

## SAFETY INSTRUCTIONS

# DURAN® Flat Flange Vessel

DN	mL	DURAN® FLAT FLANGE REACTION VESSEL	DURAN® FLAT FLANGE ROUND BOTTOM FLASK	DURAN® FLAT FLANGE BEAKER
60	100	24 390 24 08 <sup>1</sup>	-	-
	250	24 390 36 01 <sup>1</sup>	-	-
100	500	24 390 44 09 <sup>1</sup>	-	-
	1000	24 390 54 05 <sup>1</sup>	-	-
	2000	24 390 63 07 <sup>2</sup>	24 395 63 03	-
	4000	-	24 395 71 02	-
	6000	-	24 395 76 08	-
	10000	-	24 395 86 04	-
	20000	-	24 395 91 03	-
	120	1000	-	-
2000		-	-	24 394 63 02
3000		-	-	24 394 68 08
5000		-	24 397 73 01	-
150	1000	-	-	24 391 54 06
	2000	-	-	24 391 63 08
	3000	-	-	24 391 68 05
	4000	24 390 71 06 <sup>2</sup>	-	-
	6000	24 390 76 03 <sup>2</sup>	-	-
	10000	24 390 86 08 <sup>2</sup>	24 399 86 08	-
	20000	-	24 399 91 07	-

<sup>1</sup> cylindrical, <sup>2</sup> flask shaped



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WHEATON  
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**ATTENTION:** The safety instructions are only valid for original DURAN® products. Therefore, please pay attention to the DURAN® trademark which guarantees proven DURAN® quality and highest safety during application.

### **Working under pressure and vacuum**

- Due to the high wall thickness and geometry, the DURAN® flat flange vessels are pressure and vacuum resistant.
- They can be used up to the technically maximum possible vacuum and consequently offer optimum safety for user.
- When working under pressure the maximum figures indicated in the DURAN® laboratory glassware catalogue should not be exceeded.
- Never expose flat flange vessels to abrupt pressure changes (do not suddenly ventilate evacuated vessels).
- Due to the high wall thickness and the reduced thermal shock resistance under pressure loading, the flat flange vessels must not be heated on one side only or heated using an open flame (see chapter 5.1.6 „Richtlinie für Laboratorien“ BGR/GUV-R 120).
- The flat flange vessels have to be heated uniformly and gradually.
- The flat flange vessels must never be heated on a hotplate. Uniform heating in an oil or water bath is recommended to avoid thermal stresses and resultant breakages.

- Before evacuation, the glass surfaces of the flat flange vessels must be checked for damages such as scratches, cracks or nicks. Damaged flat flange vessels must not be used for safety reasons (see chapter 5.1.6 „Richtlinie für Laboratorien“ BGR/GUV-R 120).
- When used under positive or negative pressure, and especially when also working with differential temperatures, additional care measures must be taken.
- Glass apparatus that is under pressure or vacuum should only be subject to further strain (e.g. significant temperature change) with extreme caution, as the individual resulting stresses are additive and could readily result in failure.

### **Cleaning**

- Cleaning should be carried out manually in a soaking bath or automatically in a dishwasher.
- To care properly for laboratory glassware, it should be washed immediately after use at low temperature, on a short cycle and with low alkalinity.

- Laboratory apparatus that has come into contact with infectious substances or microorganisms should be treated in accordance with the current guidelines.

### **Manual cleaning**

- The generally recognized method is to wipe and rub the glass with a cloth or sponge soaked in cleaning solution. Abrasive cleaners and abrasive sponges should not be used on laboratory glassware as these can damage the surface of the glass.
- Surface damage can affect the glass properties and limit further use of the product.
- Laboratory glassware should not be soaked for long periods in alkaline media at more than 70 °C since this can have an adverse effect on the printing and may cause glass corrosion. Also to be avoided is severe mechanical action e.g. scraping using a metal spoon.

### **Automatic laboratory glassware reprocessing**

- When cleaning in a dishwasher, load so that there is no glass-to-glass contact (especially the threads) to avoid chips or abrasions.

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