



INTELLIGENT DEVICES FOR HANDLING



G R O U
Scaglia
1838

INDEVA[®]

INTELLIGENT DEVICES FOR HANDLING

Scaglia Indeva

A worldwide network at your service

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.

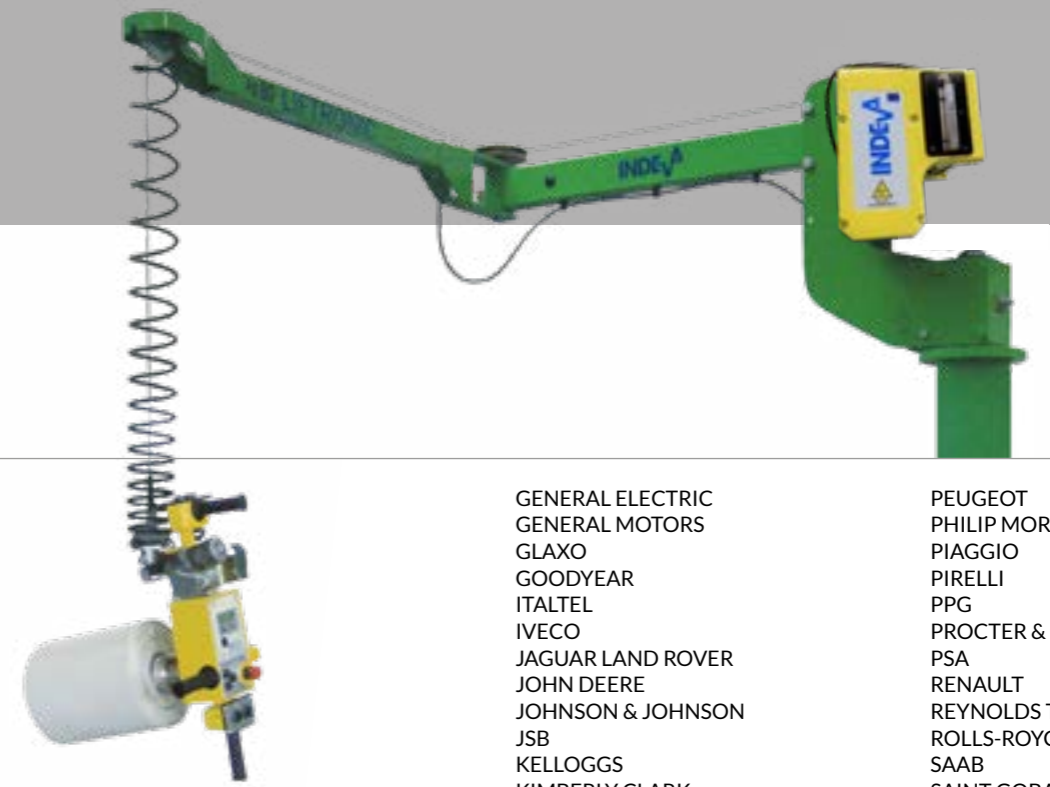
Since 1970 Scaglia Indeva has been at the leading edge of design and manufacture of innovative, ergonomically designed industrial manipulators that are used by major global manufacturers in varied applications throughout the world.

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.



References

- | | | | |
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| <ul style="list-style-type: none"> ABB AIRBUS AKZO FIBERS APRILIA ARCELOR MITTAL AUDI B.P. CHEMICALS BANK OF ENGLAND BANQUE DE FRANCE BARILLA BEKAERT BENTELER BENTLEY BMW BORG WARNER BOSCH BREMBO BRIDGESTONE FIRESTONE BRITISH AMERICAN TOBACCO CATERPILLAR CHRYSLER CIBA GEIGY CITROËN COCA COLA COMAU CONTINENTAL CPM-DÜRR GROUP DAIKIN | <ul style="list-style-type: none"> DAIMLER DENSO DUCATI DUNLOP ELECTROLUX ENICHEM FAURECIA FCA FERRARI FERRERO FIAT FINMECCANICA FORD FRESENIUS GE AUTOMATION GE AVIATION | <ul style="list-style-type: none"> GENERAL ELECTRIC GENERAL MOTORS GLAXO GOODYEAR ITALTEL IVECO JAGUAR LAND ROVER JOHN DEERE JOHNSON & JOHNSON JSB KELLOGGS KIMBERLY CLARK KRAFT GENERAL FOODS KUKA LAMBORGHINI LEAR LEONARDO HELICOPTERS MAGNA WERKZEUGTECHNIK MAHLE MAN ROLAND DRUCKMASCHINEN MERCEDES BENZ MICHELIN MOET & CHANDON NESTLE' NISSAN OPEL PEPSICO PERFETTI | <ul style="list-style-type: none"> PEUGEOT PHILIP MORRIS PIAGGIO PIRELLI PPG PROCTER & GAMBLE PSA RENAULT REYNOLDS TOBACCO ROLLS-ROYCE SAAB SAINT GOBAIN SCANIA SCHNEIDER ELECTRIC SIEMENS STILL TENARIS THYSSEN TOYOTA UNIFI UNIROYAL VALEO VOLKSWAGEN VOLVO WHIRLPOOL ZF |
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Scaglia Indeva

Intelligent Material Handling Technology


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**.

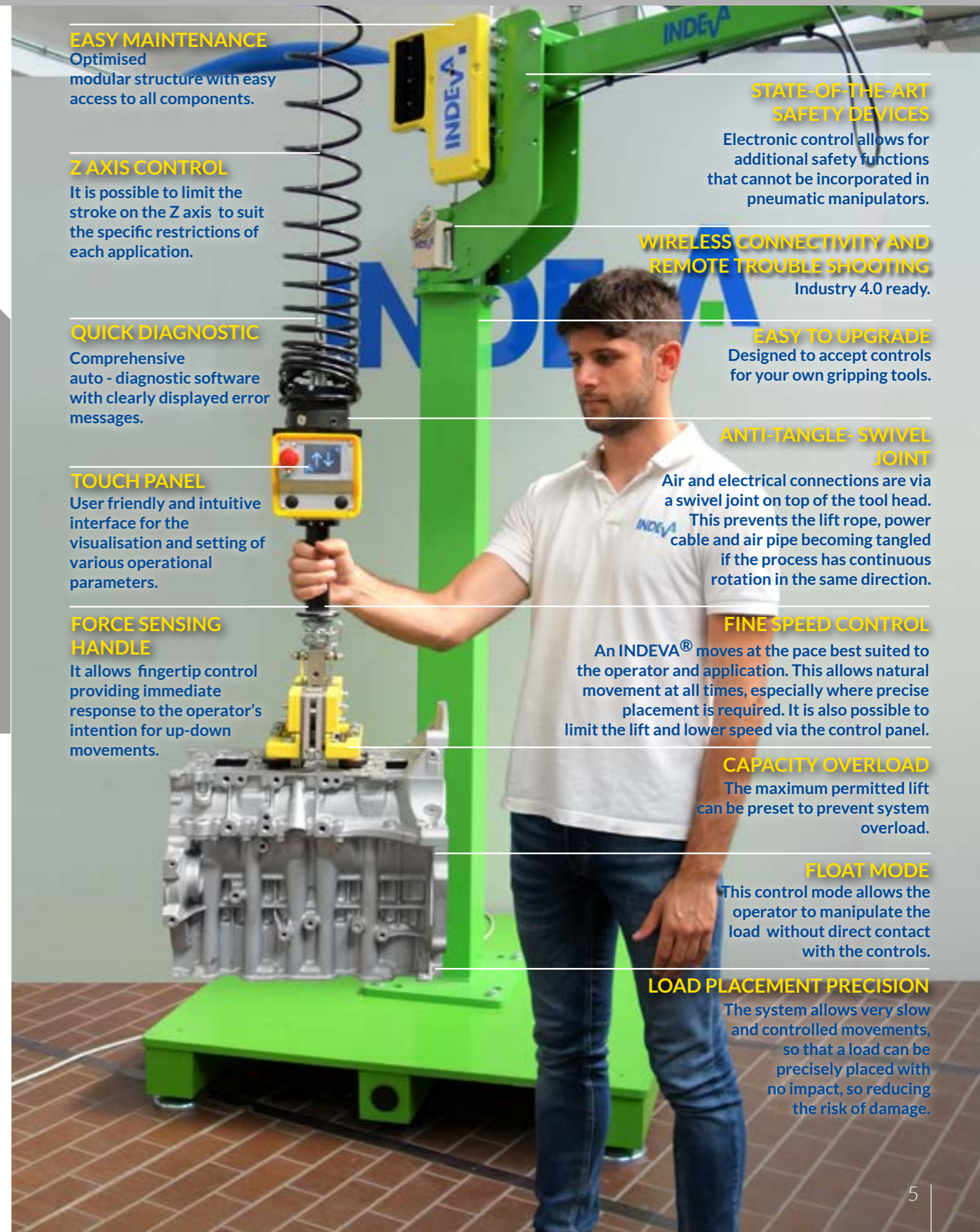
This series is equipped with an **advanced electronic control system** which overcomes the control limitations of pneumatic manipulators. They provide truly ergonomic and effortless handling.

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 foot print 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.

Scaglia Indeva

Manipulators range

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.



Rope

Rigid arm

Liftronic® Easy

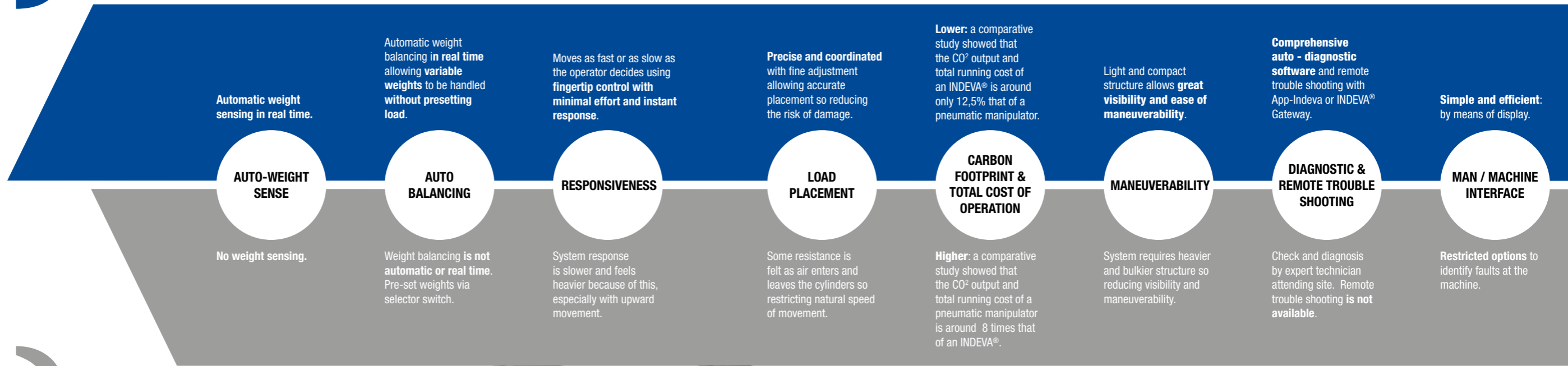
Capacity up to 320kg. Suitable for **rapid and repetitive work cycles** with simple gripping tools.

Liftronic® Pro

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

Liftronic® Air

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



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).



Rope

Rigid arm

PN Flex

Capacity up to 160kg.

PN Ergo

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

PN Compatto

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

PN Zip

Capacity up to 80kg. Very compact structure suitable when a **short vertical stroke** is required.

Liftronic® Easy

Intelligent Device for Handling

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



Scissor



Linear



Compact

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

Make your own gripping tool

Liftronic® Series

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.

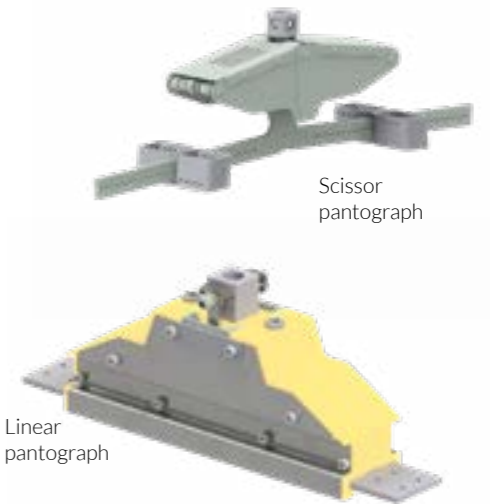
I-Connect



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



Scissor pantograph

Linear pantograph

Machine/Operator Interfaces



Remote controls

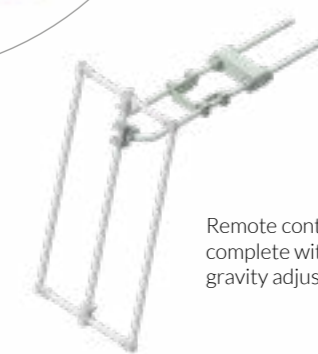


Remote touch sensitive handle available in different lengths

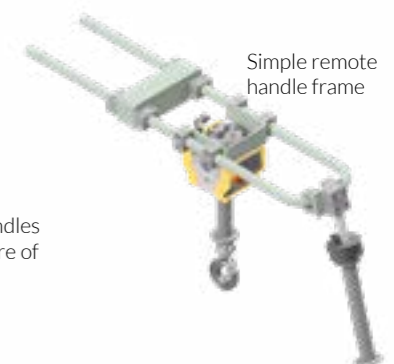
Accessories



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



Remote control handles complete with centre of gravity adjustment



Simple remote handle frame



Expanding Chuck



Liftronic® Pro

Intelligent Device for Handling

App-Indeva and INDEVA® Gateway

Wi-Fi Network Connectivity

Liftronic® Series

Liftronic® Pro is an INDEVA® - Intelligent Device for Handling. It is used for **complex applications with bespoke gripping systems**.

Main features

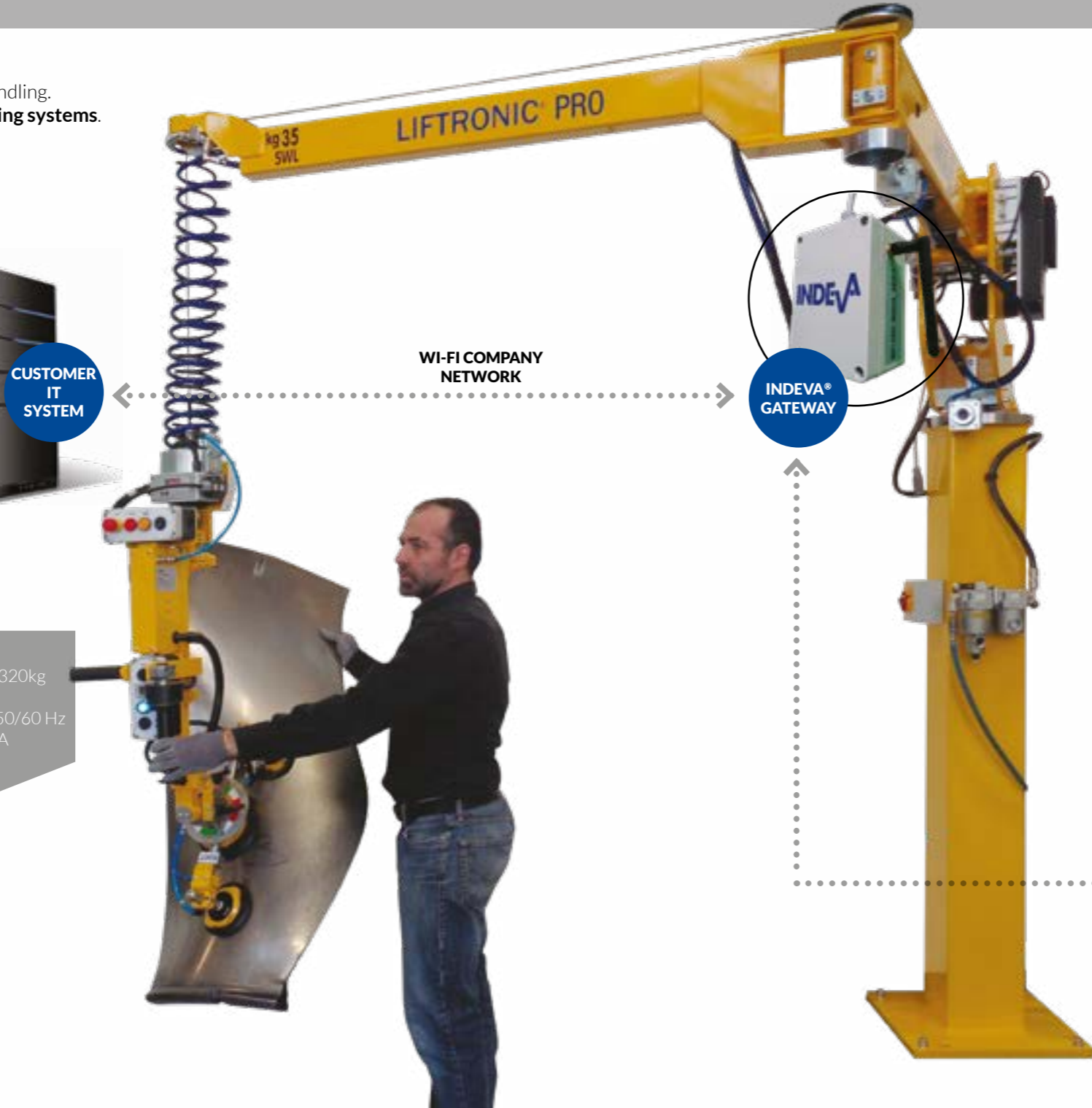
- Auto-weight sense and auto-balancing
- Can be integrated with App-Indeva and INDEVA® Gateway
- Unparalleled safety
- Ergonomic design
- Bespoke gripping devices
- Compact and light
- Fast, responsive and precise
- Low carbon footprint

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



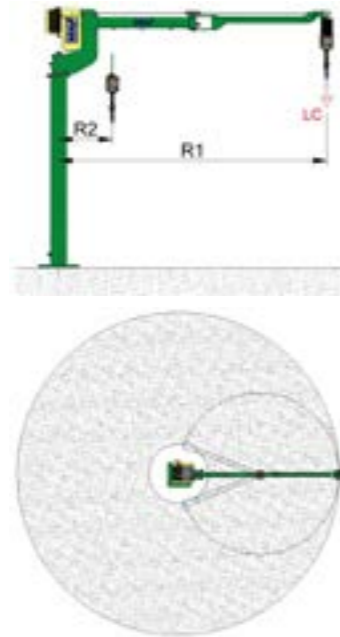
Articulated Arms

2 JOINT ARMS

Standard arms featuring 2 joint articulation.

STRUCTURE	R1 (m)	2.5	3	3.5	4	4.5
L= Light	LC kg R2 (mm)	80 450	60 550	40 650	- -	- -
H= Heavy	LC kg R2 (mm)	260 630	190 760	140 880	105 1020	78 1140
X= Extra	LC kg R2 (mm)	- -	320 860	320 1005	280 1150	220 1300

LC= max load capacity; R2= dead area

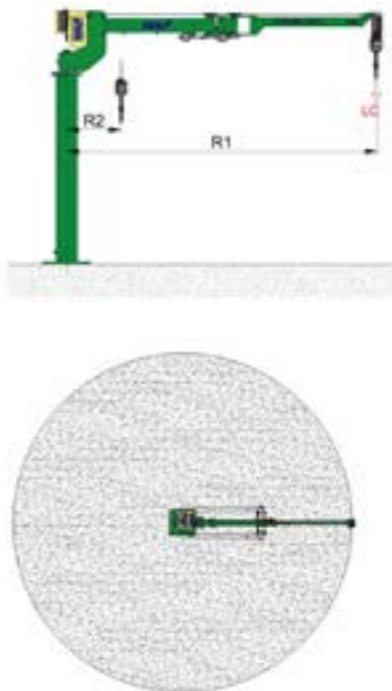


3 JOINT ARMS

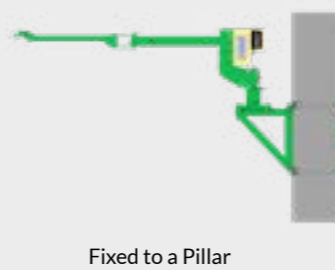
The INDEVA® Orbit Arm3 is a 3 joint arm available on request for both column and overhead versions with capacities up to 145 kg (including tooling). The 3 joint Arm provides **increased coverage** within the radius of the arm and offers the operator smooth, controllable movement across the full radius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

STRUCTURE	R1 (m)	2.75	3.25	3.75	4.25	4.5
L= Light	LC kg R2 (mm)	- -	- -	- -	- -	- -
H= Heavy	LC kg R2 (mm)	145 250	105 250	80 250	55 250	45 250
X= Extra	LC kg R2 (mm)	- -	- -	- -	- -	- -

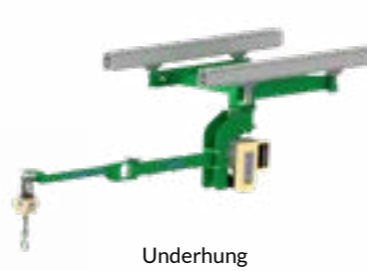
LC= max load capacity; R2= dead area



Column + arm



Overhead Arm



Liftruck



Linear



Overhead rail



Liftronic® Air

Intelligent Device for Handling

Liftronic® Series

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.

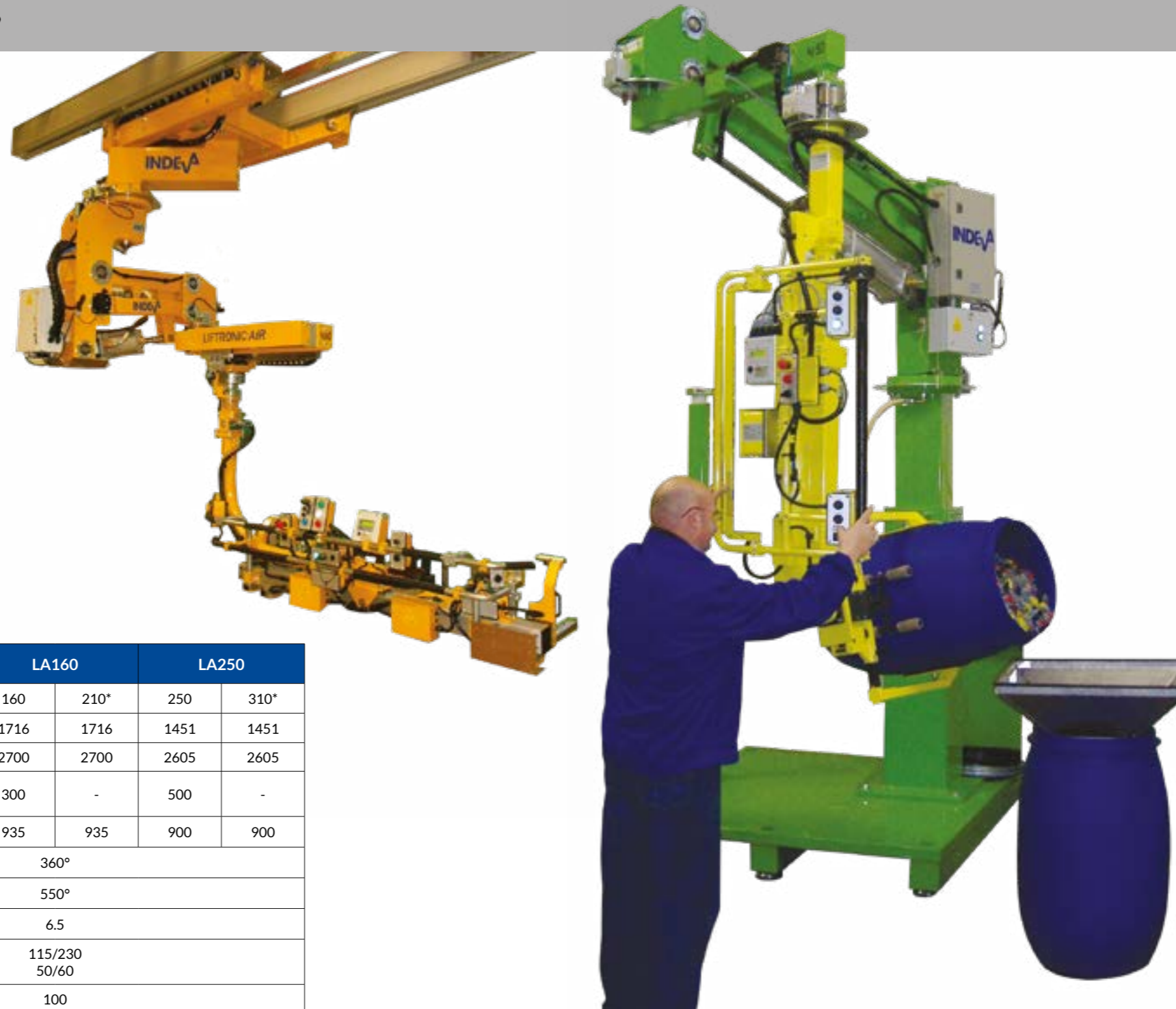
Compared to traditional pneumatically controlled manipulators, Liftronic® Air offers important advantages which help **improve safety, ergonomics, productivity and the Environment.**

Main features

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

STANDARD MODELS		LA80		LA160		LA250	
Gross capacity (including lifting tool)	kg	80	110*	160	210*	250	310*
Vertical stroke	mm	1752	1752	1716	1716	1451	1451
Arm length	mm	2700	2700	2700	2700	2605	2605
Offset handling: max. distance from the lifting tool Z axis	mm	300	-	300	-	500	-
Uncovered area	mm	907	907	935	935	900	900
Rotation around column axis	degrees	360°					
Rotation around tool axis	degrees	550°					
Air pressure min.	bar	6.5					
Power supply	V-AC Hz	115/230 50/60					
Power consumption max	VA	100					
Enclosure protection	IP	54					

*With counterweights and reinforcement for arm.



PN Series

Traditional Industrial Manipulators

PN Series

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.



PN Ergo



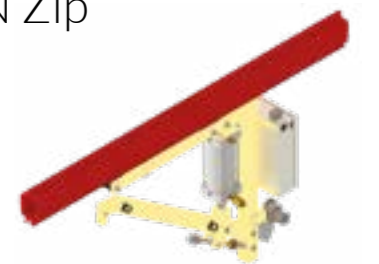
PN Compatto



PN Flex



PN Zip



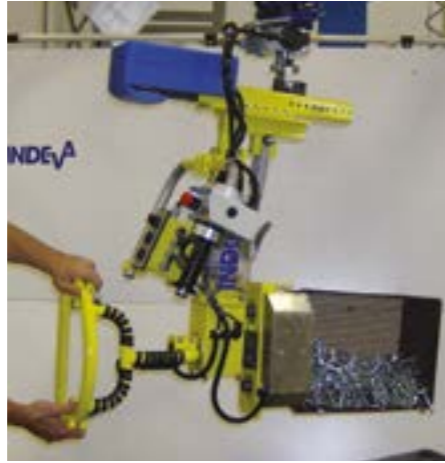
STANDARD MODELS		PN ERGO					
		PN80		PN160		PN250	
Gross capacity (including lifting tool)	kg	80	110*	160	210*	250	310*
Vertical stroke	mm	1752	1752	1716	1716	1451	1451
Arm length	mm	2700	2700	2700	2700	2605	2605
Offset handling: max. distance from the lifting tool Z axis	mm	300	-	300	-	500	-
Uncovered area	mm	907	907	935	935	900	900
Rotation around column axis	degrees	continuous					
Rotation around tool axis	degrees	standard: 550 optional: continuous					
Air pressure min.	bar	6.5					

*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





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