

# **ALH SYSTEMS LTD**

# TWIN BAGTUBE OPERATOR INSTRUCTIONS & PARTS LIST

ISSUE DATE - 10/03/2015

# **CONTENTS PAGE**

1.	OPERATING AND SERVICE NOTES	PAGE 1
2.	ALH SYSTEM 1 DRILLING & TAPPING PROCEDURE	PAGE 2 - 6
3.	ALH SYSTEM 1 BAGGING OFF PROCEDURE	PAGE 7 - 16
4.	ALH SYSTEM 1 PRODUCT RANGE	PAGE 17 - 19
5.	ALH SYSTEM 1 SERVICE VALVE PARTS	PAGE 20 & 21
6.	ALH SYSTEM 1 DRILLING MACHINE	PAGE 22 & 23
7.	ALH SYSTEMS INFLATION TUBE	PAGE 24
8.	ALH SYSTEMS INFLATION CONTROL	PAGE 25
9.	ALH SYSTEM 1 3-12" TWIN BAG TUBE	PAGE 26 & 27
10.	ALH SYSTEM 1 PLUG INSERTION	PAGE 28
11.	ALH SYSTEM 1 BYPASS	PAGE 29
12.	ALH SYSTEM 1 PE ADAPTOR	PAGE 30 & 31
13.	ALH SYSTEM 1 PURGE EJECTOR	PAGE 32 & 33



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234 E-MAIL: sales@alh-systems.co.uk

#### **OPERATING & SERVICE NOTES**

THE ALH SYSTEM 1 SERVICE VALVE AND THE ALH SYSTEM 1 DRILL SET ARE DESIGNED WITH EASE OF USE AND LOW MAINTENANCE A PRIORITY.

NO PLANNED MAINTENANCE PROGRAM IS REQUIRED TO KEEP THE KIT IN FULL WORKING ORDER.

A VISUAL INSPECTION INCLUDING CONDITION OF SEALS SHOULD BE COMPLETED BEFORE EACH OPERATION. AFTER EACH USE THE KIT SHOULD BE CLEANED TO REMOVE ANY FOREIGN MATERIAL WHICH COULD IMPAIR FUTURE USE OF THE KIT.

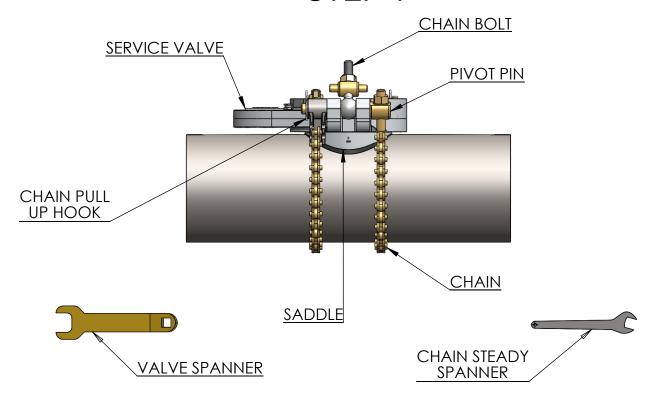
THIS DOCUMENT TO BE READ IN CONJUNCTION WITH CURRENT INDUSTRY CODES OF PRACTICE



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 DRILLING & TAPPING PROCEDURE STEP 1



- 1. CLEAN TOP OF PIPE
- 2. PLACE THE APPROPRIATE SIZE SADDLE ON PIPE
- FIT SERVICE VALVE ONTO SADDLE
- 4. PUSH CHAIN BOLTS THROUGH PIVOT PINS AND SECURE WITH WASHER AND CHAIN NUT
- 5. PASS CHAINS UNDER PIPE AND FIT INTO CHAIN PULL UP HOOK
- 6. SUPPORT CHAIN WITH CHAIN STEADY SPANNER AND TIGHTEN CHAIN NUT WITH VALVE SPANNER\*

\* IT IS ESSENTIAL THE ALH VALVE SPANNER IS USED IN ORDER TO REDUCE THE RISK OF OVER TIGHTENING THE CHAIN BOLTS

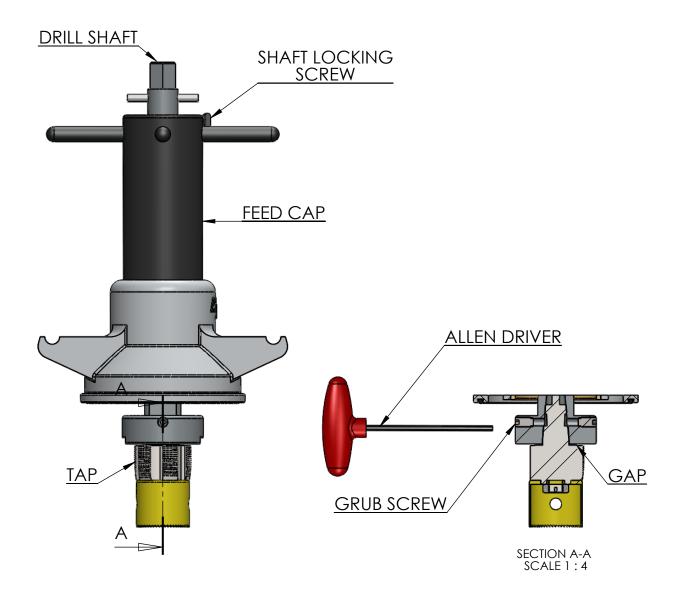
NOTE: IT MAY BE NECESSARY TO FIT PIPE CLAMPS TO 3", 4" & 6" PIPES BEFORE USING THIS EQUIPMENT.

THIS TO BE CONFIRMED BY PIPE OWNER.



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234



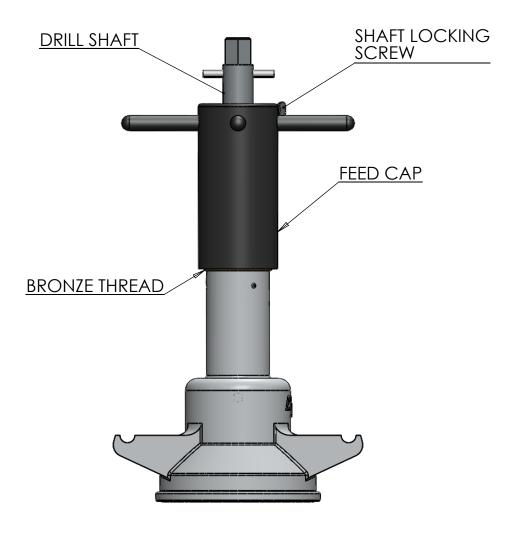
- 1. WIND FEED CAP DOWN TO STOP
- 2. RELEASE SHAFT LOCKING SCREW AND ALLOW DRILL SHAFT TO DROP
- 3. RETRACT GRUB SCREWS
- 4. FIT CORRECT CUTTER & TAP AND TIGHTEN GRUB SCREWS

TO RELEASE TAP AFTER USE, INSERT SCREWDRIVER INTO GAP SHOWN



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

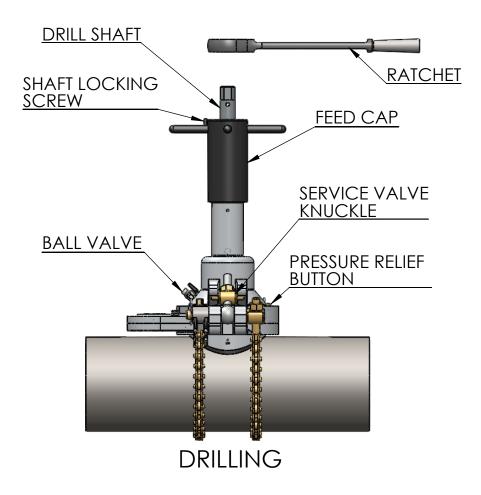


- 1. WIND FEED CAP UP UNTIL BRONZE THREAD IS VISIBLE
- 2. SLOWLY ROTATE DRILL SHAFT UNTIL IT CAN BE RAISED UP. THIS ALIGNS THE SQUARE ON THE DRILL SHAFT WITH THE SQUARE ON THE DRILL BASE, WHICH PREVENTS THE GATE BEING DRILLED
- 3. TIGHTEN SHAFT LOCKING SCREW



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

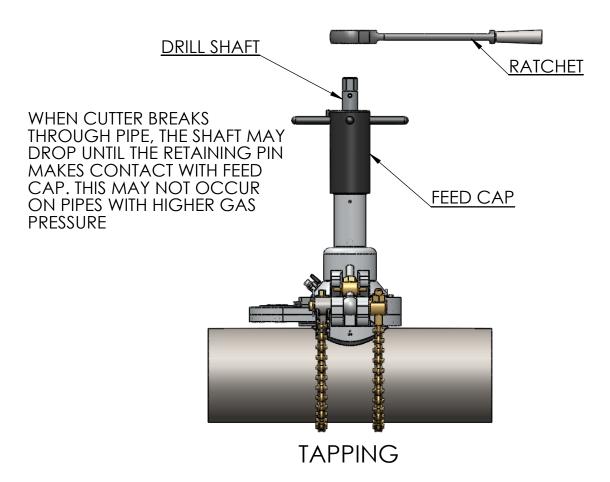


- 1. MOUNT DRILLING MACHINE ONTO SYSTEM 1 SERVICE VALVE
- SECURE USING SERVICE VALVE KNUCKLE AND TIGHTEN NUTS
- OPEN SYSTEM 1 VALVE
- 4. PRESSURE TEST VALVE AND SADDLE USING DRILLING MACHINE BALL VALVE
- 5. PRESS PRESSURE RELIEF BUTTON TO EQUALISE PRESSURE
- 6. LOOSEN SHAFT LOCKING SCREW
- 7. WIND DOWN FEED CAP UNTIL THE CUTTER REACHES THE PIPE
- 8. ROTATE THE DRILL SHAFT USING RATCHET OR NUT RUNNER AND APPLY GENTLE PRESSURE TO WIND DOWN THE FEED CAP TO CUT THROUGH THE PIPE WALL



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234



- 1. WIND DOWN FEED CAP UNTIL RESISTANCE IS FELT
- 2. ROTATE DRILL SHAFT USING RATCHET TO ENGAGE TAP
- 3. CONTINUE TO ROTATE DRILL SHAFT TO TAP HOLE
- 4. IT IS ONLY NECESSARY TO WIND FEED CAP FURTHER TO MAINTAIN GAP BETWEEN RETAINING PIN AND FEED CAP
- 5. ONCE TAP IS ROTATING FREELY, TAPPING IS COMPLETE
- 6. REVERSE THE DRILL SHAFT TO UNWIND THE TAP, IT MAY BE NECESSARY TO ALSO UNWIND THE FEED CAP
- 7. REFER BACK TO STEP 3 TO RAISE CUTTER (PAGE 4)
- 8. CLOSE SYSTEM 1 VALVE
- 9. VENT AND REMOVE DRILLING MACHINE

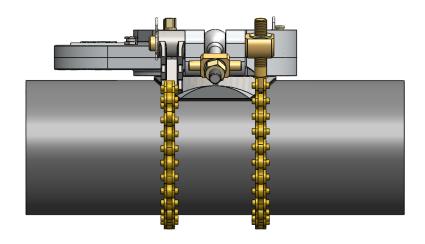


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

#### ALH SYSTEM 1 BAGGING OFF PROCEDURE STEP 1

FOR PIPES IN THE RANGE 3"-12"



DRILL AND TAP PIPE ACCORDING
TO THE ALH SYSTEM 1 DRILLING & TAPPING
PROCEDURE TO THE FOLLOWING
SIZES:

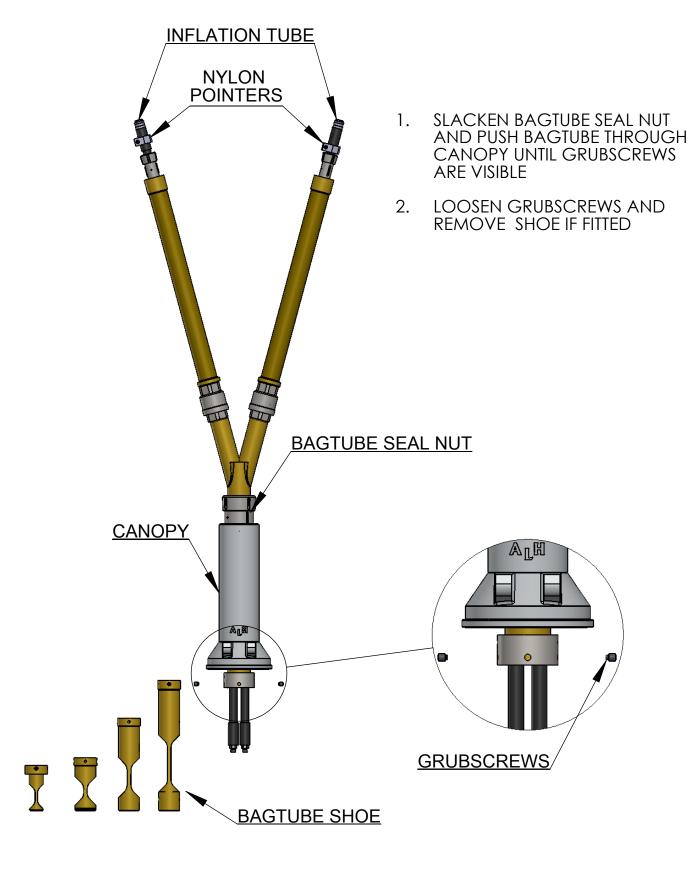
1 1/4" BSP ON 3" PIPE

2" BSP ON 4" - 12" PIPE



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

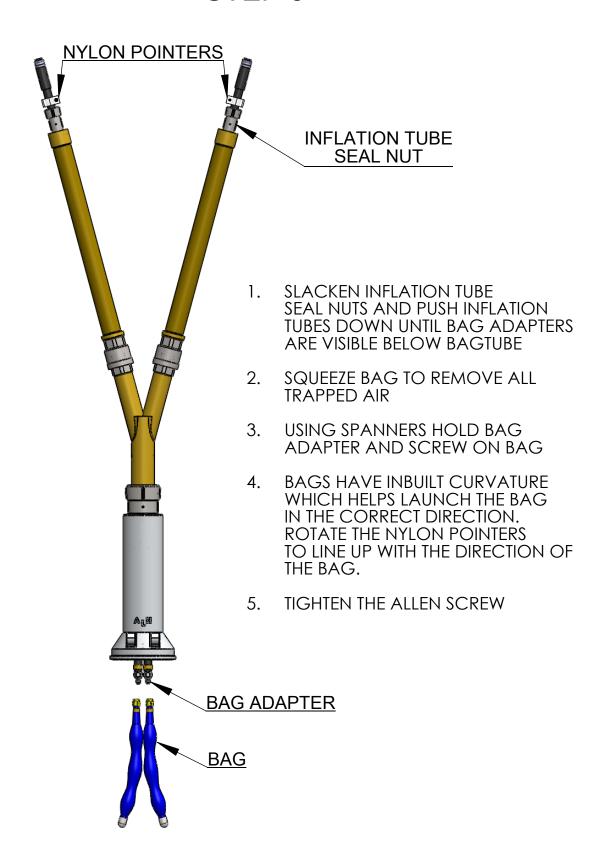
TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

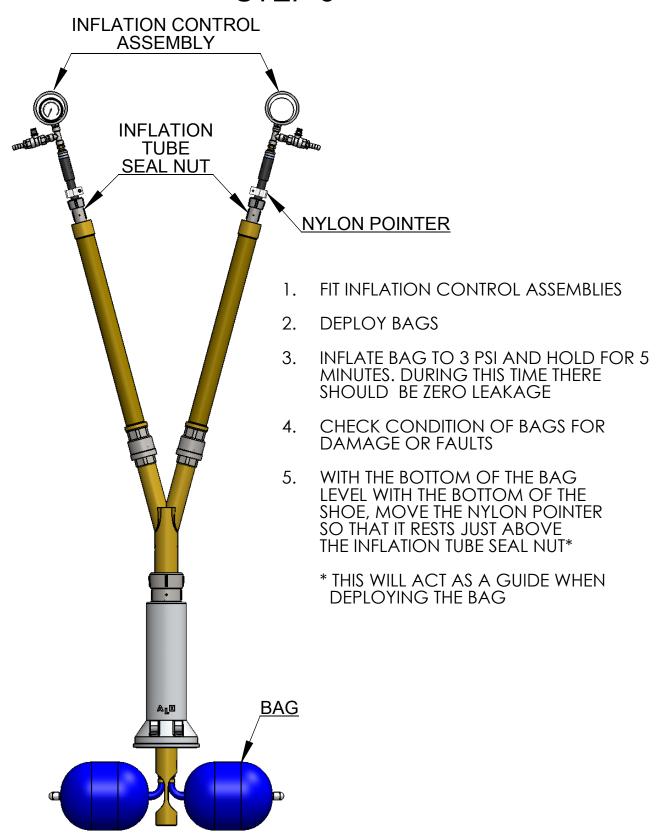
TEL: +44 (0)1373 858234

# STEP 4 **INFLATION TUBE SEAL NUT** PULL INFLATION TUBE UP INTO BAGTUBE UNTIL THE NOSE OF THE BAG PASSES THE END OF THE **DIVIDING PLATE AS SHOWN IN** SECTION B-B INSERT CORRECT SHOE, ACCORDING TO PIPE DIAMETER, INTO BAGTUBE 2. AND LINE UP DIVIDING PLATE WITH DIVIDING PLATE IN BAGTUBE 3. SECURE USING GRUBSCREWS **BAGTUBE** 3/16" AF DIVIDING ALLEN DRIVER PLATE GRUBSCREWS



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

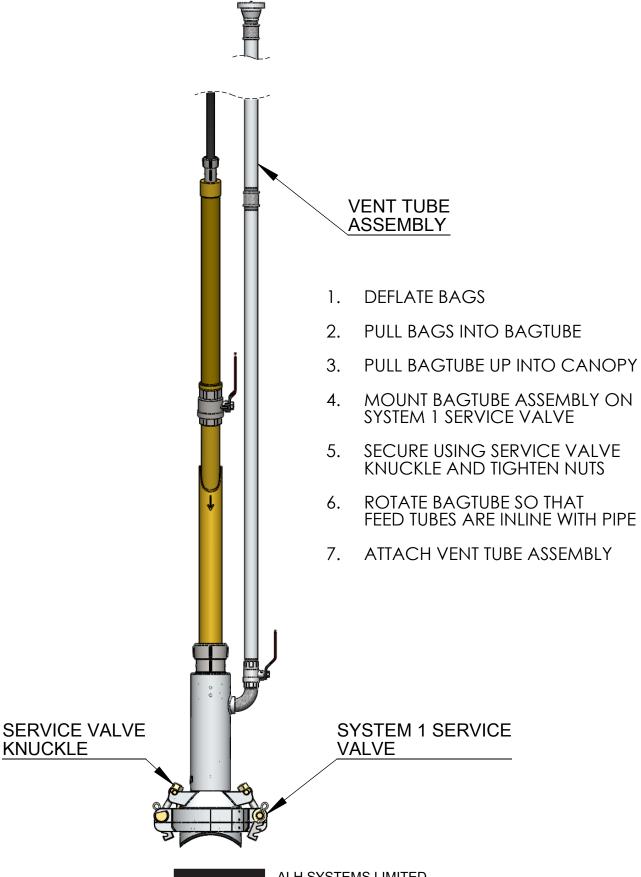
TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

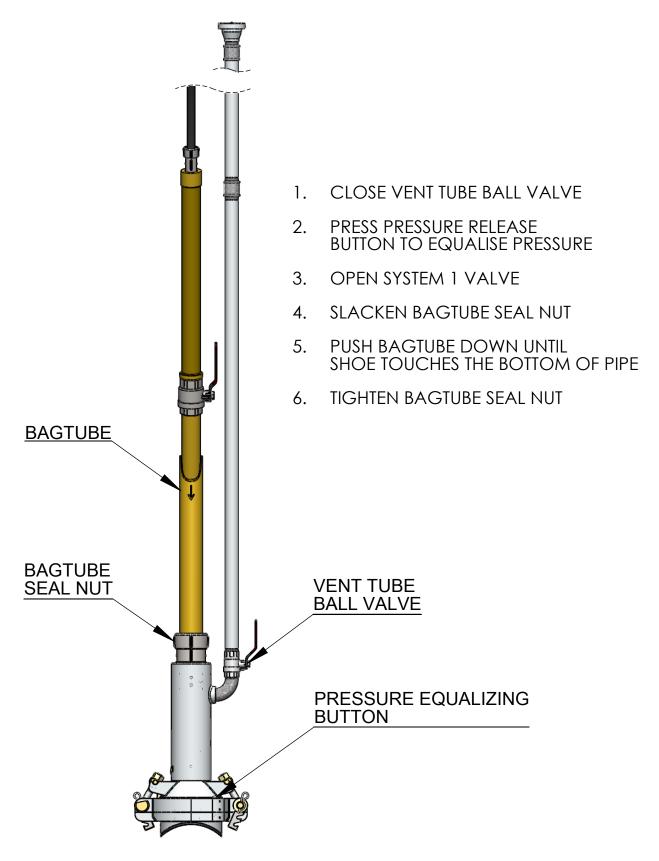
TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

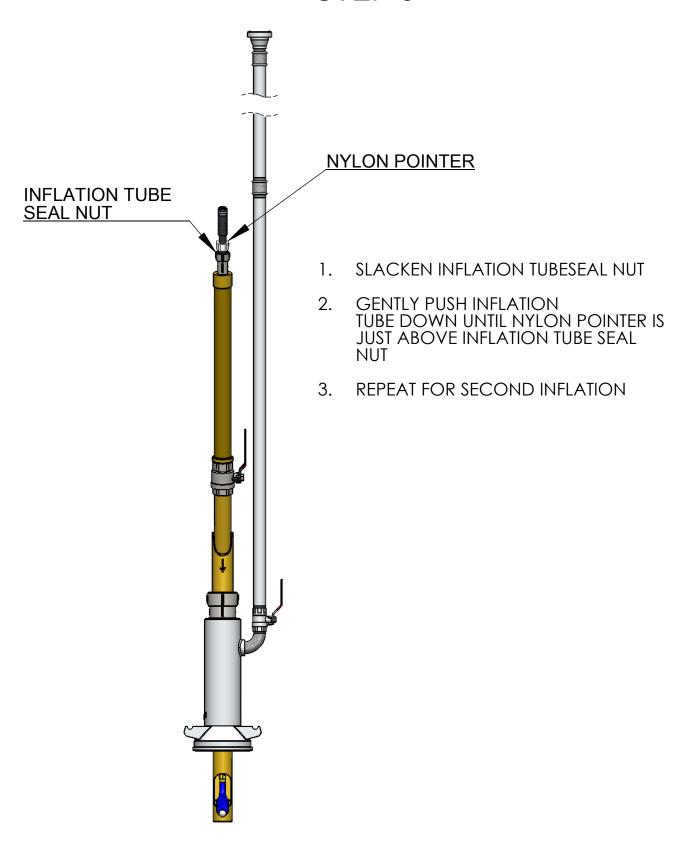
TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

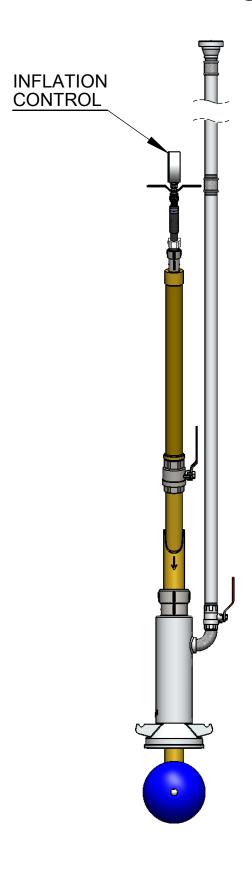
TEL: +44 (0)1373 858234





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234



- 1. FIT INFLATION CONTROL
- 2. INFLATE BAG TO 3 PSI FOLLOWING INFLATION SEQUENCE OVERLEAF
- 3. TIGHTEN INFLATION TUBE SEAL NUT

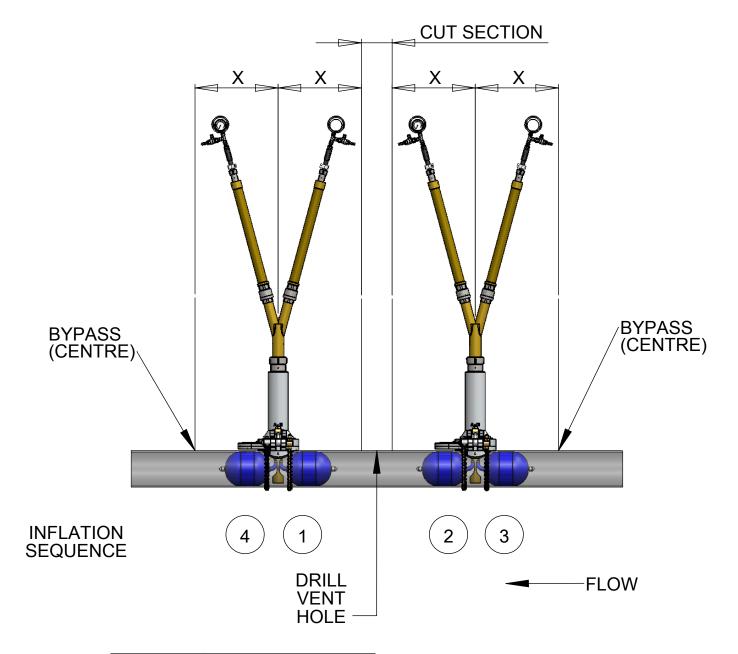
DO NOT EXCEED MAXIMUM BAG PRESSURE



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# INFLATION SEQUENCE AND SEPARATION DISTANCE



PIPE SIZE	DIMENSION 'X' MIN
3 "	350 mm
4 "	350 mm
6 "	350 mm
8 "	400 mm
10 "	450 mm
12"	500 mm

\* BEFORE INFLATING BAGS 3 & 4 TEST BAGS 1 & 2 BY OPENING VENT HOLE TO ENSURE SEAL

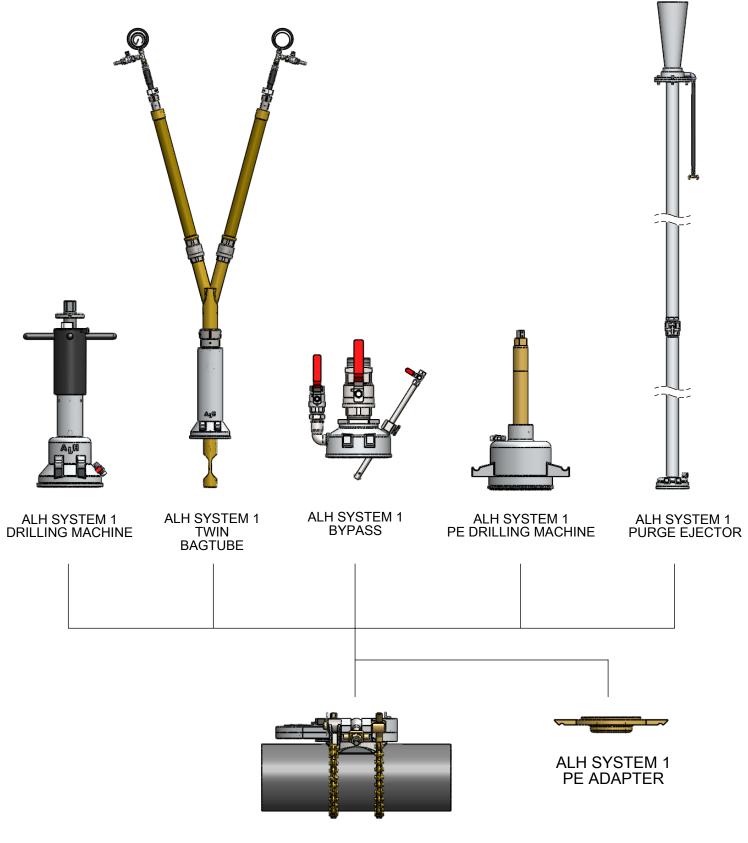
BAGS 3 & 4 CAN BE TESTED VIA THE VENT TUBES



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 PRODUCT RANGE



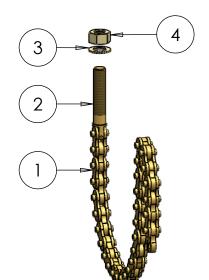
#### ALH SYSTEM 1 SERVICE VALVE



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

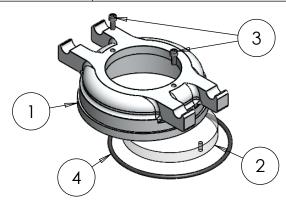
# ALH SYSTEM 1 PRODUCT RANGE



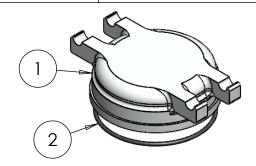
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	M3026	CHAIN ASSEMBLY	1
2	M3009	VALVE CHAIN BOLT	1
3	\$0266	WASHER	1
4	\$0217	NUT	1

PART NUMBER	DESCRIPTION
A0013	PAIR OF CHAINS FOR 3"-12" PIPE
A2900	PAIR OF CHAINS FOR 14"-24" PIPE
A2941	PAIR OF CHAINS FOR 24"-36" PIPE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	006-0068 (A0015)	INSPECTION CAP	1
2	006-0069	INSPECTION CAP PERSPEX INSERT	1
3	\$0014	CAP HEAD BOLT	2
4	M1056	O RING	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	009-0003 (A0050)	BLANKING CAP	1
2	M1056	O RING	1



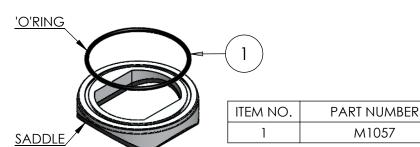


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

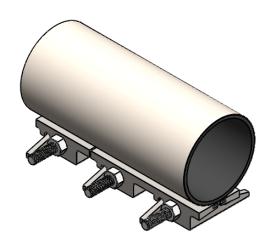
TEL: +44 (0)1373 858234

# ALH SYSTEM 1 PRODUCT RANGE

PART NUMBER	DESCRIPTION
A0032	3" SADDLE
A0003	4" SADDLE
A0030	4" MODIFIED SADDLE
A0004	5" SADDLE
A0005	6" SADDLE
A0006	7" SADDLE
A0007	8" SADDLE
A0009	10" SADDLE
A0010	12" SADDLE
A0072	16"-18" SADDLE
A0073	20" SADDLE
A0074	24" SADDLE



PART NUMBER	DESCRIPTION	QTY.
A2929	4" PIPE CLIP	1





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

E-MAIL: sales@alh-systems.co.uk

**DESCRIPTION** 

O RING

# ALH SYSTEM 1 SERVICE VALVE ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE +44 (0)1373 858234 TEL:

E-MAIL: sales@alh-systems.co.uk

SYSTEMS

# ALH SYSTEM 1 SERVICE VALVE

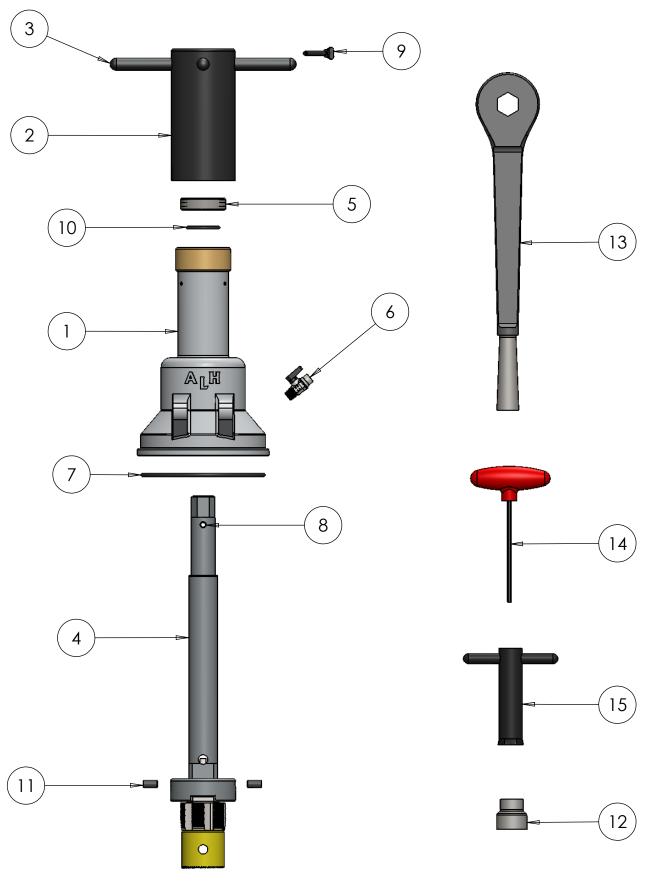
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	056-0001	TOP PLATE	1
2	056-0002	BOTTOM PLATE	1
3	006-0003	VALVE GATE	1
4	M1058	O RING	2
5	056-0005	VALVE OPERATING SPINDLE	1
6	M1050	O RING	2
7	056-0007	VALVE BY PASS PLUNGER	1
8	M1049	O RING	1
9	M3010	VITON BALL	1
10	M3011	Spring	1
11	S0127	GRUB SCREW	1
12	S0266	WASHER	2
13	056-0012	VALVE KNUCKLE	2
14	056-0009	VALVE SWING BOLT	2
15	S0406	RETAINING PIN	2
16	\$0158	CAP HEAD BOLT	6
17	S0159	CAP HEAD BOLT	6
18	056-0013	VALVE PIVOT PIN	2
19	056-0014	VALVE CHAIN PULL UP HOOK	2
20	S0217	NUT	2
21	S0129	GRUB SCREW	2
22	M2145	GREASE NIPPLE	1
23	S0271	WASHER	2
24	A0012	VALVE SPANNER	1
25	A0014	CHAIN SPANNER	1
26	M9279	SEALANT	A/R



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 DRILLING MACHINE





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 DRILLING MACHINE

ITELANIO	D 4 DT 1 11 1 4 D E D	DECODIDE	OT)/
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	045-9004	BASE SUB ASSEMBLY	1
2	045-0002	FEED CAP	1
3	045-0006	FEED HANDLE	4
4	045-0003	SHAFT	1
5	M4112	THRUST RACE	1
6	M3098	BALL VALVE	1
7	M1056	O RING	1
8	045-0010	COIL PIN	1
9	M4155	THUMB SCREW	1
10	M1022	O RING	1
11	S0166	GRUB SCREW	2
12	M4163	SOCKET	1
13	M4162	RATCHET LEVER	1
14	A0017	ALLEN DRIVER	1
15	A0259	BOX SPANNER	1

BSP HOLESAW
3/4" (24mm)
1" (30mm)
1 1/4" (38mm)
1 1/2" (44mm)
2" (56mm)
2 1/2" (73mm)

PART NO.	BSP TAP
A0260	3/4"
A0261	1"
A0262	1 1/4"
A0263	1 1/2"
A0264	2"
A0270	2 1/2"

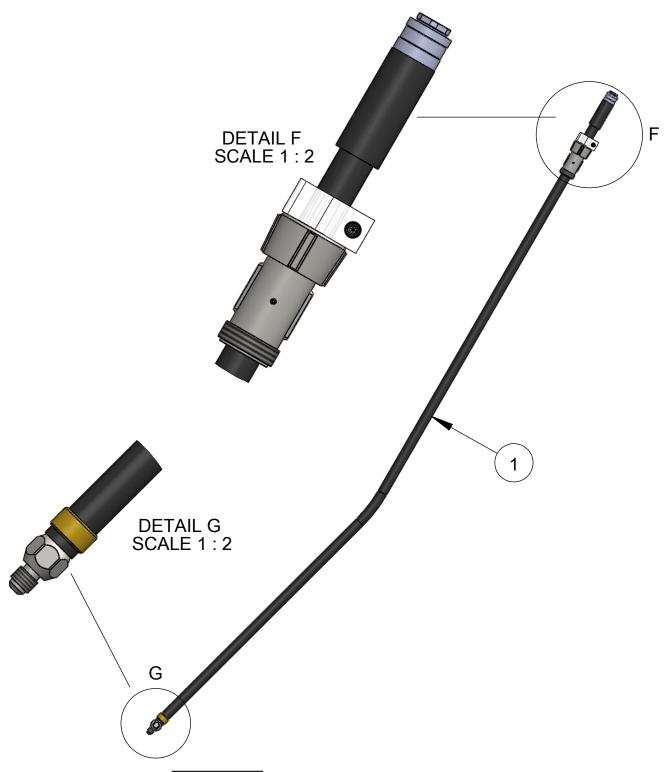


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 TWIN BAGTUBE INFLATION TUBE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	109-9004	TWIN BAGTUBE INFLATION TUBE	1



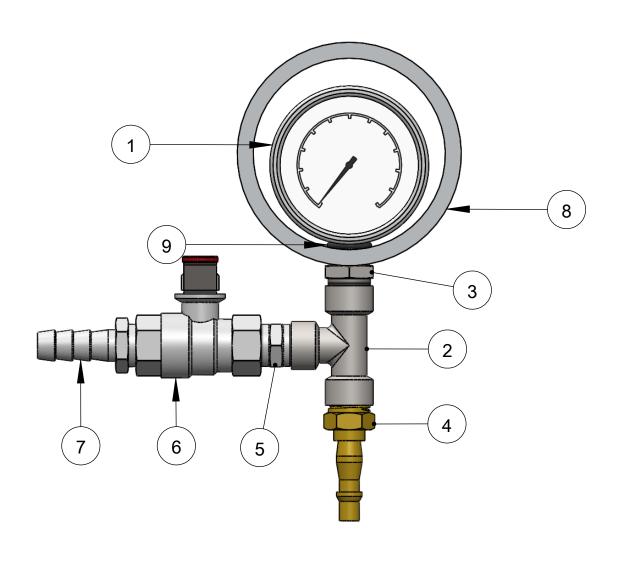


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 TWIN BAGTUBE INFLATION CONTROL

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	M4807	PRESSURE GAUGE	1
2	M9103	EQUAL TEE	1
3	M9102	REDUCING BUSH	1
4	M9112	AIRLINE ADAPTOR	1
5	M9104	HEXAGON NIPPLE	1
6	P0522	BALL VALVE	1
7	P0460	HOSE TAIL	1
8	115-0020	GAUGE PROTECTOR	1
9	M1007	O RING	1

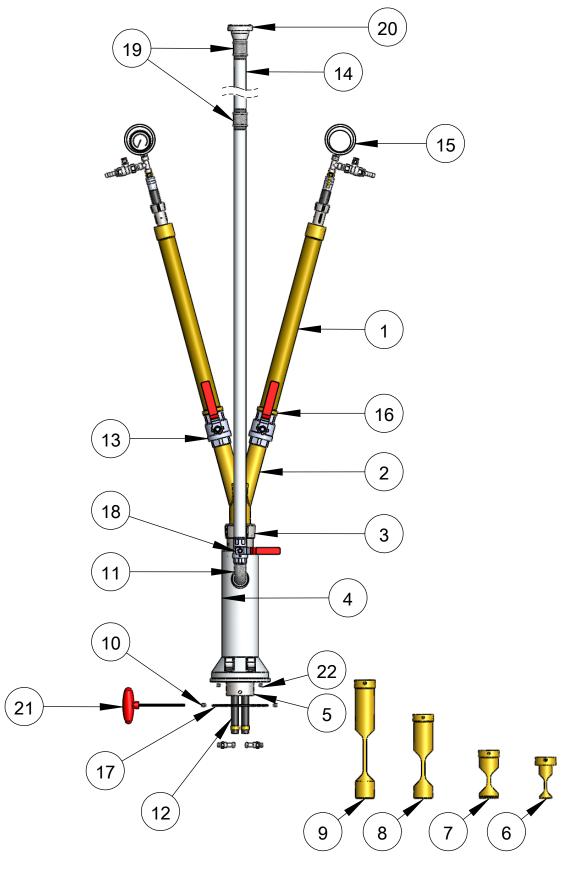




ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# **ALH SYSTEM 1 TWIN BAGTUBE**





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# **ALH SYSTEM 1 TWIN BAGTUBE**

ITEM NO.	PART NUMBER	DESCRIPTION	Default/QTY.
1	109-0006	FEED TUBE	2
2	109-0001	INSERTION TUBE	1
3	M9105	COMPRESSION COUPLING	1
4	115-0001	CANOPY	1
5	109-0005	INSERTION TUBE END	1
6	109-0032	3" SHOE	1
7	109-0002	4" SHOE	1
8	109-0003	6"-8" SHOE	1
9	109-0004	10"-12" SHOE	1
10	S0167	GRUB SCREW	2
11	M4808	BEND	1
12	109-9004	INFLATION TUBE ASSY	2
13	M4304	BALL VALVE	2
14	115-0026	VENT TUBE	2
15	115-0019	INFLATION CONTROL ASSY	2
16	M9267	BONDED SEAL	2
17	M1056	O RING	1
18	M4802	BALL VALVE	1
19	M4323	SOCKET	2
20	M4322	FLAME TRAP	1
21	A0017	ALLEN DRIVER	1
22	S0010	GRUB SCREW	2

PART NUMBER	BAG TYPE
109-0103	3" TWINSTOP BAG
109-0104	4" TWINSTOP BAG
109-0105	5" TWINSTOP BAG
109-0106	6" TWINSTOP BAG
109-0107	7" TWINSTOP BAG
109-0108	8" TWINSTOP BAG
109-0110	10" TWINSTOP BAG
109-0112	12" TWINSTOP BAG

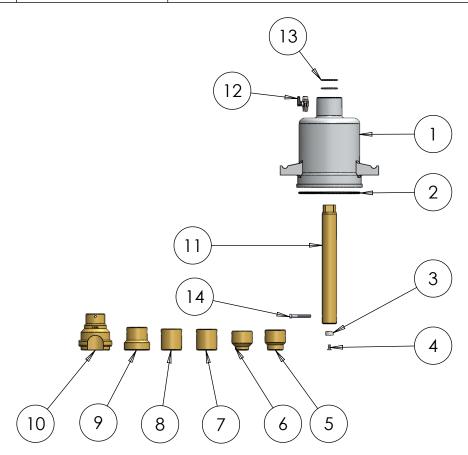


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# **ALH SYSTEM 1 PLUG INSERTION**

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	004-0001 (A0018)	FITTING SPINDLE CANOPY	1
2	M1056	O RING	1
3	M4260	MAGNET	1
4	S0046	BOLT	1
5	115-0014	1" EMID PLUG CARRIER	1
6	115-0009	3/4" EMID PLUG CARRIER	1
7	115-0018	1 1/4" EMID PLUG CARRIER	1
8	115-0015	1 1/2" EMID PLUG CARRIER	1
9	115-0016	2" EMID PLUG CARRIER	1
10	115-0038	CARRIER FOR 1" DONKIN VALVE	1
11	107-0001	PLUG FITTING SPINDLE	1
12	M3098	BALL VALVE	1
13	M1052	O RING	2
14	\$0388	CAP HEAD BOLT	1



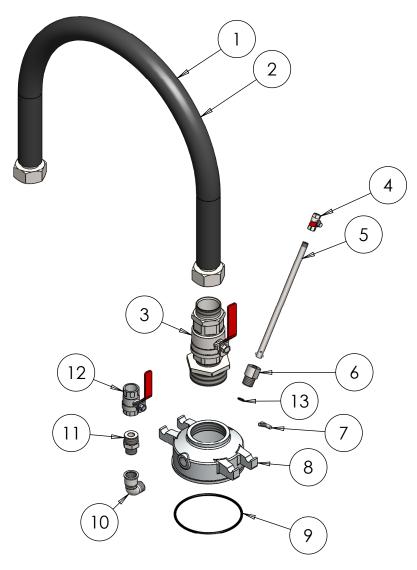


ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# **ALH SYSTEM 1 BYPASS**

QTY.
1
1
1
1
1
1
1
1
1
1
1
1
1

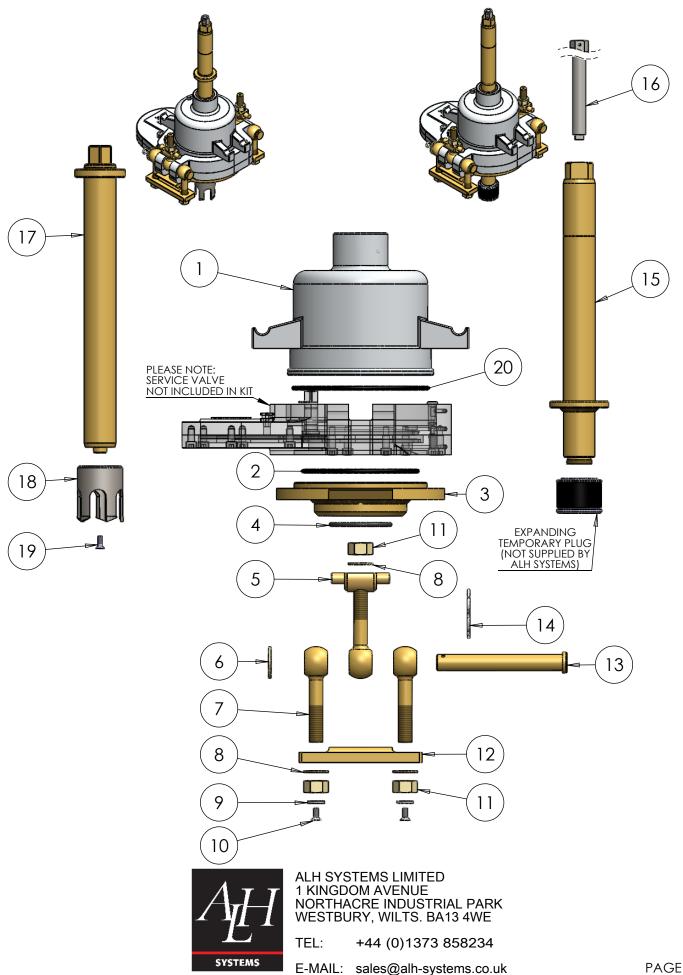




ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 PE ADAPTER ASSEMBLY



# ALH SYSTEM 1 PE ADAPTER ASSEMBLY

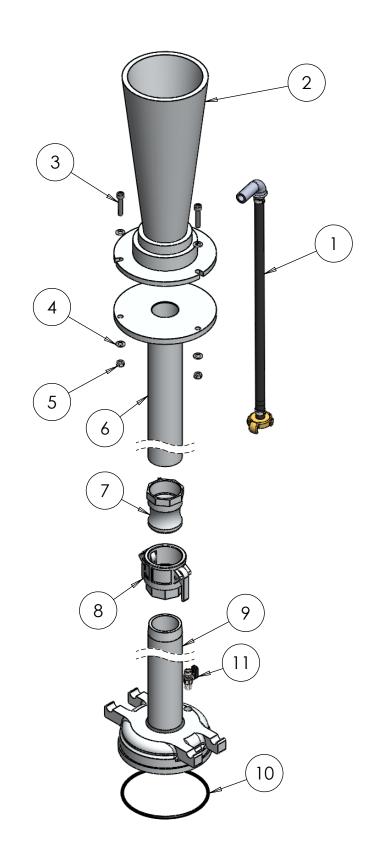
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	115-9017	PE DRILLING-PLUG FITTING CANOPY ASSEMBLY	1
2	M1057	O RING	1
3	115-0027	VALVE ADAPTOR PLATE	1
4	M1078	O RING	1
5	056-0012	VALVE KNUCKLE	2
6	S0400	WASHER	2
7	115-0035	PE SWINGBOLT	6
8	S0266	WASHER	6
9	101-0030	WASHER	4
10	S0014	BOLT	4
11	S0217	NUT	6
12	115-0028	CLAMPING BAR	2
13	115-0029	PIVOT PIN	2
14	M4547	RETAINING PIN	2
15	115-0031	PLUG FITTING SHAFT	1
16	115-0032	PLUG EXPANDING SPINDLE	1
17	115-0034	DRILLING SHAFT	1
18	115-0058	CUTTER	1
19	S0046	BOLT	2
20	M1056	O RING	1



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 PURGE EJECTOR





ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234

# ALH SYSTEM 1 PURGE EJECTOR

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	115-9027	HOSE	1
2	115-0045	VENTURI STYLE BLOWER	1
3	\$0043	BOLT	3
4	S0040	WASHER	6
5	\$0070	NUT	3
6	115-0043	UPPER EJECTOR TUBE	1
7	M4611	COUPLING	1
8	M4612	LEVER	1
9	115-0044	LOWER EJECTOR TUBE	1
10	M1056	O RING	1
11	M4273	BALL VALVE	1



ALH SYSTEMS LIMITED 1 KINGDOM AVENUE NORTHACRE INDUSTRIAL PARK WESTBURY, WILTS. BA13 4WE

TEL: +44 (0)1373 858234