

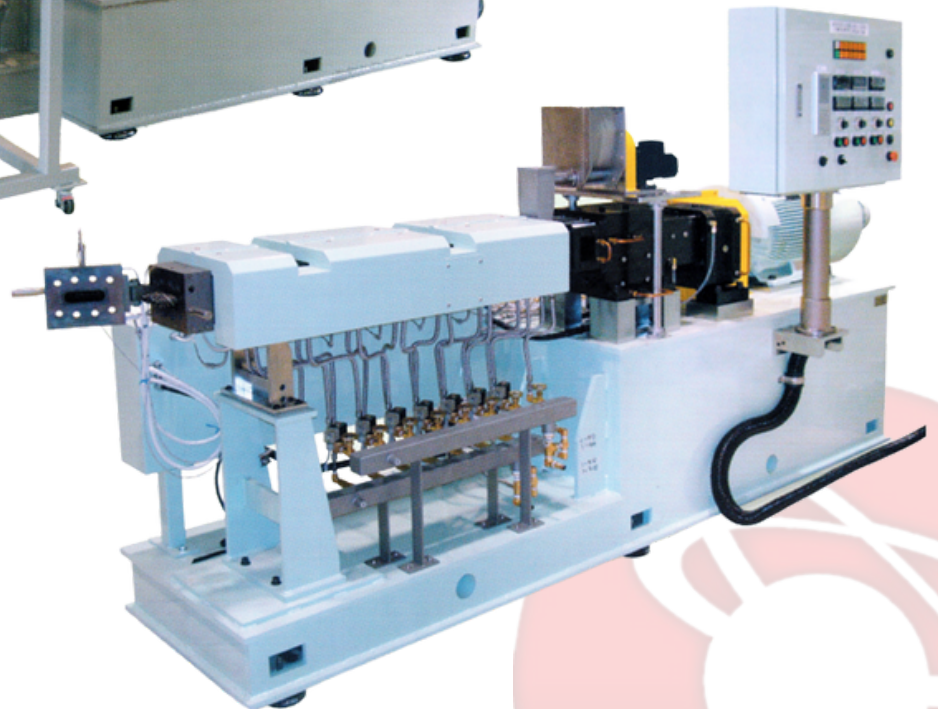
# technovel

Technovel's WDR Quad and Octa Screw Extruder utilizes a twin-screw extruder to enhance the kneading and compounding performance; particularly in reducing self-heating, residence time, equipment size, the L/D, and torque. Through testing and accumulated knowledge, Technovel has developed the "WDR" series, a fully meshed, co-rotating parallel Quad screw and Octa screw compounding extruder, which has been validated over many years. This series represents an innovative device that surpasses the performance of high L/D, high rotational speed, and high torque density of a twin-screw extruder, making it the first of its kind in the industry.

Technovel's complete line of products, including both the Quad and Octa screw extruders, are available for extensive services such as testing and evaluations.



Quad Screw Extruder is displayed.



### Features

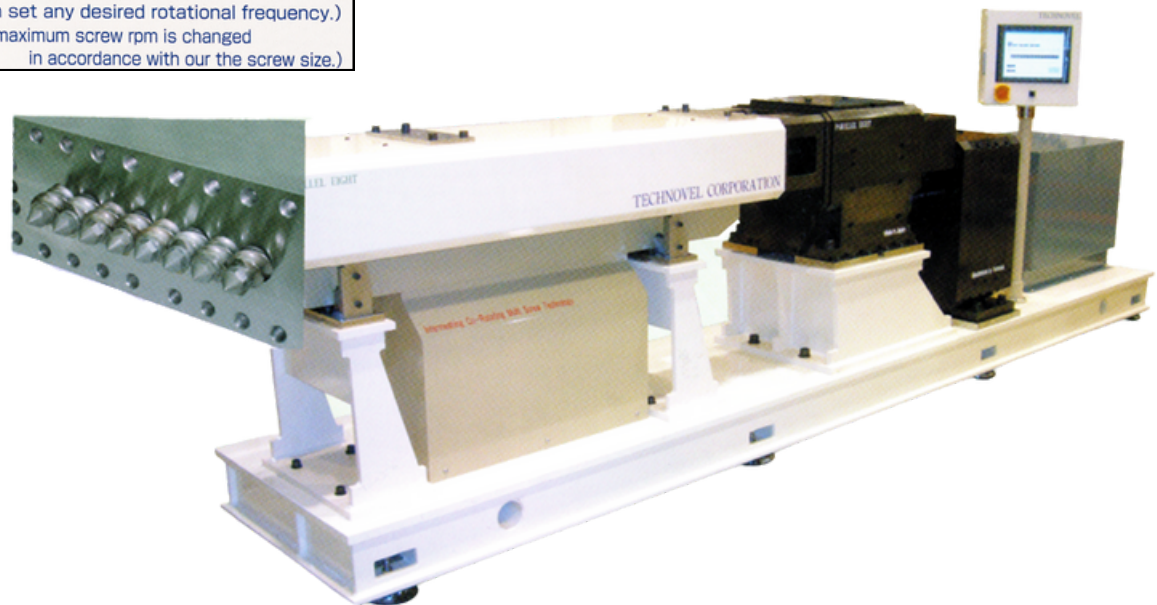
- Improvement of kneading and compounding performances
- Reduction of in-process material self-heating
- Maintenance of long retention time
- Improvement of vent degassing performance
- Improvement of materials feeding
- Increase of dispersibility by the high screw rotation speed
- Stabilization of extrusion and improvement of precision and uniformity
- Saving energy and space



### Technical Data

Screw diameter (Nominal diameter mm)	05~134
No. of screw	TW : Twin Screw-type QD : Quad Screw-type OT : Octa Screw-type
L/D	12~150
Grade*	LG : Low torque-type MG : Standard torque-type HG : High-power torque-type
Screw type	NH : Standard depth of screw groove (D/d=1.55) SH : Medium screw groove (D/d=1.62) DH : Deeper screw groove (D/d=1.88) OT : Other specifications (Triple thread Screw-type, etc.)
Screw rpm	100~10,000rpm (You can set any desired rotational frequency.) (Adaptive maximum screw rpm is changed in accordance with our the screw size.)

Octa Screw Extruder is displayed.



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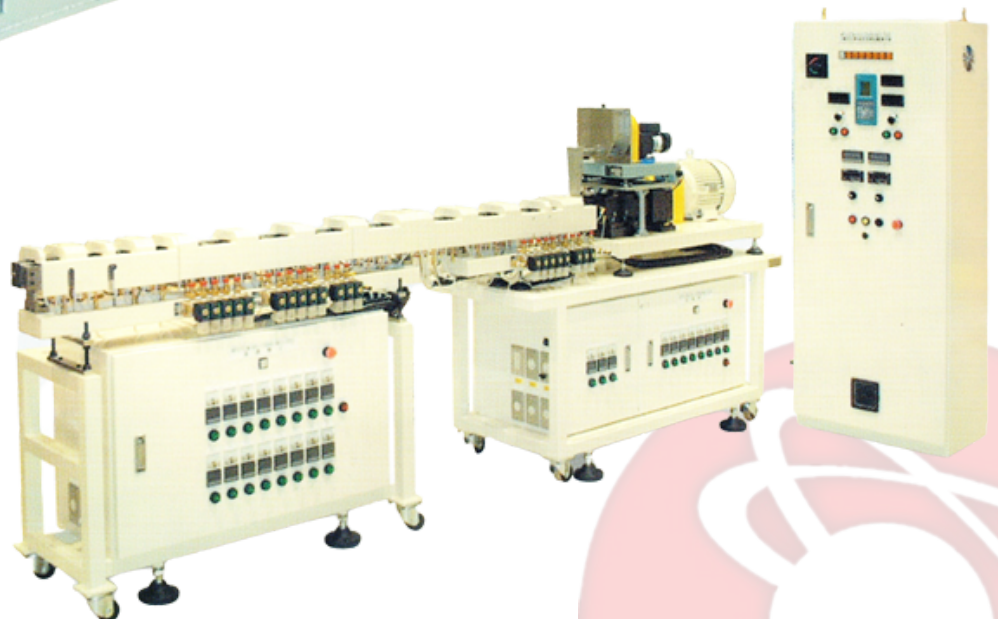
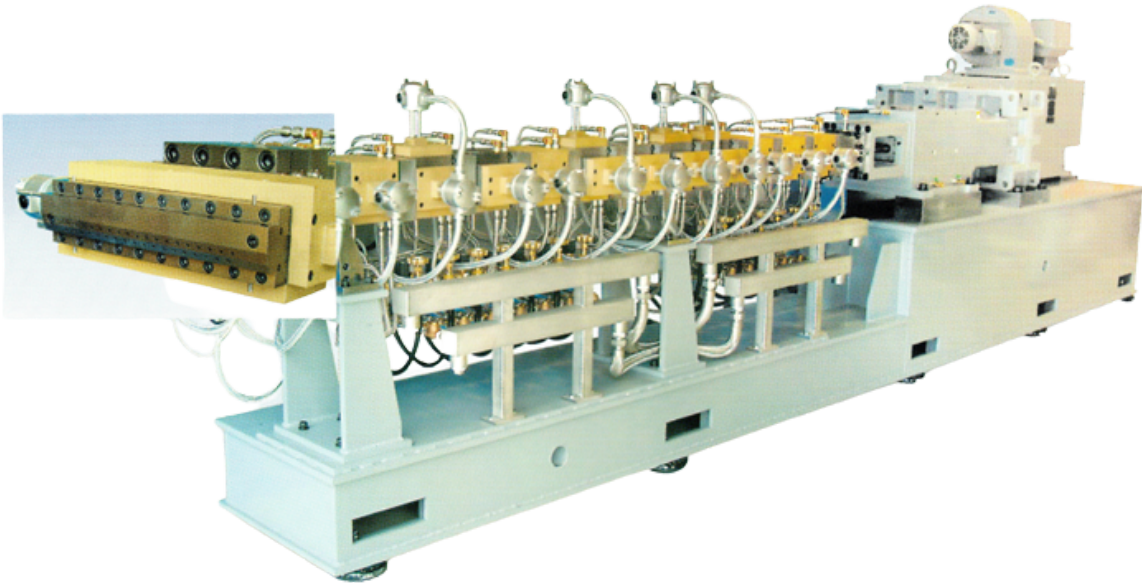
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With today's continuous development of new materials, requirements of compounding a wide variety of materials are constantly ever-changing. MFU, KSW, and ZRO are standard grades of 15 screw sizes from 6mm to 134mm.

- The screw  $D/d = 1.62$  makes it easy to scale up, where  $D$  is  $d+2h$ .
- $d$  = the screw-body diameter and  $h$  is the channel depth.
- Screw rotation speed can adjust up to 10,000rpm.
- $L/D$ : 150, where  $L$  is the total length of the screw.

The applications are for next-generation material development, from general-purpose resins, super engineering plastics, biodegradable materials, and fluoro resins.

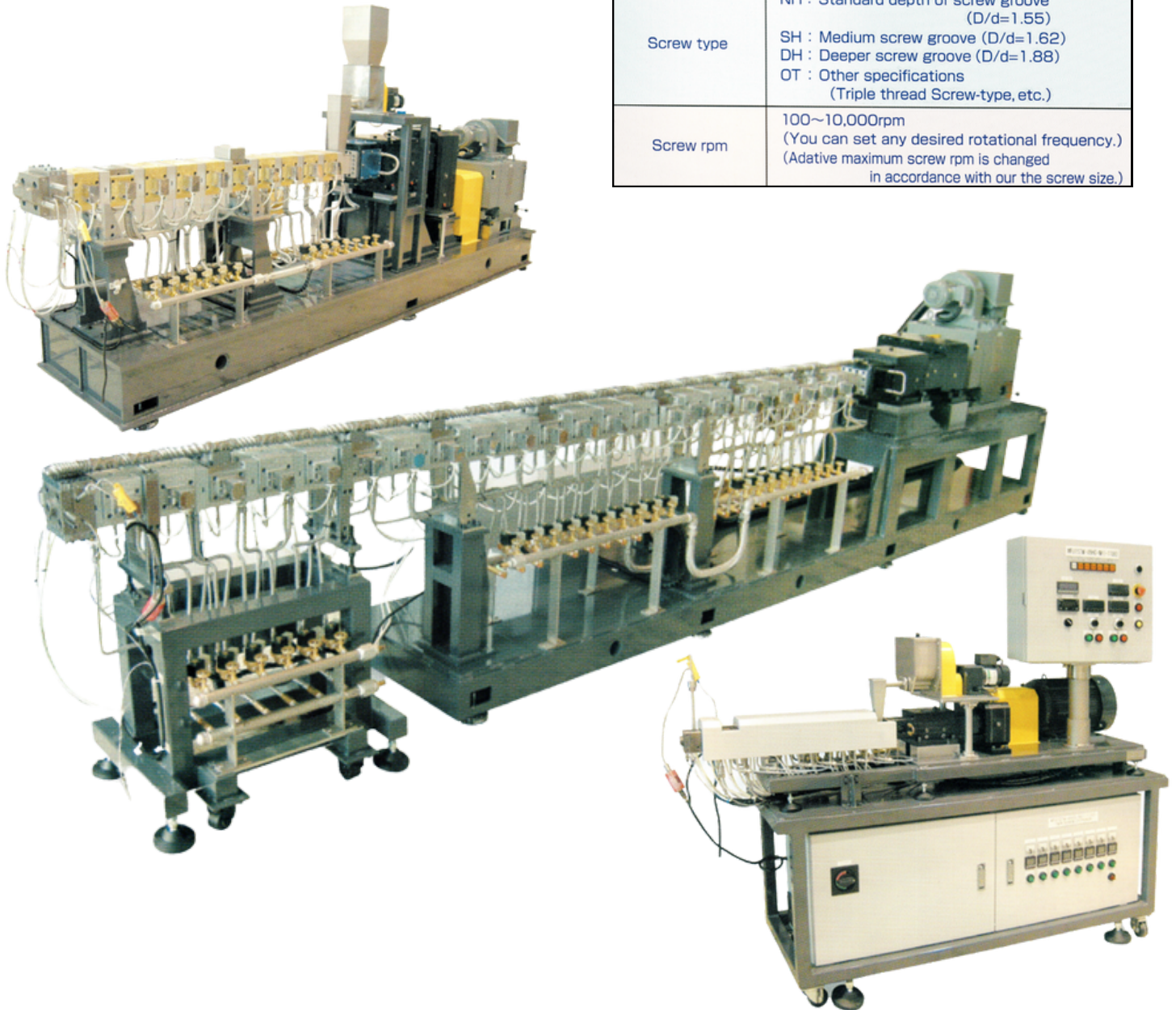


### Features

- Technovel patented high power drive system
- Screw process length L/D = 12~150
- Screw rotation speed 100~10,000 rpm
- The barrel can withstand pressure (thrust withstand pressure) up to 35 MPa (patented)
- Change screw variations freely
- Self-cleaning property
- Use for pellets, powders, liquids, gases, etc

### Technical Data

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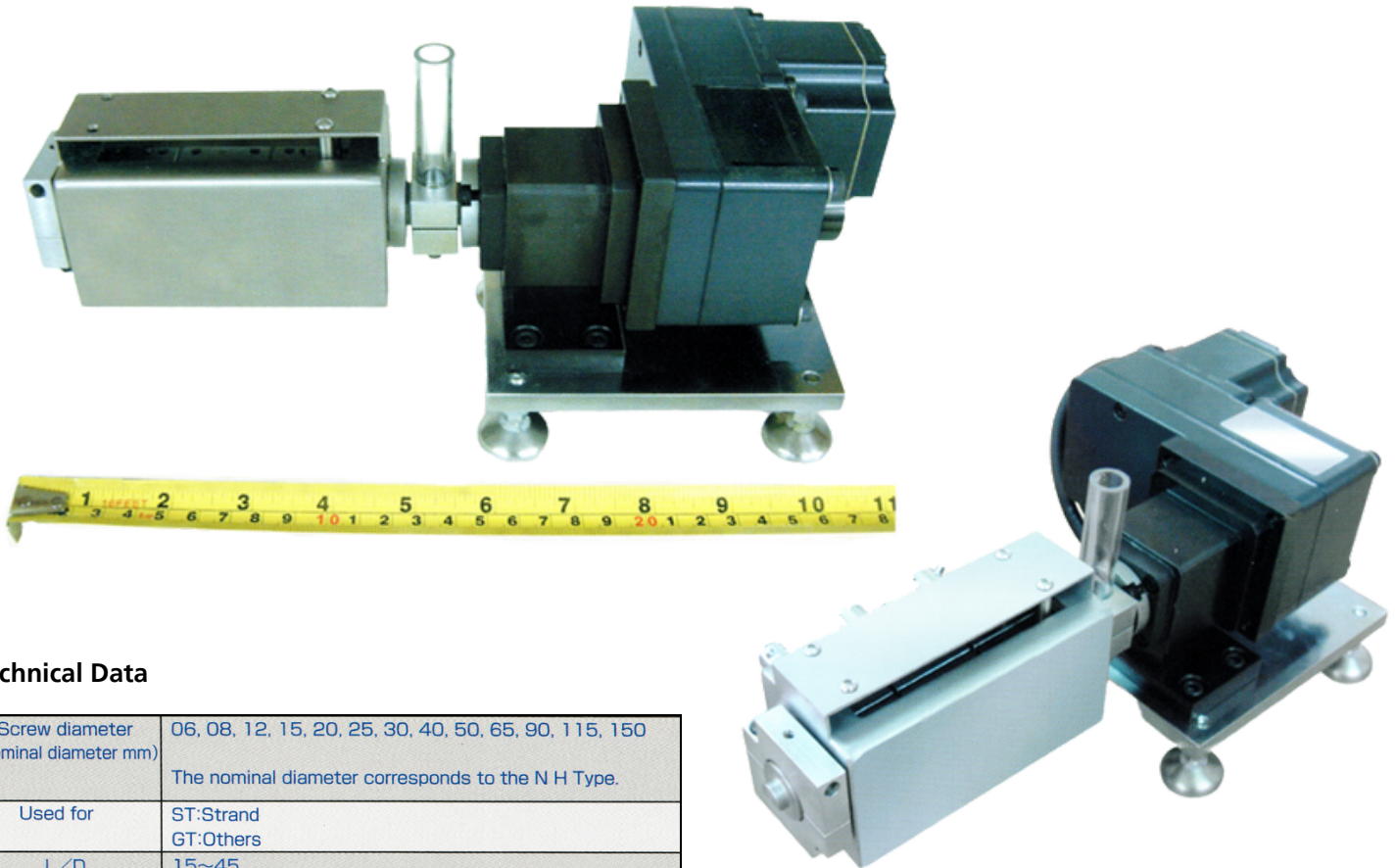
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Technovel's SZW05 is the standard Single Screw Extruder and is designed for pellets, film/sheet, tube/pipe, profile, corrugated tube/pipe, mono-filament, and for feed melted material into a multi-screw feeder. Achieve high quality with multi-layers or multi-colored operations.

The Single Screw Extruder is designed and manufactured to achieve high-output and high quality products in various fields. This also includes the operation by collaborating with the KZW Series Multi Screw Extruder.



## Technical Data

Screw diameter (Nominal diameter mm)	06, 08, 12, 15, 20, 25, 30, 40, 50, 65, 90, 115, 150 The nominal diameter corresponds to the N H Type.
Used for	ST:Strand GT:Others
L/D	15~45
Grade*	MG:Normal Operation VG:Vent Operation
Screw rpm	STD:60~100rpm MIS:101~300rpm HSS:301~600rpm

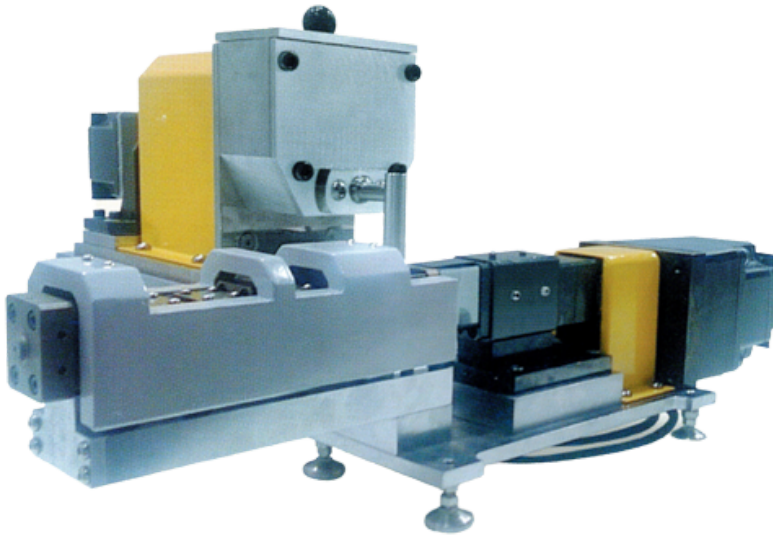
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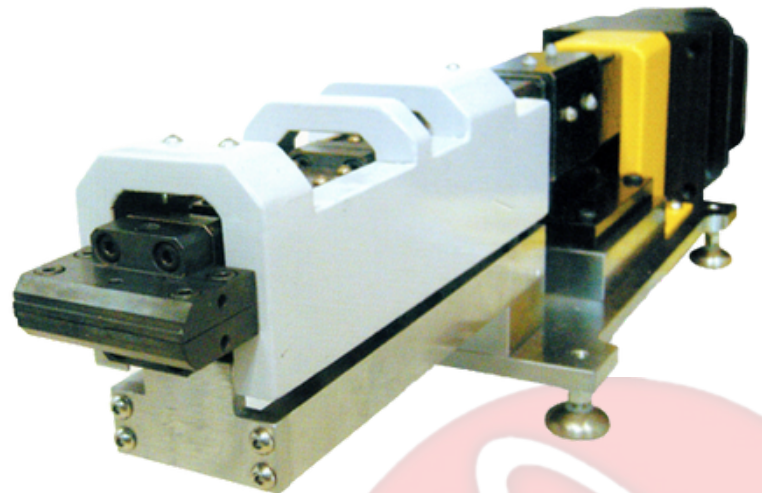


Technovel's KZW06 is an ultra-compact compounding extruder that can operate on a desktop. For its compactness, it can be hand-carried and mobile. It can be installed in any small and controlled environment such as a dust-free chamber for electronic and medical applications.

The range of output rate is 3-30 grams per hour for ultra-small continuous compounding. The internal volume is 1cc, and hence, a sample of 2 cc is enough for the operation. This machine uniquely designs for handling expensive materials and pharmaceutical applications.


**Technical Data**

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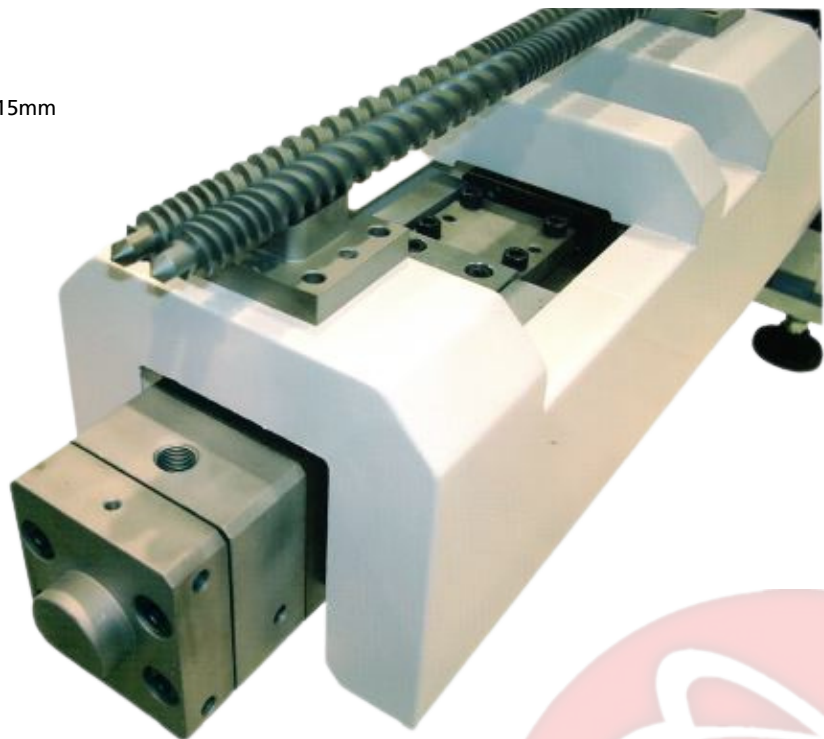
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Technovel's TCR Series has been developed with a different direction of the rotational twin-screw extruders. The majority of the twin-screw extruders are co-rotational parallel. Technovel uses the same screw elements that are used in the twin-screw extruder with the ability to exchange the screw segments in the screw design. Technovel makes the impossible, possible to extend the L/D ratio for the conical type screws.



Screw diameter 15mm



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