SCHRÖDER

IMAX HIGHLINE

Injection technology for highest demands

INJECTION

jbtc.com

IMAX injection technology for highest demands

IMAX
belt and walking beam injectors

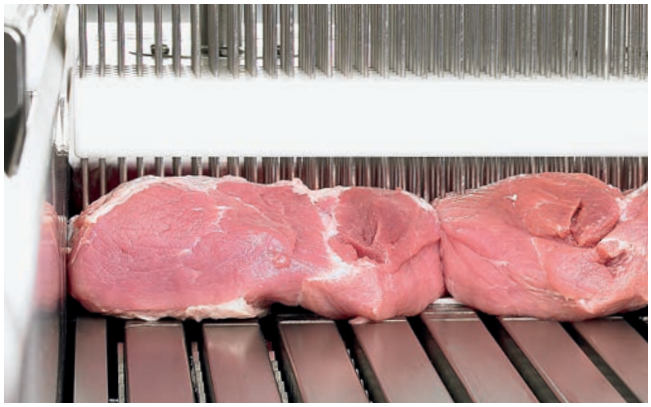
The processing principle of the IMAX technology is based on classic injection curing by means of hollow needles. This is where know-how regarding needle type, inlet and exit holes and needle stitch pattern plays a decisive role. The brine/emulsion to be injected is carried directly to the product by a system of pumps and pipes. As well as boneless products, bone-in meat, poultry and fish can also be injected.

IMAX 420 / 520 / 620
Walking beam injector

For the IMAX walking beam injectors, the meat is transported through the machine via a transport rake. This follows a flat elliptic curve. While the needles are outside the product, the rake lifts out of the transport bed and moves forward. In the controller, this product advance can be set to 50 mm or 100 mm. The bigger advance allows the largest transport capacity of the injector with a wide puncture pattern. Although the shorter 50 mm advance halves the capacity, but it provides a stitch pattern that is twice as narrow, which can bring technological advantages when injecting. Thus, the short advance is often used to achieve a high injection rate for products or to ensure perfect brine distribution with very low pressure.

The transport rake is made entirely of stainless steel and thus extremely robust and hygienic.

The IMAX rake injectors are available in three sizes from 420 mm to 620 mm pan width.



TECHNICAL DATA – IMAX420/520/620, WALKING BEAM INJECTORS	
CHANAL WIDTH	420 / 520 / 620 mm
MAX. INJECTION AREA PER HOUR	151 / 187 / 223 m²
CYCLES PER MINUTE	15 bis 60
ADVANCE	50 / 100 mm
NUMBER OF NEEDLES	depending on the application
PRESSURE RANGE	0,5 – 4,5 bar
MACHINE LENGTH	approx. 2160 mm
MACHINE WIDTH	approx. 2770 / 2870 / 2970 mm with brine basin
MACHINE HEIGHT	approx. 2240 mm
LOADING HEIGHT	approx. 1200 mm
COMPRESSED AIR	min. 6 bar
ELECTRICAL CONNECTION	3 Ph/PE; 400/440 V; 50/60 Hz or 3 Ph/PE; 220 V; 50/60 Hz

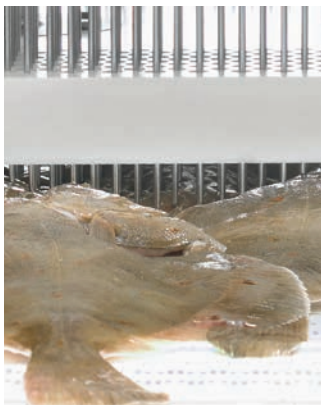
IMAX 430 / 630 / 930
Belt injector

The classic field of application of IMAX belt injectors are small-sized products or in industries in which the entire product transport often takes place using belts. Thus, these injectors are typically found in the fish and poultry industry.

The high needle density (up to 900 needles) and low injection pressure of the IMAX belt injectors ensure gentle and uniform injection of sensitive fish and poultry products.

The large number of needles also makes it possible to adjust the product feed, in addition to 50 mm and 100 mm, up to 200 mm. This ensures a high level of output even for very small and light products.

The IMAX belt injectors are available in three sizes from 420 mm to 920 mm pan width.



TECHNICAL DATA – IMAX430/630/930, BELT INJECTORS	
CHANAL WIDTH	420 / 620 / 920 mm
MAX. INJECTION AREA PER HOUR	227 / 335 / 497 m²
CYCLES PER MINUTE	15 bis 45
ADVANCE	50 / 100 / 200 mm
NUMBER OF NEEDLES	depending on the application
PRESSURE RANGE	0,5 – 4,5 bar
MACHINE LENGTH	approx. 3340 / 3340 / 3580 mm
MACHINE WIDTH	approx. 2770 / 2970 / 3450 mm with brine basin
MACHINE HEIGHT	approx. 2240 mm
LOADING HEIGHT	approx. 1200 / 1200 / 1270 mm
COMPRESSED AIR	min. 6 bar
ELECTRICAL CONNECTION	3 Ph/PE; 400/440 V; 50/60 Hz or 3 Ph/PE; 220 V; 50/60 Hz

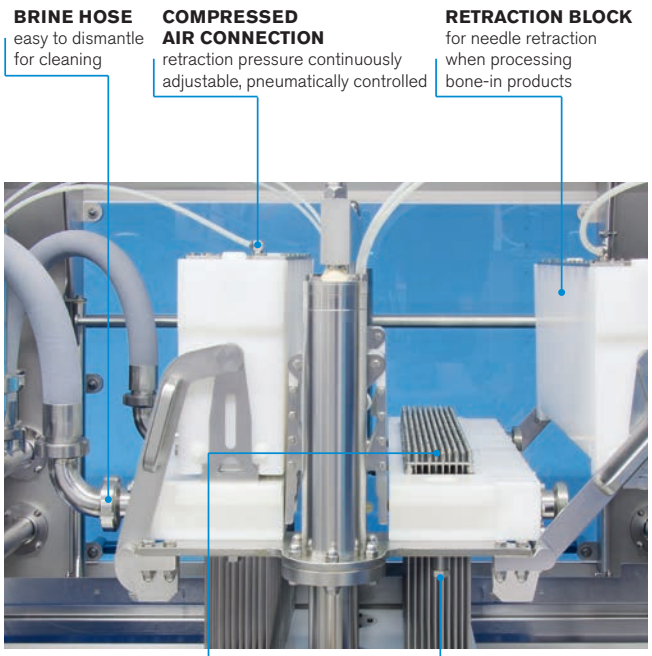
IMAX
General information

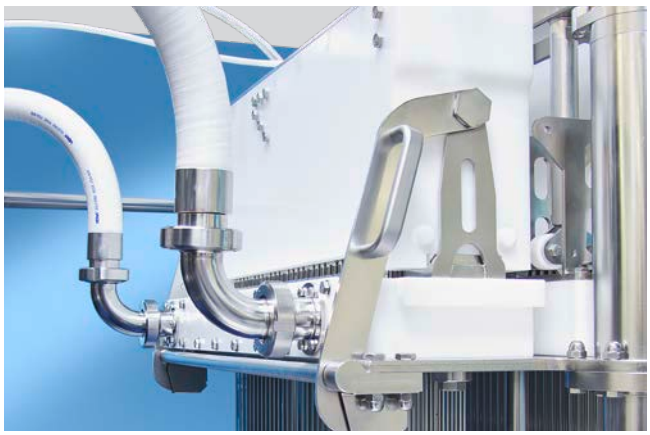
Brine feed and manifold

The user-friendly touch panel control allows all process parameters relating to the product to be entered and injection recipes to be stored. There are a number of different injection modes available, such as one-way and two-way as forced injection controlled by stripper plate, “BEC”-Brine Exit Control – vertically freely definable injection area or “ACI”-Area Controlled Injection – individual brine pressure for different muscle zones (both Schröder patents).

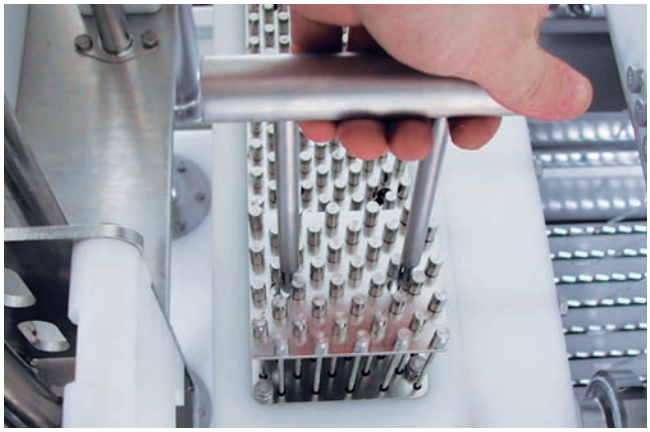
Whether single or double manifold: The stitch pattern can be adapted for the required result, according to product, brine properties and injection rate, and can therefore be optimally equipped.

The design and layout of the brine feed on Schröder injectors is the result of comprehensive research in close collaboration with a university. From the pump and filter to the needle bore, pressure ratios, volume flow and hygienic aspects have been researcheds, resulting in optimal compatibility of the individual elements.





Brine feed
High-quality brine feed which is easy to clean



Needle removal tool
Easy and quick needle removal

“Blue World” control system

- Control via hotspot operation
- Intuitive user interface with clear presentation of information
- Easily understable representation through the use of symbols – menu items such as recipe management, user level control, machine configuration or brine control
- Automatic brine request can be activated by the BRIMAX
- Information about the brine status in the BRIMAX can be displayed on the IMAX

User level control

The IMAX injectors have the option of creating different users with defined rights for machine operation. Each user must log in with their specific password and can only operate the machine to the extent of the assigned rights.

- Password-protected operator level (up to 15 individual users), thus providing restricted access to parameters for injection and machine
- Maximum process reliability by avoiding incorrect operation
- Lower risk of defective products

ACI – Area Controlled Injection

The “ACI” function developed and patented by Schröder enables free definition of quantities of brine for certain horizontal muscle zones (in the direction of flow). ACI was originally developed and used for the injection of pork loin, because at the same brine pressure, the intake of brine in the soft neck piece is significantly higher than in the hard piece of the ham. With ACI, injection rates can be adjusted for harder and softer portions of pork loin to achieve a consistent injection result (salinity/additive content) throughout the muscle.

BEC – Brine Exit Control

The “BEC” function developed and patented by Schröder makes it possible to freely define vertical injection zones, thus controlling the flow of the brine during the upward and downward movement of the injection head. As a result, for products with a layer of fat/rind, injection between the layer of fat and the lean meat is avoided, preventing pockets of brine (brine cavities). The layer retains its natural appearance.

Hotspot operation

User management

ACI – Area Controlled Injection

BEC – Brine Exit Control

HVB and hybrid function

HVB stands for High Viscose Brine – the injection of highly viscous or highly functional brines. Schröder offers the right equipment to process any type of brine – whether highly saturated with additives or highly viscous brines enriched with trimmings or additives.

All IMAX injectors can either be configured as a full HVB injector or as a hybrid injector for multiple brine types, making possible both simple clear brines and functional and viscous brine to be injected using one machine.

The areas of application:

- Injection of fat-containing brines to achieve a marbling effect on beef products – improvement of the taste, also with all other kinds of meat
- Injection of highly saturated brines, such as injection for beef jerky products (over 50% dry ingredient content)
- Meat-in-Meat injection – the use of trimmings in brine as functional meat proteins to reduce or replace phosphates and other additives and to increase yield, juiciness, bite and taste
- Many more applications possible

IMAX 620 Hybrid
with FT 200 and HVB 1000 brine tank
Highly flexible system configurable
for a wide range of special applications

JBT PROTEIN PROCESSING

PRIMARY	SECONDARY	FURTHER
CHILLING | WEIGHING | PUMPING	PORTIONING AND SLICING | BRINE PREPARATION | HOMOGENIZATION	COATING | FRYING & FILTRATION | PROOFING | COOKING | COOLING
CUTTING-UP | SKINNING | WATER	INJECTION & RETURN MILLING | MACERATION | MASSAGING |	CHILLING | FREEZING | REFRIGERATION | CLIPPING & PACKAGING
RE-USING | ENHANCING FOOD SAFETY	TENDERIZATION | X-RAY TECHNOLOGY | AUTOMATED TRAY LOADING	SOLUTIONS | X-RAY TECHNOLOGY | HIGH-PRESSURE PROCESSING (HPP)

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