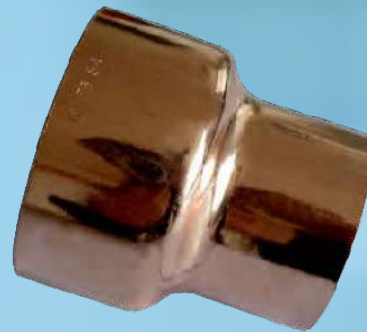


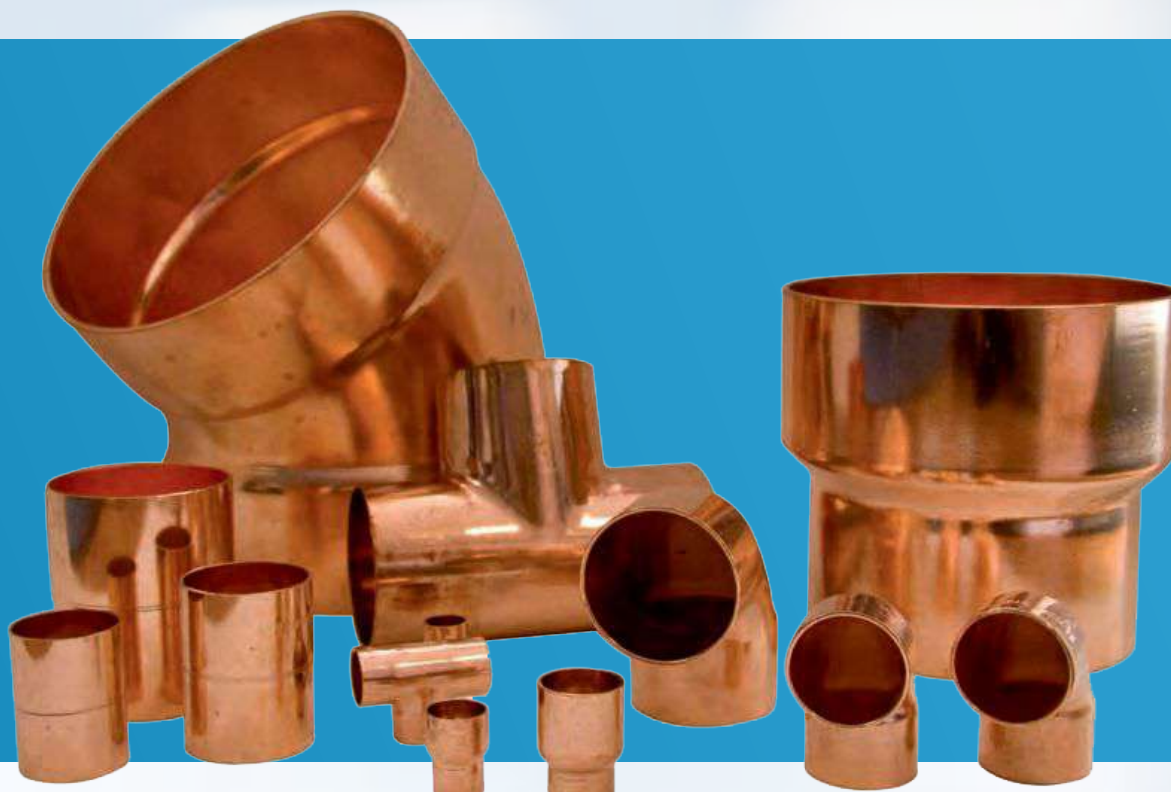


**SCHÖNN**  
Medizintechnik GmbH

## MEDICAL GRADE DEGREASED COPPER FITTINGS



## MEDICAL GRADE DEGREASED COPPER FITTINGS



SCHÖNN end feed copper fittings are manufactured under degreased copper fitting manufactured to BS EN 1254-1:1998 Part 1. Exclusively designed for Medical Gas Pipeline Systems, SCHÖNN copper fittings recognise and embrace the specialist requirements of the medical gas pipeline industry to include all aspects of design, cleanliness, packaging and usability required to become a successful partner for installations of pipelines compliant with HTM 02-01, C11 and BS EN 7396.

All fittings are supplied in individually sealed protective polythene bags and are specifically designed for copper medical gas and vacuum systems.

Specific benefits include:

- Complies to NHS Health Technical Memorandum 02/01 (HTM2022).
- All fittings supplied contain less than 100mg/m<sup>2</sup> (0.01mg cm<sup>2</sup>) of hydrocarbons on the degreased surface.
- Improved identification to avoid confusion with similar sizes of water service fittings.
- Each fitting is engraved with unique branding within the EN specification and fitting size where space permits.
- All individually sealed protective polythene bags are product labelled.
- Fittings are supplied in reinforced cardboard boxes, labelled with product information and outline drawing of fitting.
- Brass fixtures are bagged in multiples and supplied in reinforced cardboard boxes.

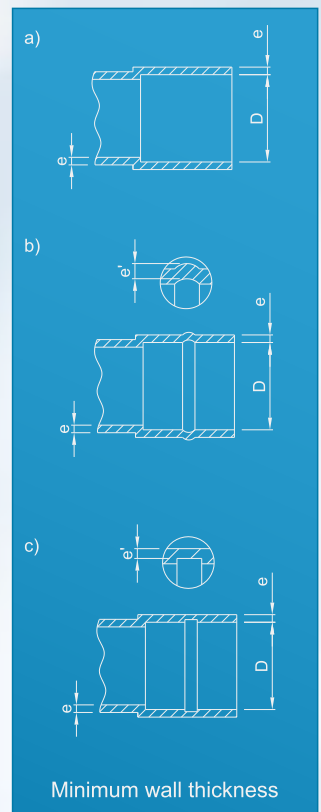
# MEDICAL GRADE DEGREASED COPPER FITTINGS

Medical Grade Copper Fittings - EN 1254-1/BS864-2  
Degreased cleaned and individually packed in accordance with HTM 2022, HTM 02-1 and C11

## Minimum wall thickness

Dimensions in millimetres

Nominal diameter <i>D</i>	Minimum wall thickness					
	Length of engagement		Wrought copper alloys		Cast coppers and copper alloys	
	<i>e</i>	<i>e'</i>	<i>e</i>	<i>e'</i>	<i>e</i>	<i>e'</i>
6	0,6	0,54	1,0	0,55	1,0	0,65
8	0,6	0,54	1,0	0,55	1,0	0,65
9	0,6	0,54	1,0	0,55	1,0	0,65
10	0,6	0,54	1,0	0,55	1,0	0,65
12	0,6	0,54	1,1	0,60	1,1	0,71
14	0,6	0,54	1,1	0,60	1,1	0,71
14,7	0,7	0,63	1,2	0,66	1,2	0,78
15	0,7	0,63	1,2	0,66	1,2	0,78
16	0,7	0,63	1,2	0,66	1,2	0,78
18	0,8	0,72	1,4	0,77	1,4	0,91
21	0,9	0,81	1,4	0,77	1,4	0,91
22	0,9	0,81	1,4	0,77	1,5	0,97
25	0,9	0,81	1,4	0,77	1,6	1,04
27,4	0,9	0,81	1,5	0,82	1,6	1,04
28	0,9	0,81	1,5	0,82	1,8	1,17
34	1,0	0,90	1,6	0,88	1,8	1,17
35	1,0	0,90	1,6	0,88	1,8	1,17
40	1,1	0,99	1,8	0,99	2,0	1,30
40,5	1,1	0,99	1,8	0,99	2,0	1,30
42	1,1	0,99	1,8	0,99	2,0	1,30
53,6	1,2	1,08	1,9	1,04	2,3	1,49
54	1,2	1,08	1,9	1,04	2,3	1,49
64	1,4	1,26	2,0	1,10	2,4	1,56
66,7	1,4	1,26	2,0	1,10	2,4	1,56
70	1,4	1,26	2,3	1,26	2,6	1,69
76,1	1,6	1,44	2,6	1,43	2,8	1,82
80	1,8	1,62	2,8	1,54	2,9	1,88
88,9	1,8	1,62	2,9	1,59	3,1	2,01
106	2,1	1,89	3,3	1,80	3,5	2,27
108	2,1	1,89	3,3	1,80	3,5	2,27



## Maximum temperatures and pressures

Soldering/Brazing	Typical examples of soldering / brazing alloys		temperature	Maximum pressures for nominal diameters		
				bar		
				From 6mm up to and including 34mm	Over 34mm up to and including 54mm	Over 54mm up to and including 34mm
Soldering	I	Lead/tin 50/50 % or 60/40 %	30	16	16	10
			65	10	10	6
			110	6	6	4
	II III	Tin/silver 95/5 % Tin/copper Cu 3 % max. 0,4 % min. remainder Sn	30	16	16	10
			65	10	10	6
			110	6	6	4
Brazing	IV V VI	Silver/copper cadmium-free 55% to 40 % Ag Silver with cadmium 30 % or 40 % Ag Copper / phosphorus 94/6 % or copper/ phosphorus with 2 % silver 92 / 6 / 2 %	30	25	25	16
			65	25	16	16
			110	16	10	10

- 1) For use in applications outside the scope of this table, the approval of the manufacturer should be obtained.
- 2) Intermediate pressure ratings shall be obtained by interpolation.

NOTE: Soldering alloys with lead and brazing alloys with cadmium are not permitted in installations for water for human consumption.

# MEDICAL GRADE DEGREASED COPPER FITTINGS

## Minimum lengths of engagement

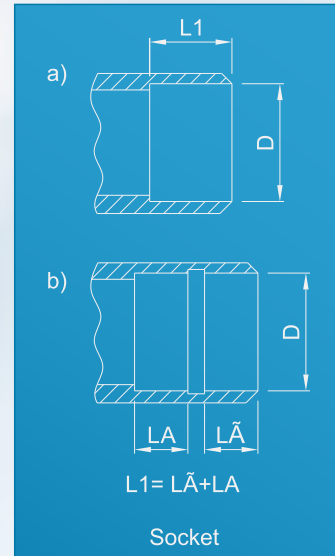
Dimensions in millimetres

Nominal diameter <i>D</i>	Length of engagement	
	<i>L1</i>	<i>L2</i>
6	5,8	2
8	6,8	2
9	7,8	2
10	7,8	2
12	8,6	2
14	10,6	2
14,7	10,6	2
15	10,6	2
16	10,6	2
18	12,6	2
21	15,4	2
22	15,4	2
25	16,4	2
27,4	18,4	2
28	18,4	2
34	23	2
35	23	2
40	27	2
40,5	27	2
42	27	2
53,6	32	2
54	32	2
64	32,5	2
66,7	33,5	3
70	33,5	3
76,1	33,5	3
80	33,5	3
88,9	37,5	3
106	47,5	4
108	47,5	4

## Minimum bore

Dimensions in millimetres

Nominal diameter <i>D</i>	Minimum bore
6	4,0
8	6,0
9	7,0
10	7,0
12	9,0
14	10,0
14,7	11,0
15	11,0
16	12,0
18	14,0
21	18,0
22	18,0
25	21,0
27,4	23,0
28	23,0
34	29,0
35	29,0
40	35,0
40,5	36,0
42	36,0
53,6	47,0
54	47,0
64	55,0
66,7	57,0
70	60,0
76,1	65,0
80	68,0
88,9	76,0
106	92,0
108	92,0

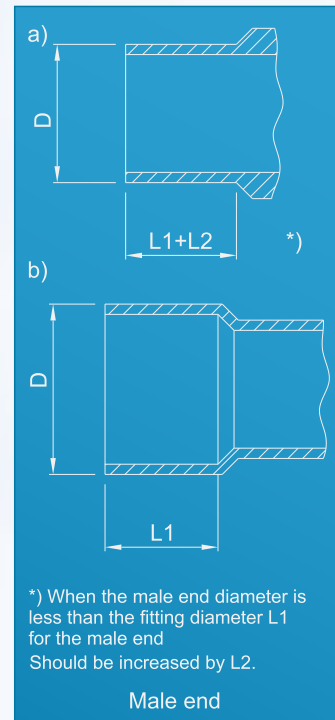


## Tolerances on the nominal diameter

Nominal diameter <i>D</i>	Tolerances on the mean diameter <sup>1)</sup> with respect to the nominal diameter <i>D</i>		Resulting diametrical difference	
	Outside diameter of male end	Inside diameter of socket	Max.	Min.
6	+ 0,04 - 0,05	+ 0,15 + 0,06	0,20	0,02
8				
9				
10				
12				
14				
14,7	+ 0,05 - 0,06	+ 0,18 + 0,07	0,24	0,02
15				
16				
18				
21				
22				
25	+ 0,06 - 0,07	+ 0,23 + 0,09	0,30	0,03
27,4				
28				
34 <sup>2)</sup>				
35 <sup>2)</sup>				
40 <sup>2)</sup>				
40,5 <sup>2)</sup>	+ 0,07 - 0,08	+ 0,33 + 0,10	0,41	0,03
42 <sup>2)</sup>				
53,6 <sup>2)</sup>				
54 <sup>2)</sup>				
64 <sup>2)</sup>				
66,7 <sup>2)</sup>				
70 <sup>2)</sup>				
76,1 <sup>2)</sup>				
80 <sup>2)</sup>				
88,9 <sup>2)</sup>				
106 <sup>2)</sup>				
108 <sup>2)</sup>				

1) Arithmetical mean of two diameters at right angles in a cross-section taken anywhere on the length of the socket or of the male end.

2) The soldering or brazing of tubes and fittings for these diameters requires special precautions regarding working practices.



Medical Grade Copper Fittings - EN 1254-1/BS864-2  
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# MEDICAL GRADE DEGREASED COPPER FITTINGS

Medical Grade Copper Fittings - EN 1254-1/BS864-2  
Degreased cleaned and individually packed in accordance with HTM 2022, HTM 02-1 and C11

## 90° Elbow SR CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-010	10	1	100
90-001-012	12	1	100
90-001-015	15	1	50
90-001-022	22	1	25
90-001-028	28	1	20
90-001-035	35	1	20
90-001-042	42	1	10
90-001-054	54	1	10
90-001-067	67	1	10
90-001-076	76	1	10
90-001-108	108	1	5

## 45° Elbow SR CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-201	10	1	100
90-001-202	12	1	100
90-001-203	15	1	50
90-001-204	22	1	25
90-001-205	28	1	20
90-001-206	35	1	20
90-001-207	42	1	10
90-001-208	54	1	10
90-001-209	67	1	10
90-001-210	76	1	10
90-001-211	108	1	5

## 90° Elbow SR FTGxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-301	15	1	50
90-001-302	22	1	25
90-001-303	28	1	20
90-001-304	35	1	20
90-001-305	42	1	10
90-001-306	54	1	10
90-001-307	67	1	10
90-001-308	76	1	10
90-001-309	108	1	5

## 45° Elbow SR FTGxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-401	15	1	50
90-001-402	22	1	25
90-001-403	28	1	20
90-001-404	35	1	20
90-001-405	42	1	10
90-001-406	54	1	10
90-001-407	67	1	10
90-001-408	76	1	10
90-001-409	108	1	5

## 90° Elbow LR CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-501	10	1	100
90-001-502	12	1	100
90-001-503	15	1	50
90-001-504	22	1	25
90-001-505	28	1	20
90-001-506	35	1	20
90-001-507	42	1	10
90-001-508	54	1	10
90-001-509	67	1	10
90-001-510	76	1	10
90-001-511	108	1	5

## 90° Elbow LR FTGxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-001-601	10	1	100
90-001-602	12	1	100
90-001-603	15	1	50
90-001-604	22	1	25
90-001-605	28	1	20
90-001-606	35	1	20
90-001-607	42	1	10
90-001-608	54	1	10
90-001-609	67	1	10
90-001-610	76	1	10
90-001-611	108	1	5



# MEDICAL GRADE DEGREASED COPPER FITTINGS

## Coupling CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-003-010	10	1	1000
90-003-012	12	1	1000
90-003-015	15	1	1000
90-003-022	22	1	400
90-003-028	28	1	200
90-003-035	35	1	100
90-003-042	42	1	80
90-003-054	54	1	40
90-003-067	67	1	20
90-003-076	76	1	15
90-003-108	108	1	5

## Reducing Coupling



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-032-001	12x10	1	1500
90-032-002	15x10	1	1000
90-032-003	15x12	1	1000
90-032-004	22x10	1	600
90-032-005	22x12	1	600
90-032-006	22x15	1	600
90-032-007	28x15	1	350
90-032-008	28x22	1	350
90-032-009	35x15	1	200
90-032-010	35x22	1	200
90-032-011	35x28	1	200
90-032-012	42x15	1	100
90-032-013	42x22	1	100
90-032-014	42x28	1	100
90-032-015	42x35	1	100
90-032-016	54x22	1	50
90-032-017	54x28	1	50
90-032-018	54x35	1	50
90-032-019	54x42	1	50
90-032-020	67x35	1	30
90-032-021	67x42	1	30
90-032-022	67x54	1	30
90-032-023	76x22	1	20
90-032-024	76x28	1	20
90-032-025	76x35	1	20
90-032-026	76x42	1	20
90-032-027	76x54	1	15
90-032-028	76x67	1	15
90-032-029	108x54	1	10
90-032-030	108x67	1	10
90-032-031	108x76	1	10

## Cross CxCxCxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-030-010	10X30	1	1000
90-030-012	12X36	1	500
90-030-015	15X45	1	200
90-030-022	22X66	1	80
90-030-028	28X84	1	40
90-030-035	35X140	1	20

## Cap C



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-031-010	10	1	3000
90-031-012	12	1	2500
90-031-015	15	1	2000
90-031-022	22	1	700
90-031-028	28	1	350
90-031-035	35	1	280
90-031-042	42	1	120
90-031-054	54	1	60
90-031-067	67	1	45
90-031-076	76	1	35
90-031-108	108	1	10

## Cross CxCxCxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-033-015	15	1	250
90-033-022	22	1	150
90-033-028	28	1	90
90-033-035	35	1	50
90-033-042	42	1	30
90-033-054	54	1	15
90-033-067	67	1	10
90-033-076	76	1	5
90-033-108	108	1	1

Medical Grade Copper Fittings - EN 1254-1/BS864-2  
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# MEDICAL GRADE DEGREASED COPPER FITTINGS

Medical Grade Copper Fittings - EN 1254-1/BS864-2  
1  
Degreased cleaned and individually packed in accordance with HTM 2022, HTM 02-1 and C11

## Equal Tee CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-005-010	10	1	100
90-005-012	12	1	100
90-005-015	15	1	50
90-005-022	22	1	25
90-005-028	28	1	20
90-005-035	35	1	20
90-005-042	42	1	10
90-005-054	54	1	10
90-005-067	67	1	10
90-005-076	76	1	10
90-005-108	108	1	5

## Reducing Tee CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-005-201	15x15x22	1	100
90-005-201	22x22x28	1	100
90-005-201	28x28x35	1	50
90-005-201	35x35x42	1	50
90-005-201	42x42x54	1	20

## Reducing Tee CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-005-301	12x10x10	1	800
90-005-302	15x10x10	1	600
90-005-303	15x10x15	1	600
90-005-304	15x12x10	1	600
90-005-305	15x12x12	1	600
90-005-306	22x15x15	1	200
90-005-307	22x15x22	1	200
90-005-308	28x15x15	1	150
90-005-309	28x22x15	1	150
90-005-310	28x22x22	1	120
90-005-311	28x22x28	1	100
90-005-312	28x15x28	1	100
90-005-313	35x15x35	1	50
90-005-314	35x22x35	1	50
90-005-315	35x22x22	1	50

## Reducing Tee CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-005-316	35x28x22	1	100
90-005-317	35x28x28	1	80
90-005-318	35x28x35	1	80
90-005-319	42x35x35	1	50
90-005-320	54x42x54	1	25

## Reducing Tee CxC



Product Code	Size(mm)	Packing Information	
		Pcs/Bag	Pcs/Ctn
90-005-401	12x10	1	800
90-005-402	15x10	1	600
90-005-403	15x12	1	600
90-005-404	22x15	1	200
90-005-405	28x15	1	200
90-005-406	28x22	1	100
90-005-407	35x15	1	80
90-005-408	35x22	1	50
90-005-409	35x28	1	50
90-005-410	42x15	1	40
90-005-411	42x22	1	40
90-005-412	42x28	1	30
90-005-413	42x35	1	30
90-005-414	54x15	1	25
90-005-415	54x22	1	25
90-005-416	54x28	1	25
90-005-417	54x35	1	25
90-005-418	54x42	1	25
90-005-419	67x28	1	20
90-005-420	67x35	1	20
90-005-421	67x42	1	15
90-005-422	67x54	1	10
90-005-423	76x28	1	5
90-005-424	76x35	1	5
90-005-425	76x42	1	5
90-005-426	76x54	1	5
90-005-427	76x67	1	5
90-005-428	108x42	1	5
90-005-429	108x54	1	5
90-005-430	108x67	1	5
90-005-431	108x76	1	5

# MEDICAL GRADE DEGREASED COPPER FITTINGS

## MEDICAL GAS SUPPLY PIPING



FIGURE 1: Measuring



FIGURE 2: Cutting

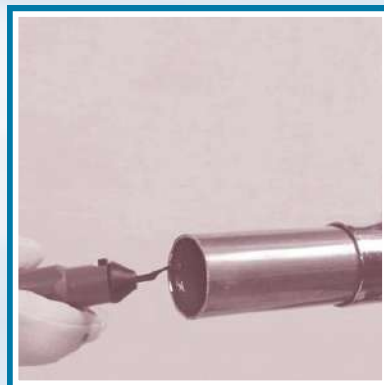


FIGURE 3: Reaming

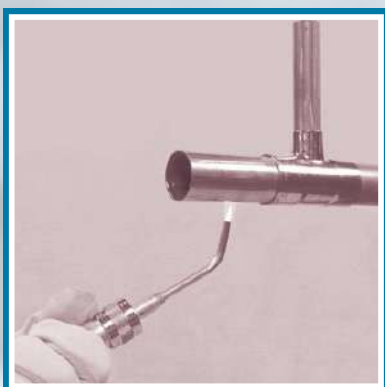


FIGURE 4: Preheating tube

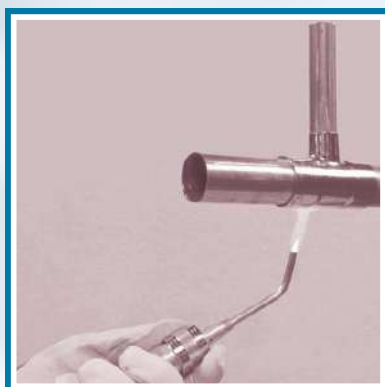


FIGURE 5: Preheating fitting

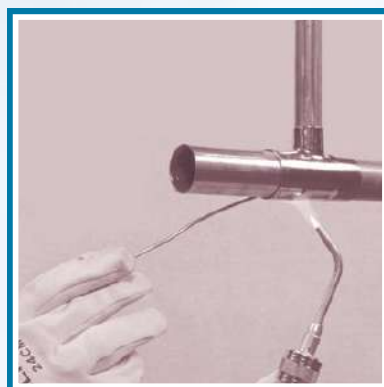


FIGURE 6: Brazing



Brazing with Inert Gas Shield



Brazing without Inert Gas Shield