



# FLAPFEEDER®

Patented deburring & finishing  
system for robots

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# INTRODUCTION

FlapFeeder is an innovative and easy to use system for deburring and finishing for various forms of products. It is intended for robot use.

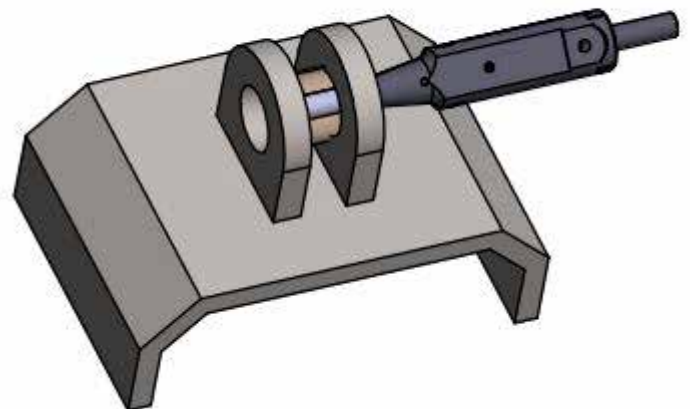
FlapFeeders patented solution for deburring enables holes of various forms and sizes to be deburred with single back-and-forth motion without the need to do interpolating programs.

The smallest hole that can be deburred with the standard hard metal finger pair is 17 mm diameter and even smaller holes can be processed with special tool available separately from Pulmek. The hard metal finger pair for the emery holder are replaceable.

FlapFeeder can also be used for deburring of square holes and outer edges of various forms. Please note that hard metal and stainless steel burrs can be too hard for this method of deburring.



FlapFeeder and tool attached to the robot



Multiple holes can be deburred from both sides with one back-and-forth motion.

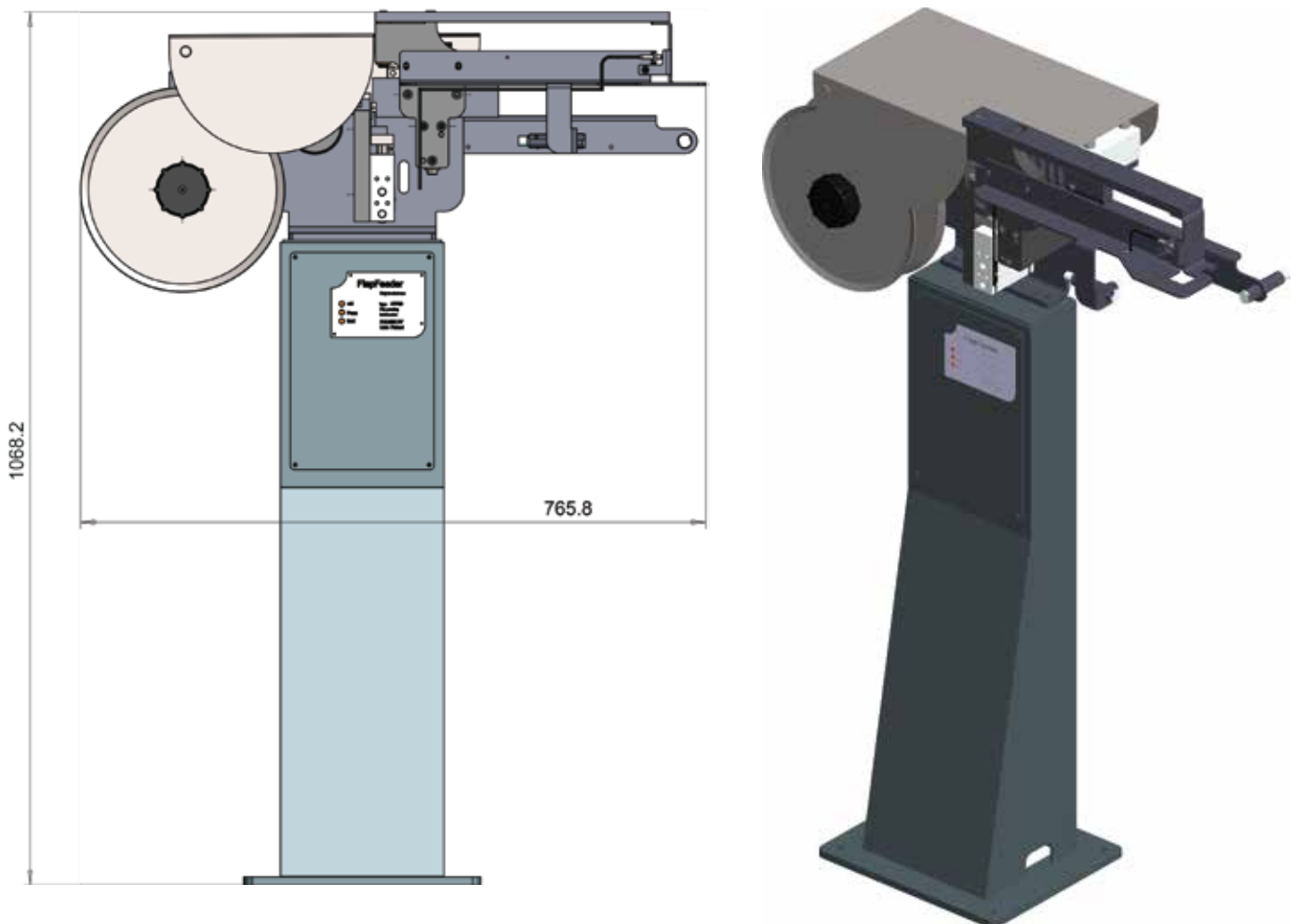


Emery cloth spins between the hard metal fingers, removing the burrs and finishing the edges.

# FLAP FEEDER

The changer and feeder holds the roll of sanding paper that is fed to the tool when it returns to change it. The automated process is controlled by optical and cylinder sensors that monitor the sanding paper roll and the return movement of the tool to pick up new piece of emery cloth. It is also monitored that the cloth is picked up by the tool.

Manual feed option for the cloth for easier maintenance is available upon request.



## THE EMERY CLOTH

The deburring and finishing is carried out with a folded piece of standard emery cloth (also known as metal sanding paper).

Emery cloths width can vary between 48,5-51 mm. The standard width is normally 50 mm but as the true measurements can vary, it is recommended to measure the emery cloths actual width before use.

Recommended grade for the emery cloth is between P80 and P200

Recommended thickness of the cloth is 0,5-0,8 mm

The standard length of the emery cloth roll is 50 m and that works well with FlapFeeder.

A built-in datasensor (part #2) monitors the cloth roll so that it will not run out of cloth.

The cloth can be fed in six different lengths with the FlapFeeder:

30 mm

60 mm

90 mm

120 mm

150 mm

180 mm

## HARD METAL FINGER PAIR

Hard metal finger pair that holds the sanding paper in place, can be easily replaced if needed. Spare parts are available from Pulmek. In normal deburring use with programmed deburring tracks, the risk of damaging the finger pair is minimal so they generally last quite long.

The finger pair can be easily changed by loosening the larger bolt on the finger pair. The smaller screw on the other side of the tool can be used to finetune the fingers clasping strenght. Note that the screws need to be properly fastended when operating the FlapFeeder.

The finger pair comes in two lengths:

Standard: 67 mm

Long: 97 mm



1. Paper holder body
2. Hard metal finger pair

## GRINDING SPINDLE

FlapFeeder comes with an air motor but it can also be operated with servo motor or

FlapFeeder includes a DEPRAG air motor 67-003/S2 that does not require lubrication but 2-3 drops of lubricant oil (the motor manufacturer recommends their own "DEPRAGOL" oil (order no.790081 E) into the air inlet nipple will reduce the need for maintenance.

If the machine is unused for longer period, it's recommended to drip a couple of drops of oil into the air inlet and let the motor run for 5-10 seconds.

Air consumption under load (m<sup>3</sup>/min / cfm): 0.47 / 17

Reversible

Max. permitted air pressure 6,3 bar/90 PSI

A servo-operated grinding spindle with multiturn absolute encoder with max 9000 rpm is available at special request.

## DEMONSTRATIONS AND TESTING

The best way to determine if FlapFeeder would work for your purposes is to send the piece over to us for testing. We will test the deburring and finishing with the actual FlapFeeder machine and we can send you a video of the results. We can also return the finished piece to you for inspection.

For more information, please contact [sales@pulmek.fi](mailto:sales@pulmek.fi)  
[www.pulmek.fi](http://www.pulmek.fi)

Vi betjänar också på svenska!

