



# Primary Packaging

## Delfi D3 Feed Placer

Demaurex



**BOSCH**  
Invented for life

### Application Information

The Delfi D3, featuring the new GD series Delta robot, picks a single or a group of food or non-food products and places them into the infeed chain of a flow wrapper or into thermoforms/blisters. The naked or wrapped products can be placed in singles, multiples or in piles, either short or broad edge leading. The 90° position of the outfeed conveyor, relative to the infeed flow reduces space. The modular Delfi D3 can be easily integrated with other packaging machines, providing manufacturers with the flexibility to meet changing market needs.

#### Maximum flexibility

- ▶ The Delfi D3 platform is highly versatile with a broad application range. The modular design is scalable with 3 and 4 robot modules that can be combined to have several cells in one line.
- ▶ The GD series Delta robot can utilize our complete portfolio of end effectors (+2,000 designs). Specific mono or multi-picking end effectors allow for particularly gentle handling of products.

#### Options

- ▶ Vision guidance for quality inspection (size, height, shape, color) and picking of non-aligned products.
- ▶ A 4th robot axis can be added for product rotation.
- ▶ A 5th robot axis can be added allowing the use of rotate and tilt elements.
- ▶ Stainless steel frame execution (non-washdown) available.

Our Gemini 4.0 hardware and software platform incorporates a virtual machine displayed on the HMI (Human Machine Interface), promoting ease of use and lowering TCO (Total Cost of Ownership). In emulation mode, this valuable tool displays a 3D view of the machine movement and motion cycle in real time. This allows operators to optimize pick and place patterns and zones in an easy, intuitive way. In simulation mode the machine performance and processes can be simulated offline without the need for physical products. This reduces product waste, decreases set-up and installation times and increases efficiency.

#### Your Benefits

##### Flexibility

Handling of different types of products on the same machine, fast changeovers, broad application range

##### Scalability

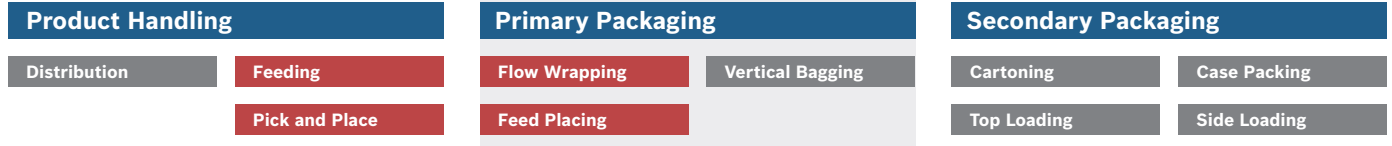
Scalable line automation through standard machine modules with application-specific options

##### Low total cost of ownership (TCO)

Minimum amount of components and, consequently, reduced maintenance and spare stock holding costs

#### Products

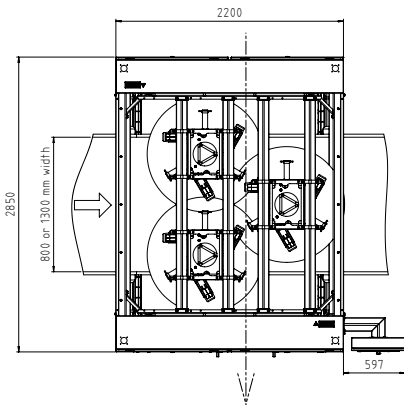
Bars, biscuits and bakery, chocolate and confectionery, dairy, dry foods, fresh and frozen foods, pet food, snacks, and more  
Naked or flow wrapped products picked in singles or multiples, and more  
Placed on/in conveyors, infeed chains or thermoforms/blisters, and more



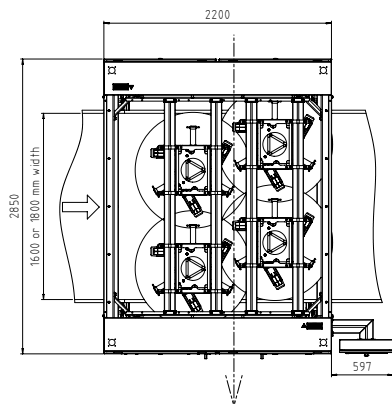
**Features**

- ▶ Typical cycle of up to 700 products per minute (multi-pick) for a 4 robot machine
- ▶ Standard cells include 3 or 4 Delta robots, managed by one Gemini 4.0 controller
- ▶ Open frame design giving full access, shortening changeover and cleaning times
- ▶ Recipe storage, recall of all individual parameters
- ▶ Tool-less gripper changeover
- ▶ Hygienic design

**Footprint Delfi D3 with 3 Delta robots**



**Footprint Delfi D3 with 4 Delta robots**



**Technical Specifications**

**Product Range**

Dimension	min. [mm]	max. [mm]
Product length	20	150
Product width	10	120
Product height	1	100

Weight	min. [g]	max. [g]
Product weight	1	1000

**Input Belt Conveyor Width**

Delfi D3 with 3 robots	800 mm or	1300 mm
Delfi D3 with 4 robots	1600 mm or	1800 mm

**Container Range**

Dimension	min. [mm]	max. [mm]
Blister or tray length	60	305
Blister or tray width	45	150
Blister or tray height	10	100

**GD25 Delta robot**

Payload	3 kg
Forearm length	(670) (770) 870 mm
Working volume	Ø 861 Z235/360 – option Ø 990 Z210/390 – option Ø 1118 Z190/395 – typical

**Air**

Pressure	0.6 MPa nominal (6 bar)
Air consumption	29 m³/h (4 robots in single pick, blowing 50ms)

**Electrical Characteristics**

Voltage	3 x 400 V 50 Hz
Power	14 kVa (3 or 4 robot cell, 1 vacuum pump)

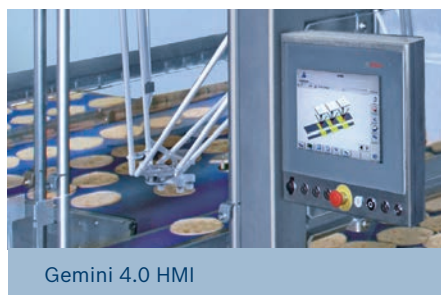
**Frame Specifications**

Ingress protection	IP54
Machine frame	Mild steel painted

**Cadences and Speeds**

Speed with 3 robots	▶ Mono-pick: up to 360 products per minute ▶ Multi-pick: up to 520 products per minute
Speed with 4 robots	▶ Mono-pick: up to 450 products per minute ▶ Multi-pick: up to 700 products per minute

Cycle rates can vary depending on the application. Our technical team can advise you of the optimum rate for your application.



Bosch Packaging Technology SA  
 Robotic Packaging Solutions  
 Avenue du Tir-Fédéral 44  
 CH-1024 Ecublens  
 Switzerland  
 Tel. +41 (0)21/63352-00  
 Fax +41 (0)21/63354-99  
 info.packaging-rma@bosch.com  
 www.boschpackaging.com