



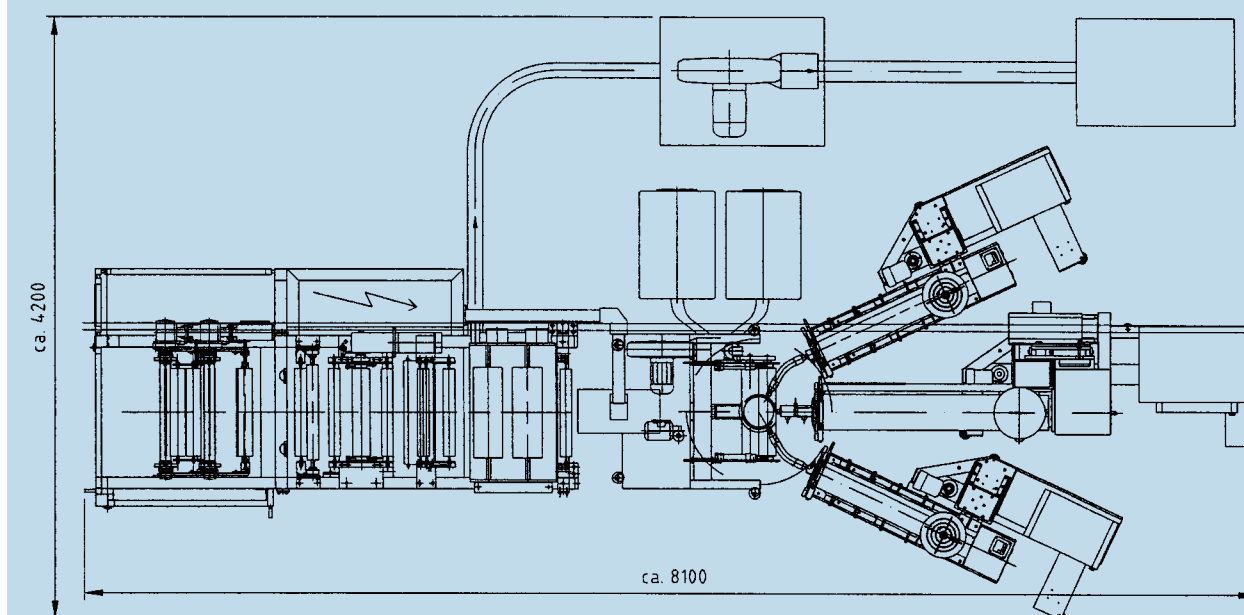
**Blown film module**

The figure to the left shows a blown film line. Decreased height of the 3 extruders ensures optimum cooling length. The 3-layer coextrusion die (expandable to 5-layers) allows the production of multi-layer film with very narrow tolerances of individual layer thickness and the overall thickness.

A mono or dual-lip cooling ring guarantees a high cooling performance while the frost line can be adjusted precisely. For optimisation of the start-up procedures, the take-off can be adjusted in height by a motor.

The layflat width can be controlled, which allows the production of a reliable and constantly high product quality level with low personnel requirements.

**Dimensions**



**Technical specification**

Extruder	Diameter	(mm)	25	30	45
	Output rate max.	kg/h	10	15	60
Flat film	Operating width	(mm)	max.600		
Chill-Roll	Diameter	(mm)	400 / 168 / 168		
	Roller width	(mm)	600		
Blown film module	Take-off speed	(m/min)	5 - 120		
	Die diameter	(mm)	60 - 100		
	Layflat width	(mm)	100 - 550		
Winder	Take-off speed	(m/min)	5 - 50		
	Diameter max.	(mm)	400		

Technical modifications reserved

Issued 10C2500

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## Combination Coextrusion Cast/ Blown Film Line for Product Development

Product development resembling actual practice – wide output range from 10 kg/h to 100 kg/h – compact – easy handling – ergonomic – cost-efficient development



Coextrusion-Film up to 7 layers  
Line speed up to 120 m/min



## Product Development Line for Blown Film and Flat Film

Mono or multi-layer up to 7 layers

### Application

Further development of polymers for multi-layer film in the packaging sector puts pressure on film producers to test and constantly develop new composites.

The conventional development of coextrusion film on production machines incurs high material costs, higher wages and losses due to production downtimes. Dr. Collin GmbH offers pilot lines with processing parameters which resemble those of production lines closely enough to allow all results to be upscaled easily.

Moreover, this method is particularly efficient in terms of machine, personnel and polymer consumption. Due to these savings a return on investment can be achieved after a short while.

### Film Types

#### Blown film:

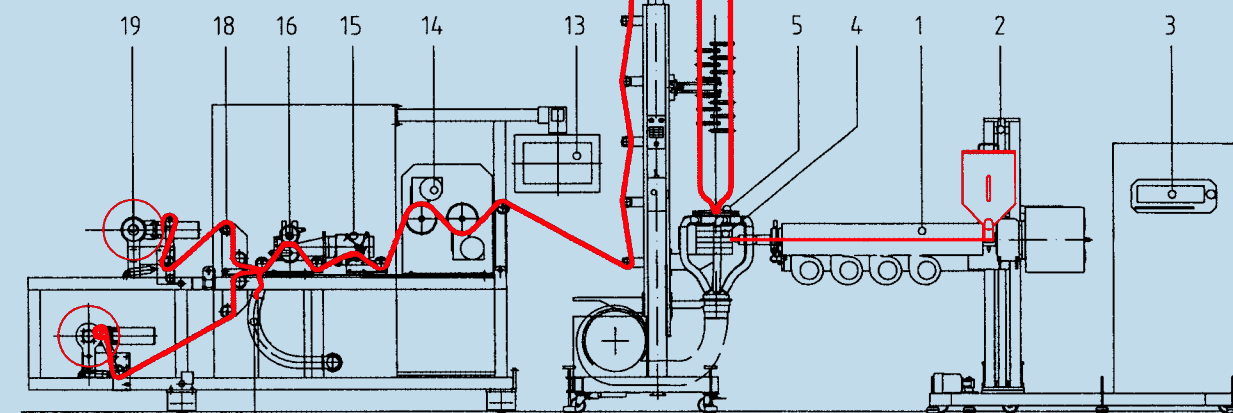
- Food packaging film
- Film for the production of bags, FFS (Form, Fill and Seal)
- Packaging film for medical applications

#### Flat film:

- Thick film for thermoforming processes,
- Barrier film for food packaging,
- Stretch film
- Film for technical applications

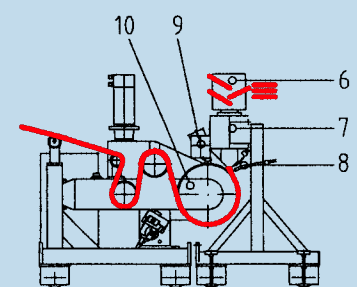
### Flow sheet

11. Take-off blown film
12. Width control
13. Control panel



1. Extruder
2. Height adjustment
3. Extruder control unit
4. Coex-blown film die
5. Dual-lip cooling ring

14. Corona treatment
15. Edge trim cutting
16. Take-off duo
17. Edge trim suction unit
18. Tension measuring roller
19. Double station winder



6. Feedblock
7. Coex-flat die
8. Edge pinning
9. Vacuum box
10. Chill-roll unit

## Components of a modular line

### Extrusion

- 3 to 5 extruders
- 20, 25, 30 or 45 mm in diameter with L/D ratio of 25 or 30
- All extruders are adjustable in height
- Independent operation due to individual drives and controls
- Output rate up to 100 kg/h

### Blown film module

- 3-layer coextrusion die with radial melt distributor RWT:
- Quick material exchange due to short flow channels
  - Expandable from 3 to 5 layers
  - Dual-lip air ring for homogeneous air distribution
  - Height adjustable film take-off duo
  - Measurement and control of the layflat width

### Chill-roll module

- 3-layer feedblock with adjustable layer distributors:
- Expandable from 3 to 5 or 7 layers
  - Coex-flat die with push/pull-lip adjustment on a moveable carriage
  - Vacuum box in connection with pneumatic edge pinning for high take-off speeds
  - 3-double walled chill-rolls 400/168/168 mm diam.
  - Fine height adjustment of the chill-rolls
  - Individual chill-roll drives
  - Temperature control by two tempering sets
  - Maximum take off speed 120 m/min.

### Take-off module

- Corona treatment for both sides, switchable
- Edge trimming by blade cutting
- Take-off roll drive with AC servo drive
- Edge trim suction unit
- Web tension control
- Double station winder, centrally driven with pneumatically pressed contact roll

### Electronic control

- All units are equipped with individual control elements for independent operation
- The entire line is linked via a central PC

