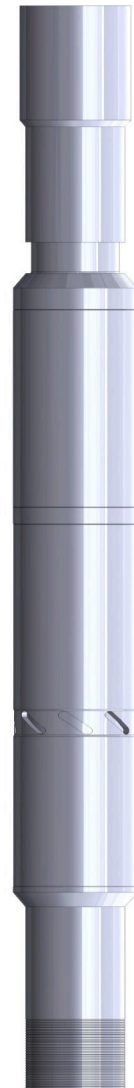


The GEODynamics QuickStart™ Inject + Frac Valve provides the operator with an initial point to break down the formation and establishes a pump-in port for use in long horizontal completions. The device is comprised of an opening piston that is controlled by a special rupture disc.

The QuickStart™ Frac Valve(s) are run as an integral part of the casing string and may be utilized in both cemented and un-cemented well bores.

### Key Features:

- One piece mandrel design provides a very robust tool that withstands burst pressure in excess of 20,000 psi.
- Port Jetting™ Technology improves injectivity to formation.
- Opening sequence is controlled by a fit for purpose rupture disc that is designed to resist plugging or bridging at the membrane.
- Mandrel design with TORQ Thru™ Technology maintains casing string integrity and yield torque ratings. The tool can be “through torqued” onto the casing string for ease of make up.
- High torque casing connections for ease in matching any number of today’s requirements.
- Exceeds all safety and environmental standards.



Part Number	Connection Size	Max O.D.	Min I.D.	Make Up Length (ft)	Temp. Rating °F	Flow Area	Torque Rating ft/lbs	Working Pressure
TC-QS-450-0000	4.5	5.65	3.34	4	325°	6.8	15000	19000
TC-QS-450-0000-SE	4.5	5.65	3.34	4	375°	6.8	15000	19000
TC-QS-455-0000	5	5.65	3.34	4	325°	6.8	15000	19000
TC-QS-455-0000-SE	5	5.65	3.34	4	375°	6.8	15000	19000
TC-QS-551-0000	5.5	6.5	3.75	5.25	325°	7.5	20000	20000
TC-QS-551-0000-SE	5.5	6.5	3.75	5.25	375°	7.5	20000	20000
TC-QS-580-0000	5.5	7.38	4.6	4	325°	7.5	20000	20000
TC-QS-587-0000	5.5	7.38	4.67	4	325°	7.5	20000	20000