

## Tender Specification / Specimen Texts

### SIMONA® PE 100 FM-Line fittings for underground fire-fighting pipelines

#### Overview of text modules with user information

#### Underground fire-fighting pipelines:

- PE 100 FM-Line fittings  
Fittings for newly laid pipelines in bed of sand, twice crushed and screened chippings, maximum grain size 11 mm, or gravel 16/32 mm.  
Joining method: heated-tool butt welding or electrofusion welding.

#### References to standards included:

FM-Approval 1613	"Polyethylene (PE) Pipe and Fittings for Underground Fire Protection Service"
DIN EN 12201-1	"Plastic piping systems for water supply, and for drainage and sewerage under pressure – General"
DIN EN 12201-3	"Plastic piping systems for water supply, and for drainage and sewerage under pressure – Fittings"
DIN EN ISO 15494	"Plastic piping systems for industrial applications – Polybutylene (PB), polyethylene (PE) and polypropylene (PP) – Requirements for piping parts and the piping system – Metric series"
DVS 2207-1	"Welding of thermoplastics – Heated-tool welding of pipes, pipeline components and sheets made of PE"
DVS 2210-1 Suppl. 3	"Industrial piping made of thermoplastics – Design and execution – Above-ground pipe systems – Flange assemblies: Description, requirement, assembly"
DIN EN ISO 9001	"Quality management systems – Requirements"
DIN EN 10204	"Types of inspection documents"

## **Generally applicable preliminary text concerning storage and processing:**

With regard to storage, care must be taken to prevent permanent deformations and damage. Stacks of pipes should not be higher than 1.5 m and must be secured at the side. Sudden stresses must be avoided. Any pipes or fittings damaged in transit or in storage must be segregated to prevent further use. This also applies to pipes with scores caused in transit having a depth of more than 10% of the wall thickness. Watertight, integral welding shall be based on the general welding guidelines of DVS 2207 Part 1 "Welding of thermoplastics; Heated-tool welding of pipes, pipeline components and sheets made of PE-HD". Process data for the welding operations shall be recorded and handed over to the client after completion of the welding work. Pressure tests shall be performed in agreement with the client in accordance with the codes of practice of DVS, DVGW or the corresponding national or international codes of practice.

Only pipeline construction contractors who have professionally trained staff in compliance with Section 19 I of the German Water Resources Act 'WHG' may be commissioned to perform the laying and assembly work. Connection of pipes and pipeline parts by welding shall be performed by plastic welders who have passed a welders' examination conforming to DVS 2212 Part 1.

Flange assemblies shall be subject to the rules of DVS 2210-1 Supplement 3 "Industrial piping made of thermoplastics – Design and execution – Above-ground pipe systems – Flange assemblies: Description, requirements, assembly"

**Item texts concerning delivery and laying**

Item **PE 100 angle, injection-moulded, for underground fire-fighting pipelines**

Deliver and lay angle, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B with FM certificate, approval up to 15 bar (218 psi) and special FM mark.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100	
Colour:	Black	
SDR class:	SDR 11	
Bend:	90 / 45	° angle
Outside diameter:	90 - 315	mm
Wall thickness:		mm
Quantity:		pcs.
Unit price:	<input type="text"/>	€
	Total price:	<input type="text"/> €
Make:	SIMONA AG, Kirn, Germany or equivalent	

Item **PE 100 bend, seamless, for underground fire-fighting pipelines**

Deliver and lay seamless bend, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B with FM certificate, approval up to 15 bar (218 psi) and special FM mark.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100	
Colour:	Black	
SDR class:	SDR 11	
Bend:	11, 22, 30, 45, 60, 90	° angle
Outside diameter:	90 - 630	mm
Wall thickness:		mm
Quantity:		pcs.
Unit price:		€
	Total	
	price:	
Make:	SIMONA AG, Kirn, Germany or equivalent	

Item **PE 100 stub flanges for loose flanges ISO/DIN injection-moulded, for underground fire-fighting pipelines**

Deliver and lay stub flange, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, injection-moulded, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	90 - 400 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 stub flanges for loose flanges ISO/DIN extended, for underground fire-fighting pipelines**

Deliver and lay stub flange, black, made of FM-approved PE 100, based on DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, machined or injection-moulded, extended with pipe, internal welding flash removed.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	450 - 630 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 tee, injection-moulded, for underground fire-fighting pipelines**

Deliver and lay tee, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, injection-moulded, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	90 - 500 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	€
	Total price: <input type="text"/>
Make:	SIMONA AG, Kirm, Germany or equivalent

Item **PE 100 tee with reduced outlet, injection-moulded, for underground fire-fighting pipelines**

Deliver and lay tee with reduced outlet, black, made of FM-approved PE 100, based on DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, injection-moulded, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	110 – 315 mm
Outside diameter d2:	90 – 160 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent



**Item PE 100 tee with reduced outlet, welded, reinforced, for underground fire-fighting pipelines**

Deliver and lay tee with reduced outlet, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B with FM certificate, approval up to 15 bar (218 psi) and special FM mark, welded from pipes, saddle-mounted and reinforced, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	110 – 630 mm
Outside diameter d2:	90 – 315 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/> €	Total price: <input type="text"/> €
Make:	SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 reducer, concentric, injection-moulded, long, for underground fire-fighting pipelines**

Deliver and lay concentric reducer, injection-moulded, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	110 – 315 mm
Outside diameter d2:	90 – 280 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent

**Item PE 100 reducer, concentric, machined, long, for underground fire-fighting pipelines**

Deliver and lay concentric reducer, machined, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B and DIN EN 12201/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	355 – 630 mm
Outside diameter d2:	250 – 560 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 end cap, injection-moulded, for underground fire-fighting pipelines**

Deliver and lay injection-moulded end cap, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B, DIN EN 12201/3 and DIN EN 1555/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with long spigot.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	90 – 400 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	€
	Total price: <input type="text"/>
Make:	SIMONA AG, Kirm, Germany or equivalent

Item **PE 100 end cap, extended, for underground fire-fighting pipelines**

Deliver and lay machined end cap, extended with pipe, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B and DIN EN 12201/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with long spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	450 – 630 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	€
	Total price: <input type="text"/>
Make:	SIMONA AG, Kirm, Germany or equivalent

Item **PE 100 reducer, concentric, injection-moulded, short, for underground fire-fighting pipelines**

Deliver and lay concentric reducer, injection-moulded, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B and DIN EN 12201/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with short spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	110 – 315 mm
Outside diameter d2:	90 – 280 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
Make:	SIMONA AG, Kirn, Germany or equivalent

**Item PE 100 reducer, concentric, machined, short, for underground fire-fighting pipelines**

Deliver and lay concentric reducer, machined, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B and DIN EN 12201/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with short spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter d1:	355 – 630 mm
Outside diameter d2:	225 – 560 mm
Wall thickness d1:	mm
Wall thickness d2:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	Total price: <input type="text"/>
	€
Make:	SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 end cap, machined, short, for underground fire-fighting pipelines**

Deliver and lay machined end cap, black, made of FM-approved PE 100, as per DIN EN ISO 15494/B and DIN EN 12201/3 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, with short spigots.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Connection of fittings and pipes by heated-tool butt welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material:	PE 100
Colour:	Black
SDR class:	SDR 11
Outside diameter:	315 – 630 mm
Wall thickness:	mm
Quantity:	pcs.
Unit price: <input type="text"/>	€
	Total price: <input type="text"/>
Make:	SIMONA AG, Kirm, Germany or equivalent



**Item PP/steel loose flange, drilled as per ISO/DIN, for underground fire-fighting pipelines**

Deliver and install PP/steel loose flange, drilled as per ISO/DIN, black, made of glass-fibre reinforced polypropylene (PP) with steel insert as per DIN EN ISO 15494/C, drilled PN 10/16 as per DIN EN 1092/1 with FM certificate, approval up to 15 bar (218 psi) and special FM mark. External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 16

For pipe d: 90 – 180 mm

DN: 80 – 150 mm

Quantity: pcs.

Unit price:  €

Total price:  €

Make: SIMONA AG, Kirn, Germany or equivalent

**Item PP/steel profile loose flange, drilled as per ISO/DIN, for underground fire-fighting pipelines**

Deliver and install PP/steel profile loose flange, drilled as per ISO/DIN, black, made of glass-fibre reinforced polypropylene (PP) with steel insert as per DIN EN ISO 15494/C, drilled PN 10/16 as per DIN EN 1092/1 with FM certificate, approval up to 15 bar (218 psi) and special FM mark.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 16

For pipe d: 200 – 400 mm

DN: 200 – 400 mm

Quantity: pcs.

Unit price:	<input type="text"/>	€	Total price:	<input type="text"/>	€
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Make: SIMONA AG, Kirn, Germany or equivalent

**Item PP/steel profile loose flange, drilled as per ISO/DIN, for underground fire-fighting pipelines**

Deliver and install PP/steel profile loose flange, drilled as per ISO/DIN, black, made of glass-fibre reinforced polypropylene (PP) with steel insert as per DIN EN ISO 15494/C, drilled PN 10/10 as per DIN EN 1092/1 with FM certificate, approval up to 15 bar (218 psi) and special FM mark.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 10

For pipe d: 450 – 630 mm

DN: 500 – 600 mm

Quantity: pcs.

Unit price:	<input type="text"/>	€	Total price:	<input type="text"/>	€
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Make: SIMONA AG, Kirn, Germany or equivalent

Item **PP/steel blind flange, drilled as per ISO/DIN, for underground fire-fighting pipelines**

Deliver and install PP/steel blind flange, drilled as per ISO/DIN, black, made of glass-fibre reinforced polypropylene (PP) with steel insert as per DIN EN ISO 15494/C, drilled PN 10/16 as per DIN EN 1092/1 with FM certificate, approval up to 15 bar (218 psi) and special FM mark.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 10

For pipe d: 90 – 225 mm

DN: 80 – 200 mm

Quantity: pcs.

Unit price:  €

Total price:  €

Make: SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 special flange assembly PP/steel, drilled as per ISO/DIN, short, for underground fire-fighting pipelines**

Deliver and install PE 100 special flange assembly PP/steel, black, made of FM-approved PE 100, drilled as per ISO/DIN, based on DIN EN 12201/3, flange connection dimensions as per DIN EN 1092/1, PN10 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, machined, with EPDM O-ring seal and with flange made of glass-fibre reinforced polypropylene (PP) with steel insert.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Connection of fittings and pipes by heated-tool butt welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 10

For pipe d: 

250 – 560
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 mm

DN: 

200 – 500
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 mm

Quantity: 

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 pcs.

Unit price: 

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 €      Total price: 

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 €

Make: SIMONA AG, Kirn, Germany or equivalent

Item **PE 100 special flange assembly PP/steel, drilled as per ISO/DIN, long, for underground fire-fighting pipelines**

Deliver and install PE 100 special flange assembly PP/steel, black, made of FM-approved PE 100, drilled as per ISO/DIN, based on DIN EN 12201/3, flange connection dimensions as per DIN EN 1092/1, PN10 with FM certificate, approval up to 15 bar (218 psi) and special FM mark, machined, with EPDM O-ring seal and with flange made of glass-fibre reinforced polypropylene (PP) with steel insert.

External monitoring by TÜV Süddeutschland e.V.

Quality assurance in compliance with DIN EN ISO 9001.

Flange assemblies as per DVS Guideline DVS 2210-1 Supplement 3.

Connection of fittings and pipes by heated-tool butt welding or electrofusion welding in compliance with the requirements of DVS 2207.

Storage and transport in compliance with the requirements of the German Plastic Pipes Association ([www.wipo.krv.de](http://www.wipo.krv.de)).

Laying in compliance with DVGW W 400-2 and manufacturer's specifications.

Proof of delivery in compliance with DIN EN 10204 with acceptance test certificate 3.1

Material: Steel with glass-fibre reinforced polypropylene

Colour: Black

Pressure rating: PN 10

For pipe d: 

250 – 560
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 mm

DN: 

200 – 500
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 mm

Quantity: 

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 pcs.

Unit price: 

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 €      Total price: 

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 €

Make: SIMONA AG, Kirn, Germany or equivalent