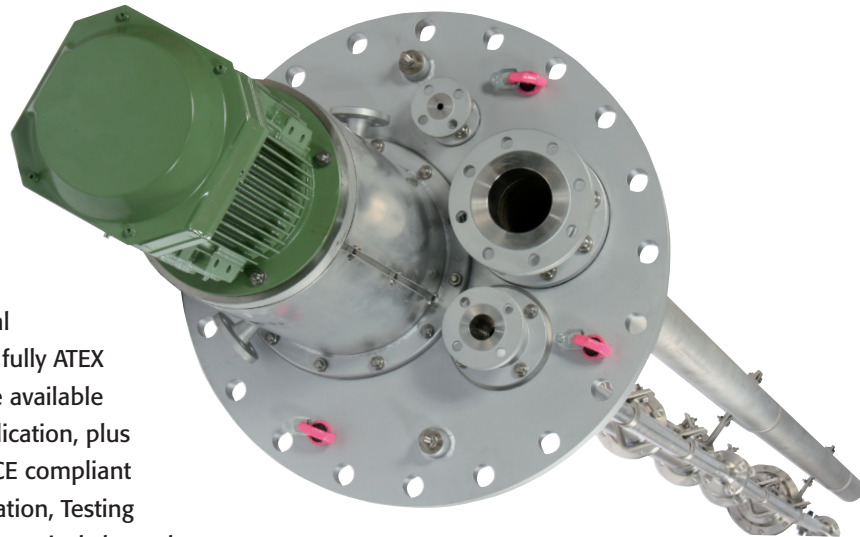


## API 610 VS4 SUMP PUMPS

Amarinth V Series pumps are designed to API 610 11th edition specifications for the Petrochemical, Chemical and Oil & Gas markets and are fully ATEX compliant. All API materials are available as standard to match your application, plus bespoke options including NACE compliant materials. Standard Documentation, Testing and NDT packs are offered. Alternatively bespoke packages can be tailored to fit your exact requirements.



### General description

A range of vertical long shaft single stage centrifugal end suction sump pumps manufactured in a variety of alloys. Designed to suit customer requirements with lengths available up to 6m sump depth.

### Construction

Heavy duty modular design maximising flexibility to suit customer's application.

### Design methodology

Advanced computer techniques including 3D modelling, FEA & CFD

### Design standards

API 610 11th : 2010 / ISO 13709 : 2010  
ATEX EC-Directive 94/9/EC

### Design pressure rating

20 bar g at 38°C (pressure containing parts)

### Operating temperature rating

-40°C to 100°C (standard construction)

### Performance envelope

#### Flowrate

Up to 500 m<sup>3</sup>/h

#### Differential head

Up to 225 m

#### Speed

Up to 3600 rpm

### Configurations

Flange mount  
Plate mount (circular / rectangular)

### Frame sizes

040x025x145 to 200x150x410

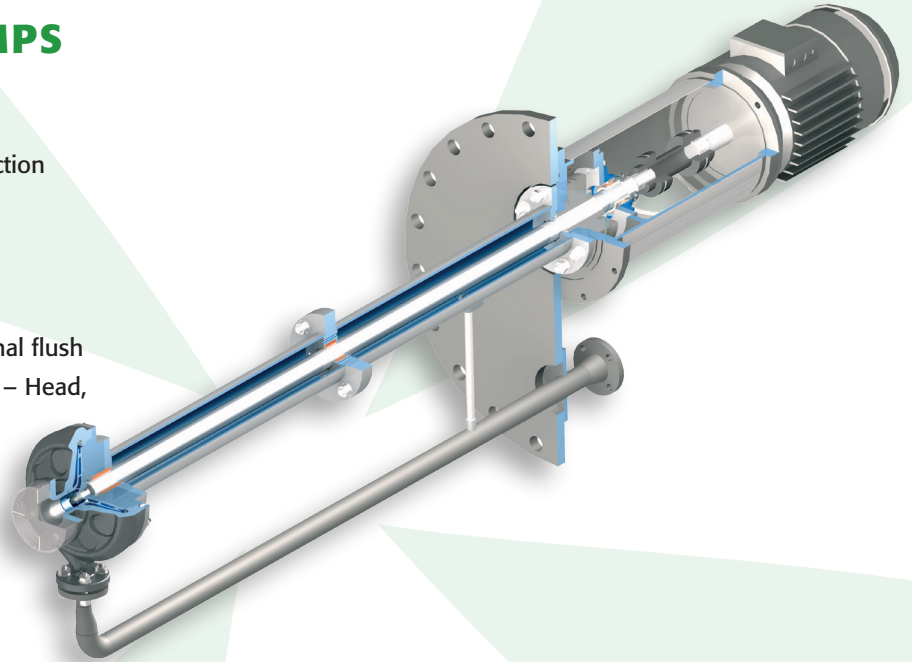
### Design life

30 years (3 years uninterrupted operation)

# API 610 VS4 SUMP PUMPS

## key features

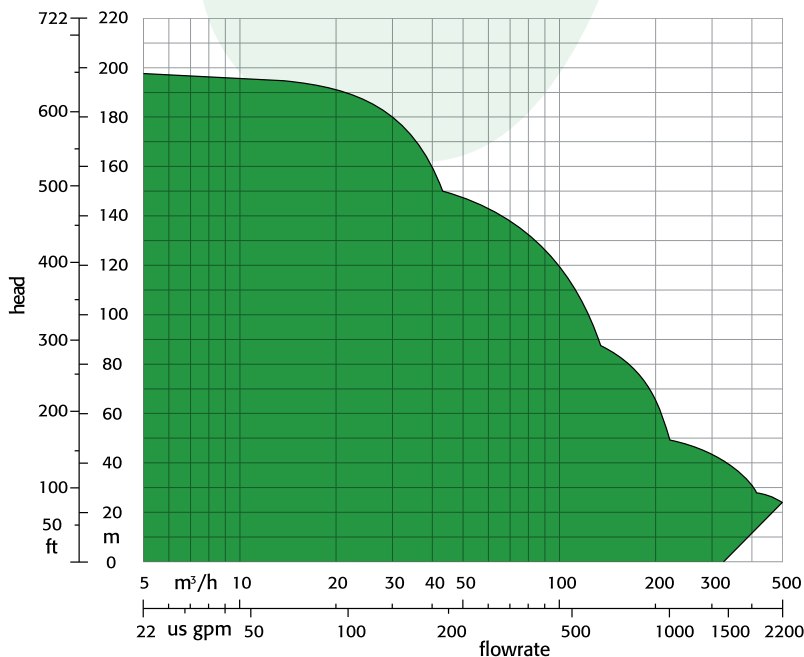
- VS4 vertical long shaft single stage end suction centrifugal pumps
- Pressure containing parts rated to 20 barg
- ATEX compliance, on application
- Shrouded or Semi open impellers
- Lubrication options using product or external flush
- Tested to API 610 / ISO 13709 procedures – Head, Flow, NPSH, Noise & Vibration
- A range of alloys available on request including NACE compliant materials
- -40°C to 100°C temperature applications
- Up to 6m sump depth



## materials

Materials	Casing	Impeller
<b>A8 SS 316L / SS 316L</b>	ASTM A351 CF 3M	ASTM A351 CF 3M
<b>I1 Cast iron / Cast iron</b>	ASTM A278 Class 30	ASTM A278 Class 30
<b>S8 Carbon Steel / SS 316L</b>	ASTM A216 WCB	ASTM A351 CF 3M
<b>S6 Carbon steel / 12% Cr SS</b>	ASTM A216 WCB	ASTM A217 Gr CA 15
<b>D1 Duplex SS / Duplex SS</b>	ASTM A890 Gr 4A (UNS J92205)	ASTM A890 Gr 4A (UNS J92205)
<b>D2 Super Duplex SS / Super Duplex SS</b>	ASTM A890 Gr 5A (UNS J93404)	ASTM A890 Gr 5A (UNS J93404)
<b>Hastelloy B / Hastelloy B</b>	ASTM A494 Gr N 7M	ASTM A494 Gr N 7M
<b>Hastelloy C / Hastelloy C</b>	ASTM A494 Gr CW 12MW	ASTM A494 Gr CW 12MW
<b>Monel / Monel</b>	ASTM A494 Gr M35 1	ASTM A494 Gr M35 1
<b>Titanium / Titanium</b>	ASTM B367 Gr C2	ASTM B367 Gr C2
<b>Customer specified</b>	Other alloys available on request including NACE compliant materials	Other alloys available on request including NACE compliant materials

## V Series hydraulic coverage



## typical applications

- Biocide / rain
- Condensate return
- Flare knock out drum
- MEG 75% with H<sub>2</sub>O
- Oily water separator
- Sour water sump
- Storm water
- Utilities
- Wash down sumps



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Certificate Number 3720  
ISO 9001, ISO 14001,  
OHSAS 18001