For maximum efficiency and fuel cost savings, the SERVOTOUGH Fluegas (2700) is a high performance gas analyser ideal for monitoring the oxygen and combustibles in a wide variety of combustion processes. The Fluegas is designed to meet the needs of power generation, process heaters, thermal crackers and incinerators, where it is your perfect partner for harsh environments, high temperatures and dusty conditions.

**FEATURES**

- **Close coupled, low flow extracted volume design** - compared to in-situ analysers, the Fluegas is not subject to the harsh process conditions, ensuring a lower cost of ownership while simultaneously delivering fast, stable and highly reliable O₂ and COₑ measurements.
- **Servomex zirconium oxide cell** - an accurate, long life, low drift, and highly robust O₂ measurement, able to withstand reducing process conditions.
- **Thick Film Catalytic Sensors** - a sensitive, fast response, and reliable COₑ measurement that responds to COₑ even in low process O₂ conditions.
- **Safety First** - protective, BASEEFA tested flametrap as standard prevent possible ignition of flue gases in fuel rich conditions.
- **Highly Flexible** - wide variety of probes, mounting flanges, calibration and air panels available.
- **Configurations** - for safe or hazardous area use.

**APPLICATIONS**

- Process heaters
- Thermal crackers
- Incinerators
- Power generation boilers
- High temperatures
- High dust loading
Close coupled, low flow extractive design

The close coupled and low flow extractive design of the SERVOTOUGH Fluegas delivers market leading sensor life, reliability and stability. By extracting the sample at low flow rates, as oppose to measuring the sample in the process stream, the Fluegas is not vulnerable to the effects of the harsh process environment. In addition, the unique low flow rate design ensures the probe and filters are not compromised by dust and particulates that regularly affect high flow rate extractive analysers. All these benefits are achieved without compromising the response time of the measurement.

Servomex Zirconium Oxide cell

Our Zirconium Oxide cell, designed specifically for the combustion analysis market, is highly robust with excellent resistance to thermal and mechanical shock, and unlike many others available, it is resistant even in reducing process conditions, offering instant recovery and operation when process conditions return to normal. Acknowledged as one of the most reliable on the market, it offers world class accuracy and stability together with extended calibration intervals.

Thick Film Catalytic Sensors

Combined with the measurement of O₂, the measurement of COe is a major advantage in improving combustion efficiency. Our Thick Film Catalytic Sensors offer fast response and high sensitivity to combustible gas breakthrough, the first sign of incomplete combustion. By reducing O₂ levels close to those of incomplete combustion, significant fuel savings and a reduction in NOx emissions can be readily achieved.

For added piece of mind and continuous operational performance, all our catalytic sensors are supplied with excess auxiliary air; a high sensitivity version for natural and clean gas applications, and a sulphur resistant version for sour gas and sulphur resistant fuels.

Safety First

During process upset, start up and shut down conditions, there is always a chance that a flue rich mixture is temporarily in the process. To help protect against the Fluegas being a source of ignition to these flue rich gases, the Fluegas has built-in flame traps that prevents gas ignition within the hot Zirconium Oxide cell passing back to the process flue.

HAZARDOUS AREA APPROVALS

Control Unit:

- Ex ic nA nC IIC T5 Gc (Ta = -10°C to +55°C)
- Ex tc IIII C T75°C Dc (Ta = -10°C to +55°C)
- ATEX Group II, Category 3, Gas and Dust hazardous atmospheres
- Intertek Certification No. ITS10ATEX47005
- Factory Mutual - FMRC approved as non-incendive for:
  - Class I, Div. 2, Groups A, B, C & D
  - Class II, Div. 2, Groups F & G
  - Class III, Div. 1 & 2
  - Enclosure Type 4X
  - T5. Ambient Temperature 55°C max.
- Canadian Standards Association - CSA suitable for use in:
  - Class I, Div. 2, Groups A, B, C & D
  - Class II, Div. 1, Groups E, F & G
  - Class III, Div. 1
  - T5. Ambient Temperature 55°C max. Enclosure Type 4X

Sensor Head:

- Use purge for installation in hazardous locations
- EUROPE - ATEX Group II, Category 3 Gases (Zone 2) when fitted with a suitable purge
- USA - Class I and II, Div. 2 and Class III, Div. 1 and 2 when fitted with a suitable purge
EC DIRECTIVE COMPLIANCE

The SERVOTOUGH Fluegas is in compliance with:
Low Voltage Directive
EMC Directive
And all other applicable Directives.

REGIONAL APPROVALS

China Pattern Approval.
TÜV tested and notification by BMU to the requirements of BlmSchV
13 (large combustion plant)
and 17 (waste incineration and similar processes).
GOST Pattern Approval for Russia.
UK MCERTS Approval.

ELECTRICAL SAFETY

Electrical safety to IEC 61010-1
The product is rated for “Overvoltage Category II”
The product is rated for “Pollution Degree 2”

Electrical Safety USA/Canada
Complies with FM approval class number 3810.
CAN/CSA - C22.2 No. 1010.1-92.
### SERVOTOUGH

**Fluegas (2700)**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Gas measured:</th>
<th>Oxygen (O₂)</th>
<th>Combustibles (COe-Carbon Monoxide Equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TECHNOLOGY</strong></td>
<td>Zirconium oxide (zirconia)</td>
<td>Patented thick film catalytic sensor</td>
</tr>
<tr>
<td>Typical applications:</td>
<td>All combustion</td>
<td>High Sensitivity: Natural Gas, Light Oil¹</td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic error (accuracy):</td>
<td>±1% of reading or ±0.1% O₂*</td>
<td>±25ppm or ±5% of reading</td>
</tr>
<tr>
<td>Resolution options:</td>
<td>0.01% O₂</td>
<td>1ppm recommended</td>
</tr>
<tr>
<td>Drift (zero):</td>
<td>Per 3 months; &lt;0.5% of range or 0.05% O₂*</td>
<td>&lt;25ppm/week</td>
</tr>
<tr>
<td>Display range:</td>
<td>0.01% to 25%</td>
<td>0ppm to 10,000ppm</td>
</tr>
<tr>
<td>Min. recommended range:</td>
<td>0-1% O₂</td>
<td>0-500ppm</td>
</tr>
<tr>
<td>Max. COe in stream:</td>
<td>Not applicable</td>
<td>6000ppm</td>
</tr>
<tr>
<td>Linearity:</td>
<td>&lt;0.1% O₂</td>
<td>&lt;3% FSR</td>
</tr>
<tr>
<td>Repeatability:</td>
<td>&lt;0.1% O₂</td>
<td>&lt;1% FSR</td>
</tr>
<tr>
<td>Recommended Calibration frequency:</td>
<td>12 months</td>
<td>1 month</td>
</tr>
<tr>
<td>Cross sensitivity: (under normal plant operating conditions)</td>
<td>No significant effect</td>
<td>Effect of common combustible flue gases per 1000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SO₂</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;30ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;100ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNAL INPUTS/OUTPUTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue output:</td>
<td>One configurable isolated 0/4-20mA per measurement (recommended impedance 600Ω or less, 1kΩ max)</td>
</tr>
<tr>
<td>O₂ output configurable from 0-1% min. to 0-25% max. O₂ in 1% steps</td>
<td></td>
</tr>
<tr>
<td>COe output configurable from 0-500ppm to 0-15,000ppm (measurement range remains as above)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarms &amp; relays:</th>
<th>Four SPCO relays (250V ac/3A or 28V dc/1A max), configurable for Concentration Alarms, Faults, In Calibration, In Blowback, and solenoid valves for blowback and autocalibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital inputs:</td>
<td>Two non-isolated digital inputs provided to remotely initiate autocalibration and perform blowback</td>
</tr>
</tbody>
</table>

¹ Fuels with sulphur contents <1%
² Fuels with sulphur contents >1% (consult Servomex for fuels with sulphur content >2.5%)
* below 1% display shows low oxygen level warning
* whichever is greater

The performance specification has been written, and verified, in accordance with the international standard IEC 1207-1:1994 “Expression of performance of gas analysers”.

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Page 4
SPECIFICATIONS

PHYSICAL
Ingress protection: IP66 / NEMA 4X
Weight: Control unit: <11kg (<24.3lbs) Sensor head: <17kg (<37.5lbs) - Dual transducer
Dimensions, WxDxH: Control unit: 391 x 167 x 260mm (15.4” x 6.6” x 10.3”)
Sensor head: 301 x 330 x 256mm (11.9” x 13.0” x 10.1”)
Mounting: Control unit: Wall, 19” rack and panel mounting
Sensor head: Choice of mounting flanges and adaptors
Max altitude: 2000m (6500 feet)
Ambient temperature: Operation Storage
Control unit: -10°C to +55°C (+14°F to +131°F) -20°C to +55°C (-4°F to +131°F)
Sensor head: -20°C to +70°C (-4°F to +158°F) -30°C to +80°C (-22°F to +176°F)

INTERCONNECTING CABLE REQUIREMENTS

Cross Section Max.

Oxygen only
3 twisted pairs with overall screen* 1.0mm² 100m
1.5mm² 150m
2.5mm² 300m
Combustibles only
6 twisted pairs with individual and overall screens* 100m
Oxygen and Combustibles
9 twisted pairs with individual and overall screens* 100m
*Maximum loop resistance of 4Ω is required for the heater connections and use cables with a minimum of 0.5mm² cross section
Note: Add 1 extra twisted pair if the optional sensor head temperature readout is required to be displayed by the Control Unit.

Part numbers for supplier Alpha Wire Company (www.alphawire.com):
Oxygen only M9700040
Combustibles only M9740080
Oxygen and combustibles M9740120

POWER REQUIREMENTS

Voltage: 100-120V ac, 50/60 Hz or 220-240V ac, 50/60 Hz
Rated Power: Control Unit 250VA, Sensor Head 600VA
Note: Control Unit and Sensor Head are powered separately. Control Unit power supply is fixed at time of order, but is field configurable. Sensor Head supply voltage is factory set.

SENSOR HEAD COMPRESSED AIR REQUIREMENTS

Aspirator Air:
Pressure: 3.5psig typical (3 to 5psig - 0.2 to 0.3barg)
Flow: <1.5 litres/min typical
## DESCRIPTION

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analysers controller</strong></td>
<td>The analyser consists of a sensor head and a control unit which includes a backlit liquid crystal display (2 line x 16 characters) and an eight button keypad. The sensor head is suitable for installation in non-hazardous areas, (hazardous area available when used with suitable purge). There are four versions of the control unit available: GEN for installation in non-hazardous areas. EU2 for installation in European Zone 2 hazardous areas. FM2 for installation in US Class I &amp; II, Division 2 and Class III, Division 1 &amp; 2 hazardous areas. CSA for installation in Canadian Class I &amp; II, Division 2 and Class III, Division 1 &amp; 2 hazardous areas.</td>
</tr>
<tr>
<td><strong>Measurement and supply voltage:</strong></td>
<td>The unit can be supplied as an oxygen only measurement, combustibles (COe) only measurement, or an oxygen and combustibles measurement analyser. The analyser can also be supplied with specially coated PCBs for use in very humid environments. 110 and 220V AC available.</td>
</tr>
<tr>
<td><strong>Combustible sensors</strong></td>
<td>For natural gas and light oil applications with fuels with sulphur contents &lt;1% our high sensitivity combustibles sensor is recommended. For sour gas, heavy oils, coal and incinerators with fuels with sulphur content &gt;1% our sulphur resistant combustible sensor is recommended. For applications with fuels &gt;2.5% sulphur refer to Servomex.</td>
</tr>
<tr>
<td><strong>Sample probes:</strong></td>
<td>A range of sample probes are available for use in different sampling environments. For samples with a relatively low dust loading (&lt;0.2 g/m³) open ended probes are available in stainless steel, high temperature alloy, and ceramic materials suitable for a range of temperatures up to 1750°C. Filtered probes are also available for samples with higher dust loading (up to 20 g/m³) and temperatures below 1500°C. The stainless steel filtered probe can also be supplied with additional mechanical support and shroud. (Note: for higher dust loadings and temperatures refer to Servomex).</td>
</tr>
<tr>
<td><strong>Internal filter:</strong></td>
<td>The analyser is supplied fitted with flame arrestors and an internal filter as standard.</td>
</tr>
<tr>
<td><strong>Electrical threaded entries:</strong></td>
<td>Choose from ¾&quot; NPT, M20, M25, PG13.5 or PG21 entries. Select entry size to suit cables and glands used.</td>
</tr>
<tr>
<td><strong>Sensor head enclosure:</strong></td>
<td>The analyser sensor head is fitted as standard with a breather port to prevent pressurisation of the enclosure. These can be replaced with fittings for the addition of a corrosive or PZ purge for the sensor head and terminal box, if required. The oxygen only analyser can also be supplied equipped to use nitrogen instead of compressed air to power the internal aspirator.</td>
</tr>
<tr>
<td><strong>Sensor head mounting option:</strong></td>
<td>There are six sensor head mounting options: A standard mounting option, a probe retention option which allows the sensor head to be removed whilst the sample probe is retained within the flue, a thermal spacer which separates the sensor head from the flue wall with a high surface temperature (350°C to 500°C), a stand off flange which increases the separation between the sensor head and the heat radiation from the flue wall (350°C to 500°C), a combined thermal spacer and probe retention and a combined probe retention and stand-off flange.</td>
</tr>
<tr>
<td><strong>Adaptor flange option:</strong></td>
<td>The sensor head is supplied with an equivalent PCD 4” ANSI 150lbs flange as standard. Adaptors are available to suit other flange sizes. The analyser is not designed to withstand 150lbs pressure. The flue pressure should be a maximum of 5psig.</td>
</tr>
<tr>
<td><strong>Control unit monitoring:</strong></td>
<td>The control unit is available for either wall or rack/panel mounting. The rack/panel mounting controller is supplied with an additional panel.</td>
</tr>
<tr>
<td><strong>Control unit enclosure option:</strong></td>
<td>The analyser can be fitted with blanking plugs, a breather port or fittings to allow the use of a corrosive or PZ type purge system.</td>
</tr>
<tr>
<td><strong>Utilities:</strong></td>
<td>A utilities unit can be configured with one or more of the following: - Aspirator air set - provides filtration and pressure regulation of the compressed air for the aspirator in the analyser. Autocalibration - provides the necessary components to allow automatic calibration of the analyser with calibration gases (not supplied) Manual calibration - provides the necessary components to allow manual calibration of the analyser with calibration gases (not supplied) Blowback - provides the necessary components to allow the blowback of the sample probe and internal filter. When nitrogen aspiration is used the calibration versions of the utilities units cannot be used.</td>
</tr>
<tr>
<td><strong>Pump unit:</strong></td>
<td>Recommended with N₂ aspiration unless other suitable device made available separately. Consult Servomex.</td>
</tr>
</tbody>
</table>
**SERVOTOUGH**

*Fluegas (2700)*

---

**DESCRIPTION**

**Analysers controller:**
- Safe Area
- Hazardous Area European Cat 3, Zone 2
- Hazardous Area FM Div. 2
- Hazardous Area CSA Div. 2

**UK MCERTS:**
- Approval required
- Not required

**Measurement and supply voltage:**
- **O₂**
  - Combustibles only
  - Oxygen & combustibles

*Coated PCBs*:
- 110-120V
- 220-240V

*Uncoated PCBs*:
- 110-120V
- 220-240V

**Combustible sensors:**
- High sensitivity
- Sulphur resistant

**Aspirator supply:**
- Air
- Nitrogen

**Sample probes:**
- None
- SS sample probe, unsupported, open ended <700°C/1292°F
- SS sample probe, unsupported, filtered <700°C/1292°F
- SS sample probe, supported, filtered with shroud <700°C/1292°F
- SS sample probe, supported, dual filtered, with shroud <700°C/1292°F
- High temperature alloy, unsupported, open ended <1000°C/1832°F
- High temperature alloy, unsupported, filtered <1000°C/1832°F
- Ceramic, sample probe, open ended <1750°C/3182°F
- Ceramic, sample probe, unsupported, filtered <1500°C/2732°F
- Hastelloy, sample probe, unsupported, open
- Non standard probes * Special, consult Servomex

**Internal filter:**
- Internal flame arrestors and internal sample filter

**Electrical threaded entries:**
- ¾” NPT (O₂ and COe)
- M20 (O₂ or COe)
- M25 (O₂ and COe)
- PG 13.5 (O₂ or COe)
- PG21 (O₂ and COe)

**Sensor head enclosure:**
- Breather port
- Purge fittings

**Sensor head mounting option:**
- Standard (4” ANSI 150lbs)
- Probe retention (excluding supported probes)
- Thermal spacer (excluding supported probes)
- Probe retention & thermal spacer (excluding supported probes)
- High temperature stand off (excluding supported probes)
- High temperature stand off & probe retention (excluding supported probes)

**Adaptor flange option:**
- None (4” ANSI 150lbs)
- 3” ANSI 150lbs equivalent
- DIN 65 equivalent
- DIN 80 equivalent
- JIS 65 equivalent
- JIS 80 equivalent
- Weld-on flange complete with studs (4” ANSI 150lbs equivalent)
- Model 700B/N to 2700 adaptor flange (excluding high temperature stand off)
- Thermox to 2700 adaptor flange (excluding supported probes)

**Control unit monitoring:**
- Wall mounted
- Rack or panel mounted

**Control unit enclosure option:**
- Blanking plugs only
- Breather port
- Purge fittings

---

*Special, consult Servomex*
**DESCRIPTION**

Utilities:

<table>
<thead>
<tr>
<th>Utilities</th>
<th>None</th>
<th>Air set, single/dual</th>
<th>Autocal air set</th>
<th>Autocal and blowback</th>
<th>Manual cal, single/dual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>single</td>
<td>dual</td>
<td>single</td>
<td>dual</td>
</tr>
</tbody>
</table>

Pump unit:

<table>
<thead>
<tr>
<th>Pump unit</th>
<th>110V ac pump</th>
<th>240V ac pump</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Quickstart & Installation manual

The 2700 Analyser is supplied with a Quickstart™ and installation manual.

<table>
<thead>
<tr>
<th>Language</th>
<th>English</th>
<th>French</th>
<th>German</th>
<th>Spanish</th>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Service manual

A service manual containing technical descriptions, fault diagnosis information, parts removal, refitting and test instructions, tool and test equipment lists, and electrical drawings is available. It is intended for use by Servomex trained service personnel.

<table>
<thead>
<tr>
<th>None</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Default software interface language

The analyser is supplied with English, French and German software installed. The active language is user selectable. The default software interface language will be active when the analyser is shipped.

<table>
<thead>
<tr>
<th>Language</th>
<th>English</th>
<th>French</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CALIBRATION GAS REQUIREMENTS**

Calibration gas requirements:

Pressure: 1barg (15psig)  Flow: 600ml/min typical

<table>
<thead>
<tr>
<th>Calibration gas composition</th>
<th>Oxygen sensor (Zr)</th>
<th>Combustibles sensor (Tfx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air (20.95% O₂ in nitrogen)</td>
<td>Span (high)</td>
<td>Zero</td>
</tr>
<tr>
<td>Air must be free from combustible gases (eg CO, H₂, hydrocarbons, etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3% O₂ in nitrogen</td>
<td>Zero (low)</td>
<td>N/A</td>
</tr>
<tr>
<td>Gas composition can be between 0.25% and 2.5% O₂ in Nitrogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500ppm carbon monoxide in air</td>
<td>N/A</td>
<td>Span</td>
</tr>
<tr>
<td>Gas composition can be between 500ppm and 1000ppm in air</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SAMPLE WETTED MATERIALS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor head</td>
<td>Stainless steel (303 and 316), gasket sealing material (Klinger grade SLS 150)</td>
</tr>
<tr>
<td>Oxygen sensor</td>
<td>Stainless steel (310 and 316), zirconia, platinum, alumina, Ni/Fe/Cr alloy, high temperature sealing glasses</td>
</tr>
<tr>
<td>Combustibles sensor</td>
<td>Stainless steel (316), platinum, platinum/iridium, zirconia, alumina, corrosion resistant glass</td>
</tr>
<tr>
<td>Unfiltered sample probe (&lt;700°C)</td>
<td>Stainless steel (316)</td>
</tr>
<tr>
<td>Filtered sample probe (&lt;700°C)</td>
<td>Stainless steel (310), stainless steel (310), silicon carbide</td>
</tr>
<tr>
<td>Unfiltered sample probe (700°C-1000°C)</td>
<td>Haynes alloy 556, stainless steel (316)</td>
</tr>
<tr>
<td>Filtered sample probe (700°C-1000°C)</td>
<td>Stainless steel (310), Haynes alloy 556, stainless steel (316), silicon carbide</td>
</tr>
<tr>
<td>High temperature sample probe (&lt;1750°C)</td>
<td>High temperature ceramic, stainless steel (316)</td>
</tr>
</tbody>
</table>
SYSTEM RESPONSE TIMES $T_{90}$ (typical)

<table>
<thead>
<tr>
<th>Measurement</th>
<th>$O_2$ only</th>
<th>Combustibles COe only</th>
</tr>
</thead>
<tbody>
<tr>
<td>$&lt;700^\circ C$, 1m long, stainless steel sample probe with sample filter:</td>
<td>$&lt;17s$</td>
<td>$&lt;27s$</td>
</tr>
<tr>
<td>$&lt;1000^\circ C$, 1m long, H556 alloy sample probe with sample filter:</td>
<td>$&lt;17s$</td>
<td>$&lt;27s$</td>
</tr>
<tr>
<td>$&lt;1750^\circ C$, 1m long, ceramic sample probe with sample filter:</td>
<td>$&lt;20s$</td>
<td>$&lt;30s$</td>
</tr>
</tbody>
</table>

SERVICE & SUPPORT

For new installations and replacement of older Servomex and competitor products, we will work with you to develop a bespoke service and support package, ensuring full measurement availability and plant operation within your timescales and budget.

SERVOSPARES
To ensure the integrity and optimum performance of your Servomex product, we recommend fitting only factory authorised spare parts. This is particularly important for all hazardous area certified products.

SERVOSURE
Ensure your Servomex analyser is properly commissioned and delivers optimum performance with a maintenance contract, service programme and extended warranty.

SERVOTECH
Make the most of your Servomex gas analyser by attending a training course at one of our training centres in Europe, USA or Asia or on your own site.

SERVOCHELP
Whether you have a simple question or complex process challenge, our local offices and global support network are here to help you.
Utilities unit specification

**Temperature**
- Operating: -10°C to +50°C (+14°F to +122°F)
- Storage: -20°C to +55°C (-4°F to +131°F)

**Compressed air & blowback air requirements:**
- Pressure: 1 to 5barg (15 to 72.5psig)
- Flow: 4.5 to 10 litres/min
- Instrument grade compressed air*, free of oil, water & dirt

Utilities units
- 02730701 Aspirator air set, single or dual sensor
  - W 93mm x D 99mm x H 165mm
  - (W 3.7" x D 3.9" x H 6.5"), <400gms (<1.0lbs)
- 02730731 Aspirator air set and manual calibration, single or dual sensors
  - W 390mm x D 174mm x H 265mm
  - (W 15.5" x D 6.8" x H 10.4"), <4.5Kgs (<10lbs)

Aspirator air set and automatic calibration units **
- 02730711 (single sensor), 02730721 (single sensor, with blowback), 02730713C (dual sensor), 02730723C (dual sensor, with blowback)
  - W 400mm x D 220mm x H 500mm
  - (W 16" x D 9” x H 20”), <16Kgs (<35lbs)

Ingress protection: IP65/NEMA 12 (Auto cal. units only)

Power supply: 100V ac, 50/60Hz <20VA; 110-120V ac, 50/60Hz <20VA or 220-240V ac, 50/60Hz <20VA (field configurable)

The Nickel plated brass bulkhead connections are suitable for ¼” NPT and BSP male fittings & tubing. Internal components are brass, plastic fittings and tubing.

* Or nitrogen, if analyser equipped for nitrogen aspiration (single measurement oxygen units only)
** The autocalibration versions of the utility units comply with the “CE Marking Directive” 93/68/EEC
TYPICAL ANALYSER MOUNTING ORIENTATION WITH 4” ANSI FLANGE. OTHER FLANGES ARE AVAILABLE

Dimensions shown in millimetres
### Servomex Range of Products for the Hydrocarbon Processing Industry

<table>
<thead>
<tr>
<th>SERVOTOUGH (Hazardous Area)</th>
<th>SERVOTOUGH (Safe Area)</th>
<th>SERVOTOUGH (Portables)</th>
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<td><strong>SERVOTOUGH</strong></td>
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<td>2500 - SERVOTOUGH SpectraExact</td>
<td>2700 - SERVOTOUGH Fluegas</td>
<td>4900 - SERVOTOUGH (Safe Area)</td>
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<td>2900 - SERVOTOUGH Laser</td>
<td>2900 - SERVOTOUGH Laser</td>
<td><strong>SERVOFLEX</strong></td>
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<td>1800 - SERVOTOUGH Oxy</td>
<td>1800 - SERVOTOUGH SpectraExact</td>
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<td>1900 IR - SERVOTOUGH Spectra</td>
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<td>5400 - SERVOPRO MultiExact</td>
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<td>4100 - SERVOFLEX Micro i.s</td>
<td>4900 - SERVOFLEX Micro i.s</td>
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<td>5100 Marine - SERVOFLEX MicroMarine</td>
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