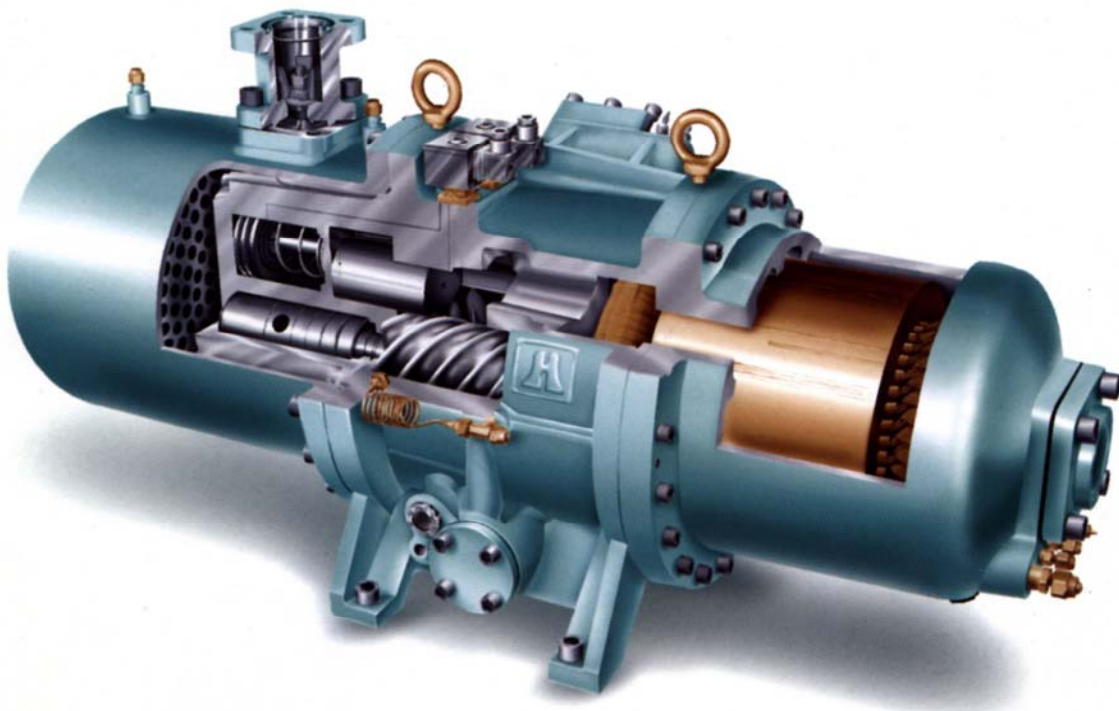


HANBELL SCREW COMPRESSORS

MAINTENANCE MANUAL



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INTRODUCTION

This HANBELL semi-hermetic twin-screw compressor maintenance manual is described regarding the maintenance procedures of HANBELL itself.

This handbook will serve as a guide or reference in order to do the maintenance or overhauling of a compressor.

HANBELL developed its screw compressors with high precision and accuracy with its own technology. Therefore, before starting the overhauling of compressor, we fully recommend that proper handling and preparation of components, spare parts, tools, clean and well-organized working conditions, and full study of this handbook are necessary.

Although proper maintenance is described in this handbook, the person with full knowledge and understanding of such work should perform maintenance of compressor. Otherwise, it should be an authorized technician from HANBELL or HANBELL appointed agent.

I. HOW TO REPLACE CAPACITY SOLENOID VALVE

NOTE: If the compressor is still connected in the chiller system, make sure to pump down first and release the pressure inside the compressor and shut down the system to prevent any accident to happen in the job site.

I-1. DISMANTLE SOLENOID VALVE

Step 1. Loosen first the nut of the solenoid valve using a wrench and remove the solenoid coil.



Step 2. Loosen all the screw of capacity solenoid valve and remove the solenoid valve.



Step 3. Clean the surface of the compressor casing using oilstone and clean the oil line hole using pressurize air.



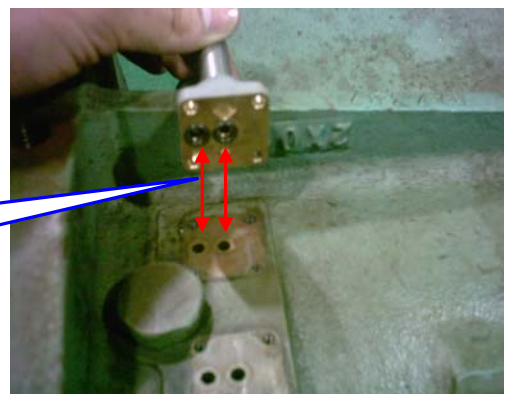
I-2. ASSEMBLY CAPACITY SOLENOID VALVE

Step 1. Put first the two O-rings to each capacity solenoid valve (make sure to use new O-rings), and be careful not to drop or deform the O-rings when installing it to prevent leakage.



Step 2. Install the capacity solenoid valve to compressor casing and make sure that the O-rings are in the same position with the compressor casing oil line hole.

O-ring and hole must be in the same position



Step 3. Install all capacity solenoid valves to compressor casing and put all screws and tighten it.



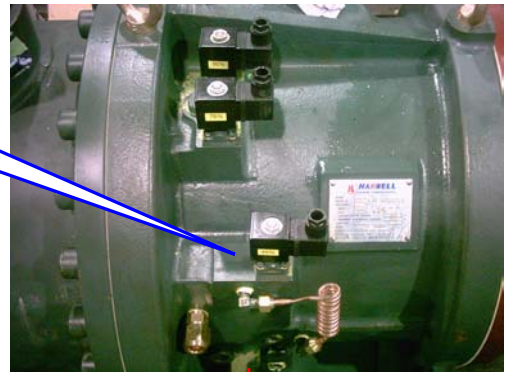
Step 4. Install the capacity solenoid coil on the capacity solenoid valve.



II. HOW TO CHANGE 4-STEP TO STEP-LESS CAPACITY CONTROL

NOTE: Make sure to release the pressure inside the compressor before doing the replacement of each compressor parts to prevent accident.

4-Step Capacity Control



Step-less Capacity Control



II-1. DISMANTLE CAPACITY SOLENOID VALVE

Step 1. Loosen the lock nut of the three solenoid valves using a wrench and remove the solenoid coil.



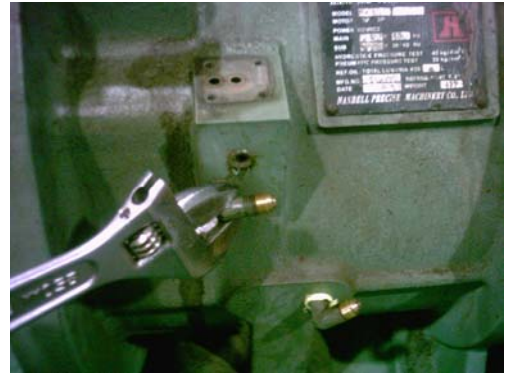
Step 2. Loosen all the screws of solenoid valve and take out the solenoid valve.



Step 3. Remove the capillary tube from the compressor casing.



Step 4. Loosen the 90 deg. elbow oil inlet connector of the compressor casing and remove it.



II-2. ASSEMBLY COVER PLATE

Step 1. Clean first the surface of the compressor casing using oilstone and wipe it with a clean cloth or rag. Also clean the oil line hole using pressurize air.



Step 2. Put the two O-ring in the cover plate.

O-ring



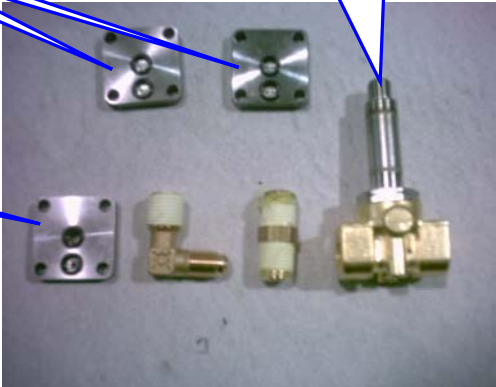
Step 3. Install the cover plate in the compressor casing and tighten all the screws.



Cover Plate

N.O. Solenoid Valve

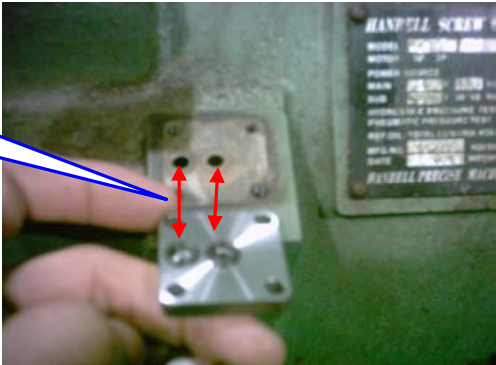
Orifice Plate



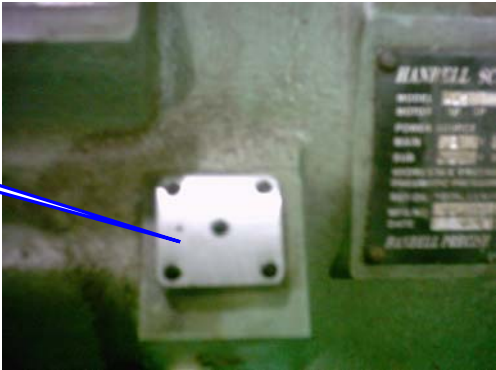
II-3. ASSEMBLY CAPACITY SOLENOID VALVE (N.C)

Step 1. Put the two O-rings in orifice plate and put it in the compressor casing.

O-rings and hole must be in same position



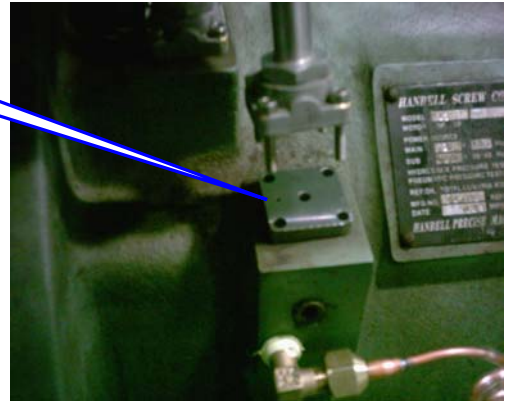
Orifice plate



Step 2. Put the two O-rings in N.C. capacity solenoid valve.



Orifice Plate



Step 3. Install the N.C. capacity solenoid valve and the orifice plate in the compressor casing.



Step 4. Put all the screws and tighten it using a wrench.



II-4. ASSEMBLY CAPACITY SOLENOID VALVE (N.O)

Step 1. Install first the oil inlet connector in the compressor casing using a wrench.



Step 2. Install the N.O. capacity solenoid valve in the oil inlet connector using a wrench. Make sure that the flow mark in the solenoid valve is correct (1 2). There is a check valve in this valve body.



Step 3. Install the 90 deg. elbow connector in the capacity solenoid valve and in the compressor casing using a wrench.



Step 4. Install the capillary tube in the two 90 deg. elbow connector.



Step 5. Install the capacity solenoid coil in the capacity solenoid valve and tighten it.



III. HOW TO CHANGE STEP-LESS TO 4-STEP CAPACITY CONTROL

Step-less
Capacity Control



4-Steps Capacity
Control



III-1. DISMANTLE CAPACITY SOLENOID VALVE (N.C)

Step 1. Dismantle the solenoid coil of the capacity solenoid valve.



Step 2. Loosen all the screw of capacity cover plate and remove it.



Step 3. Loosen all the screw of capacity solenoid valve (N.C) and remove it.



III-2. DISMANTLE CAPACITY SOLENOID VALVE (N.O)

Step 1. Loosen the capillary tube from 90 deg. elbow connector using a wrench.



Step 2. Loosen the 90 deg. elbow connector from the capacity solenoid valve.



Step 3. Loosen the N.O capacity solenoid valve from oil inlet connector.



Step 4. Loosen the oil inlet connector from compressor casing.



III-3. ASSEMBLY CAPILLARY

Step 1. Install first the 90 deg. elbow connector (with tape sealant) in the compressor casing using a wrench.



Step 2. Install the capillary on the 90 deg. elbow connector.



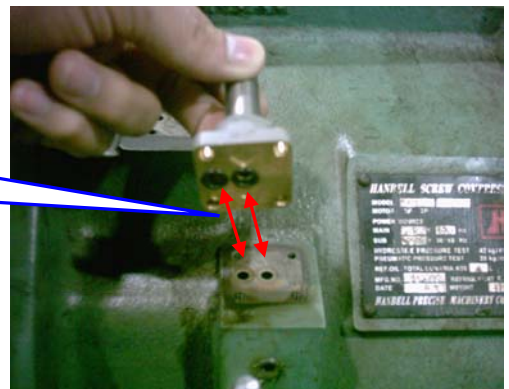
III-4. ASSEMBLY 4-STEPS CAPACITY SOLENOID VALVE

Step 1. Clean first the surface of the compressor casing using oilstone and clean the oil hole using pressurized air.



Step 2. Put O-ring in the capacity solenoid valve.

Make sure O-rings and the two holes must be in same position



Step 3. Install the capacity solenoid valve in the compressor casing and put all screw and tighten it.



Step 4. Install the solenoid coil on capacity solenoid valve and tighten it.



IV. HOW TO REPLACE OIL FILTER, OIL LEVEL SWITCH

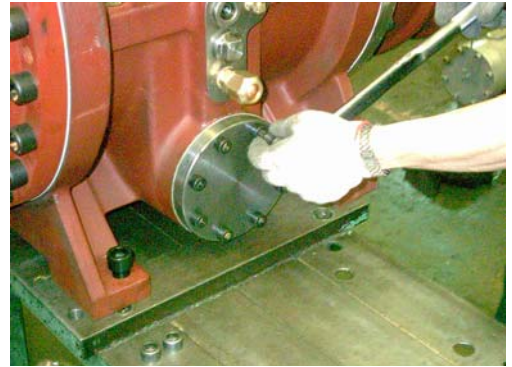
NOTE: If the compressor is still in the chiller system, be sure to pump down first the system then close the stop valves and release the high pressure inside the compressor before removing or replacing any part for servicing, to prevent any accident to happen in the jobsite.

IV-1. DISMANTLE OIL FILTER FLANGE

Step 1. Recover first the lubrication oil of the compressor by loosening the angle valve of the service flange or oil filter flange and drain the lubrication oil. Another way is to loosen all the bolts of oil filter flange and take out the flange to drain the oil.



Step 2. After draining all the lubrication oil, loosen all the screw bolts of the oil filter flange and pull out the oil filter flange.



IV-2. CHANGE OIL FILTER

Step 1. Put the oil filter flange in the clamp to fix it.



Step 2. Loosen the oil filter nut using a wrench.

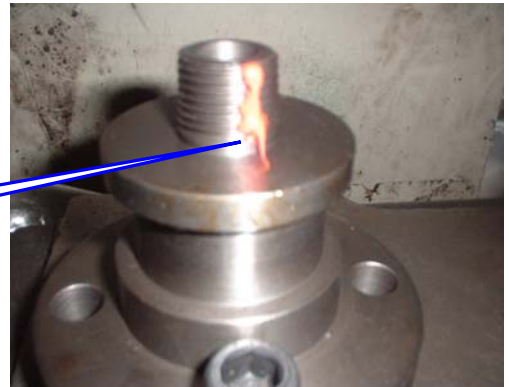


Step 3. Take out the oil filter and clean the flange using air or wipe it with a piece of cloth or rag.



Step 4. Put loctite sealant in the end side screw of oil filter flange.

Loctite Sealant



Step 5. Install the new oil filter to oil filter flange and tighten it using a wrench with a torque of **850 kg-cm**.

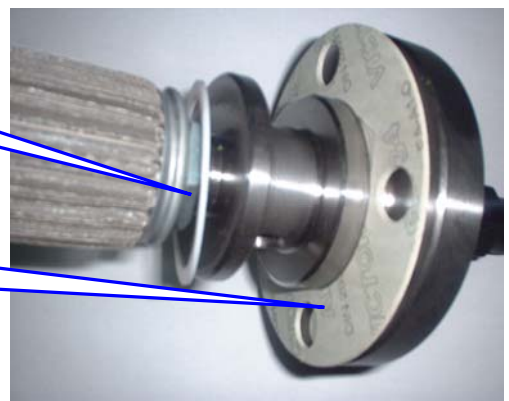


IV-3. ASSEMBLY OIL FILTER TO CASING

Step 1. Put oil filters' inner (Teflon) and outer gasket to oil filter flange.

Teflon inner gasket

Non-asbestos outer gasket



Step 2. Install oil filter assembly to compressor casing.



Step 3. Install all hexagonal screw bolts and tighten it using a hexagonal wrench or torque wrench with a torque value of **1000 kg-cm**.



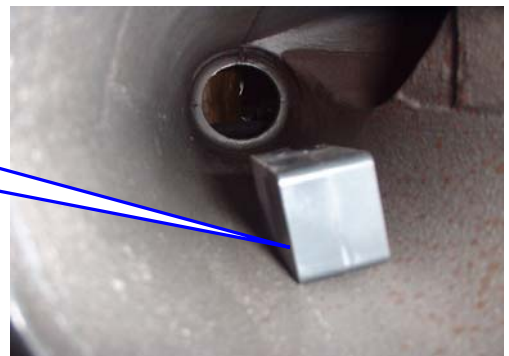
IV-4. DISMANTLE OIL LEVEL SWITCH COVER

Step 1. Use a torque wrench or hexagonal wrench to loosen the bolts of oil switch cover.



Step 2. Take out the magnet from the crankcase and clean it using air or piece of cloth.

Take this magnet out and clean



Step 3. Check the oil switch using a tester by connecting the two lines of the oil switch to tester terminal line.

The switch ON when the oil level is high



The switch OFF when the oil level is low



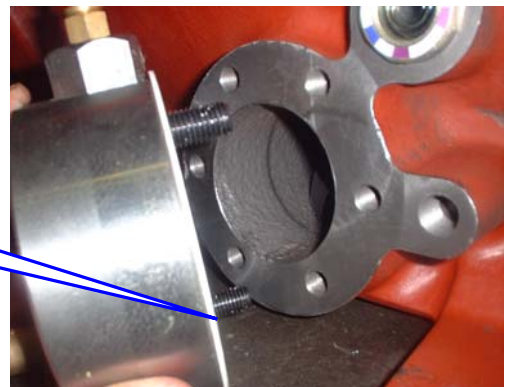
IV-5. ASSEMBLY OIL LEVEL SWITCH COVER TO CASING

Step 1. Put the magnet back in the crankcase, as close as possible to oil filter.



Step 2. Put the new gasket in oil switch cover and install it to compressor casing and put all screw bolts and tighten it using a hexagonal wrench or torque wrench with a torque **1000 kg-cm.**

Gasket



V. HOW TO REPLACE SUCTION FILTER

NOTE: If the compressor is still connected in the chiller system, make sure to pump down the system and release the pressure inside the compressor before replacing any parts of the compressor, to prevent any accident to happen in the jobsite.

V-1. DISMANTLE SUCTION FLANGE

Step 1. Loosen all the hexagonal screw bolts of the suction flange using a wrench.

NOTE: If the stop valve is connected directly in the suction flange, loosen first the entire screw bolt and remove the stop valve.



Step 2. Disconnect the suction piping from the compressor.



Step 3. Remove the gaskets and the suction filter from the compressor.



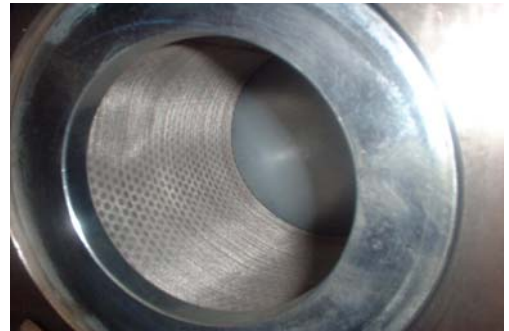
V-2. ASSEMBLY SUCTION FILTER

Step 1. Put suction filter inner gasket in the motor casing suction flange before installing the suction filter.

Inner Gasket



Step 2. Install the suction filter in the compressor casing.



Step 3. Put suction filter outer gasket in the motor casing suction flange.

Outer Gasket



Step 4. Install the suction flange with bolts and tighten it using a hexagonal wrench or torque wrench. Refer to index, table 3 of this handbook for tightening torque settings for compressor accessories.



VI. HOW TO REPLACE CHECK VALVE, OIL SEPARATOR

VI-1. DISMANTLE CHECK VALVE

Step 1. Disconnect first the discharge piping of the chiller system from the check valve.

NOTE: If the service/stop valve is connected directly to compressor discharge piping, loosen first the entire screw bolts and remove the stop valve.

Remove the
service/stop valve

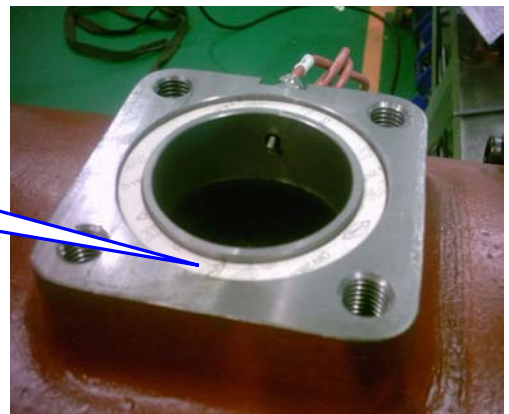


Step 2. Loosen all the bolts of check valve and after loosening all the bolts, remove the check valve from the oil separator.



Step 4. Remove the check valve from oil separator and remove the gasket.

Change this gasket
with new



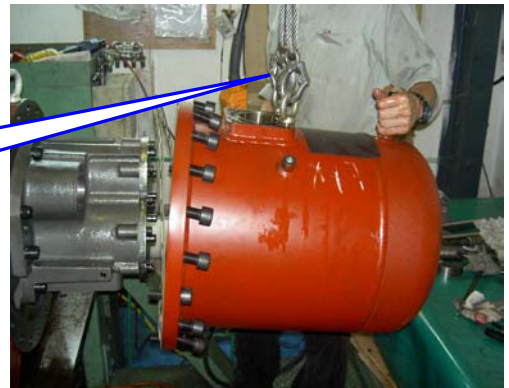
VI-2. DISMANTLE OIL SEPARATOR

Step 1. Install eyebolt in oil separator and lift it using an overhead crane and loosen all the bolts of oil separator.



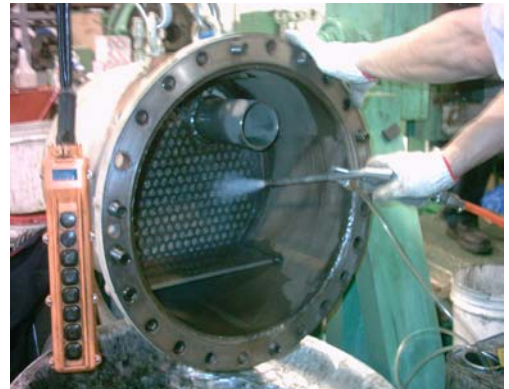
Step 2. Pull out the oil separator from compressor casing.

Eyebolt and steel rope
connected to overhead crane

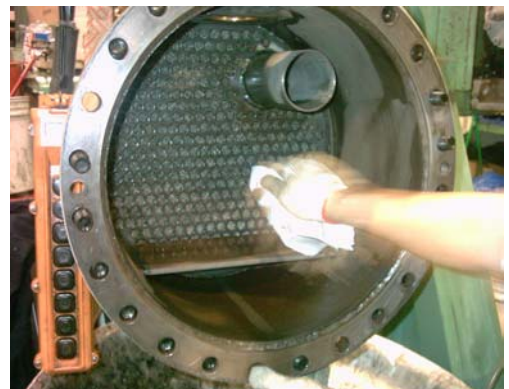


VI-3. CLEAN OIL SEPARATOR

Step 1. Lift the oil separator using overhead crane and use pressurize oil to clean the oil separator mesh screen, or dismantle the oil separator mesh screen to clean it (for RC series new design).



Step 2. Wipe the inner portion of the oil separator with a piece of cloth or rag.



Step 3. Use an oilstone to clean the surface of the oil separator and wipe it with a piece of cloth or rag.



VI-4. ASSEMBLY OIL SEPARATOR TO COMPRESSOR

Step 1. Put new Teflon gasket in the bearing seat discharge side.

Teflon gasket



Step 2. Put oil separator gasket in the compressor casing. Use screw bar on both side of the casing to secure the gasket, and it will also hold the oil separator when installing.

New gasket



Step 3. Install the oil separator in the compressor and put all screw bolts and tighten it using a wrench or torque wrench.

For M20 screw bolt, 3800 kg-cm of torque.

For M16 screw bolt, 2000 kg-cm of torque.

Refer also to index of this handbook for other torque settings for screw bolts.



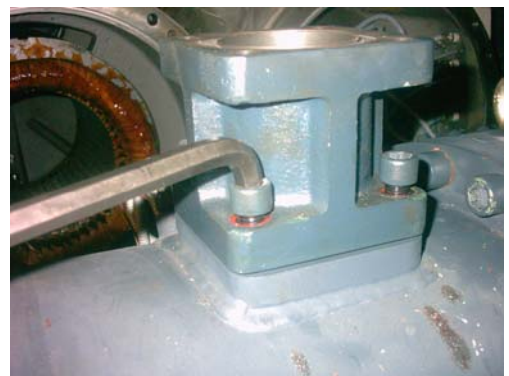
VI-5. ASSEMBLY CHECK VALVE

Step 1. Put new gasket on oil separator discharge side.

New gasket



Step 2. Install check valve on oil separator discharge port and put all the screw bolts and tighten it using a wrench with a torque value of **1600 kg-cm**.



Step 3. Put new gasket in the check valve.



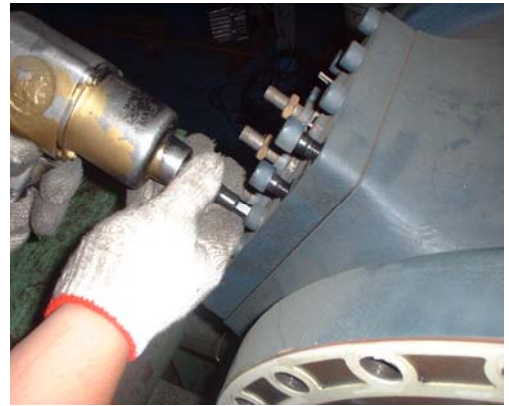
Step 4. Install the discharge piping or stop valve on the check valve and put all screw bolts and tighten it using a wrench with a torque value of **1600 kg-cm**.



VII. HOW TO REPLACE MOTOR ASSEMBLY, MOTOR STATOR

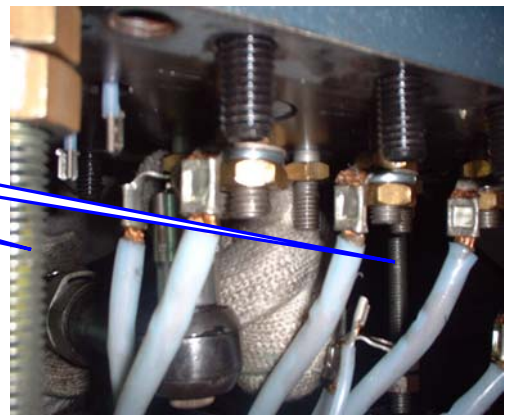
VII-1. DISMANTLE ELECTRICAL CABLE PLATE

Step 1. Loosen all the screw bolts of electrical cable plate using a wrench or air drive spanner.



Step 2. Use screw gauge to hold the cover plate and loosen the copper nut from motor cable plate terminal.

Screw gauges



Step 3. Take out the motor cable plate and the gasket.

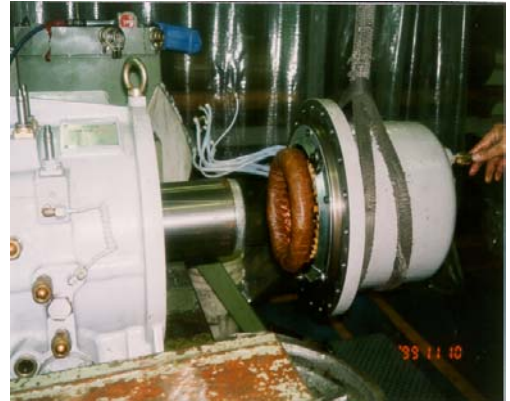


VII-2. DISMANTLE MOTOR ASSEMBLY, MOTOR ROTOR

Step 1. Use a rope to hold the motor assembly and hang it using an overhead crane, and then loosen all the screw bolts using torque wrench or hexagonal wrench.



Step 2. Remove all screw bolts and pull out the motor assembly slowly.



Step 3. Loosen the bolt of motor rotor using a wrench or air drive spanner.



Step 4. Pull out the motor rotor and remove the rotor key.

NOTE: Use a rope for bigger model to take out the motor rotor.



VII-3. DISMANTLE MOTOR STATOR

These procedures are for small models only (RC12~RC18)

Step 1. Loosen first all the bolts of motor stator guide vane and remove the guide vane.



Step 2. Install the hydraulic puller in the motor casing.



Step 3. Operate the controller of the hydraulic puller to take out the motor stator slowly. (This used pressure to take out the motor stator from the motor casing.)



NOTE: For Bigger Models (RC19~RC21), Follow the procedures given below: (This is the slide-in to take out the motor stator)

Step 1. Install first the motor stator holder and hang it using an overhead crane.



Step 2. Loosen the motor stator fix pin using a wrench.



Step 3. Remove the motor stator fix pin and the O-ring.



Step 4. Lift the motor stator using an overhead crane.
(This is slide-in to take out the motor stator from the motor casing.)



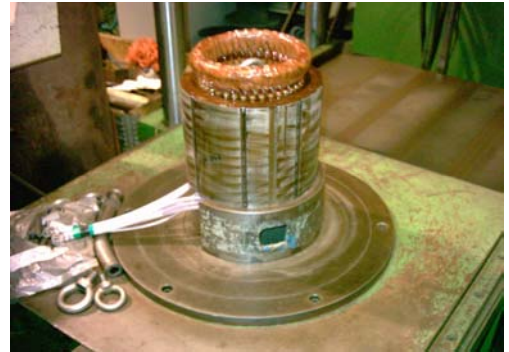
VII-4. ASSEMBLY MOTOR STATOR

NOTE: These procedures are for RC12~RC18 models only. (This is the press-in to insert the motor stator)

Step 1. Put first the motor stator to motor stator fix jig.



Step 2. Lift the motor stator using an overhead crane and put it in the hydraulic press machine.



Step 3. Insert the motor stator key and hammer it.

Motor stator key



Step 4. Lift the motor casing and put it on top of the motor stator. Make sure the slot in the motor casing and the location of the key is in the same position. This used pressure to insert the motor stator to motor casing.



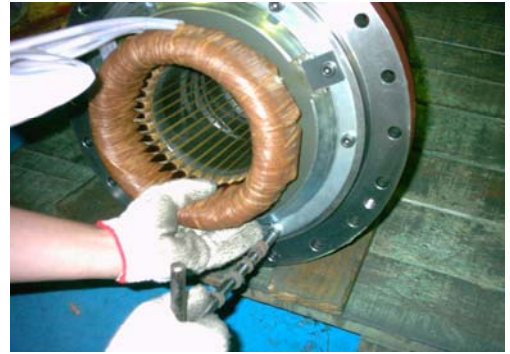
Step 5. Operate the hydraulic press machine to insert the motor stator to motor casing. After the motor stator is fitted in the motor casing, press the upward button of the press machine.



Step 6. Lift the motor assembly using a crane and put it in the pallet.



Step 7. Install the motor stator guide vane to motor assembly. Make sure to put loctite first in the screw hole before installing the guide vane.



NOTE: These procedures are for RC19~RC21 models.

Step 1. Put first the motor stator to motor stator fix jig and lift it using overhead crane.



Step 2. Put slowly the motor stator in the motor casing.

This two hole must be in the same position



Step 3. Check if the two holes are in the same position.

Check this hole



Step 4. Install the motor stator fix pin to motor casing.

Make sure to put new O-ring



Step 5. Tighten the motor stator fix pin using a wrench.



VII-5 ASSEMBLY MOTOR ROTOR

Step 1. Put the motor rotor key on male screw rotor.



Step 2. Install the motor rotor in the male screw rotor shaft.

NOTE: Use a rope for bigger models.

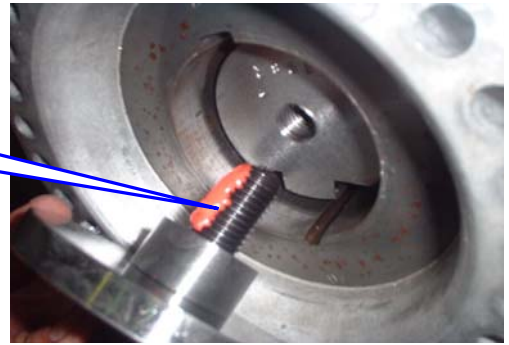


The number is close to suction bearing position



Step 3. Put loctite sealant on M16 screw bolt with washer and install it.

Loctite sealant

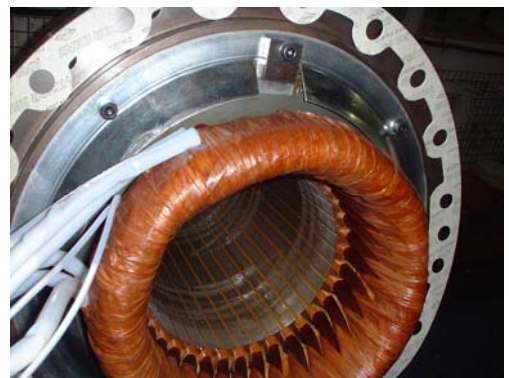


Step 4. Check the motor rotors' alignment using a dial gauge. Rotate the rotor in counterclockwise direction; the reading should not exceed **0.15 mm**.



VII-6. ASSEMBLY MOTOR TO COMPRESSOR

Step 1. Lift the motor assembly using an overhead crane and put new gasket on motor assembly.



Step 2. Install motor assembly in the compressor.

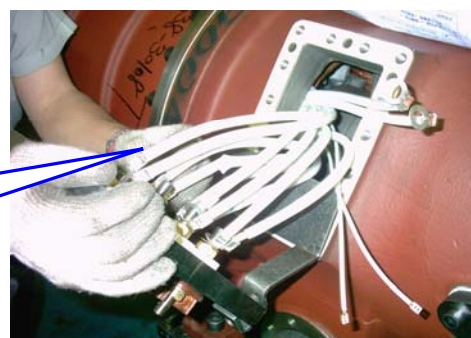


Step 3. Pull out the motor cable terminal wire from the compressor casing terminal housing and put the new motor cable gasket in the compressor casing.

New gasket



There are symbol marked U,V,W,Z,X,Y in the terminal



Step 4. Install all hexagonal screw bolts in the motor assembly and tighten it using a torque wrench or hexagonal wrench.

Refer to index of this manual for tightening torque settings for screw bolts.



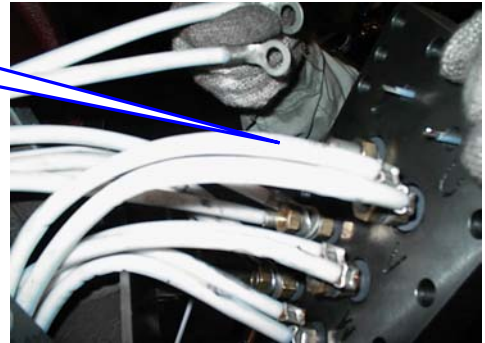
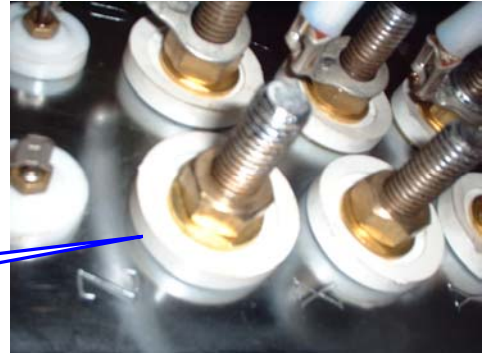
VII-7. ASSEMBLY MOTOR CABLE PLATE

Step 1. Install first the screw gauges in the compressor casing then put the motor cable plate.



Step 2. Connect the motor cable terminals to cover plate terminal bolts. Motor cable marks should correspond to cover plate terminal bolts. Install the screw nut with one washer each terminal and tighten all the screw nut using a wrench or spanner and connect also the temperature sensor terminal.

Terminals: U-U, V-V, W-W, Z-Z, X-X, and Y-Y the same mark in cable plate terminals and motor cable wires.



Step 3. Install all hexagonal screw bolts and tighten it using a torque wrench or hexagonal wrench with a torque value of 1000 kg-cm.



Step 4. Test the motor insulation and resistance of each terminal.

NOTE: Refer to Index, table 2 for insulation test standard.



VIII. HOW TO REPLACE PISTON, PISTON ROD, AND SLIDE VALVE

VIII-1. DISMANTLE OIL SEPARATOR

Step 1. Lift first the compressor and put it in the adjustable table and fix the two opposite base using screw bolt.

Note: In case there is no adjustable table in the job site, use a table that is capable of carrying the compressor.



Step 2. Dismantle the check valve, use a wrench to loosen the bolts and remove the check valve.



Step 3. Install two eyebolts in the oil separator and hang it using a crane, then loosen all the bolts of the oil separator.

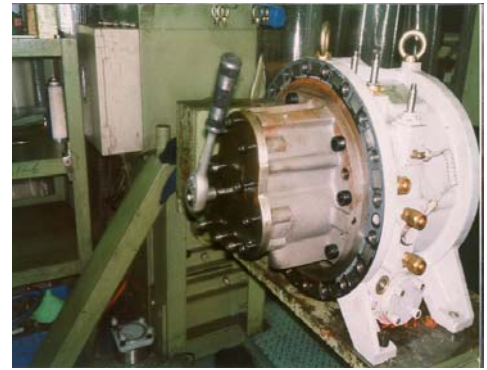


Step 4. Take out the oil separator from the compressor.

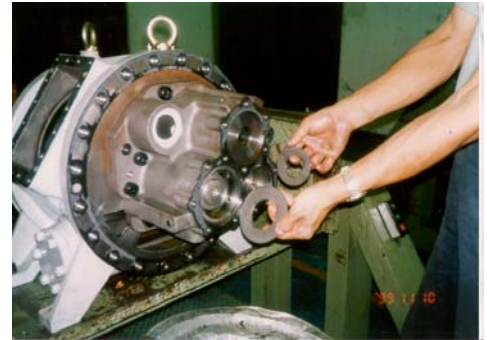


VIII-2. DISMANTLE PISTON, PISTON ROD

Step 1. Loosen all the screw bolts of discharge cover plate then remove the cover plate.



Step 2. Take out the disc spring and discharge bearing fixed ring.



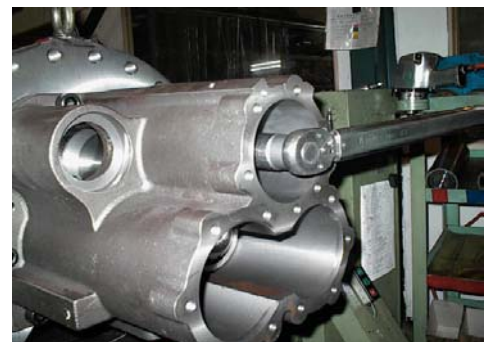
Step 3. Loosen the screw bolt of the piston and remove it.



Step 4. Pull out the piston, piston spring, and copper washer.



Step 5. Use a torque wrench to take out the piston rod.



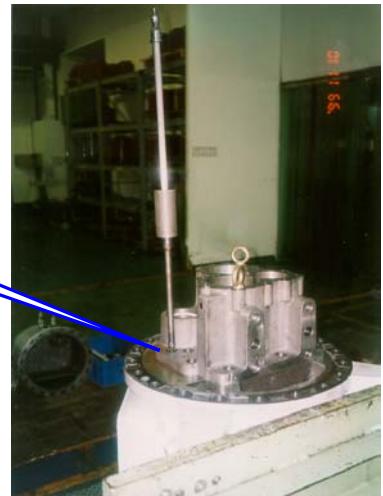
VIII-3. DISMANTLE BEARING SEAT, SLIDE VALVE

Step 1. Loosen the bolts of the bearing seat using a wrench.



Step 2. Remove the 2 two guide pin from the bearing seat.

Guide pin



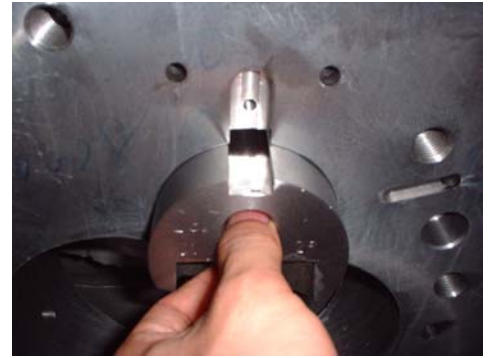
Step 3. Install two eyebolt in the bearing seat and lift the bearing seat slowly using an overhead crane.



Step 4. Loosen the bolt of slide valve key using hexagonal wrench and take out the key.



Step 5. Take out the slide valve.

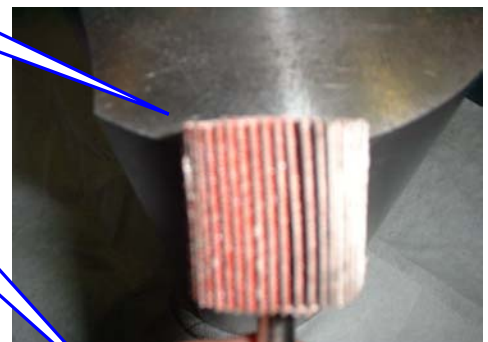


VIII-4. ASSEMBLY SLIDE VALVE

Step 1. Use a file or grinding wheel to slightly clean the sharp edges of the slide valve.



Slightly grind the surface to eliminate the sharp edges



Step 2. Clean the oil circuits of the compressor casing using pressurize air.

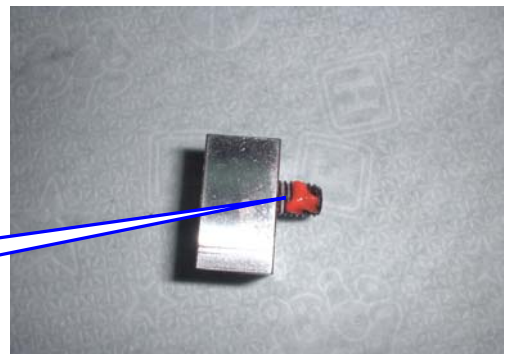


Step 3. Install the slide valve in the compressor casing. Make sure that the slide valve can be move smoothly. Refer to Index, table 6 for the Clearance.



Step 4. Put loctite sealant on the bolt of the slide valve key.

Loctite sealant



Step 5. Install the slide valve key and tighten using a hexagonal wrench. Refer to index of this manual for screw bolts tightening torque settings.



Step 6. Check again the slide valve if it can be moved smoothly.



VIII-5. ASSEMBLY BEARING SEAT

Step 1. Put loctite sealant in the surface of the compressor casing. Be careful not to drop any amount of sealant inside the chamber.

Loctite sealant

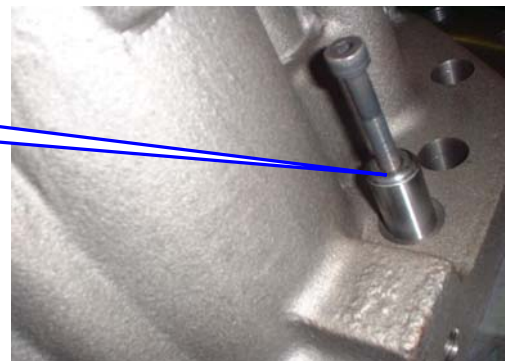


Step 2. Lift the bearing seat and install it carefully in the compressor casing.



Step 3. Fix the guide pin on the two opposite sides of the bearing seat by hammering it.

Guide pin



Step 4. Install all hexagonal screw bolts and tighten it using a torque wrench or hexagonal wrench.
Refer to index of this manual for screw bolts tightening torque settings.



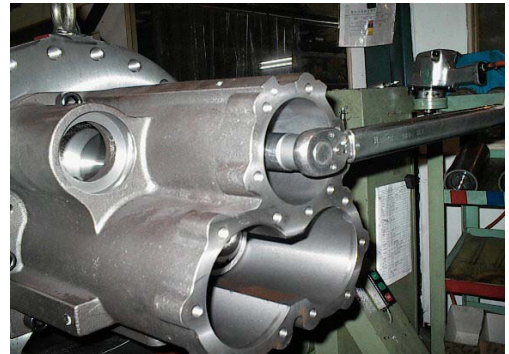
VIII-6. ASSEMBLY PISTON ROD, PISTON

Step 1. Put loctite sealant on piston rod's screw and install it in the slide valve using a torque wrench with a torque of **1000 kg-cm**. Check again the slide valve by moving the piston rod forward and backward. It should be move smoothly.

Loctite sealant

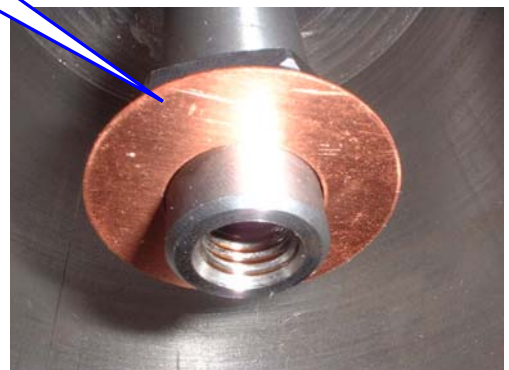
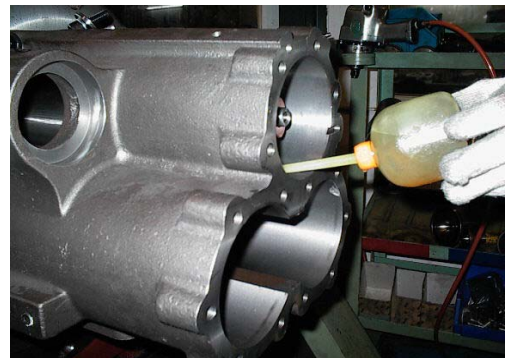


Push and pull the piston rod if the slide valve is moving smoothly.



Step 2. Put some lubrication oil in the piston cylinder and install the copper washer.

Copper washer

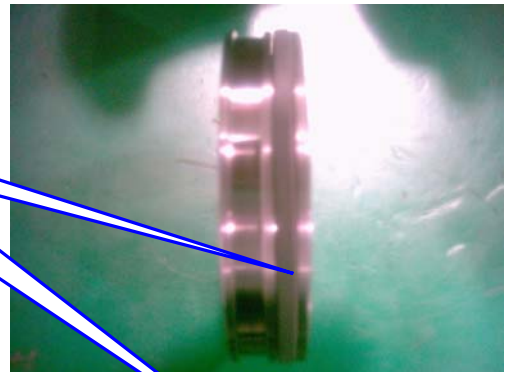


Step 3. Install first the piston O-ring, piston ring, and piston guide ring in the piston.

Piston O-ring



Piston ring



Piston guide ring

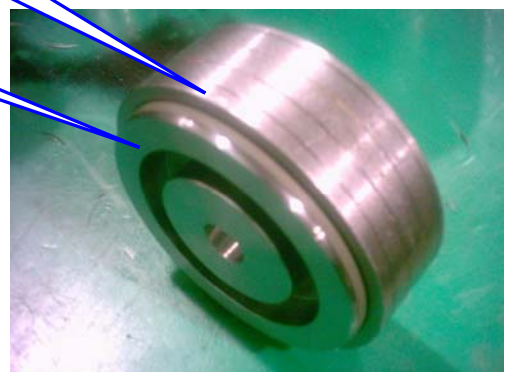


Step 4. Fix the piston to piston gauge.

Piston gauge

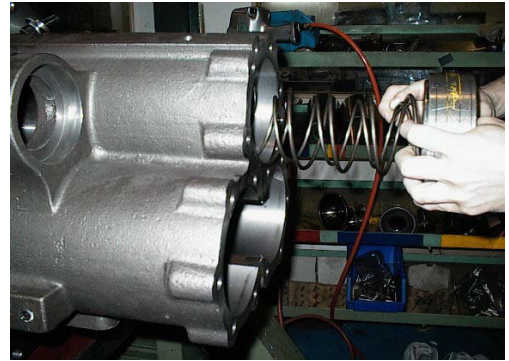


Piston



Step 5. Install the piston with spring in the piston rod.
Be careful not to drop the copper washer in the cylinder.

Guide ring



Step 6. Install the bolt with washer and check the piston by pushing it to the end and it should be back to at least 75% of its original position.



VIII-7. ASSEMBLY DISCHARGE COVER PLATE

Step 1. Put some lubrication oil in the discharge bearing.



Step 2. Install the discharge bearing fixed ring for male and female rotors.



Step 3. Install the disc spring for male and female rotors.



Step 4. Install the discharge cover plate with new gasket.

Gasket



Step 5. Put all hexagonal bolts and tighten it using a hexagonal wrench or torque wrench with a **torque of 1000 kg-cm.**

Refer to index of this manual for other screw bolts torque settings.



IX. HOW TO REPLACE MALE AND FEMALE ROTORS, BEARINGS

NOTE: Follow first the dismantling procedures given in item VII (VII-1~VII-2) and item VIII (VIII-1~VIII-3).

IX-1. DISMANTLE BEARING SLOT NUT

Step 1. Install first the male rotor fixed gauge in the male rotor suction side.

Male rotor assembly
fixed gauge



Step 2. Loosen the bearing slot nut using slot nut tightening gauge for male and female rotors.

Slot nut tightening gauge



Step 3. Remove the male rotor fixed gauge and lift the bearing seat slowly using an overhead crane.

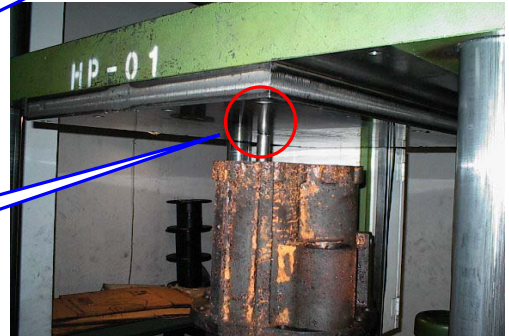


IX-2. DISMANTLE MALE AND FEMALE ROTORS

Step 1. Put a cylinder in the hydraulic press machine and put inside the cylinder the bearing seat to take out the male and female rotor.



Cylinder



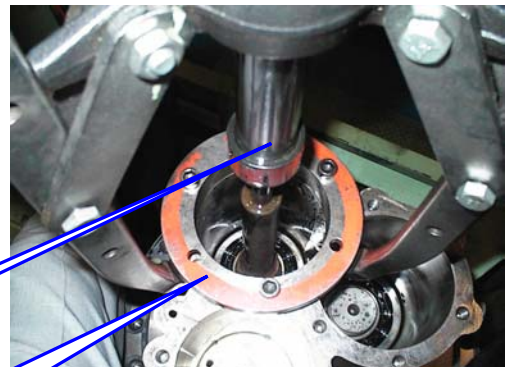
Steel bar, to push down the rotor gradually



NOTE: ANOTHER WAY TO TAKE OUT THE MALE AND FEMALE ROTOR

Step 2. Use the “ Circle tool for loosening the bearing” (refer to index of this manual for the list of this tools) and use a puller. First, install the circle tool for loosening the bearings on the male or female bearing housing. Install a steel bar on top of the rotor shaft and install the puller. The steel bar will push down the rotor shaft gradually when tightening the puller.

Puller



Circle tool for loosening bearings



IX-3. DISMANTLE DISCHARGE AND SUCTION BEARINGS

Step 1. Remove first the discharge bearings from the bearing seat by hammering.



Step 2. Remove the inner ring of male and female rotor. This can be done by heating the inner ring with the used of acetylene or by the use of grinder to cut the inner ring (be careful not to cut the screw rotor). After cutting the bearing inner ring, use a chisel and hammer it to take out the inner ring.



Grinding wheel



Step 3. Loosen the bearing fix ring of the male suction bearing and take out the bearings by hammering.



Step 4. Loosen the bearing fix bolt of the female suction bearing and take out the bearings by hammering.



IX-4. ASSEMBLY MALE AND FEMALE ROTORS, DISCHARGE BEARINGS

Step 1. Prepare and measure first the new male and female rotors neck and the bearing seat male and female bearings hole.

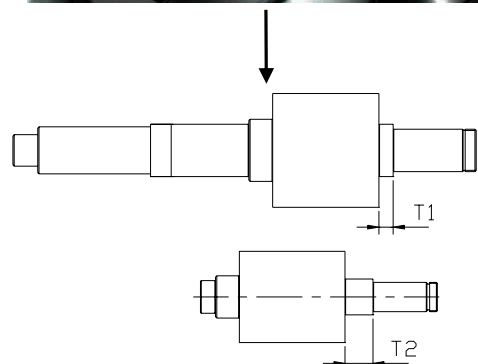
NOTE: Calculation on how to get a α balance piston and inner/outer spacer ring.

EQUATION:

$$\begin{aligned} D1-D2 &= C2-T2+0.12\text{mm} \\ D\alpha \text{ balance} &= C1-T1+0.12\text{mm} \\ T2+D1 &= C2+D2+0.12\text{mm} \end{aligned}$$

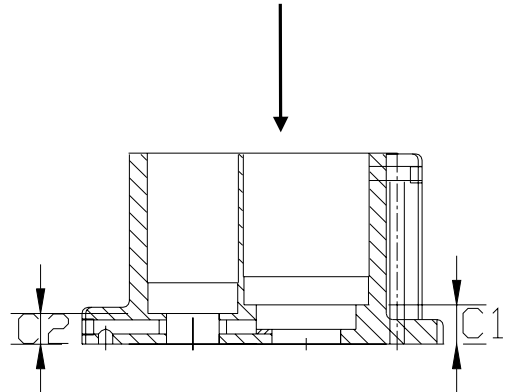
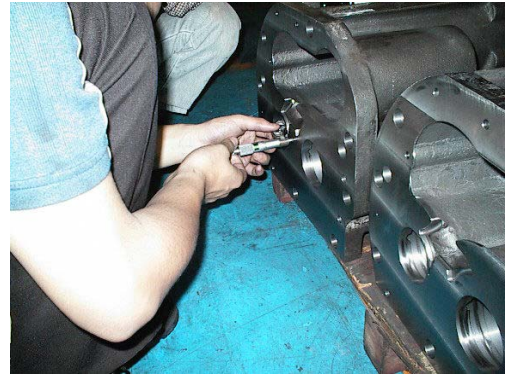
FOR MALE and FEMALE ROTORS

T1 thickness of male rotor neck
T2 thickness of female rotor neck



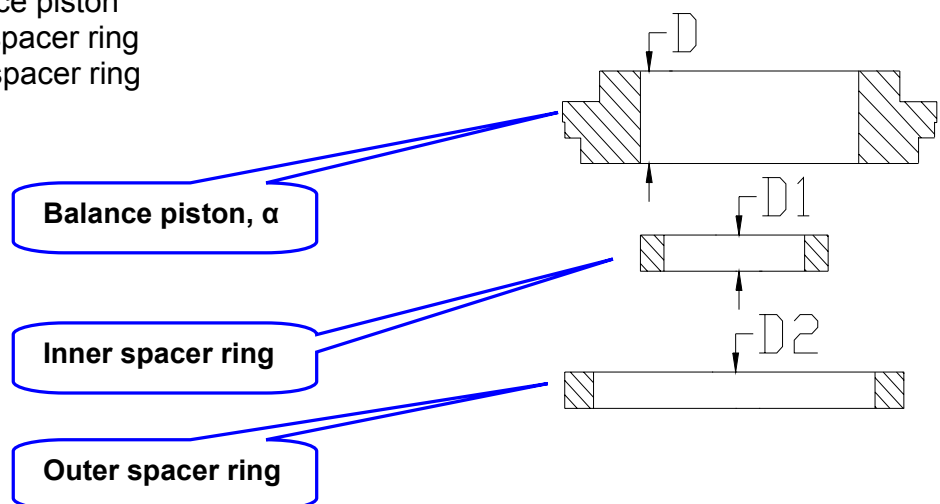
FOR BEARING SEAT

- C1** thickness of bearing seat male bearing hole
- C2** thickness of bearing seat female bearing hole

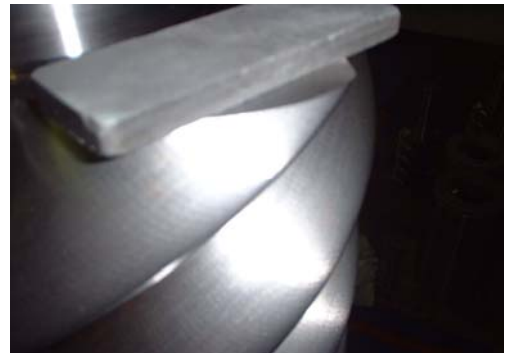


FOR SPACER RING and α BALANCE PISTON

- D** thickness of α balance piston
- D1** thickness of inner spacer ring
- D2** thickness of outer spacer ring



Step 2. Clean the male and female rotors using oilstone and grinding wheel. Do this on both the suction and discharge side of the male and female rotors.



Step 3. Install first the male rotor in the compressor casing, and then the female rotor.



Step 4. Heat the bearing's inner ring for male and female rotor, about **80 deg. C**.

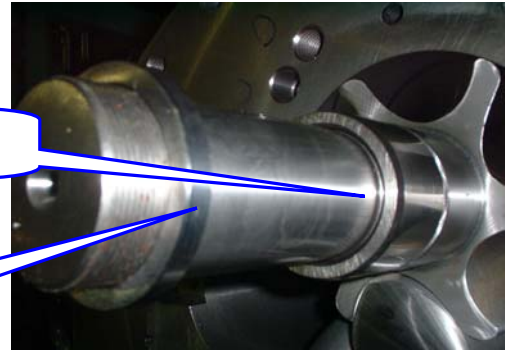
Heater Plate



Step 5. Insert first the bearing's inner ring and inner spacer ring in the female rotor (it must be at the bottom).

Radial bearing inner ring

Inner spacer ring



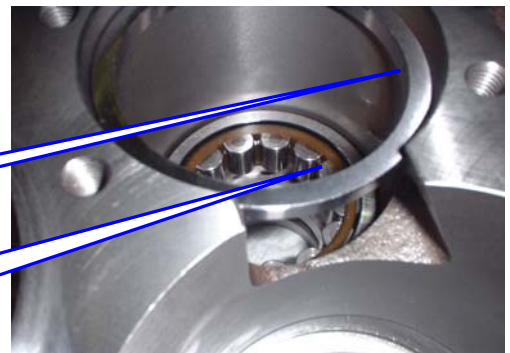
Step 6. Clean the bearing seat using oilstone and grinding wheel to remove the sharp edges.



Step 7. Put first the bearing's outer ring and then the outer spacer ring in the bearing seat female hole and hammer it.

Outer spacer ring

Radial bearing outer ring



Step 8. Lift the bearing seat using an overhead crane and put it in the compressor casing.

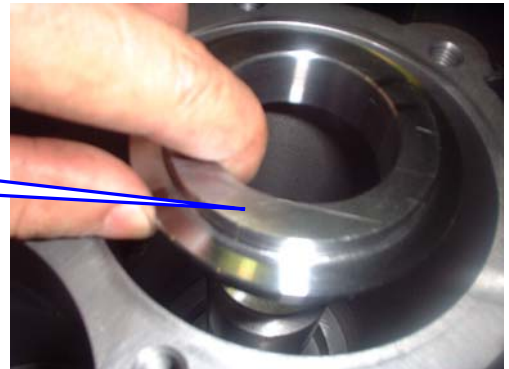


Step 9. Install two guide pin and hammer it.



Step 10. Put the α balance piston on the male rotor.

This face upside position



This face at the bottom



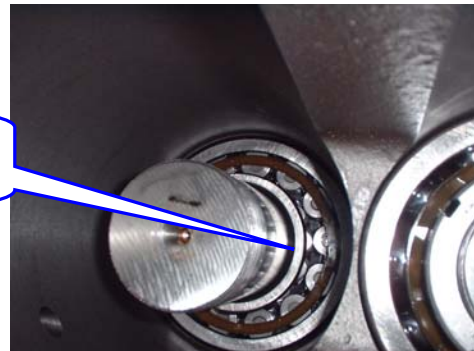
Step 11. Put the male rotor discharge bearing outer ring and hammer it.

Radial bearing outer ring



Step 12. Put the male rotor discharge bearing inner ring. Wait for a few seconds to cool and hammer it.

Male Rotor radial bearing inner ring



Step 13. Heat the male and female axial bearing up to 80°C.



Step 14. Install the axial bearing for male and female rotors. Three bearings each for male and female rotors.

Bearing position: Two bearings with series number faced down, the third bearing with series number faced up.

NOTE: Refer to Index, table 2 of this handbook for the types of bearings for all models.

Bearing position: The first and second bearing position is the series number face down and the third bearing position is the series number face up.



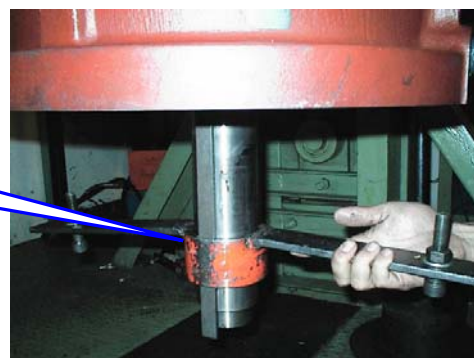
1st

2nd

3rd

Step 15. Install the rotor assembly fixed gauge on the suction side of the male rotor.

Rotor assembly
fixed gauge



Step 16. Put loctite sealant on male and female rotor end side screw and install the bearing slot nut.

Loctite sealant



Step 17. Put the slot nut tightening gauge and tighten it using a torque wrench.

Refer to the table below for the torque settings.



MODEL	Torque Value (Kg-m)	
	Male	Female
RC12~RC13	24	16
RC14~RC15L	40	20
RC16~RC17	56	28
RC18	56	34
RC19~RC21	47	47
RC22~RC24	56	56

Step 18. Remove the rotor assembly fixed gauge and the two guide pin.



Step 19. Lift the bearing assembly and check the discharge clearance of male and female rotors to bearing seat using a thickness gauge.

Refer to table below for the discharge clearance of male and female rotors to bearing seat.



Model Item	RC12~RC13	RC14~RC15	RC16~RC18	RC19~RC21	RC22~RC24
Standard (mm)	0.04~0.08	0.04~0.09	0.04~0.1	0.04~0.1	0.04~0.1

IX-5. ASSEMBLY SUCTION BEARINGS

Step 1. Heat first the radial bearing inner ring, inner spacer ring of the male rotor and the radial bearing inner ring of the female rotor for about **80 °C**.



Step 2. Insert the inner ring, inner spacer ring on the male rotor.

Bearing's inner ring

Inner spacer ring

Bearing's inner ring



Step 3. Use a chisel to mark the male rotor, to prevent the inner ring and inner spacer ring from dropping or moving.



Step 4. Insert the inner ring on the female rotor.



Step 5. Install the oil-guiding ring in the compressor casing, for male rotor and hammer it.



Step 6. Install the first suction radial bearing outer ring.

Trumpet shape tool for
tightening suction bearing



Step 7. Install the suction outer spacer ring and hammer it.



Step 8. Install the second suction radial bearing outer ring.



Step 9. Put loctite sealant on the screw hole and install the suction bearing fixed ring. Put all screw bolts and tighten it using a torque wrench or hexagonal wrench. **Refer to index of this manual for screw bolts torque settings.**

Suction bearing
fixed ring



Step 10. Install the oil-guiding ring in the compressor casing, for female rotor and hammer it.



Step 11. Install the radial bearing outer ring.



Step 12. Put loctite sealant on screw hole and install the screw bolt with washer.

Screw bolt with
washer



IX-6. ASSEMBLY OIL SEPARATOR

NOTE: Before assembling the oil separator, assemble first the bearing seat. Follow the procedures given in item VIII (VIII-5~VIII-7).

Step 1. Clean the oil separator flange using oilstone and wipe it with a piece of cloth or rag.



Step 2. Put new Teflon gasket in the bearing seat's discharge port.

Teflon gasket



Step 3. Install first "two screw" bar in the compressor casing and then install the oil separator gasket.



Step 4. Install the oil separator and put all the screw bolts and tighten it using a torque wrench or hexagonal wrench.

Refer to index of this manual for the torque settings of screw bolts.

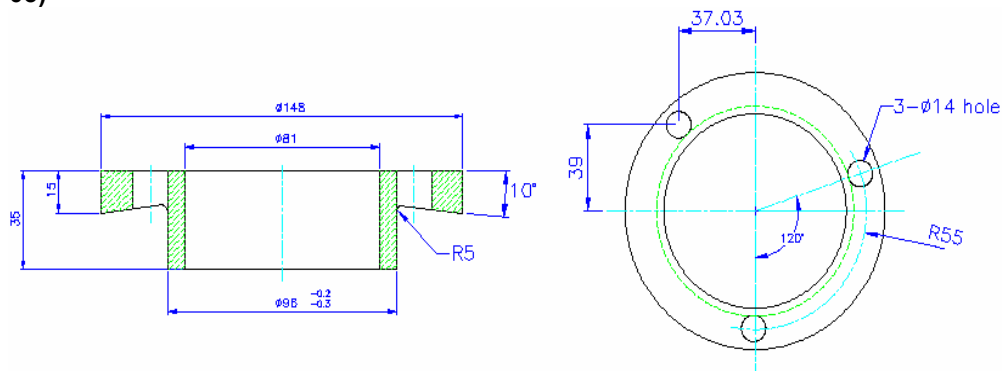


X. INDEX

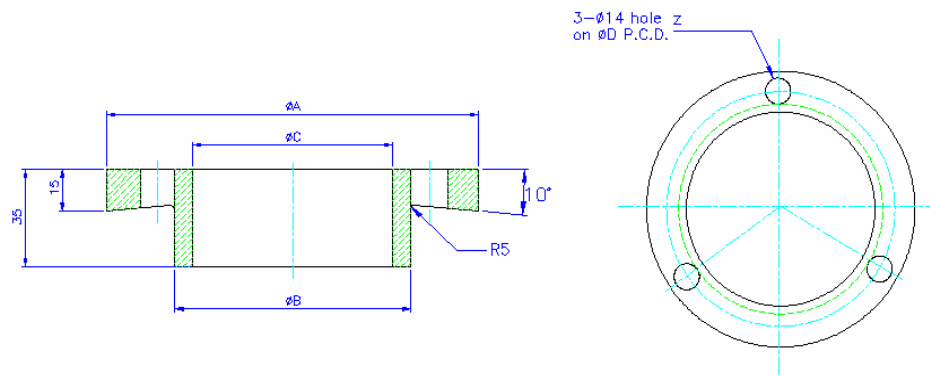
Table 1. List of special tools

Item	Tools Name
1	Circle Tool for Loosening Discharge Bearings (RC14~RC15LF)
2	Circle Tool for Loosening Discharge Bearings
3	Circle Tool for Loosening Discharge Bearings (RC12~RC13M)
4	Circle Tool for Loosening Discharge Bearings (RC12~RC13F)
5	Trumpet Shape Tool for Tightening Suction Bearings
6	Trumpet Shape Tool for Tightening Discharge Bearings
7	Male Rotor Assembly Fixed Gauge (RC10~RC21)
8	Tool for Tightening Discharge Bearing Inner Ring
9	Tool for Loosening Discharge Bearing from Bearing Seat
10	Tool for Loosening Suction Bearing from Compressor Casing
11	Slot Nut Tightening Gauge for Male Rotor
12	Slot Nut Tightening Gauge for Female Rotor
13	Press Tool for Piston Assembly (RC10~RC21)
14	Tool for Guide Pin

1. Circle Tool for loosening discharge bearings (RC14~RC15LF) (B312-0014-05)

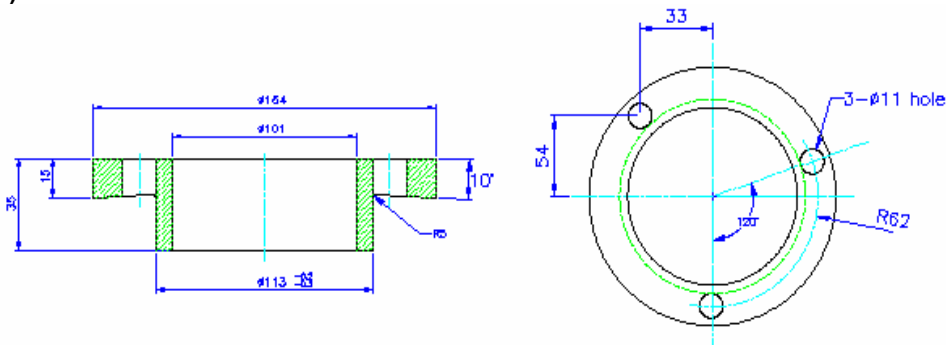


2. Circle Tool for loosening discharge bearings (RC14~RC21)

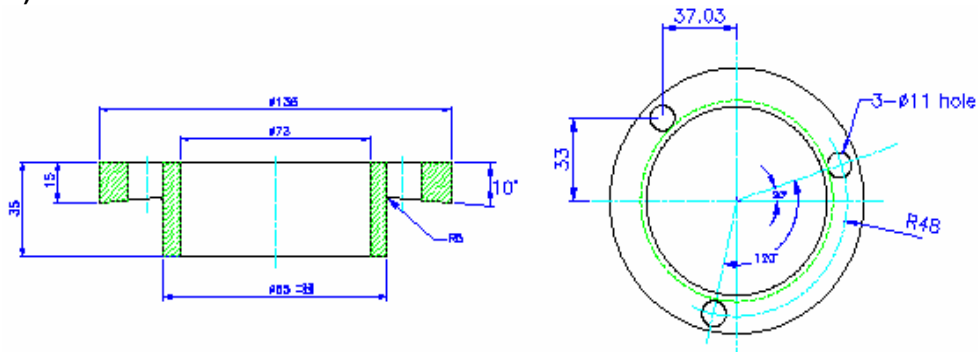


Item Number	Model	ΦA	ΦB	ΦC	ΦD (P.C.D)
B312-0014-00	RC14~RC15L Male	188	136	122	150
B312-0014-01	RC16~RC17 Male	202	150	141	164
B312-0014-02	RC16~RC17 Female	162	110	101	124
B312-0014-03	RC19~RC21 Male	192	140	132	154
B312-0014-04	RC19~RC21 Female	182	130	122	144

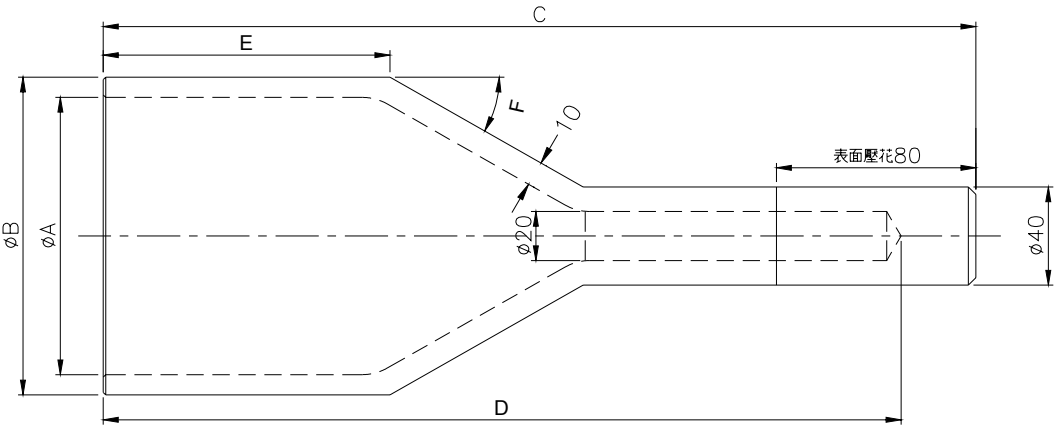
3. Circle Tool for loosening discharge bearings (RC12~RC13M) (B312-0014-06)



4. Circle Tool for loosening discharge bearings (RC 12~RC13F) (B312-0014-07)

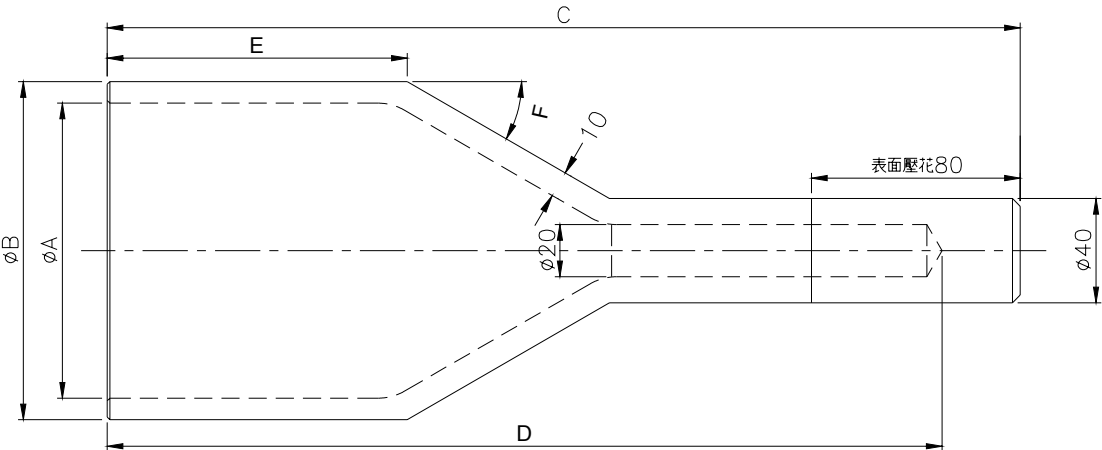


5. Trumpet shape tools for tightening suction bearing



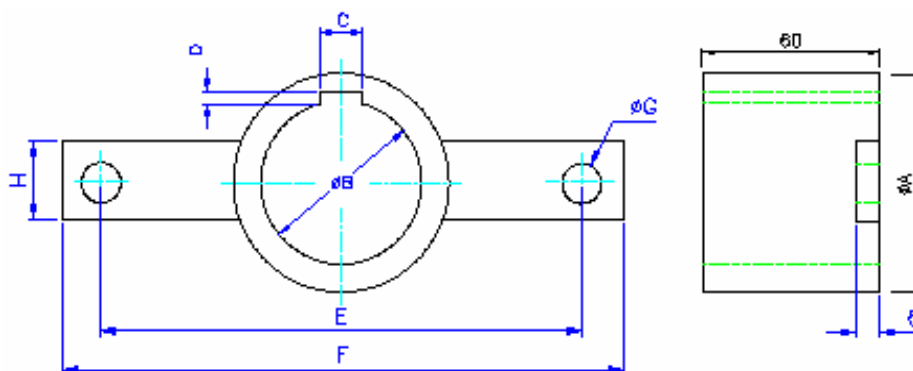
Item Number	Model	ΦA	ΦB	C	D	E	F°
B312-0090-00	RC10~RC11 Male	55	71.5	230	200	20	30°
B312-0090-11	RC10~RC11 Female	33	44.5	300	120	20	30°
B312-0090-04	RC12~RC13 Male	83	99.5	260	230	105	45°
B312-0090-01	RC12~RC13 Female	46	61.5	230	200	20	30°
B312-0090-15	RC14~RC15 Male	103	119.5	250	220	20	45°
B312-0090-00	RC14~RC15 Female	55	71.5	230	200	20	30°
B312-0090-16	RC16~RC18 Male	123	139.5	170	140	20	60°
B312-0090-03	RC16~RC21 Female	75	89.5	250	220	20	30°
B312-0090-09	RC19~RC21 Male	133	149.5	170	140	20	45°
B312-0090-10	RC22~RC24 Male	170	189.5	150	120	20	60°
B312-0090-05	RC22~RC24 Female	93	109.5	260	230	20	30°

6. Trumpet shape tools for tightening discharge bearing



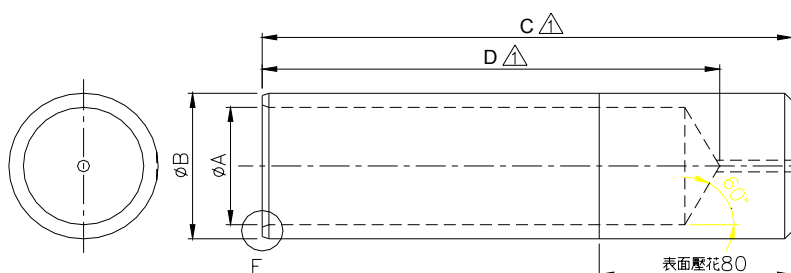
Item Number	Model	ΦA	ΦB	C	D	E	F°
B312-0090-02	RC10~RC11 Male	63	79.5	250	220	80	30°
B312-0090-13	RC10~RC13 Female	55	71.5	230	200	75	30°
B312-0090-04	RC12~RC13 Male	83	99.5	260	230	105	45°
B312-0090-06	RC14~RC15 Male	103	119.5	340	310	115	45°
B312-0090-02	RC14~RC15 Female	63	79.5	250	220	80	30°
B312-0090-08	RC16~RC18 Male	123	139.5	280	250	135	60°
B312-0090-04	RC16~RC17 Female	83	99.5	260	230	105	45°
B312-0090-07	RC19~RC21 Male	113	129.5	350	320	115	45°
B312-0090-06	RC19~RC21 Female	103	119.5	340	310	115	45°
B312-0090-08	RC22~RC24 (M), (F)	123	139.5	280	250	135	60°

7. Male Rotor Assembly Fixed Gauge



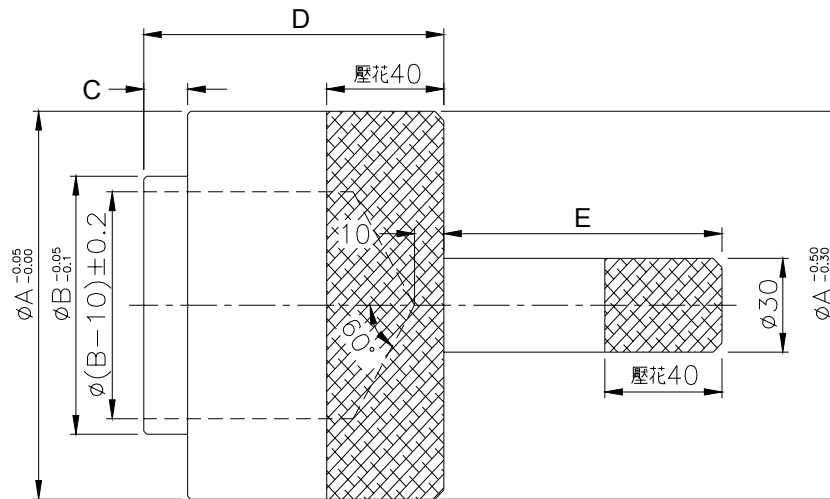
Item Number	Model	A	B	C	D	E	F	G	H
B312-0008-10	RC10~RC11	70	49	12.5	5	293	343	13	45
B312-0008-11	RC12~RC13	70	50	12.3	4	380	420	14	30
B312-0008-12	RC14~RC15L	80	60	12.3	4	436	470	18	40
B312-0008-13	RC16~RC18	94	74	12.3	4	475	520	18	50
B312-0008-14	RC19~RC21	105	83	22.3	6	516	550	18	55

8. Tool for tightening discharge bearing inner ring



Item Number	Model	ΦA	ΦB	C	D
B312-0088-01	RC10~RC11 Male	35	47	200	170
B312-0088-00	RC10~RC13 Female	30	42	170	140
B312-0088-02	RC12~RC13 Male	45	57	210	180
B312-0088-04	RC14~RC15 Male	55	67	200	170
B312-0088-01	RC14~RC15 Female	35	47	200	170
B312-0088-07	RC16~RC18 Male	65	77	260	225
B312-0088-02	RC16~RC17 Female	45	57	210	180
B312-0088-03	RC 18 Female	50	62	220	190
B312-0088-06	RC19~RC21 Male	60	72	315	280
B312-0088-05	RC19~RC21 Female	55	67	305	270
B312-0088-07	RC22~RC24 (M), (F)	65	77	260	225

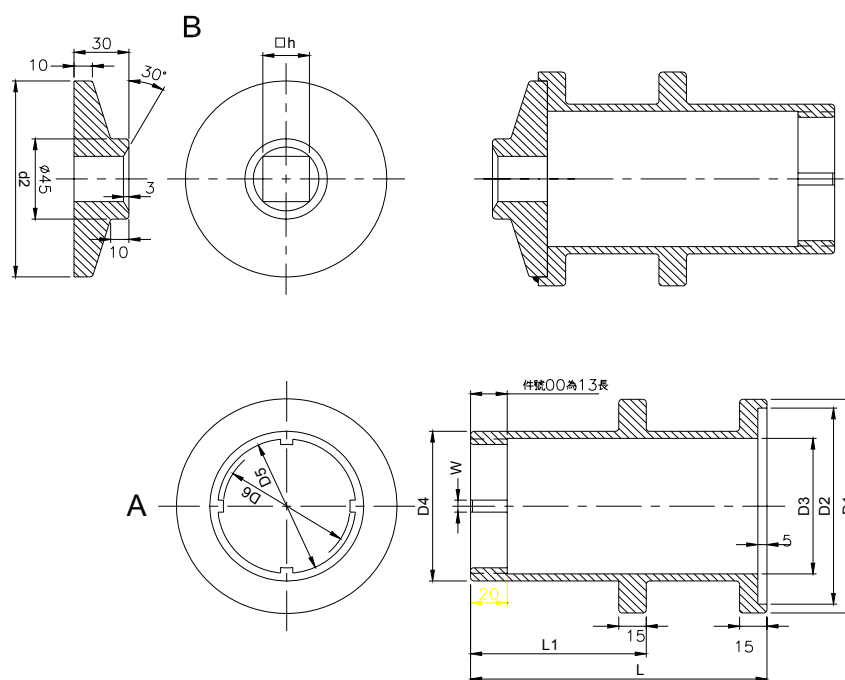
9. Tools for loosening discharge bearings from bearing seat



Item Number	Model	ΦA	ΦB	C	D	E
B312-0034-02	RC10~RC11 Female	41.5	40.5	10	100	-
B312-0034-03	RC10~RC11 Male	58	46.2	10	100	-
B312-0034-04	RC12~RC13 Female	42	40.5	10	120	-
B312-0034-05	RC12~RC13 Male	55	55	-	100	-
B312-0034-06	RC14~RC15 Female	51.8	46.2	10	120	-
B312-0034-07	RC14~RC15 Male	69.8	69.8	-	100	-
B312-0034-08	RC16~RC17 Female	61.8	58.5	10	120	-
B312-0034-09	RC16~RC18 Male	89.8	82.5	10	40	80
B312-0034-10	RC18~RC21 Female	65.8	65	10	120	-
B312-0034-11	RC19~RC21 Male	74.8	74.8	-	40	80
B312-0034-12	RC22~RC24 Female	89.8	82.5	15	65	70
B312-0034-13	RC22~RC24 Male	123.8	82.5	15	65	70

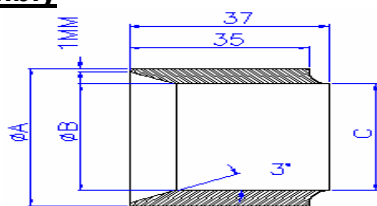
Item Number	Model	ΦD1	ΦD2	ΦD3	ΦD4	ΦD5	ΦD6	W	L1	L	Φd2	h
B312-0091-02	RC10~RC11	80	61	53	63	52.3	48.3	4.7	0	33	61	19.2
B312-0091-04	RC12~RC13	100	74	66	76	65.3	60.3	5.7	33	48	74	19.2
B312-0091-06	RC14~RC15	121.5	84	76	86	75.3	69.3	6.7	31	56	84	19.2
B312-0091-08	RC16~RC17	140	94	86	96	85.3	79.3	6.7	29	57	94	25.4
B312-0091-10	RC18	140	94	86	96	85.3	79.3	6.7	0	73	94	25.4
B312-0091-12	RC19~RC21	130.5	89	81	91	80.3	74.3	6.7	102	168	89	25.4
B312-0091-14	RC22~RC24	140	94	86	96	85.3	79.3	6.7	62	96	94	25.4

12. Slot nut tightening gauge for female rotor



Item Number	Model	ΦD1	ΦD2	ΦD3	ΦD4	ΦD5	ΦD6	W	L1	L	Φd2	h
B312-0091-03	RC10~RC11	72	54	46	56	45.3	41.3	4.7	0	52	54	19.2
B312-0091-05	RC12~RC13	72	54	46	56	45.3	41.3	4.7	49	64	54	19.2
B312-0091-07	RC14~RC15	80	61	53	63	52.3	48.3	4.7	52	77	61	19.2
B312-0091-09	RC16~RC17	100	74	66	76	65.3	60.3	5.7	47	75	74	19.2
B312-0091-11	RC18	110	79	71	81	70.3	65.3	5.7	0	84	79	19.2
B312-0091-13	RC19~RC21	120.5	84	76	86	75.3	69.3	6.7	96	162	84	25.4
B312-0091-15	RC22~RC24	140	94	86	96	85.3	79.3	6.7	80	114	94	25.4

13. Press tool for piston assembly



Model	Item Number	A	B
RC10~RC11	B312-0019-04	75	65
RC12~RC13	B312-0019-01	100	90
RC14~RC15L	B312-0019-02	110	100
RC16~RC21	B312-0019-03	130	120

14. Tool for pin

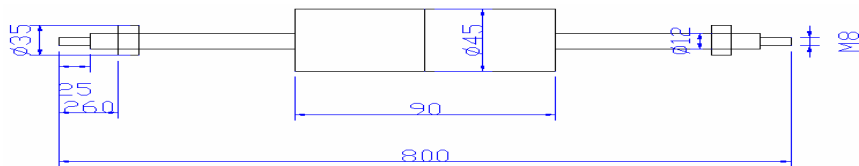


Table 2. List of bearings

MODEL	BEARING TYPE (DISCHARGE)				BEARING TYPE (SUCTION)			
	MALE	QTY.	FEMALE	QTY.	MALE	QTY.	FEMALE	QTY.
RC10~11	7307BUO	3	7306BUO	3	NKI55/35	1	NKI30/30	1
	NU307E	1	NU2306E	1				
RC12~13	7309BUO	3	7306BUO	3	NU2211E	2	NJ2206E	1
	NU309E	1	NU2306E	1				
RC14~15L	7311BUO	3	7307BUO	3	NU2213E	2	NJ2207E	1
	NU311E	1	NU2307E	1				
RC16~17	7313BUO	3	7309BUO	3	NU2216E	2	NJ2210E	1
	NU313E	1	NU2309E	1				
RC18	7313BUO	3	7310BUO	3	NU2216E	2	NJ2210E	1
	NU313E	1	NU2310E	1				
RC19~21	7312BUO	3	7311BUO	3	NU2217E	2	NJ2308E	1
	NU312E	1	NU2311E	1				
RC22~24	7313BUO	3	7313BUO	2	NU2318E	1	NJ2310E	1
	NU313E	1	NU2313E	1				

Table 3. Motor insulation standard

To the ground				Phase to phase			Phase to wiring temperature protector		
U	V	W	Wiring temperature protector	U-Z	V-X	W-Y	U	V	W
Should be more than 100 MΩ									

(2000MΩ and 1000VDC)

Table 4. Compressor accessories Torque settings

Standard screw bolt Nominal spec.	Torque value (Kg-cm)	
	Range of reference	Setting value
Motor terminal plate screw bolt M12	300 ~ 1,500	900
Oil filter joint flange M12	250 ~ 1,500	850
Oil drop / service / cleaning flange M12	260 ~ 1,500	850
1 ½" flange M16	200 ~ 1,000	1,000
2 ½" flange M16	400 ~ 2,000	1,000
3" flange M20	550 ~ 2,500	2,000
4" flange M20	800 ~ 3,000	2,000
Oil sight glass P1, P3 plug		200

Table 5. Compressor screw bolt Torque settings

Standard screw bolt Nominal spec.	Torque value (Kg-cm)	
	Range of reference	Setting value
M6	90 ~ 120	100
M8	220 ~ 290	250
M10	430 ~ 580	500
M12	750 ~ 1700	1,000
M16	1,100 ~ 3,400	2,000
M20	1,800 ~ 4,200	3,800

Table 6. Clearance between slide valve and slide valve housing

Model	RC12~RC13	RC14~RC15	RC16~RC18	RC19~RC21
Tolerance (mm)	0.025~0.055	0.03~0.06	0.04~0.07	0.04~0.07

HANBELL RC10~RC11 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3131-1131A	BEARING SEAT	1	FC 25
2	3130-1132A	MALE SCREW ROTOR – RC10	1	SAE – 1141, S45C
2	3131-1132A	MALE SCREW ROTOR – RC11	1	SAE – 1141, S45C
3	3130-1133A	FEMALE SCREW ROTOR – RC10	1	SAE – 1141, S45C
3	3131-1133A	FEMALE SCREW ROTOR – RC11	1	SAE – 1141, S45C
4	3131-1023A	MOTOR ROTOR KEY	1	S45C, 8 * 12 * 100L
5	3131-2131A	MOTOR ROTOR	1	Φ141.4 * 140L
6	3101-1034A	MOTOR ROTOR SPACER RING	1	S45C, Φ32 * 14.5T
7	3101-1017A	MOTOR ROTOR WASHER	1	S45C, Φ68 * 10t
8	4303-316	SPRING WASHER	1	M16
9	4301-116060	MOTOR ROTOR SCREW BOLT	1	M16 * 60L
10	4102-NU307E	MALE SCREW ROTOR DISCHARGE RADIAL BEARING	1	NU307E
11	3103-113AA	MALE SCREW ROTOR OUTER SPACER RING	1	S45C, Φ80.3 * 7.1t
12	3103-1137B	MALE SCREW ROTOR INNER SPACER RING	1	S45C, Φ45 * 7.1t
13	4101-7307BUO	MALE SCREW ROTOR DISCHARGE AXIAL BEARING	3	7307BUO
14	4302-235	KM 7 BEARING LOCK NUT	1	KM7 (M35 * 1.5)
15	3131-1109A	DISCHARGE BEARING FIXED RING (MALE)	1	S15C, Φ80.4 * 34.8L
16	4307-DB080	DISC SPRING (MALE)	1	SCHNORR B80
17	4102-NU2306E	FEMALE SCREW ROTOR DISCHARGE RADIAL BEARING	1	NU2306
18	3101-113AA	FEMALE SCREW ROTOR OUTER SPACER RING	1	S45C, Φ72.3 * 7.1t
19	3101-1137B	FEMALE SCREW ROTOR INNER SPACER RING	1	S45C, Φ40 * 7.1t
20	4101-7306BUO	FEMALE SCREW ROTOR DISCHARGE AXIAL BEARING	3	7306BUO
21	4302-230	KM 6 BEARING LOCK NUT	1	KM6 (M30 * 1.5)
22	3131-1111A	DISCHARGE BEARING FIXED RING (FEMALE)	1	S15C, Φ72.4 * 54.5L
23	4307-DB071	DISC SPRING (FEMALE)	1	SCHNORR B71
24	3131-1103A-3	DISCHARGE COVER PLATE GASKET	1	REINZ – AFM 34, 1.5t
25	3131-1101A	DISCHARGE COVER PLATE	1	SS400, 16t
26	4301-108025	DISCHARGE COVER PLATE SCREW BOLTS	11	M8 * 1.25p * 25L
27	3131-1008A	DISCHARGE EXHAUST TUBE GASKET	1	TEFLON, 5t
28	3131-1113A	PISTON SPRING	1	SWPB, Φ2.9 – N5, Φ41 * 125L
29	3131-1115A	PISTON ROD	1	SNCM 439, 113.7L
30	4303-414	COPPER WASHER	1	Φ14
31	3131-1116A	PISTON	1	S15C, Φ64 * 24t
32	5112-GM69	PISTON GUIDE RING	1	TURCITE T47
33	4201-CA328	PISTON O-RING	1	CR70, I.D. 46.99 * 5.33
34	4202-T065	PISTON RING	1	S55042-0650-46N(PG4200650-T4)
35	3131-1037A	WASHER	1	SS400, Φ20 * 5t
36	4303-310	SPRING WASHER	1	M10
37	4301-110025	PISTON SCREW BOLT	1	M10 * 1.5p * 25L
38	4301-112040	BEARING SEAT SCREW BOLTS	8	M12 * 1.75p * 40L
39	3502-1102A	FIXED PIN	2	
40	4305-201	PLUG	1	
41	3130-1141A	COMPRESSOR CASING – RC10	1	FC25
41	3131-1141A	COMPRESSOR CASING – RC11	1	FC25
42	3131-1002A-3	MOTOR CASING GASKET	1	REINZ – AFM34, 1.5t
43	4303-308	SPRING WASHER	1	M8
44	4301-108016	SCREW BOLT	1	M8 * 1.2 * 16L
45	4301-NK130/30	FEMALE ROTOR SUCTION BEARING	1	
46	4103-NK155/35	MALE ROTOR SUCTION BEARING	1	
47	3131-1108A	SUCTION BEARING FIXED RING	1	S15C, Φ100 * Φ65 * 3t
48	4301-106010	FIXED RING SCREW BOLT	4	M6 * 1.0 * 10L
49	3131-2105A	COPPER SLEEVE	1	
50	3131-2111A	MOTOR STATOR	1	
51	3101-1143A	OIL FILTER	1	
52	3101-1146A	OIL FILTER FLANGE INNER GASKET	1	TEFLON, 1.5t
53	3131-1144A	OIL FILTER FLANGE	1	SS400, Φ65.9 * 63L
54	3131-1147A-3	OIL FILTER FLANGE COVER GASKET	1	REINZ – AFM 34, 1.5t
55	3131-1142	OIL FILTER FLANGE COVER	1	
56	4301-112035	SCREW BOLTS	4	M12 * 1.75 * 45
57	3131-1168A	OIL FLOW REGULATOR PLUG	1	1/8" NPT, Φ1.2
58	4305-102	PLUG	1	1/4" PT
59	3131-1167A-3	OIL COOLER CONNECTOR COVER GASKET	1	REINZ – AFM 34, 1.5t
60	3131-1169A	OIL COOLER CONNECTOR COVER	1	SS400, 80 * 50 * 12t
61	4301-110025	CONNECTOR COVER SCREW BOLTS	6	M10 * 1.5p * 25L
62	4304-101	90° C ELBOW	2	1/4" F * 1/4" NPT, A - 4890
63	3101-1145E	CAPILLARY	1	
64	3101-1003A	SOLENOID VALVE GASKET	2	NOK, 1515SPS
65	4301-804012	SOLENOID VALVE SCREW BOLTS	8	M4 * 0.7 * 12L
66	4401-32	SOLENOID VALVE STEP CONTROL (NC)	2	O.D.E. 2743K0R30 – 4344
67	4402-03	SOLENOID VALVE COIL 220V	2	O.D.E. BDV08224DU, 50/60Hz
68	4201-VP021	O-RING	1	

HANBELL RC10~RC11 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
69	3101-1153	PLUG, 3/8"PT	1	
70	3130-1512B	SLIDE VALVE Vi = 3.5 RC10	1	FCD 50
70	3131-1112B	SLIDE VALVE Vi = 2.6 RC11	1	FCD 50
71	3101-1114A	SLIDE VALVE KEY	1	S45C, 16 * 27 * 12
72	4301-106010	SCREW BOLT	1	
73	3131-1147A-3	SERVICE FLANGE GASKET	1	REINZ – AFM 34, 1.5t
74	3131-1142	SERVICE FLANGE	1	
75	4301-112035	SERVICE FLANGE SCREW BOLTS	4	M12 * 1.75 * 45
76	4201-VP021	O-RING	1	(P21) – 2 ½"
77	3131-2102A	MOTOR STATOR FIXED PIN	1	S45C
78	4304-114	REFRIGERANT CONNECTOR	1	180 DEG, 3/8" F * 3/8" NPT
79	4302-311	REFRIGERANT CONNECTOR COPPER SCREW NUT	1	3/8" F
80	4302-312	REFRIGERANT CONNECTOR COPPER COVER	1	3/8" F
81	3131-1006B-3	MOTOR CABLE PLATE GASKET	1	REINZ – AFM 34, 1.5t
82	3131-1040B	MOTOR CABLE PLATE	1	S20C, Φ180 * 22t
83	3131-1014B	MOTOR CABLE BOX GASKET	1	
84	4301-112045	MOTOR CABLE SCREW BOLTS	6	M12 * 1.75p * 45
85	4301-108016	CABLE BOX SCREW BOLTS	3	M8 * 1.2 * 16L
86	3131-1012B	ELECTRICAL CABLE BOX	1	
87	3131-1013A	ELECTRICAL CABLE BOX COVER	1	
88	4806-33	CABLE BOX HOLE STOPPER	1	Φ19, HP – 19
89	3101-1007A	CABLE BOX FLANGE GASKET	1	
90	3101-1021B	CABLE BOX FLANGE	1	
91	4301-108016	CABLE BOX FLANGE SCREW BOLTS	4	
92	4405-15	MOTOR PROTECTIVE CONTROLLER INT 69, 220V	1	KRIWAN, 52A120S10
93	4301-804020	SCREW BOLTS	2	M4 * 0.7 * 20L
94	4303-104	WASHER	2	
95	4303-304	SPRING WASHER	2	MA
96	4302-104	SCREW NUT	2	
97	4301-108016	SCREW BOLT	4	
98	3131-2201A	MOTOR COVER	1	FC30
99	4301-114	3/8" NPT CONNECTOR	1	
100	4302-311	COPPER NUT	1	
101	4302-312	COPPER NUT COVER	1	
102	4304-102	1/4" NPT CONNECTOR	1	
103	4304-201	1/4" NPT TERMINAL	1	
104	4304-106	ANGLE VALVE	1	CASTEL6110/22, ¼" SAE
105	4302-303	COPPER NUT	1	¼" A-414
106	4304-301	COPPER NUT COVER	1	
107	4301-112045	MOTOR COVER SCREW BOLTS	16	M12 * 1.75 * 45
108	3131-1004A-3	SUCTION FILTER INNER GASKET	1	REINZ – AFM 34, 1.5t
109	3131-1024A	SUCTION FILTER	1	
110	3131-1004A-3	SUCTION FILTER OUTER GASKET	1	REINZ – AFM 34, 1.5t
111	3188-8700	SUCTION STOP VALVE	1	
112	4301-116120	STOP VALVE SCREW BOLTS	4	
113	3131-1004A-3	SUCTION FLANGE GASKET	1	REINZ – AFM 34, 1.5t
114	3131-101EA	SUCTION FLANGE COUPLING	1	
115	3131-1019A	SUCTION FLANGE	1	SS400
116	4301-116055	FLANGE SCREW BOLTS	4	M16 * 55L
117	3131-1801A	OIL SEPARATOR	1	ASME, SA395, GRADE 60
118	3131-1001A-3	OIL SEPARATOR GASKET	1	REINZ – AFM 34, 1.5t
119	3131-1811A	DISCHARGE EXHAUST TUBE SILENCER	1	
120	3131-1809A	OIL SEPARATOR FILTERING SLAB (INNER)	1	
121	3131-1804B	OIL SEPARATOR MESH	1	
122	3131-1809A	OIL SEPARATOR FILTERING SLAB (OUTER)	1	
123	4303-312	SPRING WASHER	3	M12
124	4301-112090	SCREW BOLTS	3	M12 * 1.75p * 90L
125	4201-VA119	O-RING	1	
126	4804-01	OIL SIGHT GLASS	1	ALCO
127	4305-105	PLUG 1/4" NPT	1	1/4" NPT * 11L
128	4305-107	PLUG 1/8" NPT	1	1/8" NPT
129	3101-1051C	OIL HEATER, 220V – 150W	1	UL, AWG#18
130	4806-28	ELECTRICAL BOX CABLE HOLE PLUG 3/8" PF	1	PF 3/8", FGA 17 – 10
131	4405-16	DISCHARGE TEMPERATURE SENSOR – 110°C	1	KRIWAN, PTC, 02D512S36
132	4305-105	PLUG 1/4" NPT	1	1/4" NPT * 11L
133	4304-106	ANGLE VALVE	1	CASTEL6110/22, ¼" SAE
134	4302-303	COPPER SCREW NUT	1	¼" A-414
135	4304-301	COPPER COVER	1	
136	4301-116055	CHECK VALVE SCREW BOLTS	4	M16 * 55L
137	3188-7100A	DISCHARGE CHECK VALVE	1	1 ½"
138	3101-1005A-3	DISCHARGE FLANGE GASKET, 1 ½"	1	REINZ – AFM 34, 1.5t
139	3101-101AB	DISCHARGE FLANGE COUPLING	1	
140	3101-1019B	DISCHARGE FLANGE	1	FCD 50
141	4301-116050	DISCHARGE FLANGE SCREW BOLTS		

HANBELL RC12~RC13 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3101-1131B	BEARING SEAT (RC12)	1	FC25
1	3102-1131B	BEARING SEAT (RC13)	1	FC25
2	3101-1132C	MALE ROTOR	1	S45C
2	3102-1132C	MALE ROTOR (RC13)	1	S45C
3	3101-1133B	FEMALE ROTOR	1	S45C
3	3102-1133B	FEMALE ROTOR (RC13)	1	S45C
4	3102-1023A	KEY OF MOTOR ROTOR	1	8*12*135 S45C
5	3101-1134A	BALANCE PISTON	1	Φ62.7*7.04 S45C
6	4102-NU309E	DISCHARGE BEARING (TRANSVERSE, MALE)	1	NU309ECP
7	4101-7309BUO	DISCHARGE BEARING (LONGITUDINAL, MALE)	3	7309BEGAP/7309B.TVP.UO
8	4302-245	KM9 BEARING SLOT NUT (MALE ROTOR)	1	M45*1.5 KM9
9	3101-1109A	DISCHARGE FIXED RING (MALE ROTOR)	1	Φ100*88.3 S15C
10	4307-DB100	DISC SPRING (MALE ROTOR)	1	SCHNORR B100
11	4102-NU2306E	DISCHARGE BEARING OF FEMALE ROTOR (TRANSVERSE)	1	NU2306ECP
12	3101-1137B	INNER SPACER RING OF FEMALE ROTOR	1	Φ47*7.1t S45C
13	3101-113AA	OUTER SPACER RING OF FEMALE ROTOR	1	Φ72.3*7.1t S45C
14	4101-7306BUO	DISCHARGE BEARING OF FEMALE ROTOR (LONGITUDINAL)	3	7306BEGAP/7306B.TVP.UO
15	3102-1111B	DISCHARGE FIXED RING (FEMALE ROTOR)	1	Φ72*107.7L S15C
16	4302-230	KM6 BEARING SLOT NUT (FEMALE ROTOR)	1	M30*1.5 KM6
17	4307-DB071	DISC SPRING (FEMALE ROTOR)	1	SCHNORR B71
18	3101-1103A-3	GASKET OF DISCHARGE COVER PLATE	1	REINZ-AFM 34, 1.5t
19	3101-1101A	DISCHARGE COVER PLATE	1	SS400
20	4301-110035	BOLT (END PLATE)	13	M10*1.5*35L
21	3102-1113A	PISTON SPRING	1	Φ40*125L SWP B
23	3101-1115A	PISTON ROD (RC12)	1	130.2L SNCM 439
23	3102-1115A	PISTON ROD (RC13)	1	148.2L SNCM 439
24	4303-420	COPPER WASHER	1	M20
25	3101-1116C	PISTON	1	Φ89 S15C
26	3101-1037B	WASHER	1	5mm
27	4303-312	SPRING WASHER	1	M12
28	4301-112035	BOLT (FOR SLIDE VALVE FIXED)	1	M12*1.75*35L
29	5112-GM69	PISTON GUIDE RING	1	Turcite T47
30	4201-CA336	PISTON'S O-RING	1	CR70, 336-2347
31	4202-T090	PISTON RING	1	S44-0900-46N
32	3101-1008B	GASKET OF DISCHARGE EXHAUST TUBE	1	TEFLON 3mm
33	4301-116040	BOLT (FOR BEARING SEAT)	8	M16*2.0*40L
34	3101-1141B	COMPRESSOR CASING (RC12)	1	FC25
34	3102-1141B	COMPRESSOR CASING (RC13)	1	FC25
35	3101-1107B	OIL GUIDING RING (FEMALE ROTOR)	1	Φ62*16.5t S15C
36	4102-NJ2206E	SUCTION BEARING (FEMALE ROTOR)	1	NJ2206ECP
37	4303-248	WASHER	1	1/2"*2.5mm
38	4303-312	SPRING WASHER	1	M12
39	4301-112020	BOLT	1	M12*1.75*20L
40	3101-1106B	OIL GUIDING RING (MALE ROTOR)	1	Φ100*16.5 S15C
41	4102-NU2211E	SUCTION BEARING (MALE ROTOR)	1	NU2211ECP
42	3101-1104A	INNER SPACER RING OF SUCTION BEARING (MALE)	1	Φ65*33.5 S15C
43	3101-1105A	OUTER SPACER RING OF SUCTION BEARING (MALE)	1	Φ100*33.5 S15C
44	4102-NU2211E	SUCTION BEARING (MALE ROTOR)	1	NU2211ECP
45	3101-1108A	SUCTION FIXED RING (MALE ROTOR)	1	Φ125*3t S15C
46	4301-106016	BOLT	4	M6*1*16L
47	3101-2131A	MOTOR ROTOR	1	
47	3102-2131A	MOTOR ROTOR	1	
48	3101-1017A	MOTOR ROTOR WASHER	1	Φ68*10 S45C
49	4303-316	SPRING WASHER	1	M16
50	4301-116060	BOLT (FOR MOTOR ROTOR FIXED)	1	M16*2.0*60L
51	3101-1153A	3/8" PT PLUG	1	
52	4201-VP021	O-RING	1	P21 VITON
53	3101-1143A	OIL FILTER	1	Φ40*200
54	3101-1146A	INNER GASKET OF OIL FILTER FLANGE	1	TEFLON 1.5t
55	3101-1147A-3	OUTER GASKET OF OIL FILTER FLANGE	1	REINZ AFM 34, 1.5t
56	3101-1144A	OIL FILTER FLANGE	1	FC25
57	4301-112035	BOLT	4	M12*1.75*35L
58	3142-1094	OIL COOLER CONNECTOR 3/8" NPT	1	3/8" NPT * 3/8"F
59	4302-312	COPPER COVER	1	3/8" F
60	4302-311	COPPER SCREW NUT	1	3/8" F
61	4201-VA119	O-RING	1	A.R.P.119, VITON
62	3101-1168A	1/2" PT PLUG	1	1/2" PT
63	4305-105	1/4" NPT PLUG	1	1/4" NPT
64	4304-115	THREE WAY CONNECTOR	1	A6330 1/4"F
65	3101-1145E	CAPILLARY	1	
66	3101-1512B	SLIDE VALVE, Vi=2.2 (RC12)	1	FCD45
66	3102-1512B	SLIDE VALVE, Vi=2.2 (RC13)	1	FCD45
67	3101-1114A	SLIDE VALVE KEY	1	27*16*12

HANBELL RC12~RC13 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
68	4301-106016	BOLT FOR SLIDE VALVE KEY	1	M6*1*16L
69	3101-1052B	OIL HEATER 220V, 150W	1	
70	3101-1148A-3	GASKET OF SERVICE FLANGE	1	REINZ-AFM 34, 1.5t
71	3101-1142A	SERVICE FLANGE	1	Φ124*16t
72	4301-112035	BOLT	6	M12*1.75*35L
73	4201-VA119	O-RING	1	A.R.P.119, VITON
74	4804-01	SIGHT GLASS	1	ALCO
75	3101-1006A-3	MOTOR CABLE PLATE GASKET	1	REINZ-AFM 34, 1.5t
76	3101-1080B	MOTOR CABLE PLATE	1	FC25
77	4301-112045	BOLT (FOR MOTOR CABLE COVER PLATE)	16	M12*1.75*45L
78	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
79	4301-804012	BOLT FOR SOLENOID VALVE	12	M4 * 0.7 * 12L
80	4401-32	SOLENOID VALVE (STEP CONTROL)	3	2743K0R30-4344 SDH12223DS
81	4303-104	WASHER	3	
82	4302-104	SCREW NUT	3	
83	4201-VP021	O-RING	1	P21 VITON
84	3101-1153A	3/8" PT PLUG	1	
85	4301-416000	EYE BOLT	2	M16
86	3132-2101A	MOTOR CASING (RC12)	1	FC30
86	3133-2101A	MOTOR CASING (RC13)	1	FC30
87	4301-112050	BOLT (FOR MOTOR CASING)	20	M12*1.75*50L
88	3101-1002A-3	GASKET OF MOTOR CASING	1	REINZ-AFM 34, 1.5t
89	3111-2220A	MOTOR STATOR (RC12)	1	60Hz, 380V
89	3112-2220A	MOTOR STATOR (RC13)	1	60Hz, 380V
90	3101-2104A	MOTOR STATOR GUIDE VANE	1	ALUMINUM
91	3101-2103B	PAD OF GUIDE VANE	1	STEEL
92	4303-308	M8 SPRING WASHER	1	M8
93	4301-108016	BOLT (FOR MOTOR STATOR GUIDE VANE)	1	M8*1.25*25L
94	4303-308	M8 SPRING WASHER	6	M8
95	4301-108016	BOLT (FOR MOTOR STATOR GUIDE VANE)	6	M8*1.25*16L
96	3142-1094	3/8" NPT CONNECTOR	1	3/8" NPT * 3/8"F
97	4302-312	COPPER COVER	1	3/8" F
98	4302-311	COPPER SCREW NUT	1	3/8" F
99	4304-102	1/4" NPT CONNECTOR	1	1/4"
100	4302-301	COPPER COVER	1	1/4" F
101	4302-303	COPPER SCREW NUT	1	1/4" F
102	4304-102	1/4" NPT CONNECTOR	1	1/4" NPT
103	4304-201	CONNECTOR TERMINAL	1	1/4" NPT
104	4304-106	ANGLE VALVE	1	1/4"
105	4304-301	COPPER COVER	1	1/4" F
106	4302-303	COPPER SCREW NUT	1	1/4" F
107	3101-1004A-3	2 1/2" GASKET	1	REINZ-AFM 34, 1.5t
108	3101-1024C	SUCTION FILTER	1	Φ84*103L
109	3101-1004A-3	GASKET FOR 2 1/2" FLANGE	1	REINZ-AFM 34, 1.5t
110	3132-1800A	OIL SEPARATOR (RC12)	1	FCD-500
110	3133-1800A	OIL SEPARATOR (RC13)	1	FCD-500
111	4301-116050	BOLT (OIL SEPARATOR)	20	M16*2.0*50L
112	3101-1001A-3	OIL SEPARATOR GASKET	1	REINZ-AFM 34, 1.5t
113	4301-106060	SCREW BOLT	2	M6 * 60L
114	4303-306	M6 WASHER	2	M6
115	3132-1806A	LOWER SLAB	1	
116	3132-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
117	3132-1804A	OIL SEPARATOR MESH	1	
118	3132-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
119	4303-306	M6 WASHER	2	M6
120	4301-106060	SCREW BOLT	2	M6 * 60L
121	3132-1806A	LOWER SLAB	1	
122	4303-312	M12 WASHER	3	M12
123	4201-112090	SCREW BOLTS	3	M12 * 90L
124	3132-1811A	DISCHARGE TUBE SILENCER	1	
125	4305-105	1/4" NPT PLUG	1	1/4" NPT
126	4305-107	1/8" NPT PLUG	1	1/8" NPT
127	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
128	3101-1005A-3	1 1/2" GASKET	1	REINZ-AFM 34, 1.5t
129	3188-7100A	1 1/2" CHECK VALVE	1	1 1/2"
130	3101-1005A-3	1 1/2" GASKET	1	REINZ-AFM 34, 1.5t
131	4201-NP065	O-RING	1	P65 NBR
132	3101-1015A	FLANGE SHELF	1	
133	3101-1019B	DISCHARGE FLANGE	1	1 1/2"
134	4301-116045	SCREW BOLTS	4	M16 * 45L
135	4301-116055	SCREW BOLTS	4	M16 * 55L
136	4304-106	ANGLE VALVE	1	1/4" NPT
137	4304-301	COPPER COVER	1	1/4" F
138	4302-303	COPPER SCREW NUT	1	1/4" F
139	4305-110	1" NPT PLUG	1	1"

HANBELL RC14~RC15L SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3103-1131B	BEARING SEAT (RC14)	1	FC25
1	3104-1131B	BEARING SEAT (RC15)	1	FC25
2	3103-1132C	MALE ROTOR (RC14)	1	S45C
2	3104-1132C	MALE ROTOR (RC15)	1	S45C
3	3103-1133B	FEMALE ROTOR (RC14)	1	S45C
3	3104-1133B	FEMALE ROTOR (RC15)	1	S45C
4	3103-1023A	KEY OF MOTOR ROTOR	1	8*12*107 S45C
4	3104-1023A	KEY OF MOTOR ROTOR	1	8*12*152 S45C
5	3103-1134B	BALANCE PISTON	1	Φ98.8 * 18.04t, S45C
6	4102-NU311E	DISCHARGE BEARING (TRANSVERSE, MALE)	1	NU311ECP
7	4101-7311BUO	DISCHARGE BEARING (LONGITUDINAL, MALE)	3	7311BEGAP/7311B.TVP.UO
8	4302-255	KM11 BEARING SLOT NUT (MALE ROTOR)	1	M55*2 KM11
9	3103-1109B	DISCHARGE FIXED RING (MALE ROTOR)	1	Φ121.9*, S15C
10	4307-DB112	DISC SPRING (MALE ROTOR)	1	SCHNORR B112
11	4102-NU2307E	DISCHARGE BEARING OF FEMALE ROTOR (TRANSVERSE)	1	NU2307ECP
12	3103-1137B	INNER SPACER RING OF FEMALE ROTOR	1	Φ45*7.1t S45C
13	3103-113AA	OUTER SPACER RING OF FEMALE ROTOR	1	Φ80.3*7.1t S45C
14	4101-7307BUO	DISCHARGE BEARING OF FEMALE ROTOR (LONGITUDINAL)	3	7307BEGAP/7307B.TVP.UO
15	3103-1111B	DISCHARGE FIXED RING (FEMALE ROTOR)	1	Φ80.4*49.6L S15C
16	4302-235	KM7 BEARING SLOT NUT (FEMALE ROTOR)	1	M35*1.5 KM7
17	4307-DB080	DISC SPRING (FEMALE ROTOR)	1	SCHNORR B80
18	3103-1103A-3	GASKET OF DISCHARGE COVER PLATE	1	REINZ-AFM 34, 1.5t
19	3103-1101A	DISCHARGE COVER PLATE	1	SS400
20	4301-112035	BOLT (END PLATE)	13	M12*1.5*35L
21	3104-1113A	PISTON SPRING	1	Φ65*140L SWP B
23	3102-1115A	PISTON ROD (RC14)	1	148.2L SNCM 439
23	3104-1115A	PISTON ROD (RC15)	1	165.2L SNCM 439
24	4303-420	COPPER WASHER	1	M20
25	3103-1116C	PISTON	1	Φ99 S15C
26	3101-1037B	WASHER	1	5mm
27	4303-312	SPRING WASHER	1	M12
28	4301-112035	BOLT (FOR SLIDE VALVE FIXED)	1	M12*1.75*35L
29	5112-GM69	PISTON GUIDE RING	1	Turcite T47
30	4201-CA339	PISTON'S O-RING	1	CR70, 336-2347
31	4202-T100	PISTON RING	1	S44-1000-46N
32	3101-1008B	GASKET OF DISCHARGE EXHAUST TUBE	1	TEFLON 3mm
33	4301-116045	BOLT (FOR BEARING SEAT)	8	M16*2.0*45L
34	3103-1141B	COMPRESSOR CASING (RC14)	1	FC25
34	3104-1141B	COMPRESSOR CASING (RC15)	1	FC25
35	3103-1107B	OIL GUIDING RING (FEMALE ROTOR)	1	Φ72*20.5t S15C
36	4102-NJ2207E	SUCTION BEARING (FEMALE ROTOR)	1	NJ2207ECP
37	4303-248	WASHER	1	1/2"*2.5mm
38	4303-312	SPRING WASHER	1	M12
39	4301-112020	BOLT	1	M12*1.75*20L
40	3103-1106B	OIL GUIDING RING (MALE ROTOR)	1	Φ120*20.5 S15C
41	4102-NU2213E	SUCTION BEARING (MALE ROTOR)	1	NU2213ECP
42	3103-1104A	INNER SPACER RING OF SUCTION BEARING (MALE)	1	Φ72*57t, S15C
43	3103-1105A	OUTER SPACER RING OF SUCTION BEARING (MALE)	1	Φ120*57t, S15C
44	4102-NU2213E	SUCTION BEARING (MALE ROTOR)	1	NU2213ECP
45	3101-1108A	SUCTION FIXED RING (MALE ROTOR)	1	Φ125*3t S15C
46	4301-106016	BOLT	4	M6*1*16L
47	3103-2131A	MOTOR ROTOR (RC14)	1	Φ138*220L
47	3104-2131A	MOTOR ROTOR (RC15)	1	
48	3103-1017A	MOTOR ROTOR WASHER	1	Φ78*10 S45C
49	4303-316	SPRING WASHER	1	M16
50	4301-116060	BOLT (FOR MOTOR ROTOR FIXED)	1	M16*2.0*60L
51	3101-1153A	3/8" PT PLUG	1	
52	4201-VP021	O-RING	1	P21 VITON
53	3101-1143A	OIL FILTER	1	Φ40*200
54	3101-1146A	INNER GASKET OF OIL FILTER FLANGE	1	TEFLON 1.5t
55	3101-1147A-3	OUTER GASKET OF OIL FILTER FLANGE	1	REINZ AFM 34, 1.5t
56	3101-1144A	OIL FILTER FLANGE	1	FC25
57	4301-112035	BOLT	4	M12*1.75*35L
58	3142-1094	OIL COOLER CONNECTOR 3/8" NPT	1	3/8" NPT * 3/8"F
59	4302-312	COPPER COVER	1	3/8" F
60	4302-311	COPPER SCREW NUT	1	3/8" F
61	4201-VA119	O-RING	1	A.R.P. 119, VITON
62	3101-1168A	1/2" PT PLUG	1	1/2" PT
63	4305-105	1/4" NPT PLUG	1	1/4" NPT
64	4304-115	THREE WAY CONNECTOR	1	A6330 1/4"F
65	3101-1145E	CAPILLARY	1	
66	3103-1512B	SLIDE VALVE, Vi=2.2 (RC14)	1	FCD45
66	3104-1512B	SLIDE VALVE, Vi=2.2 (RC15)	1	FCD45
67	3101-1114A	SLIDE VALVE KEY	1	27*16*12

HANBELL RC14~RC15L SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
68	4301-106016	BOLT FOR SLIDE VALVE KEY	1	M6*1*16L
69	3101-1052B	OIL HEATER 220V, 150W	1	
70	3101-1148A-3	GASKET OF SERVICE FLANGE	1	REINZ-AFM 34, 1.5t
71	3101-1142A	SERVICE FLANGE	1	Φ124*16t
72	4301-112035	BOLT	6	M12*1.75*35L
73	4201-VA119	O-RING	1	A.R.P.119, VITON
74	4804-01	SIGHT GLASS	1	ALCO
75	3101-1006A-3	MOTOR CABLE PLATE GASKET	1	REINZ-AFM 34, 1.5t
76	3101-1080B	MOTOR CABLE PLATE	1	FC25
77	4301-112045	BOLT (FOR MOTOR CABLE COVER PLATE)	16	M12*1.75*45L
78	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
79	4301-804012	BOLT FOR SOLENOID VALVE	12	M4 * 0.7 * 12L
80	4401-32	SOLENOID VALVE (STEP CONTROL)	3	2743K0R30-4344 SDH12223DS
81	4303-104	WASHER	3	
82	4302-104	SCREW NUT	3	
83	4201-VP021	O-RING	1	P21 VITON
84	3101-1153A	3/8" PT PLUG	1	
85	4301-416000	EYE BOLT	2	M16
86	3134-2101A	MOTOR CASING (RC14)	1	FC30
86	3135-2101A	MOTOR CASING (RC15)	1	FC30
87	4301-116050	BOLT (FOR MOTOR CASING)	20	M16*1.75*50L
88	3103-1002A-3	GASKET OF MOTOR CASING	1	REINZ-AFM 34, 1.5t
89	3113-2220A	MOTOR STATOR (RC14)	1	60Hz, 380V
89	3114-2220A	MOTOR STATOR (RC15)	1	60Hz, 380V
90	3103-2104A	MOTOR STATOR GUIDE VANE	2	ALUMINUM
91	3101-2103B	PAD OF GUIDE VANE	1	STEEL
92	4303-308	M8 SPRING WASHER	1	M8
93	4301-108025	BOLT (FOR MOTOR STATOR GUIDE VANE)	1	M8*1.25*25L
94	4303-308	M8 SPRING WASHER	6	M8
95	4301-108016	BOLT (FOR MOTOR STATOR GUIDE VANE)	6	M8*1.25*16L
96	3142-1094	3/8" NPT CONNECTOR	1	3/8" NPT * 3/8"F
97	4302-312	COPPER COVER	1	3/8" F
98	4302-311	COPPER SCREW NUT	1	3/8" F
99	4304-102	1/4" NPT CONNECTOR	1	1/4"
100	4302-301	COPPER COVER	1	1/4" F
101	4302-303	COPPER SCREW NUT	1	1/4" F
102	4304-102	1/4" NPT CONNECTOR	1	1/4" NPT
103	4304-201	CONNECTOR TERMINAL	1	1/4" NPT
104	4304-106	ANGLE VALVE	1	1/4"
105	4304-301	COPPER COVER	1	1/4" F
106	4302-303	COPPER SCREW NUT	1	1/4" F
107	3103-1004A-3	3" GASKET	1	REINZ-AFM 34, 1.5t
108	3101-1024C	SUCTION FILTER	1	Φ84*103L
109	3103-1004A-3	GASKET FOR 3" FLANGE	1	REINZ-AFM 34, 1.5t
110	3134-1800A	OIL SEPARATOR (RC14)	1	FCD-500
110	3135-1800A	OIL SEPARATOR (RC15)	1	FCD-500
111	4301-120055	BOLT (OIL SEPARATOR)	20	M20*2.0*55L
112	3103-1001A-3	OIL SEPARATOR GASKET	1	REINZ-AFM 34, 1.5t
113	4301-106060	SCREW BOLT	2	M6 * 60L
114	4303-306	M6 WASHER	2	M6
115	3134-1806A	LOWER SLAB	1	
116	3134-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
117	3134-1804A	OIL SEPARATOR MESH	1	
118	3134-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
119	4303-306	M6 WASHER	2	M6
120	4301-106060	SCREW BOLT	2	M6 * 60L
121	3134-1806A	LOWER SLAB	1	
122	4303-316	M16 WASHER	3	M16
123	4201-116130	SCREW BOLTS	3	M16 * 130L
124	3134-1811A	DISCHARGE TUBE SILENCER	1	
125	4305-105	1/4" NPT PLUG	1	1/4" NPT
126	4305-107	1/8" NPT PLUG	1	1/8" NPT
127	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
128	3131-1004A-3	2" GASKET	1	REINZ-AFM 34, 1.5t
129	3188-7200A	2" CHECK VALVE	1	2"
130	3131-1004A-3	2" GASKET	1	REINZ-AFM 34, 1.5t
131	4201-NP080	O-RING	1	P80 NBR
132	3134-1015A	FLANGE SHELF	1	
133	3131-1019A	DISCHARGE FLANGE	1	2"
134	4301-116055	SCREW BOLTS	4	M16 * 55L
135	4301-116055	SCREW BOLTS	4	M16 * 55L
136	4304-106	ANGLE VALVE	1	1/4" NPT
137	4304-301	COPPER COVER	1	1/4" F
138	4302-303	COPPER SCREW NUT	1	1/4" F
139	4305-110	1" NPT PLUG	1	1"

HANBELL RC16~RC17 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3105-1131B	BEARING SEAT (RC16)	1	FC25
1	3106-1131B	BEARING SEAT (RC17)	1	FC25
2	3105-1132C	MALE ROTOR (RC16)	1	S45C
2	3106-1132C	MALE ROTOR (RC17)	1	S45C
3	3105-1133B	FEMALE ROTOR (RC16)	1	S45C
3	3106-1133B	FEMALE ROTOR (RC17)	1	S45C
4	3105-1023A	KEY OF MOTOR ROTOR (RC16)	1	8*12*145.5L S45C
4	3106-1023A	KEY OF MOTOR ROTOR (RC17)	1	8*12*190.5L S45C
5	3105-1134B	BALANCE PISTON	1	Φ117.8 * 18.04t, S45C
6	4102-NU313E	DISCHARGE BEARING (TRANSVERSE, MALE)	1	NU313ECP
7	4101-7313BUO	DISCHARGE BEARING (LONGITUDINAL, MALE)	3	7313BEGAP/7313B.TVP.UO
8	4302-265	KM13BEARING SLOT NUT (MALE ROTOR)	1	M65*2 KM13
9	3105-1109B	DISCHARGE FIXED RING (MALE ROTOR)	1	Φ140.4*, S15C
10	4307-DB140	DISC SPRING (MALE ROTOR)	1	SCHNORR B140
11	4102-NU2309E	DISCHARGE BEARING OF FEMALE ROTOR (TRANSVERSE)	1	NU2309ECP
12	3105-1137B	INNER SPACER RING OF FEMALE ROTOR	1	Φ55*7.1t S45C
13	3105-113AA	OUTER SPACER RING OF FEMALE ROTOR	1	Φ100.3*7.1t S45C
14	4101-7309BUO	DISCHARGE BEARING OF FEMALE ROTOR (LONGITUDINAL)	3	7309BEGAP/7309B.TVP.UO
15	3105-1111B	DISCHARGE FIXED RING (FEMALE ROTOR)	1	Φ80*73.7L S15C
16	4302-245	KM9 BEARING SLOT NUT (FEMALE ROTOR)	1	M45*1.5 KM9
17	4307-DB100	DISC SPRING (FEMALE ROTOR)	1	SCHNORR B100
18	3105-1103A-3	GASKET OF DISCHARGE COVER PLATE	1	REINZ-AFM 34, 1.5t
19	3105-1101A	DISCHARGE COVER PLATE	1	SS400
20	4301-112035	BOLT (END PLATE)	13	M12*1.5*35L
21	3106-1113A	PISTON SPRING (INNER)	1	Φ65*140L SWP B
22	3106-1117A	PISTON SPRING (Outer)		Φ85*175L SWP B
23	3105-1115A	PISTON ROD (RC16)	1	153.2L SNCM 439
23	3106-1115A	PISTON ROD (RC17)	1	177.2L SNCM 439
24	4303-420	COPPER WASHER	1	M20
25	3105-1116C	PISTON	1	S15C
26	3101-1037B	WASHER	1	5mm
27	4303-312	SPRING WASHER	1	M12
28	4301-112035	BOLT (FOR SLIDE VALVE FIXED)	1	M12*1.75*35L
29	5112-GM69	PISTON GUIDE RING	1	Turcite T47
30	4201-CA345	PISTON'S O-RING	1	CR70, 345-2347
31	4202-T120	PISTON RING	1	S44-1200-46N, O.D. 120
32	3105-1008B	GASKET OF DISCHARGE EXHAUST TUBE	1	TEFLON 3mm
33	4301-120055	BOLT (FOR BEARING SEAT)	8	M20*2.5*55L
34	3105-1141B	COMPRESSOR CASING (RC16)	1	FC25
34	3106-1141B	COMPRESSOR CASING (RC17)	1	FC25
35	3105-1107B	OIL GUIDING RING (FEMALE ROTOR)	1	Φ90*20.5t S15C
36	4102-NJ2210E	SUCTION BEARING (FEMALE ROTOR)	1	NJ2210ECP
37	4303-248	WASHER	1	1/2"*2.5mm
38	4303-312	SPRING WASHER	1	M12
39	4301-112020	BOLT	1	M12*1.75*20L
40	3105-1106B	OIL GUIDING RING (MALE ROTOR)	1	Φ140*25.5 S15C
41	4102-NU2216E	SUCTION BEARING (MALE ROTOR)	1	NU2216ECP
42	3105-1104A	INNER SPACER RING OF SUCTION BEARING (MALE)	1	Φ92*50t, S15C
43	3105-1105A	OUTER SPACER RING OF SUCTION BEARING (MALE)	1	Φ140*50t, S15C
44	4102-NU2216E	SUCTION BEARING (MALE ROTOR)	1	NU2216ECP
45	3105-1108A	SUCTION FIXED RING (MALE ROTOR)	1	Φ170*3t S15C
46	4301-106016	BOLT	6	M6*1*16L
47	3105-2131A	MOTOR ROTOR	1	
47	3106-2131A	MOTOR ROTOR	1	
48	3105-1017A	MOTOR ROTOR WASHER	1	Φ92*10 S45C
49	4303-316	SPRING WASHER	1	M16
50	4301-116060	BOLT (FOR MOTOR ROTOR FIXED)	1	M16*2.0*60L
51	3101-1153A	3/8" PT PLUG	1	
52	4201-VP021	O-RING	1	P21 VITON
53	3105-1143A	OIL FILTER	1	Φ40*200
54	3105-1146A	INNER GASKET OF OIL FILTER FLANGE	1	TEFLON 1.5t
55	3101-1148A-3	OUTER GASKET OF OIL FILTER FLANGE	1	REINZ AFM 34, 1.5t
56	3105-1144A	OIL FILTER FLANGE	1	FC25
57	4301-112035	BOLT	4	M12*1.75*35L
58	3142-1094	OIL COOLER CONNECTOR 3/8" NPT	1	3/8" NPT * 3/8"F
59	4302-312	COPPER COVER	1	3/8" F
60	4302-311	COPPER SCREW NUT	1	3/8" F
61	4201-VA119	O-RING	1	A.R.P.119, VITON
62	3101-1168A	1/2" PT PLUG	1	1/2" PT
63	4305-105	1/4" NPT PLUG	1	1/4" NPT
64	4304-115	THREE WAY CONNECTOR	1	A6330 1/4"F
65	3101-1145E	CAPILLARY	1	
66	3105-1512B	SLIDE VALVE, Vi=2.2 (RC16)	1	FCD45
66	3106-1512B	SLIDE VALVE, Vi=2.2 (RC17)	1	FCD45
67	3105-1114A	SLIDE VALVE KEY	1	26*27*14.5, S45C

HANBELL RC16~RC17 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
68	4301-108016	BOLT FOR SLIDE VALVE KEY	1	M8*1*16L
69	3101-1052B	OIL HEATER 220V, 150W	1	
70	3101-1148A-3	GASKET OF SERVICE FLANGE	1	REINZ-AFM 34, 1.5t
71	3101-1142A	SERVICE FLANGE	1	Φ124*16t
72	4301-112035	BOLT	6	M12*1.75*35L
73	4201-VA119	O-RING	1	A.R.P.119, VITON
74	4804-01	SIGHT GLASS	1	ALCO
75	3101-1006A-3	MOTOR CABLE PLATE GASKET	1	REINZ-AFM 34, 1.5t
76	3105-1080B	MOTOR CABLE PLATE	1	FC25
77	4301-112040	BOLT (FOR MOTOR CABLE COVER PLATE)	16	M12*1.75*40L
78	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
79	4301-804012	BOLT FOR SOLENOID VALVE	12	M4 * 0.7 * 12L
80	4401-32	SOLENOID VALVE (STEP CONTROL)	3	2743K0R30-4344 SDH12223DS
81	4303-104	WASHER	3	
82	4302-104	SCREW NUT	3	
83	4201-VP021	O-RING	1	P21 VITON
84	3101-1153A	3/8" PT PLUG	1	
85	4301-416000	EYE BOLT	2	M16
86	3136-2101A	MOTOR CASING (RC16)	1	FC30
86	3137-2101A	MOTOR CASING (RC17)	1	FC30
87	4301-116050	BOLT (FOR MOTOR CASING)	20	M16*1.75*50L
88	3105-1002A-3	GASKET OF MOTOR CASING	1	REINZ-AFM 34, 1.5t
89	3136-2550A	MOTOR STATOR (RC16)	1	60Hz, 460V
89	3116-2220A	MOTOR STATOR (RC17)	1	60Hz, 380V
90	3105-2104A	MOTOR STATOR GUIDE VANE	2	ALUMINUM
91	3105-2103B	PAD OF GUIDE VANE	2	STEEL
92	4303-308	M8 SPRING WASHER	2	M8
93	4301-106050	BOLT (FOR MOTOR STATOR GUIDE VANE)	2	M8*1.25*50L
94	4303-308	M8 SPRING WASHER	6	M8
95	4301-108016	BOLT (FOR MOTOR STATOR GUIDE VANE)	6	M8*1.25*16L
96	3142-1094	3/8" NPT CONNECTOR	1	3/8" NPT * 3/8" F
97	4302-312	COPPER COVER	1	3/8" F
98	4302-311	COPPER SCREW NUT	1	3/8" F
99	4304-102	1/4" NPT CONNECTOR	1	1/4"
100	4302-301	COPPER COVER	1	1/4" F
101	4302-303	COPPER SCREW NUT	1	1/4" F
102	4304-102	1/4" NPT CONNECTOR	1	1/4" NPT
103	4304-201	CONNECTOR TERMINAL	1	1/4" NPT
104	4304-106	ANGLE VALVE	1	1/4"
105	4304-301	COPPER COVER	1	1/4" F
106	4302-303	COPPER SCREW NUT	1	1/4" F
107	3105-1004A-3	4" GASKET	1	REINZ-AFM 34, 1.5t
108	3105-1024C	SUCTION FILTER	1	60 MESH
109	3105-1004A-3	GASKET FOR 4" FLANGE	1	REINZ-AFM 34, 1.5t
110	3136-1800A	OIL SEPARATOR (RC16)	1	FCD-500
110	3137-1800A	OIL SEPARATOR (RC17)	1	FCD-500
111	4301-120055	BOLT (OIL SEPARATOR)	24	M20*2.0*55L
112	3105-1001A-3	OIL SEPARATOR GASKET	1	REINZ-AFM 34, 1.5t
113	4301-106060	SCREW BOLT	3	M6 * 60L
114	4303-306	M6 WASHER	3	M6
115	3136-1806A	LOWER SLAB	1	
116	3136-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
117	3136-1804A	OIL SEPARATOR MESH	1	
118	3136-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
119	4303-306	M6 WASHER	3	M6
120	4301-106060	SCREW BOLT	3	M6 * 60L
121	3136-1806A	LOWER SLAB	1	
122	4303-316	M16 WASHER	3	M16
123	4201-116150	SCREW BOLTS	3	M16 * 150L
124	3136-1811A	DISCHARGE TUBE SILENCER	1	
125	4305-105	1/4" NPT PLUG	1	1/4" NPT
126	4305-107	1/8" NPT PLUG	1	1/8" NPT
127	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
128	3101-1004A-3	2 1/2" GASKET	1	REINZ-AFM 34, 1.5t
129	3188-7201A	2 1/2" CHECK VALVE	1	2"
130	3101-1004A-3	2 1/2" GASKET	1	REINZ-AFM 34, 1.5t
131	4201-NP100	O-RING	1	P100 NBR
132	3105-1015A	FLANGE SHELF	1	
133	3102-1019A	DISCHARGE FLANGE	1	2 1/2"
134	4301-116055	SCREW BOLTS	4	M16 * 55L
135	4301-116055	SCREW BOLTS	4	M16 * 55L
136	4304-106	ANGLE VALVE	1	1/4" NPT
137	4304-301	COPPER COVER	1	1/4" F
138	4302-303	COPPER SCREW NUT	1	1/4" F
139	4305-110	1" NPT PLUG	1	1"

HANBELL RC18 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3138-1131A	BEARING SEAT	1	FC25
2	3138-1132A	MALE ROTOR	1	S45C
3	3138-1133A	FEMALE ROTOR	1	S45C
4	3138-1023A	KEY OF MOTOR ROTOR	1	8*12 S45C
5	3105-1134B	BALANCE PISTON	1	Φ117.8 * 18.04t, S45C
6	4102-NU313E	DISCHARGE BEARING (TRANSVERSE, MALE)	1	NU313ECP
7	4101-7313BUO	DISCHARGE BEARING (LONGITUDINAL, MALE)	3	7313BEGAP/7313B.TVP.UO
8	4302-265	KM13BEARING SLOT NUT (MALE ROTOR)	1	M65*2 KM13
9	3138-1109A	DISCHARGE FIXED RING (MALE ROTOR)	1	Φ140.4*86.6t, S15C
10	4307-DB140	DISC SPRING (MALE ROTOR)	1	SCHNORR B140
11	4102-NU2310E	DISCHARGE BEARING OF FEMALE ROTOR (TRANSVERSE)	1	NU2310ECP
12	3138-1137A	INNER SPACER RING OF FEMALE ROTOR	1	Φ50*7.1t, S45C
13	3138-113AA	OUTER SPACER RING OF FEMALE ROTOR	1	ID 93*OD110.3*7.1t, S45C
14	4101-7310BUO	DISCHARGE BEARING OF FEMALE ROTOR (LONGITUDINAL)	3	7310BEGAP/7310B.TVP.UO
15	3138-1111B	DISCHARGE FIXED RING (FEMALE ROTOR)	1	Φ110.4*103.9T, S15C
16	4302-250	KM9 BEARING SLOT NUT (FEMALE ROTOR)	1	M50*1.5 KM10
17	4307-DB100	DISC SPRING (FEMALE ROTOR)	1	SCHNORR B100
18	3138-1103A-3	GASKET OF DISCHARGE COVER PLATE	1	REINZ-AFM 34, 1.5t
19	3138-1101A	DISCHARGE COVER PLATE	1	16t, SS400
20	4301-112035	BOLT (END PLATE)	13	M12*1.5*35L
21	3107-1113A	PISTON SPRING (INNER)	1	Φ70*208L SWP B
22	3107-1117A	PISTON SPRING (Outer)	1	Φ85*208L SWP B
23	3138-1115A	PISTON ROD (RC17)	1	SNCM 439
24	4303-420	COPPER WASHER	1	M20
25	3105-1116C	PISTON	1	S15C
26	3101-1037B	WASHER	1	5mm
27	4303-312	SPRING WASHER	1	M12
28	4301-112035	BOLT (FOR SLIDE VALVE FIXED)	1	M12*1.75*35L
29	5112-GM69	PISTON GUIDE RING	1	Turcite T47
30	4201-CA345	PISTON'S O-RING	1	CR70, 345-2347
31	4202-T120	PISTON RING	1	S44-1200-46N, O.D. 120
32	3105-1008B	GASKET OF DISCHARGE EXHAUST TUBE	1	TEFLON 3mm
33	4301-120055	BOLT (FOR BEARING SEAT)	8	M20*2.5*55L
34	3138-1141A	COMPRESSOR CASING	1	FC25
35	3105-1107B	OIL GUIDING RING (FEMALE ROTOR)	1	Φ90*20.5t S15C
36	4102-NJ2210E	SUCTION BEARING (FEMALE ROTOR)	1	NJ2210ECP
37	4303-248	WASHER	1	1/2"*2.5mm
38	4303-312	SPRING WASHER	1	M12
39	4301-112020	BOLT	1	M12*1.75*20L
40	3105-1106B	OIL GUIDING RING (MALE ROTOR)	1	Φ140*25.5 S15C
41	4102-NU2216E	SUCTION BEARING (MALE ROTOR)	1	NU2216ECP
42	3105-1104A	INNER SPACER RING OF SUCTION BEARING (MALE)	1	Φ92*50t, S15C
43	3105-1105A	OUTER SPACER RING OF SUCTION BEARING (MALE)	1	Φ140*50t, S15C
44	4102-NU2216E	SUCTION BEARING (MALE ROTOR)	1	NU2216ECP
45	3105-1108A	SUCTION FIXED RING (MALE ROTOR)	1	Φ170*3t S15C
46	4301-106016	BOLT	6	M6*1*16L
47	3138-2131A	MOTOR ROTOR	1	
48	3105-1017A	MOTOR ROTOR WASHER	1	Φ92*10 S45C
49	4303-316	SPRING WASHER	1	M16
50	4301-116060	BOLT (FOR MOTOR ROTOR FIXED)	1	M16*2.0*60L
51	3101-1153A	3/8" PT PLUG	1	
52	4201-VP021	O-RING	1	P21 VITON
53	3105-1143A	OIL FILTER	1	Φ40*200
54	3105-1146A	INNER GASKET OF OIL FILTER FLANGE	1	TEFLON 1.5t
55	3101-1148A-3	OUTER GASKET OF OIL FILTER FLANGE	1	REINZ AFM 34, 1.5t
56	3105-1144A	OIL FILTER FLANGE	1	FC25
57	4301-112035	BOLT	4	M12*1.75*35L
58	3142-1094	OIL COOLER CONNECTOR 3/8" NPT	1	3/8" NPT * 3/8"F
59	4302-312	COPPER COVER	1	3/8" F
60	4302-311	COPPER SCREW NUT	1	3/8" F
61	4201-VA119	O-RING	1	A.R.P.119, VITON
62	3101-1168A	1/2" PT PLUG	1	1/2" PT
63	4305-105	1/4" NPT PLUG	1	1/4" NPT
64	4304-115	THREE WAY CONNECTOR	1	A6330 1/4"F
65	3101-1145E	CAPILLARY	1	
66	3138-1512B	SLIDE VALVE, Vi=2.2	1	FCD45
67	3105-1114A	SLIDE VALVE KEY	1	26*27*14.5, S45C

HANBELL RC18 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
68	4301-108016	BOLT FOR SLIDE VALVE KEY	1	M8*1*16L
69	3101-1052B	OIL HEATER 220V, 150W	1	
70	3101-1148A-3	GASKET OF SERVICE FLANGE	1	REINZ-AFM 34, 1.5t
71	3101-1142A	SERVICE FLANGE	1	Φ124*16t
72	4301-112035	BOLT	6	M12*1.75*35L
73	4201-VA119	O-RING	1	A.R.P.119, VITON
74	4804-01	SIGHT GLASS	1	ALCO
75	3101-1006A-3	MOTOR CABLE PLATE GASKET	1	REINZ-AFM 34, 1.5t
76	3105-1080B	MOTOR CABLE PLATE	1	FC25
77	4301-112040	BOLT (FOR MOTOR CABLE COVER PLATE)	16	M12*1.75*40L
78	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
79	4301-804012	BOLT FOR SOLENOID VALVE	12	M4 * 0.7 * 12L
80	4401-32	SOLENOID VALVE (STEP CONTROL)	3	2743K0R30-4344 SDH12223DS
81	4303-104	WASHER	3	
82	4302-104	SCREW NUT	3	
83	4201-VP021	O-RING	1	P21 VITON
84	3101-1153A	3/8" PT PLUG	1	
85	4301-416000	EYE BOLT	2	M16
86	3138-2101A	MOTOR CASING	1	FC30
87	4301-116055	BOLT (FOR MOTOR CASING)	20	M16*1.75*55L
88	3105-1002A-3	GASKET OF MOTOR CASING	1	REINZ-AFM 34, 1.5t
89	3138-2320A	MOTOR STATOR (RC14)	1	50Hz, 380V
89	3114-2220A	MOTOR STATOR (RC15)	1	60Hz, 380V
90	3138-2104A	MOTOR STATOR GUIDE VANE	1	ALUMINUM
91	3101-2103B	PAD OF GUIDE VANE	2	STEEL
92	4303-308	M8 SPRING WASHER	2	M8
93	4301-108025	BOLT (FOR MOTOR STATOR GUIDE VANE)	2	M8*1.25*25L
94	4303-308	M8 SPRING WASHER	6	M8
95	4301-108016	BOLT (FOR MOTOR STATOR GUIDE VANE)	6	M8*1.25*16L
96	3142-1094	3/8" NPT CONNECTOR	1	3/8" NPT * 3/8"F
97	4302-312	COPPER COVER	1	3/8" F
98	4302-311	COPPER SCREW NUT	1	3/8" F
99	4304-102	1/4" NPT CONNECTOR	1	1/4"
100	4302-301	COPPER COVER	1	1/4" F
101	4302-303	COPPER SCREW NUT	1	1/4" F
102	4304-102	1/4" NPT CONNECTOR	1	1/4" NPT
103	4304-201	CONNECTOR TERMINAL	1	1/4" NPT
104	4304-106	ANGLE VALVE	1	1/4"
105	4304-301	COPPER COVER	1	1/4" F
106	4302-303	COPPER SCREW NUT	1	1/4" F
107	3105-1004A-3	4" GASKET	1	REINZ-AFM 34, 1.5t
108	3105-1024C	SUCTION FILTER	1	60 MESH
109	3105-1004A-3	GASKET FOR 4" FLANGE	1	REINZ-AFM 34, 1.5t
110	3138-1800A	OIL SEPARATOR	1	FCD-500
111	4301-120055	BOLT (OIL SEPARATOR)	24	M20*2.0*55L
112	3105-1001A-3	OIL SEPARATOR GASKET	1	REINZ-AFM 34, 1.5t
113	4301-106060	SCREW BOLT	3	M6 * 60L
114	4303-306	M6 WASHER	3	M6
115	3138-1806A	LOWER SLAB	1	
116	3138-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
117	3138-1804A	OIL SEPARATOR MESH	1	
118	3138-1809A	OIL SEPARATOR MESH LOWER SLAB	1	
119	4303-306	M6 WASHER	3	M6
120	4301-106060	SCREW BOLT	3	M6 * 60L
121	3138-1806A	LOWER SLAB	1	
122	4303-316	M16 WASHER	3	M16
123	4201-116130	SCREW BOLTS	3	M16 * 130L
124	3138-1811A	DISCHARGE TUBE SILENCER	1	
125	4305-105	1/4" NPT PLUG	1	1/4" NPT
126	4305-107	1/8" NPT PLUG	1	1/8" NPT
127	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
128	3107-1005A-3	3" GASKET	1	REINZ-AFM 34, 1.5t
129	3188-7300A	3" CHECK VALVE	1	3"
130	3107-1005A-3	3" GASKET	1	REINZ-AFM 34, 1.5t
131	4201-NP120	O-RING	1	P120 NBR
132	3105-1015A	FLANGE SHELF	1	
133	3105-1019B	DISCHARGE FLANGE	1	4"
134	4301-116055	SCREW BOLTS	4	M16 * 55L
135	4301-116055	SCREW BOLTS	4	M16 * 55L
136	4304-106	ANGLE VALVE	1	1/4" NPT
137	4304-301	COPPER COVER	1	1/4" F
138	4302-303	COPPER SCREW NUT	1	1/4" F
139	4305-110	1" NPT PLUG	1	1"

HANBELL RC19~RC21 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3139-1800A	OIL SEPARATOR (RC19)	1	FCD-500
1	3140-1800A	OIL SEPARATOR (RC20~RC21)	1	FCD-500
2	4304-106	ANGLE VALVE	1	1/4" SAE*1/4" NPT
3	4301-120050	BOLT	4	M20*2.0*50L
4	4301-120060	BOLT	4	M20*2.0*60L
5	3103-1042A	WASHER	8	M20
6	3103-1019B	DISCHARGE FLANGE	1	FCD50
7	3103-101NB	3" COPPER TUBE, (FOR RC20~RC21: 3105-101IB – 4")	1	
	3107-1005A-3	3" GASKET FOR DISCHARGE FLANGE, (FOR RC20~RC21: 4")	1	REINZ-AFM 34, 1.5t
8	3138-7100A	3" CHECK VALVE, (FOR RC20~RC21: 3140-7100A – 4")	1	
9	3105-1001A-3	OIL SEPARATOR GASKET	1	REINZ-AFM 34, 1.5t
10	4301-120055	BOLT (OIL SEPARATOR)	24	M20*2.5*55L
11	4301-112035	BOLT (END PLATE)	15	M12*1.75*35L
12	3107-1101B	DISCHARGE COVER PLATE	1	SS400
13	3107-1103A-3	GASKET OF DISCHARGE COVER PLATE	1	REINZ-AFM 34, 1.5t
14	4301-112035	BOLT (FOR SLIDE VALVE FIXED)	1	M12*1.75*35L
15	4303-312	SPRING WASHER	1	M12
16	3101-1037B	WASHER	1	5mm
17	3105-1116C	PISTON	1	Φ89 S15C
18	4303-420	COPPER WASHER	1	M20
19	4201-CA345	PISTON'S O-RING	1	CR70, 345-2347
20	4202-T120	PISTON RING	1	S44-1200-46N
	5112-GM69	PISTON GUIDE RING	1	Turcite T47
21	3107-1115A	PISTON ROD (RC19)	1	SNCM 439
21	3108-1115A	PISTON ROD (R20~RC21)		SNCM 439
22	3107-1113A	PISTON SPRING (Inner), (FOR RC20~RC21: 3108-1113A)	1	Φ70*208L (251) SWP B
23	3107-1117A	PISTON SPRING (Outer), (FOR RC20~RC21: 3108-1117A)		Φ85*208L (251) SWP B
24	4307-DB112	DISC SPRING (MALE ROTOR)	1	SCHNORR B112
25	3105-1109B	DISCHARGE FIXED RING (MALE ROTOR)	1	Φ130.6*101.7L, S15C
26	4302-260	KM12 BEARING SLOT NUT (MALE ROTOR)	1	M60*2.0 KM12
27	4101-7312BUO	DISCHARGE BEARING (LONGITUDINAL, MALE)	3	7312BEGAP/7312B.TVP.UO
28	4102-NU312E	DISCHARGE BEARING (TRANSVERSE, MALE)	1	NU312ECP
29	3107-1136A	BALANCE PISTON FOR MALE ROTOR	1	Φ105.75*20.08 S45C
30	3107-1132C	MALE ROTOR (RC19)	1	S45C
30	3108-1132C	MALE ROTOR (RC20~RC21)	1	S45C
31	3107-1023A	KEY OF MOTOR ROTOR (RC19)	1	S45C
31	3108-1023A	KEY OF MOTOR ROTOR (RC20~RC21)	1	S45C
32	3107-1106B	OIL GUIDING RING (MALE ROTOR)	1	Φ150*20t S15C
33	4102-NU2217E	SUCTION BEARING (MALE ROTOR)	1	NU2217ECP
34	3107-1105A	OUTER SPACER RING OF SUCTION BEARING (MALE)	1	Φ150*53.3t, S15C
35	3107-1104A	INNER SPACER RING OF SUCTION BEARING (MALE)	1	Φ97*53.3t, S15C
36	4102-NU2217E	SUCTION BEARING (MALE ROTOR)	1	NU2217ECP
37	3107-2131A	MOTOR ROTOR (RC19)	1	RM 600
37	3108-2131A	MOTOR ROTOR (RC20~RC21)	1	RM 600
38	3107-1032A	MOTOR ROTOR SPACER RING	1	Φ16*Φ32 S45C
39	3105-1017A	MOTOR ROTOR WASHER	1	Φ92*10 S45C
40	4303-316	SPRING WASHER	1	M16
41	4301-116060	BOLT (FOR MOTOR ROTOR FIXED)	1	M16*2.0*60L
42	4307-DB100	DISC SPRING (FEMALE ROTOR)	1	SCHNORR 100
43	3105-1111B	DISCHARGE FIXED RING (FEMALE ROTOR)	1	Φ80*73.7L S15C
44	4302-255	KM11 BEARING SLOT NUT (FEMALE ROTOR)	1	M55*1.5 KM11
45	4101-7311BUO	DISCHARGE BEARING OF FEMALE ROTOR (LONGITUDINAL)	3	7311BEGAP/7311B.TVP.UO
46	4102-NU2311E	DISCHARGE BEARING OF FEMALE ROTOR (TRANSVERSE)	1	NU2311ECP
47	3107-1139A	BALANCE PISTON FOR FEMALE ROTOR	1	Φ97.75*20.08 S45C
48	3107-1133B	FEMALE ROTOR (RC19)	1	S45C
48	3108-1133B	FEMALE ROTOR (RC20~RC21)	1	S45C
49	3107-1107B	OIL GUIDING RING (FEMALE ROTOR)	1	Φ90*20t S15C
50	4102-NJ2308E	SUCTION BEARING (FEMALE ROTOR)	1	NJ2308ECP
51	3107-1131B	BEARING SEAT (RC19)	1	FC25
51	3108-1131B	BEARING SEAT (RC20~RC21)	1	FC25
52	3105-1008B	GASKET OF DISCHARGE EXHAUST TUBE	1	TEFLON 3mm
53	4301-120055	BOLT (FOR BEARING SEAT)	8	M20*2.5*55L
54	3101-1102B	FIX PIN	2	Φ20*35L S45C
55	4305-102	PLUG	2	1/4" PT
56	4301-108020	BOLT FOR SLIDE VALVE KEY	1	M8*1.25*20L

HANBELL RC19~RC21 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
57	3105-1114A	SLIDE VALVE KEY	1	27*26*14.5
58	3107-1512B	SLIDE VALVE, Vi=2.2 (RC19)	1	FCD45
58	3108-1512B	SLIDE VALVE, Vi=2.2 (RC20~RC21)	1	FCD45
59	4301-112035	BOLT	8	M12*1.75*35L
60	3107-1142A	SERVICE FLANGE	1	Φ166*20t
61	3107-1147A-3	GASKET OF SERVICE FLANGE	1	REINZ-AFM 34, 1.5t
62	4805-01	MAGNETICS	2	40*25*10
63	3107-1141B	COMPRESSOR CASING (RC19)	1	FC25
63	3108-1141B	COMPRESSOR CASING (RC20~RC21)	1	FC25
64	3107-1143A	OIL FILTER	1	Φ40*200
65	3107-1146A	INNER GASKET OF OIL FILTER FLANGE	1	TEFLON 1.5t
66	3107-1147A-3	OUTER GASKET OF OIL FILTER FLANGE	1	REINZ AFM 34, 1.5t
67	3107-1144A	OIL FILTER FLANGE	1	FC25
68	4301-112035	BOLT	8	M12*1.75*35L
69	4301-302	POWER BOLT	6	FUSITE X4901
70	4201-VA122	POWER BOLT O-RING	6	A.R.P122, VITON
71	4302-412	COPPER NUT (FOR POWER BOLT)	6	M12*1.75
72	4303-312	SPRING WASHER	6	M12
73	3101-1043A	COPPER NUT	6	M12*1.75
74	4301-301	SCREW FOR PTC WIRING	2	FUSITE X4914
75	4301-112045	BOLT (FOR MOTOR CABLE COVER PLATE)	16	M12*1.75*45L
76	3101-1041C	MOTOR CABLE COVER PLATE	1	FC25
77	3101-1006A-3	GASKET (FOR MOTOR CABLE COVER PLATE)	1	REINZ-AFM 34, 1.5t
78	4401-30	NUT	3	M8*0.75
79	4401-30	WASHER	3	M8
80	4401-22	SOLENOID COIL	3	
81	4401-32	SOLENOID VALVE (STEP CONTROL)	3	2743K0R30-4344 SDH12223DS
	3101-1003A	SOLENOID VALVE GASKET	3	NOK,1515SPS
82	4301-804012	BOLT	12	M4*0.7*12L
83	3101-1145E	CAPILLARY	1	1/4" F Φ2.6°
84	4304-101	90° ELBOW	2	1/4" NPT A-4890 90°
85	4304-105	5/8" CONNECTOR	1	5/8" F*1/2NPT
86	4804-01	OIL SIGHT GLASS (O-RING INCLUDED)	1	ALCO
87	4305-102	PLUG (O-RING INCLUDED)	1	3/4" PF
88	4304-111	3/4" CONNECTOR		3/4" F*1/2" NPT
89	3105-1108A	SUCTION FIXED RING (MALE ROTOR)	1	Φ170*3t S15C
90	4301-106016	BOLT	4	M6*1*16L
91	4303-248	WASHER	1	1/2"*2.5mm
92	4303-312	SPRING WASHER	1	M12
93	4301-112020	BOLT	1	M12*1.75*20L
94	3118-2220A	MOTOR STATOR (RC19)	1	60Hz, 380V
94	3119-2250A	MOTOR STATOR (RC20~RC21)	1	60Hz, 380V
95	3102-1002A-3	GASKET OF MOTOR CASING	1	REINZ-AFM 34, 1.5t
96	3107-2101B	MOTOR CASING (RC19)	1	FC30
96	3108-2101B	MOTOR CASING (RC20~RC21)	1	FC30
97	4301-116055	BOLT (FOR MOTOR CASING)	24	M16*20*55L
98	3107-2102D	FIXED BOLT OF MOTOR STATOR	1	M28*1.5, 79L
99	3107-2105B	WASHER (FOR FIXED BOLT OF MOTOR STATOR)	1	Φ26.7*24L
100	4301-116060	BOLT	8	M16*2.0*60L
101	3103-1042A	M16 SPRING WASHER	8	Φ30*5t
102	3107-1018A	FLANGE	1	5"
103	3107-1016A	FLANGE SHELF	1	5"
104	3107-1004A-3	GASKET FOR 5" FLANGE	1	REINZ-AFM 34, 1.5t
105	3107-1054A	GASKET FOR SUCTION FILTER	1	TEFLON 1.5t
106	3107-1024C	SUCTION FILTER	1	60 mesh
107	3107-1055A	SPRING	1	Φ70*50L, SWP B
108	3104-1004A-3	GASKET FOR SUCTION FILTER FLANGE	1	REINZ-AFM 34, 1.5t
109	3107-1053A	SUCTION FILTER FLANGE	1	Φ226*20t, SS400
110	4301-120065	BOLT (FOR SUCTION FLANGE)	4	M20*2.5*65L

HANBELL RC22 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3142-1131B	BEARING SEAT	1	FCD-50
2	3142-1132B	MALE SCREW ROTOR	1	SAE – 1141
3	3142-1133B	FEMALE SCREW ROTOR	1	SAE – 1141
4	3142-1137A	MALE ROTOR INNER SPACER RING	1	S45C
5	3143-1104A	MALE ROTOR SPACER RING	1	S15C, Φ110 * 163L
6	3108-1023B	MOTOR ROTOR KEY	1	S45C, 14 * 22 * 260L
7	4102-NU313E	MALE ROTOR DISCHARGE RADIAL BEARING	1	NU 313E
8	4102-NU2313E	FEMALE ROTOR DISCHARGE RADIAL BEARING	1	NU 2313E
9	3142-113AA	MALE AND FEMALE ROTOR OUTER SPACER RING	2	S45C
10	4101-7313BUO	MALE AND FEMALE ROTOR DISCHARGE AXIAL BEARING	5	7313 BUO
11	4302-265	KM 13 BEARING LOCK NUT	2	M65 * 2.0
12	3142-1111B	FEMALE ROTOR DISCHARGE BEARING FIXED RING	1	S15C
13	3142-1109B	MALE ROTOR DISCHARGE BEARING FIXED RING	1	S15C
14	4307-DB140	DISCHARGE BEARING DISC SPRING	2	
15	4201-VA355	O-RING	2	A.R.P. 355 VITON
16	3142-1118A	DISCHARGE BEARING COVER	2	SS400, Φ140.8 * 22t
17	3142-1101A	DISCHARGE COVER PLATE	1	SS400, 15t
18	4301-116035	DISCHARGE COVER PLATE SCREW BOLTS	12	M16 * 35L
19	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
20	4301-116055	SCREW BOLT	6	
21	4303-316	SPRING WASHER	6	M16
22	3142-1017A-3	DISCHARGE FLANGE GASKET	1	REINZ-AFM 34, 1.5t
23	3107-101AA	FLANGE COUPLING	1	
24	3142-1020A	DISCHARGE FLANGE 5"	1	SS400, Φ270 * 25t
25	3103-1042A	SPRING WASHER		SS400, Φ30 * 5t
26	4301-120060	DISCHARGE FLANGE SCREW BOLTS	12	M20 * 2.5 * 60L
27	3142-1121C	PISTON CYLINDER	1	FCD50
28	4201-VA354	O-RING	1	A.R.P. 354, VITON
29	4301-116045	SCREW BOLT	6	M16 * 45L
30	4303-316	SPRING WASHER		
31	3142-1113A	PISTON SPRING	1	SWP B
32	3142-1115A	PISTON ROD	1	SNCM 439
33	4201-VP038	O-RING	1	P38 VITON
34	5112-GM69	PISTON GUIDE RING	1	Turcite T47
35	4201-CA349	PISTON O-RING	1	A.R.P. 349 CR70
36	4202-T130	PISTON RING	1	GS55044 – 1300
37	3142-1116B	PISTON	1	S15C
38	3142-1037A	SPRING WASHER	1	SS400, Φ34 * 5t
39	4301-120045	PISTON SCREW BOLT	1	M20 * 2.5p * 45L
40	4201-VA351	O-RING	1	A.R.P.351 VITON
41	3142-1122B	CYLINDER COVER	1	SS400
42	4301-112040	CYLINDER COVER SCREW BOLTS	8	M12 * 1.75 * 40L
43	4301-116055	BEARING SEAT SCREW BOLTS	13	M16 * 55L
44	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
45	4401-32	SOLENOID VALVE (NC)	3	O.D.E. 2743K0R30 – 4344
46	4301-804020	SOLENOID VALVE SCREW BOLTS	12	
47	4402-03	SOLENOID COIL	3	O.D.E. BDV08224DU, 50/60 Hz
48	4302-104	WASHER	3	
49	4303-104	SCREW NUT	3	
50	4304-106	ANGLE VALVE ¼" NPT	1	CASTEL 6110/22, ¼"SAE * ¼"NPT
51	4302-301	COPPER COVER	1	¼" A – 414
52	4302-303	COPPER SCREW NUT	1	¼" A – 414
53	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
54	4302-303	COPPER COVER	1	¼"F A – 5051
55	4302-303	COPPER SCREW NUT	1	¼" A – 414
56	4305-102	PLUG ¼" PT	1	¼"PT * 11L
57	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
58	4304-201	¼" NPT TERMINAL	1	¼"F * ¼"NPT, CD1414
59	3142-1129A	TUBE	1	
60	3142-1128A	TUBE	1	
61	3142-1127A	TUBE	1	¼", 450L
62	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
63	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
64	4304-101	¼" NPT CONNECTOR, 90° ELBOW	1	¼"F * ¼" NPT, A - 4890
65	3142-1141A	COMPRESSOR CASING	1	FCD 50
66	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585

HANBELL RC22 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
67	4304-201	¼" NPT TERMINAL	1	¼"F * ¼"NPT, CD1414
68	4302-303	COPPER SCREW NUT	1	¼" A – 414
69	4302-301	COPPER COVER	1	¼"F A – 5051
70	4304-106	ANGLE VALVE ¼" NPT	1	CASTEL 6110/22, ¼"SAE * ¼"NPT
71	4201-VP010	O-RING	1	P010 VITON
72	3142-1094B	3/8" NPT CONNECTOR	1	C3603, Φ3
73	4302-312	COPPER COVER	1	3/8" F
74	4302-311	COPPER SCREW NUT	1	3/8" F
75	3107-1151A-3	ECONOMIZER FLANGE GASKET	1	REINZ-AFM 34, 1.5t
76	3107-1152A	ECONOMIZER FLANGE HOLE COVER	1	Φ40 * 3t
77	3107-1150B	ECONOMIZER FLANGE	1	
78	4301-112035	ECONOMIZER FLANGE SCREW BOLTS	2	M12 * 1.7 * 35L
79	4201-VP010	O-RING	1	P010 VITON
80	4201-VP018	O-RING	2	P18 VITON
81	3142-1512B	SLIDE VALVE Vi 2.2	1	FCD 600
82	3142-1172A	CHECK VALVE	1	
83	3142-1174A	SLIDE VALVE KEY	1	S45C ~ S55C
84	3201-1114A	SLIDE VALVE KEY	1	S45C
85	4301-108016	SCREW BOLT	1	
86	4201-VA383	O-RING	1	A.R.P.383 VITON
87	3142-1092A	BASE	1	FC25
88	4301-116090	SCREW BOLT	2	M16 * 2.0p * 90L
89	4301-112090	SCREW BOLT	2	
90	4201-VP038	O-RING	1	P38 VITON
91	3142-1153A	1" PLUG	1	
92	3142-1094B	3/8" NPT CONNECTOR	1	C3603, Φ3
93	4302-312	COPPER COVER	1	3/8" F
94	4302-311	COPPER SCREW NUT	1	3/8" F
95	3142-1102A	GUIDE PIN	2	S45C
96	4102-NU2318E	MALE ROTOR SUCTION BEARING	1	NU2318ECP
97	3142-1108B	MALE ROTOR SUCTION BEARING COVER	1	A2017BE – T42
98	4303-106	WASHER	4	
99	4301-106016	SCREW BOLTS	4	M6 * 1 * 16L
100	4303-248	WASHER	1	Φ31.9 * 12.5 * 2.3t
101	4303-312	M12 SPRING WASHER	1	
102	4301-112020	SCREW BOLTS	1	
103	4102-NJ2310E	FEMALE ROTOR SUCTION BEARING	1	NJ2310ECP
104	3142-1110A	FEMALE ROTOR SUCTION BEARING COVER	1	SS400, 17t
105	4301-110055	SCREW BOLT	12	M20 * 2.5 * 55L
106	4304-201	¼" NPT TERMINAL	1	¼"F * ¼"NPT, CD1414
107	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
108	3142-1019A	SUCTION FLANGE	1	SS400, Φ305 * 32t
109	3142-1004A-3	SUCTION FLANGE GASKET	1	REINZ-AFM 34, 1.5t
110	3142-1024A	SUCTION FILTER	1	60 MESH/INCH
111	4201-VP165	O-RING	2	P165 VITON
112	3142-1004A-3	SUCTION FLANGE GASKET	1	REINZ-AFM 34, 1.5t
113	3142-101AA	FLANGE COUPLING	1	
114	3142-1018A	6" FLANGE	1	SS400, Φ305 * 32t
115	3103-1042A	M20 WASHER	39	SS400, Φ30 * 5t
116	4301-120055	SCREW BOLTS	13	M20 * 2.5 * 55L
117	3142-2101A	MOTOR CASING	1	FCD50
118	3142-2320A	MOTOR STATOR ASSEMBLY	1	
119	3142-2103A	MOTOR STATOR HOLDER	2	SS400
120	4307-DB031	WASHER	10	DB 31.5
121	4301-116070	SCREW BOLTS	10	M16 * 2.0p * 70L
122	4201-VA390	O-RING	1	A.R.P.390 VITON
123	3142-2201A	MOTOR COVER	1	FCD50
124	4301-116065	SCREW BOLTS	24	M16 * 65L
125	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
126	4304-201	¼" NPT TERMINAL	1	¼"F * ¼"NPT, CD1414
127	4201-VA119	O-RING	1	A.R.P.119 VITON
128	4804-01	SIGHT GLASS	1	ALCO
129	4405-01	BALL VALVE	1	RIKO, RFS – 2 – 2, SUS316

HANBELL RC22 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
130	4201-VP008	O-RING	1	P8 VITON
131	4201-VP036	O-RING	1	P36 VITON
132	3142-1149A	LEVEL SWITCH PLUG	1	S45C
133	4806-28	3/8" PF PLUG	1	3/8" PF
134	5107-01	TUBE	1	
135	3142-1092A	BASE	1	FC25
136	4301-116090	SCREW BOLT	2	M16 * 2.0p * 90L
137	4301-116050	SCREW BOLT	4	M16 * 2.0p * 50L
138	4304-201	1/4" NPT TERMINAL	1	1/4"F * 1/4"NPT, CD1414
139	4304-102	1/4" NPT CONNECTOR	1	1/4"F * 1/4"NPT, A – 4585
140	3142-2104A	MOTOR LIQUID INJECTION FLANGE	1	SS400
141	3105-1004A-3	4" GASKET	1	REINZ-AFM 34, 1.5t
142	4301-610	POWER BOLT	6	AUBURN F610, 750 Amp
143	4302-116	SCREW NUT	6	M16
144	4201-VA012	O-RING	4	A.R.P. 012 VITON
145	4301-301	TEMPERATURE SENSOR SCREW BOLTS	4	FUSITE 20 – 61862
146	3142-1014A	CABLE BOX GASKET	1	
147	3142-1012B	CABLE BOX	1	600 * 370L * 2.0t
148	3142-1013B	CABLE BOX COVER	1	604 * 374L * 1.6t
149	3138-1007A	CABLE BOX FLANGE GASKET	2	
150	3138-1021A	CABLE BOX FLANGE	2	
151	4301-108016	SCREW BOLTS	8	
152	4806-33	CABLE BOX HOLE PLUG	4	Φ19, HP – 19
153	4301-108016	SCREW BOLTS	6	M8 * 16L
154	4301-108016	SCREW BOLTS	4	M8 * 16L
155	4302-104	SCREW NUT	2	
156	4303-304	SPRING WASHER	2	
157	4303-104	WASHER	2	
158	4405-35	MOTOR PROTECTIVE CONTROLLER, INT 69, 110V	1	KRIWAN, 52A120S10
158	4405-15	MOTOR PROTECTIVE CONTROLLER, INT 69, 220V	1	KRIWAN, 52A120S10
159	4301-104020	SCREW BOLTS	2	M4 * 20L
160	3101-1004A-3	FLANGE GASKET	1	REINZ-AFM 34, 1.5t
161	3142-2105A	LIQUID INJECTION FLANGE	1	SS400
162	4304-106	ANGLE VALVE 1/4" NPT	1	CASTEL 6110/22, 1/4"SAE * 1/4"NPT
163	4302-303	COPPER SCREW NUT	1	1/4" A – 414
164	4302-301	COPPER COVER	1	1/4"F A – 5051
165	4301-120050	SCREW BOLTS	4	M20 * 2.5 * 50L
166	4301-116065	SCREW BOLTS	24	M16 * 65L

HANBELL RC23~RC24 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
1	3143-1131B	BEARING SEAT	1	FCD-50
2	3143-1132B	MALE SCREW ROTOR	1	SAE – 1141
3	3143-1133B	FEMALE SCREW ROTOR	1	SAE – 1141
4	3142-1137A	MALE ROTOR INNER SPACER RING	1	S45C
5	3143-1104A	MALE ROTOR SPACER RING	1	S15C, Φ110 * 163L
6	3108-1023B	MOTOR ROTOR KEY	1	S45C, 14 * 22 * 260L
7	4102-NU313E	MALE ROTOR DISCHARGE RADIAL BEARING	1	NU 313E
8	4102-NU2313E	FEMALE ROTOR DISCHARGE RADIAL BEARING	1	NU 2313E
9	3142-113AA	MALE AND FEMALE ROTOR OUTER SPACER RING	2	S45C
10	4101-7313BUO	MALE AND FEMALE ROTOR DISCHARGE AXIAL BEARING	5	7313 BUO
11	4302-265	KM 13 BEARING LOCK NUT	2	M65 * 2.0
12	3142-1111B	FEMALE ROTOR DISCHARGE BEARING FIXED RING	1	S15C
13	3142-1109B	MALE ROTOR DISCHARGE BEARING FIXED RING	1	S15C
14	4307-DB140	DISCHARGE BEARING DISC SPRING	2	
15	4201-VA355	O-RING	2	A.R.P. 355 VITON
16	3142-1118A	DISCHARGE BEARING COVER	2	SS400, Φ140.8 * 22t
17	3142-1101A	DISCHARGE COVER PLATE	1	SS400, 15t
18	4301-116035	DISCHARGE COVER PLATE SCREW BOLTS	12	M16 * 35L
19	4405-16	DISCHARGE TEMPERATURE SENSOR	1	KRIWAN, PTC, 02D512S36
20	4301-116055	SCREW BOLT	6	
21	4303-316	SPRING WASHER	6	M16
22	3142-1017A-3	DISCHARGE FLANGE GASKET	1	REINZ-AFM 34, 1.5t
23	3107-101AA	FLANGE COUPLING	1	
24	3142-1020A	DISCHARGE FLANGE 5"	1	SS400, Φ270 * 25t
25	3103-1042A	SPRING WASHER		SS400, Φ30 * 5t
26	4301-120060	DISCHARGE FLANGE SCREW BOLTS	12	M20 * 2.5 * 60L
27	3142-1121C	PISTON CYLINDER	1	FCD50
28	4201-VA354	O-RING	1	A.R.P. 354, VITON
29	4301-116045	SCREW BOLT	6	M16 * 45L
30	4303-316	SPRING WASHER		
31	3143-1113A	PISTON SPRING	1	SWP B
32	3143-1115A	PISTON ROD	1	SNCM 439
33	4201-VP038	O-RING	1	P38 VITON
34	5112-GM69	PISTON GUIDE RING	1	TURCITE T47
35	4201-CA349	PISTON O-RING	1	A.R.P. 349 CR70
36	4202-T130	PISTON RING	1	GS55044 – 1300
37	3142-1116B	PISTON	1	S15C
38	3142-1037A	SPRING WASHER	1	SS400, Φ34 * 5t
39	4301-120045	PISTON SCREW BOLT	1	M20 * 2.5p * 45L
40	4201-VA351	O-RING	1	A.R.P.351 VITON
41	3142-1122B	CYLINDER COVER	1	SS400
42	4301-112040	CYLINDER COVER SCREW BOLTS	8	M12 * 1.75 * 40L
43	4301-116055	BEARING SEAT SCREW BOLTS	13	M16 * 55L
44	3101-1003A	SOLENOID VALVE GASKET	3	NOK, 1515SPS
45	4401-32	SOLENOID VALVE (NC)	3	O.D.E. 2743K0R30 – 4344
46	4301-804020	SOLENOID VALVE SCREW BOLTS	12	
47	4402-03	SOLENOID COIL	3	O.D.E. BDV08224DU, 50/60 Hz
48	4302-104	WASHER	3	
49	4303-104	SCREW NUT	3	
50	4304-106	ANGLE VALVE ¼" NPT	1	CASTEL 6110/22, ¼"SAE * ¼"NPT
51	4302-301	COPPER COVER	1	¼" A – 414
52	4302-303	COPPER SCREW NUT	1	¼" A – 414
53	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
54	4302-303	COPPER COVER	1	¼"F A – 5051
55	4302-303	COPPER SCREW NUT	1	¼" A – 414
56	4305-102	PLUG ¼" PT	1	¼"PT * 11L
57	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
58	4304-201	¼" NPT TERMINAL	1	¼"F * ¼"NPT, CD1414
59	3142-1129A	TUBE	1	
60	3142-1128A	TUBE	1	
61	3142-1127A	TUBE	1	¼", 450L
62	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
63	4304-102	¼" NPT CONNECTOR	1	¼"F * ¼"NPT, A – 4585
64	4304-101	¼" NPT CONNECTOR, 90° ELBOW	1	¼"F * ¼" NPT, A - 4890
65	3143-1141A	COMPRESSOR CASING	1	FCD 50
65	3144-1141A	COMPRESSOR CASING	1	FCD 50

HANBELL RC23~RC24 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
66	4304-102	1/4" NPT CONNECTOR	1	1/4"F * 1/4"NPT, A – 4585
67	4304-201	1/4" NPT TERMINAL	1	1/4"F * 1/4"NPT, CD1414
68	4302-303	COPPER SCREW NUT	1	1/4" A – 414
69	4302-301	COPPER COVER	1	1/4"F A – 5051
70	4304-106	ANGLE VALVE 1/4" NPT	1	CASTEL 6110/22, 1/4"SAE * 1/4"NPT
71	4201-VP010	O-RING	1	P010 VITON
72	3142-1094B	3/8" NPT CONNECTOR	1	C3603, Φ3
73	4302-312	COPPER COVER	1	3/8" F
74	4302-311	COPPER SCREW NUT	1	3/8" F
75	3107-1151A-3	ECONOMIZER FLANGE GASKET	1	REINZ-AFM 34, 1.5t
76	3107-1152A	ECONOMIZER FLANGE HOLE COVER	1	Φ40 * 3t
77	3107-1150B	ECONOMIZER FLANGE	1	
78	4301-112035	ECONOMIZER FLANGE SCREW BOLTS	2	M12 * 1.7 * 35L
79	4201-VP010	O-RING	1	P010 VITON
80	4201-VP018	O-RING	2	P18 VITON
81	3143-1512B	SLIDE VALVE Vi 2.2	1	FCD 600
81	3144-1512B	SLIDE VALVE Vi 2.2	1	FCD 600
82	3142-1172A	CHECK VALVE	1	
83	3142-1174A	SLIDE VALVE KEY	1	S45C ~ S55C
84	3201-1114A	SLIDE VALVE KEY	1	S45C
85	4301-108016	SCREW BOLT	1	
86	4201-VA383	O-RING	1	A.R.P.383 VITON
87	3142-1092A	BASE	1	FC25
88	4301-116090	SCREW BOLT	2	M16 * 2.0p * 90L
89	4301-112090	SCREW BOLT	2	
90	4201-VP038	O-RING	1	P38 VITON
91	3142-1153A	1" PLUG	1	
92	3142-1094B	3/8" NPT CONNECTOR	1	C3603, Φ3
93	4302-312	COPPER COVER	1	3/8" F
94	4302-311	COPPER SCREW NUT	1	3/8" F
95	3142-1102A	GUIDE PIN	2	S45C
96	4102-NU2318E	MALE ROTOR SUCTION BEARING	1	NU2318ECP
97	3142-1108B	MALE ROTOR SUCTION BEARING COVER	1	A2017BE – T42
98	4303-106	WASHER	4	
99	4301-106016	SCREW BOLTS	4	M6 * 1 * 16L
100	4303-248	WASHER	1	Φ31.9 * 12.5 * 2.3t
101	4303-312	M12 SPRING WASHER	1	
102	4301-112020	SCREW BOLTS	1	
103	4102-NJ2310E	FEMALE ROTOR SUCTION BEARING	1	NJ2310ECP
104	3142-1110A	FEMALE ROTOR SUCTION BEARING COVER	1	SS400, 17t
105	4301-110055	SCREW BOLT	12	M20 * 2.5 * 55L
106	4304-201	1/4" NPT TERMINAL	1	1/4"F * 1/4"NPT, CD1414
107	4304-102	1/4" NPT CONNECTOR	1	1/4"F * 1/4"NPT, A – 4585
108	3142-1019A	SUCTION FLANGE	1	SS400, Φ305 * 32t
109	3142-1004A-3	SUCTION FLANGE GASKET	1	REINZ-AFM 34, 1.5t
110	3142-1024A	SUCTION FILTER	1	60 MESH/INCH
111	4201-VP165	O-RING	2	P165 VITON
112	3142-1004A-3	SUCTION FLANGE GASKET	1	REINZ-AFM 34, 1.5t
113	3142-101AA	FLANGE COUPLING	1	
114	3142-1018A	6" FLANGE	1	SS400, Φ305 * 32t
115	3103-1042A	M20 WASHER	39	SS400, Φ30 * 5t
116	4301-120055	SCREW BOLTS	13	M20 * 2.5 * 55L
117	3143-2101A	MOTOR CASING	1	FCD50
118	3142-2320A	MOTOR STATOR ASSEMBLY	1	
119	3142-2103A	MOTOR STATOR HOLDER	2	SS400
120	4307-DB031	WASHER	10	DB 31.5
121	4301-116070	SCREW BOLTS	10	M16 * 2.0p * 70L
122	4201-VA390	O-RING	1	A.R.P.390 VITON
123	3142-2201A	MOTOR COVER	1	FCD50
124	4301-116065	SCREW BOLTS	24	M16 * 65L
125	4304-102	1/4" NPT CONNECTOR	1	1/4"F * 1/4"NPT, A – 4585
126	4304-201	1/4" NPT TERMINAL	1	1/4"F * 1/4"NPT, CD1414
127	4201-VA119	O-RING	1	A.R.P.119 VITON
128	4804-01	SIGHT GLASS	1	ALCO
129	4405-01	BALL VALVE	1	RIKO, RFS – 2 – 2, SUS316

HANBELL RC23~RC24 SCREW COMPRESSOR PARTS' LIST

ITEM	PART NO.	PART NAME	Q'TY	SPECIFICATION
130	4201-VP008	O-RING	1	P8 VITON
131	4201-VP036	O-RING	1	P36 VITON
132	3142-1149A	LEVEL SWITCH PLUG	1	S45C
133	4806-28	3/8" PF PLUG	1	3/8" PF
134	5107-01	TUBE	1	
135	3142-1092A	BASE	1	FC25
136	4301-116090	SCREW BOLT	2	M16 * 2.0p * 90L
137	4301-116050	SCREW BOLT	4	M16 * 2.0p * 50L
138	4304-201	1/4" NPT TERMINAL	1	1/4"F * 1/4"NPT, CD1414
139	4304-102	1/4" NPT CONNECTOR	1	1/4"F * 1/4"NPT, A – 4585
140	3142-2104A	MOTOR LIQUID INJECTION FLANGE	1	SS400
141	3105-1004A-3	4" GASKET	1	REINZ-AFM 34, 1.5t
142	4301-610	POWER BOLT	6	AUBURN F610, 750 Amp
143	4302-116	SCREW NUT	6	M16
144	4201-VA012	O-RING	4	A.R.P. 012 VITON
145	4301-301	TEMPERATURE SENSOR SCREW BOLTS	4	FUSITE 20 – 61862
146	3142-1014A	CABLE BOX GASKET	1	
147	3142-1012B	CABLE BOX	1	600 * 370L * 2.0t
148	3142-1013B	CABLE BOX COVER	1	604 * 374L * 1.6t
149	3138-1007A	CABLE BOX FLANGE GASKET	2	
150	3138-1021A	CABLE BOX FLANGE	2	
151	4301-108016	SCREW BOLTS	8	
152	4806-33	CABLE BOX HOLE PLUG	4	Φ19, HP – 19
153	4301-108016	SCREW BOLTS	6	M8 * 16L
154	4301-108016	SCREW BOLTS	4	M8 * 16L
155	4302-104	SCREW NUT	2	
156	4303-304	SPRING WASHER	2	
157	4303-104	WASHER	2	
158	4405-35	MOTOR PROTECTIVE CONTROLLER, INT 69, 110V	1	KRIWAN, 52A120S10
158	4405-15	MOTOR PROTECTIVE CONTROLLER, INT 69, 220V	1	KRIWAN, 52A120S10
159	4301-104020	SCREW BOLTS	2	M4 * 20L
160	3101-1004A-3	FLANGE GASKET	1	REINZ-AFM 34, 1.5t
161	3142-2105A	LIQUID INJECTION FLANGE	1	SS400
162	4304-106	ANGLE VALVE 1/4" NPT	1	CASTEL 6110/22, 1/4"SAE * 1/4"NPT
163	4302-303	COPPER SCREW NUT	1	1/4" A – 414
164	4302-301	COPPER COVER	1	1/4"F A – 5051
165	4301-120050	SCREW BOLTS	4	M20 * 2.5 * 50L
166	4301-116065	SCREW BOLTS	24	M16 * 65L