

# Data Sheet 20

## CIMBRIA's Q-spouting programme



Cimbria Q-spouts are square spouts for the gravity flow of grain and other free flowing products.

The advantages of square spouting is that they require lower angles than round spouts and consequently require lower built-in height.

The type denomination **Q-16**, **Q-20**, **Q-24** and **Q-30** refers to the square cross section of the spout, i.e. **Q-16** with an outside cross dimension of 160 mm.

The spouts are made of steel plate and are dip painted in RAL 9010.

All spouts are made with end flanges for connection clamps. The Q-30 series are fitted with welded end flanges for bolted assembly.

The throughput capacity in a grain spout depends on many different factors. The inclination of the spout and the nature of the grain (kernel size, purity, humidity etc.) influence the capacity.

The shape and position of an outlet (i.e. from a silo) is important and will in many cases be crucial to the volume of grain that will flow through the connecting spouts.

For example, a spout connection from a chain conveyor will normally have a higher capacity than a spout connection from a bucket elevator as the grain in the latter example often has to "turn" before it continues in the Q-spout.

### Through put for cleaned wheat at approx. 15% water content and a sloping angle of 38°

TYPE	Q-16	Q-20	Q-24	Q-30
Capacity (ton/h)	40	70	120	250

With a water content of 20-25% the capacity will be reduced by approx. 30%

For water contents above 25% we recommend a sloping angle of 45°

For flour and feed stuff we recommend a sloping angle of minimum 55°

### Q-spouts and accessories

#### Vertical and twisted bends

As part of CIMBRIA's Q-spout programme vertical bends type BV and right and left twisted bends type BR and BL can be supplied.

#### Adapters

A number of different adapters can be supplied. These adapters are used to transfer from one Q-size to another and from square to round and can be delivered symmetrical or asymmetrical as required.

#### Two-way valves

Two-way valves type LM and LN can be used for diverting the grain flow where a spout branches in two. Type LM valves are used where a vertical spout divides into two sloping spouts while type LN delivers the grain in a sloping and a vertical spout. The two-way valves can be delivered with 38° or 55° inclination, as standard.

### Connecting boxes

Connecting boxes type TM and TN are used where two spouts join together. Type TM is used to connect two sloping spouts while type TN is used to join a vertical spout and a sloping spout. Type TN can also be used as a grain brake in order to soften the fall in a long vertical spout line.

### Shutters

Shutters type SK and SKT are used for the regulation or cutting off of the flow through a spout. Shutters type SKT are dust tight and EU approved.

### Connection methods

For assembly of the Q-spout system Cimbria delivers formed connection clamps in galvanised plate and welding flanges for spout connection or machine joining.

### Air-lock valve

Cimbria can also supply an air lock valve type QDG-52 to be used for the discharging of dust and other particles from Cimbria Cyclofans.

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