



JET GROUTING EQUIPMENT

Sommario

1	DOCUMENT REVISIONS - REVISIONI DOCUMENTO	4
2	JETTING TECHNIQUES' - TIPOLOGIE JETTING	5
3	JETTING METHODS - METODI JETTING	6
4	JET GROUTING SWIVELS	7
5	SINGLE FLUID - MONOFLUIDO	10
5.1	D.60 JET	12
5.2	D.76 JET	14
5.3	D.90 JET	16
5.4	D.114 JET	18
6	DOUBLE FLUID - BIFLUIDO	20
6.1	D.90 JET 2	22
6.2	D.114 JET 2	24
6.3	D.114 JET 2 HEM (HIGH EFFICIENCY MONITOR)	28
6.4	D.114 C2H	32
6.5	D.127 JET 2	34
6.6	D.127 JET 2 HEM (HIGH EFFICIENCY MONITOR)	36
6.7	D.140 JET 2	38
7	TRIPLE FLUID - TRIFLUIDO	40
7.1	D.114 JET 3	42
7.2	D.127 JET 3	44
8	HEXAGONAL JET - JET ESAGONALE	47
8.1	HEX 80 JET - JET ESAGONO 80	48
8.2	HEX 80 JET 2 - JET 2 ESAGONO 80	50
9	JET WITH DTH - JET GROUTING CON MARTELLO FONDO FORO	53
9.1	D.90 DTH JET 1 (AIR HAMMER)	54
9.2	D.90 DTH JET 2 (AIR HAMMER)	56
9.3	D.114 DTH JET 1 (AIR HAMMER)	58
9.4	D.114 DTH JET 2 (AIR HAMMER)	60
9.5	D.114 DTH JET 1 (WATER HAMMER)	62
9.6	D.114 T3 DTH JET 2 (WATER HAMMER)	64
10	JET FOR TUNNELLING - JET GROUTING PER POSIZIONATORI	67
10.1 ..	D.114 JET 1 TUNNELLING (DRIFTER)	68
10.2 ..	D.114 JET 1 TUNNELLING (ROTARY)	70
11	ROTOPERCUSSION JET - JET ROTOPERCUSSIONE	73
11.1 ..	D.90 JET RP	74
11.2 ..	D.114 JET RP	76
11.3 ..	D.114 JET 2 RP	78



1 DOCUMENT REVISIONS - REVISIONI DOCUMENTO

Rev. No.	Date	Description
-		
1	09-03-2009	Revisione generale documento. Aggiunte figure.
2	29-04-2009	Aggiunti i seguenti codici: J-JOVNR000 E J-JOVNR112.
3	14-07-2009	Aggiunti i seguenti codici: 60J15040, CP00283014-1, CP00283314-70
4	05-03-2010	Revisione veste grafica. Aggiunti D.127 C2, D.140 C2 e jetting esagonale.
5	04-01-2013	Aggiunti D.114 JET RP e D.114 C2 RP. Variato C2 DTH con martello 5". Cambiati codici swivel sottotesta e aggiunte attrezzature per posizionatore.
6	04-10-2013	Variato capitolo 22 D.114 HP T3 DTH JET. Aggiunti §22.1 e 22.2
7	04-11-2015	Aggiunti capitoli 22.3 e 22.4
8	23-02-2016	Revisione generale. Aggiunti D.114 C3 e D.127 C3. Aggiornata numerazione capitoli.
9	20-09-2016	Revisione capitoli 4, 4.3, 4.5 per STRAJET step IV.
10	14-12-2017	Revisione capitolo 7. Variati codici teste AP D2, T3, Modular C2 e Modular C3.
11	14-03-2019	Variata tabella swivels. Variate tabelle specifiche tecniche. Aggiunto Strajet doppi ugello. Variata denominazione capitoli DTH e codici articoli. Aggiunto capitolo §10.
12	02-09-2021	Variati codici Modular swivel: sostituiti con vers. J2 e J3. Aggiunti codici aste D.114 C2 con interno in acciaio.
Ed. 25.1	14-11-2025	Revisione generale.
Ed. 25.2	11-09-2026	Revisione generale.



2 JETTING TECHNIQUES' - TIPOLOGIE JETTING

MAIN APPLICATIONS	APPLICAZIONI PRINCIPALI
UNDERPINNING	SOTTOFONDAZIONI
DIAPHRAGM WALLS	DIAFRAMMI
TUNNEL CONSOLIDATIONS	CONSOLIDAMENTI DI GALLERIE
BOTTOM PLUGS	TAMPONI DI FONDO
SLOPES CONSOLIDATIONS	CONSOLIDAMENTO DI TERRENI IN PENDENZA
DAM CUT-OFFS	
DIAPHRAGM WALLS GAPS	
BREAK-IN AND BREAK-OUT FOR TBM	
MAIN ADVANTAGES	VANTAGGI PRINCIPALI
WIDE RANGE OF SOILS THAT CAN BE SUCCESSFULLY TREATED	GRANDE VARIETA' DI TERRENI TRATTABILI
CAPABILITY TO OBTAIN COLUMNS OF CONSOLIDATED SOIL WITH DIAMETER FROM 60 TO MORE THAN 300 cm BY USING SMALL DIAMETER DRILLED HOLES, NOT LARGER THAN 140 mm	POSSIBILITA' DI OTTENERE COLONNE DI TERRENO CONSOLIDATO DA 60 A PIU' DI 300 cm DI DIAMETRO, PARTENDO DA FORI DI PICCOLO DIAMETRO NON SUPERIORI A 140 mm
CAPABILITY TO OVERPASS PRE-EXISTING FOUNDATION, BOULDERS, ROCKY LAYERS	CAPACITA' DI OLTREPASSARE FONDAZIONI PRE-ESISTENTI, TROVANTI E STRATI ROCCIOSI
USE OF LIGHT WEIGHT AND SMALL SIZE DRILLING RIGS IN SMALL WORKING AREAS	USO DI MACCHINE PERFORATRICI LEGGERE E DI PICCOLE DIMENSIONI IN AREE ANGUSTE

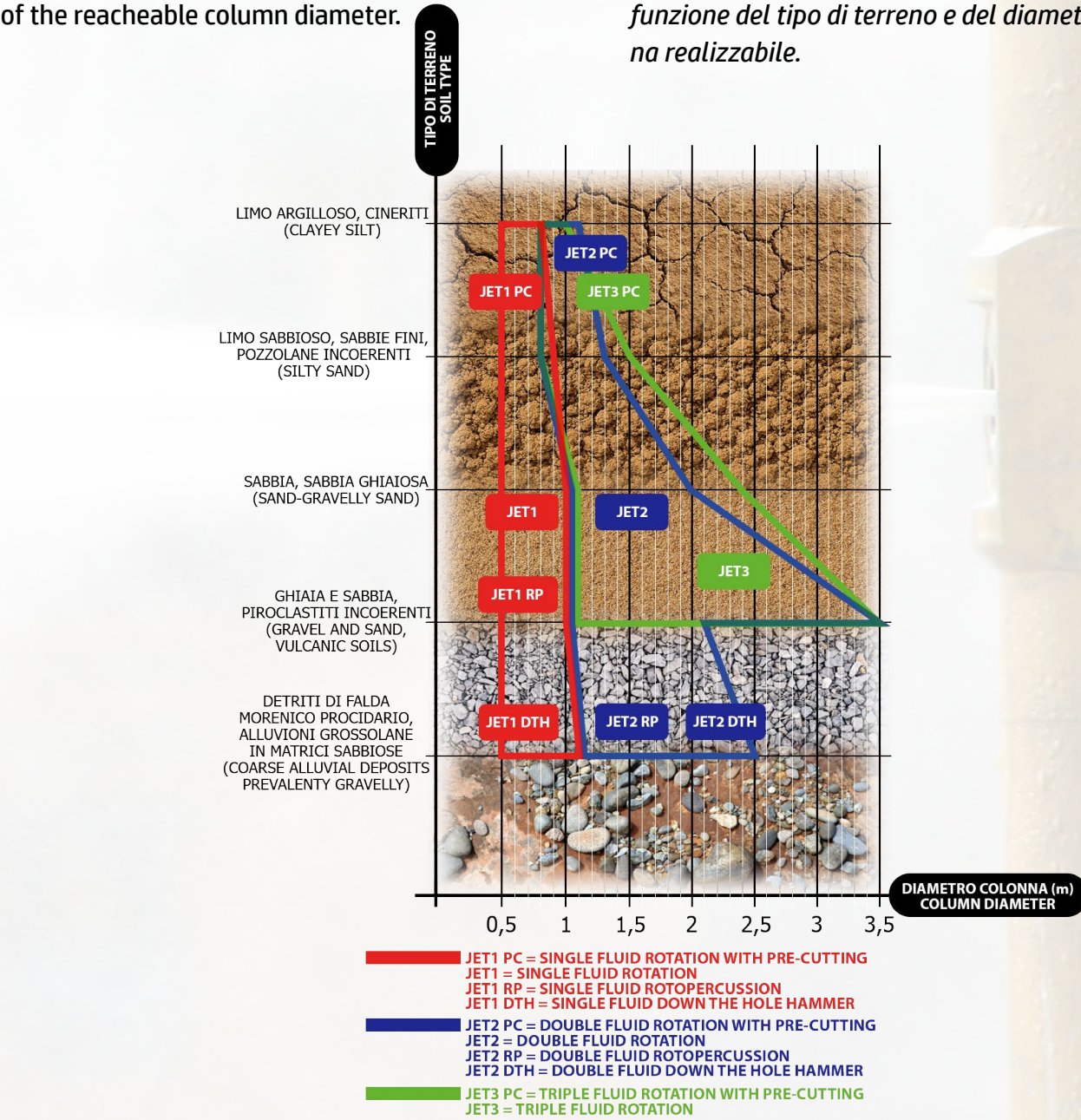
SOIL TYPE - TIPO TERRENO (ISO 14688-1)	DESCRIPTION - DESCRIZIONE		SIZE - DIMENSIONI
VERY COARSE SOIL TERRENO MOLTO GROSSOLANO	LARGE BOULDERS - GROSSI MACIGNI		> 630 mm
	BOUDERS - MACIGNI		200-630 mm
	COBBLES - CIOTTOLI		63-200 mm
COARSE SOIL TERRENO GROSSOLANO	GRAVEL GHIAIA	COARSE GRAVEL - GHIAIA GROSSOLANA	20-63 mm
		MEDIUM GRAVEL - GHIAIA MEDIA	6.3-20 mm
		FINE GRAVEL - GHIAIA FINE	2.0-6.3 mm
	SAND SABBIA	COARSE SAND - SABBIA GROSSOLANA	0.63-2.0 mm
		MEDIUM SAND - SABBIA MEDIA	0.2-0.63 mm
		FINE SAND - SABBIA FINE	0.063-0.2 mm
FINE SOIL TERRENO FINE	SILT LIMO	COARSE SILT - LIMO GROSSOLANO	0.02-0.063 mm
		MEDIUM SILT - LIMO MEDIO	0.0063-0.02 mm
		FINE SILT - LIMO FINE	0.002-0.0063 mm
	CLAY - ARGILLA		≤ 0.002 mm

3 JETTING METHODS - METODI JETTING

Jet grouting techniques are world-wide classified into three categories according to the number of injected fluids:

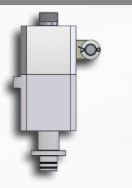
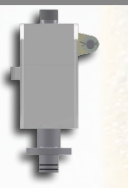
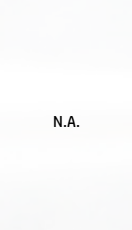
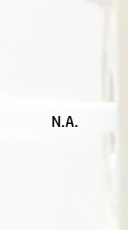
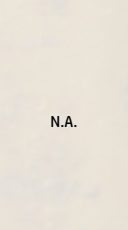
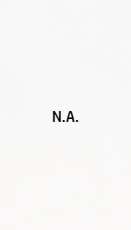
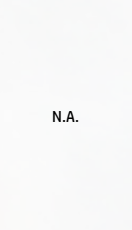
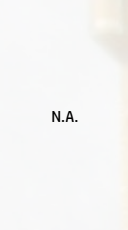
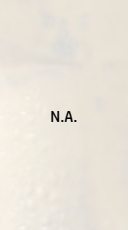
- **mono-fluid:** grout is used as disaggregating and consolidating fluid.
- **double-fluid:** grout plus air are used as disaggregating and consolidating fluids.
- **triple-fluid:** water plus air are used as disaggregating fluids while grout is used as consolidating fluid.

The following diagram gives an indication of the suitable jetting techniques in function of soil type and of the reachable column diameter.



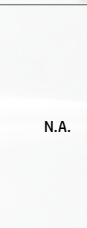
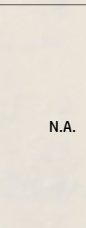
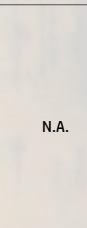
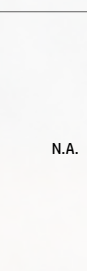
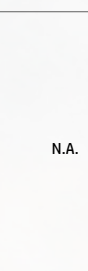
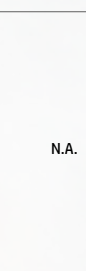
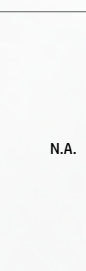
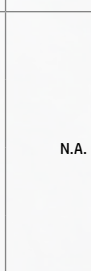
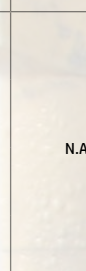
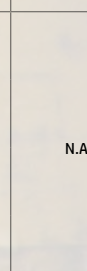
4 JET GROUTING SWIVELS



		JET GROUTING SWIVELS							
									
Swivel code		J-J00TAL76	J-8C2TS650	J-8C2TS650V	J-8C214550	J-8C2TS700	J-8C2TS700V	J-8C212500	J-WMHPS4J3
Front section (mm)		ROUND D.86	SQUARE 124	SQUARE 124	ROUND D.129	SQUARE 150	SQUARE 150	ROUND D.159	SQUARE 170
Total swivel length (mm)		291	412	352	392	511,5	423,5	452,5	684
Upper connection					FLANGE			FLANGE	
Lower connection		THREAD	FLANGE	FLANGE	THREAD	FLANGE	FLANGE	THREAD	FLANGE
Inlet size (BSPP)		3/4"	1"-1/4	1"-1/4	1"-1/4	1"-1/2	1"1/2	1"-1/2	2"
1st INLET	Shape								
	ID (mm)	12	30	30	30	35	35	35	35
	Pressure (MPa) [Max / Working]	56/40	56/40	56/40	3/2,4	56/40	56/40	3/2,4	42/40
	Type of media	GROUT / WATER	GROUT / WATER	GROUT / WATER	AIR	GROUT / WATER	GROUT / WATER	AIR	GROUT / WATER
2nd INLET	Shape								
	ID (mm)								37 D.Eq.
	Pressure (MPa) [Max / Working]								42/40
	Type of media								WATER
3rd INLET	Shape								
	ID (mm)								49 D.Eq.
	Pressure (MPa) [Max / Working]								3/2,4
	Type of media								AIR
Max / Min C°		-30/+120°C	-30/+120°C	-30/+120°C	-30/+110 °C	-30/+120 °C	-30/+120 °C	-30/+110 °C	-30/+110 °C
Max RPM dry run (2h)		40	35	35	35	30	30	30	25
Max RPM with cooling		130	120	120	110	105	105	105	150
Pull / Thrust (KN)		2	7	7	-	16	16	-	39
Type of drilling		ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH
Weight (Kg)		3	11	13	19	23,5	26,7	31,4	69,4



Click on the images on the right to download technical information

 Click on the images on the right to download technical information		JET GROUTING SWIVELS							
Swivel code		J-WMHPSWT3	J-AMHPS4J2	J-WMHP54J2	J-AMHPSWD2	J-WMHP5WD2	J-SW90238R	J-8JRP5D60	J-8JRP5000
Front section (mm)		SQUARE 160	SQUARE 170	SQUARE 170	SQUARE 160	SQUARE 160	ROUND D.158	ROUND D.180	ROUND D.198
Total swivel length (mm)		665,5	578	578	499	499	542	664,5	500
Upper connection							THREAD	THREAD	THREAD
Lower connection		FLANGE	FLANGE	FLANGE	FLANGE	FLANGE	THREAD	THREAD	THREAD
Inlet size (BSPP)		1"-1/4	2"	2"	1"-1/2	1"-1/2	1"-1/4	1"-1/4	1"1/4
1st INLET	Shape								
	ID (mm)	30	45	45	35	35	20	20	32
	Pressure (MPa) [Max / Working]	42/40	42/40	42/40	56/40	56/40	56/40	56/40	50/40
	Type of media	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER
2nd INLET	Shape								
	ID (mm)	31 D.Eq.	33 D.Eq.	33 D.Eq.	22 D.Eq.	22 D.Eq.			
	Pressure (MPa) [Max / Working]	50/45	3/2,4	50/45	3/2,4	56/45			
	Type of media	WATER	AIR	WATER	AIR	WATER			
3rd INLET	Shape								
	ID (mm)	36 D.Eq.							
	Pressure (MPa) [Max / Working]	3/2,4							
	Type of media	AIR							
Max / Min C°		-30/+110 °C	-30/+110 °C	-30/+120 °C	-30/+110 °C	-30/+120 °C	-30/+120 °C	-30/+120 °C	-30/+120 °C
Max RPM dry run (2h)		30	25	25	30	30	25	25	20
Max RPM with cooling		105	150	150	105	105	100	60	40
Pull / Thrust (KN)		31	39	39	31	31	-	-	-
Type of drilling		ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	TOP HAMMER DRILLING	TOP HAMMER DRILLING
Weight (Kg)		59	58,7	58,5	46	46	42	38,8	41,9



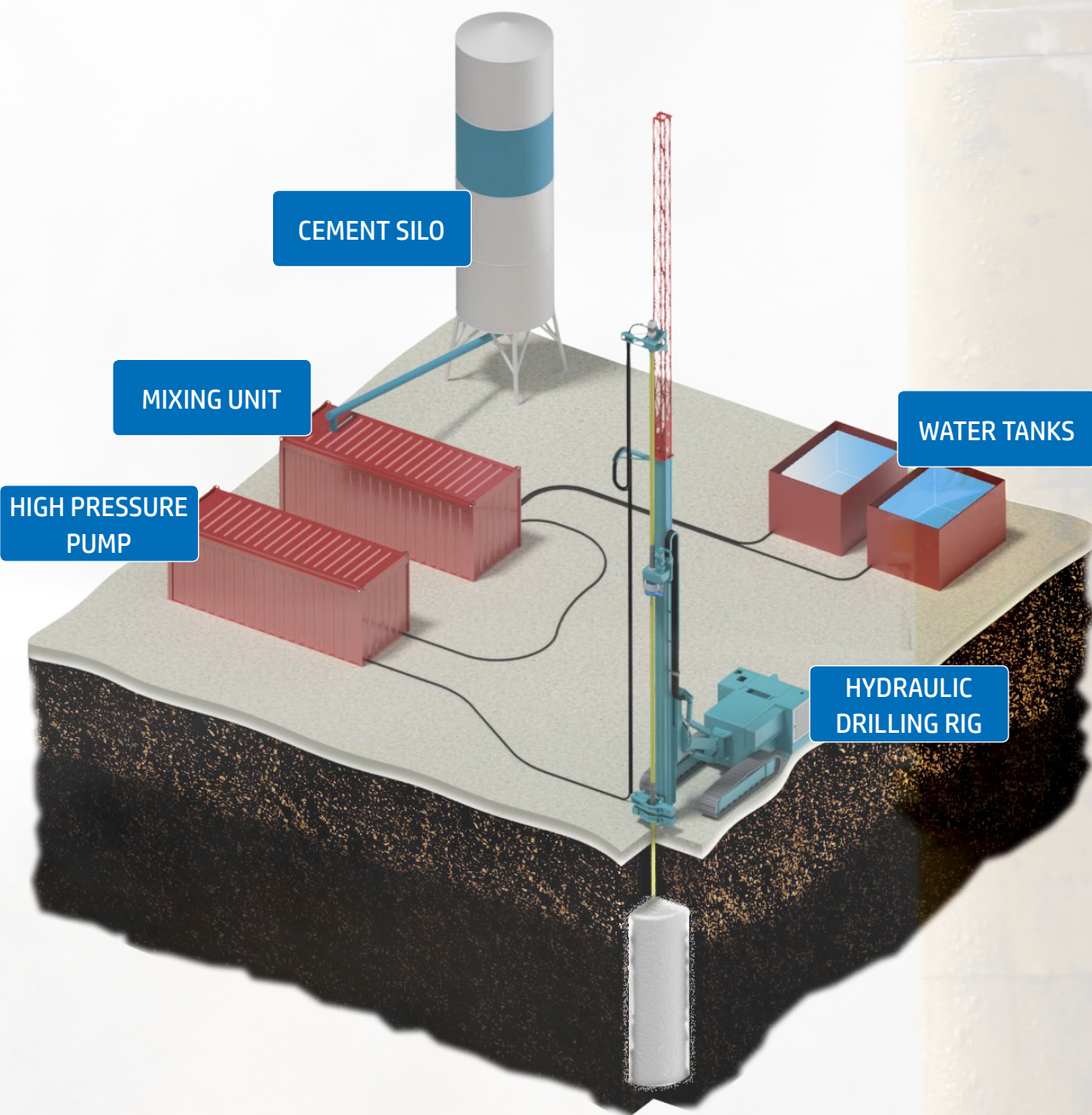
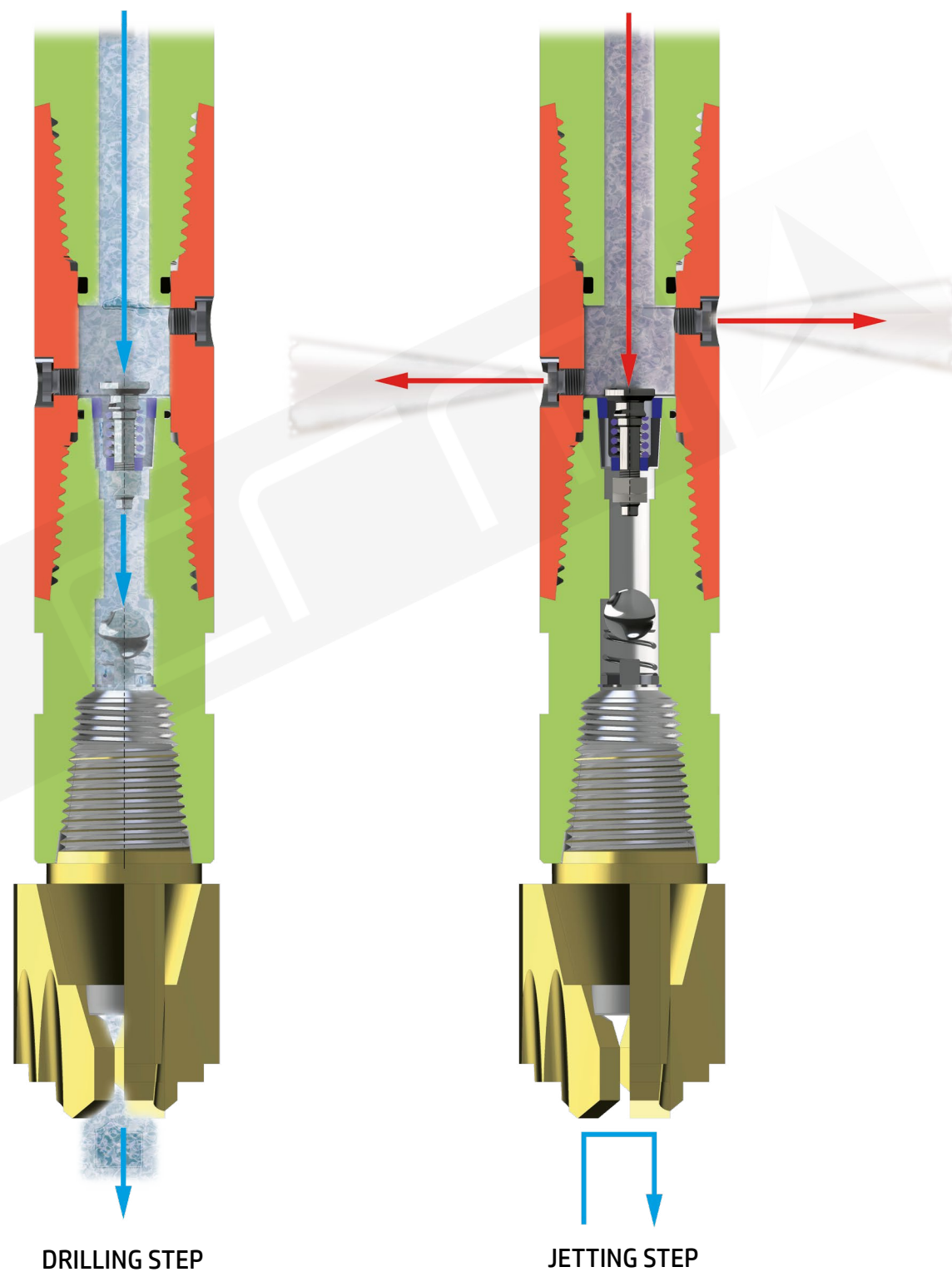
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JET GROUTING SWIVELS								
Swivel code		J-SW11312R	J-11JRP90	J-SWC20C64	 	J-8C2TS70KV	J-AMHPSWJ2	J-WMHP5WJ2
Front section (mm)		ROUND D.188	ROUND D.248	ROUND D.248	SQUARE 150	SQUARE 150	SQUARE 150	SQUARE 150
Total swivel length (mm)		551	723	882	439	326	522	522
Upper connection		THREAD	THREAD	THREAD				
Lower connection		THREAD	THREAD	THREAD	FLANGE	FLANGE	FLANGE	FLANGE
Inlet size (BSPP)		1"-1/4	1"-1/2	1"-1/2	1"-1/2	1"-1/2	1"-1/2	1"-1/2
1st INLET	Shape							
	ID (mm)	30	30	25	35	35	35	35
	Pressure (MPa) [Max / Working]	50/40	50/40	50/40	42/40	42/40	42/40	42/40
	Type of media	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER	GROUT / WATER
2nd INLET	Shape	N.A.	N.A.		N.A.	N.A.		
	ID (mm)			30			35	35
	Pressure (MPa) [Max / Working]			3/2,4			3/2,4	42/40
	Type of media			AIR			AIR	WATER
3rd INLET	Shape	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	ID (mm)							
	Pressure (MPa) [Max / Working]							
	Type of media							
Max / Min C°		-30/+120 °C	-30/+120 °C	-30/+110 °C	-30/+120 °C	-30/+120 °C	-30/+110 °C	-30/+120 °C
Max RPM dry run (2h)		25	20	20	30	30	30	30
Max RPM with cooling		80	35	35	155	155	155	155
Pull / Thrust (KN)		-	-	-	30	30	30	30
Type of drilling		ROTATIVE / DTH	TOP HAMMER DRILLING	TOP HAMMER DRILLING	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH	ROTATIVE / DTH
Weight (Kg)		60	77,8	107	34,1	31,3	53,8	53,7

5 SINGLE FLUID - MONOFLUIDO

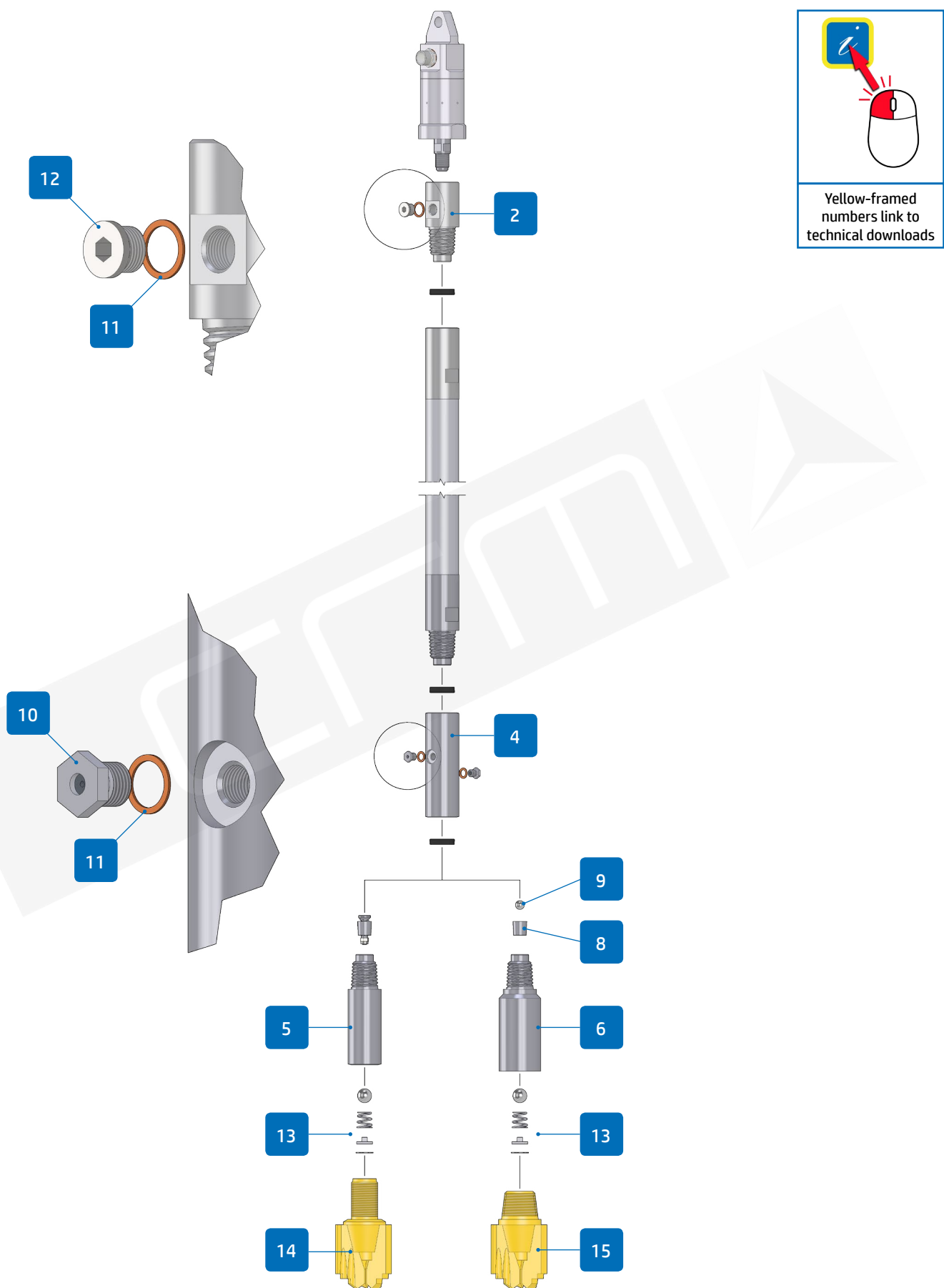
A jet of grout breaks-up and mixes the soil. The mono-fluid system is suitable for rotation-drilling, rotopercussion-drilling and DTH-drilling. The nozzles holder (monitor) can be equipped with one or more nozzles.

Simultanea disaggregazione e consolidamento ottenuti con iniezione di cemento. Il sistema puo' essere a rotazione, rotopercussione e con martello fondo foro (dth). Il portaugelli (monitor) puo' essere dotato di uno o piu' ugelli.



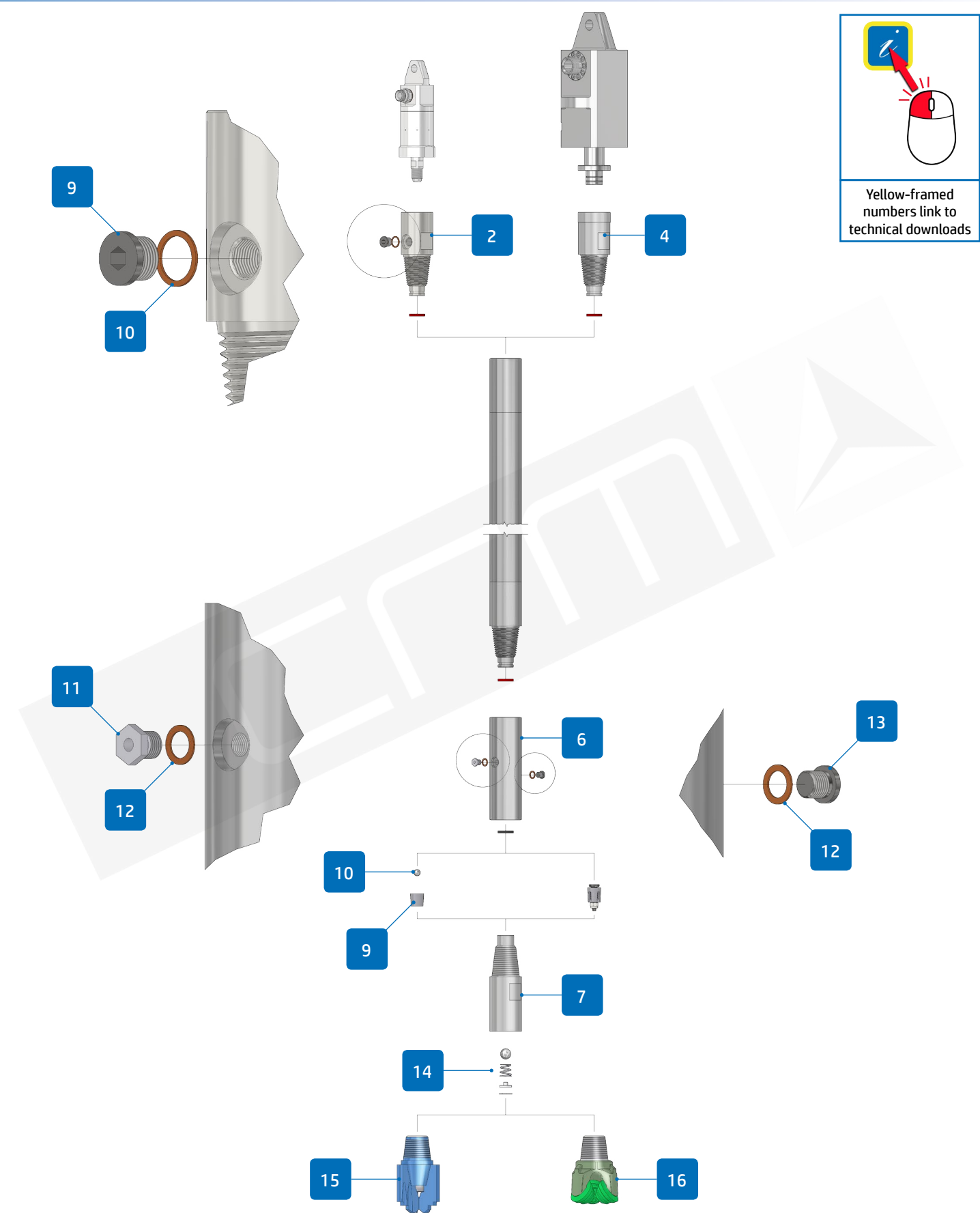
SINGLE FLUID JET GROUTING PLANT - SCHEMA IMPIANTO JET GROUTING MONOFLUIDO

5.1 D.60 JET



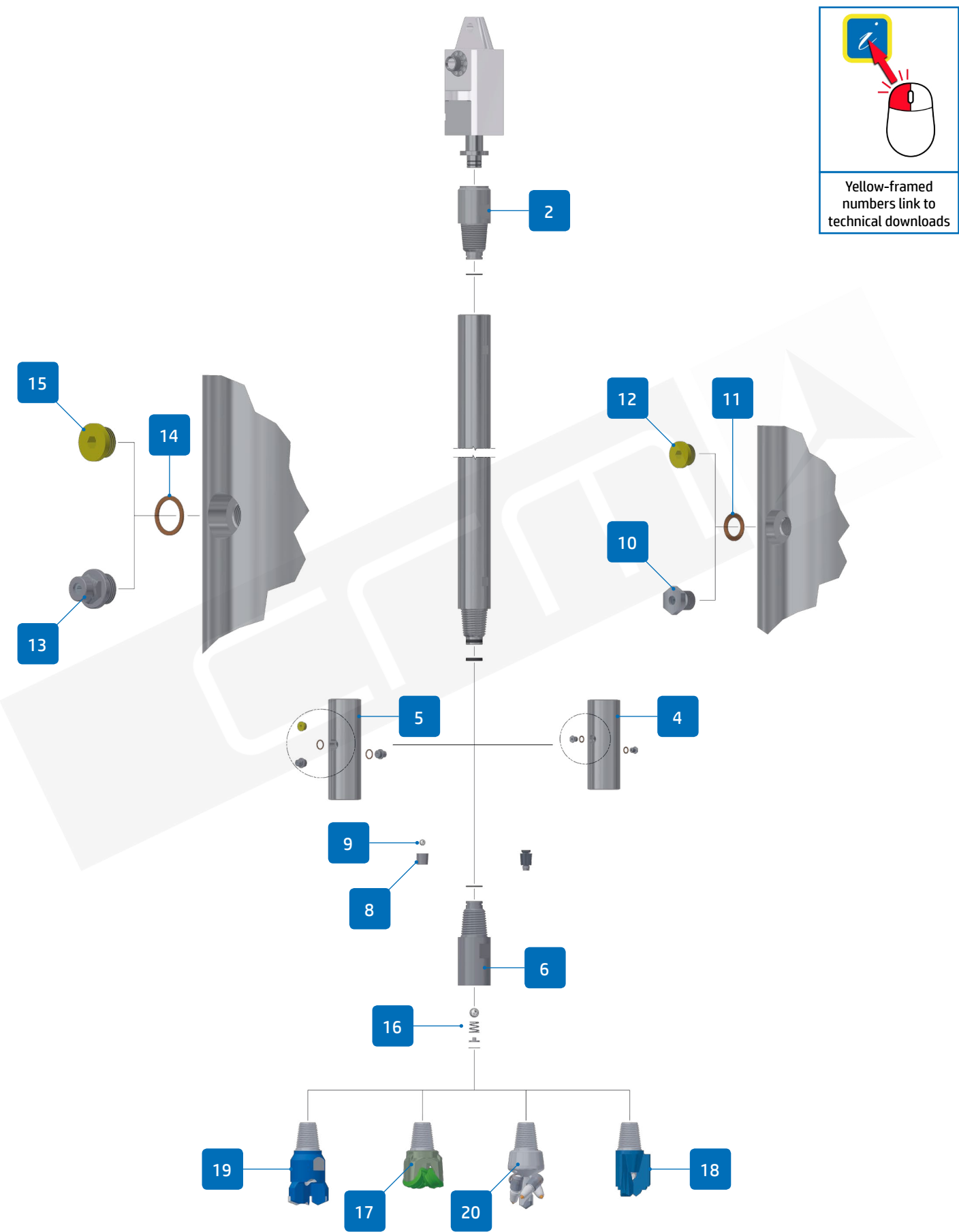
5.1 - D.60 JET					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-J00TAL76		TESTA A.P. JET 140L/MIN-500BAR	H.P. SWIVEL JET 140L/MIN-500BAR	3
2	J-60J15000		RID. ASTA D. 60 JET/TESTA J00TAL76	SWIVEL/ROD ADAPTER D. 60 JET	2
3	J-60J13000		ASTA D. 60x3000 JET	ROD D. 60x3000 JET	31
3	J-60J12000		ASTA D. 60x2000 JET	ROD D. 60x2000 JET	21,5
3	J-60J11000		ASTA D. 60x1000 JET	ROD D. 60x1000 JET	12
4	J-60J14002		MONITOR D. 60 JET 2 VIE	NOZZLE HOLDER D. 60 JET 2 WAYS	2,3
5	J-60J14510		PORTASCA. D. 60 JET C/V NO RIT. FIL. N-ROD	BIT ADAPTER D. 60 JET W/NO RET. V. N-ROD	2,4
6	J-60J14530		PORTASCA. D. 60 JET 2" 3/8 AR	BIT ADAPTER D. 60 JET 2" 3/8 AR	3,8
6	J-60J14540		PORTASCA. D.60 JET 2" 3/8 AR C/V NO RIT	BIT ADAPTER D.60 JET 2" 3/8 AR W/ VALVE	3,8
7	J-J16TP230		VALVOLA AUT. JET TIPO 1 (30 BAR)	CHECK VALVE JET TIPO 1 (30 BAR)	0,1
7	J-J16TP270		VALVOLA AUT JET TIPO 1 (70 BAR)	CHECK VALVE JET TIPO 1 (70 BAR)	0,1
8	J-J16TP200		PORTA BIGLIA TIPO 1 Di 11	BALL HOUSING TIPO 1 I.D. 11	0,06
9	J-J16TP211		BIGLIA D.16	STEEL BALL D. 16	0,02
10	J-J00UC180		UGELLO JET D. 1.8	JET NOZZLE D. 1.8	0,02
10	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
10	J-J00UC220		UGELLO JET D. 2.2	JET NOZZLE D. 2.2	0,02
10	J-J00UC250		UGELLO JET D. 2.5	JET NOZZLE D. 2.5	0,02
10	J-J00UC300		UGELLO JET D. 3.0	JET NOZZLE D. 3.0	0,02
10	J-J00UC350		UGELLO JET D. 3.5	JET NOZZLE D. 3.5	0,02
10	J-J00UC400		UGELLO JET D. 4.0	JET NOZZLE D. 4.0	0,02
11	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
12	J-J31TP014		TAPPO M. 1/4" GAS	PLUG 1/4" BSPP	-
13	J-JOVNR000		VALVOLA DI NON RITORNO COMPLETA	COMPLETE NO RETURN VALVE	0,1
14	MR-TRSTE300		TRILAMA STEP 3" (FIL. N-ROD)	3" STEP DRAG BIT (N-ROD THREAD)	-
15	MR-TRSTE312		TRILAMA STEP 3"-1/2 (2"-3/8 A.R.)	3"-1/2 STEP DRAG BIT (2"-3/8 A.R.)	-
-	J-J01TAL76		KIT RICAMBI TESTA A.P.	SPARE PART KIT H.P. SWIVEL	-
-	J-J02TAL76		KIT GUARN. TESTA A.P.	SEAL KIT H.P. SWIVEL	-
-	J-60J13011		KIT GUARN. ASTA 60 JET	SEAL KIT ROD 60 JET	-

5.2 D.76 JET



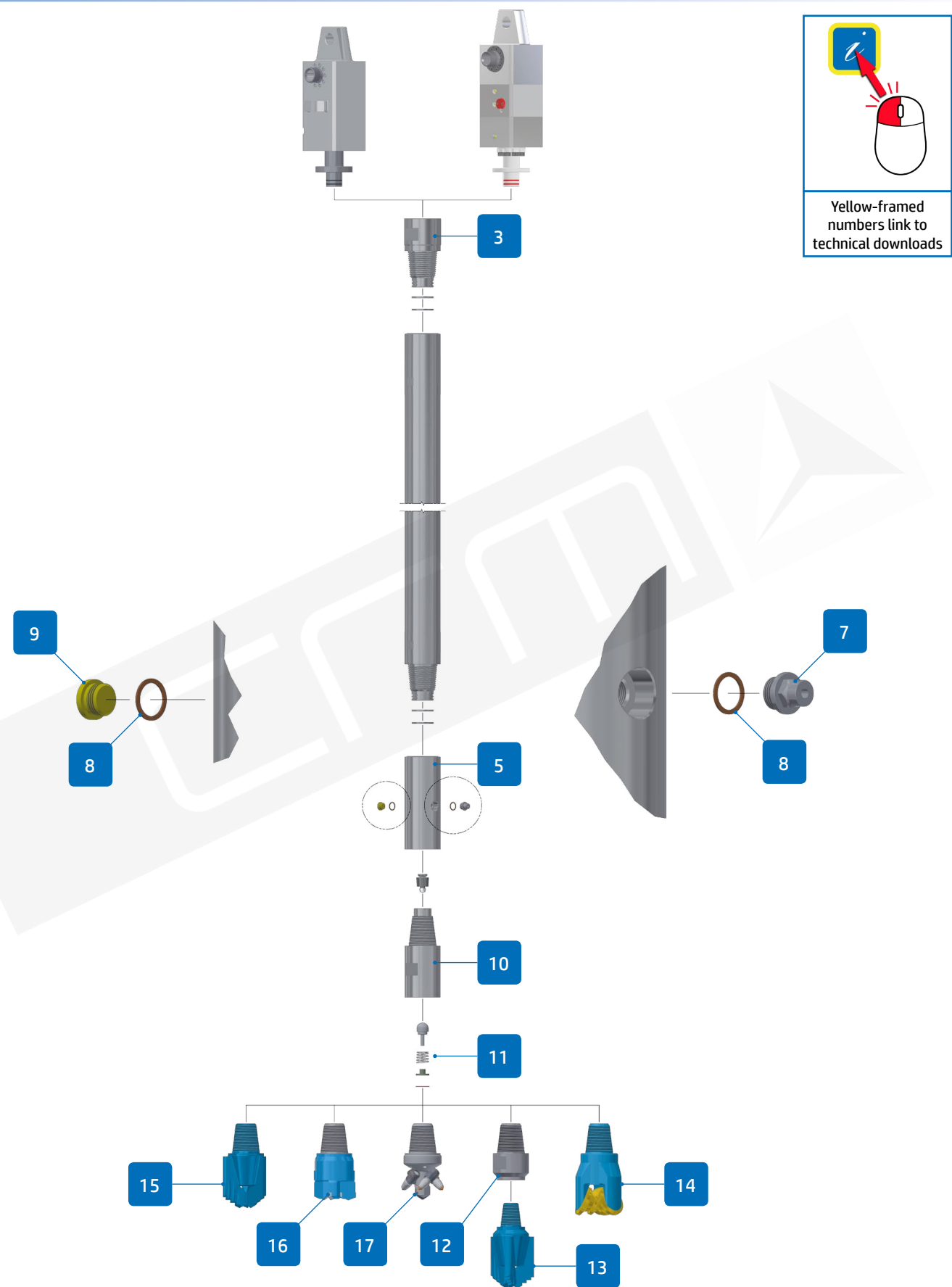
5.2 - D.76 JET					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-J00TAL76		TESTA A.P. JET 140L/MIN-500BAR	H.P. SWIVEL JET 140L/MIN-500BAR	3
2	J-76J16500		RIDUZ. TESTA J00TAL76 ASTA JET	SWIVEL/ADAPTER J00TAL76-ROD D. 76	4
3	J-8C2TS650		TESTA A.P. 410L/MIN-560BAR	H.P. SWIVEL 410L/MIN-560BAR	11
4	J-76J16620		RIDUZ. TESTA 8C2TS650 JET	SWIVEL/ADAPTER 8C2TS650 JET	4
5	J-76J13000		ASTA D. 76X3000 JET	ROD D. 76X3000 JET	16,2
5	J-76J12000		ASTA D. 76X2000 JET	ROD D. 76X2000 JET	27
5	J-76J11000		ASTA D. 76X1000 JET	ROD D. 76X1000 JET	38
6	J-76J14002		MONITOR D. 76 JET 2 VIE	NOZZLE HOLDER D. 76 JET 2 NOZ.	4,5
6	J-76J14003		MONITOR D. 76 JET 3 VIE	NOZZLE HOLDER D. 76 JET 3 NOZ.	5,5
6	J-76J14004		MONITOR D. 76 JET 4 VIE	NOZZLE HOLDER D. 76 JET 4 NOZ.	6,5
7	J-76J15000		PORTASCALPELLO D. 76 JET	BIT ADAPTER D. 76 JET	4,2
7	J-76J15100		PORTASCALPELLO D. 76 JET C/V NO RIT.	BIT ADAPTER D. 76 JET W/NO RET. VAL.	4,2
8	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
8	J-J00TP270		VALVOLA AUT. JET 70BAR	JET CHECK VALVE 70BAR	0,2
8	J-J00TP210		VALVOLA AUT. JET 100BAR	JET CHECKVALVE 100BAR	0,2
9	J-J00TP211		PORTA BIGLIA d. 11	BALL HOUSING D. 11	0,14
10	J-J16TP211		BIGLIA D. 16	STEEL BALL D. 16	0,02
11	J-J00UC180		UGELLO JET D. 1.8	JET NOZZLE D. 1.8	0,02
11	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
11	J-J00UC220		UGELLO JET D. 2.2	JET NOZZLE D. 2.2	0,02
11	J-J00UC250		UGELLO JET D. 2.5	JET NOZZLE D. 2.5	0,02
11	J-J00UC300		UGELLO JET D. 3.0	JET NOZZLE D. 3.0	0,02
11	J-J00UC350		UGELLO JET D. 3.5	JET NOZZLE D. 3.5	0,02
11	J-J00UC400		UGELLO JET D. 4.0	JET NOZZLE D. 4.0	0,02
12	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
13	J-J31TP014		TAPPO M. 1/4" GAS	PLUG 1/4" BSPP	-
14	J-JOVNR000		VALVOLA DI NON RITORNO COMPLETA	COMPLETE NO RETURN VALVE	0,1
15	MR-TRSTE400		TRILAMA STEP 4"	4" STEP DRAG BIT	-
16	MR-TRICO400		TRICONO D.4" (2"-3/8 A.R.)	ROCK BIT D.4" (2"-3/8 A.R.)	-
-	J-J01TAL76		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-J02TAL76		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-8C2TS651		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-8C2TS652		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-76J13011		KIT GUARN. ASTA 76 JET	SEAL KIT ROD D. 76 JET	-

5.3 D.90 JET



5.3 - D.90 JET					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-8C2TS650		TESTA A.P. 410L/MIN-560BAR	H.P. SWIVEL 410L/MIN-560BAR	11
2	J-889K6200		ADATTATORE TESTA 8C2TS650	SWIVEL ADAPTER 8C2TS650	5,8
3	J-889K3000		ASTA D. 88.9X3000 JET	D. 90X3000 JET	47
3	J-889K2000		ASTA D. 88.9X2000 JET	D. 90X2000 JET	34
3	J-889K1000		ASTA D. 88.9X1000 JET	D. 90X1000 JET	21
4	J-889K4002		MONITOR D. 90 JET 2 VIE	NOZZLE HOLDER D. 90 JET 2 NOZ.	6,6
4	J-889K4003		MONITOR D. 88.9 JET 3 VIE	NOZZLE HOLDER D. 90 JET 3 NOZ.	7,4
4	J-889K4004		MONITOR D. 88.9 JET 4 VIE	NOZZLE HOLDER D. 90 JET 4 NOZ.	8,2
5	J-889K4122		MONITOR D. 90 C2 Fil. 1/2"	NOZZLE HOLDER D. 90 C2 NOZZLE Th. 1/2"	7
6	J-889K5100		PORTASCA. D. 90 JET C/V NO RIT.	BIT ADAPTER W/NO RET. VAL.	6,4
7	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
7	J-J00TP270		VALVOLA AUT. JET 70BAR	JET CHECK VALVE 70BAR	0,2
7	J-J00TP210		VALVOLA AUT. JET 100BAR	JET CHECKVALVE 100BAR	0,2
8	J-J00TP211		PORTA BIGLIA d. 11	BALL HOUSING D. 11	0,14
9	J-J16TP211		BIGLIA D. 16	STEEL BALL D. 16	0,02
10	J-J00UC180		UGELLO JET D. 1.8	JET NOZZLE D. 1.8	0,02
10	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
10	J-J00UC220		UGELLO JET D. 2.2	JET NOZZLE D. 2.2	0,02
10	J-J00UC250		UGELLO JET D. 2.5	JET NOZZLE D. 2.5	0,02
10	J-J00UC300		UGELLO JET D. 3.0	JET NOZZLE D. 3.0	0,02
10	J-J00UC350		UGELLO JET D. 3.5	JET NOZZLE D. 3.5	0,02
10	J-J00UC400		UGELLO JET D. 4.0	JET NOZZLE D. 4.0	0,02
11	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
12	J-J31TP014		TAPPO M. 1/4" GAS	PLUG 1/4" BSPP	-
13	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5	0,1
13	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0	0,1
13	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5	0,1
13	J-8C214960		UGELLO CEM. D. 6.0 C2	GROUT NOZZLE D. 6.0	0,1
14	J-CU12		GUARN. UGELLO CEMENTO 1/2"	COPPER SEAL D. 1/2"	-
15	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG C2	-
16	J-JOVNR000		VALVOLA DI NON RITORNO COMPLETA	COMPLETE NO RETURN VALVE	0,1
17	MR-TRIC0412		TRICONO D. 4"-1/2 L2	ROCK BIT D. 4"-1/2 LH2 IADC 211	-
18	MR-TRSTE412		TRILAMA STEP D. 4"-1/2	DRAG BIT STEP D. 4"-1/2	-
18	J-TRS412J1		TRILAMA STEP D. 4"-1/2 JET 1/4"	DRAG BIT STEP 4"-1/2-1/4" JET NOZZLE	-
18	J-TRS412J2		TRILAMA STEP D. 4"-1/2 JET 1/2"	DRAG BIT STEP D. 4"-1/2-1/2" JET NOZZLE	-
19	J-TRH412J1		TRILAMA CHEVRON D. 4"-1/2 JET 1/4"	DRAGBIT CHEVRON 4"-1/2-1/4" JET NOZZLE	-
19	J-TRH412J2		TRILAMA CHEVRON D. 4"-1/2 JET 1/2"	DRAGBIT CHEVRON 4"-1/2-1/2" JET NOZZLE	-
20	CLAWBIT412		CLAW-BIT D. 114 (4"-1/2) 2" 3/8 AR	CLAW-BIT D. 114 (4"-1/2) 2" 3/8 AR	-
-	J-8C2TS651		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-8C2TS652		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-889K3011		KIT GUARN. ASTA D. 90 JET	SEAL KIT ROD D. 889 B1811	-

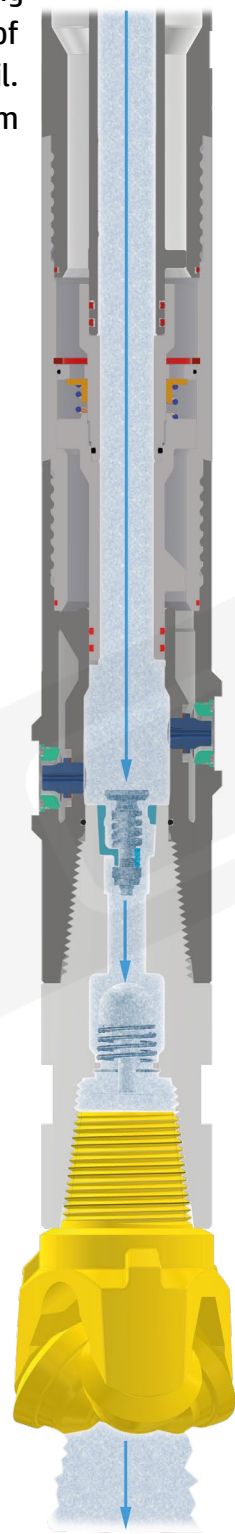
5.4 D.114 JET



5.4 - D.114 JET					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
2	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
3	J-114K6200		ADATTATORE TESTA 8C2TS700	SWIVEL ADAPTER 8C2TS700	10,6
4	J-114K3000		ASTA D. 114X3000 JET	D. 114X3000 JET	68,8
4	J-114K2000		ASTA D. 114X2000 JET	D. 114X2000 JET	52
4	J-114K1000		ASTA D. 114X1000 JET	D. 114X1000 JET	35,2
5	J-114K4002		MONITOR D. 114 JET 2 VIE	NOZZLE HOLDER D. 114 JET 2 NOZZLES	14,2
6	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
6	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
6	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
7	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
7	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
7	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
7	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
7	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
7	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
7	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
7	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
7	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
7	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
7	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
7	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
7	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
7	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
8	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
9	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
10	J-114K5200		PORTASCALPELLO D. 114 C/V NO RIT.	BIT ADAPTER D. 114 C/V NO RET.	12,7
11	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
12	238R312R-F/M		RIDUZIONE 2"-3/8 A.R.F/M 3"-1/2 A.R.	ADAPTER 2"-3/8 A.R.BOX/PIN 3"-1/2 A.R.	7,2
13	MR-TRSTE600		TRILAMA STEP D. 6" 2"-3/8 A.R.	DRAG BIT D. 6" 2"-3/8 A.R. PIN	-
14	MR-TRICO600		TRICONO D. 6" L2	ROCK BIT D. 6" L2	-
15	J-TRS600J2		TRILAMA STEP 6" (152) JET 1/2"	STEP DRAG-BIT 6" (152) JET 1/2"	-
16	J-TRH600J2		TRILAMA CHEVRON 6" (152) JET 1/2"	CHEVRON DRAG-BIT 6" (152) JET 1/2"	-
17	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	-
-	J-114K3011		KIT GUARNIZIONI ASTA D. 114 JET	SEALS KIT ROD 114 JET	-
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-

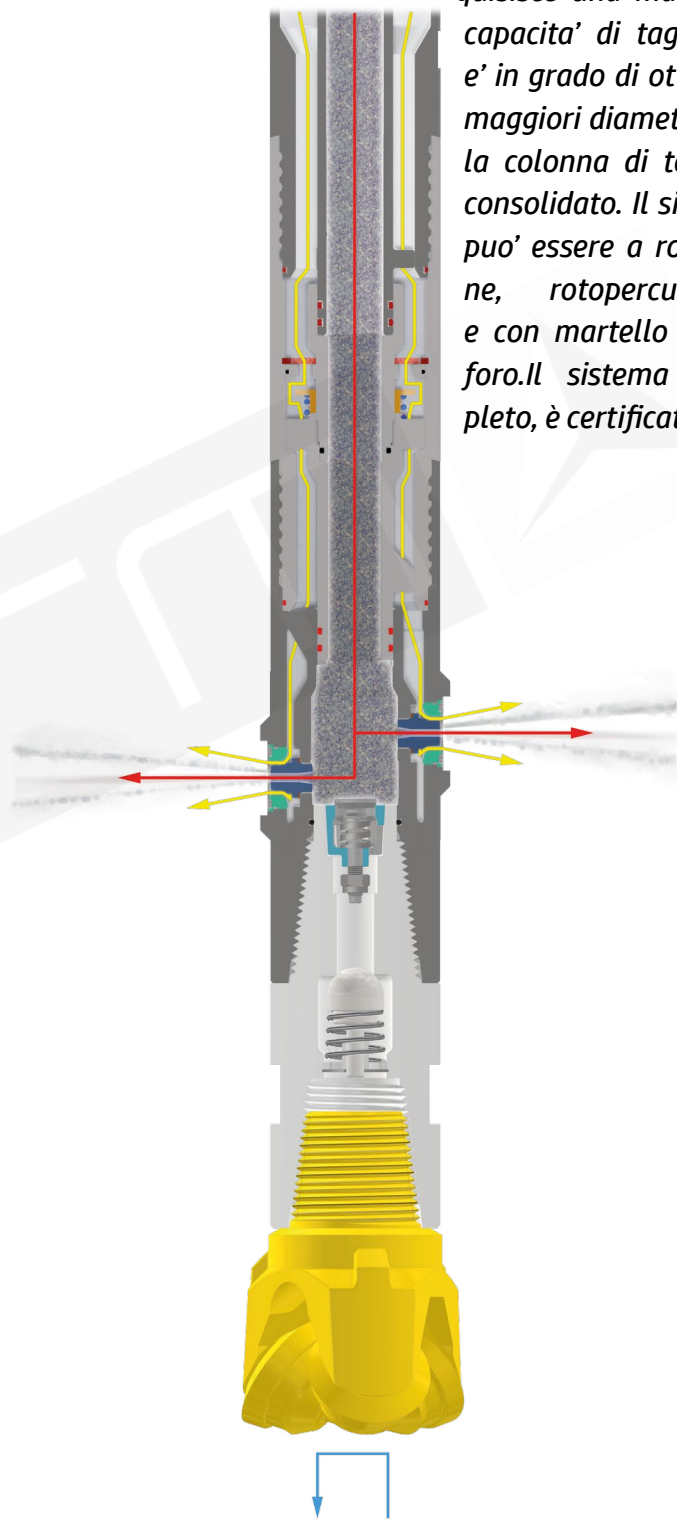
6 DOUBLE FLUID - BIFLUIDO

A jet of cement grout and air breaks-up and mixes the soil. The nozzles are designed so that the air-jet forms a shield all around the grout jet. This has the result of enhancing the grout jet cutting power and getting larger columns of consolidated soil. The complete system is CE certified.

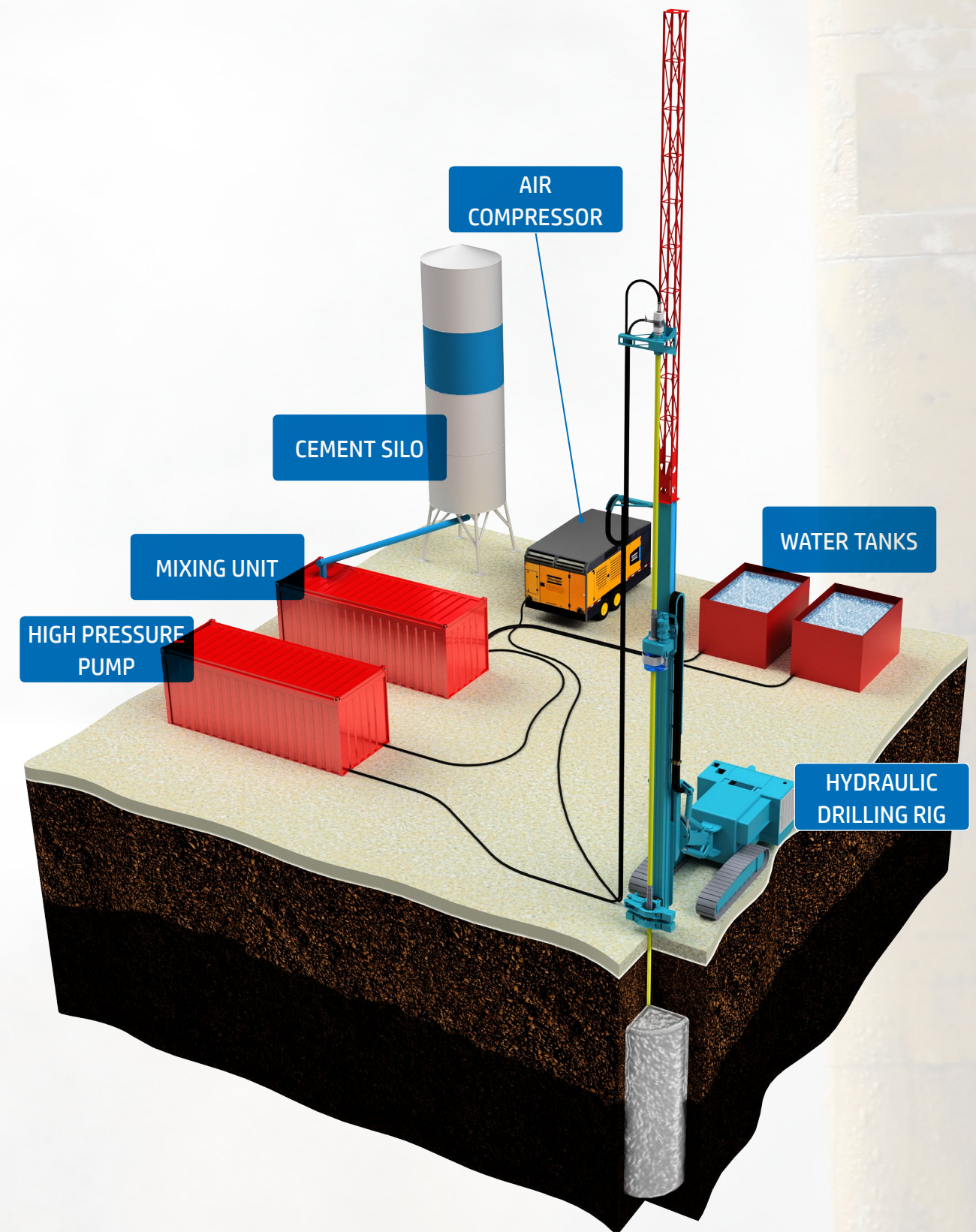


DRILLING STEP

Disgregazione e consolidamento ottenuti con iniezione simultanea di cemento e getto coassiale di aria. Gli ugelli sono progettati per creare uno schermo intorno al getto di cemento che acquisisce una maggiore capacità di taglio ed è in grado di ottenere maggiori diametri della colonna di terreno consolidato. Il sistema può essere a rotazione, rotopercolazione e con martello fondo foro. Il sistema completo, è certificato CE.

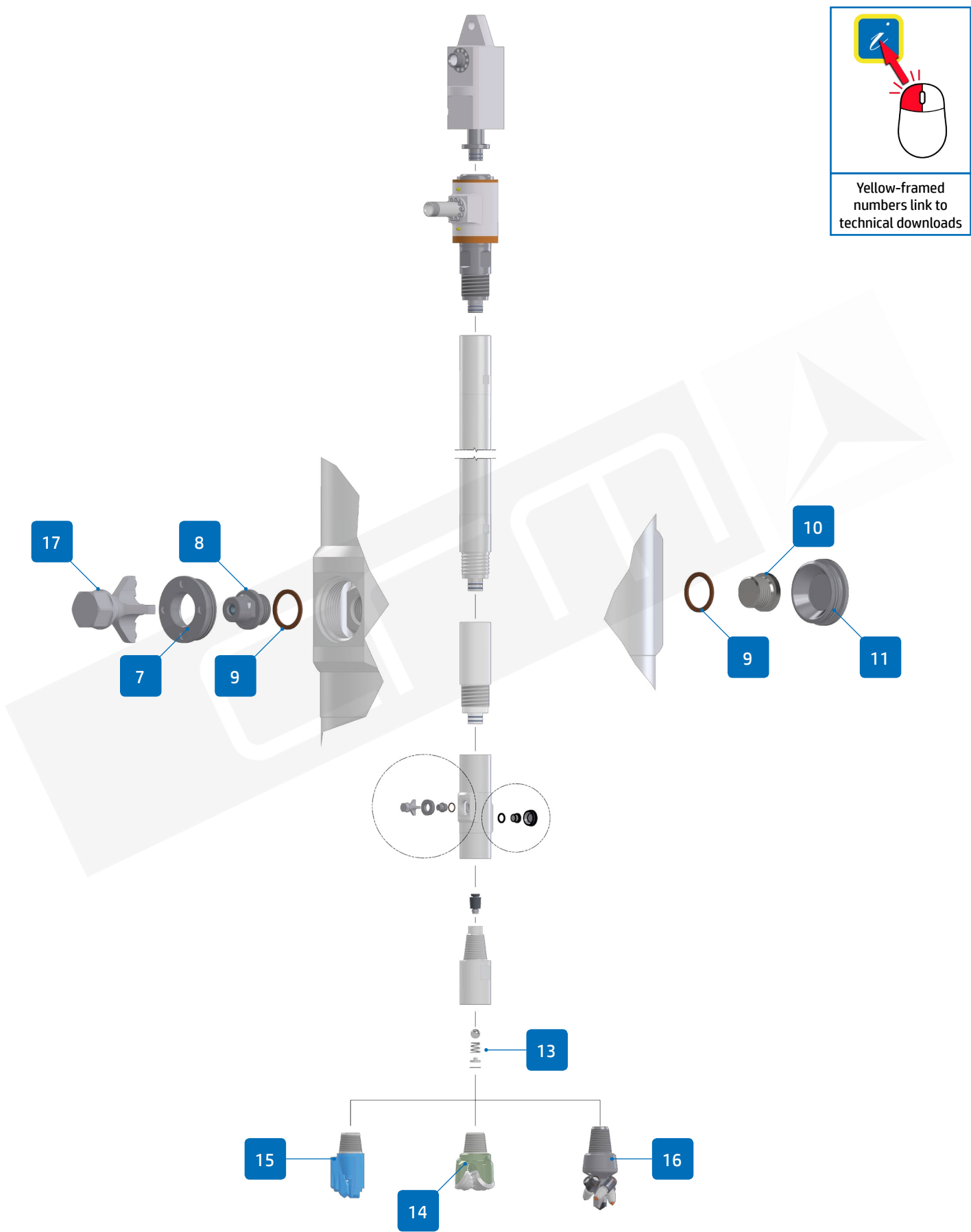


JETTING STEP



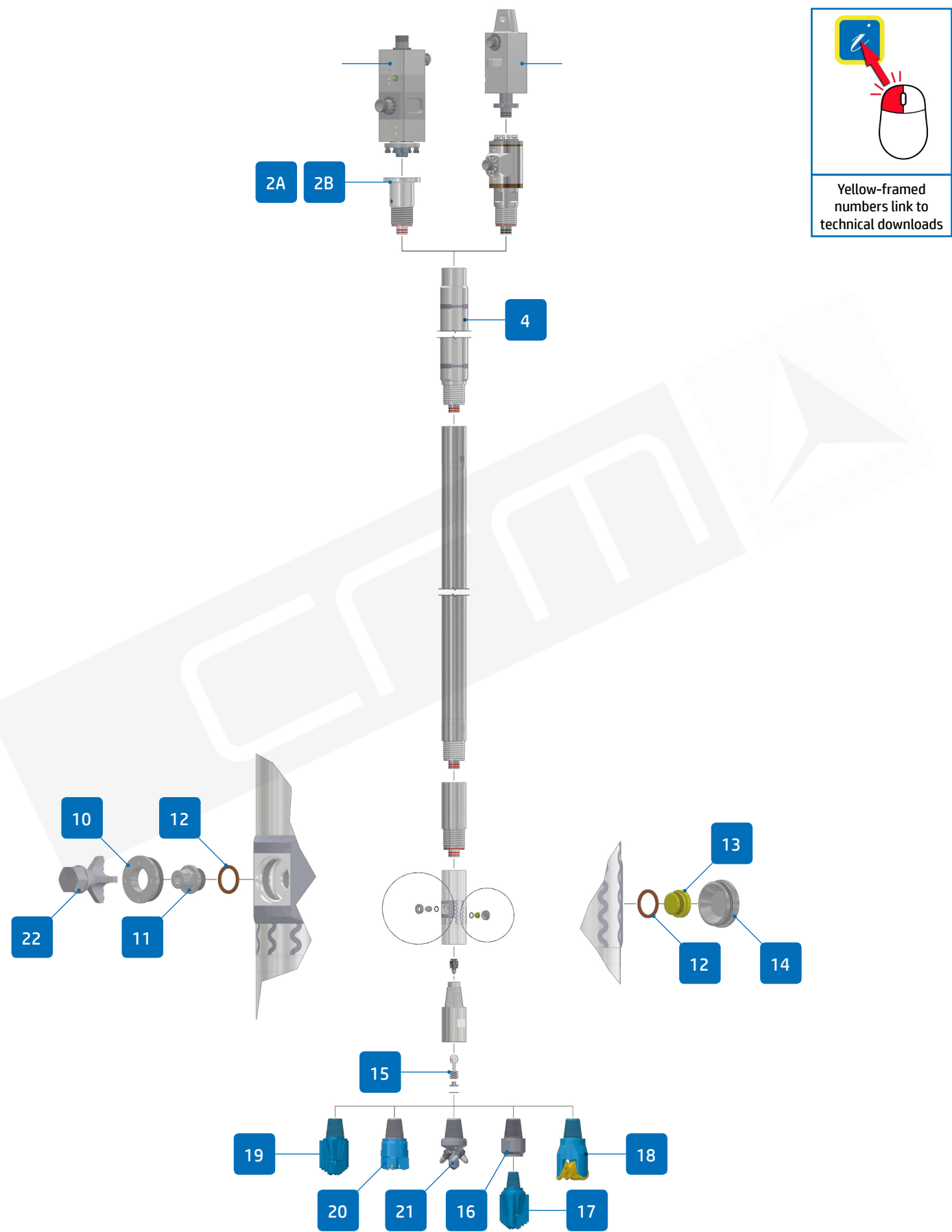
DOUBLE FLUID JET GROUTING PLANT - SCHEMA IMPIANTO JET GROUTING BIFLUIDO

6.1 D.90 JET 2



6.1 - D.90 JET 2					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-8C2TS650		TESTA A.P. 410L/MIN-560BAR	H.P. SWIVEL 410L/MIN-560BAR	11
2	J-8C214550		TESTA ARIA C2	L.P. AIR SWIVEL C2	19
3	J-8C2S3000		ASTA D. 88.9X3000 C2 INTERNO ACCIAIO	ROD. D. 90X3000 C2 INNER STEEL	59,5
3	J-8C2S2000		ASTA D. 88.9X2000 C2 INTERNO ACCIAIO	ROD. D. 90X2000 C2 INNER STEEL	41
3	J-8C2S1000		ASTA D. 88.9X1000 C2 INTERNO ACCIAIO	ROD. D. 90X1000 C2 INNER STEEL	22,5
4	J-8C214702		RACCORDO D.90 C2 C/V NO RIT.	AIR ADAPTER D. 90 C2 W/NO RET. VAL.	5,6
5	J-8C214483		MONITOR D. 88.9 C2	NOZZLE HOLDER D. 90 C2	8,1
5	J-8C214485		MONITOR D. 90 C2 ANTI USURA P910	NOZZLE HOLDER D. 90 C2 HEAVY DUTY	8,5
6	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
6	J-J00TP270		VALVOLA AUT. JET 70BAR	JET CHECK VALVE 70BAR	0,2
6	J-J00TP210		VALVOLA AUT. JET 100BAR	JET CHECKVALVE 100BAR	0,2
7	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
7	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
8	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
8	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
8	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
8	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
8	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
8	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
8	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
8	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
8	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
8	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
8	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
8	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
9	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
10	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
11	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
12	J-8C214753		PORTASCALPELLO C2 C/V NO RIT.	BIT ADAPTER C2 W/NO RET. VAL.	5,6
13	J-JOVNR000		VALVOLA DI NON RITORNO COMPLETA	COMPLETE NO RETURN VALVE	0,1
14	MR-TRIC0412		TRICONO D. 4" 1/2 L2	ROCK BIT D. 4" 1/2 LH2 IADC 231	-
15	MR-TRSTE412		TRILAMA STEP D. 4" 1/2	DRAG BIT STEP D. 4" 1/2	-
16	CLAWBIT412		CLAW-BIT D. 114 (4" 1/2) 2" 3/8 AR	CLAW-BIT D. 114 (4" 1/2) 2" 3/8 AR	-
-	J-TRS412J2		TRILAMA STEP D. 4"-1/2 JET 1/2"	STEP DRAGBIT D. 4"-1/2 (1/2" JET NOZZLE)	-
-	J-TRH412J2		TRILAMA CHEVRON D. 4"-1/2 JET 1/2"	CHEVRON DRAGBIT 4"-1/2 (1/2" JET NOZ.)	-
17	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
-	J-8C2TS651		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-8C2TS652		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-8C214311		KIT GUARN. ASTA D. 88.9 C2	SEAL KIT ROD. C2	-
-	J-8C214551		KIT GUARN. TESTA B.P. C2	L.P. SWIVEL SEAL KIT	-
-	J-8C214484		GUARN. MONITOR C2	NOZZLE HOLDER SEAL KIT	-

6.2 D.114 JET 2



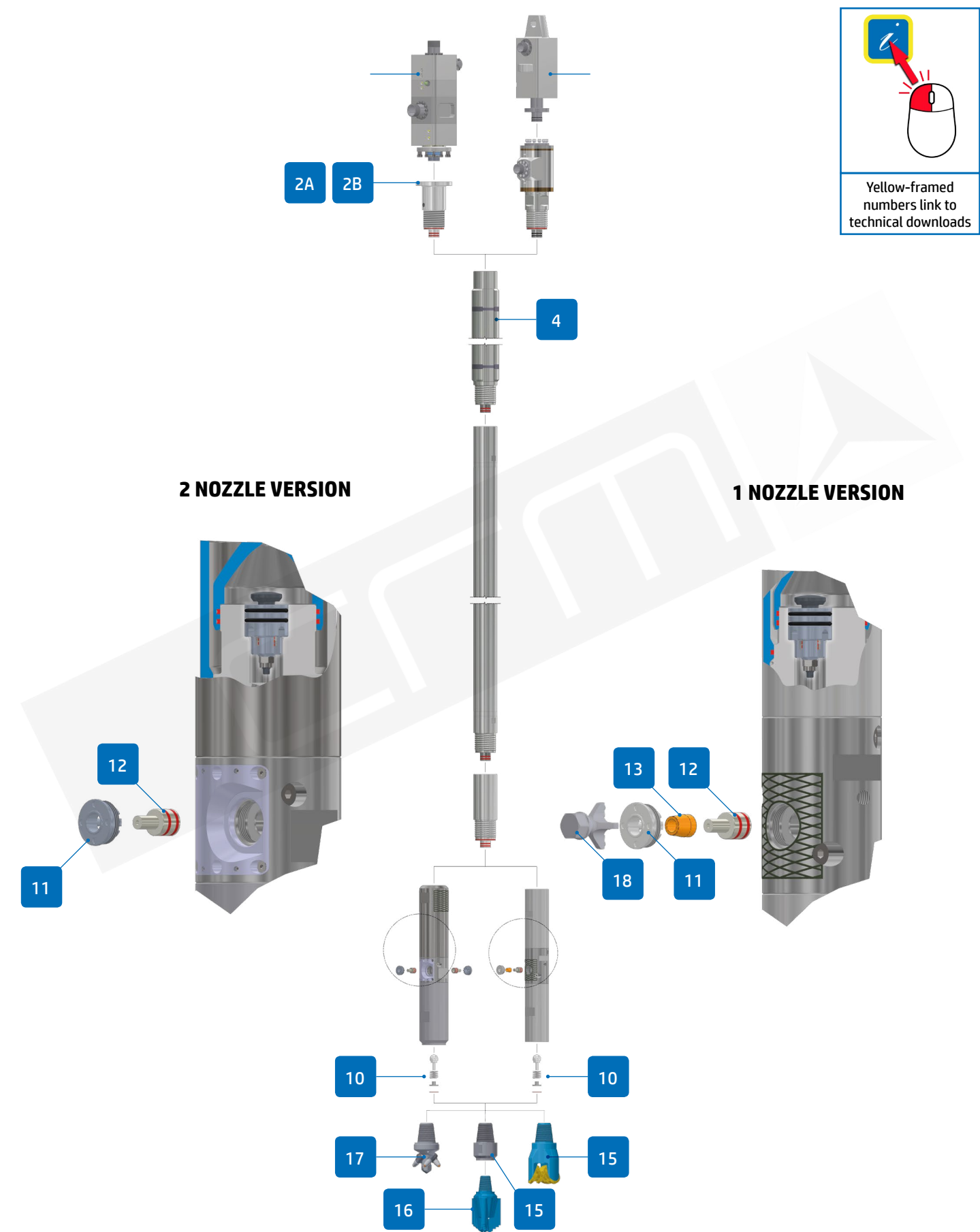
6.2- D.114 JET 2					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
1B	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
1C	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1D	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
2A	J-AMHPA4C2		ADATT. MODULAR HP SWIVEL / ASTA D.114 C2	HP SWIVEL / ROD. D.114 C2 ADAPTER	12,2
2B	J-AMHPSAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 C2	HP D2 SWIVEL / ROD. D.114 C2 ADAPTER	11,2
3	J-8C212500		TESTA ARIA B.P. C2	AIR L.P. SWIVEL C2	31,4
4	J-1C212132 (*)		ASTA D.114 C2 De132 MANDR. MAX COPPIA	ROD D.114 C2 D. 132 H. CLAMP MAX TORQUE	(*)
5	J-1C212530		ASTA D. 114X3000 C2 INTERNO ACCIAIO	ROD. D. 114X3000 C2 INNER STEEL	78
5	J-1C212520		ASTA D. 114X2000 C2 INTERNO ACCIAIO	ROD. D. 114X2000 C2 INNER STEEL	54
5	J-1C212510		ASTA D. 114X1000 C2 INTERNO ACCIAIO	ROD. D. 114X1000 C2 INNER STEEL	31
6	J-1C212702		RACCORDO CON VALVOLA	AIR ADAPTER H.D. W/NO RET. VAL.	10,9
7	J-1C212483		MONITOR D. 114 C2	NOZZLE HOLDER D. 114 C2	13,7
7	J-1C212486		MONITOR D. 114 C2 CON BOTTONI ANTI USURA	NOZZLE HOLD. W/H.D. NO WEAR BUTTON	14
7	J-1C212488		MONITOR D.114 C2 ANTI USURA P910	P910 ANTIWEARING D.114 C2 MONITOR	14
8	J-1C212752		PORTASCALPELLO CON VALVOLA	BIT ADAPTER W/NO RET. VAL.	12,7
9	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
9	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
9	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
10	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
10	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
11	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
11	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
11	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
11	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
11	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
11	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
11	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
11	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
12	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
13	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
14	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
15	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
16	238R312R-F/M		RIDUZIONE 2"-3/8 A.R.F/M 3"-1/2 A.R.	ADAPTER 2"-3/8 A.R.BOX/PIN 3"-1/2 A.R.	7,2
17	MR-TRSTE600		TRILAMA STEP D. 6" 2"-3/8 A.R.	DRAG BIT D. 6" 2"-3/8 A.R. PIN	-
18	MR-TRIC0600		TRICONO D. 6" L2	ROCK BIT D. 6" L2	-
19	J-TRS600J2		TRILAMA STEP 6" (152) JET 1/2"	STEP DRAG-BIT 6" (152) JET 1/2"	-
20	J-TRH600J2		TRILAMA CHEVRON 6" (152) JET 1/2"	CHEVRON DRAG-BIT 6" (152) JET 1/2"	-
21	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	-
22	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
(*) Disponibile a richiesta in base alle dimensioni del mandrino passante fornite dal cliente. Available upon request according to customer-provided hollow clamp dimensions.					



6.2- D.114 JET 2					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	J-8C212501		KIT GUARN. TESTA B.P. C2	AIR L.P. SWIVEL SEALS KIT	-
-	J-1C212311		KIT GUARN. ASTA D. 114 C2	ROD SEALS KIT	-
-	K35 P 93.4X97.9X3.5		GUARNIZIONE ASTA ESTERNA D.114 C2	OUTER DUCT ROD SEAL D.114 C2	-
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pz)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-

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6.3 D.114 JET 2 HEM (HIGH EFFICIENCY MONITOR)



6.3- D.114 JET 2 HEM (HIGH EFFICIENCY MONITOR)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
1B	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
1C	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1D	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
2A	J-AMHPA4C2		ADATT. MODULAR HP SWIVEL / ASTA D.114 C2	HP SWIVEL / ROD. D.114 C2 ADAPTER	12,2
2B	J-AMHPSAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 C2	HP D2 SWIVEL / ROD. D.114 C2 ADAPTER	11,2
3	J-8C212500		TESTA ARIA B.P. C2	AIR L.P. SWIVEL C2	31,4
4	J-1C212132 (*)		ASTA D.114 C2 De132 MANDR. MAX COPPIA	ROD D.114 C2 D. 132 H. CLAMP MAX TORQUE	(*)
5	J-1C212530		ASTA D. 114X3000 C2 INTERNO ACCIAIO	ROD. D. 114X3000 C2 INNER STEEL	78
5	J-1C212520		ASTA D. 114X2000 C2 INTERNO ACCIAIO	ROD. D. 114X2000 C2 INNER STEEL	54
5	J-1C212510		ASTA D. 114X1000 C2 INTERNO ACCIAIO	ROD. D. 114X1000 C2 INNER STEEL	31
6	J-1C212702		RACCORDO CON VALVOLA	AIR ADAPTER H.D. W/NO RET. VAL.	10,9
7	J-1C212472-XS		MONITOR STRAJET XS BIFLUIDO 2 UGELLI	STRAJET XS DOUBLE FUID N. H. (2 NOZZLES)	67,6
8	J-1C212470-XS		MONITOR STRAJET XS BIFLUIDO	STRAJET XS DOUBLE FLUID NOZZLES HOLDER	41,1
9	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
9	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
9	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
10	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
11	1395XSBF-10		UGELLO ARIA D. 18 XS BIFLUIDO	AIR NOZZLE D.18 XS DOUBLE FLUID	0,1
12	D-1395-D45-XSC2		UGELLO CEM. D. 4.5 XS C2	GROUT NOZZLE D. 4.5 XS C2	0,1
12	D-1395-D50-XSC2		UGELLO CEM. D. 5.0 XS C2	GROUT NOZZLE D. 5.0 XS C2	0,1
12	D-1395-D55-XSC2		UGELLO CEM. D. 5.5 XS C2	GROUT NOZZLE D. 5.5 XS C2	0,1
12	D-1395-D60-XSC2		UGELLO CEM. D. 6.0 XS C2	GROUT NOZZLE D. 6.0 XS C2	0,1
12	D-1395-D65-XSC2		UGELLO CEM. D. 6.5 XS C2	GROUT NOZZLE D. 6.5 XS C2	0,1
12	D-1395-D70-XSC2		UGELLO CEM. D. 7.0 XS C2	GROUT NOZZLE D. 7.0 XS C2	0,1
12	D-1395-D75-XSC2		UGELLO CEM. D. 7.5 XS C2	GROUT NOZZLE D. 7.5 XS C2	0,1
12	D-1395-D80-XSC2		UGELLO CEM. D. 8.0 XS C2	GROUT NOZZLE D. 8.0 XS C2	0,1
12	D-1395-D85-XSC2		UGELLO CEM. D. 8.5 XS C2	GROUT NOZZLE D. 8.5 XS C2	0,1
12	D-1395-D90-XSC2		UGELLO CEM. D. 9.0 XS C2	GROUT NOZZLE D. 9.0 XS C2	0,1
13	D-1395XSBF-11		TAPPO UGELLO ARIA PER USO MONOFLUIDO	AIR NOZZLE PLUG FOR SINGLE FLUID USE	0,005
14	MR-TRIC0600		TRICONO D. 6" L2	ROCK BIT D. 6" L2	-
15	238R312R-F/M		RIDUZIONE 2"-3/8 A.R./M 3"-1/2 A.R.	ADAPTER 2"-3/8 A.R.BOX/PIN 3"-1/2 A.R.	7,2
16	MR-TRSTE600		TRILAMA STEP D. 6" 2"-3/8 A.R.	DRAG BIT D. 6" 2"-3/8 A.R. PIN	-
17	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	-
18	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	J-8C212501		KIT GUARN. TESTA B.P. C2	AIR L.P. SWIVEL SEALS KIT	-
-	J-1C212311		KIT GUARN. ASTA D. 114 C2	ROD SEALS KIT	-
-	K35 P 93.4X97.9X3.5		GUARNIZIONE ASTA ESTERNA D.114 C2	OUTER DUCT ROD SEAL D.114 C2	-

(*) Disponibile a richiesta in base alle dimensioni del mandrino passante fornite dal cliente.
Available upon request according to customer-provided hollow clamp dimensions.

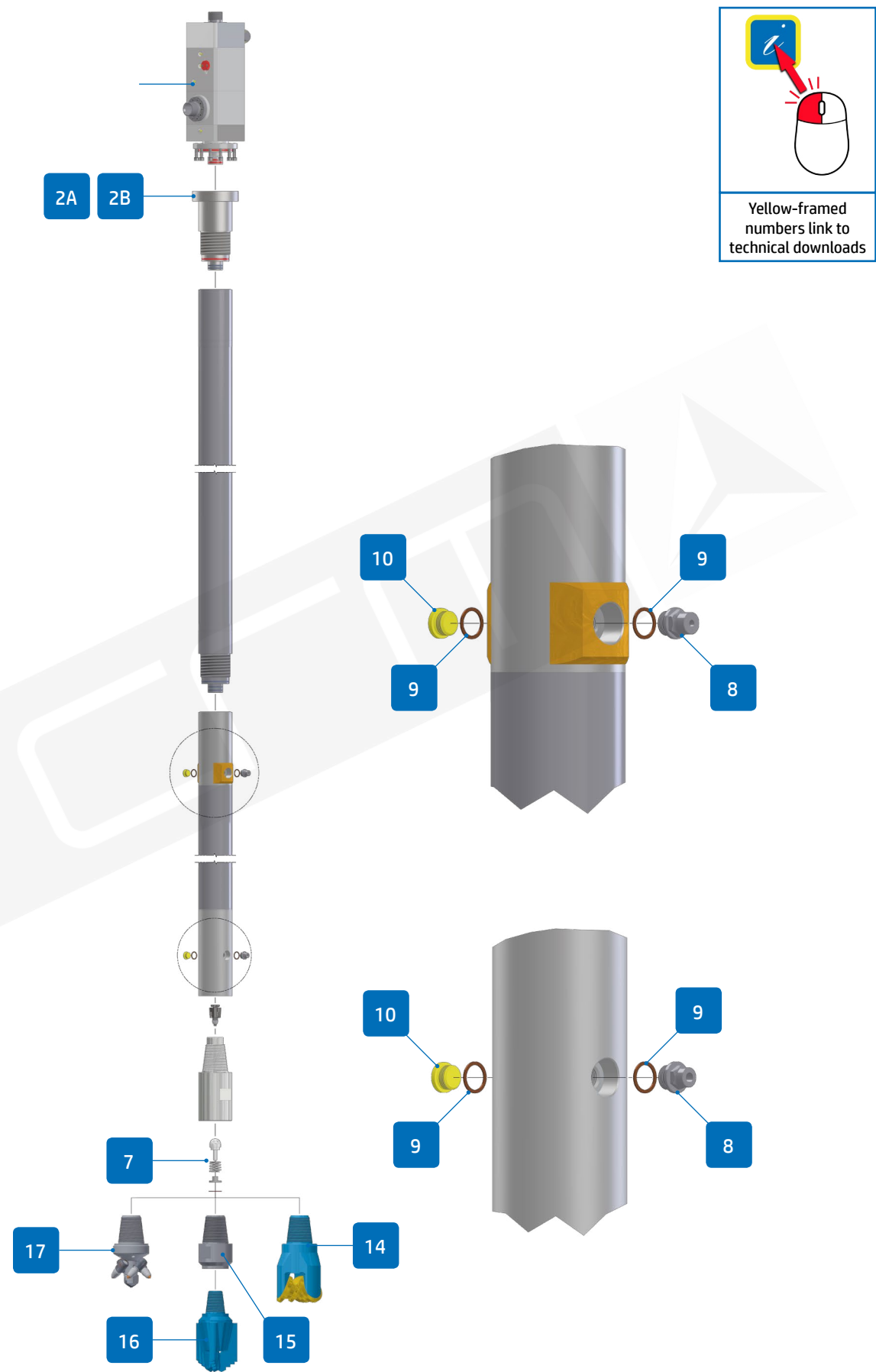


6.3- D.114 JET 2 HEM (HIGH EFFICIENCY MONITOR)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pz)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-
-	D-1395KPLUG		PLUGS KIT FOR GROUT DUCT J-1C212472-XS	KIT TAPPI PER CONDOTTO CEMENTO J-1C212472-XS	-



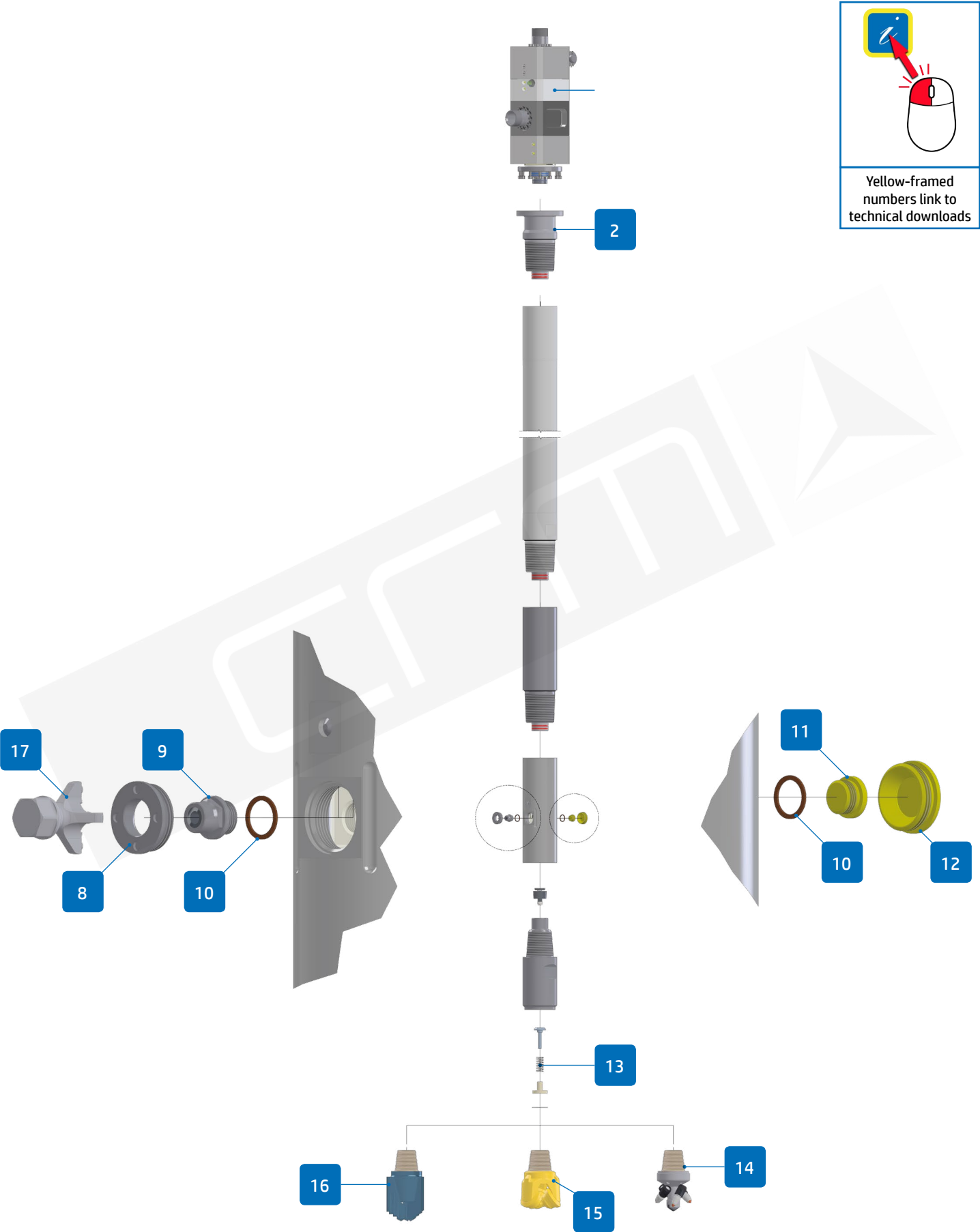
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6.4 D.114 C2H



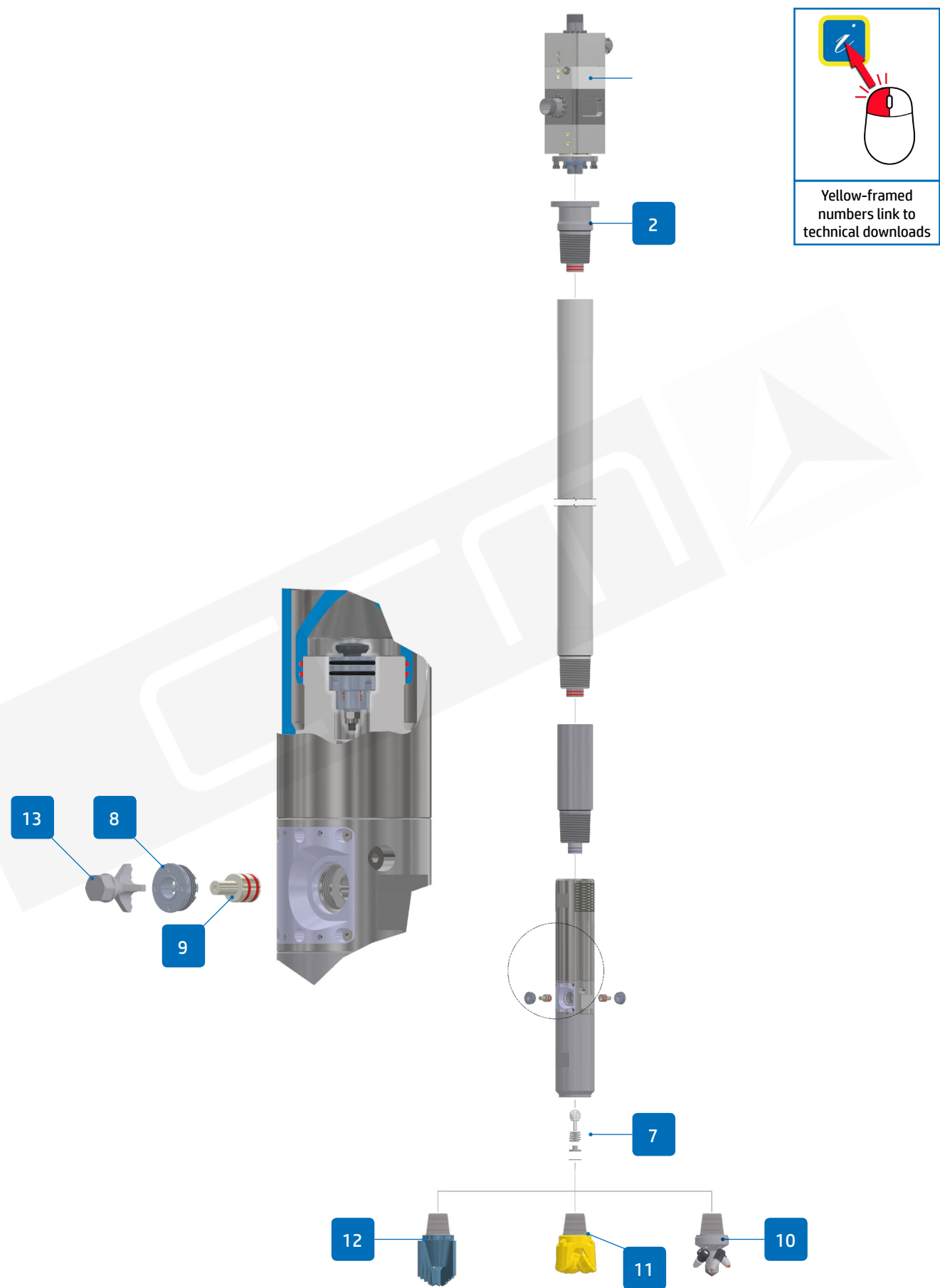
6.4- D.114 C2H					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
1B	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2A	J-AMHPA4C2		ADATT. MODULAR HP SWIVEL / ASTA D.114 C2	HP SWIVEL / ROD. D.114 C2 ADAPTER	12,2
2B	J-AMHPSAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 C2	HP D2 SWIVEL / ROD. D.114 C2 ADAPTER	11,2
3	J-1C2H3000		ASTA D. 114X3000 C2H	ROD. D. 114X3000 C2H	78
3	J-1C2H2000		ASTA D. 114X2000 C2H	ROD. D. 114X2000 C2H	55
3	J-1C2H1000		ASTA D. 114X1000 C2H	ROD. D. 114X1000 C2H	31
4	J-1C2H4000		MONITOR C2H JET L=1000	C2H JET NOZZLES HOLDER L=1000	55
5	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
5	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
5	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
6	J-1C212752		PORTASCALPELLO CON VALVOLA	BIT ADAPTER W/NO RET. VAL.	12,7
7	J-J0VNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
8	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
8	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
8	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
8	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
8	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
8	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
8	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
8	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
8	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
8	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
9	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
10	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
14	MR-TRIC0600		TRICONO D. 6" L2	ROCK BIT D. 6" L2	-
15	238R312R-F/M		RIDUZIONE 2"-3/8 A.R.F/M 3"-1/2 A.R.	ADAPTER 2"-3/8 A.R.BOX/PIN 3"-1/2 A.R.	7,2
16	MR-TRSTE600		TRILAMA STEP D. 6" 2"-3/8 A.R.	DRAG BIT D. 6" 2"-3/8 A.R. PIN	-
17	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	J-1C212311		KIT GUARN. ASTA D. 114 C2	ROD SEALS KIT	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-

6.5 D.127 JET 2



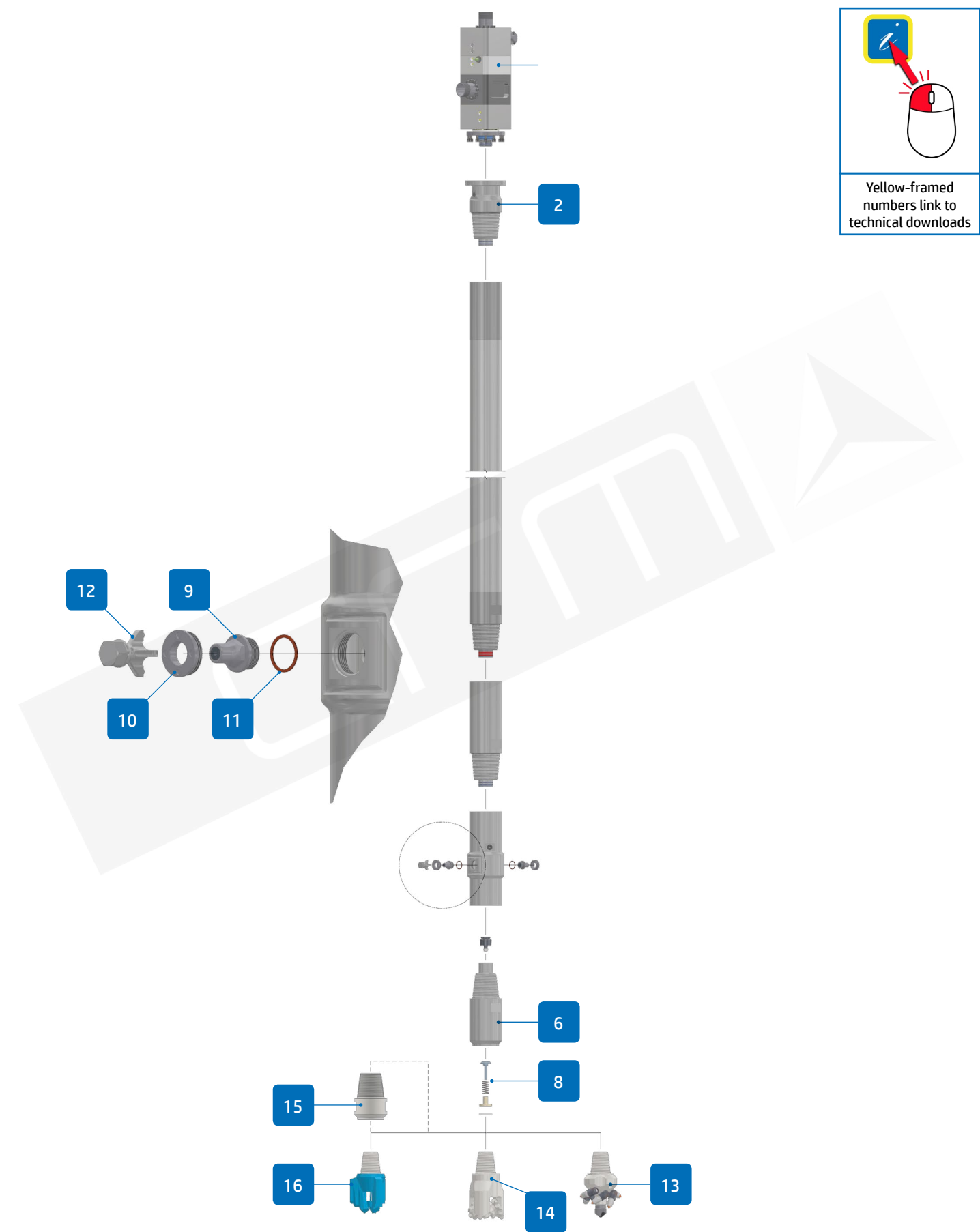
6.5- D.127 JET 2					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
2	J-AMHPA4C2-12		ADATT. MODULAR HP SWIVEL / ASTA D.127 C2	HP SWIVEL / ROD. D.127 C2 ADAPTER	14,5
3	J-12C23000		ASTA D. 127X3000 C2 Di=50	ROD. D. 127X3000 C2 I.D.=50	112
3	J-12C22000		ASTA D. 127X2000 C2 Di=50	ROD. D. 127X2000 C2 I.D.=50	78
3	J-12C21000		ASTA D. 127X1000 C2 Di=50	ROD. D. 127X1000 C2 I.D.=50	43
4	J-12C20702		ADATT. MONITOR D.127 C2 CON VALVOLA	D.127 C2 NOZZLES H. ADAPTER W/VAL.	18
5	J-12C20483		MONITOR D.127C2 Di=50	C2 D.127 NOZZLES HOLDER I.D.=50	20
6	J-J02TP120		VALVOLA AUTOMATICA 120 BAR (D.127/140)	CHECK VALVE 120 BAR (D.127/140)	0,3
6	J-J02TP100		VALVOLA AUTOMATICA 100 BAR (D.127/140)	CHECK VALVE 100 BAR (D.127/140)	0,3
6	J-J02TP070		VALVOLA AUTOMATICA 70 BAR (D.127/140)	CHECK VALVE 70 BAR (D.127/140)	0,3
7	J-12C20752		PORTASCALPELLO D.127 C2 CON VALVOLA	C2 D.127 BIT ADAPTER WITH VALVE	19,4
8	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
8	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
9	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
9	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
9	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
9	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
9	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
9	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
9	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
9	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
9	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
9	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
10	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
11	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
12	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
13	J-JOVNR140		VALVOLA NON RITORNO COMPLETA D.127/140	COMPLETE NO-RETURN VALVE D.127/140	0,4
14	CLAWBIT612		CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	-
15	MR-TRIC0612		TRICONO D.6"-1/2 L2 3"-1/2 A.R.	DRAG-BIT D.6"-1/2 L2 3"-1/2 A.R.	-
16	MR-TRSTE612		TRILAMA STEP D.6"-1/2	STEP DRAG BIT D.6"-1/2	-
17	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	J-12C23011		KIT GUARNIZIONI ASTA D.127 C2	SEALS KIT D.127 C2 ROD	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-

6.6 D.127 JET 2 HEM (HIGH EFFICIENCY MONITOR)



6.6- D.127 JET 2 HEM (HIGH EFFICIENCY MONITOR)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
2	J-AMHPA4C2-12		ADATT. MODULAR HP SWIVEL / ASTA D.127 C2	HP SWIVEL / ROD. D.127 C2 ADAPTER	14,5
3	J-12C23000		ASTA D. 127X3000 C2 Di=50	ROD. D. 127X3000 C2 I.D.=50	112
3	J-12C22000		ASTA D. 127X2000 C2 Di=50	ROD. D. 127X2000 C2 I.D.=50	78
3	J-12C21000		ASTA D. 127X1000 C2 Di=50	ROD. D. 127X1000 C2 I.D.=50	43
4	J-12C20702		ADATT. MONITOR D.127 C2 CON VALVOLA	D.127 C2 NOZZLES H. ADAPTER W/VAL.	18
5	J-1C212472-XSJ		MONITOR STRAJET XS BIFLUIDO DOPPIO UG. D.127	STRAJET XS 2 FUID NOZZLE H. (2 NOZZLES) D.127	68,5
6	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
6	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
7	J-J0VNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
8	1395XSBF-10		UGELLO ARIA D. 18 XS BIFLUIDO	AIR NOZZLE D.18 XS DOUBLE FLUID	0,1
9	D-1395-D45-XSC2		UGELLO CEM. D. 4.5 XS C2	GROUT NOZZLE D. 4.5 XS C2	0,1
9	D-1395-D50-XSC2		UGELLO CEM. D. 5.0 XS C2	GROUT NOZZLE D. 5.0 XS C2	0,1
9	D-1395-D55-XSC2		UGELLO CEM. D. 5.5 XS C2	GROUT NOZZLE D. 5.5 XS C2	0,1
9	D-1395-D60-XSC2		UGELLO CEM. D. 6.0 XS C2	GROUT NOZZLE D. 6.0 XS C2	0,1
9	D-1395-D65-XSC2		UGELLO CEM. D. 6.5 XS C2	GROUT NOZZLE D. 6.5 XS C2	0,1
9	D-1395-D70-XSC2		UGELLO CEM. D. 7.0 XS C2	GROUT NOZZLE D. 7.0 XS C2	0,1
9	D-1395-D75-XSC2		UGELLO CEM. D. 7.5 XS C2	GROUT NOZZLE D. 7.5 XS C2	0,1
9	D-1395-D80-XSC2		UGELLO CEM. D. 8.0 XS C2	GROUT NOZZLE D. 8.0 XS C2	0,1
9	D-1395-D85-XSC2		UGELLO CEM. D. 8.5 XS C2	GROUT NOZZLE D. 8.5 XS C2	0,1
9	D-1395-D90-XSC2		UGELLO CEM. D. 9.0 XS C2	GROUT NOZZLE D. 9.0 XS C2	0,1
10	CLAWBIT612		CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	
11	MR-TRIC0612		TRICONO D.6"-1/2 L2 3"-1/2 A.R.	DRAG-BIT D.6"-1/2 L2 3"-1/2 A.R.	
12	MR-TRSTE612		TRILAMA STEP D.6"-1/2	STEP DRAG BIT D.6"-1/2	
13	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-
-	D-1395KPLUG		PLUGS KIT FOR GROUT DUCT J-1C212472-XS	KIT TAPPI PER CONDOTTO CEMENTO J-1C212472-XS	-

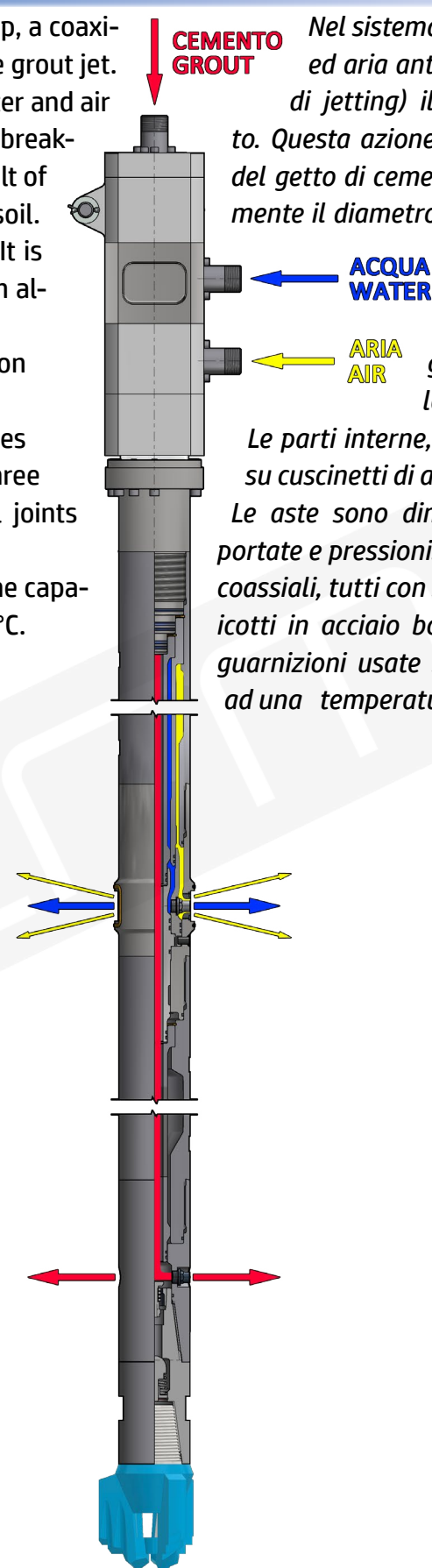
6.7 D.140 JET 2



6.7- D.140 JET 2					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-AMHPS4J2		HP SWIVEL CEMENTO-ARIA (INLET 2")	MODULAR HP SWIVEL GROUT-AIR (INLET 2")	58,7
2	J-AMHPA4C2-14		ADATTATORE TESTA A.P. J2- ASTA D.140 C2	J2 HP SWIVEL - ROD D. 140 C2 ADAPTER	16
3	J-14C23000		ASTA D. 140X3000 C2 Di=50	ROD. D. 140X3000 C2 I.D.=50	133
3	J-14C22000		ASTA D. 140X2000 C2 Di=50	ROD. D. 140X2000 C2 I.D.=50	93
3	J-14C21000		ASTA D. 140X1000 C2 Di=50	ROD. D. 140X1000 C2 I.D.=50	53
4	J-14C20702		ADATT. MONITOR D.140 C2 CON VALVOLA	D.140 C2 NOZZLES H. ADAPTER W/VALVE	26
5	J-14C20483		MONITOR D.140 C2 Di=50	C2 D.140 NOZZLES HOLDER I.D.=50	28
6	J-14C20752		PORTASCALPELLO D.140 C2 3"-1/2 A.R. C/VALV.	C2 D.140 3"-1/2 A.R. BIT ADAPT. WITH VALVE	25
6	J-14C20753		PORTASCALPELLO D.140 C2 4"-12 A.R. C/VALV.	C2 D.140-4"-1/2 A.R. BIT ADAPTER W/ VALVE	22
7	J-J02TP120		VALVOLA AUTOMATICA 120 BAR (D.127/140)	CHECK VALVE 120 BAR (D.127/140)	0,3
7	J-J02TP100		VALVOLA AUTOMATICA 100 BAR (D.127/140)	CHECK VALVE 100 BAR (D.127/140)	0,3
7	J-J02TP070		VALVOLA AUTOMATICA 70 BAR (D.127/140)	CHECK VALVE 70 BAR (D.127/140)	0,3
8	J-J0VNR140		VALVOLA NON RITORNO COMPLETA D.127/140	COMPLETE NO-RETURN VALVE D.127/140	0,4
9	D-1555-4D60		UGELLO CEMENTO D.6.0-7/8	GROUT NOZZLE D. 6.0-7/8	0,2
9	D-1555-4D65		UGELLO CEMENTO D.6.5-7/8	GROUT NOZZLE D. 6.5-7/8	0,2
9	D-1555-4D70		UGELLO CEMENTO D.7.0-7/8	GROUT NOZZLE D. 7.0-7/8	0,2
9	D-1555-4D75		UGELLO CEMENTO D.7.5-7/8	GROUT NOZZLE D. 7.5-7/8	0,2
9	D-1555-4D80		UGELLO CEMENTO D.8.0-7/8	GROUT NOZZLE D. 8.0-7/8	0,2
9	D-1555-4D85		UGELLO CEMENTO D.8.5-7/8	GROUT NOZZLE D. 8.5-7/8	0,2
9	D-1555-4D90		UGELLO CEMENTO D.9.0-7/8	GROUT NOZZLE D. 9.0-7/8	0,2
10	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
10	J-8C214902		UGELLO ARIA D. 24 C2	AIR NOZZLE D. 24 C2	0,09
11	J-CU78		GUARNIZIONE UGELLO CEMENTO 7/8" I.D. 30	COPPER SEAL D. 7/8" I.D. 30	-
12	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
13	CLAWBIT700		CLAW-BIT D. 7" -178-3"-1/2 A.R.	CLAW-BIT D. 7" -178- 3"-1/2 A.R.	-
14	MR-TRIC0634		TRICONO D.6"-3/4 L2- 3"-1/2 A.R.	DRAG-BIT D.6"-3/4 L2- 3"-1/2 A.R.	-
14	MR-TRIC0712		TRICONO D.7"-1/2 L2- 4"-1/2 A.R.	DRAG-BIT D.7"-1/2 L2- 4"-1/2 A.R.	-
15	312R412R-F/M		RID. 3"-1/2 A.R. F/M 4"-1/2 A.R.	3"-1/2 A.R. F/M 4"-1/2 A.R. ADAPTER	12
16	MR-TRSTE700		TRILAMA STEP D.7"-3"-1/2 A.R.	STEP DRAG BIT D.7"-3"-1/2 A.R.	-
-	J-J33TB078		TAPPO M. 7/8" GAS HEX INC.	GROUT NOZZLE PLUG C2 7/8" GAS	0,1
-	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
-	J-AMHPS4J2-A		KIT CUSCINETTI MODULAR SW. J2	MODULAR SW. J2 BEARINGS KIT	-
-	J-AMHPS4J2-B		KIT GUARN. HP SWIVEL J2 ARIA E SERVICE	SEALS KIT HP SWIVEL J2 AIR AND SERVICE	-
-	J-14C23011		KIT GUARNIZ. ASTA D.140 C2	D.140 C2 ROD SEAL KIT	-
-	J-14C20703		KIT GUARNIZ. ADATT. MONITOR D.140 C2	D.140 C2 NOZZLES H. ADAPTER SEALS KIT	-
-	J-14C20484		KIT GUARNIZ. MONITOR D.140 C2	D.140 C2 NOZZLES HOLDER SEALS KIT	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-

7 TRIPLE FLUID - TRIFLUIDO

In the C3 system, during the jetting step, a coaxial jet of water and air comes before the grout jet. The preventive of the coaxial jet of water and air makes the grout jet more efficient in breaking up and mixing the soil with the result of having larger columns of consolidated soil. The swivel is enbloc with three inlets. It is manufactured in heavy duty aluminium alloy. Its high strength steel inner parts work on high quality roller bearings. The rods are designed for high capacities and pressures. Each rods consists of three coaxial rods friction welded with tool joints manufactured in high strength steel. The seals used are made in poliurethane capable of an operating temperature of -50°C.

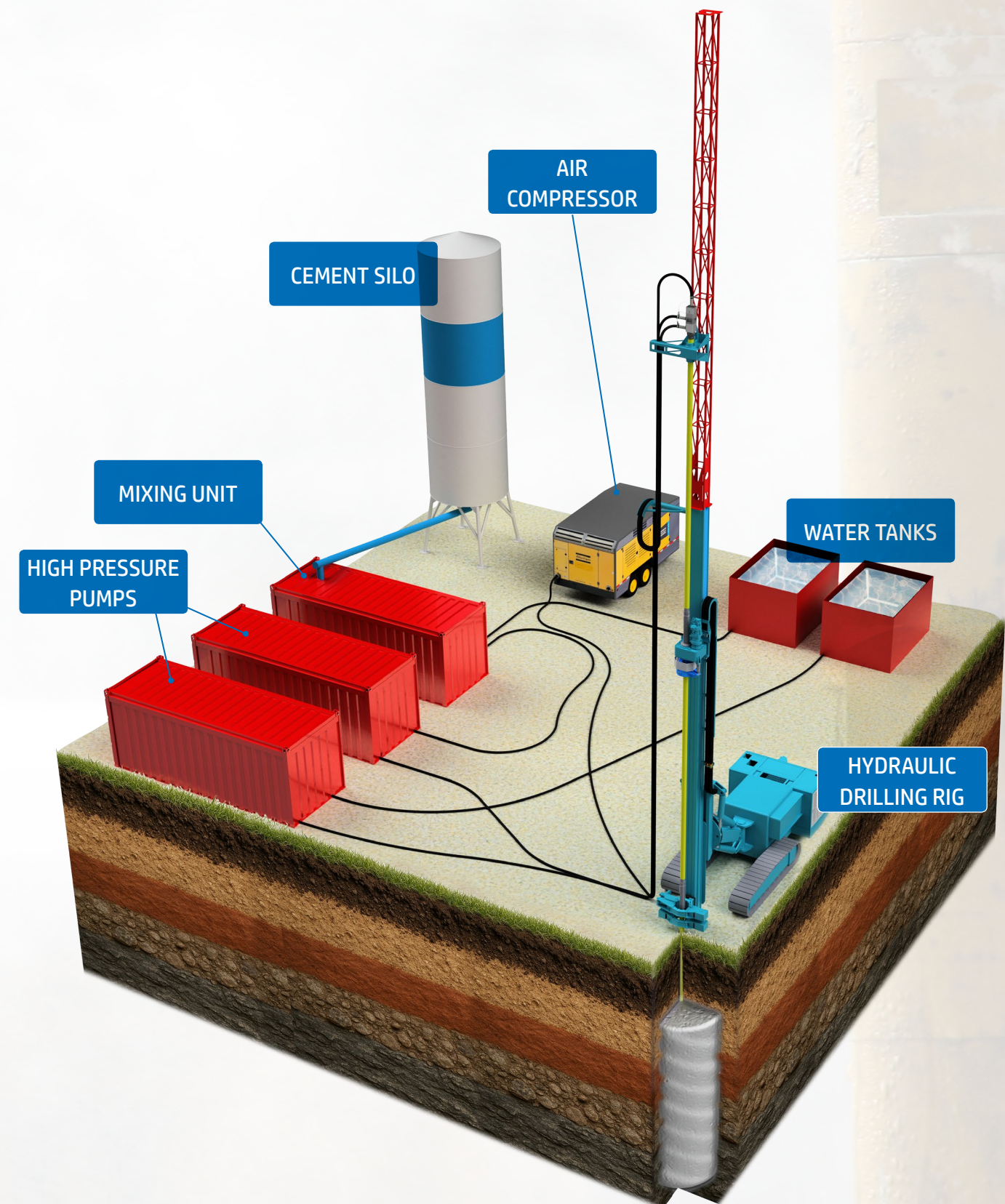


Nel sistema C3 un getto coassiale di acqua ed aria anticipa nella fase di risalita (fase di jetting) il getto dell'ugello del cemento. Questa azione preventiva migliora l'efficacia del getto di cemento aumentando considerevolmente il diametro raggiungibile della colonna di terreno consolidato.

La testa di adduzione è del tipo monoblocco con tre ingressi. Il corpo è costruito in lega leggera di alta resistenza.

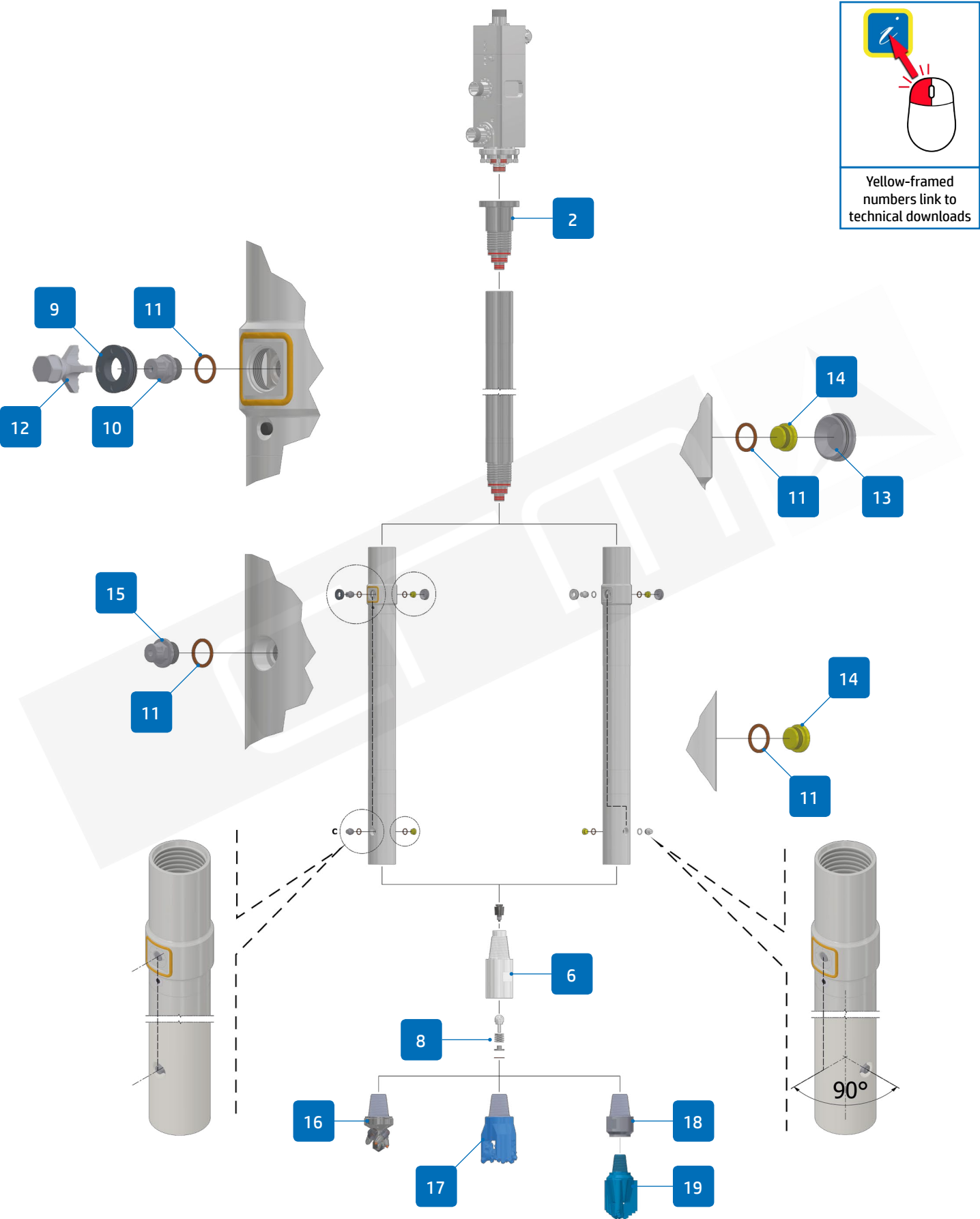
Le parti interne, in acciaio bonificato, lavorano su cuscinetti di alta qualità.

Le aste sono dimensionate per garantire alte portate e pressioni. Sono costituite di tre elementi coassiali, tutti con saldature a frizione e con manicotti in acciaio bonificato di alta resistenza. Le guarnizioni usate sono in poliuretano resistente ad una temperatura di -50°C.



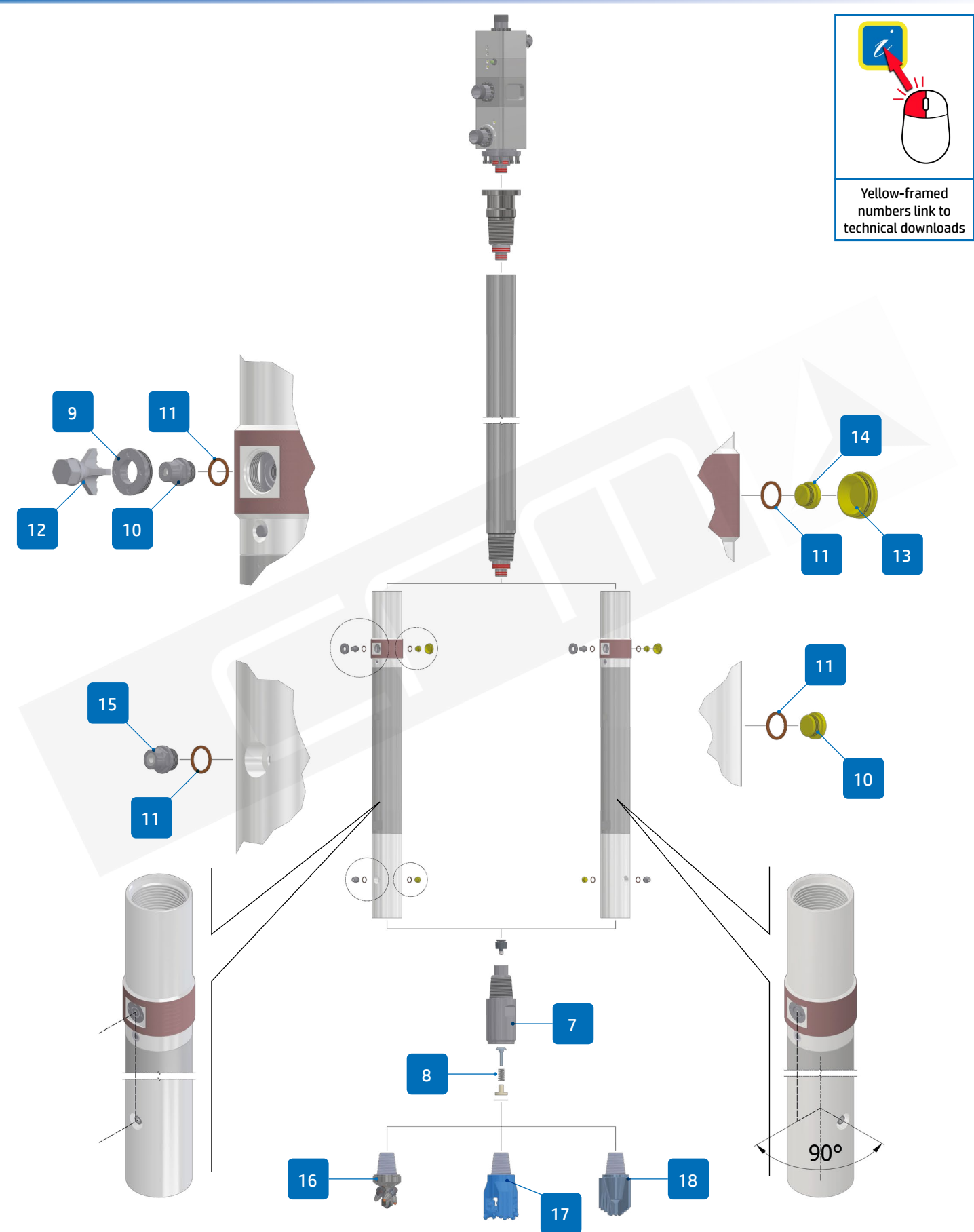
TRIPLE FLUID JET GROUTING PLANT - SCHEMA IMPIANTO JET GROUTING TRIFLUIDO

7.1 D.114 JET 3



7.1- D.114 JET 3					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-WMHP54J3		MODULAR HP SWIVEL J3 (INLET 2")	MODULAR HP SWIVEL J3 (INLET 2")	69,4
2	J-XMHPA4C3-114		ADAPTER MOD.SW. J3 - 114 C3 ROD	ADAPTER MOD.SW. J3-114 C3 ROD	11,9
3	J-114C3300		ASTA D. 114X3000 C3	ROD D. 114X3000 C3 JET	108,5
3	J-114C3200		ASTA D. 114X2000 C3	ROD D. 114X2000 C3 JET	75
3	J-114C3100		ASTA D. 114X1000 C3	ROD D. 114X1000 C3 JET	40
4	J-W114K340		MONITOR D. 114 T3-C3 UGELLI A 180°	NOZZLE HOLDER D. 114 T3-C3 JET 2x180°	67
5	J-W114K343		MONITOR D. 114 T3-C3 UGELLI A 90°	NOZZLE HOLDER D. 114 T3-C3 JET 2x90°	67
6	J-11K38000		PORTASCALP. D.114 K3 CON VALVOLA NO-RET.	D.114 K3 BIT ADAPT. WITH NO-RET. VALVE	12,7
7	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
7	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
8	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
9	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
9	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
10	J-11K34935		UGELLO ACQUA D. 3.5 D. 114 K3	WATER NOZZLE D. 3.5 D. 114 K3	0,08
10	J-11K34940		UGELLO ACQUA D. 4.0 D. 114 K3	WATER NOZZLE D. 4.0 D. 114 K3	0,08
10	J-11K34945		UGELLO ACQUA D. 4.5 D. 114 K3	WATER NOZZLE D. 4.5 D. 114 K3	0,07
10	J-11K34950		UGELLO ACQUA D. 5.0 D. 114 K3	WATER NOZZLE D. 5.0 D. 114 K3	0,07
10	J-11K34955		UGELLO ACQUA D. 5.5 D. 114 K3	WATER NOZZLE D. 5.5 D. 114 K3	0,07
10	J-11K34960		UGELLO ACQUA D. 6.0 D. 114 K3	WATER NOZZLE D. 6.0 D. 114 K3	0,07
11	J-CU12		GUARN. UGELLO CEMENTO 1/2"	COPPER SEAL D. 1/2"	
12	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
13	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
14	J-J33TB012		TAPPO M. 1/2" GAS HEX INC.	GROUT NOZZLE PLUG C2	
15	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
15	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
15	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
15	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
15	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
15	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
15	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
15	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
16	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 AR M.	CLAW-BIT D. 152 (6") 3"-1/2 AR M.	-
17	MR-TRIC0600		TRICONO D. 6" L2	ROCK BIT D. 6" L2	-
18	238R312R-F/M		RID. 2"-3/8 AR-3"-1/2 AR F/M	ADAPTER 2"-3/8 AR BOX/PIN 3"-1/2 AR	-
19	MR-TRSTE600		TRILAMA STEP D. 6" 2"-3/8 AR	DRAG BIT D. 6" 2"-3/8 AR PIN	-
-	J-WMHP54J3-A		KIT CUSCINETTI HP SWIVEL J3	J3 HP SWIVEL BEARINGS KIT	-
-	J-WMHP54J3-B		KIT GUARN. HP SWIVEL J3 ARIA E SERVICE	J3 HP SWIVEL SEALS KIT AIR AND SERVICE	-
-	602-25		GUARNIZIONE CEMENTO 2,75"	2,75" GROUT SEAL	-
-	J-W114K341		KIT RICAMBI MONITOR D.114 T3	D.114 T3 NOZZLES HOLDER SPARE PARTS	-
-	J-W114K342		KIT GUARN. MONITOR D. 114 T3	D.114 T3 NOZZLES HOLDER SEAL KIT	-
-	J-W114T331		KIT GUARN. ASTA D. 114 T3	SEAL KIT ROD D. 114 T3	-

7.2 D.127 JET 3

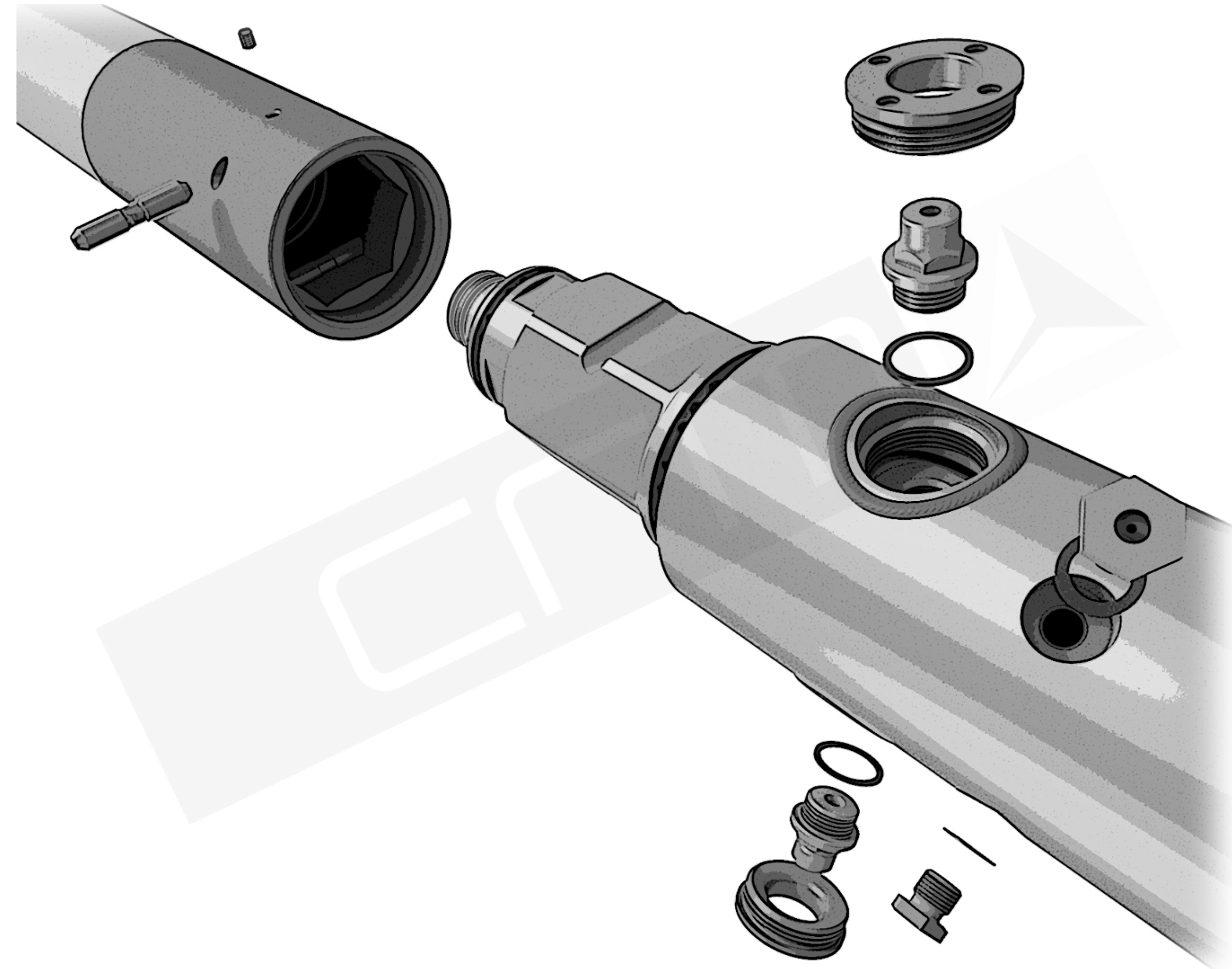


7.2- D.127 JET 3					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-WMHP54J3		MODULAR HP SWIVEL J3 (INLET 2")	MODULAR HP SWIVEL J3 (INLET 2")	69,4
2	J-XMHPA4C3		ADAPTER MOD.SW. J3 - 127 C3 ROD	ADAPTER MOD.SW. J3-127 C3 ROD	14,4
3	J-12C33000		ASTA D.127X3000 C3 JETTING FRIZIONATA	FRITIONED ROD D.127X3000 C3 JET	122
3	J-12C32000		ASTA D.127X2000 C3 JETTING FRIZIONATA	FRITIONED ROD D.127X2000 C3 JET	80
3	J-12C31000		ASTA D.127X1000 C3 JETTING FRIZIONATA	FRITIONED ROD D.127X1000 C3 JET	40
4	J-12C34000		MONITOR D.127 C3 JETTING 2 UGELLI 180°	NOZZLE HOLDER D.127 C3 JETTING 2x180°	83,5
5	J-12C34003		MONITOR D.127 C3 JETTING 2 UGELLI 90°	NOZZLE HOLDER D.127 C3 JETTING 2x90°	83,5
6	J-J02TP120		VALVOLA AUTOMATICA 120 BAR (D.127/140)	CHECK VALVE 120 BAR (D.127/140)	0,3
6	J-J02TP100		VALVOLA AUTOMATICA 100 BAR (D.127/140)	CHECK VALVE 100 BAR (D.127/140)	0,3
6	J-J02TP070		VALVOLA AUTOMATICA 70 BAR (D.127/140)	CHECK VALVE 70 BAR (D.127/140)	0,3
7	J-12C38000		PORTASCALPELLO D.127 C2 CON VALVOLA	C2 D.127 BIT ADAPTER WITH VALVE	19,4
8	J-JOVNR140		VALVOLA NON RITORNO COMPLETA D.127/140	COMPLETE NO-RETURN VALVE D.127/140	0,4
9	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
9	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
10	J-11K34935		UGELLO ACQUA D. 3.5 D. 114 K3	WATER NOZZLE D. 3.5 D. 114 K3	0,08
10	J-11K34940		UGELLO ACQUA D. 4.0 D. 114 K3	WATER NOZZLE D. 4.0 D. 114 K3	0,08
10	J-11K34945		UGELLO ACQUA D. 4.5 D. 114 K3	WATER NOZZLE D. 4.5 D. 114 K3	0,07
10	J-11K34950		UGELLO ACQUA D. 5.0 D. 114 K3	WATER NOZZLE D. 5.0 D. 114 K3	0,07
10	J-11K34955		UGELLO ACQUA D. 5.5 D. 114 K3	WATER NOZZLE D. 5.5 D. 114 K3	0,07
10	J-11K34960		UGELLO ACQUA D. 6.0 D. 114 K3	WATER NOZZLE D. 6.0 D. 114 K3	0,07
10	J-11K34963		UGELLO ACQUA D.6.3 K3	WATER NOZZLE D.6.3 K3	0,07
10	J-11K34965		UGELLO ACQUA D.6.5 K3	WATER NOZZLE D.6.5 K3	0,07
10	J-11K34967		UGELLO ACQUA D.6.7 K3	WATER NOZZLE D.6.7 K3	0,07
10	J-11K34970		UGELLO ACQUA D.7.0 K3	WATER NOZZLE D.7.0 K3	0,07
11	J-CU12		GUARN. UGELLO CEMENTO 1/2"	COPPER SEAL D. 1/2"	-
12	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
13	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
14	J-J33TB012		TAPPO M. 1/2" GAS HEX INC.	GROUT NOZZLE PLUG C2	-
15	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
15	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
15	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
15	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
15	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
15	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
15	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
15	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
16	CLAWBIT612		CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	CLAW-BIT D. 6"-1/2 -165 3"-1/2 A.R.	-
17	MR-TRIC0612		TRICONO D.6"-1/2 L2 3"-1/2 A.R.	DRAG-BIT D.6"-1/2 L2 3"-1/2 A.R.	-
18	MR-TRSTE612		TRILAMA STEP D.6"-1/2	STEP DRAG BIT D.6"-1/2	-
-	J-12C33001		KIT GUARNIZIONI ASTA D.127 C3	D.127 C3 ROD SEALS KIT	-
-	J-WMHP54J3-A		KIT CUSCINETTI HP SWIVEL J3	J3 HP SWIVEL BEARINGS KIT	-
-	J-WMHP54J3-B		KIT GUARN. HP SWIVEL J3 ARIA E SERVICE	J3 HP SWIVEL SEALS KIT AIR AND SERVICE	-
-	602-25		SEAL HYDRODYNAMIC PACKING FOR 2.75 OD WASHPIPE (3 pz)	HYDRODYNAMIC HIGH PRESSURE GROUT SEAL 2.75" OD SHAFT (3 pcs)	-

8 HEXAGONAL JET - JET ESAGONALE

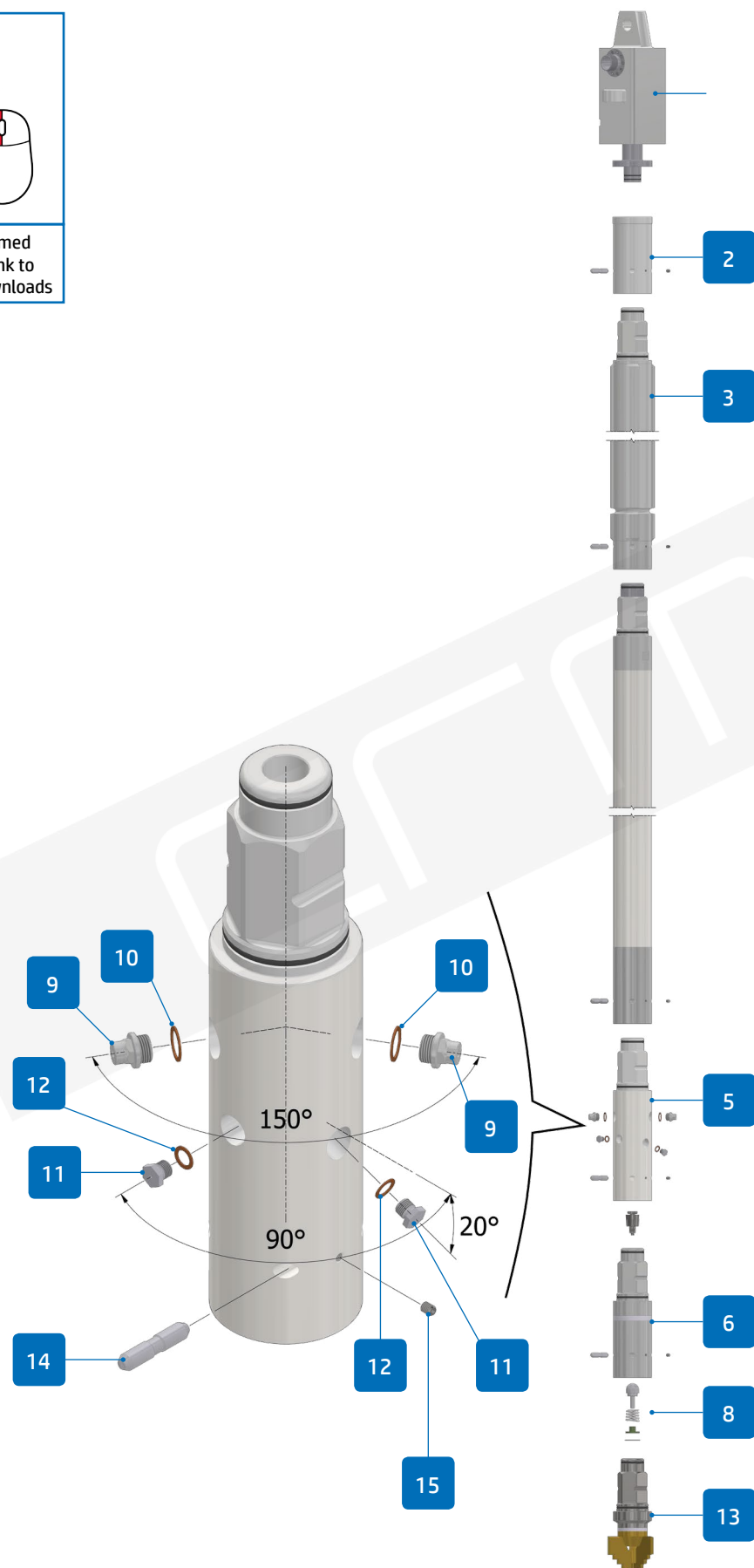
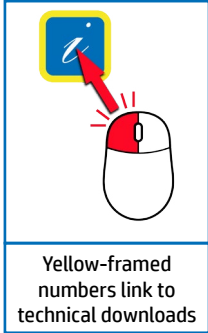
Equipment designed for jet grouting panel sealing. The hexagonal shape of coupling gives the possibility of turning the rods in both rotation directions. Single-fluid and double-fluid's versions are available.

Attrezzatura progettata per la realizzazione di pannelli jet grouting e per la sigillatura di diaframmi. La forma esagonale del manicotto rende possibile la manovra delle aste in entrambi i sensi di rotazione. Esiste sia la versione monofluido che bifluido.



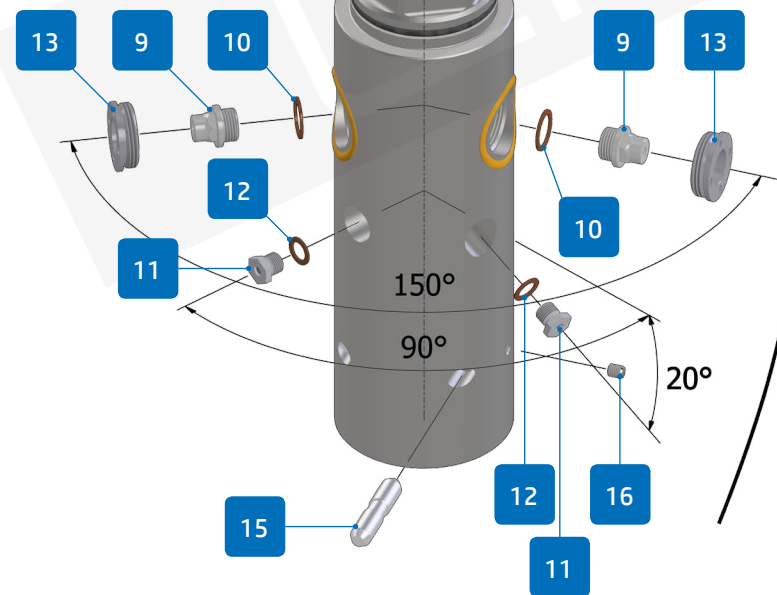
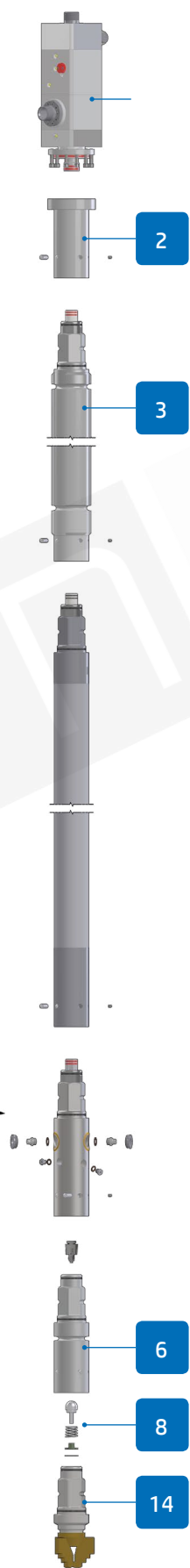
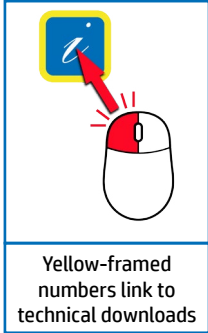
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8.1 HEX 80 JET - JET ESAGONO 80



8.1 - HEX80 JET - JET ESAGONO 80					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1B	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
2	J-EJET0755		ADATTATORE HP SWIVEL-ASTA JET HEX 80	HP SWIVEL-ROD JET HEX80 ADAPTER	10,7
3	J-EJET0132		ASTA D.114X1000 D.132 JET HEX80 MANDR. PASS. MAX COPPIA	D.114x1000 D.132 JET HEX80 ROD HOLLOW CLAMP MAX TORQUE	61,6
4	J-EJET3000		ASTA D.114X3000 JET HEX 80	D.114X3000 JET HEX 80 ROD	87
4	J-EJET2000		ASTA D.114X2000 JET HEX 80	D.114X2000 JET HEX 80 ROD	62
4	J-EJET1000		ASTA D.114X1000 JET HEX 80	D.114X1000 JET HEX 80 ROD	37
5	J-EJET4000		MONITOR JET HEX 80 150°	JET HEX80 150° NOZZLES HOLDER	22,6
6	J-EJET5000		PORTASCALPELLO JET HEX 80	JET HEX80 BIT ADAPTER	16,8
7	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
7	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
5	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
8	J-J0VNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
9	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
9	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
9	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
9	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
9	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
9	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
9	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
9	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
9	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
9	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
9	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
9	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
9	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
9	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
10	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
11	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
12	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
13	J-TRS600E2		TRILAMA STEP D.6"-152 HEX80	STEP DRAG BIT D.6"-152 HEX 80	8,1
13	J-TRH600E2		TRILAMA CHEVRON 6"-152 HEX80	CHEVRON DRAG BIT 6"-152 HEX 80	-
14	D-1383-1-4		PERBO BLOCCO ASTE	LOCKING PIN	0,07
15	5923M8X-10P125H45GR		VSTCE PIANA 8x10 1.25 UNI 5923 H45 GR	SET SCREW UNI 5923 M8x10	-
-	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-EJET3011		KIT GUARNIZ. ASTA JET HEX 80	JET HEX 80 ROD SEALS KIT	-
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pz)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-

8.2 HEX 80 JET 2 - JET 2 ESAGONO 80

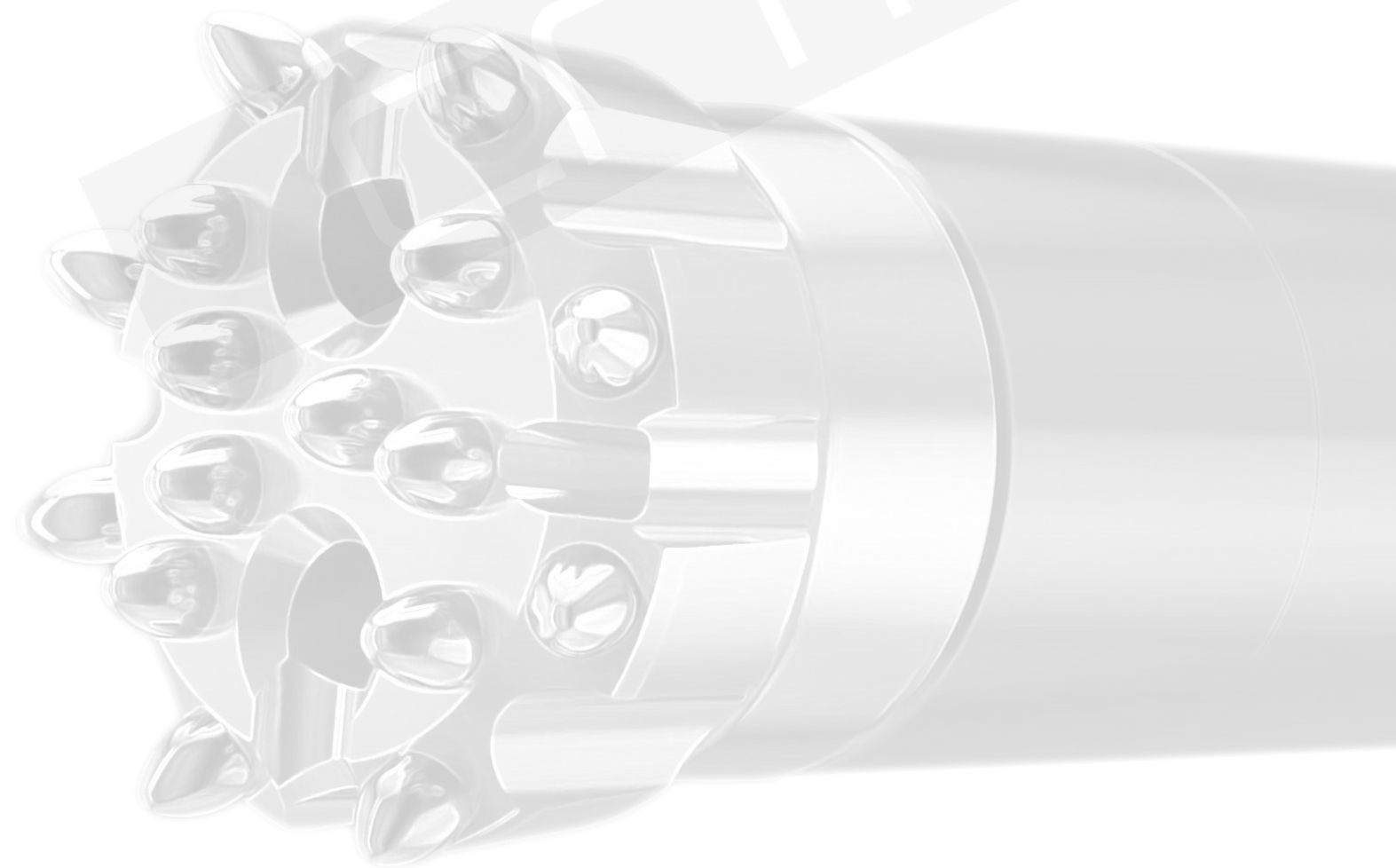


8.2 - HEX80 JET 2- JET 2 ESAGONO 80					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-AMHPSAD2-E		ADATTATORE HP SWIVEL-ASTA JET 2 HEX 80	HP SWIVEL-ROD JET 2 HEX80 ADAPTER	12,1
3	J-EC2H0132		ASTA D.114X1000 D.132 C2H HEX80 MANDRINO PASS. MASSIMA COPPIA	D.114x1000 D.132 C2H HEX80 ROD HOLLOW CLAMP MAX TORQUE	60,1
4	J-EC2H3000		ASTA D.114X3000 C2H HEX 80	D.114X3000 C2H HEX 80 ROD	112,3
4	J-EC2H2000		ASTA D.114X2000 C2H HEX 80	D.114X2000 C2H HEX 80 ROD	78,4
4	J-EC2H1000		ASTA D.114X1000 C2H HEX 80	D.114X1000 C2H HEX 80 ROD	43,8
5	J-EC2H4000		MONITOR C2H HEX 80 150°	C2H HEX80 150° NOZZLES HOLDER	21,3
6	J-EC2H5000		PORTASCALPELLO C2H HEX 80	C2H HEX80 BIT ADAPTER	16,8
7	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
7	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
7	J-J00TP200		VALVOLA AUT. JET 30BAR	JET CHECK VALVE 30BAR	0,2
8	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
9	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
9	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
9	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
9	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
9	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
9	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
9	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
9	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
9	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
9	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
9	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
9	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
9	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
9	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
10	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
11	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
12	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
13	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
14	J-TRS600E2		TRILAMA STEP D.6"-152 HEX80	STEP DRAG BIT D.6"-152 HEX 80	8,1
14	J-TRH600E2		TRILAMA CHEVRON 6"-152 HEX80	CHEVRON DRAG BIT 6"-152 HEX 80	-
15	D-1383-1-4		PERBO BLOCCO ASTE	LOCKING PIN	0,07
16	5923M8X-10P125H45GR		VSTCE PIANA 8x10 1.25 UNI 5923 H45 GR	SET SCREW UNI 5923 M8x10	-
-	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
-	J-EC2H3011		KIT GUARNIZ. ASTA C2H HEX 80	C2H HEX 80 ROD SEALS KIT	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEMENTO-ARIA (INLET 1"1/2) HYDRODYNAMIC	BEARINGS KIT GROUT-AIR (INLET 1"1/2) HYDRODYNAMIC	-
-	J-AMHPSWJ2-B		KIT GUARNIZIONI CEMENTO-ARIA (INLET 1"1/2) HYDRODYNAMIC	SEAL KIT GROUT-AIR (INLET 1"1/2) HYDRO-DYNAMIC	-
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pz)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-

9 JET WITH DTH - JET GROUTING CON MARTELLO FONDO FORO

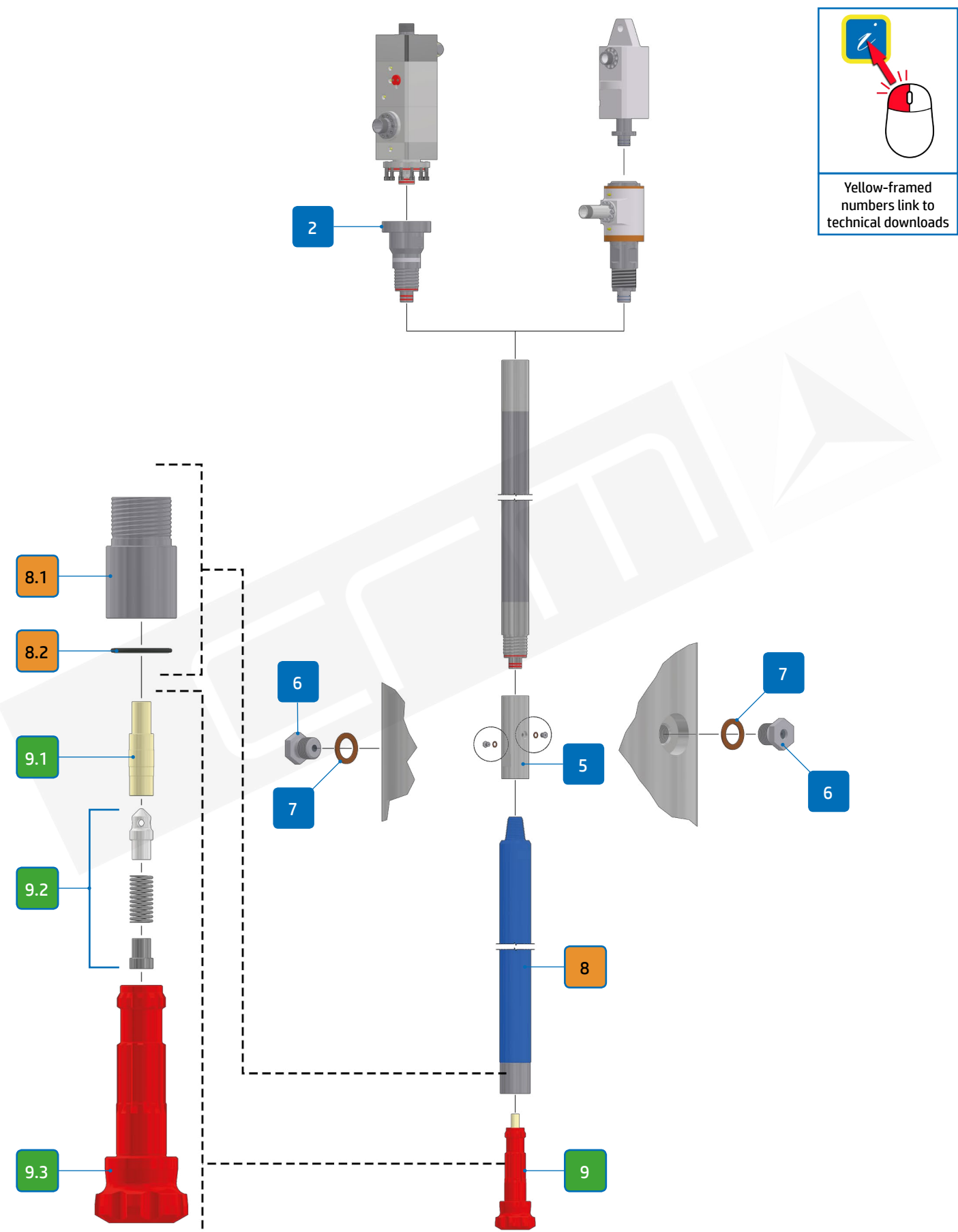
The CRM double and triple fluid jetting rods are suitable for DTH-drilling. These systems are suitable for single or double fluid treatments. This system employs high pressure resistant double steel rods. In the JET 1 system (single-fluid), air flows through the outer duct to power the hammer, while cement flows through the inner duct to the monitor nozzles. In the JET 2 (double fluid) system, a special type of monitor with an internal distributor is used. During the drilling step, the distributor opens only the outer air duct to power the hammer. During the jetting step, the increasing of cement pressure in the inner duct causes the distributor to shift, closing the passage to the hammer and opening the one to the air nozzles. The T3 system employs triple passage rods for double fluid treatments (one passage is used to operate the hammer). The complete system is CE certified.

Le aste bifluido e trifluido CRM possono essere utilizzate a rotopercolazione con martello fondo foro (DTH). I sistemi possono essere monofluido o bifluido. Si usano aste con doppio condotto in acciaio per alte pressioni. Nel sistema JET 1 (monofluido) nel condotto esterno passa l'aria per alimentare il martello, nel condotto interno passa il cemento che va agli ugelli del monitor. Nel sistema JET 2 (bifluido) si usa un tipo speciale di monitor con un distributore interno. Nella fase di perforazione il distributore apre solo il condotto esterno dell'aria per alimentare il martello. Nella fase di jet l'aumento di pressione del cemento nel condotto interno fa spostare il distributore chiudendo il passaggio al martello e aprendo quello agli ugelli dell'aria. Il sistema T3 prevede aste a triplo passaggio per eseguire trattamenti di jet grouting bifluido (con un condotto dedicato al passaggio del fluido per azionare il martello). Il sistema completo, è certificato CE.



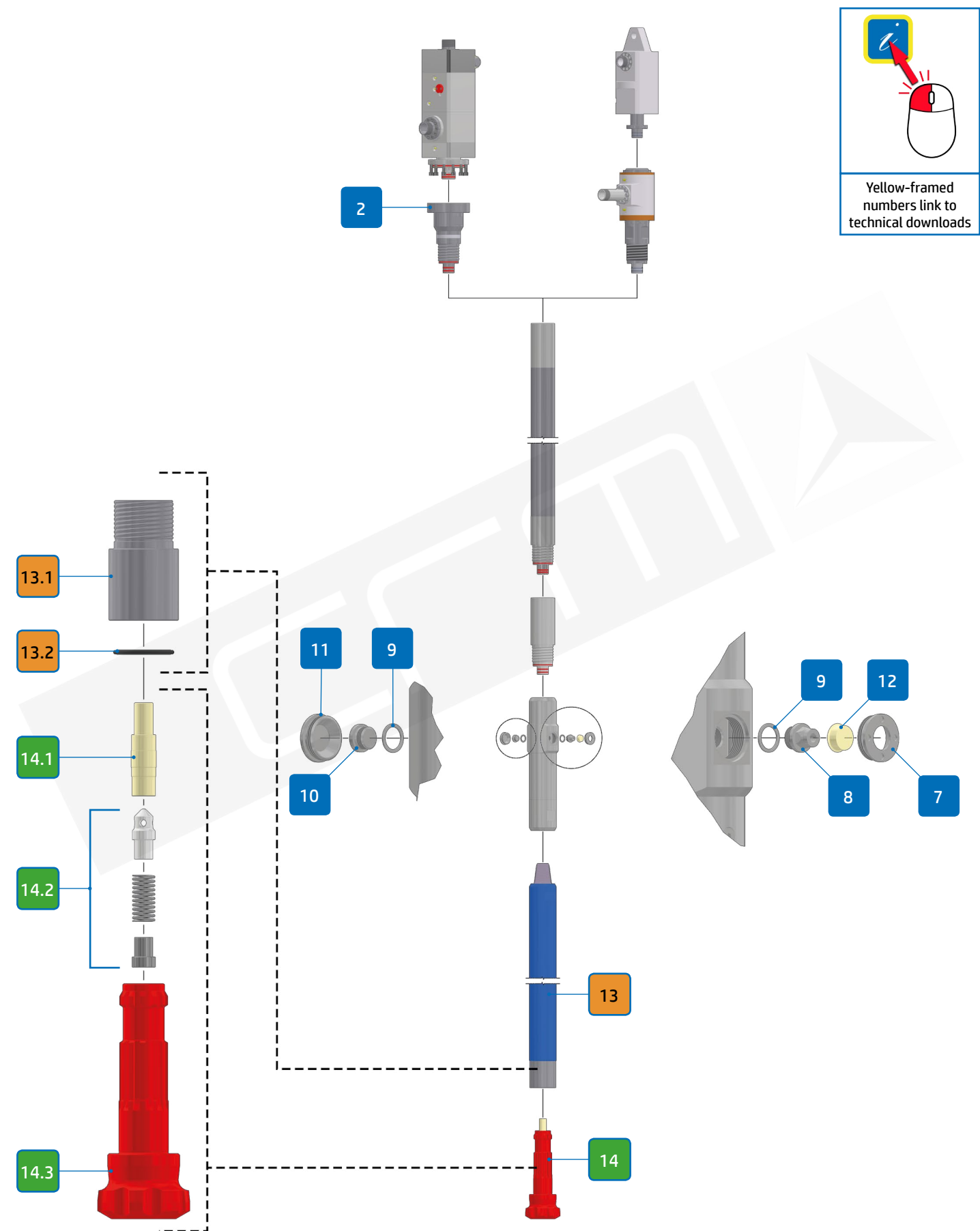
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9.1 D.90 DTH JET 1 (AIR HAMMER)



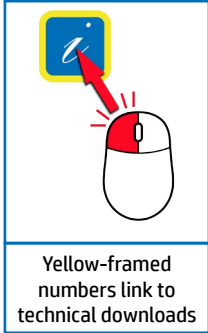
9.1 - D.90 DTH JET 1 (AIR HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS650		TESTA A.P. 410L/MIN-560BAR	H.P. SWIVEL 410L/MIN-560BAR	11
1B	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-WMHPSAC2D90		ADATTATORE TESTA HP J2 (1"-1/2) - ASTA D.90 C2	HP J2 SWIVEL J2 (1"-1/2)-ROD D.90 C2 ADAPTER	9,4
3	J-8C214550		TESTA ARIA C2	L.P. AIR SWIVEL C2	19
4	J-8C2S3000		ASTA D. 88.9X3000 C2 INTERNO ACCIAIO	ROD. D. 90X3000 C2 INNER STEEL	59,5
4	J-8C2S2000		ASTA D. 88.9X2000 C2 INTERNO ACCIAIO	ROD. D. 90X2000 C2 INNER STEEL	41
4	J-8C2S1000		ASTA D. 88.9X1000 C2 INTERNO ACCIAIO	ROD. D. 90X1000 C2 INNER STEEL	22,5
5	J-8C2DH402		MONITOR MARTELLIO JET DTH	JET DTH NOZZLES HOLDER	7,2
6	J-J00UC180		UGELLO JET D. 1.8	JET NOZZLE D. 1.8	0,02
6	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
6	J-J00UC220		UGELLO JET D. 2.2	JET NOZZLE D. 2.2	0,02
6	J-J00UC250		UGELLO JET D. 2.5	JET NOZZLE D. 2.5	0,02
6	J-J00UC300		UGELLO JET D. 3.0	JET NOZZLE D. 3.0	0,02
6	J-J00UC350		UGELLO JET D. 3.5	JET NOZZLE D. 3.5	0,02
6	J-J00UC400		UGELLO JET D. 4.0	JET NOZZLE D. 4.0	0,02
7	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	
8	J-DTHJET40-MD40		MARTELLIO JET 4" MD40	JET DTH HAMMER D. 4" MD40	
8.1	J-DTHJET40-TD40		AVANCILINDRO DTH JET 4" MINCON TD40	DTH JET CHUCK 4" MINCON TD40	3,8
8.2	MR-IG/R 0700		GUARN. DTH JET AVANCILINDRO	DTH JET CHUCK SEAL	-
9	J-DTHJETM2-TD40		BIT DTH JET D.130 TD40 CON VALVOLA NO RIT.	D.130 DTH JET BIT TD40 WITH NO RET. VALVE	
9.1	J-FOOTVALV-4B		FOOT VALVE DTH 4" JETTING	4" FOOT VALVE DTH JETTING	0,1
9.2	J-VALVEDTH-4		TESTA VALVOLA NON RITORNO PER AIR DTH 4"	4" AIR DTH NO-RET. VALVE HEAD	0,35
9.3	J-DTHJETM2		MOLLA Do=32 d=2,8 Lo=76	SPRING Do=32 d=2,8 Lo=76	
9.3	J-DTHJETM2F		BASE VALVOLA NON RITORNO PER AIR DTH 4"	4" AIR DTH NO-RET. VALVE BASE	
9.3	J-DTHJETM2		BIT DTH 4" JET TD40 D.130 CONCAVO CON SEDE VALVOLA NO RIT.	4" DTH JET BIT TD40 D.130 CONCAVE WITH NO-RET. VALVE HOUSING	-
9.3	J-DTHJETM2F		BIT DTH 4" JET TD40 D.130 PIANO CON SEDE VALVOLA NO RIT.	4" DTH JET BIT TD40 D.130 FLAT WITH NO-RET. VALVE HOUSING	-
-	J-8C2TS651		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-8C2TS652		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-8C214311		KIT GUARN. ASTA D. 88.9 C2	SEAL KIT ROD. C2	-
-	J-8C214551		KIT GUARN. TESTA B.P. C2	L.P. SWIVEL SEAL KIT	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEMENTO-ARIA (INLET 1"1/2) HYDRODYNAMIC	BEARINGS KIT GROUT-AIR (INLET 1"1/2) HYDRODYNAMIC	-
-	J-AMHPSWJ2-B		KIT GUARNIZIONI CEMENTO-ARIA (INLET 1"1/2) HYDRODYNAMIC	SEAL KIT GROUT-AIR (INLET 1"1/2) HYDRO-DYNAMIC	-
-	PN-602-33		SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pz)	SEAL HYDRODYNAMIC PACKING 50.0 MM I.D. (3 pcs)	-

9.2 D.90 DTH JET 2 (AIR HAMMER)

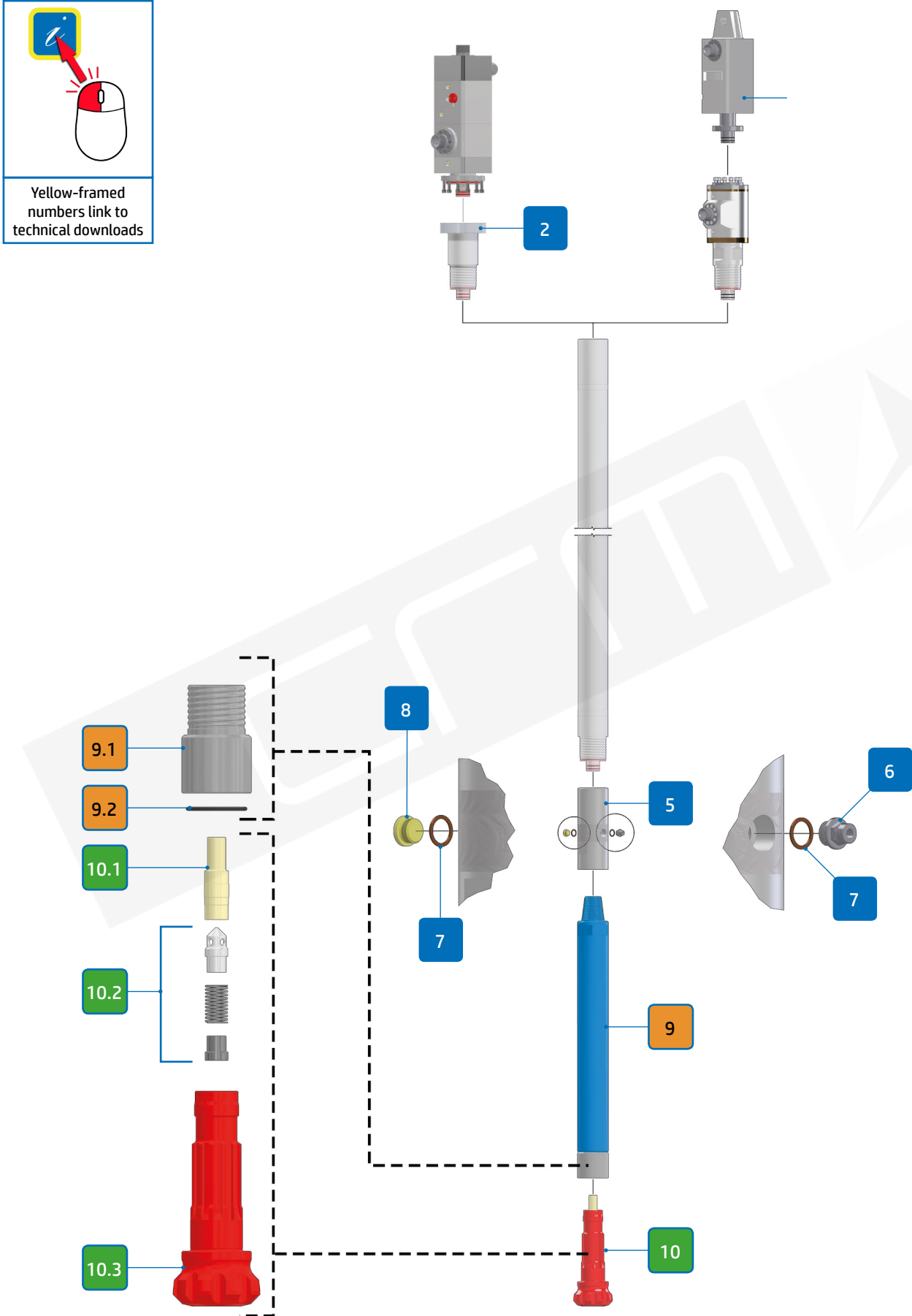


9.2 - D.90 DTH JET 2 (AIR HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS650		TESTA A.P. 410L/MIN-560BAR	H.P. SWIVEL 410L/MIN-560BAR	11
1B	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-WMHPSAC2D90		ADATTATORE TESTA HP J2 (1"-1/2) - ASTA D.90 C2	HP J2 SWIVEL J2 (1"-1/2)-ROD D.90 C2 ADAPTER	9,4
3	J-8C214550		TESTA ARIA C2	L.P. AIR SWIVEL C2	19
4	J-8C2S3000		ASTA D. 88.9X3000 C2 INTERNO ACCIAIO	ROD. D. 90X3000 C2 INNER STEEL	59,5
4	J-8C2S2000		ASTA D. 88.9X2000 C2 INTERNO ACCIAIO	ROD. D. 90X2000 C2 INNER STEEL	41
4	J-8C2S1000		ASTA D. 88.9X1000 C2 INTERNO ACCIAIO	ROD. D. 90X1000 C2 INNER STEEL	22,5
5	J-8C214702-H		RACCORDO D.90 C2 C/V NO RIT. HD	HD AIR ADAPTER D. 90 C2 W/NO RET. VAL.	5,6
6	J-8C214461		MONITOR C2 AIR DTH	NOZZLE HOLDER AIR DTH C2	23
7	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
7	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
8	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
8	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
8	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
8	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
8	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
8	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
8	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
8	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
8	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
8	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
8	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
8	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
9	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
10	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
11	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
12	J-J33RPLUG		TAPPO A PERDERE D.23	D.23 THROW AWAY PLUG	-
13	J-DTHJET40-MD40		MARTELLIO JET 4" MD40	JET DTH HAMMER D. 4" MD40	-
13.1	J-DTHJET40-TD40		AVANCILINDRO DTH JET 4" MINCON TD40	DTH JET CHUCK 4" MINCON TD40	3,8
13.2	MR-IG/R 0700		GUARN. DTH JET AVANCILINDRO 4"	4" DTH JET CHUCK SEAL	-
14	J-DTHJTM2-TD40		BIT DTH JET D.130 TD40 CON VALVOLA NO RIT.	D.130 DTH JET BIT TD40 WITH NO RET. VALVE	-
14.1	J-FOOTVALV-4B		FOOT VALVE DTH 4" JETTING	4" FOOT VALVE DTH JETTING	0,1
14.2	J-VALVEDTH-4		TESTA VALVOLA NON RITORNO PER AIR DTH 4"	4" AIR DTH NO-RET. VALVE HEAD	0,35
			MOLLA Do=32 d=2,8 Lo=76	SPRING Do=32 d=2,8 Lo=76	
			BASE VALVOLA NON RITORNO PER AIR DTH 4"	4" AIR DTH NO-RET. VALVE BASE	
14.3	J-DTHJTM2		BIT DTH 4" JET TD40 D.130 CONCAVO	4" DTH JET BIT TD40 D.130 CONCAVE	-
14.3	J-DTHJTM2F		BIT DTH 4" JET TD40 D.130 PIANO	4" DTH JET BIT TD40 D.130 FLAT	-
-	J-8C2TS651		KIT RICAMBI TESTA A.P.	H.P. SWIVEL SPARE PART KIT	-
-	J-8C2TS652		KIT GUARN. TESTA A.P.	H.P. SWIVEL SEAL KIT	-
-	J-8C214311		KIT GUARN. ASTA D. 88.9 C2	SEAL KIT ROD. C2	-
-	J-8C214551		KIT GUARN. TESTA B.P. C2	L.P. SWIVEL SEAL KIT	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEM.-AIR (1"1/2) HYDRODYN.	BEARINGS KIT GROUT-AIR (1"1/2) HYDRODYN.	-
-	J-AMHPSWJ2-B		KIT GUARN. CEM.-ARIA (1"1/2) HYDRODYN.	SEAL KIT GROUT-AIR (1"1/2) HYDRODYNAMIC	-
-	PN-602-33		SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pz)	SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pcs)	-

9.3 D.114 DTH JET 1 (AIR HAMMER)

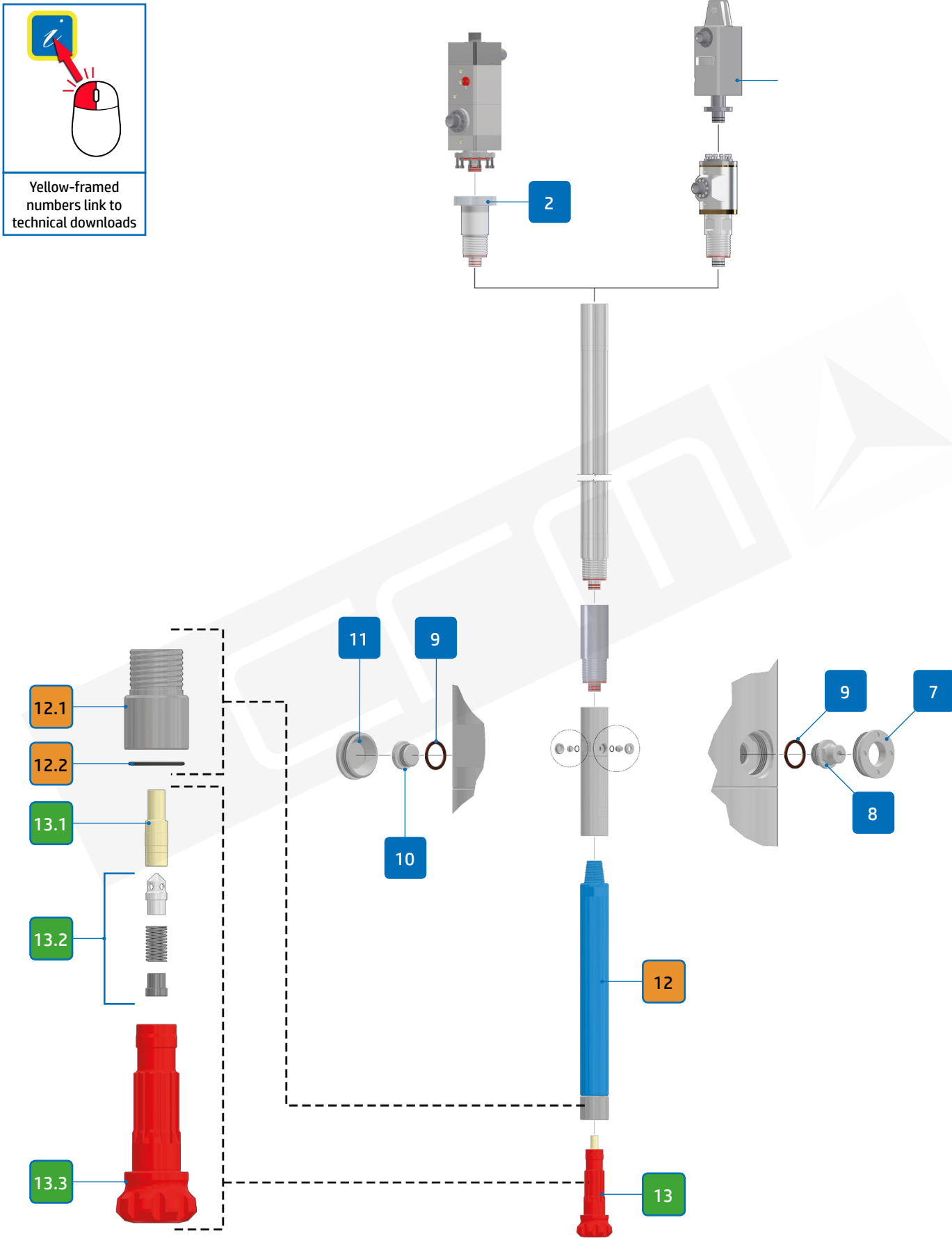
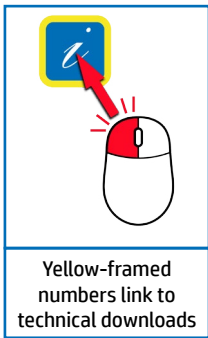


Yellow-framed numbers link to technical downloads



9.3 - D.114 DTH JET 1 (AIR HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1B	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
1C	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-AMHPSAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 C2	HP D2 SWIVEL / ROD. D.114 C2 ADAPTER	11,2
3	J-8C212500		TESTA ARIA B.P. C2	AIR L.P. SWIVEL C2	31,4
4	J-1C212530		ASTA D. 114X3000 C2 INTERNO ACCIAIO	ROD. D. 114X3000 C2 INNER STEEL	78
4	J-1C212520		ASTA D. 114X2000 C2 INTERNO ACCIAIO	ROD. D. 114X2000 C2 INNER STEEL	54
4	J-1C212510		ASTA D. 114X1000 C2 INTERNO ACCIAIO	ROD. D. 114X1000 C2 INNER STEEL	31
5	J-1C212485-DTH		MONITOR D.114 C2/JET1 DTH 5" JET RIPORTO 66 HRC	NOZZLE HOLDER D.114 C2/JET1 DTH 5" JET HARD COATING 66 HRC	14,8
6	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
6	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
6	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
6	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
6	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
6	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
6	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
6	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
6	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
6	J-8C214963-H		UGELLO CEM. D. 6.3 C2 HEAVY DUTY	GROUT NOZZLE D. 6.3 C2 HEAVY DUTY	0,18
6	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
6	J-8C214967-H		UGELLO CEM. D. 6.7 C2 HEAVY DUTY	GROUT NOZZLE D. 6.7 C2 HEAVY DUTY	0,18
6	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
6	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
7	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
8	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
9	J-DTHJET50-MP50		MARTELLO DTH JET 5" MP50 QL5 3"1/2 AR M	DTH JET HAMMER 5" MP50 QL5 3"1/2 AR M	-
9.1	J-DTHJET50-QL50		AVANCILINDRO DTH JET MINCON QL50	CHUCK DTH JET 5" MINCON QL50	5,2
9.2	MR-IG/R 0900		GUARN. DTH JET AVANCILINDRO 5"	5" DTH JET CHUCK SEAL	-
10	J-DTHJETM4-QL50		BIT DTH JET D.150 QL50 CON VALVOLA NO RIT.	D.150 DTH JET BIT QL50 WITH NO RET. VALVE	-
10.1	J-FOOTVALV-5B		FOOT VALVE BIT DTH 5" JETTING	FOOT VALVE BIT DTH 5" JETTING	0,1
10.2	J-VALVEDTH-5		TESTA VALVOLA NON RITORNO PER AIR DTH 5"	5" AIR DTH NO-RET. VALVE HEAD	0,5
			MOLLA Do=39 d=2,8 Lo=76	SPRING Do=39 d=2,8 Lo=76	
10.3	D-1730-28		BASE VALVOLA NON RITORNO PER AIR DTH 5"	5" AIR DTH NO-RET. VALVE BASE	-
			DTH 5" JET BIT QL50 D.150 CON SEDE VALVO-LA NO-RIT. CONCAVO	DTH 5" JET BIT QL50 D.150 W/H NO RET. VALVE CONCAVE	
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-8C212501		KIT GUARN. TESTA B.P. C2	AIR L.P. SWIVEL SEALS KIT	-
-	J-1C212311		KIT GUARN. ASTA D. 114 C2	ROD SEALS KIT	-
-	K35 P 93.4X97.9X3.5		GUARNIZIONE ASTA ESTERNA D.114 C2	OUTER DUCT ROD SEAL D.114 C2	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEM.-AIR (1"1/2) HYDRODYN.	BEARINGS KIT GROUT-AIR (1"1/2) HYDRODYN.	-
-	J-AMHPSWJ2-B		KIT GUARN. CEM.-ARIA (1"1/2) HYDRODYN.	SEAL KIT GROUT-AIR (1"1/2) HYDRODYNAMIC	-
-	PN-602-33		SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pz)	SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pcs)	-

9.4 D.114 DTH JET 2 (AIR HAMMER)

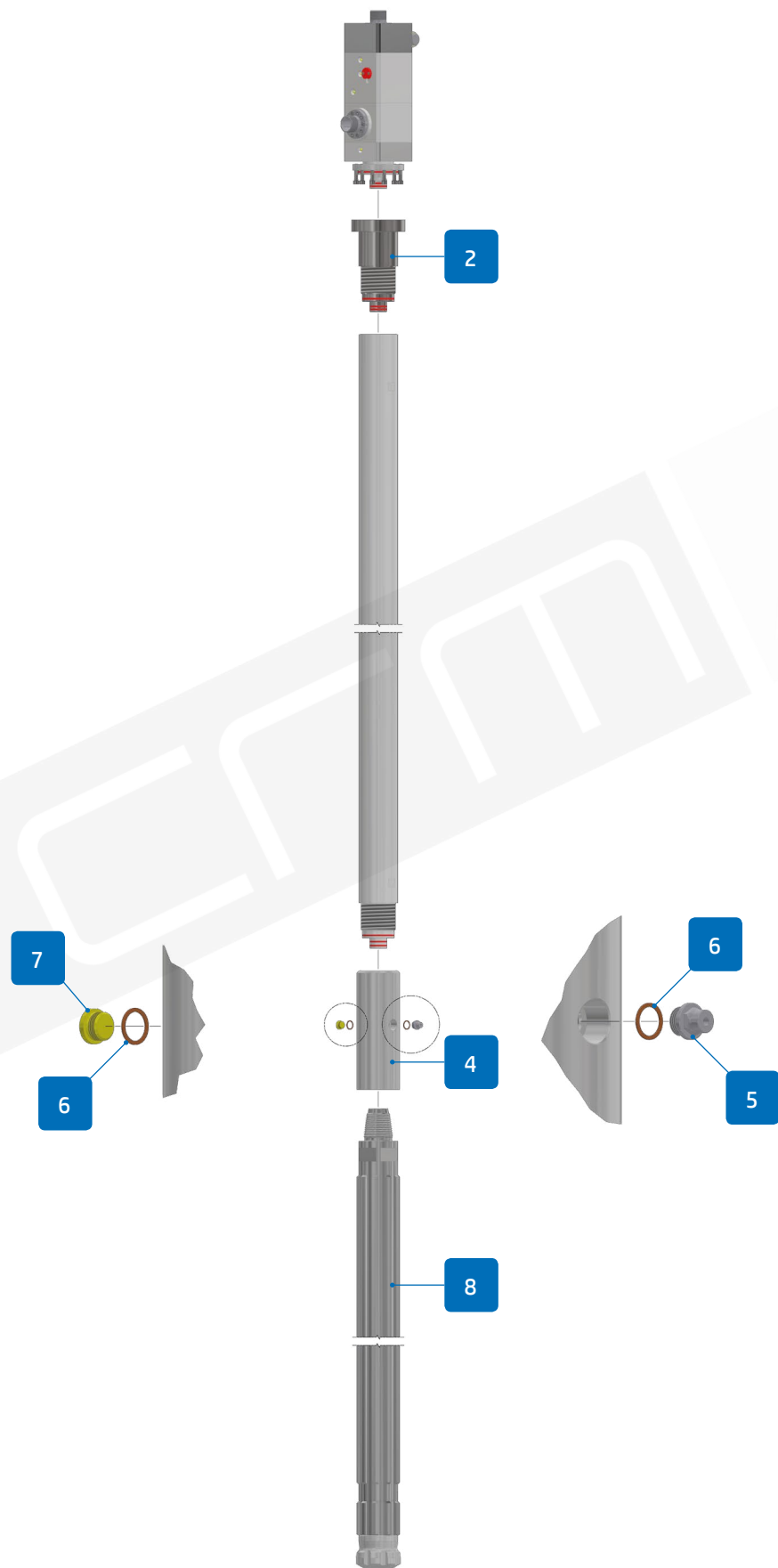


9.4 - D.114 DTH JET 2 (AIR HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1B	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
1C	J-AMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-AMHPSAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 C2	HP D2 SWIVEL / ROD. D.114 C2 ADAPTER	11,2
3	J-8C212500		TESTA ARIA B.P. C2	AIR L.P. SWIVEL C2	31,4
4	J-1C212530		ASTA D. 114X3000 C2 INTERNO ACCIAIO	ROD. D. 114X3000 C2 INNER STEEL	78
4	J-1C212520		ASTA D. 114X2000 C2 INTERNO ACCIAIO	ROD. D. 114X2000 C2 INNER STEEL	54
4	J-1C212510		ASTA D. 114X1000 C2 INTERNO ACCIAIO	ROD. D. 114X1000 C2 INNER STEEL	31
5	J-1C212702		RACCORDO CON VALVOLA	AIR ADAPTER H.D. W/NO RET. VAL.	10,9
6	J-1C212461-XL		MONITOR C2 D.114 DTH GROUT MASTER 5" XL	NOZ. H. C2 D.114 DTH GROUT MASTER 5" XL	29,2
7	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
7	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
8	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
8	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
8	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
8	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
8	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
8	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
8	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
8	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
8	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
8	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
8	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
8	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
9	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
10	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
11	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
12	J-DTHJET50-MP50		MARTELLO DTH JET 5" MP50 QL5 3"1/2 AR M	DTH JET HAMMER 5" MP50 QL5 3"1/2 AR M	-
12.1	J-DTHJET50-QL50		AVANCILINDRO DTH JET MINCON QL50	CHUCK DTH JET 5" MINCON QL50	5,2
12.2	MR-IG/R 0900		GUARN. DTH JET AVANCILINDRO 5"	5" DTH JET CHUCK SEAL	-
13	J-DTHJTM4-QL50		BIT DTH JET D.150 QL50 CON VALVOLA NO RIT.	D.150 DTH JET BIT QL50 WITH NO RET. VALVE	-
13.1	J-FOOTVALV-5B		FOOT VALVE BIT DTH 5" JETTING	FOOT VALVE BIT DTH 5" JETTING	0,1
13.2	J-VALVEDTH-5		TESTA VALVOLA NON RITORNO PER AIR DTH 5"	5" AIR DTH NO-RET. VALVE HEAD	-
			MOLLA Do=39 d=2,8 Lo=76	SPRING Do=39 d=2,8 Lo=76	0,5
			BASE VALVOLA NON RITORNO PER AIR DTH 5"	5" AIR DTH NO-RET. VALVE BASE	-
13.3	D-1730-28		DTH 5" BIT QL50 D.150 C/SEDE VALV. NO RET	DTH 5" BIT QL50 D.150 W/H NO RET. VALVE	-
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-8C212501		KIT GUARN. TESTA B.P. C2	AIR L.P. SWIVEL SEALS KIT	-
-	J-1C212311		KIT GUARN. ASTA D. 114 C2	ROD SEALS KIT	-
-	K35 P 93.4X97.9X3.5		GUARNIZIONE ASTA ESTERNA D.114 C2	OUTER DUCT ROD SEAL D.114 C2	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEM.-AIR (1"1/2) HYDRODYN.	BEARINGS KIT GROUT-AIR (1"1/2) HYDRODYN.	-
-	J-AMHPSWJ2-B		KIT GUARN. CEM.-ARIA (1"1/2) HYDRODYN.	SEAL KIT GROUT-AIR (1"1/2) HYDRODYNAMIC	-
-	PN-602-33		SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pz)	SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pcs)	-

9.5 D.114 DTH JET 1 (WATER HAMMER)



Yellow-framed numbers link to technical downloads

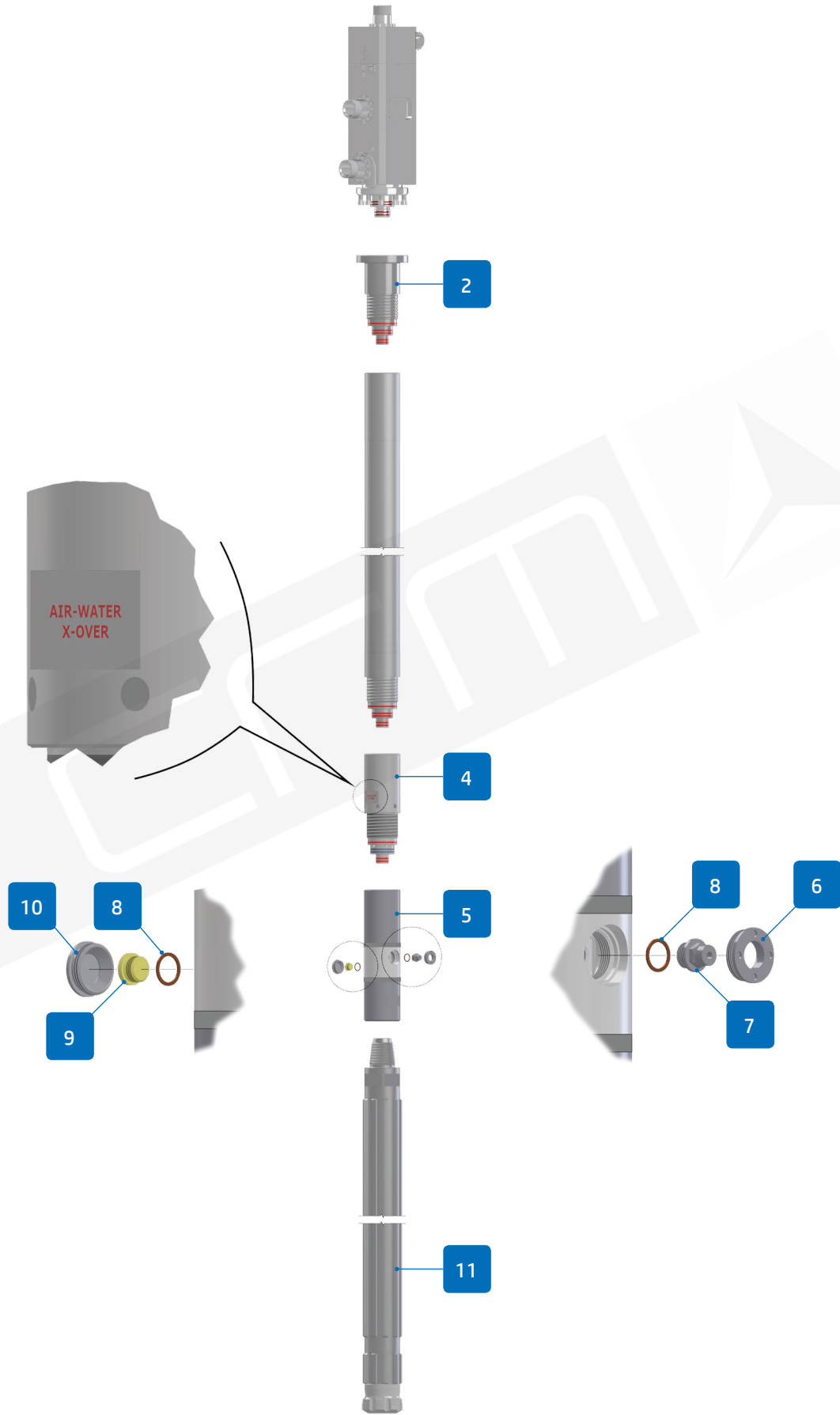


9.5 - D.114 DTH JET 1 (WATER HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-WMHPSWJ2		HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	HP J2 SWIVEL HYDRODYN. SEALS J2 (1"-1/2)	53,8
2	J-WMHPHAD2		ADATTAT. SWIVEL HP D2/ASTA D.114 D2	HP D2 SWIVEL / ROD. D.114 D2 ADAPTER	11
3	J-W114D230		ASTA D.114 D2 L.3000	D.114 D2 ROD L.3000	103,5
3	J-W114D220		ASTA D.114 D2 L.2000	D.114 D2 ROD L.2000	71
3	J-W114D210		ASTA D.114 D2 L.1000	D.114 D2 ROD L.1000	38
4	J-W114D2M1		MONITOR D.114 D2 DTH W120	NOZZLE HOLDER D.114 D2 DTH W120	20
5	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
5	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
5	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
5	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
5	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
5	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
5	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
5	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
5	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
5	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
5	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
5	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
6	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
7	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
8	-		MARTELLO AD ACQUA 5"	5" WATER HAMMER	-
-	J-AMHPSWJ2-A		KIT CUSCINETTI CEM.-AIR (1"1/2) HYDRODYN.	BEARINGS KIT GROUT-AIR (1"1/2) HYDRODYN.	-
-	J-WMHPSWJ2-B		KIT GUARN. CEM.-ACQUA (1"1/2) HYDRODYN.	SEAL KIT GROUT-WATER (1"1/2) HYDRODYN.	-
-	PN-602-33		SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pz)	SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pcs)	-
-	J-W114D231		KIT GUARN. ASTA D. 114 D2	D2 ROD SEALS KIT	-

9.6 D.114 T3 DTH JET 2 (WATER HAMMER)



Yellow-framed numbers link to technical downloads



9.6 - D.114 T3 DTH JET 2 (WATER HAMMER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-WMHP54J3		MODULAR HP SWIVEL J3 (INLET 2")	MODULAR HP SWIVEL J3 (INLET 2")	69,4
2	J-XMHPA4C3-114		ADATTATORE TESTA HP J3-ASTE D.114 T3	SWIVEL J3-D.114 T3 ROD ADAPTER	11,9
3	J-W114T330		ASTA D. 114X3000 T3	ROD D. 114X3000 T3 JET	132,5
3	J-W114T320		ASTA D. 114X2000 T3	ROD D. 114X2000 T3 JET	90
3	J-W114T310		ASTA D. 114X1000 T3	ROD D. 114X1000 T3 JET	47
4	J-W114T3AB		X-OVER ARIA-ACQUA D.114 T3	X-OVER AIR-WATER D.114 T3	13,6
5	J-W114T360		MONITOR D.114 T3 PER JET C2 + DTH	NOZZLE HOLDER D.114 T3 JET C2 + DTH	19,4
6	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
6	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
7	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
7	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
7	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
7	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
7	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
7	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
7	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
7	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
7	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
7	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
7	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
7	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
8	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
9	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
10	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
11	-		MARTELLO AD ACQUA 5"	5" WATER HAMMER	-
-	J-WMHP54J3-A		KIT CUSCINETTI HP SWIVEL J3	J3 HP SWIVEL BEARINGS KIT	-
-	J-WMHP54J3-B		KIT GUARN. HP SWIVEL J3 ARIA E SERVICE	J3 HP SWIVEL SEALS KIT AIR AND SERVICE	-
-	602-25		GUARNIZIONE CEMENTO 2,75"	2,75" GROUT SEAL	-
-	J-W114T331		KIT GUARNIZIONI ASTA D.114 T3	D.114 T3 ROD SEALS KIT	-

10 JET FOR TUNNELLING - JET GROUTING PER POSIZIONATORI

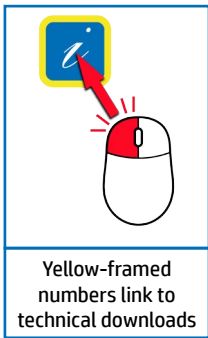
Jet-grouting equipment for tunnelling rig, is specifically designed for consolidating the weak/unstable soil ahead of the tunnel face before the excavation.

Attrezzature jet-grouting adatte a lavorare su posizionatori, per consolidare il terreno sciolto/instabile davanti al fronte di gallerie, prima dello scavo.

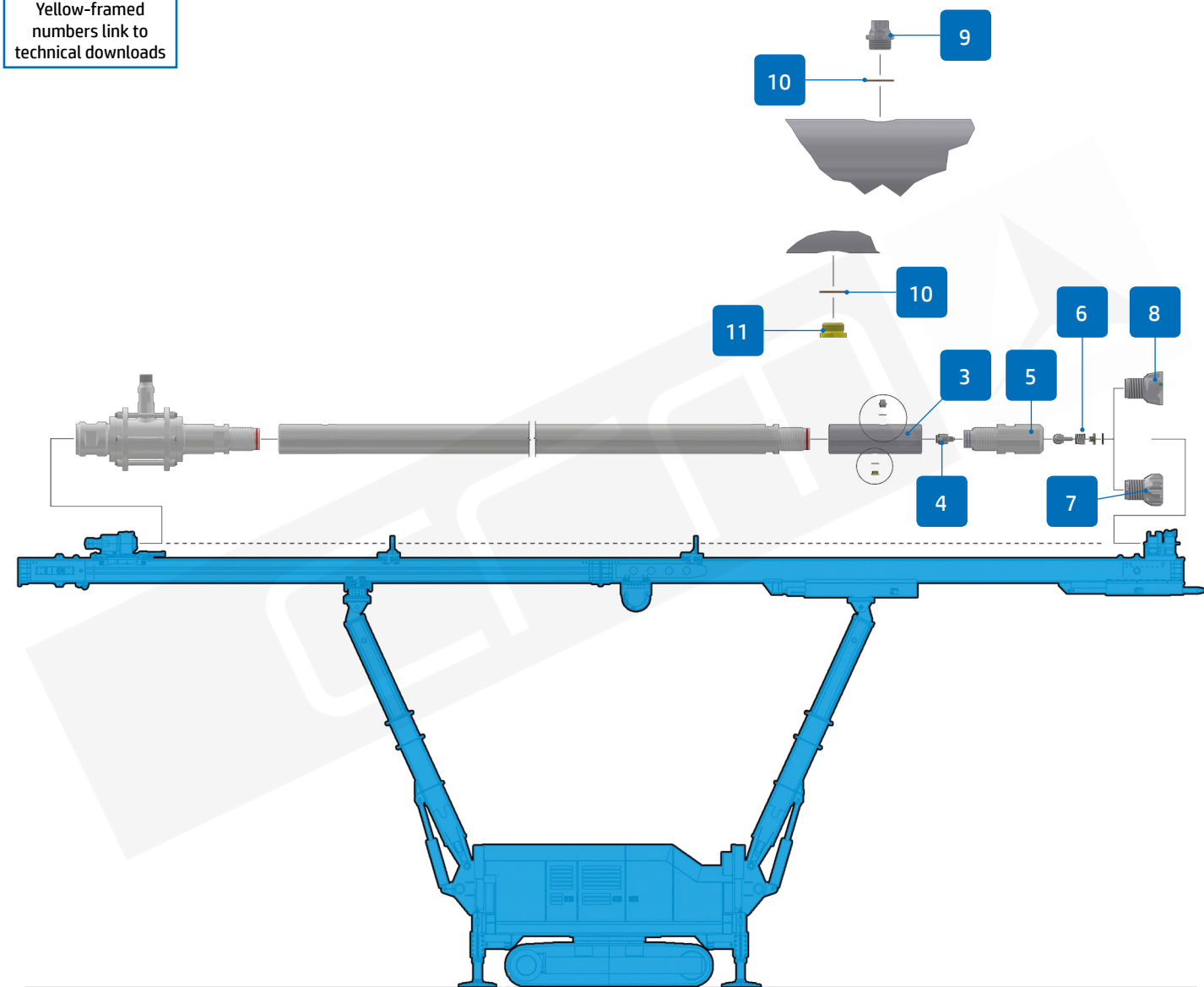
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10.1 D.114 JET 1 TUNNELLING (DRIFTER)

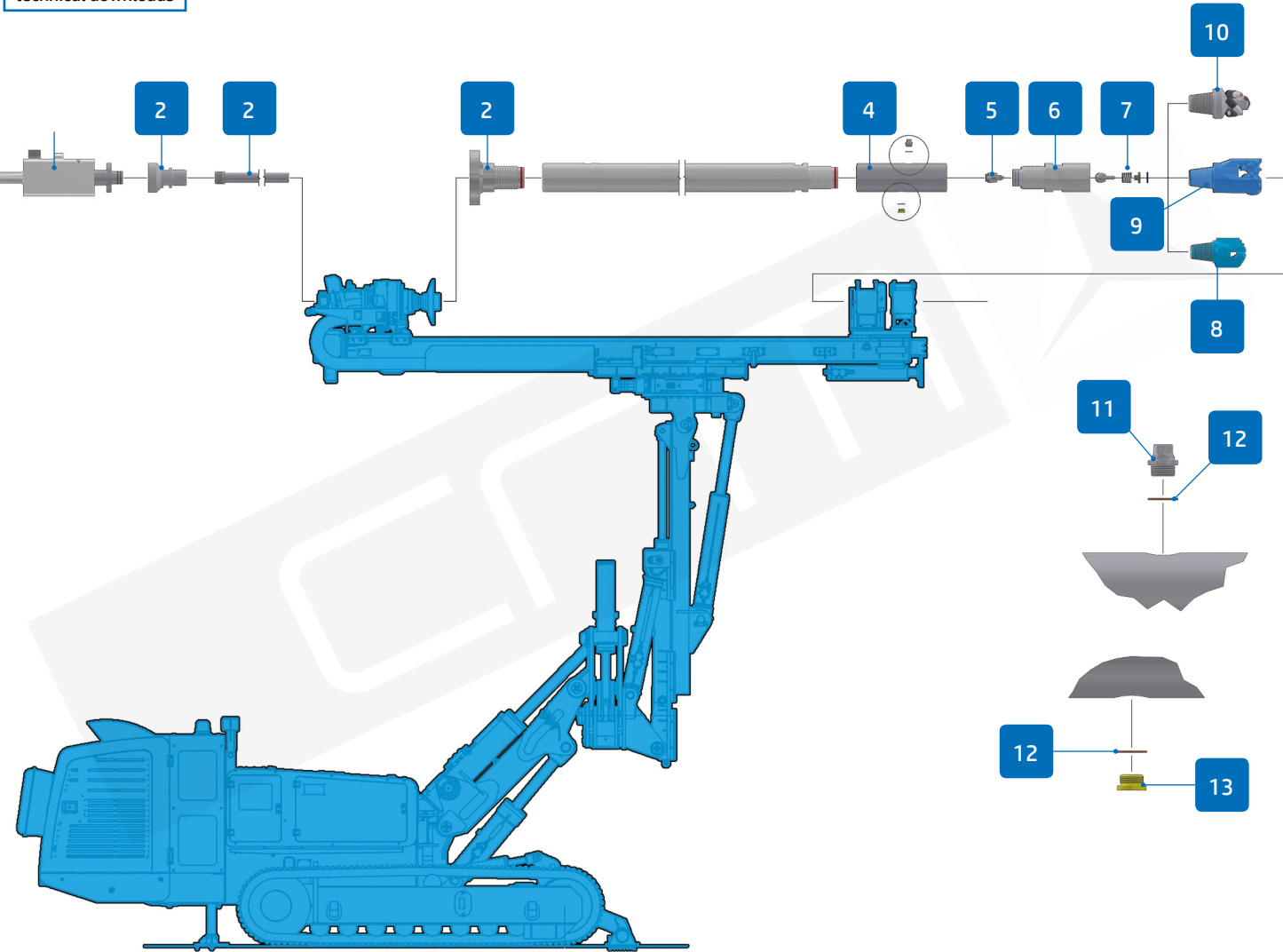
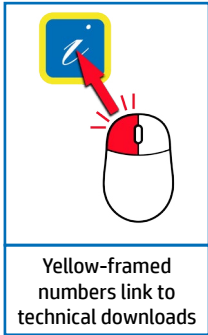


Yellow-framed numbers link to technical downloads



10.1 - D.114 JET 1 TUNNELLING (DRIFTER)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-11JRPC90		H.P. SWIVEL D.114 JET. R.P. C90 D.114 RP	H.P. SWIVEL D.114 JET. R.P. C90 D.114 RP	77,8
1	J-11JRPH90		H.P. SWIVEL D.114 JET. R.P. H90-R90 D.114 RP	H.P. SWIVEL D.114 JET. R.P. H90-R90 D.114 RP	78
2	J-11JRP100-O		ASTA D.114X1000 JET RP (TUNNELLING)	D.114X1000 JET RP ROD (TUNNELLING)	43
2	J-11JRP200-O		ASTA D.114X2000 JET RP (TUNNELLING)	D.114X2000 JET RP ROD (TUNNELLING)	76
2	J-11JRP300-O		ASTA D.114X3000 JET RP (TUNNELLING)	D.114X3000 JET RP ROD (TUNNELLING)	109,5
3	J-11JRP402		MONITOR D.114 JETT RP 2 UGELLI	NOZZLE HOLDER D.114 JETT RP 2 NOZ.	15,3
4	J-J01TP200		VALVOLA AUT. JET 30 BAR	AUT. JET VALVE 30 BAR	0,3
4	J-J01TP212		VALVOLA AUT. JET 120 BAR	AUT. JET VALVE 120 BAR	0,3
4	J-J01TP270		VALVOLA AUT. JET 70 BAR	AUT. JET VALVE 70 BAR	0,3
5	J-11JRP750		PORTASCALP. D.114 JET RP CON V. NO-RIT.	BIT ADAPT. D.114 JET RP WITH NO-RET VALVE	14,9
6	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
7	J-KBIT0130		BIT D.130 A BOTTONI FIL D.78	BUTTONS BIT D.130 D.78 THREAD	7
8	J-KBIT0130-C		BIT A CROCE D.130 FIL. D.78	CROSS BIT D.130 D.78 THREAD	5,7
9	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
9	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
9	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
9	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
9	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
9	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
9	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
9	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
9	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
9	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
9	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
9	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
10	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
11	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-11JRPC90-K		KIT GUARNIZIONI HP SWIVEL RP JET	HP SWIVEL ROTOPER. JET SEALS KIT	-
-	J-11JRP311		KIT GUARN. ASTA D 114 JET RP	D. 114 JET RP ROD SEALS KIT	-

10.2 D.114 JET 1 TUNNELLING (ROTARY)



10.2 - D.114 JET 1 TUNNELLING (ROTARY)					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1A	J-8C2TS700		TESTA A.P. 700L/MIN- 560BAR	H.P. SWIVEL 700L/MIN-560BAR	23,5
1B	J-8C2TS70K		TESTA A.P. GUARN. IDRODIN. ROTANTI	H.P. SWIVEL ROTATING HYDRODYNAMIC SEALS	36,3
2	D-1727-XXX (*)		KIT ROTARY D.114 JET 1 / SWIVEL HP	KIT ROTARY D.114 JET 1 / SWIVEL HP	-
3	J-11JRP100-O		ASTA D.114X1000 JET RP (TUNNELLING)	D.114X1000 JET RP ROD (TUNNELLING)	43
3	J-11JRP200-O		ASTA D.114X2000 JET RP (TUNNELLING)	D.114X2000 JET RP ROD (TUNNELLING)	76
3	J-11JRP300-O		ASTA D.114X3000 JET RP (TUNNELLING)	D.114X3000 JET RP ROD (TUNNELLING)	109,5
4	J-11JRP402		MONITOR D.114 JETT RP 2 UGELLI	NOZZLE HOLDER D.114 JETT RP 2 NOZ.	15,3
5	J-J01TP200		VALVOLA AUT. JET 30 BAR	AUT. JET VALVE 30 BAR	0,3
5	J-J01TP212		VALVOLA AUT. JET 120 BAR	AUT. JET VALVE 120 BAR	0,3
5	J-J01TP270		VALVOLA AUT. JET 70 BAR	AUT. JET VALVE 70 BAR	0,3
6	J-11JRP753		PORTASCALP. D.114 JET RP C/V. 3"-1/2 A.R. F	BIT ADAPT. D.114 JET RP W/VAL. 3"-1/2 A.R. F	14,8
7	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
8	MR-TRSTE600A		TRILAMA STEP D. 6" 3"-1/2 A.R. M	DRAG BIT D. 6" 3"-1/2 A.R. M	-
9	MR-TRICO600		TRICONO D. 6" L2 3"-1/2 A.R. M	ROCK BIT D. 6" L2 3"-1/2 A.R. M	-
10	CLAWBIT600		CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	CLAW-BIT D. 152 (6") 3"-1/2 A.R. M.	-
11	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
11	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
11	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
11	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
11	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
11	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
11	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
11	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
11	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
11	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
11	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
11	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
12	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
13	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-8C2TS701		KIT RICAMBI TESTA A.P. J-8C2TS700	SWIVEL SPARE KIT J-8C2TS700	-
-	J-8C2TS702		KIT GUARNIZIONI TESTA A.P. J-8C2TS700	SWIVEL SEALS KIT J-8C2TS700	-
-	J-8C2TS70K-A		KIT CUSCINETTI HYDRODYNAMIC HP SWIVEL	HP HYDRODYNAMIC SWIVEL BEARINGS KIT	-
-	J-8C2TS70K-B		KIT GUARN. HP HYDRODYN. SWIVEL E SERVICE	SEALS KIT HP HYDRODYN. SW. AND SERVICE	-
-	J-11JRP311		KIT GUARN. ASTA D 114 JET RP	D. 114 JET RP ROD SEALS KIT	-
-	PN-602-33		SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pz)	SEAL HYDRODYN. PACK 50.0 MM I.D. (3 pcs)	-

(*) The kit code depends on the customer's machine type and the specific configuration made for it.

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11 ROTOPERCUSSION JET - JET ROTOPERCUSSIONE

Rotopercussion drilling system. This system is suitable for mono fluid or double-fluid jetting.

In mono fluid system a jet of cement grout breaks-up and mixes the soil.

In double fluid system a jet of cement grout and air breaks-up and mixes the soil.

The nozzles are designed so that the air-jet forms a shield all around the grout jet. This has the result of enhancing the grout jet cutting power and getting larger columns of consolidated soil.

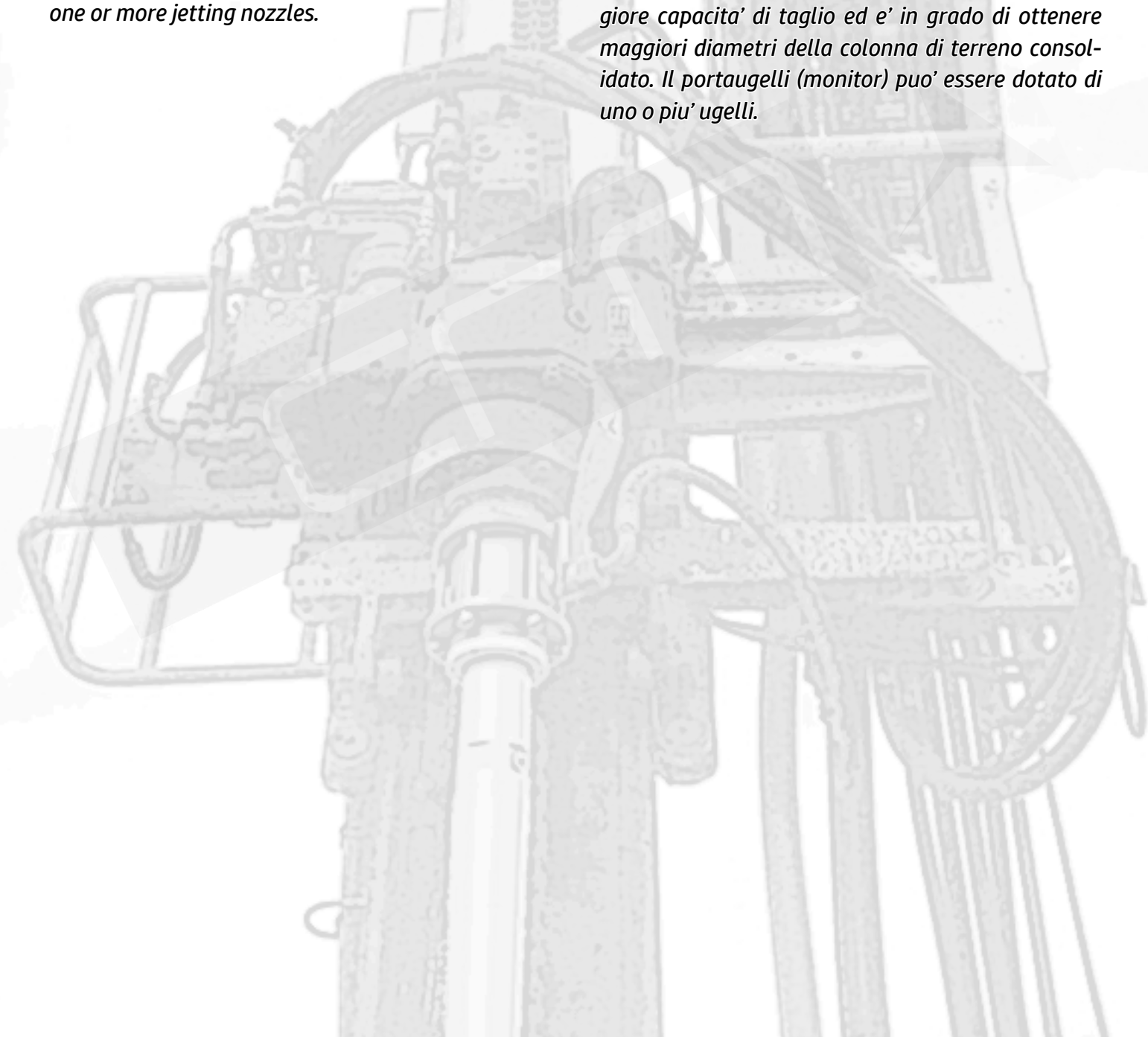
The nozzles holder (monitor) can be equipped with one or more jetting nozzles.

Sistema di perforazione a rotopercolazione. Il sistema può essere monofluido o bifluido.

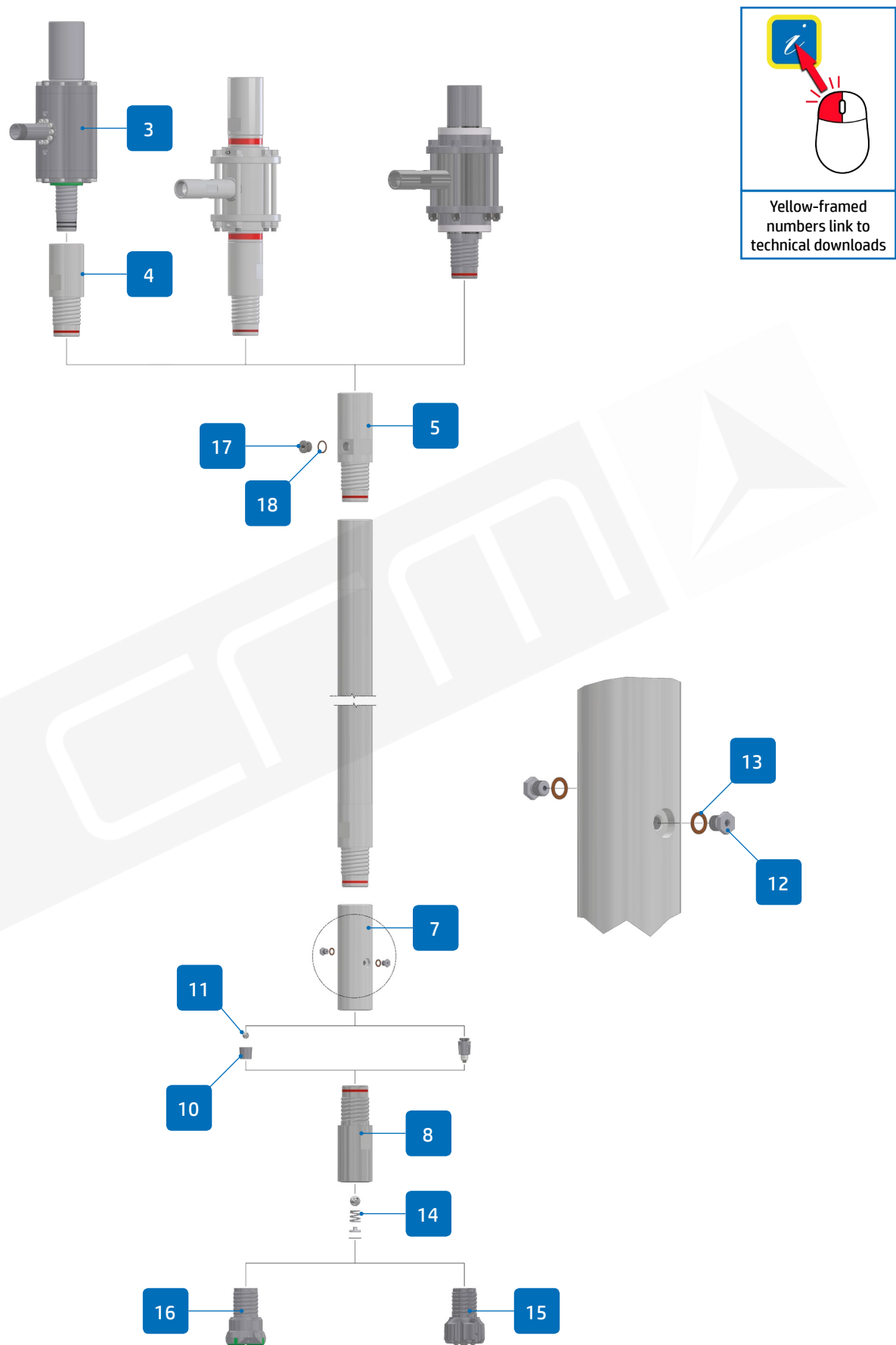
Nel sistema monofluido si ottiene la simultanea disaggregazione e consolidamento del terreno tramite iniezione di cemento.

Nel sistema bifluido la disaggregazione e il consolidamento sono ottenute con iniezione simultanea di cemento e getto coassiale di aria.

Gli ugelli sono progettati per creare uno schermo intorno al getto di cemento che acquisisce una maggiore capacità di taglio ed è in grado di ottenere maggiori diametri della colonna di terreno consolidato. Il portaugelli (monitor) può essere dotato di uno o più ugelli.

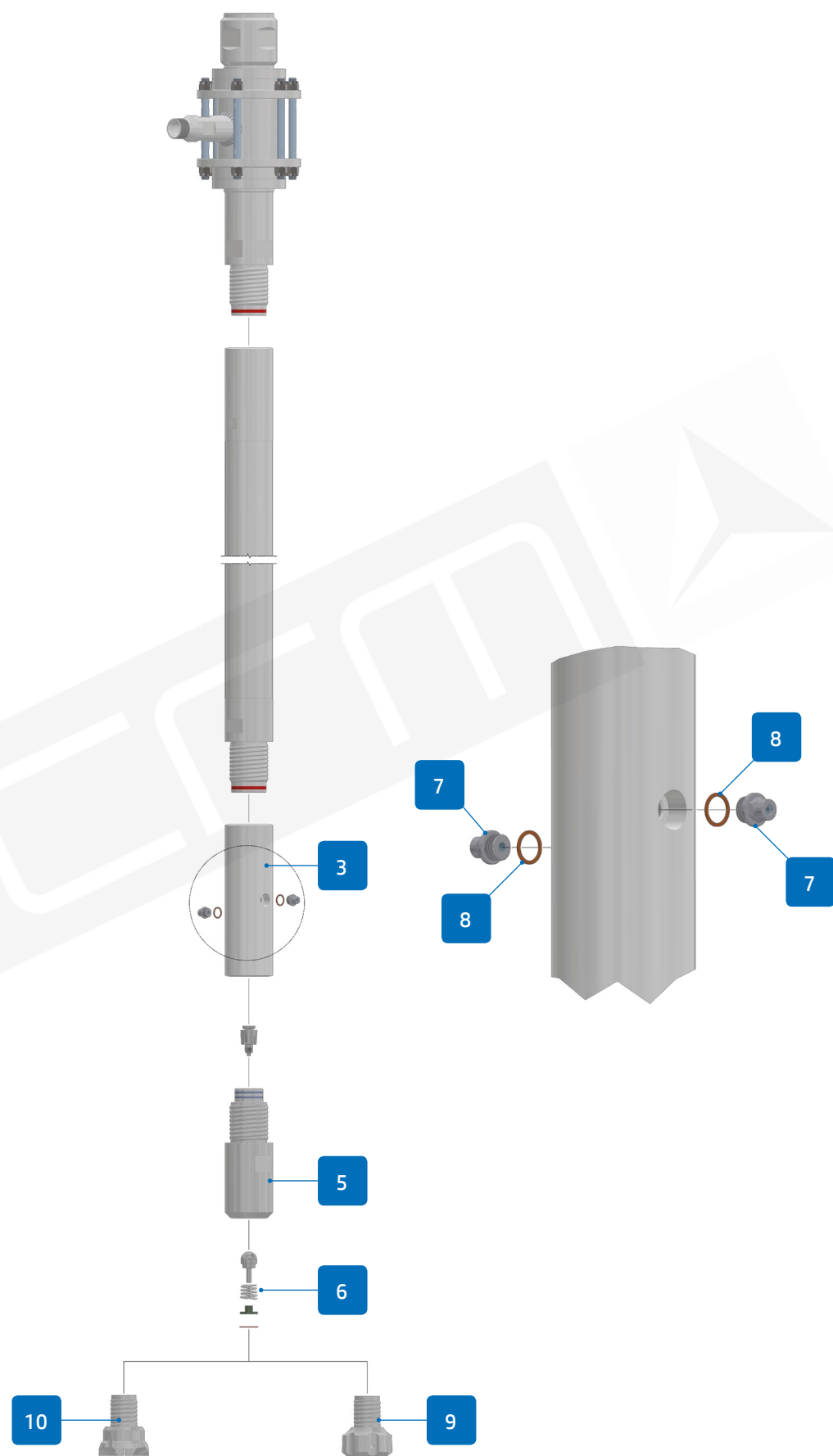


11.1 D.90 JET RP



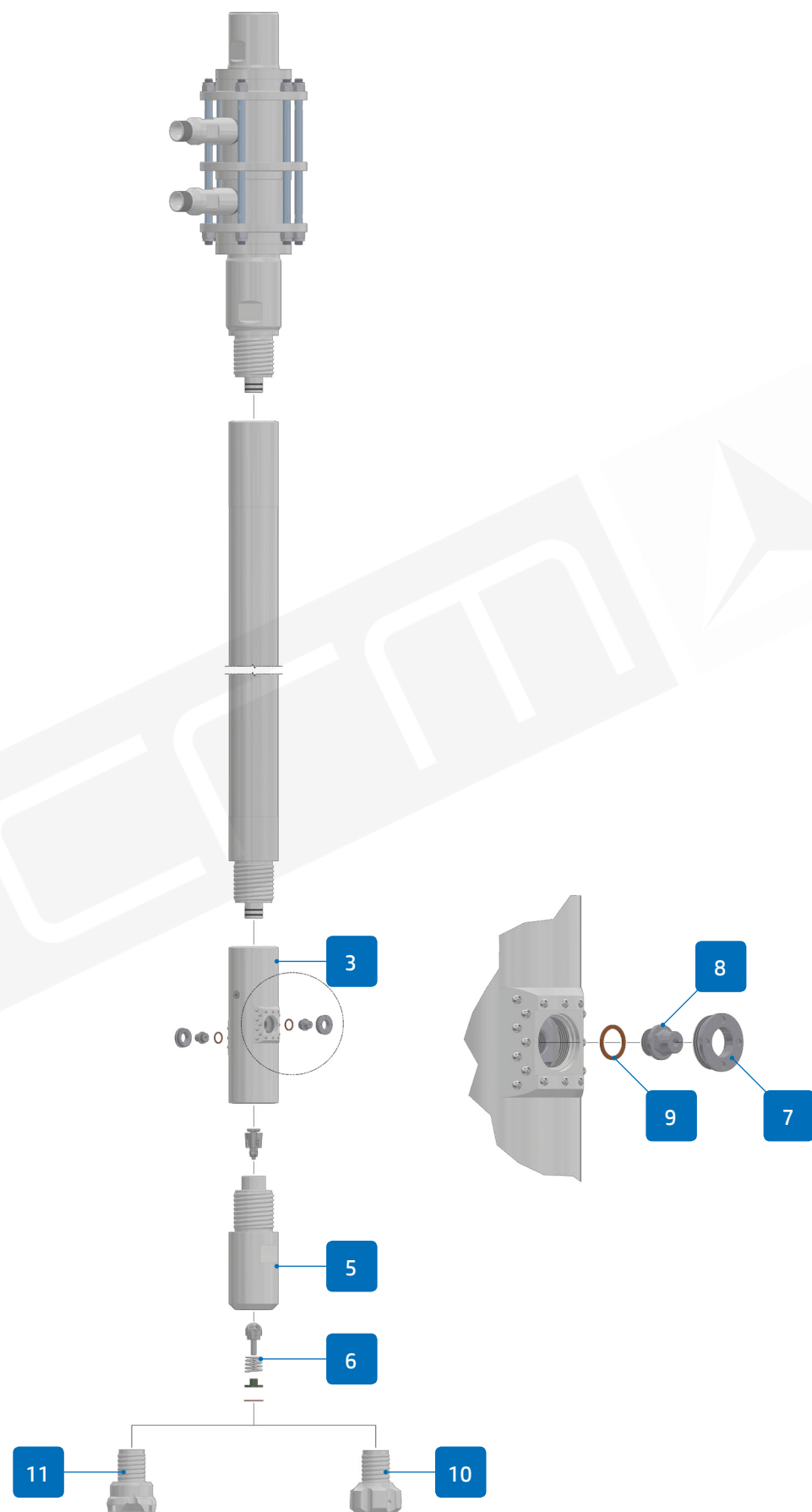
11.1 - D.90 JET RP					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-8JRP5D60		TESTA A.P. RP ALBERO D.60 FIL. H55 F	H.P. SWIVEL RP SHAFT D.60 H55 BOX THREAD	38,8
2	J-8JRP5000		TESTA A.P. D. 90 JET RP FIL. H55 F	H.P. SWIVEL D. 90 JET RP H55 BOX THREAD	41,9
2	J-8JRP5000-H64		TESTA A.P. D. 90 JET RP FIL. H64 F	H.P. SWIVEL D. 90 JET RP H64 BOX THREAD	41,9
2	J-8JRP5000-C64		TESTA A.P. D. 90 JET RP FIL. C64 F	H.P. SWIVEL D. 90 JET RP C64 BOX THREAD	41,9
3	J-SW90H55		SWIVEL HP C/CUSCINETTI ALBERO D.60 H55 F	HP SWIVEL W. BEARINGS D.60 SHAFT H55 BOX	42,4
4	J-SW9090RP		RID. TESTA J-SW90 F/M 90 JET RP	J-SW90 F/M 90 JET RP ADAPTER	6,6
5	J-8JRP6000		DISPOSITIVO INSER. BIGLIA D. 90	BALL IN-LET DEVICE D. 90	8
6	J-8JRP3000		ASTA D. 90X3000 JET RP	ROD D. 90X3000 JET RP	75
6	J-8JRP2000		ASTA D. 90X2000 JET RP	ROD D. 90X2000 JET RP	52
6	J-8JRP1000		ASTA D. 90X1000 JET RP	ROD D. 90X1000 JET RP	28
7	J-8JRP4002		MONITOR D. 90 JET RP 2 UGELLI	NOZZLE HOLDER D. 90 JET RP JET 2 NOZ.	6,4
7	J-8JRP4003		MONITOR D. 90 JET RP 3 UGELLI	NOZZLE HOLDER D. 90 JET RP JET 3 NOZ.	7,1
7	J-8JRP4004		MONITOR D. 90 JET RP 4 UGELLI	NOZZLE HOLDER D. 90 JET RP JET 4 NOZ.	7,8
8	J-8JRP4500		PORTASCALPELLO D. 90 JET RP Fil. 64	BIT ADAPTER D. 90 JET RP Th. D. 64	7,7
8	J-8JRP4520		PORTASCALPELLO D. 90 JET RP Fil. 78	BIT ADAPTER D. 90 JET RP Th.D 78	8
9	J-J00TP200		VALVOLA AUT. JET 30 BAR	JET CHECK VALVE 30 BAR	0,2
9	J-J00TP270		VALVOLA AUT. JET 70 BAR	JET CHECK VALVE 70 BAR	0,2
9	J-J00TP210		VALVOLA AUT. JET 100 BAR	JET CHECKVALVE 100 BAR	0,2
10	J-J00TP211		PORTA BIGLIA d. 11	BALL HOUSING D. 11	0,14
11	J-J16TP211		BIGLIA D. 16	STEEL BALL D. 16	0,02
12	J-J00UC180		UGELLO JET D. 1.8	JET NOZZLE D. 1.8	0,02
12	J-J00UC200		UGELLO JET D. 2.0	JET NOZZLE D. 2.0	0,02
12	J-J00UC220		UGELLO JET D. 2.2	JET NOZZLE D. 2.2	0,02
12	J-J00UC250		UGELLO JET D. 2.5	JET NOZZLE D. 2.5	0,02
12	J-J00UC300		UGELLO JET D. 3.0	JET NOZZLE D. 3.0	0,02
12	J-J00UC350		UGELLO JET D. 3.5	JET NOZZLE D. 3.5	0,02
12	J-J00UC400		UGELLO JET D. 4.0	JET NOZZLE D. 4.0	0,02
13	J-CU14		GUARN. UGELLO 1/4"	NOZZLE COPPER SEAL D. 1/4"	-
14	J-JOVNR000		VALVOLA DI NON RITORNO COMPLETA	COMPLETE NO RETURN VALVE	0,1
15	J-KBIT0105		BIT D. 105 A BOTTONI D. 64	BUTTON BIT D. 105 D. 64	4,5
15	J-KBIT0120		BIT D. 120 A BOTTONI Fil. 78	BUTTON BIT Th. 78	-
16	J-KBIT0105-C		BIT D. 105 RP A CROCE	CROSS BIT D. 105	4,1
16	J-KBIT0120-C		BIT D. 120 RP A CROCE Fil. 78	CROSS BIT D. 120 Th. 78	-
17	J-J33TB034		TAPPO M. 3/4 PER INS. BIGLIA (EX INCASSATO)	3/4 BALL HOUSING PLUG	-
18	J-CU34		GUARN. RAME 3/4"	3/4" COPPER SEAL	-
-	J-J31TP014		TAPPO M. 1/4" GAS	PLUG 1/4" BSPP	-
-	J-8JRP5D60-K		KIT GUARN. TESTA SOFT RP	SOFT SWIVEL SEALS KIT	-
-	J-8JRP5002		KIT GUARN. TESTA A.P. RP	RP H.P. SWIVEL SEALS KIT	-
-	J-8JRP3001		KIT GUARN. ASTA D. 88.9 JET	D. 90 RP JET ROD SEALS KIT	-
-	J-SW90278R-S		KIT RICAMBI SWIVEL JET SOTTO TESTA J-SW90	SPARE PARTS KIT JET SWIVEL J-SW90 TYPE	-
-	J-SW90278R-K		KIT GUARN. SWIVEL SOTTO TESTA J-SW90	SEAL KIT HP SWIVEL UNDER ROTARY J-SW90	-

11.2 D.114 JET RP



11.2 - D.114 JET RP					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-11JRPC90		TESTA ADDUZ. D.114 JET RP C90	JET 114 RP SWIVEL THREAD C90	77,8
1	J-11JRPH90		TESTA ADDUZ. D.114 JET RP H90-R90	JET 114 RP SWIVEL THREAD H90-R90	77,8
2	J-11JRP300		ASTA D.114X3000 JET RP	D.114 JET RP ROD L=3000	87,5
2	J-11JRP200		ASTA D.114X2000 JET RP	D.114 JET RP ROD L=2000	62
2	J-11JRP100		ASTA D.114X1000 JET RP	D.114 JET RP ROD L=1000	36
3	J-11JRP402		MONITOR D.114 JETT RP 2 VIE	2 WAYS D.114 JET RP NOZZLES HOLDER	15,3
4	J-J01TP200		VALVOLA AUT. JET 30 BAR	AUT. JET VALVE 30 BAR	0,3
4	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70 BAR	0,3
4	J-J01TP212		VALVOLA AUT. JET 120 BAR	AUT. JET VALVE 120 BAR	0,3
5	J-11JRP750		PORTASCALP. D.114 JET RP FIL D.78	D.114 JET RP BIT ADAPT. D.78 THREAD	14,9
6	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
7	J-8C214920		UGELLO CEM. D. 2.0 C2	GROUT NOZZLE D. 2.0 C2	0,1
7	J-8C214925		UGELLO CEM. D. 2.5 C2	GROUT NOZZLE D. 2.5 C2	0,1
7	J-8C214930		UGELLO CEM. D. 3.0 C2	GROUT NOZZLE D. 3.0 C2	0,1
7	J-8C214935		UGELLO CEM. D. 3.5 C2	GROUT NOZZLE D. 3.5 C2	0,1
7	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
7	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
7	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
7	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
7	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
7	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
7	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
7	J-8C214975-H		UGELLO CEM. D. 7.5 C2 HEAVY DUTY	GROUT NOZZLE D. 7.5 C2 HEAVY DUTY	0,18
7	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
8	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
9	J-KBIT0130		BIT D.130 A BOTTONI FIL 78	D. 130 BUTTONS BIT Th. 78	7
10	J-KBIT0130-C		BIT D.130 A CROCE FIL 78	D.130 CROSS BIT Th. 78	5,7
-	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-11JRPC90-K		KIT GUARN. SWIVEL RP JET J-11JRP	SWIVEL J-11RP SEALS KIT	-
-	J-11JRP311		KIT GUARN. ASTA D.114 JET RP	D.114 JET RP ROD SEALS KIT	-

11.3 D.114 JET 2 RP



11.3 - D.114 JET 2 RP					
ITEM	CODICE - CODE	REF. DWG	DESCRIZIONE	DESCRIPTION	PESO WEIGHT (Kg)
1	J-SWC20C64		SWIVEL C2 RP C64 DX	SWIVEL C2 RP C64 DX	107
2	J-1C2RP300		ASTA D.114X3000 C2 RP 1" 1/4	ROD D.114X3000 C2 RP 1" 1/4	97
2	J-1C2RP200		ASTA D.114X2000 C2 RP 1" 1/4	ROD D.114X2000 C2 RP 1" 1/4	69
2	J-1C2RP100		ASTA D.114X1000 C2 RP 1" 1/4	ROD D.114X1000 C2 RP 1" 1/4	41
3	J-1C2RP402		MONITOR D.114 C2 RP (2 UGELLI)	NOZZLE HOLDER D.114 C2 RP (2 NOZZLES)	14,8
4	J-J01TP212		VALVOLA AUT. JET 120BAR	AUT. JET VALVE 120BAR	0,3
4	J-J01TP270		VALVOLA AUT. JET 70BAR	AUT. JET VALVE 70BAR	0,3
5	J-1C2RP750		PORTASCALPELLO D.114 C2 RP FIL. D.78	D.114 C2 RP BIT ADAPTER TH. D.78	13,5
6	J-JOVNR112		VALVOLA DI NON RITORNO COMPLETA D.114	COMPLETE NO RETURN VALVE D. 114	0,4
7	J-8C214900		UGELLO ARIA D. 23 C2	AIR NOZZLE D. 23 C2	0,09
7	J-8C214921		UGELLO ARIA D. 21 C2	AIR NOZZLE D. 21 C2	0,09
8	J-8C214940		UGELLO CEM. D. 4.0 C2	GROUT NOZZLE D. 4.0 C2	0,1
8	J-8C214945		UGELLO CEM. D. 4.5 C2	GROUT NOZZLE D. 4.5 C2	0,15
8	J-8C214950		UGELLO CEM. D. 5.0 C2	GROUT NOZZLE D. 5.0 C2	0,15
8	J-8C214955		UGELLO CEM. D. 5.5 C2	GROUT NOZZLE D. 5.5 C2	0,15
8	J-8C214960-H		UGELLO CEM. D. 6.0 C2 HEAVY DUTY	GROUT NOZZLE D. 6.0 C2 HEAVY DUTY	0,18
8	J-8C214965-H		UGELLO CEM. D. 6.5 C2 HEAVY DUTY	GROUT NOZZLE D. 6.5 C2 HEAVY DUTY	0,18
8	J-8C214970-H		UGELLO CEM. D. 7.0 C2 HEAVY DUTY	GROUT NOZZLE D. 7.0 C2 HEAVY DUTY	0,18
8	J-8C214980-H		UGELLO CEM. D. 8.0 C2 HEAVY DUTY	GROUT NOZZLE D. 8.0 C2 HEAVY DUTY	0,18
9	J-CU12		GUARN. RAME 1/2"	COPPER SEAL 1/2"	-
10	J-KBIT0130		BIT D.130 A BOTTONI FIL 78	D. 130 BUTTONS BIT Th. 78	7
11	J-KBIT0130-C		BIT D.130 A CROCE FIL 78	D.130 CROSS BIT Th. 78	5,7
-	J-J33TB012		TAPPO M. 1/2" GAS EX INC	GROUT NOZZLE PLUG 1/2"	-
-	J-8C21490T		TAPPO M. 1"1/4 UGELLO ARIA	AIR NOZZLE PLUG	0,08
-	J-8C214901		CHIAVE UGELLO ARIA 8C214900	AIR NOZZLE REMOVING TOOL	0,2
-	J-1C2RP311		KIT GUARN. ASTA D.114 C2RP	ROD SEALS KIT D.114 C2RP	-
-	J-1C2RP404		KIT GUARN. MONITOR D.114 C2 RP	NOZZLE HOLDER SEALS KIT D.114 C2 RP	-
-	J-SWC20C64-A		KIT GUARN. SW JETT C2 RP	SEAL KIT FOR SWIVEL C2 JET R.P.	-

NOTES

[illegible]

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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