

PART OF THE **DURAN®** BOTTLE SYSTEM

# **DURAN®** GLS 80® STIRRED BOTTLE REACTOR SYSTEM, WIDE MOUTH

The perfect support  
for your mixing processes



**DWK LIFE SCIENCES**  
DURAN WHEATON KIMBLE

# DURAN® GLS 80® STIRRED BOTTLE REACTOR SYSTEM, WIDE MOUTH

## FEATURES & BENEFITS

- **Drive using standard magnetic stirrers**
- **Variable stirrer shaft**, can be used for 250, 500, 1 000 and 2 000 ml DURAN® GLS 80® laboratory glass bottles
- **Stirrer element exchangeable**  
(Stirrer impeller type available as accessory)
- Can be used **up to 500 rpm**
- **Completely autoclaveable**
- **Temperature resistant up to 140 °C**
- Compatible with the proven DURAN® connection systems; Hoses with bores from 1.6 mm to 12.0 mm can be fitted
- Significantly improved through mixing compared to standard magnetic stirring bar
- Materials used PP / PTFE / PEEK / stainless steel
- Parts in contact with media **conform fully to FDA requirements**
- Supply includes bottle (optional)
- **4 ports:** 2 x GL 18, 2 x GL 14



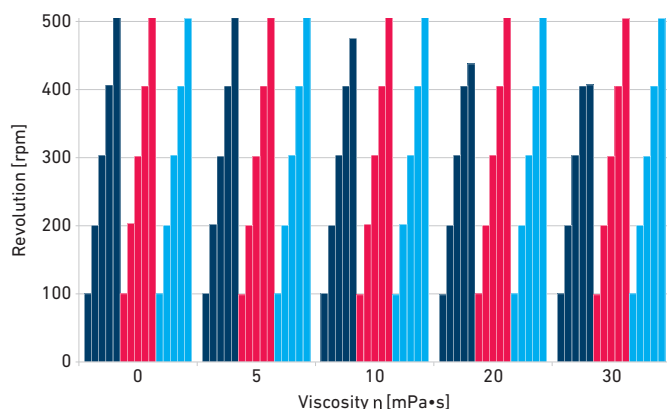
## APPLICATION AREAS

The mentioned features and benefits make the DURAN® stirred reactor ideal for the widest possible range of mixing processes in laboratories, e. g. mixing liquids or dissolving solids. The connections available permit you to introduce other media into the bottle or remove media during mixing.

The whole assembly is autoclaveable, so that it can be used in biological applications, for simple fermentation processes, for example. With the aid of components from the DURAN® connection system you can connect extra media bottles or fit a sterile pressure release.

## OPERATION AT VARYING VISCOSITIES

- DURAN® GLS 80® stirred reactor (anchor type)
- DURAN® GLS 80® stirred reactor (impeller type)
- Standard magnetic bar



The GLS 80® stirred reactor was tested at different rpm and with varying viscosities to check whether the target rpm could be reached. The results indicate that the anchor type paddle is not suitable for a rotary speed of 400 rpm or more in combination with a viscosity higher than 10 mPa·s. Under these operating conditions, the impeller type stirrer should be used. It has an increased surface and can be used without any restrictions or disadvantages compared to the standard magnetic stirring bar.

The results of the GLS 80® stirred reactor with anchor and impeller type stirrers were compared to the results of a standard magnetic bar (10 x 60, PTFE coated). **Test conditions:** PVP/water solution in different concentrations was used as experimental liquid to achieve a viscosity of 10, 20 and 30 mPa·s. For 0 mPa·s pure water was used. The temperature was 30 °C and the distance between glass bottom to stirrer was 1 cm (exception: magnetic stirrer bar, applied directly to the bottom).

## ORDERING INFORMATION

Description	Thread GLS	Stirrer Ø mm	Pack Unit	Cat. No.
DURAN® GLS 80® Stirred Bottle Reactor Screw Cap, wide mouth, for 500, 1000 and 2000 mL bottles, supplied with anchor magnetic stirrer and shaft	80	62	1	12 003 79
DURAN® GLS 80® Stirred Bottle Reactor Screw Cap, wide mouth, for 250 mL bottles, supplied with impeller magnetic stirrer and shaft	80	62	1	21 263 91 07
DURAN® GLS 80® Stirred Bottle Reactor Set, wide mouth, complete with 1000 mL bottle (clear), 1x GLS 80® screw cap (PP, blue/grey), 1x GL 14 screw cap (PP, blue), 2x GL 14 screw cap (PBT, red), 2x GL 18 screw cap (PBT, red), anchor magnetic stirrer and shaft	80	62	1	12 003 80
DURAN® GLS 80® Stirred Bottle Reactor Set, wide mouth, complete with 2000 mL bottle (clear), 1x GLS 80® screw cap (PP, blue/grey), 1x GL 14 screw cap (PP, blue), 2x GL 14 screw cap (PBT, red), 2x GL 18 screw cap (PBT, red), anchor magnetic stirrer and shaft	80	62	1	12 003 81

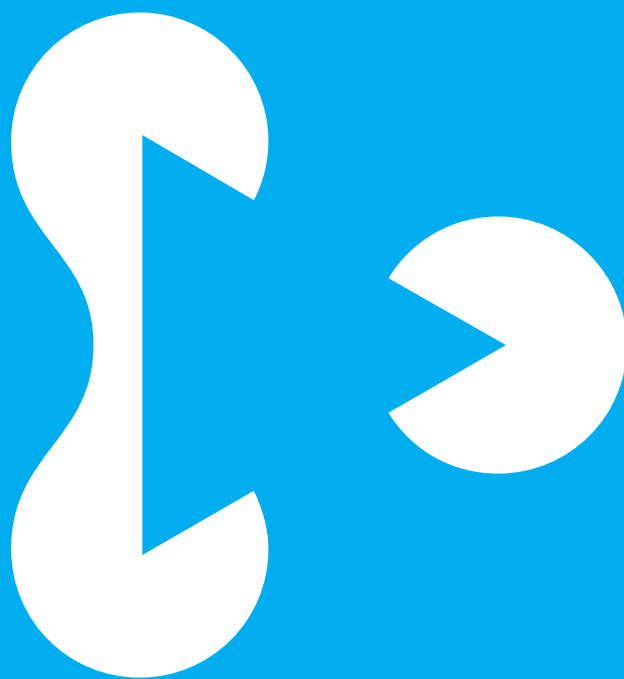
## REPLACEMENT PARTS AND ACCESSORIES

Description	Thread GLS	Stirrer Ø mm	Pack Unit	Cat. No.
Alternative Impeller Magnetic Stirrer, for DURAN® GLS 80® Stirred Bottle Reactor, wide mouth		62	1	12 003 82
Replacement Anchor Magnetic Stirrer, for DURAN® GLS 80® Stirred Bottle Reactor, wide mouth		62	1	12 003 83
Replacement Screw Cap, for DURAN® GLS 80® Stirred Bottle Reactor, wide mouth, PP, blue/grey	80		1	12 003 85
Replacement Shaft, for DURAN® GLS 80® Stirred Bottle Reactor, wide mouth, stainless steel, with PEEK screw connector			1	12 003 86

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