



NEWS AND HIGHLIGHTS



**HOSOKAWA
ALPINE**

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**Dear customers
and business partners,**

in a market that places increasing demands on blown film production, Hosokawa Alpine is always ahead of the game. With pioneering innovations, we guarantee quality and efficiency down to the last detail. Right at the forefront: our energy-saving extruder concept HX Select, cooling with a patented monomer suction system and our new high-performance winder AW.

Central topics in our company are sustainability and circular economy. As a link between raw material manufacturers and processors, we as a machine manufacturer also make our contribution to offering machines and concepts for the production of recyclable products. As a pioneer in MDO technology, we have been working with resource-saving film orientation processes for over 20 years. For the production of completely recyclable full PE solutions, we now have further optimized our lines. This is how we set standards in MDO technology. Discover the possibilities of Hosokawa Alpine!

With best wishes,

Dr. Holger Niemeier
Executive Vice President

HX SELECT THE HIGH PERFORMANCE EXTRUDER

Up to 20 % energy savings combined with significantly reduced melt temperature.*

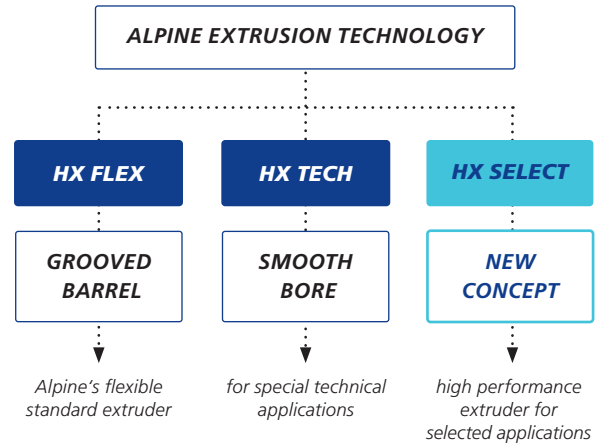
- › Up to 50 % higher output*
- › Ideal for materials like LLDPE, mLLDPE, recycled resins (PCR), biodegradables
- › Good processing of resins with lower bulk density

**compared to standard grooved extruder*

TECHNICAL INFORMATION

- › All new cylinder and screw design for selected applications
- › Efficient mixing due to special screw and barrier design
- › Less sensitive to grain size
- › Fluff feeding possible
- › Thanks to the higher specific output HX Select is comparable to the next in size HX Flex
- › Available sizes: HX 50 Select, HX 65 Select, HX 90 Select, HX 120 Select

THE ALPINE EXTRUDER CONCEPT



COMPACT SCREEN CHANGER ADC

Compact design and highest output.

- › Can be operated manually or hydraulically; retrofitting is no trouble at all
- › Screw can be withdrawn through the screen changer, providing major savings in time during cleaning and refitting
- › Design up to 800 bar melt pressure enables high output
- › Compact design and modular adapter system allow short melt flow and easy connection to die head and extruder
- › Rheologically optimized design to prevent contamination in the system
- › Position monitoring integrated in EXVIS (sensor-based: open/closed) with shutdown function for maximum process reliability



TECHNICAL INFORMATION

- › Proven space-saving hinged plate design
- › Pressure measurement, melt temperature measurement, optional integrated differential pressure measurement
- › Modular adapter system for connection to Alpine extruders and die heads



MATERIAL FEED AND DOSING FOR OPTIMISED CHANGING TIMES

Markedly reduced product changing times.

- › Automatic cleaning
- › Automatic material change at the start of a new order
- › Alpine de-dusting system for latest possible dust and abraded particle extraction

TECHNICAL INFORMATION

- › "Clean" function: all internal hopper surfaces are automatically cleaned by flowing granulate
- › "Drain" process: remaining granulates are conveyed into a separate container; at the same time, pulsed compressed air frees the dosing units from dust and residues
- › Alpine de-dusting system: central extraction upstream from extruder inlet
- › MMC (material minimizing control): guarantees that the weighing hoppers are almost empty at the end of an order

COOLING SYSTEM THE NEW GENERATION

COOLING RING

- › Low counter-pressure system for (energy-) efficient use of existing cooling capacity
- › Increased cooling capacity for higher line throughput
- › Perfect insulation due to new design and material composition
- › Easy integration in the system through just one cooling air supply line
- › Markedly increased control precision for optimum film tolerances
- › Optional monomer suction between cooling ring and die head

TECHNICAL INFORMATION

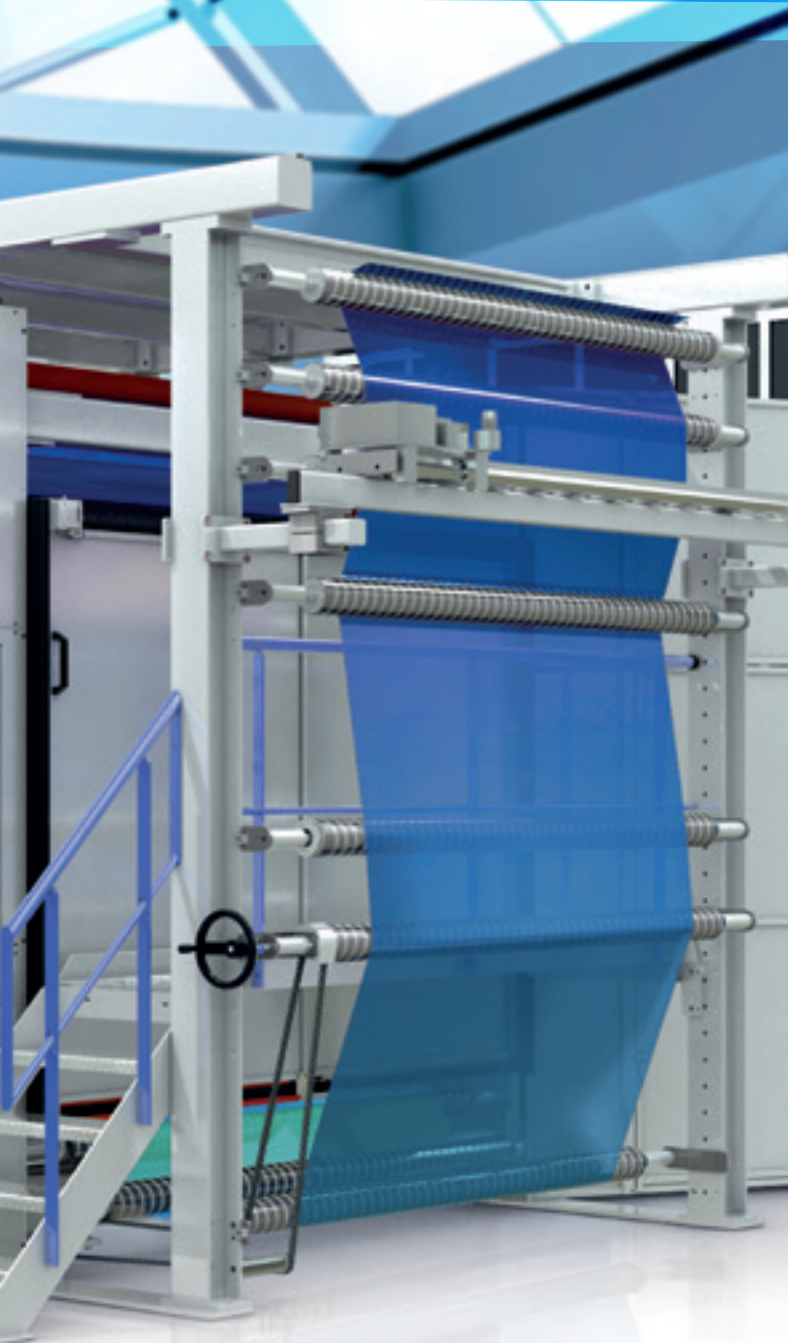
- › Principle of spiral air distribution with only one feed
- › Compatible with existing, proven Alpine cooling inserts,
- › new developed high-performance cooling insert TMX for certain applications

COOLING TOWER

with patented Monomer Collection System MC

- › For substantially longer cooling tower cleaning intervals
- › Prevents paraffin splashes on the film bubble
- › Low counter-pressure system for (energy-) efficient use of existing cooling capacity
- › Improved insulation for optimised heat transfer





MDO V04 INLINE TECHNOLOGY WITH PATENTED TRIO SYSTEM

Alpine stands for more than 25 years of experience in Machine Direction Orientation (MDO).

3 Solutions for optimised flatness and trim reduction

PATENTED TRIO TECHNOLOGY

- › Optimizes the film thickness profile
- › Reduces edge trim up to 50 %

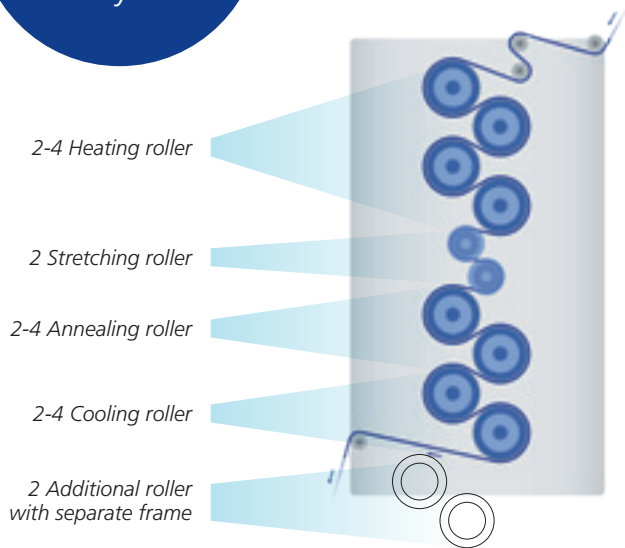
GAP ADJUSTEMENT

- › For more flexibility
- › Reduces edge trim

VACUUM TECHNOLOGY

- › Optimised flatness due to vacuum roller
- › Excellent film properties for lamination and printing

**Most flexible
and modular**
with 8 -12
Roll-System



TECHNICAL INFORMATION

- Available lay flats: 1.600 / 2.000 / 2.600 / 3.000mm
- Film speed at inlet up to 130m/min, outlet 300m/min
- Step-less orientation ratio of up to 1:10

POSSIBLE CONFIGURATIONS OF INLINE MDO AND TRIO

1. Blown film **blocked** and oriented as **single sheet**
2. Blown film **opened** by opening frame and oriented as **single sheet**
3. Blown film oriented as **tubular film** and separated for **double flat film**

MDO FOR RECYCLABLE FULL PE SOLUTIONS

The proven MDO technology from Hosokawa Alpine is a key technology for the production of high-performance single-material compounds made of polyethylenes.

- Completely recyclable due to monomaterial PE
- High toughness for pack integrity
- Applicable for reverse printing in flexo or rotogravure lines
- Significant material savings due to patented TRIO system
- Very good web planarity for efficient conversion
- Easy form fill and seal
- Excellent optics
- Lightweight design



HIGH-PRECISION FILM WINDER AW

More than 70 years of experience in the production of film winders.

- › High performance film winder for maximum precision
- › Reverse winding possible
- › Operating functions for roll change termination and telescoping of the roll
- › Automatic winding shaft identification
- › Multiple options for optimum adaption to the quality requirements

TECHNICAL INFORMATION

- › Working width between 1.300 – 3.200 mm
- › Roll diameter up to 1.500 mm
- › Production speed up to 300 m/min
- › Cores available in 3", 6" and 8"



USER-FRIENDLY, SMART LINE CONTROL WITH ExVis 5.0

New and more intuitive user interface design.

- › Provides a complete overview of trends, alarms, raw materials and the associated line parameters, from the material feeder, including the MDO, to the winder
- › Clearly organised structure and a wide range of customisation options assist the user with everyday operation

- › Smart production through versatile analysis options for simple, intuitive assessment of production quality
- › Safe overview of machine parameters by smartphone or computer from all over the world

TECHNICAL INFORMATION

- › Fully integrated system: the data of all system components are merged in ExVis 5.0 and can be managed centrally
- › Simple integration into ERP and MES systems via defined interfaces and protocols
- › Energy monitoring
- › Role reports, order and material management for a complete overview and seamless production planning





HOSOKAWA ALPINE

Process technologies for tomorrow.

HOSOKAWA ALPINE AKTIENGESELLSCHAFT

Peter-Doerfler-Strasse 13 – 25

86199 Augsburg

Germany

Phone: +49 821 5906-0

Fax: +49 821 5906-129

E-mail: plastics@alpine.hosokawa.com

www.hosokawa-alpine.com

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Printed in Germany.