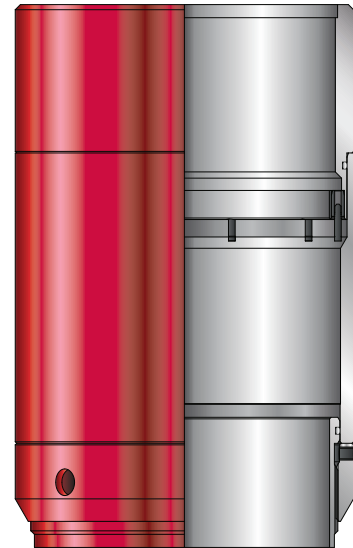




# *FloReg™ Inflow Control Device*

Weatherford's *FloReg* inflow control device (ICD) is designed to help evenly distribute inflow throughout a horizontal wellbore. This device reduces the tendency of early water or gas production, allowing the reservoir to drain more efficiently while maximizing production and recovery. The *FloReg* ICD allows for uniform production and flow contribution along a sand-face completion in horizontal wells. The system can be retrofitted with a range of Weatherford's screens.

The *FloReg* device enables predetermined setting of the desired pressure drop (heel-to-toe) along a screen section, using multiple open or closed flow ports to provide the required reservoir management. *FloReg* ICDs have proven the potential of extending well life by prolonging the plateau period, minimizing water and/or gas production, lessening annular flow, and increasing recovery.



## *Features, Advantages and Benefits*

- Weatherford's well screens are assembled on non-perforated basepipe. The produced fluid flows between the screen jacket and basepipe and is routed to the multiple flow ports on the *FloReg* ICD. This arrangement allows the unique predetermined setup of flow contribution from each screen joint so that all screen joints contribute equally to control the production flow profile.
- Pressure drop in each flow port is viscosity independent, but density dependent, thus inhibiting water breakthrough.
- Since the *FloReg* device eliminates the need for control-line-operated interval control valves (ICVs) or instrumentation, it also eliminates the cost and risk associated with these more complex flow-control approaches for horizontal wells.
- Rigorous flow testing has confirmed the performance characteristics of the *FloReg* device. This testing allowed the development of empirical operating envelopes that aid modelling before completion operations.
- The number of open flow ports can be adjusted to the prescribed setting, based on the latest data. This procedure is conducted at surface, that is, prior to shipment or on location while the screens are still on the pipe rack, saving valuable rig time.
- Each *FloReg* device is standard (rather than machined) to suit a specific application. This flexibility can translate into significant cost savings since it reduces the need for multiple screens held in inventory or on location.
- *FloReg* flow ports are tungsten carbide, mitigating flow-induced erosion.



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### *Specifications*

Size (in.)	2-3/8	2-7/8	3-1/2	4	4-1/2	5	5-1/2	6-5/8	7
Suitable screen selection	Metal-mesh and wire-wrap screens								
Overall tool length (in./mm)	10.4 264.16								
OD (in./mm)	3.32 84.33	3.90 99.06	4.44 112.78	5.00 127.00	5.44 138.18	6.00 152.40	6.50 165.10	7.69 195.33	8.12 206.25
Flow port quantity	5	10							
Flow port sizes (in./mm)	1/8 or 3/32 3.175 or 2.381								
Length of flow port (in./mm)	0.50 12.70								
Flow port material	Tungsten carbide								
Base material and stress intensity (ksi/MPa)	13Cr                      L80 110                      or                      80 758                                           551								
Elastomer material*	FKM95								

\*Alternative elastomer material is available