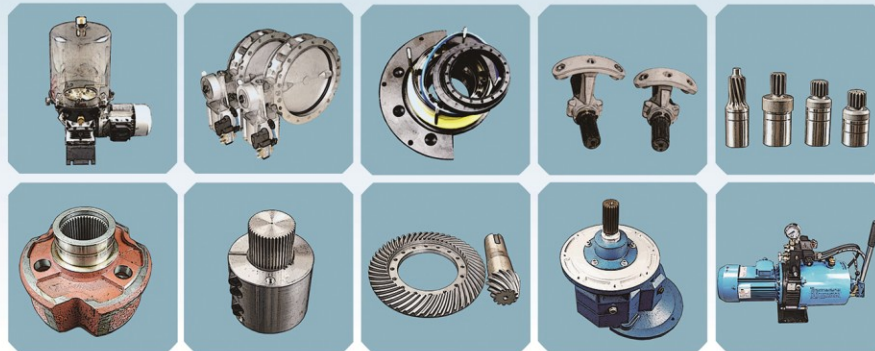


Quality you can rely on
Better quality for value



China's First Construction Machinery MRO Online Platform



Hiya Mechanical Equipment Co., Ltd.
<https://mechmall.com> & <https://mech-mall.com>
E-mail: info@mechmall.com

2018



CONCRETE MIXER SPARE PARTS Servicing Manual



www.mechmall.com

Technology creates quality and service creates value

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Wear Parts & Spares

	
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Mixer Maintenance

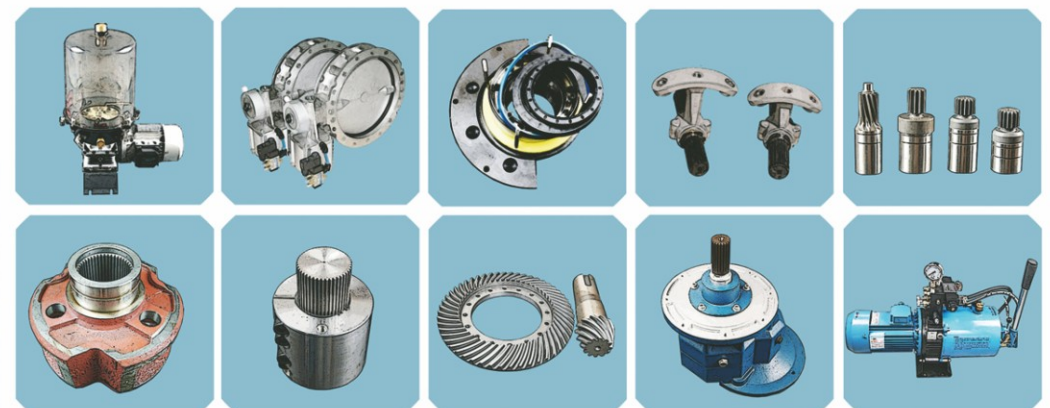
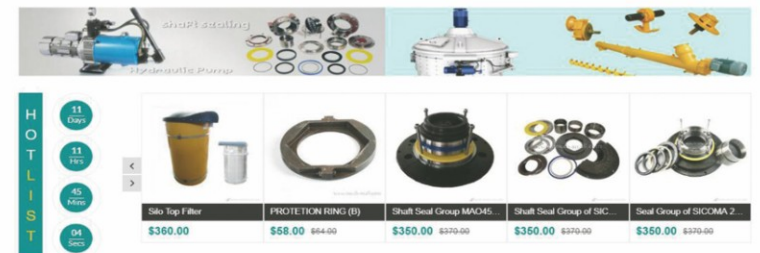
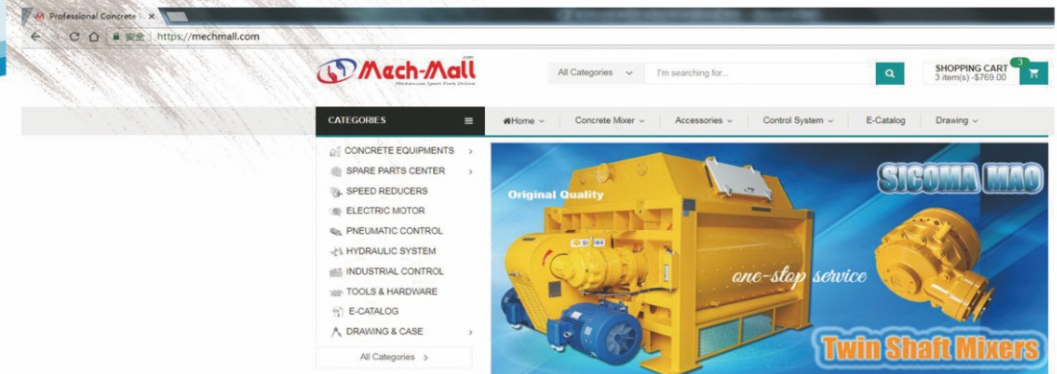
	
Lubrication System Maintenance	14-15
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About Us

20-21



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Professional Concrete Machinery Supplier



FAX:0371-85228155 E-MAIL:info@mechmall.com

WEB: WWW.MECHMALL.COM WWW.HZSBATCHPLANT.COM

The Works We Do



HZS Batch Plant

HZS 25 -HZS 90 standard mixing station has features of less investment and easy operation . Our strong spare parts service can give client a perfect after-sales support. HZS120-HZS360 large-scale mixing plant are equipped with sicoma or BHS mixer, own-patented intelligent control system. Undertake overseas turnkey mixing station project.



Concrete Machinery MRO Service

- * Top Quality Products
- * Best Customer Service
- * Efficient One-stop Purchasing Patterns

In the past 10 years working for mining machinery and construction machinery factories, we served numerous overseas customers. They always have a lot of troubles on purchasing the repairing and maintaining spare parts. For example, the concrete mixing station in China do not has a national design standard, almost each plant out of different factories are not the same. From the quality to the spare parts also are difference, It is very difficult to identify which one is right size and good quality. That is why we established China's first professional MRO online platform for concrete equipment.



info@mechmall.com

Hiya Mechanical Equipment Co., Ltd.

Henan Hiya Mechanical Equipment Co., Ltd is a professional construction machinery B2C platform service supplier.

Co-Manufacturers:

Zhengzhou Five-star Motor Co., Ltd.

Zhengzhou Deshengxiang Motor Manufacturing Co., Ltd.

Zhengzhou Huacheng Construction Manufacturing Co., Ltd.

Zhengzhou Hydraulic Machinery Co., Ltd.

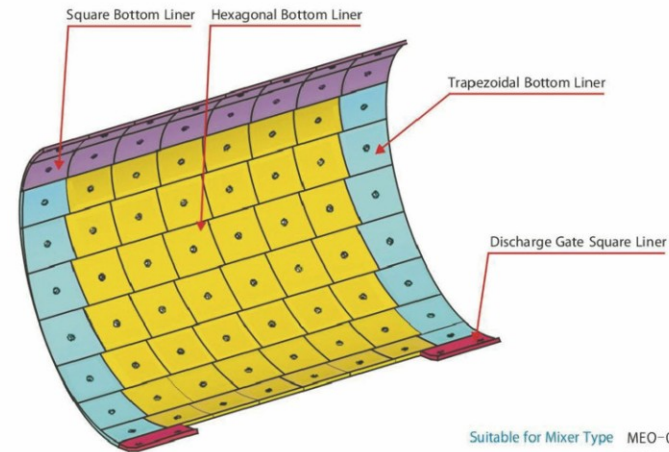
Zhengzhou Hiya Construction Equipment Manufacturing Co., Ltd.

Brands:

SICOMA, SDMX, BHS, WAM, CHIMEI, OLI, AIRTAC



Layout of Bottom Linings

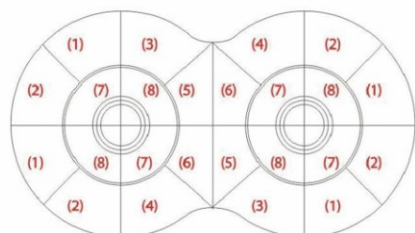


Suitable for Mixer Type MEO-0.75/1.0/2.0
MSO-1.0/1.25/1.5
MAO-1.5/2.0/3.0/3.0F/4.0/4.5

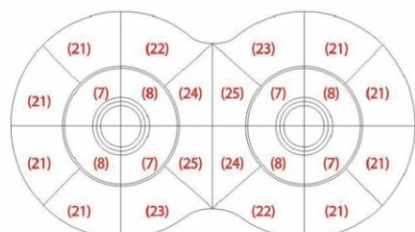
Item No.	Description	Code	MEO 0.75	MEO 1.0	MSO 1.0	MSO 1.25	MSO 1.5	MAO 1.5	MAO 2.0	MEO 2.0	MAO 3.0	MAO 3.0F	MAO 4.0	MAO 4.5
1	Trapezoidal Bottom Liner	SCAZ-900-144	24	24	24	24	24	28	28	28	32	32	32	32
2	Hexagonal Bottom Liner	SCAZ-900-145	48	48	60	60	72	56	84	84	128	144	160	176
3	Square Bottom Liner	SCAZ-900-146	24	24	28	28	32	24	32	32	40	44	48	52

Item No.	Description	Code	MAW 1.5	MAW 2.0	MAW 3.0	MAW 3.0F	MAW 4.0	MAW 4.5
1	Trapezoidal Bottom Liner	SCAZ-550W-144	28	28	32	32	32	32
2	Hexagonal Bottom Liner	SCAZ-550W-145	56	84	128	144	160	176
3	Square Bottom Liner	SCAZ-550W-146	24	32	40	44	48	52

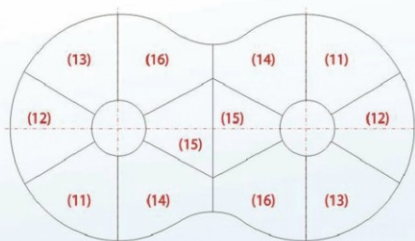
Layout of Wall Linings



Suitable for Mixer Type MAO-3.0/3.0F/4.0/4.5
MAW-3.0/3.0F/4.0/4.5



Suitable for Mixer Type MAO-1.5/2.0 MEO2.0
MAW-1.5/2.0



Suitable for Mixer Type MEO-0.75/1.0
MSO-1.0/1.25/1.5

Item No.	Description	Nos.
1	Wall Liner(1)	8
2	Wall Liner(2)	8
3	Wall Liner(3)	4
4	Wall Liner(4)	4
5	Wall Liner(5)	4
6	Wall Liner(6)	4
7	Elliptical Wall Liner(1)	8
8	Elliptical Wall Liner(2)	8

Item No.	Description	Nos.
1	Wall Liner(21)	16
2	Wall Liner(22)	4
3	Wall Liner(23)	4
4	Wall Liner(24)	4
5	Wall Liner(25)	4
6	Elliptical Wall Liner(1)	8
7	Elliptical Wall Liner(2)	8

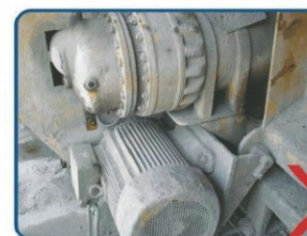
Item No.	Description	Nos.
1	Wall Liner (11)	4
2	Wall Liner(12)	4
3	Wall Liner(13)	4
4	Wall Liner(14)	4
5	Wall Liner(15)	4
6	Wall Liner(16)	4

Mixer Cleaning

Mixer Motor Cleaning

Mixing plant is a dusty environment. To ensure that the mixer maintains tip top condition, works efficiently, life extended and abiding by the safety regulations please cleans your mixer regularly. Especially key parts like the electric motor.

- 1 - The surface and grooves of the electric motor must be cleaned regularly. Dusting should not exceed 5 mm or heat diffusion of the motor will be affected and cause over-heat thus shortening the life of the motor.
- 2 - Wipe the dust off with cloth. Do not water jet the motor or any other powered parts, water sippage will cause short circuit and affect normal production of the mixing plant.



Cleaning instructions (All electrically powered parts must not be washed by water jet, use semi wet cloth to wipe surface)



Lining Components

Mixing Blades Adjustment

Mixing blades and mixing arms must be inspected at least weekly to check if they become loose or are mis-aligned, or to check if contact with mixer body produces abnormal sound. Should the above anomalies occur, adjustments have to be made. Failing to adjust in time may cause bigger sized aggregates to stick between the mixing blades and the wear plates and pressure is exerted on the mixing shaft. Should the situation sever; the mixing arm may break and also speed up the wear on the mixing blades and the wear plates. Running costs are increased. To ensure that your mixers work properly and to save your production cost, please inspect and adjust your mixing blades regularly.



Central Mixing Blade adjustment



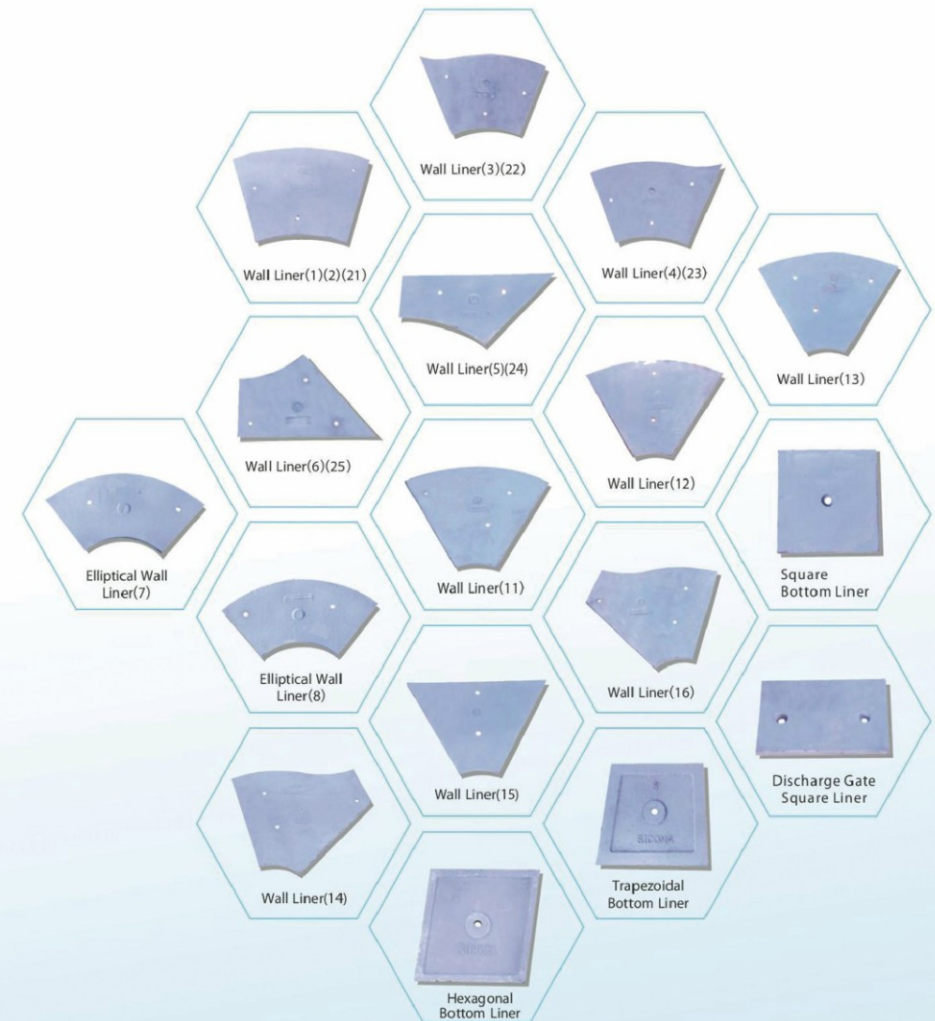
Side Mixing Blade adjustment

Inspect & adjust Pulley Belt tension

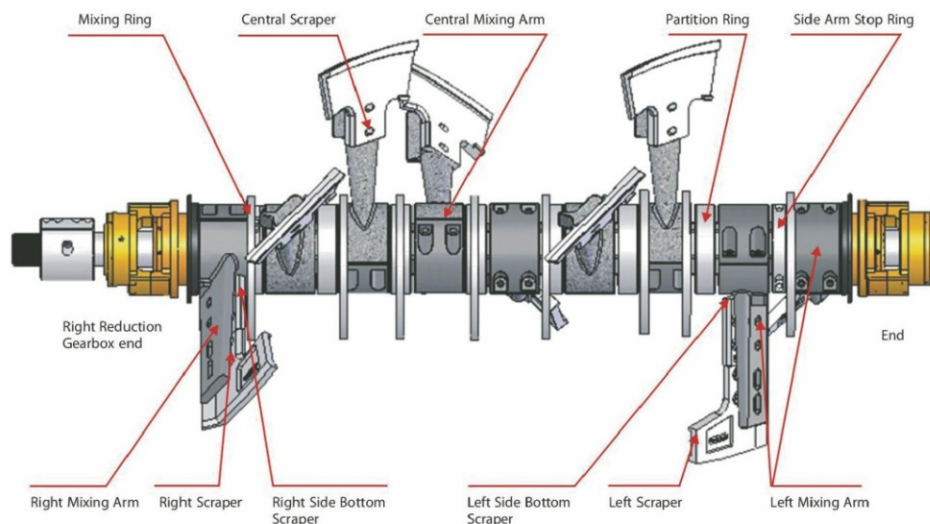


Mixer V-belt must be inspected weekly. Check belt tension and aging carefully.

- 1 - Remove belt cover and check if all belts are in good condition or are mis-aligned or show signs of aging.
- 2 - When applied with 100N (10kg) pressure, the deformation of the belt in the given direction should not exceed 20 mm. If the belt is too tight, adjust its tension in accordance to the guidelines of the Manual.
- 3 - The belt must be changed when deformed or aged, make changes as so laid down in the Manual.



Configuration of Mixing Arms



Item No.	Description	Code	MAO1.5	MAO2.0	MAO3.0	MAO3.0F	MAO4.0	MAO4.5	MAO5.0
1	Central Mixing Arm	SCAZ-230-174 (6)							
		SCAZ-230-174							
		SCAZ-400-174 (6)	6	8					
		SCAZ-700W-174	8	12	14	16			
		SCAZ-500-174 (6)			10	12	16	18	
		SCAZ-040(A)W-174					18	20	
2	Side Mixing Arm(Left)	SCAZ-050-174							16
		SCAZ-230-173 (6)							
		SCAZ-230-173							
		SCAZ-400-173 (6)	4	4					
		SCAZ-700W-173	2	2	2	2			
		SCAZ-500-173 (6)			4	4	4	4	
3	Side Mixing Arm(Right)	SCAZ-040(A)W-173					2	2	
		SCAZ-050-173							2
		SCAZ-230-172 (6)							
		SCAZ-230-172							
		SCAZ-400-172 (6)	2	2					
		SCAZ-700W-172	2	2	2	2			
		SCAZ-500-172 (6)			2	2	2	2	
		SCAZ-040(A)W-172					2	2	
		SCAZ-050-172							2

Note 1. This configuration corresponds to right sided reduction gearbox. Mixing arms layout is reversed for left sided reduction gearbox

Specialized Grease for Lubrication System

- ◆ Specifically apply to heavy duty construction machinery like concrete mixers. Friction parts are still protected under intensive loading, extremely harsh working condition of humid and extreme temperatures do not stop mixer to run smoothly.
- ◆ Standardized barrel design to fit tailor-made Oil Dispenser. The barrel can be placed inside the dispenser, simple to use and saves oil contamination due to multiple oil takes.
- ◆ Coupled with the proper way of oil re-fill, wearing to mixer shaft heads and its sealing components is effectively delayed. Better sealing to shaft ends can effectively reduce the intensiveness and level of workload in maintenance as well as prolonging the life of the mixer.



Genuine Lubricant + Special Oil Dispenser
= perfect Oil Re-fill package

Pneumatic Oil Dispenser Installation Processes



1 - Prepare Oil Dispenser and Grease barrel



2 - Open the oil dispenser cover and put the barrel inside



3 - Close the oil dispenser cover and shut it with the clamps

Grease Data

PartGrease	Pump
Type of Oil	Grease
Standard Volume	16l/barrel
Position	Shaft Heads

Grease Model

Model	Applicable Temperature	Remarks
SG3	-5°C~5°C	For Winter
SG2	5°C~15°C	For both Spring & Autumn seasons
SG1	15°C~30°C	For Summer

Oil Dispenser Model

H30-G	Manual Oil Dispenser
A45-G	Pneumatic Oil Dispenser

Warning

- 1 - Before operating on the mixer, the operators must disconnect the power to the mixer first and ensure that the installation has stopped working. Other necessary precautionary measures have to be applied too.
- 2 - Lubricants, solvents and detergents may be toxic and harmful to human. Direct contact with skin may cause allergy; poisoning may occur with in-take.

Lubrication System Maintenance



- ◆ Lubrication system is one of the core parts of a mixer. Its operation directly affects the mixer's efficiency and its life span. For your mixer to operate safely and efficiently, please ensure proper maintenance and operation of the lubrication system.
- ◆ Automatic lubrication pump is set to simulate the operation of the mixer. It is fitted with an electrical time relay to allow intermittent stop of the lubrication pump – 30 min. stop, 3 min. of operation and saves oil consumption. Under normal working condition, there is no need of any hands on operation, apart from routine inspection and re-filling oil tanks. For manual lubricant pumps, good lubrication can be achieved by re-filling lubricants twice in a day, before and after works.

Inspection: Daily check on lubricant reaching shaft head, steps as follows -

- ◆ There is a greasing nipple on each of the four shaft ends. Press the ball of the grease nipple with your nail and if oil sips out, the lubrication pump is working normally.
- ◆ If lack of oil was found at shaft heads, check if oil pipes to the shaft head are free flowing. Then check if the flow diverter valve is clogged and lastly, check if pump core is supplying lubricant normally.
- ◆ Special Treatment: should the mixer be made to work in the absence of the oil pump, the four grease nipples at shaft ends must be lubricated with greasing gun.

Notice:

- ◆ Lubricant should be free of foreign substance and its viscosity must be kept at all times;
- ◆ Lubricant should be absolutely clean; existence of impurities would damage the lubrication system and the bearings.

Guides to Oil Re-fill



Proper Oil Re-fill

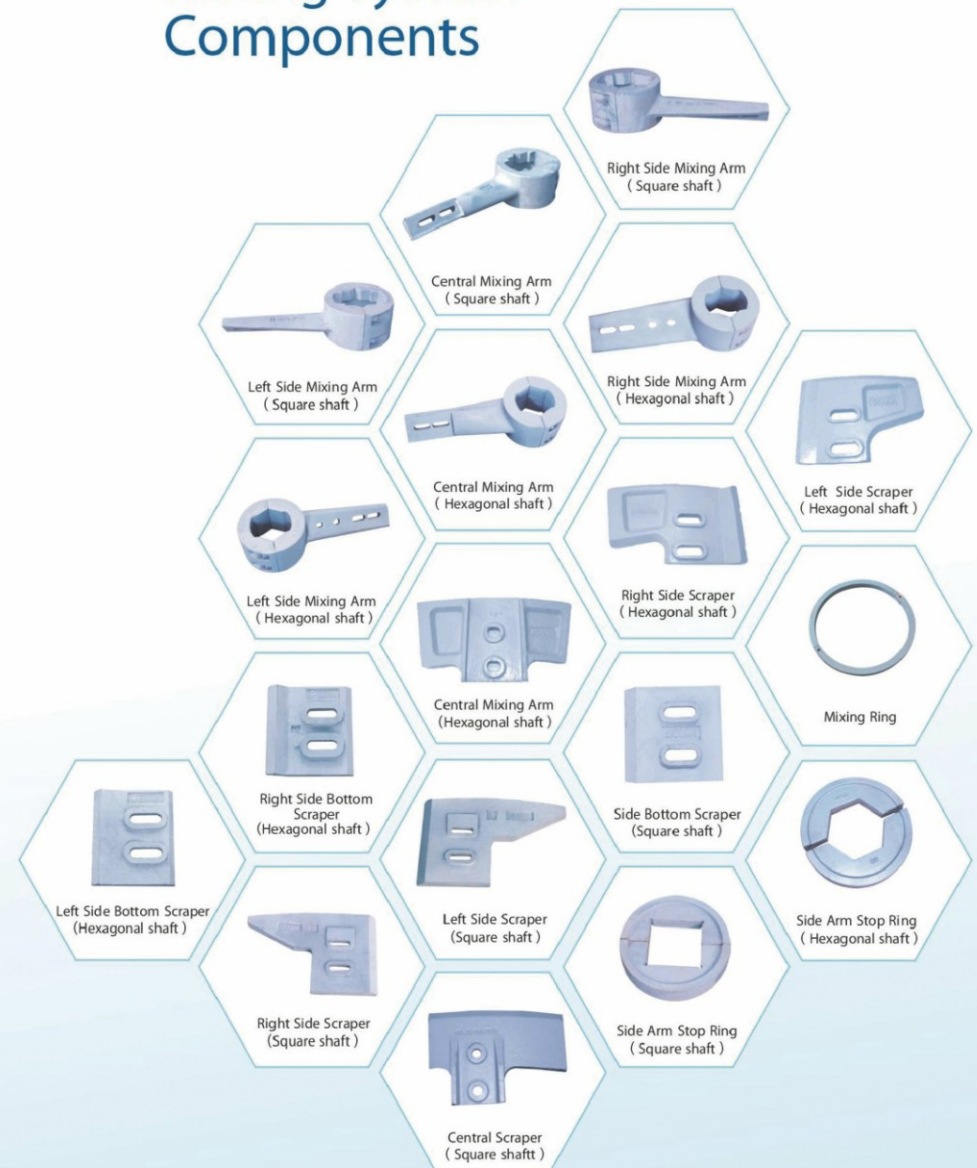
Lubricant passes through the filtering nozzle before entering the oil pump. It ensures clean lubricant, oil flow is open and shaft ends are lubricated effectively.



Wrong way to re-fill

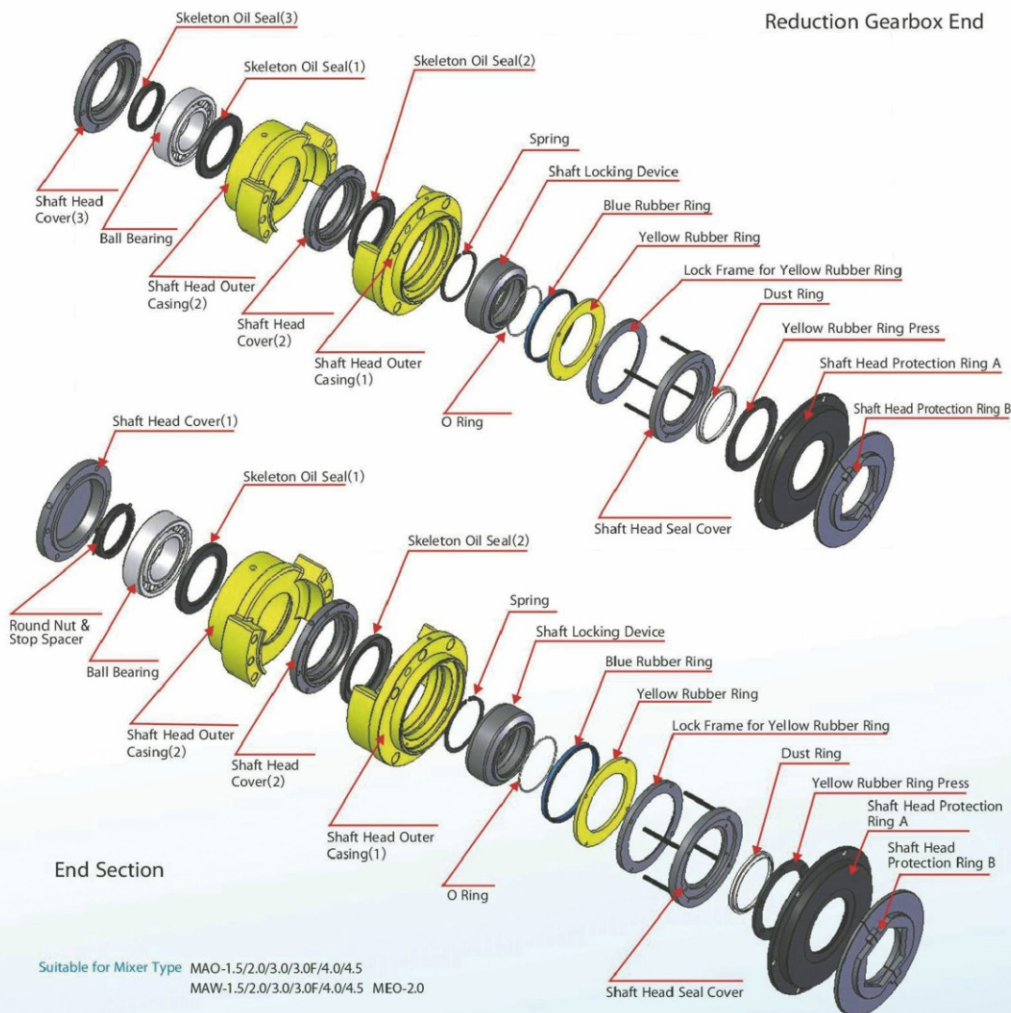
Lubricant is added directly to the oil pump, un-filtered. Dust contamination may occur and cause oil blockage and damages to pump core. Lubrication of shaft ends is affected.

Mixing System Components



Layout of Shaft End Sealing System

Reduction Gearbox End



Suitable for Mixer Type MAO-1.5/2.0/3.0/3.0F/4.0/4.5
MAW-1.5/2.0/3.0/3.0F/4.0/4.5 MEO-2.0

Lubricant Change Time Table

Stage of Use	Working Hours	Description
Run-in Period	1 st Run-in 200 hours	Replace lubricant
	2 nd Run-in 500 hours	Replace lubricant
Normal Production Period	Every 2,500 hours	Replace lubricant



After all these years, SICOMA finally come up with a lubricant suitable for gears in reduction gearboxes. The lubricant is designed to cope with SICOMA mixers, ideal for concrete mixing and the like environment. It's highly stable, high loading capability, strong against corrosion, anti oxidization and anti emulsification. Its proper use can extend the mixer life effectively and saves users running costs.

Grease Grade:
Working Temperature above 5°C — NLGI 2#
Working Temperature -10°C~5°C — NLGI 0#
Working Temperature below -10°C — NLGI 000#

Oil Change

- 1 · Put a suitable container under the oil drain plug;
- 2 · Remove the oil fill cap, air drain and oil drain plug to drain the lubricant; (it's easier to drain the lubricant when it's hot)
- 3 · Replace the seal ring of the oil drain plug after all the lubricant is drained and then put the plug back in place;
- 4 · Add fresh lubricant up to the marked level. Do not mix lubricant of different make and grade. Inspect and ensure that lubricant is of high emulsification proof and graded EP, SICOMA gearbox lubricant is recommended;
- 5 · Replace the seal ring of the oil fill cap and then put the cap back in place.

Warning

- 1 · Before operating on any reduction gearbox, the operator must first cut off the power supply to the reduction gearbox and ensure that the installation has stopped working. Precautions have to be taken to avoid resumption of power or un-expected operations. Besides, safety measures have to be addressed to.
- 2 · Lubricants, solvents and detergents may be toxic and harmful to human. Direct contact with skin may cause allergy; poisoning may occur with in-take.

Oil Consumption Rate of Mixers

Model	Part	Total Consumption each Mixer	Total Consumption each Mixer
MAO2250/1500	Oil Tank & Pipes	10 (l./unit)	2 (bottle)
MAO3000/2000	Oil Tank & Pipes	18 (l./unit)	4 (bottle)
MAO4500/3000	Oil Tank & Pipes	20 (l./unit)	4 (bottle)
MAO6000/4000	Oil Tank & Pipes	32 (l./unit)	7 (bottle)

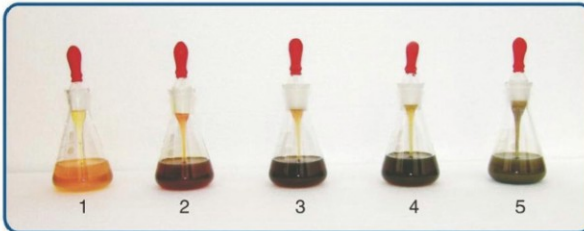
Reduction Gearbox Maintenance

Selection & Replacement of Gear Lubricant



There are a lot of fake gear lubricants of inferior quality available in the market. These lubricants are poor in quality, of low viscosity and forms very thin oil membrane which is unable to protect the gears. Next is prolonged use of gear lubricant without change, the gear lubricant would emulsify and reduces the viscosity; no oil membrane can then be formed (see illustrations shown below). All these will cause the gears inside the reduction gearbox to come into direct contact and resulted in wears to the gears. When the condition severed, the gears will break, pressing on the casing may lead to cracks and serious break-down of the mixer. Production will be affected. To ensure proper production in your concrete mixing plants and in order to protect your asset, please think 'big' and try cutting your loss. Adhere to the {Operating/Maintenance Manual} strictly, use recommended lubricants and change them timely.

Illustration of Lubricants used after time



- 1 - New
- 2 - Used for 200 hours
- 3 - Used for 600 hours
- 4 - Used for 800 hours
- 5 - Used for 1,000 hours

Damages to Gears with inferior lubricant



Image 1



Image 2

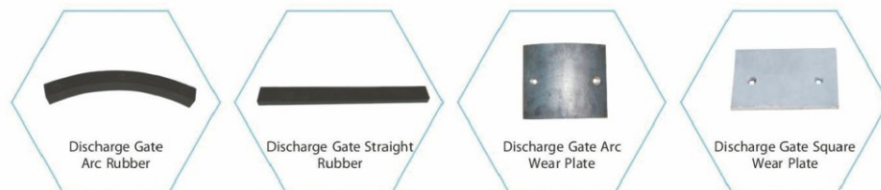


Image 3

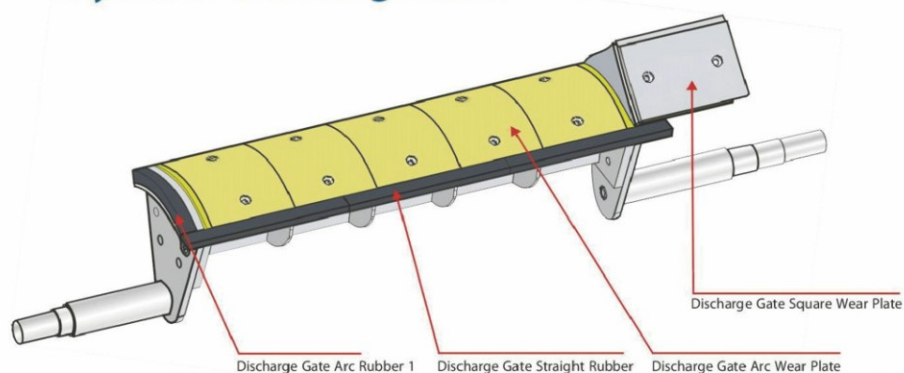
Shaft Head Sealing System Components



Discharge Gate Assembly



Layout of Discharge Gate



Item No.	Description	Code	MSO 1.0	MSO 1.25	MSO 1.5	MAO 1.5	MAO 2.0	MAO 3.0	MAO 4.0	MAO 4.5
1	Discharge Gate Square Wear Plate	SCLJ-230-466	4	4	4					
2	Discharge Gate Square Wear Plate	SCLJ-810-466					4	4	4	4
3	Discharge Gate Arc Rubber	SCLB-230-122	2	2	2					
4	Discharge Gate Arc Rubber	SCLB-600-122				2	2	2	2	2
5	Discharge Gate Straight Rubber	SCLB-900-123	7	7	8	8	8	10	12	13
6	Discharge Gate Arc Wear Plate	SCLJ-230-542	4	4	5					
7	Discharge Gate Arc Wear Plate	SCLJ-600-542				4	5	7	9	10

Batching Control System Weighing Indicator



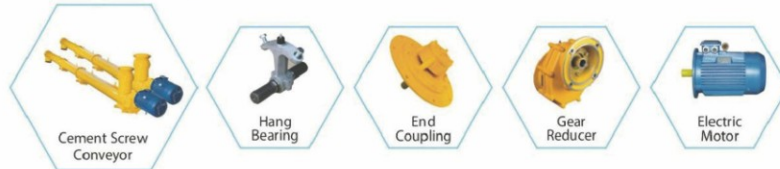
Load Cell



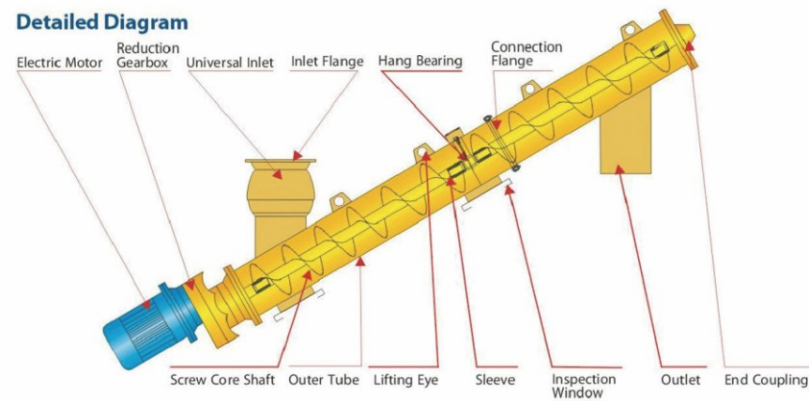
Micro-wave Moisture Sensors from Hydronix, U.K.



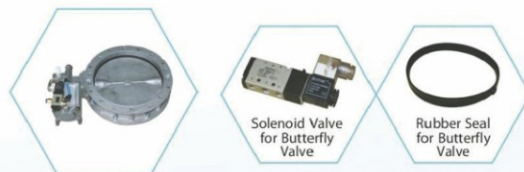
Cement Screw Conveyor



Detailed Diagram



Butterfly Valve



Dust Collector



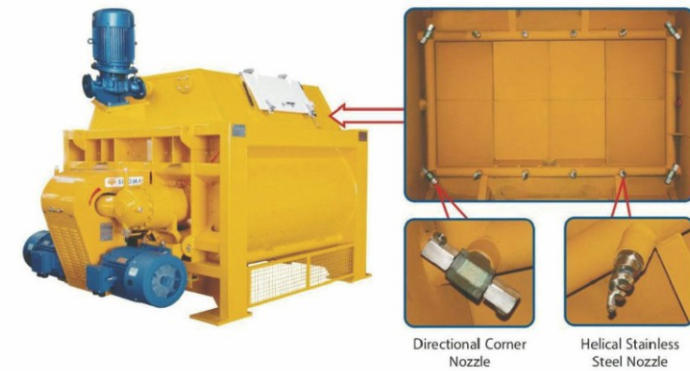
Butterfly Valve for Water



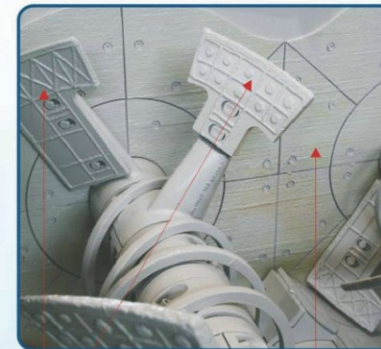
Others



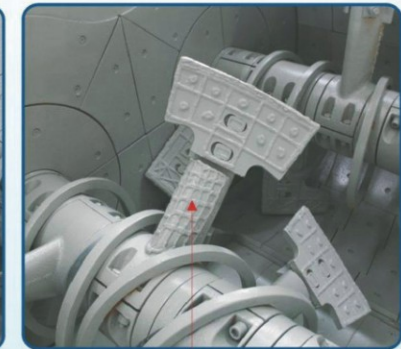
Newly Improved Components Pressurized Water Spraying System



■ High Wear-resistant ■ Strong against impact ■ Hard to break ■ Cost-effective



High Wear-resistant
Alloyed Blades



High Wear-resistant
Alloyed Wall Liners

High Wear-resistant
Alloyed Mixing Arms

