



CG625/1250 TUBE CLEANING GUN OPERATING MANUAL



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CG625/1250 TUBE CLEANING GUN OPERATING INSTRUCTIONS



CAUTION: WEAR PROTECTIVE EYEWEAR WHILE PREPARING CLEANING GUN AND DURING OPERATION. EAR PLUGS OR AN EAR COVERING IS ALSO RECOMMENDED.



1.0 - CLEANING GUN PREPARATION

1. The hose attached to the rear handle must be connected to a compressed air line preferably between 60 to 100PSI. It is recommended that the air be filtered and lubricated. The airline should be equipped with a moisture trap and filter. An automatic lubricator should be located as close to the unit as practical. Use a #10 light-weight oil or high speed spindle oil and adjust the feed to produce a slight oil mist at the exhaust.
2. The flexible hose connected to the front handle must be connected to a water supply. Standard plant pressure is sufficient. Turn on water supply and depress trigger on front handle until water begins to flow out of unit. This is in order to lubricate the seals in the chamber.
3. Attach the proper cleaning tool to the threaded end of the Cleaning Gun.

1.1 - OPERATION

1. If the tubes to be cleaned are completely clogged it is recommended that the short starter drill be used to create a pilot hole for the hollow drills. When using the starter drill water will not be flowing through the unit.
2. Attach the hollow drill of the proper diameter and length and make sure water supply is turned on at the source. Insert the carbide tip of the hollow drill into the hole created by the starter drill and depress the trigger on the front handle (open water valve slightly before the turbine is started). Do not force drill into tube. Apply light pressure and allow the drill to do the work giving the water sufficient time to back-flush deposits. Excessive force can clog the drill tip and subject the tube to damage. Depress trigger on front handle before entering each tube to assure water is flowing from tip of hollow drill.



WHEN THE HOLLOW DRILL AND EXTENSION TUBES ARE USED, DO NOT RUN DRY. ALWAYS TURN ON WATER SUPPLY AND DEPRESS TRIGGER ON FRONT HANDLE BEFORE STARTING.



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1.1 - OPERATION CONTINUED

3. Water flow prevents the hole in the tip of the drill from becoming clogged, cools the drill, and flushes out deposit.
4. Depending on the type of deposit being cleaned, it may be necessary to clean the flute of the hollow drill. Simply scrape excess deposit from the flute with the blade of a screw driver or similar tool.
5. The drill should be held parallel to the tubes to be cleaned. This is especially important when first entering the tube. Once the carbide tip is fully into the tube, the drill will tend to center itself.
6. It may be desirable to protect the operator from water splashing by inserting the drill through a piece of cardboard or other material to form a shield.
7. If the tube is longer than 4 feet, it is suggested that a shorter drill be used first and then follow-up with a longer drill of sufficient length to go completely through the tube. This will prevent excessive bending of very long hollow drills. If tubes are accessible from both ends, it may be desirable to clean from each end.
8. Whenever possible, tubes should be in a horizontal position when being cleaned. When this is not possible, and tubes must be cleaned in vertical position, care must be taken to avoid allowing the weight of the Cleaning Gun to force the hollow drill into the tube too quickly.
9. As a final clean-up, it is recommended that the cutting/buffing tools be used on the extension tubes. Water flush must also be used in conjunction with these tools.
10. Stainless steel or black nylon brushes can also be used in addition to or instead of the cutting/buffing tools. These brushes are to be used on the extension tubes as above.



STAINLESS STEEL BRUSHES SHOULD NOT BE USED IN NON-FERROUS TUBES, AS THEY WILL LEAVE SCRATCHES IN THE TUBE WALL ON WHICH SCALE WILL ADHERE MORE READILY.

1.2 - MAINTENANCE & CARE

1. With proper care and operation, the Cleaning Gun will provide long and reliable service. It is recommended that all parts be wiped dry and cleaned after use. Should the hollow drill clog up at the tip, it should be detached from the Cleaning Gun and a stiff wire of suitable diameter be used for cleaning the tip. Then blow clean with compressed air from the tip end.
2. Before storing the tool it is recommended that small amount of light machine oil be squirted into the aiR hose. Then run drill for 5 to 10 seconds.



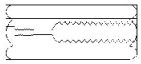
CG625/1250 TUBE CLEANING GUN ACCESSORIES

(O.D. SIZED PART NUMBERS SHOWN ON NEXT PAGE)

Connects the Drive Shaft to the Cleaning Gun

Available in 2', 4', 6', or 8' lengths

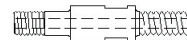
Used to connect brush or drills to Drive or Extension Tubes



Drive Coupling



Drive Tube



Brush Coupling



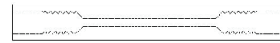
Brush

Couples the hollow shafts together

Available in 2', 4', 6', or 8' lengths



Extension Coupling



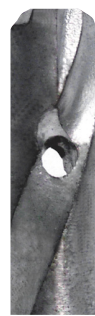
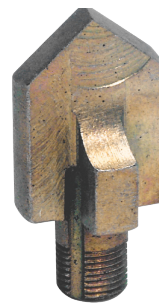
Extension Tube

BRUSHES

CARBIDE DRILL TIP

ARROW POINT ALLOY METAL

CARBIDE TWIST DRILL BIT





CG625/1250 TUBE CLEANING GUN ACCESSORIES

**TO ORDER
SELECT THE
OUTSIDE
DIAMETER
AND GAUGE
WALL OF THE
TUBE(S)**

**TO ORDER
SELECT THE
INSIDE DIAMETER
OF THE TUBE(S)
IN THE TUBE I.D.
SECTION BELOW**

TUBE O.D. (BWG)	TUBE I.D.	DRIVING COUPLING	DRIVING TUBE	TUBE COUPLING	EXTENSION TUBE	BRUSH COUPLING	ARROW POINT		BRUSHES	
							AP-DRILLS	CTD-DRILLS		
1/4" (23-24)	3/8" (14)	.212-227	DC-187	DT-187	N/A	N/A	N/A	N/A	CTD-187	
3/8" (14-15)		.228-.243	DC-187	DT-187	N/A	N/A	N/A	N/A	CTD-218	
3/8" (15-16)	1/2" (10)	.244-.259	DC-218	DT-218	TC-218	ET-218	N/A	AP-234	CTD-234	
3/8" (17)	1/2" (11)	.260-.275	DC-218	DT-218	TC-218	ET-218	N/A	AP-250	CTD-250	
3/8" (18)	1/2" (11)	.275-.290	DC-218	DT-218	TC-218	ET-218	N/A	AP-265	CTD-265	
3/8" (19)		.291-.301	DC-250	DT-250	TC-250	ET-250	N/A	AP-281	CTD-281	
3/8" (20-22)	1/2" (13)	.306-.321	DC-250	DT-250	TC-250	ET-250	N/A	AP-296	CTD-296	
1/2" (14)	5/8" (9)	.322-.337	DC-250	DT-250	TC-250	ET-250	N/A	AP-312	CTD-312	
1/2" (14)		.338-.353	DC-250	DT-250	TC-250	ET-250	N/A	AP-328	CTD-328	
1/2" (15-17)	5/8" (10-11)	.359-.389	DC-312	DT-312	TC-312	ET-312	BC-312	AP-343	CTD-343	
1/2" (18)	5/8" (12)	.390-.420	DC-312	DT-312	TC-312	ET-312	BC-312	AP-375	CTD-375	
5/8" (13)		.421-.452	DC-375	DT-375	TC-375	ET-375	BC-375	AP-406	CTD-406	S
5/8" (14-15)	3/4" (9-10)	.453-.483	DC-375	DT-375	TC-375	ET-375	BC-375	AP-437	CTD-437	E
5/8" (16-17)	3/4" (11)	.484-.514	DC-437	DT-437	TC-437	ET-437	BC-437	AP-468	CTD-437	E
5/8" (18)	3/4" (12)	.515-.545	DC-437	DT-437	TC-437	ET-437	BC-437	AP-500	CTD-500	
3/4" (13)		.546-.577	DC-437	DT-437	TC-437	ET-437	BC-437	AP-531	CTD-531	B
3/4" (14-15)		.578-.608	DC-437	DT-437	TC-437	ET-437	BC-437	AP-562	CTD-562	R
3/4" (14-15)		.578-.608	DC-500	DT-500	TC-500	ET-500	BC-500	AP-562	CTD-562	U
3/4" (16-17)	7/8" (11)	.609-.639	DC-500	DT-500	TC-500	ET-500	BC-500	AP-593	CTD-593	S
3/4" (18)	7/8" (12)	.640-.675	DC-500	DT-500	TC-500	ET-500	BC-500	AP-625	CTD-625	H
7/8" (13)		.676-.706	DC-500	DT-500	TC-500	ET-500	BC-500	AP-656	CTD-656	
7/8" (14-15)	1" (9)	.707-.737	DC-500	DT-500	TC-500	ET-500	BC-500	AP-687	CTD-687	S
7/8" (16-17)	1" (10-11)	.738-.769	DC-562	DT-562	TC-562	ET-562	BC-562	AP-718	CTD-718	E
7/8" (18)	1" (12)	.770-.800	DC-562	DT-562	TC-562	ET-562	BC-562	AP-750	CTD-750	C
1" (13)	1 1/4" (5)	.801-.831	DC-562	DT-562	TC-562	ET-562	BC-562	AP-781	CTD-781	T
1" (14-15)	1 1/4" (6)	.832-.862	DC-625	DT-625	TC-625	ET-625	BC-625	AP-812	CTD-812	I
1" (16-17)		.863-.894	DC-625	DT-625	TC-625	ET-625	BC-625	AP-843	CTD-843	O
1" (18)	1 1/4" (7-8)	.895-.925	DC-625	DT-625	TC-625	ET-625	BC-625	AP-875	CTD-875	N
1 1/2" (2)		.926-.956	DC-625	DT-625	TC-625	ET-625	BC-625	AP-906	CTD-906	
1 1/4" (9-10)		.957-.987	DC-625	DT-625	TC-625	ET-625	BC-625	AP-937	CTD-937	P
1 1/4" (11)	1 1/2" (3)	.988-1.024	DC-625	DT-625	TC-625	ET-625	BC-625	AP-968	CTD-968	G
1 1/4" (12)	1 1/2" (4)	1.025-1.055	DC-625	DT-625	TC-625	ET-625	BC-625	AP-1000	CTD-1000	
1 1/4" (13)	1 1/2" (5)	1.025-1.086	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1031	CTD-1031	
1 1/4" (14-15)	1 1/2" (6)	1.087-1.117	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1062	CTD-1062	H
1 1/4" (16-17)	1 1/2" (7)	1.118-.1149	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1093	CTD-1093	E
1 1/4" (18)	1 1/2" (8)	1.150-1.180	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1125	CTD-1125	48
1 1/2" (9)	1 3/4" (2)	1.181-1.211	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1156	CTD-1156	
1 1/2" (10)	1 3/4" (3)	1.212-1.242	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1187	CTD-1187	
1 1/2" (11)		1.243-1.280	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1218	CTD-1218	
1 1/2" (12)	1 3/4" (4)	1.281-1.311	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1250	CTD-1250	
1 1/2" (13-14)	1 3/4" (5)	1.312-1.342	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1281	CTD-1281	
1 1/2" (15-16)	1 3/4" (6)	1.343-1.374	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1312	CTD-1312	
1 1/2" (17-18)	1 3/4" (7)	1.375-1.405	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1343	CTD-1343	
1 3/4" (8)	2" (1)	1.406-1.436	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1375	CTD-1375	
1 3/4" (9)	2" (2)	1.437-1.467	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1406	CTD-1406	
1 3/4" (10)	2" (3)	1.468-1.499	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1437	CTD-1437	
1 3/4" (11)	2" (4)	1.500-1.530	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1468	CTD-1468	
1 3/4" (12)		1.531-1.561	DC-750	DT-750	TC-750	ET-750	BC-750	AP-1500	CTD-1500	
1 3/4" (13)	2" (5)	1.562-1.592	DC-1000	DT-1000	TC-1000	ET-1000	BC-1000	AP-1531		
1 3/4" (14-15)	2" (6)	1.562-1.592		DT-1000	TC-1000	ET-1000	BC-1000	AP-1562		
1 3/4" (16-17)	2" (7)	1.625-1.655		DT-1000	TC-1000	ET-1000	BC-1000	AP-1593		
1 3/4" (18-19)	2" (8)	1.656-1.686		DT-1000	TC-1000	ET-1000	BC-1000	AP-1625		
1 3/4" (20-21)	2" (9)	1.687-1.717		DT-1000	TC-1000	ET-1000	BC-1000	AP-1656		
2" (10)		1.718-1.749		DT-1000	TC-1000	ET-1000	BC-1000	AP-1687		
2" (11)	2 1/4" (3)	1.750-1.780		DT-1000	TC-1000	ET-1000	BC-1000	AP-1718		
2" (12)	2 1/4" (4)	1.781-1.811		DT-1000	TC-1000	ET-1000	BC-1000	AP-1750		
2" (13-14)	2 1/4" (5)	1.812-1.842		DT-1000	TC-1000	ET-1000	BC-1000	AP-1781		
2" (15-16)	2 1/4" (6)	1.843-1.874		DT-1000	TC-1000	ET-1000	BC-1000	AP-1812		
2" (17-18)	2 1/4" (7)	1.875-1.905		DT-1000	TC-1000	ET-1000	BC-1000	AP-1843		
2" (19-20)	2 1/4" (8)	1.906-1.936		DT-1000	TC-1000	ET-1000	BC-1000	AP-1875		
2" (21-22)	2 1/4" (9)	1.937-1.967		DT-1000	TC-1000	ET-1000	BC-1000	AP-1906		

Note: Larger sizes available, consult factory