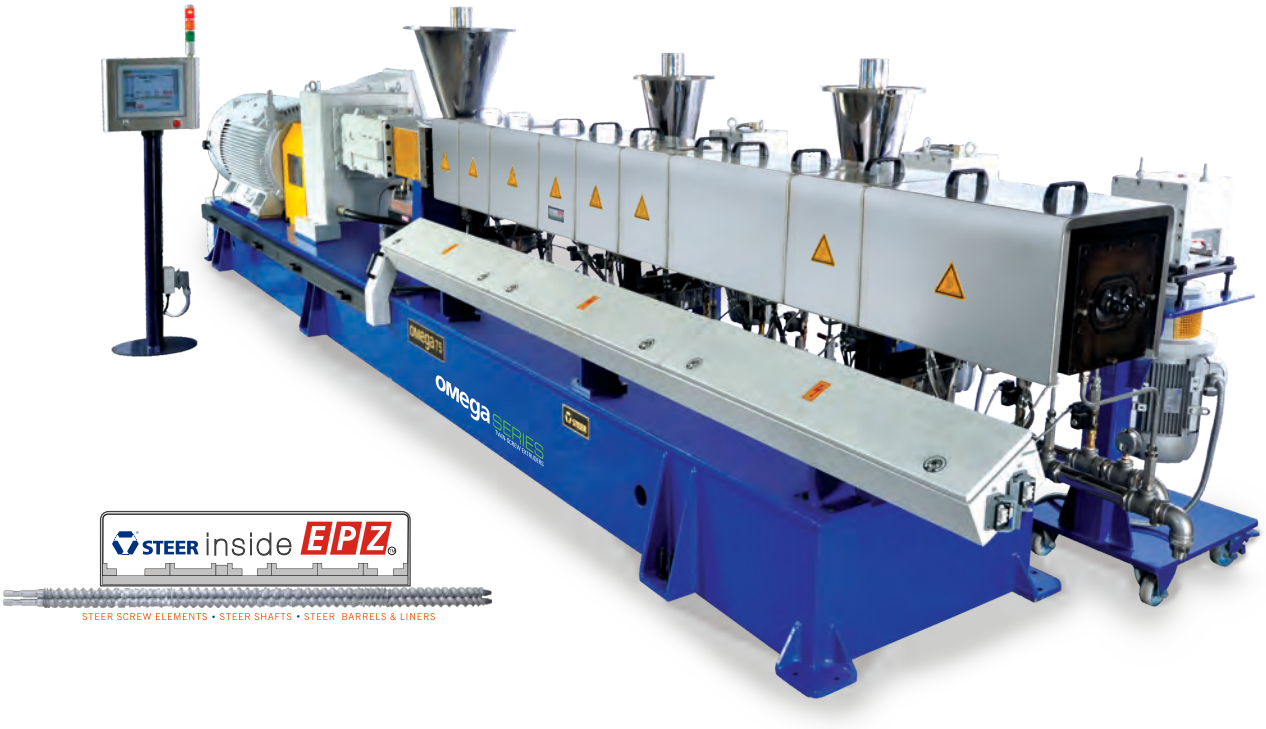
STEER
STEER A NEW WORLD

STEER GENERATION NEXT
CO-ROTATING TWIN-SCREW EXTRUDERS

BRANDS * SPECIFICATIONS * APPLICATIONS



omega H-CLASS TWIN-SCREW EXTRUDERS
omega SERIES TWIN-SCREW EXTRUDERS
omega LAB TWIN-SCREW EXTRUDERS
OMICRON 12 LAB EXTRUDERS
ALPHA S-CLASS TWIN-SCREW EXTRUDERS
ALPHA SERIES TWIN-SCREW EXTRUDERS
ALPHA LAB TWIN-SCREW EXTRUDERS
MEGA SERIES TWIN-SCREW EXTRUDERS

omega H-CLASS TWIN-SCREW EXTRUDERS

Applications

- Long Fiber Reinforced Thermoplastics (LFRTP)
- Halogen Free Flame Retardant Compounds
- Compounds of all Engineering Polymers: PA, PC, PEEK, PEK, PSU, PU, PES, PEI
- XLPE
- Polymer Blends
- Halogenated PVC
- Devolatization or degassing
- TPO, TPVs
- Automotive Compounds
- Color Masterbatch
- Natural Fiber (Jute) Filled Composites
- Bio Polymers
- Impact modified PP
- Difficult to process materials & many other applications that need residence time to be as low as possible
- Highly metal ceramic filled polymer
- Shear sensitive polymers
- WPC

omega SERIES TWIN-SCREW EXTRUDERS

Applications

- Automotive Compounds
- Polymer Blends
- De-Volatilizing
- Reactive Processing
- Speciality Polymers
- Thermo Plastic Elastomer / Vulcanisers
- Natural fibers compounding
- WPC
- Bio Polymers
- Thermo Set Polymers
- Nano-particle Compounding
- Solvent extraction
- Processing of shear sensitive material such as PVC, PSU
- Fiber grade Polyester, Polyethylene Masterbatches
- Engineering TP

omega LAB TWIN-SCREW EXTRUDERS

Applications

- Automotive Compounds
- Polymer Blends
- De-Volatilizing
- Reactive Processing
- Nano-particle Compounding
- Processing of shear sensitive material such as PVC, PSU
- Fiber grade Polyester, Polyethylene Masterbatches
- Research & Development

STEER OMEGA

THE BEST *value* – OPTION –

OMicron12 LAB EXTRUDERS

Applications

- R & D
- Compounding Applications
- Pharmaceutical
- Color Matching
- Food
- Paints
- Costly Products

ENERGIZING
RESEARCH & DEVELOPMENT

ALPHA S-CLASS
TWIN-SCREW EXTRUDERS

Applications

Flame retardant compounds
Additive masterbatch
Color masterbatches
Composites
Alloys & Blends
Thermoplastic Elastomer / Vulcanizate

ALPHA SERIES
TWIN-SCREW EXTRUDERS

Applications

Flame retardant compounds
Additive masterbatch
Color masterbatches
Composites
Alloys & Blends
Thermoplastic Elastomer / Vulcanizate

ALPHA LAB
TWIN-SCREW EXTRUDERS

Applications

Specialty polymers: PEEK, PAEK, PEK, PEI
Flame retardant compounds
Additive masterbatch
Color masterbatches
Composites
Alloys & Blends
Thermoplastic Elastomer / Vulcanizate
Mineral Filled Polymers

THE WORKHORSE
PERFORMANCE EXTRUDERS

MEGA SERIES
TWIN-SCREW EXTRUDERS

Applications

Polymer blends
Automotive Compounds
Short Fiber Reinforced -
Thermoplastic Compounds
PP impact modifier
Color Compounds
Thermo Plastic Vulcanizates

STATE OF THE ART EXTRUDERS
for more ***FLEXIBILITY & INTERCHANGEABILITY***
{ Do/Di 1.55 }

SPECIFICATIONS

omega H-CLASS TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
OMEGA 30H	29.7	1.71	6.2	0.15	0.50	50.0	1200	200	14.5	50 - 100
OMEGA 40H	39.7	1.71	8.2	0.15	0.50	138.0	1200	550	16.8	300 - 600
OMEGA 50H	49.7	1.71	10.2	0.15	0.50	270.0	1200	1075	16.8	500 - 1000

The generation next co-rotating twin-screw extruder **STEER OMEGA** has, over the years grown in stature due to its control over the work done inside the extruder and its control over residence time. The latest technology extruders with **Do/Di 1.71**, offer the best feeding ability, the greatest energy efficiency and the highest speed of operation that is practical. **STEER OMEGA** has become the 'the best value option' for the compounding industry.

omega SERIES TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
OMEGA 30	29.7	1.71	6.2	0.15	0.50	37.0	1200	150	10.8	50 - 100
OMEGA 40	39.7	1.71	8.2	0.15	0.50	90.0	1200	360	11.0	150 - 300
OMEGA 50	49.7	1.71	10.2	0.15	0.50	180.0	1200	720	11.3	300 - 700
OMEGA 60	59.7	1.71	12.3	0.15	0.50	377.0	1200	1500	13.6	600 - 1200
OMEGA 70	73.0	1.71	15.0	0.25	0.50	686.0	1200	2730	13.6	800 - 2000
OMEGA 75	75.1	1.71	15.6	0.25	0.50	603.0	1200	2400	11.1	800 - 2000
OMEGA 80	80.5	1.71	17.0	0.25	0.50	854.0	1200	3400	13.0	1000 - 2500
OMEGA 95	95.0	1.71	19.5	0.25	0.50	1508.0	1200	6000	13.6	1500 - 3500

omega LAB TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
OMEGA 20	19.6	1.71	4.0	0.20	0.40	7.5	1200	30	7.3	5 - 10
OMEGA 25	26.0	1.71	5.5	0.15	0.50	18.0	1200	72	7.7	20 - 40
OMEGA 30	29.7	1.71	6.2	0.15	0.50	37.0	1200	150	10.8	50 - 100

OMICRON 12 LAB EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
OMICRON 12	12.0	1.45	1.75	0.15	0.25	1.9	1200	7.5	6.5	0.2 - 2

STEER OMICRON is a co-rotating twin-screw lab extruder, specifically designed & developed for Pharmaceutical, Polymer & Elastomer industries. The ability of OMICRON 12 to generate outstanding dispersive & distributive mixing assures a consistent high quality product every time. It can produce material at an extremely low output rate, which helps in lowering the cost of development of new products.

Disclaimer1: The information in this brochure does not constitute an offer of sale of the equipment listed. Extruders utilizing all three of the following specifications: volumetric ratio of at least 1.5 Do/Di; screw speed of at least 800 rpm; torque density of at least 11 Nm/cm^3, are not available in the U.S., Canada, Japan, South Korea and Turkey. Please contact your local STEER sales office for a full quotation of equipment configured to meet your specific needs.

Disclaimer2: Due to continuous development actual value / parameters may differ from those mentioned in this list.

SPECIFICATIONS

ALPHA S-CLASS TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
ALPHA 30S	28.0	1.49	4.50	0.20	0.50	66.0	1440	220	15.9	75 - 150
ALPHA 40S	37.5	1.49	6.00	0.25	0.50	157.0	1440	520	15.9	300 - 600
ALPHA 50S	47.5	1.49	7.65	0.25	0.50	300.0	1440	995	15.5	500 - 1000

STEER ALPHA are performance extruders and are popular for 'applications, craftsmanship and engineering'. These co-rotating twin-screw extruders are robust machines not only for general compounding applications but are highly suited to advanced applications. Developed with a **Do/Di 1.49,** the extruders have been designed to meet the exacting needs of compounders who are looking for an all-in-one extruder, a work horse partner.

ALPHA SERIES TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
ALPHA 25	24.5	1.49	3.85	0.20	0.50	18.0	1200	72	7.7	20 - 40
ALPHA 30	28.0	1.49	4.50	0.20	0.50	30.0	1200	120	8.7	40 - 60
ALPHA 40	37.5	1.49	6.00	0.25	0.50	75.0	1200	300	9.2	100 - 200
ALPHA 50	47.5	1.49	7.65	0.25	0.50	160.0	1200	636	10.0	250 - 500
ALPHA 60	56.5	1.49	9.00	0.25	0.50	315.0	1200	1253	11.3	500 - 1000

ALPHA LAB TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
ALPHA 18	18.5	1.46	2.90	0.15	0.40	7.5	1200	30	7.3	5 - 10
ALPHA 25	24.5	1.46	3.85	0.20	0.50	18.0	1200	72	7.7	20 - 40

MEGA SERIES TWIN-SCREW EXTRUDERS

	Screw Diameter (mm)	Diameter Ratio (Do/Di)	Flight Depth (mm)	Barrel to Screw Clearance (mm)	Screw to Screw Clearance (mm)	Max. Drive Power (kW)	Max. Screw Speed (rpm)	Specified Nominal Torque/shaft (Nm)	Specific Torque (Nm/cm^3)	Throughput (kg/h)
MEGA 20 / LAB	19.0	1.55	3.40	0.20	0.40	7.5	1200	30	7.3	5 - 10
MEGA 25 / LAB	25.5	1.55	4.50	0.20	0.50	18.0	750	113	11.5	20 - 40
MEGA 32	31.6	1.55	5.60	0.20	0.50	47.0	750	300	15.4	60 - 100
MEGA 40	40.0	1.55	7.10	0.25	0.50	80.0	750	510	13.6	100 - 250
MEGA 50	50.0	1.55	8.90	0.25	0.50	154.0	750	980	13.6	300 - 600
MEGA 58	57.8	1.55	10.30	0.25	0.50	226.0	750	1500	13.6	400 - 800
MEGA 70	70.5	1.55	12.50	0.25	0.50	429.0	750	2730	13.6	800 - 1600
MEGA 92	91.8	1.55	16.30	0.25	0.50	942.0	750	6000	13.6	1500 - 3000

STEER MEGA Series Extruders are 'state-of-the-art' co-rotating twin-screw extruders with proven capability and consistent performance quality. These modern extruders with **Do/Di 1.55** offer complete interchangeability of parts and high levels of compatibility with other extruder lines.

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Applications proven using STEER OMEGA extruders

GROUP / POLYMER	ALLOYS, BLENDS & COMPOSITES	APPLICATIONS
SPECIALTY POLYMERS / PEEK, PEK, PEI	Glass Fiber	Friction Rings, Thermal Insulators, Switch Panels
	Graphite	Bearing, Tribological
	Fluoro Polymer Based	Tribological, Gears, Shaft Bearing Rings, Pulleys, High Strength Bearings
ENGINEERING THERMOPLASTICS / PC, PPO, PPS, PA, PBT	PC + PBT	Automotive Bumpers, Side Moldings, Front Panels, Lawn & Garden Tractor Hoods,
	PC + ABS	Door Handle, Roof Rails, Computer Cabinets, Computer Cabinets, Mobile Covers,
	LFRTP	Automotive Applications
	PPO + Nylon	Vertical Body Panel Sprit & Rear Spoilers Wheel Caps, Under The Hood, Powder
	Highly Filled Magnetics	Electronic Devices, Automotive Components, Hard Disk Drives, Magnetic
	Glass & Mineral Filled Grades	Under The Hood, Moldings, Wiper Blades, Fuse Box, Connectors
	PPO + PS	Houseware, Personal Case & Small Appliances, Fluid Engg. Applications,
COMMODITY POLYMERS / HDPE, LLDPE, PP, PVC, PS	HDPE + CPE	Film For Pesticide
	Wood Polymer Composites	Deck Boards, Furniture, Ship Decks, Claddings
	HDPE + EVA	Medical Grade Film, Packaging
	LFRTP	Underbody Shields, Front End Carriers, Spare Wheel Well Covers, Piping, Spare
	85% CaCO3 filled PP / PE.	AFMB, Film, Tapes
	Color Masterbatch	Film Molded, Extruded
	PP + Impact Modifiers	Bumper
	Plasticized & Rigid PVC	Film, Pipes
	PP + Talc	Battery Cases, Tank Covers, Fascia Panels, Washing Machine
THERMOPLASTIC ELASTOMERS / VULCANIZATES	PP + Silicone, Nylon + Silicone, PP + EPDM, PPO + SEBS, PS + SEBS	W & C, Packaging, Shoe Sides, Cables, Bumpers, Packaging Film
BIO POLYMERS / PLA	Polyester based with talc & neat(virgin) / PE with high starch filling	Mulch Film, Food Packaging
THERMOSET	Epoxy, Polyesters, Phenol-Formaldehyde resin	Adhesives, Automotive (SMC), Powder Paints

STEER OMEGA

THE BEST value – OPTION –

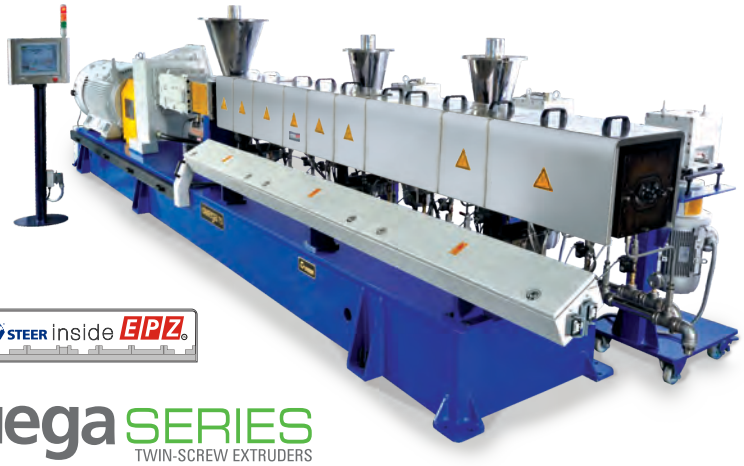
	INDUSTRY
	Aircraft, Automotive, Electrical & Electronic, Marine, Medical / Healthcare
	Automotive, Electronics, Industrial
	Aircraft, Automotive, Electronics, Industrial
Wiring Connectors	Automotive, Furniture
Cellphone Housing, Laptop Housing	Automotive, Electronics & Communication
	Automotive
Coating, Painting	Automotive, Building & Construction
Bearings	Automotive, Electrical, Electronics
	Automotive, Electrical, Electronics, Industrial
Performance Food Packaging	Appliances, Building & Construction, Packaging
	Packaging
	Building & Construction, Marine
Wheel Wells, Seat Backs, Door Modules	Automotive, Building & Construction, Medical, Packaging
	Masterbatch, Packaging
	Industrial, Packaging
	Automotive, Industrial
	Automotive
	Automotive, Consumer Durables
	Automotive, Footwear, Fluid Engg., Packaging
	Agriculture, Packaging
	Automotive, Building & Construction, Industrial

LEAD. INNOVATE. **MAXIMISE.**

The generation next co-rotating twin-screw extruder, **STEER OMEGA** has, over the years grown in stature due to it's control over the work done inside the extruder and it's control over residence time. The latest technology extruders with Do/Di = 1.71, overcome feed limitations, provides the greatest energy efficiency and the optimum performance needed for a product or an application. STEER OMEGA has become the '**the best value option**' for the compounding industry.

The three product offerings from STEER omega SERIES TWIN-SCREW EXTRUDERS omega LAB TWIN-SCREW EXTRUDERS omega H-CLASS TWIN-SCREW EXTRUDERS presents extruders for lab usage, pilot production and for large scale manufacturers. State-of-the-art STEER extruders have proven capabilities in applications requiring kneading, dispersive mixing, distributive mixing and reactive extrusion.

STEER GENERATION NEXT
CO-ROTATING TWIN-SCREW EXTRUDERS



STEER inside EPZ

omega SERIES TWIN-SCREW EXTRUDERS

FOR MORE INFORMATION,
VISIT EXTRUDERS.STEERWORLD.COM

STEER

STEER GENERATION NEXT
CO-ROTATING TWIN-SCREW EXTRUDERS

Modern high performance extruders are distinguished by their specialized features. Twin-screw extruders have evolved in design, performance and productivity over a span of several decades. STEER has made significant contributions to the progress of co-rotating twin-screw extruder design. STEER's 'Generation Next' extruder brands omega, aLPHA, mEGA & oMicron12 embodies this corporate philosophy to advance twin-screw extruder performance to the highest degree.

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