

Hot smoking systems from NESS: the economic standard !

Quality is still the best basis.

Be it meat products, poultry, fish or cheese – smoke imparts taste and colour and therefore often individual character to a wide variety of products.

NESS hot smoking systems uniquely combine our experience from more than 100 years. Customer-oriented construction, solid and robust design, high processing quality and high-quality materials are the basis for reliable equipment that proves itself in the daily work routine. From single to multi-trolley systems, NESS offers the right size, equipment and heating method for every plant configuration.

All NESS systems are characterised by:

- All-stainless steel design.
- User-friendly operation, maintenance and cleaning.
- Low energy consumption for all available heating variants.
- High operating safety, durable technology, robust design.
- Can easily be integrated into existing and new production lines.
- Comprehensive range of accessories.
- Exceptionally flexible construction for individual adaptation.
- Environment-friendly low-noise operation.

NESS



The UNIGAR®-range from NESS: simply good.

This system offers the processor a proven concept for nearly all treatment methods. UNIGAR® equipment with fully automatic process control ensures consistent quality during smoking, hot-air cooking, baking, roasting, steam-cooking, drying, sweating, reddening and thawing. Appropriate additional accessories allow maturing, conditioning and showering.

UNIGAR® universal chambers are made of stainless steel. Different heating methods are available (see table). Three different smoke generating systems are available: friction, saw dust or liquid smoke. Air circulation and distribution via injection pipes and multi-stage circulation system.

Further equipment:

- Humidity measuring station, automatic flap setting, core temperature sensor, self-cleaning device and air conditioning unit installed in the head section or as central unit for roof or back wall mounting, depending on system type. (For systems with central air conditioning unit with reciprocal air distribution)
- From powerful and proven microprocessor control units to innovative touch screen solutions (separate brochure available)
- Circo-Smoke-System®



Technical Data UNIGAR® single trolley system (COMPACT-CS/OPTIMA-CS)

Type		1800	2000	2002	2202	2200	2502	2500
Chamber width	m	1,09	1,32	1,32	1,32	1,50	1,32	1,50
Total width	m	1,58	1,81	1,81	1,81	1,99	1,81	1,99
Depth	m	0,92	0,93	1,28	1,28	1,28	1,28	1,28
Chamber height	m	2,23	2,23	2,23	2,39	2,39	2,70	2,70
Total height	m	2,55	2,55	2,55	2,71	2,71	3,00	3,00
Required room height	m	2,75	2,75	2,75	2,92	2,92	3,20	3,20
Trolley size: Width	m	0,85	0,95	0,95	0,95	1,02	0,95	1,02
Depth	m	0,75	0,75	1,02	1,02	1,02	1,02	1,02
Height	m	1,55	1,55	1,55	1,70	1,70	2,00	2,00
Trolley capacity	kg*	160	200	250	300	330	360	400
Connected loads:								
Heating: Natural gas H	m ³ /h	2,0	2,2	2,5	2,75	2,75	3,4	3,4
Liquid gas (propane)	kg/h	1,55	1,71	1,94	2,13	2,13	2,64	2,64
Fuel oil extra light (diesel)	kg/h	1,90	2,00	2,15	2,33	2,33	2,88	2,88
Electric	kW	15,0	18,0	19,2	22,4	22,4	28,8	28,8
Steam 0,5/8,0 bar overpressure	kg/h	-	-	-	60	60	60	60
Air circulation + smoke generator COMPACT-CS/OPTIMA-CS	kW	7,1/1,8	8,5/3,2	8,5/3,2	8,5/3,2	8,5/3,2	8,5/3,2	8,5/3,2

*for calibre 75 cold cuts

Technical Data UNIGAR® multi-trolley system Type I with air conditioning chamber

Type		5000/1I	7500/1I	10000/1I	10000/2I	15000/2I	20000/2I	25000/2I
Chamber width	m	1,50	1,50	1,50	3,00	3,00	3,00	3,00
Chamber depth	m	2,45	3,55	4,65	2,45	3,55	4,65	5,75
with back wall mounting	m	3,80	4,73	-	3,88	5,00	6,45	7,55
Chamber height	m	2,50	2,50	2,50	2,50	2,50	2,50	2,50
with roof mounting	m	3,72	3,72	4,61	4,61	4,61	4,90	4,90
No. of trolleys 1,00 x 1,00 x 2,00 m	no.	2	3	4	4	6	8	10
Chamber capacity	kg*	800	1200	1600	1600	2400	3200	4000
Trolley rows		1	1	1	2	2	2	2
Connected loads:								
Heating: Natural gas H	m ³ /h	6,4	7,5	9	9	11	13	15
Liquid gas (propane)	kg/h	5,0	5,83	7	7	8,55	10,1	11,65
Fuel oil extra light (diesel)	kg/h	4,8	5,9	7,2	7,2	8,4	11	11
Electric	kW	48,6	72,0	97	97	144	-	-
Steam 0,5/8,0 bar overpressure	kg/h	120	180	240	240	360	480	600
Circulation fan	kW	9,5	9,5	13	13	16	22	26
Fresh air fan	kW	1,1	1,1	2,5	2,5	4	4	4

* for calibre 75 cold cuts

Technical Data UNIGAR® multi-trolley system Type S with individual fans

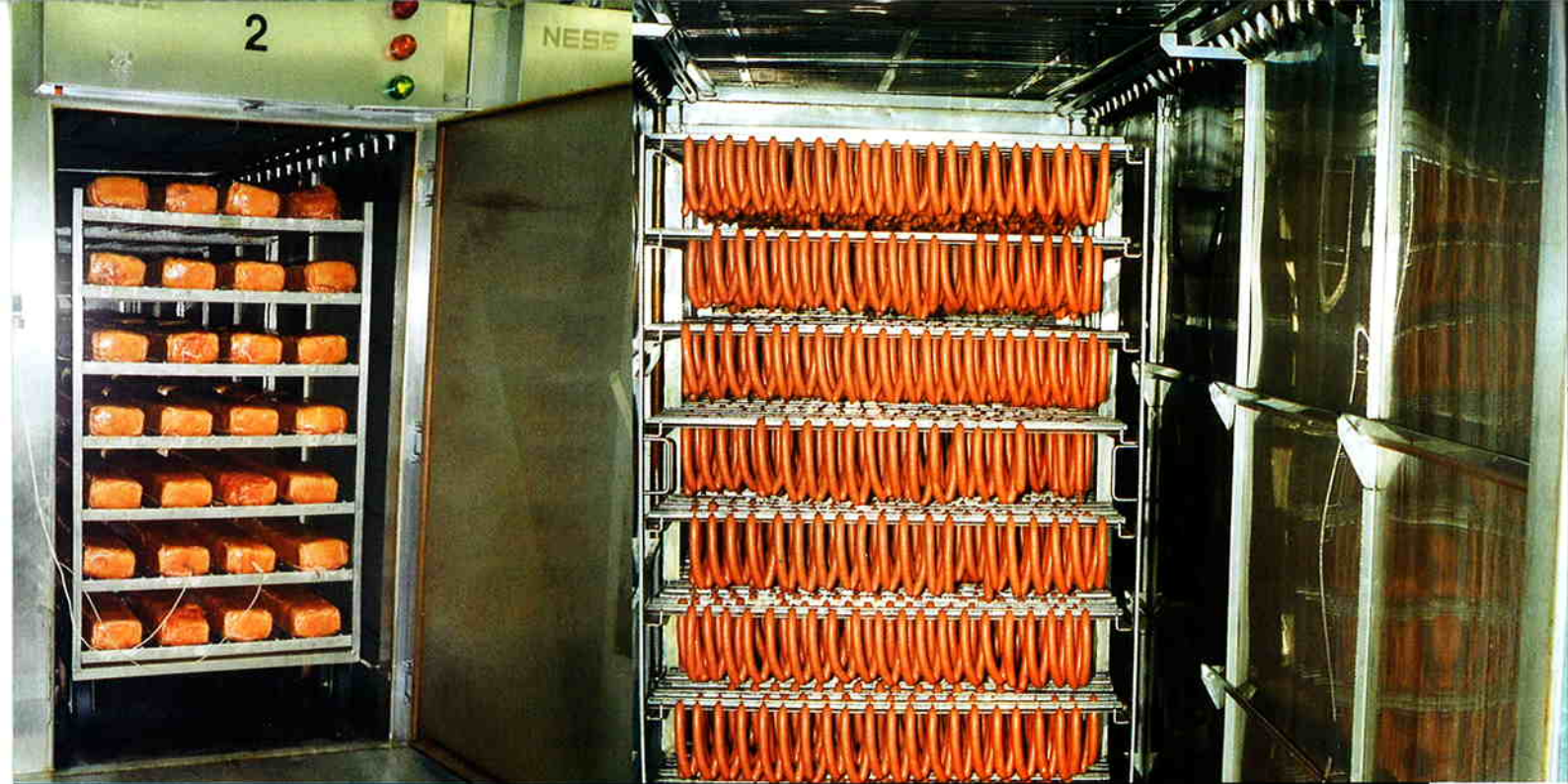
Type		5000/1 S	7500/1 S	10000/1 S	10000/2 S	12500/1 S	15000/1 S	15000/2 S	20000/1 S	20000/2 S	25000/1 S	25000/2 S
Chamber width	m	1,50	1,50	1,50	3,00	1,50	1,50	3,00	1,50	3,00	1,50	3,00
Chamber depth	m	2,45	3,55	4,65	2,45	5,75	6,85	3,55	9,05	4,65	11,25	5,75
Chamber height	m	2,70	2,70	2,70	2,70	2,70	2,70	2,70	2,70	2,70	2,70	2,70
with motors and piping	m	3,60	3,60	4,10	4,10	4,10	4,10	4,10	4,10	4,10	4,10	4,10
No. of trolleys 1,00 x 1,00 x 2,00 m	no.	2	3	4	4	5	6	6	8	8	10	10
Chamber capacity	kg*	800	1200	1600	1600	2000	2400	2400	3200	3200	4000	4000
Trolley rows		1	1	1	2	1	1	2	1	2	1	2
Connected loads:												
Heating:												
Natural gas H	m ³ /h	6,4	-	-	2 x 6,4	-	-	-	-	-	-	-
Liquid gas (propane)	kg/h	5,0	-	-	2 x 5,0	-	-	-	-	-	-	-
Fuel oil extra light (diesel)	kg/h	4,8	-	-	2 x 4,8	-	-	-	-	-	-	-
Electric	kW	48,6	72	97(81)**	97(81)**	120	144	144	-	-	-	-
Steam 0,5/8,0 bar overpres.	kg/h	120	180	240	240	300	360	360	480	480	600	600
Circulation fan	kW	5	7,5	10	10	12,5	15	15	20	20	25	25
Fresh air fan	kW	1,1	2,5	2,5	2,5	2,5	4	4	4	4	4	4

* for calibre 75 cold cuts

** = value in brackets for HD/E equipment

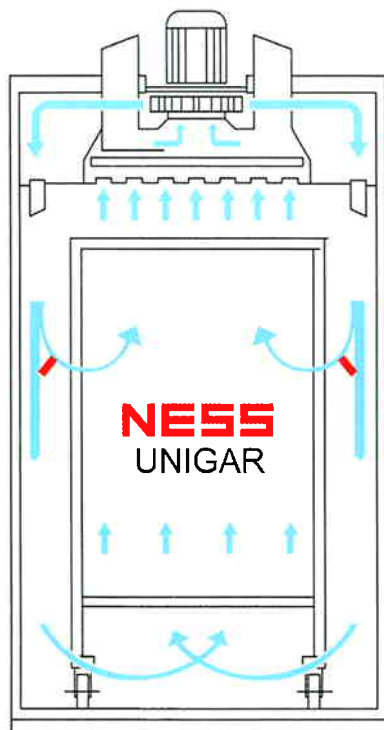
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NESS



Unique air distribution.

Our extensive know-how continuously leads to technical developments that underline our competitive advantage. Particularly the air distribution in our systems is literally in a class of its own. Only our patented air guide vanes enable absolutely uniform distribution of the air flows over the whole of the smoke chamber.



The figure clearly shows how uniformly warm dry air constantly flows around the goods through the patented air guide vanes. The familiar problems occurring through cooled and frequently moisture-enriched air are definitely a thing of the past. Only this technology enables speedy and uniform drying.

Furthermore, the negative setting angle of the air guide vanes effectively prevents discoloured water splashes from reaching the goods. Once again we demonstrate that good ideas can have a large effect.

The air guide vanes divert part of the hot dry air into the upper third of the chamber trolley. The consequence: more uniform heating and drying of the goods in the chamber trolley, no over-drying of the goods in the lower region, overall faster drying of the whole material.



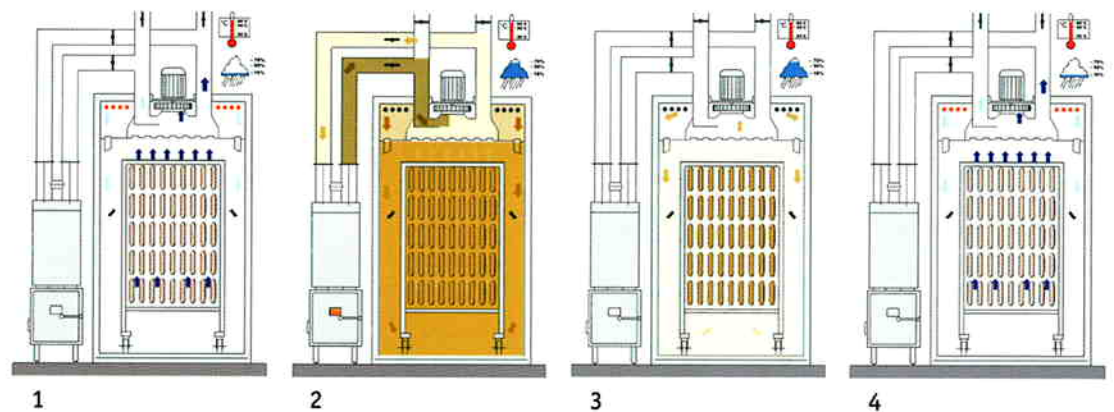
The Circo-Smoke-System®: economic and environment-friendly.

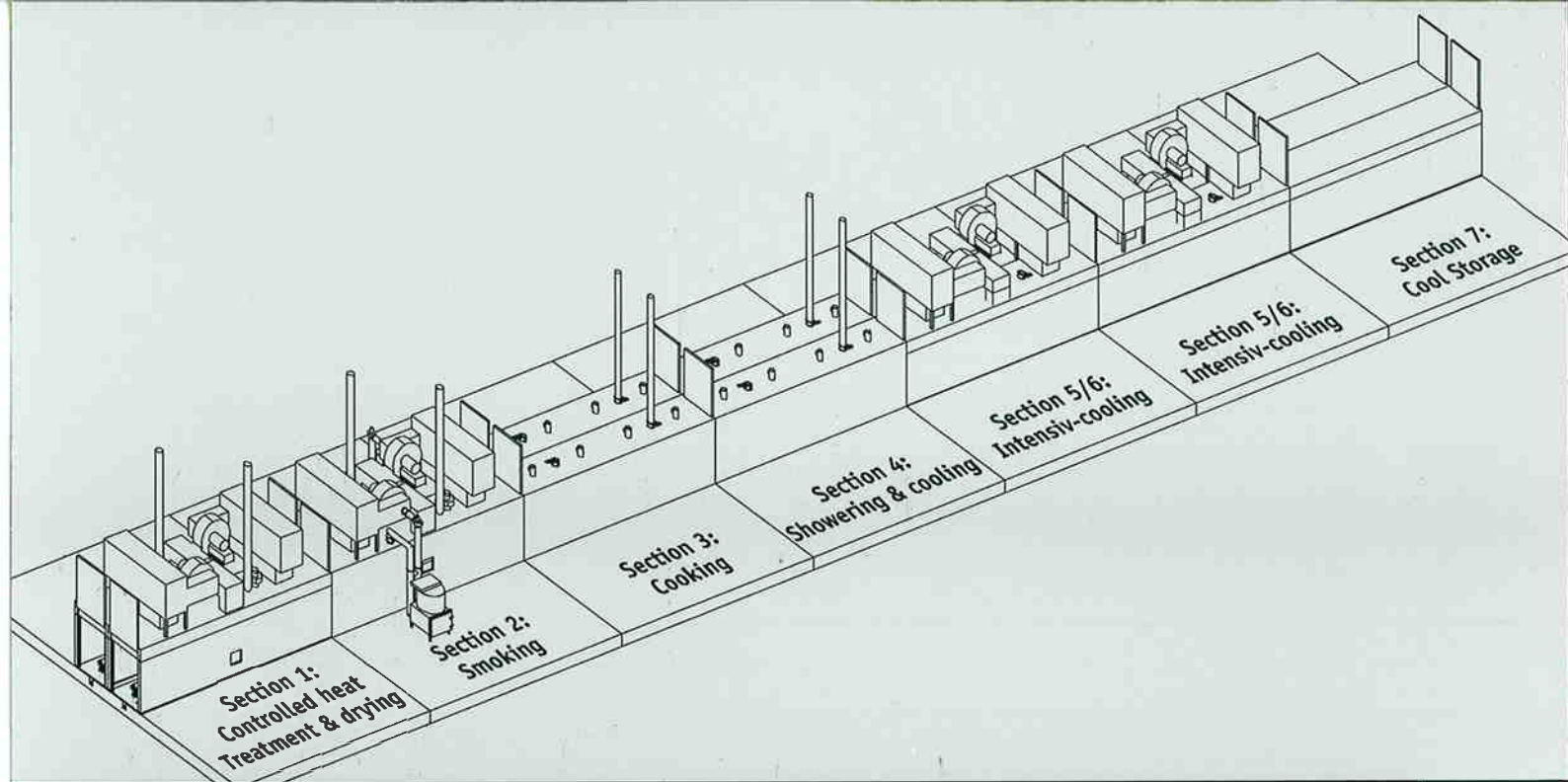
A development from NESS that may well set new standards. The Circo-Smoke-System® combines economic and environment-friendly system operation with the NESS-quality our customers have become accustomed to. Independent of the smoke generating system, this method enables compliance with the technical instructions of clean air without post-combustion system, catalysts or air washer. With the Circo-Smoke-System®, smoke generators only generate as much smoke as necessary to accomplish the task in hand. The closed system utilises the smoke generated in an optimum way and is characterised by minimum energy consumption, minimum quantities of waste water and low contamination of the smoke tubes.

The system uses up to 80 percent less smoke than open systems – another plus point in terms of economy!

NESS Circo-Smoke-System®:
*suitable for all system sizes –
 here is how it works :*

1. *Drying with fresh and exhaust air flaps open*
2. *Smoking with fresh and exhaust air flaps closed. Smoke generator and treatment chamber operate as a closed system.*
3. *Shutting down the smoke generator in the closed system. Air circulation continues to smoke the goods, whilst the smoke atmosphere becomes increasingly thinner.*
4. *At the end of the smoking process, a quantity of residual atmosphere equivalent to one chamber volume is exhausted to ambient.*





As a transfer system also in a class of its own.



The NESS-CATHSE system was developed specifically for industrial requirements. Our automatic transfer systems enable economic heat and smoke treatment of meat and sausage products in large quantities according to industrial standards.

Blocks of 2 to 10 standard smoking trolleys or hanging frames are transported through the various treatment zones via an automatic conveying system. The blocks are treated differently in each of the individual zones. That is, the process steps of drying, smoking, cooking and chilling are carried out separately with closed doors. They are transported to the next zone only when the process is complete.

This means that each product block can be treated in a standardised fashion within accurately defined conditions and specified parameters (e.g. temperature, humidity, smoke concentration, etc...), ensuring homogeneous and uniform results for each production batch. NESS-CATHSE equipment therefore plays an important part in terms of quality assurance.



All system areas are separated from each other in terms of air circulation. In combination with the environment-friendly Circo-Smoke-System®, NESS-CATHSE equipment can be operated with saw dust, friction or liquid smoke comply with air quality regulations (technical instructions of clean air) without the need for post-combustion, catalysts or air washer. NESS-CATHSE installations are designed specifically according to customer requirements. The sophisticated basic concept enables simple reorganisation of the treatment programmes for various products and gives the operator tremendous flexibility for reacting to market or product changes.



Powerful heat treatment with NESS GARMACHE cooking chambers.

NESS GARMACHE cooking chambers can be used for the heat treatment of a large variety of products. They convince through mature technology, optimum heat efficiency and excellent insulation, and enable homogeneous product treatment. They are equipped with a core temperature sensor and a powerful control system, enabling Delta-t and core temperature cooking without problem.

Our GARMACHE cooking chambers can optionally be equipped with automatic door opening, integrated showering, baking and cooling system.





For longer shelf life: intensive cooling systems from NESS.



Longer shelf life, more efficient production and improved quality are demands that can be met through the use of powerful intensive cooling systems. Our systems are suitable for nearly all meat and sausage products, as well as for the production of ready-made meals. They shorten cooldown times after the heat treatment and reduce weight loss.

Design and construction.

NESS intensive cooling systems can be supplied as individual units or in combination with our smoking and cooking systems with automatic trolley transport. Depending on the required throughput, the systems are available as single or dual-row versions. Our intensive cooling systems consist of a hermetically welded corrosion-proof housing, manufactured from high-quality chromium-nickel steel. The equipment comprises a high-performance ventilation system, a showering device and a finned cooling battery. Depending on the type of product to be produced, the finned cooling batteries are made from stainless steel or gold-finished aluminium.

NESS

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