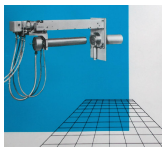
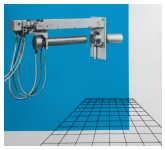


Lock Chamber for Retraction Device

Lock Chamber for Retraction Device

- The lock chamber enables operation of the furnace camera system in combination with firing processes which operate under over pressure conditions up to 100 mbar
- The lock camber is hermetically closed and provided with flap system which seals off the camera housing to ambiency. Thus offers insertion or retraction of probe camera under operation conditions of the firing process (e.g. pressure boiler).

  Due to special design of the lack chamber system, leakage of hot flue gases is being prevented safely, during control of the retraction device.
- Two additional special OD-seals with sealing lip encircle camera probe housing in the area of the retraction port of the lock chamber.
- Drive of lock chambers flap is performed via a pneumatic cylinder. A pneumatic position switch detects flap position and releases control of the retraction device, after it is totally closed.
- In case of control air failure, a retraining spring secures safe cose of the lock chamber.
- Via a nozzle cooling- respectively barrier air is connected to the chamber system.
- The lock chamber is installed to a sub plate and may be screwed to the main base plate (also water cooled version). Stud bolts on the sub plate allow fast and easy fixing of the retraction device.
- The lock chamber is designed ‘sea water resistant’.



Retraction Device with Lock Chamber

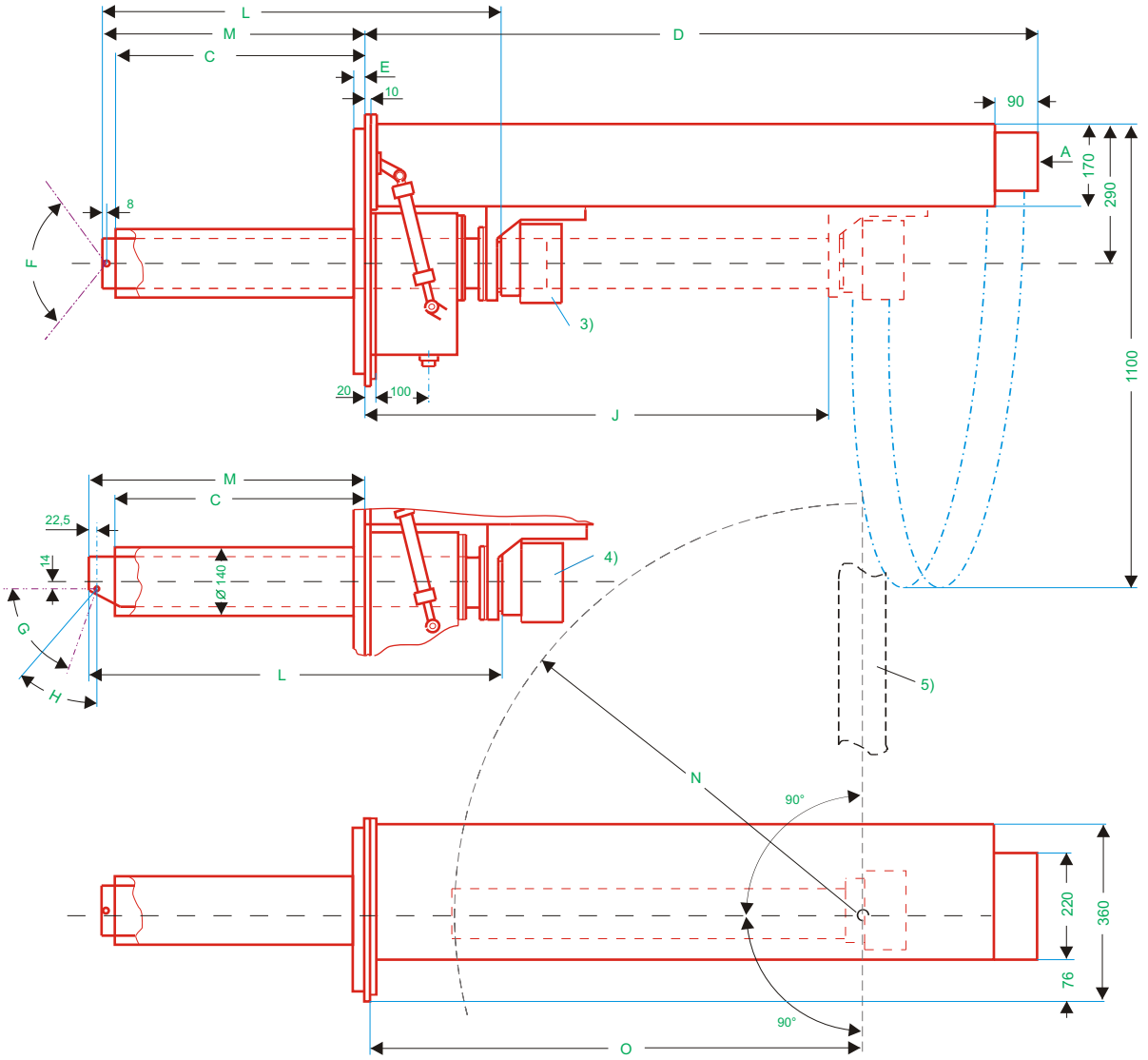
Ordering data

Item	Order no.								
Retraction device	2GF1713	-	☐	☐	☐	☐	☐	-	☐	☐
For furnace pressure < 100 mbar overpressure, including lock chamber with shutter and air nozzle for ambient temperature < 80 °C			|	|	|	|	|		|	|
Chassis			|	|	|	|	|		|	|
- With 750 mm stroke			5	|	|	|	|		|	|
- With 1050 mm stroke			6	|	|	|	|		|	|
(long probe housing required)				|	|	|	|		|	|
Base plate				|	|	|	|		|	|
- Without base plate				A	|	|	|		|	|
- With base plate (furnace wall temperature < 60 °C)					|	|	|		|	|
St35-sleeve, 520 mm long (with 750 mm stroke)				B	|	|	|		|	|
St35-sleeve, 820 mm long (with 1050 mm stroke)				C	|	|	|		|	|
- With water-cooled base plate					|	|	|		|	|
St35-sleeve 520 mm long (with 750 mm stroke)				E	|	|	|		|	|
St35-sleeve 820 mm long (with1050 mm stroke)				F	|	|	|		|	|
X15-sleeve 520 mm long (with 750 mm stroke)				H	|	|	|		|	|
X15-sleeve 820 mm long (with 1050 mm stroke)				J	|	|	|		|	|
- With base plate in spezial design [1])				Z	|	|	|		|	|
Junction box					|	|	|		|	|
- without junction box					A	|	|		|	|
- with junction box 9/12						|	|		|	|
for ≤ 70 °C ambient temperature					B	|	|		|	|
For > 70 °C ambient temperature with 4 m protection tube					D	|	|		|	|
and additional casing						|	|		|	|
- With junction box 9/12 for > 70 °C ambient temperature						|	|		|	|
4 to 10 m protection tube and additional casing on request						|	|		|	|
Insertion stop						|	|		|	|
- Without insertion stop						0	0		|	|
- With insertion stop						1	1		|	|
(necessary from 3° inclination downwards)									|	|
Limit switch for purging air stop									|	|
- Without limit switch								-	0	|
- With limit switch								-	1	|
(max. 80 °C amb. Temperature, purging valve in compressed air unit 2GD1703-... necessary)										|
Tubes and cables										|
- Without tubes and cables								-		A
- With tube- and cable set D22 [2])										F
(without installation tube set)								-		
- With installation tube set [3])								-		G

[1]) On request (for example ceramic sleeve)

[2]) Tube and cable set D22 consisting of: 1 purging air tube D22 (M28), length 2 m, 2 cooling water tubes (12 mm diam, / 2m) 1 signal cable, thermo cable for temperature monitoring inside probe, length: 2,8 m.

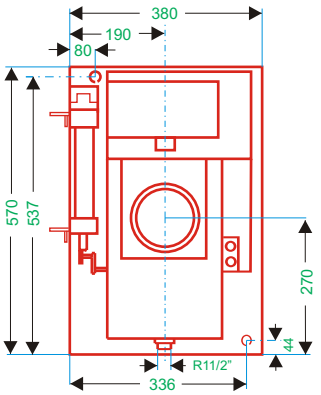
[3]) Installation tube set 2GF1801-8FC, consisting of : 3 air tubes (8 mm diam./2 m, for working air ‘insertion’, working air ‘retraction’ and purging air inlet), 2 cooling water tubes (12 mm diam./2 m, cooling water inlet and outlet for probe camera housing) and also two screwed glands, R 1/2”.



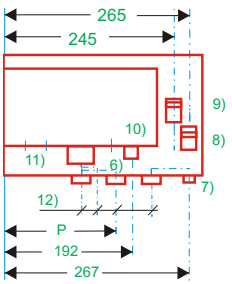
Dimen-sions (mm) or angle	Explanation	Short probe camera housing viewing direction straight	Short probe camera housing viewing direction elbow	Long probe camera housing viewing direction straight	Long probe camera housing viewing direction elbow
C	Lenght of sleeve	< 520	<520	<820	<820
D	Total length from base plate	1300	1300	1600	1600
E	With water cooled base palte	23	23	23	23
F	Diagonal angle of view	< 110°	-	<110°	-
G	Viewing direction angle	-	70°	-	70°
H	Vertical angle of view (horizontal = 58°)	-	45°	-	45°
J	Stroke length	750	750	1050	1050
K	With air nozzle (otherwise: 10)	96	96	96	96
L	Length from stop	673	695	973	995
M	Insertion depth from base plate	528	550	828	850
N	Pivoting radius	700	725	1000	1025
O	-	952	952	1252	1252
P	Viewing direction straight, upwards, right or left	167	167	167	167
P	Viewing direction downwards	-	92	-	92

1) Cooling water inlet for base palte 1/2” female thread
2) Cooling water outlet for base plate 3/4” female thread
3) Probe camera housing with straight view direction
4) Probe camera housing with elbow view direction
5) Service position of the camera housing (90° to the left or right)

View A



Connection board



6) Cooling water inlet for probe camera housing (ferrule screw gland for 12 mm outer diameter).
7) Cooling water outlet for probe camera housing (ferrule screw gland for 12 mm outer diameter)
8) Working air for retraction process (screwed gland for tube with 8 mm outer diameter)
9) Working air for probe’s insertion (screwed gland for tube with 8 mm outer diameter)
10) Purging air inlet (screwed gland for tube with 8 mm oter diameter)
11) Screwed glands for cable diameter 6 - 9 mm or 12 - 14 mm
12) Connections for cooling water and purging air to probe camera housing
13) Cooling air connection of the nozzle R 1 1/2”, male thread

Dimensions, retraction device 2GF1713-...