

## Volumetric dosers

### TORO-systems C-feed

The TORO-systems C -feed dosing units are designed to dose masterbatch and additives continuously and exactly into the main material stream.



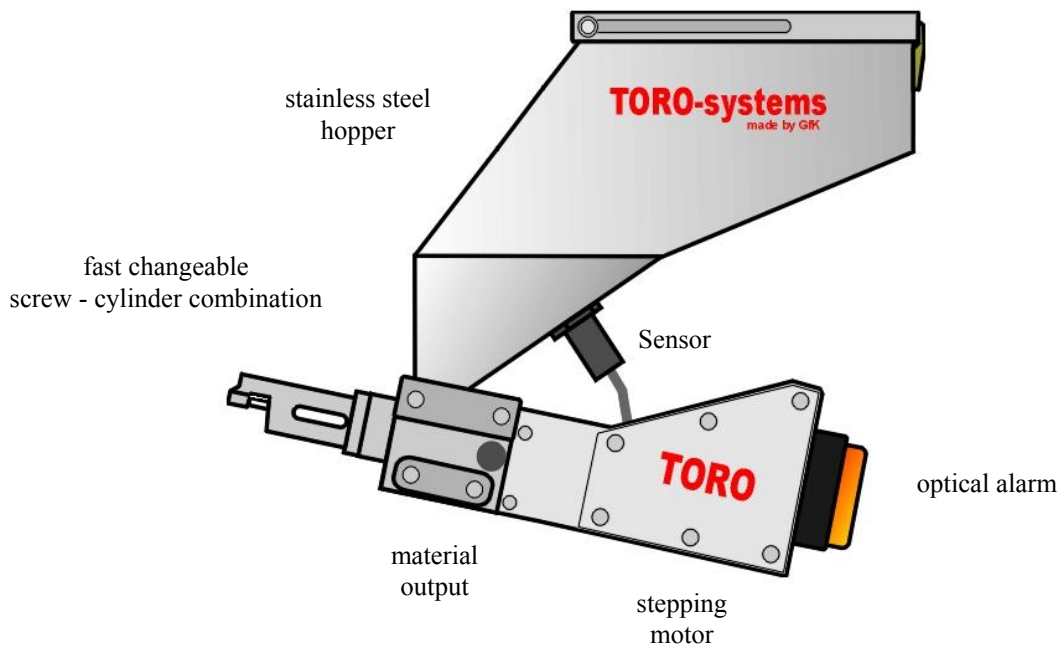
The volumetric screw dosers

### TORO-systems FG - C-feed

are extremely easy to handle and absolutely reliable. They have been designed to add additives (colour, regrind) "In-Line" just before processing.

#### Advantageous solutions for the customer:

- superior colour mixture
- easy and fast cleaning
- dosage as accurately as possible (stepper motor, especially designed neckpiece)
- stainless steel neckpiece (up to 3 dosers)
- stainless steel hopper
- control unit is extremely easy to handle
- low investment
- fast return on investment

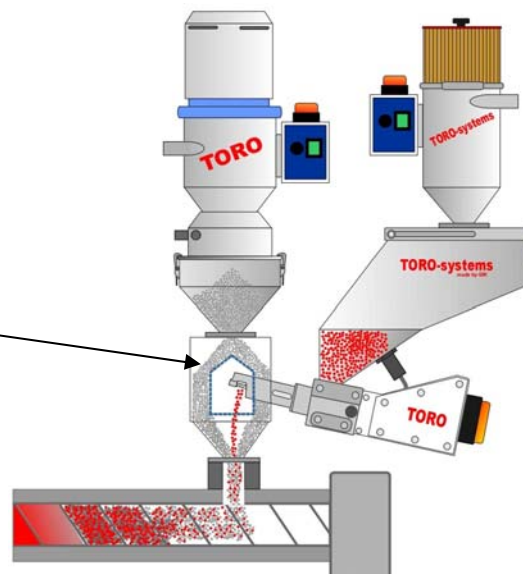
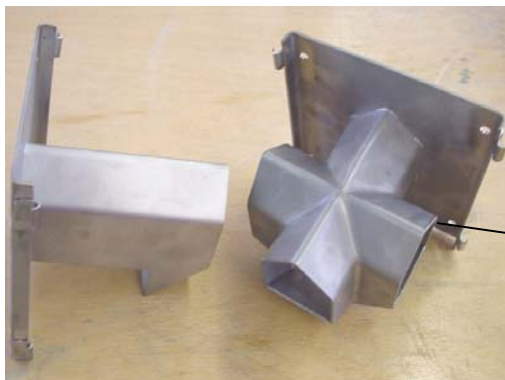


## Indroduction

The modular design of the **TORO-systems C-feed** screw dosers allow an very easy attachment to the needed output. For very small amounts of additives it is necessary to use a so called micro-masterbatch with the 12 mm cylinder-unit and for higher amounts the 16 mm or 20 mm cylinder-unit.

The especially designed neckpiece is a "free falling mixer" that divides the virgin material stream in two or four streams and allows the additives to be added directly into the centre over the processing screw (constantly during the dosing time). This is a great advantage over other systems that use batch pre-mixing because pre-mixing can cause material separation.

Furthermore the cylinder is positioned under an angel to prevent the additives from falling uncontrolled into the neckpiece.



To achieve a **dosage as accurately as possible** the **TORO-systems C-feed** dosers are working with a **stepping motor**. For every dosage the amount of motor steps and therefore the volume is absolutely constant. Furthermore the speed using a stepping motor is also absolutely constant.

Compared to a DC motor of normal screw dosers the achieved results are extremely better and can sometimes be used to reduce the amount of additives.



The MC control unit allows to store 98 different programs and is extremely easy to handle. To calibrate the **TORO-systems C-feed** (different additives need different calibration values) just fill up the hopper and press the calibration start button. The measured amount of additive during calibration, the shot weight and the percentage of additive is only entered into the MC control unit and every thing else is calculated by the MC control unit.



The connection to the processing machine can either be done with an extra connector for the dosing valve (advantage: the control unit gets the information when and how long the screw is rotating and can stop the injection moulding machine when the additive is empty) or a connector for the machine dosing signal (the information we get is depending on the machine signal).

Cleaning the TORO-systems C-feed dosers is very easy and done within a few minutes:

- To empty the hopper easily there is a material outlet installed
- The cylinder is only fixed with one screw

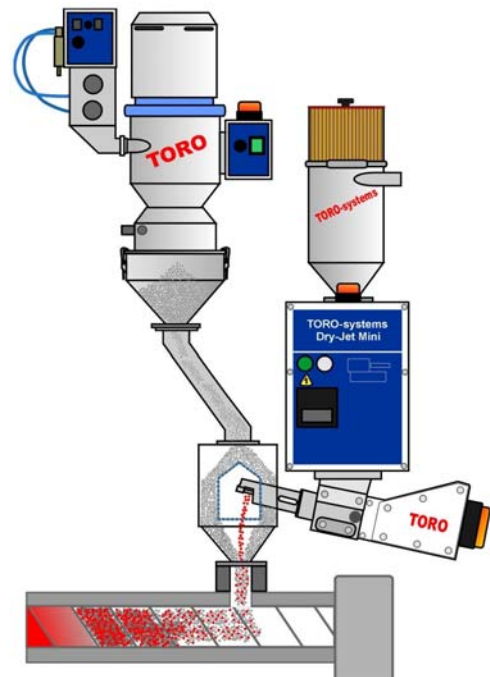
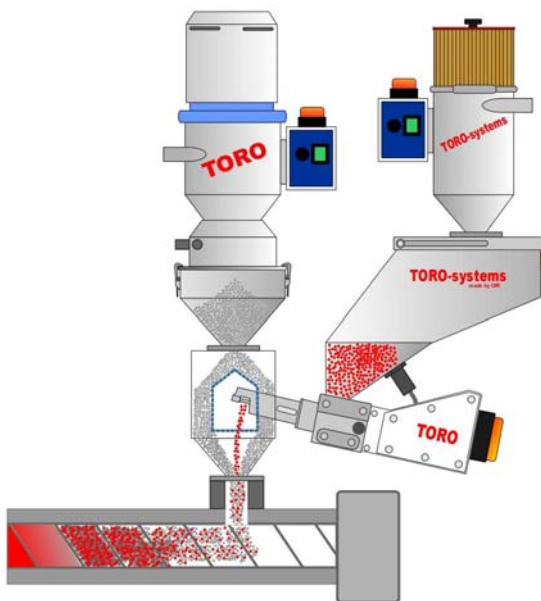
## TORO-systems C-feed Superior

The control unit for the TORO-system C-feed Superior is equipped with a Sensor and an optical alarm device. The speed of the dosing screw is automatically calculated according to the dosing time of the processing machine and the set parameters.

If necessary the dosing time of the additives can also be set directly (necessary when the dosing time changes from shot to shot - EASY modus).

## Options

- automatic hopper loader (pneumatic) **TORO-systems Mini-Zyklon**
- automatic hopper loader (vacuum) **TORO-systems CK**
- small dryer **TORO-systems Dry Jet Mini** for the additives
- up to three dosers at one neckpiece



## Output

	screw diameter	<b>TORO-systems C-feed</b>	<b>usable for additive / pellet size (mm)</b>
<b>12</b>	12 mm	2,4 kg/h = 0,67 g/s	2*1,1 (l*d)
<b>16</b>	16 mm	4,5 kg/h = 1,25 g/s	3*3 (l*d)
<b>20</b>	20 mm	6,5 kg/h = 1,8 g/s	5*5 (l*d)

Attention: The output is directly connected to the used additives and pellet size. In order to qualify a screw cylinder combination for a special additive we can run tests in our technical department.

Additives that are bigger than the allowed size can cause a screw stop and therefore uneven dosage!

## Technical data TORO-systems C-feed

Control unit	Easy	Superior
Output	depending on screw / cylinder and additive	
Volume of additive hopper	approx. 10 Litre	
Additive detection	No	Yes
Optical alarm	No	Yes
Alarm signal	No	Yes
Connection to machine	potential free (Impulse or Signal possible)	
Connection to dosing valve	No	Yes (optional)
Motor	stepper motor (0,225°/step)	
Speed	0 - 160 rpm	
Screw angel	15 °	
Power supply	230 V / 50 Hz	
Dimension neckpiece	(L*W*H mm) 140 * 140 * 220	
Opening neckpiece	□ 60 mm	
Ground plate neckpiece	□ 120 mm	
Dimension doser	(L*W*H mm) 500 * 260 * 500	