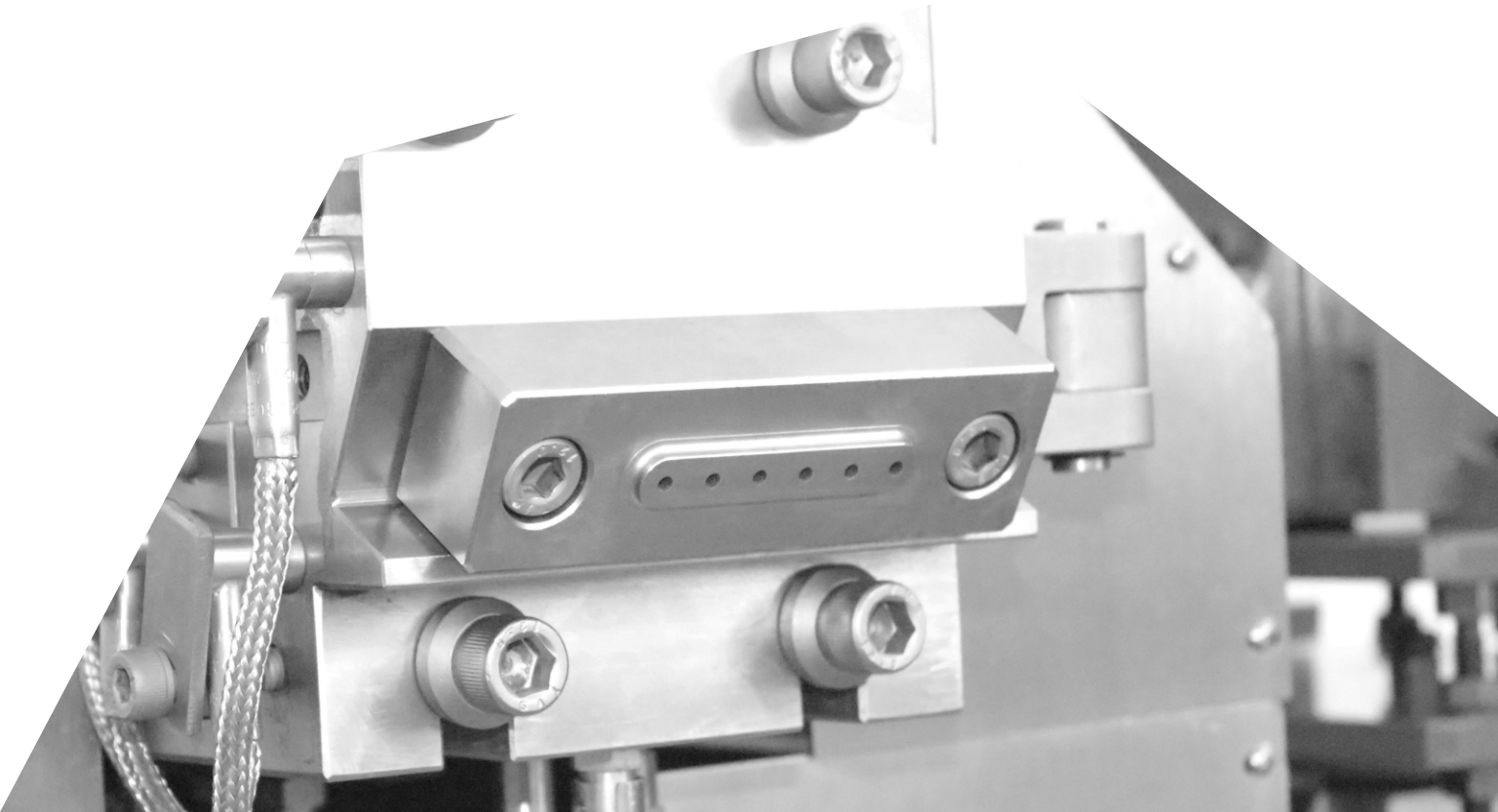
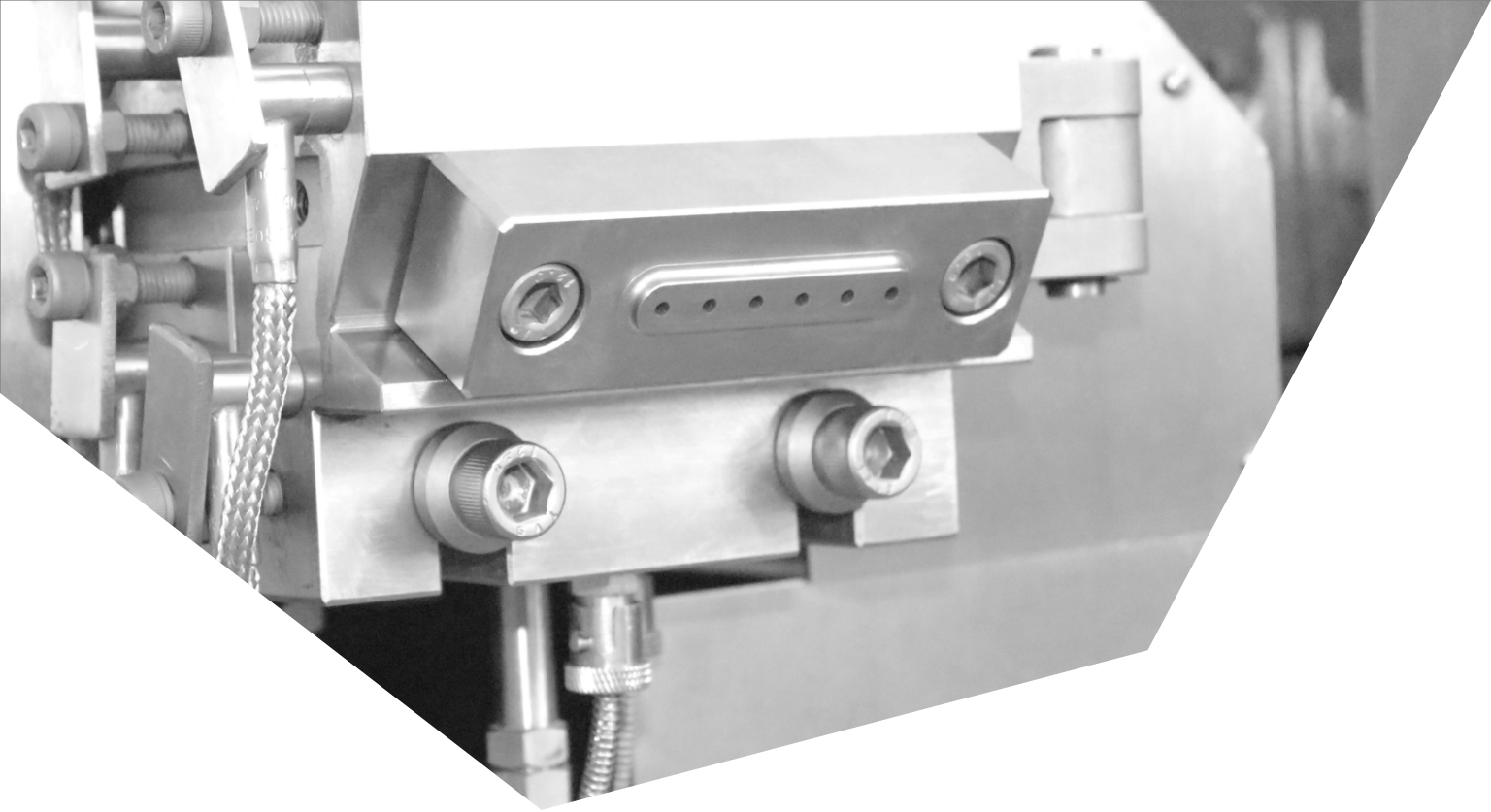


Transforming Lives.
Transforming Materials.



OFFERINGS





STEER is the creator of advanced co-rotating twin-screw extruders that effectively transform and functionalise materials in the fields of plastics, pharmaceuticals, food & nutraceuticals, biomaterials and biorefining.

FOUNDED IN 1993 BY DR. BABU PADMANABHAN WITH A VISION TO STEER A NEW
WORLD, STEER TODAY HAS OVER 33 PATENTS FOR BREAKTHROUGH
INNOVATIONS AND SERVES OVER 700 CUSTOMERS IN 39 COUNTRIES



5 GLOBAL OFFICES

10 SATELLITE OFFICES



3 APPLICATION
DEVELOPMENT CENTERS
FOR PLASTICS

DEDICATED POLYMER
SCIENCE & DIAGNOSTIC
CENTER

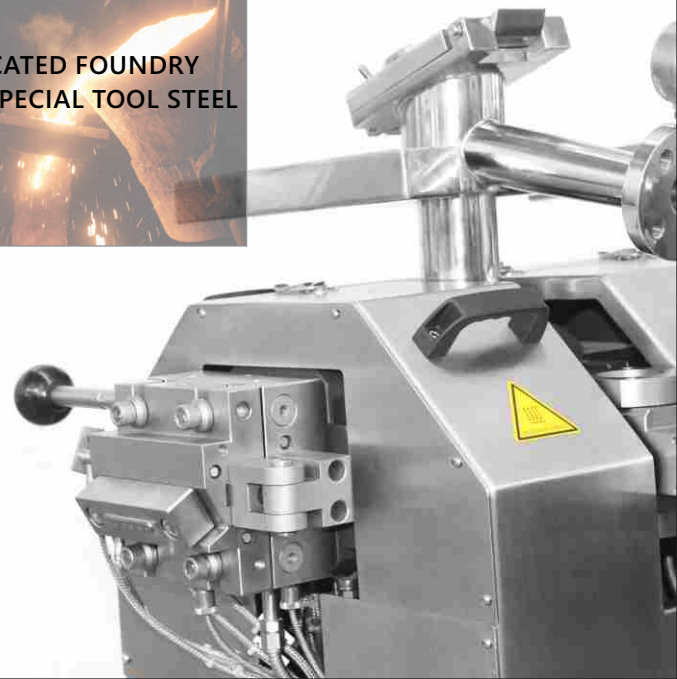


PHARMACEUTICAL
FORMULATION &
DEVELOPMENT CENTER

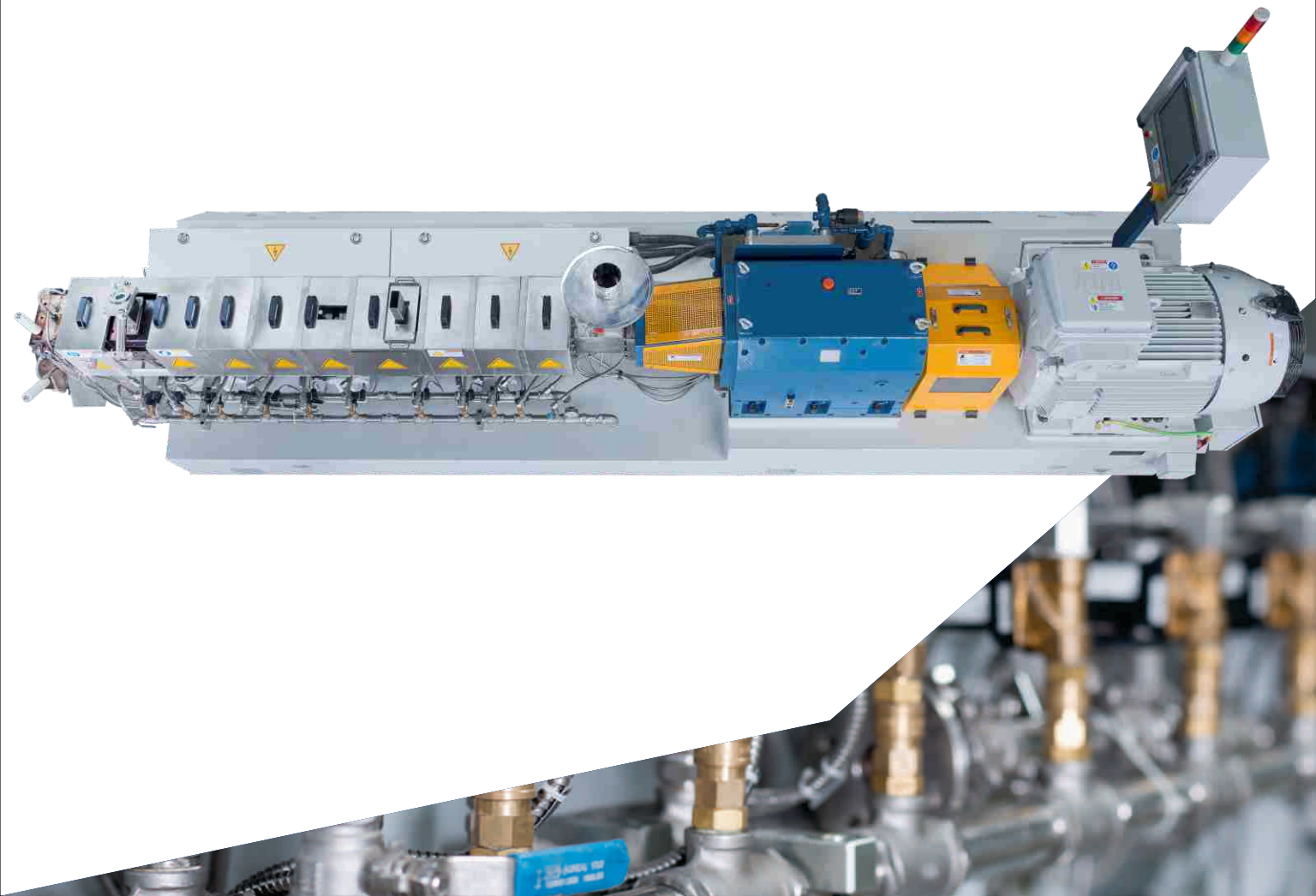
FOOD AND
NUTRACEUTICAL LAB



DEDICATED FOUNDRY
FOR SPECIAL TOOL STEEL



OUR OFFERING





**ADVANCED CO-ROTATING
TWIN-SCREW EXTRUDERS**

REVOLUTIONARY OMEGA 1.71 DO/DI
MEGA SPECIAL 1.55 DO/DI
ALPHA 1.49 DO/DI

**INTEGRATED
MANUFACTURING HUB**

SPECIAL TOOL STEEL PLANT
STEER MANUFACTURING FACILITIES

**ADVANCED EPZ
TECHNOLOGY**

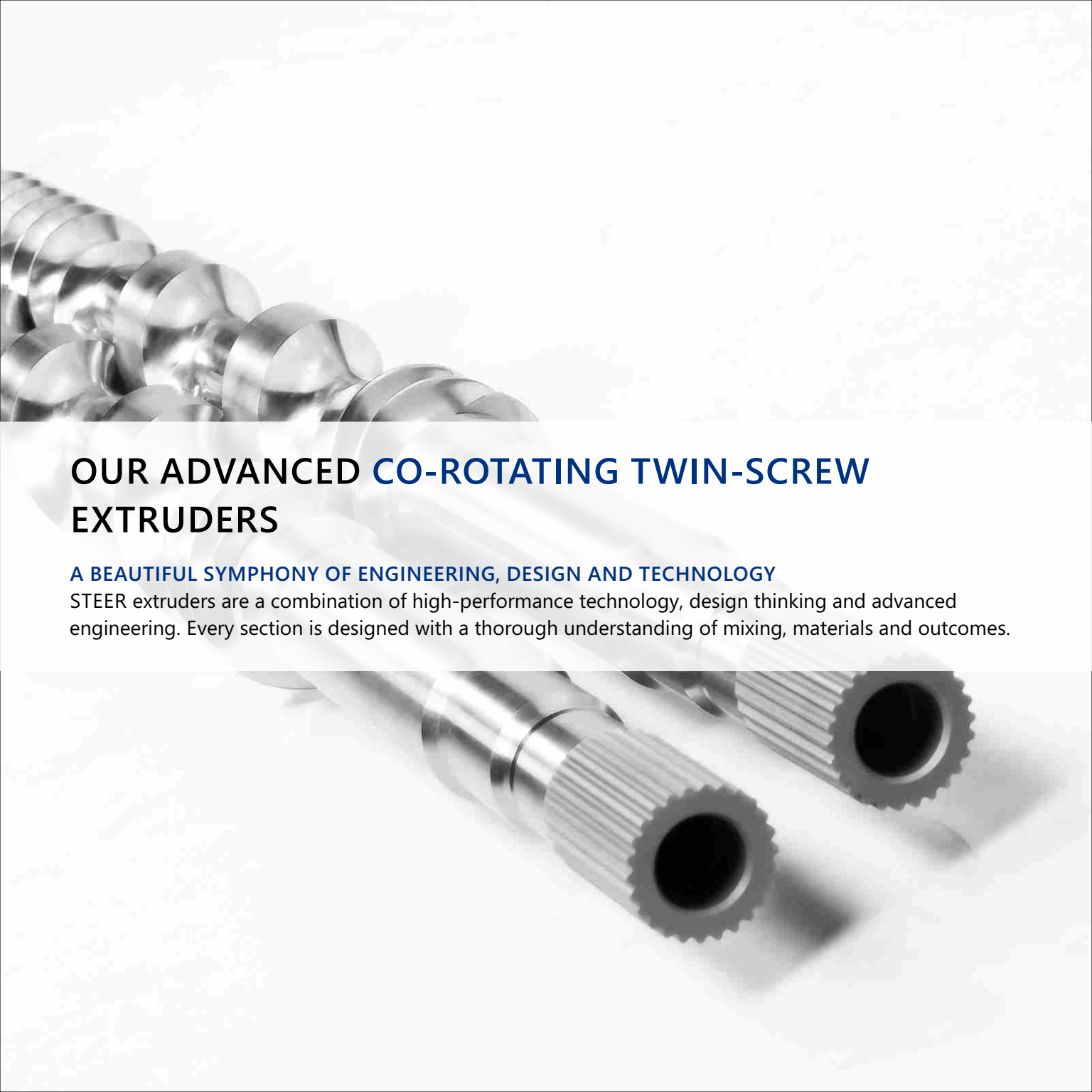
STANDARD ELEMENTS
BARRELS & LINERS
SHAFTS

**STEER COMPONENTS
AND PERIPHERALS**

HITORQ GEARBOXES
TSE FEEDERS
TSE PARTS
HUMAN MACHINE INTERFACE

**STEER TECHNICAL
SERVICES**

INSTALLATION SERVICES
ANNUAL MAINTENANCE CONTRACT
AFTER - SALES SUPPORT
RELINING AND REFURBISHING SERVICES



OUR ADVANCED **CO-ROTATING TWIN-SCREW** EXTRUDERS

A BEAUTIFUL SYMPHONY OF ENGINEERING, DESIGN AND TECHNOLOGY

STEER extruders are a combination of high-performance technology, design thinking and advanced engineering. Every section is designed with a thorough understanding of mixing, materials and outcomes.



**OMEGA 1.71 DO/DI ADVANCED
CO-ROTATING TWIN-SCREW
EXTRUDER**



omega SERIES
TWIN-SCREW EXTRUDERS

**MEGA SPECIAL 1.55 DO/DI
CO-ROTATING TWIN-SCREW
EXTRUDER**



MEGA SERIES
TWIN-SCREW EXTRUDERS

**ALPHA 1.49 DO/DI
CO-ROTATING TWIN-SCREW
EXTRUDER**



ALPHA SERIES
TWIN-SCREW EXTRUDERS

THE REVOLUTIONARY OMEGA 1.71 DO/DI ADVANCED CO-ROTATING TWIN-SCREW EXTRUDERS

The OMEGA SERIES sets a new standard in the compounding industry. The revolutionary 1.71 Do/Di allows manufacturers to increase their production capacity by up to 25%* due to the increased volume and higher torque capacity. The OMEGA series comes with STEER's patented 'fractional lobe geometry' special elements that are designed to enhance process efficiency and quality of output, while delivering far greater returns on investment.



ADVANTAGES OVER CONVENTIONAL PLATFORMS

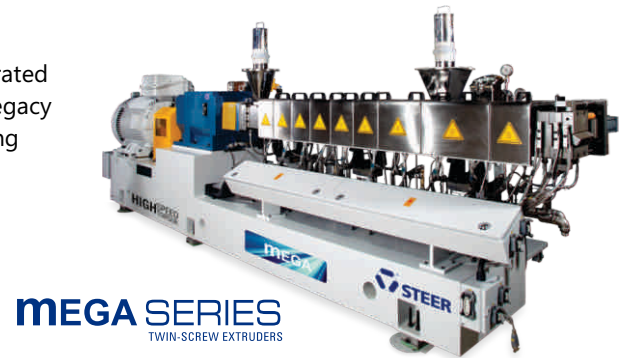
- 01** Up to 25%* more production capacity due to increased volume and torqueability. The High free volume leads to higher throughput.
- 02** Improved process efficiency and quality* due to patented special elements with 'fractional-lobe' geometry, that allow for higher conveying capacity, uniform shear, and extensional flow.
- 03** Reduced energy dissipation* due to a narrower, sharper residence time distribution
- 04** Better control* over kneading, stirring and shear to give manufacturers the capability to work with low-bulk density and shear-sensitive materials
- 05** Improved conveying efficiency, greater ROI and minimised downtime* due to self-wiping elements that prevent stagnation and degradation.
- 06** Controlled processing with higher required mean shear, reduction in total shear as well as controlled residence time

The OMEGA Series is available for specific lab-related needs to large commercial needs, ranging from 20mm to 140mm. For more information visit STEERWORLD.COM

* varies basis applications

THE PROVEN OUTPERFORMER FOR STANDARD COMPOUNDING APPLICATIONS — THE MEGA SPECIAL 1.55 DO/DI CO-ROTATING TWIN-SCREW EXTRUDER

The MEGA SPECIAL SERIES is the most desired choice amongst several world class compounders. These extruders have demonstrated capability to support high volume manufacturing, especially for legacy engineering thermoplastics. Besides uncompromising quality along with proven technology and standard design.



The MEGA SPECIAL Series is available in four variants - MEGA SPECIAL PREMIUM, MEGA SPECIAL PLUS, MEGA SPECIAL ZL and MEGA SPECIAL LT — to suit a variety of compounding needs

THE RELIABLE WORKHORSE — STEER'S ALPHA 1.49 DO/DI CO-ROTATING TWIN-SCREW EXTRUDER

STEER's ALPHA series twin-screw extruders are a popular choice amongst compounders looking for an all-in-one performer. Developed with a 1.49 Do/Di, these co-rotating twin-screw extruders are robust, reliable and perfectly suited for round-the-clock production. They deliver exceptional results for both general compounding applications as well as advanced applications.



The ALPHA Series is available in different variants with the screw diameter ranging from 18 — 90 mm.
Note: STEER builds twin-screw extruders to CE and UL standards



INTEGRATED MANUFACTURING FACILITY

Our integrated manufacturing facility gives us control over quality and allows us to cater to specific requirements. We not only produce some of the best tool steel in the world but, design, craft, profile and create advanced technology, all under one roof.



DEDICATED FOUNDRY FOR SPECIAL TOOL STEEL

STEER manufactures special grades of tool steel, with high wear and corrosion resistance, developed in our state-of-the-art foundry at Coimbatore, India.

For instance, our ACROLLOY series, a vanadium rich tool steel developed using microgenetic technology comes with alloying and micro-alloying elements and works against the forces of abrasion, wear and corrosion. With ACROLLOY, our platforms and elements are capable of withstanding the most difficult applications.

Choice of metallurgy

Wear-resistant series, Corrosion resistant series, HIP, Crest-welded & Special Alloys, MOC to suit all applications.

SOME OF OUR MANUFACTURING FACILITIES



For any additional information write to info@steerworld.com

ADVANCED EPZ TECHNOLOGY

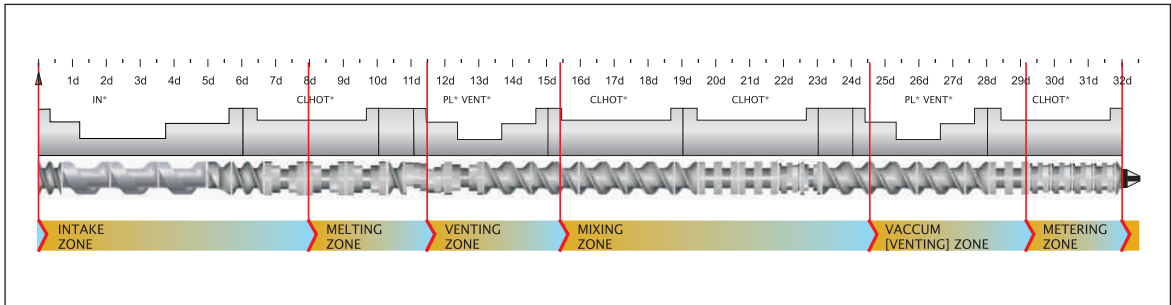


HIGH-END TECHNOLOGY CRAFTED TO DELIVER SUPERIOR COMPOUNDS

A good compound is the result of a thorough understanding of what goes on inside the 'extruder processing zone' (EPZ). The key to success lies with the exact design of the 'element and barrel' configuration. At STEER, we have mastered this art, which is why over **6000** extruder lines around the globe prefer STEER's replacement elements and components.

STANDARD REPLACEMENT ELEMENTS — EXEMPLIFYING ENGINEERING EXCELLENCE

STEER replacement elements are purpose-built for performance and deliver outstanding process efficiency. Every element is made from special tool steel manufactured at our very own state-of-the-art foundry. This means that STEER replacement elements are designed to last and to work in perfect unison with the existing system.



INTAKE ELEMENTS



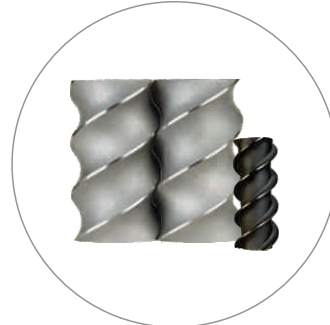
MELTING ELEMENTS



VENTING ELEMENTS



MIXING ELEMENTS



VACUUM ELEMENTS



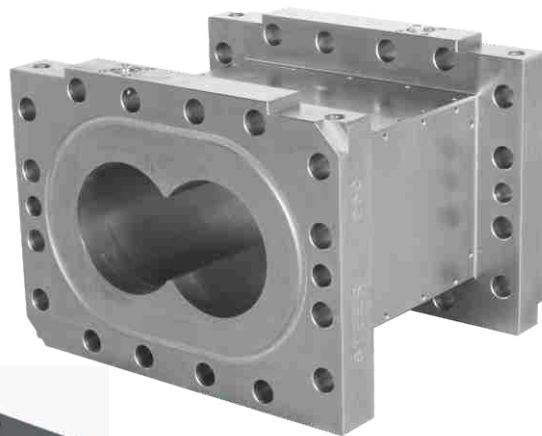
METERING ELEMENTS

For any additional information write to info@steerworld.com

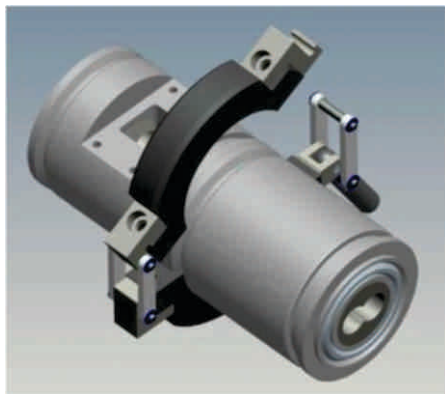
STEER BARRELS AND LINERS — CRAFTED TO PERFECTION

EPZ BARRELS

STEER Barrels and Liners are technologically advanced masterpieces, designed to deliver outstanding value. Made with the right metallurgy at our very own state-of-the-art foundry, they are crafted for high performance, longer life and perfectly match with your existing co-rotating twin-screw extruder machinery.



STEER Barrels are available for a wide range of co-rotating twin-screw extruders. We manufacture barrels from 10mm dia to 300 mm dia (with a maximum length of 600mm). Whether you require Solid or Lined, Hard-faced or Surface-engineered, Flanged or Round, Tie-bar or Clam-shell, each and every barrel is purpose-built with great attention to detail, offering you a host of advantages including customised metallurgy with required accuracy, cooling circuits for increased efficiency and customised vent inserts for better performance .



NOVEL TECHNOLOGY WITH JIFFY CLAMP

We are constantly innovating and have developed a 'Novel Technology with a Jiffy Clamp' for special Extruders. The objective is to reduce time during assembling/changing and to take care of the forces of expansion during the heating process.

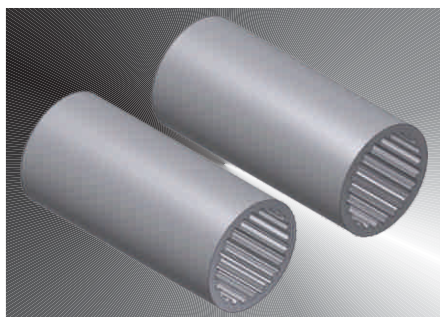
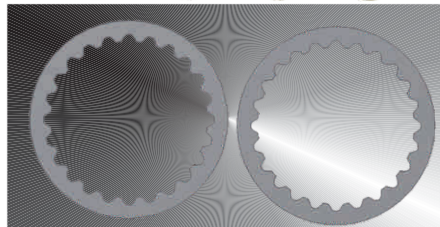
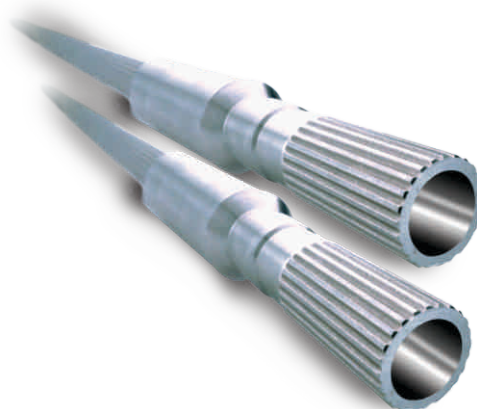
For any additional information write to info@steerworld.com

STEER SHAFTS — BUILT FOR POWER

EPZSHAFTS

STEER shafts are made with superior metallurgy from our very own state-of-the-art foundry, with full-fledged in-house treatment. Besides they are diligently designed and made with high accuracy. At STEER, we have the ability to machine any contour for up to 5.5m . Our in-house torque testing facility helps rate the capacity of these shafts.

STEER manufactures exclusive shafts of required profile and geometry for all makes of twin-screw extruders.



STEER CONTINUA SPLINE

Most commonly used shaft splines are involute, circular or straight increasing the stress concentration and causing severe damage to the expensive screw shaft, the screw elements and the gearbox during a surge in torque.

STEER's Continua Spline design, made of high alloy steel, reduces stress concentration. It has a shaft adaptor with "V" groove. During a surge, only the shaft adaptor breaks at the groove, preventing damage to the shaft, the elements and the gearbox.

For any additional information write to info@steerworld.com

STEER COMPONENTS AND PERIPHERALS

PERFECT SYNERGY FOR PERFECT OUTCOMES

STEER components and peripherals are crafted to work in perfect unison with the rest of the platform. They are designed with great attention to detail to deliver **exceptional performance, enhanced efficiency and superior returns on investment** while ensuring ease of operation.

STEER TSE FEEDERS — OPTIMISED FEEDING. PRECISE DOSING



At STEER, we craft both volumetric feeders and side feeders. STEER Feeders assure optimised feeding of the materials, ranging from highly cohesive to interlocking fibers. The feeders are known for their noiseless and pollution-free operations. Besides, STEER has also designed conveying elements for high consistency and precise dosing into the extruder.

For any additional information write to info@steerworld.com



VOLUMETRIC FEEDER

**FEED ENHANCEMENT
ELEMENTS**



TFV



SKE



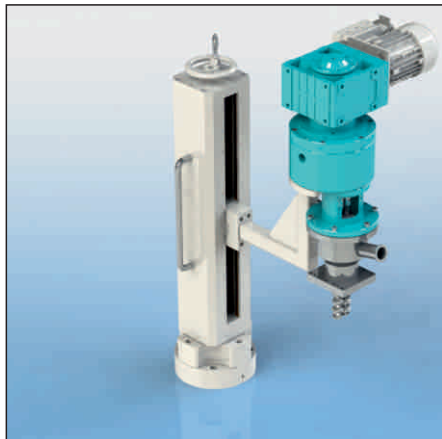
SFV



RFV

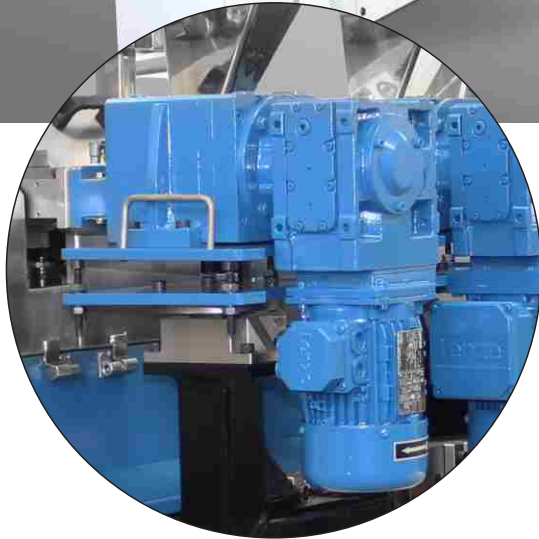


SIDE FEEDERS



VERTICAL FEEDER

STEER VACUUM STUFFERS



In a twin screw extruder, vacuum vent is generally located before the metering zone for removal of gases effectively in a continuous manner at lower than atmospheric pressure. This degassing helps to conserve the quality of the melt that is affected by the presence of monomers, solvents, moisture and other volatiles.

Vacuum vent stuffers are used to apply vacuum to the process section to remove gas entrainment in the melt while simultaneously preventing the melt from blocking the vent opening.

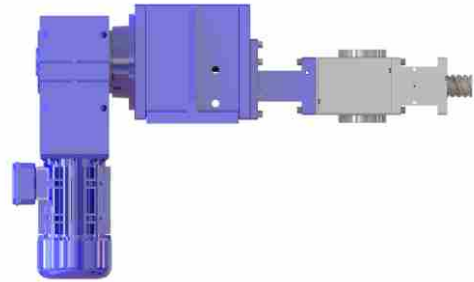
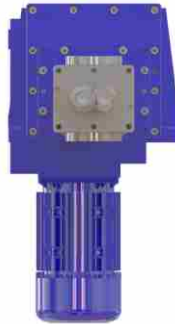
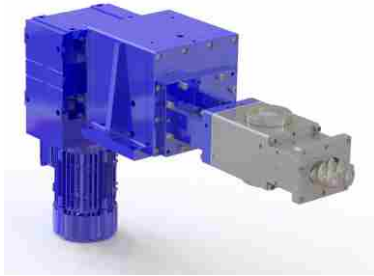
Advantages associated with the use of vent stuffers are:

- i. Improved volatile removal
- ii. Decreased downtime due to vent blockage
- iii. Higher quality and / or production rate.

The screws are decoupled from the gearbox output shafts via a connecting zone in the same manner as the extruder. This approach provides the ultimate degree of process flexibility, allowing for specialized configuration of the screw elements. The STEER side vacuum vent stuffer are fitted with high performance gearboxes with thrust bearing assemblies which provides the highest level of reliability and service life expectancy.

STEER VACUUM STUFFERS

Side Stuffers



Top Stuffers

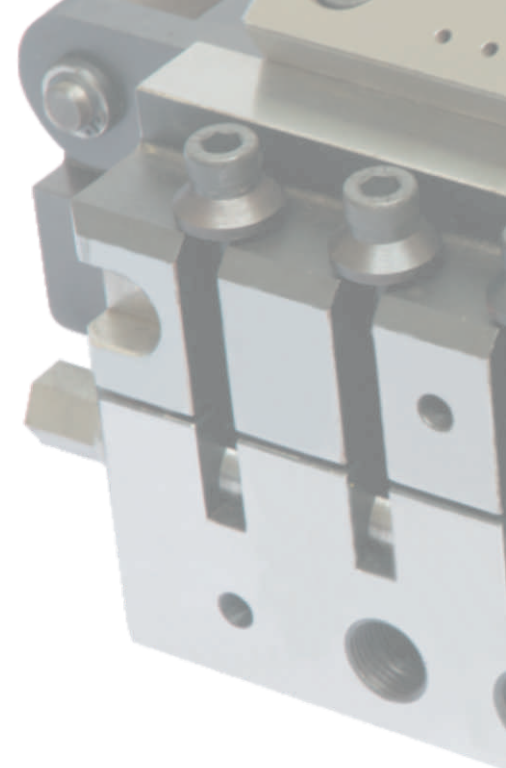


Specifications

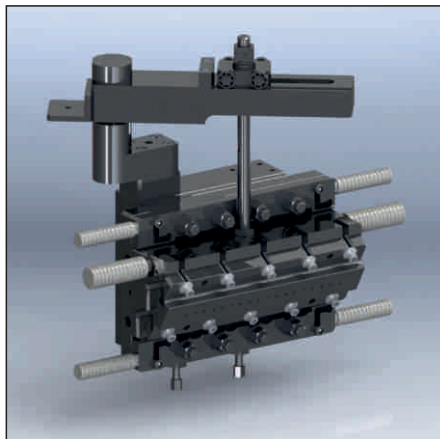
Type	VF -10	VF -9	VF -7	VF -6	VF -4	VF -3	VF -2	VF -20
Diameter	108mm	90mm	71mm	62mm	41mm	30mm	25mm	20mm
Power	15kW	15kW	75kW	55kW	15kW	0.75kW	0.37kW	0.37kW
Max Screw Speed Available	60RPM	60RPM	60RPM	60RPM	60RPM	60RPM	60RPM	60RPM
VFD Control	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

STEER TSE PARTS — ENHANCED EFFICIENCY. LONGER LIFE

STEER manufactures twin-screw extruder parts designed to enhance process efficiency and deliver far greater returns on investments.



2 BOLT DIE ASSEMBLY



DIE ASSEMBLY

For any additional information write to info@steerworld.com



STEER TECHNICAL SERVICES

A GLOBAL SOLUTIONS PROVIDER

The STEER Technical services network provides installation, after-sales support, annual maintenance, and relining and refurbishing services.



EXTRUDER AND PLANT INSTALLATION

Our skilled team of service personnel ensure smooth installation of the extruder. Besides this, we provide complete training, operation and maintenance support.



ANNUAL MAINTENANCE CONTRACTS

STEER undertakes Annual Maintenance Contracts (AMCs) for extruders to ensure maximum productivity and minimum downtime.



AFTER - SALES SERVICE

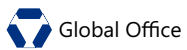
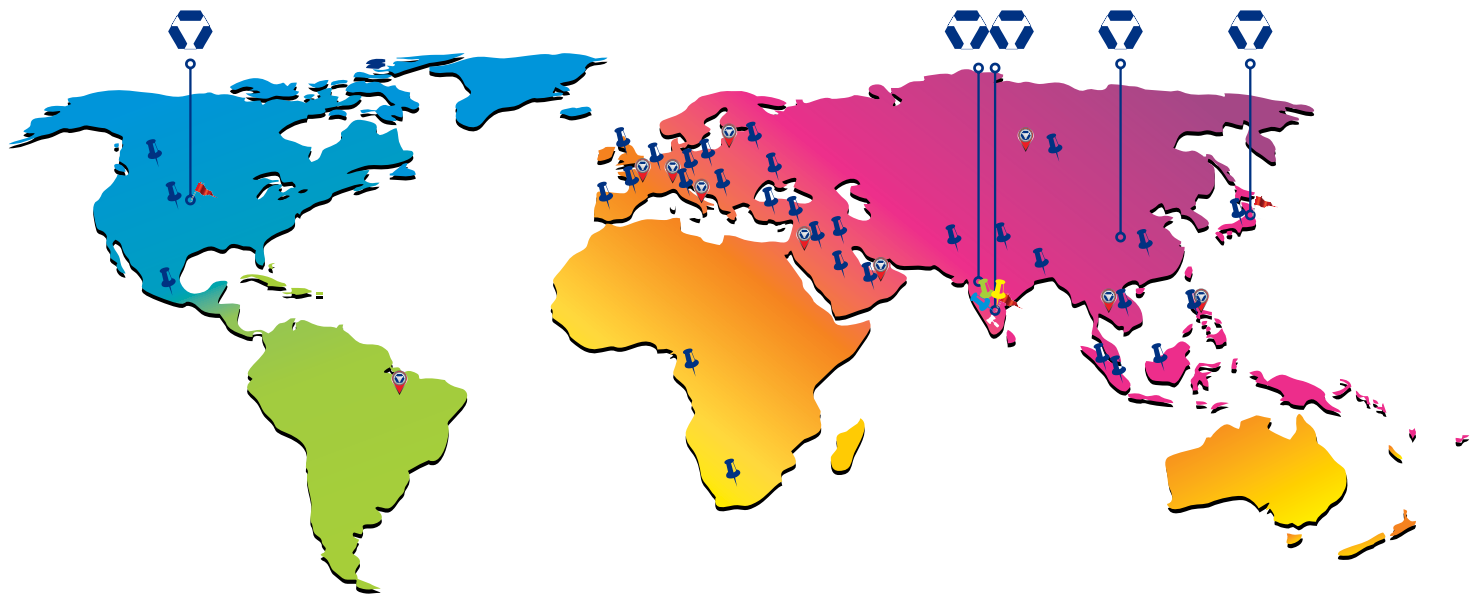
STEER is committed to improving customer satisfaction. Our reliable team of skilled professionals are prepared for every emergency, 24x7, to provide prompt solutions for problems or concerns.



RELINING AND REFURBISHING SERVICES

STEER also undertakes the complex task of Barrel relining to give your platform extended life.

For any additional information write to info@steerworld.com



Global Office



Satellite Office



Application Development Center



Countries Served



Foundry



Dedicated Polymer Science & Diagnostic Center



Pharmaceutical Formulation & Development Center



Food & Nutraceutical Lab

5 GLOBAL OFFICES

10 SATELLITE OFFICES

4 APPLICATION DEVELOPMENT CENTERS

39 COUNTRIES SERVED

500+ EMPLOYEES

60 PATENTS

418000 ELEMENTS SOLD

625 EXTRUDERS INSTALLED

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