

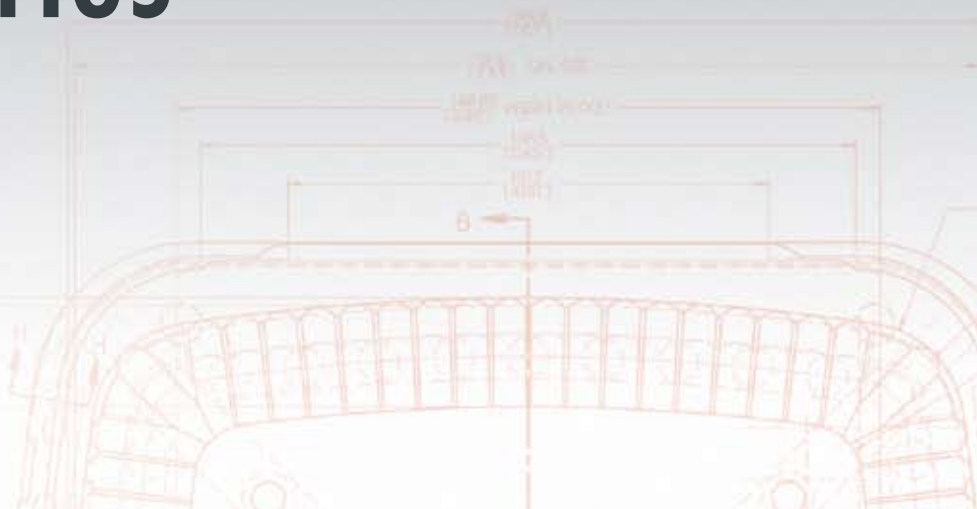
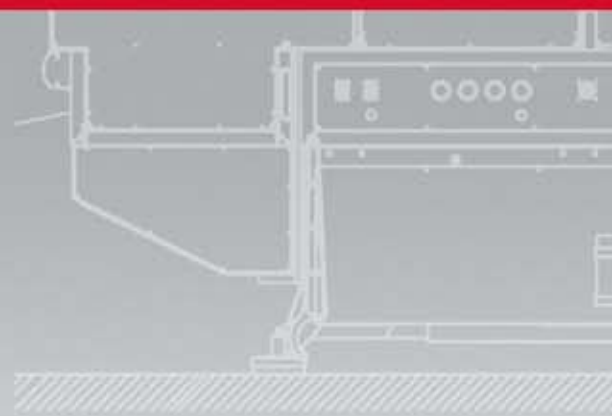


GN

Thermoforming Equipment



GN D Series



■ At the cutting edge

GN Thermoforming Equipment has set the world standard for the plastics industry by developing a complete line of robust and dependable thermoforming machines. All GN technology incorporates an in-mould cutting system for consistent and accurate trim. These machines are easy to use and ideally suited to produce high quality thermoformed plastic products from a variety of roll-fed thermoformable materials.

Continuous research and development are the cornerstones of GN's advanced technology. Our team of experienced engineers focuses on equipment design and continuous improvement based on customer feedback and industry trends.

GN ensures the productivity of its thermoforming machines with one of the industry's most comprehensive customer service programs. Our worldwide network of agents and qualified GN technicians are available to offer a reliable after sales service.

Leading plastic package manufacturers around the world have come to rely on GN Thermoformers to make their businesses more productive and profitable.

■ GN D Series Thermoformers

The **GN D Series** Thermoformers have quickly become the choice of customers throughout the world requiring a larger forming area and cutting capacity to provide maximum part production. All D machines incorporate servo movements to provide maximum cycle speed and efficiency.

Features and benefits:

- In-mould cutting ensuring consistent and accurate trim
- Servo driven platen
- Six point toggle systems with oversized roller bearings
- High speed forming system
- Multi-zone contact heating system
- Electric preheater
- Microprocessor-based control systems (PLC)
- Computerized DC drive sheet transport
- Photo scanning available for preprinted sheet
- Static eliminator

Features and benefits unique to the GN4532D Thermoformer

- Roll holders capable of handling material rolls up to 1000mm (39")
- Diagnostics included

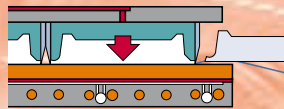


FORMING THE W

Technology

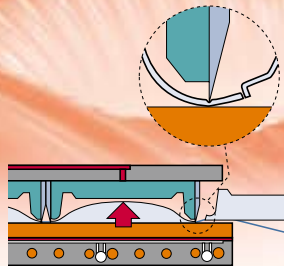


1



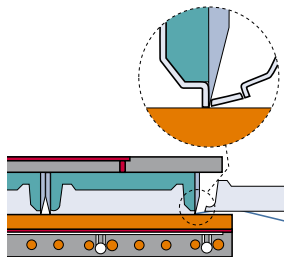
Heating - Plastic material is unwound from a roll and fed into the forming area. Here it is trapped in place by a double toggle mechanism which closes the forming press. Compressed air is injected through the mould ensuring complete contact of the plastic material with the heating platen. Exact, uniform and rapid heating is achieved by the unique heating platen assembly.

2



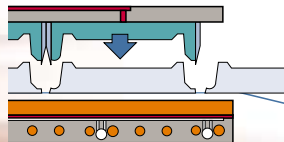
Forming - As the thermoplastic material reaches the optimum forming temperature, air is exhausted from the mould. Forming air pressure is then applied through thousands of tiny holes in the heating platen assembly. This forming pressure forces the plastic into every detail of the mould cavity.

3



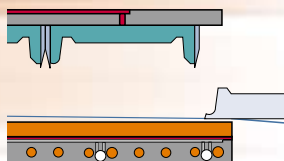
Cutting - As the forming air is vented, a second toggle movement forces the knife edge of the cutting die through the plastic sheet.

4



Ejecting - The press then opens and the formed parts are ejected with pressurized air.

5



Transporting - The formed parts, still connected to the material web, are transported to the stripping and stacking stations.

O R L D

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■ GN Stacking Units

GN Stacking Units can easily be attached to any thermoformer to create a completely automated and efficient high-speed thermoforming production system designed to improve the performance of the GN thermoformer. GN Stacking units accurately count, stack and deliver the formed parts onto the receiving station.

■ GN Up Stacking Unit

The GN Up Stacking unit is ideally suited to stack and count square or rectangular parts and deliver them to a receiving platform.

Stacking Rate:

Maximum 30 cycles/minute
Maximum 1800 cycles/hour



■ GN RSX Robotic Stacking Unit

The GN RSX Robotic Stacking unit is a complete product handling system designed to improve the performance of the GN thermoformer. Vacuum cups attach themselves to the plastic product prior to stripping them from the web and placing them in pre-counted stacks to be delivered to the receiving station.

Stacking Rate:

Maximum 20 cycles/minute
Maximum 1200 cycles/hour

Design features:

- Ensures consistent part separation from web
- Simple, inexpensive tool specific change parts
- Minimal set-up
- User friendly operation
- Easily adapts to most GN Thermoformers (please consult GN)
- A/B and A/B/C stacking capabilities
- Optional rotating head to stack any possible configuration



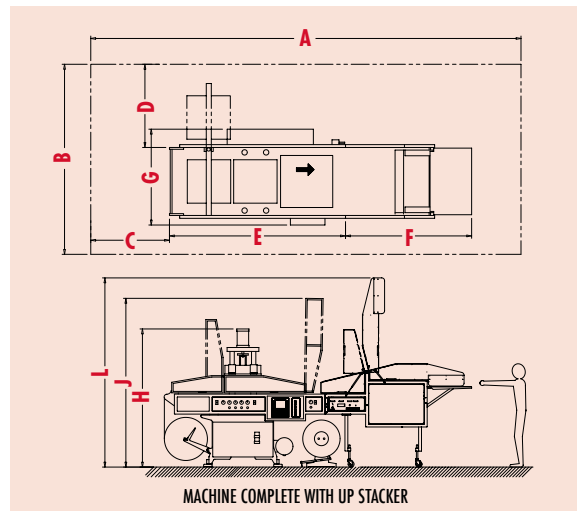
Machine specifications

| | GN3030D | GN4532D |
|-----------------------------------|---|---|
| Forming Area | 762mm x 762mm (30" x 30") maximum | 1143mm x 813mm (45" x 32") maximum |
| Depth of Draw | 125mm (5") maximum | 125mm (5") maximum |
| Knife Length | 6858mm (270") for APET 11430mm (450") for other thermoformable materials | 11500mm (453") for APET 16510mm (650") for other thermoformable materials |
| Sheet Width | 815mm (32") maximum | 1194mm (47") maximum |
| Material Thickness Range | 0.15mm - 1.00mm (0.006"-0.040") | 0.15mm - 1.00mm (0.006"-0.040") |
| Material Roll Diameter | 711mm (28") maximum | 1000mm (39") maximum |
| Dry Cycles per Minute | 25 maximum | 20 maximum |
| Main Supply Voltage | 3x400V+N+PE, 50-60Hz (380-415V) 3x480V+PE, 50-60Hz (440-480V) 3x220V+PE, 50-60Hz (220-240V) | 3x400V+N+PE, 50-60Hz (380-415V) 3x480V+PE, 50-60Hz (440-480V) 3x220V+PE, 50-60Hz (220-240V) |
| Power Consumption | 20 Kilowatts/hr (Approximate) | 20 Kilowatts/hr (Approximate) |
| Air Pressure | 6.8 bar (100 PSI) minimum | 6.8 bar (100 PSI) minimum |
| Air Consumption | 1200 Litres/min (48 CFM) | 1900 Litres/min (70 CFM) |
| Cooling Water Consumption | 14 Litres/min @ 15 °C - 20 °C (3 gal/min @ 58 °F - 68 °F) | 14 Litres/min @ 15 °C - 20 °C (3 gal/min @ 58 °F - 68 °F) |
| Machine Dimensions (l x w x h) | 3200mm x 1930mm x 2693mm (126" x 76" x 106") | 4050mm x 2300mm x 2800mm (160" x 91" x 110") |
| Machine Weight | 5909 kg (13027 lbs) | 11400 kg (25132 lbs) |

MACHINE COMPLETE WITH UP STACKER

| | GN3030D | GN4532D |
|------------------------|-------------------|-------------------|
| DIM "A" MACHINE ONLY | 20' - 2" 6129 mm | 30' - 10" 9400 mm |
| DIM "A" MC + STACKER | 27' - 10" 8492 mm | 39' - 4" 11980 mm |
| DIM "B" | 15' - 0" 4572 mm | 15' - 0" 4572 mm |
| DIM "C" | 11' - 10" 3600 mm | 11' - 10" 3600 mm |
| DIM "D" | 4' - 8" 1425 mm | 4' - 8" 1425 mm |
| DIM "E" | 10' - 6" 3200 mm | 11' - 2" 3400 mm |
| DIM "F" | 8' - 0" 2426 mm | 8' - 6" 2580 mm |
| DIM "G" | 7' - 9" 2375 mm | 7' - 9" 2375 mm |
| DIM "H" | 9' - 8" 2950 mm | 9' - 8" 2950 mm |
| DIM "J" | 9' - 10" 2998 mm | 6' - 9" 2050 mm |
| DIM "L" STACKER OPTION | 10' - 1" 3074 mm | 10' - 8" 3250 mm |

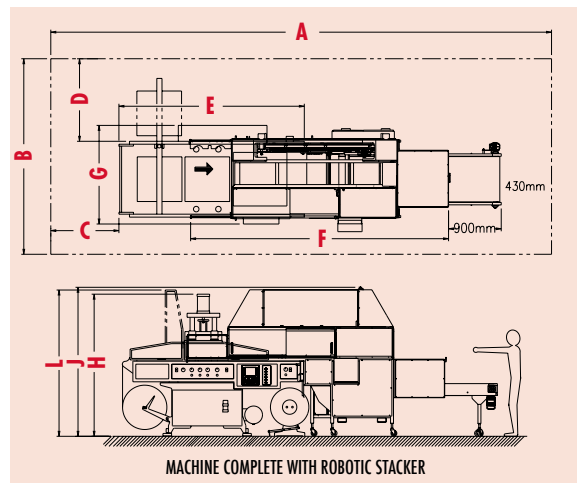
All dimensions are approximate



MACHINE COMPLETE WITH ROBOTIC STACKER

| | GN4532D |
|------------------------|-------------------|
| DIM "A" MACHINE ONLY | 30' - 10" 9400 mm |
| DIM "A" MC + STACKER | 39' - 9" 12120 mm |
| DIM "B" | 15' - 0" 4572 mm |
| DIM "C" | 11' - 10" 3600 mm |
| DIM "D" | 4' - 8" 1425 mm |
| DIM "E" | 11' - 2" 3400 mm |
| DIM "F" | 13' - 10" 4200 mm |
| DIM "G" | 7' - 9" 2375 mm |
| DIM "H" | 9' - 8" 2950 mm |
| DIM "J" | 6' - 9" 2050 mm |
| DIM "L" STACKER OPTION | 8' - 0" 2415 mm |

All dimensions are approximate



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GN's Vision: Build Success With Our Customers!



Cost effective tooling is designed, manufactured and production tested at our facility.

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**A world wide network of GN representatives
is available to assist you.**

ISO 9001-2008



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