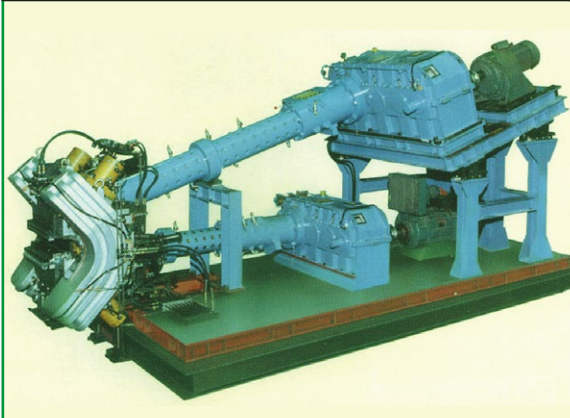


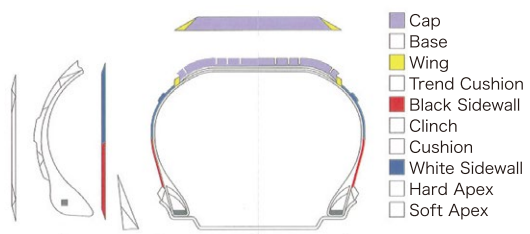
MULTIPLEX EXTRUDERS

Extruders for multi-structure profiles play an extremely important role in improving tire quality. A tire consists of a tread, sidewalls and bead section. The respective components are formed from a number of rubber compounds with properties required for specific aspects of tire performance. With multiplex extruders, the rubber profile components are extrusion molded as a single air-free, multi-layer/compound unit under high pressure. Nakata makes cold feed extruders and pin type extruders up to 300 mm. These machines are arranged in piggyback type of 2, 3, 4 and 5 layers, and in opposed type with 2 and 3 layers. Multi-layer extrusion heads have also been developed and adapted to these units. These have also been incorporated into production lines with good results.

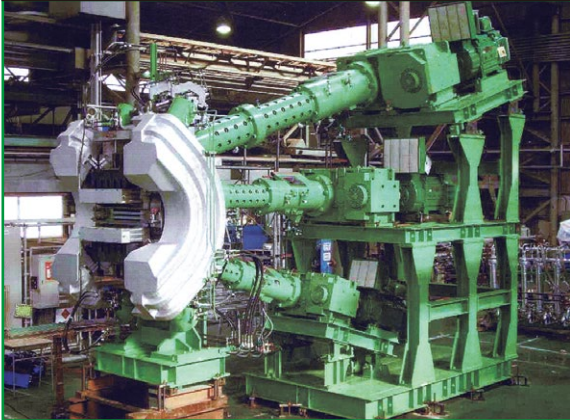
DUPLEX EXTRUDER UNIT



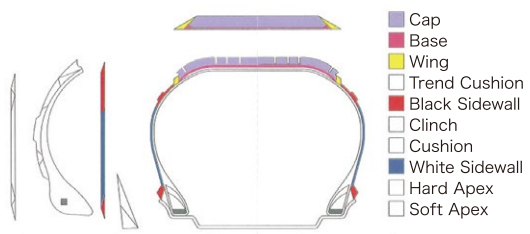
Typical Applications



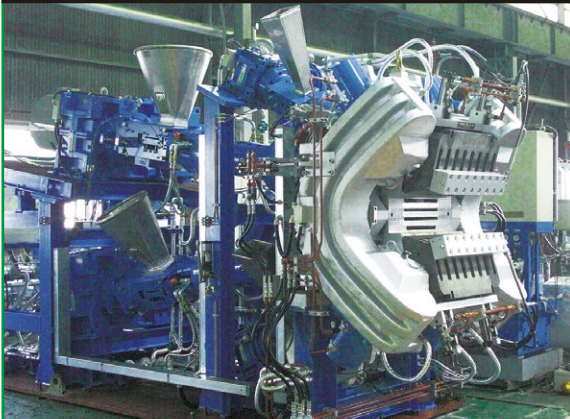
TRIPLEX EXTRUDER UNIT



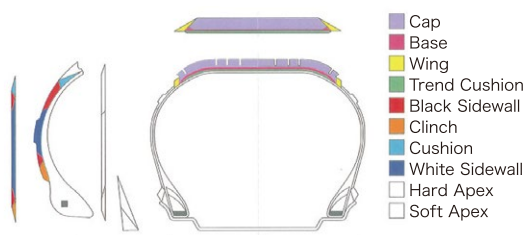
Typical Applications



QUADRUPLEX EXTRUDER UNIT

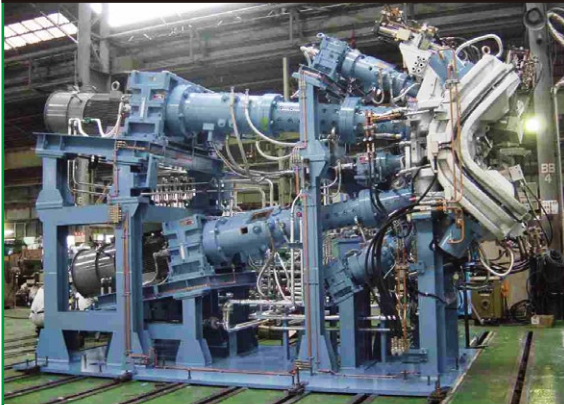


Typical Applications

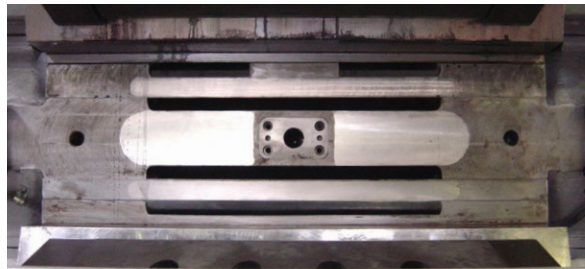
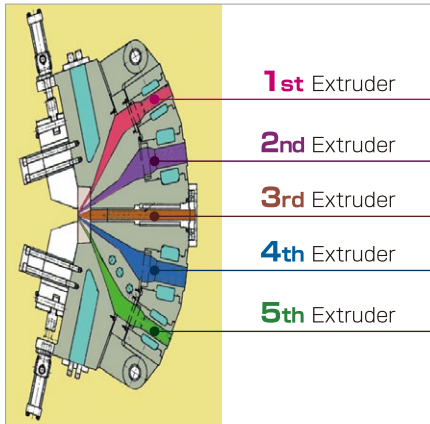
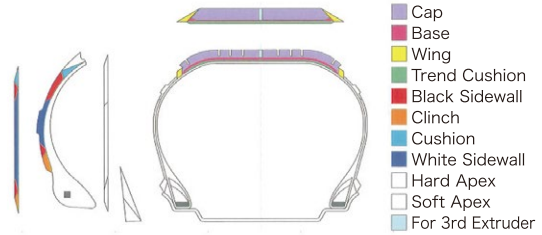


MULTIPLY EXTRUDERS

QUINTUPLEX EXTRUDER UNIT



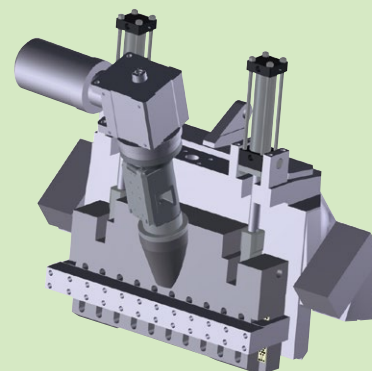
Typical Applications



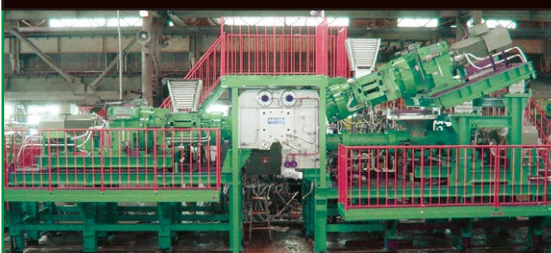
Nakata Engineering has applied our state-of-the-art technology and many years of experience to the development of a quintuplex extruder for extruding tread sections using five different compounds. Treads and many other compounds can be extruded with precision using this equipment. The Nakata quintuplex extruder is ideal for addition of electro-conductive compounds into quadruple Silica compound treads.

Modification to apply Chimney Extruder onto Existing Head

Nakata owns a technology to apply an extra-extruder for Chimney onto an existing head in operation in a customer's factory.



OPPOSED-TYPE TRIPLEX EXTRUDER



OPPOSED-TYPE QUADRUPLEX EXTRUDER

