The **EQUALIZER HELIX™ passive inflow and injection control device** (ICD) features a helical geometry to equalize the production or injection profile, helping to improve long-term production and ultimate recovery.

With robust construction and the largest cross-sectional flow area in the industry, the EQUALIZER HELIX ICD can support high-rate, high-volume production for extended periods without succumbing to erosion or plugging. Unlike orifice or nozzle ICD designs that simply constrict flow and are prone to erosion and plugging, the EQUALIZER HELIX ICD’s helical channels use surface friction to create a pressure drop and balance the inflow or injection profile from heel to toe.

The ICD’s resistance ratings can be customized to match specific reservoir and completion requirements, and the device is fully compatible with a broad range of Baker Hughes, a GE company (BHGE) completion solutions—such as sand control screens, multitasking valves, sliding sleeves, and intelligent production systems—to optimize long-term production. The EQUALIZER HELIX ICD’s design is especially ideal for high gas-to-oil ratio wells and gas producers, as well as for water, steam, and chemical injection wells.

With more than 120,000 unit installations to-date, the EQUALIZER HELIX ICD has the most extensive run history in the industry and has more than a 99% reliability rate.

Contact your local BHGE representative today for more information about how EQUALIZER HELIX ICDs can help you delay water breakthrough and improve recovery in your next well.

**Applications**
- Conventional oil and gas wells with and without sand control requirements
- Producers and injectors
- Highly fractured reservoirs
- High-rate gas wells
- Gas condensate wells
- Multilaterals
- SAGD wells

**Features and benefits**
- Helical geometry
  - Creates a pressure drop to equalize flow from heel to toe
  - Limits gas or water influx
  - Delays water breakthrough
  - Offers improved plugging and erosion resistance over orifice-style ICDs
  - Improves recovery
- In-house dynamic reservoir modeling capability
  - Delivers reservoir-optimized completion designs to improve well productivity
- Rugged construction
  - Resists erosion
  - Ensures long-term performance
  - Minimizes intervention-related costs
- Full compatibility with a wide range of BHGE completion technologies
  - Enables customization for a variety of challenges
- Extensive run history
  - Demonstrates a track record of field-proven performance

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EQUALIZER HELIX ICD restriction levels are designated by a term referred to as flow resistance ratings (FRR). An FRR is an indication of pressure drop in units of bar for any given setting when rating flowing 175 BPD of water at standard conditions (1 cP and 62.4 lbm/ft³).

FRRs can be tailored to the application in question by adjusting channel numbers, lengths, and flow areas. The currently available FRRs for the EQUALIZER HELIX ICD are as follows: 0.2, 0.4, 0.8, 1.6, 1.9, 2.1, and 3.2. Flow performance curves for different EQUALIZER HELIX settings and fluid properties may be provided upon request. BHGE has conducted extensive testing on the EQUALIZER HELIX ICD including:

- Flow performance (single and multiphase flow)
- Mechanical integrity
- Plugging
- Erosion

Accessory Equipment for EQUALIZER completions

<table>
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<tr>
<th>Functionality</th>
<th>Accessory</th>
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<tbody>
<tr>
<td>Filtration Mechanism</td>
<td>Unconsolidated Formations: EXCLUDER™, BakerWrapXP™, and BAKERWELD™ sand control screens; GeoFORM™ conformable sand management system Consolidated Formations: Slotted tubular (debris barrier)</td>
</tr>
<tr>
<td>Well Compartmentalization</td>
<td>Mpas™ packers and REPacker™ swellable packers</td>
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<tr>
<td>Zonal Shutoff</td>
<td>Sliding sleeves (EQUALIZER Plus configuration)</td>
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<td>String Isolation During Run-in</td>
<td>Multitasking valve (MTV)</td>
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