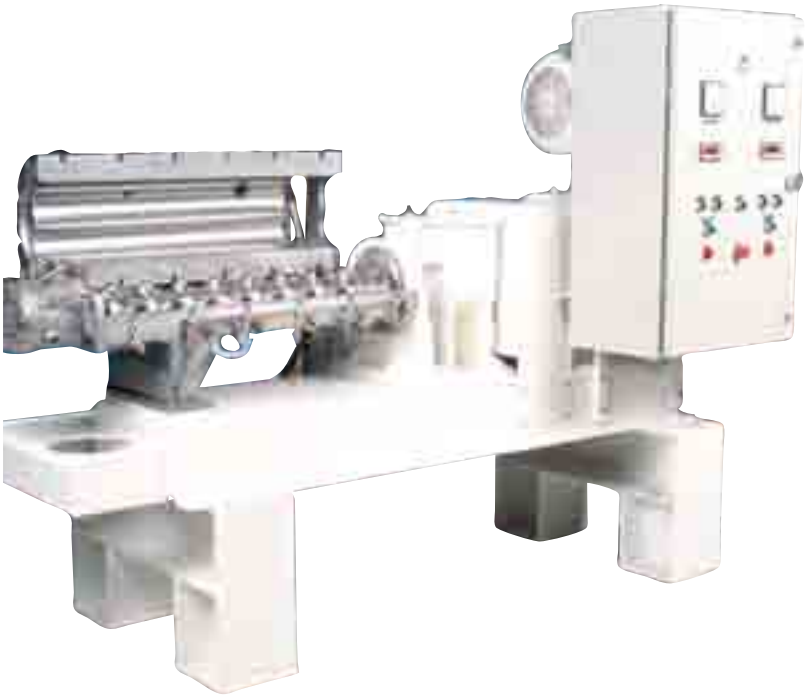
UCP™ Series

Paddle Arrangement



Continuous Mixer UCP 2

Twin-Screw Continuous Mixing/Extruding Systems

UCP Series systems are engineered for mixing, kneading and extruding a homogenous mix of the most challenging high-viscosity materials. They're also ideal for chemical reactions, polymerization, crystallization and other demanding mixing tasks where materials can reach hot and cold extremes or several million centipoises in viscosity.

Twin screws and paddles provide full coverage for a thorough, homogenous mix. Thanks to the co-rotating shafts and close clearances between the paddles as well as between the paddles and the barrel walls, uniform mixing is performed in less time than with conventional mixers.

Key features include:

- Models available with throughput capacity ranging from 50 kg to 10 tons/hour
- Rugged design for consistently processing high-viscosity materials
- Extrusion available via continuous mono-screw, twin-screw or gear pump
- Self-cleaning design
- Venting port for degasing during mixing cycle
- Wide range of paddle arrangements available to meet specific application needs
- Choice of construction materials to provide abrasion and corrosion resistance
- Variable mechanical or hydraulic speed drives
- Modular design enables easy customisation
- Designed for easy maintenance and repair

Why choose the UCP Series ?

The UCP Series continuous mixing system is ideal for high-volume applications that previously would have required multiple processes in batch mixing systems. The rotation of the two paddles provides a continuous variation in volume between the mixing elements and the barrels throughout the unit. The action of the paddles also creates an alternate compression and suction of the product, ensuring continuous mixing.

The result ?

Unsurpassed mixing quality.

RPA Process

HASLER

JFI Group Companies

Industrial liquid filtration, separation and mixing solutions

UCP™ Series
Twin-Screw Continuous Mixing/Extruding Systems

Product Specifications

Standard Sizes : Continous Mixer

Screw diameter in./mm	2/50	2.25/57	3/75	4/100	5/125	6/150	7.875/200	10/250	12/300	15/375	18/460	20/510	24/610	30/760
Internal length in./mm	17/439	22/570	22/570	30/760	36/910	44/1100	60/1520	72/1820	86/2180	108/2740	130/3300	144/3650	174/4420	216/5480
Standard power /kw	2.2	4	5.5	7.5	15	22	55	90	150	250	355	450	630	800
max power /kw	3	5.5	7.5	11	30	37	90	150	250	400	560			
Internal free volume/l	0.78	1.6	2.55	7.56	14.1	22.7	56.7	113.5	197	378	673	908	1570	3065
Exchange surface / m^2	0.09	0.13	0.21	0.37	0.56	0.74	1.39	2.23	3.16	5.01	7.25	8.91	12.82	20.05
Weight / kg	300	400		1200	1500	1800	3000	4700	11000	14200				

Continuous Extruder

As an option, the standard continuous mixer can be equipped with special screws at the end of the existing shafts allowing the extrusion to be performed on line. Alternately, a single screw extrusion system can be installed in addition to the continuous mixer. For difficult applications, all twin-screw extruding systems are equipped with an independent variable speed drive, providing the flexibility necessary to optimise product quality.

Degasing

Gases are extracted with a vacuum pump through a venting port located between the continuous mixer and the extrusion unit.

Co-Extrusion

Extrusion of two products from two different sources through a special die plate is made possible by recently developed processes.

Continuous Mixer/Mono-Screw Extruder UCP 12"

Standard Sizes : Mono-Screw Continuous Extruder

Mixer Type	Extruder Type	Total Length Working Length	KW / SeriesN*	KW / SeriesS**	Speed (RPM) N1N2	Internal free Volumes (Litres)
2"	Mono 60	420/230	1.1	3	20-100	1.7
4"	Mono 90	630/350	4	11	15-75	2.8
5"	Mono 130	910/500	5.5	15	11-55	8.5
6"	Mono 170	1190/650	11	30	11-55	19
7,7/8"	Mono 200	1400/770	22	75	0-45	31
10"	Mono 260	1820/1000	37	110	0-40	68
12"	Mono 330	2310/1270	75	200	0-30	138

Standard Sizes : Twin-Screw Continuous Extruder

Mixer Type	Extruder Type	Total Length Working Length	KW / SeriesN*	KW / SeriesS**	Speed (RPM) N1N2	Internal free Volumes (Litres)
2"	Duo1 1/2"	270/120	1.5	3	0-150	0.2
4"	Duo 3"	630/235	5.5	11	0-150	1.5
5"	Duo 4"	710/310	11	22	0-110	2.8
6"	Duo 5"	890/390	15	30	0-110	5
7,7/8"	Duo 6"	1065/465	37	75	0-90	10
10"	Duo 8"	1420/620	55	110	0-80	20
12"	Duo 10"	1775/775	110	220	0-60	32

* Series N : Maximum pressure 30 bar (435 psi)
** Series S : Maximum pressure 100 bar (1450 psi)

RPA Process SAS
18 - 22, rue d'Arras
92000 Nanterre Cedex - France
Phone: +33 (0)1 56 83 83 83
Fax: +33 (0)1 56 83 83 01

E-mail: info@rpaprocess.com
Web: www.rpaprocess.com

Photo credits : RPA - February 2013

RPA Process HASLER
JFI Group Companies

Industrial liquid filtration, separation and mixing solutions