ALVENIUS

FIRE PROTECTION

Fire fighting in aggressive environments

Advanced solutions designed to safeguard human lives and critical infrastructure.

MADE BY SWEDEN

Experts in Piping Solutions since 1951

Stavdal
H15S XL

Complete systems for extinguishing water

Alvenius supplies safe and reliable steel pipe systems for extinguishing water systems and sprinklers. Our pipe systems have been developed to meet the tough requirements of marine environments, which makes them ideal for port facilities, paper mills, refineries, the chemical industry and tunnel constructions for example – environments where stainless steel was previously the only option.

Alvenius is certified according to the quality standard ISO 9001, the environmental standard ISO 14001 and the welding quality standard ISO 3834-2.

The pipes are dimensioned according to the SS-EN 13480 series. Tolerances are according to SS-EN 10217-1. This means FlowMax® pipes are of the highest possible quality.

Complete system for your facility
The Alvenius FlowMax® pipe system includes everything you need for all types of installations – pipes, couplings, valves, bends, T-pipes, transition pieces, threaded sockets etc.

We can also supply feeder pipes in different sizes – a good example of special solutions that we develop in partnership with customers.

Lighter. Quicker. Simpler.
Installation is incredibly simple - all you need are pipes, couplings and a socket wrench.

Compared to welding, installation is ten times quicker - no hot work involved, no special training needed.

What's more, Alvenius FlowMax® pipes are significantly lighter than standard pipes, which simplifies and shortens installation and maintenance procedures. The low weight also makes a huge contribution to lowering costs for transport, handling and installation.

When safety and dependability are the utmost priority

Alvenius FlowMax® pipes coated with CorroFlo® are far and away the best solution in extinguishing water environments where you need 100% reliability and performance for decades to come.

Independent tests namely show that undamaged FlowMax® pipes have a service life of over 50 years. Our CorroFlo® coated products are certified according to ISO 12944-6 for corrosion resistance and comply with the requirements for C5 classification.

To provide greater protection against impact damage, the pipes can be externally coated with RocShield®.

Maximum safety

The internal and external coating of CorroFlo® gives FlowMax® pipes unbeatable resistance in these types of environment. Not only is the corrosion proofing unsurpassed, FlowMax® pipes also resist acidic and alkaline substances, chemicals, extreme weather and UV radiation.

Even if the extinguishing system remains unused for lengthy periods with corrosive water, no corrosion arises and the facility will be 100% service ready when required. Another advantage is that pipes coated with CorroFlo® are non-conductive.

Low flow resistance – lower operating costs

Take the numerous advantages into consideration that the thin walls of the FlowMax® pipes offer, already at the construction phase.

- Option to choose a pipe with a smaller external diameter
- Lower flow resistance thanks to larger inner diameter
- Option to use smaller pumps - or with lower output - thanks to less flow resistance
- Option to reduce the number of pumps in the system
- As Alvenius FlowMax® pipes are spirally welded not length welded, they always stay straight – under load or in the event of temperature changes

FlowMax® pipes for extinguishing water

Alvenius FlowMax® pipes are spirally welded with unique pressure equipment classed steel. This means that the pipes can be made thin-walled but still strong, while the spiral welding ensures pipes remain straight.

The pipes can also be made with a flat internal surface, which prevents the accumulation of condensation in a dry pipe system. This type of system is used in tunnels where minus temperatures can be expected at certain times of the year. The pipe system is drained via the Outlet couplings.

Fact sheet

Diameter	89 – 508 mm. CorroFlo® coated
Pressure	– 80 bar
Wall thickness	1.25 – 7.9 mm.
Weight	30 – 50% lower than standard pipes

- Rigid couplings or flexible couplings where certain movement or temperature changes can be expected
- Self-sealing EPDM rubber gasket. I.e. the higher the pressure in the pipe system the tighter the joint is sealed
- Joint deflection up to 2.5°. You can reduce the number of bends in long pipe runs
- Insensitive to vibrations
- Withstands axial movement, e.g. heat build up, thanks to axial play in the coupling

Dimensions
89 – 508 mm.

Lengths
500, 1,000, 2,000, 5,000, 6,000 mm (standard)
Other lengths on request

Pressure rating
SS-EN 13480

Steel grade
SSAB Domex 240 YPD-ALV, 420 MCD-ALV
Precision cut rings for welding

Surface treatment
CorroFlo® or
CorroFlo® plus RocShield®

Accessories/pipe fittings
Complete system with pipes, pipe fittings, couplings etc.

Weight savings
30 – 50% compared to standard pipes

Sprinkler pipes – important components in a professional fire protection system

Reliability, dependability and 100% performance in all situations and user environments are what you can expect from Alvenius lightweight pipes for sprinklers. Naturally, the pipe system has been developed for the toughest possible environments and situations, to ensure maximum reliability and resistance.

Alvenius untreated or hot-dip galvanised pipes for sprinkler applications are supplied in dimensions 76 – 323 mm. One big advantage with Alvenius steel pipes is their low weight, achieved by keeping the thickness down. In other words, they are light and easy to handle and install, and put smaller loads on suspension systems. This means a weight saving of 30 – 50% compared to standard pipes.

And as the steel pipes are spirally welded, they are incredibly strong, stiff and stable and retain their straightness when being welded - such as when sleeves are welded on. The pipes quite simply tolerate substantial loads, without losing their shape.

Alvenius grooved, untreated/hot-dip galvanised pipes are approved and certified to all Nordic fire standards.

Quick connected and the most economical
The pipes are delivered ready grooved to fit and be compatible with quick couplings available on the market.

Good flow performance is one of the many important advantages of our pipe systems, where the bottom line benefits include both lower operating costs and lower total costs.

Surface coating to suit the application
Alvenius sprinkler pipes can be supplied hot-dip galvanised or entirely untreated. The pipes are ideal for trunk pipes/feeder pipes, above all where the anti-corrosion protection requirements are especially exacting.

- Hot-dip galvanised for so-called dry pipe systems. Untreated/painted for pressurised systems.
- The pipes can be primed in a number of different standard colours.

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Alvenius Sprinkler Pipes

Alvenius sprinkler pipes are also spirally welded with a unique pressure equipment classed steel material. The end result is thin-walled but still strong pipes that remain straight thanks to the spiral welding.

Fact sheet

Diameter	76 – 323 mm.
Pressure	– 34 bar
Wall thickness	2.0 – 4.4 mm.
Weight	30 – 50% lower than standard pipes

Available as rigid or flexible couplings.

- Dimensions 76 – 323 mm
- Rigid or flexible couplings
- Self-sealing gaskets
- Joint deflection up to 2.5°
- Insensitive to vibrations
- Withstands axial movement, e.g. heat build up, thanks to axial play in the coupling

Dimensions
76 – 323 mm.

Lengths

6,000 mm	+0	-5
12,000 mm	+0	-10

Pressure rating
SS-EN 13480

Steel grade
SSAB Domex 240 YPD-ALV, 420 MCD-ALV
Supplied grooved as standard. Can be supplied with plane ends

Surface treatment
HDG (hot-dip galvanised)

Stiffness
No bowing or deformation on welding or handling

Weight savings
30 – 50% compared to standard pipes

Made in Sweden

Alvenius FlowMax® pipes are spirally welded with unique pressure equipment classed steel. This means that the pipes can be made thin-walled but still strong, while the spiral welding ensures pipes remain straight.

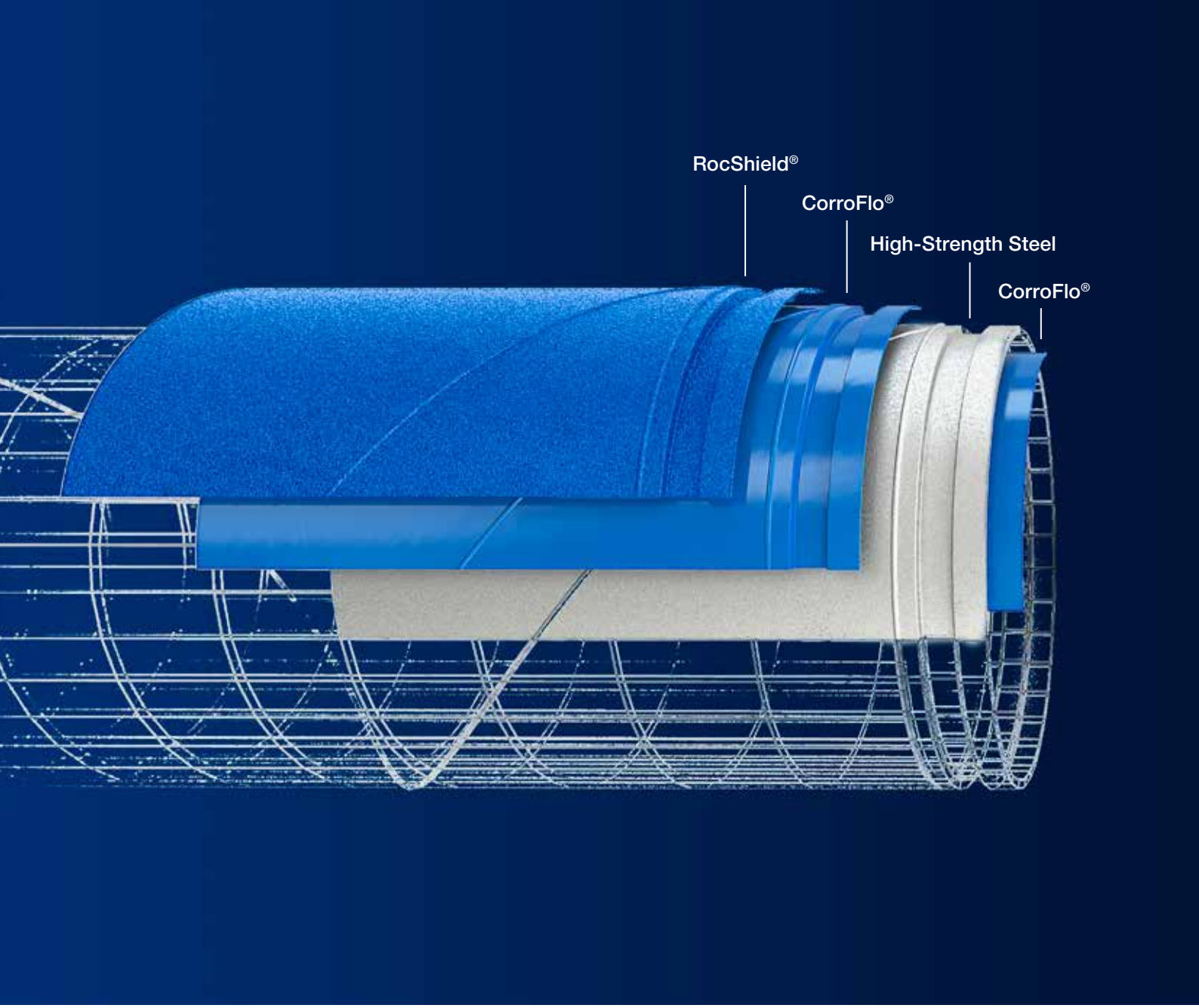
FlowMax® pipes offer a range of unique advantages, thanks to their steel qualities. No other manufacturer can offer the same combination of material strength, very smooth surface and extremely thin-walled products with no loss of strength.

Alvenius is certified according to the quality standard ISO 9001, the environmental standard ISO 14001 and the welding quality standard ISO 3834-2.

The pipes are dimensioned according to the SS-EN 13480 series. Tolerances are according to SS-EN 10217-1. This means FlowMax® pipes are of the highest possible quality.

Steel grades				
SSAB	**Yield point, ReH [MPa]**	**Tensile strength, Rm [MPa]**	**Elongation at break [%]**	**EN 10149-2 equivalent**
Domex 240 YP	240	240	28	S235
Domex 420 MC	420	420	20	S420 MC

Available pressure ratings					
Pipe dimension			**Working pressure [bar]**		
ISO DN	**Inches**	**DY [mm]**	**16**	**25**	**40**
80	3	88.9	x	x	x
100	4	114.3	x	x	x
125	5	139.7	x	x	x
150	6	168.3	x	x	x
200	8	219.1	x	x	x
250	10	273.0	x	x	x
300	12	323.9	x	x	x
400	16	406.4	x	x	x
500	20	508.0	x	x	



Surface coating for maximum service life and reliability

An effective surface coating dramatically improves pipe system performance. Especially in user environments where corrosion and aggressive action are common. Alvenius FlowMax® is surface coated to deliver maximum reliability, safety and service life.

CorroFlo® and RocShield® are unique surface coatings from Alvenius, and have been tested and used for many years, with unrivalled performance.

The surface coatings are ideal for extinguishing water pipes thanks to their superior resistance to acidic water, aggressive chemicals, the effects of weather, wind and salt laden air in outdoor systems.

CorroFlo®. Maximum corrosion protection for safety and service life

CorroFlo® is a thermoplastic coating, with a series of unique advantages.

- Lower flow resistance thanks to a larger inner diameter and coating with CorroFlo®
- Option to use smaller pumps – or with lower output, thanks to less flow resistance
- Option to reduce the number of pumps in the system
- Extremely good adhesion – no risk of cracks or flaking
- High chemical resistance to acidic and alkaline liquids
- Ideal in outdoor environments – insensitive to UV, flexible down to -70° C
- Working temperature in air – up to +60° C
- Corresponds to C5, I.e. very high resistance to corrosion in extreme environments with high saline content
- Electrically insulating
- Environmentally friendly
- Extremely low flow resistance. Flat surface finish: 0.05 mm
- Layer thickness 500 µm
- 800% elongation at break

RocShield®

For extra durability and resistance to wear and tough treatment, FlowMax® pipes can be coated with RocShield® - en extra 500 µm LDPE coating on top of the CorroFlo® coating.

RocShield® provides an even stronger and more durable surface with greater resistance to weather, chemicals and mechanical wear.

Numerous advantages:

- Simpler and safer pipe handling with good grip, thanks to the rougher structure
- Very high resistance to wear and mechanical effects, such as when backfilling pipe trenches, rough handling etc.
- Very high impact resistance

HDG for sprinkler pipes

Hot-Dip Galvanising is a method that provides long-term anti-corrosion protection to steel via a coating of molten zinc. HDG has been used for over 150 years and is tried and tested in virtually every situation.

The advantages are both convincing and comprehensive. It provides a tough coating that lasts for years and years, it is environmentally sustainable and maintenance-free. On the other hand, HDG is not suitable for wet pipe sprinkler systems. Untreated sprinkler pipes are preferable in these types of applications.

Alvenius was founded in 1951 and ever since we have supplied the global market with high-quality quick coupling steel pipe systems.

Today, we focus our expertise on the segments: Mining, Fire Protection, Tunneling, Water Supply, Industry, and Snow Making.

We have a presence in Asia, Africa, the Middle East, North and South America, Europe and, of course, our domestic market Sweden.

Our international approach offers many advantages.

Above all else, it means that we understand the conditions and demands of your particular market – wherever that may be.

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