

# **CHAPTER 7**

## Desiccant

### DESI-DRI HPA Gas Drying Tablets

#### DESCRIPTION

Water vapor is a common impurity found in natural gas. Operating problems caused by condensing water vapor can include: gas line freezing, formation of hydrates in meters, valves etc. and corrosion due to wet conditions. Most pipeline companies require some level of gas quality.

DESI-DRI HPA is an inexpensive way to reduce moisture content of natural gas. DESI-DRI HPA can be used in systems with higher temperature gas. The tablet allows for good contact between the gas stream and the medium, which will reduce channeling and bridging and gain maximum drying effectiveness.

DESI-DRI HPA can be used by itself or in combination with other grades of desiccant, such as DESI-DRI C. In this application the natural gas flows through the DESI-DRI HPA first, removing the majority of the moisture and then through the DESI-DRI C to further reduce dew points. This arrangement is more cost efficient because the more expensive DESI-DRI C lasts longer.

#### FEATURES

DESI-DRI HPA is a tablet that has several advantages over competitive pellets and briquettes.

Made with over ten tons of compression.

Harder, more dense tablets resist caking, channeling, blooming and dusting

Minimizes re-crystallization in sump with gas temperature above 85°F.

#### SPECIFICATIONS

<b>Purity</b>	95%
<b>Appearance</b>	White Tablet
<b>Diameter</b>	1"
<b>Height</b>	0.735"
<b>Tablet Width</b>	~9.5 grams
<b>Bulk Density</b>	69-62lbs/cu.ft
<b>Solubility in Water</b>	Complete



DESI-DRI HPA

#### ORDERING INFORMATION

Part No.	Description
61285075	50lb. boxes

### DESI-DRI C Gas Drying Tablets

#### DESCRIPTION

Natural gas pipeline moisture specifications can be difficult to meet. Desiccants lower relative humidity to an acceptable level. Unfortunately, common desiccants often do not take enough water out of the gas to meet more stringent specifications. DESI-DRI C is three times more effective than the more common desiccants. DESI-DRI C effectively lowers relative humidity to meet gas pipeline specifications.

DESI-DRI C can be used by itself or in combination with DESI-DRI HPA. In this application the natural gas flows through the DESI-DRI HPA first, removing the majority of the moisture and then through the DESI-DRI C to meet specifications. The arrangement is more cost effective because the DESI-DRI C lasts longer. DESI-DRI C is a tablet that virtually eliminates powder and broken briquettes.

#### FEATURES

DESI-DRI C is a tablet that has several advantages over competitive pellets and briquettes.

Made with over ten tons of compression.

Harder & more dense tablets resist caking, channeling, blooming and dusting.

High purity means greater activity, longer life and lower dew points.

Tablets virtually eliminate broken, shattered and dusted product.

#### SPECIFICATIONS

<b>Purity</b>	98.5%
<b>Appearance</b>	White Tablet
<b>Diameter</b>	1"
<b>Height</b>	0.775"
<b>Tablet Width</b>	~14.75 grams
<b>Solubility in Water</b>	Complete



#### ORDERING INFORMATION

Part No.	Description
61285083	35lb. pails

### DESI-DRI D Gas Drying Tablets

#### DESCRIPTION

DESI-DRI D represents the most advanced technology in gas drying deliquescent to date. Produced as a eutectic in a novel patented process, DESI-DRI D eliminates many of the drawbacks that have been historically associated with conventionally produced gas drying tables. Since a eutectic pellet represents a homogeneous new crystal-line form, the problems of tablet compression, disintegration and dusting are virtually eliminated.

DESI-DRI D has been developed to meet the economic, environmental and performance requirements of a more demanding gas processing market. It also has been engineered to meet new dew point requirements where other desiccants can not. The drying performance of DESI-DRI D surpasses that of competitive lithium based drying tablets.

DESI-DRI D should be used in a single pass multistage, high pressure contractor. DESI-DRI D drying systems can be installed downstream of DESI-DRI A dryers to minimize the consumption of product.

Outlet moisture levels from a DESI-DRI D drying tower are determined by the physical properties of the gas. Lower temperatures and higher pressures tend to improve performance, while the opposite is true for higher temperature and lower pressures.

#### FEATURES

DESI-DRI D drying systems have several advantages over competitive gas drying options.

Dusting problems eliminated by unique pellet composition.

Caking & channeling are reduced or eliminated by fast deliquescent action.

Closed drying system results in no emissions, no fuel consumption or environmental concerns.

20lb Moisture/MMCF attainable at pressures as low as 50pis at 60°F.

7lb Moisture/MMCF attainable at pressure as low as 125pis at 60°F.



#### SPECIFICATIONS

<b>Purity</b>	99%
<b>Appearance</b>	White Tablet
<b>Diameter</b>	3/8"
<b>Height</b>	1/2"
<b>Tablet Width</b>	~7.5 grams
<b>Bulk Density</b>	80-85 lbs/cu.ft
<b>pH (50% in solution)</b>	3.0-4.0

#### ORDERING INFORMATION

Part No.	Description
61285084	50lb. boxes

### DESI-DRI E Gas Drying Tablets

#### DESCRIPTION

Natural gas dehydration at low pressures and low flow rates can be very difficult. Most conventional salt-type desiccants are unable to adequately dry gas under very low pressure (<75psi) or when stringent pipeline specifications (>7 lbs. H<sub>2</sub>O/MMCF) must be met.

DESI-DRI E was developed to meet dew points where other desiccants or glycols can not.

DESI-DRI E can be used by itself or in combination with other grades of desiccant, such as DESI-DRI C and DESI-DRI HPA. In this application the natural gas flows through the DESI-DRI HPA or C first removing the majority of the moisture and then through the DESI-DRI E to further reduce dew points.

#### FEATURES

DESI-DRI E tables have several advantages over the low pressure gas drying options.

7lb/MMCF attainable @ 50psi and 60°F

20lb/MMCF attainable @ 25psi and 80°F

Dryer gas for less cost than glycol towers in many instances.

Greater hygroscopicity means more H<sub>2</sub>O removed per pound of desiccant.

Hard dense tablets resist caking, channeling, blooming and dusting.

#### SPECIFICATIONS

<b>Purity</b>	98%
<b>Appearance</b>	White Tablet
<b>Diameter</b>	3/8"
<b>Height</b>	1/2"
<b>Tablet Width</b>	~7.5 grams
<b>Bulk Density</b>	80-85 lbs/cu.ft
<b>pH (50% Solution)</b>	3.0 – 4.0



#### ORDERING INFORMATION

Part No.	Description
61285085	35lb. pails