612705	84	137	0.865	10	400	1
	63	2"	612899	84	142	0.910	10	400	1

1) Minimum purchase quantity is a packaging unit (BX).

FRIALEN transition fittings

MUM

Transition fitting HD-PE/gunmetal with female thread



Transition fitting gunmetal pipe MUM

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and gunmetal [EN 1982 - CC499K-GC, thread to EN 10226-1]
- Safety technology

Note:

Gunmetal side is anchored non-detachable and non-rotatable in the PE. Self-sealing, patented sealing geometry without elastomeric seal for utilisation in water areas.

Default: Gunmetal, V2A on request.

Other thread dimensions available on request.

PE 100 SDR 11

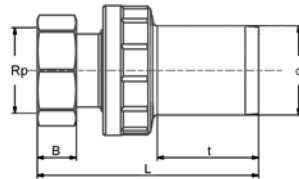
Maximum permissible working pressure 16 bar (water)



d	Rp	Order No.	D	L	Weight [kg]	BX	PU	Stock status
32	1"	612595	47	112	0.360	20	1080	1
40	1 1/4"	612596	58	121	0.520	20	800	1
50	1 1/2"	612692	70	136	0.650	15	600	1
63	1 1/2"	612708	84	141	1.230	10	300	1
63	2"	612693	84	141	1.050	10	400	1

UAM ET

Universal transition adaptor HD-PE/brass with free union nut with female thread



Universal transition adaptor brass pipe UAM ET

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and brass [CW617N or CW612N, ISO 228 thread]

Note:

The brass side is anchored non-detachable and non-rotatable in the PE. With freely rotatable union nut for easy and fast assembly.

For use in water areas.

Other thread dimensions available on request.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

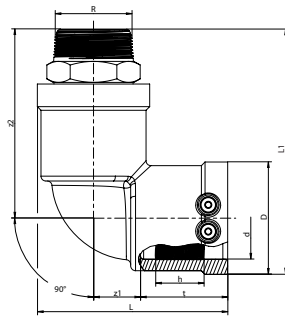


d	Rp	Order No.	L	WS [mm]	t	Weight [kg]	BX	PU	Stock status
25	3/4"	616654	110	30	44	0.160	60	2160	1
32	1"	616655	120	36	47	0.330	30	1080	1
40	1 1/4"	616626	145	50	56	0.520	20	720	1
50	1 1/2"	616627	150	58	57	0.650	16	576	3
63	1 1/2"	616629	160	58	63	0.740	9	324	1
63	2"	616628	170	67	63	0.920	9	324	3



WUN 90

90° transition elbow HD-PE/brass with external thread



Transition elbow brass pipe WUN 90

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and brass [EN 12168 - CW617N, thread according to EN 10226-1]
- Safety technology

Note:

The brass side is anchored as non-detachable and non-rotatable in PE. Self-sealing, patented sealing geometry without elastomeric seal for utilisation in water areas.

Default: Brass, gunmetal on request.

Other thread dimensions available on request.



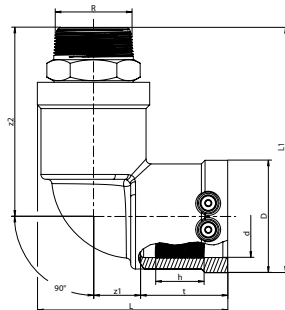
PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

d	R	Order No.	D	L	Weight [kg]	BX	PU	Stock status
32	1"	612120	47	85	0.340	20	1000	1
32	1 1/2"	612140	47	94	0.470	20	800	1
40	1"	612127	58	102	0.500	15	750	1
40	1 1/4"	612122	58	102	0.520	15	750	1
40	1 1/2"	612121	58	102	0.560	15	750	1
50	1"	612119	70	118	0.680	10	500	1
50	1 1/4"	612123	70	118	0.670	10	500	1
50	1 1/2"	612124	70	118	0.680	10	500	1
63	1 1/2"	612125	84	128	0.980	10	320	1
63	2"	612126	84	128	1.000	10	320	1

WUN V2A 90

Transition elbow 90° HD-PE/Stainless steel with male thread



Transition elbow V2A pipe WUN V2A 90

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and V2A [EN 10278 ; EN 10088-3 - 1.4305 -X8CrNiS18-9, thread according to EN 10226-1]
- Safety technology

Note:

V2A side is anchored in the PE so that it cannot be rotated.

Self-sealing, patented sealing geometry without elastomeric seal for utilisation in water areas.

Other thread dimensions available on request.



PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)

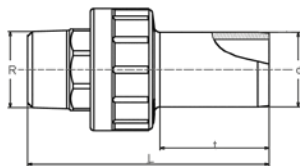
d	R	Order No.	D	L	Weight [kg]	BX	PU	Stock status
40	1"	616514	58	102	0.540	15	750	1
40	1 1/2"	612148	58	102	0.535	15	750	1
50	1 1/2"	612118	70	118	0.650	10	600	1
63	1 1/2"	612186	84	128	0.980	10	320	1
1) 63	2"	616515	84	128	0.950	10	320	3

1) Minimum purchase quantity is a packaging unit (BX).

FRIALEN transition fittings

UAN

Universal adaptor HD-PE/brass with male thread and PE pipe socket



Universal transition adaptor brass pipe UAN

- Water and gas
- Maximum pressure: Water 16 bar, gas 5 bar
- Material; PE 100 and brass [CW617N / CW612N, ISO 228 thread]

Note:

The brass side is anchored non-detachable and non-rotatable in the PE.
Installation independent of position possible.
For use in the water and gas sector.
Other thread dimensions available on request.

PE 100 SDR 11

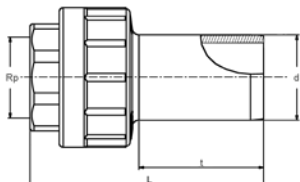
Maximum permissible working pressure 16 bar (water) / 5 bar (gas)



d	R	Order No.	L	WS [mm]	t	Weight [kg]	BX	PU	Stock status
20	1/2"	616604	94	22	41	0.100	70	4200	1
25	3/4"	616605	92	28	44	0.150	60	3600	1
32	1"	616152	104	35	47	0.240	30	1800	1
40	1 1/4"	616153	121	44	56	0.400	20	1200	1
50	1 1/2"	616154	123	50	57	0.520	16	960	1
63	1 1/2"	616610	136	50	63	0.620	9	540	1
63	2"	616155	140	62	63	0.730	9	540	1
75	2 1/2"	616612	155	77	70	1.200	10	300	1
90	3"	616613	172	90	78	1.600	8	240	1
110	4"	616614	200	115	87	2.900	4	120	3
125	4"	616664	200	115	92	2.950	4	120	3

UAM

Universal transition adaptor HD-PE/brass with female thread



Universal transition adaptor brass pipe UAM

- Water and gas
- Maximum pressure: Water 16 bar, gas 5 bar
- Material; PE 100 and brass [CW617N / CW612N, ISO 228 thread]

Note:

The brass side is anchored non-detachable and non-rotatable in the PE.
Installation independent of position possible.
For use in the water and gas sector.
Other thread dimensions available on request.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 5 bar (gas)

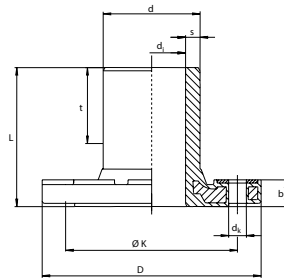


d	Rp	Order No.	L	WS [mm]	t	Weight [kg]	BX	PU	Stock status
20	1/2"	616615	79	26	41	0.080	80	4800	1
25	3/4"	616616	77	32	44	0.120	60	3600	1
32	1"	616156	88	40	47	0.190	36	2160	1
40	1 1/4"	616157	100	49	56	0.290	20	1200	1
50	1 1/2"	616158	102	55	57	0.350	16	960	1
63	1 1/2"	616621	115	55	63	0.450	10	600	1
63	2"	616159	120	67	63	0.580	10	600	1
75	2 1/2"	616665	128	82	70	0.760	10	300	1
90	3"	616623	144	94	78	1.030	8	240	1
110	4"	616624	161	120	87	1.870	6	180	3
125	4"	616666	161	120	92	1.990	6	180	3



EFL

Full faced flange (spigot fitting)



Flange adapter and flange EFL

- Water and gas
- Maximum pressure: Water 16 bar, gas 10 bar
- Material; PE 100 and metal insert

Note:

Metal insert in flange in order to prevent cold flow.
Fused side for processing with FRIALEN couplers MB or UB.
We recommend GST seals.
Note the screw tightening torques after specifying the seal manufacturer or DVS.
Additional washers are required.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water) / 10 bar (gas)

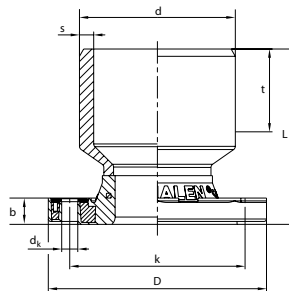


d/DN	Order No.	D	d _i	d _k	L	s	Ø k	Holes for screws	Weight [kg]	BX	PU	Stock status
63/50	615417	169	51	17	105	5,8	125	4	1.500	5	250	1
90/80	615418	204	72	17	130	8,2	160	8	2.540	5	160	1
110/100	615419	224	87	17	150	10	180	8	3.310	3	96	1
125/100	615605	224	101	17	160	11,4	180	8	3.280	2	64	1
160/150	615421	288	127	21	190	14,6	240	8	6.140	2	36	1
180/150	615927	288	123	21	200	16,4	240	8	6.660	2	36	1
1) 225/200	615607	343	180	21	225	20,4	295	8	9.100	1	27	1

1) Flange drill hole for PN 10

FLR

Flange reducer



Flange reducer FLR

- Water
- Maximum pressure: Water 16 bar
- Material; PE 100 and metal insert

Note:

Metal insert in flange in order to prevent cold flow.
We recommend GST seals.
Note the screw tightening torques after specifying the seal manufacturer or DVS.
Additional washers are required.

PE 100 SDR 11

Maximum permissible working pressure 16 bar (water)



d/DN	Order No.	D	d _k	L	s	Ø k	Holes for screws	Weight [kg]	BX	PU	Stock status
110/80	616065	204	17	161	10	160	8	3.500	3	96	1
160/100	616241	224	17	180	14,6	180	8	4.060	2	64	1



FRIAFIT sewage system

The closed PE system for sewage, wastewater, storm and grey water pipe systems.

Product range AF 27/23

Things worth knowing about FRIAFIT Sewage System

Product traceability

Each product is equipped with an additional barcode for traceability.

Conformity

The FRIAFIT sewage system made of PE 100 complies with EN 12666 and is therefore regarded as a regulated construction product. Therefore, certification or 3rd party inspection is not required.

The FRIAFIT spigot saddle ASA MULTI is generally approved under construction regulations. You can find the registration notice in the download area on our homepage.

Fusibility

FRIAFIT safety fittings can be fused with SDR levels 33 to 17. Other levels of SDR can be processed on request.

Please also note the details of the respective SDR fusibility, which are indicated on the bar code label of the fitting and further binding labels directly on the product.

Please contact our application technology when you want to process thin-walled pipes > SDR33.

FRIAFIT safety fittings can be processed with pipes made of PE 100 and PE 100-RC, PE 80 according to EN 12666, DIN 8074/75, EN 12201-2, ISO 4427-2.

For pipes made of other PE material types, e.g. PE-Xa, PE-RT, PE-EL please request confirmation of processability.

For PE pipes, a melt flow rate of MFR 190/5 in the range from 0.2 to 1.7 g/10 minutes applies. For components with MFR < 0.20, a confirmation of suitability is required.

Processing the FRIAFIT safety fittings is possible with FRIAMAT fusion units at ambient temperatures between -10 °C and +45 °C.

In the case of material transition joints, the material- or system-specific standards and assembly guidelines also apply.

Please read our assembly instructions for any restrictions regarding installation, laying as well as processing of FRIAFIT safety fittings in general. Our customer service department and our field application technicians will also be pleased to answer any questions.

Pressure resistance

The FRIAFIT sewage system is designed for non-pressure pipes. According to DIN EN 1610, the test pressure is maximum 0.5 bar.

FRIAFIT sewage bends ABM/ABMS and the sewage saddles ASA TL, ASA UNI and ASA VL are designed for pressure pipe systems with a permanent working pressure of maximum 2.5 bar.

Information regarding the pressure bearing capacity can be found in the respective product description.

Fusion process

FRIAFIT safety fittings can be processed with universal electrofusion control units, e.g. the FRIAMAT series. The fusion parameters are automatically transmitted by the fitting barcode.

Cooling times

FRIAFIT socket fitting, e.g. AM couplers, manhole connectors AEM, bends ABS and also FIXBLOC restraint:

The cooling times (CT) indicated on the bar codes are understood as times until the movement of the fused joint.

FRIAFIT sewage saddles ASA TL, ASA UNI and ASA VL and transition saddle ASA TL KG:

The cooling time indicated on the bar code of the saddle is understood as the time until drilling.

For further details, please refer to our assembly instructions.

Processing instructions and additional information

The processing takes place according to our assembly instructions, which are also available for download on the Internet at www.aliaxis.de. You can also find further information about the products and their processing, approvals, publications as well as seminar dates and contact persons via the navigation.

Statics

The structural calculations for of the HD-PE channel pipe must be executed in each individual case by the respective pipe manufacturer or engineering office, depending on the ambient conditions.

The annular stiffness of the pipe connection, which is fused with FRIAFIT couplers, is in any case higher than the annular stiffness of the pipe inserted.



FRIALEN

Safety Technology

Open wire design



Large insertion depth and longer fusion zones

Large insertion depth & longer fusion zones



The ideal embedding of exposed heating coils guarantees the fast and safe assembly of our safety fittings.



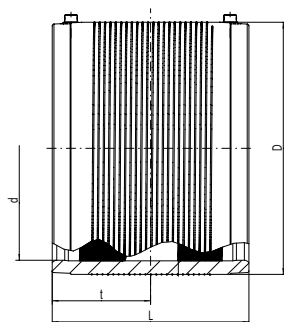
Large insertion depth and longer fusion zones ensures an unrivaled safe and secure jointing process.

Our unique technology and design delivers the **IDEAL SOLUTION** for safe electrofusion connections.



AM

Coupler without inner stop, SDR 17



Coupler without inner stop, SDR 17

- For connecting water and sewage pipes made from HD-PE
- Safety technology
- For processing without holding devices
- With pin indicator for visual inspection of the fusion

PE 100 SDR 17

Maximum permissible working pressure 10 bar (water / sewage)

	d	Order No.	D	L	t	Weight [kg]	BX	PU	Stock status
	110	680001	130	160	80	0.600	24	192	1
	125	680013	146	160	80	0.650	22	176	1
	160	680002	184	180	90	1.100	12	96	1
	180	680003	207	180	90	1.450	8	64	1
	200	680004	236	180	90	2.070	1	75	1
	225	680005	263	200	100	2.723	1	52	1
	250	680006	282	220	110	2.200	1	44	1
	280	680007	316	220	110	3.800	1	32	1
	315	680008	355	220	110	4.750	1	24	1
	355	680009	400	220	110	5.900	1	24	1
	400	680010	450	220	110	7.300	1	12	1
	450	680011	506	270	135	11.200	1	6	1
1)	500	680012	562	270	135	14.450	1	4	1
1) 2)	560	680018	630	380	190	24.350	1	2	1
1) 2)	630	680019	710	420	210	35.000	1	2	1

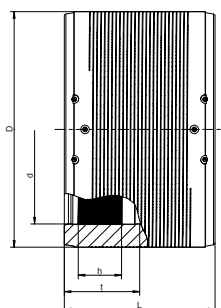
1) separate fusion zones

2) with pre-heating technology for optimum gap bridging

For use with close-fit liners, please contact our hotline +49 621 486-1896.

UB SDR 17

Coupler without inner stop, SDR 17



Coupler UB SDR 17 without inner stop

- Gas and water
- Maximum pressure: Gas 5 bar; Water 10 bar
- Material; PE 100
- Safety technology
- Separate fusion zone
- DVGW test mark: DV-8611AU2250 and DW-8610CN0420

Note

From nominal size 560 with preheating technology and from nominal size 1000, only one FRIAMAT XL is to be utilised, which is available as a loan device under Order No. 613091.

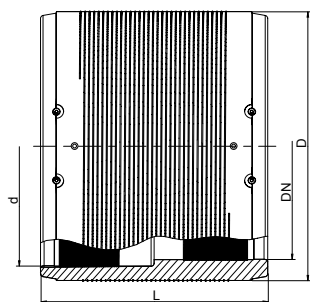
PE 100 SDR 17

Maximum permissible working pressure 10 bar (water / sewage)

	d	Order No.	B	D	h	L	t	Weight [kg]	BX	PU	Stock status
	710	615994	802	800	112	442	221	46.000	1	2	1
	800	616290	902	900	137	500	250	65.900	1	1	1
	900	616345	1026	1024	110	500	250	91.500	1	1	1
	1000	616403	1132	1130	129	610	305	128.000	1	1	3
	1200	616416	1358	1356	155	670	335	205.000	1	1	3



REM SDR 17 Reducer, SDR 17 for Relining



Reducer REM, SDR 17 for Relining

- Gas and water
- Maximum pressure: Gas 5 bar; Water 10 bar
- Material; PE 100
- Problem solver for pipe refurbishment work (relining)
- Safety technology
- Separate fusion zone
- Preheating technology

PE 100 SDR 17

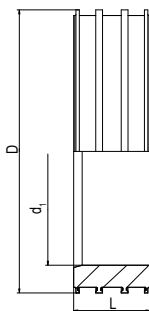
Maximum permissible working pressure 10 bar (water / sewage)

	d/DN	Order No.	B	D	h1	L	t	Weight [kg]	BX	PU	Stock status
1)	110/100	615569	144	130	30	160	80	0.700	24	192	1
	160/150	615571	199	190	38	180	90	1.600	12	96	1
	315/300	615576	355	355	78	300	150	7.700	1	18	1

1) Discontinued article until Q1/2023

ASF

Shaft lining adapter for prefabricated concrete sewage inspection chambers



Shaft lining adapter for prefabricated concrete sewage inspection chambers ASF

- Connecting element between concrete prefabricated manhole and sewage insert sleeve AEM
- Reversed anchoring webs (T-section) on the entire circumferential width always ensure a firm and tight fit in the concrete
- Defined internal surface and fitting ratio for reliable system seal with AEM
- Stable internal diameter due to large wall thickness
- Flush closure (inside and outside) in the concrete shaft sub-section according to DIN 4034

PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

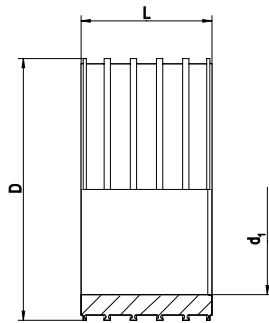
Ø Pipe	d ₁	Order No.	D	L	Weight [kg]	BX	PU	Stock status
110	134	680401	200	135	1.600	12	96	1
160	190	680402	250	135	1.900	8	64	1
180	218	680403	280	135	2.300	6	48	1
200	250	680404	315	135	2.700	4	32	1
225	280	680405	355	135	3.700	4	32	1
250	316	680407	400	135	4.800	4	32	1
280	357	680408	450	135	6.200	1	18	1
315	402	680409	500	135	7.400	1	18	1
355	452	680410	560	135	9.300	1	12	1
400	502	680411	630	135	12.700	3	6	1
450	562	680414	670	135	11.300	3	6	1
500	628	680412	710	135	8.800	3	6	1
560	713	680413	800	135	10.700	3	6	1

Note: If pipe dimensions ≥ d 710 are used, please contact our hotline +49 621 486-1896.



ASFL

Shaft lining adapter for sewage inspection chambers L = 250 mm



Shaft lining adapter for sewage inspection chambers L = 250 mm ASFL

- Connecting element between a brick shaft or concrete shaft and FRIAFIT sewage insert sleeve AEM for installation on the construction site
- Reversed anchoring webs (T-section) on the entire circumferential width ensure a firm and tight fit in the shaft
- Defined internal surface and fitting ratio for reliable system seal with AEM
- Stable internal diameter due to large wall thickness

PE 100

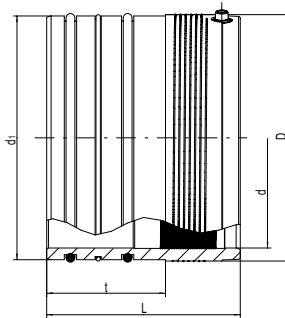
Maximum permissible test pressure 0.5 bar to DIN EN 1610

Ø Pipe	d ₁	Order No.	D	L	Weight [kg]	BX	PU	Stock status
225	280	680505	355	250	4.670	2	16	1
250	280							
280	316	680507	400	250	6.650	2	16	1
315	357	680508	450	250	8.750	1	9	1
355	402	680509	500	250	11.050	1	6	1
450	502	680511	630	250	23.400	1	2	1
560	628	680512	710	250	16.400	1	2	1
630	713	680513	800	250	20.300	1	2	1

Note: If pipe dimensions ≥ d 710 are used, please contact our hotline +49 621 486-1896.

AEM

Plug-in coupler for shaft lining adapter



Plug-in coupler for shaft lining adapter AEM

- For the articulated connection of HD-PE pipes into ducts in accordance with DIN 4034 or DWA-A 157 together with the FRIAFIT adapter ASF/ ASFL
- With two elastomeric sealing rings as hinge for optimum compression
- With water-swellaable sealing ring Q for additional safety
- Connection side to HD-PE pipe with open-wire technology for optimal heat transfer for use without holding devices
- Safety technology
- Level transition to chamber sole

Note:

Also available with NBR seals (handling of substances hazardous to water according to AwSV, application WHG e.g. grease and coalescence separators): Stock status 3.

PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

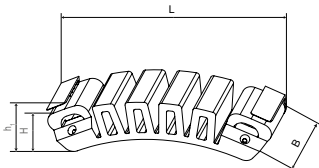
d	d ₁	Order No.	D	L	t	Weight [kg]	BX	PU	Stock status
110	131	680201	133	165	135	0.700	8	144	1
160	187	680202	193	225	135	1.900	8	64	1
180	215	680203	225	220	135	3.100	1	54	1
200	247	680204	250	220	135	3.500	1	56	1
225	277	680205	280	220	135	4.600	1	32	1
250	277	680206	280	220	135	2.500	1	32	1
280	313	680207	315	220	135	3.600	1	32	1
315	354	680208	355	220	135	4.350	1	24	1
355	399	680209	400	220	135	5.800	1	20	1
400	449	680210	450	220	135	8.300	1	12	1
450	499	680211	500	220	135	8.900	1	8	1
500	559	680214	562	220	135	11.050	1	8	1
1) 560	624	680212	630	220	135	13.400	1	4	1
1) 630	709	680213	710	270	135	22.400	1	3	1

1) with pre-heating technology for optimum gap bridging



FIXBLOC

Fixation for absorbing axial thrust and tensile forces



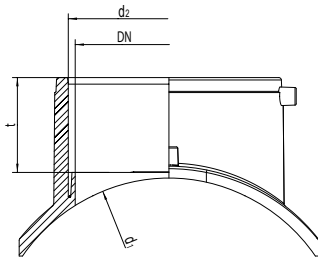
- Fixation for absorbing axial thrust and tensile forces FIXBLOC
- For the production of a fixed point on a PE pipeline, as a pull-out fuse, installation aid or fixing to pipe supports
 - Strength per fixed point up to 40 kN
 - Multiple applications possible around the pipe circumference
 - Processing is carried out with commercially available tensioning straps with a belt width of 50 mm, which are securely guided by two straps (easily removable)
 - Minimum length approx. 3.5 x d pipe (longer for multiple applications)
 - If the belt around the pipe circumference is not accessible, the clamping device FIXBLOC FWFB (Order No. 613380), e.g. in the case of a PE liner, which must be anchored relative to a shaft wall.



PE 100
Maximum shear load per FIXBLOC: 40 kN

d ₁	Order No.	B	H	h1	L	Weight [kg]	BX	PU	Stock status
160 - 1600	680600	60	40	45	220	0.310	15	750	1



ASA TL
Top-loading sewage saddle


Top-loading sewage saddle ASA TL, SDR 17

- Compact component made from HD-PE with integrated fusion coupler in the outlet (d 160)
- For a connection for connecting pipes to existing PE main channel
- Safety technology

Note:

Can only be used with clamping and drilling device FWFIT (Order No. 613480).

For d 200, special installation instructions must be observed when applying to SDR 33-11 pipes and for d 225-d 315 to SDR 33-26 pipes.

For installation on close-fit liners and pipes d 560/d 630, please contact our hotline +49 621 486-1896.


PE 100

Maximum permissible working pressure 2.5 bar

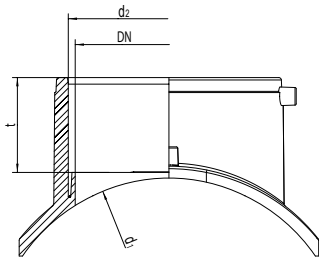
	d ₁	d ₂	DN	Order No.	t	Weight [kg]	BX	PU	Stock status
1)	200	160	150	682618	76	0.990	8	64	1
	225	160	150	682613	76	0.943	8	64	1
	250	160	150	682614	76	0.802	10	80	1
	280	160	150	682615	76	0.986	10	80	1
	315	160	150	682620	76	0.952	10	80	1
	355	160	150	682621	76	0.894	10	80	1
	400	160	150	682616	76	0.882	10	80	1
	450	160	150	682622	76	0.900	10	80	1
	500/560/630	160	150	682622	76	0.900	10	80	1

1) When using d 250 please contact the hotline +49 621 486-1896.



ASA TL KG

Top-loading transition saddle



- Transition saddle, top-Loading ASA TL KG, SDR 17
- Compact component made from HD-PE with integral socket in the outlet (d 160)
 - For connecting connecting pipes made of PVC/PP DN 150 to existing PE main channel
 - Safety technology

Note:
Can only be used with clamping and drilling device FWFIT (Order No. 613480).
For d 225 - d 315, special installation instructions must be observed when applying to SDR 33 - 26 pipes.



PE 100
Maximum permissible test pressure 0.5 bar to DIN EN 1610

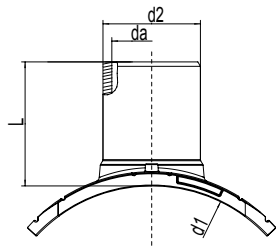
d ₁	d ₂	DN	Order No.	t	Weight [kg]	BX	PU	Stock status
225	160	150	682624	76	1.192	8	64	1
280	160	150	682625	76	1.106	10	80	1
315	160	150	682626	76	1.106	10	80	1
355	160	150	682627	76	1.106	10	80	1
450	160	150	682628	76	1.136	10	80	1
500/560/630	160	150	682629	76	1.136	10	80	1

For installation on close-fit liners and pipes d 560/d 630, please contact our hotline +49 621 486-1896.



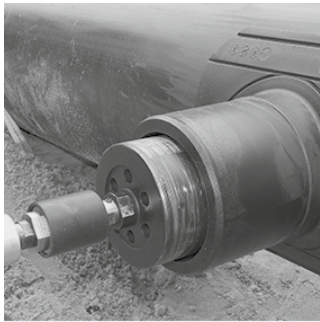
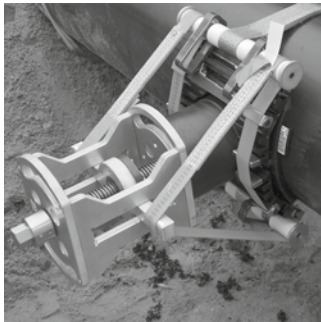
ASA UNI

Spigot saddle SDR 17



- Spigot saddle with outlet spigot ASA UNI, SDR 17
- For the connection of a branch pipe into PE pipes without pressure or under working pressure
 - Compact component made of HD-PE saddle with safety technology
 - Outlet spigot for processing with FRIAFIT couplers AM
 - For variable adaptation to all pipe diameters in the specified range by means of clamping device
 - With pin indicator for visual inspection of the fusion

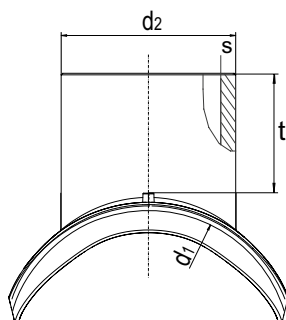
Note:
Can only be used with clamping device UNITOP (Order No. 613385) and clamping adaptor for outlet SDR 17 (Order No. 613839).
For pressure-free tapping, we recommend our drilling equipment FWAB (Order No. 613838).



PE 100
Maximum permissible working pressure 2.5 bar (sewage)

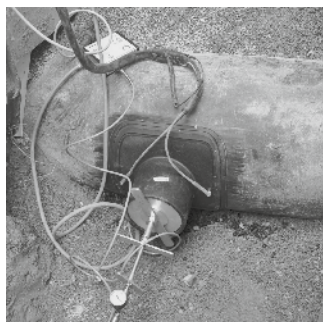
d_1	d_2	Order No.	Weight [kg]	BX	PU	Stock status
630-900	160	682639	1.650	5	40	1



ASA VL
Vacuum-loading sewage saddle


Sewage saddle vacuum loading ASA VL, SDR 17

- For the integration of large-volume branch pipes to collectors made of HD-PE with little effort, minimal foundation engineering and without interruption of operation
- HD-PE saddle with safety technology
- When using SDR 17/17,6 pipes, the outlet spigot d 225 provide a passage with an equal base
- Can be fused with FRIAFIT couplers AM or transition socket AMKG d 225 on PVC/PP DN 200
- Innovative vacuum clamping technology for reliable bridging of even large pipe ovality and shape deviations, which additionally provides the possibility of a tightness test before drilling


Note:

Can be used with the vacuum pump VACUPUMP only (Order No. 613827) and the corresponding plunger PRESSKO (Order No. 613823).

For pressure-free tapping, we recommend our drilling equipment FWAB (Order No. 613835).

The ASA VL assembly aid (Order No. 613371) is also required for cross-dimensional processing.

PE 100

Maximum permissible working pressure 2.5 bar (sewage)

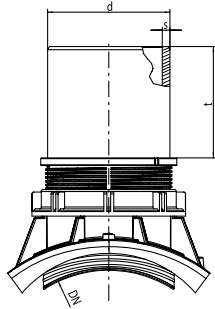
d ₁	d ₂	Order No.	t	s	Weight [kg]	BX	PU	Stock status
355	225	682640	144	13,4	3.080	1	4	1
450	225	682641	144	13,4	2.900	1	6	1
560	225	682642	144	13,4	3.065	1	6	1
630	225	682643	144	13,4	3.080	1	6	1

Cross-dimension processing

Ø pipe	d2	Order No.
315 400	225	682640
500	225	682641
710	225	682643

ASA MULTI

Connecting spigot to clay and concrete pipes



Connecting spigot to clay and concrete pipes ASA MULTI

- For the connection of fused, root-proof HD-PE connection pipes to clay or concrete pipes
- For reinstallation as well as refurbishment without separation or complete opening of the main trench
- When using SDR 17/17,6 pipes, the outlet connection d 160 offers a passage with the same sole
- Bright inner surface of the spigot for optimum visibility when driving through the camera
- Can be fused with FRIAFIT coupler AM or FRIAFIT bends ABM/ABMS

Note:

For installation, the ASA MULTI MS assembly key (Order No. 682660) will be required.

PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

	Pipe	d	Order No.	B	H	t	s	Weight [kg]	BX	PU	Stock status
1)	STZ DN 250	160	682650	265	250	146	9,5	2.700	5	40	1
2)	STZ DN 300/350	160	682651	265	250	146	9,5	2.800	5	40	1
3)	Concrete DN 250/300	160	682651	265	250	146	9,5	2.800	5	40	1

- 1) Suitable for connection to clay pipes DN 250 N/H (standard and high load series EN 295)
- 2) Suitable for connection to clay pipes DN 300 / DN 350 N/H (standard and high load series EN 295)
- 3) Suitable for connection to concrete pipes DN 250 / DN 300 (EN 1916)

ASA MULTI MS

Assembly key

Assembly key ASA MULTI MS

- For secure and fast installation of FRIAFIT connector spigots ASA MULTI

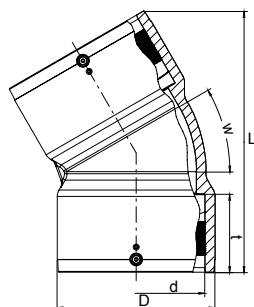


Order No.	Weight [kg]	Stock status
682660	0.150	1



ABM

Sewage bend



Sewage bend (coupler/coupler) ABM

- Low space requirement through compact design
- The elbow gradations 15°, 30°, 45° enable comfortable services routing
- Couplers integrated on both sides to reduce assembly time with safety technology
- The smooth and hydraulically optimised internal contour provides a equal-base passage when utilising SDR 17/17.6 pipes
- Bright surface finish for optimum visibility when driving through with a camera
- With pin indicator for visual inspection of the fusion

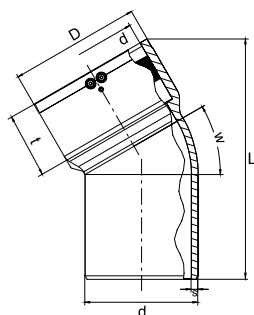
PE 100

Maximum permissible working pressure 2.5 bar

d	w	Order No.	D	L	t	Weight [kg]	BX	PU	Stock status
160	15°	681100	185	279	92	1.870	6	48	1
160	30°	681101	185	306	92	2.100	6	48	1
160	45°	681102	185	320	92	2.060	6	48	1

ABMS

Sewage bend (one-side spigot end)



Sewage bend (one-side spigot end) ABMS

- Low space requirement through compact design. The gradations 15°, 30°, 45° enable comfortable services routing
- Fem. connection side with safety technology
- Pipe spigot particularly suitable for direct fusion into the FRIAFIT sewage saddle ASA TL
- By multiple application with ABM, for example, elbows of 60°, 90°, etc. can also be achieved
- The smooth and hydraulically optimised internal contour provides a equal-base passage when utilising SDR 17/17.6 pipes
- Bright surface finish for optimum visibility when driving through with a camera
- With pin indicator for visual inspection of the fusion.

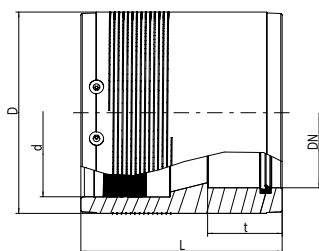
PE 100

Maximum permissible working pressure 2.5 bar

d	w	Order No.	D	L	t	s	Weight [kg]	BX	PU	Stock status
160	15°	681103	185	286	92	9,5	1.510	6	48	1
160	30°	681104	185	329	92	9,5	1.680	6	48	1
160	45°	681105	185	325	92	9,5	1.730	6	48	1

AMKG

Transition coupler PE-PVC/PP



Transition coupler PE-PVC/PP AMKG

- Continuous material transfer from HD-PE pipes (SDR 33 - 17) to PVC/PP pipes
- HD-PE side with integrated coupler with safety technology
- PVC/PP side as coupler with SBR lip seal with large insertion depth

PE 100

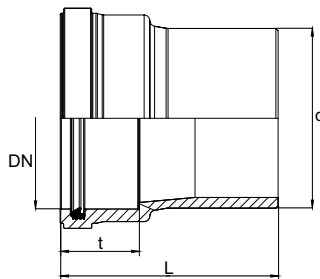
Maximum permissible test pressure 0.5 bar to DIN EN 1610

d/DN	Order No.	D	L	t	Weight [kg]	BX	PU	Stock status
160/150	682630	193	183.5	80	1.780	1	120	1
225/200	682631	270	270	100	5.820	1	32	1



UKG

Transition piece PE-PVC/PP



Transition piece PE-PVC/PP UKG

- Continuous material transfer from HD-PE pipes (SDR 33 - 17) to PVC/PP pipes
- HD-PE side can be fused with FRIAFIT AM coupler, bend ABM/ABMS or with FRIAFIT ASA TL sewage saddles
- PVC/PP side as coupler with SBR lip seal with large insertion depth

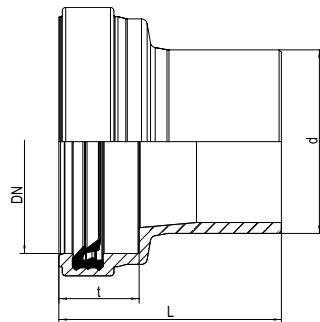
PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d/DN	Order No.	L	t	Weight [kg]	BX	PU	Stock status
160/150	682617	194	70	1.070	12	96	1

USTZ

Transition piece PE - clay



Transition fitting PE - clay USTZ

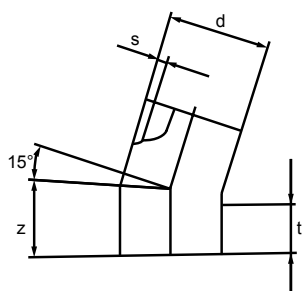
- Continuous material transfer from HD-PE pipes (SDR 33 - 17) to clay pipes (spigot end)
- HD-PE side can be fused with FRIAFIT AM coupler, bend ABM/ABMS or with FRIAFIT ASA TL sewage saddles
- Clay side as coupler with SBR lip seal with large insertion depth.

PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d/DN	Order No.	L	t	Weight [kg]	BX	PU	Stock status
160/150	682623	194	70	1.250	2	36	1



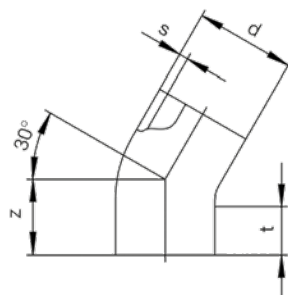
ABS 15
15° sewage bend (spigot fitting)


Sewage bend 15°, SDR 17 (spigot fitting) ABS 15

- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
- Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100
Maximum permissible test pressure 0.5 bar to DIN EN 1610

d	Order No.	Z	t	s	Weight [kg]	BX	Stock status
110	681004	230	170	6,6	1.050	1	3
125	681005	250	170	7,4	1.450	1	3
160	681006	280	170	9,1	2.780	1	3
180	681007	315	250	10,2	3.770	1	3
225	681008	370	250	12,8	6.870	1	3
280	681023	438	300	15,9	12.500	1	3
355	681020	528	300	20,1	24.300	1	3

ABS 30
30° sewage bend (spigot fitting)


Sewage bend 30°, SDR 17 (spigot fitting) ABS 30

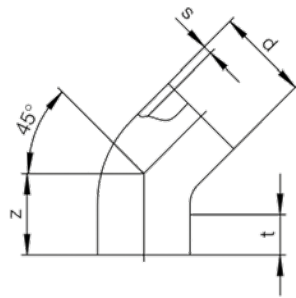
- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
- Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100
Maximum permissible test pressure 0.5 bar to DIN EN 1610

d	Order No.	Z	t	s	Weight [kg]	BX	Stock status
110	681009	230	170	6,6	1.050	1	3
125	681010	250	170	7,4	1.450	1	3
160	681001	280	170	9,1	2.780	1	3
180	681002	317	250	10,2	3.770	1	3
225	681003	371	250	12,8	6.870	1	3
280	681022	440	300	15,9	12.500	1	3
315	681021	480	300	17,9	17.400	1	3
355	681019	520	300	20,1	22.100	1	3

ABS 45

45° sewage bend (spigot fitting)



Sewage bend 45°, SDR 17 (spigot fitting) ABS 45

- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
- Black pipe colour with bright inner surface (subject to availability)

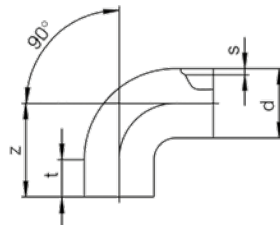
PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d	Order No.	Z	t	s	Weight [kg]	BX	Stock status
110	681011	235	170	6,6	1.050	3	3
125	681012	250	170	7,4	1.450	3	3
160	681201	280	170	9,1	2.780	1	3
180	681202	320	250	10,2	3.770	1	3
200	681203	349	250	11,4	5.000	1	3
225	681204	380	250	12,8	6.870	1	3
250	681205	411	250	14,2	9.210	1	3
280	681206	448	300	15,9	12.500	1	3
315	681207	491	300	17,9	17.400	1	3
355	681208	541	300	20,1	24.300	1	3

ABS 90

90° sewage bend (spigot fitting)



Sewage bend 90°, SDR 17 (spigot fitting) ABS 90

- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
- Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100

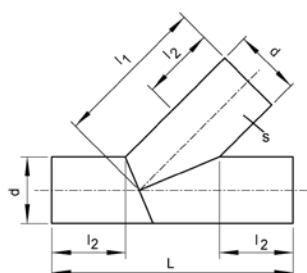
Maximum permissible test pressure 0.5 bar to DIN EN 1610

d	Order No.	Z	t	s	Weight [kg]	BX	Stock status
160	681601	390	100	9,1	3.230	1	3
180	681602	420	150	10,2	4.370	1	3
225	681603	488	150	12,8	7.440	1	3



ATS 45

Equal branch 45° (spigot fitting)



- Equal branch with same outlet 45°, SDR 17 (spigot fitting) ATS 45
- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
 - Black pipe colour with bright inner surface (subject to availability)

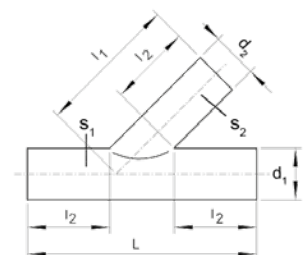
PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d	Order No.	L	l1	l2	s	Weight [kg]	BX	Stock status
110	682001	556	333	200	6,6	1.700	1	3
125	681013	577	351	200	7,4	2.300	1	3
160	682002	626	393	200	9,5	4.100	1	1
180	682003	655	417	200	10,7	5.400	1	3
200	682004	783	491	250	11,9	8.000	1	3
225	682005	818	522	250	13,4	10.500	1	3
250	682006	954	602	300	14,8	15.100	1	3
280	682007	996	638	300	16,6	19.700	1	3
315	682008	1145	730	350	18,7	28.800	1	3
355	682009	1202	779	350	21,1	38.300	1	3

ATSR 45

Unequal branch 45° (spigot fitting)

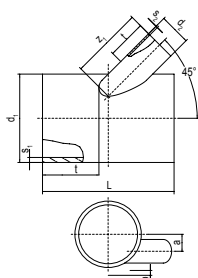


- Unequal branch with reduced outlet 45°, SDR 17 (spigot fitting) ATSR 45
- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM
 - Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d ₁	d ₂	Order No.	L	l1	l2	s ₁	s ₂	Weight [kg]	BX	Stock status
160	110	682201	556	368	200	9,5	6,6	3.100	1	3
225	160	682203	726	489	250	13,4	9,5	8.000	1	3
280	160	682204	826	578	300	16,6	9,5	13.100	1	3
280	225	682205	918	610	300	16,6	13,4	16.300	1	3
315	160	682206	926	653	350	18,7	9,5	18.100	1	3
315	225	682207	1018	685	350	18,7	13,4	21.900	1	3
355	160	682208	926	681	350	21,1	9,5	22.400	1	3
355	225	682209	1018	714	350	21,1	13,4	26.700	1	3
450	160	682210	926	748	350	26,7	9,5	34.800	1	3

ATSRS 45
Unequal branch 45° with off-center outlet (spigot fitting)


Unequal branch 45° with off-center outlet, SDR 17 (spigot fitting) ATSRS 45

- HD-PE fitting with off-center outlet for processing without holding devices with FRIAFIT couplers AM.
- Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610
in flow direction right

d ₁	d ₂	Order No.	L	t	z ₁	s ₁	s ₂	a	b	Weight [kg]	BX	Stock status
315	160	682301	630	200	320	17,9	9,1	50	30	13.400	1	3
315	225	682302	720	200	320	17,9	12,8	20	25	17.400	1	3
355	160	682303	630	200	335	20,1	9,1	68	30	16.600	1	3
355	225	682304	720	200	335	20,1	12,8	40	25	20.900	1	3
450	160	682305	670	200	370	25,5	9,1	115	30	26.600	1	3
450	225	682306	760	200	370	25,5	12,8	87	25	32.300	1	3
560	160	682307	670	200	410	31,7	9,1	170	30	39.900	1	3
560	225	682308	760	200	410	31,7	12,8	142	25	47.600	1	3
630	160	682309	670	200	440	35,7	9,1	205	30	49.900	1	3
630	225	682310	760	200	440	35,7	12,8	177	25	59.100	1	3

PE 80 / PE 100

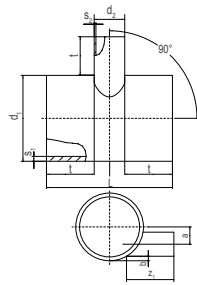
Maximum permissible test pressure 0.5 bar to DIN EN 1610
in flow direction left

d ₁	d ₂	Order No.	L	t	z ₁	s ₁	s ₂	a	b	Weight [kg]	BX	Stock status
315	160	682311	630	200	320	17,9	9,1	50	30	13.400	1	3
315	225	682312	720	200	320	17,9	12,8	20	25	17.400	1	3
355	160	682313	630	200	335	20,1	9,1	68	30	16.600	1	3
355	225	682314	720	200	335	20,1	12,8	40	25	20.900	1	3
450	160	682315	670	200	370	25,5	9,1	115	30	26.600	1	3
450	225	682316	760	200	370	25,5	12,8	87	25	32.300	1	3
560	160	682317	670	200	410	31,7	9,1	170	30	39.900	1	3
560	225	682318	760	200	410	31,7	12,8	142	25	47.600	1	3
630	160	682319	670	200	440	35,7	9,1	205	30	49.900	1	3
630	225	682320	760	200	440	35,7	12,8	177	25	59.100	1	3



ATSRS 90

Unequal branch 90° with off-center outlet (spigot fitting)



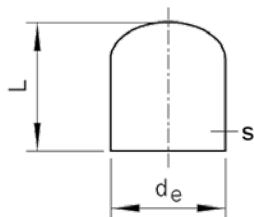
Unequal branch 90° with off-center outlet, SDR 17 (spigot fitting) ATSRS 90

- HD-PE fitting with off-center outlet for processing without holding devices with FRIAFIT couplers AM
- Black pipe colour with bright inner surface (subject to availability)

PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d ₁	d ₂	Order No.	L	t	z ₁	s ₁	s ₂	a	b	Weight [kg]	BX	Stock status
315	160	682401	565	200	280	17,9	9,1	50	30	12.100	1	3
315	225	682402	630	200	280	17,9	12,8	20	25	15.300	1	3
355	160	682403	660	200	290	20,1	9,1	68	30	17.000	1	3
355	225	682404	730	200	290	20,1	12,8	40	25	20.700	1	3
450	160	682405	660	200	315	25,5	9,1	115	30	25.600	1	3
450	225	682406	730	200	315	25,5	12,8	87	25	30.700	1	3
560	160	682407	660	200	340	31,7	9,1	170	30	39.000	1	3
560	225	682408	730	200	340	31,7	12,8	142	25	45.300	1	3
630	160	682409	660	200	360	35,7	9,1	205	30	48.800	1	3
630	225	682410	730	200	360	35,7	12,8	177	25	56.200	1	3

CDE
Sewage end cap (spigot fitting)


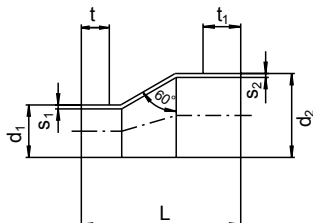
Sewage end cap (spigot fitting) CDE

- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM.

PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d _e	Order No.	L	s	Weight [kg]	BX	Stock status
110	73409636110	127	6,6	0.275	18	1
125	73409636125	127	7,4	0.360	18	2
160	73409636160	155	9,5	0.740	6	1
180	73409636180	166	10,7	0.975	12	2
225	73409636225	203	13,4	1.805	6	1
280	73409636280	238	16,6	3.285	6	1
315	73409636315	258	18,7	4.610	2	1
355	73409636355	281	21,1	6.610	2	2
400	73409636400	310	23,7	9.185	2	3

RES
Reducer off-center (spigot fitting)


Reducer off-center, SDR 17 (spigot fitting) RES

- HD-PE fitting for processing without holding devices with FRIAFIT couplers AM

Note:

Other dimensions on request.

PE 80 / PE 100

Maximum permissible test pressure 0.5 bar to DIN EN 1610

d ₁	d ₂	Order No.	L	t	t ₁	s ₁	s ₂	Weight [kg]	BX	Stock status
110	125	681018	264	85	85	6,6	7,4	1.000	1	3
110	160	681801	310	90	95	6,6	9,5	1.200	1	3
160	225	681802	404	100	150	9,5	13,4	2.530	1	3
200	225	681804	440	100	250	11,9	12,8	4.100	1	3
225	280	681810	540	150	250	13,4	16,6	5.460	1	3







FRIATOOLS Technical Equipment

Convenient and durable devices and tools for pipe connections.

Product range EZ 36/23

Things worth knowing about FRIATOOLS Technical Equipment

FRIAMAT area of application

FRIAMAT electrofusion units operate reliably at ambient temperatures from -20 °C to +50 °C. The range of application depends on the power requirement of the fitting to be fused and the respective processing temperature.

For processing of FRIALEN and FRIAFIT couplers up to and including d 900 and all saddle dimensions the following electrofusion control units are recommended: FRIAMAT 7 prime, FRIAMAT 7 basic, FRIAMAT prime eco, FRIAMAT print eco and FRIAMAT basic eco.

For Frialen couplers > d 900, FRIAMAT XL electrofusion control unit is recommended.

FRIAMAT fusion units can be used to process fittings from other manufacturers even up to d 1200 and above. However, we recommend to check and align the specific power demand of the fitting with the manufacturer in advance, also considering temperature during processing.

Availability of the FRIAMAT Bluetooth function and the FRIAMAT APP

FRIAMAT 7 prime and FRIAMAT prime eco are equipped with a Bluetooth® interface.

Please check at www.aliaxis.de/en/services/digital-apps, if the Bluetooth connectivity is provided in the intended region of operation, as specific approvals may be required.





FRIAMAT 7 prime and FRIAMAT 7 basic

The 7th FRIAMAT generation fulfils your needs even better

We have now enhanced our FRIAMAT fusion units, which have been tried and tested many times, up to the latest technological level and have made them "fit for the future". To make it easier for you to work – in every respect. This new low weight device provides high performance, easier / more convenient operation and documentation.

FRIAMAT 7 basic is one of our most successful models, which we have comprehensively revised to include features such as: Flow-optimized active cooling, rugged housing, bright colour TFT display, intuitive user guidance and much more.

FRIAMAT 7 prime also offers you the full range of digital functions for documentation and advanced traceability alongside the new Bluetooth interface and FRIAMAT app. With the optional 1D/2D scanner, the new FRIAMAT is also prepared to read out and process 2D barcodes according to ISO 12176-5. This enables you to capture all the information

required for fusing, including traceability data and advanced product information with just one scan operation.



FRIAMAT 7 with the tried and tested mini scanner

FRIAMAT 7 prime Fusion unit with documentation function



Powerful universal fusion unit FRIAMAT 7 prime

- Bluetooth
- Full documentation
- Full traceability functions
- 20,000 fusion protocols
- Output via USB interface or app (smart phone)
- Supervisor function
- State-of-the-art converter technology with active cooling.
- Bright colour TFT display
- With mini scanner, reader wand or 1D/2D scanner (2D barcodes according to ISO 12176-5)
- Extra long fusion cable (4 m)
- Extra long power cable (5 m)
- Weight approx. 12.8 kg

Note:

Possibility of updating the FRIAMAT software via the USB interface by the user.

Version	Order No.	Stock status
With reader wand	613134	1
With mini scanner	611134	1
With 1D/2D scanner	614134	1

FRIAMAT prime eco Fusion unit with documentation function



Powerful universal fusion unit FRIAMAT prime eco

- Bluetooth
- Full documentation
- Full traceability functions
- 20,000 fusion protocols
- Output via USB interface or app (smart phone)
- Supervisor function
- State-of-the-art toroidal core technology with active cooling.
- Bright colour TFT display
- With mini scanner, reader wand or 1D/2D scanner (2D barcodes according to ISO 12176-5)
- Extra long fusion cable (4 m)
- Extra long power cable (5 m)
- Weight approx. 18.0 kg

Note:

Possibility of updating the FRIAMAT software via the USB interface by the user.

Version	Order No.	Stock status
With reader wand	613124	1
With mini scanner	611124	1
With 1D/2D scanner	614124	3

WORKFLOW

WorkFlow - The digital assistant for construction project management



Digital assistant for construction project management WorkFlow:

- Simplifies, accelerates and expands documentation incl. images, geodata and comments
- Enables cross-company work in projects
- Convenient operation of the FRIAMAT fusion unit with Bluetooth interface
- Convenient data editing in the cloud application
- User authorisations
- Extended data export formats (.csv, .pdf, DVS protocol)
- Meets the requirements of ISO 12176-5 (2D barcode)

Workflow is currently only available in some countries, but we are constantly working on expanding the availability.

Article description	Order No.
WorkFlow - Package Test Key (runtime 3 months)	610001T
WorkFlow - Package S Key (runtime 12 months)	610002S
WorkFlow - Package L Key (runtime 12 months)	610003L



FRIAMAT 7 basic Fusion unit without documentation function



Powerful universal fusion unit FRIAMAT 7 basic

- State-of-the-art converter technology with active cooling.
- Bright colour TFT display
- With mini scanner, reader wand or 1D/2D scanner (2D barcodes according to ISO 12176-5)
- Extra long fusion cable (4 m)
- Extra long power cable (5 m)
- Weight approx. 12.8 kg

Note:

Possibility of updating the FRIAMAT software via the USB interface by the user.

Version	Order No.	Stock status
With reader wand	613130	1
With mini scanner	611130	1
With 1D/2D scanner	614130	1

FRIAMAT basic eco Fusion unit without documentation function



Powerful universal fusion unit FRIAMAT basic eco

- State-of-the-art toroidal transformer technology with active cooling
- Bright colour TFT display
- With mini-scanner, reader wand or 1D/2D scanner (2D barcodes according to ISO 12176-5)
- Extra long fusion cable (4 m)
- Extra long power cable (5 m)
- Weight approx. 18.0 kg

Note:

Possibility of updating the FRIAMAT software via the USB interface by the user.

Version	Order No.	Stock status
With reader wand	613120	1
With mini scanner	611120	1
With 1D/2D scanner	614120	3

FRIAMAT print eco Fusion unit with simple documentation function



Powerful universal fusion unit FRIAMAT print eco

- Documentation function (only fusion data)
- 1,000 fusion protocols
- Output via USB interface
- State-of-the-art toroidal core technology with active cooling.
- Bright colour TFT display
- With mini scanner, reader wand or 1D/2D scanner (2D barcodes according to ISO 12176-5)
- Extra long fusion cable (4 m)
- Extra long power cable (5 m)
- Weight approx. 18.0 kg

Note:

Possibility of updating the FRIAMAT software via the USB interface by the user.

Version	Order No.	Stock status
With mini scanner	611122	1
With reader wand	613122	1
With 1D/2D scanner	614122	3

MINISCAN

Mini-scanner



FRIAMAT mini-scanner

- Handy
- Sturdy
- Reliable reading of the fusion barcodes and traceability barcodes
- Practical storage bag
- Suitable for all FRIAMAT fusion units in this current catalogue for FRIATOOLS

Note:

Utilisation with older FRIAMAT types on request.

Order No.

624005

Stock
status

1

FWLESST

Reader wand



FRIAMAT reader wand

- For reading in the fusion and traceability barcodes
- Applicable to all FRIAMAT fusion units

Order No.

623645

Stock
status

1

2DSCAN

1D/2D scanner



FRIAMAT 1D/2D scanner 2DSCAN

- Handy
- Sturdy
- Reliable reading of 1D fusion and traceability barcodes and 2D barcodes according to ISO 12176-5.
- With practical storage pocket
- Suitable for all FRIAMAT fusion units in this current catalogue for FRIATOOLS

Order No.

624006

Stock
status

1

MEMSTICK

Memory stick



FRIAMAT Memory Stick for storing fusion data and traceability data

- As FRIATRACE database format
- As a PDF data file or CSV data file
- 2 GB

Order No.

624023

Stock
status

1



FRIATRACE

FRIATRACE database software



Software for further processing of fusion data including traceability data (traceability)

- Suitable for:
 - Windows XP
 - Windows 7
 - Windows 8.1
 - Windows 10
- For FRIAMAT fusion units with traceability and documentation function
- With database function (all fusion data in a database)
- For individual evaluation, copying, sorting, searching, formatting, editing, etc.
- FRIATRACE database software consisting of:
 - FRIATRACE CD-ROM
 - Connection cable PC fusion unit
- FRIATRACE combo package consisting of:
 - FRIATRACE CD-ROM
 - Memory Stick (2GB)

Note:

The FRIATRACE database software will be discontinued in the course of 2023 and replaced by a digital offer available on www.aliaxis.de.

Article description	Order No.	Stock status
FRIATRACE database software	613280	1
FRIATRACE combination package	624026	1

PA USB

FRIAMAT Parallel USB Adapter



For connecting a printer with USB Type B port.

- For FRIAMAT fusion units from year 2000 with parallel interface
- Direct printing of fusion data on a USB printer
- GDI printers are not supported.

Note:

Power is supplied via the supplied power supply (adapter included).

Order No.	Stock status
613263	1

SUPER P

Supervisor Pass



For individual setting of menu functions.

- Function blocking
- Presetting of forced processes
- Controlling the maintenance deadline
- Other functions (see FRIAMAT operating instructions)

Usable for:

- FRIAMAT 7 prime
- FRIAMAT prime eco
- FRIAMAT XL

Note:

To order, please download the application form on www.aliaxis.de in the product catalogue under Supervisor Pass.

Order No.	Stock status
623101	3



SPASS

Fusion-Pass



To block the fusion unit functions

- Identification of the person fusing
- To protect FRIAMAT fusion units (only documentation devices) from unauthorised access

The data stored in the Fusion-Pass (fusion number or name of the person fusing) will be transferred to the fusion protocol.

Note:

To order, please download the application form on www.aliaxis.de in the product catalogue under Fusion-Pass.

Order No.

623100

Stock
status

3

FPASS

Remote start pass



For remote start of all FRIAMAT fusion units

- With reader wand
- With scanner
- Including carrying belt

Note:

Reading in the code only activates the START button. Unable to stop fusion unit.

Order No.

624003

Stock
status

1

ALTK FMT

Transport boxes



For transporting and storing FRIAMAT fusion units.

Note:

Transport boxes for older FRIAMAT types available on request.

Version

FRIAMAT fusion units from model year 2018

Order No.

627600

Stock
status

1

CONTACT4

Socket contacts 4.0 mm



Socket contacts 4.0 mm

- For all FRIAMAT fusion units

Order No.

624529

Stock
status

1



ADFL

Adaptor for flat contacts



- For mounting on the socket contact 4.0 mm
- For all FRIAMAT fusion units
 - Adaptor for flat contacts

Order No.

613236

**Stock
status**

1

ADBK

Adaptor for socket contacts 4.7 mm



- For mounting on the socket contact 4.0 mm
- For all FRIAMAT fusion units
 - Adaptor with socket contact 4.7 mm

Order No.

613237

**Stock
status**

1



Our professional tools make your job easier

Having the correct tools to perform installation on site makes all the difference. Aliaxis delivers high-quality tools for professionals.

We see ourselves as specialists in electrofusion of HDPE piping systems, so we develop also the equipment and accessories for your needs from the very outset. We know exactly what matters and what is needed on site. We offer a range of equipment tailored to the daily challenges encountered on the construction site:

FRIATOOLS scraper tools for all pipe diameters and for a wide range of scraping lengths and saddle surfaces. These safeguard a uniform removal of material and reproducible quality for the optimal processing and reliable fusion of HDPE pipes.

Put your trust in tools that produce the perfect results.



Our products at a glance:

- Scraper tools for pipe ends (d 20 - d 1200)
- Scraper tools for outlet spigots and pipe ends (d 25 - d 63)
- Scraper tools for saddle areas and pipe ends (d 63 - d 1000)
- Coordinated accessories and comprehensive service for all scraper tools

FWSG RA

Compact scraper tool for pipe ends and outlet spigots d 25 - d 63



Dimension-bound compact scraper tool FWSG RA

- Metal version
- Safe removal of the oxide layer from HD-PE and PE-Xa pipes and from outlet spigots on FRIALEN fittings
- Extra-long scraper length
- Scraper blade made of hard metal with 2 cutting edges (double life)
- Automatic compensation of pipe ovality and tolerances
- Operation by hand, with hand crank or battery-operated screwdriver.

Note:

Practical plastic case to hold dimensions d 32 - d 63 available as an accessory (without compact scraper tools).

Article description	Dimension	SDR	Order No.	Stock status
FWSG RA 25	d 25	11	613576	1
FWSG RA 32	d 32	11	613580	1
FWSG RA 40	d 40	11	613581	1
FWSG RA 50	d 50	11	613582	1
FWSG RA 63	d 63	11	613583	1
Crank handle	d 25 - d 63		613579	1
FWSG RA case	d 32 - d 63		613586	1

FWSG 63

Scraper tool for pipes d 20 - d 63 (1/2" - 2" IPS)



Cross-dimension scraper tool FWSG 63

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes
- Scraper blade made of hard metal with 2 cutting edges (double life)
- Universal scraper areas from d 20 - d 63 (1/2" - 2" IPS)
- No dimension adjustment required
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 63	d 20 - d 63	613408	1

FWSG 225

Scraper tool for pipes d 75 - d 225 (3" - 8" IPS)



Cross-dimension scraper tool FWSG 225

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes
- Scraper blade made of hard metal with 2 cutting edges (double life)
- Universal scraping areas from d 75 - d 225 (3" - 8" IPS)
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 225	d 75 - d 225	613409	1

FWSG 400

Scraper tool for pipe d 75 - d 400 (3" - 14" IPS)



Cross-dimension scraper tool FWSG 400

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes
- Scraper blade made of hard metal with 2 cutting edges (double life)
- Universal scraping areas from d 75 - d 400 (3" - 14" IPS)
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 400	d 75 - d 400	613410	1

FWSG 710 L

Scraper tool for pipes d 250 - d 710 (10" - 28" IPS)



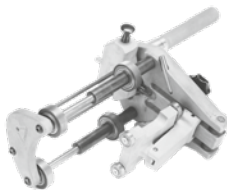
Cross-dimensional scraper tool FWSG 710 L

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes
- Scraper blade made of hard metal (long service life)
- Universal scraping areas from d 250 - d 710 (10" - 28" IPS)
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 710 L	d 250 - d 710	613642	1

FWSG 710 S

Scraper tool for pipes d 250 - d 710 (10" - 28" IPS) and spigot fittings



Cross-dimensional scraper tool FWSG 710 S

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes (maximum for half-socket length d 710)
- Scraper blade made of hard metal (long service life)
- Universal scraping areas from d 250 - d 710 (10" - 28" IPS)
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 710 S	d 250 - d 710	613639	1

FWSG 900 L

Scraper tool for pipes d 630 - d 900 (25" - 36" IPS)



Cross-dimensional scraper tool FWSG 900 L

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes
- Scraper blade made of hard metal (long service life)
- Universal scraping areas from d 630 - d 900 (25" - 36" IPS)
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG 900	d 630 - d 900	613644	3

FWSG XL

Large scraper tool for pipes d 800 to d 1200



Cross-dimension scraper tool FWSG XL

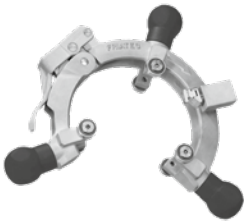
- Safe removal of the oxide layer from HD-PE and PE-Xa pipes SDR 11 - SDR 33
- Scraper blade made of hard metal with 2 cutting edges (double life)
- Universal scraper areas from d 800 - d 1200
- Centrally supported drive unit via hand crank
- Uniform chip removal by spring-mounted scraper blade and automatic feed
- With quick adjustment for easy adjustment to the scraping length
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG XL	d 800 - d 1200	613645	3



FWSG SE

Compact scraper tool for pipe ends and saddle surfaces d 63 - d 315



Dimension-bound scraper tool FWSG SE

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes and in the saddle surface area
- Scraper blade with 2 cutting edges (double life)
- Easy clamping due to the open design of the scraper tool.
- Uniform chip removal by spring-mounted scraper blade
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG SE 63	d 63	613562	1
FWSG SE 75	d 75	613563	1
FWSG SE 90	d 90	613564	1
FWSG SE 110	d 110	613565	1
FWSG SE 125	d 125	613566	1
FWSG SE 140	d 140	613567	1
FWSG SE 160	d 160	613568	1
FWSG SE 180	d 180	613569	1
FWSG SE 200	d 200	613570	1
FWSG SE 225	d 225	613571	1
FWSG SE 250	d 250	613572	1
FWSG SE 280	d 280	613573	1
FWSG SE 315	d 315	613574	1

FWSG SE IPS

Scraper tool for pipe ends and saddle areas 2 IPS - 12 IPS



Dimension-bound compact scraper tool FWSG SE IPS

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes and in the saddle surface area
- Scraper blade with 2 cutting edges (double life)
- Simple clamping by open construction of the scraper tool.
- Uniform chip removal by spring-mounted scraper blade
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSG SE 2 IPS	2 IPS	613512	1
FWSG SE 3 IPS	3 IPS	613513	1
FWSG SE 4 IPS	4 IPS	613514	1
FWSG SE 6 IPS	6 IPS	613515	1
FWSG SE 8 IPS	8 IPS	613516	1
FWSG SE 12 IPS	12 IPS	613519	1

FWSK

Scraper chain for pipe ends and saddle surfaces d 250 - d 1000



Cross-dimension scraper tool FWSK

- Safe removal of the oxide layer from HD-PE and PE-Xa pipes and in the saddle surface area
- Simple clamping
- Adjustable pipe diameter
- Uniform chip removal by spring-mounted scraper blade
- Delivery in transport box

Article description	Dimension	Order No.	Stock status
FWSK	d 250 - 1000	613383	1

FWSGE 3

Replacement blade for scraper tools FWSG 225 (until 2019)



Replacement blade made of hard metal FWSGE 3

- 3 pieces Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench.

Note:

Can only be utilised for scraper tools FWSG 225 and FWSG 315 up to model year Q3/2019.

Article description	Type of device	Marking	Order No.	Stock status
FWSGE 3	FWSG 225 / FWSG 315 (up to model year Q3/2019)	Red coloured	613322	1

FWSGE 4

Replacement blades for scraper tools FWSG 63 (until 2018)



Replacement blade made of hard metal FWSGE 4

- 3 pieces Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench.

Note:

Can only be utilised for the FWSG 63 scraper tool up to model year 2018.

Article description	Type of device	Marking	Order No.	Stock status
FWSGE 4	FWSG 63 (up to model year 2018)	Green coloured	613323	1

FWSGE 5

Replacement blade for scraper tools FWSG 710 L/S and FWSG 900 L



Replacement blade made of hard metal FWSGE 5

- 3 pieces Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench

Article description	Type of device	Marking	Order No.	Stock status
FWSGE 5	FWSG 710 L/S and FWSG 900 L	Blue coloured	613324	1

FWSGE 6

Replacement blade for scraper tools FWSGS 110 and FWSGS 180

Replacement blade made of hard metal FWSGE 6

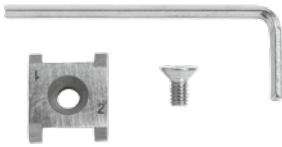
- 1 piece Replacement blade
- 2 piece Torx screw
- 1 piece Torx wrench

Article description	Type of device	Order No.	Stock status
FWSGE 6	FWSGS 110 / FWSGS 180	613325	1



FWSGE 8

Replacement blades for scraper tools FWSG SE (all types)



Replacement blades FWSGE 8

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Allen screw
- 1 piece Allen wrench

Article description	Type of device	Order No.	Stock status
FWSGE 8	FWSG SE (all types)	613327	1

FWSGE 10

Replacement blades for scraper tools FWSG RA 32 and 40



Replacement blades FWSGE 10

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench

Article description	Type of device	Order No.	Stock status
FWSGE 10	FWSG RA 32 and 40	613329	1

FWSGE 11

Replacement blades for scraper machines FWSG RA 50 and 63



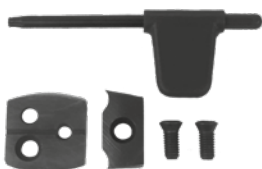
Replacement blades FWSGE 11

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench

Article description	Type of device	Order No.	Stock status
FWSGE 11	FWSG RA 50 and 63	613330	1

FWSGE 12

Replacement blades for scraper tools FWSG XL



Replacement blades and sliding plate FWSGE 12 designed for large pipe machining

- Design as reversing blade and reversing plate (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece sliding plate
- 1 piece Torx screw
- 1 piece Torx wrench

Article description	Type of device	Order No.	Stock status
FWSGE 12	FWSG XL	613331	1

FWSGE 13

Replacement blades for scraper tools FWSG RA 25

Replacement blades FWSGE 13

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench



Article description	Type of device	Order No.	Stock status
FWSGE 13	FWSG RA 25	613332	1

FWSGE 14

Replacement blades for scraper tools FWSG 225 / FWSG 400 (from 2019)

Replacement blades FWSGE 14

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench



Note:

FWSGE 14 can only be utilised for the scraper tools FWSG 225 and FWSG 400 from model year 2019.

Article description	Type of device	Marking	Order No.	Stock status
FWSGE 14	FWSG 225/FWSG 400 (from model year 2019)	white coloured	613335	1

FWSGE 15

Replacement blades for scraper tools FWSG 63 (from 2018)

Replacement blades FWSGE 15

- Design as a turning blade (with 2 cutting edges).
- 1 piece Replacement blade
- 1 piece Torx screw
- 1 piece Torx wrench



Note:

FWSGE 15 can only be used for the FWSG 63 scraper tool from model year 2018.

Article description	Type of device	Marking	Order No.	Stock status
FWSGE 15	FWSG 63 (from model year 2018)	Orange coloured	613336	1

FWSGE K

Replacement blades for scraper chain FWSK

Replacement blades for scraper chain

Article description	Type of device	Order No.	Stock status
FWSGE K	FWSK	613337	1



ALTK FWSG

Transport boxes

For transporting and storing scraper tools.

Note

Transport boxes for older scraper tools on request.



Type of device	Order No.	Stock status
FWSG 63	613307	1
1) FWSG 225 and FWSG 63/225	613309	1
FWSG 400 (from model year 2019)	613407	1
FWSG 710 S	613308	1
FWSG 710 L	613314	1
FWSG 900 L	613304	1
FWSG SE 63	613303	1
FWSG SE 75 - 140	613319	1
FWSG SE 160 - 225	613318	1
FWSG SE 250 - 315	613320	1

1) Suitable for FWSG 225 up to and from model year 2019

FWZ

Hand scraper

For removing the oxide layer from HD-PE pipes or mouldings which cannot be processed by appropriate scraper tools. Also suitable for deburring cut edges.

- 1 hand piece scraper

Note

Replacement blades: Content per pack 5 piece.



Article description	Order No.	Stock status
Hand scraper	613300	1
Replacement blade	613270	1

FWZ XL

Hand scraper for large pipes

For removing the oxide layer from large PE pipes which cannot be processed by appropriate scraper tools. In particular for preparing saddle surfaces for processing FRIALEN saddle mouldings. Also suitable for deburring cut edges.

- 1 hand scraper
- Two cutting faces



Article description	Order No.	Stock status
Hand scraper for large pipes	613299	1

FRIATOP

Clamping unit (top loading)



For assembling FRIALEN top-loading saddle mouldings without lower clamp.

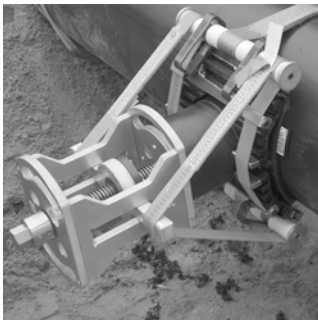
- For all pipe diameters in the respective stated dimension range with extra elastic pneumatic spring
- For optimum joint pressure build-up during fusing.

Order No.	Stock status
613350	1



UNITOP

Clamping unit for spigot saddles SA UNI / ASA UNI



For the assembly of:

- FRIALEN Spigot Saddles SA UNI d 250 - d 900 with outlet d 90, d 110, d 125 and d 160
- FRIAFIT Spigot Saddles ASA UNI d 630 - d 900 with outlet d 160 / SDR 17.

Note:

In conjunction with the UNITOP clamping device, additional elbow adaptors ADWL for socket contacts 4.0 mm are required for fusion units equipped with straight-line fusion plugs (Order No. 613241). Not required for FRIAMAT fusion units.

For the correct mounting of the FRIAFIT Spigot Saddle ASA UNI d 630 - d 900 with outlet d 160 / SDR 17, an additional adaptor (Order No. 613839) will be required for drilling. This adapter must be ordered separately.

Article description	Order No.	Stock status
UNITOP clamping device from d 250 - d 900	613385	1
ADWL elbow adaptor for socket contacts 4.0 mm	613241	1
Clamp adaptor for the outlet of the ASA UNI d 160 spigot saddles	613839	1



VACUPUMP

Vacuum pump with connection pipes



For assembly on

- FRIALEN spigot saddles SA VL,
- FRIALEN repair saddles RS VL,
- FRIAFIT Sewage saddles ASA VL.

Comprising:

- Vacuum pump 230V
- Gauge
- Connection pipes.

Note

No additional site compressor is required for operation. Delivery in transport box.

Plungers (PRESSKO) are required for the installation of FRIALEN spigot saddles SA VL and FRIAFIT sewage saddles ASA VL.



Article description	Order No.	Stock status
Vacuum pump 230 V	613827	1
Vacuum pump 110V	613828	3

PRESSKO

Plunger



Nominal size-related plunger with stop plate and plug-in nipple NW 7.2 for assembling on:

- FRIALEN spigot saddle SA VL with outlet d 160, d 225 or d 250
- FRIAFIT sewage saddle ASA VL with outlet 225 and for connecting the VACUBOX.

Note:

Plunger for other outlet dimensions up to d 400 on request.



Version	Order No.	Stock status
FRIALEN SA VL d 160	613821	1
FRIALEN SA VL d 225	613822	1
FRIALEN SA VL d 250 / FRIAFIT ASA VL d 225	613823	1
FRIALEN SA VL d 280	613853	1
FRIALEN SA VL d 315	613854	1
FRIALEN SA VL d 355	613855	1
FRIALEN SA VL d 400	613837	1

FWAB

Drilling equipment



FWAB drilling equipment for drilling HD-PE pipes in a pressure-free condition:

- FRIALEN spigot saddles SA VL
- FRIALEN spigot saddles SA UNI
- FRIAFIT spigot saddles ASA UNI
- FRIAFIT sewage saddles ASA VL
- Driven by drill

Comprising:

- Hole saw (nominal size-related), hole saw mounting with drill shaft SDS-maximum,
- Extension for hole saw mounting (not for FWAB ASA as well as for SA UNI applications),
- Centring drill with ejector and catch sleeve
- Hexagonal spanner.

Note:

(Fig. shows FWAB XL 160)



Article description	Outlet dimension	Order No.	Stock status
FWAB 90 for FRIALEN SA UNI	d 90	613832	1
FWAB 110 for FRIALEN SA UNI	d 110	613833	1
FWAB 125 for FRIALEN SA UNI	d 125	613834	1
FWAB 160 for FRIALEN SA UNI	d 160	613829	1
FWAB 225 for FRIALEN SA VL	d 225	613830	1
FWAB 250 for FRIALEN SA VL	d 250	613831	3
FWAB 280 for FRIALEN SA VL	d 280	613850	3
FWAB 315 for FRIALEN SA VL	d 315	613851	1
FWAB 355 for FRIALEN SA VL	d 355	613852	1
FWAB 400 for FRIALEN SA VL	d 400	613836	3
FWAB 160 for FRIAFIT ASA UNI	d 160	613838	1
FWAB ASA 225 for FRIAFIT ASA VL	d 225	613835	1

FWFIT

Clamping and drilling unit for FRIAFIT sewage saddles (ASA TL) and transition saddles (ASA TL KG)

Combined clamping and drilling device FWFIT, universally applicable for:

- FRIAFIT ASA TL sewage saddles
- FRIAFIT transition saddle ASA TL KG
- For clamping and producing the necessary joining pressure during fusion
- For drilling through the outlet in the pressure-free condition after expiry of the prescribed cooling time



Order No.	Stock status
613480	1



ASATOP

Clamping unit for close-fit liner DN 200 - DN 500 (ASA TL) and transition saddle (ASA TL KG)



Clamping tool ASATOP for processing from:

- FRIAFIT sewage saddles ASA TL
- FRIAFIT ASA TL KG transition saddles, especially for HD-PE close-fit liners DN 200 - DN 500 and for HD-PE pipes d 630
- For clamping and producing the necessary joining pressure during fusion

Comprising:

- ASATOP clamping device with tilting dowel (without pipe-comprehensive clamping belt technology)
- Hole saw (Ø 95 mm) with SDS hole saw holder
- Centring drill,
- Extension,
- Compressed air pump

Note:

The FWFIT clamping device and drilling device (Order No. 613480) will be required for drilling.



Order No.

613370

Stock status

3

RPS

Repair set



RPS repair set for retaining residual water after the water runs

- When executing repair work and integration work on HD-PE water pipes in dimensions d 90 to d 900

■ Comprising:

- Universal repair set with pump
- Gauge
- Drill
- Connection hose
- In addition, dimensional repair balloons

- Optional extension kit for the universal repair set for connecting another repair balloon

■ Comprising:

- Connection hose 3 m
- Gauge

Note:

From dimension d 355 onwards, the drilling equipment FWAB XL 225 (Order No. 613830) is required for drilling.

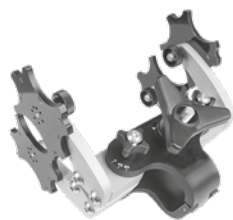
When utilising the repair set up to d 225, then FRIALEN repair and reinforcing saddles VVS are required. From d 250, FRIALEN locking clamps VSC TL or FRIALEN repair saddles RS VL will be required.



Article description	Dimension	Order No.	Stock status
Universal repair set	d 90 - d 900	613701	1
Extension kit	d 90 - d 900	613715	1
Repair balloon Type 1	d 90 - d 180	613702	1
Repair balloon Type 2	d 200 - d 315	613703	1
Repair balloon Type 3	d 355 - d 450	613704	1
Repair balloon Type 4	d 500 - d 560	613705	1
Repair balloon Type 5	d 630	613706	1
Repair balloon Type 6	d 710	613707	1
Repair balloon Type 7	d 800	613708	1
Repair balloon Type 8	d 900	613709	1
Transport box		613700	1

CLAMP 63

Alignment clamp d 20 - d 63



Pipe retaining clamp CLAMP 63 with elbow adjustment (45° / 90°)

Universal application for:

- Fitting
- Reductions
- Elbow 45° and 90°
- Outlets on saddle components d 20 - d 63 mm

Note:

Optional long version CLAMP63L can also be used for long couplers FRIALONG.

Article description	Order No.	Stock status
CLAMP63	613020	1
CLAMP63L	613034	1

CLAMP 180

Alignment clamp d 63 - d 180



Pipe retaining clamp CLAMP 180 with elbow adjustment (45° / 90°) and 2 clamping elements for:

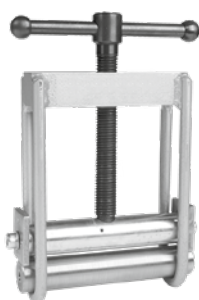
- Fittings,
- Reductions
- Elbow 45° and 90° in d 63, d 90, d 125 and d 180
- Modular expansion of the pipe retaining clamp.
 - 2 additional clamping elements for utilisation as 4-fold retaining clamps for dimensions d 63, d 90, d 125 and d 180.
 - T-extension kit for pipe clamp can be utilised for T-pieces. Can be upgraded by additional clamping element to the double retaining clamp on the branching pipe.
 - Reducer half-shell set for dimensions d 110 and d 160.

(Fig. shows design with 4 clamping elements)

Article description	Dimension	Order No.	Stock status
Pipe retaining clamp with 2 clamping elements	d 63, d 90, d 125, d 180	613021	1
Additional clamping element (1 piece.)	d 63, d 90, d 125, d 180	613022	1
Reducer half-shell set (1 piece)	d 110, d 160	613023	1
T extension kit	d 63, d 90, d 125, d 180	613024	1

SQM

Manual squeezing-off tool for d 20 - d 125 pipes



SQM manual squeezing-off tool for the temporary shut-off of HD-PE and PE-Xa pipes d 63 - d 125 in SDR 11 and SDR 17,6.

Article description	Dimension	SDR	Order No.	Stock status
SQM63	d 20 - d 63	11	613025	1
SQM125	d 63 - d 90 d 90 - d 125	11 / 17,6	613026	1

SQH

Hydraulic squeeze-off tool for pipes d 63 - d 180



SHQ hydraulic squeeze-off tool for the temporary shut-off of HD-PE and PE-Xa pipes d 63 - d 180 in SDR 11 and SDR 17.6.

Article description	Dimension	SDR	Order No.	Stock status
SQH180	d 63 - d 180	11 / 17,6	613028	1



RRC**Re-rounding clamps for reinstating round cross section of squeezed-off pipes d 63 - d 180**

For rounding back HD-PE and PE-Xa pipes d 63 - d 180 after squeezing has been executed correctly.

- RRC90 as universal rounding-back clamp for dimensions d 63, d 75 and d 90. Including key for actuating the universal return clamp
- RRC110 - RRC180 as dimension-related rounding-back clamps for dimensions d 110, d 125, d 160 and d 180

(Fig. 1 shows RRC90, Fig. 2 shows RRC180)



Article description	Dimension	Order No.	Stock status
RRC90	d 63, d 75, d 90	613029	3
RRC110	d 110	613030	3
RRC125	d 125	613031	3
RRC160	d 160	613032	3
RRC180	d 180	613033	3

FWXR**Manual round clamp for pipes d 63 - d 250**

For the back rounding of oval HD-PE and PE-Xa pipes. Cover several dimensions by inserting reducing half-shells.

(Fig. shows FWXR-S1)



Article description	Dimension	Order No.	Stock status
FWXR-S1	d 32, d 40, d 50, d 63	613416	1
FWXR-S2	d 90, d 110	613431	1
FWXR-S3	d 125, d 160	613439	1
FWXR-S4	d 180, d 200	613443	3
FWXR-S5	d 225, d 250	613444	3

FWXRH**Hydraulic round clamp for pipes d 280 - d 900**

For rounding back HD-PE and PE-Xa pipes.

Note:

Prices and availability of dimensions on request.

(Fig. shows the hydraulic round clamp d 800).



Dimension	Order No.	Stock status
d 280	613452	3
d 315	613461	3
d 355	613462	3
d 400	613463	3
d 450	613464	3
d 500	613465	3
d 560	613467	3
d 630	613466	3
d 710	613468	3
d 800	613460	3
d 900	613458	3

FWXRB
Manual rounding clamp for pipes d 800 - d 1200


For rounding back HD-PE pipes.
Suitable for pipes d 800 - d 1200.

Note:
Prices and availability on request.

Dimension	Order No.	Stock status
d 800 - d 1200	613457	3

PCUT
Pipe cutter for pipes d 20 - d 140

Pipe cutter with quick adjustment for HD-PE pipes d 20 to d 140 in SDR 11.



Article description	Dimension	Order No.	Stock status
Pipe cutter d 63	d 20 - d 63	613040	1
Pipe cutter d 140	d 50 - d 140	613041	1
Replacement cutting wheel d 63	d 20 - d 63	613042	1
Replacement cutting wheel d 140	d 50 - d 140	613043	1

PCUT S
Pipe shears for pipes d 20 - d 63

Pipe shears with lever ratio for HD-PE pipes d 20 to d 63 in SDR 11.



Article description	Dimension	Order No.	Stock status
Pipe shears d 40	d 20 - d 40	613044	1
Pipe shears d 63	d 20 - d 63	613046	1

FWPM
FRIALEN / FRIA FIT marker (silver)

For labelling HD-PE and PE-Xa pipes.

- Colour silver
- Content per pack: 10 pieces.



Order No.	Stock status
613069	1



FWSS

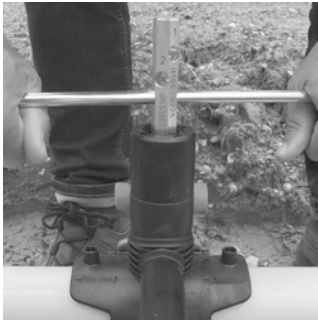
Activating key for tapping tees

For drill actuation, depending on the diameter (d1) of the FRIALEN tapping tees

- d1: 40 - 225 wrench size WS 17 mm for all DAA RED SNAP, DAA Classic d 50 - d 75 and DAP d 63.
- d1: 90 - 315 wrench size WS 19 mm for DAA TL and DAA Classic d 90 - d 225 and DAP d 90 - d 225.



d ₁	WS [mm]	Order No.	WS [mm]	Stock status
40-225	17	613246	17	1
90-315	19	613250	19	1



FWSR T

Ratchet for activating key for tapping tees DAA RED SNAP

For drill actuation of the DAA RED SNAP FRIALEN tapping tees, comprising:

Ratchet 1/2" telescopic including socket wrench attachment wrench size WS 17 (17 mm).

Note:

In addition, the actuating key FWSS wrench size WS 17 mm is required (Order No. 613246).



Article description	Order No.	Stock status
Ratchet 1/2" with socket wrench SW17 mm	613615	1



FWSR

Actuating key for parallel dome tapping tees (DAP)

For drill actuation of the FRIALEN tapping tees with parallel dome DAP, comprising:

- Ratchet 1/2"
- Socket adapter with wrench size WS 17 mm or WS 19 mm



Article description	Order No.	Stock status
Ratchet 1/2"	613610	1
Socket key SW 19 mm	613605	1
Socket key SW 17 mm	613606	1

FWDPA

Pressure test adapter for DAA Classic, DAP, DAA TL, DAA TL RE

Pressure test adaptor for use with FRIALEN tapping tees:

- DAP
- DAA TL
- DAA Classic from d 90, with female thread = R 1/4" for connecting a pressure gauge



Article description	Order No.	Stock status
FWDPA for FRIAL DAP, DAA TL, DAA Classic from d 90	613595	1

FWDPA SA

Pressure test adapter

Pressure test adaptor for use with FRIALEN spigot saddles SA UNI, with connection nipple Ø 1/2".



Article description	Order No.	Stock status
FWDPA SA for SA UNI	613596	1





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