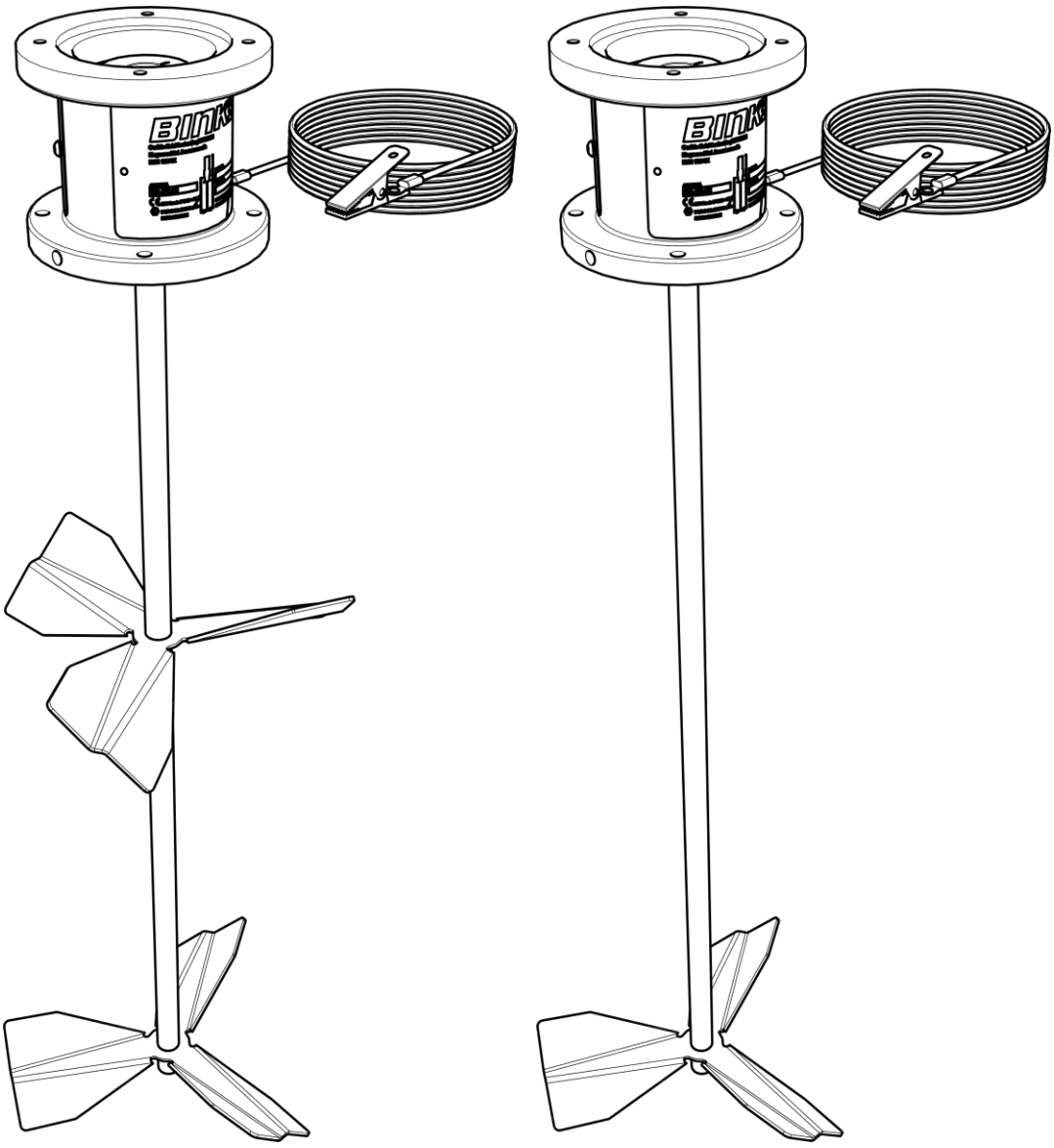
QS-5016S AGITATOR



IMPORTANT! DO NOT DESTROY
It is the Customer's responsibility to have all operators and service personnel read and understand this manual. Contact your local Carlisle Fluid Technologies representative for additional copies of this manual.
READ ALL INSTRUCTIONS BEFORE OPERATING THIS PRODUCT

Product Description / Object of Declaration:	**Agitator - QS-5016SXXXXXXX**	**EN**
This Product is designed for use with:	Solvent and Water based materials	
Suitable for use in hazardous area:	Zone 0 / Zone 1	
Protection Level:	II 1/2 G Ex h IIB T4 Ga/Gb	
Notified body details and role:	Element Materials Technology (2812) EU Type examination and issuing Certificate EMT18ATEX0010X	
This Declaration of conformity / incorporation is issued under the sole responsibility of the manufacturer:	Carlisle Fluid Technologies UK Ltd, Ringwood Road, Bournemouth, BH11 9LH. UK	

EU Declaration of Incorporation

CE

Ex

This Declaration of conformity / incorporation is issued under the sole responsibility of the manufacturer:

Machinery Directive 2006/42/EC
ATEX Directive 2014/34/EU
by complying with the following statutory documents and harmonized standards:
EN ISO 12100:2010 Safety of Machinery - General Principles for Design
EN ISO 80079-36:2016 Explosive Atmospheres- Part 36: Non Electrical equipment for explosive atmospheres- Basic methods and requirements.
EN ISO 80079-37:2016 Explosive Atmospheres- Part 37: Non Electrical equipment for explosive atmospheres - protection by methods "c", "b" and "k".

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.

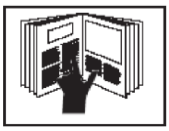
Signed for and on behalf of Carlisle Fluid Technologies UK Ltd:	D Smith	Director of Sales (EMEA)
	1/2/18	Bournemouth,BH11 9LH,UK

In this part sheet, the words WARNING, CAUTION and NOTE are used to emphasize important safety information as follows: **EN**

⚠ WARNING	⚠ CAUTION	NOTE
Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.	Hazards or unsafe practices which could result in minor personal injury, product or property damage	Important installation, operation or maintenance information.

⚠ WARNING

Read the following warnings before using this equipment.



READ THE MANUAL. Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.

WEAR SAFETY GLASSES. Failure to wear safety glasses with side shields could result in serious eye injury or blindness.

DE-ENERGIZE, DE-PRESSURISE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE. Failure to de-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.

NOISE LEVELS. The A-weighted sound level of pumping and spray equipment may exceed 85 dB(A) depending on equipment settings. Actual noise levels are available on request. It is recommended that ear protection is worn at all times while equipment is in use.

INSPECT THE EQUIPMENT DAILY. Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.

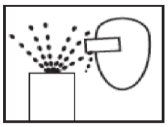
EQUIPMENT MISUSE HAZARD. Equipment misuse can cause the equipment to rupture, malfunction or start unexpectedly and result in serious injury.

HIGH PRESSURE CONSIDERATION. High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the gun, hose leaks or ruptured components can inject fluid into your body and cause extremely serious injury.

STATIC CHARGE. Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and alll other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or elecrtic shock and other serious injury.

PROP 65 WARNING. WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

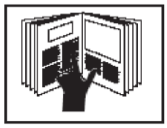
AUTOMATIC EQUIPMENT. Automatic equipment may start suddenly without warning.



PROJECTILE HAZARD. You may be injured by venting liquids or gases that are released under pressure, or flying debris.

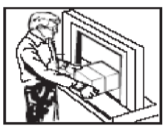
KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY.

PRESSURE RELIEF PROCEDURE. Always follow the pressure relief procedure in the equipment instruction manual.



OPERATOR TRAINING. All personnel must be trained before operating finishing equipment.

PACEMAKER WARNING. You are in the presence of magnetic fields which may interfere with the operation of certain pacemakers.



KEEP EQUIPMENT GUARDS IN PLACE. Do not operate the equipment if the safety devices have been removed.

NEVER MODIFY THE EQUIPMENT. Do not modify the equipment unless the manufacturer provides written approval.

PINCH POINT HAZARD. Moving parts can crush and cut. Pinch points are any areas where ther are moving parts.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.

FUNCTIONAL DESCRIPTION

The Binks agitator with paddle type impellers is intended for agitating paints and lacquers.

It is suitable for use in hazardous areas and can be directly coupled to electric or pneumatic drive units as specified.

SPECIFICATION			
FOR USE WITH THE FOLLOWING DRIVE UNIT TYPES:			
		Gearbox Ratio:	Output Speed [rpm]
Electric	Inverter Control 20 - 80 Hz	11.55:1	47-190
	Fixed Speed	7.23:1	194
	Manual Variator Control	2.62:1	40 - 229
Pneumatic	Restrictor Control	11.55:1	0 - 216
ENVIRONMENT			
Ambient operating temperature:		0 - 40° C Nominal	
RECOMMENDED VISCOSITY RANGE			
1 - 1000 Centipoise			
IMPELLER DETAILS			
Ø Impeller [mm]		120, 200 or 300	
Rotation - Looking On Top Of Unit		Clockwise	
Maximum Speed		229 RPM	
TOTAL WEIGHT			
WITH Ø120 OR Ø200 IMPELLER/S			
1 x Impeller	3800g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 7.0Kg	
2 x Impeller	4100g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 7.3Kg	
4 x Impeller	4700g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 7.9Kg	
TOTAL WEIGHT			
WITH Ø300 IMPELLER/S			
1 x Impeller	4000g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 7.2Kg	
2 x Impeller	4500g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 7.7Kg	
4 x Impeller	5500g + [Shaft Length[mm] x 2.48]	e.g. 1300 Shaft = 8.7Kg	
MATERIALS OF CONSTRUCTION FOR WETTED PARTS			
Shaft / Impeller	300 Series Stainless Steel		
CONNECTION TO GEARBOX			
Frame Size & Mounting	IEC71 / "D" Flange B5		
	NEMA 56C		

SPECIAL REQUIREMENTS FOR ATEX

⚠ WARNING

The support housing is supplied with a 4m earth lead.

The lead must be connected to a true earth ground.

The end user shall ensure that all metallic parts of the equipment are suitably bonded to a common earth point.

A resistance of <1Ω should be achieved between metallic parts and true earth ground.

Maximum shaft speed shall not exceed 229 rpm.

The agitator shaft and mixing equipment must be kept clean from the gradual build-up of product which can cause vibration due to out-of-balance loading.

The end user must ensure that there is a minimum 50 mm clearance between the impeller and the wall of the vessel.

The end user must carry out routine maintenance and periodically inspect the support housing & shaft / impeller for signs of damage or distortion that may compromise the clearances required above.

The maintenance regime for the motor, gearbox and lip seal must be strictly followed.
(See user manual Section Preventative Maintenance Page 15).

This equipment shall only be used in an area with zones as defined:

Zone 0 Inside the Vessel

Zone 1 Outside the Vessel

The agitator, when operated with an inverter, must not differ from the minimum and maximum range of Hz.

(See user manual Section Functional Description Page 4).

NOTE

To eliminate the possibility of any oil contamination into the paint tank from a failed or leaking gearbox seal, a flinger plate is incorporated onto the shaft to direct any oil escape into the support housing.

Drainage is through the 1/8" connection.

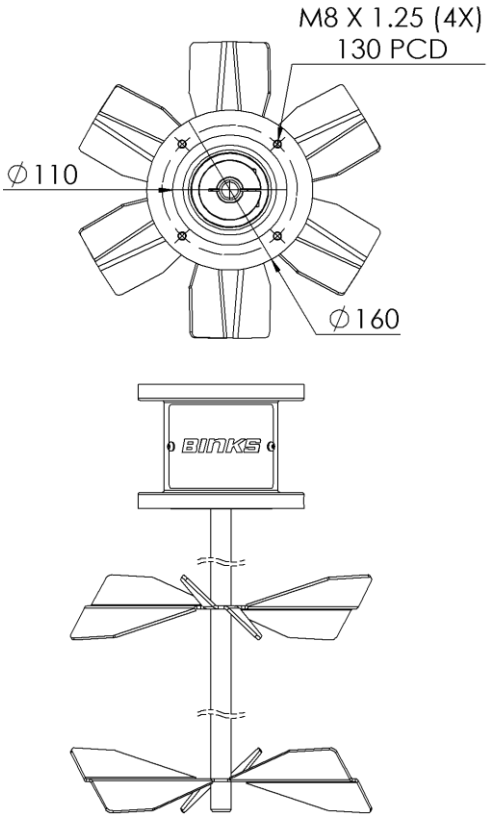
A Ø6mm hose fitting or similar can be connected to allow any oil to be piped away from the tank lid.

In addition a PTFE shaft seal is incorporated into the support housing to prevent any unintentional ingress from entering the tank.

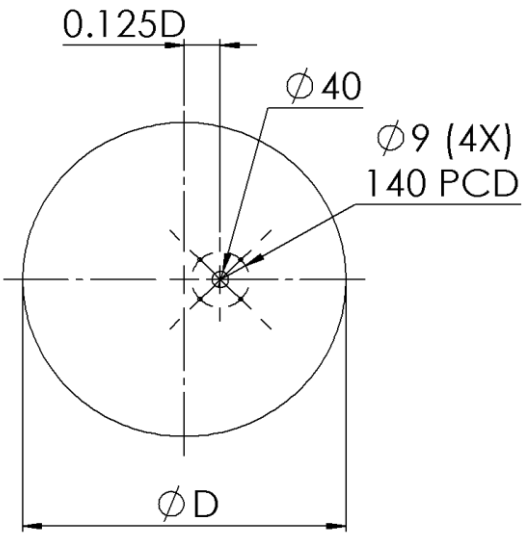
The agitator must only operate when the lower impeller is submerged by at least one impeller diameter.

INSTALLATION

GEARBOX MOUNTING DIMENSIONS



TANK LID OFFSET CALCULATION - AGITATOR POSITIONING



Calculation example:

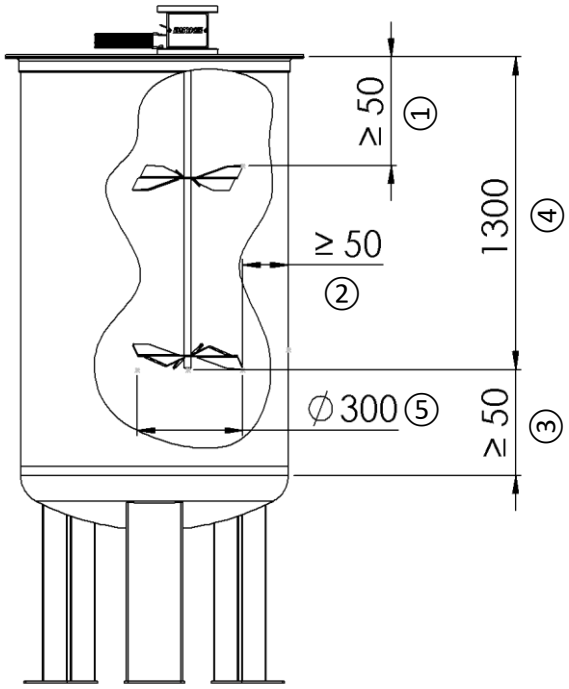
- Tank ØD
  = Ø600
- Offset
  = 0.125 x D
- Offset
  = 0.125 x 600
- Offset
  = 75

NOTE
All dimensions are in mm unless otherwise stated.

INSTALLATION

TYPICAL INSTALLATION

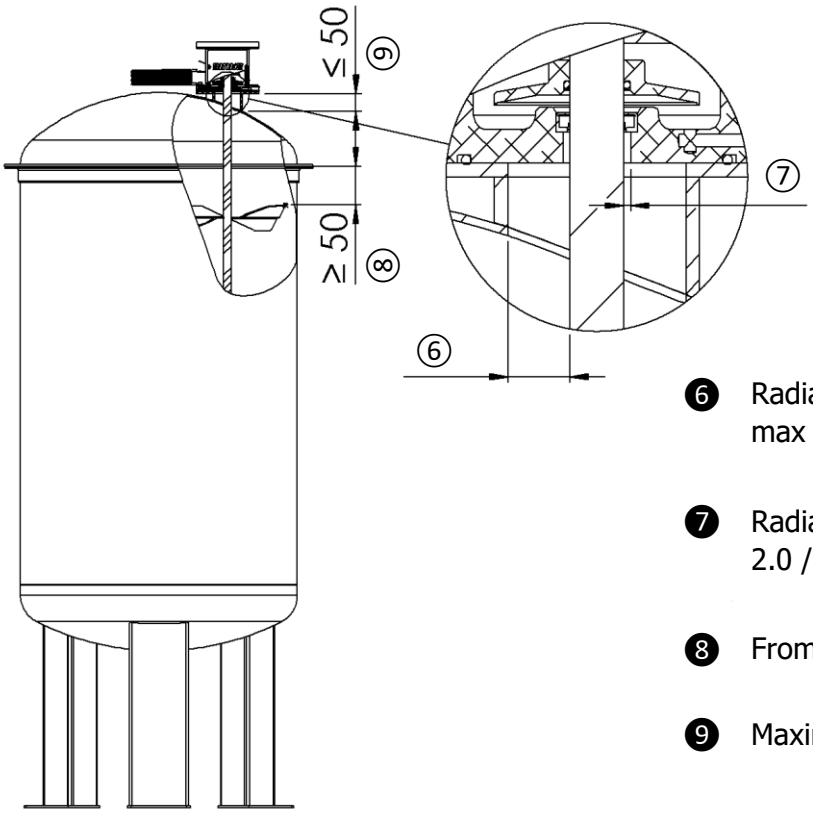
FLAT LID



1. From underside of lid
2. From edge of impeller to inside of vessel
3. From start of tank base to bottom of shaft
4. Maximum length of shaft in tank
5. Impeller maximum

TYPICAL INSTALLATION

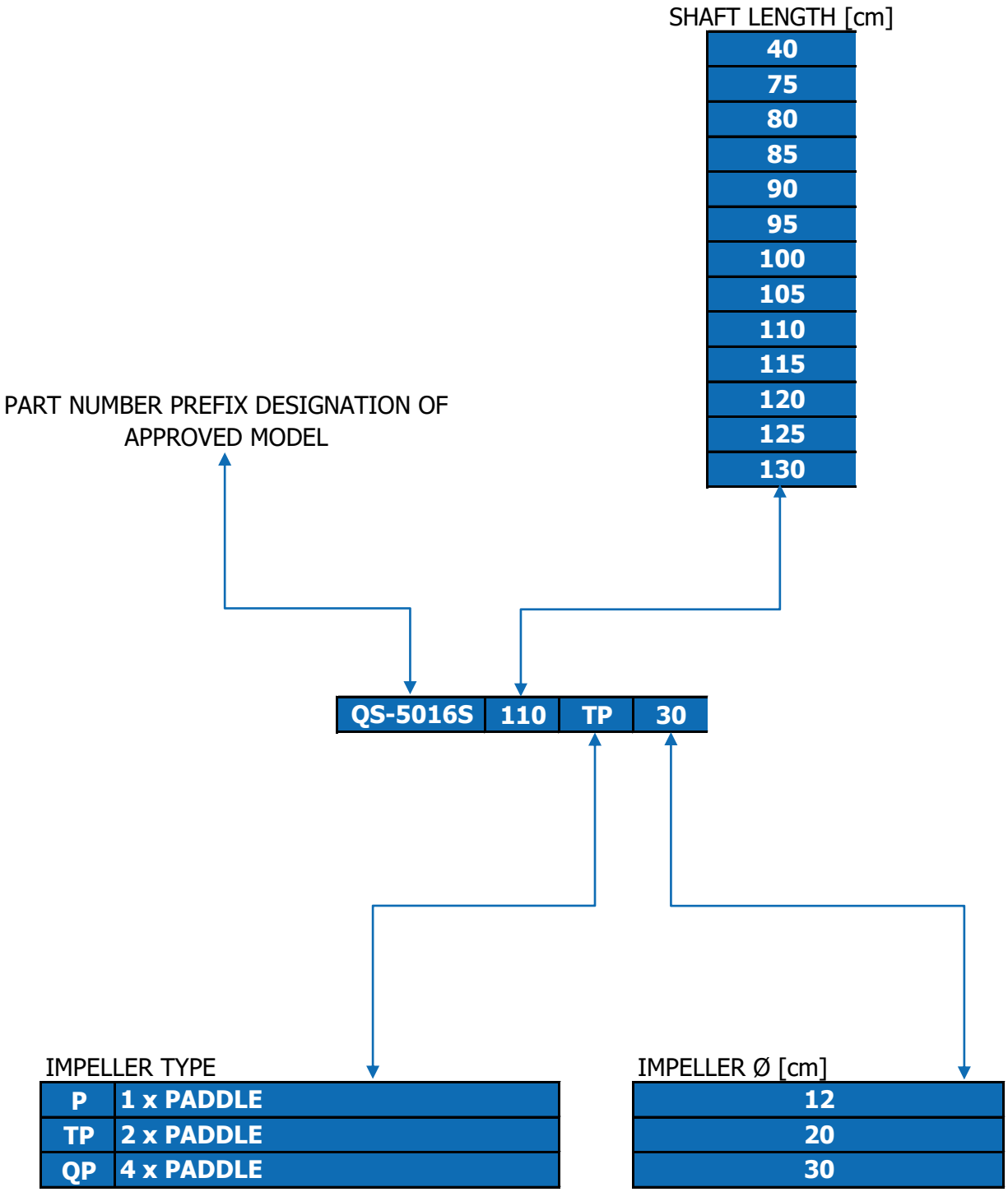
RAISED BOSS



6. Radial gap, shaft to raised boss min 10 / max 20
7. Radial gap support housing to shaft min 2.0 / max 3.0
8. From underside of lid
9. Maximum boss height

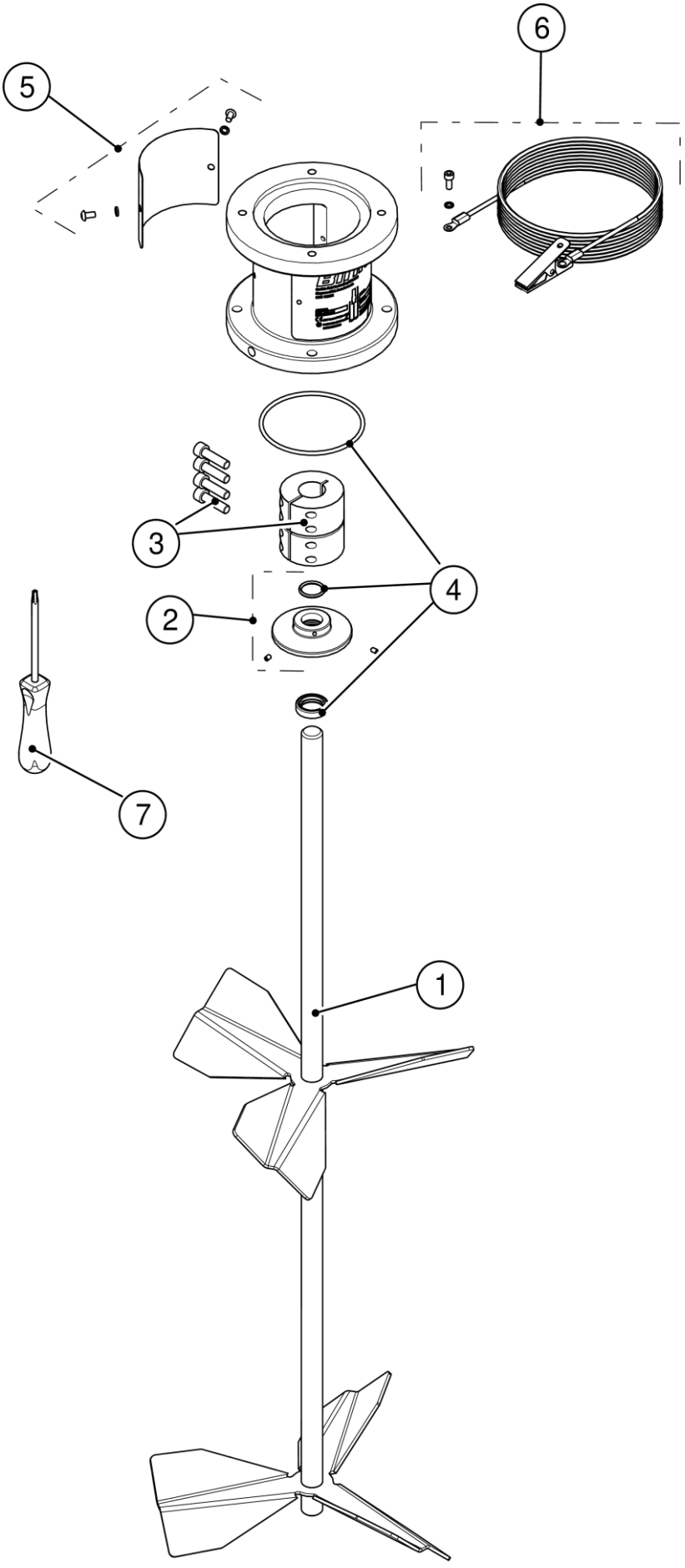
NOTE
All dimensions are in mm unless otherwise stated.

PART NUMBER SELECTION GUIDE



NOTE
NOT ALL COMBINATIONS ARE AVAILABLE.

SPARE PARTS



SPARE PARTS

ITEM	PART NO.	DESCRIPTION
1 *	QSK-001-XXXXXXX	IMPELLER & SHAFT ASSEMBLY KIT
2	QSK-002	FLINGER PLATE, GRUB SCREWS & O-RING KIT
3	QSK-003	SHAFT CLAMP & SCREWS KIT
4	QSK-004	SEAL KIT
5	QSK-005	COVER PLATE, SCREWS & WASHERS KIT
6	QSK-006	EARTH LEAD, SCREW & WASHER KIT
7	QSK-007	T25T "TORX SCREWDRIVER KIT

e.g. 110[cm] SHAFT + TWIN PADDLE Ø30[cm] IMPELLERS =

QSK-001-110TP30

** SEE PAGE 8*

PART NUMBER SELECTION GUIDE, TO CORRECTLY SPECIFY SHAFT LENGTH AND IMPELLER/S.

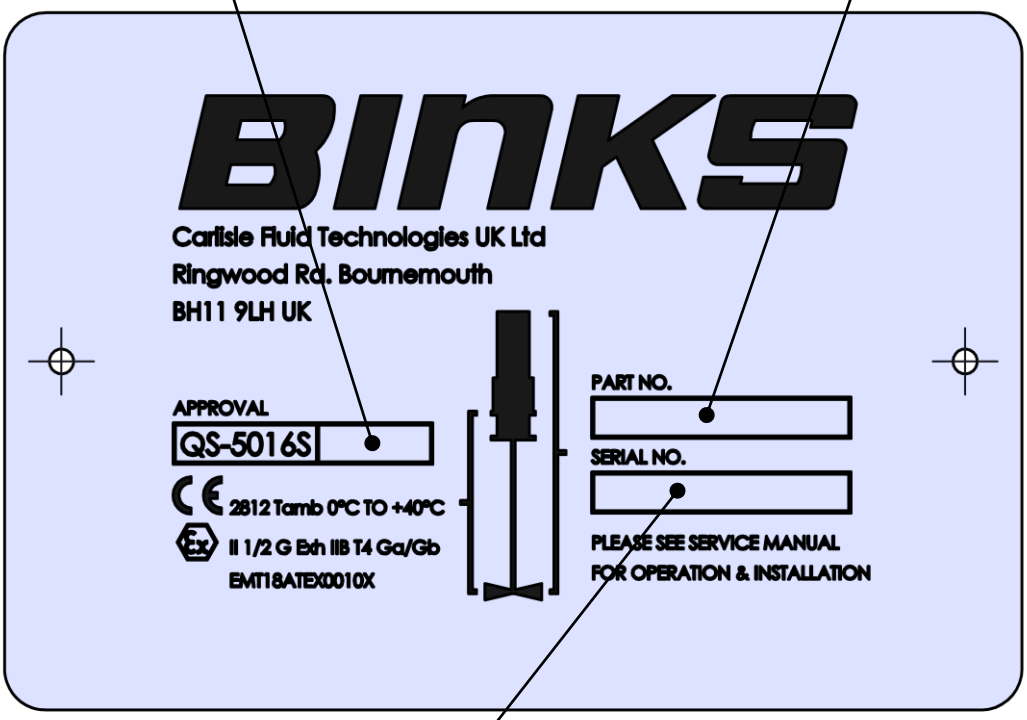
DATA LABEL

e.g. QS-5016S110TP30

(EXAMPLE ONLY)

e.g. QS-ES110TP30D

(EXAMPLE ONLY)



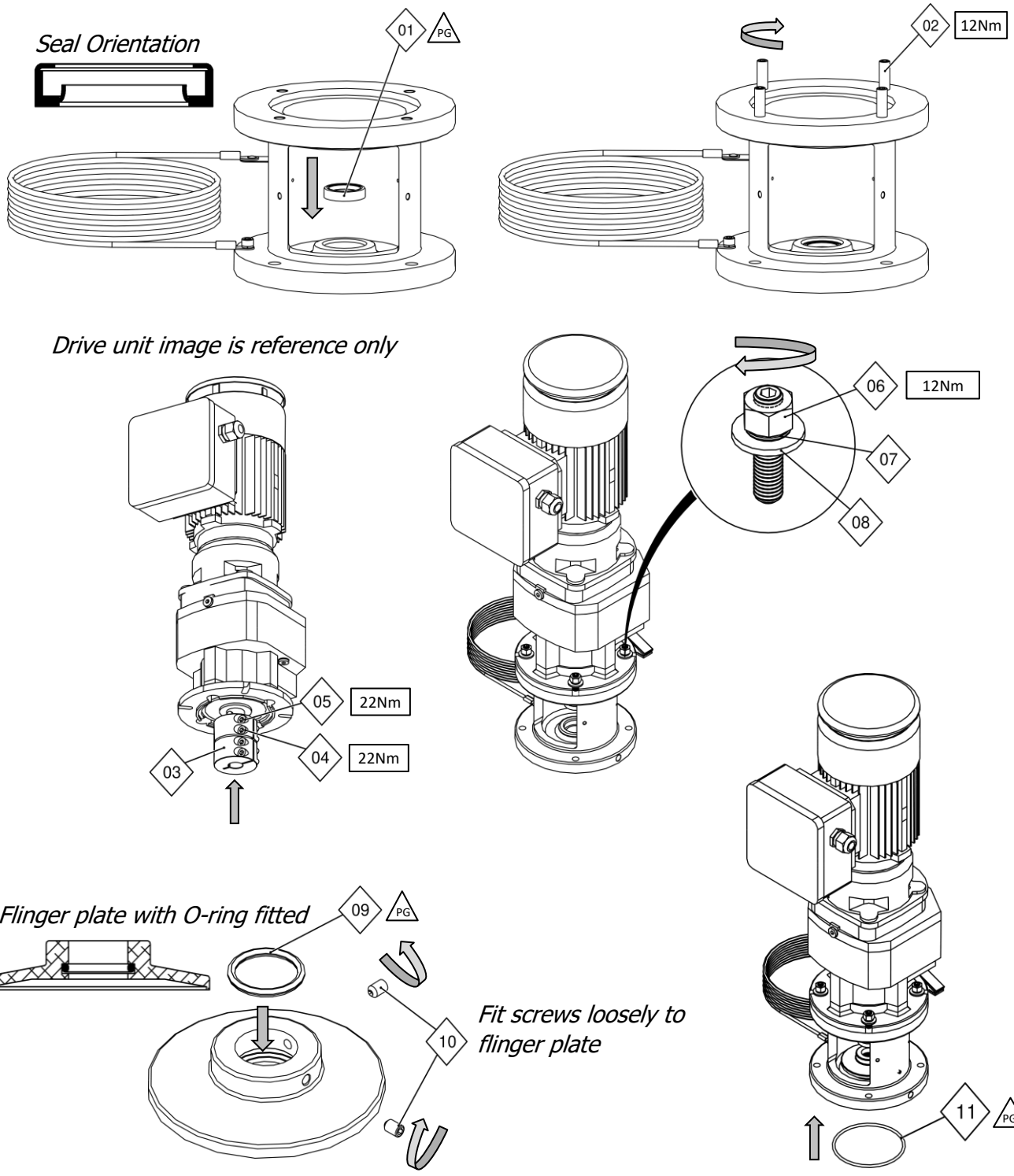
XXXXYY

(WHERE YY DENOTES YEAR OF MANUFACTURE)

MAINTENANCE

ASSEMBLY PROCEDURE

INITIAL ASSEMBLY

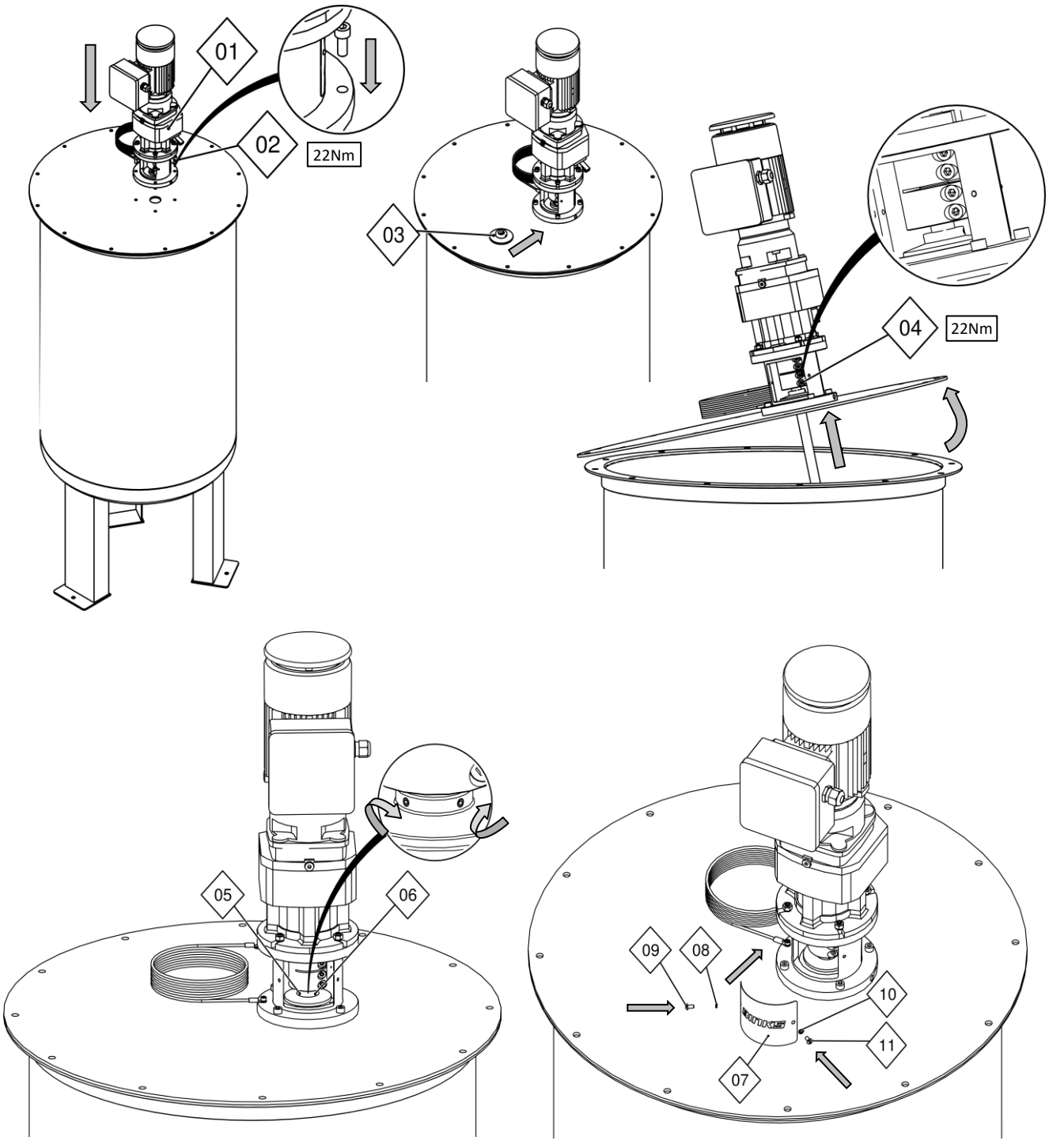


MAINTENANCE SYMBOLS	
(#)	ITEM NUMBER
◇#	MAINTENANCE ORDER *(Reverse for assembly)*
△PG	PETROLEUM JELLY
△TS	THREAD SEALANT (PTFE tape)

MAINTENANCE

ASSEMBLY PROCEDURE

ASSEMBLY TO MIX TANK

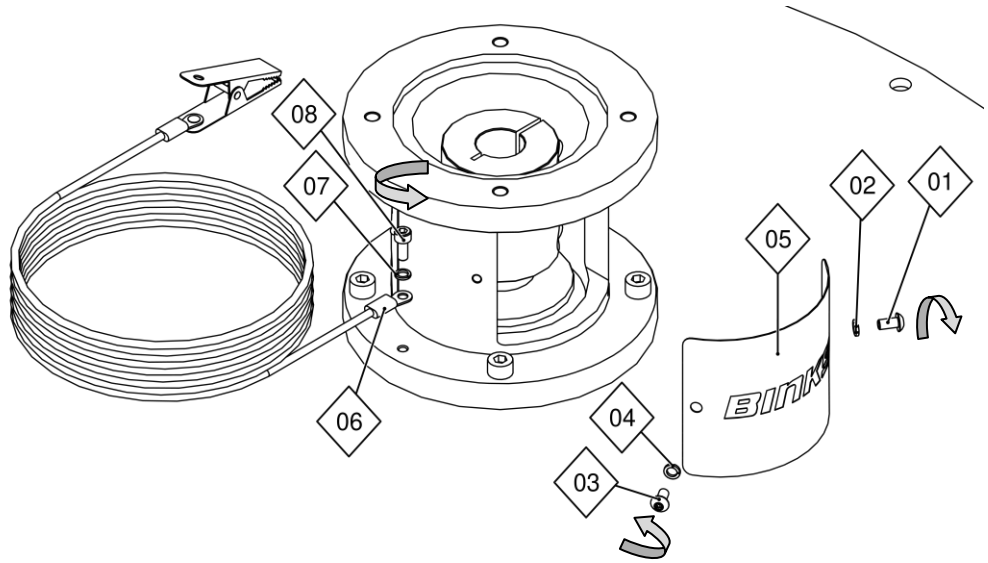


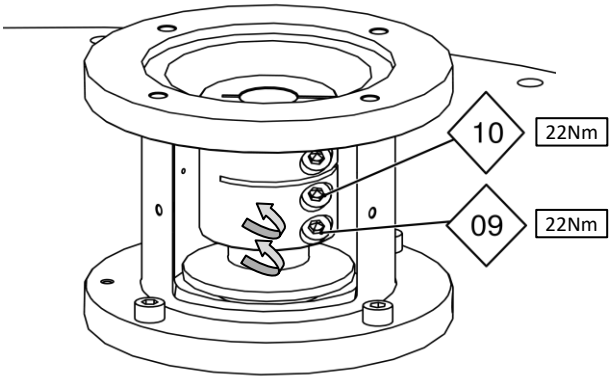
MAINTENANCE SYMBOLS	
ⓐ	ITEM NUMBER
◇#	MAINTENANCE ORDER *(Reverse for assembly)*
PG	PETROLEUM JELLY
TS	THREAD SEALANT (PTFE tape)

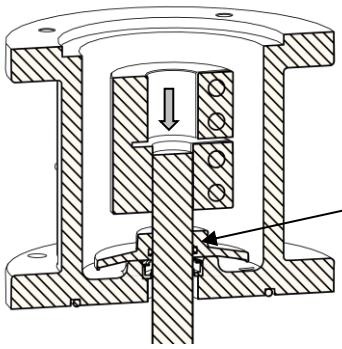
PREVENTATIVE MAINTENANCE

SHAFT SEAL REPLACEMENT

DRIVE UNIT REMOVED

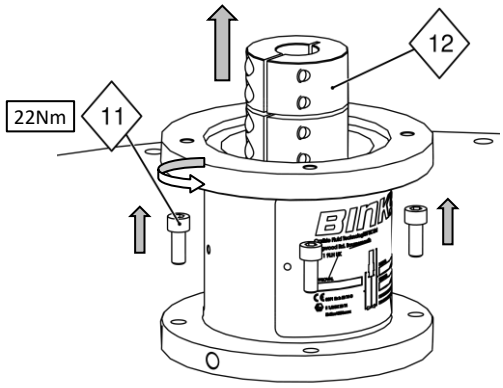


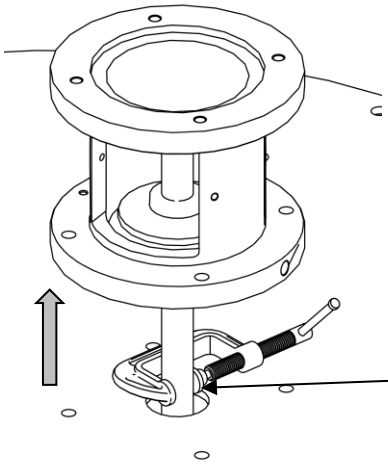




NOTE

Leave screws tight at this stage.





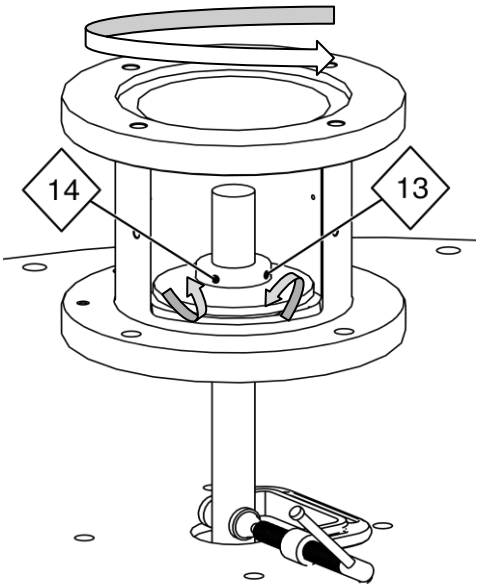
NOTE

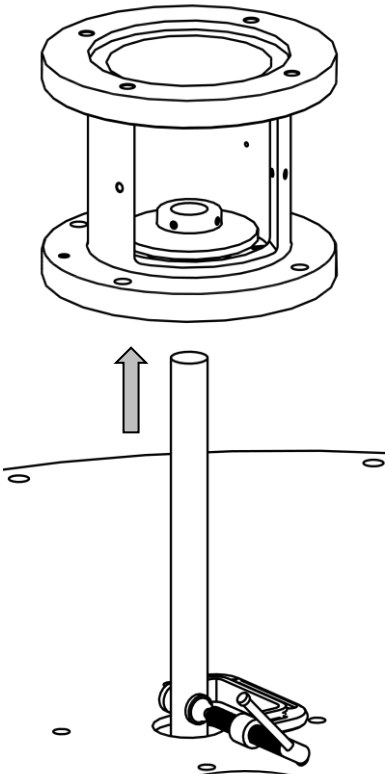
Protect shaft from damage

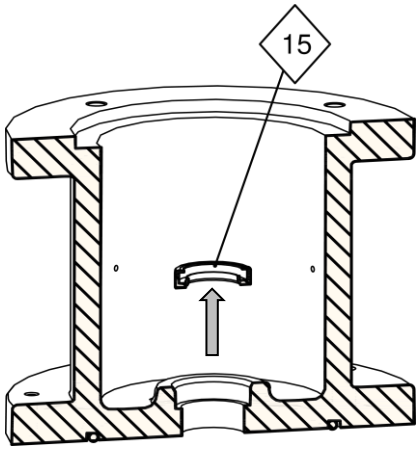
MAINTENANCE SYMBOLS	
(#)	ITEM NUMBER
◇#	MAINTENANCE ORDER *(Reverse for assembly)*
PG	PETROLEUM JELLY
TS	THREAD SEALANT (PTFE tape)

PREVENTATIVE MAINTENANCE

SHAFT SEAL REPLACEMENT CONTINUED

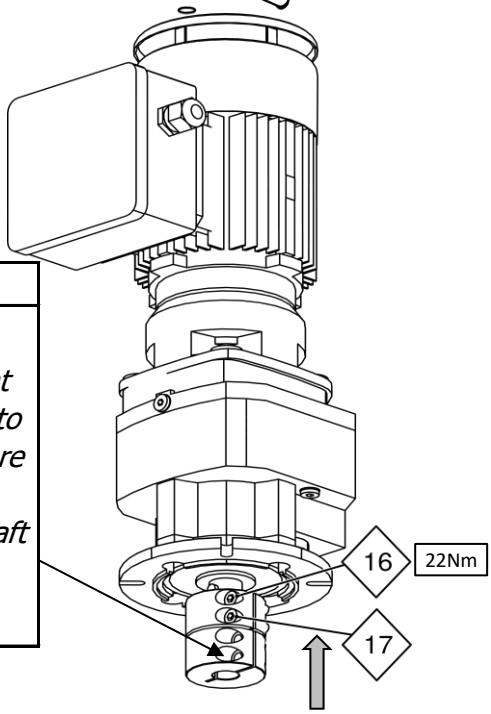






NOTE

It is recommended that you fit the shaft clamp to the drive unit first, before re-assembly of the support housing and shaft / impeller.



MAINTENANCE SYMBOLS	
#	ITEM NUMBER
#	MAINTENANCE ORDER *(Reverse for assembly)*
PG	PETROLEUM JELLY
TS	THREAD SEALANT (PTFE tape)

PREVENTATIVE MAINTENANCE

ROUTINE INSPECTION	PERIOD
Inspect shaft and seal for wear / damage	3 Months
Replace shaft seal	1 Year
Check gearbox for oil leaks and excessive noise	3 Months

FAULT FINDING

SYMPTOM	POSSIBLE CAUSE	REMEDY
Oil coming from support housing drain hole	a. Gearbox transport plug still fitted	a. Remove and fit breather plug
	b. Gearbox seal failed	b. Replace seal (see gearbox manual)
	c. Gearbox over filled with oil	c. Drain oil (see gearbox manual)
Excessive movement of shaft / impeller	a. Shaft clamp loose	a. Tighten clamp bolts and check movement
	b. Gearbox bearings worn	b. Replace bearings and seals (see gearbox manual)
Excessive noise coming from agitator assembly	a. Low or no oil in gearbox	a. Check oil level and fill
	b. Gearbox bearings worn	b. Replace bearings (see gearbox manual)
	c. Shaft bent	c. Replace shaft / impeller

WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided, may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

Carlisle Fluid Technologies is a global leader in innovative finishing technologies.Carlisle Fluid Technologies reserves the right to modify equipment specifications without prior notice.

For technical assistance or to locate an authorised distributor, contact one of our international sales and customer support locations below.

Region	Industrial / Automotive	Automotive Refinishing
Americas	Tel: 1-888-992-4657 Fax: 1-888-246-5732	Tel: 1-800-445-3988 Fax: 1-800-445-6643
Europe, Africa, Middle East, India	Tel: +44 (0)1202 571 111 Fax: +44 (0)1202 573 488	
China	Tel: +8621-3373 0108 Fax: +8621-3373 0308	
Japan	Tel: +81 45 785 6421 Fax: +81 45 785 6517	
Australia	Tel: +61 (0) 2 8525 7555 Fax: +61 (0) 2 8525 7575	

For the latest information about our products, visit www.carlisleft.com

CARLISLE FLUID TECHNOLOGIES

SOLUTIONS FOR YOUR WORLD