



ISO: 9001 - CERTIFIED

“SWIFT” Wafer Baking Line +NXT



“SW” 24 + NXT

Capacity approx. 80 - 120 kg/hr

“SW” 42 + NXT

Capacity approx. 175 - 180 kg/hr

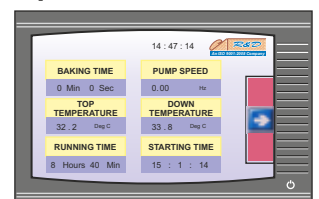
“SW” 48 + NXT

Capacity approx. 190 - 210 kg/hr

The SW wafer production plants comprise of the following single machines:

- Batter Mixer TM 3- 100 litre
- Automatic Wafer Baking Machine “SW” Series.
- Wafer Sheet Cooler SC - 2
- Automatic Wafer Creaming Machine CR - 5
- Book Cooler - BC Series
- Automatic Wafer Cutting Machine WC -5
- Conveyour C1 & C3

Optional



NXT Display

On customer request, cream preparation & wafer book cooler can be integrated to the line.

Wafer Manufacturing process:

The wafer batter is produced in batches, transferred to the batter depositing station of the automatic wafer baking machine and poured onto the baking plates.



The wafer sheets are baked in accordance with the baking time and baking temperature, then removed automatically and transferred to the further processing production line.

The wafer sheets are conveyed over a wafer sheet cooler to cool them down before they reach the wafer spreading machine. The cream for wafer filling is also produced in batches and fed into the cream hopper of the spreader head. The cream filling is applied in fully automatic mode. Then the wafer sheets are stacked on top of one another according to the preset number, and afterwards the wafer books are calibrated to the thickness desired. The wafer book sandwiches are then conveyed for the subsequent cutting and packing process. A fully automatic cutting machine is provided for cutting the wafer sandwich to the desired product dimensions.



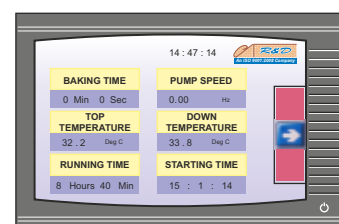
Imported Gas Train



Triangle Burner



Wafer Moulds

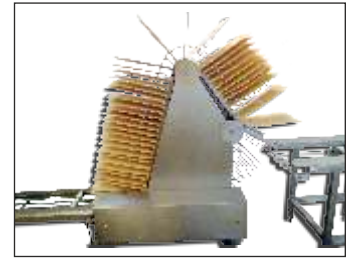
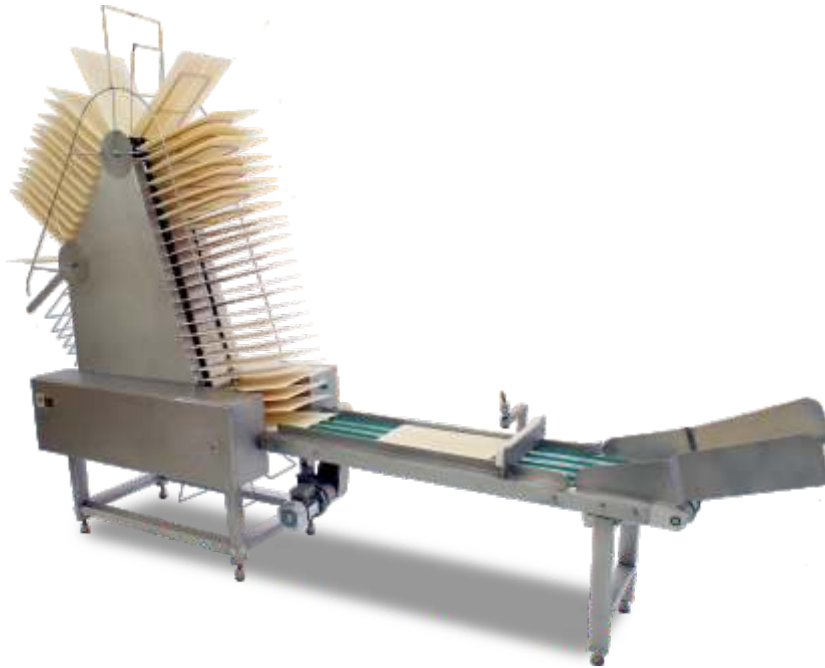


NXT Display (Optional)

Automatic Wafer Baking Machine : SW - Series

- 24,42 or 48 baking tongs.
- Baking plate size: 460 x 290mm.
- Baking plate Engraving on request.
- Fully automatic Imported Gas train.
- Electronic batter depositing control.
- Automatic wafer sheet take-off system.
- Exhaust dampers above oven provided.
- SW series also available without **NXT** controls.

Wafer Sheet Cooler : SC - 2



Sheet Coolers are used to cool the baked wafer sheets in ambient air. The baked wafer sheets enter the sheet cooler equipment where uniform cooling & stress relieving takes place.

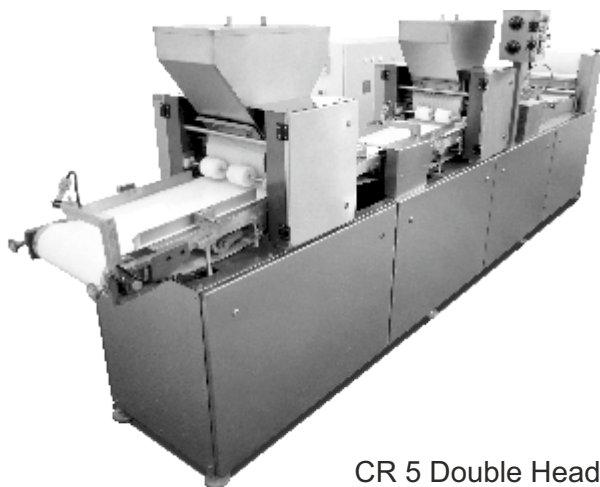
The wafer sheet cooler is designed in the form of an arch so that operator can supervise several machines and move from one to other without hindrance.

The wafer sheets are fed into pair of metallic wire brackets which are positioned to each other. The wire brackets are fastened to a pair of endless roller chains forming an endless chain of holders. Sensing device notes when a sheet has been placed in a bracket and signals the motor to advance the chain one step so that an empty bracket awaits the next wafer sheet.

The carrier brackets, guide plates and all other components of the unit coming into contact with the products are fabricated from stainless steel. Wear-resistant plastic rails are used to guide the carrier chain. The cooler is fabricated from modular components thus allowing the length, width and carrying capacity to be varied easily and as required.

Automatic Wafer Spreading Machine : CR - 5

For spreading of the cream fillings using the contact method.



CR 5 Double Head



CR 5 Single Head

Cream spreading machines can apply a wide range of creams to all kinds of wafer sheets. Normally these machines operate on contact system or optionally on film system. Spreading machines spread an exact amount of fat cream onto the wafer sheets and automatically stack the requested number of spread sheets together with the un-creamed top sheet into a wafer block.

A thermostat allows to heat the cream spreading roller as well as the counter-roller up to an exact temperature. The speed of the two rollers and of the spreading belt can be variably adjusted independently of each other.

Book Cooler Machine - BC - Series



Cooling Process

Book Cooler is a machine used for cooling the cream between the books before they enter the cutting machine. The cooling capacity can be changed according to the wafer product and capacity required.

The wafer book cooler "BC-Series" machine is of a compact design and are fabricated from modular sections. This unit developed by a combination of number of modules will provide required cooling time and also fits in the space available. The bracket, guide plates, and all other parts coming into contact with the product are fabricated from stainless steel.

After spreading the cream on the wafers and completing the pre-preparation of wafer book, it must be cooled in order to harden and set the cream prior to cutting. Partially set cream is required for clean cutting & in turn clean cutting is required for clean packing.

Automatic Wafer Cutting Machine : WC - 5



- Automatic infeed of the wafer sandwiches.
- Stacking device with counter
- Pair of cutting frames for additional cutting sizes easily exchangeable

These are fully automatic machine for cutting flat and hollow wafers filled with cream. These machine take over the cooled down wafer blocks coming from the cooling device or creaming machine and cut them into required number of blocks.

Batter Mixer : TM - 3

Stainless steel execution.

The batter mixer is used for the batch production of batter. Consistent batter is required for quality products.

Wafer Batters for these products are fluid mixtures of flour and water to which small amounts of other ingredients are added.

A recommended formula would be

100 parts flour,
140 parts water,
0.5 part sodium bicarbonate,
0.5 part salt,
0.1 part lecithin and 1 part vegetable Fat.

The other ingredients used may include flavours, colors, ammonium bicarbonate, dried whole milk, corn starch, and soya lecithin.



The plants for the production of cream-filled flat wafers are offered in two capacities:

Technical Data :

	“SW” 24	“SW” 42	“SW” 48
Batch size (kg)	40	60	60

Automatic Wafer Baking Machine ZWA

Number of baking tongs:	24	42	48
Baking plate size (mm):	460 x 290	460 x 290	460 x 290
Baking time (min)*:	2	2	2
Capacity (Sheets/min)*:	12	21	24
Gas Consumption:			
Natural(m ³ /h)*:	9-11	12-15	15-18
Propane/Butane (kg/h)*:	14-16	25-28	28-32

Wafer Sheet Cooler SC-2

Number of effective brackets:	30	30	30
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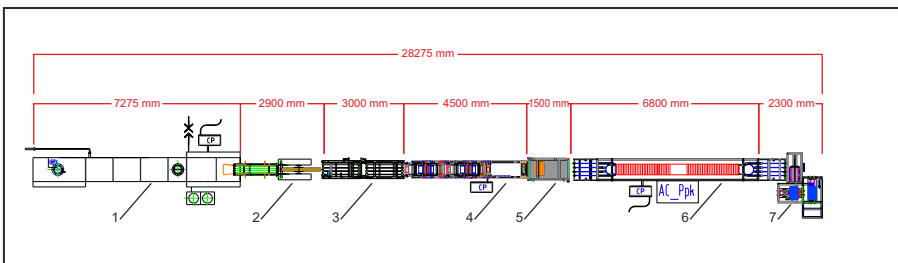
Automatic Wafer Creaming Machine CR5

Spreading width approx (mm):	455	455	455
Product possibilities (wafer sheets / fillings):	2/1,3/2,4/3,5/4	2/1,3/2,4/3,5/4	2/1,3/2,4/3,5/4

Automatic Wafer Biscuit Cutting Machine WC-5

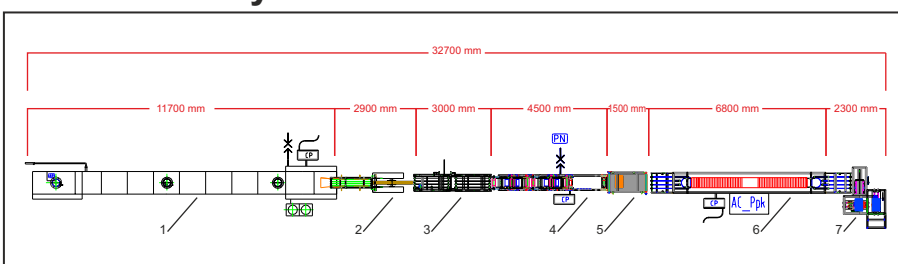
Capacity, max. (double cuts/min.):	6	6	6
Wafer sandwiches/stack, max.:	3	3	3

SWIFT 24 Layout



1. SW - 24	Oven
2. Sheet Cooler	SC2 + To3
3. C3	Conveyour
4. Creaming Machine	CR - 5
5. Book Cooler	BC - Series
6. C1	Conveyour
7. Wafer Cutting Machine	WC - 5

SWIFT 42 Layout



1. SW - 42	Oven
2. Sheet Cooler	SC2 + To3
3. C3	Conveyour
4. Creaming Machine	CR - 5
5. Book Cooler	BC - Series
6. C1	Conveyour
7. Wafer Cutting Machine	WC - 5

“SW” Series Wafer Baking Line

For a baker who wants to begin making wafers, R & D Engineers introduces the “SW” wafer line here.

The “SW” wafer oven is finding increasing interest as a cost-efficient and convenient ‘Entrance Ticket’ to the wafer business.

The reason for this interest is that the oven is part of a whole package of machinery that meets the needs of small producers who want to extend their business as well as those who may be new to industrial production of wafers.

The fully automatic SW lines feature the baking oven, a batter mixer, a wafer sheet cooler, a cream spreader and book cooler that also builds the wafer books and cutter. The lines are available in two capacities, producing either (upto 120 kg*) or (upto 210 kg*) of cream filled wafer biscuits per hour.

The oven is equipped with either 24, 42 or 48 supported baking plates made of gray cast iron. A variable - frequency-controlled motor drives the baking chain .

Wafer sheets cool at ambient temperatures, and the cooler is synchronized to the oven speed and actuated by a photo cell controlled motor.

The wafer cream spreader uses the contact spread method and produces books with up to 4 creme and 5 wafer layers of wafer books with a top sheet. Then, the books cut with wires or blades. Cutting frames are easily exchangeable for quick and un- complicated changeover.

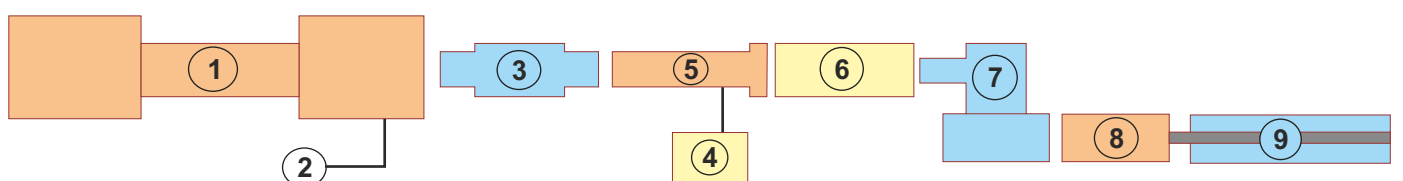
Advancements & Developments

- I) As energy costs continue to increase this becomes a bigger issue for manufacturers.. Our newly designed burners and baking chambers within its ovens reduce the gas consumption by as much as 15 to 20% compared with previous models.
- II) **NXT** model : Info system on operators panel. We have tried to put all information from the machine needed for the operator up-front available for rapid decision making & monitoring process quality and management functions.

The company is continually making small improvements to its lines to aid with maintenance and sanitation. For the most part there has been a great push to introduce new wafer lines therefore, there could be great opportunities for companies to introduce new and exciting products to consumers.

A wide variety of automated lines are available for the production of flat and hollow wafers.

Wafer Biscuit Manufacturing - Typical Factory Layout



1. Wafer Oven

2. Batter Mixer

3. Wafer Sheet Cooler

4. Planetary Cream Mixer ☆

5. Cream Spreading Machine

6. Book Cooler

7. Wafer Cutting Process

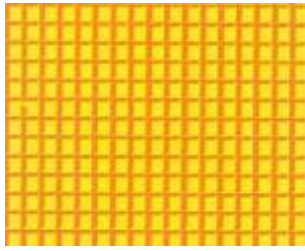
8. Wafer Fanning Device ☆

9. Packing Process ☆

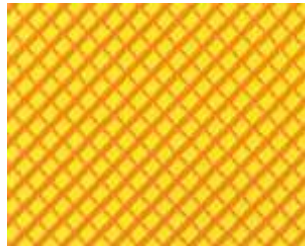
☆ Not included in the swift line

Wafer Design Selection Guide

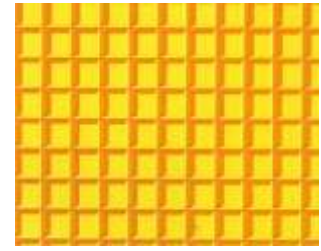
Regular Designs



2.5 X 0.4 (90°)



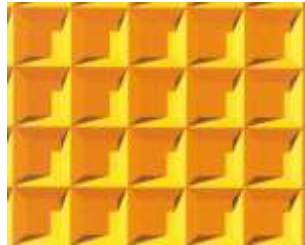
2.5 X 0.4 (45°)



4.0 X 0.6 (90°)



6.0 X 1.0 (45°)



8.0 X 2.0 (90°)



8.0 X 2.0 (60°)



10 X 2.5 (60°)



10 X 2.0 (45° & 0°)



12 X 3.0 (90°)



12 X 3.0 (60°)

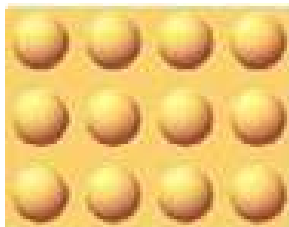


12 X 3.0 (45°)

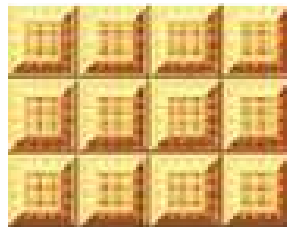


12 X 3.0 (45° & 0°)

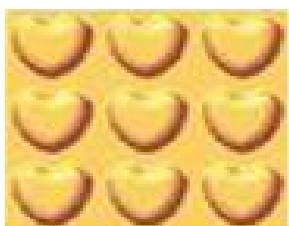
Special Designs



Round shell Design



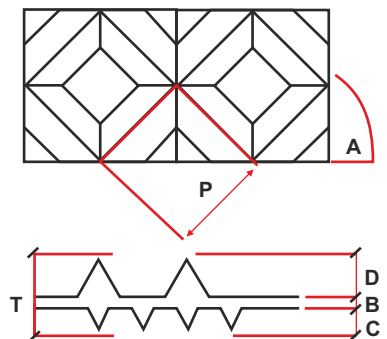
Canape Design



Heart Design



Communion Wafer Design



- A - Angle of Reeding
- B - Body
- C - Depth of Engraving
- D - Depth of Engraving
- P - Pitch of reeding
- T - Total Thickness

Design Requirements

Certifications

CERTIFICATE

Issued in accordance with the requirements of the applicable directive(s), as amended. EN ISO 12100 certify that the Technical Documentation of the products, drawn by the applicant, is in compliance with the specified Directive and standards.

CERTIFICATE NO	: ABCEIS173635
ORIGINAL CERTIFICATION DATE	: 26/10/2017
CURRENT CERTIFICATION DATE	: 06/04/2023
CERTIFICATION EXPIRY DATE	: 05/04/2028
MANUFACTURER	: R&D ENGINEERS A-41, IDA Kukatpally, Phase II, Road No.4, Via I.E. Gandhi Nagar, Hyderabad - 500 037, T.eLANGANA, India.
PRODUCTS NAME	: Baking Machine For Ice Cream Cones, Wafer Biscuits & Specialty Wafers
MODELS NAME	: ZAW Series, ZE Series, ZA - 1, RS Series, TT Series, WA Series, SW Series, RW Series, WT1, WT Series, RSCM & BW.
BRAND NAME	: R&D
APPLICABLE DIRECTIVES	: Machinery Directive (2006/42/EC) and Low Voltage Directive (2014/35/EU)
STANDARDS USED	: EN ISO 12100:2010 and EN 60204 - 1:2009+A 1:2009
MANUFACTURER DECLARATION REF	: R&D/MDC/CE01

The technical documentation shows that the product complies with the Essential Safety Requirements specified in general principles of Article 4, with the essential requirements in the field of Design. The technical documentation of the products refer only to the products listed in this certificate. Any significant modification will void this certificate issued. The product liability rests with the manufacturer or the representative in accordance with the source directive IEC/EN 60204. This certificate requires the presence of a signed and dated declaration and is entered through the national surveillance body.

SURVEILLANCE AUDIT SCHEDULE

First Surveillance Audit Due On: 05/04/2024	8	Second Surveillance Audit Due On: 05/04/2025	8
Third Surveillance Audit Due On: 05/04/2026		Fourth Surveillance Audit Due On: 05/04/2027	

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www.bmqr.com

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NVT QUALITY CERTIFICATION INTERNATIONAL

CERTIFICATE

Certificate Number: 16779
This is to certify that

R & D ENGINEERS
A-41, IDA, Kukatpally,
Phase II, Road No.4, Hyderabad,
Telangana State - 500 037, India.

has implemented and maintains a Quality Management System for its

SCOPE :
MANUFACTURING AND SUPPLY OF BAKING MACHINES FOR FOOD INDUSTRIES

Certification Structure: Single Site
(that meets the requirements of the standard)

ISO 9001:2015
Quality Management Systems - Requirements

The file that forms the basis of this certificate: 16779

Date of Initial Certification : October 06, 2014
Date of Current Revision : October 17, 2023
Certification Expiry Date : October 05, 2028

Authorized Office: NVT Quality Certification International LLP, Bangalore, India
Marketing Office : NVT Quality Certification International, Milpitas, CA, USA

ANAB IS A MEMBER OF INTERNATIONAL ACCREDITATION FORUM (IAF)
Note: Please verify current validity of certificate from NVT Quality Certification International LLP at info@nvtquality.com

CE Certified

ISO 9001:2015 Certified

R&D Family World Wide

The map shows the following countries with lines pointing to their locations:

- USA
- Mexico
- Haiti
- Honduras
- Guatemala
- Panama
- Colombia
- Venezuela
- Guyana
- Peru
- Chile
- Argentina
- Senegal
- Morocco
- Ghana
- Nigeria
- Congo
- Uganda
- South Africa
- Malawi
- Rwanda
- Zambia
- Mozambique
- Madagascar
- Tanzania
- Mauritius
- Seychelles
- Ethiopia
- Sri Lanka
- Bangladesh
- Spain
- UK
- Belgium
- Germany
- Czech
- Malta
- Bulgaria
- Turkey
- Syria
- Jordan
- Saudi Arabia
- Bahrain
- U.A.E
- Iran
- Nepal
- Myanmar
- Mongolia
- Japan
- South Korea
- Thailand
- Vietnam
- Cambodia
- Philippines
- Malaysia
- Burme
- Solomon Islands
- Singapore
- Fiji Islands
- Papua
- New Guinea
- Indonesia

Manufacturer & Exporter

R & D Engineers

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E-Mail : info@mdwafers.com

- ICE CREAM CONE MACHINES
- SPECIALITY WAFER MACHINE
- ROLLED SUGAR CONE MACHINE
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