

OBSESSED WITH QUALITY  
SINCE  
1973

# CONICAL TWIN SCREW EXTRUSION LINES



**neoplast<sup>®</sup>**

*People you can believe*



[www.neoplastindia.com](http://www.neoplastindia.com)

# neoplast ...the art of perfection since 1973

Since 1973, Neoplast is known as the reliable and efficient partner in plastic industry. What started as a small structured family-owned enterprise is now acknowledged as most renowned, reputed and reliable partner for the plastic processing machinery in Global market. Neoplast has won its customers continued trust by always providing them with a "perfect solution to their specific requirements", and this has helped Neoplast to emerge as a market leader with about 70% India market share.

At Neoplast quality and innovation is a way of life and thus the R&D is given a much due importance. The company has a dedicated team of professionals that has been instrumental in this success. However, it is Neoplast's customers, who have the greatest share in its success. Their trust in getting the perfect solution for their specific requirements and their confidence in Neoplast's state-of-the-art technology has made Neoplast what it is today.

Last but not the least...Neoplast is committed to work towards its goal, that of attaining global leadership in the manufacturing of machinery and equipment for the plastic industry.

## Screw & Barrel Life



A novel wear resistance coating technique ensures exceptional long life of screw and barrel, the heart of the extruder. The wearing layer achieved with this technique is denser, more compact and less brittle than conventional coating applied with customary methods. We guarantee extreme abrasive resistance.

## Barrel Heating Cooling System



Specially designed barrel heating cooling elements (air power cooling) and precise locations of thermocouples ensures accurate temperature control. The large surface area of cooling elements results into the highest efficiency and lowest maintenance.

## Metering Unit



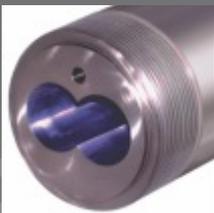
Metering unit facilitates accurate adjustment of the screw feeding factor and plasticizing capacity. It is ideal for materials with the possibility of density variations & particularly suitable for processing regrind and pellets.

## Venting Unit



The venting port on the barrel is coupled with a specially designed efficient venting pump for effective removal of moisture, air and gases generated during the plastification process.

## Threaded Barrel



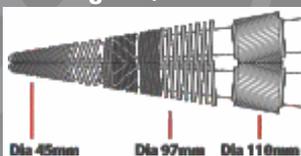
Due to unique manufacturing techniques, barrels are with absolutely accurate conical bore. The barrel is made from nitro-alloy steel with hardness of 50 HRC, which in turn undergoes two-stage gas nitriding to achieve final hardness of 67 HRC.

## neoplast's Promise

- Conical Twin Screw extruders from Neoplast are designed to ensure a higher return on your investment, i.e. outstanding cost effectiveness, higher output & excellent product quality.
- Neoplast offers Conical Twin Screw extruders for RPVC Pipes, CPVC Pipes, SWR Pipes, Engineering Profile, Furniture Profiles, and Building Sections etc.
- The NCMT series of conical twin screw extruders offered by Neoplast is the fifth generation of conical twin screw extruders.

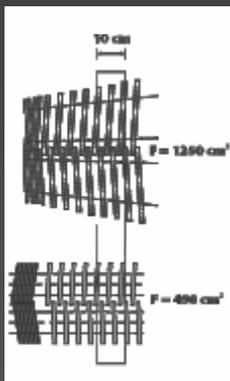
## Why Conical Twin Screw

### Larger L/D Ratio



- 45/97 mm conical twin screw, discharges like a parallel 45 mm, feeds like a parallel 97 mm & matches the gearing of a parallel 110 mm.
- Conical 45 mm extruder can match output of 65 mm parallel, the intake section has surface area and gentle plasticizing of a 100 mm parallel, while only the metering section has the excess friction and shear of a 45 mm parallel.
- The small screw front face results in a low axial force on the screws.

## Gentle & Efficient Plastification



- The screw surface area in the feed zone is considerably larger than that of the parallel screws offering same output.
- As a result, transmission of heat energy and the plastification in the feed zone is much more efficient.
- Moreover due to larger feed zone, plastification work is spread out over a larger section of the screw.

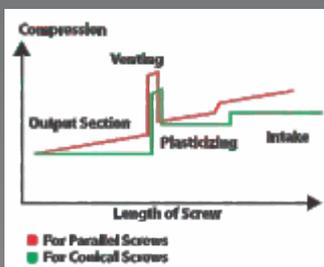
## Optimized Screw Geometry



- Degressive pitch in the feed & compression zone ensures the continuity of compression; hence there are no pressure peaks, which is in favor of a prolonged life of the gear box.
- In the metering section, the inter meshing surface area is less, which gives lower shear energy input and addition, the shear rate is further reduced because of the conical screw design.

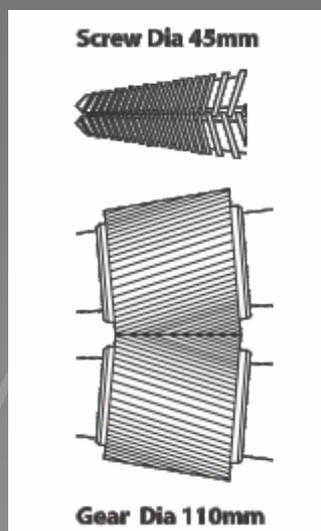


## Continuity of Compression



- By using conical twin screws, compression continuity can be maintained throughout the length of the screw.
- Compression continuity results into enormous processing latitude & better quality of melt.

## Life of Gears



- The pinion gears of conical twin screw lasts much longer than those of parallel twin screws.
- As the center distance is much larger, the gear pinions have larger diameter which increases the life of the gears.
- The life of gear pinions increases with the cube of the diameter, which enhances the reliability.

# Technical Specifications

## Conical Twin Screw Extruders - NCMT Series

Sr. No.	Model	Conical Screw Dia (mm)	Screw Length (L/D)	Main Motor (AC Drive) (kW)	Maximum Pipe OD (mm)	Output Capacity (Kg/Hr)	Connected Installed Capacity (kW)
1	NCMT-20	2 x 20	330	3.7	2.5	9	11
2	NCMT-35	2 x 35	790	11	50	80	20
3	NCMT-45	2 x 45	1025	15	160	170	25
4	NCMT-58	2 x 58	1320	37	200	270	58
5	NCMT-80	2 x 80	1830	75	500	650	260

## Single Screw Extruders - SSE Series

Sr. No.	Model	Screw Dia (mm)	Screw Length (L/D)	Main Motor (kW)	Output Capacity (Kg/Hr)
1	SSE-25	25	20 / 25 / 28	2.2 / 3.7 / 7.5	9
2	SSE-45	45	20 / 25 / 28	5.5 / 7.5 / 11	35
3	SSE-65	65	20 / 25 / 28	11 / 15 / 18	70
4	SSE-75	75	20 / 25 / 28	18 / 22 / 30	100
5	SSE-90	90	20 / 25 / 28	30 / 37 / 45	200
6	SSE-110	110	20 / 25 / 28	30 / 37 / 45	250
7	SSE-150	150	20 / 25 / 28	45 / 55 / 75	350

- Specifications are indicative and as a part of our continuous R & D, we reserve right to change specifications without prior notice.
- For customized application the specifications can be altered.
- Output depends on type of material, formulations, processing parameters or ambient conditions.



CPVC Pipes



RPVC Pipes



SWR Pipes



HDPE Pipes



Furniture Profiles



Engineering Profiles



Building Profiles

# neoplast

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