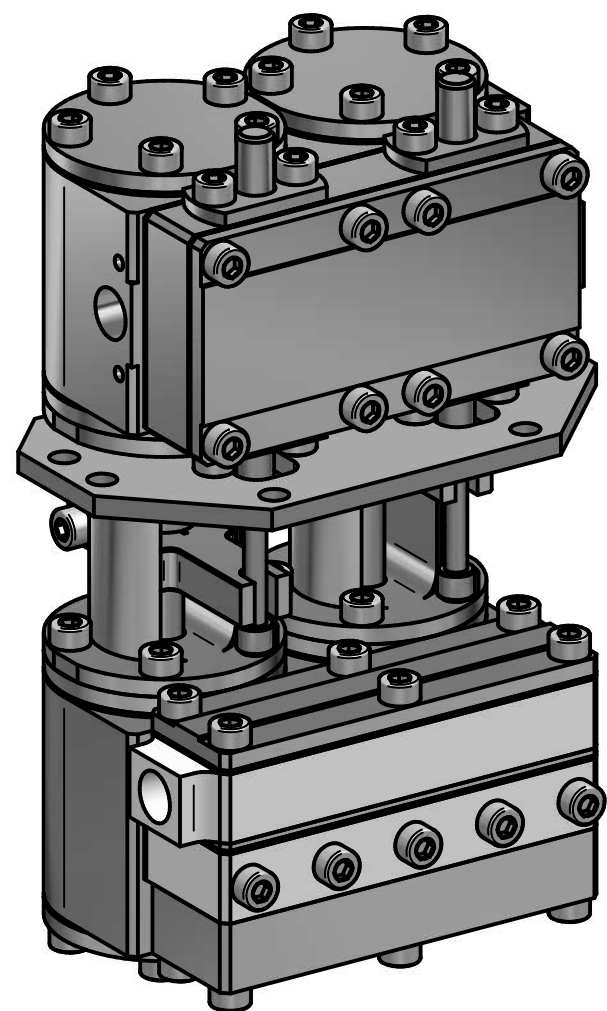
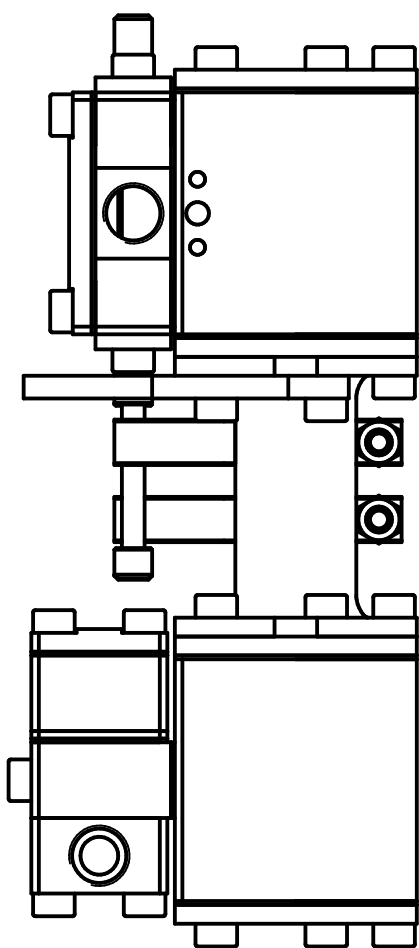
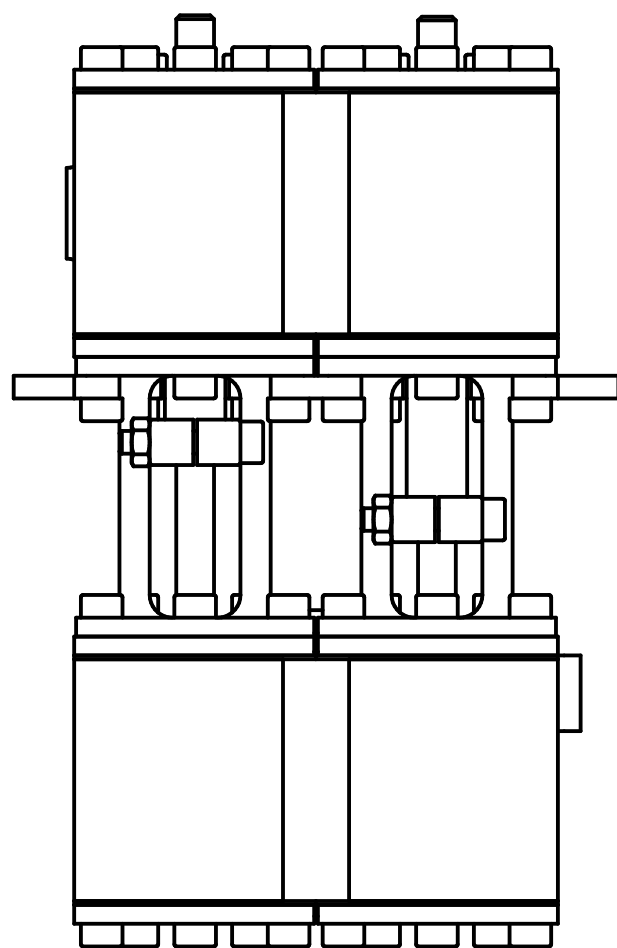
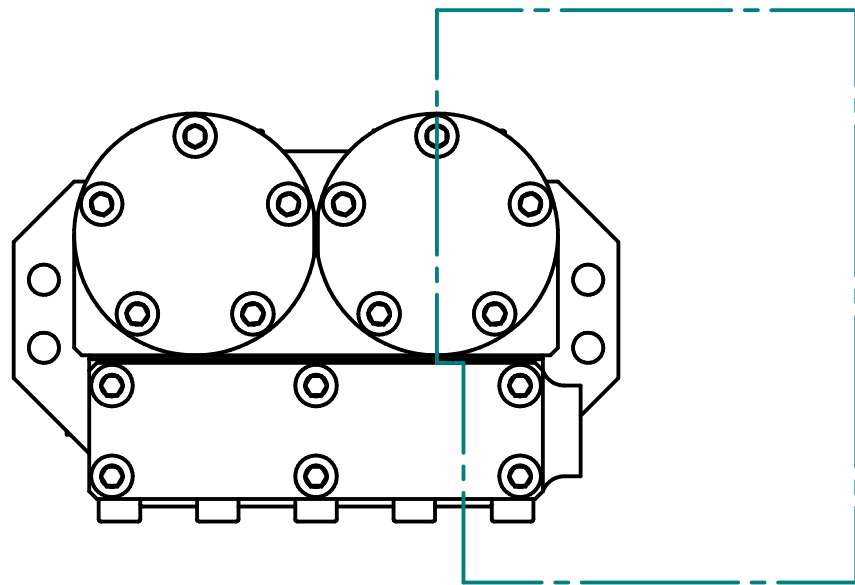
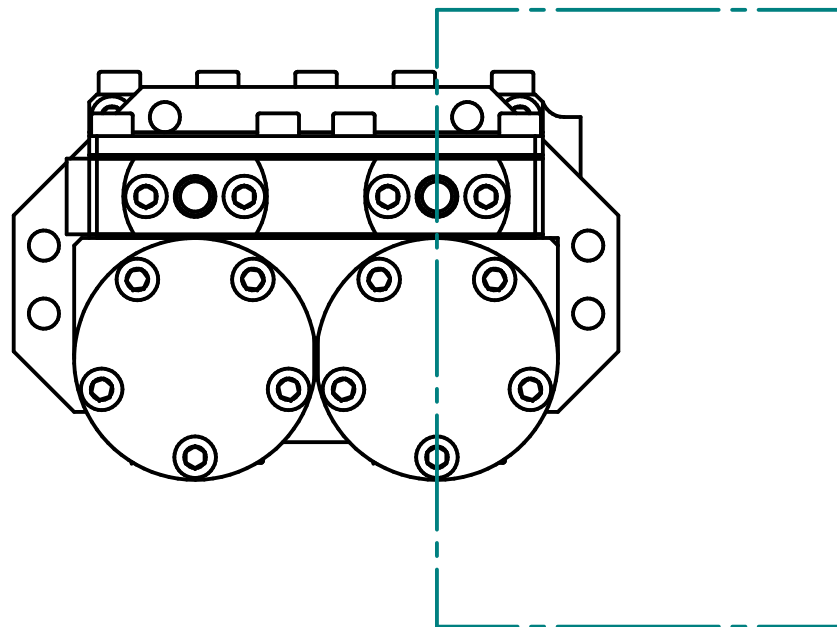


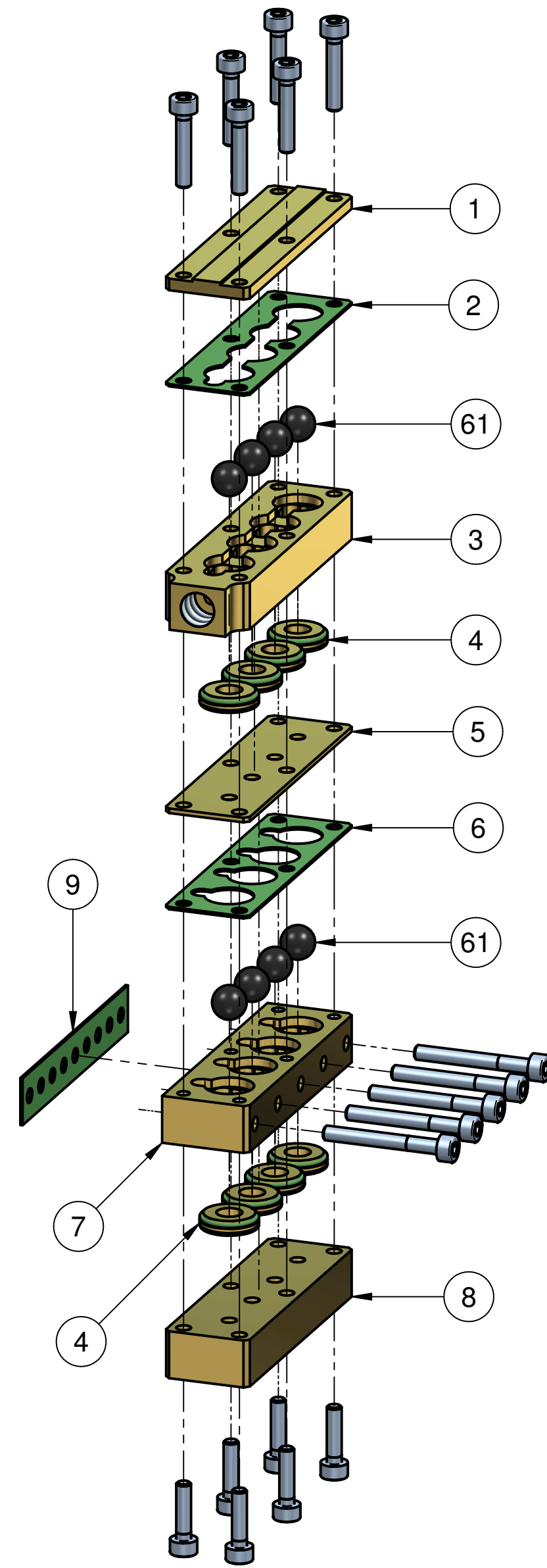
BROKEN OUT SECTION



DIMETRIC VIEW



	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20	TITLE Steam Pump		
CHECKED					
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 1 OF 18

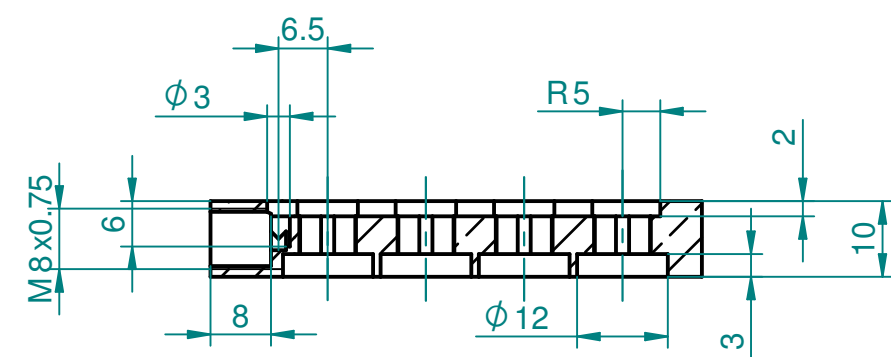
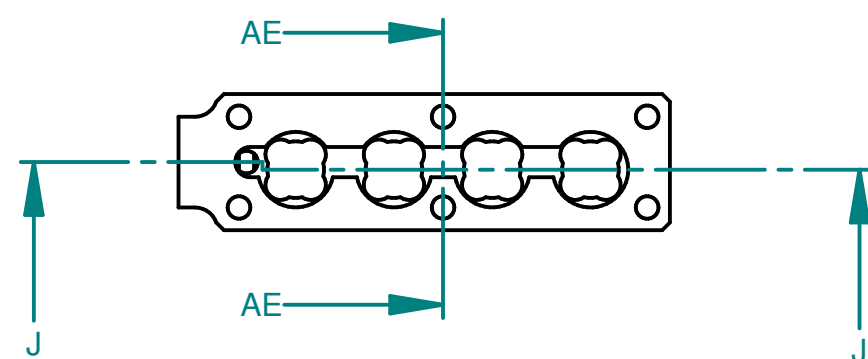
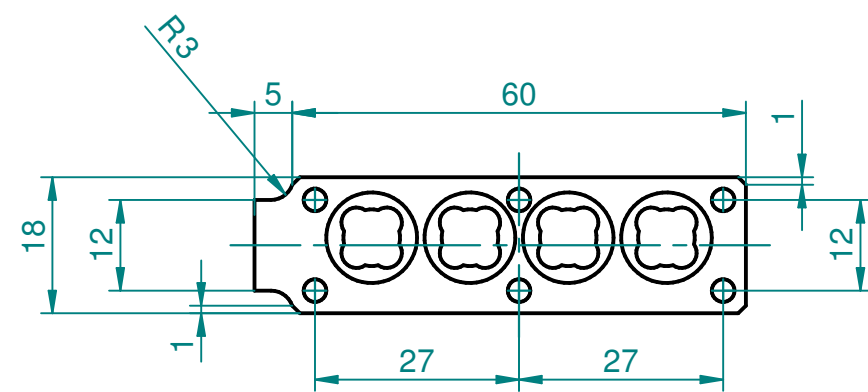


WATER VALVES ASSEMBLY, EXPLODED VIEW
Fig. 1

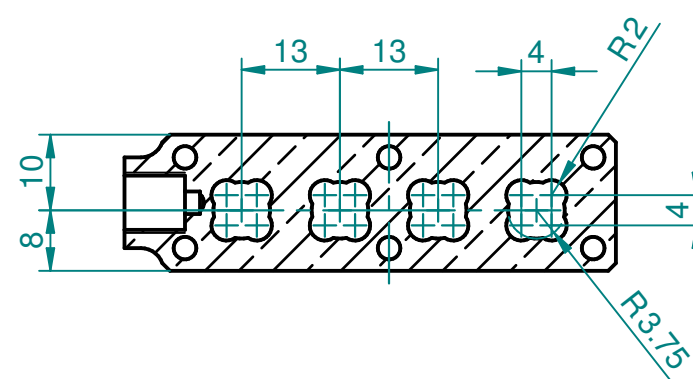
WATER VALVES				
POS	DESCRIPTION	MATERIAL	QTY	COMMENTS
1	WATER V. TOP COVER	Brass, yellow brass	1	
2	WATER V. TOP COVER GASKET	Aramide 0.5 mm Gasket	1	
3	WATER V. DISCHARGE BLOCK	Brass, yellow brass	1	
4	WATER V. BALL SEAT	Brass, yellow brass	8	
5	WATER V. SPACER SHEET	Brass, yellow brass	1	
6	WATER V. SPACER GASKET	Aramide 0.5 mm Gasket	1	
7	WATER V. INLET BLOCK	Brass, yellow brass	1	
8	WATER V. INLET MANIFOLD	Brass, yellow brass	1	
9	WATER VALVE GASKET	Aramide 0.5 mm Gasket	1	
61	Ball 7 mm	Silicon Nitride	8	Commercial Item
62	O-Ring 10 x 1 mm	FKM	8	Commercial Item
63	O-Ring 10 x 1 mm	FKM	8	Commercial Item

WATER VALVES ASSEMBLY, PARTS LIST
Table 1

	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE		
ENG APPR					
MGR APPR			Steam Pump		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 2 OF 18

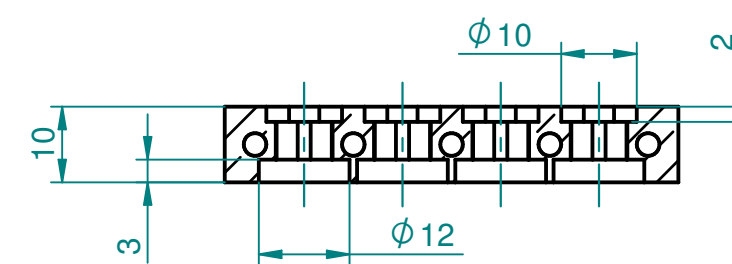
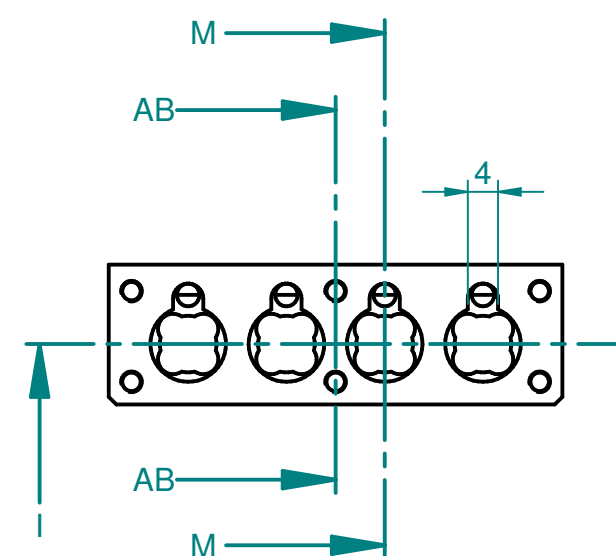
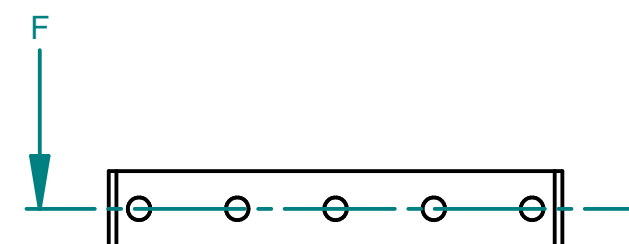
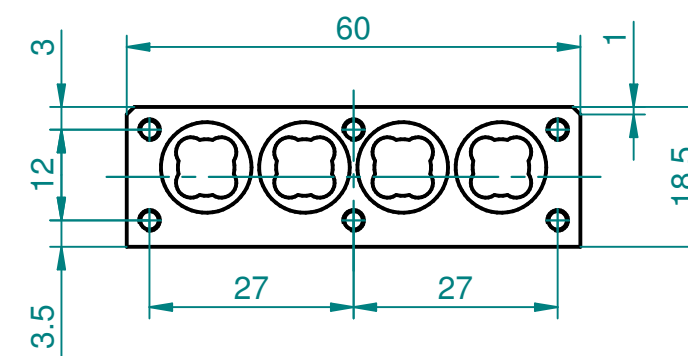


SECTION J-J

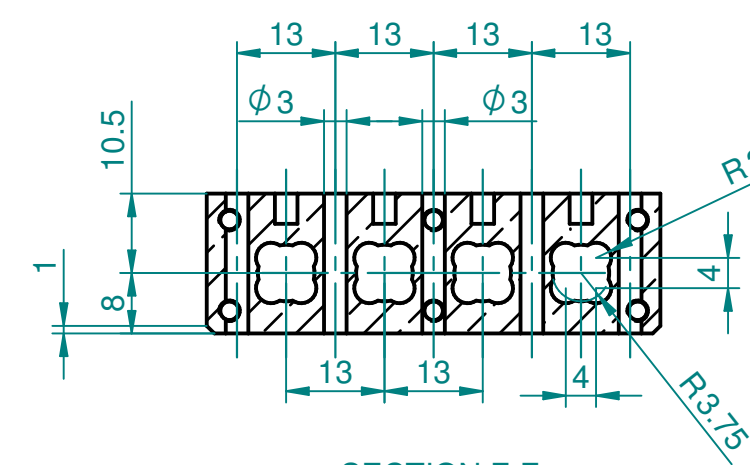


SECTION AC-AC

3 WATER V. DISCHARGE BLOCK
Fig. 2

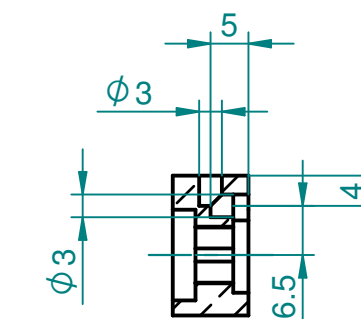


SECTION I-I

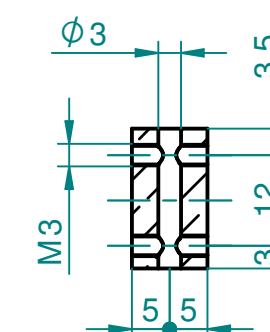


SECTION F-F

7 WATER V. INLET BLOCK
Fig. 3

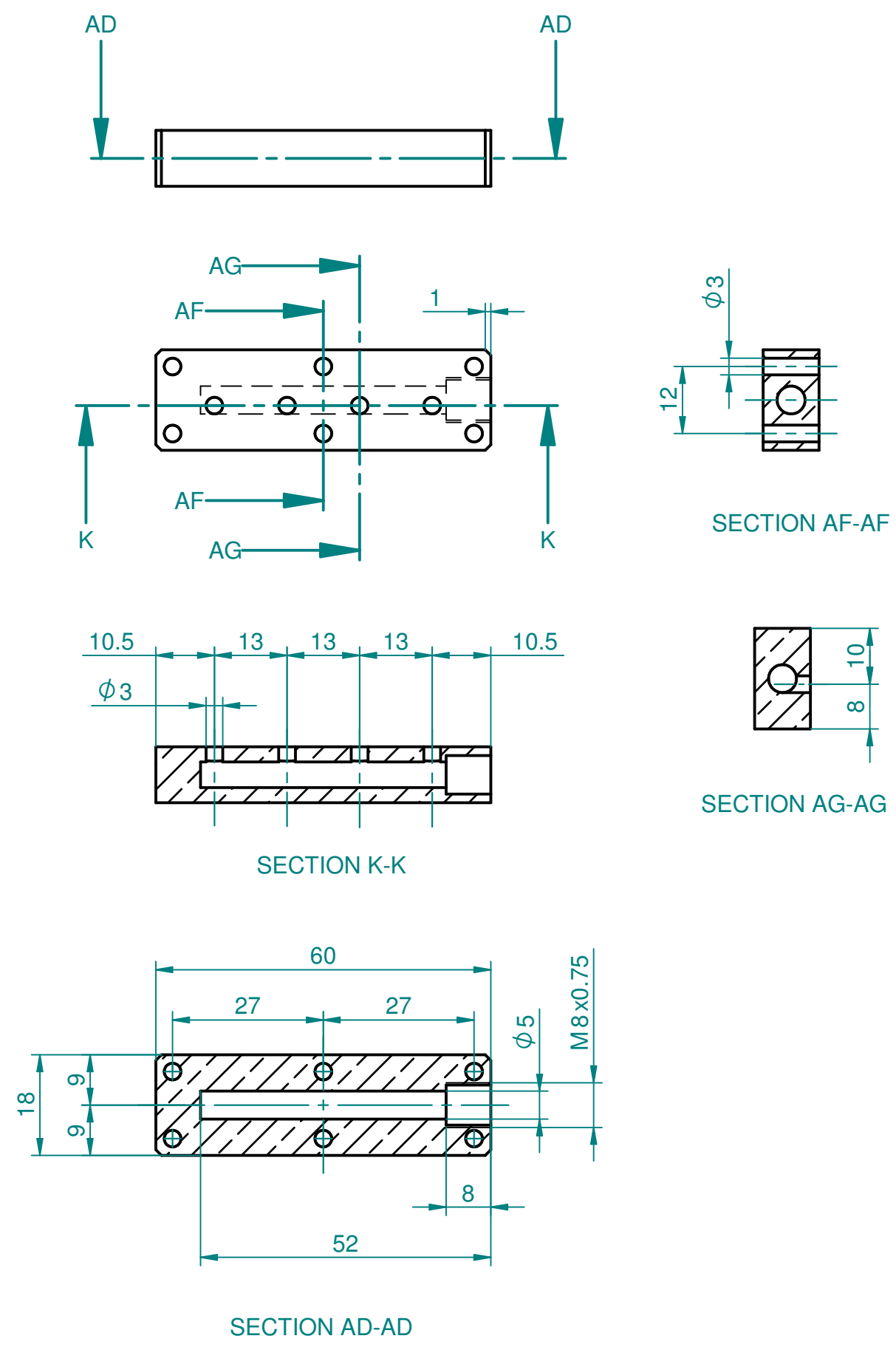


SECTION M-M

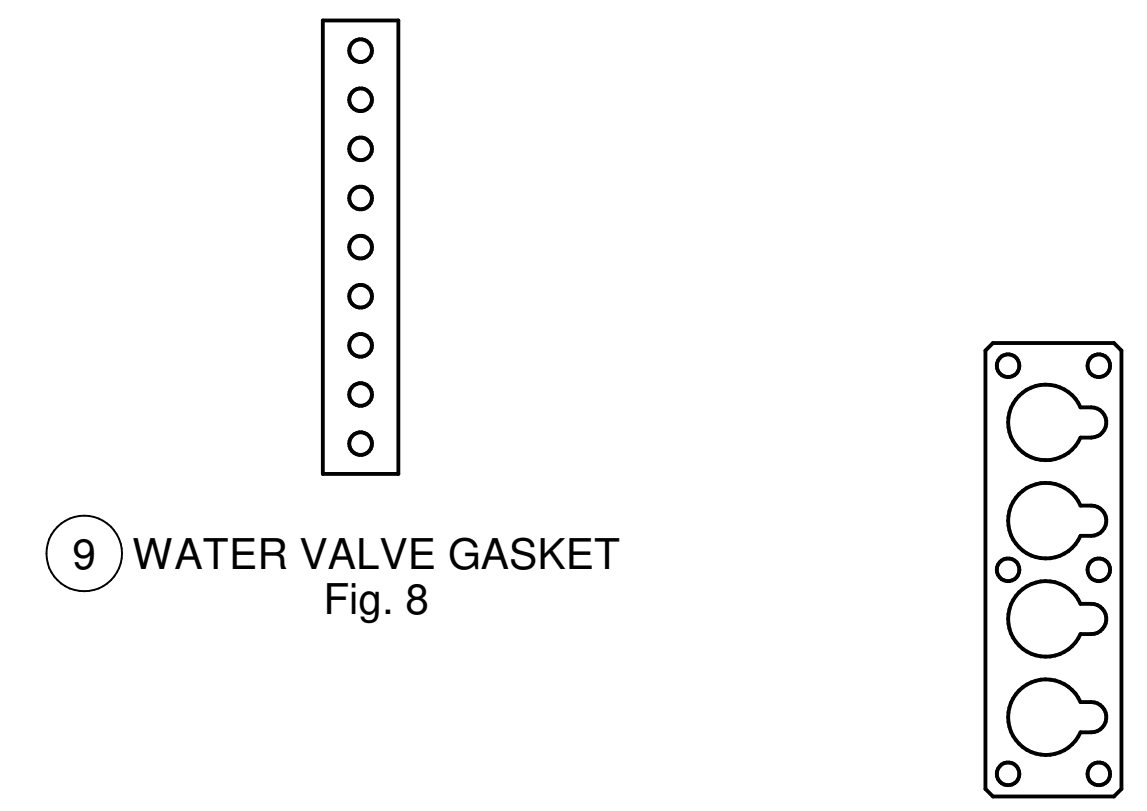
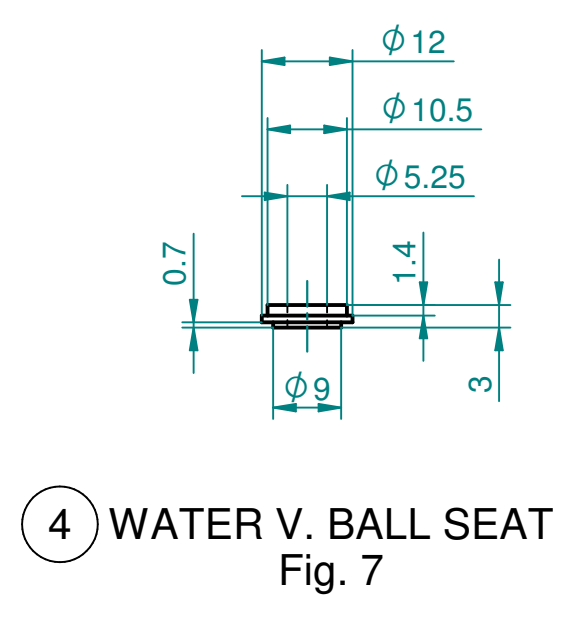
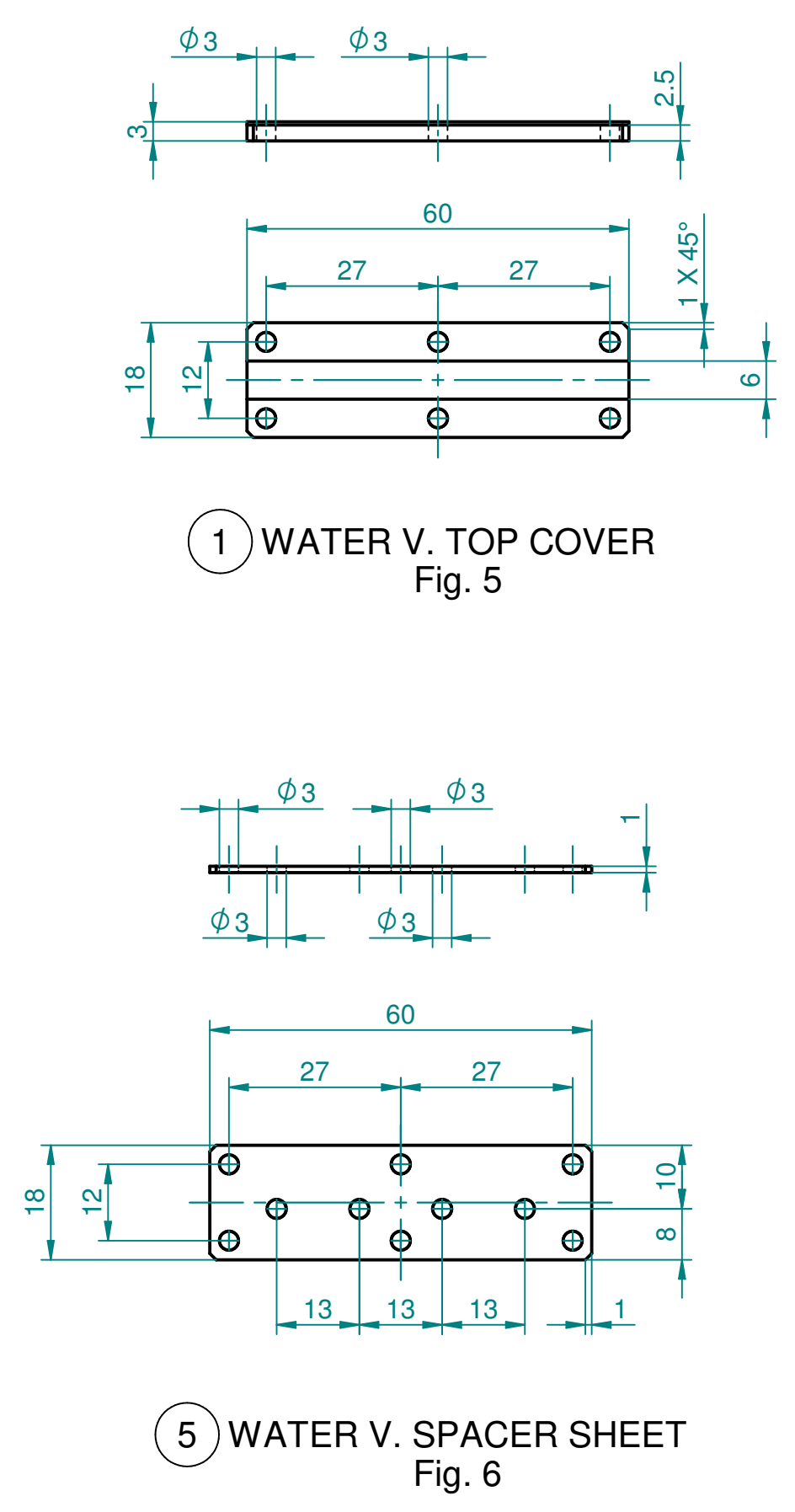


SECTION AB-AB

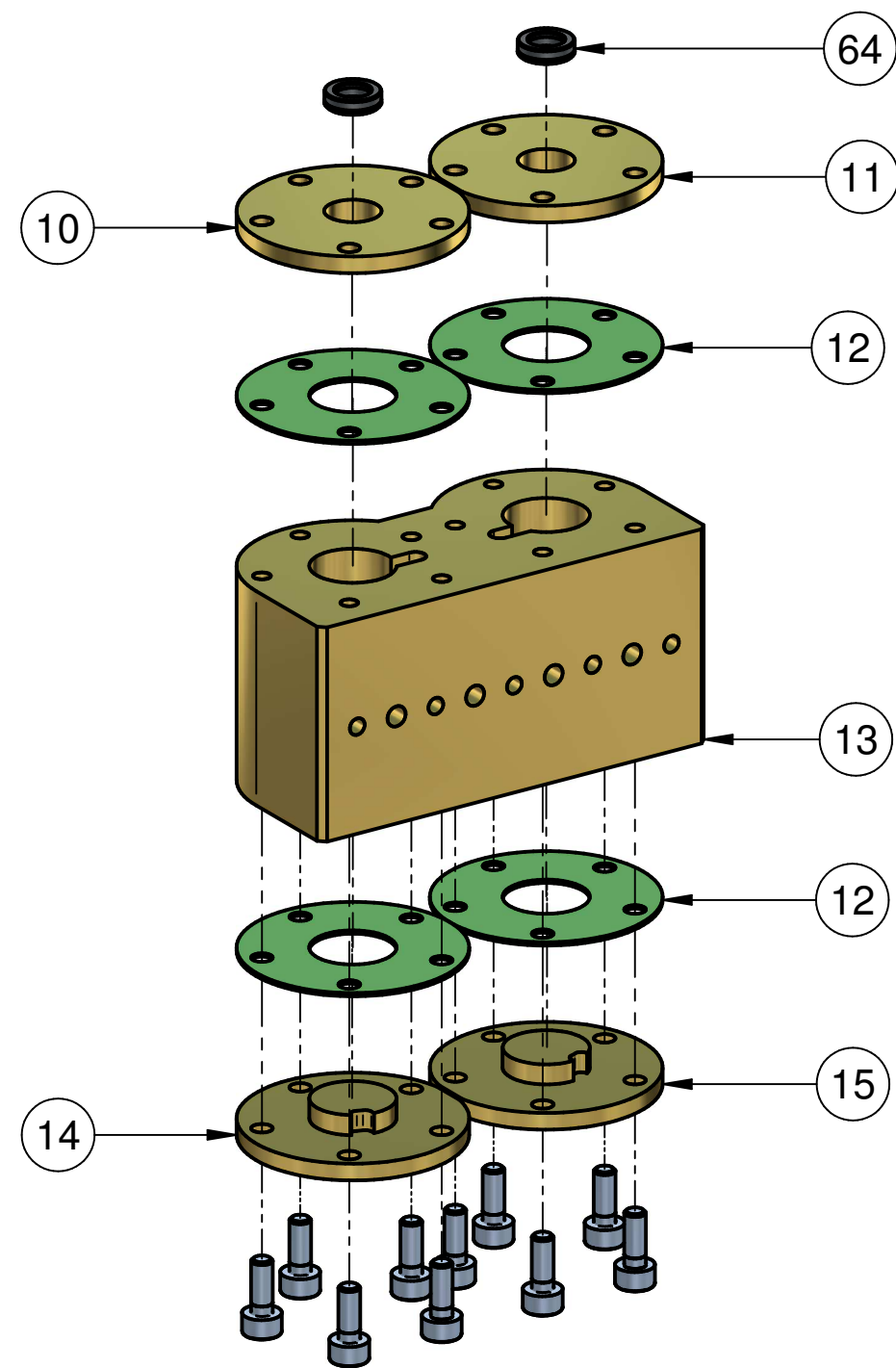
	NAME	DATE	LS-Fornells	
DRAWN	Joan Lluch	08/20/20		
CHECKED			TITLE	
ENG APPR				
MGR APPR			Steam Pump	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE	REV
			A2	2.1
			FILE NAME: SteamPump - GH.dft	
			SCALE:	WEIGHT: SHEET 3 OF 18



8 WATER V. INLET MANIFOLD
Fig. 4



	NAME	DATE	LS-Fornells	
DRAWN	Joan Lluch	08/20/20		
CHECKED			TITLE	
ENG APPR				
MGR APPR			Steam Pump	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump
			FILE NAME: SteamPump - GH.dft	REV 2.1
			SCALE:	WEIGHT: SHEET 4 OF 18

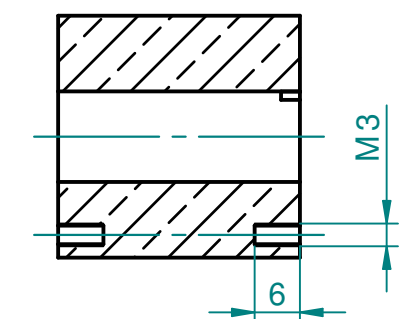
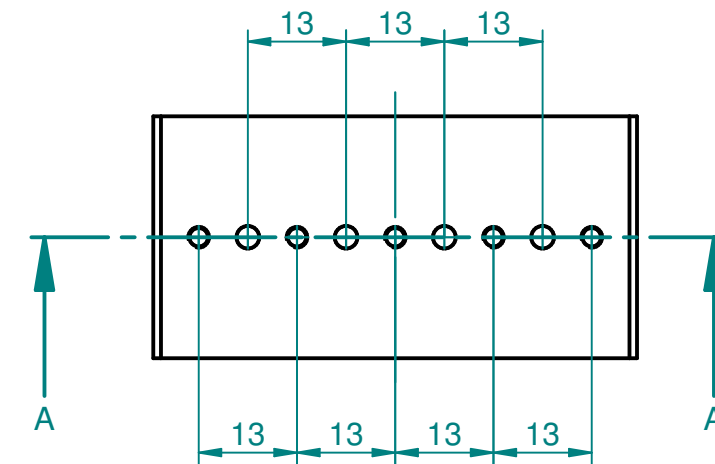
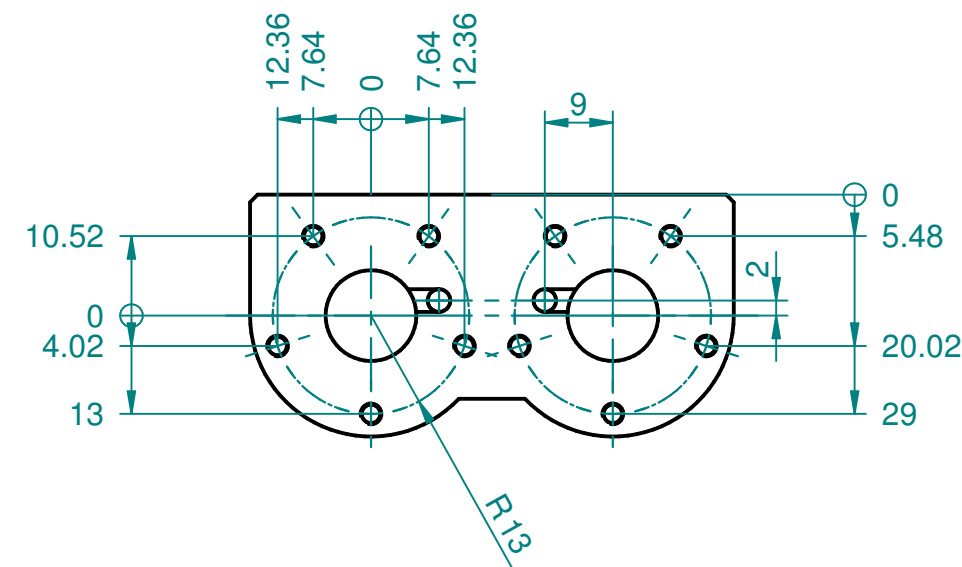
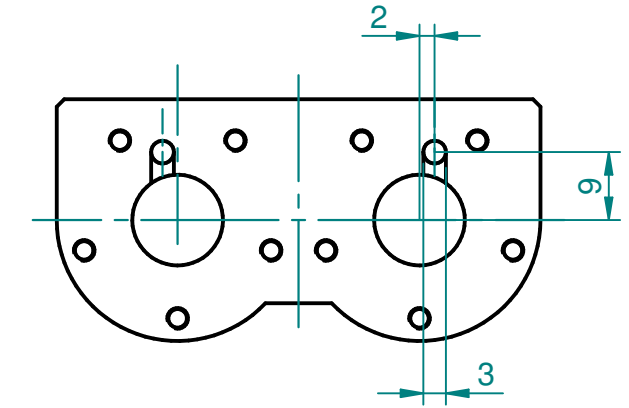
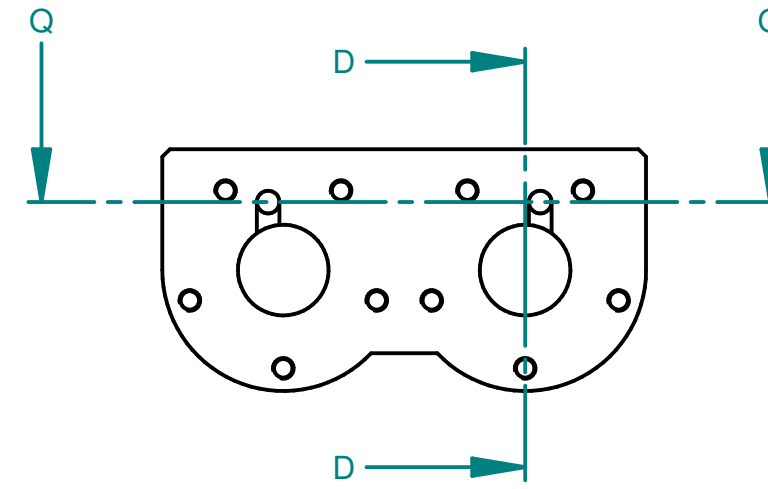
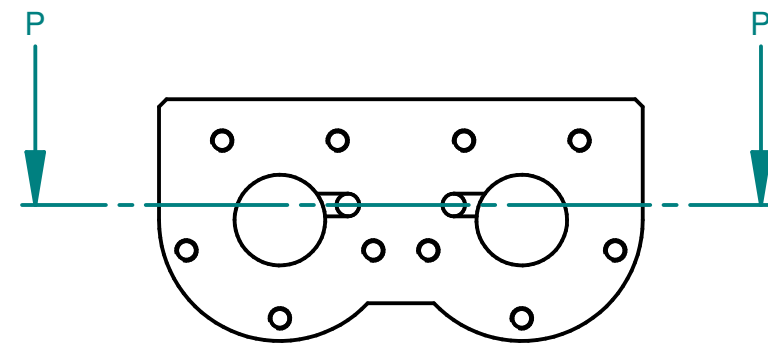
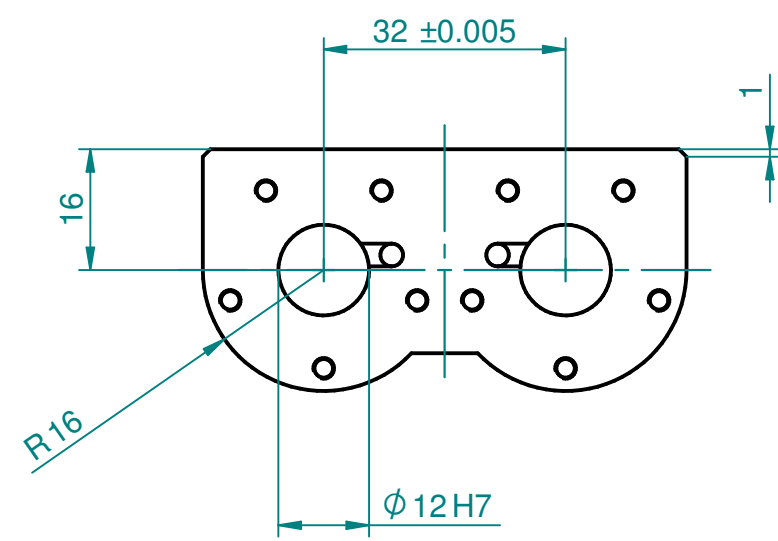


WATER CYLINDERS ASSEMBLY, EXPLODED VIEW
Fig. 11

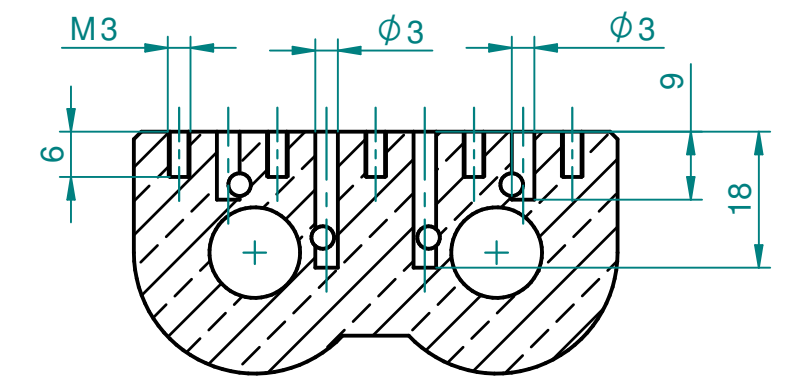
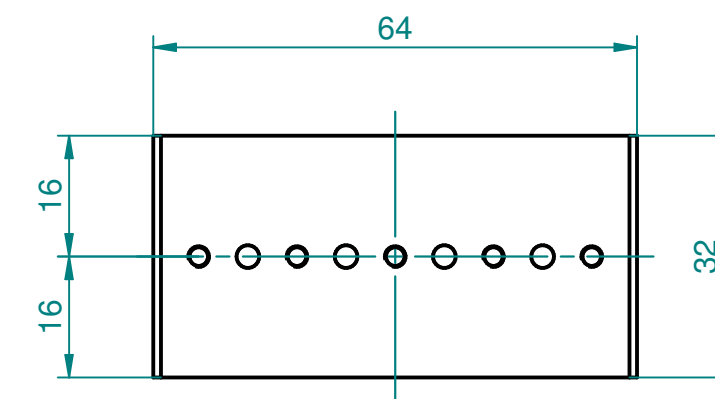
WATER CYLINDERS				
POS	DESCRIPTION	MATERIAL	QTY	COMMENTS
10	WATER CYL. FLANGE LEFT	Brass, yellow brass	1	
11	WATER CYL. FLANGE RIGHT	Brass, yellow brass	1	
12	WATER CYL. GASKET	Aramide 0.5 mm Gasket	4	
13	WATER CYLINDERS BLOCK	Brass, yellow brass	1	
14	WATER CYL. COVER LEFT	Brass, yellow brass	1	
15	WATER CYL. COVER RIGHT	Brass, yellow brass	1	
64	Rod Seal (5 mm)		2	Commercial Item

WATER CYLINDERS ASSEMBLY, PARTS LIST
Table 2

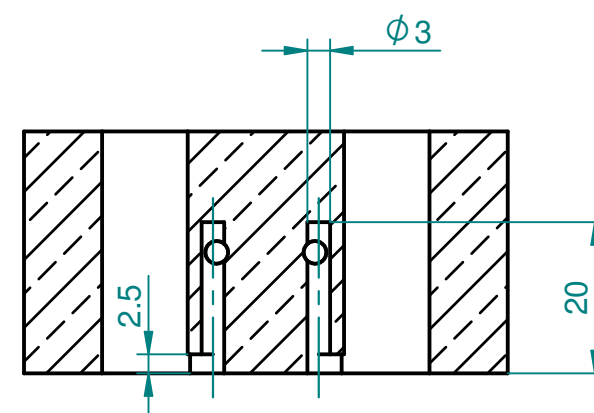
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED					
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±XXX 3 PL ±XXXX			TITLE		
			Steam Pump		
			SIZE A2	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 5 OF 18



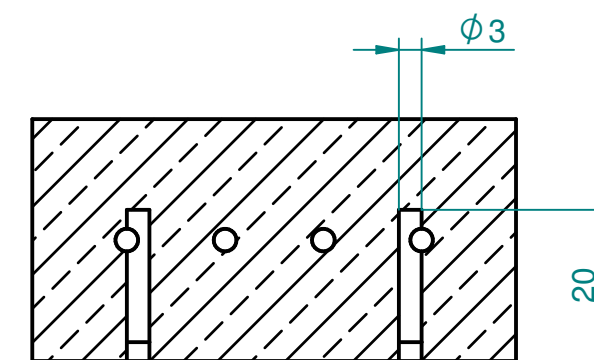
SECTION D-D



SECTION A-A



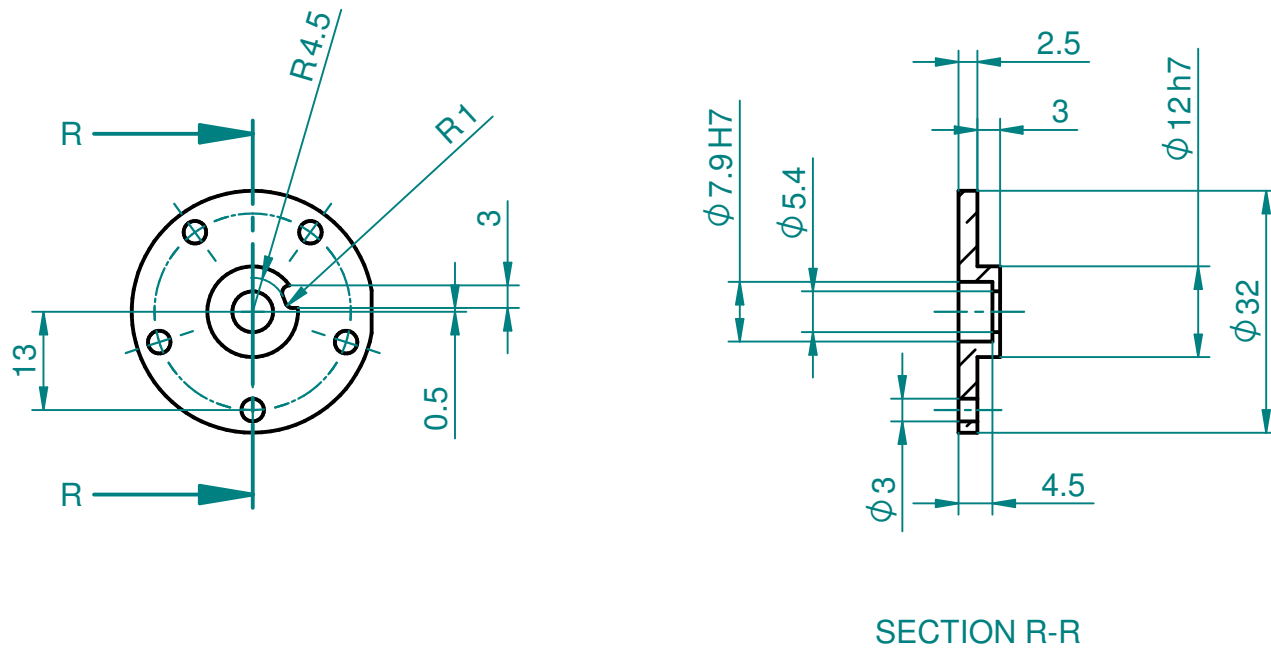
SECTION P-P



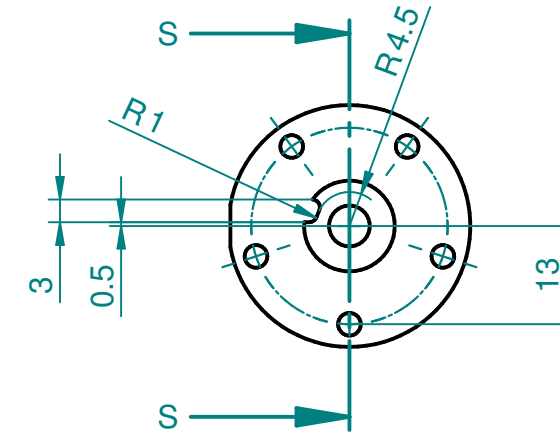
SECTION Q-Q

13 WATER CYLINDERS BLOCK
Fig. 12

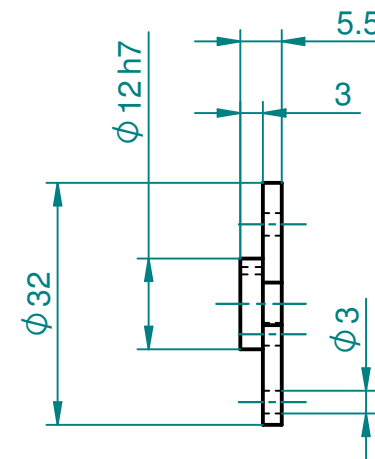
	NAME	DATE	LS-Fornells	
DRAWN	Joan Lluch	08/20/20		
CHECKED			TITLE	
ENG APPR				
MGR APPR			Steam Pump	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump
			FILE NAME: SteamPump - GH.dft	REV 2.1
			SCALE:	WEIGHT: SHEET 6 OF 18



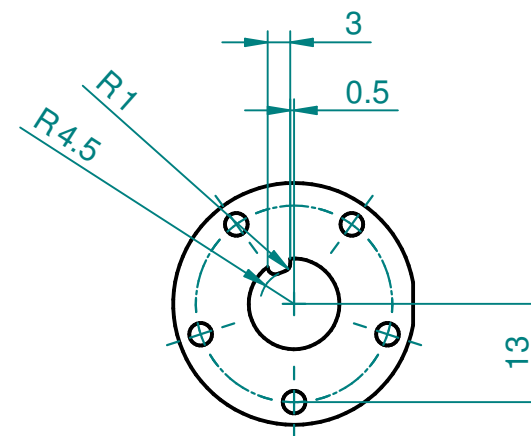
10 WATER CYL. FLANGE LEFT
Fig. 13



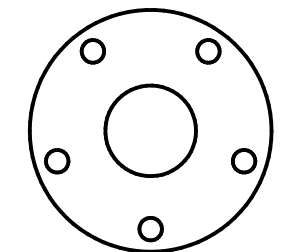
11 WATER CYL. FLANGE RIGHT
Fig. 14



15 WATER CYL. COVER RIGHT
Fig. 17

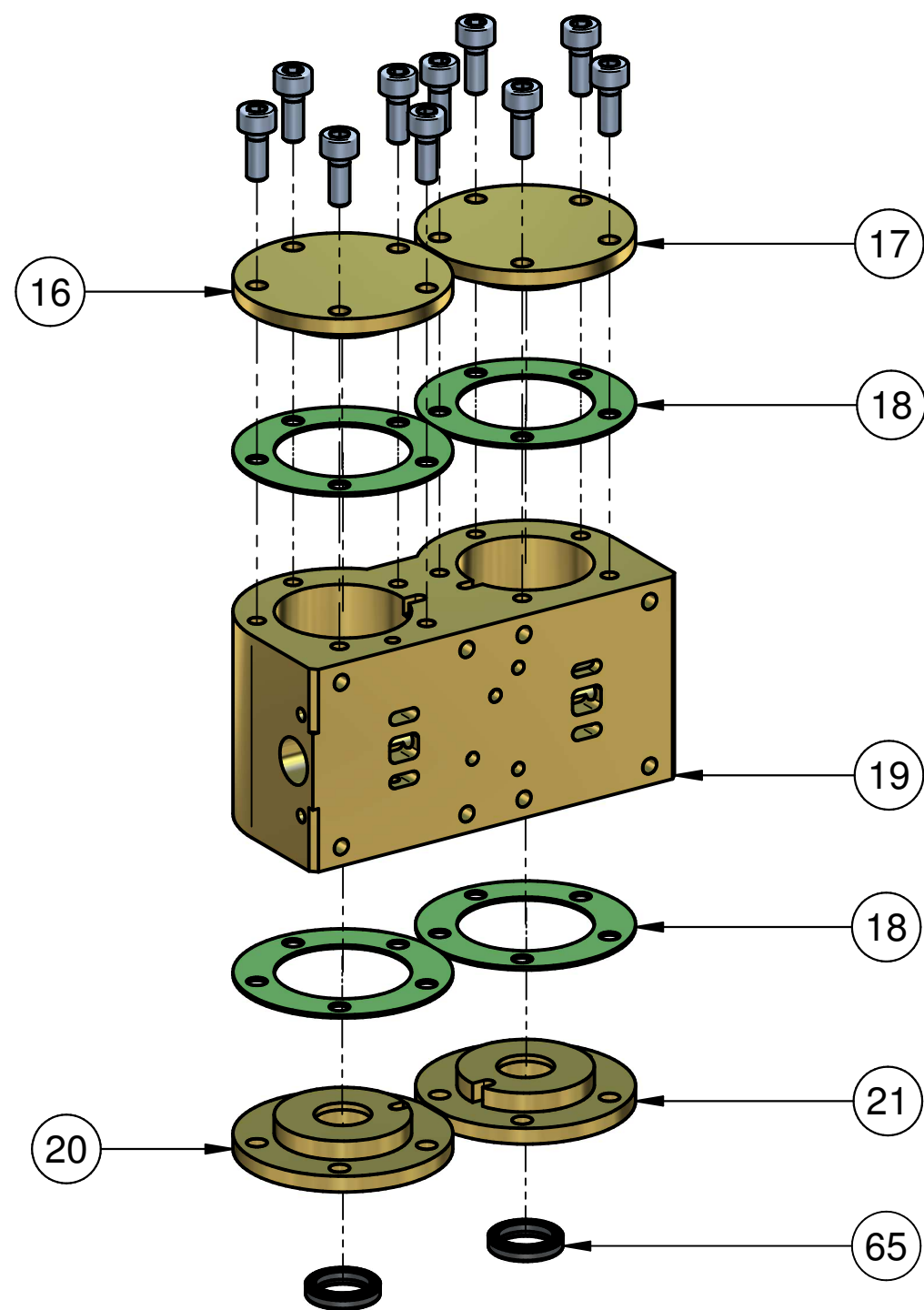


14 WATER CYL. COVER LEFT
Fig. 15



12 WATER CYL. GASKET
Fig. 16

	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE Steam Pump		
ENG APPR					
MGR APPR			SIZE A3 DWG NO Pump REV 2.1		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 7 OF 18

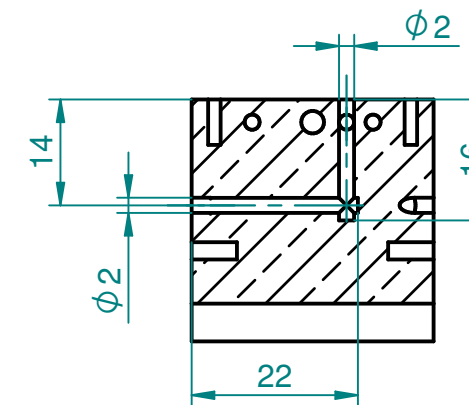
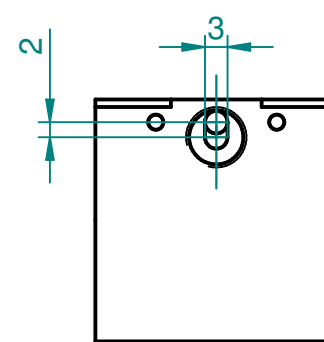
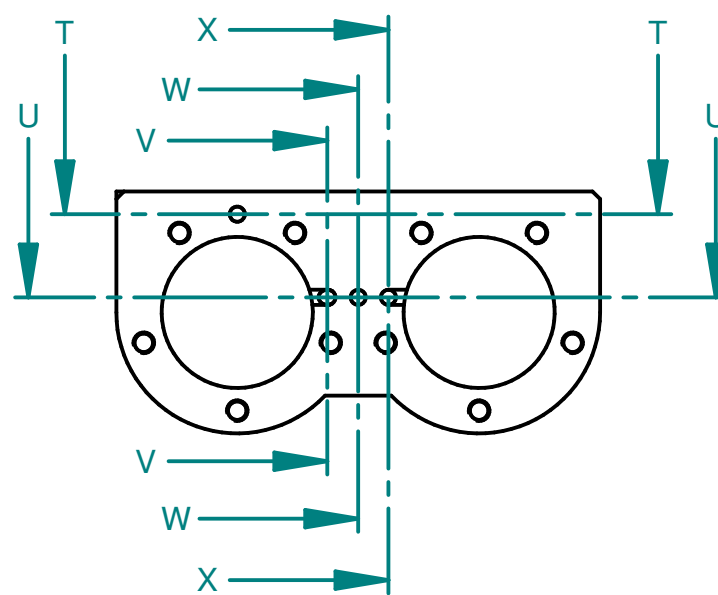
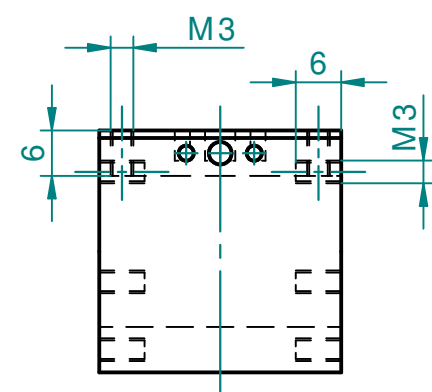
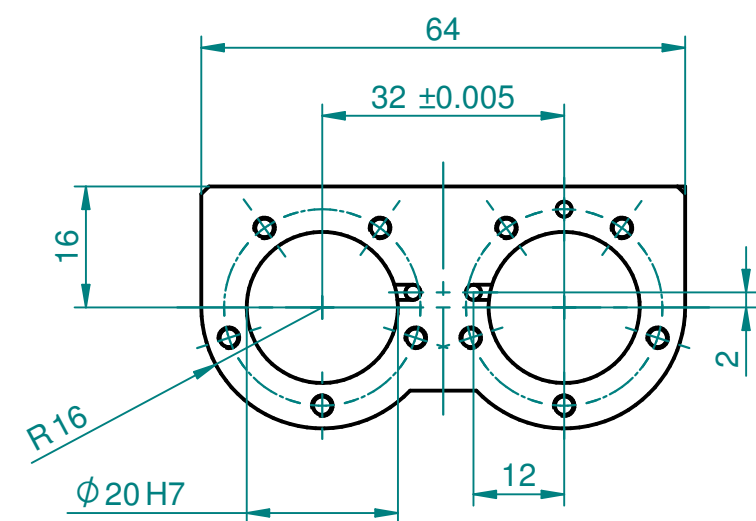


STEAM CYLINDERS ASSEMBLY, EXPLODED VIEW
Fig. 18

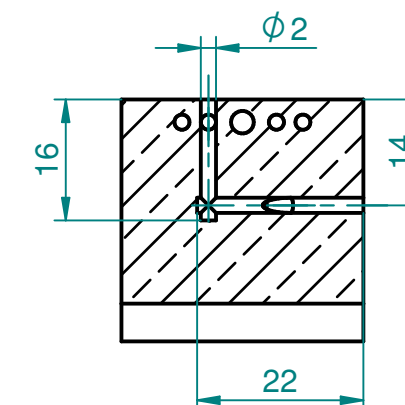
STEAM CYLINDERS				
POS	DESCRIPTION	MATERIAL	QTY	COMMENTS
16	STEAM CYL. COVER LEFT	Brass, yellow brass	1	
17	STEAM CYL. COVER RIGHT	Brass, yellow brass	1	
18	STEAM CYL. GASKET	Aramide 0.5 mm Gasket	4	
19	STEAM CYLINDER BLOCK	Brass, yellow brass	1	
20	STEAM CYL. FLANGE LEFT	Brass, yellow brass	1	
21	STEAM CYL. FLANGE RIGHT	Brass, yellow brass	1	
65	Rod Seal (8 mm)		2	Commercial Item

STEAM CYLINDERS ASSEMBLY, PARTS LIST
Table 3

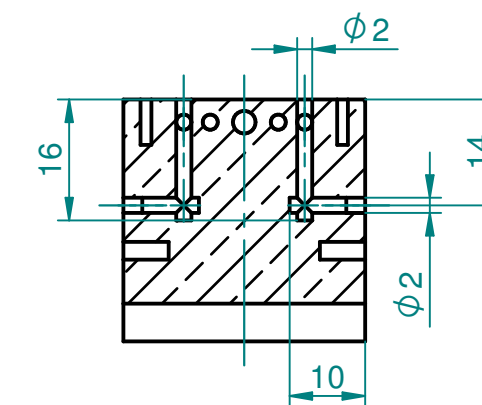
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE Steam Pump		
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 8 OF 18



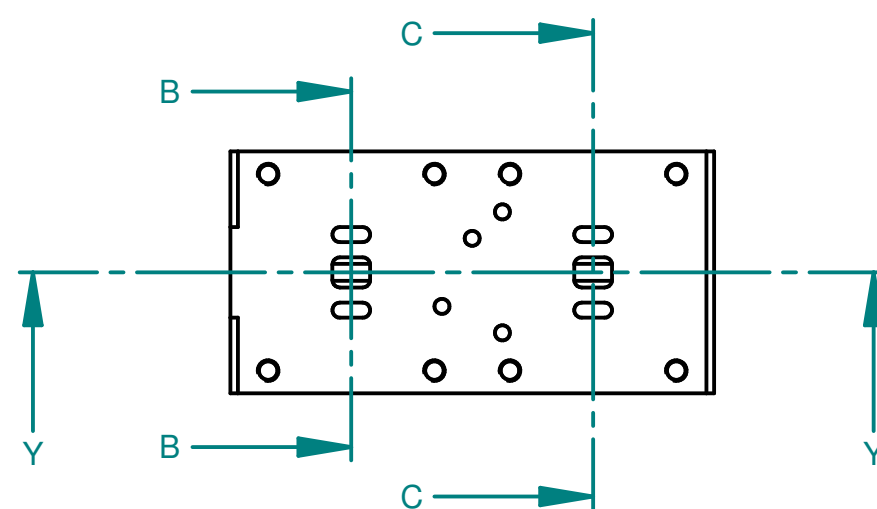
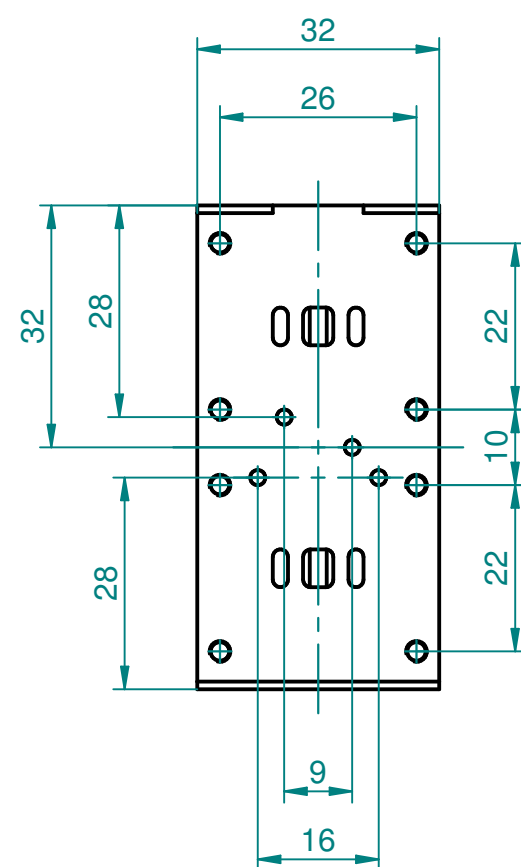
SECTION V-V



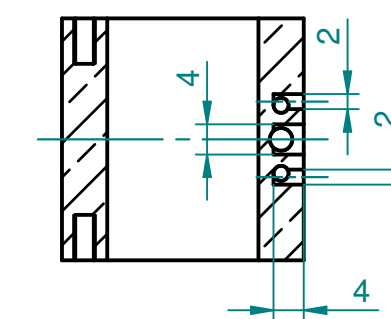
SECTION W-W



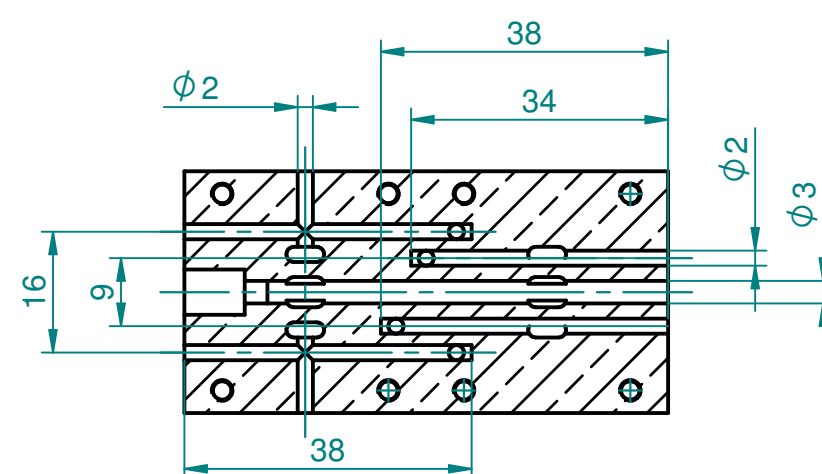
SECTION X-X



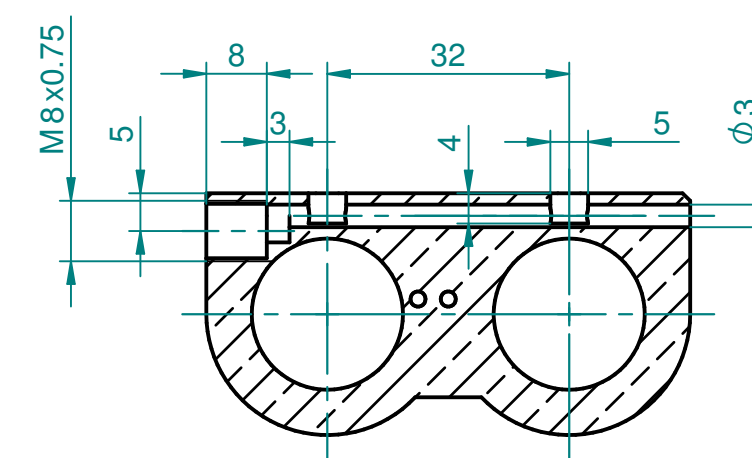
SECTION B-B



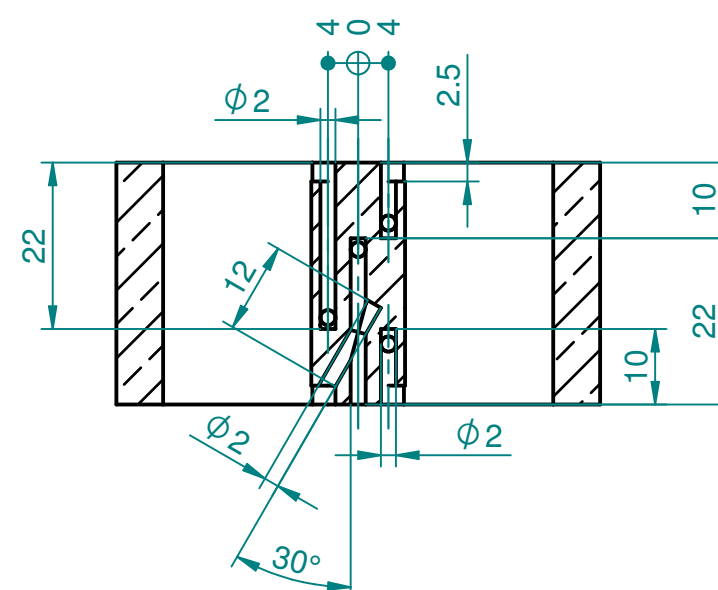
SECTION C-C



SECTION T-T



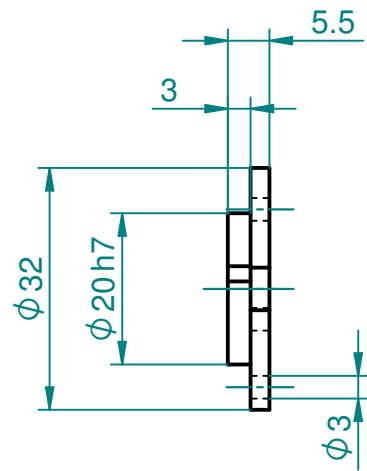
SECTION Y-Y



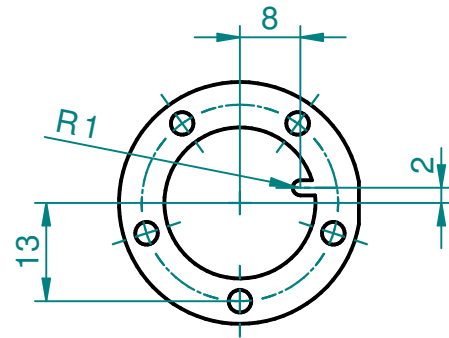
SECTION U-U

19 STEAM CYLINDER BLOCK
Fig. 19

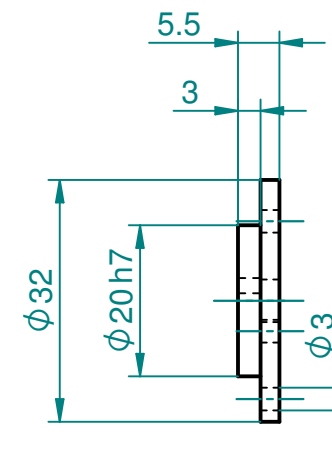
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE		
ENG APPR					
MGR APPR			Steam Pump		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X° 2 PL ±XXX 3 PL ±XXXX			SIZE	DWG NO	REV
			A2	Pump	2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 9 OF 18



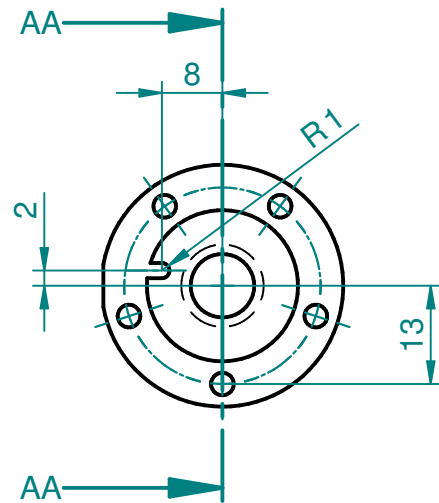
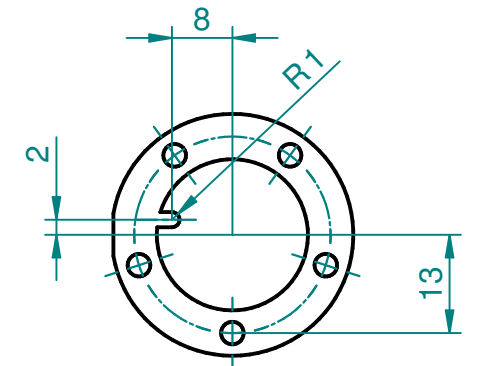
16 STEAM CYL. COVER LEFT
Fig. 20



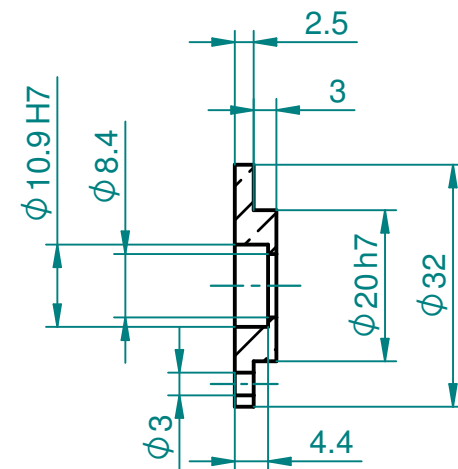
18 STEAM CYL. GASKET
Fig. 21



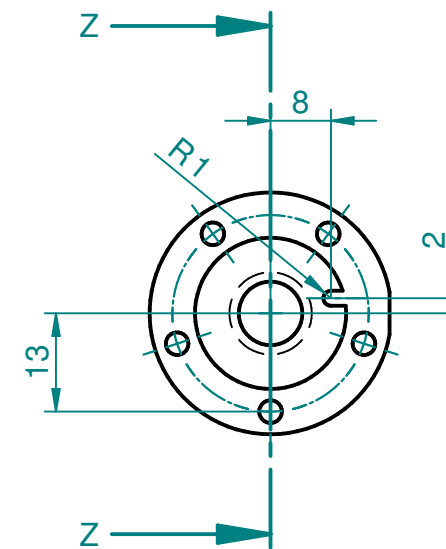
17 STEAM CYL. COVER RIGHT
Fig. 22



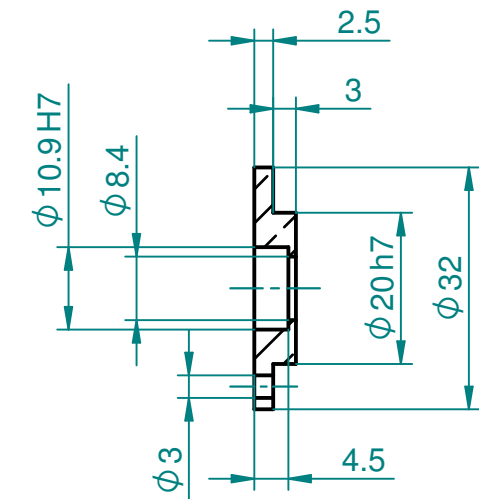
20 STEAM CYL. FLANGE LEFT
Fig. 23



SECTION AA-AA

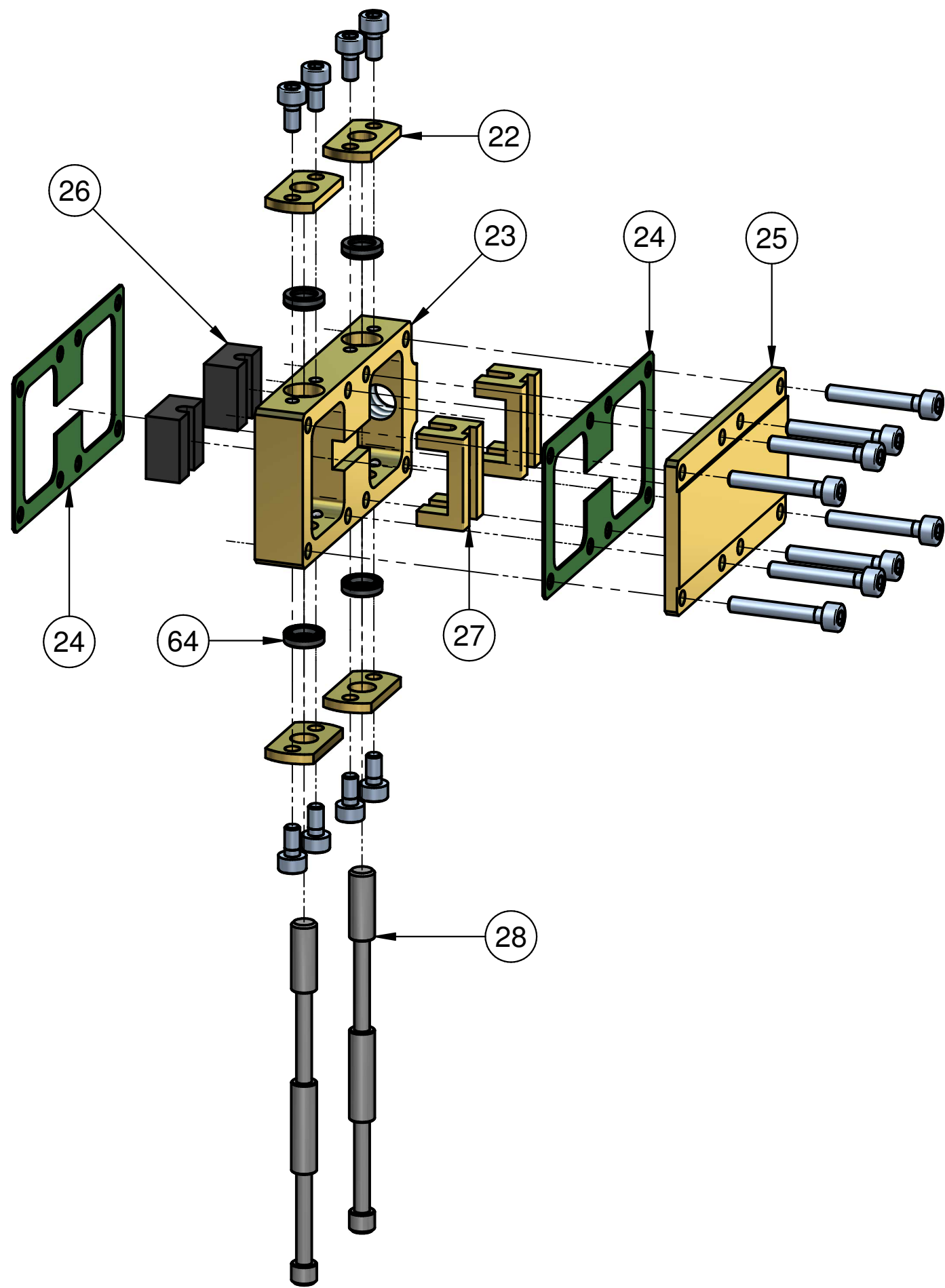


21 STEAM CYL. FLANGE RIGHT
Fig. 24



SECTION Z-Z

	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20	TITLE		
CHECKED			Steam Pump		
ENG APPR			SIZE A3		
MGR APPR			DWG NO Pump		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			REV 2.1		
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 10 OF 18

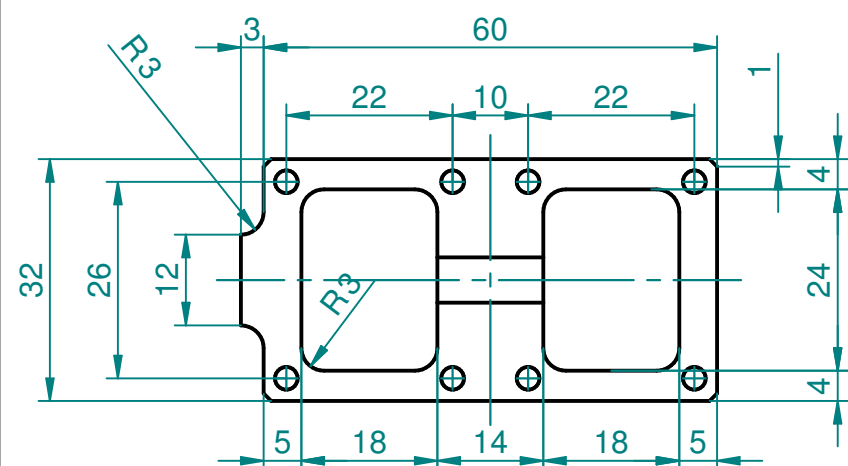


STEAM VALVES ASSEMBLY, EXPLODED VIEW
Fig. 25

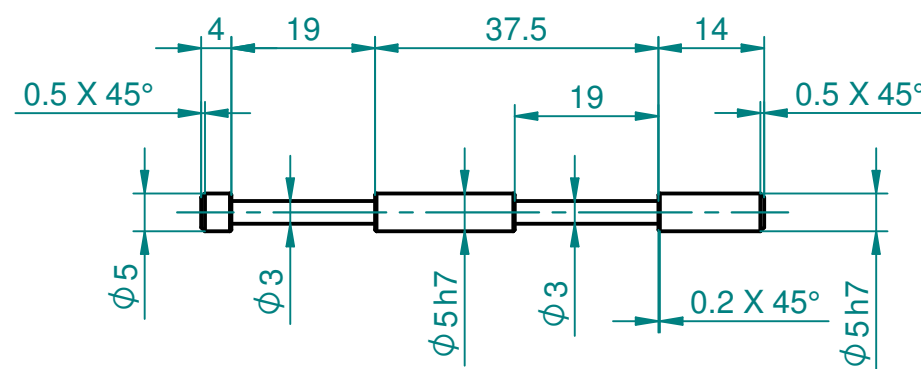
STEAM VALVES				
POS	DESCRIPTION	MATERIAL	QTY	COMMENTS
22	ACTUATOR SEAL COVER	Brass, yellow brass	4	
23	STEAM CHEST BLOCK	Brass, yellow brass	1	
24	STEAM CHEST GASKET	Aramide 0.5 mm Gasket	2	
25	STEAM CHEST COVER	Brass, yellow brass	1	
26	STEAM SLIDE VALVE	PEEK HPV	2	
27	STEAM VALVE CLIP	Brass, yellow brass	2	
28	ACTUATOR ROD	Stainless Steel, 316	2	
64	Rod Seal (5 mm)		4	Commercial Item

STEAM VALVES ASSEMBLY, PARTS LIST
Table 4

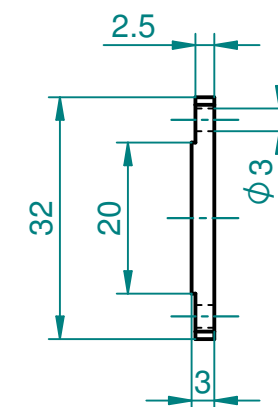
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE Steam Pump		
ENG APPR					
MGR APPR			SIZE A2		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX					
			DWG NO Pump		REV 2.1
			FILE NAME: SteamPump - GH.dft		
SCALE:		WEIGHT:		SHEET 11 OF 18	



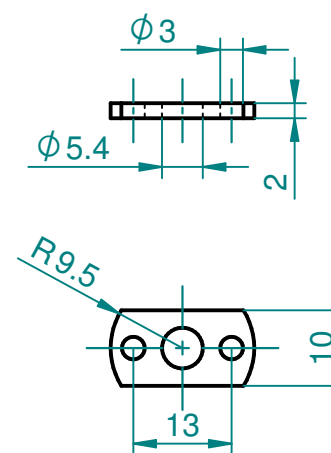
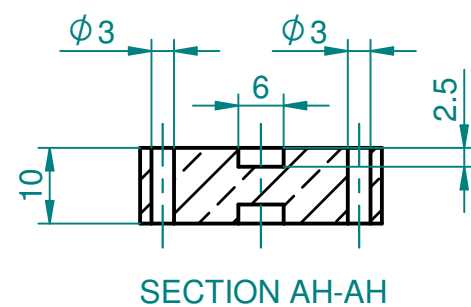
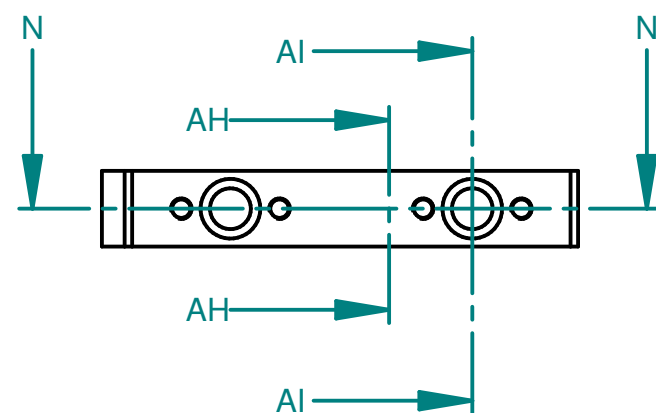
(23) STEAM CHEST BLOCK
Fig. 26



(28) ACTUATOR ROD
Fig. 30

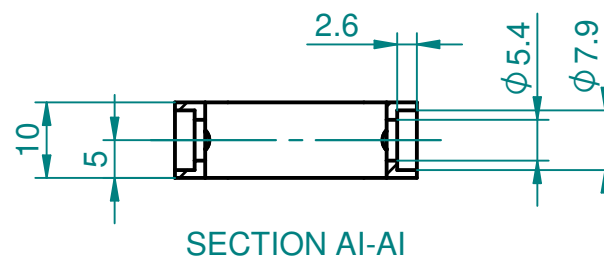
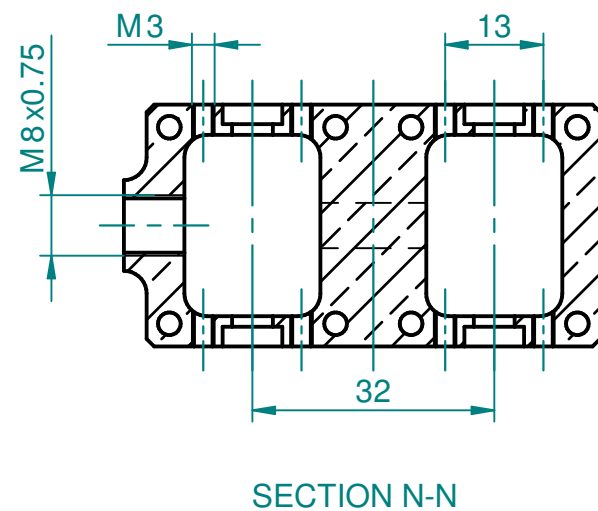


(25) STEAM CHEST COVER
Fig. 29

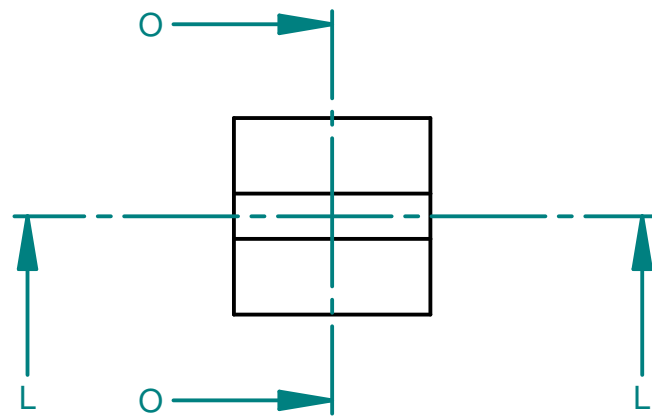


(22) ACTUATOR SEAL COVER
Fig. 27

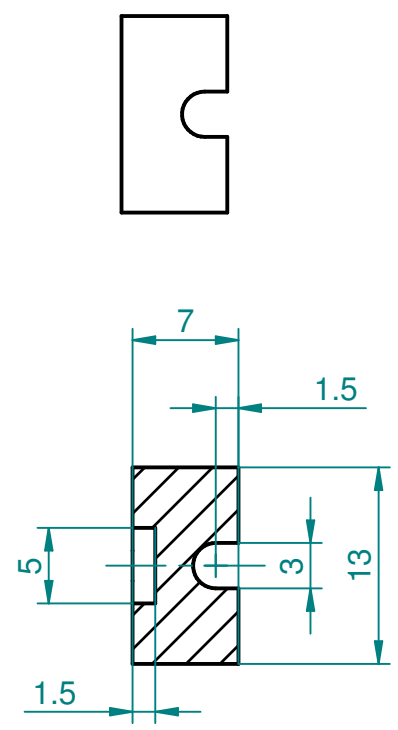
(24) STEAM CHEST GASKET
Fig. 28



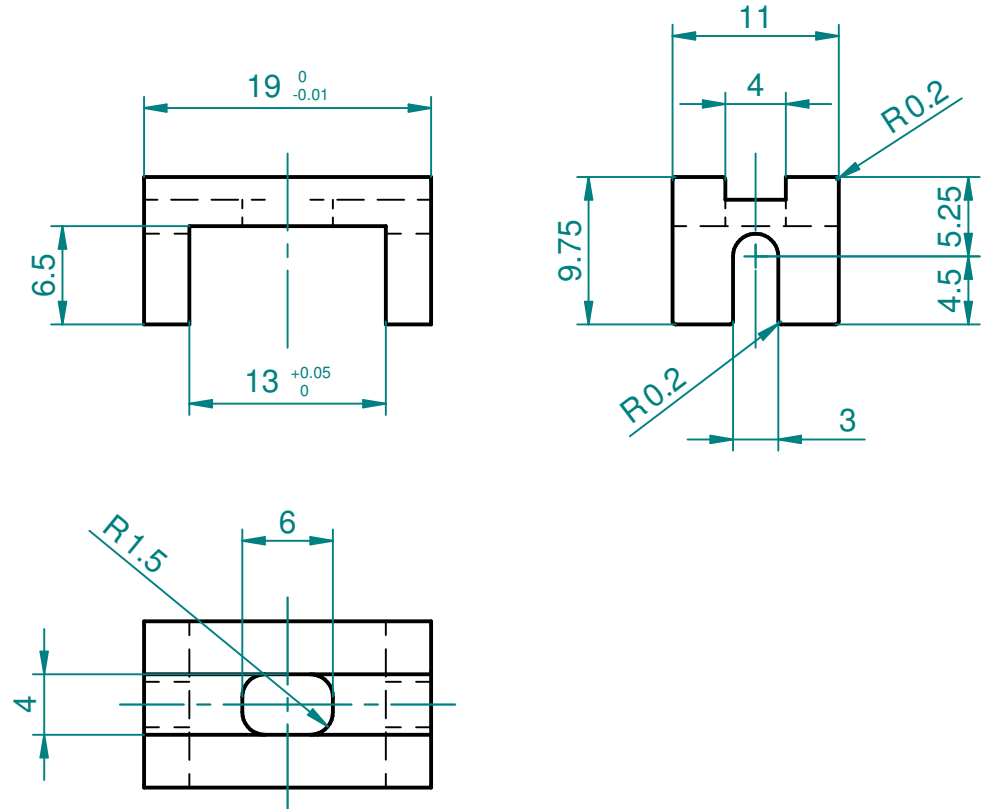
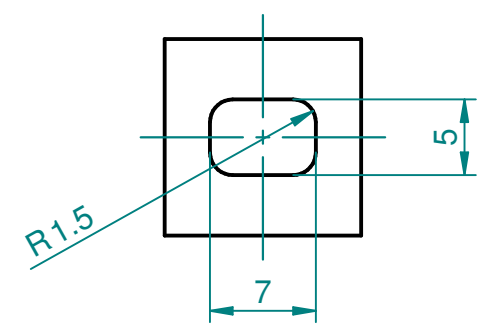
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20	TITLE		
CHECKED			Steam Pump		
ENG APPR			SIZE A3		
MGR APPR			DWG NO		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			Pump		REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 12 OF 18



SECTION L-L



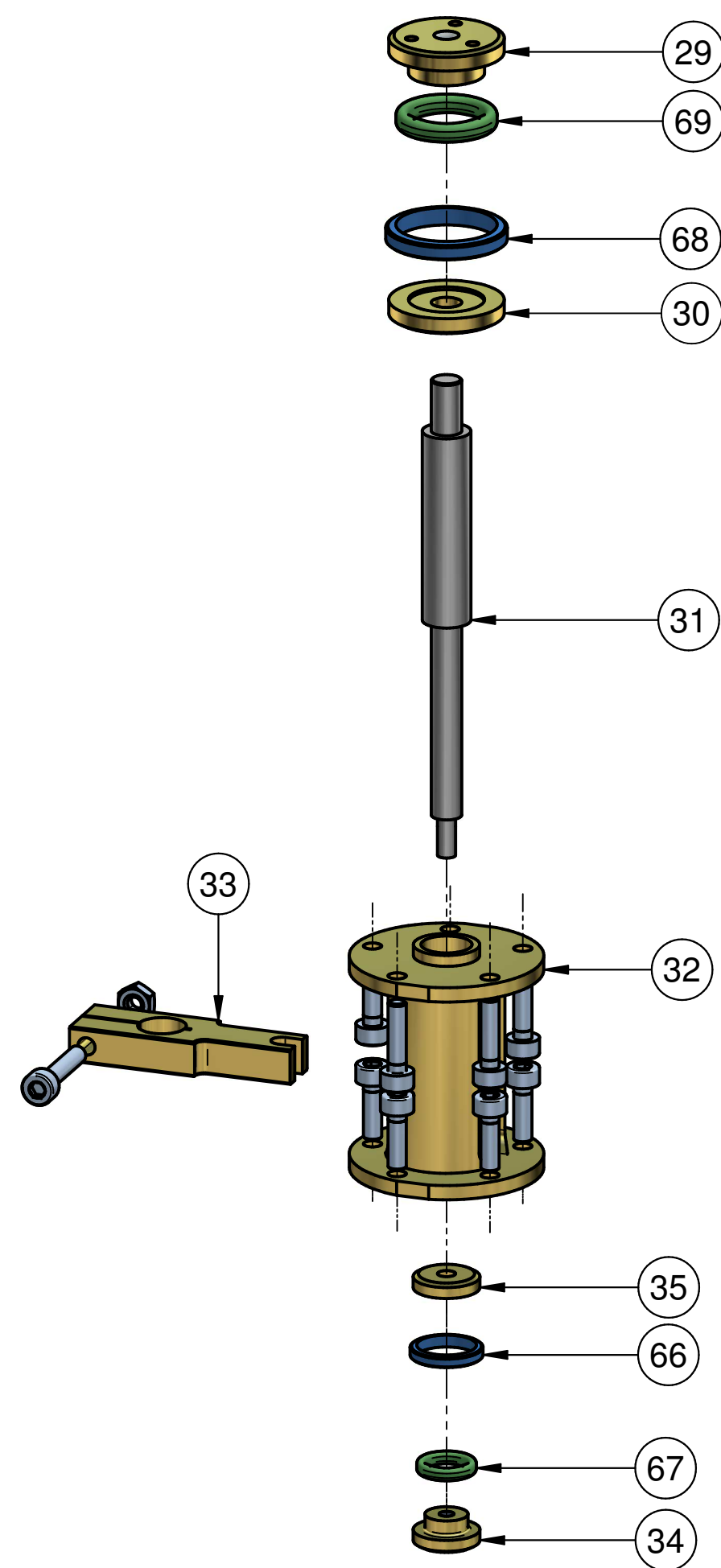
SECTION O-O



27 STEAM VALVE CLIP E2:1
Fig. 32

26 STEAM SLIDE VALVE E2:1
Fig. 31

	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED			TITLE Steam Pump		
ENG APPR					
MGR APPR			SIZE A3 DWG NO Pump REV 2.1 FILE NAME: SteamPump - GH.dft		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX					
SCALE:		WEIGHT:	SHEET 13 OF 18		

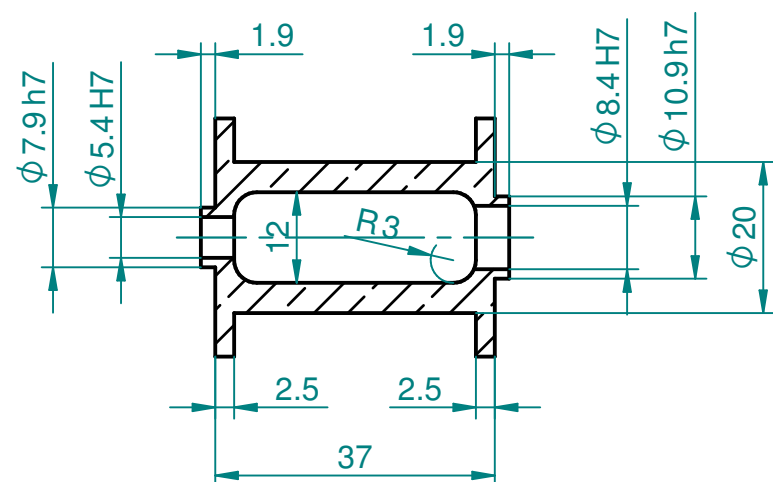


PISTON AND ACTUATOR ASSEMBLY, EXPLODED VIEW
Fig. 33

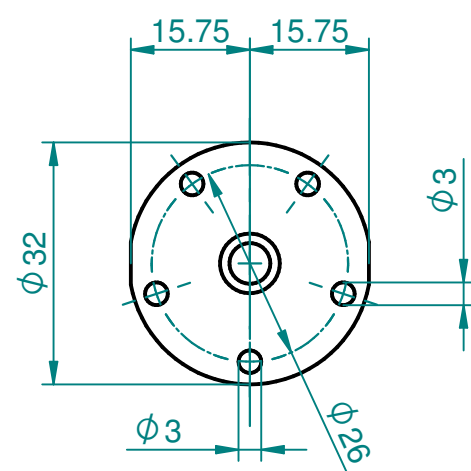
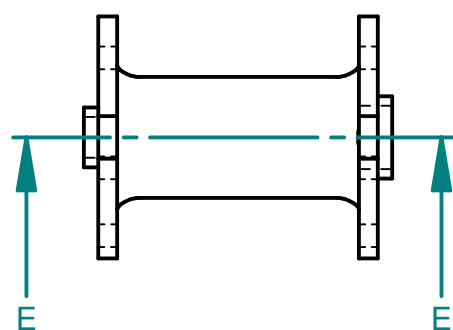
WATER/STEAM PISTON				
POS	DESCRIPTION	MATERIAL	QTY	COMMENTS
29	STEAM PISTON NUT	Brass, yellow brass	1	
30	STEAM PISTON WASHER	Brass, yellow brass	1	
31	PISTON ROD	Stainless Steel, 316	1	
32	CYLINDER SPACER	Brass, yellow brass	1	
33	ACTUATOR ARM	Brass, yellow brass	1	
34	WATER PISTON NUT	Brass, yellow brass	1	
35	WATER PISTON WASHER	Brass, yellow brass	1	
66	Piston Seal (12 x 2.2 mm)	Filled PTFE	1	Commercial Item
67	Piston Seal O-Ring 6.75 x 1.78 mm	FKM	1	Commercial Item
68	Piston Seal (20 x 3.2 mm)	Filled PTFE	1	Commercial Item
69	Piston Seal O-Ring 12.32 x 2.62 mm	FKM	1	Commercial Item

PISTON AND ACTUATOR ASSEMBLY, PARTS LIST (TWO SETS REQUIRED)
Table 5

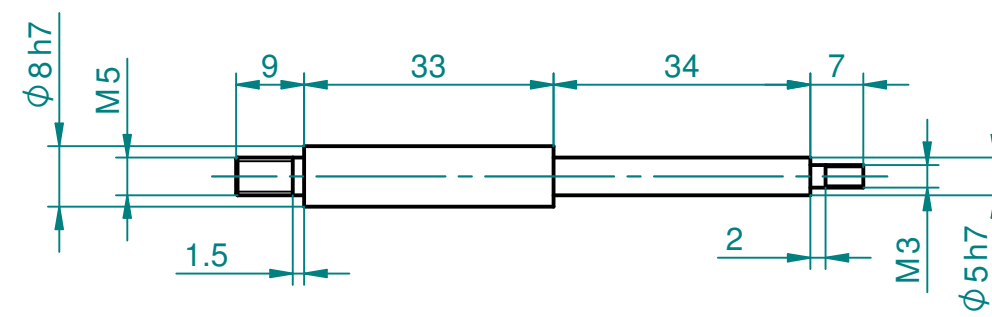
	NAME	DATE	LS-Fornells	
DRAWN	Joan Lluch	08/20/20		
CHECKED				
ENG APPR				
MGR APPR			TITLE Steam Pump	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump
			FILE NAME: SteamPump - GH.dft	REV 2.1
			SCALE:	WEIGHT: SHEET 14 OF 18



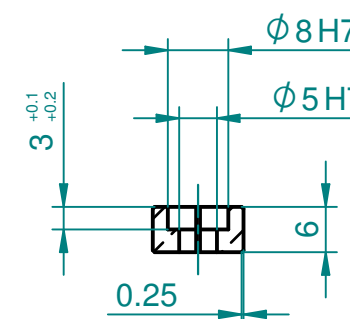
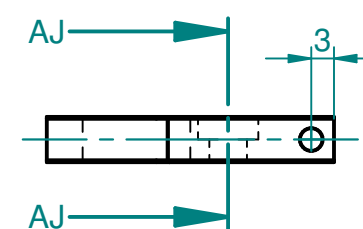
SECTION E-E



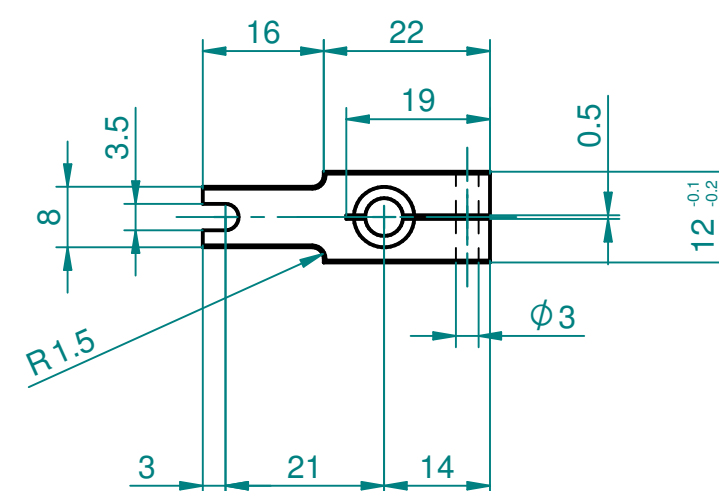
32 CYLINDER SPACER
Fig. 34



31 PISTON ROD
Fig. 35

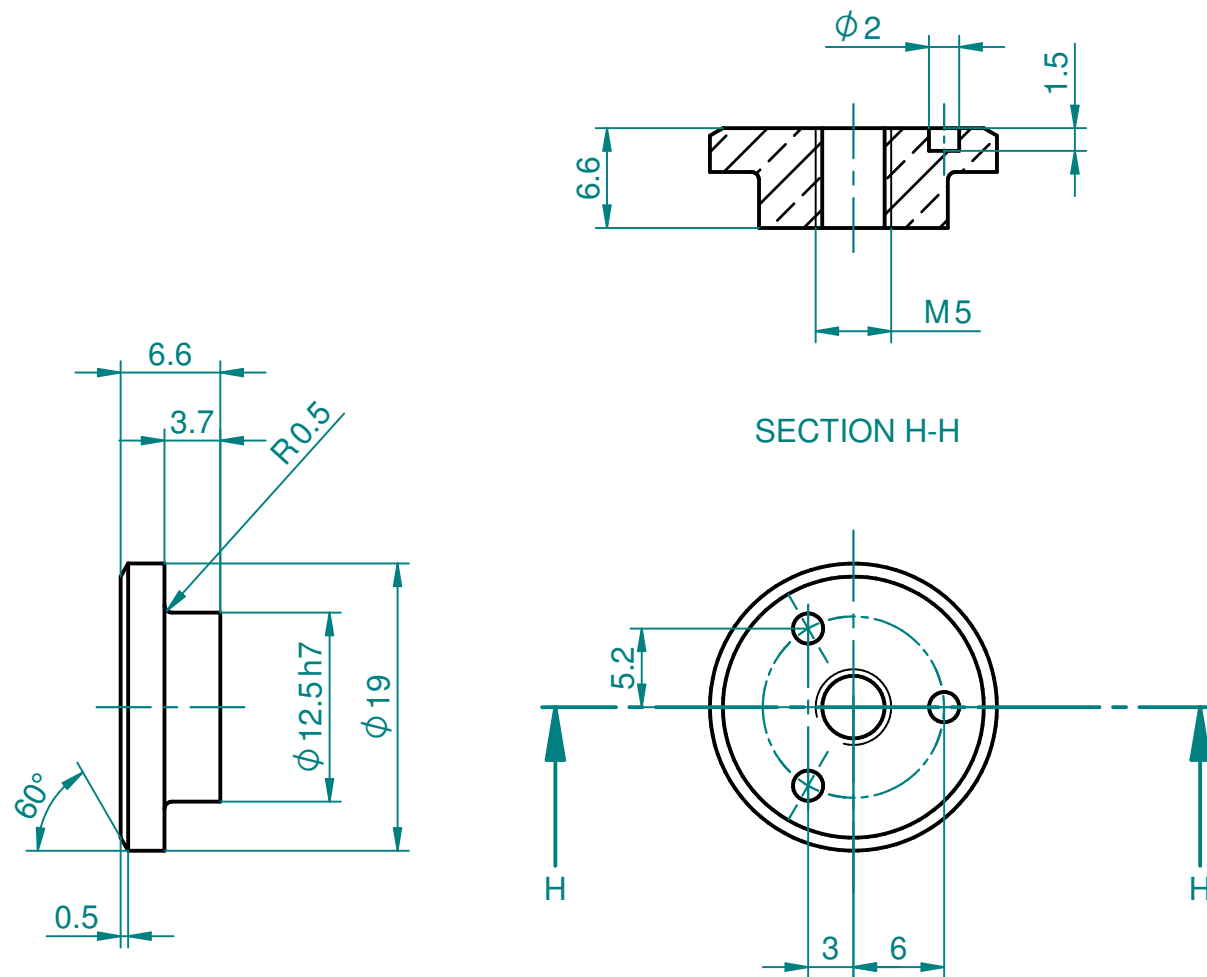


SECTION AJ-AJ

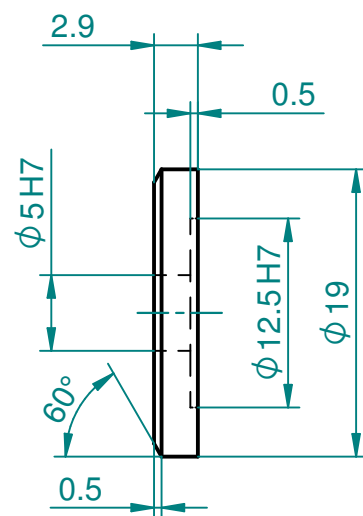


33 ACTUATOR ARM
Fig. 36

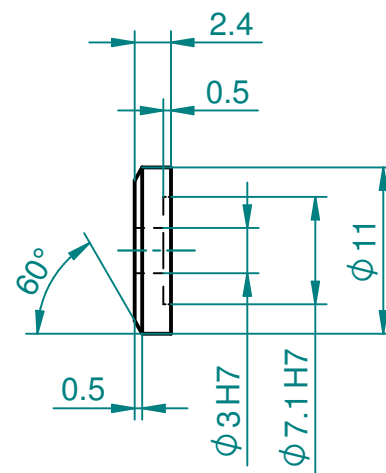
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20	TITLE Steam Pump		
CHECKED					
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A3	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 15 OF 18



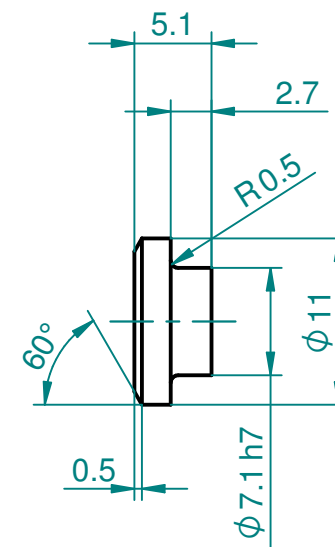
29 STEAM PISTON NUT E2:1
Fig. 37



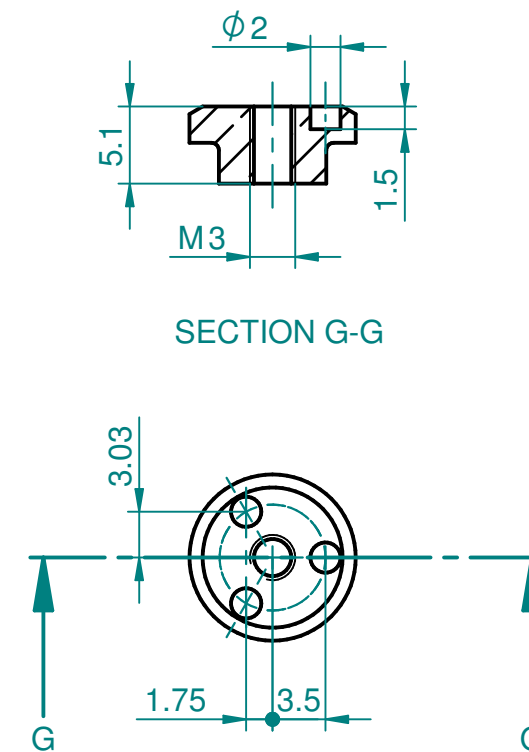
30 STEAM PISTON WASHER E2:1
Fig. 38



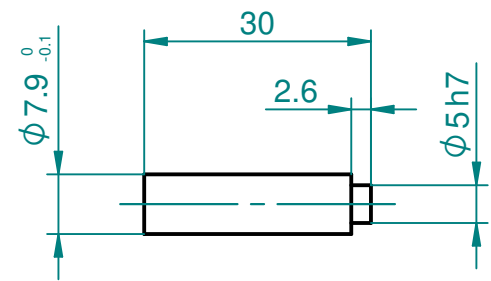
35 WATER PISTON WASHER E2:1
Fig. 40



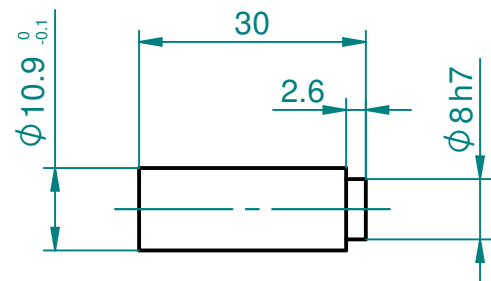
34 WATER PISTON NUT E2:1
Fig. 39



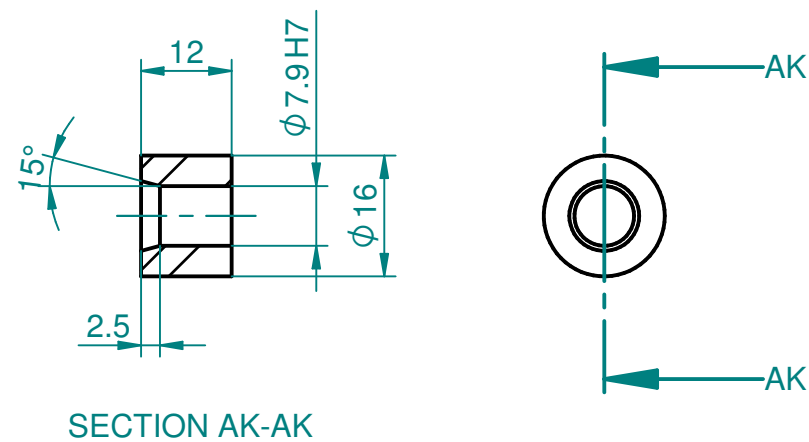
	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20	TITLE Steam Pump		
CHECKED					
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A3	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 16 OF 18



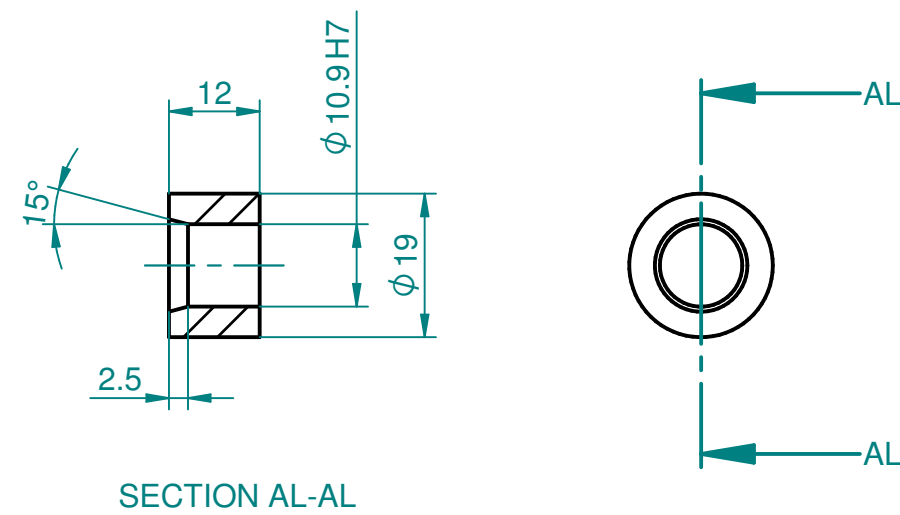
5 MM SEAL INSERTION TOOL SHAFT
Fig. 41



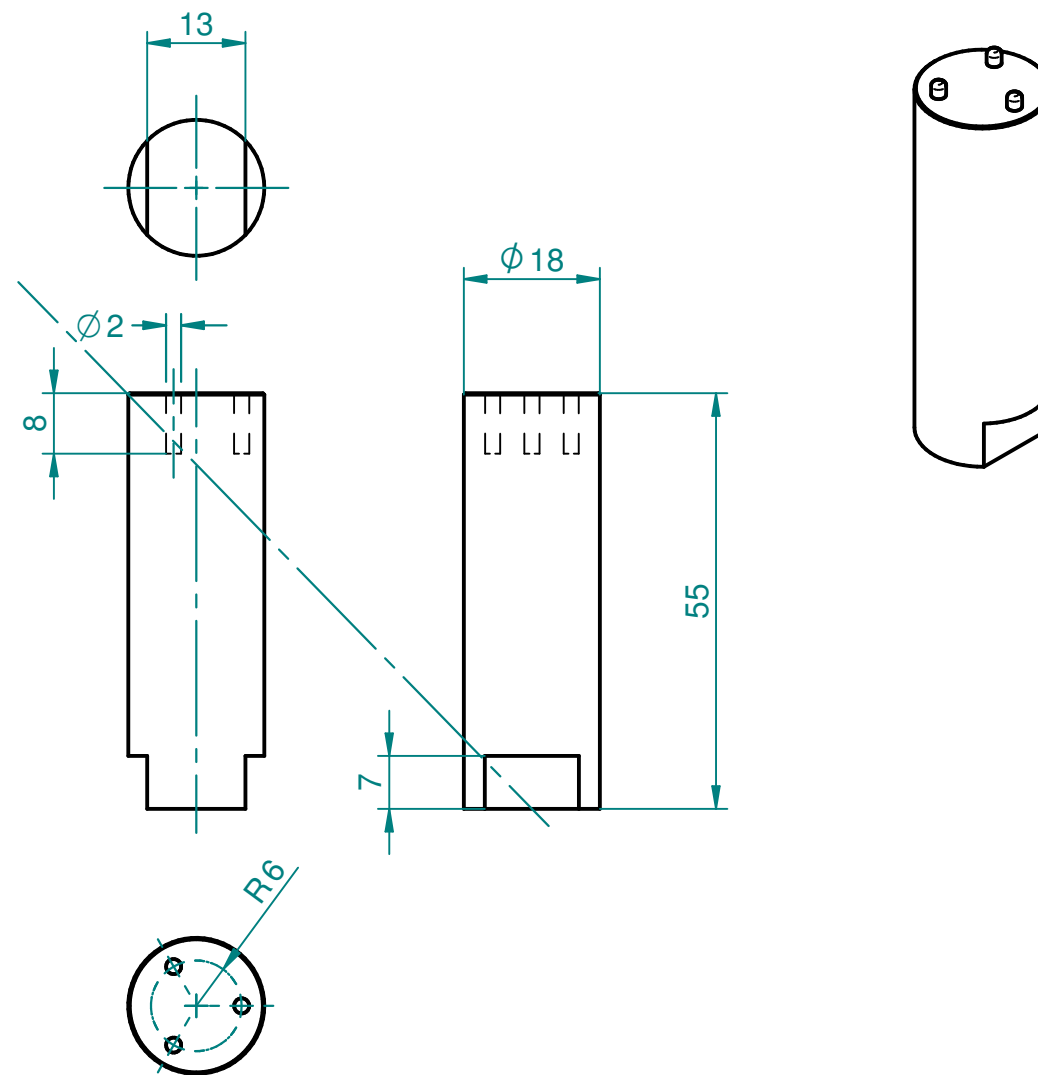
8 MM SEAL INSERTION TOOL SHAFT
Fig. 42



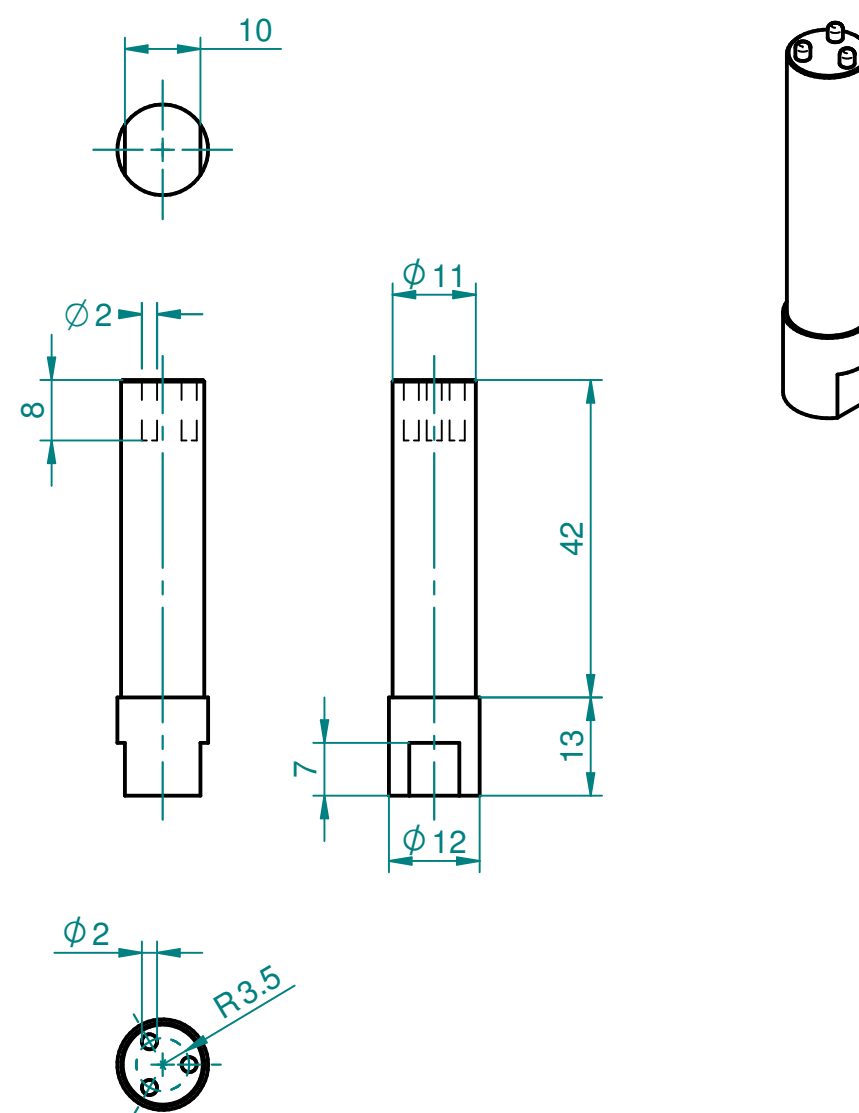
5 MM SEAL INSERTION TOOL HOSE
Fig. 43



8 MM SEAL INSERTION TOOL HOSE
Fig. 44



STEAM PISTON KEY TOOL
Fig. 45



WATER PISTON KEY TOOL
Fig. 45

	NAME	DATE	LS-Fornells	
DRAWN	Joan Lluch	08/20/20		
CHECKED			TITLE	
ENG APPR				
MGR APPR			Steam Pump	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE A2	DWG NO Pump
			FILE NAME: SteamPump - GH.dft	REV 2.1
			SCALE:	WEIGHT: SHEET 17 OF 18



	NAME	DATE	LS-Fornells		
DRAWN	Joan Lluch	08/20/20			
CHECKED					
ENG APPR					
MGR APPR			TITLE Steam Pump		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A3	DWG NO Pump	REV 2.1
			FILE NAME: SteamPump - GH.dft		
			SCALE:	WEIGHT:	SHEET 18 OF 18