SWAK

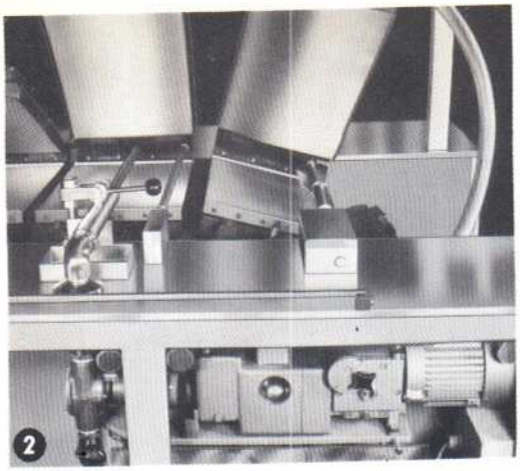
The automatic wafer baking machines of the SWAK series are suitable for the production of all kinds of flat wafers and shallow hollow wafers and can be supplied with 32, 40, 48, 56, 64 or 72 baking plates (tongs) according to the required output. The baking plates are transversely mounted in a compact design and the standard size of plates is 290 mm x 460 mm (about $11^1/_2$″ x 18″) or 350 mm x 480 mm (about $13^3/_4$″ x 19″). Also special sizes of baking plates can be supplied on request.

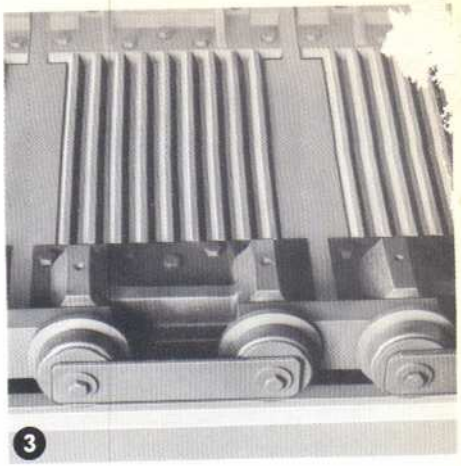
In designing this machine, special emphasis was laid on simple yet precise controls. By incorporating the latest technology in the choice of materials, a long life expectancy has been achieved with the least possible maintenance. The stainless steel outer sheeting and highly effective insulation reduce the heat radiation from the baking chamber to a minimum and this offers a high degree of comfort to the operating staff. The baking chamber can be opened over its entire length: this makes cleaning both simple and tidy. Three flues, controlled by dampers, provide extraction from both the steam hood and the baking chamber.

The machine is built with a rigid steel frame of channel-section members and has adjustable feet.

Hence it is possible, without any special machine base, to level the oven as required.

The drive takes place on the front transmission shaft through clip-on gears with a thyristor-controlled D. C. flange mounted motor. With this type of drive it is possible to provide the baking plate chain with an infinitely variable speed control over a wide range by means of a potentiometer (minimum baking time of 1 minute) and so guarantee a smooth, jolt-free start-up until the desired circulation time of the baking plate chain is reached. Hence a minimum wear and tear on the bearings is ensured.

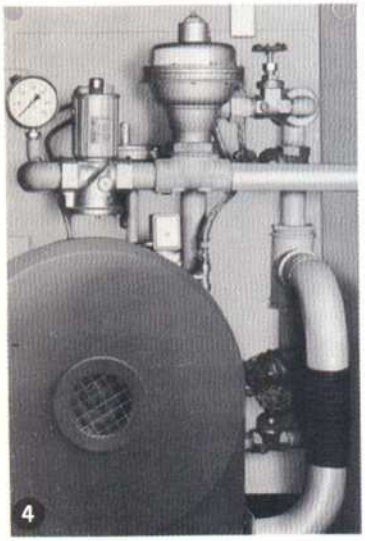


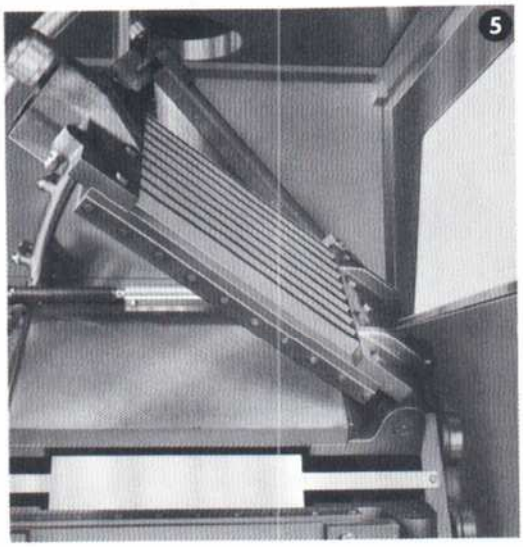


❶ The control panel is mounted at the discharge end of the oven. This gives direct control of the drive, the automatic ignition for gas heating and the batter pump. There are indicators for the automatic flame control (high and low flame) and flame-monitor. There is a speed selection switch and a dial to show the baking time. A counter shows the number of working hours on the oven. There is a temperature-indicator controller with temperature-range selector to maintain the temperature of the baking plates within ±1.5 degrees Centigrade (±3°F).

❷ The batter is discharged onto the baking plates by a cam operated pump in stainless steel execution. This pump can be very accurately set to give an efficient distribution of batter with maximum economy and a minimum of waste. There is no draw-back of the batter. The deposit is constant in volume and always fresh and there are no residual drips. Adjustment, cleaning and maintenance of the pump are simple and quick.

❸ The baking plates are carried direct on ball bearings mounted on hardened stub shafts. The outer race of the ball bearings serves as the running surface. The baking plates are joined together by heavy links with self-lubricating bearings. These links are fitted between the baking plates and the ball bearing runners. Easily removable safety links on the outside of the runners permit ready access for servicing the ball bearings (required only about every 6,000 working hours).





❺ The baking plates are ribbed longitudinally. This gives a high degree of stability and very good heat absorption and distribution. The locking-rollers on the baking plates run on ball bearings and the outer race of the bearing is used as the roller. The pairs of baking plates are made of a special grey cast iron alloy with a ground surface finish (of 0.004 mm depth) — this gives a good release of the wafer sheet. If required, the surface of the baking plates can be hard chromed. Baking plates can be supplied with rectangular designs, engraved patterns and hollow moulds. Internal metal baffles are arranged to prevent overheating of the sides of the baking plates.

❹ Model SWAK has a two-part heating system providing heat from above and below, as well as fully automatic ignition and flame-monitor. In the case of a gas, air or power failure or overheating, an automatic cut-out device on the heating system will operate. Measurement of the baking plate temperature by a contact-less method controls the volume of gas automatically and maintains the temperature within ±1.5 degrees Centigrade (±3°F). Temperature over the whole baking plate area is controlled, giving maximum efficiency and uniform wafer sheet texture. The air blower is mounted on shock-absorbing blocks to provide vibration-free running. The heating system is suitable for town gas, natural gas, propane/butane and oil gas (in conjunction with an oil gasification plant) as desired.

The baking chamber has stainless steel outer sheeting and patented doors which can be opened over the entire length of the oven.

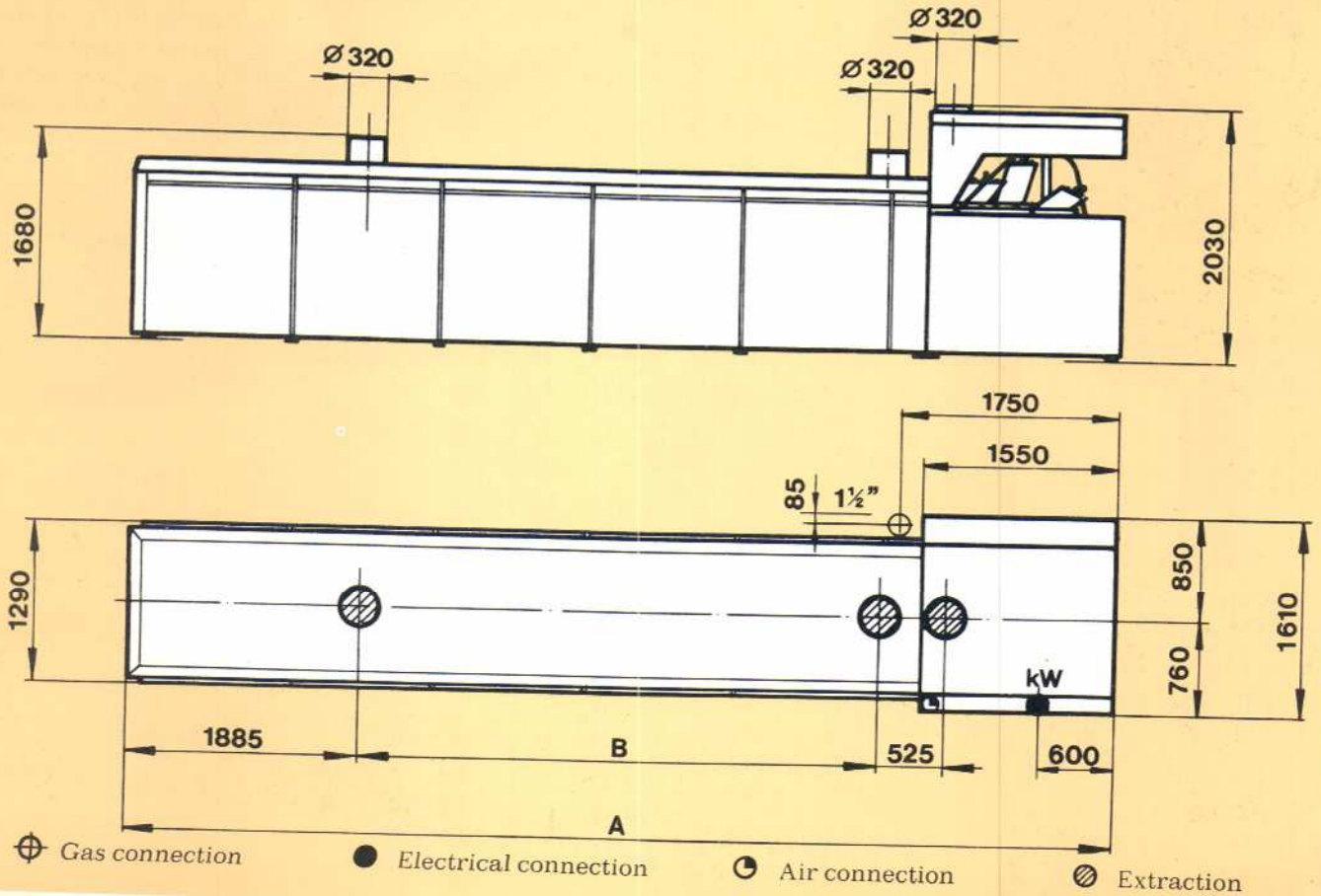
Technical data

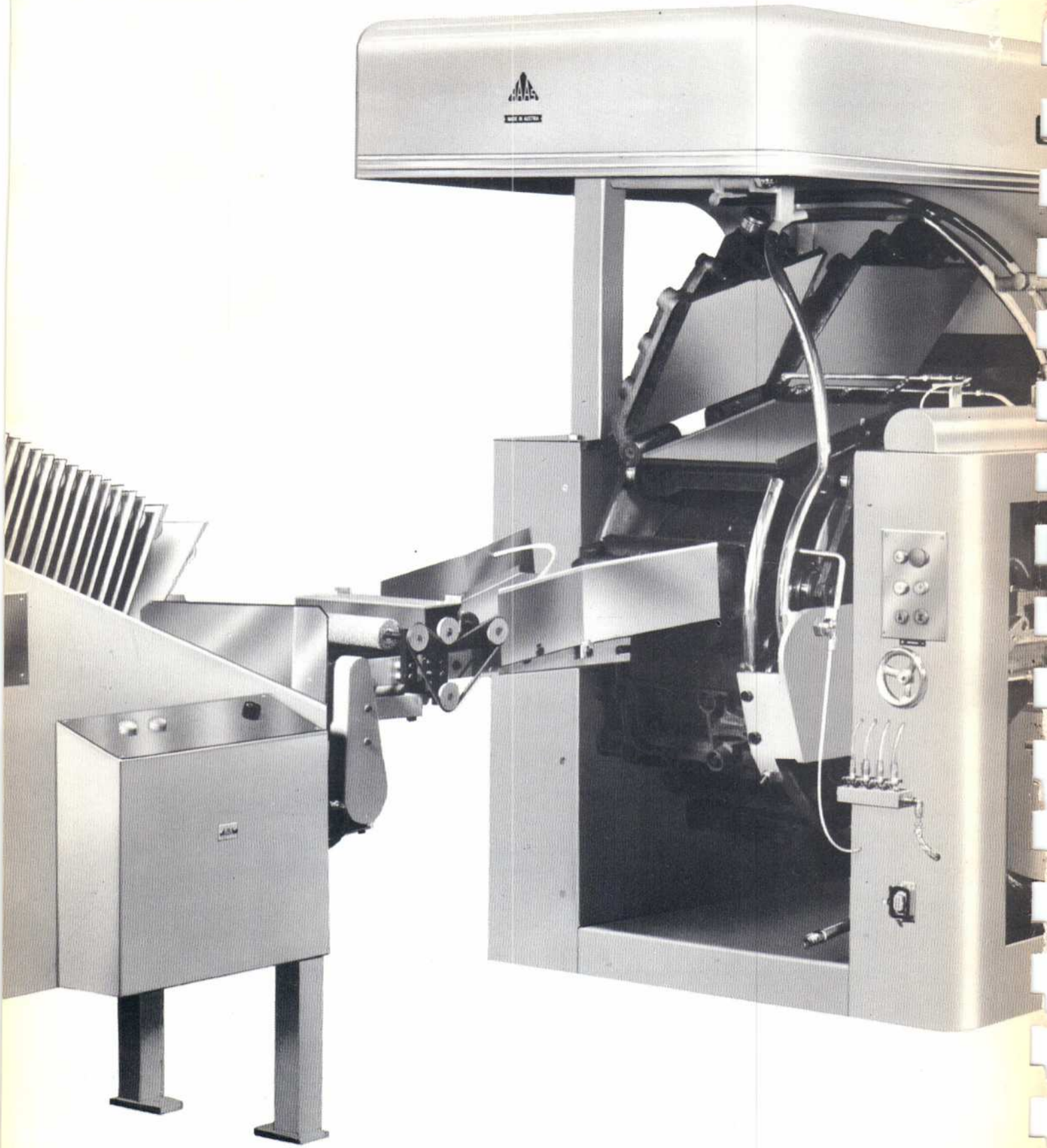
Type	SWAK 32	SWAK 40	SWAK 48	SWAK 56	SWAK 64	SWAK 72
No. of baking plates (tongs)	32	40	48	56	64	72
Plates per minute for $1^1/_2$ min. baking time	22	27	32	37	42	43*
Gas consumption per hour (natural gas) in cu. metres (cft.)	18 (630)	22 (770)	26 (910)	30 (1,050)	34 (1,190)	37 (1,300)
Electrical load in kW	4.5	4.5	4.5	4.5	4.5	4.5
Electric heating: Load in kW	125	156	187	218	250	280
Consumption in kWh	105	125	150	175	200	224
Dimensions in mm (feet and inches)						
A	5,405 (17′9″)	6,665 (21′10″)	7,925 (26′)	9,185 (30′2″)	10,445 (34′3″)	11,705 (38′5″)
B	1,680 (5′6″)	2,940 (9′8″)	4,200 (13′9″)	5,460 (17′11″)	6,720 (22′1″)	7,980 (26′2″)
Approx. weight in kg (lbs.) (without wafer take-off)						
Net	8,500 (18,750)	10,200 (22,500)	11,900 (26,250)	13,600 (29,900)	15,300 (33,750)	17,000 (37,500)
incl. export packing	9,800 (21,600)	11,800 (26,000)	13,700 (30,200)	15,700 (34,600)	17,600 (38,800)	19,600 (43,200)
Approx. shipping space in cu. metres (cft.)	26 (910)	31 (1,090)	38 (1,330)	44 (1,540)	50 (1,750)	55 (1,930)

* Automatic wafer baking machines SWAK 72 are mainly used for the production of wafers which, according to the recipe or thickness of the wafer, require longer baking time.

The above details are approximate figures obtained under working conditions and vary according to the thickness of the wafer sheet and consistency of the batter.

Measurements and illustrations are subject to alteration





SWA

The automatic wafer baking machines of the SWA series are suitable for the production of all kinds of flat wafers and shallow hollow wafers and can be supplied with 12, 18, 24, 30 and 36 baking plates (tongs) according to the required output.

The machine is built with a steel frame of rigid construction. An endless chain conveys the baking plates on their carriers through the baking chamber, driven by a chain drive infinitely variable in speed through its range.

The standard size of the baking plates is 290 mm x 460 mm (about $11^1/_2$″ x 18″) or 350 mm x 480 mm (about $13^3/_4$″ x 19″). Also, special sizes of baking plates can be supplied on request.

The baking plates are of very heavy construction to prevent distortion and to guarantee wafer sheets of an even thickness. These baking plates can easily be exchanged to produce wafers of different designs.

The highly effective double insulation considerably reduces the heat loss to the working area. The baking chamber is provided with large doors on both sides for easy cleaning and maintenance. If required, a waste disposal unit can be built in to automatically clean the floor of the baking chamber. Steam and products of combustion are drawn from the hood and the baking chamber through flues.

The automatic wafer shoot takes off dough

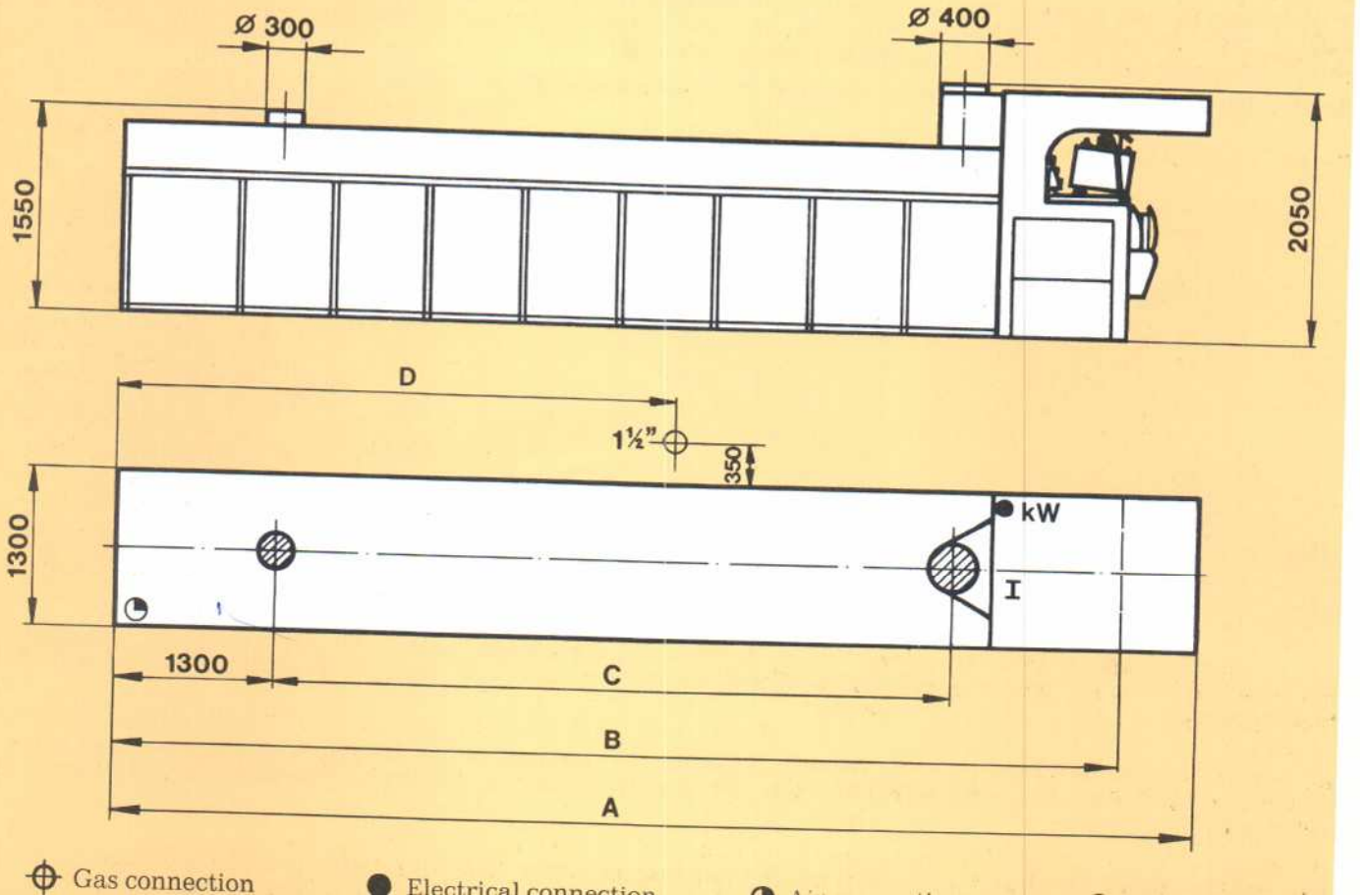
Technical data

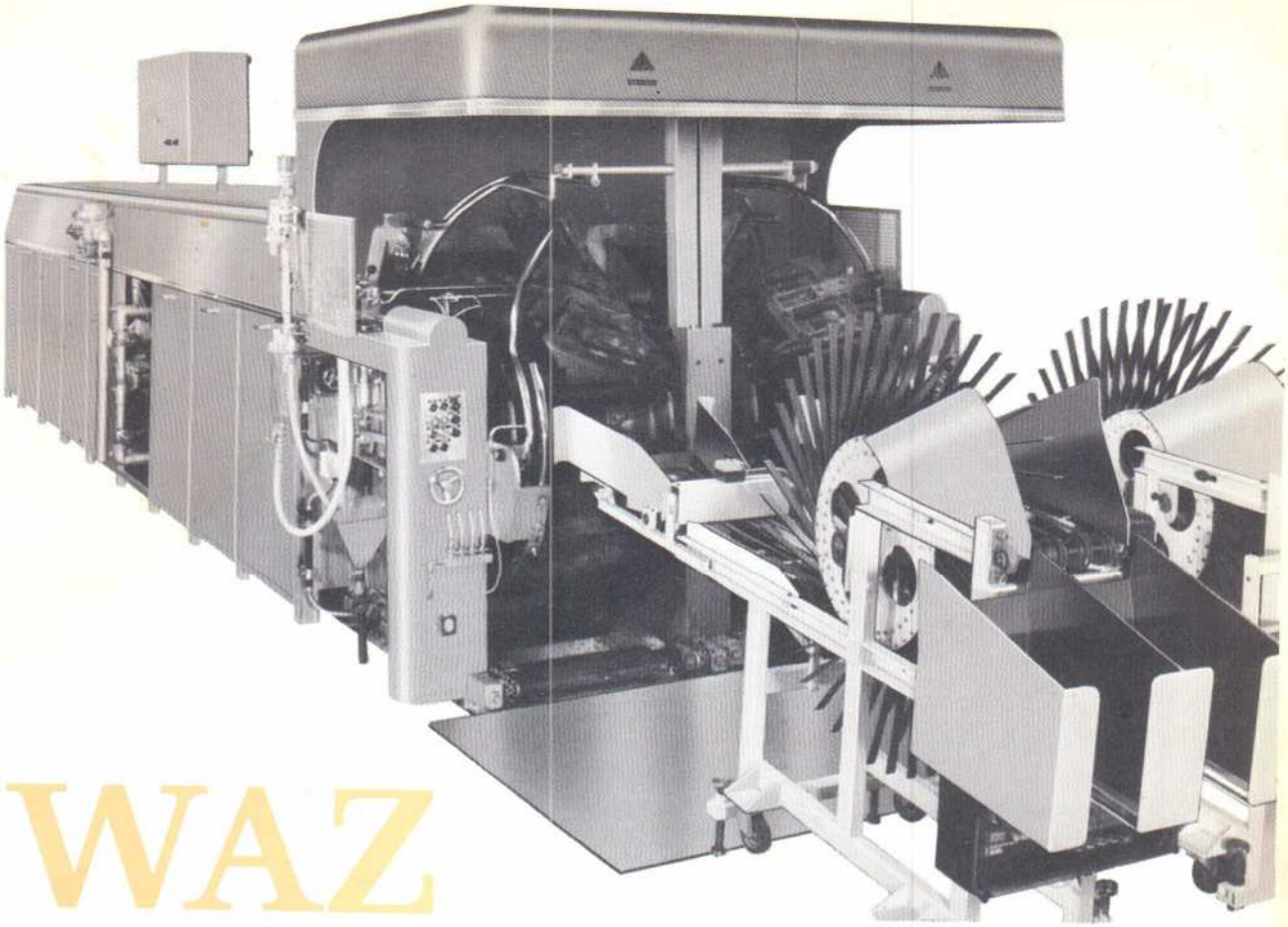
Type	SWA 12	SWA 18	SWA 24	SWA 30	SWA 36
No. of baking plates (tongs)	12	18	24	30	36
Plates per minute for 1½ min. baking time	8	12	16	20	21*
Gas consumption per hour (natural gas) in cu. metres (cft.)	7.5 (260)	11 (390)	14.5 (510)	18 (630)	20 (700)
Electrical load in kW	3.5	3.5	3.5	3.5	3.5
Electric heating:					
Load in kW	47	70	94	118	141
Consumption in kWh	37	56	75	94	100
Dimensions in mm (feet and inches)					
A	4,240 (13'11")	5,700 (18'8")	7,180 (23'7")	8,700 (28'6")	10,200 (33'6")
B	3,660 (12')	5,120 (16'10")	6,600 (21'8")	8,120 (26'8")	9,620 (31'7")
C	only 1 flue (I)	2,700 (8'10")	3,860 (12'8")	5,400 (17'9")	6,900 (22'8")
D	3,000 (9'10")	3,500 (11'6")	3,500 (11'6")	4,500 (14'9")	6,000 (19'8")
Approx. weight in kg. (lbs.)					
Net	3,400 (7,500)	5,850 (12,900)	6,850 (15,100)	8,400 (18,500)	10,000 (22,100)
incl. export packing	4,400 (9,700)	7,100 (15,700)	8,300 (18,300)	10,250 (22,600)	12,100 (26,700)
Approx. shipping space in cu. metres (cft.)	19 (670)	24.5 (860)	30 (1,050)	36 (1,260)	41 (1,440)

* Automatic wafer baking machines SWA 36 are mainly used for the production of wafers which, according to the recipe or thickness of the wafer, require a longer baking time.

The above details are approximate figures obtained under working conditions and vary according to the thickness of the wafer sheet and consistency of the batter.

Measurements and illustrations are subject to alteration.





SWAZ

To complete the SWA series, twin automatic wafer baking machines of the SWAZ series are built for larger wafer sheet capacities.

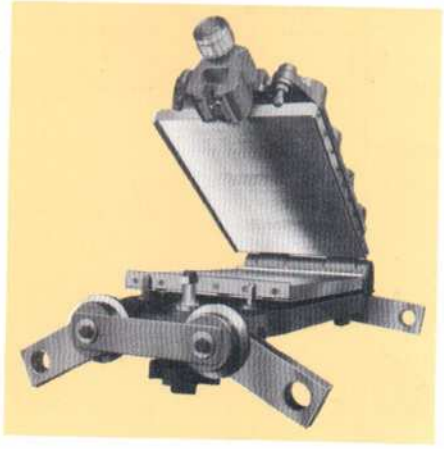
Twin automatic wafer baking machines SWAZ are supplied with 48, 60 and 72 baking plates (tongs).

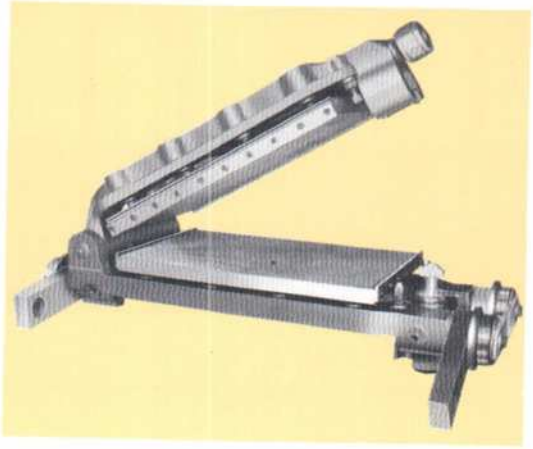
The SWAZ series consists of 2 carrier chains running in parallel which can be independently controlled. The separate drive systems are identical to that of the SWA series. Hence different baking times can be achieved simultaneously.

The heating system makes different baking temperatures possible in the two independent baking chambers as well as the production of differing products. An additional advantage is that one half of the machine can remain in production while the other half is being serviced.

Automatic temperature control can be supplied for this type of oven, if desired.

ELECTRICALLY HEATED AUTOMATIC WAFER BAKING MACHINES





All automatic wafer baking machines can be fitted with electrically heated baking plates on request (see illustrations). The current is conveyed via brass conductors and then by spring contacts to the individual baking plates.

All wiring is made of a heat-resisting material (silicon) and covered on the outside with stainless steel mesh so that it is protected against mechanical damage. The supply sockets of the heating elements are dustproof and waterproof.

The baking plates are fitted with high-quality heating elements that are unaffected by the action of steam. Each heating element is protected with a high-quality insulating material against heat radiation.

Technical data

Type	SWAZ 48	SWAZ 60	SWAZ 72
No. of baking plates (tongs)	48	60	72
Plates per minute for $1^1/_2$ min. baking time	32	40	42*
Gas consumption per hour (natural gas) in cu. metres (cft.)	25 (880)	30 (1,050)	34 (1,190)
Electrical load in kW	7	7	7
Electric heating:			
Load in kW	188	236	282
Consumption in kWh	150	188	200
Dimensions in mm (feet and inches)			
A	7,180 (23'7")	8,700 (28'6")	10,200 (33'6")
B	6,600 (21'8")	8,120 (26'8")	9,620 (31'7")
C	3,860 (12'8")	5,400 (17'9")	6,900 (22'8")
D	3,500 (11'6")	4,500 (14'9")	6,000 (19'8")
Approx. weight in kg (lbs.)			
Net	13,240 (29,200)	16,400 (36,200)	19,000 (41,900)
incl. export packing	15,800 (34,800)	19,100 (42,100)	22,500 (49,600)
Approx. shipping space in cu. metres (cft.)	53 (1,860)	63 (2,200)	72 (2,520)

* Automatic wafer baking machines SWAZ 72 are mainly used for the production of wafers which, according to the recipe or thickness of the wafer, require a longer baking time.

The above details are approximate figures obtained under working conditions and vary according to the thickness of the wafer sheet and the consistency of the batter.

Measurements and illustrations are subject to alteration.