

ASPEN Stainless hardworking stainless steel products for hardwearing environments: British engineered and sealed with a lifetime guarantee.

Product Description

The Non-Standard Manholes are manufactured to the bespoke requirements of the customers' drainage system or unique process and environment needs.

Suitable for use in hygienic environments.

Technical Specification

- Available in grade 304 stainless steel (British Standard 304S31, Euronorm 1.4301)
- Available in grade 316 stainless steel (British Standard 316S31, Euronorm 1.4401)

ASPEN Drainage System

• Key Benefits

This service complements our standard range of products and provides bespoke solutions to difficult problems. We pride ourselves on solving 99% of our clients' individual needs.

• Maintenance

Stainless steel equipment should be occasionally thoroughly checked for retained deposits and concentrated fluid build up that causes corrosion.

• Cleaning

Many factors affect the choice of cleaning method and frequency of its application. Suitable methods for stainless steel are: water and steam; mechanical scrubbing; scouring powder and detergents; alkaline solutions; organic solvents; and nitric acid cleaning.



ASPEN Drainage Installation

Canal Engineering offer supply only or full installation, with fully welded and polished joints, and commissioning. Canal Engineering also offer on-going annual inspection and maintenance contracts.

For advice regarding the most suitable ASPEN Stainless for you please contact our specialist engineers today to discuss your requirements; 0115 986 6321; aspens@canalengineering.co.uk

ASPEN | By Canal Engineering Limited

ASPEN Stainless is a division of Canal Engineering Limited. Canal Engineering is based in Nottingham and specialise in the design, fabrication, manufacture and installation of metalwork engineering projects.

Visit www.canalengineering.co.uk

ASPEN Drainage Systems

Drainage tailored to your requirements



Here are a few basic questions to start the process of deciding how to specify your drainage system.

Step 1: What is the maximum spillage in the location in litres per second?

3 to 5 litres per second requires 110mm diameter outlet.

Step 2: Which water trap do you require?

We supply two types of gully traps;

1. Gully trap with constant trapped water
2. Gully trap that drains fully when the trash basket and/or trap is removed.

Step 3: What type of traffic will go over the drainage?

This will decide the strength of the drainage to be used. Our 'load classification' table and symbols can be used as a guide.

See [LOAD CLASSIFICATION CHART](#)

Step 4: What grade of stainless steel should be specified?

Type 304 is general grade and type 316 is most corrosion resistant.

Consideration must be given to the type of products being processed and the type of dilution of cleaning chemicals. The stainless steel resistance chart should only be used as a guideline.

See [STAINLESS RESISTANCE CHART](#)

Step 5: Check the levels of any adjoining manholes or outlet pipes to ensure you choose the correct type and direction of outlet.

The invert (depths) of the adjoining drainage system is the key to ensure the system is self drainage.

As a guide underground pipe should fall at a rate of 1:60.

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ASPEN Stainless Steel Resistance Chart



STAINLESS

KEY



RECOMMENDED

SUITABLE HOWEVER CONTACT US FOR ADVICE

NOT RECOMMENDED

REAGENT SUBSTRATE	S/S GRADE	
	304	316
ACETIC ACID	Green	Green
ACETONE	Green	Green
ALCOHOL	Green	Green
ALUMINIUM CHLORIDE	Red	Orange
ALUMINIUM SULPHATE	Green	Green
AMMONIA GAS (DRY)	Green	Green
AMMONIUM CHLORIDE	Orange	Orange
AMMONIUM HYDROXIDE	Green	Green
AMMONIUM NITRATE	Green	Green
AMMONIUM PHOSPHATE	Green	Green
AMMONIUM SULPHATE	Red	Orange
AMMONIUM SULPHIDE	Green	Green
AMYL CHLORIDE	Red	Orange
ANILINE	Green	Green
BARIUM CHLORIDE	Red	Orange
BARIUM SULPHATE	Green	Green
BEER	Green	Green
BEEF SUGAR LIQUORS	Green	Green
BENZENE	Green	Green
BENZOIC ACID	Green	Green
BORIC ACID	Green	Green
BROMIC ACID	Orange	Orange
BROMINE WATER	Red	Red
BUTANE	Green	Green
CALCIUM CARBONATE	Green	Green
CALCIUM CHLORIDE	Red	Orange
CALCIUM HYDROXIDE	Green	Green
CALCIUM HYPOCHLORITE	Red	Orange
CALCIUM SULPHATE	Green	Green
CARBON BISULPHIDE	Green	Green
CARBON TETRACHLORIDE	Orange	Orange
CAUSTIC POTASH	Green	Green
CAUSTIC SODA	Green	Green
CHLORIDE (DRY)	Orange	Orange
CHLORIDE (WET)	Red	Red
CHLOROACETIC ACID	Red	Red
CHLOROBENZENE	Green	Green
CHLOROFORM	Orange	Orange
CHROME ACID 50%	Orange	Orange
CHROME ACID 10%	Green	Green

REAGENT SUBSTRATE	S/S GRADE	
	304	316
CITRIC ACID	Orange	Orange
CITRIC ACID CAN BE USED IN A SIMILAR WAY TO NITRIC ACID FOR PASSIVATION AND CLEANING OF STAINLESS STEEL.		
COPPER CHLORIDE	Red	Red
COPPER CYANIDE	Green	Green
COPPER NITRATE	Green	Green
COPPER SULPHATE	Green	Green
DISTILLED WATER	Green	Green
ETHYL ACETATE	Green	Green
ETHYLENE CHLORIDE	Green	Green
ETHYLENE GLYCOL	Green	Green
FATTY ACIDS	Green	Green
FERRIC SULPHATE	Green	Green
FLUORENE GAS	Red	Red
FORMALDEHYDE	Green	Green
FORMIC ACID	Red	Red
FRUIT JUICES AND PULP	Orange	Green
GASOLINE	Green	Green
GLYCERINE	Green	Green
HYDROBOMIC ACID 20%	Red	Red
HYDROCHLORIC ACID 40%	Red	Red
HYDROCYANIC ACID	Green	Green
HYDROGEN PEROXIDE	Green	Green
IODINE	Red	Orange
KEROSENE	Green	Green
LACTIC ACID	Green	Green
LINSEED OIL	Green	Green
MAGNESIUM CHLORIDE	Orange	Orange
MAGNESIUM SULPHATE	Green	Green
MALEIC ACID	Green	Green
METHYL CHLORIDE	Green	Green
MILK	Green	Green
MURIATIC ACID	Red	Red
NICKEL CHLORIDE	Orange	Orange
NICKEL SULPHATE	Green	Green
OIL AND FATS	Green	Green
OLEIC ACID	Green	Green
OXALIC ACID	Orange	Orange
PERCHLORIC ACID	Red	Red
PETROLEUM OILS	Green	Green
PHENOL 5%	Green	Green
PHOSPHORUS TRICHLORIDE	Green	Green

REAGENT SUBSTRATE	S/S GRADE	
	304	316
PHOTOGRAPHIC SOLUTIONS	Orange	Green
PITRIC ACID	Green	Green
POTASSIUM CARBONATE	Green	Green
POTASSIUM CHLORIDE	Green	Green
POTASSIUM CYANIDE	Green	Green
POTASSIUM DICHROMATE	Green	Green
POTASSIUM HYDROXIDE	Green	Green
POTASSIUM PERMANGANATE	Green	Green
POTASSIUM SULPHATE	Green	Green
SEA WATER	Red	Orange
SEWERAGE	Orange	Orange
SILVER NITRATE	Green	Green
SILVER SULPHATE	Green	Green
SODIUM BICARBONATE	Green	Green
SODIUM BISULPHITE	Green	Green
SODIUM CARBONATE	Green	Green
SODIUM HYDROXIDE	Green	Green
SODIUM HYPOCHLORITE	Orange	Orange
SODIUM SULPHATE	Green	Green
SODIUM SULPHIDE	Orange	Orange
SODIUM SULPHITE	Orange	Orange
SODIUM THIOSULPHATE	Green	Green
STANNOUS CHLORIDE	Red	Orange
STEARIC ACID	Green	Green
SULPHUROUS ACID	Red	Orange
SULPHUR	Orange	Orange
SULPHUR DIOXIDE (DRY/WET)	Orange	Orange
SULPHURIC ACID	Red	Red
TANNIC ACID	Green	Green
TANNING LIQUORS	Green	Green
TRICHLOROETHYLENE	Green	Green
TURPENTINE	Green	Green
UREA	Green	Green
URINE	Green	Green
VINEGAR	Green	Green
WATER (FRESH/MINE/SALT)	Green	Green
WHISKY	Green	Green
WINES	Green	Green
ZINC CHLORIDE	Red	Red
ZINC SULPHATE	Orange	Green

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