



The crusher ROmiLL CP1 was awarded with the main Prix "The Golden Spike" at the international show ZEMĚ ŽIVITELKA 2005 in České Budějovice.

# CP1



## PRINCIPLE

The machine takes part in technology of the so-called split harvest of wet grain and its ensilage. It is used for processing maize and various kinds of grain, legumes, mainly in colder regions where the crop does not mature. This is an economically highly effective method of post-harvest treatment. This method has found its first European use in Finland and England. Now it is spreading dynamically all over the Europe, even in the very hot southern regions. Farmers, regardless of regional conditions and differences in breeding kinds, convert to this method of feed processing. Owing to significant costs savings, they can get ahead and gain competitive advantage at animal products market.

## SPECIFICATION

The type CP1 is determined for operation on a farm where grain, transported from a field from a harvester, is processed and stored in a bag. The machine is driven by a cardan shaft connected to an at least 100 HP tractor. The machine is equipped with a roller mills.

It is designed for both primary producers and harvest service companies. It can be used year-round: as a wet grain crusher during the harvest season, and as a dry grain grinder, optionally also as a crimper, in remaining part of the year. The wet grain is transported from the field to the machine and is filled into a hopper using a receiving worm conveyor or a front loader. Consequently, the grain is crushed and according to required different product structure for cattle and monogasters appropriate milling gap can be set. After crumbling, the product is sprayed by preservative. The processed product is then transported, compressed and pressed into a bag of 1,5 m diameter using special helical device. The result is a crushed preserved mass with optimal moisture of 30 to 40%, stored at the maximal air displacement.

## BENEFITS

If you use this method of grain treatment immediately at harvest, you will achieve unrivally the lowest costs. In the conditions and price relations in the Czech Republic, the savings due to the elimination of maize grain drying amount to 20-33 €/t. For about 9 t/ha yield, the costs range from 13 to 17 €/t, according to the preservative used. In summary, this method provides costs savings about 33 €/t. The diesel consumption of the ROmiLL roller crusher with press is about 0,5 l/t – which is by 2,5 l/t lower than of a hammer mill of equal throughput and ensilage press. Moreover, it only needs one tractor and one operator.

The feed processed by the method mentioned above, contains more water-soluble sugars, is digestible in a better way and has higher utilization of soluble nitrogen. It optimizes starch ratio in paunch and small intestine which results in lowers occurrence of paunch acidosis.

## SUMMARY OF ADVANTAGES:

- › One machine covers 4 different operations.
  - grain crushing
  - spray application of a preservative on the crushed material, or additional moisturizing
  - mixing of the crushed material and the preservative
  - bagging of the mass
- › Significant costs reduction in post-harvest treatment
  - matchless capacity – up to 20 t/h with the diesel consumption of 0,9 l/t of product
  - one operator for the whole process from crushing to pressing
- › The feed structure can be varied according to the requested fineness both for cattle and monogasters
- › Alternative utilization:
  - the crushed and preserved mass can be emptied into a silage pit instead of into a bag
  - as a roller grinder of dry grain for the year-long operation also out of the harvest season

SPECIFICATIONS		CP1
Tractor drive		min. 100 HP
Operational capacity (wet maize grain)	Cattle	15 – 20 t/h
	Pigs*	8 – 15 t/h
Hopper		2,0 m <sup>3</sup>
Culp weight		2070 kg

\*if the request for finer feed structure for pigs persists



### Mobile Concept

The frame of the machine is firmly attached to the one-axle chassis. All other machine components are attached to the frame – mainly the chamber with the pressing auger, crushing unit, hopper and the pressing tunnel. The carriage unit is equipped with pneumatic brakes connected to a tractor. It is approved for the road traffic up to 40 km/h. The two independent electric circuits of the tractor supply the rear and brake lights and direction indicators, the preservative applicator pump and electrical accessories.

### Crushing and pressing

Grain is crushed by a roller mill series 900, specially designed for wet grain.

The pressing auger, situated under the crushing units, transports the material in a pressing tunnel, where it is spread all over the bag diameter while the air is displaced.

The crusher units as well as the pressing auger are driven by the tractor by a cardan shaft.

### Preservation

The preservative application is carried out by six nozzles in the pressing auger chamber. There is a 200-litre barrel installed directly on the machine. The barrel is handled with a hoist device.

### Optional Moisturizing

Water inlet (usually from an independent tank) vents in the pressing chamber and is used for optional moisturizing of the grain.

### Basic accessories

- > Cardan shaft
- > Preservative applicator
- > Sound and light signaling of operational conditions that require an operator's intervention

### Optional accessories

- > Receiving worm conveyor

### LONG LIFETIME OF ROMILL ROLLER MILLS

- > robust design
- > high abrasion resistance of rollers
- > stable alignment of rollers
- > protection of rollers against damage caused by hard objects by a unique mechanism
- > reliable gears

