



# Big Dutchman®



## **Dry**Rapid

The versatile and efficient conveying system  
for dry feed

# DR 850 & DR 1500 – efficient pipe conveying systems

Whenever dry feed, be it mash, crumbles or pellets, has to be conveyed or distributed on a pig farm, Big Dutchman's DryRapid is the ideal transport system, from the silo discharge all the way to the feed trough. This efficient pipe conveying

system is available as DR 850 with a conveying capacity of approx. 850 kg/h or as DR 1500 with a capacity of approx. 1500 kg/h.

DryRapid can be controlled either semi-automatically using EasyControl or with

our management and control system BigFarmNet.

For large amounts of cereal and feed, we can additionally offer the DR 4500 with a conveying capacity of 4500 kg/h.

## Advantages of DryRapid

- ✓ thanks to its modular design, DryRapid can be installed in many different variants and is therefore ideally suited for the modernisation of old pig houses;
- ✓ feed is taken directly from the silo; an additional feed auger is not required;
- ✓ the filling level can be adjusted separately at all feeders by means of a telescopic drop pipe;
- ✓ an upgrade to a computer-controlled feeding system is very easy;
- ✓ high conveying capacity;
- ✓ smooth feed transport with minimum feed wastage;
- ✓ low maintenance requirements and long service life.

## Versatile options for using DryRapid

### In a sow house:

- ✓ individual sow feeding with volume dispensers
- ✓ supplies the ESF systems for pregnant sows that are kept in groups

### In a nursery:

- ✓ supplies all types of self-feeders
- ✓ DR 1500 as conveying unit of the computer-controlled dry feeding systems *EcoMaticpro* and *DryExactpro*

### In a finishing house:

- ✓ supplies all types of self-feeders
- ✓ DR 1500 as conveying unit of the computer-controlled dry feeding systems *EcoMaticpro* and *DryExactpro*



Use of volume dispensers to feed sows kept individually in stalls



Call-Innpro for pregnant sows kept in groups



Supply of PigNic Jumbo feeders in piglet rearing with *DryExactpro*



Supply of PigNic feeders in a finishing pen

# Main components of the **DryRapid** conveying system

## Drive unit

- ✓ compact design, can be installed either inside or outside the barn;
- ✓ has a stainless steel casing;
- ✓ can be equipped with a tensioning device (optional);
- ✓ drive unit XXL is available for longer transport distances;
- ✓ weather guard protects the drive unit if it is installed outside the barn.



## Feed hopper

- ✓ made of stainless steel, installed in the barn or directly beneath the silo;
- ✓ conveying capacity can be adjusted continuously by means of a shut-off;
- ✓ available with one or two lines to supply two circuits, if necessary;
- ✓ can be supplied with a mechanical or motor-driven forced infeed and a forced return for uniform filling of the feed pipe to prevent overflowing of the system.



## Conveying pipe with conveyor chain

- ✓ pipe is made of 1.25 or 1.5 mm thick, galvanized steel with an outside diameter of 45 or 60 mm;
- ✓ pipe is optionally also available as stainless steel version or with a novel Magnelis® coating (a special Zn-Al-Mg alloy offering superb protection against corrosion in environments containing ammonia);
- ✓ chain is made of custom-hardened steel;
- ✓ pusher discs are made of high-quality plastic material with diameters of 30 and 35 mm or 42 and 49 mm;
- ✓ pusher discs are applied to the chain at distances of 51 or 71 mm so that all chain links remain free and only very small quantities of feed are entrained.



## Outlet with shut-off

- ✓ supplies all types of self-feeders;
- ✓ made of synthetic materials, with shut-off, available in two colours for easy distinction between two feed circuits;
- ✓ available with rigid or telescopic drop pipe, also available as transparent version.





## 90° corner

- ✓ the corner housing is made of plastic or stainless steel and is also available with a transparent cover;
- ✓ all corners are non-corrosive and therefore well-suited for outside installation;
- ✓ ball-bearing corner wheel made of plastic or cast iron for reduced friction.



Corner wheel made of cast iron



Corner wheel made of plastic for DR 850



Corner wheel made of plastic

## Pneumatic feed valve

- ✓ necessary when using the computer-controlled dry feeding systems *EcoMaticpro* and *DryExactpro*;
- ✓ feed can be dispensed individually per valve at any self-feeder, either based on volume or based on weight;
- ✓ available with central or individual control.



## Volume dispenser

- ✓ stepless adjustment for individual sow feeding;
- ✓ transparent hopper has a capacity of 6 or 8 litres;
- ✓ minimum quantity approx. 1 litre;
- ✓ easy-to-read adjustment markings in litres and kilograms;
- ✓ large lateral opening for simple addition of feed additives, easy to clean;
- ✓ clip for data sheets so important information about the sow is within reach.



## DryRapid EasyControl

- ✓ On/Off control of the dry feeding system;
- ✓ optionally available with time switch.



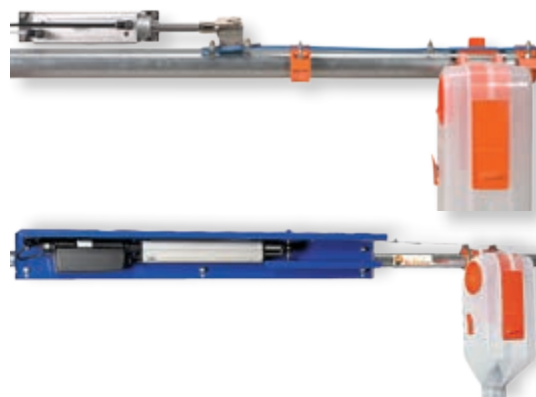
## DryRapid 103

- ✓ features additional functions:
  - control of two feed circuits;
  - control of the small quantity-dosing device motor;
  - release of the volume dispensers.



## Volume dispenser release station

- ✓ manual release by means of a winch with crank handle;
- ✓ automatic release with pneumatic drive for up to 30 volume dispensers;
- ✓ automatic release with 24 V drive for up to 100 volume dispensers.



## Sensor

- ✓ switches DryRapid off when the last volume dispenser or self-feeder is completely filled with feed.



## Medicator

- ✓ precise addition of pulverised feed additives to the dry feed;
- ✓ diseases in the pig house can be treated immediately and at a low price;
- ✓ can easily be retrofitted into existing pipe conveying systems.

### 1. MediPut

- ✓ large dosing range from 0.25 to 10 kg of additives per tonne of feed;
- ✓ precise metering even with fluctuating flow rates;
- ✓ no dispensing when the silo is empty or in case of feed bridging;
- ✓ certified according to DIN 10529-1.

### 2. Small quantity dosing device

- ✓ dosing capacity ranges from 400 to 8000 g/h and allows time-dependent dispensing.



## Technical data of DryRapid

|                                      |       | DryRapid 850    | DryRapid 1500   | DryRapid 4500 |
|--------------------------------------|-------|-----------------|-----------------|---------------|
| Drive output                         | kW    | 1.5             | 1.5             | 3.0           |
| Chain speed                          | m/min | 27              | 27              | 27            |
| Conveying capacity*                  | kg/h  | 870**           | 1580**          | 4500          |
| Max. conveying length with 4 corners | m     | 300 (standard)  | 300 (standard)  | 250           |
|                                      | m     | 500 (XXL drive) | 500 (XXL drive) | -             |

\* at a filling level of 66 % and a feed density of 650 kg/m<sup>3</sup>

\*\* in case of forced infeed, the output may vary depending on the feed texture

## The ideal management and control system

At the beginning of the 21st century, digitalisation is the main innovation driver – and has long since reached agriculture as well. Big Dutchman identified this trend early on. We have made interconnection one of the most important topics in our R & D. For us, “digital animal husbandry” means

**BigFarmNet!** BigFarmNet is a hardware and software solution for the entire pig farm: one solution for everything! The software, the so-called BigFarmNet Manager, is very easy to use. All BigFarmNet applications have the same user interface, no matter whether it concerns production management,

climate control or data analysis. This means that you only need one single software to use your computer-controlled dry feeding system, to control the house climate and to analyse production results.

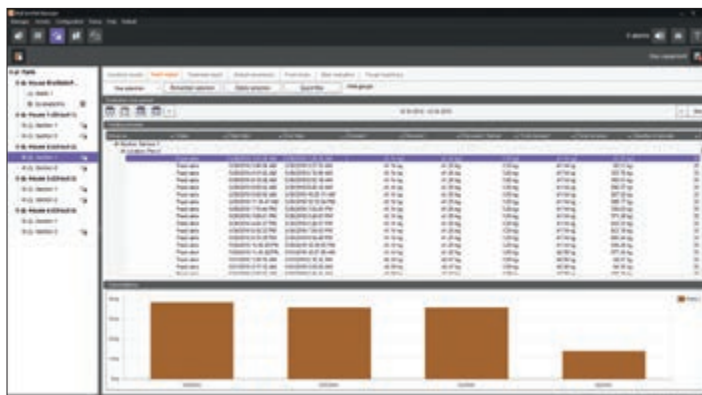


One single, comprehensive software solution for all applications on your farm – whether you have a sow house and/or a finishing house, whether you own one barn or entire farm complexes, whether you operate at one or many different locations: ideal prerequisites to save money.

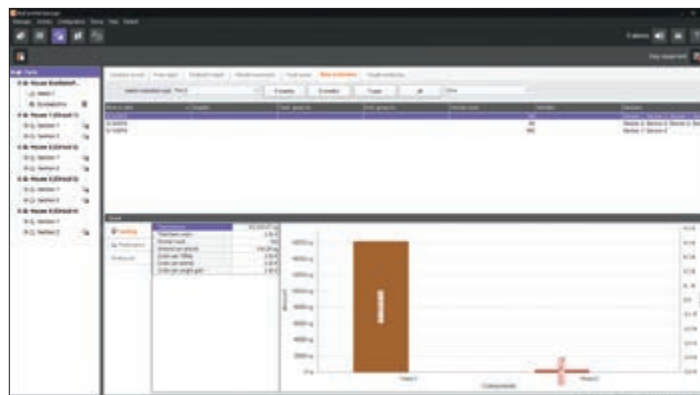
### Advantages

- ✓ data has to be entered on one computer only because all other computers connected to the network are updated automatically;
- ✓ several PCs can be used simultaneously and in parallel, e.g. in the barn and in the farm manager's home office;
- ✓ if the farm consists of several locations, they can conveniently be managed and monitored from the farm manager's home;
- ✓ alarm messages are displayed on all connected computers on the farm, so the farm manager can react immediately;
- ✓ all PCs have concise and identical user interfaces for easy handling;
- ✓ a visualisation of all buildings and the installed equipment provide a good overview;
- ✓ all data are safe, no data loss;
- ✓ very scalable system;
- ✓ both online and offline control are possible.

### Options for analysis with tables and graphs



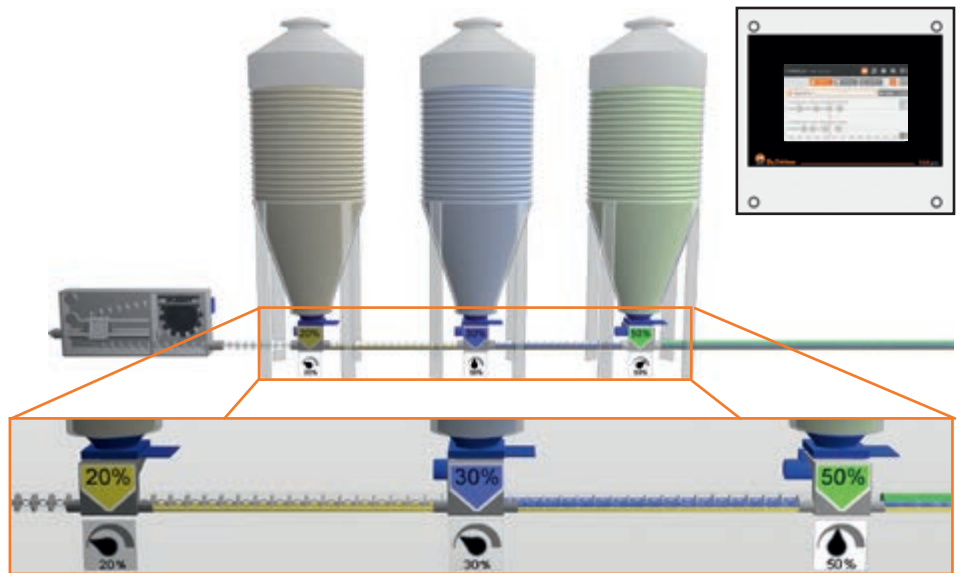
Feed report: each supply of feed to the feeders is recorded individually



Evaluation of the entire finishing period with regard to consumption and performance

# EcoMatic<sup>pro</sup> – volume-based dispensing of feed

EcoMatic<sup>pro</sup> supplies the individual feed components based on volume, which means that no mixer is required. A frequency-controlled auger is situated in the feed hopper under each silo and dispenses the required amounts of the individual components into the DryRapid conveying pipe. The components are then mixed to create the correct recipe. With the next step, the feed mix is dispensed in portions by the valves. This computer-controlled dry feeding system operates without a distribution unit and without a feed kitchen and is therefore simple and economic. The individual components have to be metered only once.



How EcoMatic<sup>pro</sup> works (schematic view)

## Advantages of EcoMatic<sup>pro</sup>

- ✓ fast transport system, especially for a large number of livestock;
- ✓ multi-phase feeding can be realised
- easily to allow age-based feeding and to save on feed costs;
- ✓ can be upgraded to become a sensor feeding system;
- ✓ cost-effective solution.

# DryExact<sup>pro</sup> – weight-based feed dispensing

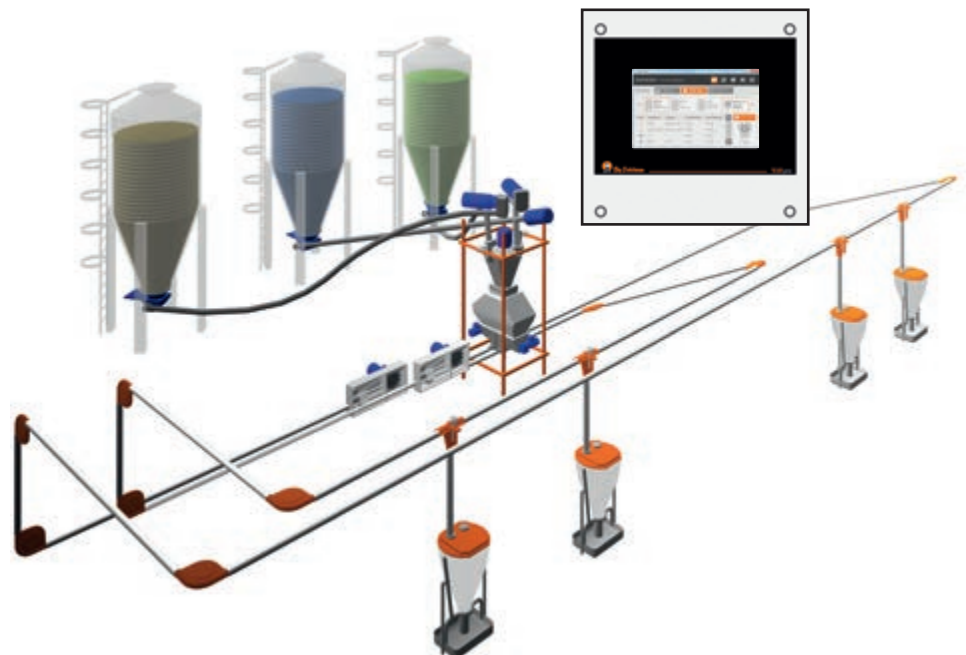
The DryExact<sup>pro</sup> system works with a weighed mixer that has a capacity of 70 litres. This makes it possible to supply an individual feed mix to every valve with a very high mixing quality and accuracy.

Of course, the system also permits multi-phase feeding at each individual valve. As an option, DryExact<sup>pro</sup> can also be upgraded to operate as sensor-controlled feeding system. In this case, each hopper

is equipped with a sensor that informs the computer of any empty hopper when feeding starts.

After feeding has started, the weighed mixer is filled with different components. The finished mix drops into a hopper with funnel below the mixer or, in case of a two-line circuit, into a container (tilting box) that supplies both circuits alternately with feed.

The DR 1500 transports the mix to the respective feed valve while the next recipe is being prepared in the mixer. A sensor inside the feed hopper verifies that the hopper is empty to prevent intermixing of the individual feed recipes. This process is repeated until all valves have been supplied with feed.



How DryExact<sup>pro</sup> works with two feed circuits (schematic view)





DryExactpro feed kitchen: two systems with one feed circuit each



DryExactpro with two feed circuits

## Advantages of DryExactpro

- ✓ individual recipes for each valve;
- ✓ every feed valve allows multi-phase feeding to feed pigs based on their age and to save on feed costs;
- ✓ can be upgraded to become a sensor feeding system;
- ✓ individual solutions for each specific case and farm.

## SiloCheckpro – registering and monitoring silo contents



- ✓ PC program to register and monitor silo contents;
- ✓ filling level is shown in kg and as percentage;



- ✓ a warning comes up when filling levels fall below the minimum;
- ✓ total consumption per silo is shown;
- ✓ consumption history for each silo;
- ✓ overview of delivered and removed quantities for each silo;
- ✓ network via cables or wireless;
- ✓ the electronic weigh bars of all silos are connected, even if they are situated at different locations.

Cover for silo foot for accurate weighing even in extreme weather



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