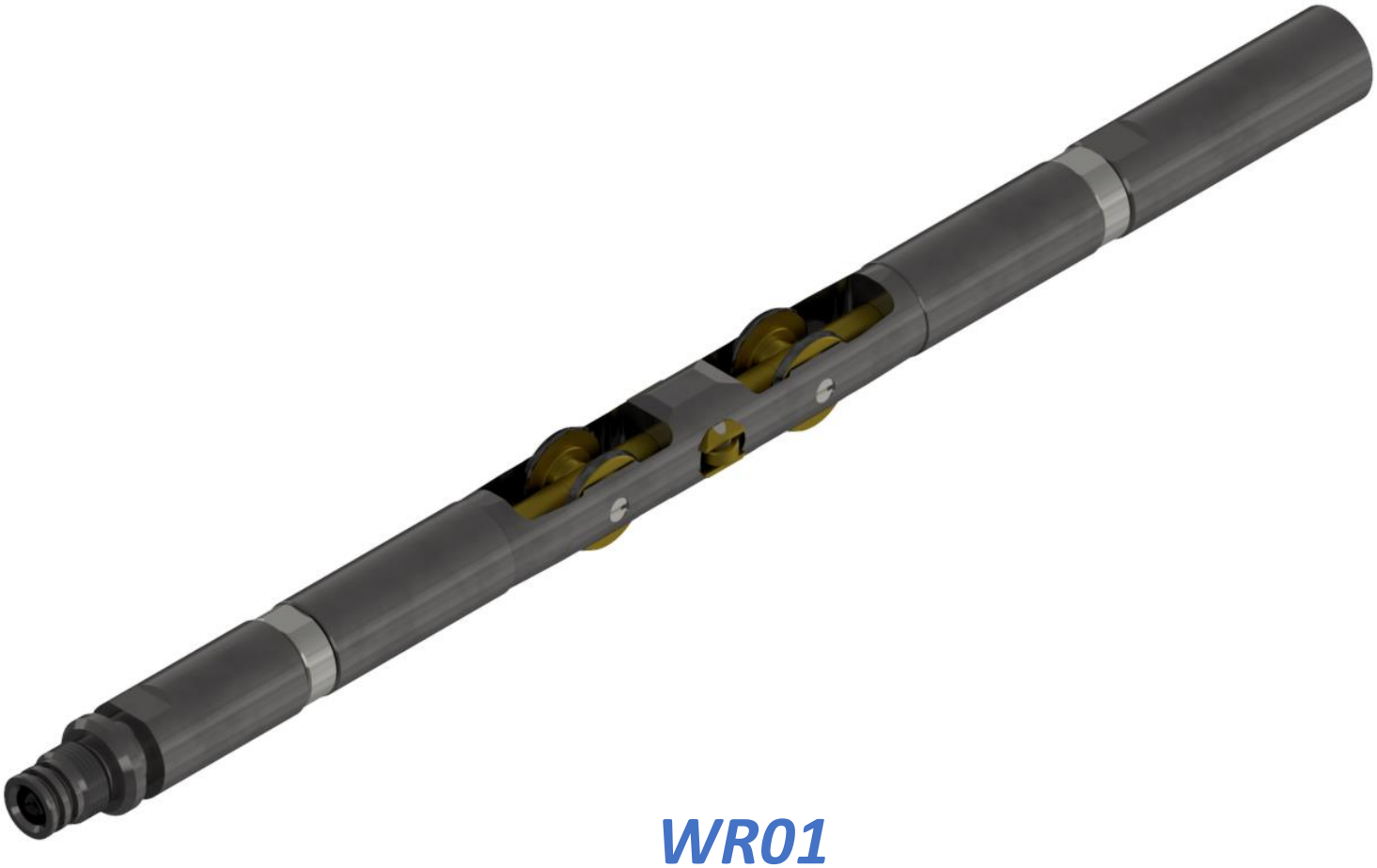
GARD *U-line*



WR01

CASED HOLE

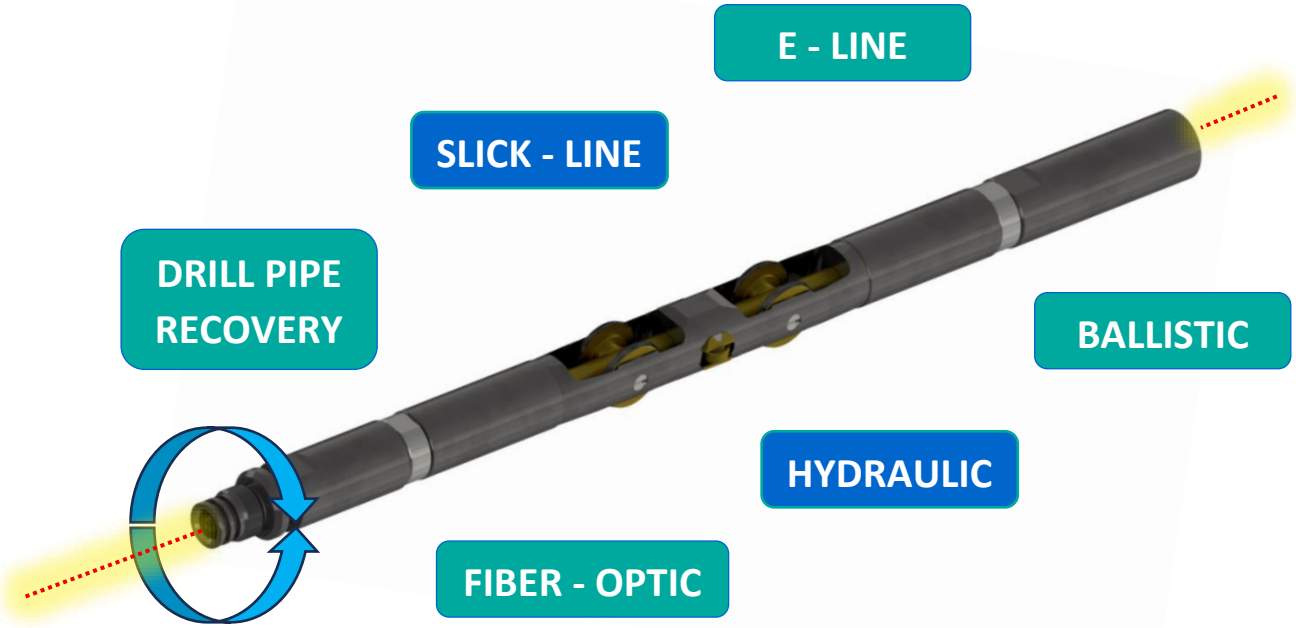
www.ga-rd.co.uk
GARD *U-line* Ltd | 36A Regent Mews | Regent Quay | Aberdeen | AB11 5BE | UK

PERFORMANCE

GARD *U-line* conveyance systems enable the conveyance of wireline operations in challenging wellbores usually accessed by heavy conveyance methods such as, wireline tractors and coiled tubing. **GARD *U-line*** technology is proven for conveying toolstrings in very challenging well profiles with high deviations up to 86° and at depths up to 20,000 ft.

UNIVERSAL RUNS

GARD *U-line* has universal characteristics, allowing the tool to connect with any slickline or e-line monoconductor connection, including fibre-optic due to its very low rolling friction coefficient, enabling minimum line tension. By design the U-line systems facilitate hydraulic pumping for applications such as coiled tubing and coiled hose. Latest case studies also include conveying thru stuck drill pipe for recovery, with e-line cutters.



360° ORIENTATION

GARD *U-line* technology, features a 360° swivel orientation setting for mechanical, data acquisition and ballistic tools requiring directional orientation, allowing for fixed orientation of custom orientated setting, or free self-alignment setting, to achieve maximum efficiency. This unique feature maximizes the quality of data acquisition by enabling smooth controlled low friction and low noise deployment of data acquisition tools.

UNIVERSAL

GARD *U-line* conveyance system facilitates adaptability with any end connection required.

SWIVEL Roller chassis can be set to self-orientate and swivel independently or fixed.

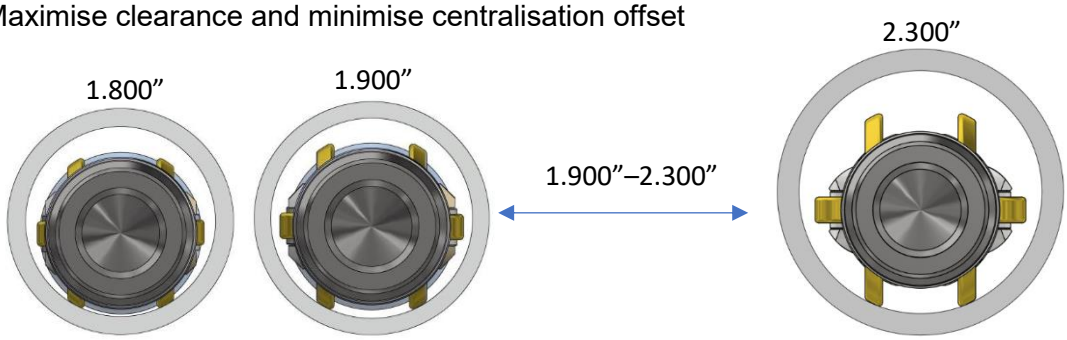
NO SCREWS Roller can be assembled and latched in line on the tool string without the requirement of grub screws or fasteners, using its unique interlock-bar feature, eliminating risk of components coming loose and getting stuck.

LOW FRICTION (2 - 3 %) on wheel bearing

a. Reduce POOH cable tension by 40%
b. Extend achievable TD (target depth)

VARIABLE SIZE

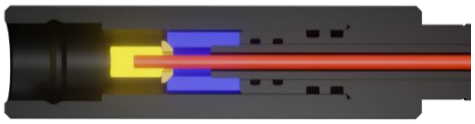
a. Create significant standoff to avoid rolling friction due debris accumulated in the well
b. Maximise clearance and minimise centralisation offset



UNIVERSAL CONNECTIONS

E-line (monoconductor)

i. GO A
ii. SONDEX
iii. SLB-mono
iv. BH A3



Slick-line

i. QLS
ii. SR

d. Fibre-Optic
e. Hydraulic

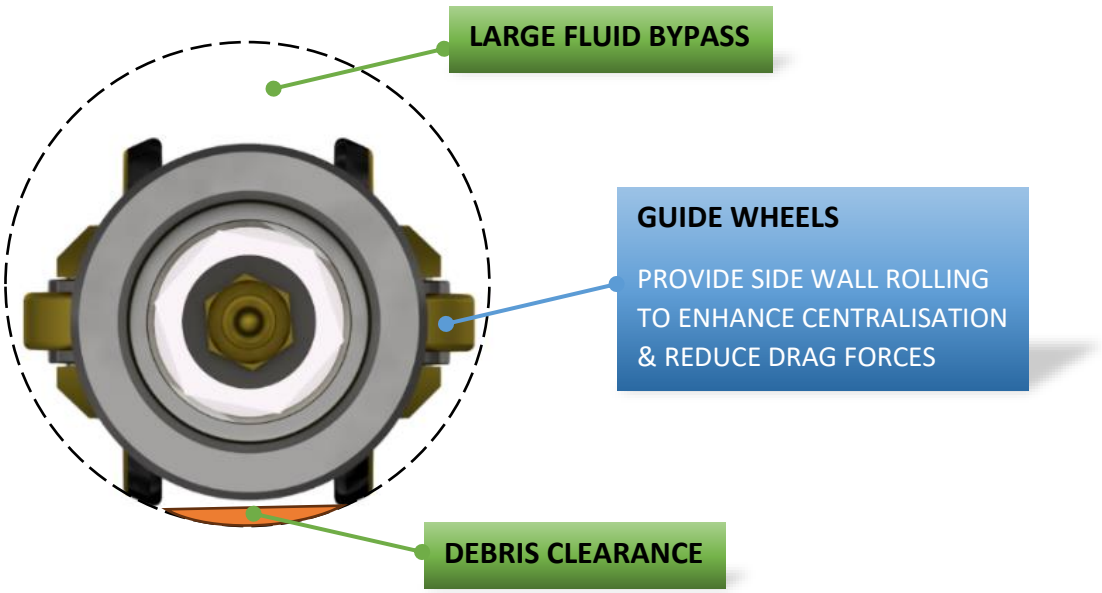
TECHNICAL INFORMATION

Wheel Effective Diameter	END CONNECTIONS									
	SLICK-LINE				E-LINE					
	15/16 SR		1 1/2 QLS		GO A		SONDEX		SLB MONO	
	MUL	WEIGHT	MUL	WEIGHT	MUL	WEIGHT	MUL	WEIGHT	MUL	WEIGHT
	in	lbs	in	lbs	in	lbs	in	lbs	in	lbs
1.800”	27.9	12.34	30.2	13.07	27.9	12.59	26.09	11.88	26.57	13.16
1.900”		13.52		14.24		13.77		13.06		14.33
2.000”		13.60		14.32		13.85		13.14		14.41
2.125”		13.73		14.45		13.97		13.26		14.54
2.300”		13.89		14.61		14.13		13.42		14.70

Notes:

1. *Above sizes are most common sizes. Any other specific wheel effective diameter to accommodate minimum restrictions of well completions can be supplied.*

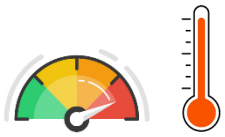
2. *Any other end connections to meet customer requirements for e-line specific connections with monoconductor feed thru line can be supplied.*



HPHT ENVIRONMENT

GARD ***U-line*** conveyance rollers are designed to operate for slickline operations at high temperatures up to **360° F** and for slickline runs can operate up to **450 °F**. The wheel bearing design is:

1. Constructed with **HT** rated materials, (no nitrile and Viton elastomers)
2. Validated for sand control, operating in drilling mud
3. Drilling fluid self-lubricated, operating at **HP** up to **10,000 psi**



Technical Specification	
Wheel Effective Diameter RANGE	**1.800" – 2.300"**
Chassis OD	**1.600"**
Rolling Friction co-efficient	**0.028**
Min Well Restriction	**1.875"**
Tubing/Casing Sizes	**2**-3/8", **2**-7/8" & **3**-1/2"
Pressure rating	**10,000 psi**
Max Operating Temperature (e-line)	**360° F** (182° C)
Max Operating Temperature (slick-line)	**450° F** (232° C)
E-line Feed Thru Bore	**7 mm**

UNIQUE FEATURES	
NO SCREWS	NO ADDITIONAL E-LINE CROSSOVERS
HIGH WEIGHT DENSITY	UNIVERSAL TO ALL LINES
VARIABLE WHEEL EFFECTIVE DIAMETER	LESS THAN 3% ROLLING FRICTION
HPHT ENVIRONMENT	SWIVEL