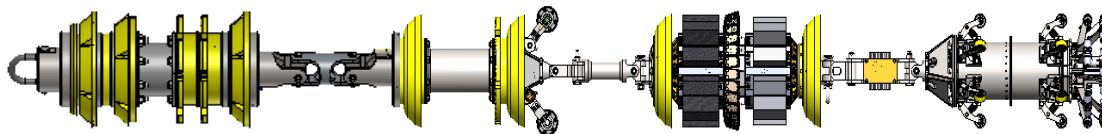


## 10-12" MFL + IMU + CLP Tool Specification



### GENERAL SPECIFICATIONS:

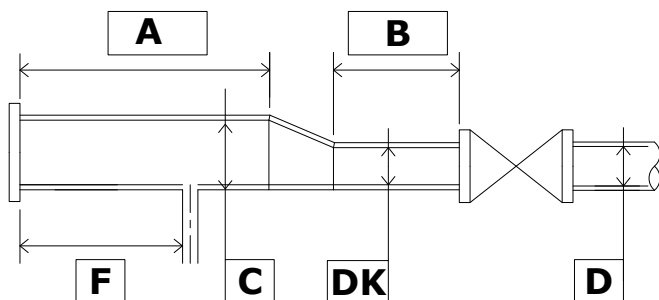
Tool Length	2600 mm
Launch Length	2300 mm
Receive Length	2100 mm
Min. ID in straight pipe	(234 mm 85.7% OD)-(274mm 84% OD)
Min. ID in bend	(243 mm 89% OD)-(288mm 89% OD)
Min. bend radius	3 D
Operational weight	300 kg

### PIPELINE SPECIFICATIONS:

Pipeline Outer Dia	273 mm — 323.85mm
Operating temperature	-40...+85 °C
Operating pressure	1.0-9.93 MPa
Tool run velocity	1 - 3 m/sec
Max. Run duration	48 Hrs

### RECOMMENDED DIMENSIONS:

	Launcher	Receiver
A	2500 mm	2100mm
B	450 mm	2200 mm
C	Pipeline OD+2"	Pipeline OD+2"
D	Pipeline ID	Pipeline ID
Dk	Pipeline ID	Pipeline ID
F	500 mm	200 mm



### IMU SPECIFICATIONS:

#### Measured parameters:

- Linear acceleration (ax, ay, az);
- Angular rotation rate (wx, wy, wz);
- Temperature.

#### Range of measurements:

- Gyros:  $\pm 400$  °/s;
- Accelerometers:  $\pm 10$  g.
- Inclination:  $\pm 1.7$  g

#### Resolution:

- Gyros: 0.22 °/hour;
- Accelerometers: 1.9  $\mu$ g.
- Inclination: 0.2  $\mu$ g

#### Nonlinearity:

- Gyros: 50 ppm
- Accelerometers: 100 ppm.
- inclination: 500 ppm.

#### Scale factor error:

- Gyros:  $\pm 500$  ppm.
- Accelerometers:  $\pm 300$  ppm.
- Inclination:  $\pm 500$  ppm.

#### Angular random walk:

- Gyro: 0.15 deg/sqrt(hr)

#### Velocity random walk:

- Accelerometers: 0.06 m/s/sqrt(hr)
- Inclination: 0.08 m/s/sqrt(hr)

#### Bias repeatability:

- Gyro : 0.5degree/hr'
- 0.05 mg (accel.).
- Inclination: 0.06mg
- Sampling rate: up to 2000 Hz.

### ODOMETER:

- Resolution 3mm
- Distance error  $\pm 0.5\%$

### LOCATION ACCURACY:

- Latitude  $\pm 1$  m\*
- Longitude  $\pm 1$  m\*
- Elevation  $\pm 1$  m\*
- With above ground reference points every 1 km.

### MFL SPECIFICATIONS:

- Wall Thickness Range : 4 - 16 mm
- Circumferential Resolution: 5.5 mm
- Sampling Rate: 2 ms

### CLP SPECIFICATIONS:

- Wall Thickness Range: 4 - 24 mm
- Sampling Rate: 2 ms