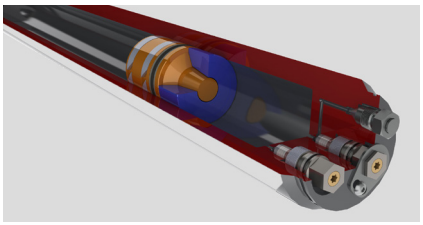
proserv

Sampling Cylinder Catalogue



Proserv is a controls technology company

We provide cutting-edge technologies to our customers to support the entire lifecycle of an asset, improving reliability, optimising performance and extending the life of critical infrastructure.

By combining our technical ingenuity with our engineering, manufacturing and field service expertise, we create innovative, industry-leading solutions that are flexible and agnostic by design, able to be integrated into any existing system.

Our Proserv technology ethos prioritises regeneration, upgrade and augmentation before replacement, widening functionality and capability, while minimising expense, saving time and reducing environmental impacts.

What we offer to our clients:

CONTROL
Independent and reliable control systems for critical infrastructure.

MONITORING
Intuitive visualisation of asset integrity and performance.

INTELLIGENCE
Insights from advanced data analytics and machine learning to predict outcomes.

OPTIMISATION
Improved performance and asset life extension through our expertise and technology.

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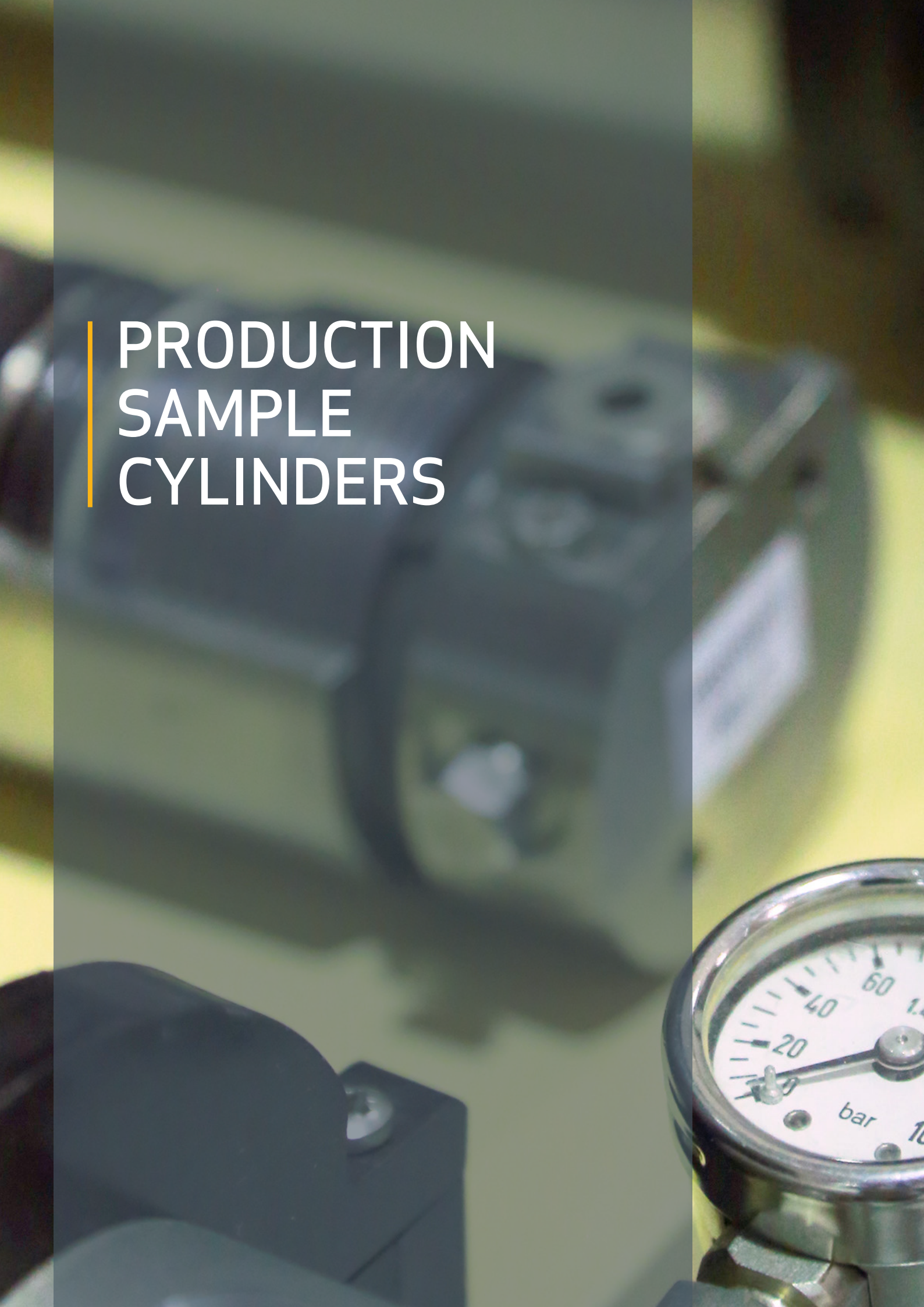

PRODUCTION
SAMPLE
CYLINDERS
60
40
20
bar

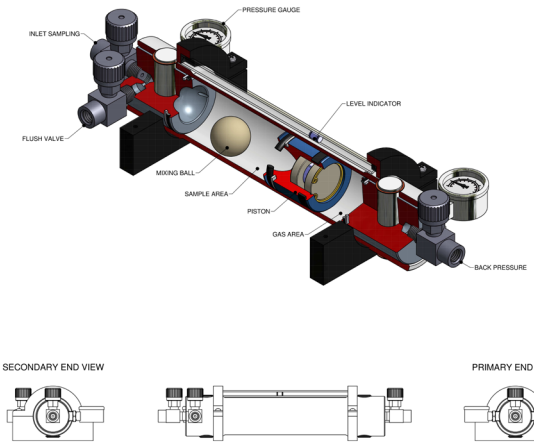

80
100
120
140

ProSteel SS-150-100-MB

Proserv's ProSteel sample receiver is a constant pressure cylinder for oil, gas and condensate sampling. A free-floating piston design ensures constant precharge and sample pressure, which maintains the phase of the sampled fluid. The integrity of the sample can be monitored by two pressure gauges, and a volume indicator provides visual volume inspection. To help prevent segregation of the sampled fluids, the cylinder may be equipped with a mixing ball.

Features and benefits

- Light weight single piston sample receiver with internal mixing ball
- Parker needle valves with 1/4" NPT female ports
- Volume indicator
- Pressure gauge with range 0-160 bar on primary and secondary side
- On primary side 2 needle valves make flushing of receiver possible



Technical Specification	
Part number	SS-150-100 MB
GA-drawing	3AA-032
Net volume	1,000 cc
Design temperature	-20 °C to 65 °C
MAWP	150 bar g @ 65 °F
Material	Cylinder: EN 10216-5 1.4404 End Caps: EN 10272:2007 1.4404 Piston: EN 10272:2007 1.4404 Mixing Ball: EN 10272:2007 1.4404 Retainer Pins: EN 10272:2007 1.4418
Net weight	7.0 kg
Dimensions	700 x 150 x 90 mm (L x W x H)

Code	EN 13445-3
Applied directive	PED 2014/68/EU Article 4, Paragraph 3 (SEP)
Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquefied • UN 1954 compressed gasses, flammable, n.o.s. • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
Standard documentation	• Hydrostatic pressure test • certificate endorsed by • 3rd party • User's guide • Declaration of Conformity
Option	• Other kinds of connections available • Transport box • Swagelok needle valves for sour gas • Mixing ball • Material cert. EN 10204 3.1 on pressure retaining parts • Also available in 500cc & 300cc

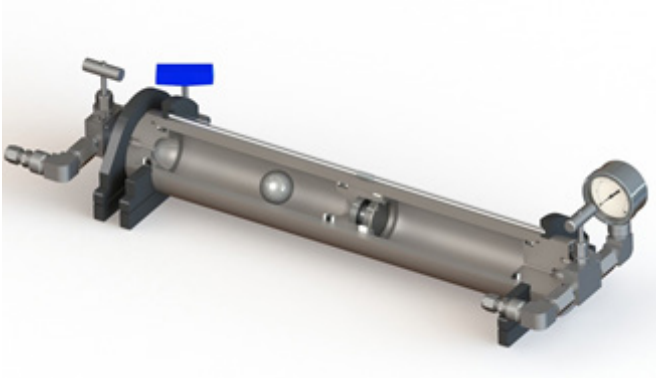
Specification Sheet

ProFisc 220 bar 1,000 cc, PED, DOT

The ProFisc sample receiver is a portable single piston sample cylinder. It is used for the collection of hydrocarbon liquids and gas Group 1 samples that require analysis in the laboratory environment and subsequent storage. This product is field proven with a substantial track record.

Features and benefits

- Lightweight single piston sample receiver with internal mixing ball
- Valves: Autoclave Engineers
- Inlet and outlet connections: Swagelok OD tube compression fittings
- Flushing valve outlet port: 1/8 inch AE W125
- Volume indicator (piston magnetic tracker)
- Zero to 250 bar pressure gauge on back pressure side



Technical Specification	
Part number	045317
Net volume	981 cc
Design temperature	-20 °C to +100 °C (see note 1)
Design pressure	220 bar (3,191 psi)
Material	Cylinder body: titanium grade 5 End caps: titanium grade 2 Piston: titanium grade 2 Mixing ball: AISI 316 St Stl Mini valves: AISI 316 St Stl
Net weight	8.4 kg
Dimensions	Cylinder length including valves and pressure gauge 737 mm Cylinder body length 610 mm Cylinder OD 72 mm
Option	• Hydrostatic test certificate, with third party endorsement, complete with third party inspection release note • Copy of PED 2014/68/EU declaration of conformity • Material certification to EN 10204: 3.1for pressure retaining components • Other type of connections available on request • Titanium grade 6246 for cylinder body (NACE MR 0175/ISO 15156 compliant) • Alternative valves material • Alternative O-ring seal material • Transportation box (DOT requirement)

Approved for use within the European Union & Transportation within the USA under the following European Directives and US Special Permit:
- 2014/68/EU (PED)
- US DOT SP-15404
Design code: generally in accordance with PD 5500

Service:
- UN 1954 compressed gas, flammable, NOS
- UN 1964 hydrocarbon gas mixture, compressed, NOS
- UN 1965 hydrocarbon gas mixtures, liquefied, NOS
- UN 1053 hydrogen sulphide (H2S)
- UN 3161 liquefied gas, flammable, NOS
- UN 1971 UN 1972 Natural gas with methane content
- UN 1066 nitrogen, compressed
- UN 1267 petroleum crude oil
- UN 1075 petroleum gases, liquefied or liquefied petroleum gas
- UN 1006 argon, compressed
- UN 1953 compressed gas, toxic, flammable, NOS

NOTE 1: The design of the cylinder metal work, brackets and pressure gauge are suitable for sample medium temperatures up to 100 °C, the magnet tube has a maximum temperature of 70 °C. If the sample cylinder requires to be externally heated (reconditioning) then it should be noted that the pressure gauge has an external temperature limit of +60 °C.

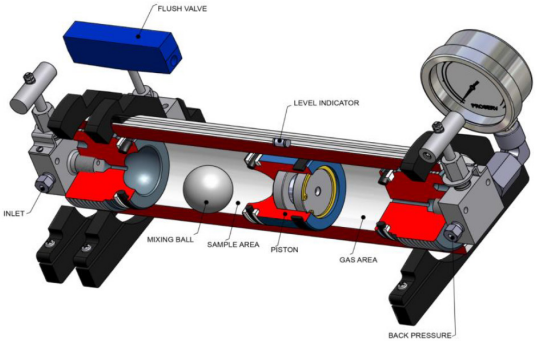
Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list • Authorised Inspectors Certificate of • Conformance to DOT SP-15404 • Copy of DOT SP-15404

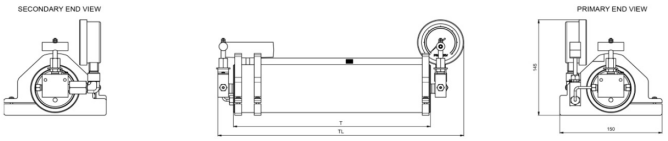
ProFisc Ti-250-100-MB, TPED

The ProFisc sample receiver is a portable single piston sample cylinder. It is used for the collection of hydrocarbon liquids and gas Group 1 samples that require analysis in the laboratory environment and subsequent storage.

Features and benefits

- Light weight single piston sample receiver with internal mixing ball
- Autoclave engineers valves
- Outlet port: 1/8" AE W125
- Volume indicator
- Pressure gauge with range 0-250 bar on back pressure side
- Flushing valve



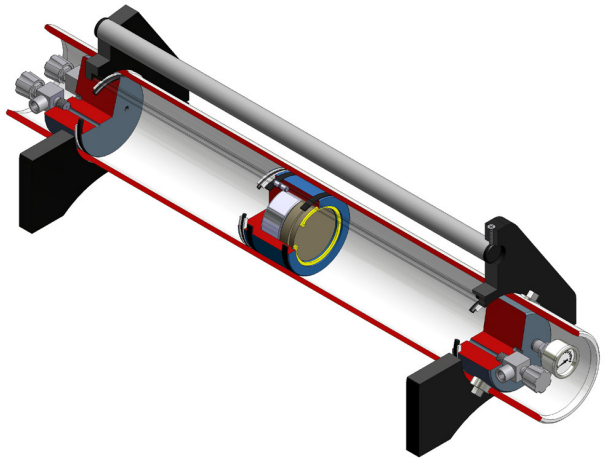


Technical Specification			
Part number	TI-250-100MB	Code	EN 1964-3
GA-drawing	3CA-034	Applied directive	TPED 2010/35/EU
Net volume	981 cc	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquified • UN 1954 compressed gasses, flammable, n.o.s. • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • UN 1964 hydrocarbon gas mixture • UN 1965 hydrocarbon gas mixture liquefied, n.o.s • UN 1053 hydrogen sulphide • UN 3161 natural gas, compressed • UN 1953 nitrogen, compressed • Formation water
Design temperature	-20 °C to +177 °C		
Design pressure	250 bar g @ +177 °C		
Material	Cylinder: ASTM B348 Gr. 5 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Mixing ball: ASTM A479 316		
Net weight	7.6 kg		
Dimensions	(TL x W x H) 653 x 150 x 145 T = 610 OD = Ø72	Standard documentation	• Hydrostatic pressure test certificate • Users guide • Declaration of Conformity • Material cert. EN 10204 3.1 on pressure retaining parts • Transport box
Option	• Pressure gauge with range 0-700 bar • Other kinds of connections available • Also available in sizes 300cc & 640cc • NACE Compliant (MR 0175) in titanium grade 6246		

Specification Sheet

ProLarge II SS-130-400-MB

Proserv's ProLarge sample receiver is a large constant pressure cylinder for oil, gas and condensate sampling. A free floating piston design ensures constant pre-charge and sample pressure, which maintains the phase of the sampled fluid. The integrity of the sample can be monitored by a pressure gauge, and a volume indicator provides visual volume inspection. To help prevent segregation of the sampled fluids, the cylinder may be equipped with a mixing ball.



Features and benefits

- Large volume piston sample receiver
- Needle valves with 1/4 inch NPT female outlets
- Purge valve
- Volume indicator
- Pressure gauge
- Carrying handle
- Available both in titanium and stainless steel

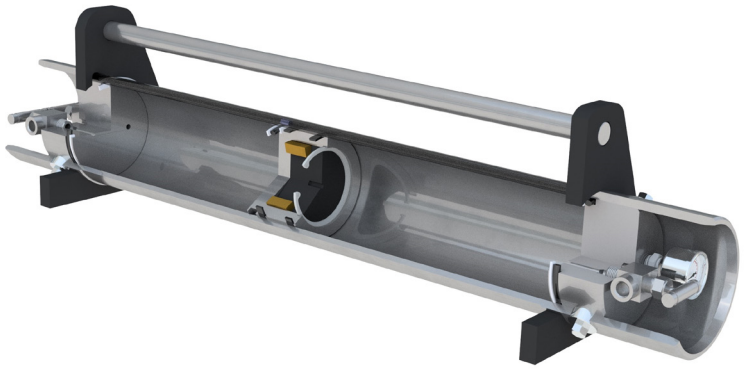
Technical Specification	
Part number	SS-130-400-MB
GA-drawing	3AA-121
Net volume	3,750 cc
Design temperature	-20 °C to +65 °C
Design pressure	130 bar g @ 65 °C
Material	Cyl body: EN 10216-5 1.4404 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Mixing ball: ASTM B348 Gr. 5 Retainer pins: EN 10272 1.4418
Net weight	24 kg
Dimensions	850 x 250 x 250 mm (L x W x H)
Option	• Sour service edition • Mixing nozzle for ProMix Edition • Other materials and volumes upon request • Rupture disc • EN 10204 3.1 material certification • Transportation and storage box

Standards and codes	• PED 2014/68/EU • Design code EN 13445-3 • ISO 3170 and 3171 • API MPMS 8,1 & 8,2
Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquided • UN 1954 compressed gasses, flammable, NOS • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
Standard documentation	• Hydrostatic pressure test certificate • User manual • Declaration of conformity

ProLarge III Ti-200-400-TPED

Main features

- Large light weight single piston sample receiver
- Needle valves
- Volume indicator
- Pressure gauge with range 0-250 bar on back pressure side
- Two needle valves on primary side makes flushing of receiver possible
- 1/4" NPT Female connections



Specification	
Model	TI-200-400-TPED
GA-drawing	3AA-160
Net volume	4005 cc
Design temperature	-20 °C to +149 °C
Design pressure	200 bar g
Material	Cylinder: ASTM B348 Gr. 5 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Retainer pins: EN 10088-3, 1.4418
Net weight (kg)	13.3 kg
Dimensions	(L x W x H) 787 x 160 x 195

Documentation & Design	
Design code	EN 1964-3:2000
Applied directive	TPED 2010/35/EU
Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquified • UN 1954 compressed gasses, flammable • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • UN 1964 hydrocarbon gas mixture, compr. • UN 1965 hydrocarbon gas mixture, liquefied • UN 1053 hydrogen sulphide • UN 3161 liquefied gas, flammable • UN 1075 petroleum gases, liquified • UN 1953 compressed gas, toxic, flammable • Formation water
Standard	• Hydrostatic pressure test certificate • Users instructions • Declaration of Conformity • Material cert. 3.1
Option	• Other kinds of connections available • Transportation box • Available in volume 2000cc

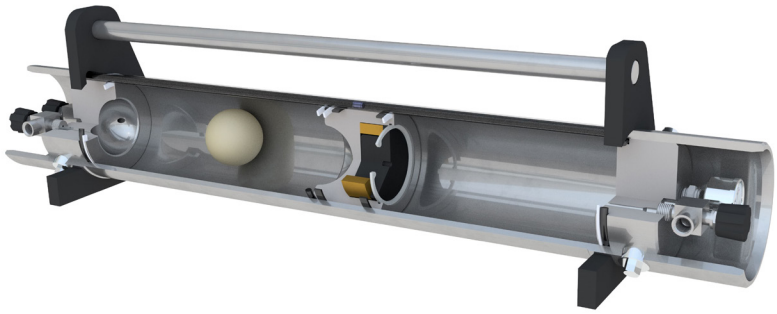
Specification Sheet

ProLarge III Ti-200-400-MB-TPED

proserv

Main features

- Large light weight single piston sample receiver
- Needle valves
- Volume indicator
- Pressure gauge with range 0-250 bar on back pressure side
- Two needle valves on primary side makes flushing of receiver possible
- 1/4" NPT Female connections
- Mixing Ball



Specification	
Part number	TI-200-400-MB-TPED
GA-drawing	3AA-161
Net volume	3750 cc
Design temperature	-20 °C to +149 °C
Design pressure	200 bar g
Material	Cylinder: ASTM B348 Gr. 5 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Retainer pins: EN 10088-3, 1.4418 Mixing ball: PEEK
Net weight	13.9 kg
Dimensions	(L x W x H) 787 x 160 x 195

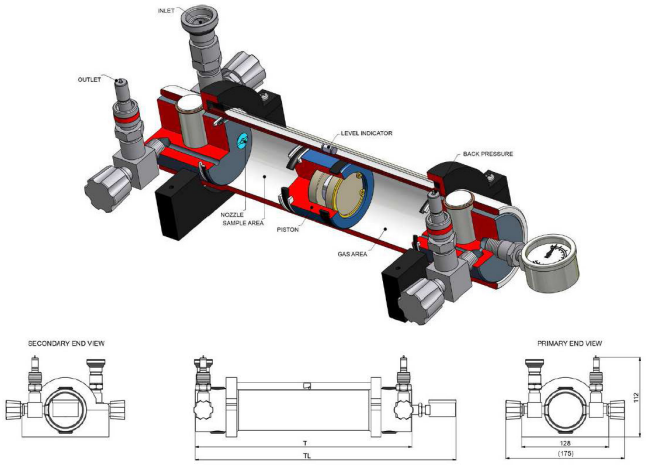
Documentation & Design	
Design code	EN 1964-3:2000
Applied directive	TPED 2010/35/EU
Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquified • UN 1954 compressed gasses, flammable • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • UN 1964 hydrocarbon gas mixture, compr. • UN 1965 hydrocarbon gas mixture liquefied • UN 1053 hydrogen sulphide • UN 3161 liquified gas, flammable • UN 1075 petroleum gases, liquefied • UN 1953 compressed gas, toxic, flammable • Formation water
Standard	• Hydrostatic pressure test certificate • Users instructions • Declaration of conformity • Material cert. 3.1
Option	• Other kinds of connections available • Transportation box • Available in volume 1750cc

ProMix SS-150-100

The ProMix sample receiver is a portable constant pressure cylinder for crude oil sampling. It is designed for mixing/homogenising samples prior to analysis and is used in conjunction with the Proserv ProMix bench.

Features and benefits

- Lightweight single piston sample receiver
- Parker needle valves
- Volume indicator
- Pressure gauge with range zero to 160 bar on back pressure side
- On primary side, two needle valves make flushing of receiver possible
- Homogenising nozzle on primary side
- Connections: 1/4 inch NPT female fitted with quick connectors



Technical Specification			
Part number	SS-150-100	Code	EN 13445-3
GA-drawing	3AA-034	Applied directive	PED 2014/68/EU Article 4 Paragraph 3 (SEP)
Net volume	1,000 cc		
Design temperature	-20 °C to +65 °C	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquided • UN 1954 compressed gasses, flammable, NOS • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
MAWP	150 bar g @ 65°C		
Material	Cyl body: EN 10216-5 1.4404 End caps: EN 10272 14404 Piston: EN 10272 14404 Nozzle: EN 10272 14404 Retainer pins: EN 10272 1.4418		
Net weight	7 kg		
Dimensions	705 x 175 x 112 mm (L x W x H)	Standard documentation	• Hydrostatic pressure test certificate endorsed by third party • User guide • Declaration of conformity
Option	• Material cert. EN 10204 3.1 on vessel and valves • Transport box • Swagelok needle valves for sour gas • Various kinds of connections available • Also available in 500cc & 300cc		

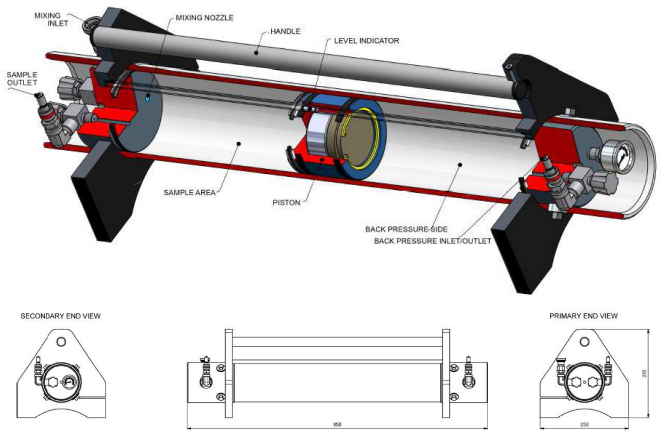
Specification Sheet

ProMix II SS-130-400

The ProMix sample receiver is a portable constant pressure cylinder for crude oil sampling. It is designed for mixing/homogenising samples prior to analysis and is used in conjunction with the Proserv ProMix bench.

Features and benefits

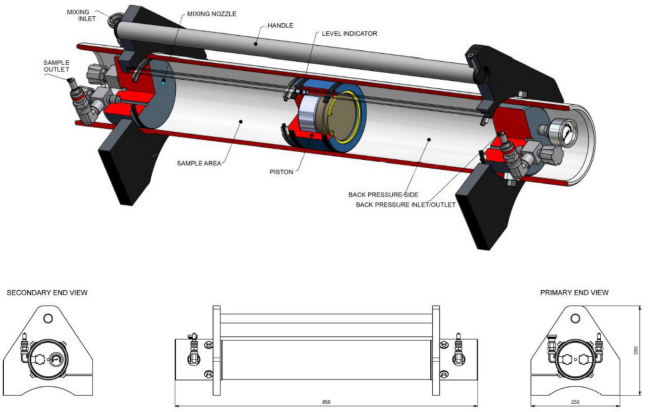
- Large single piston sampling receiver
- Homogenising nozzle on primary side
- External volume indicator
- Pressure gauge with range zero to 160 bar on secondary side
- Parker needle valves
- On primary side, two needle valves make flushing of receiver possible
- Connections: 1/4 inch NPT female fitted with quick connectors



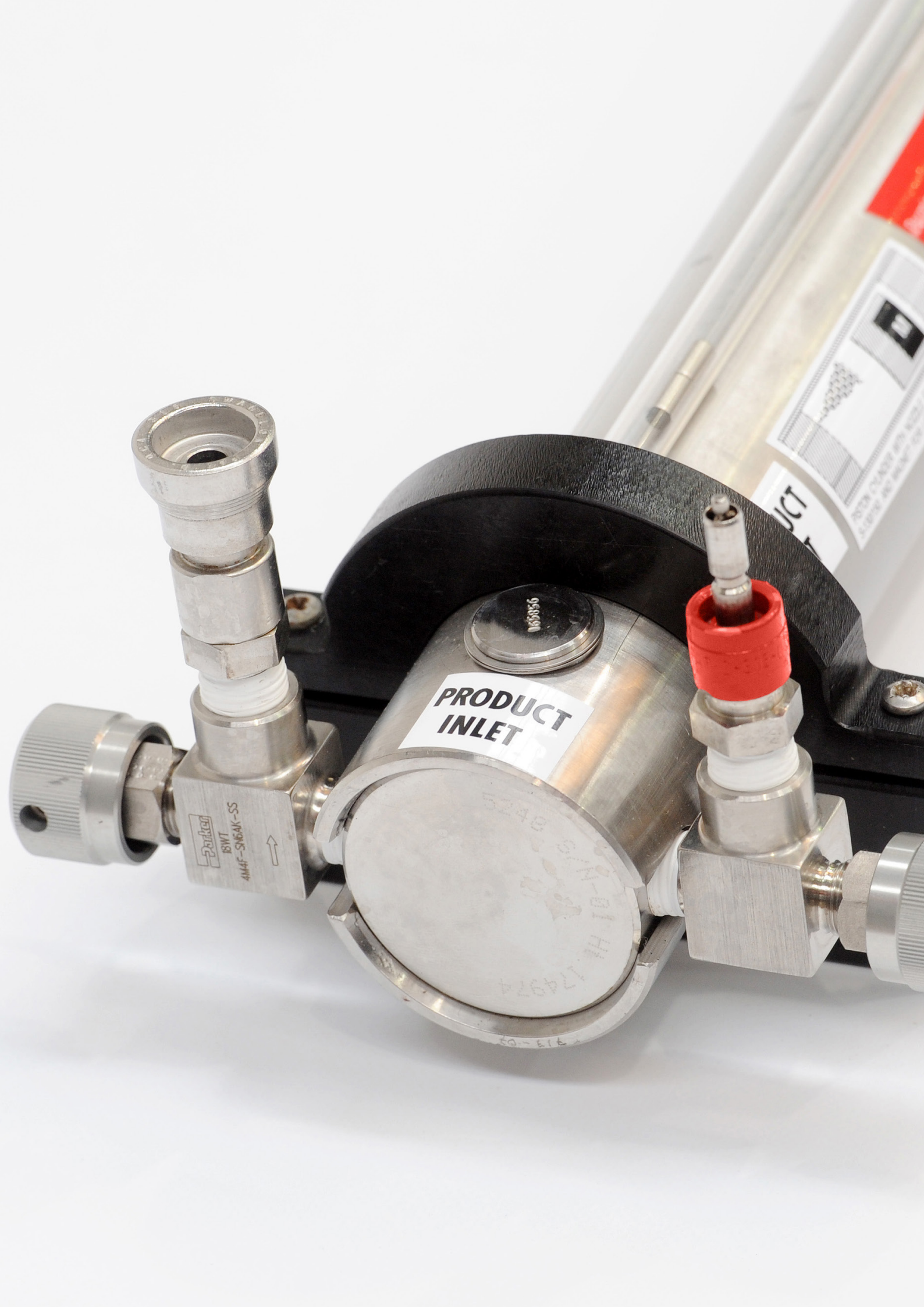
Technical Specification			
Part number	SS-130-400	Code	EN 13445-3
GA-drawing	3AA-081	Applied directive	PED 2014/68/EU
Net volume	4005 cc	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquided • UN 1954 compressed gasses, flammable, NOS • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
Design temperature	-20 °C to +65 °C		
MAWP	130 bar g @ 65 °C		
Material	Cyl body: EN 10216-5 1.4404 End caps: EN 10272 1.4404 Piston: EN 10272 1.4404 Nozzle: EN 10272 1.4404 Retainer pins: EN 10272 1.4418		
Net weight	30.5 kg	Standard documentation	• Hydrostatic pressure test certificate endorsed by third party • User guide • Declaration of conformity
Dimensions	850 x 250 x 250 mm (L x W x H)		
Option	• Material cert. EN 10204 3.1 on vessel and valves • Transport box • Swagelok needle valves for sour gas • Various kinds of connections available		

ProMix II TI-130-400

- Large single piston sampling receiver
- Homogenising nozzle on primary side
- External volume indicator
- Pressure gauge with range 0-160 bar on secondary side
- Parker needle valves
- On primary side 2 needle valves make flushing of receiver possible
- Connections: 1/4" NPT Female fitted with quick connectors



Technical Specification			
Part number	TI-130-400	Code	EN 13445-3
GA-drawing	3AA-125	Applied directive	PED 2014/68/EU
Net volume	4005 cc	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquided • UN 1954 compressed gasses, flammable, n.o.s. • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
Design temperature	-20°C... +65°C		
MAWP	110 bar g @ 65°C		
Material	Cylinder: ASTM B348 Gr. 2 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Nozzle: EN 10272 1.4404 Retainer pins: EN 10272 1.4418		
Net weight	17.5 kg	Standard documentation	• Hydrostatic pressure test • certificate endorsed by • 3rd party • User's guide • Declaration of Conformity
Dimensions	850 x 250 x 250 mm (TL x W x H)		
Option	• Other kinds of connections available • Transport box • Swagelok needle valves for sour gas • Material cert. EN 10204 3.1 pressure retaining parts		

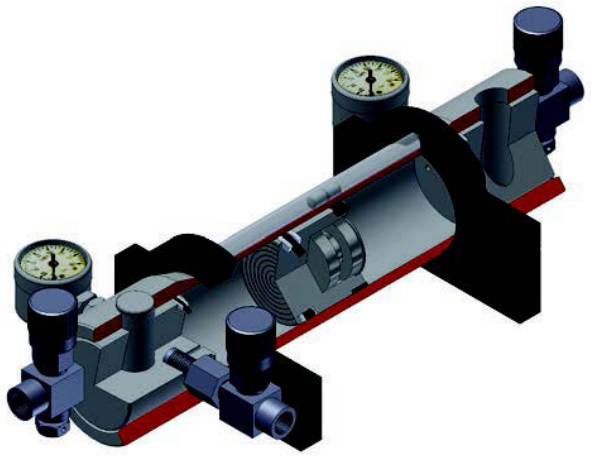

PRODUCT
INLET

ProAI AI-150-30

The ProAI sample receiver is a constant pressure cylinder for gas and condensate sampling. Made of aluminium, this sample receiver has good properties for handling cold products. A free floating piston design ensures constant pre-charge and sample pressure, which maintains the phase of the sampled fluid. The integrity of the sample can be monitored by a pressure gauge, and a volume indicator provides visual volume inspection.

Features and benefits

- Lightweight single piston sample receiver
- Needle valves with 1/4 inch NPT female outlet
- Rupture disc
- Volume indicator
- Purge valve
- Pressure gauge on both primary and secondary side



Technical Specification			
Part number	AI-150-30	Standards and codes	• PED 2014/68/EU, Article 4 Paragraph 3 (SEP) • Design code EN 13445-3 • ISO 3170 and 3171 • API MPMS 8.1 & 8.2
GA-drawing	3AA-014		
Net volume	299 cc		
Design temperature	-20 °C to +65 °C	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquided • UN 1954 compressed gasses, flammable, NOS • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • Formation water
MAWP	150 bar g @ 65 °C		
Material	Cyl body: EN AW 6082 T6511 End caps: EN AW 6082 T6 Piston: EN AW 6082 T6 Retainer pins: EN 10272:2007 1.4418		
Net weight	2.8 kg	Standard documentation	• Hydrostatic pressure test certificate endorsed by third party • User guide • Declaration of conformity
Dimensions	400 x 182 x 91mm (L x W x H)		
Option	• Material cert. EN 10204 3.1 on vessel and valves • Transportation and storage box • Carrying handle		

Flow Through Sample Cylinder Non Coated

The flow through sample cylinder is used for the collection of liquid and gas samples. Each assembly consists of one Proserv type sample cylinder, two 1/4 inch needle valves with 1/4 inch OD tube male connectors (Swagelok) complete with blanking caps.

Features and benefits

- Primarily used for taking gas samples
- Standard valve option is straight pattern needle valves with 1/4 inch OD tube connection (Swagelok)
- Valve ports fitted with Swagelok male connectors and 1/4 inch plugs

Technical Specification	
Part number	061605 061620 061627 061632
Net volume	150 cc 300 cc 500 cc 1,000 cc
Maximum allowable filling pressure	1,800 psi (124 bar)
Working temperature	-20 °c to 65 °c
Cylinder material	316L stainless steel cylinder body 316L stainless steel needle valves
Net weight	300 ml - 1.09 kg 500 ml – 1.37 kg 1,000 ml – 3.62 kg
Dimensions cylinder only (OD x L)	300 ml – 50 mm x 240 mm 500 ml – 50 mm x 369 mm 1,000 ml – 101 mm x 247 mm
Option	• Valve configuration with angle pattern valve • Independent witness pressure test product certificate by Lloyds • Alternative inlet/outlet connections • Transportation box

Code	Transportable pressure equipment directive (TPED) 2010/35/EU
Reference	BS EN 1964-3 TPED certified cylinder
Service	• UN 1006: argon, compressed • UN 1066: nitrogen, compressed • UN 1046: Helium, compressed • UN 1013: CO^2 • UN 1049: hydrogen, compressed • UN 1971: methane, compressed or natural gas • UN 1964: hydrocarbon gas mixtures, compressed
Standard documentation	• Hydro pressure test certificate • Proserv certificate of conformity • Manufacturing declaration of conformity with: TPED 2010/35/EU

Flow Through Sample Cylinder Sulfinert Coated

The Proserv flow through type cylinder is used for the collection of liquid and gas samples. Each assembly consists of one coated sample cylinder, two coated 1/4 inch needle valves with 1/4 inch OD tube connector (Swagelok) complete with blanking caps.

Features and benefits

- 1/4 inch OD tube connections (Swagelok)
- Straight pattern valve configuration
- 316 St Stl cylinder body
- Transport box available
- Sulfinert coated cylinder and valves for low level H2S studies
- Refer to Silcotek website for further information on Sulfinert coating

Technical Specification			
Part number	075333, 075327, 075328, 075329, 075330	Reference	TPED 2010/35/EU
Net volume	150 cc, 300 cc, 500 cc, 1,000 cc, 3,785 cc		
Design pressure	1,450 psi (100 bar)	Service	• UN 1006: argon, compressed • UN 1066: nitrogen, compressed • UN 1046: helium, compressed • UN 1013: CO^2 • UN 1049: hydrogen, compressed • UN 1971: methane, compressed or natural gas • UN 1964: hydrocarbon gas mixtures, compressed • UN 1954 compressed gas flammable NOS
Design temperature	-20 °C to 50 °C		
Cylinder material	Cylinder body 316 St. Stl (304 St. Stl for 3785cc option only) Valves 316 St. Stl Sulfinert coated wetted parts		
Net weight	0.6 kg, 0.9 kg, 1.4 kg, 3.1 kg, 9.7 kg (approx. estimated) retrospectively		
Dimensions	500 cc cylinder: 351 mm length (cylinder only) 50.3 mm cylinder diameter	Standard documentation	• Hydrostatic pressure test certificate • Proserv letter of conformity • Manufacturing declaration of conformity with TPED 2010/35/EU
Option	• Independent witness pressure test certificate by Lloyds • Cylinder material certification • Transportation box available fibre glass construction		

ProLight Flow Through Cylinder

The ProLight flow through cylinder is used for collecting gas or fluid samples. Each assembly consists of one Proserv ProLight type sample cylinder, two 1/4 inch needle valves, with 1/4 inch NPT to six millimetre A-Lok adaptors fitted.

Features and benefits

- Lightweight high pressure flow through cylinder
- Swagelok needle valves
- Inlet/outlet connections six millimetre A-Lok

Technical Specification			
Part number	045710	2014/68/EU (PED) Design code: generally in accordance with PD 5500	
Net volume	735 cc	Service	• UN 1954 compressed gas, flammable, NOS • UN 1964 hydrocarbon gas mixture, compressed, NOS • UN 1965 hydrocarbon gas mixtures, liquefied, NOS • UN 1053 hydrogen sulphide (H2S) • UN 3161 liquefied gas, flammable, n.o.s • UN 1971, UN 1972 natural gas with methane content • UN 1066 nitrogen, compressed • UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquefied or liquefied petroleum gas • UN 1006 argon, compressed • UN 1953 compressed gas, toxic, flammable, NOS
Design temperature	-20 °C to +93 °C		
Design pressure	5,160 psi @ 93 °C 6,000 psi @ 37 °C		
Material	Cyl body: ASTM B348 Ti Gr. 5 End caps: ASTM B348 Ti Gr.2 Needle valves: AISI 316 St Stl Adaptors: AISI 316 St Stl		
Net weight	5.4 kg		
Dimensions	Cyl length incl valves 660 mm Cyl body length 444 mm Cyl OD 72 mm		
Option	• Hydrostatic test certificate, with third party endorsement, complete with inspection release note • Alternative connections • Transportation box	Standard documentation	• Hydrostatic test certificate • Leak test certificate • User instructions


UK) LTD
HYDROCARBON LIQUID & GAS
TITANIUM GR 2
-20°C TO +85°C
150 BAR (2176 PSI)
225 BAR (3263 PSI)

Inconel 625 Flow Through Cylinder 6K

The Inconel 625 sample receiver is a flow through type cylinder, used for the collection of Group 1 hydrocarbon liquids and gas samples requiring analysis in the laboratory and subsequent storage. The cylinder design allows sampling from extreme environments (H2S). Threaded end caps and a double seal arrangement at either end of the cylinder creates a robust and reliable design that is field proven.

Features and benefits

- Valves: Inconel 625
- Valve inlet ports: 1/2 inch NPT female
- Cylinder main components: Inconel 625
- Suitable for sour environments (H2S)

Technical Specification			
Part number	155548	Approved for use within the European Union under the following Directive: PED 2014/68/EU • Generally in accordance with PD 5500 • BS EN14359	
Net volume	500 cc		
Design temperature	0 °C to 93 °C (32 °F to 199 °F)		
Design pressure	6,000 psi (413 bar)	Service	• UN 1053 hydrogen sulphide (H2S) • UN 1066 nitrogen, compressed • UN 1075 petroleum gases, liquefied or liquefied petroleum gasses • UN 1267 Petroleum crude oil • UN 1953 compressed gas, toxic, flammable, n.o.s. • UN 1954 compressed gas, flammable, n.o.s. • UN 1964 hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1971, UN 1972 natural gas with methane content
Material	Cylinder body / end caps / Hex nipple / Valves: Inconel 625		
Net weight	11 kg approx. (empty)		
Dimensions	Overall length including valves 538 mm (21") Cylinder OD 79 mm (3.1")	Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list
Option	• Hydrostatic test certificate, with third party endorsement, complete with third party inspection release note • Copy of PED 2014/68/EU Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components • Transportation box		

Inconel 625 Flow Through Cylinder 10K

The Inconel 625 sample receiver is a flow through type cylinder, used for the collection of Group 1 hydrocarbon liquids and gas samples requiring analysis in the laboratory and subsequent storage. The cylinder design allows sampling from extreme environments (H2S). Threaded end caps and a double seal arrangement at either end of the cylinder creates a robust and reliable design that is field proven.

Features and benefits

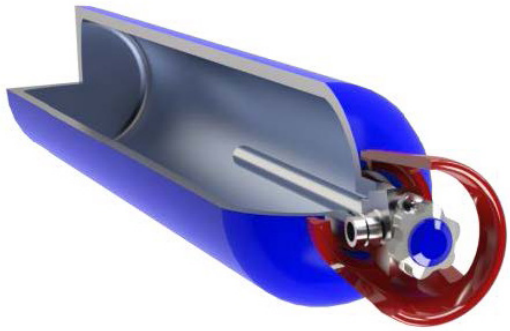
- Valves: Autoclave Engineers Inconel 825
- Valve inlet ports: 1/4 inch NPT female
- Main components manufactured from Inconel 625 and Inconel 825
- Suitable for sour environments (H2S)

Technical Specification			
Part number	060424	Approved for use within the European Union under the following Directive: PED 2014/68/EU Generally in accordance with PD 5500 BS EN14359	
Net volume	500 cc		
Design temperature	0 °C to +149 °C		
Design pressure	10,000 psi (690 bar) @ +93 °C 8,800 psi (606 bar) @ +149 °C	Service	• UN 1053 hydrogen sulphide (H2S) • UN 1066 nitrogen, compressed • UN 1075 petroleum gases, liquefied or liquefied petroleum gasses • UN 1267 petroleum crude oil • UN 1953 compressed gas, toxic, flammable, n.o.s. • UN 1954 compressed gas, flammable, n.o.s. • UN 1964 hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1971, UN 1972 natural gas with methane content
Material	Cylinder / end caps: Inconel 625 Valves: Inconel 825		
Net weight	11 kg approx. (empty)		
Dimensions	Overall length including valve 455 mm Cylinder OD 79 mm		
Option	• Hydrostatic test certificate, with third party endorsement, complete with third party inspection release note • Copy of PED 2014/68/EU Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components • Transportation box	Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list

EXPLORATION SAMPLE CYLINDERS

20 LTR GAS CYLINDER, UN, TPED, DOT (PENDING)

Proserv's single ended 20 Ltr Aluminimum gas cylinder is the sampling industry standard where large volume surface separator gas samples are required during well testing. The Cylinder is suitable for use in any ambient condition to be expected outdoor, subject to the specified temperature limitations, including offshore platforms, onshore terminals and sites in tropical areas.



Features and benefits

- Universally transportable cylinder
- Single valve design with dual 1/4" NPT female ports which enable transfer of liquid gas or vapor gas, assisted by one valve port being equipped with a dip tube
- Dual Port Design valve also fitted with a PRD
- Quick filling of liquified gas by releasing cylinder head pressure through additional vapor port
- Ability to remove liquids by inverting cylinder

Technical Specification			
Part number	A0016837	Complies with	• Approved for use within the European union under the following Directive: • - 2010/35/EU (TPED) • UN Approval Certification • DOT Approval Pending
Net volume	20,000cc (20L)		
Operating temperature	-20 to 95 °C (-4 °F to 203 °F)		
Design temperature	-20 °C to 95 °C (-4 °F to 203 °F)		
Transport temperature	65 °C (149 °F) (Max)		
Maximum working pressure	193 bar(g) (2,800 psi) at 65 °C (max) 170 bar(g) (2,465 psi) at 95 °C	Service	• UN 1075 Petroleum gases, liquefied • UN 1965 Hydrocarbon gas mixture, liquefied, n.o.s. (not otherwise specified) • UN 1053 Compressed gas, toxic, flammable, n.o.s. • UN 1954 Compressed gas, flammable, n.o.s. • UN 1971 Natural gas, compressed • UN 1006 Argon compressed • UN 1016 Carbon monoxide compressed • UN 1046 Helium compressed • UN 1049 Hydrogen, Compressed. • UN 1066 Nitrogen, compressed • Gas mixtures: only when in compliance with the appropriate Transport of Dangerous Goods Regulations; (see references)
Material	Cylinder: Aluminium alloy AA 6061 T6 grade Valves: 316L stainless steel compliant to NACE MR-0175		
Net weight	27 kg		
Dimensions (OD x L)	204 x 1080 mm		
Fusible Burst Disc Plug (PRD)	200-220 Bar (2900-3200) @ 100°C		
Option	Transportation box		
Standard documentation	• Proserv Certificate of Conformity • Hydrostatic Test Certificate • Declaration of Conformance TPED & UN • User instructions • User spare parts list		

Specification Sheet

ProLight 690 bar PED/DOT

The Prolight Sample Cylinder is designed for the collection of hydrocarbon Liquid & Gas Group 1 samples requiring analysis in the laboratory and subsequent storage. Threaded end caps inclusive of o-ring and back up ring sealing arrangement at either end of the cylinder creates a robust and reliable design, which is field proven.

Features and benefits

- Light weight titanium cylinder construction
- Autoclave Engineers valves
- Valve inlet and outlet ports: 1/8" AE W125
- Flushing connection on inlet valve

Technical Specification

Part number	See table below
Design temperature	-20°C to +177°C
Design pressure	690 Bar (10,000psi) @ 93°C 668 Bar (9,700psi) @ 177°C
Material	Cylinder Body: Titanium Grade 5 End Caps: Titanium Grade 2 Piston: Titanium Grade 2 Mixing Ball: Stainless Steel 316 Valves: Stainless Steel 316
Net weight	See table below
Dimensions (OD x L)	Cylinder length include valves = see table Cylinder OD = 72mm Cylinder OD for 2500cc cylinder ONLY = 100mm
Option	• Hydrostatic test certificate, with 3rd party endorsement, complete with 3rd party inspection release note • Copy of 2014/68/EU PED EC D of C • Material Certification to EN 10204: 3.1 for pressure retaining components • Other type of connections available on request • Ti Gr 6246 for Cylinder body (NACE MR 0175/ISO 15156 compliant) • Alternative valves material • Alternative O-ring seal material • Transportation Box (DOT Requirement) • Australian Standards Certification on request

Approved for use within the European union under the following Directive: 2014/68/EU (PED)

Approved for Transportation within the USA US Special Permit:

US DOT SP-15404

Design codes: generally, in accordance with PD 5500

Service	• UN 1954 Compressed gas, flammable, n.o.s • UN 1964 Hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1053 Hydrogen sulphide (H2S) • UN 3161 Liquefied gas, flammable, n.o.s. • UN 1971, UN 1972 Natural gas with methane content • UN 1066 Nitrogen, compressed • UN 1267 Petroleum crude oil • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1006 Argon compressed • UN 1953 Compressed gas, toxic, flammable, n.o.s. • Formation water: water with dissolved salts in various quantities compositions
Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list • Authorised Inspectors Certificate of Conformance to DOT SP-15404 • Copy of DOT SP-15404

Cylinder Specification

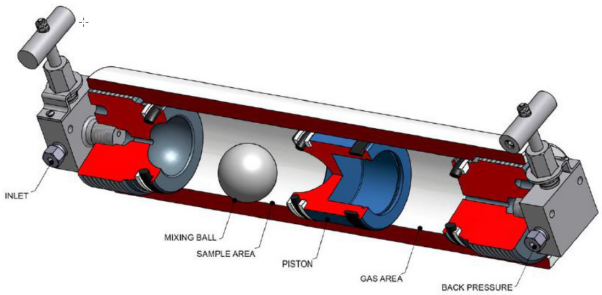
Part number	Description	Volume	Weight	Dimension (overall length including valves)
002990	Prolight, 690 Bar, 640cc, PED, DOT	640 cc	5.7 kg	497 mm
066530	Prolight, 690 Bar, 300cc, PED/DOT	300 cc	4.4 kg	332 mm
017774	Prolight, 690 Bar, 1000cc, PED/DOT	1,000 cc	7.1 kg	660 mm
203251	Prolight, 690 Bar, 2500 cc, PED. C/W carry handle & Brackets	2,500 cc	19 kg	903 mm
028039	Prolight, 690 Bar, 640cc, PED	640 cc	5.7 kg	497 mm
205511	Prolight, 690 Bar, 1000cc, PED	1,000 cc	7.1 kg	660 mm
205512	Prolight, 690 Bar, 300cc, PED	300 cc	4.4 kg	332 mm
076557	Prolight, 690 Bar, 640cc, PED, SilcoNert Coated	640 cc	5.7 kg	497 mm

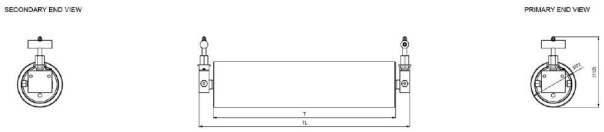
ProLight Ti-690-100-MB, TPED

The ProLight flow through cylinder is used for collecting gas or fluid samples.

Features and benefits

- Light weight single piston sample receiver
- Internal mixing ball
- Autoclave engineers valves
- Outlet port: 1/8" AE W125





Technical Specification			
Part number	Ti-690-100 MB	Code	• EN 1964-3
GA-drawing	3CA-030	Applied directive	• TPED 2010/35/EU
Net volume	981 cc	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquified • UN 1954 compressed gasses, flammable, n.o.s. • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • UN 1964 hydrocarbon gas mixture • UN 1965 hydrocarbon gas mixture liquefied, n.o.s • UN 1053 hydrogen sulphide • UN 3161 liquefied gas, flammable, n.o.s • UN 1953 compressed gas, toxic, flammable, n.o.s • Formation water
Design temperature	-20 °C to +177 °C		
MAWP	690 bar g @ 177 °C		
Material	Cylinder: ASTM B348 Gr. 5 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Mixing ball: ASTM A479 316		
Net weight	7.2 kg		
Dimensions	(TL x W x H) 653 x 72 x 114,5 (open) T = 610 OD = Ø72	Standard	• Hydrostatic pressure test certificate • Users guide • Declaration of Conformity • Material cert. EN 10204 3.1 on pressure retaining parts • Transport box
Option	• Other kinds of connections available • Also available in sizes 300cc & 640cc • NACE Compliant (MR 0175) in titanium grade 6246		

Specification Sheet

ProLight 690 bar 640 cc, NACE, PED, DOT

The Prolight sample cylinder is designed for the collection of hydrocarbon liquid and Gas Group 1 samples requiring analysis in the laboratory and subsequent storage. Threaded end caps inclusive of o-ring and back up ring sealing arrangement at either end of the cylinder creates a robust and reliable design, which is field proven. Cylinder is compliant with ANSI/NACE MR0175/ISO 15156.

Features and benefits

- Light weight titanium cylinder construction
- Autoclave Engineers valves
- Inlet valve: alloy 625
- Valve inlet and outlet ports: 1/8" AE W125
- Flushing connection on inlet valve

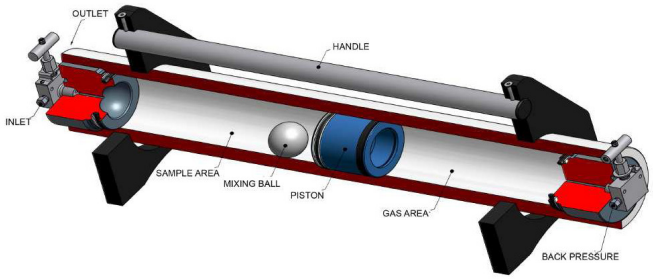
Technical Specification			
Part number	054265	Approved for use within the European union under the following Directive: 2014/68/EU (PED) Approved for Transportation within the USA US Special Permit: US DOT SP-15404 Australian Standard AS 2030 - WAP 23930 Design codes: Generally in accordance with PD 5500	
Net volume	629 cc		
Design temperature	-20 °C to +177 °C		
Design pressure	690 bar, 10,000 psi @ 93 °C 668 bar, 9,700 psi @ 177 °C		
Material	Cyl body: titanium 6246 End caps: titanium grade 2 Piston: titanium grade 2 Mixing ball: stainless steel 316 Inlet valve: alloy 625 Outlet valve: stainless steel 316		
Net weight	5.7 kg		
Dimensions	Cyl length incl valves 497 mm Cyl body length 444 mm Cyl OD 72mm		
Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list • Authorised Inspectors Certificate of Conformance to DOT SP-15404 • Copy of DOT SP-15404 • Australian Standards test certificate • Australian Standards design registration document	Service	• UN 1954 compressed gas, flammable, n.o.s • UN 1964 hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1053 hydrogen sulphide (H2S) • UN 3161 liquefied gas, flammable, n.o.s. • UN 1971, UN 1972 natural gas with methane content • UN 1066 nitrogen, compressed • UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquefied or liquefied petroleum gas • UN 1006 argon compressed • UN 1953 compressed gas, toxic, flammable, n.o.s. • - Formation water: water with dissolved salts in various quantities compositions
Option	• Transportation Box (DOT Requirement) • Alternative connection types, valve material and o-ring seal material available on request	Optional documentation	Hydrostatic test certificate, with 3rd party endorsement, complete with 3rd party inspection release note. Copy of 2014/68/EU PED EC D of C. Material Certification to BS EN 10204: 3.1 for pressure retaining components.

ProLight Ti-690-400-MB

The ProLight sample receiver is a portable single piston sample receiver with an internal mixing ball, double product inlet connections and one back pressure connection. The double inlet connection is suitable as flush connection. Connections are furnished with mini-valves with 1/8 inch AE W125.

Features and benefits

- Lightweight single piston sample receiver
- Internal mixing ball
- Autoclave Engineers valves
- Outlet port: 1/8 inch AE W125



Technical Specification			
Part number	Ti-690-400-MB	Code	EN 13445-3
GA-drawing	3CA-031	Applied directive	2014/68/EU (PED)
Net volume	4,001 cc	Service	• UN 1267 petroleum crude oil • UN 1075 petroleum gases, liquefied • UN 1954 compressed gasses, flammable, n.o.s. • UN 1971 natural gas, compressed • UN 1066 nitrogen, compressed • UN 1964 hydrocarbon gas mixture • UN 1965 hydrocarbon gas mixture liquefied, n.o.s • UN 3161 liquefied gas, flammable, n.o.s • UN 1953 compressed gas, toxic, flammable, n.o.s • Formation water
Design temperature	-20 °C to +149 °C		
MAWP	690 bar g @ 149 °C		
Material	Cylinder: ASTM B348 Gr. 5 End caps: ASTM B348 Gr. 2 Piston: ASTM B348 Gr. 2 Mixing ball: ASTM A479 316		
Net weight	26.5 kg		
Dimensions	(TL x W x H) 1,293 x 180 x 210 mm T = 1,250 mm OD = Ø100		
Option	• Material cert. EN 10204 3.1 on pressure retaining parts • Transport box • Other kinds of connections available	Standard documentation	• Hydrostatic pressure test • certificate endorsed by 3rd party • Users guide • Declaration of Conformity

Inconel 625 10K, PED

The sample cylinder N625 is designed for the collection of hydrocarbon liquids and gas group 1 samples requiring analysis in the laboratory and subsequent storage. Threaded end caps and piston inclusive of o-ring and back up ring sealing arrangement within the cylinder creates a robust and reliable design, which is field proven.

Features and benefits

- Inconel 625 corrosion resistant material
- Autoclave Engineers valves
- Valve inlet / outlet ports: 1/8" AE W125
- Carry handle (removable)

Technical Specification

Part number	See table below
Net volume	See table below
Design temperature	-29°C to +149°C
Design pressure	10000 psi (690 Bar) @ -29°C to +93C 9800 psi (676 Bar) @ +149°C
Material	Cylinder Body: Alloy 625 End Caps: Alloy 625 Piston: Alloy 625 Inlet Valve: Alloy 625 Outlet Valve: Stainless Steel 316 Mixing Ball: Hastelloy C276 Adapter: 6MO
Net weight	See table below
Dimensions	See table below
Option	• Hydrostatic test certificate, with 3rd party endorsement, complete with 3rd party inspection release note • Copy of PED 2014/68/EU • Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components

- Approved for use within the European union under the following Directive: 2014/68/EU (PED)
- Design codes: Generally in accordance with PD 5500

Service	• UN 1954 Compressed gas, flammable, n.o.s • UN 1964 Hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1053 Hydrogen Sulphide (H2S) • UN 3161 Liquefied Gas, flammable, n.o.s. • UN 1971, UN 1972 Natural gas with methane content • UN 1066 Nitrogen, compressed • UN 1267 Petroleum crude oil • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1006 Argon compressed • UN 1953 Compressed gas, toxic, flammable, n.o.s. • Formation water: water with dissolved salts in various quantities compositions
Standard documentation	• Certificate of conformity • Hydrostatic test certificate • User instructions • User spare parts list

Cylinder Specification

Part number	Description	Volume	Weight	Dimension (overall length including valves)
185518	Sample Cylinder, Piston, N625, 10000 psi, 300 cc, PED	300 cc	10.7 Kg	375 mm
185519	Sample Cylinder, Piston, N625, 10000 psi, 640 cc, PED	640 cc	14.2 Kg	534 mm
185520	Sample Cylinder, Piston, N625, 10000 psi, 1000 cc, PED	1,000 cc	18.4 Kg	705 mm

Specification Sheet

Type 5 10K, 700 cc, PED, DOT, TC, AS

The Type 5 (10K) sample cylinder is designed specifically for the task of housing samples transferred from the Proserv downhole sampler, for transportation to the analysis laboratory and subsequent storage. This transportable sampling cylinder is of piston type with two end caps, sealed with double O rings and back-up rings.

Features and benefits

- Single piston sample receiver, with internal mixing ball
- Evacuation port on sample side of cylinder
- Autoclave Engineer needle valves fitted
- Valve inlet / outlet ports: 1/4" NPT female
- Valve protection guards fitted

Technical Specification	
Part number	850669-700
Net volume	700 cc
Design temperature	-20 °C to +150 °C
Design pressure	10,000 psi (690 bar)
Material	Cylinder and end caps: 17-4PH St. Stl. (AISI 630) in NACE MR0175 Condition Piston and Mixing Device: 316 St. Stl. (AISI 316) in NACE MR0175 Condition
Net weight	17.5 kg (empty) 18.2 kg (pre-charged water/glycol)
Dimensions	Overall length 693 mm Cylinder OD 89 mm
Option	• Transportation Box (DOT Requirement) • 500cc and 1000cc cylinder volumes available
Standard documentation	• Proserv Certificate of Conformity • Hydrostatic Test Certificate • Authorised Inspectors Certificate of Conformance to DOT SP-12116 and TC Equivalency Certificate SU9269 • Copy of DOT SP-12116 • Copy of TC-SU9269 • User Instructions • User spare parts list • Australian Standards Test Certificate • Australian Standards Design Registration Document.

• Approved for use within the European union under the following Directive: 2014/68/EU (PED) • Approved for Transportation within the USA US Special Permit: - US DOT SP-12116 • Transport Canada: TC-SU9269 • Australian Standard AS 2030: WAP 23931 • Design codes: Generally in accordance with PD 5500	
Service	• UN 1066 - Nitrogen, compressed • UN 1075 - Petroleum Gases, Liquefied or Liquefied Petroleum Gases • UN 1267 - Petroleum Crude Oil • UN 1953 - Compressed Gas, Toxic, Flammable, n.o.s. • UN 1954 - Compressed Gas, Flammable, n.o.s. • UN 1964 - Hydrocarbon gases mixtures, compressed, n.o.s. • UN 1965 - Hydrocarbon gases mixtures, Liquefied, n.o.s. • UN 1971 - Methane, Compressed or Natural Gas, Compressed)
Optional documentation	• Hydrostatic Test Certificate, with 3rd party endorsement complete with 3rd party inspection release note • Material Certification to EN 10204: 3.1 for main pressure retaining components • Copy of PED 2014/68/EU Declaration of Conformity

Type 5 15K, 700 cc, PED, DOT, TC, AS

The Type 5 (15K) sample cylinder was designed specifically for receiving samples transferred from the Proserv downhole sampler and production surface samples,for transportation to the analysis laboratory and subsequent storage. This transportable sampling cylinder is of piston type with two end caps, sealed with double 'O' rings and back-up rings.

Features and benefits

- Single piston sample receiver, with internal mixing ball
- Evacuation port on sample side of cylinder
- Autoclave Engineer needle valves
- Valve inlet / outlet ports: 1/4" A.E. medium pressure female
- Valve protection guards fitted

Technical Specification	
Part number	850870-700
Net volume	700 cc
Design temperature	-20 °C to +200 °C
Design pressure	15,000 psi (1,034 bar)
Material	Cylinder and End caps: 17-4PH St. Stl. (AISI 630) in NACE MR0175 condition Piston and Mixing Device: 316 St. Stl. (AISI 316) in NACE MR0175 Condition
Net weight	21.2 kg (empty) 21.9 kg (pre-charged water/glycol)
Dimensions	Overall length 719 mm Cylinder OD 90 mm (28.3" X 3.6")
Option	500cc and 1000cc volume options available Transportation Box (DOT requirement)
Optional documentation	• Hydrostatic Certificate, with 3rd party endorsement with 3rd party inspection release note • - Material Certification to EN 10204: 3.1 or 3.2 for main pressure retaining components • - Copy of PED 2014/68/EU Declaration of Conformity

- Approved for use within the European union under the following Directive: 2014/68/EU (PED)
- Approved for Transportation within the USA under US Special Permit: US DOT SP-12116
- Transport Canada: TC Equivalency Certificate SU9269
- Australian Standard AS 2030: WAP 24116
- Design codes: Generally in accordance with PD 5500

Service	• UN 1066 - Nitrogen, compressed • UN 1075 - Petroleum Gases, Liquefied or Liquefied Petroleum Gases • UN 1267 - Petroleum Crude Oil • UN 1953 - Compressed Gas, Toxic, Flammable, n.o.s. • UN 1954 - Compressed Gas, Flammable, n.o.s. • UN 1964 - Hydrocarbon gases mixtures, compressed, n.o.s. • UN 1965 - Hydrocarbon gases mixtures, Liquefied, n.o.s. • UN 1971 / UN 1972 - Methane, Compressed or Natural Gas, Compressed
Standard documentation	• Proserv Certificate of Conformity • Hydrostatic Test Certificate • Authorised Inspectors Certificate of Conformance to DOT SP-12116 and TC Equivalency Certificate SU9269 • Copy of DOT SP-12116 • Copy of TC-SU9269 • User instructions • User spare parts list • Australian Standards Test Certificate • Australian Standard Design registration Document

Specification Sheet

Type 5 15K, 100 cc, 500cc & 1,250cc, PED, DOT

The Type 5 (15K) sample cylinder is designed for the collection of group 1 hydrocarbon liquids and gas samples, for transportation to the analysis laboratory and subsequent storage. This transportable sampling cylinder is of piston type with two end caps, sealed with double 'O' rings and back-up rings, and reliable proven design in the oil & gas industry.

Features and benefits

- Single piston sample receiver, with internal mixing ball
- Integrated evacuation port on the sample side of the cylinder
- Integral Autoclave Engineers Valves for superior control
- Valve inlet / outlet ports: 1/4" A.E. medium pressure female
- Valve protection guards fitted

Technical Specification	
Part number	See table below
Net volume	See table below
Design temperature	-20 °C to +200 °C
Design pressure	15,000 psi (1034 Bar)
Material	Cylinder and End Caps: 17-4PH St. Stl. (AISI 630) (ANSI/NACE MR0175 ISO 15156) - Piston and Mixing Device: 316 St. Stl. (AISI 316) (ANSI/NACE MR0175 ISO 15156) - Valves: Hastelloy C-276 Wetted Parts
Net weight	See table below
Dimensions	Overall Length = see table below O.D = 91mm (3.6")
Option	- Transportation Box (DOT requirement)
Optional documentation	• Hydrostatic Test Certificate, complete with 3rd Party endorsement, and 3rd Party Inspection Release Note • Material Certification to EN 10204: 3.1 for pressure retaining components • Copy of PED 2014/68/EU • Declaration of Conformity

• Approved for use within the European union under the following Directive: PED 2014/68/EU • Approved for Transportation within the USA under US Special Permit: DOT SP-12116 • Design codes: Generally in accordance with PD 5500	
Servi ce	• UN 1066 Nitrogen compressed • UN 1006 Argon compressed • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1267 Petroleum crude oil • UN 1953 Compressed gas, toxic flammable n.o.s. • UN 1053 Hydrogen Sulphide (H2S) • UN 1954Compressed gas, flammable, n.o.s • UN 1964Hydrocarbon gas mixture compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1971 Natural gas with methane content
Standard documentation	• Proserv Certificate of Conformity • Hydrostatic Test Certificate • Authorised Inspectors, Certificate of Conformance to DOT SP-12116 • Copy of DOT Special Permit SP-12116 • User Instructions • User Spare Parts List

Cylinder options

Part number	Description	Volume	Weight	Approximate dimension (overall length including valves)
188992	Type 5 15K, Cylinder, 1250 cc, PED/DOT	1250 cc	25.2 Kg	893 mm
198652	Type 5 15K, Cylinder, 500 cc, PED/DOT	500 cc	18.4 Kg	630 mm
198653	Type 5 15K, Cylinder, 100 cc, PED/DOT	100 cc	14.4 Kg	490 mm

Type 6 10K, 700 cc, PED, DOT, TC

The Type 6 (10K) cylinder is designed specifically for the task of housing samples transferred from the Proserv downhole sampler, for transportation to the analysis laboratory and subsequent storage.

Features and benefits

- Single piston sample receiver, with internal vortex ring mixing device
- Single phase nitrogen reservoir
- Evacuation port on sample side of cylinder
- Valve inlet/outlet ports: nitrogen reservoir – 1/4 inch AE medium pressure female.
- Sample and precharge: 1/4 inch NPT female

Technical Specification			
Part number	850409-700	Approved for use and transport within, and across borders, in Europe, USA and Canada under the following European Directives, US Special Permit and Transport Canada Equivalency Certificate: • 2014/68/EU (PED) • US DOT SP-12116 • TC Equivalency Certificate SU9269	
Net volume	700 cc fluid and 100 cc nitrogen		
Design temperature	- 20 °C to +150 °C		
Design pressure	10,000 psi (690 bar)		
Material	Cylinder and end caps: 17-4PH St. Stl. (AISI 630) in NACE MR0175 Condition piston and mixing device: 316 St. Stl.(AISI 316) in NACE MR0175 Condition	Service	• UN 1066 - nitrogen, compressed • UN 1075 - petroleum gases, liquefied or liquefied petroleum gases • UN 1267 - petroleum crude oil • UN 1953 - compressed gas, toxic, flammable, NOS • UN 1954 - compressed gas, flammable, NOS • UN 1964 - Hydrocarbon gases mixtures, compressed, NOS • UN 1965 - hydrocarbon gases mixtures, liquefied, NOS • UN 1971 - methane, compressed or natural gas, compressed
Net weight	22 kg (empty) 22.7 kg (pre-charged water/glycol)		
Dimensions	Cylinder length 720 mm Cylinder OD 89 mm Length with guards 810 mm		
Option	• Hydrostatic certificate, with third party endorsement • Third party inspection release note Material Certification to EN 10204: • 3.1 or 3.2 for main pressure retaining components • 500 cc and 1,000 cc volume options available. • Transportation box for compliance with DOT	Standard documentation	• Hydrostatic certificate • Authorised Inspectors Certificate of Conformance to DOT SP-12116 and TC Equivalency Certificate SU9269 • Copy of DOT SP-12116 • User instructions and user spare parts list

Specification Sheet

Type 6 15K, 700 cc, PED, DOT, TC, AS

The Type 6 (15K) cylinder is a high-pressure, high-temperature single phase sample cylinder, designed for the collection of group 1 hydrocarbon liquids and gas samples. A nitrogen charged chamber maintains pressure and representative samples during transportation to the laboratory for analysis and subsequent storage. The Type 6 (15K) cylinder has a reliable field proven design with multiple years' service in the oil and gas industry.

Features and benefits

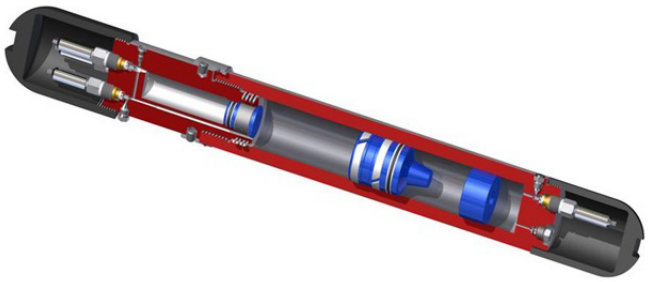
- Internal Vortex ring for sample agitation
- Integral Autoclave Engineers valves for superior control
- Valve inlet / outlet ports, 1/4" A.E. Medium pressure female
- Integrated evacuation port on the sample side of the cylinder
- Minimal dead volume
- Single-phase pressure compensation
- Valve protection guards fitted

Technical Specification	
Part number	850852-700
Net volume	700 cc fluid and 100 cc nitrogen
Design temperature	-20 °C to +200 °C
Design pressure	15,000 psi (1034 bar)
Material	Cylinder Body: 17-4PH Stainless Steel (ANSI/NACE MR0175 ISO 15156) - Nitrogen End Cap: 17-4PH Stainless Steel (ANSI/NACE MR0175 ISO 15156) - Piston & Vortex Ring: 316 St. Stl. (AISI 316) in NACE MR0175 Condition - Valve: Hastelloy C-276 wetted parts
Net weight	Approx. 24 Kg (empty)
Dimensions	Cylinder length 720 mm Cylinder OD 91 mm Length with guards 820 mm
Option	Transportation Box (DOT requirement)
Optional documentation	• Hydrostatic test certificate, with 3rd party endorsement, complete with 3rd party inspection release note • Copy of PED 2014/68/EU Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components

• Approved for use within the European union under the following Directive: - 2014/68/EU (PED) • Approved for Transportation within the USA under US Special Permit: - US DOT SP-12116 • Transport Canada: - TC Equivalency Certificate SU9269 • Australian Standard AS 2030: - WAP 24095 • Design codes: Generally in accordance with PD 5500	
Service	• UN 1954 Compressed gas, flammable, n.o.s • UN 1964 Hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1053 Hydrogen Sulphide (H2S) • UN 3161 Liquefied Gas, flammable, n.o.s. • UN 1971, UN 1972 Natural gas with methane content • UN 1066 Nitrogen, compressed • UN 1267 Petroleum crude oil • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1006 Argon compressed • UN 1953 Compressed gas, toxic, flammable, n.o.s.
Standard documentation	• Proserv Certificate of Conformity • Hydrostatic Test Certificate • Authorised Inspectors Certificate of Conformance to DOT SP-12116 and TC Equivalency Certificate SU9269 • Copy of DOT SP-12116 • Copy of TC-SU9269 • User instructions • User spare parts list • Australian Standards Test Certificate • Australian Standards Design registration Document

Type 6 15K, 700 cc, Severe Service PED, DOT

The Type 6 (15K) cylinder is a high-pressure, high-temperature single phase sample cylinder, designed for the collection of group 1 hydrocarbon liquids and gas samples. A nitrogen charged chamber maintains pressure and representative samples during transportation to the laboratory for analysis and subsequent storage. The Type 6 (15K) cylinder is ideal for harsh environments (H2S), due to the material of manufacture, and has a reliable field proven design with multiple years' service in the oil and gas industry.



Features and benefits

- Corrosion resistant alloy construction
- Internal vortex ring for sample agitation
- Integral Autoclave Engineers valves for superior control
- Valve inlet / outlet ports, 1/4" A.E. medium pressure female
- Integrated evacuation port on the sample side of the cylinder
- Minimal dead volume
- Single-phase pressure compensation
- Valve protection guards fitted

Technical Specification	
Part number	099161
Net volume	700 cc fluid and 100 cc nitrogen charge
Design temperature	-20 °C to +200 °C
Design pressure	15,000 psi (1034 bar)
Material	Cylinder Body: Inconel 725 (ANSI/NACE MR0175 ISO 15156) - Nitrogen End Cap: 17-4PH Stainless Steel (ANSI/NACE MR0175 ISO 15156) - Piston & Vortex Ring: Inconel 625 (ANSI/NACE MR0175 ISO 15156) - Valve: Hastelloy C-276 wetted parts
Net weight	Approx 24 kg (empty)
Dimensions	Cylinder length 720 mm Cylinder OD 91 mm Length with guards 820 mm
Option	• Hydrostatic test certificate, with 3rd party endorsement, complete with 3rd party inspection release note • Copy of PED 2014/68/EU • Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components • Transportation Box (DOT Requirement)

	• Approved for use within the European Union under Directive: - 2014/68/EU (PED) • Approved for Transportation within the USA under DOT Special Permit: US DOT SP-15404 • Design codes: Generally in accordance with PD 5500
Service	• UN 1954 Compressed gas, flammable, n.o.s • UN 1964 Hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1053 Hydrogen Sulphide (H2S) • UN 3161 Liquefied Gas, flammable, n.o.s. • UN 1971, UN 1972 Natural gas with methane content • UN 1066 Nitrogen, compressed • UN 1267 Petroleum crude oil • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1006 Argon compressed • UN 1953 Compressed gas, toxic, flammable, n.o.s.
Standard documentation	• Hydrostatic test certificate • User Instructions & Spare parts List • Authorised Inspectors Certificate of Conformance to DOT SP-12116

Specification Sheet

Type 8 10K Cylinder, 6000 cc, PED

The Type 8 10K sample cylinder was designed specifically for receiving hydrocarbon liquid & gas group 1 samples for laboratory analysis work and subsequent storage. This sampling cylinder is of a piston type with two end caps, which are sealed by double 'O' rings and back-up rings

Features and benefits

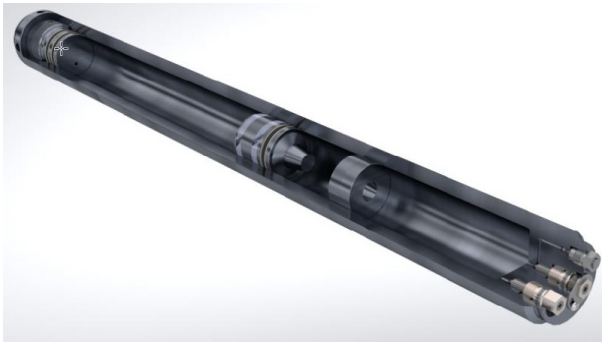
- Anti-tamper valves
- Large volume 6 litre
- Valve connections, 1/4" NPT (f) inlet and outlet
- Internal mixing ball

Technical Specification	
Part number	180833, 180130 (excludes valves)
Net volume	6000 cc
Design temperature	-20 °C to +150 °C
Design pressure	10,000 psi (690 bar)
Material	Cylinder Body & Screwed Ring: 17-4 PH St. Stl. In the NACE ANSI MR0175/ISO 15156 condition End Caps & Piston: 316 St. Stl. In the NACE ANSI MR0175/ISO 15156 condition
Net weight	130 Kg
Dimensions	Overall Length: 865 mm Cylinder O.D: 191 mm
Options	5000 cc option available
Optional documentation	• Hydrostatic Test Certificate, with 3rd party endorsement, complete with 3rd party inspection release note • Copy of PED 2014/68/EU • Declaration of Conformity • Material Certification to EN 10204: 3.1 for pressure retaining components

• Approved for use within the European union under the following Directive: 2014/68/EU (PED) • Design codes: Generally in accordance with PD 5500	
Service	• UN 1954 Compressed gas, flammable, n.o.s • UN 1964 Hydrocarbon gas mixture, compressed, n.o.s. • UN 1965 Hydrocarbon gas mixtures, liquefied, n.o.s. • UN 1971, UN 1972 Natural gas with methane content • UN 1066 Nitrogen, compressed • UN 1267 Petroleum crude oil • UN 1075 Petroleum gases, liquefied or liquefied petroleum gas • UN 1953 Compressed gas, toxic, flammable, n.o.s. • Formation water: water with dissolved salts in various quantities compositions
Standard documentation	• Certificate of Conformity • Hydrostatic Test Certificate • User Instructions • User Spare Parts List

Sample Cylinder, Multiphase, 20K, PED, DOT

Proserv's 20000 psi sample cylinder is a piston type sample receiver suitable for capture, transportation and subsequent storage of high-pressure hydrocarbon samples. The cylinder is designed for containment of conventional multiphase samples and can be utilised in a laboratory for fluid analysis and large volume recombination studies.



Features and benefits

- Large volume capacity
- Designed in accordance with PED 2014/68/EU
- DOT approval under SP-20681
- Materials complaint to ANSI/NACE MR0175/ISO 15156
- Inconel construction, suitable for severe service
- Fluids recombination vessel
- Suitable for long term storage

Technical specification	
Part number	208453 (2000 cc), 208459 (1500 cc) 208460 (1000 cc), 208461 (700 cc)
Net volume	See table below
Design temperature	-29°C to +177°C
MAWP	20000 psi (1379 Bar) @ -29°C to +93°C 19200 psi (1324 Bar) @ +177°C
Material	Cylinder and End Caps: Inconel 725 (UNS N07725) in ANSI/NACE MR0175/ISO 15156 Sample Piston and Vortex Ring: Inconel 625 (UNS N06625) in ANSI/NACE MR0175/ISO 15156 Condition Nitrogen Piston: Stainless Steel 316 (UNS S31600) Valve Body: Nibron Valve Stem: MP35N (UNS R30035)
Net weight	See table below
Dimensions	See table below
Optional documentation	• 3rd party Inspection Release Note • Hydrostatic certificate, with 3rd party endorsement • PED Declaration of Conformity • Material certification to EN 10204: Type 3.1 for main pressure retaining components

Approved for use under the following directive/Permit - 2014/68/EU (PED) • DOT Special Permit SP-20681	
Service	• UN 1006 - Argon, Compressed • UN 1066 - Nitrogen, compressed • UN 1075 - Petroleum gases, liquefied or liquefied petroleum gases • UN 1267 - Petroleum crude oil • UN 1953 - Compressed gas, toxic, flammable, n.o.s. • UN 3161 - Liquefied gas, Flammable, N.O.S • UN 1954 - Compressed gas, flammable, n.o.s. • UN 1964 - Hydrocarbon gases mixtures, compressed, n.o.s. • UN 1965 - Hydrocarbon gases mixtures, liquefied, n.o.s. • UN 1971 / UN 1972 - Methane, compressed or natural gas • UN 1053 - Hydrogen sulfide
Standard documentation	Hydrostatic Pressure Test Certificate User Instructions & User spare parts list Authorised Inspectors Certificate of Conformance to DOT SP-20681

Cylinder options		
Net volume	Net weight	Dimensions
2000cc Cylinder Volume	33kg (empty) 35kg (pre-charged water/glycol)	Cylinder Length = 992mm, Cylinder OD = 88.9mm
1500cc Cylinder Volume	28kg (empty) 29.5kg (pre-charged water/glycol)	Cylinder Length = 817mm, Cylinder OD = 88.9mm
1000cc Cylinder Volume	23kg (empty) 24kg (pre-charged water/glycol)	Cylinder Length = 640mm, Cylinder OD = 88.9mm
700cc Cylinder Volume	20kg (empty) 20.7kg (pre-charged water/glycol)	Cylinder Length = 534mm, Cylinder OD = 88.9mm

Specification Sheet

Sample Cylinder, Single Phase, 20K, PED, DOT

Proserv's 20,000 psi sample cylinder is a piston type sample receiver suitable for capture, transportation and subsequent storage of high-pressure representative production fluid samples. The cylinder is designed for containment of conventional single phase samples and can be utilised in a laboratory for fluid analysis and large volume recombination studies.

Features and benefits

- Large volume capacity
- Designed in accordance with PED 2014/68/EU
- DOT approval under SP-20681
- Materials complaint to ANSI/NACE MR0175/ISO 15156
- Inconel construction, suitable for severe service
- Fluids recombination vessel

Technical specification			
Part number	208466 (2000 cc), 208465 (1500 cc) 208463 (1000 cc), 208462 (700 cc)	Approved for use under the following directive/Permit • 2014/68/EU (PED) • DOT Special Permit SP-20681	
Net volume	See table below		
MAWP	20000 psi (1379 Bar) @ -29°C to +93°C 19200 psi (1324 Bar) @ +177°C		
Design temperature	-29°C to +177°C		
Material	Cylinder and End Caps: Inconel 725 (UNS N07725) in ANSI/NACE MR0175/ ISO 15156 Sample Piston and Vortex Ring: Inconel 625 (UNS N06625) in ANSI/NACE MR0175/ISO 15156 Condition Nitrogen Piston: Stainless Steel 316 (UNS S31600) Valve Body: Nibron Valve Stem: MP35N (UNS R30035)	Service	• UN 1006 - Argon, Compressed • UN 1066 - Nitrogen, compressed • UN 1075 - Petroleum gases, liquefied or liquefied petroleum gases • UN 1267 - Petroleum crude oil • UN 1953 - Compressed gas, toxic, flammable, n.o.s. • UN 3161 - Liquefied gas, Flammable, n.o.s. • UN 1954 - Compressed gas, flammable, n.o.s. • UN 1964 - Hydrocarbon gases mixtures, compressed, n.o.s. • UN 1965 - Hydrocarbon gases mixtures, liquefied, n.o.s. • UN 1971 / UN 1972 - Methane, compressed or natural gas • UN 1053 - Hydrogen sulfide
Net weight	See table below		
Dimensions	See table below		
Optional certification	3rd party Inspection Release Note Hydrostatic Pressure Test Certificate, with 3rd party endorsement PED Declaration of Conformity Material certification to EN 10204: Type 3.1 for main pressure retaining components	Standard documentation	• Hydrostatic Pressure Test Certificate • User Instructions & User spare parts list • Authorised Inspectors Certificate of Conformance to DOT SP-20681

Cylinder options		
Net volume	Net weight	Dimensions
2000cc Cylinder Volume & 500cc Nitrogen	46kg (empty) 48kg (pre-charged water/glycol)	Cylinder Length = 1340mm, Cylinder OD = 88.9mm
1500cc Cylinder Volume & 500cc Nitrogen	42kg (empty) 43.5kg (pre-charged water/glycol)	Cylinder Length = 1167mm, Cylinder OD = 88.9mm
1000cc Cylinder Volume & 300cc Nitrogen	35kg (empty) 36kg (pre-charged water/glycol)	Cylinder Length = 926mm, Cylinder OD = 88.9mm
700cc Cylinder Volume & 300cc Nitrogen	32kg (empty) 32.7kg (pre-charged water/glycol)	Cylinder Length = 818mm, Cylinder OD = 88.9mm

SUBSEA SAMPLE CYLINDERS

Specification Sheet

Subsea Cylinder, Single Phase, 20K, PED, DOT

Proserv's subsea sampling cylinder has been designed to capture representative production fluid samples from a subsea environment, allowing for transportation directly to a fluid analysis laboratory without the requirement for fluid transfer. This reduces associated risk or sample loss / contamination, maintains sample integrity, limits the dangers associated with high pressure hydrocarbon transfer and reduces onsite equipment and personnel time during subsea sampling operations.

Features and benefits

- Large volume capacity
- Designed in accordance with PED 2014/68/EU
- DOT approval under SP-20681
- Valves qualified to API 6A-PR2
- Materials complaint to ANSI/NACE MR0175/ISO 15156
- Inconel construction, suitable for severe service
- Eliminates need for transfer of sampled fluid in field

Technical specification

Part number	108292 (2000 cc), 171112 (1500 cc) 153422 (1000 cc), 153439 (700 cc)
Net volume	See table below
MAWP	20000 psi (1379 Bar) @ -29°C to +93°C 19200 psi (1324 Bar) @ +177°C
Design temperature	-29 °C to 177 °C
Material	Cylinder and End Caps: Inconel 725 (UNS N07725) in ANSI/NACE MR0175/ ISO 15156 API-6A Condition Sample Piston and Vortex Ring: Inconel 625 (UNS N06625) in ANSI/NACE MR0175/ISO 15156 Condition Nitrogen Piston: Stainless Steel 316 (UNS S31600) Valve Body: Nibron Valve Stem: MP35N (UNS R30035)
Net weight	See table below
Dimensions	See table below
Water depth (maximum)	3,000 m
Optional certification	3rd party Inspection Release Note - Hydrostatic Pressure Test Certificate, with 3rd party endorsement - PED Declaration of Conformity - Material certification to EN 10204: Type 3.1 for main pressure retaining components - API 17D Hyperbaric test (3000 m) 3rd party witness

Approved for use under the following directive/Permit
- 2014/68/EU (PED)
- DOT Special Permit SP-20681

Standard certification	• Hydrostatic Pressure Test Certificate • User Instructions & User spare parts list • Authorised Inspectors Certificate of Conformance to DOT SP-20681
Service	• UN 1006 - Argon, Compressed • UN 1066 - Nitrogen, compressed • UN 1075 - Petroleum gases, liquefied or liquefied petroleum gases • UN 1267 - Petroleum crude oil • UN 1953 - Compressed gas, toxic, flammable, n.o.s. • UN 3161 - Liquefied gas, Flammable, N.O.S • UN 1954 - Compressed gas, flammable, n.o.s. • UN 1964 - Hydrocarbon gases mixtures, compressed, n.o.s. • UN 1965 - Hydrocarbon gases mixtures, liquefied, n.o.s. • UN 1971 / UN 1972 - Methane, compressed or natural gas • - UN 1053 - Hydrogen sulfide
Standard documentation	• Hydrostatic test certificate • API-6A PR2 Proserv certificate • User instruction and user spare parts list • Hyperbaric test (3000 m) third party witness

Cylinder options

Net volume	Net weight	Dimensions
2000cc Cylinder Volume & 500cc Nitrogen	46kg (empty) 48kg (pre-charged water/glycol)	Cylinder Length = 1340mm, Cylinder OD = 88.9mm
1500cc Cylinder Volume & 500cc Nitrogen	42kg (empty) 43.5kg (pre-charged water/glycol)	Cylinder Length = 1167mm, Cylinder OD = 88.9mm
1000cc Cylinder Volume & 300cc Nitrogen	35kg (empty) 36kg (pre-charged water/glycol)	Cylinder Length = 926mm, Cylinder OD = 88.9mm
700cc Cylinder Volume & 300cc Nitrogen	32kg (empty) 32.7kg (pre-charged water/glycol)	Cylinder Length = 818mm, Cylinder OD = 88.9mm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