



# CERTIFICATE OF PLANT DESIGN REGISTRATION

Work Health & Safety Act 2011  
Work Health & Safety Regulation 2017

ABN: 81 913 830 179  
Phone: 13 10 50

**Registration No:** PV 6-243345/20 **Issue Date:** 30/04/2020

**Registration Holder:** DANFOSS A/S  
**Postal Address:** 81 NORBORGVEJ  
NORDBORG 6430  
DENMARK

**Plant Type:** Pressure Vessel Alteration

**Model Number/ Trade Name:** Scroll Compressor Shell No.1

**Technical Standard :** EN 14276-1:2006 + A1:2011 "PRESSURE EQUIPMENT FOR REFRIGERATING SYSTEMS AND HEAT PUMPS"

**Engineering Principles:** No

**Drawing Number Design:**

**Design Description:**

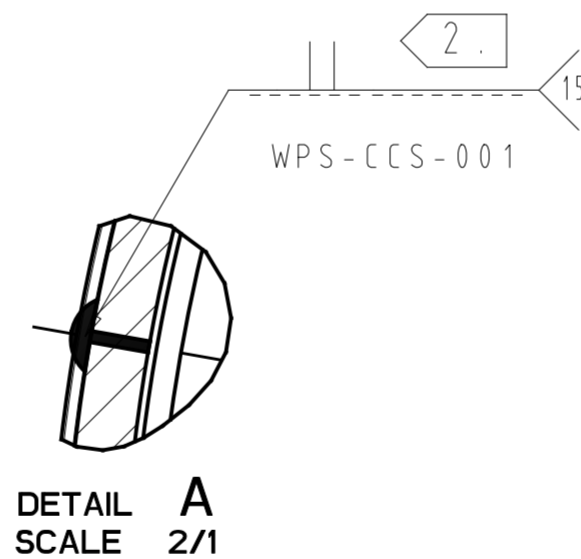
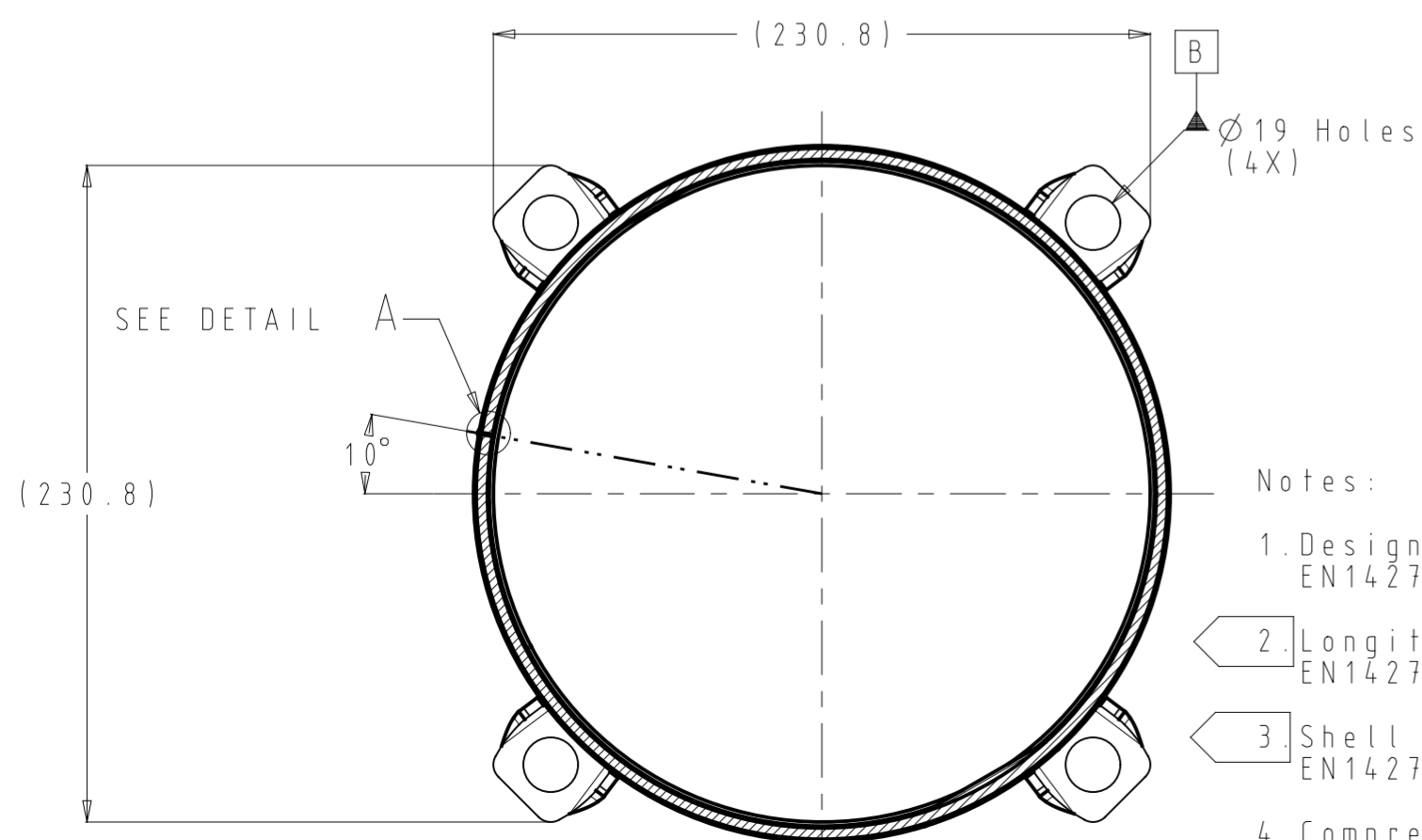
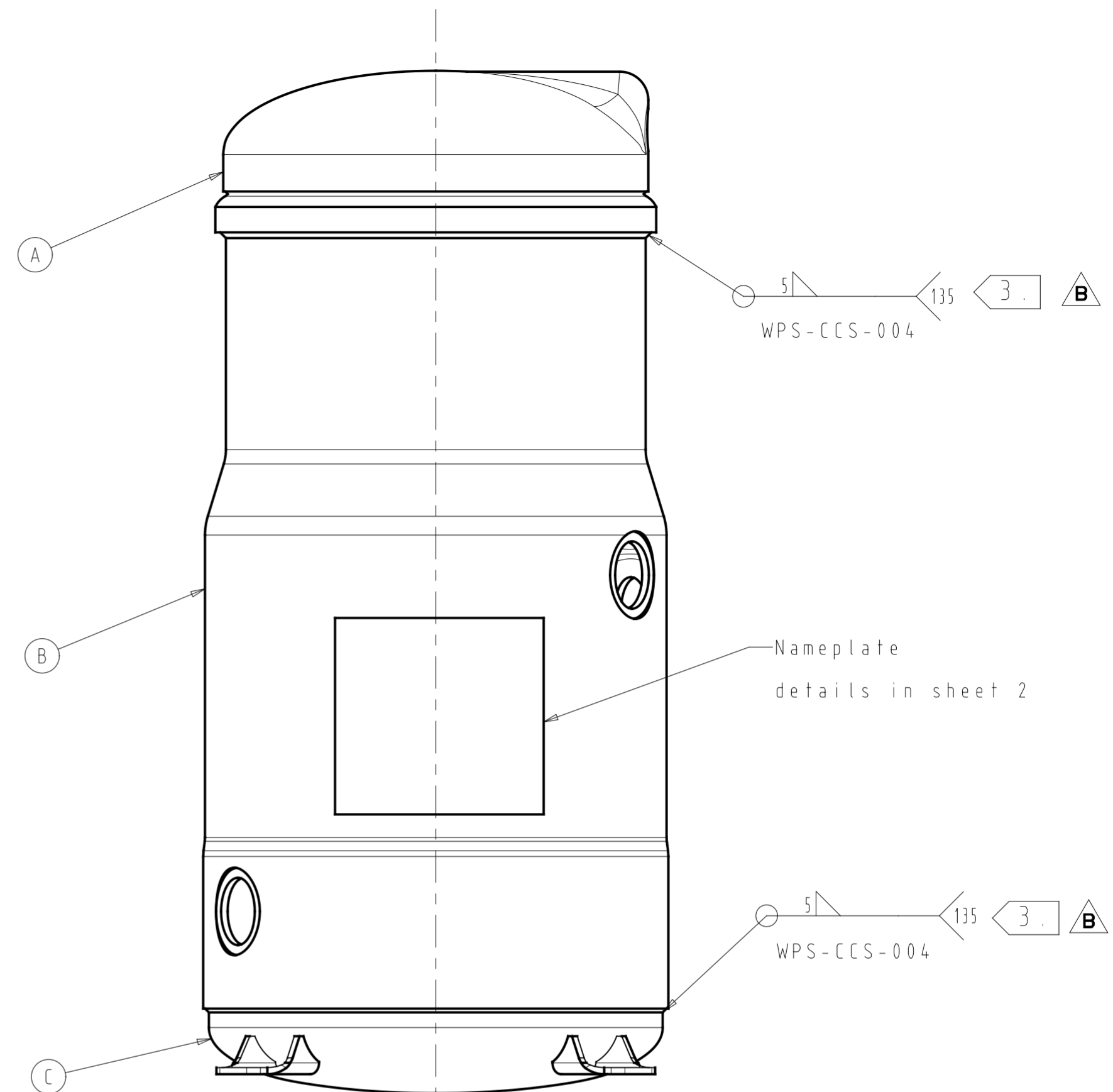
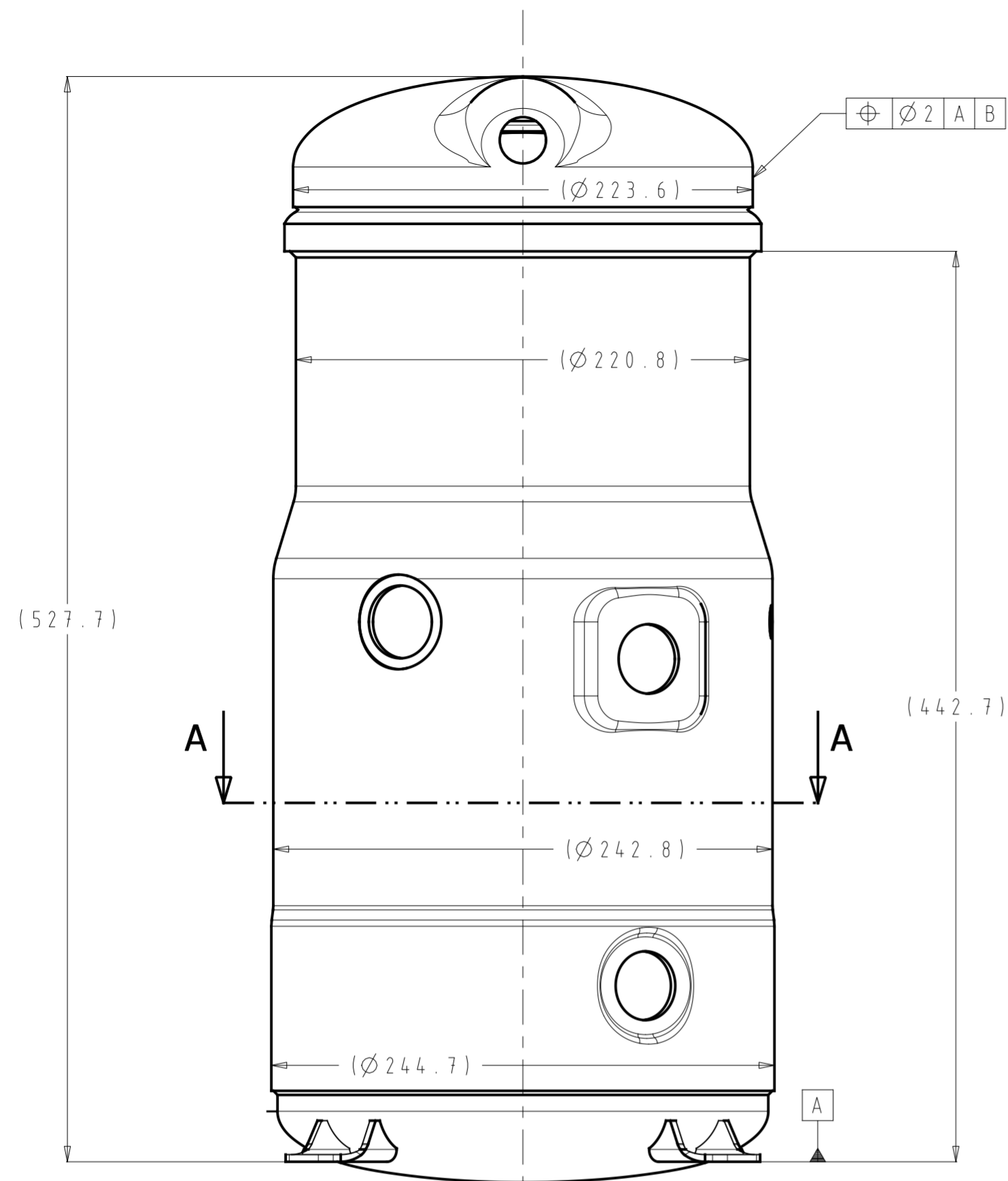
Hazard Level	C
Contents	Very Harmful
Chamber 1 Volume (l)	15.1
Chamber 1 Design Pressure (kPa)	0 TO 3330
Chamber 1 Temperature (°C)	-35 TO 55
Chamber 1 Fluid Type	Gas
Drawing Number & Revisions	9850280_796 REV B
Pressure Vessel	Other
Other Type	Hermetic Compressor Shell
Number of Chambers	1

Note: The design of an item of plant registered under the Occupational Health and Safety Regulation immediately before the repeal of that regulation is deemed to have been registered under part 5.3 of the WHS Regulation

**Fee Paid:** \$288.15

**Receipt Date:** 8/04/2020

**Receipt No:** 30-3178



Notes:

- Design code: EN13445 - part 1 to 5: 2017  
EN14276-1: 2011, AS4343: 2005 Hazard level C
- Longitudinal continuous welding according to  
EN14276-1: 2011, EN5817:2014 and specification 8550091.
- Shell welding requirements according to  
EN14276-1: 2011, EN5817:2014 and specification 8550091.
- Compressor Model:  
SZ147, SM124-147, VSH/VZH117  
SH/WSH105-120-140-161, SJ161  
PSH023-026-030-034  
DSH105-120-140-161  
DSF115/130/155/175

	Pressure (bars)	Volume(L)	TSMX (°C)	TSMI (°C)
Lower Pressure	33.3	15.1	55	-35
High Pressure	45	0.7	150	-35

Model	Part	description	Part number	Thickness MIN.	Material Grade	Material Standard
VZH117	A	upper shell	5312454P01	3.9mm	SPHC	Q/BQB 302
	B	mid shell	5312549P01	3.9mm	SPHE	Q/BQB 302
	C	lower shell	5314233P01	3.5mm	SPHC	Q/BQB 302

General Tolerances Table	Drawing Status :			Production print		
			Surface Area (m2)			
			Estimated Mass (Kg)			
			Projection		Scale	
Roughness (µm)	B	update	26-12-2019	1/5		A2
	A	Creation	10-10-2016			
	Revision	ECR Number	Date			
	Designer	Su Junmei				
ISO 8015 ISO 1101	Approval	Kong Haili				Designation <b>Scroll Compressor Shell No.1</b>
	Confidential: Property of Danfoss Commercial Compressors. Not to be handed over to copied or used by third party. Two or three dimensional reproduction of contents to be authorized by Danfoss CC.					

SECTION A-A

DETAIL A  
SCALE 2/1

Key characteristic  
Critical characteristic  
According to Danfoss standard 50220024

Material : -  
Designation

Sheet 1 of 2  
B.5 Dwg N° 9850280 796

**Danfoss**  
MADE IN CHINA

**Model no: VZH117AGANA**

**Serial no: GG2500000123**

380-480 V 3 ~ 50-60 Hz UL electrical ratings to CDS303 Frequency converter

Thermally protected

P.E.D. Marking	L.P. side	HP side
PS	33.3 bar	45 bar
TS max	55 °C	150 °C
TS min	-35 °C	-35 °C
Volume	15.1 L	0.7 L

Lubricant: P.O.E. 160SZ

CAUTION: Variable speed compressor electric supply via Danfoss approved frequency converter only

CE 0662 US EAC

Refrigerant: R410A

PROTECTED BY DOMESTIC AND FOREIGN PATENTS

Freq: 50-200 Hz  
Speed: 25-100 rps  
MMT: 55 A

**WARNING**  
Installation and servicing shall be performed by trained personnel only. Failure to observe these safety warnings could result in serious injury or death.  
**ELECTRIC SHOCK HAZARD:** Turn off power before servicing. (Discharge all capacitors.)  
Keep terminal cover in place and securely fastened whenever power is applied to the compressor. Use this equipment on a grounded system only.  
**HIGH PRESSURE:** System contains refrigerant and oil under pressure. Remove pressure from both the high and low side before servicing, wear safety goggles.  
**FIRE HAZARD:** Use tubing cutter to remove compressor. Do not use torch as oil may catch fire.

**CAUTION**  
Use only manufacturer's approved refrigerants, lubricants and electrical components. Unauthorized refrigerant / lubricant / electrical component could cause fires, explosions, electrical shorting.  
For details refer to multi language instructions and technical documentation available on Danfoss website at <http://icc.danfoss.com>

6001115F01

Nameplate Example

General Tolerances Table	Drawing Status :			Production print			Key characteristic Critical characteristic According to Danfoss standard 50220024 Material : - Designation <b>Scroll Compressor Shell No.1</b>
				Surface Area (m2)			
				Estimated Mass (Kg)			
				Projection	Scale 1/5	Size A2	
Roughness (µm)	B	update	26-12-2019		Material : -		
	A	Creation	10-10-2016		Designation		
	Revision	ECR Number	Date		<b>Scroll Compressor Shell No.1</b>		
	Designer	Su Junmei		Approval			
				Kong Haili		Sheet 2 of 2	
ISO 8015 ISO 1101	Confidential: Property of Danfoss Commercial Compressors. Not to be handed over to copied or used by third party. Two or three dimensional reproduction of contents to be authorized by Danfoss CC.			B.5 Dwg N° 9850280 796		<b>B</b>	