

Profile and Tubing: Recommended Xaloy® Screw and Barrel Solutions

Resin	Screw performance/design options			Base Material [Note 2]	Screw Cooling	Hardfacing options		Coating Options	Barrel Options	
	★★★	★★	★			★★★	★★		★★★	★★
ABS, vented	2-stage w/SB II	2-stage w/blister		4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
ABS, non-vented	Fusion™	EF w/SB	SS w/SB	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Acrylic	2-stage w/SB II			4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
HIPS	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Lexan® (PC), vented	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
Lexan®, non-vented	EF w/ SB II	SS w/SB II		4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
Nylon (PA, polyamide)	EF w/ SB II	SS w/ Spiral UCC	SS	4140 HT or SM59	None	X-830	X-183	CP-O	X-800	X-102
PET	EF w/ SB II			4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
PC, polycarbonate- see Lexan										
PE										
HDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830		CP-O	X-800	
LDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
LLDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830		CP-O	X-800	
MDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Polyamide (see Nylon)				4140 HT or SM59	None	X-830	X-183	CP-O	X-800	X-102
PP, non-vented	Fusion™ (note 1)	EF w/ NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
PS (GPPS)	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
PVC (pellet)										
CPVC	SS w/SB			Note 4	Note 5	X-183	X-830	CP-2	X-306	
Flexible PVC	EF w/SB II	EF w/Spiral UCC		4140 HT or SM59	Full length	X-183	X-830	CP-1	X-800	X102
Rigid PVC	Note 6			Note 4	Note 5	X-183	X-830	CP-2	X-306	
PUR (Polyurethane)	EF w/SB II	SS w/Spiral UCC		4140 HT or SM59	Feed	X-183	X-830	CP-1	X-800	X-102

Other materials Please contact your Xaloy representative for recommendations

KEY:

Performance ratings



Premium performance, our best solution
Excellent balance of performance and cost
Good performance at economical cost

EF = [Efficient™ Barrier Screw](#)

NM = [Nano™-Mixer](#)

SB = StrataBlend® Mixer

SB II = [StrataBlend® II Mixer](#)

SS = Single-stage screw

Coatings: CP-O = Chrome plating is optional

CP-1 = Chrome-plated, thickness 0.001" (25 µm)

CP-2 = Chrome-plated, thickness 0.002" (51 µm)

More hot links: [X-830](#), [X-183](#), [X-800](#), [X-102](#), [X-306](#)

NOTES:

- Fusion™ Screws must be 24:1 L/D or longer.
- Any screw of 40 mm (1.575") diameter or smaller is made of CPM-9V.
- When the X-830 screw flight hardsurfacing is used, then the X-800 barrel liner must be used.
- Recommended materials for rigid PVC and CPVC extrusion screws are AISI 4140 or SM59 microalloy with chrome plating, or 17-4 stainless steel, which eliminates the need for chrome plating.
- Screws for processing CPVC and rigid PVC need to be cored for cooling along their entire length and have removable offset noses. The removable noses are cored to within 1/2" (13 mm) from the very end and tapped with a NPT tap to attach a, pipe fitting, so that isolated tip heating can be used.
- Special barrier screw with spiral UCC mixer. Available in 2.5" and 3.5" x 24:1 L/D sizes.

