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Ref. No.:
50-12102122

Overview and Technical Data:

STORK TOWNSEND - QX Fresh Skinless Sausage Line - like New!!

STORK TOWNSEND

Year of Build:
Jun 2007

Description:

STORK TOWNSEND QX - Single nozzle fresh skinless sausage line.

Complete line including:

- Single nozzle co-extrusion unit
- Cooling water circulation unit
- Single bowl brine unit
- Portioning unit
- Conveyor
- Control panel
- Complete original manual in English & German

QX-quality co-extrusion is a combination of a process and product created to alter the state of sausage making; manual labor is minimized, and safety, sanitation and hygiene unmatched.

The machine has only been used for 3 Month only. It is now completely cleaned and is ready for immediate shipping.

New price over 390.000 Euro.

In addition there is a with a complete unused set of spare parts (starter kit), worth over € 50,000 EUR.

Technical Data:

Technical Data:

Control:
CNC

Dimensions and Weight:

Height:
200 mm
Length:
2.400 mm
Width:
920 mm
Weight:
3.500 kg

Buyer Information:

Condition:
Like New
Available:
Sold
Sold as:
EXW (Ex Works - Incoterm)
VAT:
19 %
Buyers Premium:
15 %
Location:
Germany

Images:

1

2

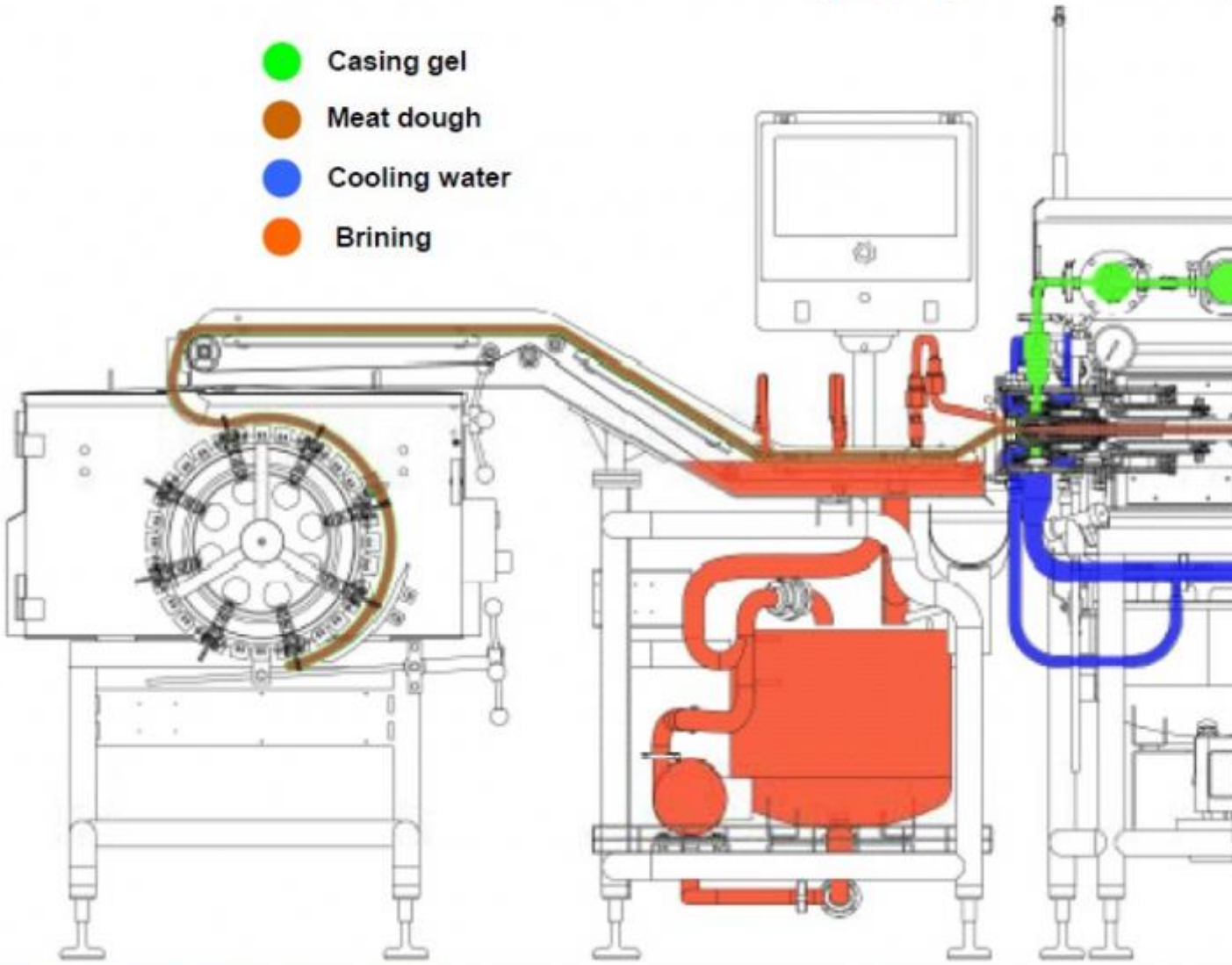
3

4

5

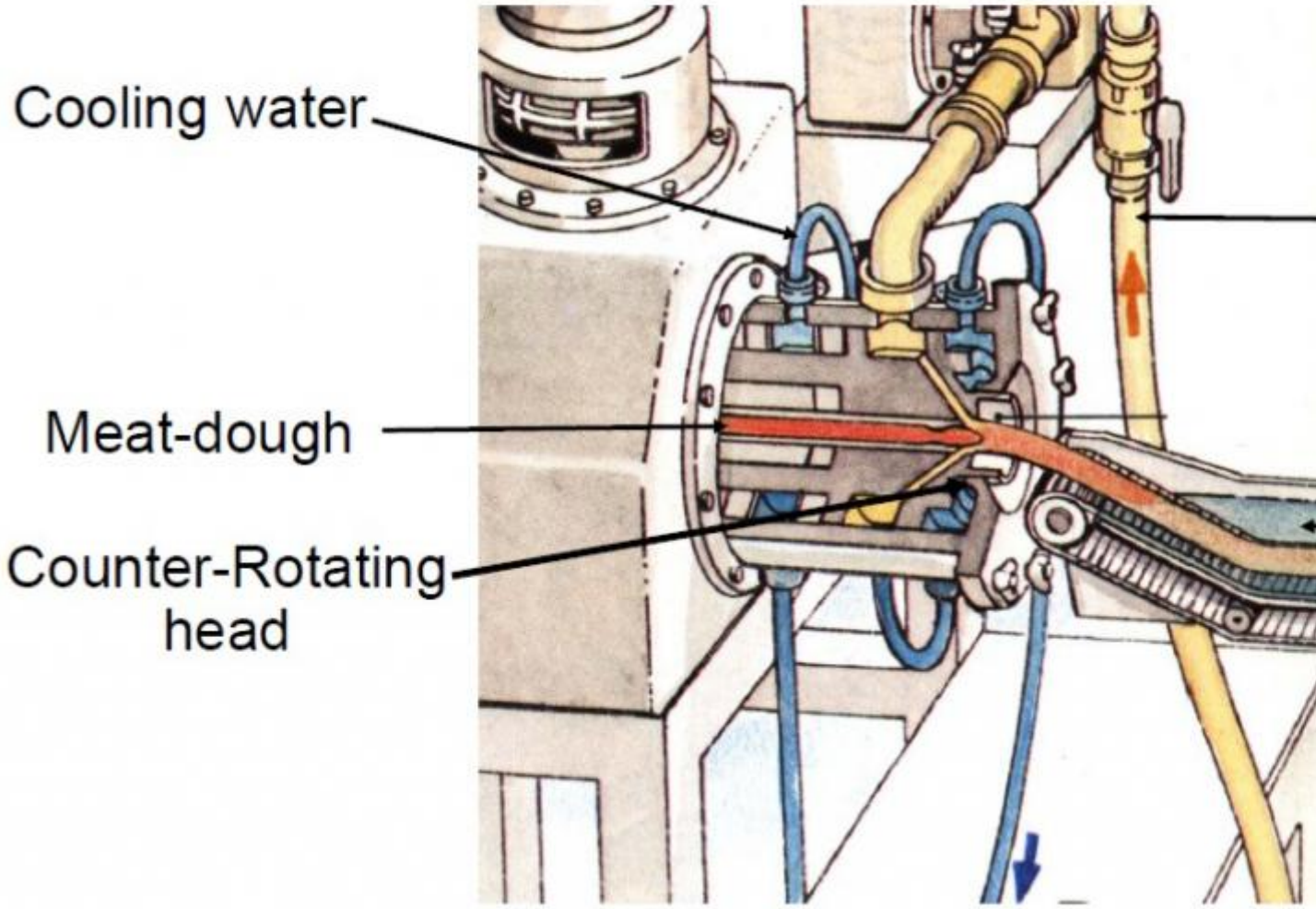

TOWNSEND
Engineering B.V.
Industrielaan 61
5349 AE OSS
The Netherlands
Phone: +31(0)412-669911
MODEL
SERIAL NO
YR OF CONST.
2008
WEIGHT
VOLTS
PHASE/Hz.
INSTAL PWR.
6

Co-Extrusion (QX) Princi



Co-Extrusion (QX) Princi

Sausage diameter



Stork Food Systems

Kunde: :
Nummer : 5
Auftragbestätigung: 6
Datum : *18. Januar 2008*

1. Allgemein

Diese Auftragsbestätigung erläutert den Auftrag für ein (1) demo QX Einzeldüsen-Frischwurstsystem für die Herstellung von Würsten mit Wursthüllengel gemäß dem Koextrusion-Prinzip.

2. Allgemeine Informationen zum Produkt und Produktspezifikationen - I

Das System ist grundsätzlich ausgelegt für die Herstellung von:

Produkt	Portionierungs-gehäuse (Anzahl)	Wurstlänge frisch circa (mm)	Wurstdurch-messer frisch circa (mm)	Wurst gewicht frisch circa (Gramm)	Nominell berechnete Kapazität/ Std. frisch circa (Kilogramm)
Bratwurst 1	12	140	27	80	1.465
Bratwurst 2	17	100	16	20	518
Bratwurst 3	12	140	30	100	1.220
Bratwurst 4	17	100	30	70	1.220

Zusatzzubehör (nicht in dieser Auftragbestätigung enthalten) kann für die Herstellung von Würsten mit den folgenden Abmessungen geliefert werden:

Durchmesser frisch circa (mm)	Länge frisch circa (mm)
16 – 32	48 – 218

Die Kosten für das Extruder-Zubehör sowie die Kosten für das Portionierungs-Zubehör können vorgelegt werden, falls abweichende Durchmesser und/oder Längen benötigt werden.

TOWNSEND

CE

EG Konformitätserklärung

(Entsprechend Anhang II Buchstabe A)

Beschreibung: **QX Frisches Wurst-System**
Seriennummer: **E186, E171, E176, E226**

Die Maschine entspricht den nachstehenden Sicherheits- und Gesundheitsanforderungen:

++	EG Maschinenrichtlinie 98/37/EG	
++	Niederspannung-Richtlinie 73/23/EWG	
++	Elektromagnetische Kompatibilität Richtlinie 89/336/EWG	
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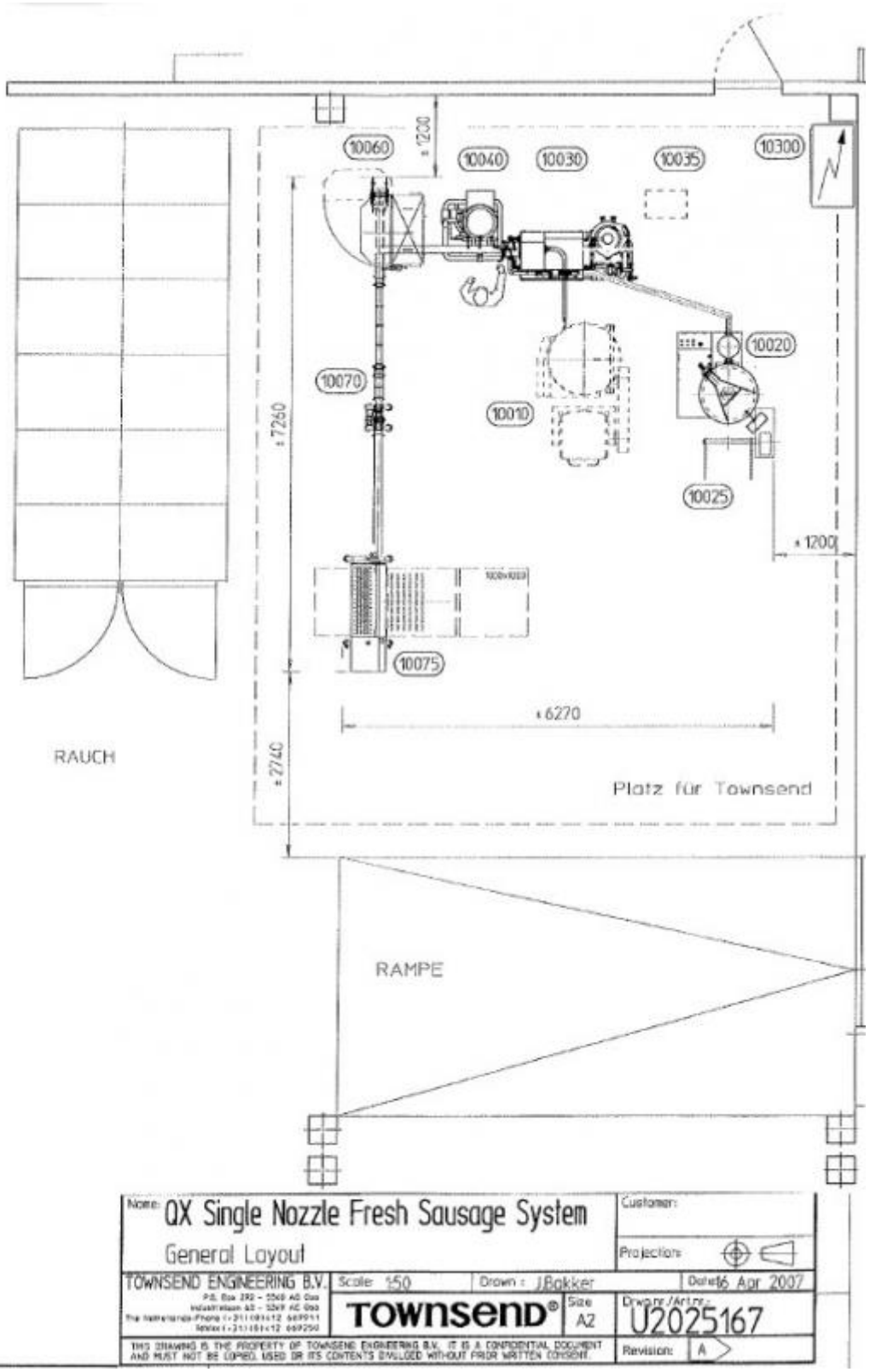
++	TOWNSEND - Documentation	

Ausstellungsdatum: 26 - Feb - 2008

Autorisierte Unterzeichnung: i.a.

Titel: ☐ Vizepräsident, Produkt-Entwicklung ☒ Direktor der Herstellung

Stork Townsend B.V. - Industrielaan 63 - 5349 AG OSS - The Netherlands
Stork Townsend Inc. - 2425 Hubbell Avenue, P.O. Box 1433 - Des Moines, Iowa - U.S.A. 50305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± 1200
± 7260
± 1200
± 6270
± 2740
RAUCH
Platz für Townsend
RAMPE
Name: QX Single Nozzle Fresh Sausage System
General Layout
Customer:
Projection:
TOWNSEND ENGINEERING B.V.
Scale: 1:50
Drawn: J.Bakker
Date: 16 Apr 2007
TOWNSEND®
Size: A2
Drwng/Artnr.: U2025167
Revision: A
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TOWNSEND

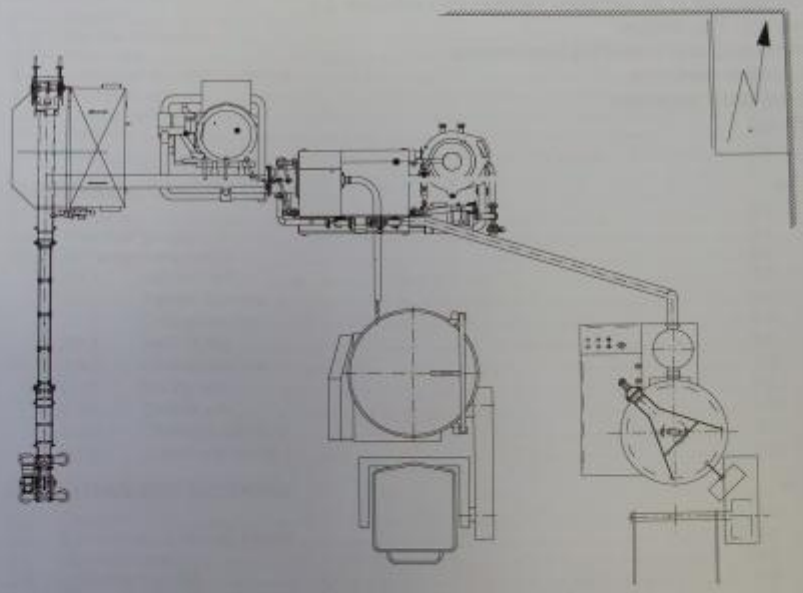
Stork Food Systems

Operator's Manual

P/N: 882800_0605E
Version: 2006/05 - English

QX Fresh

Sausage System



Stork Townsend B.V.
PO. Box 292, NL-5340 AG OSS
Industrielaan 63, NL-5349 AE OSS
The Netherlands
Tel.: +31 (0)412 669 911
Fax: +31 (0)412 669 250

3.3.2 System overview

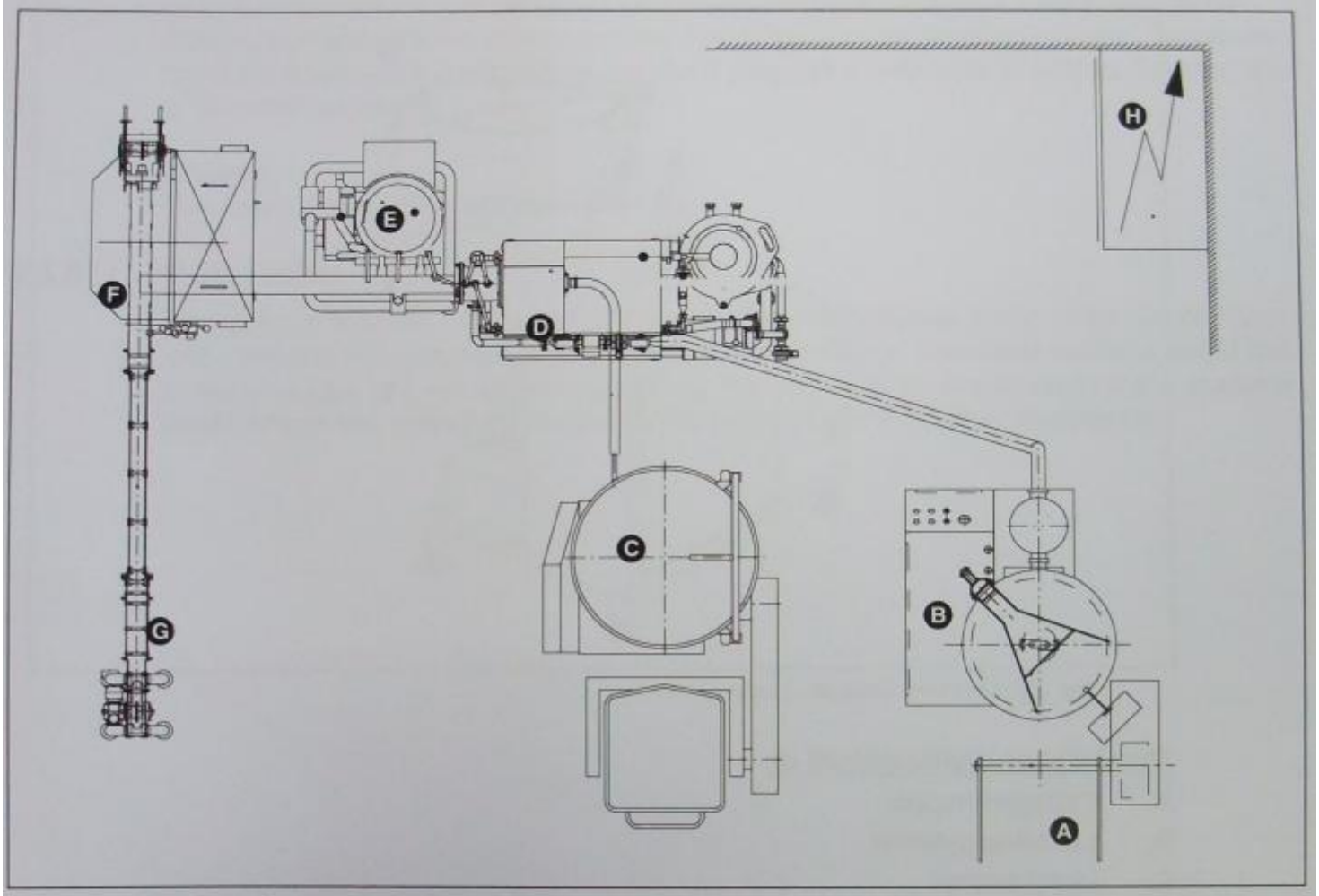


Fig. 3.1: System overview

The Co-extrusion system consist of:

A. Skiphoist (lifting device)
B. Collagen stuffer
C. Meat stuffer
D. Co-extrusion unit
E. Brining unit
F. Crimper unit
G. Crimper discharge conveyor
H. Electric cabinet

3.3.3 Collagen stuffer

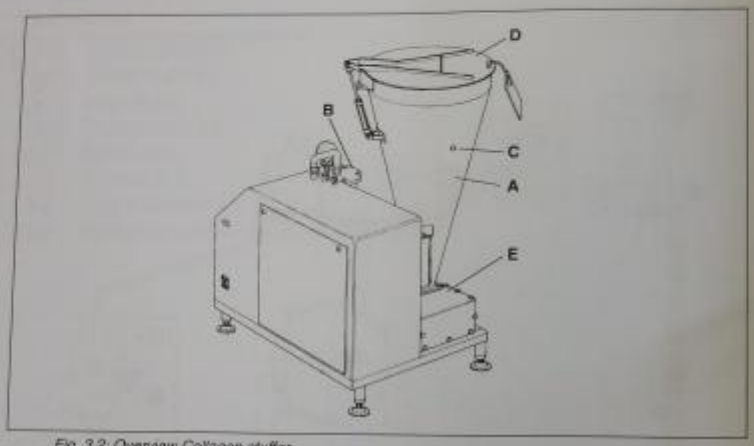


Fig. 3.2: Overview Collagen stuffer

The Collagen stuffer consist of:

A. Collagen hopper
B. Levelling cylinder
C. Level sensor
D. Cover
E. Rotary Pump

By means of the collagen stuffer collagen is supplied to the metering pump of the co-extrusion units.
The collagen is conveyed to the rectangular filler opening of rotating rotary pump (E) from this steep sided hopper (A). The rotary pump presses the collagen via the non-return valve, the pneumatically buffered levelling cylinder (B) and the collagen piping to the metering pump.

The levelling cylinder equalizes pressure fluctuations and switches the rotary pump E on and off. The levelling cylinder has a surface ratio of 1:4.22 and, depending on the air pre-pressure, determines the end pressure of the collagen in the supply pipeline to the metering pump. The maximum pressure that can be supplied by pump E is 11 bar, so that this pump can still fill the system with collagen at an air pre-pressure of 2.6 bar (2.6 x 4.22= 11 bar) on the levelling cylinder.

If the pump output exceeds collagen consumption by the system, the levelling cylinder will fill up completely, upon which a limit switch will switch off the pump. At this point collagen transport is completely taken over by the levelling cylinder, until the bottom limit switch re-activates the pump and the cycle is repeated. A non-return valve in the levelling cylinder prevents the collagen from flowing back to the pump.

The pump output can be varied with the help of a variator by adjusting the RPM to such an extent that output just exceeds consumption capacity; the pump will then only be switched on and off for the mimimum number of times by the levelling cylinder. The stuffer is supplied with a low level control, for which purpose a level sensor is fitted. This low level activates an alarm.

Beware:
The rotary pump is not allowed to run dry.

3.3.4 Meat stuffer

By means of the meat stuffer meat is supplied to the metering pump of the co-extrusion unit (Chapter Co-extrusion unit) at a consistent pressure. The meat stuffer is not in the scope of supply of Townsend Engineering. The meat stuffer is activated on the operator panel. Check the operator's manual of the meat stuffer for further assistance.

3.3.5 Co-extrusion unit

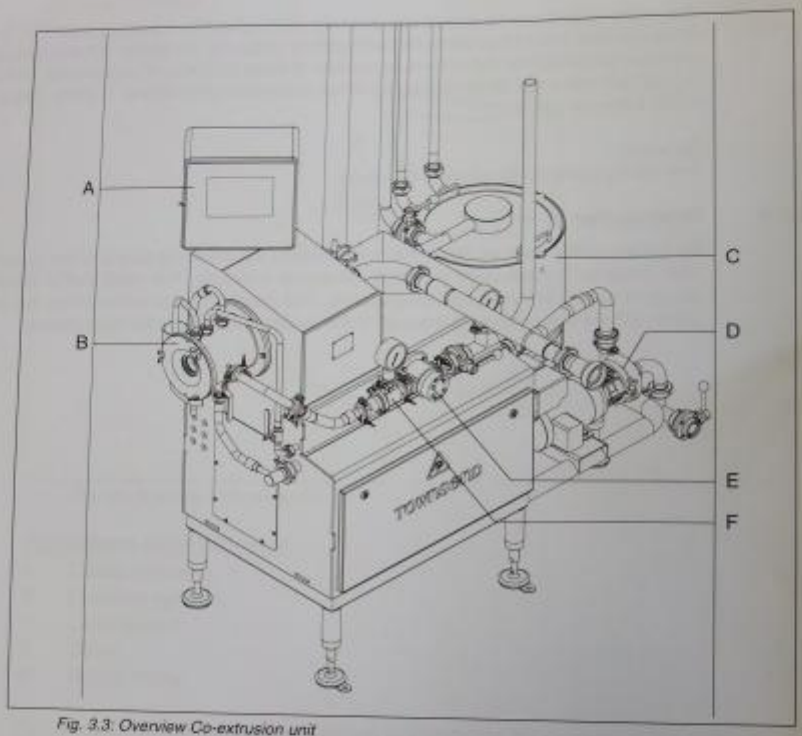


Fig. 3.3: Overview Co-extrusion unit

The Co-extrusion unit consists of:

A. Operator panel
B. Co-extrusion nozzle
C. Cooling water tank
D. Meat metering pump
E. Collagen metering pump
F. Collagen filter

Collagen supply

See *Fig. 3.3*:

The collagen stuffer (§3.3.3) supplies the collagen to the collagen-metering pump (1.2). This pump doses the collagen for the co-extrusion unit. The speed of this pump is adjustable on the operator panel in order to control the collagen flow and thereby the percentage of collagen on the sausage.

A minimum pre-pressure before the collagen pump of at least 2.5 Bar and a maximum of

16

10 bar is required in order to dose properly. The Pre-pressure can be checked by means of the pressure gauge (1.9)

In order to stabilize the collagen casing a cross-linker agent is required. This cross-linking agent is injected into the collagen gel by means of the inline-mixing pump. (2.3) The cross-linker is injected in the collagen gel straight after the collagen-metering pump (1.3). To mix the collagen and cross-linker homogenous a dynamic mixer is (1.5) used.

After the inline mixing the collagen is filtered (1.8) in order to remove possible coarse particles out of the collagen. These particles might otherwise block the aperture of the co-extrusion nozzle. After this filter a pressure gauge is mounted (1.10), a pressure difference between the gauges (1.9 and 1.10) indicates a partial blockage of the filter. A pressure difference of maximum 1 bar is acceptable. If the difference is higher the filter must be cleaned.
After the filter, the collagen is pumped into the co-extrusion nozzle (1.7).

Meat supply

See *Fig. 3.3*:

The meat-stuffer (§3.3.4) pumps the meat dough to the meat-metering pump (1.2). The metering pump doses the meat to the collagen unit. This speed of this pump is adjustable in order to control the flow to the co-extrusion unit. A minimum pressure of approximately 5 bar before the meat metering pump is required in order to dose properly.
After the metering pump, the meat is pumped via the stuffing tube into the Co-extrusion nozzle (1.7)

Co-extrusion

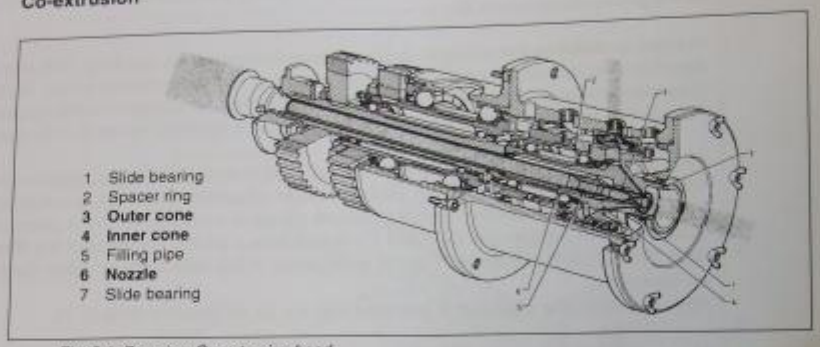


Fig. 3.4: Overview Co-extrusion head

See *Fig. 3.4:*

An outer cone (3) concentrically surrounds the inner cone (4). The inner cone is fitted with a stuffing tube and a nozzle (6). The interior of the nozzle forms a restrictor. The orientation of the meat particles in the dough entering the nozzle are disrupted by the restrictor in this pipe so that a "random orientation" is created, i.e. an isotropic condition, which results in a firm sausage with uniform shrinkage at heating and drying. The collagen dosing pump pumps the collagen into the nozzle. The collagen is pumped through the aperture between the inner and outer cones and forms a tubular skin around the meat dough. The inner and outer cone rotate in opposite directions, causing the collagen fibres in the skin to lie crosswise on top of each other.

Cooling water

Cooling water is required to cool the co-extrusion nozzle. This is in order to prevent the collagen temperature rising above 20°C during extrusion. When the temperature of the collagen is above 20°C, the collagen will gelatinize and loses its functionality completely.

3.3.6 Brining unit

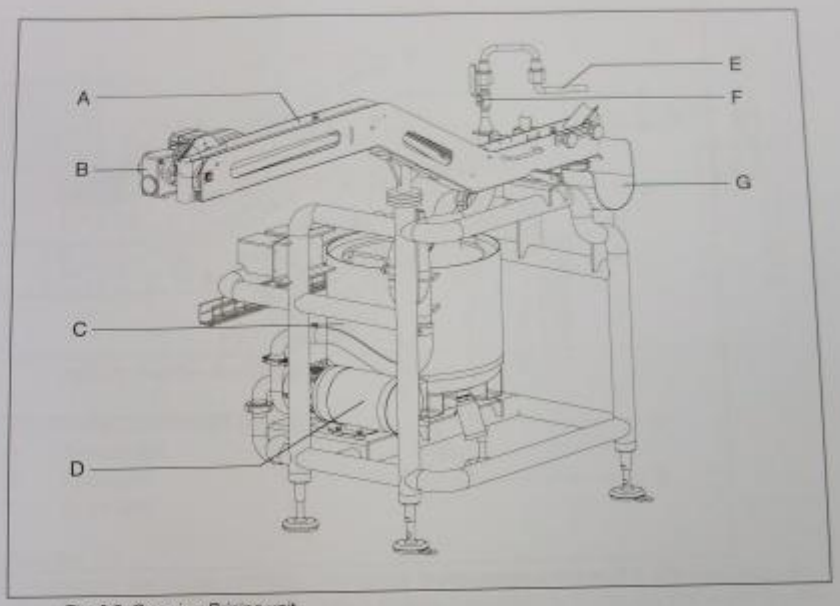


Fig. 3.5: Overview Brining unit

The Brining unit consists of:

A. Brine conveyor belt
B. Brine conveyor drive
C. Brine circulation tank
D. Brine circulation pump unit
E. Brine pipe
F. Brine regulating valve
G. Disposal bowl

See *Fig. 3.5*

The rope is put on a conveyor belt (A) that brings the sausage rope from the extrusion nozzle to the crimper unit. During that transport, the sausage rope is dipped in a brine bath. By means of osmosis the water content of the collagen gel is lowered and the collagen protein is denatured to affect the mechanical strength of the casing. If more water is extracted out of the collagen gel the mechanical properties of the collagen casing improve.
Also the distance between the casing molecules is reduced, which improves the cross-linking process and increases the stability of the casing. The amount of water extracted out of the casing depends on the brine concentration, temperature and time.
The valve need to be adjusted so that the brine is circulated over the trough as well as over the filter in a rate of 20:80. While solving the brine powder, the water can be circulated through the filter, the brine is easily solved in the water. Solve until the solution has become suturated.

3.3.7 Crimper unit

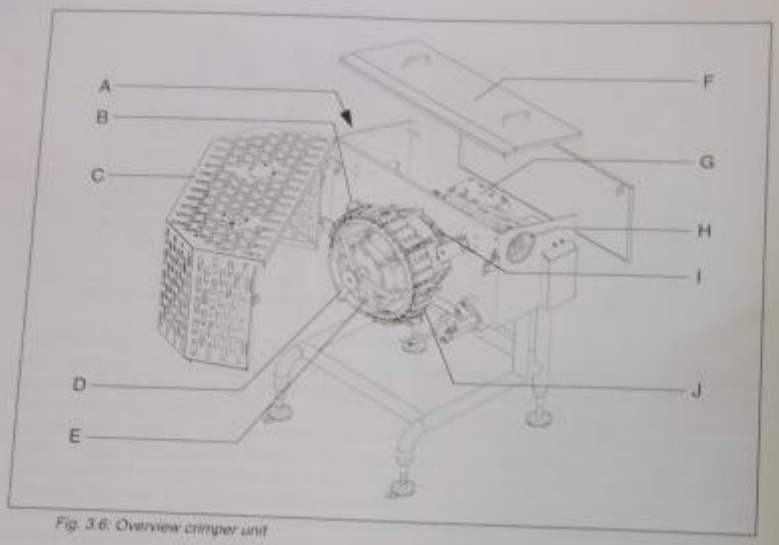


Fig. 3.6: Overview crimper unit

The crimper unit consists of:

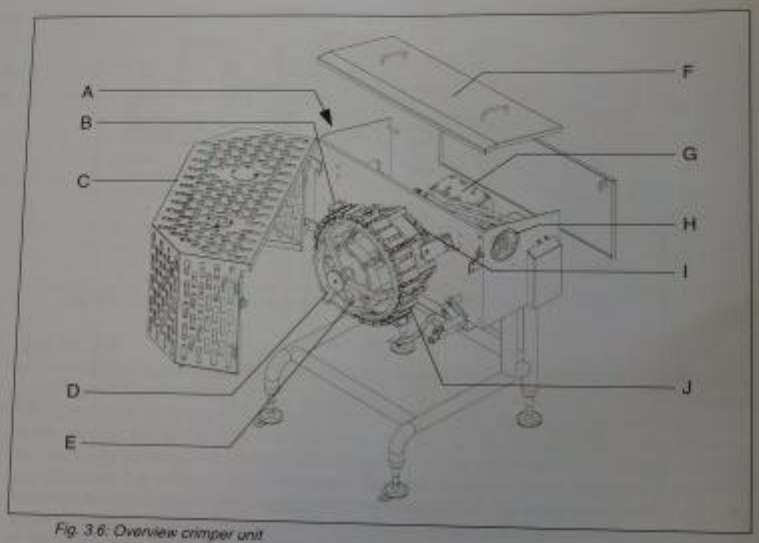
A. Jog Button
B. Crimper-bodies
C. Crimper cover
D. Clamping ring
E. Crimper-wheel
F. Motor drive cover
G. Crimper wheel drive
H. Crimper cam adjustment
I. Crimper cam
J. Support ring

3.3.9

See *Fig. 3.6*

After removal of the brine the sausage rope is cut into individual links by means of a so-called crimper unit. On this, crimper bodies (6.1) are mounted on the crimper-wheel (6.3). The amount of crimper bodies on the wheel determines the fresh length of the sausage. The amount of bodies can be varied between 3 and 36. By choosing the correct crimper-wheel and separation disc the desired length can be chosen. The circumference of the crimper-wheel is 1755 mm. Divide the circumference by the amount of crimper-bodies on the crimper-wheel for the fresh length of the sausage.

3.3.7 Crimper unit



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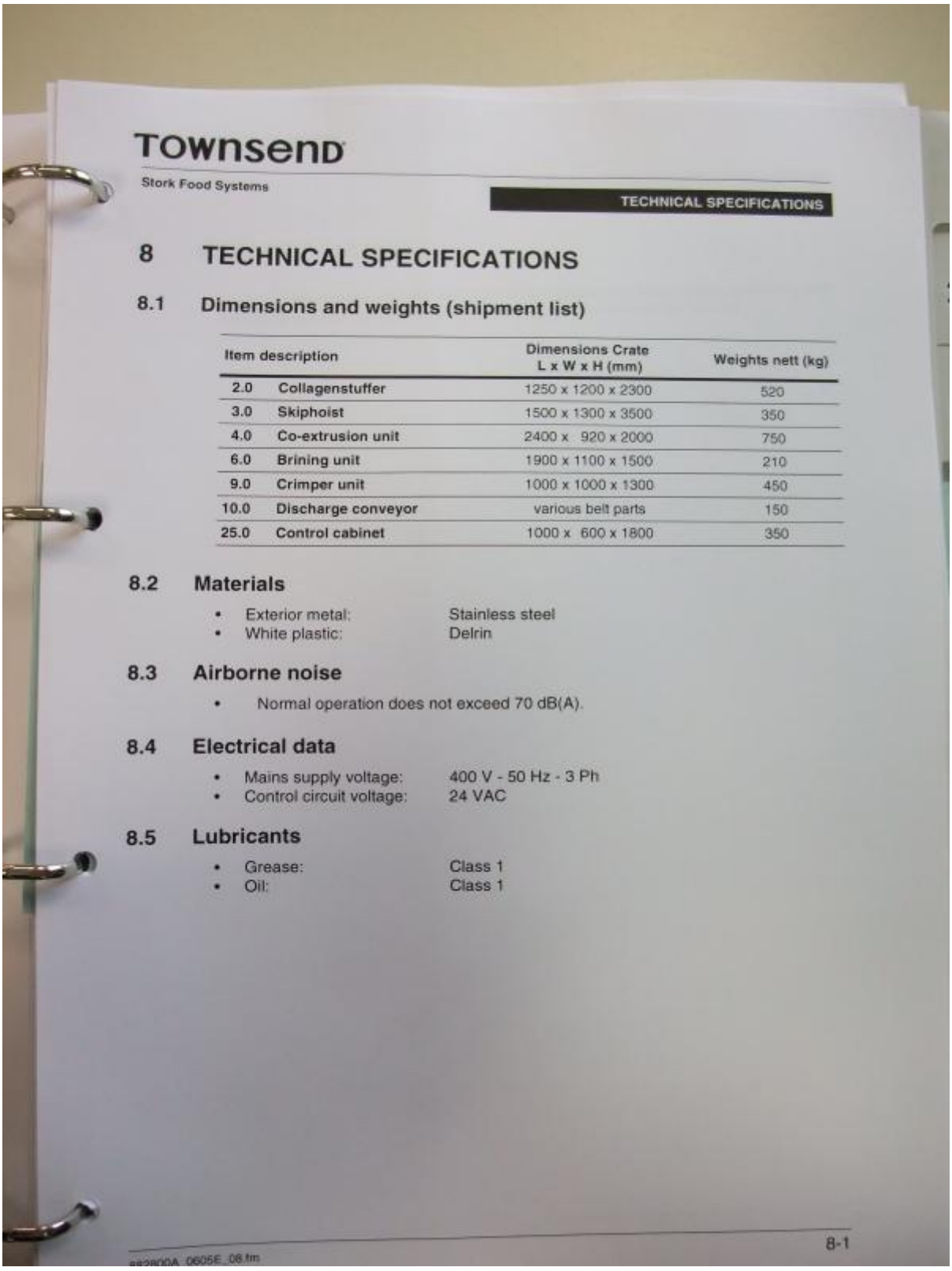

TOWNSEND

Stork Food Systems

TECHNICAL SPECIFICATIONS

8 TECHNICAL SPECIFICATIONS

8.1 Dimensions and weights (shipment list)

Item description		Dimensions Crate L x W x H (mm)	Weights nett (kg)
2.0	Collagenstuffer	1250 x 1200 x 2300	520
3.0	Skiphoist	1500 x 1300 x 3500	350
4.0	Co-extrusion unit	2400 x 920 x 2000	750
6.0	Brining unit	1900 x 1100 x 1500	210
9.0	Crimper unit	1000 x 1000 x 1300	450
10.0	Discharge conveyor	various belt parts	150
25.0	Control cabinet	1000 x 600 x 1800	350

8.2 Materials

- Exterior metal: Stainless steel
- White plastic: Delrin

8.3 Airborne noise

- Normal operation does not exceed 70 dB(A).

8.4 Electrical data

- Mains supply voltage: 400 V - 50 Hz - 3 Ph
- Control circuit voltage: 24 VAC

8.5 Lubricants

- Grease: Class 1
- Oil: Class 1

8-1

22

Video:

Asset-Trade

Assessment and Sale of Used Assets world wide

Am Sonnenhof 16

47800 Krefeld

Germany

Tel.: +49 2151 32500 33

Fax.: +49 2151 65 29 22

Email: info@asset-trade.de

Web.: https://www.asset-trade.de/en

Ref. No.:
50-12102122

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Sold
Sold as:
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Buyers Premium:
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Germany

Images:

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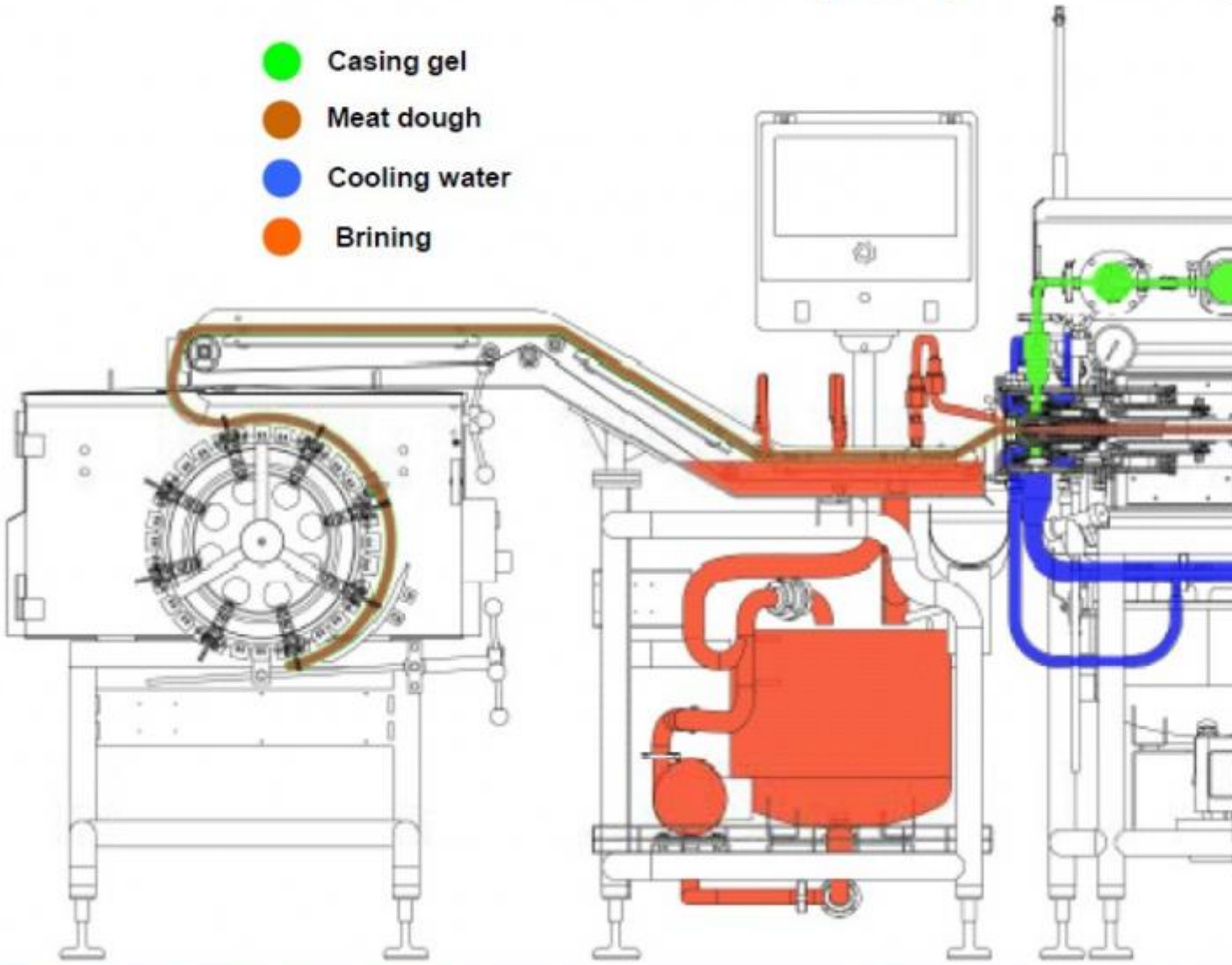
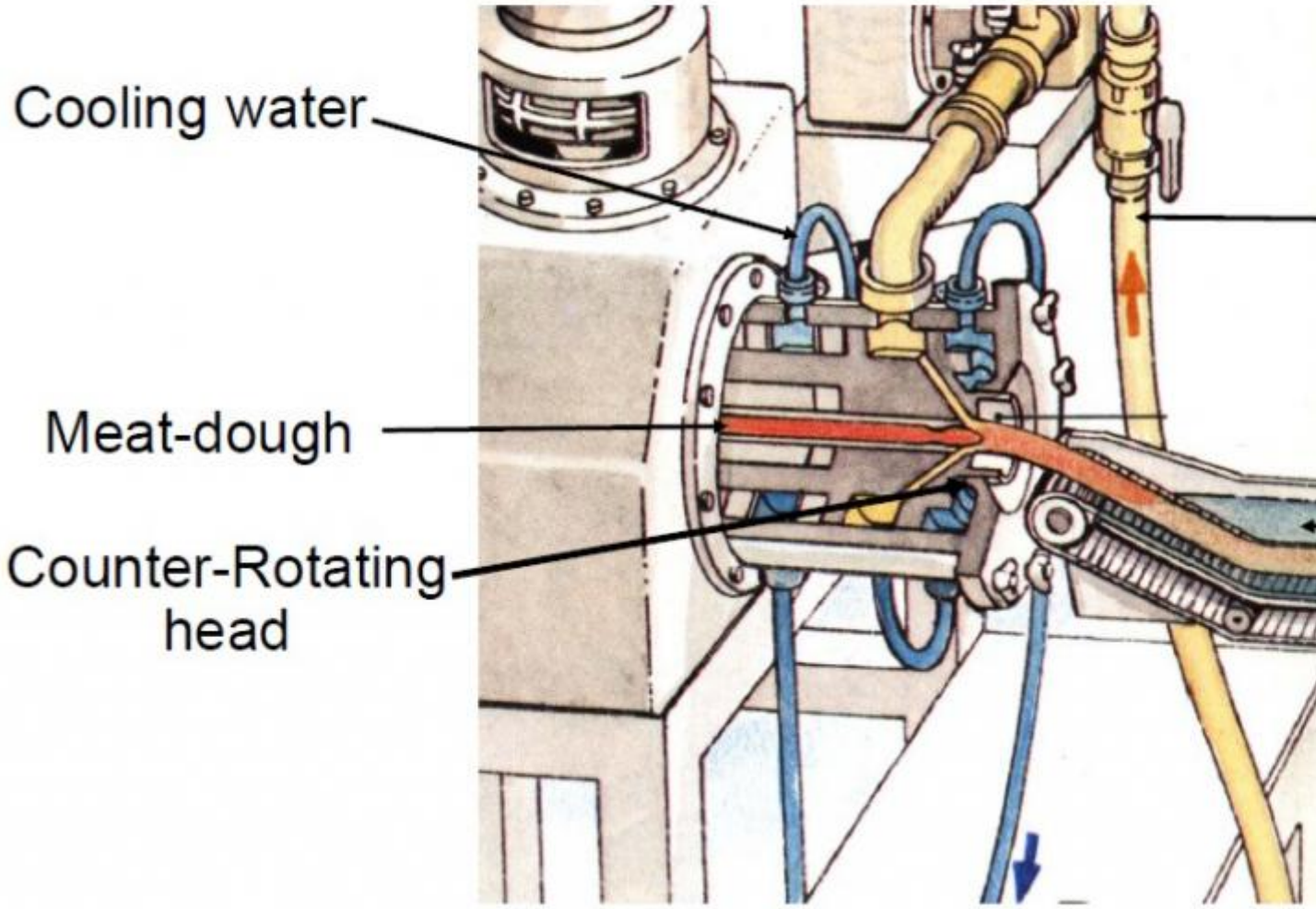


Co-Extrusion (QX) Princi

Sausage diameter



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Auftragbestätigung: 6
Datum : *18. Januar 2008*

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TOWNSEND

CE

EG Konformitätserklärung

(Entsprechend Anhang II Buchstabe A)

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Seriennummer: **E186, E171, E176, E226**

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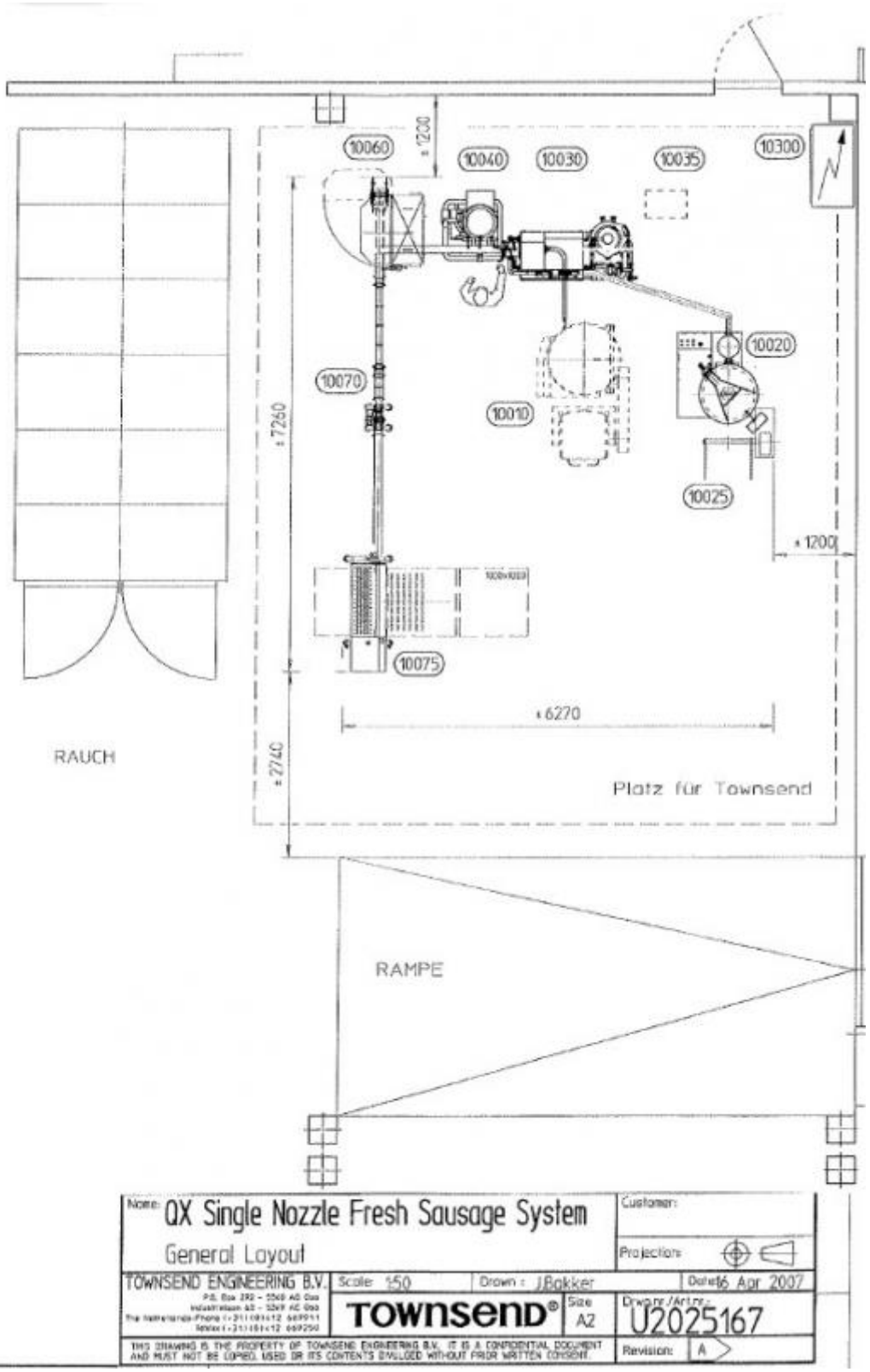
++	TOWNSEND - Documentation	

Ausstellungsdatum: 26 - Feb - 2008

Autorisierte Unterzeichnung: i.a.

Titel: ☐ Vizepräsident, Produkt-Entwicklung ☒ Direktor der Herstellung

Stork Townsend B.V. - Industrielaan 63 - 5349 AG OSS - The Netherlands
Stork Townsend Inc. - 2425 Hubbell Avenue, P.O. Box 1433 - Des Moines, Iowa - U.S.A. 50305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10075
± 1200
± 7260
± 1200
± 6270
± 2740
RAUCH
Platz für Townsend
RAMPE
Name: QX Single Nozzle Fresh Sausage System
General Layout
Customer:
Projection:
TOWNSEND ENGINEERING B.V.
Scale: 1:50
Drawn: J.Bakker
Date: 16 Apr 2007
TOWNSEND®
Size: A2
Drwng/Artnr.: U2025167
Revision: A
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TOWNSEND

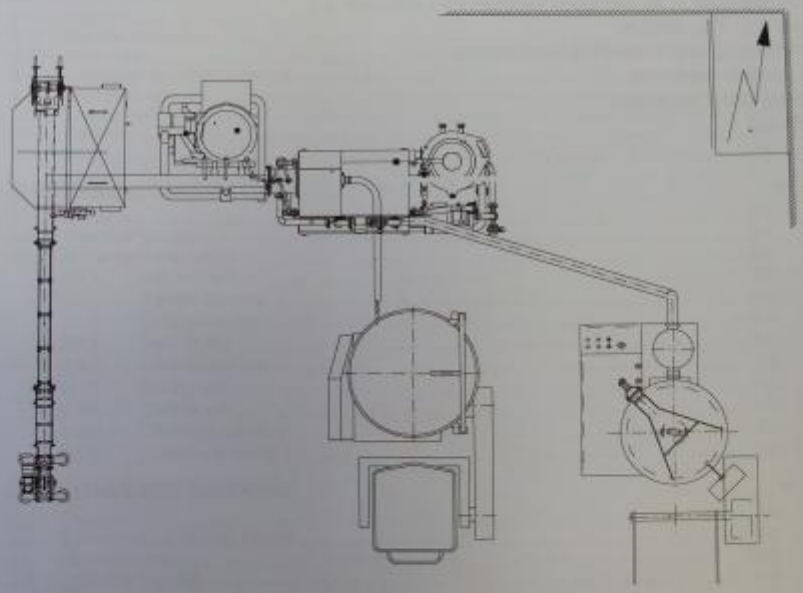
Stork Food Systems

Operator's Manual

P/N: 882800_0605E
Version: 2006/05 - English

QX Fresh

Sausage System



Stork Townsend B.V.
PO. Box 292, NL-5340 AG OSS
Industrielaan 63, NL-5349 AE OSS
The Netherlands
Tel.: +31 (0)412 669 911
Fax: +31 (0)412 669 250

3.3.2 System overview

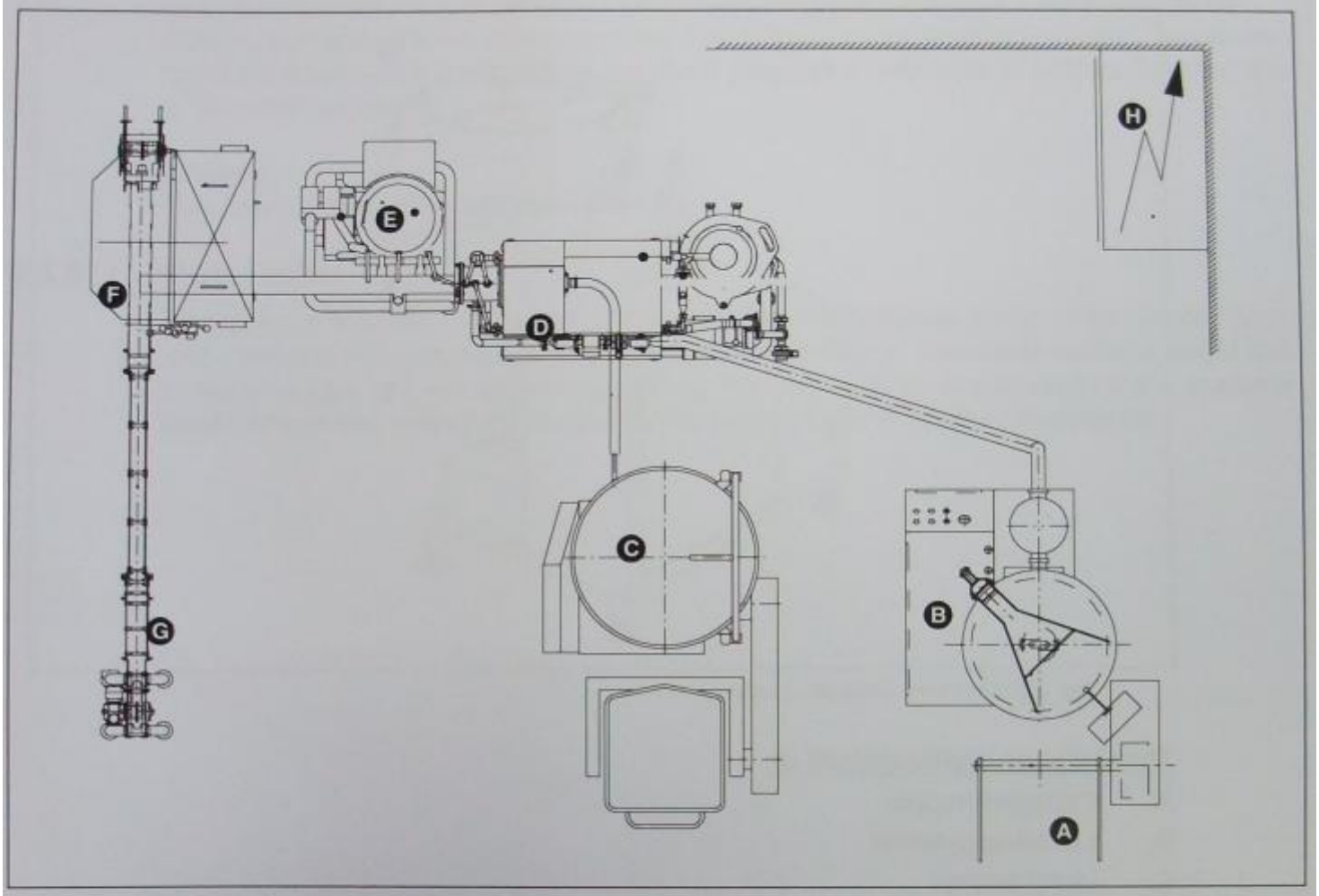


Fig. 3.1: System overview

The Co-extrusion system consist of:

A. Skiphoist (lifting device)
B. Collagen stuffer
C. Meat stuffer
D. Co-extrusion unit
E. Brining unit
F. Crimper unit
G. Crimper discharge conveyor
H. Electric cabinet

3.3.3 Collagen stuffer

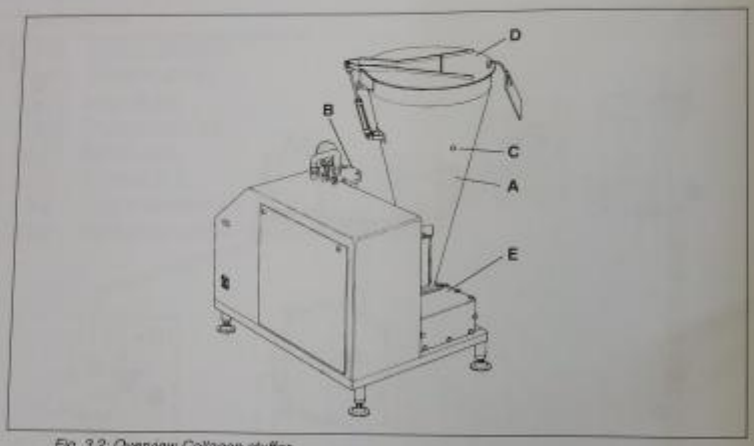


Fig. 3.2: Overview Collagen stuffer

The Collagen stuffer consist of:

A. Collagen hopper
B. Levelling cylinder
C. Level sensor
D. Cover
E. Rotary Pump

By means of the collagen stuffer collagen is supplied to the metering pump of the co-extrusion units.
The collagen is conveyed to the rectangular filler opening of rotating rotary pump (E) from this steep sided hopper (A). The rotary pump presses the collagen via the non-return valve, the pneumatically buffered levelling cylinder (B) and the collagen piping to the metering pump.

The levelling cylinder equalizes pressure fluctuations and switches the rotary pump E on and off. The levelling cylinder has a surface ratio of 1:4.22 and, depending on the air pre-pressure, determines the end pressure of the collagen in the supply pipeline to the metering pump. The maximum pressure that can be supplied by pump E is 11 bar, so that this pump can still fill the system with collagen at an air pre-pressure of 2.6 bar (2.6 x 4.22= 11 bar) on the levelling cylinder.

If the pump output exceeds collagen consumption by the system, the levelling cylinder will fill up completely, upon which a limit switch will switch off the pump. At this point collagen transport is completely taken over by the levelling cylinder, until the bottom limit switch re-activates the pump and the cycle is repeated. A non-return valve in the levelling cylinder prevents the collagen from flowing back to the pump.

The pump output can be varied with the help of a variator by adjusting the RPM to such an extent that output just exceeds consumption capacity; the pump will then only be switched on and off for the mimimum number of times by the levelling cylinder. The stuffer is supplied with a low level control, for which purpose a level sensor is fitted. This low level activates an alarm.

Beware:
The rotary pump is not allowed to run dry.

3.3.4 Meat stuffer

By means of the meat stuffer meat is supplied to the metering pump of the co-extrusion unit (Chapter Co-extrusion unit) at a consistent pressure. The meat stuffer is not in the scope of supply of Townsend Engineering. The meat stuffer is activated on the operator panel. Check the operator's manual of the meat stuffer for further assistance.

3.3.5 Co-extrusion unit

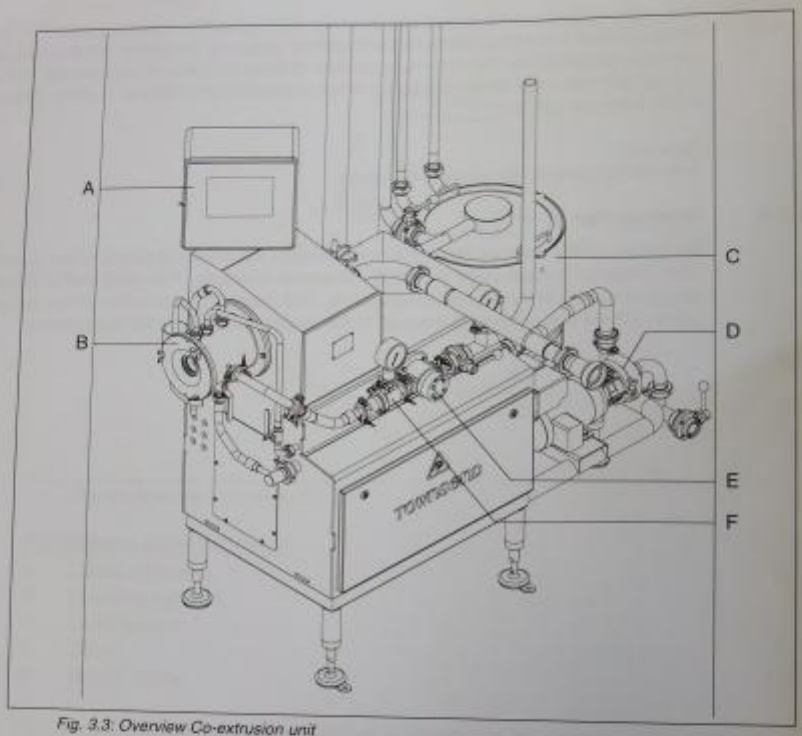


Fig. 3.3: Overview Co-extrusion unit

The Co-extrusion unit consists of:

A. Operator panel
B. Co-extrusion nozzle
C. Cooling water tank
D. Meat metering pump
E. Collagen metering pump
F. Collagen filter

Collagen supply

See *Fig. 3.3*:

The collagen stuffer (§3.3.3) supplies the collagen to the collagen-metering pump (1.2). This pump doses the collagen for the co-extrusion unit. The speed of this pump is adjustable on the operator panel in order to control the collagen flow and thereby the percentage of collagen on the sausage.

A minimum pre-pressure before the collagen pump of at least 2.5 Bar and a maximum of

16

10 bar is required in order to dose properly. The Pre-pressure can be checked by means of the pressure gauge (1.9)

In order to stabilize the collagen casing a cross-linker agent is required. This cross-linking agent is injected into the collagen gel by means of the inline-mixing pump. (2.3) The cross-linker is injected in the collagen gel straight after the collagen-metering pump (1.3). To mix the collagen and cross-linker homogenous a dynamic mixer is (1.5) used.

After the inline mixing the collagen is filtered (1.8) in order to remove possible coarse particles out of the collagen. These particles might otherwise block the aperture of the co-extrusion nozzle. After this filter a pressure gauge is mounted (1.10), a pressure difference between the gauges (1.9 and 1.10) indicates a partial blockage of the filter. A pressure difference of maximum 1 bar is acceptable. If the difference is higher the filter must be cleaned.
After the filter, the collagen is pumped into the co-extrusion nozzle (1.7).

Meat supply

See *Fig. 3.3*:

The meat-stuffer (§3.3.4) pumps the meat dough to the meat-metering pump (1.2). The metering pump doses the meat to the collagen unit. This speed of this pump is adjustable in order to control the flow to the co-extrusion unit. A minimum pressure of approximately 5 bar before the meat metering pump is required in order to dose properly.
After the metering pump, the meat is pumped via the stuffing tube into the Co-extrusion nozzle (1.7)

Co-extrusion

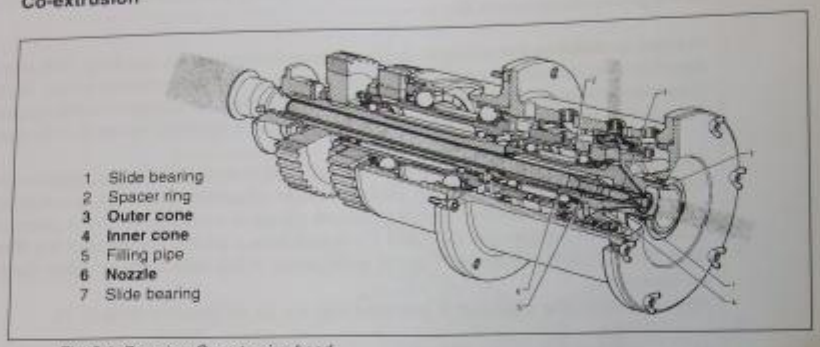


Fig. 3.4: Overview Co-extrusion head

See *Fig. 3.4:*

An outer cone (3) concentrically surrounds the inner cone (4). The inner cone is fitted with a stuffing tube and a nozzle (6). The interior of the nozzle forms a restrictor. The orientation of the meat particles in the dough entering the nozzle are disrupted by the restrictor in this pipe so that a "random orientation" is created, i.e. an isotropic condition, which results in a firm sausage with uniform shrinkage at heating and drying. The collagen dosing pump pumps the collagen into the nozzle. The collagen is pumped through the aperture between the inner and outer cones and forms a tubular skin around the meat dough. The inner and outer cone rotate in opposite directions, causing the collagen fibres in the skin to lie crosswise on top of each other.

Cooling water

Cooling water is required to cool the co-extrusion nozzle. This is in order to prevent the collagen temperature rising above 20°C during extrusion. When the temperature of the collagen is above 20°C, the collagen will gelatinize and loses its functionality completely.

3.3.6 Brining unit

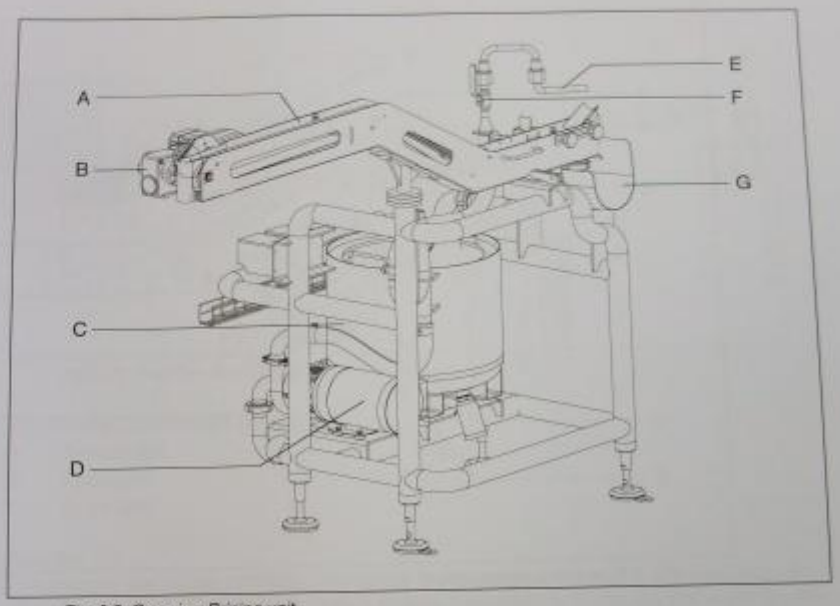


Fig. 3.5: Overview Brining unit

The Brining unit consists of:

A. Brine conveyor belt
B. Brine conveyor drive
C. Brine circulation tank
D. Brine circulation pump unit
E. Brine pipe
F. Brine regulating valve
G. Disposal bowl

See *Fig. 3.5*

The rope is put on a conveyor belt (A) that brings the sausage rope from the extrusion nozzle to the crimper unit. During that transport, the sausage rope is dipped in a brine bath. By means of osmosis the water content of the collagen gel is lowered and the collagen protein is denatured to affect the mechanical strength of the casing. If more water is extracted out of the collagen gel the mechanical properties of the collagen casing improve.
Also the distance between the casing molecules is reduced, which improves the cross-linking process and increases the stability of the casing. The amount of water extracted out of the casing depends on the brine concentration, temperature and time.
The valve need to be adjusted so that the brine is circulated over the trough as well as over the filter in a rate of 20:80. While solving the brine powder, the water can be circulated through the filter, the brine is easily solved in the water. Solve until the solution has become suturated.

3.3.7 Crimper unit

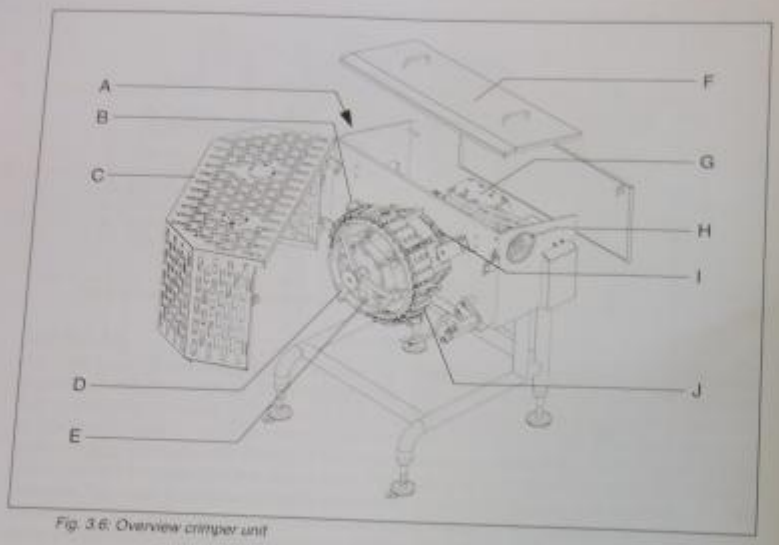


Fig. 3.6: Overview crimper unit

The crimper unit consists of:

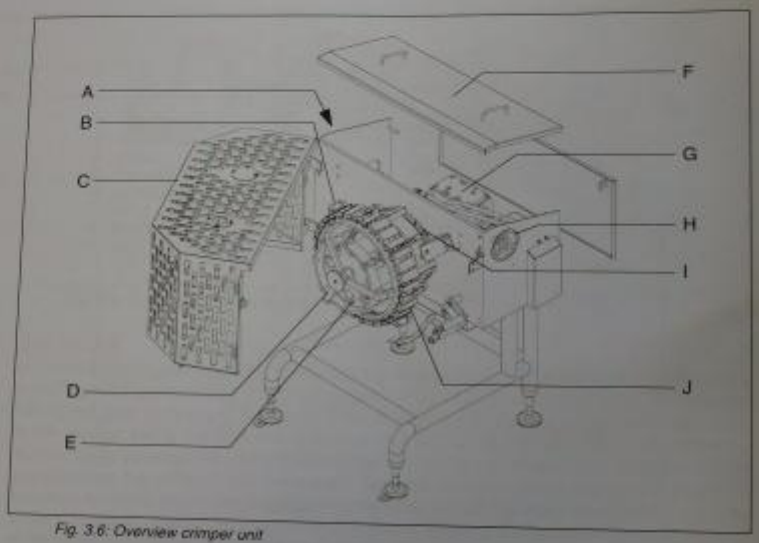
A. Jog Button
B. Crimper-bodies
C. Crimper cover
D. Clamping ring
E. Crimper-wheel
F. Motor drive cover
G. Crimper wheel drive
H. Crimper cam adjustment
I. Crimper cam
J. Support ring

3.3.9

See *Fig. 3.6*

After removal of the brine the sausage rope is cut into individual links by means of a so-called crimper unit. On this, crimper bodies (6.1) are mounted on the crimper-wheel (6.3). The amount of crimper bodies on the wheel determines the fresh length of the sausage. The amount of bodies can be varied between 3 and 36. By choosing the correct crimper-wheel and separation disc the desired length can be chosen. The circumference of the crimper-wheel is 1755 mm. Divide the circumference by the amount of crimper-bodies on the crimper-wheel for the fresh length of the sausage.

3.3.7 Crimper unit



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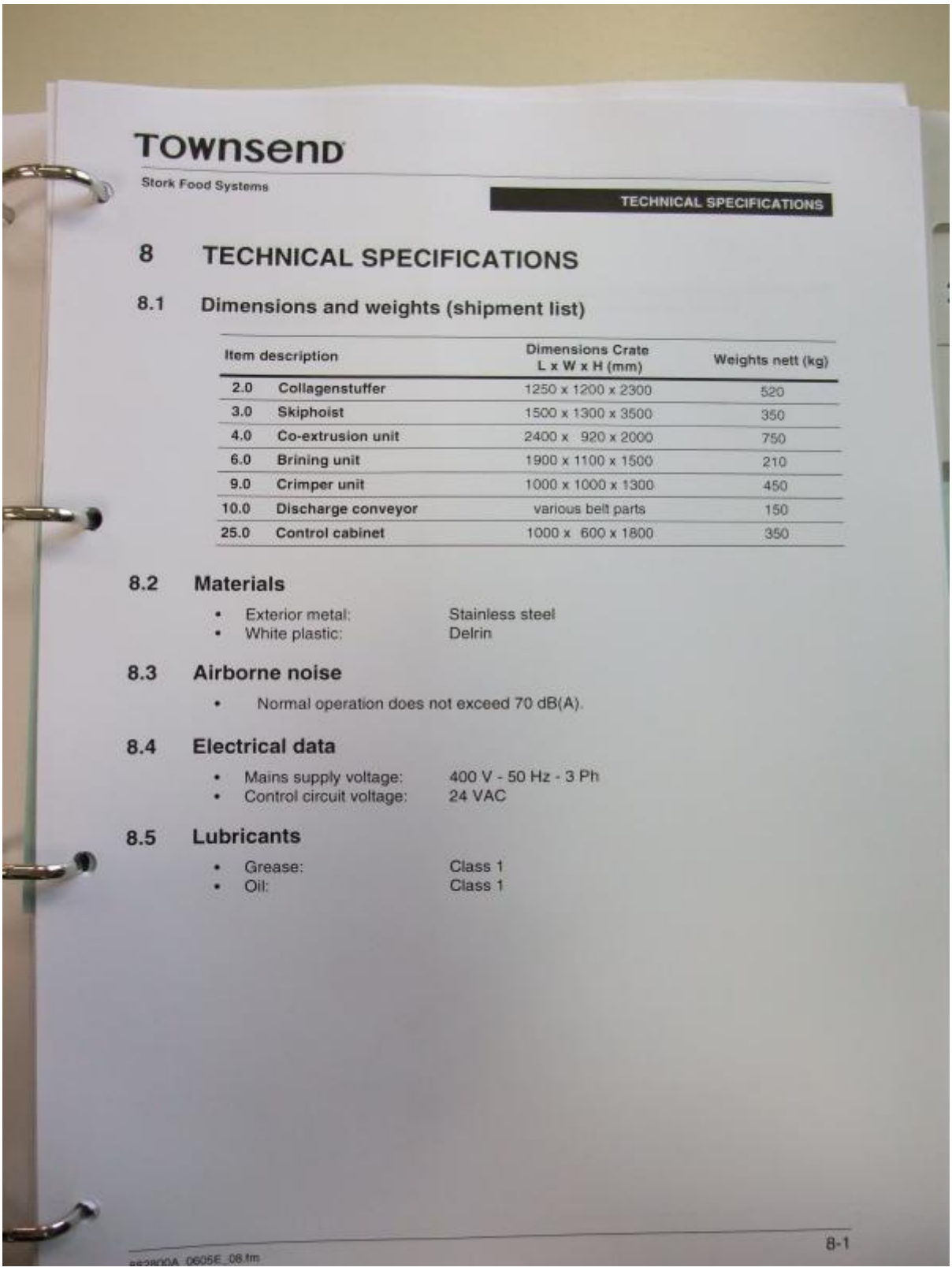

TOWNSEND

Stork Food Systems

TECHNICAL SPECIFICATIONS

8 TECHNICAL SPECIFICATIONS

8.1 Dimensions and weights (shipment list)

Item description		Dimensions Crate L x W x H (mm)	Weights nett (kg)
2.0	Collagenstuffer	1250 x 1200 x 2300	520
3.0	Skiphoist	1500 x 1300 x 3500	350
4.0	Co-extrusion unit	2400 x 920 x 2000	750
6.0	Brining unit	1900 x 1100 x 1500	210
9.0	Crimper unit	1000 x 1000 x 1300	450
10.0	Discharge conveyor	various belt parts	150
25.0	Control cabinet	1000 x 600 x 1800	350

8.2 Materials

- Exterior metal: Stainless steel
- White plastic: Delrin

8.3 Airborne noise

- Normal operation does not exceed 70 dB(A).

8.4 Electrical data

- Mains supply voltage: 400 V - 50 Hz - 3 Ph
- Control circuit voltage: 24 VAC

8.5 Lubricants

- Grease: Class 1
- Oil: Class 1

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Video:

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Am Sonnenhof 16

47800 Krefeld

Germany

Tel.: +49 2151 32500 33

Fax.: +49 2151 65 29 22

Email: info@asset-trade.de

Web.: https://www.asset-trade.de/en