

INTERCHANGEABLE GLASSWARE \_\_\_\_\_

## INTERCHANGEABLE GLASSWARE

DURAN® interchangeable glassware is indispensable for laboratory work. DWK Life Sciences offers a wide range of bottles and flasks with standard ground necks, vessels with flat flanges, condensers and stirrer shafts.

The DURAN® flat flange reaction vessels are valued for their universal suitability for use in the laboratories of a wide range of specialisations.

Whether reaction, distillation, evaporation or desiccation, DURAN® offers a wide range of unfinished and finished parts which always provide the optimum solution for the particular application. Due to the pure glass-to-glass connections, reactions with highly corrosive or highly chemically reactive substances can be carried out without problems.

The vessels are notable due to a robust glass flange design with an optimum external flange angle of 45°. Due to the precisely ground joint, the vessels can be closed tightly when using a sealing ring.

Matching stainless-steel quick release clamps, with three retaining clips, ensure easy and safe handling.

All individual parts and a wide range of accessories such as lids, seals, quick-release clamps etc. are compatible and can be interchanged as required. Vessels and lids can be matched using their DN (nominal diameter) number.

#### Usage tips:

- All components are suitable for use under full vacuum and approved for operating over-pressures (see product related pages).
- Before use, it is recommended that the glass surfaces of the vessels be checked for damage such as scratches, cracks or nicks.
- Damaged glass vessels should not be used for safety reasons.
- Due to the high wall thickness and reduced thermal shock resistance under pressure loading, the flat flange vessels should be heated uniformly and gradually.



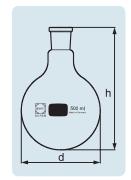
Thanks to the uniform wall thickness, round bottom flasks are ideal as heating vessels. The geometry permits very uniform heating. Closable with glass and plastic stopper. Combinable with other standard ground joint articles.

Typical applications: distillation, extraction.

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Neck	Remark	Pack Unit
241701307	25	41	85	14/23		10
241701401	25	41	85	19/26	Non-DIN ISO size.	10
241702003	50	51	90	14/23		10
241701701	50	51	90	19/26		10
241701804	50	51	105	24/29	Non-DIN ISO size.	10
241701907	50	51	105	29/32	Non-DIN ISO size.	10
241702509	100	64	105	14/23		10
241702406	100	64	105	19/26		10
241702603	100	64	105	24/29		10
241702706	100	64	105	29/32		10
241703608	250	85	140	24/29		10
241703702	250	85	140	29/32		10
241704407	500	105	163	24/29		10
241704604	500	105	163	29/32		10
241704707	500	105	163	45/40	Non-DIN ISO size.	10
241705403	1 000	131	200	24/29		10
241705609	1 000	131	200	29/32		10
241705703	1 000	131	200	45/40	Non-DIN ISO size.	10
241706305	2 000	166	240	29/32		10
241706408	2 000	166	240	45/40	Non-DIN ISO size.	10
241707207	4 000	207	290	45/40		1

## **DURAN® Round Bottom Flask**

with standard ground joint









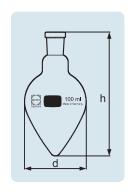


The conical geometry makes them ideal for small-scale reactions.

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Neck	Pack Unit
241950809	10	30	75	14/23	10
241951402	25	40	90	14/23	10
241952004	50	50	110	14/23	10
241952501	100	62	125	14/23	10

# DURAN® Pear Shape Flask

with standard ground joint





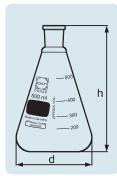




# DURAN® Erlenmeyer Flask

## with standard ground joint













With easy-to-read scale and large labelling field for easy marking. The conical shape makes these flasks ideal for mixing liquids and, due to the even wall thickness, also suitable for use as heating glassware.

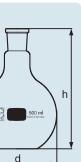
Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Neck	Remark	Pack Unit
241931306	25	42	75	14/23		10
241932002	50	51	85	14/23		10
241931709	50	51	85	19/26		10
241931803	50	51	85	24/29	Non-DIN ISO size.	10
241931906	50	51	85	29/32		10
241932405	100	64	105	19/26		10
241932602	100	64	105	24/29	Non-DIN ISO size.	10
241932705	100	64	105	29/32		10
241933204	200	79	131	29/32	Non-DIN ISO size.	10
241933607	250	85	140	24/29		10
241933701	250	85	140	29/32		10
241933804	250	85	140	45/40	Non-DIN ISO size.	10
241933907	300	87	155	29/32	Non-DIN ISO size.	10
241934406	500	105	175	24/29		10
241934603	500	105	175	29/32		10
241934706	500	105	175	45/40	Non-DIN ISO size.	10
241935402	1 000	131	220	24/29		10
241935608	1 000	131	220	29/32		10
241935702	1 000	131	220	45/40	Non-DIN ISO size.	10

## **DURAN® Flat Bottom Flask**

## with standard ground joint













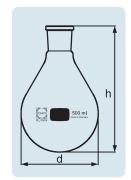
Due to the flat bottom the flask can be set upon a bench without a support ring.

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Neck	Remark	Pack Unit
241711908	50	51	85	29/32		10
241712407	100	64	103	19/26		10
241712604	100	64	103	24/29		10
241712707	100	64	103	29/32		10
241713609	250	85	130	24/29	Non-DIN ISO size.	10
241713703	250	85	130	29/32		10
241714408	500	105	160	24/29	Non-DIN ISO size.	10
241714605	500	105	160	29/32		10
241715404	1 000	131	187	24/29	Non-DIN ISO size.	10
241715601	1 000	131	187	29/32		10
241716306	2 000	166	230	29/32	Non-DIN ISO size.	10

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Neck	Pack Unit
241202707	100	60	110	29/32	10
241203703	250	81	140	29/32	10
241204605	500	101	170	29/32	10
241205601	1 000	126	210	29/32	10

## **DURAN®** Evaporating Flask

with standard ground joint, pear shape









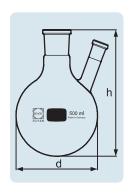
Thanks to the uniform wall thickness, round bottom flasks are ideal as heating vessels. The geometry permits very uniform heating. Depending upon the application, accessories, columns, thermometers, dropping funnels, boiling capillaries, etc. can be fitted.

Typical applications: distillation, extraction.

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Center neck (NS)	Side neck (NS)	Remark	Pack Unit
241832604	100	64	105	24/29	14/23	Non-DIN ISO size.	1
241832707	100	64	105	29/32	14/23	Non-DIN ISO size.	1
241833609	250	85	140	24/29	14/23	Non-DIN ISO size.	1
241833703	250	85	140	29/32	14/23		1
241834408	500	105	163	24/29	14/23	Non-DIN ISO size.	1
241834605	500	105	163	29/32	14/23		1
241835404	1 000	131	200	24/29	14/23	Non-DIN ISO size.	1
241835601	1 000	131	200	29/32	14/23		1
241836306	2 000	166	240	29/32	14/23		1

# DURAN® Twin-Neck Round Bottom Flask

with standard ground joint, inclined side neck











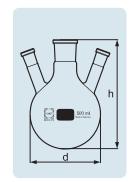
Thanks to the uniform wall thickness, round bottom flasks are ideal as heating vessels. The geometry permits very uniform heating. Depending upon the application, accessories, columns, thermometers, dropping funnels, boiling capillaries, etc. can be fitted.

Typical applications: distillation, extraction.

Cat. No.	Capacity (mL)	d (OD) (mm)		Center neck (NS)	Side neck (NS)	Pack Unit
241882703	100	64	105	29/32	14/23	1
241883605	250	85	140	24/29	14/23	1
241883708	250	85	140	29/32	14/23	1
241884301	500	105	163	24/29	14/23	1
241884601	500	105	163	29/32	14/23	1
241885306	1 0 0 0	131	200	24/29	14/23	1
241885503	1 000	131	200	29/32	14/23	1

## DURAN® Triple-Neck Round Bottom Flask

with standard ground joint, inclined side necks

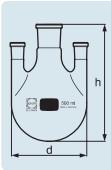




## DURAN® Triple-Neck Round Bottom Flask

with standard ground joint, parallel side necks











Thanks to the uniform wall thickness, round bottom flasks are ideal as heating vessels. The geometry permits very uniform heating. Depending upon the application, accessories, columns, thermometers, dropping funnels, boiling capillaries, etc. can be fitted.

Typical applications: distillation, extraction.

Cat. No.	Capacity (mL)	d (OD) (mm)	h (mm)	Center neck (NS)	Side neck (NS)	Remark	Pack Unit
241853602	250	85	105	24/29	19/26	Non-DIN ISO size.	1
241853705	250	85	140	29/32	14/23	Non-DIN ISO size.	1
241854401	500	105	140	24/29	19/26	Non-DIN ISO size.	1
241854607	500	105	163	29/32	14/23	Non-DIN ISO size.	1
241854504	500	105	163	29/32	29/32		1
241855603	1 000	131	163	29/32	14/23	Non-DIN ISO size.	1
241855509	1 000	131	200	29/32	29/32		1
241856308	2 000	166	240	29/32	14/23	Non-DIN ISO size.	1
241856505	2 000	166	240	29/32	29/32		1

# DURAN® Vigreux Column

with 2 standard ground joints, complete, with slide-on glass jacket





Typical application: distillation.

Cat. No.	Overall length (mm)	Socket size (NS)	Cone (NS)	Effective length (mm)	Pack Unit
242407104	450	24/29	24/29	300	1
242407207	450	29/32	29/32	300	1
242408709	650	24/29	24/29	500	1
242408803	650	29/32	29/32	500	1

#### **DURAN® Woulff Bottle**

3 standard ground necks





Vacuum resistant due to the wall thickness and geometry.

Cat. No.	Capacity (mL)	d (OD) (mm)	Neck	Pack Unit
247094403	500	87	19/26	1
247095408	1 000	113	24/29	1
247096301	2 000	135	29/32	1
247097306	5 000	185	34/35	1





Vacuum resistant due to the wall thickness and geometry.

Cat. No.	Capacity (mL)	d (OD) (mm)	Neck	Remark	Pack Unit
247104401	500	87	19/26	Bottom NS 19/26	1
247105406	1 000	113	24/29	Bottom NS 19/26	1
247106308	2 000	135	29/32	Bottom NS 19/26	1
247107304	5 000	185	34/35	Bottom NS 29/32	1

## **DURAN® Woulff Bottle**

3 standard ground necks, and bottom tubulature









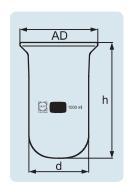
Pressure and vacuum resistant due to the wall thickness and geometry. Groove for O-ring seal.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	Capacity (mL)	Full capacity (mL)	Outer diameter (AD) Flange (mm)	Vessel d (OD) (mm)	h (mm)		Remark	Pack Unit
DN 60								
243902408	100	195	100	70	85	2.5 bar	cylindrical	1
243903601	250	315	100	70	125	2.5 bar	cylindrical	1
DN 100								
243904409	500	740	138	106	120	1.5 bar	cylindrical	1
243905405	1 000	1 395	138	106	205	1.5 bar	cylindrical	1
243906307	2 000	2 620	138	140	270	1.5 bar	flask shaped	1
DN 150								
243907106	4 000	5 765	184	200	290	1.0 bar	flask shaped	1
243907603	6 000	7 320	184	215	320	1.0 bar	flask shaped	1
243908608	10 000	11 935	184	240	410	0.5 bar	flask shaped	1

# DURAN® Flat Flange Reaction Vessel

## flange with groove





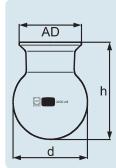




## DURAN® Flat Flange Round Bottomed Flask

flange with groove, for vacuum use









Pressure and vacuum resistant due to the wall thickness and geometry. Groove for O-ring seal. Note: At the maximum usage temperature of  $250\,^{\circ}\text{C}$  and the maximum operating pressure, the temperature difference in the glass wall of the flat flange reaction vessels must not exceed  $30\,^{\circ}\text{C}$ .

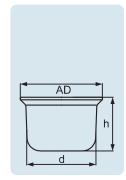
Typical applications: reactions under pressure and/or high temperature.

Cat. No.	Capacity (mL)	h (mm)	Outer diameter (AD) Flange (mm)	Full capacity (mL)	Vessel d (OD) (mm)	Max. operating pressure at 250°C	Pack Unit
DN 100							
243956303	2 000	215	138	2 610	165	1.0 bar	1
243957102	4 000	265	138	4 660	206	1.0 bar	1
243957608	6 000	295	138	6 675	236	1.0 bar	1
243958604	10 000	340	138	11 720	280	0.5 bar	1
243959103	20 000	410	138	21 415	350	0.5 bar	1
DN 120							
243977301	5 000	270	158		223		1
DN 150							
243998608	10 000	340	184		280		1
343999107	20 000	410	184		350		1

## DURAN® Flat Flange Beaker

flange with groove









Pressure and vacuum resistant due to the wall thickness and geometry. Groove for O-ring seal. Suitable for Witt-type filter apparatus. Note: only heat flat-flange beakers in water or oil baths. At the maximum usage temperature of  $250\,^{\circ}\text{C}$  and the maximum operating pressure, the temperature difference in the glass wall of the flat flange reaction vessels must not exceed  $30\,^{\circ}\text{C}$ .

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	Capacity (mL)		Outer diameter (AD) Flange (mm)		Max. operating pressure at 250 °C	Beaker d (OD) (mm)	Pack Unit
DN 120							
243945409	1 000	125	158	1 360	0.5 bar	130	1
243946302	2 000	200	158	2 200	0.5 bar	130	1
243946808	3 000	290	158	3 220	0.5 bar	130	1
DN 150							
243915406	1 000	120	184	1 915	0.5 bar	159	1
243916308	2 000	200	184	3 070	0.5 bar	153	1
243916805	3 000	265	184	4 090	0.5 bar	153	1
DN 150 243915406 243916308	1 000	120 200	184	1 915 3 070	0.5 bar 0.5 bar	159 153	

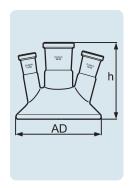
Pressure and vacuum resistant due to the wall thickness and geometry. Note: At the maximum usage temperature of  $250\,^{\circ}\text{C}$  and the maximum operating pressure, the temperature difference in the glass wall of the flat flange reaction vessels must not exceed  $30\,^{\circ}\text{C}$ .

Typical applications: reactions under pressure and/or high temperatue.

Cat. No.	h (mm)	DN			Max. operating pressure at 250 °C	Pack Unit
243923406	90	60	100	29/32	2 bar	1

## DURAN® Flat Flange Lid

4 standard ground necks, with side neck (NS): 2 x 19/26 angled; 1 x 14/23 angled









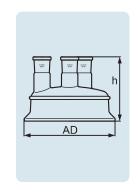
Pressure and vacuum resistant due to the wall thickness and geometry.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	h (mm)	DN	Outer diameter (AD) Flange (mm)		Max. operating pressure at 250 °C	Pack Unit
243925707	130	150	184	29/32	1 bar	1

# DURAN® Flat Flange Lid

4 standard ground necks, with side neck (NS): 3 x 29/32 parallel





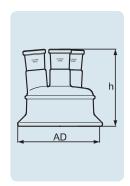




# **DURAN® Flat Flange Lid**

4 standard ground necks, with side neck (NS): 3 x 29/32 angled









Pressure and vacuum resistant due to the wall thickness and geometry.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	h (mm)	DN	Outer diameter (AD) Flange (mm)	Center neck (NS)	Max. operating pressure at 250 °C	Pack Unit
243924608	125	100	138	29/32	1 bar	1
243925801	130	150	184	29/32	1 bar	1

# DURAN® Flat Flange Lid

4 standard ground necks, with side neck (NS): 2 x 29/32 angled; 1 x 14/23 angled









Flat form. Pressure and vacuum resistant due to the wall thickness and geometry.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	h (mm)	DN	Outer diameter (AD) Flange (mm)	Center neck (NS)	Max. operating pressure at 250 °C	Pack Unit
243964603	105	100	138	29/32	1 bar	1

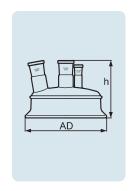
Pressure and vacuum resistant due to the wall thickness and geometry.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.	h (mm)	DN	Outer diameter (AD) Flange (mm)	Center neck (NS)	Max. operating pressure at 250 °C	Pack Unit
243924702	125	100	138	29/32	1 bar	1
243925107	130	120	158	29/32	1 bar	1
243925904	120	150	184	29/32	1 bar	1

# **DURAN® Flat Flange Lid**

4 standard ground necks, with side neck (NS):  $2 \times 29/32$  angled;  $1 \times 14/23$  parallel









Pressure and vacuum resistant due to the wall thickness and geometry.

Typical applications: reactions under pressure and/or high temperature.

Cat. No.		DN	Outer diameter (AD) Flange (mm)		Max. operating pressure at 250 °C	Pack Unit
243926009	140	150	184	45/40	1 bar	1

# DURAN® Flat Flange Lid

4 standard ground necks, with side neck (NS): 3 x 29/32 angled

