

IDS HORIZONTAL/DIRECTIONAL DRILLING EQUIPMENT

Technical Specifications

Second edition



ids

The logo features the lowercase letters 'ids' in a bold, sans-serif font. The letters are rendered in a dark grey color with a slight 3D effect. Two thick, dark grey curved lines frame the text, one above and one below, curving around the letters.

Using this Booklet and the IDS Product Catalogue

This booklet is intended for use with the IDS Horizontal/Directional Drilling Equipment Product Catalogue. Each product shown in the catalogue is accompanied by a 'Product Code'. In this booklet, the Product Code may be used to find the full range of sizes or variants in which a product is available. To do this please refer to the index on this page.

Note that the Product Code is also the first part of every standard IDS product's part number.

Ordering Procedure

IDS endeavours to maintain stocks of popular items and produce custom items such as adaptors in the shortest possible time. To place an order, please photocopy the form provided on page 11, or contact us at:

International Drilling Services Limited
Directional Drilling Division
Carrwood Road
Chesterfield Trading Estate
Sheepbridge, Chesterfield
S41 9QB, UK

Tel: +44 (0)1246 269911
Fax: +44 (0)1246 269922
E-mail: cjs@idsuk.com

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**IDS 'Universal' Pilot Boring System****'Universal' Sonde Housing Modules** Product Code: SHU

Dia.	o/a Length	Up Conn.	Down Conn	Weight (approx.)	Part No.
3 ¹ / ₂ " / 89 mm	910mm	2 ³ / ₈ " Reg box	3 ¹ / ₂ " BE box	26.8kg	SHU-3.5
4" / 102 mm	910mm	2 ⁷ / ₈ " Reg box	3 ¹ / ₂ " BE box	39kg	SHU-4.0
4 ³ / ₄ " / 121 mm	965mm	3 ¹ / ₂ " I.F. box	4 ³ / ₄ " BE box	49.5kg	SHU-4.75
6 ¹ / ₄ " / 159 mm	990mm	4 ¹ / ₂ " I.F. box	6 ¹ / ₄ " BE box	80kg	SHU-6.25

'Universal' Angled Drill Heads Product Code: DHU

Dia.	o/a Length	Housing Compat.	Connection	Weight (approx.)	Part No.
4" / 102 mm	323mm	SHU-3.5 / SHU-4.0	3 ¹ / ₂ " BE pin	10kg	DHU-4.0
4 ³ / ₄ " / 121 mm	415mm	SHU-4.75	4 ³ / ₄ " BE pin	26.8kg	DHU-4.75

'Viper' Hard Ground Bits Product Code: VBU

Cutting Dia.	o/a Length	Drill Head Compat.	Teeth	Weight (approx.)	Part No.
5" / 127mm	253mm	DHU-4.0	RC-CMM-4THD	8kg	VBU-4.0
6 ¹ / ₂ " / 165mm	320mm	DHU-4.75	RC-CMM-4THD	13kg	VBU-4.75

'Sabre' Lead Cutters Product Code: LCU

Cutting Dia.	o/a Length	Drill Head Compat.	Size	Weight (approx.)	Part No.
5" / 127mm	275mm	DHU-4.0	Standard	4kg	LCU-5.0
6" / 152 mm	275mm	DHU-4.0	Wide	4.7kg	LCU-6.0
5 ³ / ₄ " / 146 mm	360mm	DHU-4.75	Standard	6.5kg	LCU-5.75
7" / 178 mm	360mm	DHU-4.75	Wide	7kg	LCU-7.0

Bent Jet Tubes Product Code: JTU

Up Conn.	Dia.	o/a Length	Housing Compat.	Down Conn.	Weight (approx.)	Part No.
3 ¹ / ₂ " BE pin	3 ³ / ₄ " / 95mm	700mm	SHU-3.5/SHU-4.0	2 ⁷ / ₈ " Reg. box	31kg	JTU-3.5
4 ³ / ₄ " BE pin	4 ³ / ₄ " / 121mm	700mm	SHU-4.75	3 ¹ / ₂ " Reg. box	60kg	JTU-4.75
6 ¹ / ₄ " BE pin	6 ¹ / ₄ " / 159mm	900mm	SHU-6.25	4 ¹ / ₂ " Reg. box	110kg	JTU-6.25

Detachable Jet Heads Product Code: JHAU

Head Dia.	o/a Length	Jet Tube Compat.	Connection	Weight (approx.)	Part No.
4 ³ / ₄ " / 108mm	190mm	JTU-3.5	2 ⁷ / ₈ " Reg. pin	8kg	JHAU-3.5
6" / 152mm	220mm	JTU-4.75	3 ¹ / ₂ " Reg. pin	18kg	JHAU-4.75
8 ¹ / ₂ " / 216mm	290mm	JTU-6.25	4 ¹ / ₂ " Reg. pin	29.5kg	JHAU-6.25

Indexing Subs Product Code: ISU

Dia.	o/a Length	Up Conn.	Down Conn.	Weight (approx.)	Part No.
3 ¹ / ₂ " / 89 mm	283mm	3 ³ / ₈ " BE pin	2 ³ / ₈ " Reg pin	8.3kg	ISU-3.5
4" / 101 mm	290mm	3 ⁷ / ₈ " BE pin	2 ⁷ / ₈ " Reg pin	10kg	ISU-4.0
4 ³ / ₄ " / 121 mm	297mm	4 ¹ / ₂ " BE pin	3 ¹ / ₂ " I.F. pin	18.1kg	ISU-4.75
6 ¹ / ₄ " / 159 mm	325mm	6 ¹ / ₂ " BE pin	4 ¹ / ₂ " I.F. pin	26kg	ISU-6.25

**IDS V-Series Pilot Boring System****V-Series Sonde Housing Modules** Product Code: SHV

<i>Dia.</i>	<i>o/a Length</i>	<i>Up Conn.</i>	<i>Down Conn.</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
2.5" / 63 mm	565mm	2" IF box	2.5" Hex. fem.	8.9kg	SHV-2.5
3.25" / 82.5mm	755mm	2 ³ / ₈ " Reg. box	3.25" Hex fem.	22.2kg	SHV-3.25

V-Series Angled Drill Heads Product Code: DHV

<i>Dia.</i>	<i>o/a Length</i>	<i>Housing Compat.</i>	<i>Connection</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
2.5" / 63 mm	216mm	SHV-2.5	2.5" Hex. male	3.8kg	DHV-2.5
3.25" / 82.5mm	321mm	SHV-3.25	3.25" Hex. male	10.1kg	DHV-3.25

'Viper' Hard Ground Bit Product Code: VBV

<i>Cutting Dia.</i>	<i>o/a Length</i>	<i>Drill Head Compat.</i>	<i>Teeth</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
3" / 76mm	185mm	DHV-2.5	RC-CMM4THD	2kg	VBV-2.5
3 ³ / ₄ " / 95mm	198mm	DHV-3.25	RC-CMM4THD	2.6kg	VBV-3.25

'Sabre' Lead Cutters Product Code: LCV

<i>Dia.</i>	<i>o/a Length</i>	<i>Drill Head Compat.</i>	<i>Size</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
3 ¹ / ₂ " / 89mm	197mm	DHV-2.5	Standard	1.2kg	LCV-3.5
4" / 102mm	197mm	DHV-2.5	Wide	1.2kg	LCV-4.0
4 ¹ / ₄ " / 108mm	210mm	DHV-3.25	Standard	3.5kg	LCV-4.25
5" / 127mm	210mm	DHV-3.25	Wide	4kg	LCV-5.0

IDS Directional Hammer System**Basic Assembly****Directional Hammer** Product Code: DH

Incorporates Sonde Housing and Hammer Sections

<i>Dia.</i>	<i>o/a Length</i>	<i>Up Conn.</i>	<i>Bit Compat.</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
3.7" / 94mm	1850mm	2 ³ / ₈ " Reg. Box	DB-4.75 / HRB-4.5	32.3kg	DH-3.5

Directional Hammer Bit Product Code: DB

<i>Cutting Dia.</i>	<i>o/a Length</i>	<i>Dir. Hammer Compat.</i>	<i>Connection</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
4 ³ / ₄ " / 121mm	560mm	DH-3.5	Spline Shank	16.3kg	DB-4.75

IDS Directional Hammer System**Optional Items****Hard Rock Hammer Bit** Product Code: HRB

(Non-Directional)

<i>Cutting Dia.</i>	<i>o/a Length</i>	<i>Dir. Hammer Compat.</i>	<i>Connection</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
4.53" / 115mm	560mm	DH-3.5	Spline Shank	16kg	HRB-4.5

In-Line Shock Absorber Product Code: SA

<i>Dia.</i>	<i>o/a Length</i>	<i>Up Conn.</i>	<i>Down Conn.</i>	<i>Weight (approx.)</i>	<i>Part No.</i>
3 ¹ / ₂ " / 89mm	459mm	2 3/8" Reg. box	2 3/8" Reg. box	11.6kg	SA-3.5

**IDS Non-Magnetic Pilot Boring System****Non-Mag. Drill Pipe (One-Piece AG17)** Product Code: DRNM

Conns. (pin x box)	Length (eff.)	Tool Joint O.D.	Body O.D.	I.D.	Weight	Part No.
Mod. Wirth	10 ft / 3m	3 ¹ / ₁₆ " / 77.8mm	3 ¹ / ₁₆ " / 77.8mm	2" / 50.8mm	65kg	DRNM-01
Mod. Wirth	10 ft / 3m	3 ¹ / ₂ " / 88.9mm	3 ¹ / ₁₆ " / 77.8mm	2" / 50.8mm	70kg	DRNM-02
Mod. Wirth	10 ft / 3m	3 ¹ / ₂ " / 88.9mm	3 ¹ / ₂ " / 88.9mm	2" / 50.8mm	92kg	DRNM-03
2 ⁷ / ₈ " API IF	10 ft / 3m	4 ¹ / ₈ " / 104.8mm	3 ¹ / ₂ " / 88.9mm	2 ¹ / ₈ " / 54mm	102kg	DRNM-04
2 ⁷ / ₈ " API IF	15 ft / 4.5m	4 ¹ / ₈ " / 104.8mm	3 ¹ / ₂ " / 88.9mm	2 ¹ / ₈ " / 54mm	TBA	DRNM-04A
2 ⁷ / ₈ " API IF	10 ft / 3m	4 ¹ / ₈ " / 104.8mm	4 ¹ / ₈ " / 104.8mm	2 ¹ / ₈ " / 54mm	160kg	DRNM-05
2 ⁷ / ₈ " API IF	15 ft / 4.5m	4 ¹ / ₈ " / 104.8mm	4 ¹ / ₈ " / 104.8mm	2 ¹ / ₈ " / 54mm	TBA	DRNM-05A
3 ¹ / ₂ " API IF	10ft / 3m	4 ³ / ₄ " / 120.65mm	3 ¹ / ₂ " / 88.9mm	2 ¹ / ₂ " / 63.5mm	96kg	DRNM-06
3 ¹ / ₂ " API IF	15ft / 4.5m	4 ³ / ₄ " / 120.65mm	3 ¹ / ₂ " / 88.9mm	2 ¹ / ₂ " / 63.5mm	TBA	DRNM-06A
3 ¹ / ₂ " API IF	10ft / 3m	4 ³ / ₄ " / 120.65mm	4 ³ / ₄ " / 120.65mm	2 ¹ / ₂ " / 63.5mm	TBA	DRNM-06B
3 ¹ / ₂ " API IF	15ft / 4.5m	4 ³ / ₄ " / 120.65mm	4 ³ / ₄ " / 120.65mm	2 ¹ / ₂ " / 63.5mm	TBA	DRNM-06C
4 ¹ / ₂ " API IF	10ft / 3m	6 ¹ / ₈ " / 155.6mm	6 ¹ / ₂ " / 88.9mm	3 ¹ / ₂ " / 88.9mm	111kg	DRNM-07
4 ¹ / ₂ " API IF	20ft / 6m	6 ¹ / ₈ " / 155.6mm	7 ¹ / ₂ " / 88.9mm	3 ¹ / ₂ " / 88.9mm	207kg	DRNM-08
4 ¹ / ₂ " API IF	30ft / 9m	6 ¹ / ₈ " / 155.6mm	8 ¹ / ₂ " / 88.9mm	3 ¹ / ₂ " / 88.9mm	312kg	DRNM-09

Non-Mag. Jet Tubes Product Code: JTNM

Up (Box) Conn.	Up Int. Box Conn.	Down (Box) Conn.	Tool Joint Dia.	Body Dia.	o/a Length	Weight	Part No.
2 ⁷ / ₈ " API IF	1 ¹ / ₄ " UNF (12 tpi)	2 ⁷ / ₈ " API Reg.	4 ¹ / ₈ " / 104.8mm	3 ¹ / ₁₆ " / 77.8mm	TBA	TBA	JTNM-3.0
3 ¹ / ₂ " API IF	2 ¹ / ₄ " UNF (12 tpi)	3 ¹ / ₂ " API Reg.	4 ³ / ₄ " / 120.65mm	4" / 101.6mm	TBA	TBA	JTNM-4.0
4 ¹ / ₂ " API IF	2 ¹ / ₄ " UNF (12 tpi)	4 ¹ / ₂ " API Reg.	6 ¹ / ₂ " / 165.1mm	6 ¹ / ₂ " / 165.1mm	TBA	TBA	JTNM-6.5

Non-Mag. Detachable Angled Jet Head Product Code: JHANM

Conn. (Pin)	Head Dia.	Jet Tube Compat.	o/a Length	Weight	Part No.
2 ⁷ / ₈ " API Reg.	4 ¹ / ₂ " / 114.3mm	JTNM-3.0	190mm	8kg	JHANM-3.0
3 ¹ / ₂ " API Reg.	6 ¹ / ₄ " / 158.75mm	JTNM-4.0	220mm	18kg	JHANM-4.0
4 ¹ / ₂ " API Reg.	8 ¹ / ₄ " / 209.55mm	JTNM-6.5	290mm	29.5kg	JHANM-6.5

Non-Mag. Orienting Subs Product Code: OSNM

Up Conn. (Box)	Int. Box Conn.	Down (Pin) Conn.	Dia.	Length (eff.)	Weight	Part No.
Mod. Wirth	1 ¹ / ₄ " UNF (12 tpi)	2 ³ / ₈ " API Reg.	3 ¹ / ₈ " / 79.4mm	15" / 381mm	11kg	OSNM-01
2 ⁷ / ₈ " API IF	1 ¹ / ₄ " UNF (12 tpi)	2 ³ / ₈ " API Reg.	4 ¹ / ₈ " / 104.8mm	15" / 381mm	15kg	OSNM-02
2 ⁷ / ₈ " API IF	1 ¹ / ₄ " UNF (12 tpi)	2 ⁷ / ₈ " API Reg.	4 ¹ / ₈ " / 104.8mm	15" / 381mm	15kg	OSNM-03
2 ⁷ / ₈ " API IF	1 ¹ / ₄ " UNF (12 tpi)	2 ⁷ / ₈ " API IF	4 ¹ / ₈ " / 104.8mm	15" / 381mm	15kg	OSNM-04
2 ⁷ / ₈ " API IF	1 ¹ / ₄ " UNF (12 tpi)	3 ¹ / ₂ " API Reg.	4 ¹ / ₄ " / 107.95mm	15" / 381mm	15kg	OSNM-05
3 ¹ / ₂ " API IF	2 ¹ / ₄ " UNF (12 tpi)	3 ¹ / ₂ " API IF	4 ³ / ₄ " / 120.65mm	18" / 457.2mm	32kg	OSNM-06
3 ¹ / ₂ " API IF	2 ¹ / ₄ " UNF (12 tpi)	4 ¹ / ₂ " API Reg.	5 ¹ / ₂ " / 139.7mm	18" / 457.2mm	32kg	OSNM-07
4 ¹ / ₂ " API IF	2 ¹ / ₄ " UNF (12 tpi)	4 ¹ / ₂ " API IF	6 ¹ / ₈ " / 155.6mm	18" / 457.2mm	32kg	OSNM-08

Non-Mag. Flow Tubes Product Code: FTNM

Up (Box) Conn.	Down (Pin) Conn.	Dia.	Length (eff.)	Material	Weight	Part No.
1 ¹ / ₄ " UNC (8 tpi)	1 ¹ / ₄ " UNF (12 tpi)	1 ³ / ₄ " / 44.5mm	6 ¹ / ₂ " / 165mm	Marine Brass	1.1kg	FTNM-01
1 ¹ / ₄ " UNF (12 tpi)	1 ¹ / ₄ " UNF (12 tpi)	1 ³ / ₄ " / 44.5mm	6 ¹ / ₂ " / 165mm	Marine Brass	1.1kg	FTNM-02
1 ¹ / ₄ " UNC (8 tpi)	1 ¹ / ₄ " UNF (12 tpi)	1 ³ / ₄ " / 44.5mm	6 ¹ / ₂ " / 165mm	AG 17 St. Steel	1.1kg	FTNM-03
1 ¹ / ₄ " UNF (12 tpi)	1 ¹ / ₄ " UNF (12 tpi)	1 ³ / ₄ " / 44.5mm	6 ¹ / ₂ " / 165mm	AG 17 St. Steel	1.1kg	FTNM-04
1 ¹ / ₄ " UNC (8 tpi)	2 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₂ " / 63.5mm	9" / 228.6mm	Marine Brass	2.3kg	FTNM-07
1 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₂ " / 63.5mm	9" / 228.6mm	Marine Brass	2.3kg	FTNM-08
1 ¹ / ₄ " UNC (8 tpi)	2 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₂ " / 63.5mm	9" / 228.6mm	AG 17 St. Steel	2.3kg	FTNM-09
1 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₄ " UNF (12 tpi)	2 ¹ / ₂ " / 63.5mm	9" / 228.6mm	AG 17 St. Steel	2.3kg	FTNM-10

**Rock Bits****Mill Tooth Sealed-Bearing / Gauge-Protected Rock Bits*** Product Code: RBMTSB

Diameter	Connection	Circulation	Weight (Approx.)	Part No.
4 ¹ / ₂ "	2 ³ / ₈ " Reg.	Jet	5kg	RBMTSB-4.5
4 ³ / ₄ "	2 ⁷ / ₈ " Reg.	Jet	10kg	RBMTSB-4.75
5 ¹ / ₈ "	2 ⁷ / ₈ " Reg.	Jet	8kg	RBMTSB-5.125
6 ¹ / ₄ "	3 ¹ / ₂ " Reg.	Jet	17kg	RBMTSB-6.25
6 ³ / ₄ "	3 ¹ / ₂ " Reg.	Jet	21kg	RBMTSB-6.75
7 ³ / ₈ "	3 ¹ / ₂ " Reg.	Jet	19kg	RBMTSB-7.375
7 ⁷ / ₈ "	4 ¹ / ₂ " Reg.	Jet	33kg	RBMTSB-7.875
8 ³ / ₄ "	4 ¹ / ₂ " Reg.	Jet	39kg	RBMTSB-8.75
9 ⁷ / ₈ "	6 ⁵ / ₈ " Reg.	Jet	60kg	RBMTSB-9.875

* Bits have Shirt Tail Protection and TC Insert Gauge Protection on cones.

T.C.I. Sealed-Bearing / Gauge-Protected Rock Bits*

Product Code: RBTC SB

Diameter	Connection	Circulation	Weight (Approx.)	Part No.
4 ¹ / ₂ "	2 ³ / ₈ " Reg.	Jet	5kg	RBTC SB-4.5
4 ³ / ₄ "	2 ⁷ / ₈ " Reg.	Jet	7kg	RBTC SB-4.75
5 ¹ / ₈ "	2 ⁷ / ₈ " Reg.	Jet	7kg	RBTC SB-5.125
6 ¹ / ₄ "	3 ¹ / ₂ " Reg.	Jet	18kg	RBTC SB-6.25
6 ³ / ₄ "	3 ¹ / ₂ " Reg.	Jet	21kg	RBTC SB-6.75
7 ³ / ₈ "	3 ¹ / ₂ " Reg.	Jet	25kg	RBTC SB-7.375
7 ⁷ / ₈ "	4 ¹ / ₂ " Reg.	Jet	35kg	RBTC SB-7.875
8 ³ / ₄ "	4 ¹ / ₂ " Reg.	Jet	39kg	RBTC SB-8.75
9 ⁷ / ₈ "	6 ⁵ / ₈ " Reg.	Jet	62kg	RBTC SB-9.875

* Bits have Shirt Tail Protection and TC Insert Gauge Protection on cones.

Mill Tooth Standard Bearing Rock Bits Product Code: RBMTOB

Diameter	Connection	Circulation	Weight (Approx.)	Part No.
4 ¹ / ₂ "	2 ³ / ₈ " Reg.	Regular	5kg	RBMTOB-4.5
4 ³ / ₄ "	2 ⁷ / ₈ " Reg.	Regular	7kg	RBMTOB-4.75
5 ¹ / ₈ "	2 ⁷ / ₈ " Reg.	Regular	8kg	RBMTOB-5.125
6 ¹ / ₄ "	3 ¹ / ₂ " Reg.	Jet	17kg	RBMTOB-6.25
6 ³ / ₄ "	3 ¹ / ₂ " Reg.	Jet	21kg	RBMTOB-6.75
8 ³ / ₄ "	4 ¹ / ₂ " Reg.	Jet	39kg	RBMTOB-8.75
9 ⁷ / ₈ "	6 ⁵ / ₈ " Reg.	Jet	60kg	RBMTOB-9.875

T.C.I. Standard Bearing Rock Bits Product Code: RBTCOB

Diameter	Connection	Circulation	Weight (Approx.)	Part No.
4 ¹ / ₂ "	2 ³ / ₈ " Reg.	Regular	5kg	RBTCOB-4.5
4 ³ / ₄ "	2 ⁷ / ₈ " Reg.	Regular	7kg	RBTCOB-4.75
5 ¹ / ₈ "	2 ⁷ / ₈ " Reg.	Jet	7kg	RBTCOB-5.125
6 ¹ / ₄ "	3 ¹ / ₂ " Reg.	Jet	18kg	RBTCOB-6.25
6 ³ / ₄ "	3 ¹ / ₂ " Reg.	Jet	21kg	RBTCOB-6.75
8 ³ / ₄ "	4 ¹ / ₂ " Reg.	Jet	39kg	RBTCOB-8.75
9 ⁷ / ₈ "	6 ⁵ / ₈ " Reg.	Jet	62kg	RBTCOB-9.875

**IDS H-Series Back Reamers**

Prices are valid for Reamers with a Thread at the front and a Thread, Pulling Eye (Code: PE) or IDS Integral Swivel Socket (Code: ISS (for H1F and H2F Reamers only)) at the rear.

IDS H1F Fluted Compaction Reamers Product Code: H1F

Cutting Dia.	Compact Dia.	Max. Conn. Dia.*	Body Length	Body Wt (approx)	Part No. Prefix
8" / 200mm	7" / 175mm	3½" / 89mm	240mm	21kg	H1F-8-200-
10" / 250 mm	9" / 225mm	3½" / 89mm	370mm	73kg	H1F-10-250-
12" / 300 mm	11" / 275mm	3½" / 89mm	370mm	82kg	H1F-12-300-
14" / 350 mm	13" / 325mm	4½" / 114mm	445mm	184kg	H1F-14-350-
16" / 400 mm	15" / 375mm	4½" / 114mm	445mm	201kg	H1F-16-400-
18" / 450 mm	17" / 425mm	4½" / 114mm	655mm	337kg	H1F-18-450-
20" / 500 mm	19" / 475mm	4½" / 114mm	655mm	367kg	H1F-20-500-

*Max connection diameter offered at the standard price.

IDS H2F Fluted Compaction Reamers Product Code: H2F

Cutting Dia.	Compact Dia.	Max. Conn. Dia.*	Body Length	Body Wt (approx)	Part No. Prefix
8" / 200mm	7" / 175mm	3½" / 89mm	240mm	21kg	H2F-8-200-
10" / 250 mm	9" / 225mm	3½" / 89mm	370mm	73kg	H2F-10-250-
12" / 300 mm	11" / 275mm	3½" / 89mm	370mm	82kg	H2F-12-300-
14" / 350 mm	13" / 325mm	4½" / 114mm	445mm	184kg	H2F-14-350-
16" / 400 mm	15" / 375mm	4½" / 114mm	445mm	201kg	H2F-16-400-
18" / 450 mm	17" / 425mm	4½" / 114mm	655mm	337kg	H2F-18-450-
20" / 500 mm	19" / 475mm	4½" / 114mm	655mm	367kg	H2F-20-500-

*Max connection diameter offered at the standard price.

IDS H3 Displacement Reamers Product Code: H3

Cutting Dia.	Compact Dia.	Max. Conn. Dia.*	o/a Length	Weight (approx)	Part No. Prefix
8" / 200 mm	7" / 175mm	3½" / 89mm	375mm	18kg	H3-8-200-
10" / 250 mm	9" / 225mm	3½" / 89mm	425mm	22kg	H3-10-250-
12" / 300 mm	11" / 275mm	3½" / 89mm	500mm	26kg	H3-12-300-
14" / 350 mm	13" / 325mm	4½" / 114mm	575mm	30kg	H3-14-350-
16" / 400 mm	15" / 375mm	4½" / 114mm	625mm	36kg	H3-16-400-
18" / 450 mm	17" / 425mm	4½" / 114mm	725mm	40kg	H3-18-450-
20" / 500 mm	19" / 475mm	4½" / 114mm	725mm	44kg	H3-20-500-

*Max connection diameter offered at the standard price.

Part numbers for reamers with custom connections are made in the following way, using the thread codes shown on page 9:

If both connections are threads:

	Part no. Prefix	Front Thread Code	Male or Fem?	Rear Thread Code	Male or Fem?
EXAMPLE:-	H2F-10-250-	N3 -	M -	N3 -	F

If the back connection is a Pulling Eye (Back Connection Code: PE) or Integral Swivel Socket (Back Connection Code: ISS):

	Part no. Prefix	Front Thread Code	Male or Fem?	Back Conn. Code
EXAMPLE:-	H2F-10-250-	N3 -	M -	PE

Please state part numbers when ordering.

**DS Fly Cutters and Barrel Reamers****IDS Fly Cutters** Product Code: FC

Cutting Dia.	Length (eff.)	Shaft Dia.	Conns. (pin x box)*	Weight (approx.)	Part No.
12" / 300 mm	762mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	28kg	FC-12-300
14" / 350 mm	762mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	30kg	FC-14-350
16" / 400 mm	762mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	33kg	FC-16-400
18" / 450 mm	762mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	40kg	FC-18-450
20" / 500 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	80kg	FC-20-500
22" / 550 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	90kg	FC-22-550
24" / 600 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	100kg	FC-24-600
26" / 650 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	105kg	FC-26-650
28" / 700 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	116kg	FC-28-700
30" / 750 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	121kg	FC-30-750
32" / 800 mm	762mm	5" / 127 mm	3 ¹ / ₂ " IF	132kg	FC-32-800
34" / 950 mm	762mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	175kg	FC-34-850
36" / 900 mm	762mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	181kg	FC-36-900
42" / 1050 mm	762mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	206kg	FC-42-1050
48" / 1200 mm	915mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	290kg	FC-48-1200
52" / 1300 mm	915mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	307kg	FC-52-1300
60" / 1500 mm	915mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	326kg	FC-60-1500
72" / 1800 mm	915mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	410kg	FC-72-1800

IDS Barrel Reamers Product Code: BR

Cutting Dia.	Length (eff.)	Shaft Dia.	Conns. (pin x box)*	Weight (approx.)	Part No.
12" / 300 mm	830mm	3" / 76 mm	IDS / NWY	60kg	BR-12-300
14" / 350 mm	880mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	112kg	BR-14-350
16" / 400 mm	930mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	146kg	BR-16-400
18" / 450 mm	930mm	3 ¹ / ₂ " / 89 mm	2 ⁷ / ₈ " IF	160kg	BR-18-450
20" / 500mm	1220mm	5" / 127 mm	3 ¹ / ₂ " IF	285kg	BR-20-500
22" / 550mm	1220mm	5" / 127 mm	3 ¹ / ₂ " IF	295kg	BR-22-550
24" / 600 mm	1520mm	5" / 127 mm	3 ¹ / ₂ " IF	319kg	BR-24-600
26" / 650 mm	1520mm	5" / 127 mm	3 ¹ / ₂ " IF	330kg	BR-26-650
28" / 700 mm	1830mm	5" / 127 mm	3 ¹ / ₂ " IF	340kg	BR-28-700
30" / 750 mm	1830mm	5" / 127 mm	3 ¹ / ₂ " IF	366kg	BR-30-750
32" / 800 mm	2300mm	5" / 127 mm	3 ¹ / ₂ " IF	390kg	BR-32-800
34" / 850 mm	2600mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	586kg	BR-34-850
36" / 900 mm	2600mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	586kg	BR-36-900
42" / 1050 mm	2800mm	6 ¹ / ₄ " / 159 mm	4 ¹ / ₂ " IF	819kg	BR-42-1050
48" / 1200 mm	3450mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	1057kg	BR-48-1200
52" / 1300 mm	3700mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	1409kg	BR-52-1300
60" / 1500 mm	4100mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	1592kg	BR-60-1500
72" / 1800 mm	4750mm	8" / 203 mm	6 ⁵ / ₈ " Reg.	1780kg	BR-72-1800

**IDS HDD Swivels** Product Code: SDC

Rating (Tonnes)	Diameter	Length	Weight (approx.)	Part No.
6	70mm / 2.760"	367mm	8kg	SDC-6
11	82mm / 3.228"	402mm	12.3kg	SDC-11
14	96mm / 3.780"	419mm	14.7kg	SDC-14
20	111mm / 4.370"	482mm	24.3kg	SDC-20
23	122mm / 4.803"	536mm	29kg	SDC-23
27	127mm / 5.0"	538mm	35.7kg	SDC-27
36	144mm / 5.669"	606mm	42kg	SDC-36
50	160mm / 6.299"	715mm	75kg	SDC-50

IDS Integral Swivels Product Code: IS

Compatible with IDS H1F and H2F Fluted Reamers

Rating (Tonnes)	Swivel Body Size (o.d)	For Reamer Sizes	Length	Weight (approx.)	Part No.
15	3" / 76mm	8" / 10" / 12"	250mm	7.7kg	IS-3.0-15
30	4 1/2" / 114mm	14" / 16" / 18" / 20"	312mm	34.5kg	IS-4.5-30

IDS TITAN Drill Pipe Product Code: DRF

Rig Compatibility	Length	Tool Joint Dia.	Tube Dia.	Wall	Weight	Part No.
Am. Augers DD4 (PAC)	10'	2 7/8" / 73mm	2.82" / 71.7mm	0.362" / 10.5mm	57kg	DRF-AA4P
Am Augers DD1	6'	1 7/8" / 48mm	1 3/4" / 44mm	0.256" / 6.5 mm	10kg	DRF-N1
Case 6010	10'	2 1/4" / 57mm	2" / 51mm	0.275" / 7 mm	24kg	DRF-C1
Case 6030	10'	2 5/8" / 67mm	2 1/4" / 57mm	0.314" / 8 mm	26kg	DRF-C2
Case 1500TX	10'	2 1/2" / 63mm	2 1/4" / 57mm	0.314" / 8 mm	26kg	DRF-C2A
Ditchwitch 4/40, 5/40	3m	1 3/4" / 44mm	1 3/4" / 44mm	0.256" / 6.5 mm	15kg	DRF-D1
Ditchwitch 25/10, 25/11	3m	2 1/4" / 57mm	2" / 51mm	0.275" / 7 mm	22kg	DRF-D2
Ditchwitch 8/60 (4tpi)	3m	2 1/2" / 63mm	2 1/4" / 57mm	0.314" / 8 mm	25kg	DRF-D3A
Ditchwitch 8/60 (6tpi)	3m	2 1/2" / 63mm	2 1/4" / 57mm	0.314" / 8 mm	25kg	DRF-D3B
Ditchwitch 35/10, 27/20	3m	2 3/4" / 70mm	2 1/4" / 57mm	0.314" / 8 mm	31kg	DR-D4
Ditchwitch 820, 920	2m	2" / 51mm	1 3/4" / 44mm	0.256" / 6.5 mm	13kg	DR-D5
Ditchwitch 920L	3m	2" / 51mm	1 3/4" / 44mm	0.256" / 6.5 mm	16kg	DR-D5A
Ditchwitch 17/20 / 23/21	3m	2 1/2" / 63mm	2" / 51mm	0.275" / 7 mm	25kg	DRF-D9
Ditchwitch 40/20	4.5m	3 1/4" / 82.5mm	2.5" / 63.5mm	0.354" / 9mm	65kg	DRF-D10
Straightline 1510	10'	2 1/4" / 57mm	2" / 51mm	0.275" / 7 mm	24kg	DRF-M1
Straightline 2062	10'	2 1/4" / 57mm	2" / 51mm	0.275" / 7 mm	24kg	DRF-M1A
Straightline 4010	10'	2 7/8" / 73mm	2.82" / 71.7mm	0.362" / 10.5mm	38kg	DRF-M2
Straightline 24/62	10'	2 1/2" / 63mm	2 1/4" / 57mm	0.314" / 8 mm	25kg	DRF-M3
T.T. 12G (Original)	3 m	2 3/8" / 60mm	2" / 51mm	0.275" / 7 mm	25kg	DRF-G1
T.T. 12G (New)	3 m	2 3/8" / 60mm	2" / 51mm	0.275" / 7 mm	25kg	DRF-G1A
Vermeer D6, D7/11	6'	1 7/8" / 48mm	1 3/4" / 44mm	0.256" / 6.5 mm	10kg	DRF-N1
Vermeer D10	10'	1 7/8" / 48mm	1 3/4" / 44mm	0.256" / 6.5 mm	16kg	DRF-N1A
Vermeer D24, D24A"	10'	2 1/4" / 57mm	2" / 51mm	0.275" / 7 mm	24kg	DRF-N2
Vermeer D24/40, 24/40A"	10'	2 5/8" / 67mm	2 1/4" / 57mm	0.314" / 8 mm	26kg	DRF-N3
Vermeer D33/44 (N3 Conn.)	15'	2 5/8" / 67mm	2.5" / 63.5mm	0.354" / 9mm	65kg	DRF-N3A
Vermeer D50 (2 7/8")	15'	3 1/8" / 79mm	2.82" / 71.7mm	0.362" / 10.5mm	69kg	DRF-N4
Vermeer D50 (3 1/2")	15'	3 5/8" / 92mm	3.54" / 90mm	0.453" / 11.5mm	75kg	DRF-N5
Vermeer D16/20	10'	2 1/4" / 57mm	1.99" / 51mm	0.275" / 7mm	30kg	DRF-N6

IDS Forged Drill Pipe Product Code: DRT

Connections (M & F)	Length	Upset Dia.	Body Dia.	Wall	Weight	Part No.
2 3/8" V	15'	2 5/8" / 67mm	2 3/8" / 60.3mm	0.281" / 7.1 mm	57kg	DRT-N3
2 7/8" V	15'	3 1/8" / 79mm	2 7/8" / 73mm	0.362" / 9.2 mm	76kg	DRT-N4
3 1/2" V	15'	3 5/8" / 92mm	3 1/2" / 89mm	0.449" / 11.4 mm	132kg	DRT-N5

**IDS X-Overs and Saver Subs** Product Code: A

Prices for X-Over Subs are same as for Saver Subs of the larger dia. thread on the X-Over

American Augers Saver Subs

Connections (pin x box)	Diameter	Thread Code
DD1	2 ³ / ₄ " / 70mm	N1
DD4 (2 ³ / ₈ " MJ)	2 ¹ / ₈ " / 73mm	AA4
DD4 (PAC)	2 ¹ / ₈ " / 73mm	AA4P

Case Saver Subs

Connections (pin x box)	Diameter	Thread Code
6010, 400TX	2 ¹ / ₄ " / 57mm	C1
6030	2 ⁵ / ₈ " / 67mm	C2
1500TX	2 ¹ / ₂ " / 63mm	C2A

Ditch Witch Saver Subs

Connections (pin x box)	Diameter	Thread Code
4/40, 5/40	1 ³ / ₄ " / 44mm	D1
25/10, 25/11	2 ¹ / ₄ " / 57mm	D2
8/60 (4 tpi)	2 ¹ / ₂ " / 63mm	D3A
8/60 (6 tpi)	2 ¹ / ₂ " / 63mm	D3B
35/10 / 27/20	2 ³ / ₄ " / 70mm	D4
8/20, 9/20, 9/20L	2" / 51mm	D5
70/20	4" / 101mm	D8
17/20 / 23/21	2 ¹ / ₂ " / 63mm	D9
40/20	3 ¹ / ₄ " / 82.5mm	D10
PT10/10	1 ³ / ₄ " / 44mm	D11

Flowtex Saver Subs

Connections (pin x box)	Diameter	Thread Code
Flowtex 44mm	1 ³ / ₄ " / 44mm	F1
Flowtex 60mm	2 ³ / ₈ " / 60mm	F2

Straightline Saver Subs

Connections (pin x box)	Diameter	Thread Code
15/10, 20/62	2 ¹ / ₄ " / 57mm	M1
40/10	2 ¹ / ₈ " / 73mm	M2
24/62	2 ¹ / ₂ " / 63mm	M3

Tracto Technik Saver Subs

Connections (pin x box)	Diameter	Thread Code
12G (Original)	2 ³ / ₈ " / 60mm	G1
12G (New)	2 ³ / ₈ " / 60mm	G1A
40/60	1 ³ / ₄ " / 44mm	G2

Vermeer Saver Subs

Connections (pin x box)	Diameter	Thread Code
D6, D7/11, D10	2 ³ / ₄ " / 70mm	N1
D24, D24A	2 ¹ / ₄ " / 57mm	N2
D24/40, D24/40A/ D33/44 (2 ³ / ₈ " V)	2 ⁵ / ₈ " / 67mm	N3
D24/40, D24/40A Quick-Disconnect	2 ³ / ₄ " / 70m	N3FT
D50 (2 ¹ / ₈ " V)	3 ¹ / ₈ " / 79mm	N4
D50 (3 ¹ / ₂ " V)	3 ⁵ / ₈ " / 92mm	N5
D16/20	2 ¹ / ₄ " / 57mm	N6
D33/44 (New)	3" / 76mm	N7

API Regular Saver Subs

Connections (pin x box)	Diameter	Thread Code
2 ³ / ₈ " API Reg	3 ¹ / ₈ " / 79mm	238R
2 ⁷ / ₈ " API Reg	3 ³ / ₄ " / 95mm	278R
3 ¹ / ₂ " API Reg	4 ¹ / ₄ " / 108mm	312R
4 ¹ / ₂ " API Reg	5 ¹ / ₂ " / 140mm	412R
6 ⁵ / ₈ " API Reg	7 ³ / ₄ " / 197mm	658R

API Internal Flush Saver Subs

Connections (pin x box)	Diameter	Thread Code
2 ³ / ₈ " API IF	3 ³ / ₈ " / 86mm	238IF
2 ⁷ / ₈ " API IF	4 ¹ / ₈ " / 105mm	278IF
3 ¹ / ₂ " API IF	4 ³ / ₄ " / 120mm	312IF
4 ¹ / ₂ " API IF	6 ¹ / ₈ " / 159mm	412IF
5 ¹ / ₂ " API IF	7 ³ / ₈ " / 187mm	512IF

Part numbers for Saver Subs and X-Overs are made in the following way, using the thread codes shown above:"

Connection #1			Connection #2	
Product Code	Thread Code	Male or Fem?	Thread Code	Male or Fem?
A -	N3 -	M -	238R -	F

Written: A-N3-M-238R-F

Please state part numbers when ordering.

IDS 'PE' Towing Heads Product Code: TH

<i>Pipe Compat. (mm)</i>	<i>O.D. (mm)</i>	<i>o/a Length</i>	<i>Weight</i>	<i>Part No.</i>
160	161	295mm	4kg	TH-160
180	181.2	315mm	6kg	TH-180
200	201.2	325mm	9kg	TH-200
225	226.3	335mm	11kg	TH-225
250	251.5	340mm	13kg	TH-250
280	281.6	380mm	18kg	TH-280
315	316.8	440mm	27kg	TH-315
355	357.1	470mm	35kg	TH-355
400	402.3	505mm	45kg	TH-400
450	452.7	540mm	60kg	TH-450
500	503	580mm	75kg	TH-500

IDS Ancillary Equipment
Jet Nozzles Product Code: JN

<i>Jet Size (mm)</i>	<i>Weight</i>	<i>Part No.</i>
2	0.051kg	JN-2
4	0.051kg	JN-4
6	0.051kg	JN-6
8	0.051kg	JN-8
10	0.051kg	JN-10

Zinc 50 Thread Dope Product Code: Z50

<i>Packaging</i>	<i>Weight</i>	<i>Part Number</i>
Pail	25Kg / 55lb	Z50-25KG

Replacement Cutters Product Code: RC

<i>Description</i>	<i>Weight</i>	<i>Part Number</i>
'Pick Tooth' Cutter	0.10kg	RC-CMM4
Housing for RC-CMM4	0.10kg	RC-CMMB2
Shark's Tooth' Cutter	0.25kg	RC-RT1
Threaded 'Pick Tooth' Cutter	0.10kg	RC-CMM4THD

INTERNATIONAL DRILLING SERVICES LIMITED TERMS AND CONDITIONS OF SALE

IMPORTANT: CONDITIONS 7, 13 AND 14 PROVIDE THAT CERTAIN RISKS ARE BORNE BY THE BUYER AND MAY AFFECT HIS INSURANCE ARRANGEMENTS

1. **DEFINITIONS:** "the contract" means the agreement between International Drilling Services Limited" (hereinafter referred to as) "the company" and the customer for the supply of goods or services; "the Buyer" means the purchaser of the goods or services; "the goods or services" means the subject matter of the contract; "the price" means the price of the goods or services and/or any other payment contracted to be made by the Buyer to the company.
2. **GENERAL:** The contract is entered into and all quotations are given subject to these conditions which may only be varied or waived by written agreement between the company and the Buyer. No contract shall be made until the company has accepted in writing an order placed by the Buyer. If these conditions differ from those of any offer made or order placed by the Buyer, any subsequent communication by the company constitutes a counter-offer and not acceptance of such terms. Any company quotation is not intended as a formal offer and may be varied or withdrawn without notice.
3. **DESCRIPTIONS:** All photographs, drawings, descriptions and details in the company catalogues, price lists and/or other documents are only indicative of a type of product or service and do not constitute warranties, conditions or representations. No report, representation, advice, communication or statement made by a representative of the company shall be binding unless expressly contained herein. The company reserves the right to incorporate improvements in the general development of its products or services and to make and charge for mandatory modifications to the same.
4. **PRICE**
 - 4.1. Unless otherwise agreed in writing, all prices quoted are nett, ex-works, trade packed and apply only in relation to the services, total quantities, dates and rates of delivery quoted. All prices are subject to the addition of all other duties and taxes (including where applicable Value Added Tax at the rate ruling at the relevant tax point).
 - 4.2. The invoiced amount may be adjusted to take account of increases in costs of components or equipment not manufactured by the company, services not performed by the company, raw materials, general commodities freight or insurance, rates of currency exchange, duties, taxes or surcharges or improvements or mandatory modifications made under clause 3 above.
 - 4.3. **PAYMENT:** Unless otherwise agreed in writing, all payments shall be made, in full without deductions or withholding, in cash in pounds sterling by the end of the month following the month of the date of invoice and free of setoff, or counterclaim. Failure by the Buyer to make payment in accordance with the terms agreed, shall without prejudice to any other remedies the company may have, render the Buyer liable to pay interest upon the total sums outstanding calculated at the rate of 3% above Barclays Bank Plc base rate from time to time in force calculated from the date of delivery, such interest accruing on a daily basis and being payable on demand. Time for payment is of the essence of the contract.
6. **DELIVERY**
 - 6.1. Unless otherwise agreed and stated in writing, all deliveries shall be made ex-works and shall be deemed to have been effected when the company has notified the Buyer the goods are ready for collection.
 - 6.2. Any periods quoted for delivery or despatch are estimates only and the company shall not be liable for failure to meet such periods (whether due to their negligence or otherwise) nor shall the Buyer be entitled to reject any consignment of the goods or services or to treat the contract as repudiated in the event of any such failure.
 - 6.3. Delivery of the goods to a carrier for transmission to the Buyer or the delivery of goods to the stipulated place of delivery shall constitute delivery to the Buyer and risk therein shall upon such delivery pass to the Buyer. Section 32(2) and (3) of the Sale of Goods Act 1979 shall not apply.
 - 6.4. The company shall be entitled to make partial deliveries or deliveries by instalments and these conditions shall apply to each partial delivery.
 - 6.5. Where the goods are ready but cannot be despatched for any reason beyond the control of the company or through the fault or delay of the Buyer, the company shall be entitled to make a reasonable charge in respect of insurance and storage of the goods.
7. **PROPERTY AND RISK**
 - 7.1. The Property in the goods or services shall remain in the company until it has received payment in full for the same. Risk in the goods or services shall pass to the Buyer on delivery.
 - 7.2. Whilst property in the goods or services remains in the company, it shall have the right, without prejudice to the obligations of the Buyer to purchase the goods or services, to re-take possession of the same (and for that purpose go upon any premises occupied by the Buyer). If so required by the company, the Buyer shall insure, mark and store the goods identifying them as the property of the company.
 - 7.3. The company shall have the right to maintain an action for the price notwithstanding that property in the goods may not have been passed to the Buyer.
 - 7.4. **TRANSIT:** Claims for damages to goods occurring in transit or for shortage in delivery of goods received from carriers will be considered by the company if the carriers and the company receive written notification of such damage or shortage within seven days of arrival or in the event of loss of goods in transit, within 21 days of the date of the consignment. Where delivery is taken of goods without being checked they will be deemed to have been accepted by the Buyer unless the carrier's delivery book is signed "Not Examined".
9. **INSPECTIONS**
 - 9.1. Unless otherwise agreed in writing the company will carry out such tests and inspection as it usually carries out on such goods or services. Any additional tests or inspection required by the Buyer will be to the Buyer's account.
 - 9.2. The goods shall be manufactured and released in accordance with the relevant requirements of such public or responsible body or bodies in the United Kingdom to whose jurisdiction, control or regulation the goods may from time to time be subject and in addition such of the goods as are manufactured by the company shall be inspected and released under its own system of inspection as approved by any such body as above and such inspection and release shall constitute acceptance by the Buyer of all the goods.
10. **INTELLECTUAL PROPERTY RIGHTS (IPR)**
 - 10.1. The Buyer shall indemnify the company against any claim alleging infringement of trade marks, trade names, patents, copyrights, registered designs or any other IPR which arises as a result of the company's compliance with the Buyer's specifications, designs and instructions.
 - 10.2. (i) They Buyer shall notify the company forthwith of any claim that the sale or use of the goods or services supplied by the company infringe any IPR and give authority, information and every reasonable assistance to the company for the defence of any such claim and shall not itself admit, handle, deal with or compromise any such claim except with the written consent of the company;
 - (ii) They buyer shall comply with all instructions of the company and all legislation in relation to the sale, processing, storage and use of the goods or services supplied. The company may without liability cancel or suspend any supply services, delivery or manufacture of any goods, which have become the subject of a claim by a third party alleging infringement of any IPR.
- 10.3. The contract does not grant the Buyer or any other third party any licence, express or implied, under any IPR of the company for goods or services or any product, process, design or machine of which the goods or services form part, nor does the sale of the goods or services supply of supporting information imply the goods or services do not infringe a third party's IPR.
11. **COPYRIGHT:** Copyright in the goods or services and copyright and property in all drawings, descriptions, specifications and other documents supplied by the company to the Buyer shall remain in the company.
12. **WARRANTY:** The company will at its option either replace or repair or issue credit for the price to the Buyer for any goods or services found to be defective by the sole reason of faulty materials or poor workmanship (fair wear and tear excluded) within 6 months from the date of delivery or within 10 hours of use (whichever shall first expire) provided that:
 - (i) The company is notified in writing within 7 days of the discovery of any such defects by the Buyer and the defective goods are returned to the company within 30 days of that date or an agreed period for overseas clients, transportation charges being prepaid by the Buyer;
 - (ii) examination by the company of such goods shall establish to its satisfaction that such defects exist and have not been caused by misuse, neglect, improper installation or repair, alteration, accident or improper storage;
 - (iii) this warranty shall not extend to any products or parts thereof not manufactured by the company. In the case of products not so manufactured, the company will as far as possible pass to the Buyer the benefit of any warranty or guarantee to the company by the manufacturers.
- 12.1. In the case of a consumer transaction as defined in the Consumer Transactions (Restrictions on Statements) Order 1976 (as amended) this condition shall not affect the statutory rights of the Buyer.
13. **EXCLUSION OF LIABILITY**
 - 13.1. Save as expressly provided in clause 12 above, the company shall be under no liability (including liability for indirect or consequential loss or damage) of whatsoever kind, howsoever caused, whether or not due to the negligence or wilful default of the company or its servants or agents arising out of or in connection with the goods or services provided. All conditions, warranties or other terms express, implied, statutory or otherwise are hereby excluded.
 - 13.2. If paragraph 13.1 above is held to be wholly or partially ineffective in relation to any claim, the Buyer shall not be entitled to reject the goods or services and any damages recovered by the Buyer shall be limited to the price or if lower to the reasonable cost of remedying the breach of duty, provided that the company shall be first afforded the opportunity to carry out such remedial work itself.
 - 13.3. Except where the contract is an international supply contract within section 26 of the Unfair Contract Act 1977 ("the Act") nothing contained in this condition shall exclude or restrict:
 - (i) any liability of the company for death or personal injury (as defined in the Act) resulting from negligence (as defined in the Act)
 - (ii) any liability of the company for breach of the implied undertakings as to title contained in section 12 of the Sales of the Goods Act 1979; and
 - (iii) where the Buyer deals as a consumer within the meaning of the Act, any liability of the company for breach of its implied undertakings as to conformity of the goods with description or sample or as to their quality or fitness for a particular purpose contained in sections 13, 14 and 15 of the Sale of Goods Act 1979.
14. **FORCE MAJEURE**
 - 14.1. The company shall not be liable for delay in performance or for non-performance in whole or in part of its obligations under the contract directly or indirectly resulting from causes beyond control either of the company or its suppliers including, but not limited by reference to, Acts of God, acts of the Buyer or a third party, hostilities, embargoes, sabotage, civil disturbance, Government regulations, strikes, lockouts or other industrial action, illness, flood, fire, impact, explosion, adverse weather, delay in delivery to the company or its supplier or shortages of any services, products or materials.
 - 14.2. In any such event the company may without liability vary the terms of the contract including, but not limited to, extending the time for performance of the contract. If the contract is frustrated or cancelled, the company shall be entitled to such reasonable remuneration as it may specify.
15. **BREACH AND FINANCIAL CONDITIONS**
 - 15.1. If any of the Buyer's obligations to the company under any contract are not fulfilled or, if the Buyer's financial condition at any time does not in the company's unfettered judgement justify continuance of the contract on the terms of payment specified, the company may, without prejudice to any other rights it may have, by notice in writing cancel any outstanding order or suspend any deliveries of, or work on, any of the goods or services, unless the Buyer makes payment as the company may require.
 - 15.2. In addition to any rights of lien to which the company may by law be entitled, whilst any amount remains due to it from the Buyer, the company shall be entitled to a general lien for such amount on all property of the Buyer in the company's possession (whether paid for by the Buyer or not).
16. **HEALTH AND SAFETY AT WORK ETC., ACT 1974**
 - 16.1. If the goods are articles for use at work within the meaning of Health and Safety at Work etc. Act 1974 the Buyer hereby agrees that he is responsible for taking all necessary steps to ensure that the goods are safe and without risks to health when properly used including:
 - (i) regularly and properly testing, inspecting and maintaining, properly installing, storing and housing the goods;
 - (ii) disseminating adequate detailed information regarding their safe and proper use to the persons using the goods, and ensuring that the goods are adequately manned, and the Buyer's order for the goods shall be deemed to be its written undertaking therefore pursuant to the said Act.
17. **BUYER'S PROPERTY:** Any property of the Buyer received by the company, whether for incorporation in goods or services of the company or for repair or otherwise, will be held by the company at the Buyer's risk as regards to loss or damage howsoever arising (whether due to the company's negligence or otherwise).
18. **PROPER LAW AND JURISDICTION:** The contract shall be governed by the construed in accordance with English Law and the Courts of England shall have non-exclusive jurisdiction to hear all disputes arising in connection with the contract.
19. **CONFIDENTIALITY:** Any information or data given in confidence or any confidential drawings or other general commercial intelligence which may be received by the Buyer or any representative of the Buyer shall not be divulged to any third party and may be used by the Buyer only in connection with the goods or services supplied and not in any other connection whatsoever. In the event that the Buyer or any such representative so divulge any such drawings, data, information or intelligence to the detriment of the company, the Buyer shall indemnify the company in full against all costs, expenses, damage or loss directly or indirectly occasioned thereby.
20. **EXPORTS:** In the case of the export contracts the following additional conditions shall apply
- 20.1. It is hereby declared and agreed that the Uniforms Laws on International Sales Acts 1967 and any statutory modification or enactment thereof shall not apply.
- 20.2. The company shall not be taken as indemnifying the Buyer or as being liable for IPR infringement where the goods or services are sold or used outside of the UK or their usual function.

Authorised IDS Distributor:



INTERNATIONAL DRILLING SERVICES LIMITED

Directional Drilling Division

Carrwood Road, Chesterfield Trading Estate,
Sheepbridge, Chesterfield S41 9QB, UK

Tel: +44 (0)1246 269911 Fax: +44 (0)1246 269922

E-mail: cjs@idsuk.com