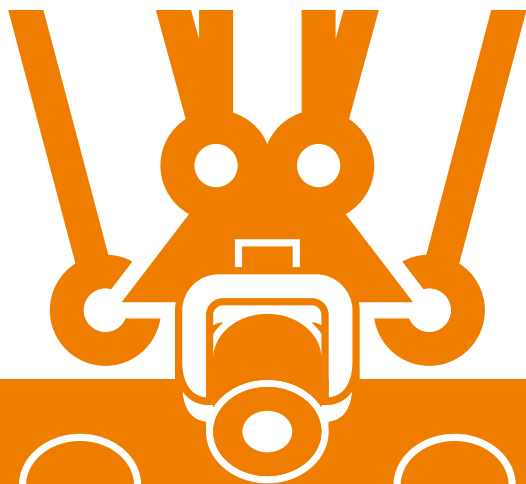


Low Cost Plastic Automation

Solutions for the plastics and rubber industry



• plastics for longer life[®]

igus[®].eu ■ ■ ■

www.igus.eu/plasticmachines

Tech up, Cost down. It's our job



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Industry Manager

Plastic Machines

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Sprue picker for less than 2,000 euros ...

Return on investment after only a few months.

The removal of sprues in the injection moulding process offers a great advantage and allows more economical production. Subsequent separation and other manual handling tasks are also eliminated. This saves money. To this end, igus® has developed its own sprue picker. The investment of only €4,000 per injection moulding machine (sprue picker components and integration) will pay for itself within a few months.



Cost-effective automation, economical production, ROI in only a few months.



Component sprue sorting: how much does a box cost you?

€40/box

Invest

Kinematics: €1,900
Integration: €2,500

€4,400

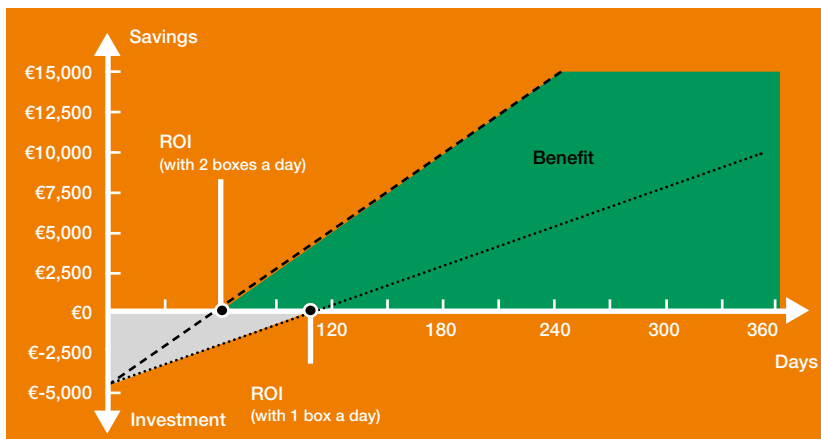
110 boxes

1 box/day

110 days

2 boxes/day

55 days



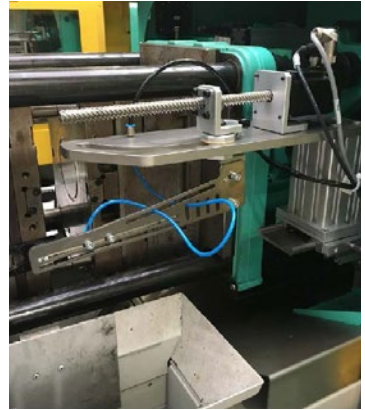
igus sprue picker IAP1

For use in stripper and ejector tool moulds

- The sprue is ejected sideways
- Electrical drive
- Wear-resistant parts easily replaceable
- Opening to closing total cycle in 1.25s
- Configurable substructure
(adaptable according to machine type)

Scope of delivery

- igus® sprue picker IAP1
- Controller D1



The signal flow between IAP1 and control system is as follows:



*Internal IAP1 use is on Arburg A270S machines (horizontal and vertical injection unit). A Siemens 1212DC integrated into the control cabinet serves as a PLC. Supply with 24V and 2A. All data of the D1 motor control system at: www.igus.eu/d1

What is included in delivery?

Scope of delivery igus® <€1,910

- Sprue picker kinematics IAP1
- Motor control system drylin® drye D1
- Sample programme for EUROMAP/ SELOGICA

Procurement by the customer Approx €2,500

- Remaining hardware (SPS, gripper)
- We will gladly provide an example circuit diagram and a list of the additional hardware components installed at igus®.
- Integration: CE and commissioning

igus® motion plastics in the sprue picker

The picker has a modular design. igus® high-performance polymers are used for the moving components. Lubrication-free and maintenance-free.

Dry-operating lead screws and nuts

▲ Tech up

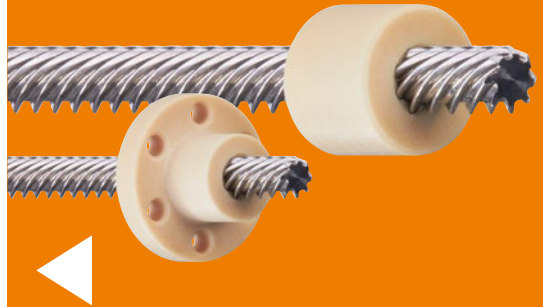
- 100% lubrication-free
- Up to 2.5 times greater efficiency due to optimum thread angle
- Quiet and vibration elimination due to rounded tooth flanks

▼ Cost down

- More than 5,000 lead screw system options available from stock
- Tested: up to 25% less wear

 www.igus.eu/dryspin

dryspin® lead screw technology



iglidur® J plain bearing



iglidur® J plain bearing the versatile endurance runner

▲ Tech up

- Low coefficient of friction
- Wear-resistant material for continuous operation

▼ Cost down

- Maintenance-free
- Over 250 sizes available from stock

 www.igus.eu/J

drylin® W profile guide



Lubrication-free drylin® W profile guides

▲ Tech up

- Maintenance and lubrication-free
- Wear-resistant

▼ Cost down

- Up to 40% more cost-effective than recirculating ball bearing guides
- Modular linear guides



www.igus.eu/drylinW

Lubrication-free drylin® N low-profile linear guides

▲ Tech up

- Maintenance and lubrication-free
- Wear-resistant with low coefficient of friction

▼ Cost down

- Low profile between 6 and 12mm
- Lightweight



www.igus.eu/drylinN

drylin® N low-profile guide



Tribologically optimised polymer bar stock for movement

▲ Tech up

- Low coefficient of friction in dry operation
- Maintenance-free and predictable

▼ Cost down

- Standard range from stock
- Machining with no minimum order quantity



www.igus.eu/barstock

iglidur® J plate bar stock



Additional automation solutions

roboLink® 4 DOF

- Reach 620mm
- Max. load 3kg
- With or without an integrated control system
- starting at €3,158 (without controller)

roboLink® 5 DOF

- Reach 790mm
- Max. load 3kg
- With or without an integrated control system
- starting at €3,538 (without controller)



www.igus.eu/roboLink



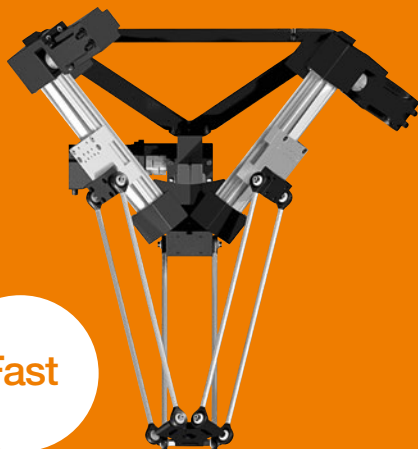
Flexible

drylin® delta robot

- As a kit or pre-harnessed
- Reach 360/660mm
- starting at €3,970 (kit)



www.igus.eu/delta



Fast

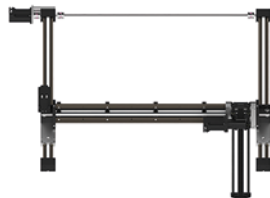
drylin® linear robots

- Standard product range shipped in 24 hours
- Individually configurable
- Loads of up to 75kg; stroke of up to 6m
- starting at €1,899 (room linear robot)



www.igus.eu/gantry

Modular





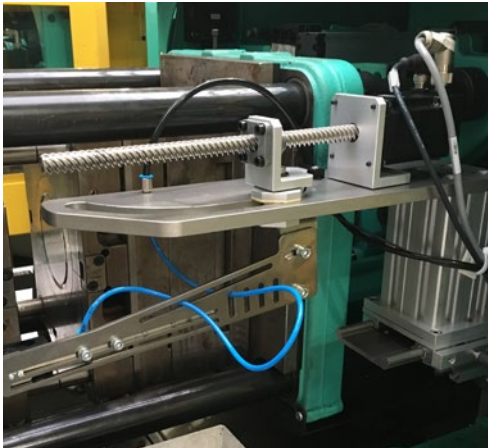
End of the line

- Chain assembly cell: pick & place for plastic parts.
- Cycle time of less than 1.8 seconds



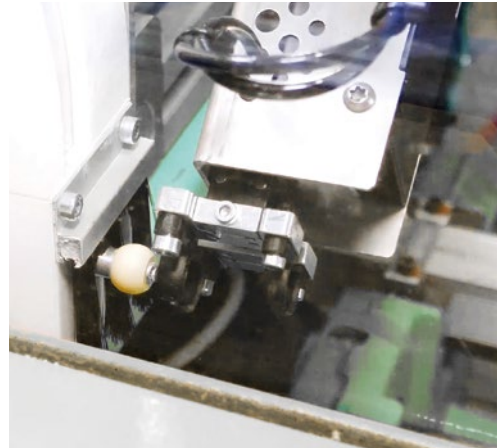
System integration (horizontal)

- Handling automation for injection moulding machines
- Payload up to 3kg



System integration

- Sprue picker kinematics in the injection moulding machine
- Small & compact



System integration (vertical)

- Insertion automation for injection moulds.
- Individually configurable

Interesting contributions with practical examples for the injection moulding machine, videos and application examples and questions on the subject of plastics machines can be found in the igus® blog at ...



Moving energy made easy

Solutions from the igus® e-chains® construction kit

e-chains® – designed to guide and protect e-chain systems® are the "umbilical" of modern machines. They reduce downtime and increase the service life of cables and hoses. Polymer energy chains have been developed, produced and tested by igus® since 1971. e-chain systems® carry sensitive bus, data and fibre optic cables, as well as energy forms such as electricity, gas, air and hydraulics.

A selection from 90,000 e-chains® parts:



E1 system

- Cost-effective solution for large volumes
- Can be shortened or lengthened as required, modular chain band

 www.igus.eu/E1

- Maintenance-free – no grease or oil needed to lubricate the joints
- Modular design reduces assembly time
- For small installation spaces
- For all applications
- The polymer material reduces noise development and has a vibration dampening effect
- Electrically insulating
- Easy to change length
- Resistant to dirt, chemicals and high temperatures
- Diverse modular interior separations
- Lightweight and high strength



E2 micro

- For the smallest installation spaces
- UL94-V2 (optional V0)
- Strong, light and quiet

 www.igus.eu/E2micro



System E2.1

- Strong and low noise
- Large, assembly-friendly pins
- Openable from both sides
- Extensive accessories

 www.igus.eu/E21



easychain®

- Easy insertion of cables
- Flexible, high dynamics and quiet
- Easy access from along the inside or outside
- Affordable one-piece energy chains

 www.igus.eu/easychain

chainflex® cables work – guaranteed

chainflex® cables for moving applications with 36-month guarantee*

From control cables suitable for energy chains, servo cables and motor cables up to bus cables, data cables, encoder cables and fibre optic cables:

Reduce your costs by up to 64.7% with chainflex® cables; with the same or longer service life. We give you our 36-month guarantee*.

- Temperature range from -40°C to +90°C
- For dynamic applications in energy chains
- Special design prevents cable failure and "corkscrewing"
- 36-month guarantee for all cables*



A selection of 1,244 chainflex® types:



PVC control cables CF130.UL & CF140.UL

- For medium duty applications
- PVC outer jacket (CF140 shielded)
- Flame retardant



www.igus.eu/CF130



TPE control cables CF98 & CF99

- For heaviest duty applications
- Very small radii of 4xd
- TPE outer jacket (CF99 shielded)



www.igus.eu/CF98



PVC Ethernet cable CAT5/GigE CFBUS.PVC

- For medium duty applications
- PVC outer jacket, shielded
- Oil-resistant, flame retardant



www.igus.eu/CFBUS



PVC motor cables CF31

- For heavy-duty applications
- PVC outer jacket, shielded
- Oil-resistant, flame retardant



www.igus.eu/CF31

As a harnessed system ...

readychain®: chain - cable - guarantee ...
delivered in 3-10 days



Assembled igus® readychain® systems:
individual or volume production

 www.igus.eu/readychain

readychain® - fully harnessed systems in 3-10 days

The largest factory for harnessed readychain® systems with 4,700m² and 160 employees in Cologne, 12 other readychain® factories worldwide.

- Eliminate storage costs for cables, e-chains® and connectors
- Cut lead times by half
- Flexibility when orders vary
- Reduce the number of suppliers and orders by 75%
- System guarantee – depending on the application

readycable®:
Harnesses drive cables ... in 24-48 hours



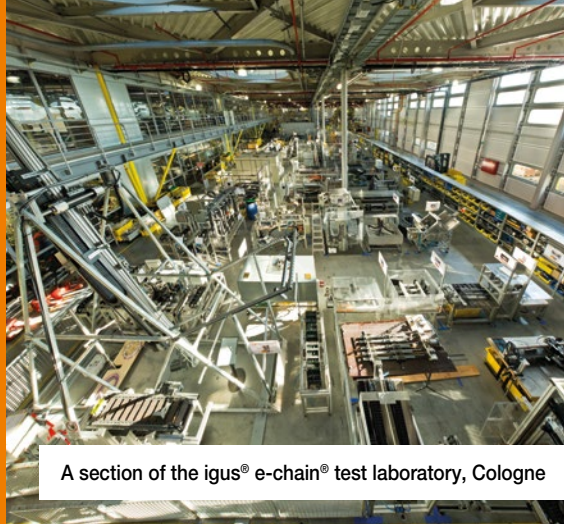
readycable®

igus® provides more than 4,000 harnessed cables for drives suitable for 24 different manufacturer standards. Professionally produced, 100% tested.

 www.igus.eu/readycable

Tested service life!

Tested at the 3,800 m² Cologne lab. 4,100 tests, 7,512 findings added to the electronic database, 10 billion e-chains[®] cycles per year for chains and cables.



A section of the igus[®] e-chain[®] test laboratory, Cologne



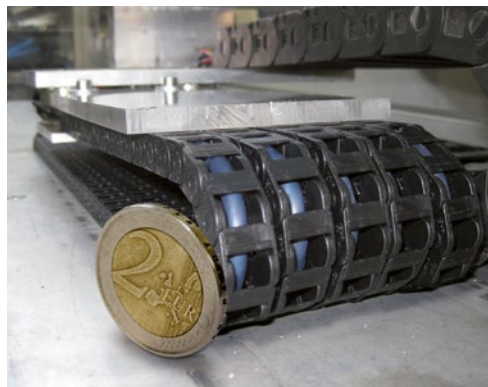
A section of the igus[®] dry-tech[®] test laboratory, Cologne



Many types with flammability class UL94-V2 or V0



Wear tests under the influence of different media



Control cable CF98.05.04 tested in e-chain[®]. More than 138 million strokes with a bending factor of 3.2xd

Low Cost Plastic Automation

/9001:2015 /16949:2016

igus® is certified in accordance with ISO 9001:2015 and ISO/TS 16949:2016 in the field of energy supply systems, cables and harnessing, as well as polymer bearings.

/14001:2015

igus® is certified according to ISO 14001:2015. This accepted basis for environmental management systems supports us on our way to a CO2-neutral factory.

/newsletter

Get more information about motion plastics® innovations and trends: exciting applications, videos, test results, webinars and much more Compact and free of charge. Register here:
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/online

You can find more about plastics machinery at
www.igus.eu/plastic-machines

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Published by igus® GmbH, Germany
MAT0074840.20 Issue 05/2020
Subject to technical alterations.