

# Hayward Tyler

(formally APV Osborne Craig Ltd.)

## HYGIENIC SIDE ENTRY MIXERS

Moody direct Ltd have been appointed as the exclusive distributor of all parts for the range of hygienic side entry mixers, originally known as Osborne Craig, into the UK dairy industry.

### Cleanline & Hygienic Range

These Cleanline & Hygienic Side Entry Mixers are synonymous with Milk storage applications. Many thousands of such units were supplied since their inception in the 1960's. This range of fixed mount Hygienic Mixers is specifically designed for aseptic applications where hygiene is of paramount importance. The highly polished stainless steel parts which are exposed to the product in the vessel, are designed to be crevice free and suitable for 100% cleaning in place. These units are still available through Moody Direct Ltd.



### Side Entry Hygienic Mixers

#### Recommendations For Standard Tanks

**Model: GDW-S-SE-HY**

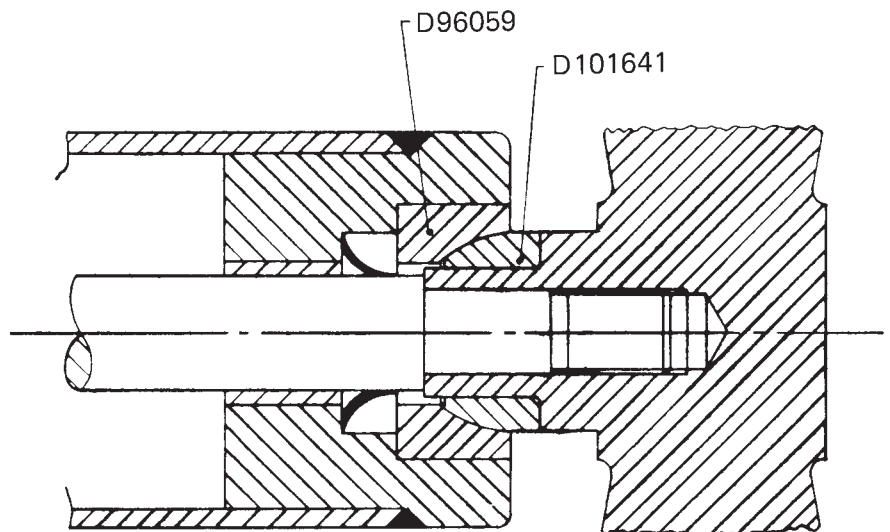
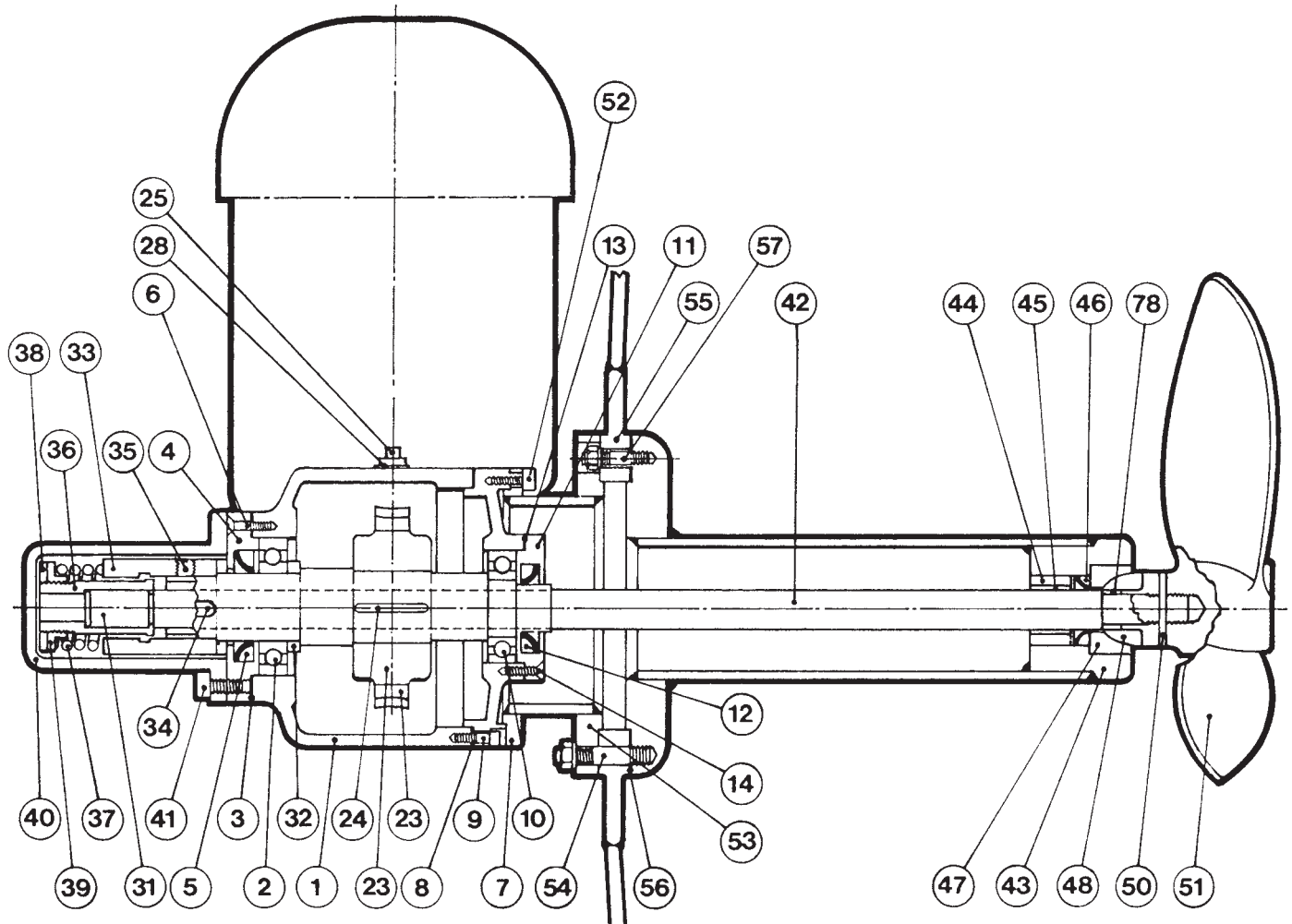
**Using Hi-Flo Propellers Only (Sizing Chart)**

## Milk Storage Vessels

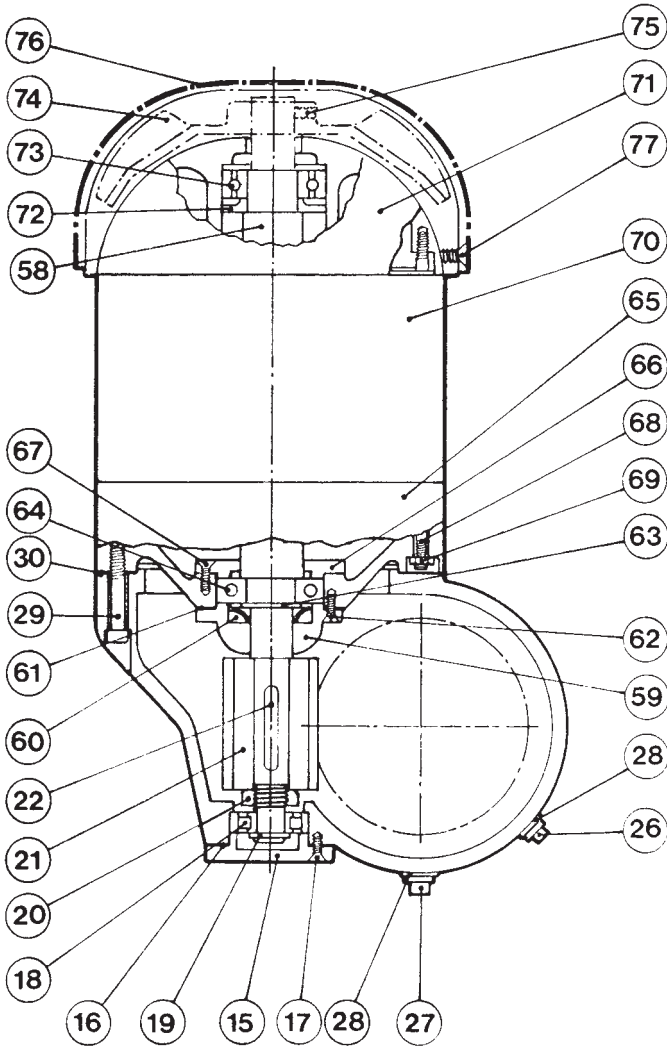
Vertical Vessels			
Max. Capacity Gal	H.P.	RPM	PROP
1,000	1/2	200	11"
6,000	1.0	200	12"
15,000	1.0	200	13"
20,000	2.0	260	13"
30,000	2.0	260	15"
40,000	3.0	260	17"
50,000	3.0	260	17"

Horizontal Vessels			
Max. Capacity Gal	H.P.	RPM	PROP
1,000	1/2	200	11"
3,000	1.0	200	12"
5,000	1.0	260	13"
6,000	2.0	260	15"
7,500	3.0	260	17"
10,000	3.0	260	17"

**HYGIENIC SIDE ENTRY MIXERS - MkIII (OSBORNE SPHERICAL SEAL)**



Mark 3 Assembly



**SIDE ENTRY MIXERS**

Item No.	No. off	Description
1	1	Gearbox
2	1	Bearing
3	1	Gasket
4	1	Bearing Cap
5	1	Oil Seal
6	6	Retaining Screws for Item 4
7	1	Gearbox Skirtbase Sideplate
8	1	Gasket
9	6	Securing Screws for Item 7
10	1	Bearing
11	1	Bearing Cap
12	1	Oil Seal
13	1	Gasket
14	4	Securing Screws for Item 11
15	1	Bearing Cap
16	1	Gasket
17	4	Securing Screws for Item 15
18	1	Bearing
19	1	Circlip
20	1	Worm Locknut
21	1	Worm
22	11	Worm Keys
23	1	Worm Wheel
24	1	Worm Wheel Key
25	1	Oil Filter Plug
26	1	Oil Lever Plug
27	1	Oil Drain Plug
28	3	Plug Seals
29	4	Securing Screws for Motor to G/B
30	1	Gasket
31	1	Output Shaft
32	1	Spacer
33	1	Coupling Body
34	1	Coupling Key
35	2	Securing Screws for Item 33
36	1	Coupling Sleeve
37	1	Coupling Spring
38	1	Coupling Locknut
39	1	Coupling Locknut
40	1	Coupling Protection Cap
41	4	Securing Screws for Item 40
42	1	Blade Shaft
43	1	Nose Bearing Housing
44	1	Bearing Housing
45	1	Bearing
46	1	Oil Seal
47	1	Spherical Bearing Seat
48	1	Spherical Bearing
50	1	Blade Pin
51	1	Propeller Blade
52	6	Securing Screws for Item 53
53	1	Stool
54	4	Studs for 53 c/w SPW. and Nuts
55	1	Vessel Pad
56	1	Gasket
57	4	Studs for 43 c/p SPW. and Nuts
58	1	Rotor
59	1	Motor Oil Seal Cap
60	1	Oil Seal
61	1	Gasket
62	4	Securing Screws for Item 59

**SIDE ENTRY MIXERS**

Item No.	No. off	Description
63	1	Circlip
64	1	Bearing
65	1	Motor End Cover
66	1	Inner Bearing Cap
67	4	Securing Screws for Item 66
68	4	Motor Studs
69	4	Motor Stud Nuts
70	1	Motor Body
71	1	Motor End Cover
72	1	Grease Retainer
73	1	Bearing
74	1	Fan
75	1	Securing Screw for Item 74
76	1	Fan Cowl
77	3	Securing Screws for Item 76
78	1	Distance Piece

## SERVICING SEALS AND SPHERICAL BEARINGS

### Seal Servicing

Hygienic seal spares are supplied as a complete kit containing all wearing parts.

Disconnect power supply, knock blade (51) in anti-clockwise direction, unscrew bladeshaft and remove complete with spherical bearing (48) and blade. Release and remove completely mixer assembly from vessel. If carbon seat requires replacing, carefully break out old carbon seat (47), oil seal (46) and press out bearing/bearing housing (44) replace bearing (45) and refit bearing housing to main housing (43) 3/8" (9.35mm) below shoulder; fit oil seal (46) and then carbon seat (47) refit to vessel.

### Spherical Bearing

Mark 1 conversion procedure

Mark 1 design of spherical bearing was superseded in 1974 by Mark 2 design. Kits are available to convert Mark 1 units to the Mark 2 design. Grip bladeshaft assembly in vice, locate 3/16" (4.65mm) dia. blade locking pin and drift out, unscrew blade from bladeshaft, breakaway ceramic hub cone D101641 from boss of blade;

**DO NOT DAMAGE** mating face on blade hub; thoroughly degrease blade/bladeshaft, mix a small amount of adhesive (see details below), and apply to mating faces of new distance piece (78), blade shaft (42) and blade hub (51). Screw blade into place; refit and lock blade locking pin. Bond new cone into position.

### Mark 2 & 3 Servicing

Break away old ceramic cone, taking care not to damage the mating face; clean up and bond new cone into position.

Adhesive:

Araldite Resin A105 with Hardener HY953F (Ratio 1 x 1 by weight)

Curing time - 24 hours at 15°C.

30 minutes at 100°C.

**N.B. DO NOT USE NAKED FLAME** when heating to reduce cure time.  
**DO NOT ALLOW** "Araldite" on spherical area of cone.

Refit bladeshaft assembly to mixer. If the spherical nose cone is of the Mark 2 assembly, it is not necessary to remove the blade from the bladeshaft, simply break away cone, clean and bond on new one.

#### i) Motor Assembly

Parts likely to need replacement (see page 3)

Bearings 64 +73

Oil Seal 60

Gaskets 30 + 61

#### ii) Gearbox Assembly

Parts likely to need replacement (see page 3)

Bearings 2, 10 +73

Oil Seals 5 + 12

Worm Wheel 23

Worm 21

Gaskets 3, 8, 13, 16 + 30