Dehydration with Deliquescent Desiccant Tablets
Dehydration with deliquescent desiccants from Weatherford Engineered Chemistry™ products is simple. The wet stream flows through a vessel that contains a bed of desiccant. Moisture is absorbed on the desiccant surface and begins to dissolve the desiccant salt. The resulting salt solution is still hygroscopic, and continues to attract water. As more water accumulates on the desiccant tablets, droplets form and drip into a sump at the bottom of the vessel. As this liquid level increases, it can be automatically or manually discharged. The only by-product is common brine water, which can be easily disposed. There is no regeneration; new desiccant is simply added to each dryer when needed.

**Ease of Use**

**Advantages**
- Easy installation
- No costly disposal
- Simple operation
- No fire hazard
- Low maintenance
- Low, predictable operating costs
- Low capital expenditure

**Operating Cost versus Pressure at various temperatures**

**Weatherford Desiccants** (Shown by Increasing Hygroscopicity)

- **Industrial Desiccant**
  - Designed specifically for air-drying, this desiccant removes enough moisture to reduce the dew point by 20°F (-6.7°C) or more, depending on the incoming temperature, at an extremely low cost.

- **Desiccant RG™**
  - Widely used for first-stage dehydration; to reduce operational problems; or where dehydration requirements are not severe. In higher-pressure applications, Desiccant RG tablets often yield acceptable moisture content at an extremely low cost. (Recommended at operating temperatures below 80°F (26.7°C).

- **Desiccant HT**
  - Used in high-temperature applications to reduce operational problems. Desiccant HT inhibits fluid crystallization and reduces sump clogs, while still yielding low-cost operation. (Recommended at operating temperatures below 120°F (48.9°C).

- **Desiccant SG™**
  - Our highest-grade direct-compression tablet is commonly used in final stage of dehydration for polish drying. At 40°F (4.4°C) and 100 PSI (689 kPa), outlet moisture content is below 0 lb (0 kg)/MMCF.

**EUTECTIC DESICCANTS** represent the most advanced technology in gas-drying deliquescents. The eutectic pellet, a homogenous crystalline form, virtually eliminates the problems of tablet compression, tablet disintegration and dusting.

**Hydro-Lith™ E**
- With Hydro-Lith E, 20 lb (9-kg) moisture/MMCF is attainable at pressures as low as 50 psi (345 kPa) at 60°F (15°C), and 7-lb (3.2-kg) moisture/MMCF at pressures as low as 125 PSI (862 kPa) at 60°F (15°C).

**Xenritre™**
- Developed to meet dew points in low-pressure (<75 PSI) and low-flow rate applications. Can be used alone or in combination with other grades of desiccant. With Xentrite tablets, 7-lb (3.2-kg) moisture/MMCF is attainable at pressures as low as 50 PSI (345 kPa) at 60°F (15°C), and 20-lb (9-kg) moisture/MMCF at pressures as low as 25 PSI (172 kPa) at 80°F (27°C).

**NATURAL GAS VEHICLE DRYING**
- Incredibly hygroscopic, and used extensively in Natural Gas Vehicle refueling stations. In a typical station operating at 100°F (37.8°C) and 3000 PSI (684 kPA), outlet moisture content is as low as 0.25-lb (0.11-kg)/MMCF. Low moisture content is very important in NGV systems to prevent hydrate formation.