A reliable Company with a long history

The ant is a tireless and intelligent worker. It is able to lift and carry with ease loads much larger than itself. This simple analogy represents Scaglia Indeva’s mission to design and produce industrial manipulators that are compact yet strong, simple yet intelligent, and offer improved performance whilst reducing the risk of injury and improving workforce wellbeing.

A world-leading manufacturing company in the field of material handling and intra-logistics.

Since 1838 this family-owned company has been at the forefront of manufacturing and is now an important industrial group with diverse business interests worldwide. Since 1970 Scaglia Indeva has been at the leading edge of design and manufacture of innovative, ergonomically designed industrial manipulators that are used by major global manufacturers in varied applications throughout the world.

World-wide, Scaglia Indeva works with many blue-chip manufacturers across most sectors, including the leading automotive companies, where innovative and reliable material handling solutions are required. Our headquarters are in Val Brembilla - Italy. Our key locations offer a central sales and support operation, which provides excellent engineering services and supply of spare parts.
The Liftronic® Series, known as INDEVA® is a new generation of advanced industrial manipulators featuring electronic control. They represent the evolution from traditional manipulators and are part of the innovative product group of load handling devices known as Intelligent Assist Devices.

This series is equipped with an advanced electronic control system which overcomes the control limitations of pneumatic manipulators. They provide truly ergonomic and effortless handling.

The INDEVA® Liftronic® series offers numerous important and unique advantages over a traditional pneumatic manipulator, especially the auto-weight sense and auto balancing features:

- **Higher productivity:** using an INDEVA®, output can be maintained throughout a full shift giving increased productivity and operator wellbeing.
- **Better ergonomics:** a fingertip-sensitive handle allows for the lifting or lowering of heavy loads by simply touching the handle with a finger. Very little human effort is required during any part of the lift, place and lower process.
- **Higher precision:** with considerably more speed and precision than a traditional pneumatic manipulator, an INDEVA® allows for unsurpassed precision, where the operator will intuitively work at the pace best suited to the task. The operator has exceptional control with the lightest of touch needed.
- **User friendly:** the auto weight sensing and auto balancing functions operate in real time, so no need to pre-set the load or to keep buttons depressed. The Float Mode option allows the operator to control movement directly from the load.
- **Safety:** state-of-the-art safety features prevent movement unless an operator is present and in control. Should a power failure occur, the motor is held with a mechanical lock and the load cannot be released until power is restored, or the full weight of the load is supported.
- **Wireless connectivity for industry 4.0:** an INDEVA® can exchange data with the Customer IT System through the Company Network and allows visualisation of manipulator activity by means of interface software.
- **Remote trouble shooting:** an INDEVA® can be connected via Wi-Fi to App Indeva, so that machine data can be transferred to a remote tablet or smartphone in real time. This can assist fault diagnosis, so significantly reducing call-out charges and operator downtime.
- **Environment friendly:** low carbon footprint thanks to efficient and low energy consumption.

In applications which require speed of handling, smooth movement and precise load placement, the INDEVAs Liftronic® Series provide a perfect solution.

A recent case study by the Engineering Faculty of the Brescia University and published by the International Journal of Industrial Ergonomics, together with a comparison study carried out by the University of Milan proved how the use of an INDEVA® satisfies current industry demand for increased productivity combined with improved ergonomics and safety.
**EASY MAINTENANCE**
Optimised modular structure with easy access to all components.

**Z AXIS CONTROL**
It is possible to limit the stroke on the Z axis to suit the specific restrictions of each application.

**QUICK DIAGNOSTIC**
Comprehensive auto-diagnostic software with clearly displayed error messages.

**TOUCH PANEL**
User friendly and intuitive interface for the visualisation and setting of various operational parameters.

**FORCE SENSING HANDLE**
It allows fingertip control providing immediate response to the operator’s intention for up-down movements.

**STATE-OF-THE-ART SAFETY DEVICES**
Electronic control allows for additional safety functions that cannot be incorporated in pneumatic manipulators.

**WIRELESS CONNECTIVITY AND REMOTE TROUBLE SHOOTING**
Industry 4.0 ready.

**EASY TO UPGRADE**
Designed to accept controls for your own gripping tools.

**ANTI-TANGLE-SWIVEL JOINT**
Air and electrical connections are via a swivel joint on top of the tool head. This prevents the lift rope, power cable and air pipe becoming tangled if the process has continuous rotation in the same direction.

**FINE SPEED CONTROL**
An INDEVA® moves at the pace best suited to the operator and application. This allows natural movement at all times, especially where precise placement is required. It is also possible to limit the lift and lower speed via the control panel.

**CAPACITY OVERLOAD**
The maximum permitted lift can be preset to prevent system overload.

**FLOAT MODE**
This control mode allows the operator to manipulate the load without direct contact with the controls.

**LOAD PLACEMENT PRECISION**
The system allows very slow and controlled movements, so that a load can be precisely placed with no impact, so reducing the risk of damage.
**Liftronic® Series**

Intelligent Devices for Handling

Electronic control

The Liftronic® Series Intelligent Devices for Handling, known as INDEVA®, represent true evolution of traditional industrial manipulators.

State-of-the-art standardised components, combined with cutting-edge technology, hardware and optimised software provide a high degree of safety and reliability.

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**PN Series**

Traditional Industrial Manipulators

Pneumatic control

PN series manipulators are traditional industrial manipulators featuring pneumatic control and drive.

All manipulators in the PN Series can be designed in accordance with ATEX regulations as per EU Directives 2014/34 regarding applications in controlled environments with danger of explosion, classified classes 1 and 2 (Gas) (only for PN Flex) and 21 and 22 – Dust (for all PN series models).
**LOAD PLACEMENT**

Precise and coordinated with fine adjustment allowing accurate placement so reducing the risk of damage.

Precise and coordinated with fine adjustment allowing accurate placement so reducing the risk of damage.

Some resistance is felt as air enters and leaves the cylinders so restricting natural speed of movement.

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Lower: a comparative study showed that the CO₂ output and total running cost of an INDEVA® is around only 12.5% that of a pneumatic manipulator.

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Light and compact structure allows great visibility and ease of maneuverability.

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System requires heavier and bulkier structure so reducing visibility and maneuverability.

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Check and diagnosis by expert technician attending site. Remote trouble shooting is not available.

Check and diagnosis by expert technician attending site. Remote trouble shooting is not available.

Restricted options to identify faults at the machine.

Restricted options to identify faults at the machine.

**CARBON FOOTPRINT & TOTAL COST OF OPERATION**

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**DIAGNOSTIC & REMOTE TROUBLE SHOOTING**

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**MAN / MACHINE INTERFACE**

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**Liftronic® Easy**

Capacity up to 320kg. Suitable for rapid and repetitive work cycles with simple gripping tools.

Capacity up to 320kg. Suitable for complex work cycles with bespoke gripping systems.

Capacity up to 310kg for standard models and 450 kg for special applications. Suitable for handling offset loads with speed and precision.

Capacity up to 160kg.

Capacity up to 310kg, for standard models and 450 kg for special applications. Suitable for handling offset loads.

Capacity up to 100kg. Suitable for handling offset loads in a small work area.

Capacity up to 80kg. Very compact structure suitable when a short vertical stroke is required.
Liftronic® Easy is an INDEVA® - Intelligent Device for Handling. Suitable for rapid and repetitive work cycles with simple gripping tools.

Main features

- Auto-weight sense and auto-balancing
- Can be integrated with App-Indeva and INDEVA® Gateway
- Unparalleled safety
- Ergonomic design
- Simple gripping devices
- Compact and light
- Fast, responsive and precise
- Low carbon footprint

INDEVA®
Gripping tools

TECHNICAL DATA

Max. gross capacity: from 80 to 320kg (weight of lifting tool included)
Power supply: 110/230 V-AC - 50/60 Hz
Power consumption: max 700 VA
Enclosure protection: 54 IP
Vertical stroke: up to 2.80m
INDEVA® Modulo is a standard component range for assembling a gripping tool which is to be attached to a Liftronic® Easy tool head. It is easy for customers to design the tool to best suit their needs and then purchase the necessary parts. These standardised modules have been proven over many years and are a key part of our continuous improvement and development program.

I-Connect
Standard I.O. Interface module: you can easily implement safety functions for your own custom gripping tool

Gripping Modules
These chucks can be fitted with jaws according to your specific requirements

Accessories
Air and electric connections via a continuous swivel joint at the toolhead to keep cables from tangling

Machine/Operator Interfaces
Remote touch sensitive handle available in different lengths

Simple remote handle frame
Remote control handles complete with centre of gravity adjustment

Remote controls
Scissor pantograph
Linear pantograph
Liftronic® Pro is an INDEVA®- Intelligent Device for Handling. It is used for complex applications with bespoke gripping systems.

Main features
- Auto-weight sense and auto-balancing
- Can be integrated with App-Indeva and INDEVA® Gateway
- Unparalleled safety
- Ergonomic design
- Bespoke gripping devices
- Compact and light
- Fast, responsive and precise
- Low carbon footprint

INDEVA® Gripping tools

TECHNICAL DATA
Max. gross capacity: from 80 to 320kg (weight of lifting tool included)
Power supply: 110/230 V-AC - 50/60 Hz
Power consumption: max 700 VA
Vertical stroke: up to 2.80m
Industry 4.0 ready

**App-Indeva**
is a virtual INDEVA® service engineer always at your site providing machine data capture and analysis, diagnostic and real time trouble shooting whenever it is needed.

**App-Indeva**, is based on an in-house designed App suitable for Android smartphone or tablet that can be connected via Wi-Fi to the lift assistor, features **Real-Time Capability to collect and analyse machine data** and deliver the results to the operator, maintenance technician or a remote Indeva Service Centre.

If you are using an INDEVA® manipulator equipped with App-Indeva you will increase your machine availability time through:

- **reduced time for diagnosis and trouble shooting by your staff**
- **reduced time for communication with an INDEVA® service centre**
- **reduced time for malfunction repair by INDEVA® staff**

**INDEVA® Gateway**
allows real time data exchange with the Customer IT System through the Company Wi-Fi network and allows visualisation of production data by means of an interface software.

Options for all Liftronic® Series units
Articulated Arms

2 JOINT ARMS
Standard arms featuring 2 joint articulation.

3 JOINT ARMS
The INDEVA® Orbit Arm3 is a 3 joint arm available on request for both column and overhead versions with capacities up to 145 kg (including tooling). The 3 joint Arm provides increased coverage within the radius of the arm and offers the operator smooth, controllable movement across the full radius with the added benefit of quick sideways movement using the forearm only.

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>R1 (m)</th>
<th>2.5</th>
<th>3</th>
<th>3.5</th>
<th>4</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>L= Light</td>
<td>LC kg</td>
<td>80</td>
<td>450</td>
<td>60</td>
<td>550</td>
<td>40</td>
</tr>
<tr>
<td>H= Heavy</td>
<td>LC kg</td>
<td>260</td>
<td>330</td>
<td>190</td>
<td>760</td>
<td>140</td>
</tr>
<tr>
<td>X= Extra</td>
<td>LC kg</td>
<td>-</td>
<td>320</td>
<td>-</td>
<td>860</td>
<td>320</td>
</tr>
<tr>
<td>R2 (mm)</td>
<td></td>
<td>80</td>
<td>450</td>
<td>60</td>
<td>550</td>
<td>40</td>
</tr>
</tbody>
</table>
| LC= max load capacity; R2= dead area

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>R1 (m)</th>
<th>2.75</th>
<th>3.25</th>
<th>3.75</th>
<th>4.25</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>L= Light</td>
<td>LC kg</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>145</td>
<td>250</td>
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<td>LC kg</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<td></td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

LC= max load capacity; R2= dead area
Pneumatic drive - electronic control

The world's first manipulator with the strength of a traditional pneumatic manipulator and the intelligence of an INDEVA®.

It offers electronically controlled air and load management, delivering precise, energy efficient handling and auto weight sensing, removing the responsibility from the operator to make adjustments for different weights by utilising our touch sensitive handle technology.

It is suitable for handling offset and/or very heavy loads with minimum effort.

Liftronic® Air units can be supplied either column, ceiling or overhead rail mounted.

Compared to traditional pneumatically controlled manipulators, Liftronic® Air offers important advantages which help improve safety, ergonomics, productivity and the Environment.

Main features

- Efficient use and delivery of air
- Auto-weight sense and auto-balancing
- Unparalleled safety
- Fast, responsive and precise
- Low carbon footprint

<table>
<thead>
<tr>
<th>STANDARD MODELS</th>
<th>LA80</th>
<th>LA160</th>
<th>LA250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross capacity (including lifting tool)</td>
<td>kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical stroke</td>
<td>mm</td>
<td>1752</td>
<td>1752</td>
</tr>
<tr>
<td>Arm length</td>
<td>mm</td>
<td>2700</td>
<td>2700</td>
</tr>
<tr>
<td>Offset handling: max. distance from the lifting tool Z axis</td>
<td>mm</td>
<td>300</td>
<td>-</td>
</tr>
<tr>
<td>Uncovered area</td>
<td>mm</td>
<td>907</td>
<td>907</td>
</tr>
<tr>
<td>Rotation around column axis</td>
<td>degrees</td>
<td>360°</td>
<td></td>
</tr>
<tr>
<td>Rotation around tool axis</td>
<td>degrees</td>
<td>550°</td>
<td></td>
</tr>
<tr>
<td>Air pressure min.</td>
<td>bar</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>V-AC Hz</td>
<td>115/230 50/60</td>
<td></td>
</tr>
<tr>
<td>Power consumption max</td>
<td>VA</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Enclosure protection</td>
<td>IP</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>

*With counterweights and reinforcement for arm.
PN Series are traditional industrial manipulators featuring full pneumatic operation.

**It is suitable for handling offset and/or very heavy loads.**

PN units can be supplied either column, ceiling or overhead rail mounted.

### Main features

- **Reliable**
  Continuous product development using standard modules and components for improved safety and efficiency.

- **Safe**
  Equipped with safety devices that maintain the grip on the load, even in the event of a total air loss. It is not possible to release the load when it is fully supported by the machine. When the control handle is released, a full set of brakes lock the machine and prevent further movement.

- **Versatile**
  It can be equipped with a wide range of bespoke tools operated pneumatically by grip or vacuum. Simple mechanical tools can also be used.

### STANDARD MODELS

<table>
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<tr>
<th></th>
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<th>PN160</th>
<th>PN250</th>
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<tr>
<td><strong>Gross capacity</strong></td>
<td>kg</td>
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</tr>
<tr>
<td>(including lifting tool)</td>
<td>80</td>
<td>110*</td>
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</tr>
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<td>mm</td>
</tr>
<tr>
<td></td>
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<td>mm</td>
<td>mm</td>
<td>mm</td>
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<tr>
<td><strong>max. distance from the lifting tool Z axis</strong></td>
<td>300</td>
<td>-</td>
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<tr>
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<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td></td>
<td>907</td>
<td>907</td>
<td>935</td>
</tr>
<tr>
<td><strong>Rotation around column axis</strong></td>
<td>degrees</td>
<td>continuous</td>
<td></td>
</tr>
<tr>
<td><strong>Rotation around tool axis</strong></td>
<td>degrees</td>
<td>standard: 550, optional: continuous</td>
<td></td>
</tr>
<tr>
<td><strong>Air pressure min.</strong></td>
<td>bar</td>
<td></td>
<td>6.5</td>
</tr>
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*With counterweights and reinforcement for arm.
Industry fields

- AGRICULTURE
- AEROSPACE
- AUTOMOTIVE
- BATHROOM AND TOILETWARE
- CERAMIC
- CHEMICALS/PHARMACEUTICALS
- ELECTRO-MECHANICAL
- ELECTRONICS
- FOOD/DRINK/TOBACCO
- FOUNDRY
- FURNITURE
- GLASS
- HOUSEHOLD ELECTRIC APPLIANCES
- MECHANICS
- METAL WIRES
- MOTORCYCLES
- PAPER PRODUCTION
- RUBBER/PLASTICS
- TEXTILE
- TYRES