

# FINE MESH STRAINING TECHNOLOGY



roll-ex<sup>®</sup>

[www.UTH-gmbh.com](http://www.UTH-gmbh.com)

# FINE MESH STRAINING – OUR CORE COMPETENCE

## UTH FINE MESH STRAINING SYSTEMS OFFER A WIDE RANGE OF OPTIONS

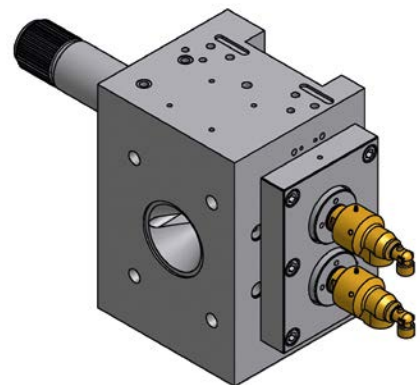
Ever since UTH GmbH was established in 1985, it has been providing innovative machinery and processing technique for the rubber, tyre and plastics industries.

The roll-ex® gear pump extrusion system, developed by UTH, has become the global benchmark of fine mesh straining of rubber compound.

UTH GmbH is the pioneer in the field of development and manufacturing of gear pumps and gear extruders for rubber processing.

## ROLL-EX® GEAR PUMP TECHNOLOGY

- patented roll-ex gear pump design with special features
- optimised for straining application
- modular concept for individual straining solutions



TEMPERATURE /  
PRESSURE  
CHARACTERISTIC

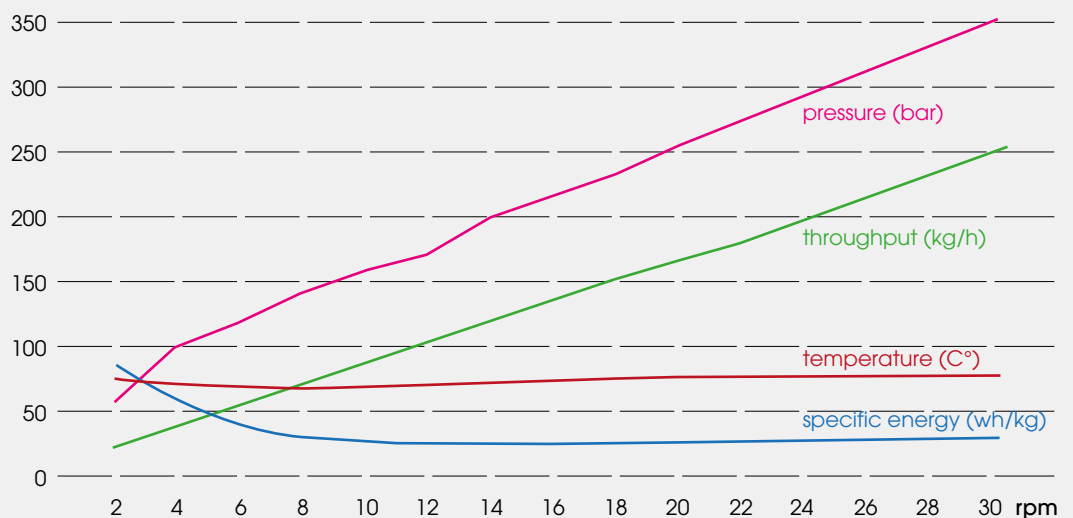
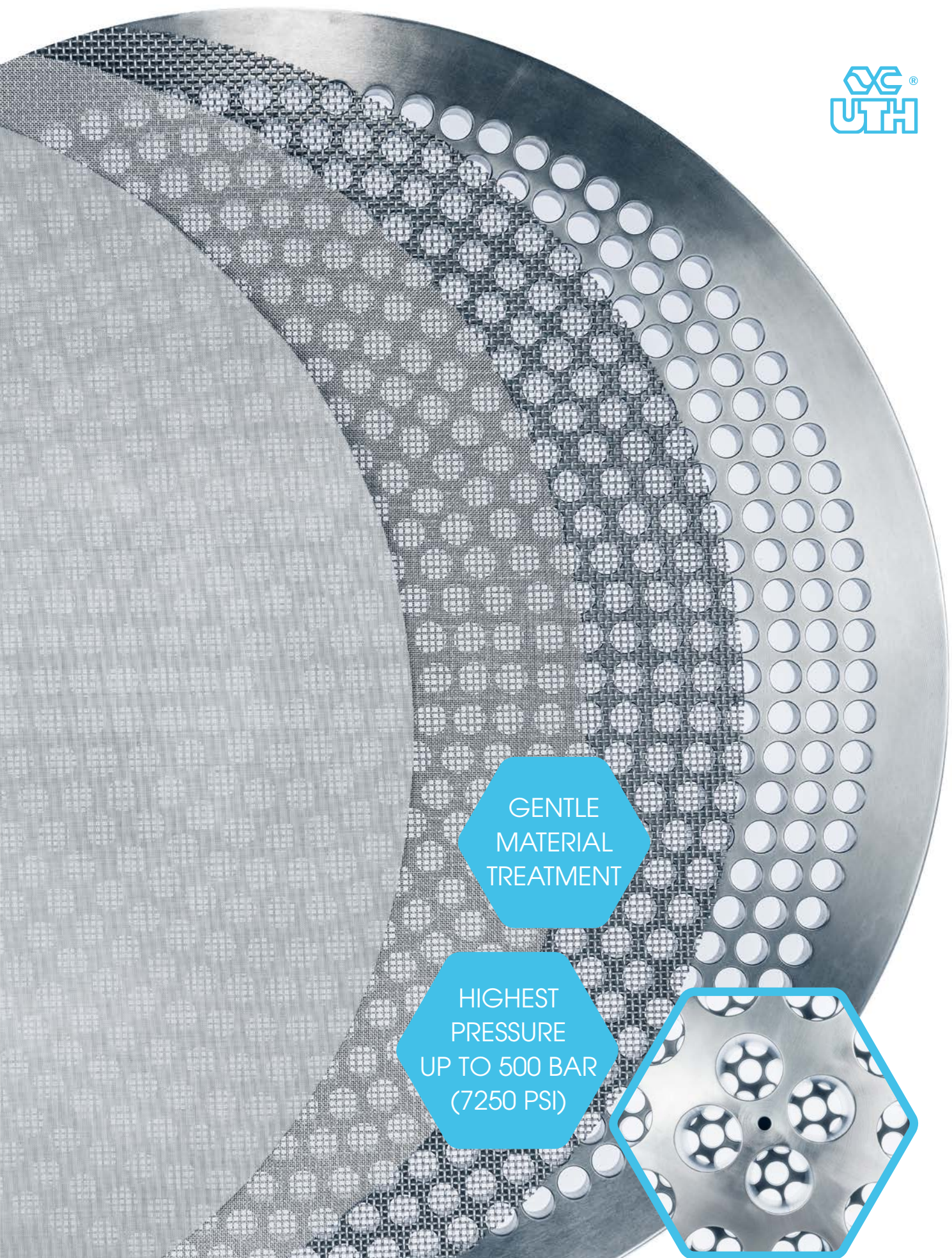
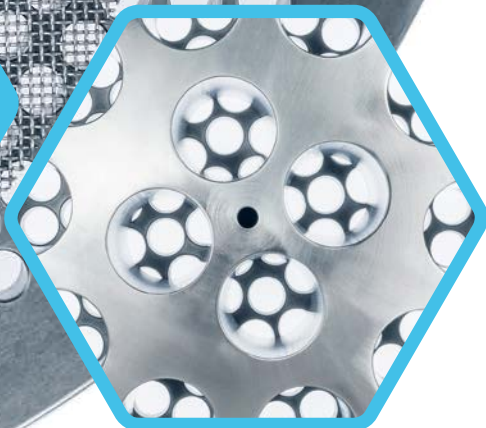


Diagram: Typical strainer test on a roll-ex® 70 with NBR 70® Shore, a screen with a mesh aperture of 0.122 mm (120 mesh / 2100 mesh per cm<sup>2</sup>) and a screen diameter of 200 mm

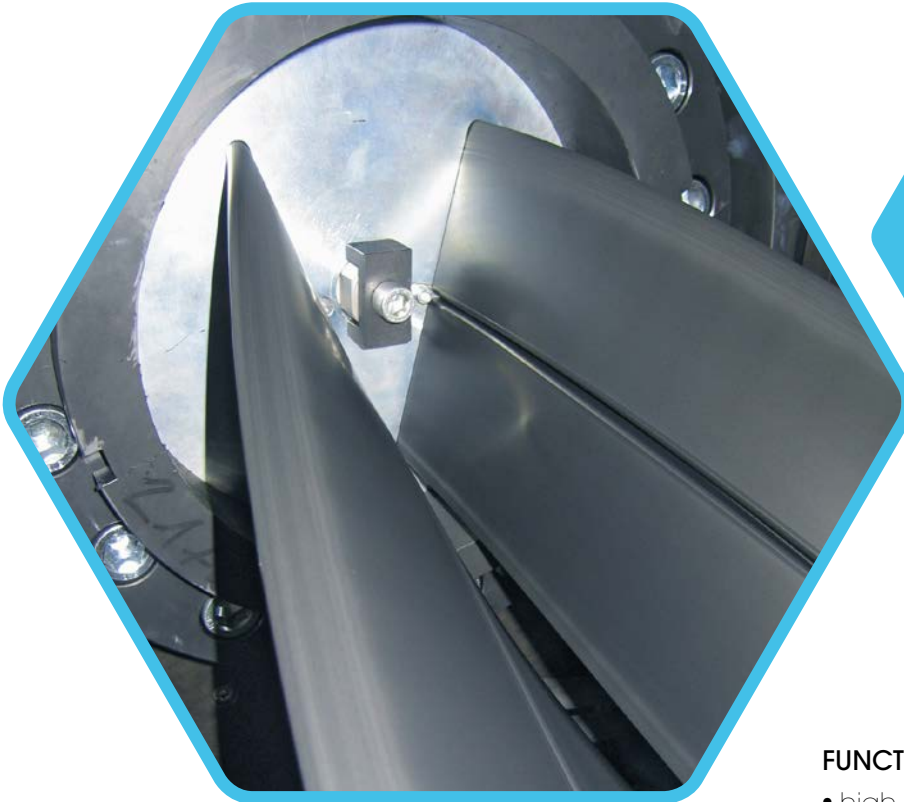


GENTLE  
MATERIAL  
TREATMENT

HIGHEST  
PRESSURE  
UP TO 500 BAR  
(7250 PSI)



# HIGH LEVEL OF FUNCTIONALITY



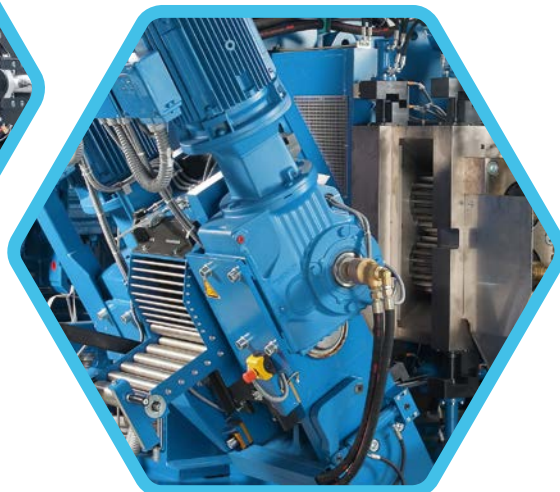
CLEAN  
RUBBER

## FUNCTIONAL STRAINER HEAD SYSTEM:

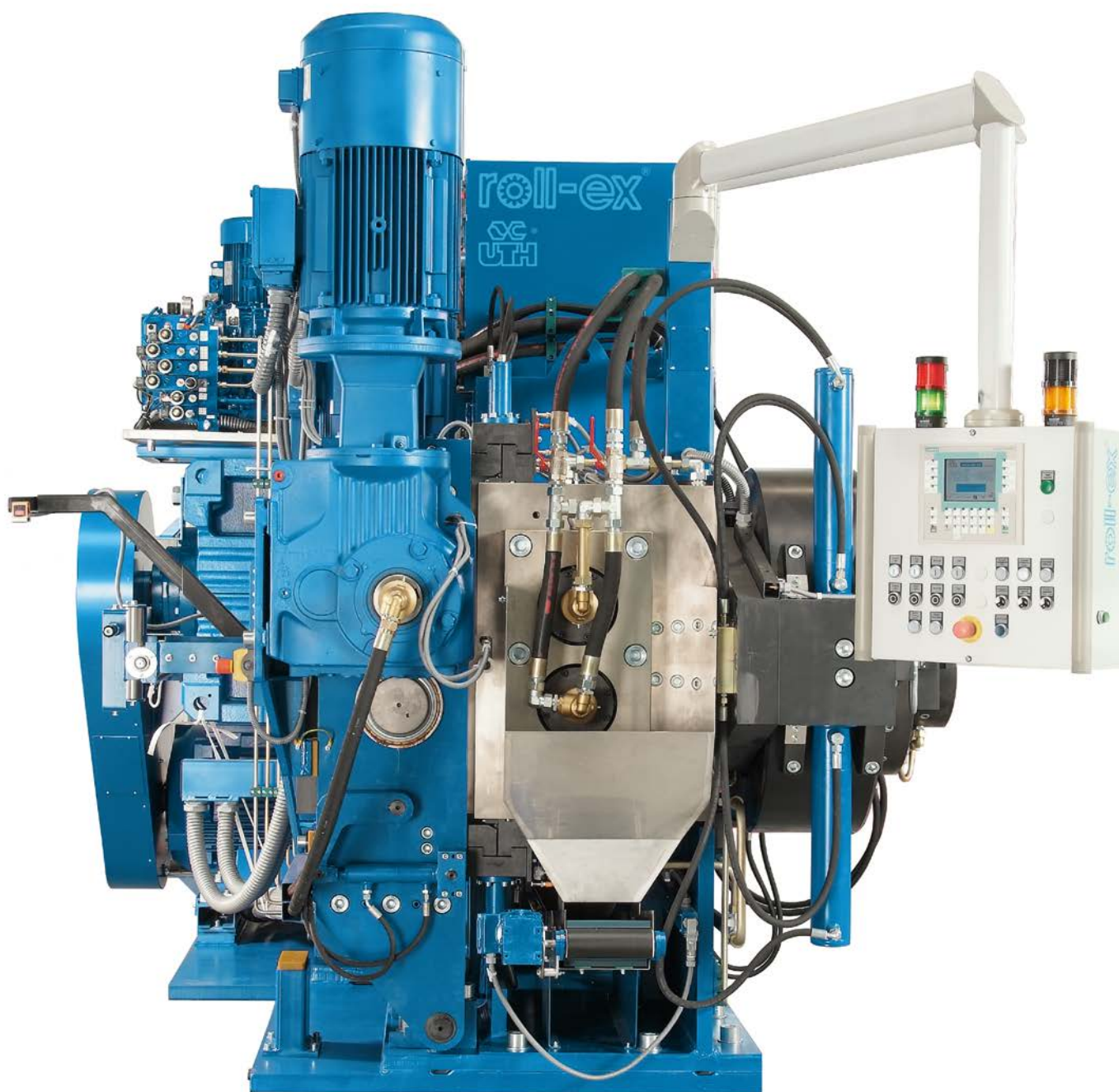
- high pressure design
- quick screen change
- easy cleaning



roll-ex® strainer head with hydraulic quick clamping



roll-ex® gear pump in cleaning mode



CONSTANT  
TEMPERATURE  
ON LOW  
LEVEL

„IT HAS BEEN  
PROVEN, THAT  
THE QUALITY OF  
RUBBER COMPOUNDS  
CAN BE IMPROVED  
SIGNIFICANTLY BY FINE  
MESH STRAINING.“

Peter J. Uth, Managing  
Director & Founder

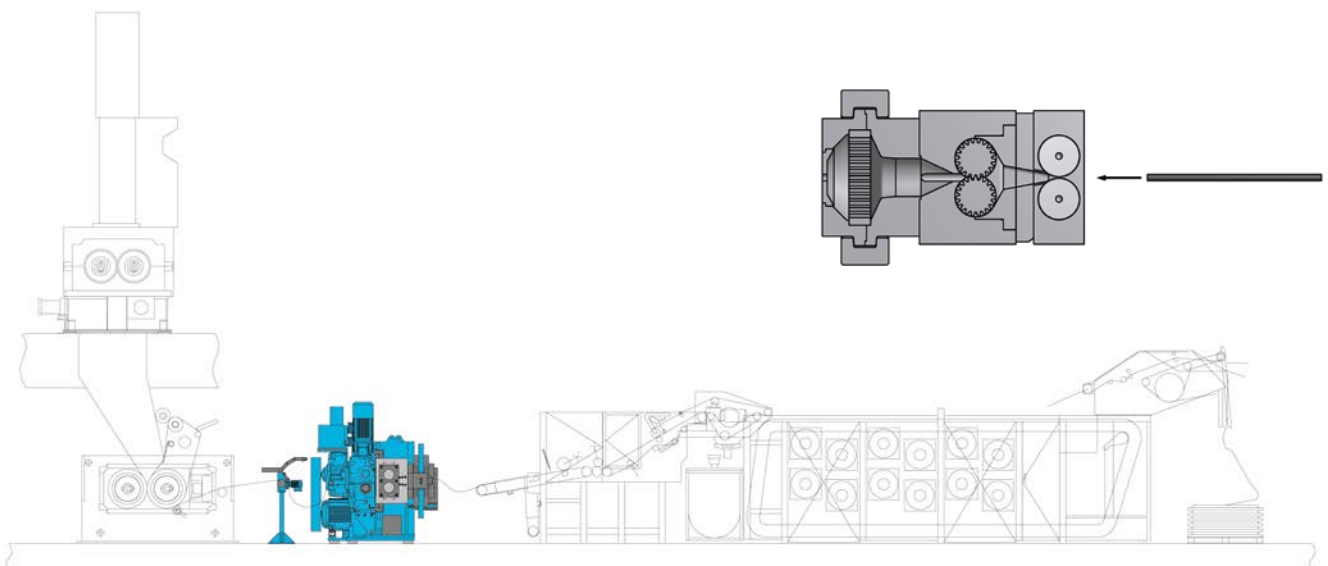
# FINE MESH STRAINING *WITHIN THE MIXING LINE*

## BY THE ROLL-EX® TRF TYPE

### PROCESS TECHNOLOGICAL BENEFITS:

- very cost effective method
- straining of final compound in a single step together with the mixing process
- specially engineered for final compound straining
- minimal dwell time
- low temperature increase
- easy and quick compound change
- modular design, easy to integrate into lines

Model	Through-put (kg/h)
120 TRF	1000
150 TRF	1500
220 TRF	2500
300 TRF	3500
600 TRF	6000
1000 TRF	10000



# FINE MESH STRAINING WITHIN THE MIXING LINE



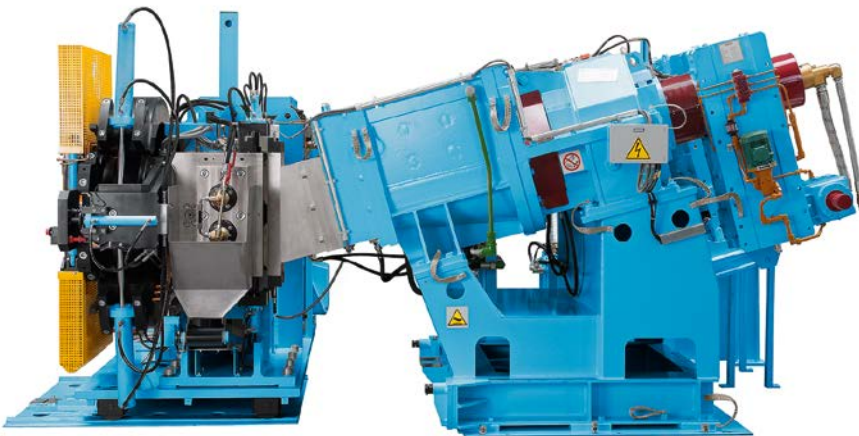
## BY THE ROLL-EX® DSE TYPE

### PROCESS TECHNOLOGICAL BENEFITS:

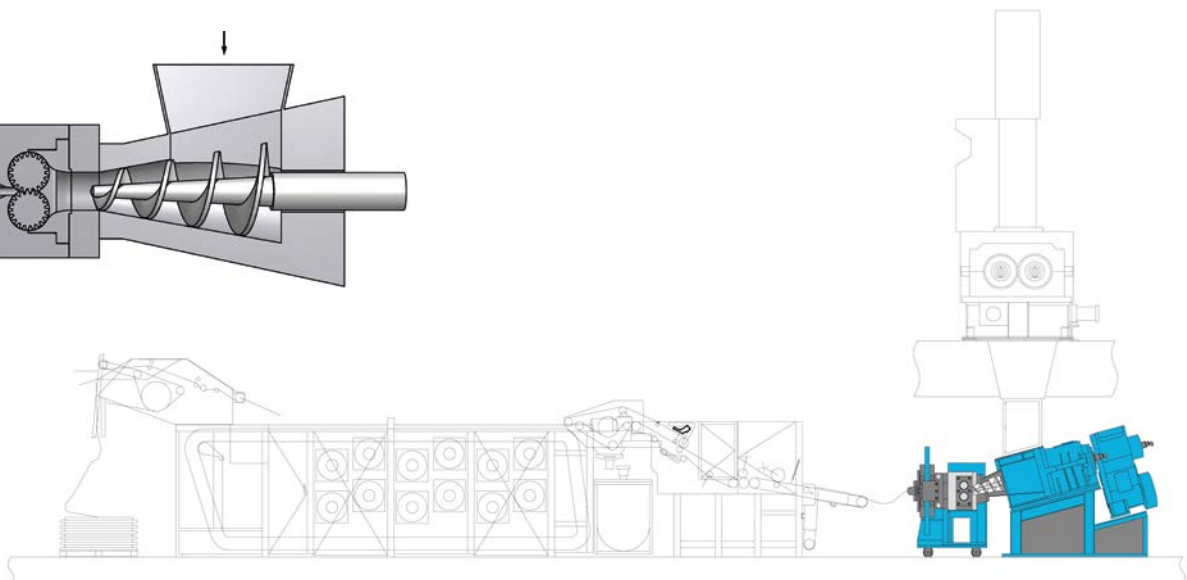
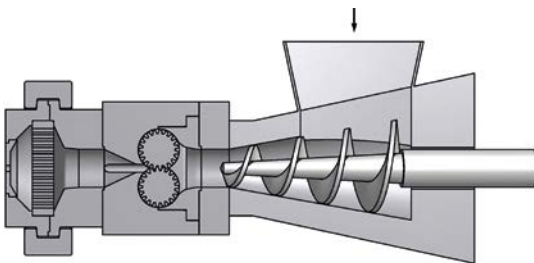
- straining of master batch and forming out of slabs in a single step
- specially engineered for in-line straining
- low temperature increase
- easy compound change



Twin screw interface, available for many different brands



Model	Through-put (kg/h)
150 DSE	1500
220 DSE	2500
300 DSE	3500
600 DSE	6000
1000 DSE	10000



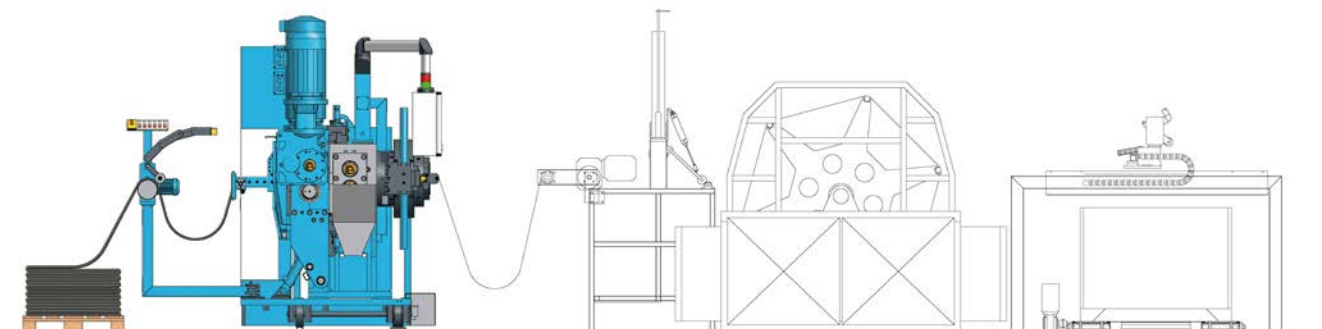
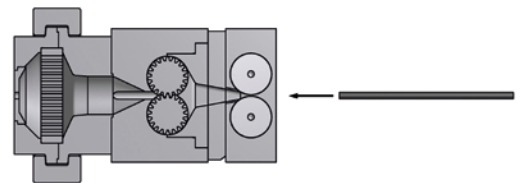
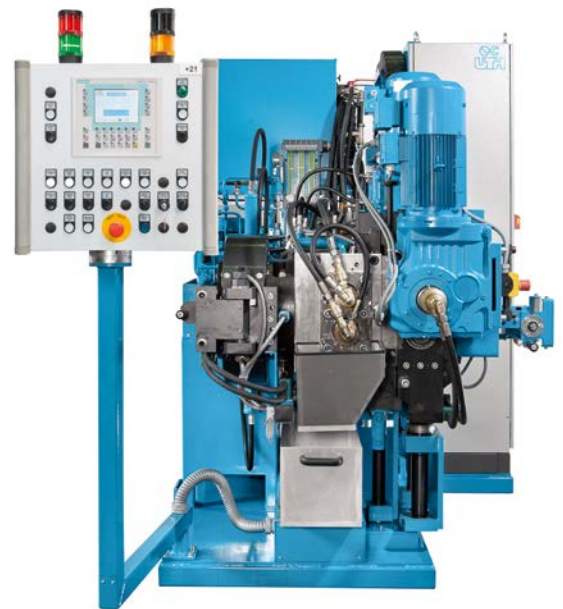
# FINE MESH STRAINING *OFFLINE*

## BY THE ROLL-EX® TRF TYPE

### PROCESS TECHNOLOGICAL BENEFITS:

- minimal dwell time
- low temperature increase
- easy and quick compound change
- cold feed for low and medium viscosity

Model	Through-put (kg/h)
70 TRF	250
120 TRF	600
150 TRF	1000
220 TRF	1800



# FINE MESH STRAINING *OFFLINE*



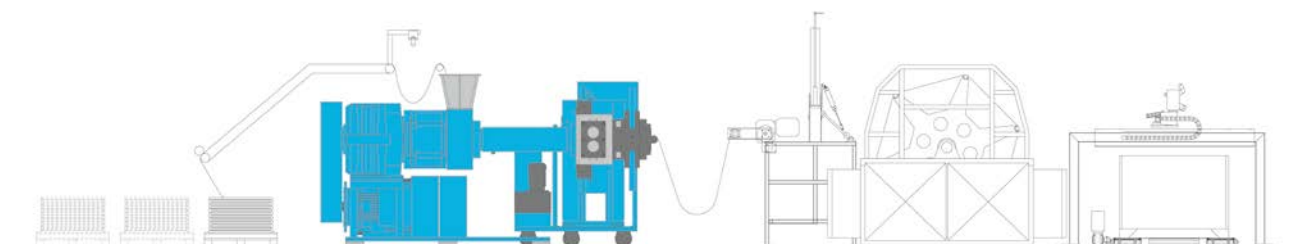
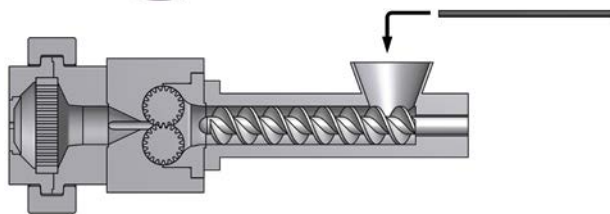
## BY THE ROLL-EX<sup>®</sup> SF TYPE

### PROCESS TECHNOLOGICAL BENEFITS:

- cold feed for medium and high viscosity material
- good plastizing of compound
- blending of different batches



Model	Through-put (kg/h)
70 SF	400
120 SF	1000
150 SF	1500
220 SF	2500



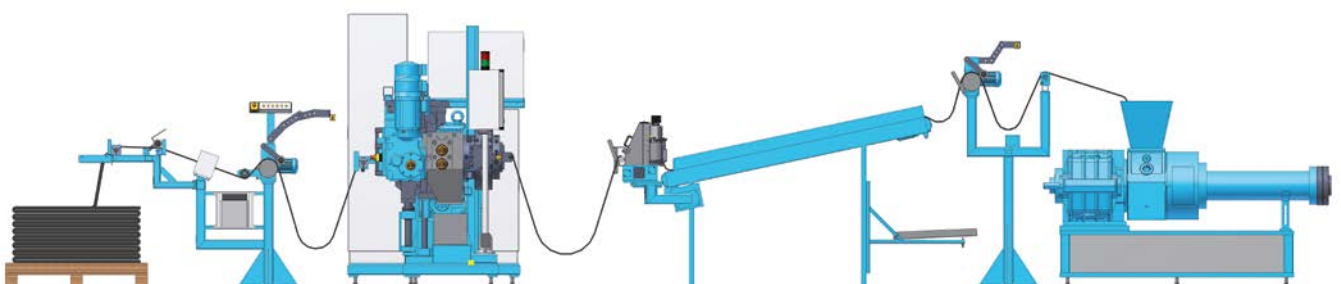
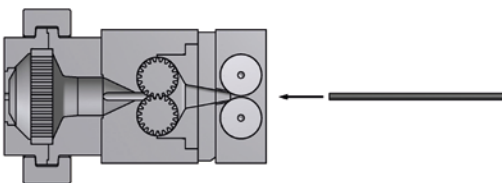
# FINE MESH STRAINING *WITHIN* THE EXTRUSION LINE

## BY THE ROLL-EX® TRF TYPE

### PROCESS TECHNOLOGICAL BENEFITS:

- continuous and warm feeding of the screw extruder
- optimum strip geometry increases the precision of the final profile considerably
- economic solution

Model	Through-put (kg/h)
70 TRF	250
120 TRF	600



# FINE MESH STRAINING OF *SILICON COMPOUND*



## BY THE ROLL-EX<sup>®</sup> DSE TYPE

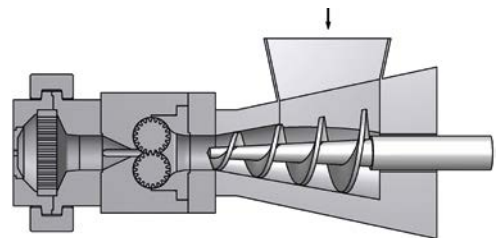
### PROCESS TECHNOLOGICAL BENEFITS:

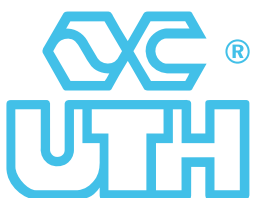
- cold or warm feeding of lumps and batches
- low temperature straining process
- easy cleaning, easy compound change



cleaning mode

Model	Through-put (kg/h)
70 DSE	400
120 DSE	800
150 DSE	1500
220 DSE	2000
300 DSE	3000





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