

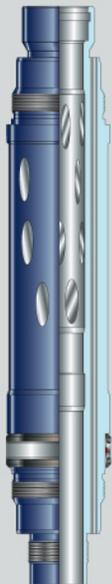
Ported Crossover Bodies

Schlumberger

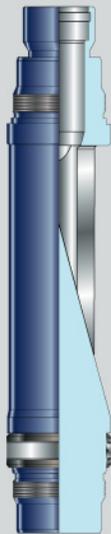
Ported crossover bodies.



Standard
Crossover
Port Body



Multiple-Port
Crossover
Port Body



Uniport
Crossover
Port Body

The Schlumberger gravel pack crossover port family is the heart of the service tool line. The crossover port's function is to divert the sand-control pumping treatment from the workstring into the casing/screen annulus below the QUANTUM* packer. If returns are being taken at surface, it also diverts the clean fluid from the wash pipe to the casing/workstring annulus above the packer.

The rugged Schlumberger crossover ports are designed to survive the harsh downhole conditions they encounter. These conditions include hostile formation fluids (CO₂ and H₂S), heavyweight completion fluids, acids, and high erosional wear from heavy concentrations of proppant pumped during high-rate frac-pack treatments.

The crossover ports are machined from a solid bar, with no welding, for maximum strength and resistance to erosion.

Extensive testing has been done to validate port designs. For basic or high-rate water-pack jobs, the standard port is available. For high-rate, high-sand volume jobs, the multiple port crossover is available; and for extreme pumping jobs, the durable Uniport is available. When using the Uniport, the packer-setting ball must be reversed out after setting the packer.

Applications

- Cased or open hole
- Frac-pack or gravel-pack operations

Benefits

- Tolerant to damage from hostile fluids
- Resistant to erosion damage
- Enhances reservoir productivity
- Saves rig time and cost

Feature

- Multiple-port and high-flow crossovers do not require reversing out the packer setting ball.

Ratings for Crossover Body Port Types

Packer Bore Size (in. [mm])	Standard (Gravel Packs)		High Flow (STIMPAC Service)		Multiport (Large-Volume Fracs)		Uniport (Ultrahigh-Volume Fracs)	
	Injection Rate (bbl/min)	Total Proppant (lbm [kg])	Injection Rate (bbl/min)	Total Proppant (lbm [kg])	Injection Rate (bbl/min)	Total Proppant (lbm [kg])	Injection Rate (bbl/min)	Total Proppant (lbm [kg])
2.688 [68.3]	12	50,000 [22,676]	15	50,000 [22,676]	16	200,000 [90,703]	16	350,000 [158,730]
3.000 [76.2]	10	75,000 [34,014]	16	75,000 [34,014]	16	250,000 [113,379]	16	350,000 [158,730]
3.250 [82.6]	10	125,000 [56,689]	17	125,000 [56,689]	na	na	na	na
4.000 [101.6]	12	175,000 [79,365]	25	175,000 [79,365]	40	300,000 [136,054]	40	400,000 [181,406]
4.750 [120.7]	20	200,000 [90,703]	28	200,000 [90,703]	50	800,000 [362,812]	50	1,000,000 [453,515]
6.000 [152.4]	18	250,000 [113,379]	33	250,000 [113,379]	50	800,000 [362,812]	50	1,000,000 [453,515]

na = not applicable

Note: Ratings are for 20/40 CarboProp proppant, at 10/12 ppa at maximum listed rate for that size port body.

For other proppant types, sizes, and concentrations, contact your Schlumberger sales representative.

Dropping the proppant concentration lowers the rating of the port body.

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