ISO/VDMA Actuators

High Performance Actuators

- Long Life
- Reliable

- Flush mounted & integrated switches
- Robust friction
- Extensive mounting and selection

- ISO 15552
- VDMA 24562

- Up to 3 metre stroke
- Customised options serviceable readily available

Use in challenging environments

Engineering GREAT Solutions
Engineering GREAT solutions through people, products, innovation and service

IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilise our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world’s most demanding engineering challenges.

> Reliability
We deliver and support our high quality products through our global service network.

> High performance products
Calling on a world-class portfolio of fluid and motion control products including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. We can supply these singly, or combined in powerful customised solutions to improve performance and productivity.

> Partnership & Problem Solving
We get closer to our customers to understand their exact challenges.
ISO/VDMA Actuators

Our market leading range of ISO/VDMA actuators have been proven in the market over many years and in the most challenging environments. Backed by our standard warranty, the range comes in 11 different bore sizes and offers stroke lengths of up to 3 metres.

Running costs and total cost of ownership can be optimised using our low friction levels to operate at lower air pressures. In addition to our standard range, we offer up to 28 variants such as non-rotating, four position and alternative seal materials. Our extensive range of accessories includes reed and solid state switches and one of the largest ranges of mountings on the market.

Standard cylinders and mountings are available for immediate dispatch with many of the non-standard options manufactured within 24 hours.
Our ISO/VDMA ranges conform to the following international standards:

- ISO 15552
- ISO 6431
- VDMA 24562
- NFE 49-003-1
The ISO/VDMA Range

Industrial Cylinders

**Tie Rod RA/8000**
This classic cylinder is of robust tie-rod construction ideal for industrial applications. Available in all bore sizes with a wide choice of variants options and mountings, it can be adapted to solve the most difficult actuation problems.

**Profile PRA/180000**
The shaped profile barrel provides a clean appearance and enables direct assembly of flush-mounted switches.

**IVAC industrial PRA/862000**
IVAC incorporates proven valve and flow regulation technologies to reduce energy consumption, weight and installation space. Anodised end covers give additional environmental protection and ATEX versions are available for hazardous applications.

**Cleanline Cylinders**

**Smoothline PRA/822000**
The anodised barrel and end covers and option of single rear air connection give this cylinder its smooth profile. Switches can be directly flush mounted to maintain the appearance.

**Cleanline PRA/842000**
This cylinder is hygienically designed according to EN1672-2 with an IP67 protection class for wash down in packaging and food applications.

**IVAC Cleanline PRA/882000**
The pilot valve module maintains the IP67 protection class of the Cleanline variants. Customer installation is greatly simplified with a single M12 connector for the pilot valves and switches and single air and exhaust ports.

**Stainless Steel KA/8000**
The most rugged and reliable cylinder for applications in harsh environments and where contact with food requires heavy wash down. Constructed from AISI303, 304 and 316 and complemented with a range of mountings.
## Specifications

<table>
<thead>
<tr>
<th>Technical feature</th>
<th>Parameters</th>
<th>Industrial</th>
<th>Cleanline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cylinder diameters</strong></td>
<td>32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 320mm</td>
<td>32 … 320mm</td>
<td>32 … 200mm</td>
</tr>
<tr>
<td>Standard strokes</td>
<td>25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500mm</td>
<td>25 … 500mm</td>
<td>25 … 500mm</td>
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<tr>
<td>Non-standard strokes</td>
<td>10 … 3000mm</td>
<td>10 … 3000mm</td>
<td>10 … 100mm</td>
</tr>
<tr>
<td><strong>Operating pressure</strong></td>
<td>Ø32 … 200mm</td>
<td>1 … 16bar</td>
<td>1 … 16bar</td>
</tr>
<tr>
<td></td>
<td>Ø250 &amp; 320mm</td>
<td>1 … 10bar</td>
<td>2 … 8bar</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>Ø32 … 125mm</td>
<td>-20 … +80°C</td>
<td>-20 … +80°C</td>
</tr>
<tr>
<td></td>
<td>Ø160 … 320mm</td>
<td>-10 … +80°C</td>
<td>-10 … +80°C</td>
</tr>
<tr>
<td>Voltage</td>
<td>Supply</td>
<td>24V d.c.</td>
<td>24V d.c.</td>
</tr>
<tr>
<td></td>
<td>Switching (if switches fitted)</td>
<td>10 … 30V d.c.</td>
<td></td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrel</td>
<td>Anodised aluminium</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel (austenitic)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>End covers</td>
<td>Aluminium</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Anodised aluminium</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel (austenitic)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Piston rod</td>
<td>Stainless steel (martensitic)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel (austenitic)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Piston and rod seals</td>
<td>Ø32 … 100mm</td>
<td>PUR</td>
<td>PUR</td>
</tr>
<tr>
<td></td>
<td>Ø125 … 320mm</td>
<td>NBR</td>
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</tr>
<tr>
<td><strong>Variants</strong></td>
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</tr>
<tr>
<td>Piston rod</td>
<td>Hard chrome plated</td>
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<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel (austenitic)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel (austenitic) hard chrome plated</td>
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</tr>
<tr>
<td>Non-magnetic</td>
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<td>*</td>
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</tr>
<tr>
<td>Magnetic</td>
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</tr>
<tr>
<td>High temperature</td>
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<td>Hydraulic</td>
<td>Ø32 … 100mm Ø32 … 100mm</td>
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<td>*</td>
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<td>Special rod seal</td>
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<tr>
<td>Low friction</td>
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<tr>
<td>Extended piston rod</td>
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<tr>
<td>Piston rod bellows</td>
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</tr>
<tr>
<td>Without cushioning</td>
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<tr>
<td>Double ended piston rod</td>
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<tr>
<td>Four position cylinder</td>
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<td>*</td>
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<tr>
<td>Non-rotating piston rod</td>
<td>Ø32 … 100mm Ø32 … 100mm</td>
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<td>*</td>
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<tr>
<td>With locking unit</td>
<td>Ø32 … 125mm</td>
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## Data Sheets

**Range**

<table>
<thead>
<tr>
<th>Industrial</th>
<th>Cleanline</th>
<th>Switches</th>
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<tbody>
<tr>
<td>RA/8000</td>
<td>PRA/182000</td>
<td>PRA/322000</td>
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<tr>
<td>PRA/862000</td>
<td>PRA/842000</td>
<td>PRA/882000</td>
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<tr>
<td>KA/8000</td>
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<table>
<thead>
<tr>
<th>Product</th>
<th>Data sheets</th>
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<td>Nien 1.5.125.01</td>
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<td>Nien 4.3.005.01</td>
<td>Nien 4.3.0007.01</td>
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</table>

Full details of materials and variants can be found in the product datasheets.
Industrial Options

**Resistance to corrosion**
Stainless steel and chrome plated piston rods to ensure long life

**Protection against ingress**
A choice of sealing materials to resist dust, chemical, liquid and temperature to extend life and reduce maintenance

**Positionable switches**
Reed and solid state switches available for position sensing

**Adjustable cushioning**
End of stroke adjustable damping to enable optimum performance and life

**Profile barrel**
Anodised aluminium profile barrel and flush mounted switches for clean appearance

**Reduced installation time**
Integrated option reduces time and cost
1. Single air and exhaust ports for easy connection
2. Glandless spool valve for long life
3. Pilot valve for actuator control

**Protection against the environment**
IP65 protection class to resist harsh environments
Cleanline Options

**Resistance to corrosion**
Stainless steel and chrome plated piston rods to ensure long life

**Protection against ingress**
A choice of sealing materials to resist dust, chemical, liquid and temperature to extend life and reduce maintenance

**Positionable switches**
Reed and solid state switches available for position sensing
1. Externally adjustable
2. Internally adjustable without compromising IP67 rating or clean profile

**Adjustable cushioning**
End of stroke adjustable damping to enable optimum performance and life

**Profile barrel**
Anodised aluminium profile barrel and flush mounted switches for clean appearance

**Reduced installation time**
Integrated option reduces time and cost
1. Single air and exhaust ports for easy connection
2. Glandless spool valve for long life
3. Pilot valve for actuator control with single M12 connector

**Protection against the environment**
IP67 protection class to resist harsh environments and wash down
IVAC innovation to reduce energy usage and operating costs

A unique & sustainable energy improvement

> Reduce components
> Reduce operating costs
> Simplify ordering, installation and maintenance
> Cleanline versions
> Reduce machine downtime

**Saves Energy**
By reducing CO₂ emissions and KW Hrs, IVAC helps towards Energy targets & KPI’s

**Saves Air**
Consolidation of parts and patent protected design reduces energy consumption by minimising dead volume (it only uses the air in the cylinder, NOT the air in the tubing)

**Saves Cost**
Reduced air means the cost per mm of stroke is significantly reduced (the air savings effectively pay for replacements)

**Saves Time**
Simple selection and ordering with reduced installation and commissioning time
**IVAC Cleanline**
IP67, integrated valve, switches & flow controls for fast installation and easy washdown

**IVAC Industrial**
IP65, integrated valve & flow controls for fast installation

> Adjustable & buffer cushioning for end of stroke damping
> Fully integrated sensor adjustment
> 1 single M12 connection (IVAC Cleanline)
> Fully integrated flow controls
> 1 single air connection, 1 single exhaust port
> Integrated pressure protection
> Long life glandless valve technology
> ISO/VDMA footprint
Accessories

Our ISO/VDMA actuators are complemented by one of the largest ranges of accessories on the market, including mountings, switches and cables.

Mountings

A comprehensive range of mountings for each cylinder range conforming to ISO15552 for front end cover, rear end cover and piston rod mounting.
Switches
Reed and solid state switches are available which are suitable for all cylinder ranges with magnetic pistons. Switches can be mounted flush on profile cylinders, or with the delivered adapter for tie-rod versions.

Connectors & cables
15mm Form C connectors are available for connecting to IVAC Industrial pilot solenoids. M12 connector cables are available for connecting to Cleanline and IVAC Cleanline cylinders. A Y-connection cable is also available for configuring the cylinder to an I/O module.
IMI Precision Engineering operates four global centres of technical excellence and a sales and service network in 75 countries, as well as manufacturing capability in the USA, Germany, China, UK, Switzerland, Czech Republic, Mexico and Brazil.

For information on all IMI Precision Engineering companies visit www.imi-precision.com

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