Q-System is a modern, internationally established Danish company with over 30 years specialization in the development and production of innovative solutions for internal transport and material handling.

Our product portfolio offers a well-designed standard program covering a broad range for handling units up to 1500 kg per meter. In order to meet all internal transport requirements, Q-System also offers a truck and trolley program that is highly recognized for its functional qualities.

Q-System's policy is to deliver conceptual solutions that are responsive to the professional user needs. Therefore, we naturally deploy many resources to the goal-oriented development of customized solutions and encourage a partnership with individual business segments pursuing optimum solutions.

As a Q-System customer, you will have at your disposal our logistic specialists as a participating member of your development team. These select experts have a special knowledge of your business and are therefore able to match your daily needs to the latest technology developed by Q-System's engineers.

Professional businesses choose "Q" because they demand security; security regarding technical quality, security about a reliable conveyor system that meets their requirements, security in safe operations, security in the knowledge that Q-System delivers on time.

Q-System is available in individual countries through local Q organizations, trained in optimum internal transport and material handling solutions. Q-System is always nearby and at your disposal, when needed.

Quality is the code word for Q; broad technical and business know-how, quick and effective communications, and the right solution at the right time, on time, all the time.

Q-System's people will be there when you need us - they are committed and empowered to serve you, our customers!

Q-SYSTEM

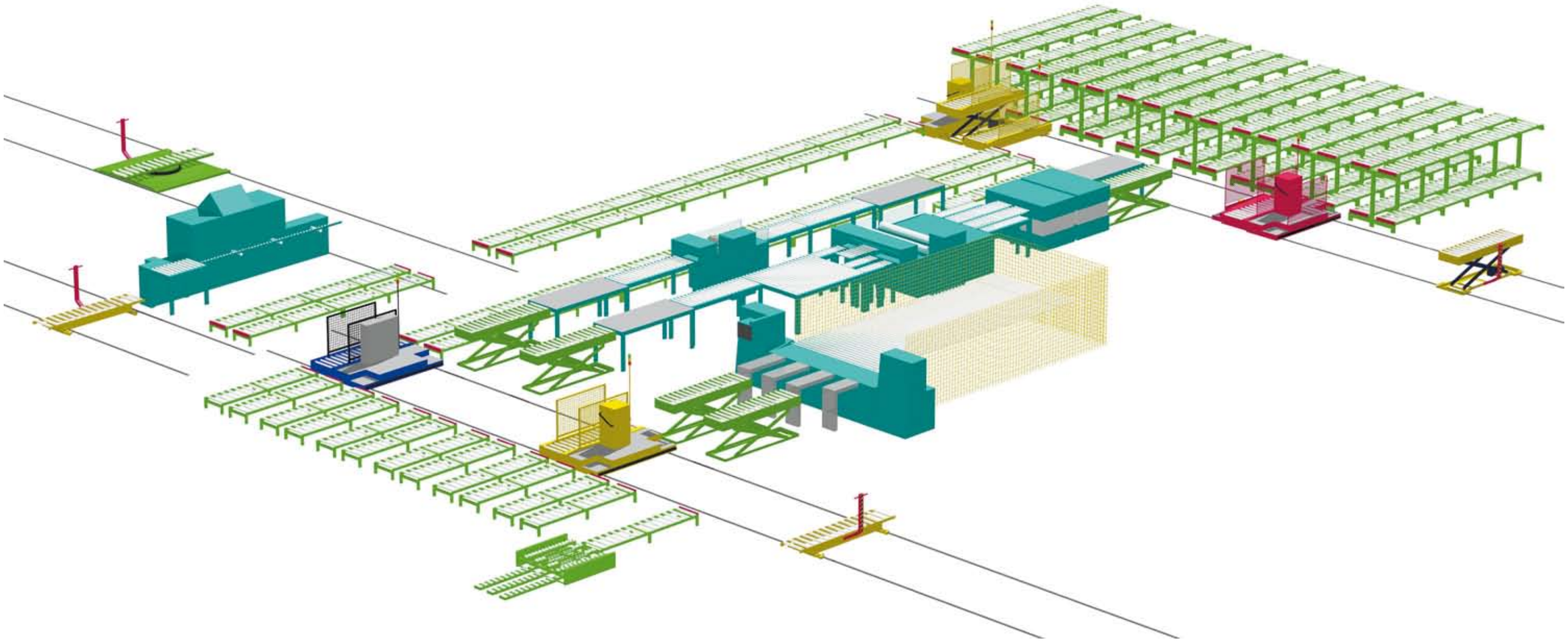
The Q70 Conveyor System

having a capacity of up to 1000 kg per meter (672 lbs/ft) is designed for the transportation of stacks with or without baseboards.

Due to the easy-running rollers, the manual handling of even very heavy stacks is done with incredible ease. In fact, a force of only 15 kg (33 lbs) is required for setting a stack of 1000 kg in motion.

Research and cost calculations show that within the woodworking industry, among others, an investment in this system is usually returned within one year. This is, of course, due to the fact that in most situations internal transportation costs amount to approximately 70-80% of the combined production costs.

Standard colors of Q conveyors are green, grey and blue, but they can be supplied in any color you may wish.



Q·SYSTEM

Steel roller Q70

Heavy duty with dust proof steel ball bearings. Roller dia. 70 mm (2.75”). Load capacity per roller is max. 200 kg (440 lbs).

Frames

Are made from heavy angle profiles. The frames are manufactured with oblong holes on centers of 100 (4”), 150 (6”) or 200 mm (8”) for easy placement of rollers, and with predrilled holes every 1000 mm (39”) to fasten the supports. Standard lengths: 2000 mm (78.7”) and 3000 mm (118”).

Supports

Can be supplied with fixed or adjustable height ± 25 mm (1”) by means of adjusting bolt. The leg is not only to support the frame, but it is also utilized as a splice bracket and separation tube. The supports can be supplied with brackets for floor fastening.

Standard widths : 400 (15.7”), 500 (19.7”), 600 (23.6”), 900 (35.4”) and 1100 mm (44”)
Heights : 300 mm (12”) and 300 ±25 mm (±1”)

Permanent And Tilting End-Stop

The bright red permanent end-stop, which is a standard item, is used for the end of the conveyor line.

The tilting end-stop, also in bright red, allows the operator to roll material on and off the conveyor. The stop is released manually but springs back automatically as a stack is fed or removed, thus preventing stacks from rolling back into the aisle and damaging the material.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

Two-Level Conveyor Rack

The two-level conveyor rack provides double utilization of the storage area, and reduces the transport distance between the storage area and the machinery lines.

The modular structure of the conveyor system enables the use of standard non-driven Q roller conveyors and end-stops in the two-level rack.

The two-level rack is of very robust construction, which will maintain stability even when the rack is subjected to a load of 600 kg/m (402 lbs/ft) on one side of the upper level. Stability is additionally secured by a cross-member.

The centrally positioned support pillar allows free access to the product, simplifying use of the storage area.

Standard colors are green, grey and blue.

Height 1	:	300 mm (12”)
Height 2	:	1600 mm (63”) and 1700 mm (67”)
Roller width	:	2 x 500 mm (2 x 19.7”) and 2 x 600 mm (23.6”)
Total width	:	1300 mm (51.1”) and 1500 mm (59”)
Capacity	:	Height 1: 1000 kg/m (670 lbs/ft.) (one-side load) Height 2: 600 kg/m (402 lbs/ft.) (one-side load)

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

①② Non-Driven Transfer Carts

with one or two non-driven conveyors are used for transverse movement of the product, and distribution from the machinery lines to storage conveyors, or further production.

The transfer cart can be supplied with push bar, material brake and a foot-activated parking brake.

Transfer cart with one conveyor:

Roller width : 400 mm (15.7”) 500 mm (19.7”) 600 mm (23.6”) and 900 mm (35.4”)

Length : 1500 mm (59”) 2000 mm (78.7”) 2500 mm (98.4”) and 3000 mm (118”)

Height : 300 mm (12”)

Track width : 1200 mm (47.2”) 1600 mm (62.9”) 2000 mm (78.7) and 2400 mm (94.5”)

Load capacity : Max. 2500 kg (5500 lbs)

③ Manual Transfer Cart w/360° Pivot

This type is often utilized in connection with transport to/from the sanding and coating lines where materials need to be turned 90° or 360°.

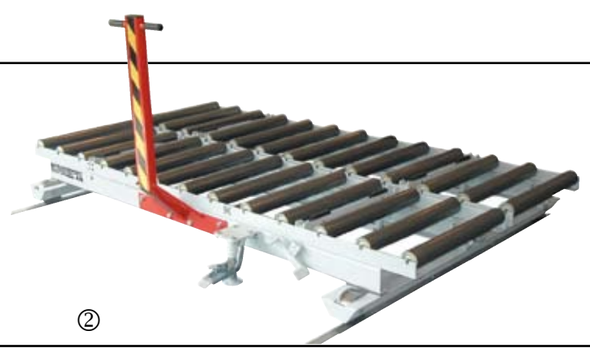
It is built with two material brakes, locks for each 90° turn, a foot-activated parking brake and detachable push bar.

④ Manual Transfer Cart With Lift Table And Roller Conveyor

This type is used to e.g transport material to two-level conveyor racks.

The cart is supplied with push bar, material brake, a foot-activated parking brake, and upright for electric cable and control box. Further, it can be supplied with a mechanical roller decelerator and a tilting end-stop.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.



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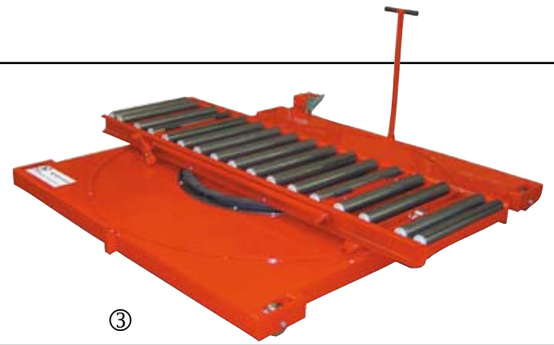

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① Transfer Cart Flexible

This sturdy battery-driven transfer cart with driver platform can be supplied with one or two driven roller conveyors, with or without lifting table or with any other function required for your application. The Flexible is therefore the safe choice for the quick and efficient transport of material in your critical production areas.

The cart has been designed in close co-operation with the Danish Employees Health Service to ensure the optimum comfort to the driver. Among other things, the cart is equipped with strong shock absorbers to ensure a soft and comfortable drive.

The control panel on the driver platform is equipped with a joystick for control of the roller conveyor speed and the down aisle speed of the cart. The panel is also equipped with push buttons for start/stop of the roller conveyor, lifting/lowering of the lifting table, a potentiometer for setting the roller conveyor speed, a reset button and an emergency stop. Several functions can also be operated by a remote control.

A built-in power indicator shows the power level of the battery. Changing the battery is very easy as rollers are installed under the operator floor plate for the battery to roll on/off.

The standard color of the Flexible is yellow.

Cart length	:	2.500 & 3.000 mm (98,4 & 118”)
Cart width	:	2.200 mm (86,6”)
Height	:	300 mm (12”)
Roller width	:	900 mm (35,4”)
Speed	:	0-80 m/min.
Conveyor speed	:	0-18 m/min.
Battery exchange	:	right og left

② Transfer Cart Basic

The Basic provides the quick and efficient handling of stacks while the down aisle speed and the conveyor operations are managed easily by joystick and push buttons.

Contact Q-System for further information.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

③ Transfer Cart Courier

The Courier can be both driver-operated, as well as run automatically from a production control system transmitter to the radio modem on the cart. A laser positioning system will ensure the correct positioning of the transfer cart to the pick up and drop off conveyor.

Contact Q-System for further information.

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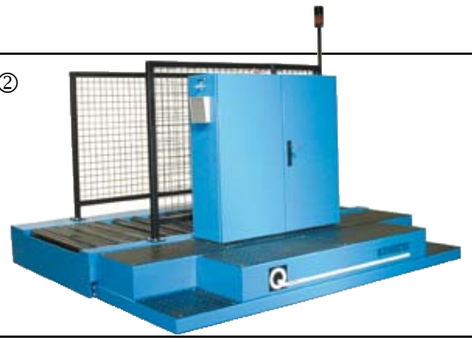

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Non-Driven 90º Curve

The non-driven curve, available in 45º, 90º and 180º, is used for changing the direction of a non-driven conveyor line.

The curve can be supplied with either tapered or double rollers.

Width	:	400 (15.7”) 500 (19.7”) 600 (23.6”) and 900 mm (35.4”)
Interior radius	:	= longest item
Height	:	300 mm (12”) and 300 ± 25 mm (1”)

Standard colors are green, grey and blue.

Floor Truck With Roller Conveyor And Tug Bar

The floor truck is used to transport the products from the conveyor system to another location.

The truck can be supplied with brake and/or tilting end-stop.

Length	:	1500 (59”) 2000 (78.7”) and 2500 mm (98.4”)
Width	:	400 (15.7”) 500 (19.7”) 600 (23.6”) and 900 mm (35.4”)
Height	:	300 mm (12”)
Capacity load	:	1500 kg (3300 lbs)

Standard colors are green, blue and grey.
The tug bar is bright red.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

Q-System Lifting Tables

Q lifting tables are available in many standard models: single scissor, double vertical scissor, double horizontal and low height models, all having a capacity of 500 kg up to 1500 kg. All options are very flexible and can be easily "tailored" for the specific function required in your production facility.

All of the Q lifting tables can be supplied with a plane platform, driven or non-driven roller conveyor, and with various levels of controls, e.g. from control station or with foot pedal control for manual load indexing all the way to automatic photocell control of the lift for automatic indexing up or down.

To keep material on the non-driven roller conveyor stable, the table can be supplied with tilting end-stops or with pneumatic braking of rollers.

All Q lifting tables are CE marked and conform to the safety regulations within the EU.

① Single scissor lifting table with stacking wall.
② Double scissor lifting table.
③ Single scissor lifting table with revolvable roller conveyor.

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Base Converter

The base converter is used to transfer a stack, possibly placed on a base board, from a EURO pallet onto a roller conveyor. From the opposite direction the base converter can transfer a stack placed on a roller conveyor to a EURO pallet.

The base converter must be placed between a roller conveyors with triple rollers, length 1500 mm (59”), height 88 mm (3.5”), and a roller conveyor of length 3000 mm (118”), height 300 (12”) mm.

Technical Description:

Pallet size	:	EURO 800x1200 mm (31.4” x 47.2”)
Measurement base board/stack	:	l x w=2100 x 1300 mm l x w= 82,6”x51.1”
In/outfeed height pallet	:	88 mm (3.5”)
In/outfeed height stack	:	300 mm (12”)
Lifting/lowering time	:	Abt. 15 sec each way
Operation	:	Electrohydraulic
Up/down	:	Push button panel, dead-man controlled.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

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Edge Varnishing

In the edge polishing and varnishing arenas, modern furniture factories focus on high capacity combined with ergonomics and a safe working environment.

Q-System supplies complete customized conveyor solutions based on your requirements for automation for the whole edge varnishing process.

The common solution will comprise of transfer carts to collect stacks from the intermediate storage area and powered conveyors for transport to and through the polish booth, the spray booth and the drying zone.

The polish and spray booths will be equipped with in-feed and outfeed conveyors separated by the working station, which is an integrated lifting and turn- table to ensure good ergonomics to the operator. All functions of the mechanical equipment in the booths can be operated from a suspended press-button control.

Q-System solutions are often designed to allow for future automation to include robotic polishing and spraying.

Processing And Intermediate Transport

The standard components of the Q60/67 conveyor system create the basis for an easily customized conveyor system for the intermediate transport and for the processing department.

The Q60/67 non-driven and driven conveyor systems are designed for transportation of items with a weight of up to 200 kg per meter (135 lbs/ft).

The Q67 driven conveyor system is comprised of several components including roller conveyors with cord-driven steel rollers, curves, turning tables, pushers, mill turners, strap conveyors, angle transfer units, and many other components.

① Cord-driven Roller Conveyor Q67

Rollers	:	Steel and PVC rollers with ball bearings.
Roller widths	:	400-600-800 mm (15.7-23.6-31.2”)
Centre distance	:	67-100-133 mm (2.6-4-5.2”)
Height	:	800-1000 +/- 15 mm 31.5”-39.3” +/- 0.59”

② Driven Turntable Q67 With Angle Transfer

This is an example of a unit that is often customized.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

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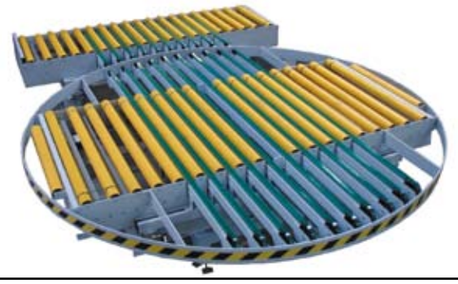

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The Packaging Process

The efficiency and accuracy in the packaging of products are important both for product production, and product "shelf appeal."

Q-System supplies complete solutions for an effective packaging process; solutions which are specifically designed for the individual customer's requirements and desired automation level.

The advanced packaging and palletizing solution will include a cardboard box folding machine, packing belt, non-driven or motorized approach conveyors with built-in return-pathways for the empty pallets and lifting tables. Therefore, workers are not exposed to stressful, monotonous movements and lifting. Alternatively, robotics can be used to fully automate the process as well as remove the need for manual labor.

The process finishes with automatic box sealing, labeling, further conveyance to a robotic palletizer with subsequent foil-wrapping and automatic transport to storage or shipping.

Q·SYSTEM

The Q89 conveyor system is designed for transportation of EURO pallets and other materials with a flat sturdy surface. The Q89 system is comprised of a number of standard components including gravity roller conveyors, chain-driven powered conveyors, cross tables, angle transfers, transfer carts, turntables, etc.

All components can be supplied with various center distances of the rollers in order to accommodate the material's weight and size.

The Q89 system can easily be combined with our other Q standard systems.

Chain-driven Roller Conveyor Q89

The standard conveyor is supplied with constant speed but it can also be supplied with accumulation functionality. The accumulation functionality provides the optimal utilization of the conveyor line. The conveyor is chain-driven from roller to roller with a double chain wheel.

Standard colors are green, grey and blue.

Roller	:	ø89 mm (3.5"), black-painted steel, with ball bearings
Roller width	:	500 to 1300 mm (19.7 to 52")
Center distance	:	150 - 200 mm (6 - 8")
Height	:	300 mm ± 25 mm (12" ± 1") Can be fastened to the floor.
Standard speed	:	10 m/min.
Max. capacity	:	1,000 kg/m (672 lbs/ft)

Chain Conveyor Q89

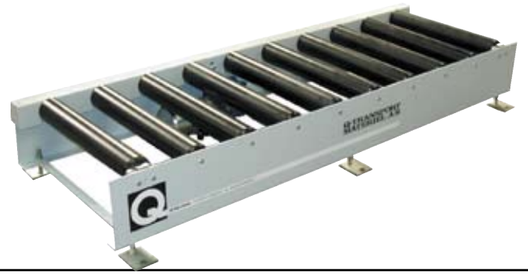
The two- and three-string chain conveyor is used for horizontal and slightly upward transportation of pallets placed crosswise, and other types of products with even bottom surfaces.

The conveyors are driven by worm reduction gear motors. The frames are made of heavy U-profiles and equipped with endless roller chains.

Standard colors are green, grey and blue.

Height	:	300 mm ± 25 mm (12" ± 1") Can be fastened to the floor.
Max capacity	:	1,000 kg/m (672 lbs/ft)

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.



① Motorized Transfer Cart Q89

The driven transfer cart with chain-driven roller conveyor is used for transverse movement of pallets and other types of goods with even bottom surfaces.

Roller	:	ø89 mm (3.5”), black-painted steel w/ball bearings
Roller width	:	900 & 1100 mm (35.4” & 44”)
Centre distance	:	150 & 200 mm (6 & 8”)
Height	:	300 mm (12”)
Driving station	:	Worm gear motor
Speed standard	:	10 m/min.

② Motorized Transfer Cart Q89 with turntable

The turntable provides the possibility of a 10° to 270° change of the transport direction.

③④ Battery-driven Transfer Carts

The automatic battery-driven transfer cart is the right choice for long down aisle runs or when the cart runs through fire walls as no cables are involved.

The battery-driven transfer carts have their own PLC-control, which, as an option, can be linked to the production control system via a transmitter and a radio modem on the cart.

Contact Q-System for further information.

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

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① Driven Turntable Q89

The driven turntable with chain-driven roller conveyor or chain conveyor is used to change the direction of transport from 10° up to 270°.
The turning unit is designed as a pivot table with chain-drive.

With Roller Conveyor

Roller	:	ø89 mm (3.5”), black-painted steel, with ball bearings
Roller width	:	900 & 1100 mm (34.4 & 43.3”)
Centre distance	:	150 & 200 mm (6 & 8”)
Height	:	300 mm +/- 25 mm (12” +/- 1”)
Speed standard	:	10 m/min.
Capacity load max.	:	Pallet: 1.500 kg (1007 lbs/ft

With Chain Conveyor

Chain	:	3/4” x 1/2” chain with straight plates.
Distance between chains	:	800 mm (31.5”)

The equipment is manufactured to metric standards, any measurements other than metric are approximate and for comparison only. The company reserves the right to change the technical specifications without prior notice.

② Driven Angle Transfer Q89

The angle transfer which is designed as a driven roller conveyor with a built-in raise/lowering chain conveyor is used for a 90° angle transfer of material.

Roller width	:	500 up to 1100 mm (19.7 up to 43.3”)
Chains	:	3/4” x 1/2” chain with straight plates
Height	:	300 mm ± 25 mm (12” +/- 1”)

Other specifications as for driven turntable.

③ Pallet Dispenser

For stacking/destacking of empty pallets.

The pallet dispenser is designed as a frame with in-feed guides, two pneumatic grippers and two motor-driven carriers. A roller or chain conveyor can be supplied for feeding of pallets from the side or alternatively from the front.

The standard model has a capacity of 14 EURO pallets.

To accommodate different pallet sizes, Q-System supplies models with manually and automatically adjustable sides.

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Q·SYSTEM

Storage Solutions

Multi-level pallet racks provide optimal utilization of the storage area and can be used to optimize the storage of both raw materials, semi-fabricated and finished products ready for distribution.

The unmanned store can be serviced by Q loaders with either fork lifts or driven roller conveyor, and can be supplied as a multiple row, single-face shelving or as pallet flow racks with rollers, enabling back-loaded pallets to flow by gravity to the front face.

The automatic storage and retrieval system, which is based on bar code identification, is linked with your production control.