Xaloy® X-800® Bimetallic Twin Barrels

It’s All About Service Life

- Last up to 4 times as long as traditional Nitralloy barrels
- More resistance to abrasive fillers
- More resistance to corrosive volatiles

Xaloy X-800® bimetallic barrels have proven that they far outlast nitrided barrels in processing rigid PVC, other vinyl materials and plastic-wood composites. Xaloy X-800® barrels are lined with a composite consisting of superhard tungsten carbide particles uniformly dispersed in a nickel alloy matrix.

High quality

Xaloy X-800® barrels meet or surpass OEM specifications for dimensions, straightness and parallelism. A skilled production team works exclusively on twin barrels. Our twin barrel manufacturing operation is certified as meeting ISO 9001:2008 requirements.

Screw compatibility

Screw-barrel compatibility is especially critical in counter-rotating twin-screw extrusion because of very high screw-to-barrel loading and the potential for adhesive and abrasive wear at the interface.

Xaloy 830® screw surfacing is the ideal companion to Xaloy X-800® barrels. It too is a hard, durable tungsten carbide composite specially formulated for maximum compatibility with Xaloy X-800® barrels.

We work closely with leading extruder manufacturers and processors on testing various screw coatings to insure compatibility between our barrels and their screws.

Fights Abrasive Wear

<table>
<thead>
<tr>
<th>Barrel material, (block)</th>
<th>Volume loss, mm²x10³</th>
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<tbody>
<tr>
<td>Xaloy X-800® / 830®</td>
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<tr>
<td>Nitralloy/Molybdenum</td>
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<th>Corrosion rate, mm/yr</th>
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Abrasive test equipment: Falex Block on Ring Tester. Test Method: ASTM G 77.

Blocks made of barrel alloys were tested against rings made of screw hardfacing materials. The Nitralloy barrel/molybdenum hardfacing combination showed nearly double the wear of the Xaloy X-800®/X-830® pair, but the difference would be even greater if the test had been continued beyond the standard 20,000 cycles. The wear resistance of Xaloy X-800® tungsten carbide composite is consistent throughout its depth. In Nitralloy, by contrast, hardness and wear resistance progressively decrease with depth into the material.

Combats Corrosive Wear

Corrosion rate, mm/yr

Corrosive medium is 20% HCl.

Xaloy X-800® barrels provide far more resistance to corrosion by HCl. That’s a clear indication of its resistance to aggressive by-products of the thermal degradation of PVC or halogen-containing additives.
Made right. Our highly skilled production and quality team makes sure that every Xaloy X-800® barrel meets or surpasses OEM specifications for dimensions and straightness.

Relining or new

Nordson can serve your needs for longer-lasting Xaloy X-800® bimetallic twin barrels two ways: by relining your worn barrel or by supplying a completely new barrel. In relining a worn nitrided barrel, the first step is to bore out the nitrided lining. Using our spin-casting process and proprietary joining methods, we produce a new twin liner with a bimetallic tungsten carbide composite inlay and fit it into the bored out casing. Each job gets a perfect custom fit. This is critical to insure proper heating and cooling of the plastic during processing.

Relining is highly cost-effective because the casing usually does not require replacement. Second-time and subsequent relining jobs cost less than first-time relines because there is no need to bore out the worn liner. We simply press out the old unit and replace it with a new Xaloy X-800® liner.

Let’s get started

Now is the time to reduce your ownership costs for twin-screw extruders. For more information or a quotation, contact your Nordson representative today.

Please also contact Nordson to meet your requirements for other high-quality extrusion processing components including single-screw barrels, high-performance single screws, screen changers and gear pumps.

Relining job uses new liner at right as an insert for an existing bored-out casing.