INDEX

Congratulations for purchasing a product with SCHULZ quality.
An ISO 9001 quality system and ISO 14001 environmental management system certified company.

SCHULZ products combine technology and convenience.
If you need any help, please, contact us.

ATTENTION

The warranty period will only be valid when the Technical Delivery of this compressor is performed by the Accredited Technician of a SCHULZ AUTHORIZED DEALER. Read the chapter Technical Delivery.

IMPORTANT

This Instruction Manual contains important information about operation, installation, maintenance and safety, and must be always available for the operator. Before operating the equipment or performing any maintenance job, read this instruction manual and be sure of fully understanding all the instructions in order to prevent personal injuries or material damages to your rotary screw compressor.

IMPORTANT

For the maintenance of your rotary screw compressor, always use genuine SCHULZ parts, which are purchased at a SCHULZ AUTHORIZED DEALER.

2. INTRODUCTION

FOR THE CORRECT USE OF THE PRODUCT, WE RECOMMEND THE COMPLETE READING OF THIS MANUAL.

It will help you optimize the performance of the equipment, guarantee its safe operation and guide you through its preventive maintenance. In case you cannot solve a problem with the help of the information contained in this manual, contact the nearest SCHULZ AUTHORIZED DEALER, who will always be willing to help you, or get more information in the website (www.schulzamerica.com).

Warranty Term
Familiarize with the Warranty Term; read carefully the compressor chapter "Warranty" at the end of this manual.
In order to validate the Warranty and for more safety of the equipment, it is essential the use of genuine LUB SCHULZ SYNTHETIC or LUB SCHULZ oil for rotary screw compressor and genuine SCHULZ parts.
The final user is responsible for the installation, inspection, maintenance, operation and specific documentation of the pressure vessel, which should be carried out in accordance with local legislation of each country.

Service Report
Any repair in the compressor should be carried out by SCHULZ AUTHORIZED SERVICE PROVIDER. After the repair or maintenance, fill out the service record supplied with this Manual.

Questions
Whenever you have any questions about you rotary screw compressor, please, mention the model and serial number indicated on the plate fixed in the cabinet.

3. COMPRESSOR INSPECTION

Inspect and check if there were apparent damages caused by transportation. If so, inform the carrier immediately. Be sure that all damaged parts are replaced and that mechanic and electric problems are fixed before operating the air compressor.

4. APPLICATION

Schulz air compressors must be only used for atmospheric air compression up to the maximum pressure indicated in its identification plate. The version of Total Solution Rotary Compressor integrates in the same product the compression of atmospheric air (via rotary compressor), treatment (via module with coalescent filter and air dryer by cooling) and compressed air storage (via tank), up to the maximum pressure indicated in the nameplate.
The dryer module and coalescent filter are important to remove the humidity, solid particles and oil present in the compressed air.
The presence of water in liquid state and particles in the compressed air system cause oxidation of metal parts and the wear of moving parts, since the water washes the surfaces, removing the lubricants. Furthermore, those contaminants affect the pneumatic tools and any industrial process where the quality of compressed air is required. Therefore, the rotary compressor with integrated dryer aims to produce, treat and store the compressed air. In case you wish a more complete treatment of the compressed air, it is important to use the proper filters, according to typical installation presented in the chapter "Installation".

5. TECHNICAL DELIVERY

After performing the procedures of installation of the compressor – in compliance with local legislation – electrical wiring and compressed air system (performed by the customer), the compressor will be started in the presence of a Technician of the nearest SCHULZ AUTHORIZED DEALER.
The technician will guide the customer through the start procedure, monitor the operation and orient about preventive maintenance (which may be performed by the customers). The warranty period will only be valid upon the presentation of the Service Report, which the Technician of SCHULZ AUTHORIZED DEALER will fill out at the moment of the activation, leaving one copy with the customer, and upon the filling out of the Technical Delivery Report, which then will be sent to the factory by the technician after being documented. The instructions of item "A" in the Warranty, Warranty General Conditions must be followed.

6. SAFETY INSTRUCTION

1. This equipment, if improperly used, can cause physical and material damage. To avoid these damages, follow the instructions below:

- This equipment may not be used by people with physical, sensorial, or mental handicaps. Or without experience or knowledge.
- People without the proper experience or knowledge may use this equipment only if properly supervised or instructed to it's use by someone who is liable for his or her safety.
- This equipment may not be used by children under any circumstances.
- Do not use your equipment while tired, under the infl uence of medication, alcohol or drugs. Lack of attention during operation may result in serious personal injury;
- Can cause mechanical or electrical interference on nearby sensitive equipments;
- Must be installed and operated in places that are ventilated and protected against moist presence and water falling.

2. The equipment model must be chosen in compliance with the established use. don't exceed maximun capacity, if required, acquire a more suitable product for the application. This will increase the efficiency and safety in the work;

3. Always use suitable personal protective equipment (PPE), as each application, such as dust glasses and masks, non-skid safety shoes and ear protection. This reduces the risks against personal injury;

4. Not use long wear clothing, or jewelry that may come into contact with the moving part of the compressor during use. If you have long hair, contain it before using the product;

5. While in use, this equipment has electrical components and hot moving parts;

6. To reduce the risk of electrical shock:

- Do not use the equipment barefoot, in wet or very humid places, do not touch metal surfaces attached to the ground or grounded, such as pipes, motors, gutters, fences, windows, doors, metal gates, etc, this increases the risk of electric shock;
- The electrical installations of the compressor must be according to the country's current regulation (Electrical installations of low voltage).
- Before cleaning or performing maintenance, disconnect the machine from the power grid;
- Do not make splices in the cord. If required, change for a power cord.
- Do not use your electric equipment in explosive atmospheres (gas, flammable liquid or dust). The motor generate sparks that may cause explosion;
- Make sure that the disconnect switch is in the "off" position before connecting the equipment to the power grid.

7. Do not modify the settings of the safety valve and pressure switch, once they come preset from the factory, if some adjustment is necessary on the pressure switch, use the service of the nearest SCHULZ AUTHORIZED DEALER.

8. Never exceed the maximum pressure indicated on the compressor's identification plate/sticker.

9. Never operate the safety valve with the compressor under operation or pressure. This may cause injury due to shooting particles and/or burns when the valve is installed on a hot piece;

10. Never perform repairs or welding services on the tank, because they can affect the resistance or mask more serious problems. If there is any leak, crack or corrosive wear, suspend the use of the equipment immediately and find a SCHULZ AUTHORIZED DEALER.

11. Release all pressure in the tank before performing any maintenance;

12. The compressed air might contain pollutants that will cause harm to the health of humans, animals, ambient or foods, among others. The compressed air must be treated with adequate filters, according to application and use requirements. Consult the factory or a SCHULZ AUTHORIZED DEALER for more information.

13. Do not allow the compressor to keep in contact with any flammable substances;

14. Remove all adjustment tools before turning your equipment on. A tool or part stuck in moving of the equipment may cause serious injuries;

15. Never clean the compressor with solvents or any other flammable substances, use a neutral detergent.

16. In presence of any equipment abnormally, suspend its operation immediately and contact the nearest SCHULZ AUTHORIZED DEALER.

7. TECHNICAL FEATURES

(FOR USA COMPRESSOR)

MODEL		SRP 4015 ELECTRONIC	SRP 4020 ELECTRONIC	SRP 4030 ELECTRONIC
Operating pressure	barg/psig	8,6/125	8,6/125	8,6/125
Volumetric Flow	pcm	51	74	108
	ℓ /min	1444	2095	3057
	Drive method	Belt 3 VX	Belt 3 VX	Belt 3 VX
Power Compressor	hp/kW	15/11	20/15	30/22
	Voltage (V)	208	208	208
		230	230	230
		460	460	460
	Start mode	Y/Δ	Y/Δ	Y/Δ
Electrical Parameters	Fuse NH	Slow Blow fuse*	Slow Blow fuse*	Slow Blow fuse*
	Command voltage (V)	24	24	24
Temperature	Ambient temperature allowed (ºC)	0 - 45	0 - 45	0 - 45
Air cooled compressor	Air inlet dimensions (mm)	400 X 400	660 X 360	660 X 360
	Air outlet dimensions (mm)	400 X 400	660 X 410	660 X 410
Oil lubricant	Volume (ℓ)	5	13,2	13,2
	Description	SH 46 synthetic (kluber)	SH 46 synthetic (kluber)	SH 46 synthetic (kluber)
Tank air	Volume (ℓ/gallon)	230/60	-	-
Noise Level	dBA	70	68	70
Air discharge connection	BSP (or Rp)	3/4"	1"	1"
Compressor weight (Kg /ℓb)	R	377/831	436/961	449/990

*SEE TABLE 7.2 TABLE

(FOR USA COMPRESSOR)

MODEL		SRP 4050 ELECTRONIC		
Operating pressure	barg/psig		8,6/125	
Volumetric Flow	pcm		207	
	ℓ /min		5860	
Drive method		Belt Poly - V		
Power Compressor	hp/kW	50/37		
	Voltage (V)	208		
		230		
		460		
	Start mode	Y/Δ		
Electrical Parameters	Fuse NH	Slow Blow fuse*		
	Command voltage (V)	220		
Temperature	Ambient temperature allowed (ºC)	0 - 45		
Air cooled compressor	Air inlet dimensions (mm)	(625x525)+(350x195)		
	Air outlet dimensions (mm)	(815x970)+(650x438)		
Oil lubricant	Volume (ℓ)	20,0		
	Description	SH 46 synthetic (kluber)		
Tank air	Volume (ℓ)	-		
Noise Level	dBA	76		
Air discharge connection	BSP (or Rp)	1.1/2"		
Compressor weight (Kg /ℓb)	R	750/1653		

*SEE TABLE 7.2 TABLE

7. TECHNICAL FEATURES

(EXCEPT USA)

MODEL		SRP 4005 ELECTRONIC			SRP 4008 ELECTRONIC			SRP 4010 ELECTRONIC SRP 4010 DYNAMIC		
Operating pressure	barg/psig	7,5/109	9/131	11/160	7,5/109	9/131	11/160	7,5/109	9/131	11/160
Volumetric Flow	pcm	18	17	14	28	26	21	40	35	30
	ℓ /min	521	470	396	804	722	594	1132	991	849
	Drive method	Belt 3VX			Belt 3VX			Belt 3VX		
Power Compressor	hp/kW	5/3,7			7,5/5,5			10/7		
	Voltage (V)	220			220			220		
		380			380			380		
		440			440			440		
	Start mode	direct on line			direct on line			Y/Δ		
Electrical Parameters	Fuse NH	Retarded fuse*			Retarded fuse*			Retarded fuse*		
	Command voltage (V)	24Vca			24Vca			220Vca		
Temperature	Ambient temperature allowed (ºC)	0-45			0-45			0-45		
Air cooled compressor	Air inlet dimensions (mm)	350 x 410			350 x 410			400 x 400		
	Air outlet dimensions (mm)	310 x 345			310 x 345			400 x 400		
Oil lubricant	Volume (ℓ)	2,7			2,7			5		
	Description	Lub Schulz			Lub Schulz			Lub Schulz / Lub Schulz Synthetic		
Tank air	Volume (ℓ)	200			200			500	230 (Dynamic)	
Noise Level	dBA	60			62			69		
Air discharge connection	BSP (or Rp)	1/2"			1/2"			3/4"		
Compressor weight (Kg)	AD	130			184			232		
	R	195			248			363		
	ADS	-			204			259		
	TS	-			268			390		

*SEE TABLE 7.2 TABLE

(EXCEPT USA)

MODEL		SRP 4015 ELECTRONIC SRP 4015 DYNAMIC			SRP 4020 ELECTRONIC			SRP 4025 ELECTRONIC		
Operating pressure	barg/psig	7,5/109	9/131	11/160	7,5/109	9/131	11/160	7,5/109	9/131	11/160
Volumetric Flow	pcm	59	51	45	84	73,9	64,9	102	89	80
	ℓ/min	1670	1444	1274	2378	2093	1837	2888	2520	2265
	Drive method	Belt 3VX			Belt 3VX			Belt 3VX		
Power Compressor	hp/kW	15/11			20/15			25/19		
	Voltage (V)	220			220			220		
		380			380			380		
		440			440			440		
	Start mode	Y/Δ			Y/Δ			Y/Δ		
Electrical Parameters	Fuse NH	Retarded fuse*			Retarded fuse*			Retarded fuse*		
	Command voltage (V)	220Vca			220Vca			220Vca		
Temperature	Ambient temperature allowed (ºC)	0-45			0-45			0-45		
Air cooled compressor	Air inlet dimensions (mm)	400 x 400			660 x 360			660 x 360		
	Air outlet dimensions (mm)	400 x 400			660 x 410			660 x 410		
Oil lubricant	Volume (ℓ)	5			13,2			13,2		
	Description	Lub Schulz / Lub Schulz Synthetic			Lub Schulz / Lub Schulz Synthetic			Lub Schulz / Lub Schulz Synthetic		
Tank air	Volume (ℓ)	500	230 (Dynamic)		500			500		
Noise Level	dBA	70			68			69		
Air discharge connection	BSP (or Rp)	3/4"			1"			1"		
Compressor weight (Kg)	AD	246			429			436		
	R	377			560			567		
	ADS	279			479			469		
	TS	410			600			610		

*SEE TABLE 7.2 TABLE

(EXCEPT USA)

MODEL		SRP 4030 ELECTRONIC			SRP 4050 ELECTRONIC			SRP 4060 ELECTRONIC		
Operating pressure	barg/psig	7,5/109	9/131	11/160	7,5/109	9/131	11/160	7,5/109	9/131	11/160
Volumetric Flow	pcm	124	108	97	224	207	185	274	232	221
	ℓ/min	3510	3057	2746	6354	5850	5245	7751	6569	6258
	Drive method	Belt 3VX			Belt Poly-V			Belt Poly-V		
Power Compressor	hp/kW	30/22			50/37			60/45		
	Voltage (V)	220			220			220		
		380			380			380		
		440			440			440		
	Start mode	Y/Δ			Y/Δ			Y/Δ		
Electrical Parameters	Fuse NH	Retarded fuse*			Retarded fuse*			Retarded fuse*		
	Command voltage (V)	220Vca			220Vca			220Vca		
Temperature	Ambient temperature allowed (°C)	0-45			0-45			0-45		
Air cooled compressor	Air inlet dimensions (mm)	660 x 360			(625 x 525) + (360x195)			(756 x 624) + (360x195)		
	Air outlet dimensions (mm)	660 x 410			(815 x 970) + (650x438)			(970 x 815) + (650x438)		
Oil lubricant	Volume (ℓ)	13,2			20,0			20,0		
	Description	Lub Schulz / Lub Schulz Synthetic			Lub Schulz / Lub Schulz Synthetic			Lub Schulz / Lub Schulz Synthetic		
Tank air	Volume (ℓ)	500			500			500		
Noise Level	dBA	70			76			78		
Air discharge connection	BSP (or Rp)	1"			1.1/2"			1.1/2"		
Compressor weight (Kg)	AD	449			750			750		
	R	580								
	ADS	499								
	TS	630								

*SEE TABLE 7.2 TABLE

MODEL		SRP 4150 ELECTRONIC			SRP 4200 ELECTRONIC		
Operating pressure	barg/psig	7,5/109	9/131	11/160	7,5/109	9/131	11/160
Volumetric Flow	pcm	710	670	-	945	855	708
	ℓ/min	20104	18972	-	26760	24215	20036
Drive method		Direct drive			Direct drive		
Power Compressor	hp/kW	150/112			200/150		
	Voltage (V)	220			220		
		380			380		
		440			440		
	Start mode	Y/Δ			Y/Δ		
Electrical Parameters	Fuse NH	Retarded fuse*			Retarded fuse*		
	Command voltage (V)	220Vca			220Vca		
Temperature	Ambient temperature allowed (ºC)	0-45			0-45		
Air cooled compressor	Air inlet dimensions (mm)	(360 x 657) + (995 x 657)			(360 x 657) + (995 x 657)		
	Air outlet dimensions (mm)	1460 x 1200			1460 x 1200		
Oil lubricant	Volume (ℓ)	60			80		
	Description	Lub Schulz / Lub Schulz Synthetic			Lub Schulz / Lub Schulz Synthetic		
Tank air	Volume (ℓ)	56			56		
Noise Level	dBA	81			81		
Air discharge connection	BSP (or Rp)	4"			4"		
Compressor weight (Kg)	AD	3000			3380		
	R						
	ADS						
	TS						

*SEE TABLE 7.2 TABLE

Tensão	SOFT-STARTER (WEG)	SOFT-STARTER (SIEMENS)	
	SRP 4010	**SRP 4150**	**SRP 4200**
220V	-	"3NE1 334-2 (6X) - 2 for phase (500A - Fast blow manufacturer: Siemens)"	"3NE1 334-2 (6X) - 2 p/ fase (500A - Ultra Rápido Fabricante: Siemens)"
		"170M4164 (6X) - 2 for phase (500A - Ultra Rápido Fabricante: Bussmann)"	"170M4164 (6X) - 2 p/ fase (500A - Ultra Rápido Fabricante: Bussmann)"
		"6,9URD32TTF0500 (6X) - 2 for phase (500A - Ultra Rápido Fabricante: Mersen)"	"6,9URD32TTF0500 (6X) - 2 p/ fase (500A - Ultra Rápido Fabricante: Mersen)"
		"N4214 (6X) - 2 for phase (500A - Ultra Rápido Fabricante: Negrini)"	"N4214 (6X) - 2 p/ fase (500A - Ultra Rápido Fabricante: Negrini)"
380V	"3NE1 817-0 (50A - Ultra Rápido Fabricante: Siemens)"	"3NE1 333-2 (450A - Ultra Rápido Fabricante: Siemens)"	"3NE1 334-2 (500A - Ultra Rápido Fabricante: Siemens)"
	"170M2611 (50A - Ultra Rápido Fabricante: Bussmann)"	"170M4163 (450A - Ultra Rápido Fabricante: Bussmann)"	"170M4164 (500A - Ultra Rápido Fabricante: Bussmann)"
	"00598.050000 (50A - Ultra Rápido Fabricante: Mersen)"	"6,9URD32TTF0450 (450A - Ultra Rápido Fabricante: Mersen)"	"6,9URD32TTF0500 (500A - Ultra Rápido Fabricante: Mersen)"
	"N3209 (50A - Ultra Rápido Fabricante: Negrini)"	"N4213 (450A - Ultra Rápido Fabricante: Negrini)"	"N4214 (500A - Ultra Rápido Fabricante: Negrini)"
440V	-	"3NE1 331-2 (350A - Ultra Rápido Fabricante: Siemens)"	"3NE1 333-2 (450A - Ultra Rápido Fabricante: Siemens)"
		"170M3168 (350A - Ultra Rápido Fabricante: Bussmann)"	"170M4163 (450A - Ultra Rápido Fabricante: Bussmann)"
		"6,9URD31TTF0350 (350A - Ultra Rápido Fabricante: Mersen)"	"6,9URD32TTF0450 (450A - Ultra Rápido Fabricante: Mersen)"
		"N4211 (350A - Ultra Rápido Fabricante: Negrini)"	"N4213 (450A - Ultra Rápido Fabricante: Negrini)"

*SEE TABLE 7.2 TABLE

Tensão			Y/Δ (ANY MANUFACTURER)								
	SRP 4005	**SRP 4008**	**SRP 4010/ Dynamic**	**SRP 4015/ Dynamic**	**SRP 4020**	**SRP 4025**	**SRP 4030**	**SRP 4050**	**SRP 4060**	**SRP 4150**	**SRP 4200**
220V	35A	50A	50A	63A	80A	100A	125A	200A	224A	630A	720A
380V	25A	35A	25A	35A	50A	63A	63A	125A	125A	315A	355A
440V	25A	35A	20A	35A	50A	50A	63A	100A	125A	300A	315A

TABLE 7.2 - FUSES

Note.: For constant speed compressors use the slow fuse with same valve or just above that reported in the table.

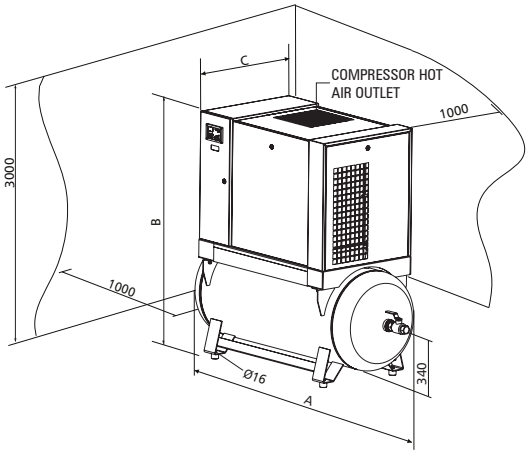


FIGURE 17.1

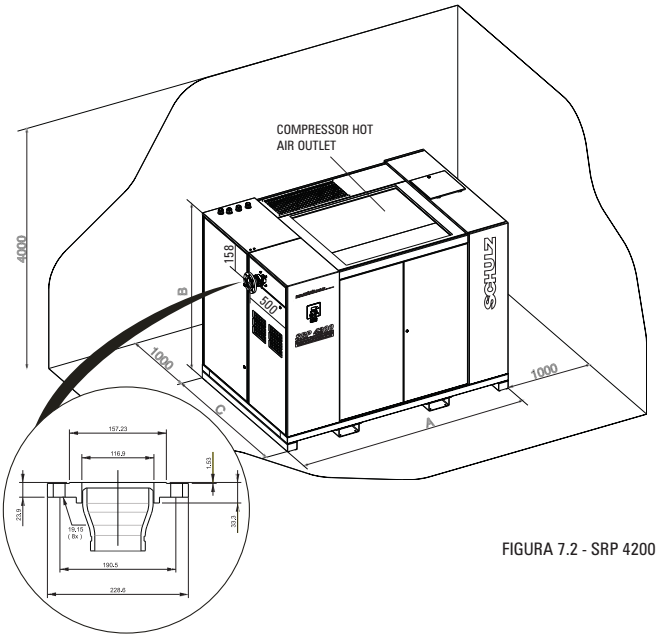


FIGURA 7.2 - SRP 4200

AD	Direct Air Compressor
TSAD	Total Solution Ar Direto (compressor + Dryer + pré-filter)
R	Compressor over tank
TSR	Total Solution, Tank (compressor + Dryer + pré-filter + tank air)

Models	Versão	A	B	C
SRP 4005 Electronic	AD / TS ADS/ R	1050 1360	710 1245	475 475
SRP 4008 Electronic	AD / TS ADS/ R	1050 1360	710 1245	475 475
SRP 4010 Electronic	AD / TS ADS/ R	1140 1600	900 1480	700 700
SRP 4015 Electronic	AD / TS ADS/ R	1140 1600	900 1480	700 700
SRP 4010 Dynamic SRP 4015 Dynamic	AD R	800 1072	935 1518	700 700
SRP 4015 Eletronic for USA				
SRP 4020 Electronic	AD / TS ADS/ R	1400 1600	1300 1884	770 770
SRP 4025 Electronic	AD / TS ADS/ R	1400 1600	1300 1884	770 770
SRP 4030 Electronic	AD / TS ADS/ R	1400 1600	1300 1884	770 770
SRP 4050 Electronic	AD	1750	1660	990
SRP 4060 Electronic	AD	1750	1660	990
SRP 4150 / 200 Electronic	AD / TS ADS/ R	2700	2040	1800

TABLE 7.2 - DIMENSIONS (MM)

8. MAIN PARTS

1. Electronic Interface Command II
2. Dryer Electronic Controller
3. Cabinet
4. Starting switch
5. Compressed air tank 500L.
6. Radiator hot air outlet
7. Radiator
8. Air/oil separator element
9. Air/oil cooling fan
10. Minimum pressure valve
11. Air/oil tank
12. Plug for filling up the oil
13. Oil level sight
14. Oil and condensate drain valve
15. Outlet of the treated compressed air
16. Drain
17. Support for handling
18. Vibration dampener
19. Oil filter
20. Belt tightener
21. Thermostatic valve
22. Cooling air inlet
23. Air filter restriction indicator
24. Vehicular admission filter
25. Admission valve
26. Air end
27. Driven pulley
28. Belt
29. Belt guard
30. Electric motor
31. Driving pulley
32. Electric power supply
33. Pre-filter restriction indicator
34. Coalescent pre-filter
35. Needle valve
36. Pre-filter drain
37. Capillary tube
38. Heat exchanger
39. Solenoid drain valve
40. Valve by-pass
41. Fan
42. Hermetic Compressor
43. Condenser

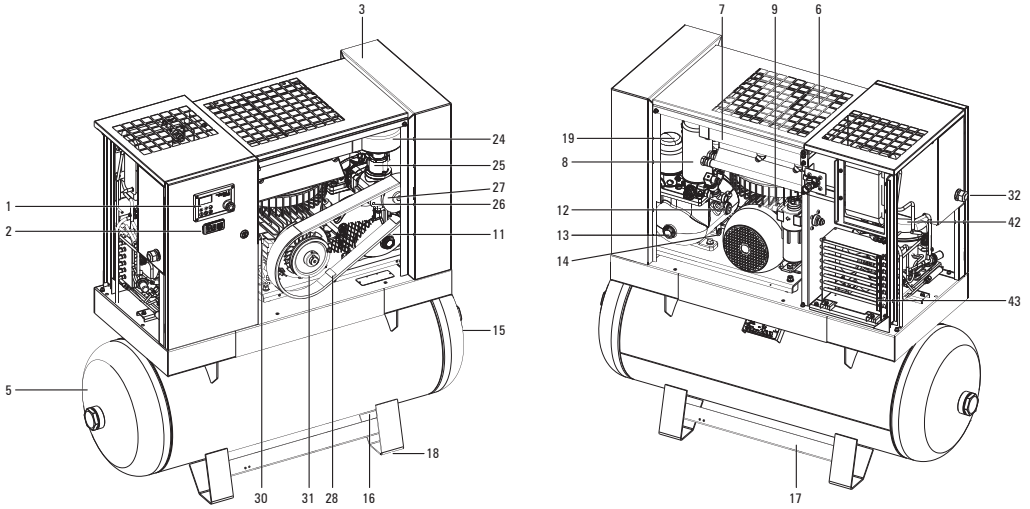


FIGURE 8.1 - SRP 4005 / SRP 4008

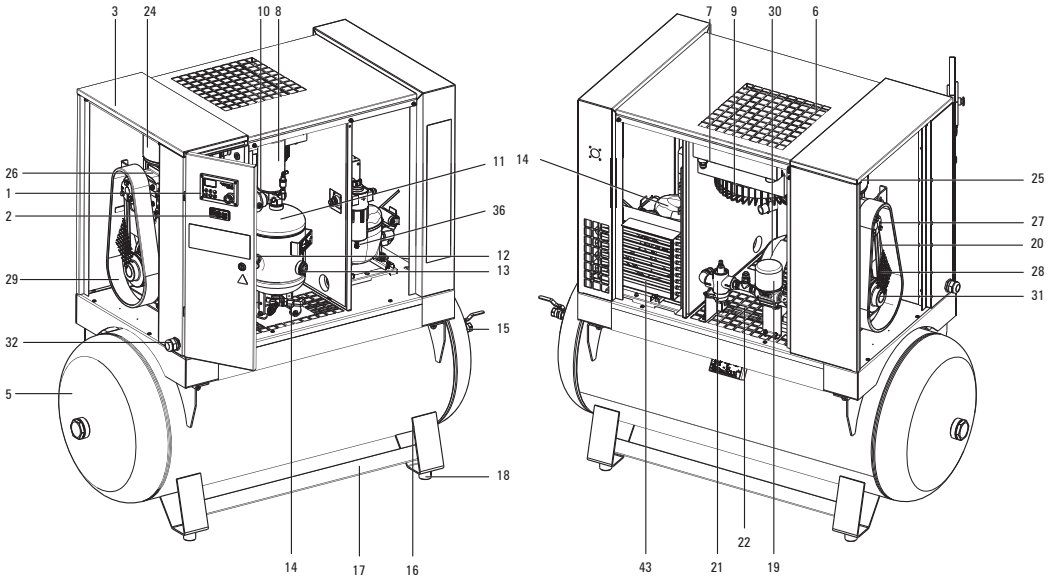


FIGURE 8.2 - SRP 4010 / SRP 4015

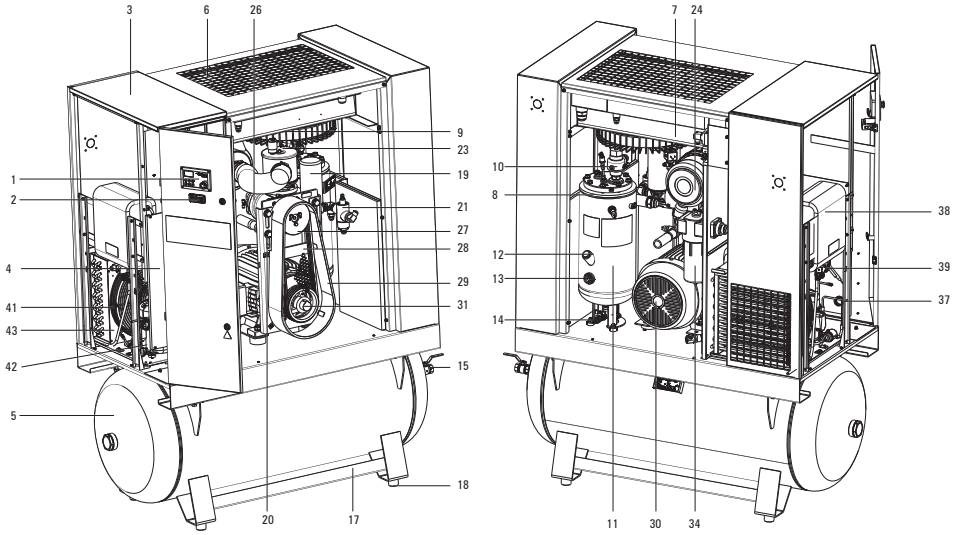


FIGURE 8.3 - SRP 4020 TO SRP 4030

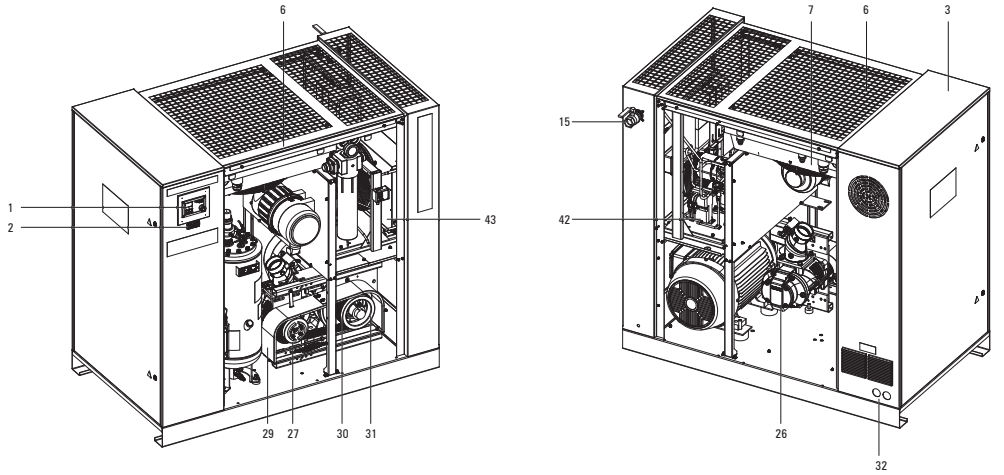


FIGURE 8.4 - SRP 4050 / SRP 4060

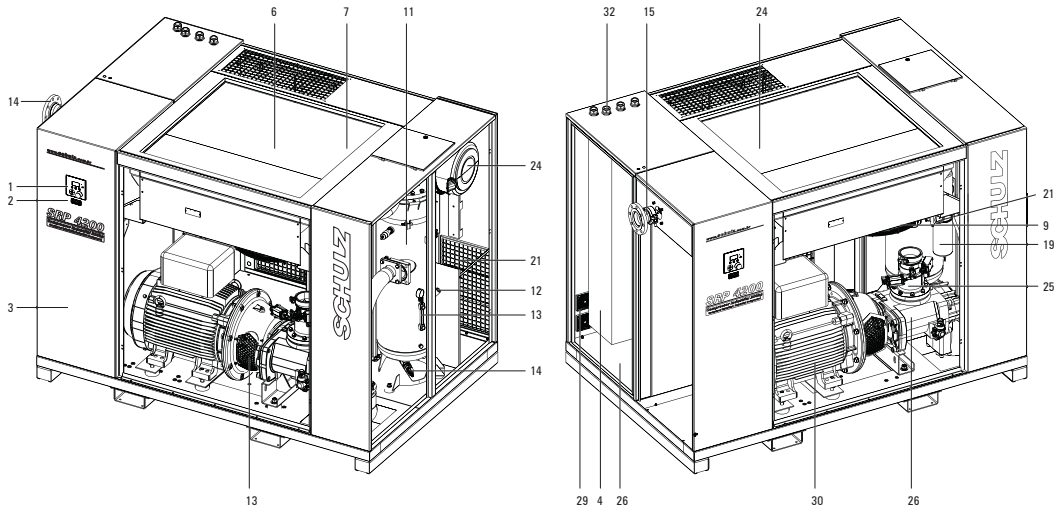


FIGURE 8.5 - SRP 4150 TO SRP 4250

9. STORAGE AND TRANSPORTATION

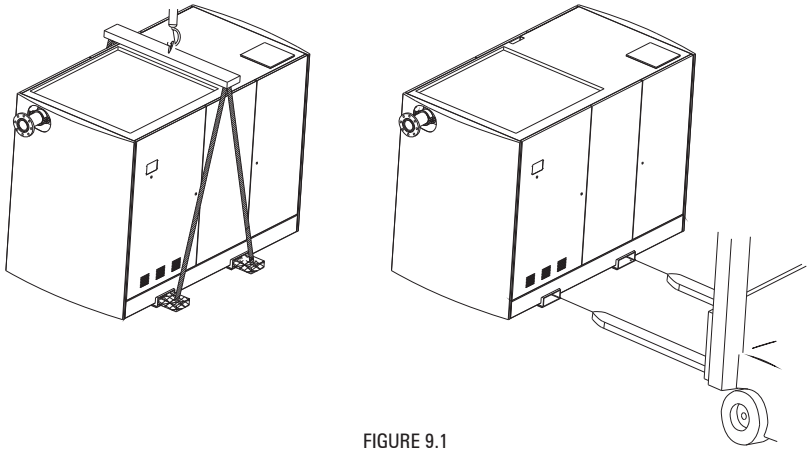


FIGURE 9.1

IMPORTANT

Have special cares when lifting and transporting.
The forks of the forklift should be under the compressor, according to the direction shown in figure out.
For the selection of the appropriate forklift check the product's weight in the technical features section.

10. INSTALLATION

1. Location

Install the compressor in a covered area, well ventilated and free of dust, gases, toxic gases, chemical products humidity or any other kind of pollution.

The noise level of the compressor, measured in an open space, may rise considerably if the installation place is surrounded by walls that reflect sound. This equipment must not be installed where inadvertent people may have access to. Observe this aspect when choosing the best place for installation.

The maximum ambient temperature recommended for operation is 45°C. If the ambient temperature is higher, exhaust fans or other means to lower the temperature must be provided. The lower the ambient temperature is better for compressor working conditions. The presence of contaminants (dust, fibers, chemical products, etc.) suspended in the air, can cause premature saturation of the air filter and radiator honeycomb core (See Preventive Maintenance section).

It is important to emphasize that chemical products can be absorbed by the air filter, contaminating the oil and causing lubrication problems, compromising the quality of compressed air, as well as damaging the external and/or peripheral components of the compressor, be they mechanical, electrical or electronic.

In order to reduce the noise level of the compressor, an acoustic project should be adopted.

ATTENTION

Do not install the compressor in chemically contaminated areas.

2. Foundation / Packaging

Install the compressor removing the accessory for transportation (base) and place it on a leveled concrete floor. It is necessary to install vibration dampers in the compressor SRP4010 up to SRP4030 and, in the other compressors, the use is recommended. In case of doubt regarding the installation of vibration dampers, contact the nearest SCHULZ AUTHORIZED DEALER. Do not fasten the compressor on the floor.

3. Positioning and dimensions of the compressor (installation)

Observe the distance indicated in Figures 7.1 and 7.2, from any obstacle in order to facilitate maintenance jobs.

4 Electrical installations

Refer to a specialized technician to evaluate the general conditions of the power line and select the proper power supply and protection devices. the instructions contained in this manual must be followed, see table 7.2.

ATTENTION

As a suggestion the power supply cables should be dimensioned, taking into account the capacity of the start switch of the compressor and the distance of the power source (See Table 10.1), but the local legislation must be followed.

ATTENTION

Check the capacity of the transformer to stand the installed power rating of the compressor. If you do not have your own transformer, you must evaluate if the mains and principal circuit breakers hold the increase of load. The power line must not present voltage variation over 10%. The voltage drop generated by the start peak must not be over 10%.

The electric panel of the compressor has a terminal block for adaptation of remote activation.

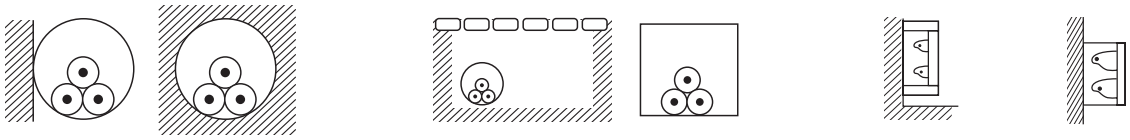
The start switch features an overload relay for protection of the motor of the compressor.

For your safety, the frame of the compressor must be properly connected to the ground wire.

The electric power supply must be protected with fuses, installed close to the compressor (see Table 7.2).

Maximum Distances for Voltage Drop of 5% (meters)																											
A / mm²	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	120	140	160	180	200	220	240
1,0	76	38																									
1,5	110	55	37																								
2,5	183	92	61	46																							
4,0	293	147	98	73	59																						
6,0	431	216	144	108	86	72	62																				
10	733	367	244	183	147	122	105	92	81	73																	
16	1122	561	374	281	224	187	160	140	125	112	102	94	86														
25	1719	859	573	430	344	286	246	215	191	172	156	143	132	123	115	107	101	95									
35	2292	1146	764	573	458	382	327	286	255	229	208	191	176	164	153	143	135	127	121	115							
50	3014	1507	1005	753	603	502	431	377	335	301	274	251	232	215	201	188	177	167	159	151	126						
70	4074	2037	1358	1019	815	679	582	509	453	407	370	340	313	291	272	255	240	226	214	204	170	146	127				
95	5238	2619	1528	1310	1048	873	748	655	582	524	476	437	403	374	349	327	308	291	276	218	187	164	146	131			
120	6286	3143	2095	1571	1257	1048	898	786	698	629	571	524	484	449	419	392	370	349	331	314	262	224	196	175	157	143	131

Ways to install



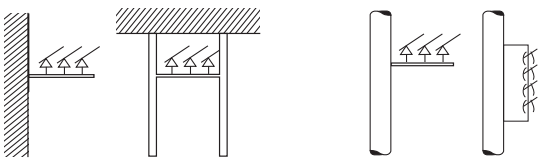
EMBUTIDOS ENTERRADOS CANALETAS EMBUTIDOS CANALETAS

Distances in meters for 220V, Noflan BWF cable,
750V, Three-phase system, cos – 0.8.
For 380V multiply by 1.727
For 440V multiply by 2
For other voltages contact an electrician

Maximum Distances for Voltage Drop of 5% (meters)																											
A / mm²	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	150	200	250	300	350	400	450
6	411	206	137	103	82	69	59	51																			
10	661	330	220	165	132	110	94	83	73	66	60																
16	991	495	330	248	198	165	142	124	110	99	90	83	76	71	66												
25	1447	724	482	362	289	241	207	181	161	145	132	121	111	103	96	90	85	80	76	72							
35	1864	932	621	466	373	311	266	233	207	186	169	155	143	133	124	117	110	104	98	93							
50	2316	1158	772	579	463	386	331	289	257	232	211	193	178	165	154	145	136	129	122	116	77						
70	2973	1486	991	743	595	495	425	372	330	297	270	248	229	212	198	186	175	165	156	149	99	74					
95	3548	1774	1183	887	710	591	507	444	394	355	323	296	273	253	237	222	209	197	187	177	118	89					
120	4074	2037	1358	1019	815	679	582	509	453	407	370	340	313	291	272	255	240	226	214	204	136	102	81				
150	4683	2292	1528	1146	917	764	655	573	509	458	417	382	353	327	306	286	270	255	241	229	153	115	92	76			
185	5000	2500	1667	1250	1000	833	714	625	556	500	455	417	385	357	333	313	294	278	263	250	167	125	100	83	71		
240	5641	2821	1880	1410	1128	940	806	705	627	564	513	470	434	403	376	353	332	313	297	282	188	141	113	94	81	71	
300	6286	3143	2095	1571	1257	1048	898	786	698	629	571	524	484	449	419	393	370	349	331	314	210	157	126	105	90	79	70

E.g.: Motor with current of 35A (220V) – section of the cables 35 mm² and maximum distance found of 266 meters

Ways to install



WALL POLES

TABLE 10.1 – GUIDING TABLE FOR COPPER WIRE

INSTALLATION OF CAPACITOR BANK

Power Factor Correction

An economical and sensible way to obtain the reactive power necessary for the proper operation of your compressor is the installation of capacitors near it.

The installation of capacitors, however, must be done after some operational measures to decrease the demand for reactive power, such as the turning off of idle or oversized motors or other inductive loads.

Where the significant advantage of the correction of the power factor is the improvement of the voltage.

CARES IN THE INSTALLATION OF CAPACITORS

Local of installation

- Avoid exposure to sunrays or closeness to equipment with high temperatures;
- Do not block the air inlet and outlet of the cabinets;
- The places must be protected against solid and liquid materials in suspension (dust, oils);
- Avoid installing capacitors near the roof (heat);
- Take care when installing the capacitors near non-linear loads.

PROTECTION AGAINST SHORT CIRCUIT

Fuses: Dimension the fuses according to the equation: In x 1.65

Note - "In" informed in the capacitor nameplate.

Use commercial value of delayed-type fuse immediately above.

Conductors: Use conductors oversized in 1.43 times the capacitor rated current and take into account other criteria, such as: way to install, ambient temperature, etc.

Note: - For the connection of diagram A (YΔ), adjust the new current that will pass through the relay.

Note: - The installation of capacitors for power factor correction must always be performed by a qualified professional.

- Figure 6 of diagram A shows the proper way to connect the capacitors in the wiring of your compressor.

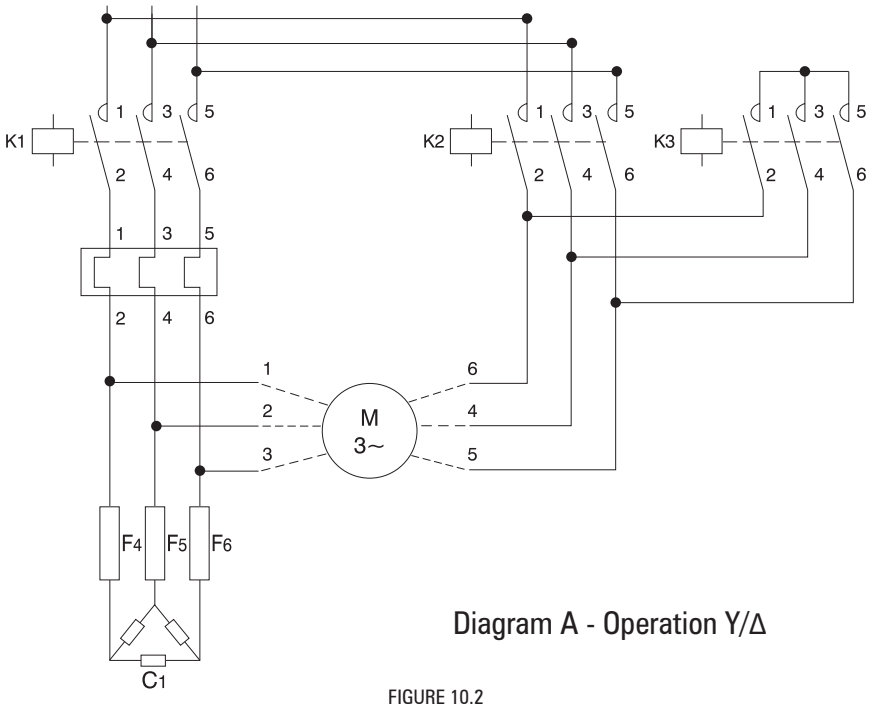


Diagram A - Operation Y/Δ

FIGURE 10.2

5. Air Distribution

The compressor is supplied from factory with service valve in the air outlet to the system with female thread (according to the table of technical features).

Do not use connection with reduction in the outlet of the compressor and do not install undersized line filter(s), so as not to cause load loss near the source of air production. Whenever possible, install "Y" instead of "T" and long-radius curves.

The electric motor is equipped with sensors for overload protection.

For versions of direct air compressors installed in short systems, it is always recommended to install an air tank so that the command system will not operate too often in case the air demand is too close to the capacity of the compressor and the cycles of consumption have a brief duration.

A good project of a compressed air system always establishes the installation of a tank in order to absorb pulsations produced by the sudden consumption, collect condensate and strategically keep a spare supply for occasional consumption peaks.

We recommend installing, in the air outlet, a service line with a hose and an air blow gun for cleaning the radiator and other jobs that require local compressed air.

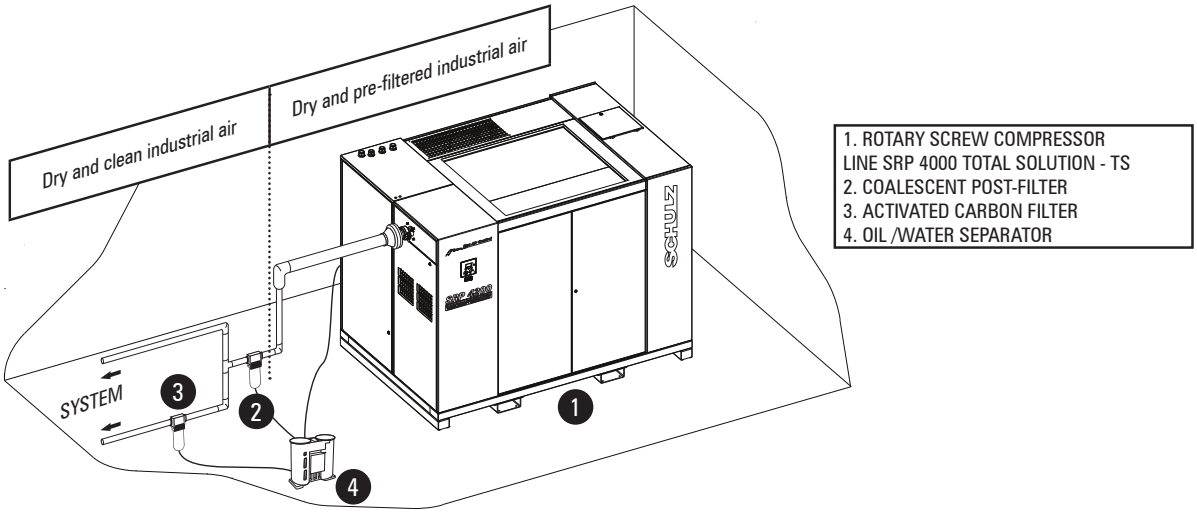


FIGURE 10.3 - TYPICAL INSTALLATION OF THE COMPRESSOR WITH THE PERIPHERALS FOR THE TREATMENT OF THE COMPRESSED AIR

Air quality in compliance with ISO 8573.1 – Class 1.4.1

NOTE: For other configurations, contact the factory.

IMPORTANT

In the other components, perform the maintenance according to their instruction manuals.

Note: The installation expenses and accessories are paid by the customer.

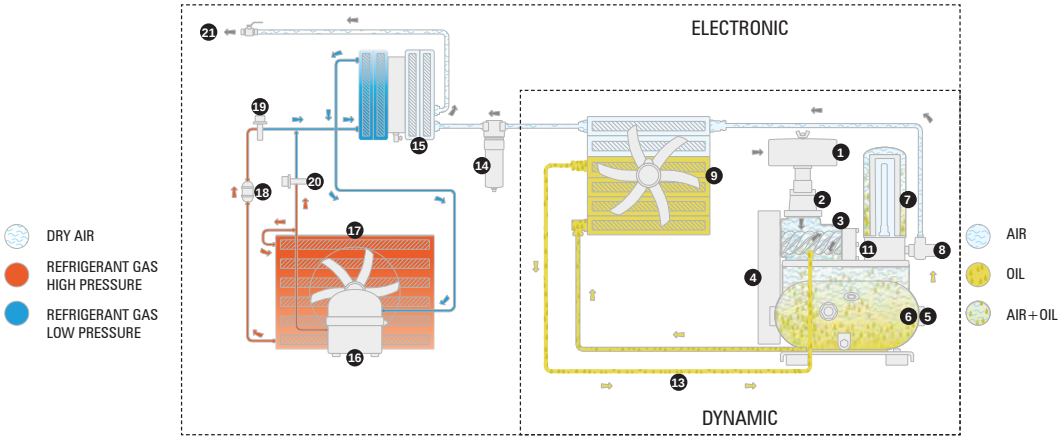


FIGURE 11.1 - AIR OIL FLOW SRP 4005 TO 4008

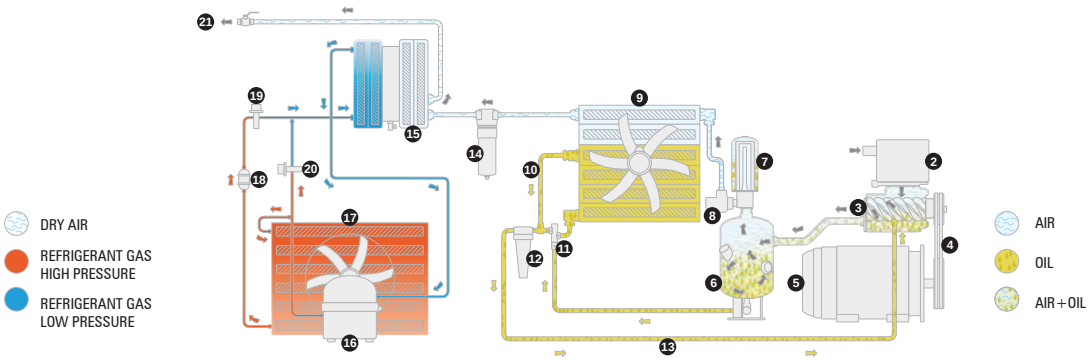


FIGURE 11.2 - AIR OIL FLOW SRP 4010 TO 4015

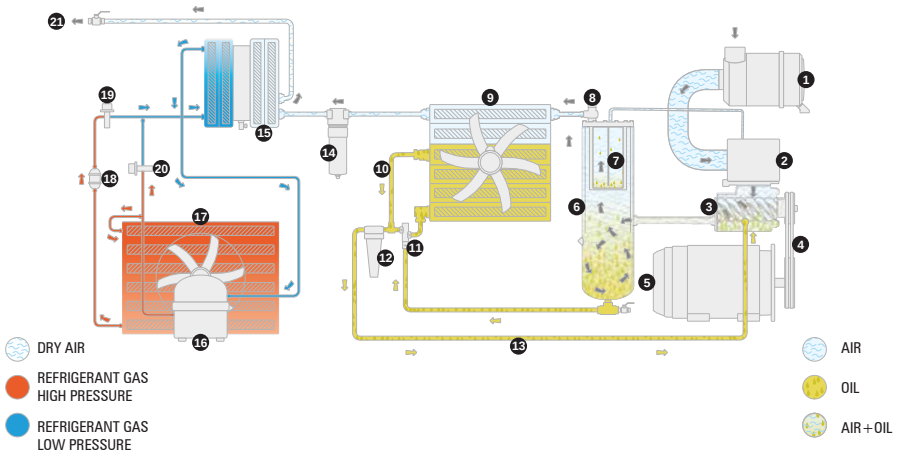


FIGURE 11.3 - AIR OIL FLOW SRP 4020 TO 4030

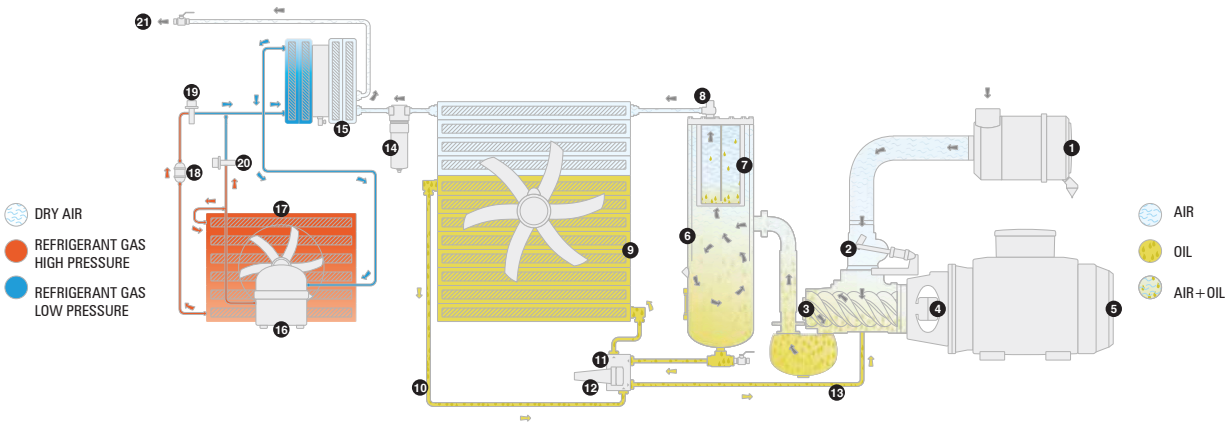


FIGURE 11.4 - AIR OIL FLOW SRP 4150 TO 4200

Air circuit

1. Air filter (vehicle type or conventional)
2. Inlet valve
3. Air end
4. Direct coupling or belt
5. Electric motor
6. Air/oil tank
7. Air/oil separator element
8. Minimum pressure valve

Oil circuit

9. Air/oil radiator and aftercooler
10. Oil return line
11. Thermostatic valve
12. Oil filter
13. Line of injection of oil into the unit

Refrigeration circuit

14. Pre-filter
15. Heat exchanger and evaporator
16. Hermetic Compressor
17. Condenser
18. Separator filter
19. Expansion valve
20. By-pass system
21. Outlet of treated air

Dryer module: air treatment and cooling system of the dryer

After the air is compressed by the compressor and partially cooled by the radiator the compressed air is filtered by a pre-filter 8 where part of the water, oil and contaminants is removed. Then, the compressed air passes through the air dryer, which removes the humidity of the air by means of a cooling system, that is, the humidity is removed by the cooling of the compressed air in a heat exchanger, seeing that the water produced in this process is eliminated through a separator and drain with time control **1**.

The cooling process of the compressed air is done in two steps:

- First the pre-cooling takes place in a heat exchanger between the hot and humid air that is getting in and the dry and cold that is coming out **2**.
- The second step is through the exchange between humid air and cooling fluid **3**. The thermal exchange occurs up to close to the evaporation temperature of the cooling fluid. With the temperature low, the excessive humidity present in the compressed air condenses because the dew point or water condensation temperature is reached. Inside the heat exchanger itself the air, already dry and cold, is reheated by thermal contact with the humid and hot air that is getting in. This exchange allows a pre--cooling of the air that gets into the dryer and a slight heating of the dry compressed air that returns to the consumption system.

The cooling system of the Air Dryer - SRS has a hermetic compressor **4**, which aspirates the cooling fluid in the gas phase from the evaporator **3**, where the thermal exchange between the humid air and the cooling fluid occurs. The evaporator absorbs the heat of the compressed air, condensing the water vapor contained in the air. While passing by the hermetic compressor, the cooling fluid is compressed raising pressure and temperature. Then, it enters the condenser **5**, which features a fan 6 responsible for the circulation of the cooling air between the tubes and fins that cool down the cooling fluid. After cooled down, it passes by the expansion device **7**, located at the beginning of the evaporator, lowering the pressure and temperature of the cooling fluid, restarting the cycle.

Drop of thermal load

When the reduction of the flow and/or temperature of the compressed air in the inlet of the Air Dryer, there is a tendency of the pressures and temperature of the cooling system to decrease, which may cause the condensate to freeze before it is drained.
In order to solve this problem, the Air Dryers - SRS feature a hot air bypass system. When there are situations that may cause the freezing of the condensate inside the heat exchanger, the bypass system is activated diverting part of the hot cooling fluid to the evaporator, preventing the freezing of the condensate and the clogging of the passage of compressed air. The hot air bypass valve controls the amount of cooling fluid that will return to the low pressure circuit, preventing its excess.
If the temperature drops below -1°C, the dryer will shut down in order to prevent its freezing.

Low temperature in the discharge of the compressor for refrigeration

In case the ambient temperature is excessively low, there is a tendency of reduction of the discharge pressure in the compressor, jeopardizing the activation of the bypass system and of the expansion device. Besides, too low condensing temperatures hinder the return of the oil that is in the refrigeration circuit to the hermetic compressor. The resource used to avoid this problem is a pressure switch that shuts down the fan of the condenser when the high pressure of the refrigeration system drops below normal.

Safety pressure switch

The dryer has a pressure switch installed in the refrigeration system that shuts down the dryer in case of an increase in pressure out of the normal conditions of the system.

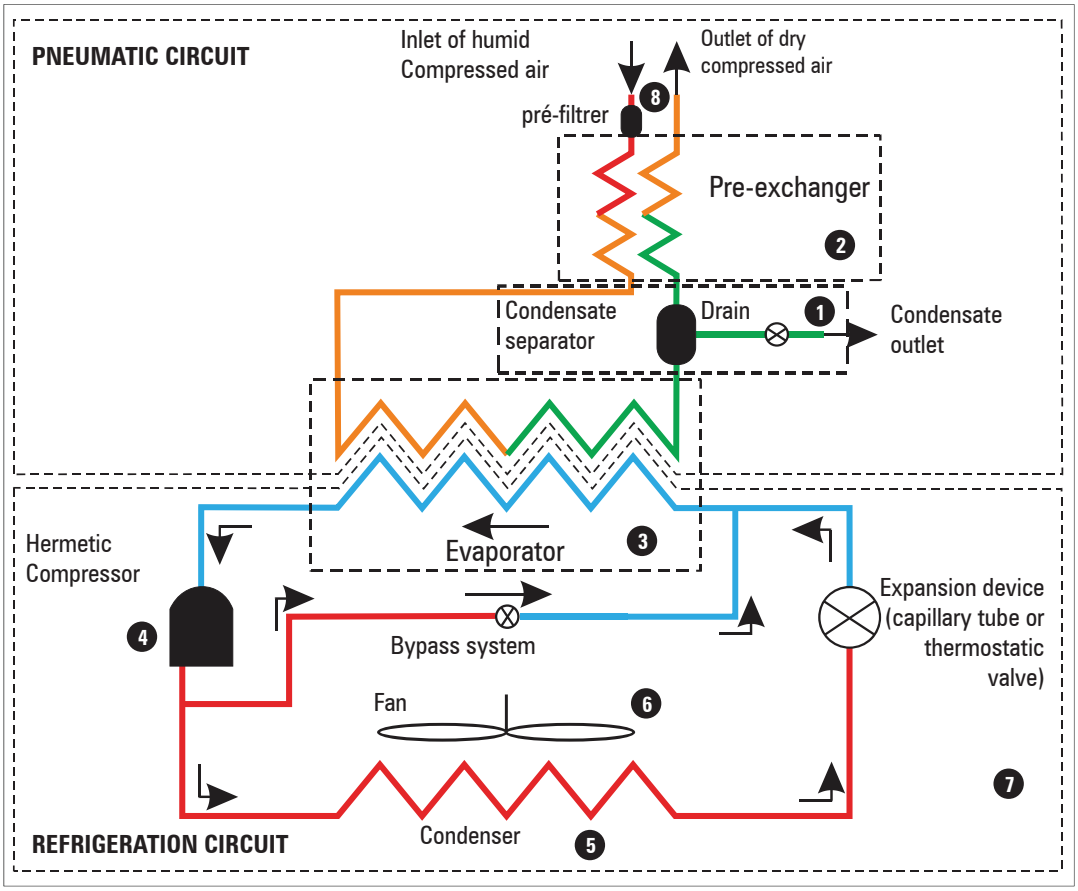


FIGURE 11.5- REFRIGERATION AND PNEUMATIC CIRCUIT OF THE DRYER MODULE

ATTENTION

When the Air Dryer stops running without any apparent reason, this safety pressure switch may be shutting down this equipment or the temperature dropped below -1 °C. When this kind of situation occurs, it means the Air Dryer module is operating in conditions of risk for the refrigeration system, and it is necessary to contact the nearest SCHULZ AUTHORIZED DEALER.

12. COMMAND SYSTEM

The compressor operates with double command the following way:

COMPRESSOR COMMAND IN OPERATION

In this section consider:
P1 - Reference pressure
P4 - Pressure level for operation in relief
The electronic interface of the compressors Flex is programmed to perform commands according to the rated pressure indicated in the nameplate of the product.
After the start, the compressor goes into full load mode operation. When the discharge pressure reaches the rated values of the compressor, adjusted by the parameter P1, the rotation speed of the main motor will start to vary due to the action of the frequency inverter. The command of the frequency inverter is performed by the electronic interface by means of a feedback control system(*) The command system makes the discharge pressure of the compressor remain at its rated value, with variations of at most 0.1 bar, since the maximum and minimum values of rotation of the main motor are respected.
In case the maximum speed of the main motor is reached and the pressure starts to drop, the compressor is operating at the limit of its capacity (compressor under dimensioned for the application). If the speed of the motor reaches its minimum pressure, that is, the air consumption is very low or even if there is no consumption at all, the discharge pressure will increase until it reaches the value of relief pressure (P4). The interface will lower the speed of the motor to a value called relief speed. If the compressor remains in relief for over thirty seconds, the main motor will turn off and the compressor will go into the standby mode until the discharge pressure decreases to the rated value (P1). At this point, the compressor will begin the start procedure automatically, without the operator having to press the start button.

(*) Proportional integral feedback command (PI). For further information, refer to the section Speed Setting in the Electronic Interface.

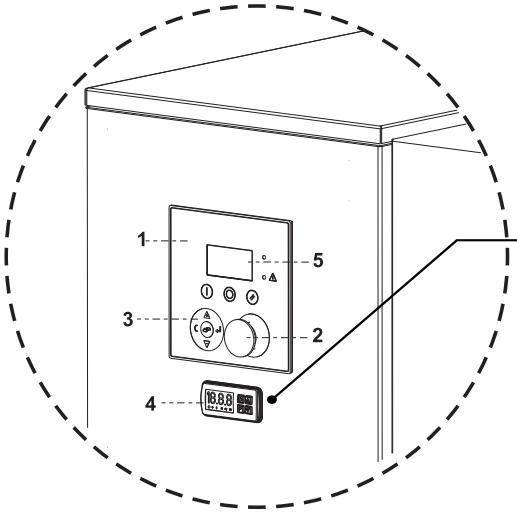
COMPRESSOR COMMAND IN RELIEF

1. In this phase of operation, the admission valve will close, stopping the air flow in the suction, but the air suction still goes on by holes called bypass. Since the section of the passage of those holes is small, the air volume decreases together with the power consumed by the compressor.
2. With the relief way open, the depressurization of the air/oil tank will begin until the air volume aspired by the bypass holes is equal to the air volume drained by the relief way, equalizing the pressure of the tank between 3.1 to 4.1 barg (45 to 60 psig) required in order to guarantee the lubrication of the system, reducing the power around 60% while in this regime.
3. In this command phase, the compressor will not produce air to the system. If there is air consumption at this moment, the pressure may decrease in the system, making the Electronic Interface deenergize the solenoid valve, putting the compressor back to operation at full load.

COMPRESSOR COMMAND AT FULL LOAD

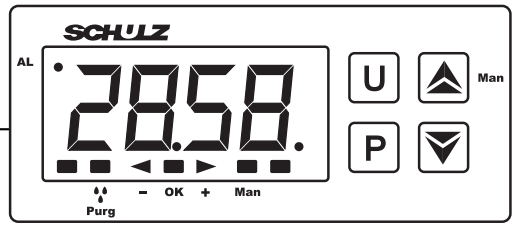
1. When the pressure goes up reaching the value of the rated pressure of the compressor, the electronic interface Control I or Control II, will deenergize the solenoid valve **Y1** closing the command way that kept the admission valve 1 totally open.

13. INSTRUMENT PANEL



1. Electronic interface (Read the instructions in the manual of the Electronic Interface)
2. Emergency stop button
3. Keys
4. Dryer electronic controller
5. Display

FIGURE 13.1 - INSTRUMENT PANEL



U Verification of the Power Supply Voltage and Temperature

P Access to the parameters

Increase of test and drain parameters

Decrease

AL: to Temperature and/or voltage oscillation
Purg 3 little drops: to Activation of the drain
Man: to Manual drain activated
- : to Lower temperature limit reached (LO)
OK: to Normal operating conditions
+: to Upper temperature limit reached (HI)
. : to Access to the programming menus

FIGURE 13.2 - DRYER ELECTRONIC CONTROLLER

14. COMMAND MODE

The Electronic Interface is programmed in the factory to operate in automatic mode, that is: The motor of the compressor will turn off when the period in relief is greater than the time set, automatically returning to operation if the pressure is below the value of **P1.**
The compressor runs in full load regime, going into relief as soon as the maximum working pressure is reached.
The time of permanence in relief **P4** comes set from the factory through the Electronic Interface.
If during this adjusted time there is no consumption that causes a pressure drop, the compressor will turn off, returning to operation as soon as the pressure is lower than the parameter **P1** adjusted in the Electronic Interface.

15. START PROCEDURE

IMPORTANT

The Compressors are supplied from factory already tested and filled with synthetic lubricant oil LUB SCHULZ. Before the initial start of the compressor, check: the retightening of the hoses of the hydraulic circuit and of the electric contacts; turn on the dryer five minutes before the start of the compressor (when installed).

INITIAL START PROCEDURE

A. Open the door and check the oil level. The oil level sight **13** (figures 8.1 and 8.3) must be at the maximum mark;

B. The Electronic Interface display should show the message “READY TO START”;

C. Press the green key to start the compressor, and immediately press the emergency button (turning off the compressor - vide item stop procedure), observing if the rotation direction of the assembly is the same as that of the arrow located on the housing of the compressing assembly and the rotation direction of the fan (the correct air flow is towards the radiator);

Note: In case the direction is wrong, disconnect the compressor from the mains and invert the wires in the input of the power supply or at the output of the protection fuses and repeat the procedure C. And for the fan, invert only the two cables of contactor of fan.

Note: Unlock the emergency button and press the reset key in the Electronic Interface to cancel the message “EMERGENCY” in the display, which afterwards will show “READY TO START”.

D. After making sure the rotation direction is correct, close the side door and press the ON (green) key to put the compressor into operation, with the valve closed until the compressor reaches the maximum pressure. When it goes into relief P4, slowly open the valve and your rotary screw compressor will be ready to supply compressed air to the compressed air system.

Note: The air dryer should be already on.

IMPORTANT

- Do not allow, at the first start, the motor to run for over 3 (three) seconds with the rotation inverted. The operation of the item C is quick and easy to see. If there are difficulties in the start, refer to the chapter Troubleshooting.
- In normal situations, use the OFF (red) key in the instrument panel, which will produce a timed relief before the complete turning off of the compressor.
- The emergency button must only be used when a fast deactivation of the compressor is desired. Its use in normal conditions will cause failure of the equipment which is not covered by the Warranty.

16. STOP PROCEDURE

- The compressor is programmed to turn off according to the setting of the interface;
- In order to turn it off (manual stop), press the OFF (red) key in the instrument panel, which will produce a timed relief before the complete turning off of the compressor.
- For emergency stops, press the emergency button. The stop of the compressor will be fast.

ATTENTION

It is important to await complete depressurisation tank air/oil to a new start-up (approximately 3 minutes).

17. PREVENTIVE MAINTENANCE

1. PROCEDURES BEFORE BEGINNING MAINTENANCE.

ATTENTION

There are hot surfaces inside the compressor cabinet after its stop.
The use of Schulz genuine lubricant oil and parts extends the useful life of your compressor, preventing, thus, the loss of the Warranty of you compressor.

A. Disconnect the compressor and make sure the tank has no pressure (wait for five minutes).
B. Disconnect the compressor from the power supply (disconnecting switch) and make sure the compressor cannot be inadvertently turned on.

For compressors with remote command the used in group, you must put up a sign "In Service", on the start switch.

C. Close the valve between the compressed air system and the compressor.

2. PROCEDURES AFTER MAINTENANCE
A. Close the valve between the compressed air system and the compressor.
B. Connect the compressor to the power supply (disconnecting switch) and make sure the compressor can be turned on without causing any accidents.
C. Start the compressor.

3. PROCEDURE TO ADJUST THE TENSION OF THE BELT
The tension of the belt that drives the motor movement to the air end must be checked weekly.
In case the tension is not within the specification of Table 17.1, the procedure below must be carried out in order to adjust the tension of the compressor belt properly:
A. See item 1 - Procedures before beginning maintenance.
B. Loose the bolts 1 (4 units).
C. Loose the lock nuts 3 of the bolts 2 (2 units).
D. Tighten the bolts 2 alternately so as to keep the air end leveled until the belt presents the proper tension as per table 17.1
E. If the tension of the belt is correct, tighten bolts 1 and the lock nuts 3; otherwise, repeat the previous steps.

Notes:
- With the compressor operating at maximum pressure, if the belt describes and arc on the driven pulley as if it were trying to get out of the grooves, the tension is incorrect.
- At the ideal tension, the belt touches all the traction arc of the driven pulley (right side).
- To measure the force, use a tensiometer, which must be purchased at a SCHULZ AUTHORIZED DEALER.
- When the tension of the belt is not correct, there is overheating and typical noise indicating the belt is slipping.
- Another way to monitor the tension is to monitor the rotation of the air end observing its variation.

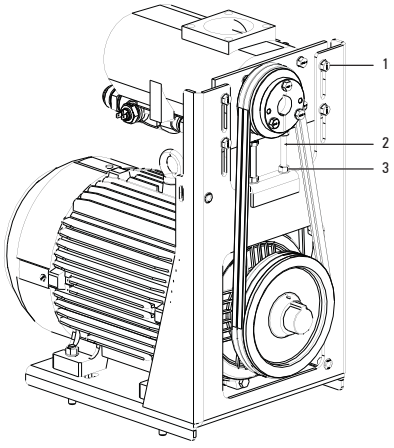


FIGURA 17.1 - BELT TENSION

Model	Load				X (cm)
	(Kgf)		N (Newton)		
	Min.	Max.	Min.	Max.	
SRP 4005 SRP 4008	3,0	4,5	29,4	44,2	0,5
SRP 4010 SRP 4015 Dynamic	3,0	4,0	29,4	40	0,5
SRP 4020 SRP 4025 SRP 4030	2,5	3,5	24,5	34,3	0,6
SRP 4050 SRP 4060	19,4	25,0	190	245	1,0

TABLE 17.1 - BELT TENSION

4. PROCEDURE FOR REPLACING THE AIR FILTER

Wait for the compressor to cool down before beginning the work. The element of the filter cannot be reused or cleaned.

The air filter is the component responsible for the purity of the air that will be compressed by the air end. The period for changing the air filter is indicated in Table 17.3. In order to change the air filter of your rotary screw compressor, follow the procedure below and check Figures 17.2, 17.3 or 17.5

A. Read the procedures before beginning maintenance.

B. Remove the cover 1.

C. Remove the main air filter element 2 (and the secondary one 3, if applicable).

D. Clean the filter enclosure.

E. Install the new filters y put the cover back to place.

F. Update the information of number of hours for the next change of oil filter on the electronic interface of the compressor. The number to be set is indicated in the parameter table attached to the information folder of your compressor. (see table 7)

G. Make sure the sealing of the air filter is well seated on the fastening face.

Note: The period for the replacement of the air filter should always be evaluated by the technical assistance that services your rotary screw compressor.

Note: Check the restriction of the air filter weekly. If indicator restriction is red, change the filter following the procedure above, even if the number of hours has not been reached.

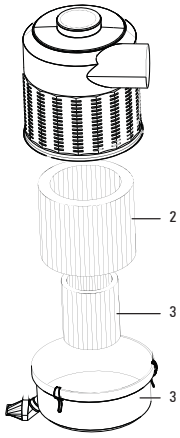


FIGURE 17.2 - AIR FILTER SRP 4040 TO 4200

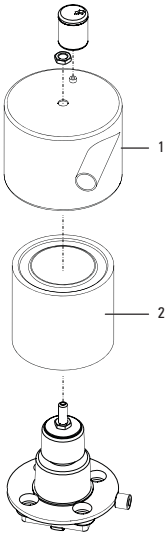


FIGURE 17.3 - AIR FILTER SRP 4005 AND 4030

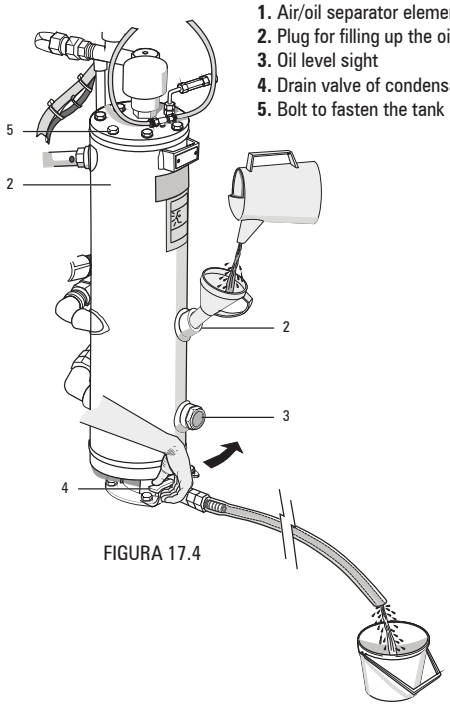


FIGURA 17.4

5. PROCEDURE FOR DRAINING THE CONDENSATE (WATER) FROM THE AIR/OIL TANK

The draining of the condensate of the air/oil tank must be performed daily. In order to drain the condensate of the air/oil tank, follow the procedures below and check Figure 17.4

A. See item 1 - Procedures before beginning maintenance.

B. Turn the compressor off and wait for 1 (one) hour for the condensate to settle on the bottom of the tank.

C. Open the drain valve 2 and collect the condensate in a container. Close the drain valve as soon as oil starts coming out of the tank.

6. PROCEDURE FOR REPLACEMENT OF THE OIL FILTER

Wait for the compressor to cool down before beginning the work. The oil filter cannot be reused and must be disposed according to the local regulations.

In order to change the oil filter, follow the procedures below and check Figures 17.5, 17.6, 17.7 or 17.8. The period for changing the oil filter is indicated in Table 17.3

A. See item 1 - Procedures before beginning maintenance.

B. Remove the used element 1.

C. Install new component 1.

D. Update the information of number of hours for the next change of oil filter on the electronic interface of the compressor. The number to be set is indicated in the parameter table attached to the information folder of your compressor.

E. Make sure the sealing of the air filter is well seated on the fastening head 2

Note: The first change of oil filter compressors SRP 4010 to SRP 4030 deve be held with 300 hours

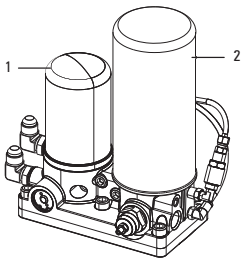


FIGURA 17.5 - CHANGE OF THE AIR/OIL FILTER SRP 4005 AND SRP 4008

FIGURE 17.6 - CHANGE OF THE OIL FILTER ELEMENT SRP 4010 TO SRP 4040

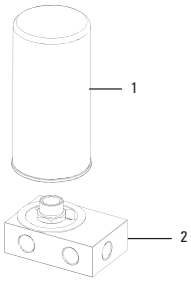


FIGURE 17.7 - CHANGE OF THE OIL FILTER ELEMENT SRP 4050 AND SRP 4200

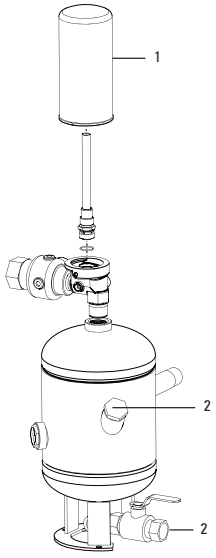


FIGURE 17.8 (SRP 4010, 4015 AND DYNAMIC)

7. PROCEDURE FOR CHANGING THE LUBRICANT OIL

Use LUB SCHULZ, LUB SCHULZ SEMI SYNTHETIC or LUB SCHULZ SYNTHETIC oil for rotary screw air compressor only. Do not mix different kinds of oil. The oil is still hot when the compressor is just turned off. Do not open the filling plug if the tank is pressurized. Dispose the oil according to the local regulations.

In order to change the oil, follow the procedures below and check Figure 17.4. The period for changing the oil is indicated in Table 17.3

A. See item 1 - Procedures before beginning maintenance.

B. Turn off the compressor and wait for at least 5 (five) minutes for the elimination of the pressure of the system. The air/oil tank has a pressure gauge. Check if the tank is completely depressurized before performing the next step.

C. Open valve 2 and collect the used oil in a container. Close the valve at the end of the draining.

D. Open the filling plug 3 and fill with LUB SCHULZ, LUB SCHULZ SEMI SYNTHETIC or SYNTHETIC LUB SCHULZ oil until the oil level reaches the lower part of the filling plug.

E. Close the filling plug after the filling. It is not necessary a strong fastening torque, since the plug is self-sealing.

Note:

- In the air/oil tank is a tag that indicates if the oil LUB SCHULZ or SYNTHETIC LUB SCHULZ oil for rotary screw compressor which comes in your compressor from factory. You find this oil in SCHULZ AUTHORIZED DEALER. This compressor may operate with mineral oil* and nontoxic synthetic oil*.
- We recommend not changing the oil. Changing the kind of oil can cause contamination because of chemical incompatibility, reducing the useful life of the oil and producing lubrication problems.

8. REPLACEMENT OF THE AIR/OIL SEPARATOR ELEMENT

8.1 FOR COMPRESSORS SRP 4020 TO SRP 4200

Dispose the used separator element according to the local regulations. Wait for the compressor to cool down before beginning the maintenance work.

In order to change the separator element, follow the procedures below and check Figure 17.9. The period for changing the separator element is indicated in Table 17.3;

A. See item 1 - Procedures before beginning maintenance.
B. Turn off the compressor and wait for at least 5 (five) minutes for the elimination of the pressure of the system. The air/oil tank has a pressure gauge. Check if the tank is completely depressurized before performing the next step.
C. Remove the bolts that fasten the cover of the air/oil tank.
D. Remove the cover of the tank.
E. Clean the sealing surfaces of the tank and of the cover and replace the gaskets.
F. Clean the tank if necessary.
G. Install the new separator element and make sure it is well coupled. Take care not to contaminate the element; hold it by the metal ends.
H. Assemble the upper cover of the air/oil tank, taking care for the gasket and ground clamp properly positioned.
I. Tighten the bolts alternately with a torque wrench (see table 17.2).
J. Update the information of number of hours for the next change of the separator element on the electronic interface of the compressor. The number to be set is indicated in the parameter table attached to the information folder of your compressor.

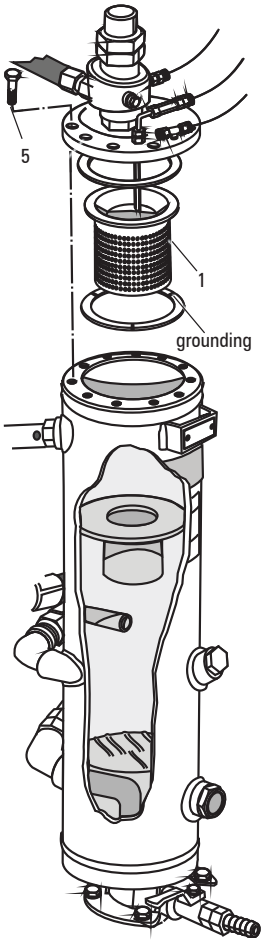


FIGURE 17.9

IMPORTANT

- It is important to check if the gasket of the separator element has a grounding clip.
- When this element is installed, the electrical continuity must be stabilized and maintained between the element itself and the air/oil separator tank. Fail to keep this continuity may result in the buildup of static power on the compressor. The spark resulting from the discharge of this static electricity can cause the ignition of the air/oil mix inside the compressor, resulting in serious damages to the equipment and accidents or death!
- For compressors SRP 4150 and SRP 4200 there is support in the reservoir to facilitate removal of its cover, as in figure 17.9.

N° Bolt	Preload torque	Final torque
16	30-50N.m. (22-37lbf.ft)	155-164N.m. (114-121lbf.ft)
8 | 12	15-25N.m. (11-18lbf.ft)	70-80N.m. (52-59lbf.ft)

TABLE 17.2

8.2 FOR COMPRESSORS SRP 4010 AND SRP 4015

Dispose the used separator element according to the local regulations. Wait for the compressor to cool down before beginning the maintenance work.

A. See item 1 - Procedures before beginning maintenance.
B. Turn off the compressor and wait for at least 5 (five) minutes for the elimination of the pressure of the system. The air/oil tank has a pressure gauge. Check if the tank is completely depressurized before performing the next step.
C. Remove the used element 1.
D. Install new component 1.
E. Update the information of number of hours for the next change of oil filter on the electronic interface of the compressor. The number to be set is indicated in the parameter table attached to the information folder of your compressor. (Procedure necessary for electronic compressors only).
F. Make sure the sealing of the air filter is well seated on the fastening head 2 (Models SRP4010 or SRP 4030)

9. MAIN ELECTRIC MOTOR BEARING

In order to perform the maintenance of the main electric motor bearings, follow the procedures indicated in item 1. Grease the electric motor bearings as indicated in its nameplate. For further information, refer to the instruction manual of the motor.

10. RETIGHTENING OF ELECTRICAL WIRING

A Before beginning the retightening of the wiring connections, proceed as indicated in item
B. Then retighten the wiring connections of the start switch (connectors of relays, contactors, power cables, etc).
C. Retighten the connections of the electric motor's terminals, see table 17.3

11. RADIATOR AND CONDENSER CLEANING

A clogged radiator raises the compressor's temperature to the point of shutting it down due to overheating. Before starting to clean proceed as indicated in item 1.
To clean the radiator and the condenser externally (Figure 17.10), use compressed air from the outside to the inside.
To clean the radiator more thoroughly, brush its inner bottom surface.
Note: Do not use a metal brush to clean the radiator or condenser, avoid crumpling the cooling fins.

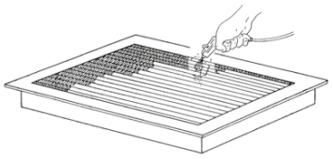


FIGURE 17.10

12. CALIBRATIONS

Perform the gauging of the safety valve(s) and pressure gauges calibrated at an local technical norms and legislation accredited body. This operation must be carried out with the device not coupled to the tank.

Procedure		Daily	Weekly	1000h	2000h	4000h	8000h	Annually	When Required
Check the indications of failures in the interface		*							
Check oil level			* (1)						
Change lubricant oil	mineral 1000			* (8)					*
	mineral 4000					* (8)			
	synthetic 8000						* (8)		
Replace the conventional air filter element				*					*
Replace the vehicular air filter element						*			*
Check the air filter element restriction level			* (5)						
Replace the oil filter	compressors up to 40hp with mineral oil			* (2) (9)					
	compressors up to 40hp with synthetic oil				* (2)				
	compressors from 50hp to 250hp with mineral oil				*(9)				
	compressors from 50hp to 250hp with synthetic oil					*			
Replace air/oil separator element	in compressors up to 15hp					* (6)			
	in compressors up to 15hp with mineral oil					* (6) (9)			*
	in compressors up to 15hp with synthetic oil						* (6)		*
Check the air/oil separator element restriction level			* (5)						
Clean the radiator and the condenser externally									* (4)
Check for oil leaks			*						
Inspect the safety valve								*	
Check the condition and tightness of hoses						*			*
Tighten screws									* (4)
Check electrical, switch and motor connections.			*	*					*
Clean the filter air inlet on the compressor			*						
Compressor cleaning				*					*
Clean the air filters of the electrical box			*						*
Check voltage and tcondition of the belt(s)			*						
Lubricate the motor bearings (according to motor nameplate)									*
Check the coalescing pre-filter restriction level			*						
Replace coalescing pre-filter element								* (7)	*
Check operation of the automatic air purge (when applicable)			*						
Replace nylon tubes							*(11)	*	

TABLE 17.3 - PREVENTIVE MAINTENANCE PLAN

ATTENTION

If the compressor remains stopped for a period equal to or exceeding six months, it will be required and the customer's responsibility to replace the filters and oil.

IMPORTANT

(1) Check the oil level when the compressor is off (wait until the air and oil are separated and the bubbles (foam) are eliminated, since this may mask the oil level).
(2) The first time with 300 hours (SRP 4005 to 4040 models)
(4) On a quarterly basis or when required.
(5) Replace the filter if the indicator (if any) presents a restriction.
(6) The useful life of the separator element is up to 8,000 hours of service provided that all the following requirements are met:
- installation conditions according to items 1 and 2 in the Installation Chapter;
- Preventive maintenance performed correctly (according to its chapter);
- Infrequent machine operating regime (cycle load / relief).

Replacement period for the separator element must always be evaluated by the Technical Assistance that attends your screw compressor (recommendations valid for factory supplied mineral oil as well as synthetic oil).
(7) Perform replacement of elements regularly to obtain maximum efficiency and quality of Schulz air filters, thus maintaining low operating costs. The filter elements must be changed at least once a year or when the pressure drop exceeds the recommended maximum of 0.6 bar.
(8) Operating conditions such as ambient temperature, air/oil radiator obstruction by contamination, machinery room air renewal, cleaning of air, oil and separator element filters, can cause the unit's discharge temperature at levels that alter the useful life of the oil.
When operating conditions regularly cause the compressor unit's discharge temperature below 90°C, the oil change period must meet the following:
- If mineral oil – every 1,000 hours;
- If semi-synthetic oil – every 4,000 hours;
- If synthetic oil – every 8,000 hours.

When operating conditions regularly cause the compressor unit's discharge temperature above 90°C, the oil change period must meet the following:
- If mineral oil 1,000 – every 500 hours;
- If mineral oil 4,000 – every 2,000 hours;

(9) Included in mineral oils: Lubschulz mineral 1,000 and Lubschulz mineral 4,000.
(11) Operating conditions such as: ambient temperature, air/oil radiator obstruction by contamination, machinery room air renewal, cleaning of air, oil and separator element filters can promote/accelerate wear of nylon tubing.

18. MAINTENANCE PARTS

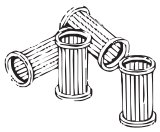
For your SCHULZ rotary screw air compressor to have a guaranteed useful life and operate properly, it needs periodical maintenance as mentioned in the chapter Preventive Maintenance. The table below indicates the basic parts for maintenance and lubricant oil, which can be purchased at SCHULZ SERVICE PROVIDER.

Description	SRP 4005 E	SRP 4008 E	SRP 4010 E/ Dynamic	SRP 4015 E/ Dynamic	SRP 4020 E	SRP 4025 E	SRP 4030 E	SRP 4050 E	SRP 4060 E	SRP 4150 E	SRP 4200 E
SH-46 SYNTHETIC (Kluber). lubricant oil (20-l drum)	-	-	-	-	-	-	-	-	-	-	-
Mineral lubricant oil LUB SCHULZ (drum 20 liters)	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0	101.0173-0
Lubricant oil LUB SCHULZ SEMI-SYNTHETIC (20-l drum)	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT	101.0280-0/AT
Synthetic lubricant oil LUB SCHULZ (drum 20 liters)	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT	101.0239-0/AT
Air filter element (primary)	007.0238-0	007.0238-0	007.0184-0/AT	007.0184-0/AT	007.0170-0/AT	007.0170-0/AT	007.0170-0/AT	007.0472-0/AT	007.0472-0/AT	007.0364--0/AT	007.0364--0/AT
Air filter element (secondary)	-	-	-	-	007.0171-0/AT	007.0171-0/AT	007.0171-0/AT	-	-	007.0365-0/AT	007.0365-0/AT
Oil filter	007.0177-0	007.0177-0	007.0177-0	007.0177-0	007.0023-1/AT	007.0023-1/AT	007.0023-1/AT	007.0383-0/AT	007.0383-0/AT	007.0383-0/AT	007.0383-0/AT
Air/oil separator element	007.0233-0/AT	007.0233-0/AT	007.0233-0/AT	007.0233-0/AT	021.0148-0	021.0148-0	021.0148-0	007.0026-6	007.0026-6	021.0185-0	021.0185-0
Pre-filter element	-	-	007.0267-0	007.0295-0	007.0271-0	007.0271-0	007.0271-0	007.0275-0	007.0275-0	007.0310-0	007.0310-0
Motor inlet air filter	-	-			007.0417-0/AT	007.0417-0/AT	007.0417-0/AT	007.0455-0/AT	007.0455-0/AT	-	-
Electric box inlet air filter	-	-	-	-	-	-	-	-	-	007.0176-0/AT	007.0176-0/AT
Inlet filter for compressor (kit with 2 pieces)	-	-	-	-	007.0398-0/AT	007.0398-0/AT	007.0398-0/A	007.0491-0	007.0491-0	-	-

TABLE 18.1

19. REMOVING MAINTENANCE PARTS - DISPOSAL

When service is over, the compressor oil, oil filter element and oil separator element must be disposed according to the local regulations.
See further directions in “Environmental Orientations and Recommendations”.



20. CARES WITH THE LUBRICANT OIL

The recommended oil is the synthetic or mineral oil for rotary screw oil compressor, which is found at SCHULZ AUTHORIZED DEALERS.
Before the continuous use of the oil, the following items should be checked, because they are important for the operation of the compressor:
1. Temperature during operation: if continuously above 90°C, reduce by half the regular period for oil change;
2. Oil consumption: high temperature during operation increases oil consumption;
3. If the compressor operates continuously over 90ºC and/or the oil change period is not respected, there might be formation of varnish (oil oxidation). This formation can be seen as a layer of brown varnish. The varnish affects the cooling and oil separation.

IMPORTANT

Note: We recommend not changing the oil. Changing the kind of oil can cause contamination because of chemical incompatibility, reducing the useful life of the oil and producing lubrication problems.

21. CORRECTIVE MAINTENANCE

ATTENTION

To guarantee the SAFETY and RELIABILITY of the product, the repairs, maintenance and adjustments must be performed through the nearest SCHULZ AUTHORIZED DEALER, which always uses genuine parts.

22. ENVIRONMENTAL GUIDELINES AND RECOMMENDATIONS

1. Wastewater Disposal

The presence of liquid effluents or non-treated condensate from the tank or condensate separator in rivers, lakes or in other water receiving bodies may adversely affect the aquatic life and the water quality.

The condensate daily withdrawn from the tank or condensate separator, according to Chapter Preventive Maintenance, must be kept in a container and/or in an appropriate collecting network for further treatment.

Schulz S.A. recommends that the liquid effluent produced inside the compressor tank or condensate separator be properly treated through processes that aim at the protection of the environment and a healthy life quality of the population, complying with the local legal regulations and requirements in effect.

Among the treatment methods available, you may choose from the physical-chemical, chemical, and biological ones.

The treatment may be carried out by the company itself or by a third party company.

2. Draining of the Lubricant Oil from the Air End or Air/Oil Separator Tank

The disposal of lubricant oil from oil changes in the tank of the rotary screw compressor must comply with the requirements of the related local regulations.

3. Disposal of Solid Waste (large parts and product packaging)

The creation of solid waste is one aspect that must be considered by the user in the use and the maintenance of the equipment. The impacts on the environment may cause significant changes in the quality of the soil, in surface and underground water, and in the population's health due to improper disposal of the discarded residues (on streets, water springs, landfills, etc).

Schulz S.A. recommends that the waste resulting from the product, from its generation, use, transportation, and treatment to its final disposal, be handled with care.

A suitable management should consider the following stages: quantification, qualification, classification, reduction at source, pick-up and selective pick-up, recycling, storage, transportation, treatment and final destination.

Waste disposal should be done in compliance with the requirements of local legislation in effect.

23. FAILURE DIAGNOSTICS

The list we present below simulates most problems and possible causes that may result in a halt or incorrect operation of the compressor. Some procedures to solve the problems are simple, which allows the user, through the reading of the Electronic Interface display, to solve them without the need of specialized Technical Assistance.
However, if the problem remains after the corrective actions described below, contact the nearest SCHULZ AUTHORIZED DEALER.

OCCASIONAL DEFECT	PROBABLE CAUSE	SOLUTION
Oil dragged to the air system.	Oil level too high.	Remove oil excess.
	Compressor oil foaming.	Fast load and relief cycle. Turn off some compressor in parallel or install a larger tank.
Compressor with load/relief cycles too fast.	Air consumption too lower than the production of the compressor.	Turn off some compressor in parallel or install a larger tank.
	Outlet valve closed. (In this case, pressure is too low in the air system).	Open the valve slowly.
	Great load loss close to the compressor.	Eliminate load loss.
Compressor will not start. NOTE: The Electronic Interface was programmed to detect possible failures (refer to its instruction manual).	Phase or electric power missing.	Check the wiring and protection fuses.
	Voltage missing in the command.	Check the protection fuse of the command. With voltage on the command, the light (if it is ok) must turn on.
	Pump or fan motor overload relay tripped.	Reengage it and check the cause by restarting the compressor.
	Overtemperature.	Wait for some minutes until going back to the ideal operating temperature. In case it does not solve the problem, contact the Technical Assistance.
	Coil of the contactors burnout.	Check the coils of the contactors.
	Other causes: Wires with loose or broken contacts.	Check this component by following the wiring scheme; find where the voltage interruption that prevents the start of the compressor is located.
	Emergency stop button activated.	Unlock the button and press the reset key of the Electronic Interface
The compressor starts and immediately turns off.	Overload relay tripped. (Read the Electronic Interface).	Identify the cause, eliminate it and check the adjustment range of the relay.
	Installation not in compliance with the related standard.	Check current and the discrepancy between the phases, check the cause and resize the cables if necessary.
	Phase missing (installation fuse burnout).	Check the fuses and resize them if necessary. Check the cause for the fuse burnout.
	Power supply cables of motor loose in the input or output of the contactors.	Check the conditions of the cables and insulations and retighten them if necessary.
	Thermal relay with defect or contacts of contactors worn out.	Check the contacts of contactors K1, K2, K3. If they are good, observe the overload relay.
	Lack of oil. The temperature rises quickly.	Check the oil level and refill it, (See chapter Preventive Maintenance item 1.2.4 using oil LUB SCHULZ or LUB SCHULZ SYNTHETIC for rotary screw compressor).
	Network pressure is high (unload mode time is 6 minutes)	Turn off some other compressor installed in the same network or wait that it will turn off automatically when the pressure drops down, since it be pushed the green button and the symbol ⏽ is being showed.
The compressor suddenly lost performance. Pressure is too low in the air system. Note: Before any actions, read the notes at the end of the troubleshooting and in the display of the Electronic Interface.	Air filter clogged.	Check the restriction indicator and the conditions of the air filter, replacing it if necessary.
	Hose that depressurizes the tank is disconnected from the admission valve or broken. (Observe typical leak noise).	Connect the hose or replace it.
	Relief valve stuck open. Compressor will not compress the full air flow to the air system. Admission valve won't open.	Request the presence of the Technical Assistance.
	Coil of solenoid valve burnout or with hole clogged.	
	Pipe that feeds the solenoid valve broken or disconnected.	
	Air leak in some pipe of the compressor.	
	Belts loose or worn out.	Adjust the tension or replace the belts. See the Chapter Preventive Maintenance.

OCCASIONAL DEFECT	PROBABLE CAUSE	SOLUTION
Compressor turns off and won't start even with the system pressure low.	Overload relay tripped.	Check the current and setting of the overload relay.
	Air/oil tank pressurized.	Wait for depressurization or check the causes for overpressure in the tank.
	Thermal relay tripped.	Check the current and setting of the overload relay.
	High temperature. (This compressor has temperature sensors that will inform the Electronic Interface)	Check the oil level and refill it if necessary. Use LUB SCHULZ or LUB SCHULZ SYNTHETIC oil for rotary screw air compressor.
		Check if the fan is not broken (blades).
		Check if the filtering element of the oil filter is not clogged. The first change is done after 300 hours of operation (SRP 3030 Flex).
		Check if there is air flow on the radiator. (Clean it if clogged).
		Check if there is oil leak and fix it.
	Phase missing in the command.	Look for the cause as per the electrical scheme.
	Coil of the contactors burnout.	Change the coil.
Excessive oil consumption, requiring refilling. (Too much oil in the air system).	Leak in the system.	Identify and correct.
	Separator element damaged. In this case, the pressure gauge that indicates restriction will virtually not indicate any restriction.	Change the air/oil separator element and the oil LUB SCHULZ or LUB SCHULZ SYNTHETIC for rotary screw air compressors.
	Return line of the air/oil separator element clogged.	Remove the pipe and clean it.
	Compressor operating in relief too long.	Optimize the time by changing the command mode or adjusting the relay.
Main motor current above the operating rated current.	Rotation reversed.	Check the rotation direction.
	Voltage below the specification.	Recheck the dimensioning of the cables.
	Compressing assembly stuck.	Request the presence of the Technical Assistance.
Water excess in the air/oil tank.	Compressor operating too much above the capacity of the pneumatic tools.	Check the behavior of consumption of your air system. In case it does not solve the problem, request the presence of the Technical Assistance.
	Compressor operating in relief too long.	Check the consumption behavior of your air system, adjusting the time.
	Air filter clogged.	Replace it.
	Low oil level.	Check the cause and change the oil, using LUB SCHULZ or LUB SCHULZ SYNTHETIC.
	Radiator clogged.	Clean it.
	Thermostatic valve not working.	Request the presence of the Technical Assistance.
	Fault in the electronic drain.	Replace the electronic drain.
	Lack of manual drainage in the tank.	Drain the tank manually
Intermittent noise at the start. The contactors seem not to activate.	Voltage drop in the power supply. Installation not in compliance with the related standard.	Recheck the dimensioning of the power supply cables, observing the distance from the power supply (transformer).
		Check how much the voltage drops in the command at the moment of start.
		Check discrepancy between the phases.
		Check if there are no command wires loose.
	Voltage drop in the secondary of the 24-V transformer at the start.	Check the cause and eliminate it.
Overheating of the compressor.	Oil filter clogged.	Replace the filtering element.
	Air filter clogged.	
	Oil level low.	Check the cause and change the oil, using LUB SCHULZ or LUB SCHULZ SYNTHETIC oil.
	Radiator clogged.	Clean it.
	Thermostatic valve not working.	Request the presence of the Technical Assistance.
	Fan will not turn on.	Check the cause and if the problem persists, request the presence of the Schulz Autorized Dealer.
Safety valve opens repeatedly.	Air/oil separator element clogged.	Check the pressure gauge of restriction and replace the separator element.
	Admission valve stuck.	Request the presence of the Technical Assistance.
	Solenoid valve(s) defective.	
	Minimum pressure valve stuck.	

OCCASIONAL DEFECT	PROBABLE CAUSE	SOLUTION
Excessive vibration or noise.	Bearings of motors or air end damaged.	Identify where the noise is and request the presence of the Technical Assistance.
	Fan blade broken.	Request the presence of the Technical Assistance.
	Belts loose or worn out.	Adjust the tension or replace the belts.
It will not dry the compressed air (presence of humidity in the system or in the tank).	Needle valve is closed. It won't let the condensate out of the air dryer, overflowing the heat exchanger and allowing the dragging of condensate to the system.	Make sure the drain needle valve is open enough. If not, turn the handle of the valve counterclockwise in order to increase the discharge of condensate during the drains. It is not necessary the open the valve completely; just the necessary.
	Drain system clogged by dirt. The presence of dirt or particles in the drain system may clog the passage of condensate.	Depressurize and shut down the dryer. Then disassemble the drain system, clean it and assembly again. If you have any questions about how to do the cleaning, contact a SCHULZ AUTHORIZED DEALER.
	Solenoid drain valve not working. Plunge of the solenoid valve stuck or coil burnout, not allowing the activation of this component.	Contact a SCHULZ AUTHORIZED DEALER.
	High temperature of the compressed air. Temperature of the compressed air in the inlet of the dryer excessively hot.	Check the temperature in the discharge of the compressor of compressed air. Clean the radiator.
	High ambient temperature. Ambient temperature too high (above 45°C), decreasing the capacity of thermal exchange of the condenser, jeopardizing the efficiency of the air dryer.	Check if the ambient temperature is above 45°C. If so, provide means to lower the temperature. For help, contact a SCHULZ AUTHORIZED DEALER.
	Thermal protector of the refrigeration compressor activating. Ambient temperature too high (above 45°C), decreasing the capacity of thermal exchange of the condenser, jeopardizing the efficiency of the air dryer.	Contact a SCHULZ AUTHORIZED DEALER to check if your dryer is correctly dimensioned.
	Drain hose to long or with a diameter too small. It hinders the expelling of condensate from the drain system.	Install hoses with a maximum length of 4 meters and internal diameter of at least 5/16".
	A single drain hose for several dryers. It may hinder the proper drain of the equipment.	Use independent hoses for each drain system if there are more than one dryer installed.
Dryer shuts down without any apparent reason.	Temperature sensor disconnected, broken or in short circuit. In any of those conditions, the electronic controller will not allow the activation of the dryer.	Check if the electronic controller is indicating any of the errors mentioned in manual. If so, contact a SCHULZ AUTHORIZED DEALER.
	Electronic controller unadjusted. That will not allow the activation of the dryer.	Check if led "P1" of the controller is on. If so, contact a SCHULZ AUTHORIZED DEALER.
	Pressure switch of high pressure goes off. If the ambient temperature is too high (above de 38°C), the thermal exchange in the condenser is jeopardized and the condensing pressure goes up, activating the pressure switch of high pressure. In case of voltage variations above 10%, the dryer controller goes off, activating Alarm.	Check if the ambient temperature is above 38°C. If so, provide means to lower the temperature. For help, contact a SCHULZ AUTHORIZED DEALER. Clean the condenser according to the instructions of table 5.
	Pressure switch of high pressure goes off. The fans (or fan) turn on and off according to the needs of the equipment. It may happen that they are continuously on, but if they do not turn on at any time up to the dryer shuts down without any apparent reason, it is possible that there is a problem in their electric circuit, stuck rotors or fault in the motors.	Contact a SCHULZ AUTHORIZED DEALER.
High pressure loss in the dryer	Filtering element clogged. Coalescent elements saturated by particles and oil preventing the flow of compressed air.	Check the indicator of restriction of the coalescent filters. If they show restriction, replace them.
	Heat exchanger clogged by formation of ice. If, for any reason, the evaporation temperature drops too much below 0.0°C, a layer of ice may build up within the heat exchanger, clogging the passage of compressed air.	With the dryer on and compressed air passing through it, check if the electronic controller is indicating temperatures below - 1°C. If so, turn off the equipment and contact a SCHULZ AUTHORIZED DEALER.
	Heat exchanger clogged by contaminants. Lack of preventive maintenance on the pre-filter. The heat exchanger may be clogged by contaminants that will settle in its internal cavity.	Keep the air dryer off for 30 minutes with compressed air passing through its inner part. (Attention: during this period, the dryer will allow the passage of humidity to the air system). If at the end of this period, the load loss persists, the air dryer may be clogged by contaminants. In this case, contact a SCHULZ AUTHORIZED DEALER.

NOTES:

When there is a pressure drop in the air system, observe the following details:

- If the operation pressure indicated in the display of the Electronic Interface of the compressor is high and at the factory too low, the problem is significant load loss in the air system.
- If the pressure in the compressor is low and in the air system too, it is possible that the consumption increased due to recent installation of equipment. In this case, the required air demand is higher than the production.
- Before any actions, trying to find the causes in the compressor, close the discharge valve slowly until the pressure rises close to the maximum operating pressure and check the motor current.
- If the compressor is aspiring air at full load and the current is close to the rated current, it is likely the problem is not the compressor.

24. WARRANTY

The "Manufacturer" warrants this equipment to the original purchaser against manufacturing defects of the compressor/dryer for a period of one year and two years (including the Legal Warranty – first 90 (ninety) days) for the air end and the heat exchanger of the dryer, from the date of the issue of the invoice, conditioned on the technical start (when applied) carried out by SCHULZ AUTHORIZED DEALER, subject to the purchase period of the invoice.

The warranty will be granted to the compressor unit provided that:

A. Periodicity is observed for the exchange of lubricating oil (Air end), and given installation conditions as instructed in this manual.
B. The lubricant oil used is oil for rotary screw air compressor recommended in this Manual (Air End), and the spare parts used are genuine SCHULZ parts.
C. The compressor will not operate without the filters or being damaged/clogged to the point of losing its filtering normal capacity.

WARRANTY GENERAL CONDITIONS

A. The warranty period elapses from the purchase date of the product and not from the technical start (when applied).
B. Possible shutdown of the equipment, regardless of the reason, will not generate the right to compensation, repair, refund or return of any nature.
C. Warranty reception will only be held by SCHULZ AUTHORIZED DEALER in view of presentation of the original invoice, preferably on behalf of the customer, containing Tax ID.
D. It is not included in the warranty: parts that naturally wear out with regular use and that are influenced by installation and way of use of the product, such as: air filter, oil filter, valves, hoses, bearings, pressure gauges, fan of the frequency inverter, rotary shaft seal, oil level sight, ball valve, contactors, electronic sensors, electronic interface, air/oil separator element and lubricant oil.
E. Warranty will not include installation and cleaning services, bearing relubrication, adjustments requested by the customer, change of lubricant oil and filters, damages to the external part of the product as well as damages that may result from improper use, neglect, modifications, external agents, bad weather, use of improper accessories, bad dimensioning for the applications it is intended to, falls, perforations, operation different form the directions of the Instruction Manual, power connections to improper voltages or to power lines subject to excessive variations, overloads or fuel use (portable compressors) of poor quality.
F. The warranty of the motor (electric and diesel) and of the component parts of the electric panel (electric switch) is subject to surety and issue of a technical report provided by their manufacturer which informs defects in material and workmanship.
G. The power voltage of the command must operate within the variation of ± 10% (Electronic Interface).
H. Any repairs or compensation for damages caused during transportation are not covered by the warranty.
I. The warranty will not include modifications in the parameters of the Electronic Interface, unless directed by SCHULZ AUTHORIZED DEALER.SCHULZ S.A. will not be liable for failures in the compressor, halts or damages due to the not following of this recommendations/ conditions listed in this manual.

WARRANTY EXTINCTION

This warranty will have no effect when:

A. As of the standard course of its expiration date, counted from the issue date of the invoice.
B. The product is sent for repair or moved (except portable) to another place by people/companies not authorized by SCHULZ S.A., and presents signs of violation of its original characteristics or assembling out of the factory standards.
C. Allow the air dryer to operate without the coalescing pre-filter, according to ISO 8573.1, class 1.4.1, or damaged to the point of losing its normal filtering capacity, or even when its service term is expired.
D. If the compressor presents defects arising from its incessant operation, although the customer is duly alerted by an accredited technical assistance about the need for preventive maintenance or repair, Schulz will be exempt, in this case, from any responsibility in respect to any loss of profits.

NOTES

A. The lubrication of the compressor is essential, which, to have a correct operation and long useful life, also needs oil change and elements of the preventive maintenance at regular intervals as indicated in this manual.
B. No SCHULZ retailer, representative or SCHULZ AUTHORIZED DEALER is authorized to change, add, delete, modify this Warranty or take liabilities on behalf of Schulz S.A.
C. Compressors that may be without running (off, dead, with missing parts, etc.) during the period exceeding 6 (six) months should receive preventive maintenance before operating.The expenses from this maintenance are the customer's responsibility.
D. The drawings, dimensions and photos contained in this manual are for illustrative purposes.

Note: 1. Schulz S.A. reserves the right of making changes in this Instruction Manual without any previous notice.
2. The product lines Compact, Portable and Dryers do not include technical start.

25. SERVICE REPORT

The objective of this record is to register all the services and maintenances performed in your compressor.
The records will help you follow the routine procedures and services performed.
Please, always have at hand the following information when requesting maintenance. Keep this record together with the compressor and fill it out carefully.

Compressor model	Unit model	Serial number Cabinet Unit
Dealer		Invoice number Date
Date of first start		Oil type
Optional equipment:		

Notas

Date	Hours of operation	Ambient temperature	Compressor temperature	**Services:** (oil change, change of filter element, retightening of electric connections, etc.) 	Notes	Initials

26. TECHNICAL DELIVERY REPORD

Produto				
Compressor model SRP	Serial number Compressor	Model Unit Serial number	Pressure (bar)	Voltage (V)
Date	SERVICE PROVIDER			

Distributor	
Name	
Address	
City	State

User	
Name	
Address	
City	State
Person in charge of the equipment	Telephone

Installation		
With air treatment unit Yes ☐ No ☐	Brand	Model
Com reservatório Adicional Sim ☐ Não ☐	Volume (ℓ) Serial Number	Installed under a shelter

Features:
Pre filter ☐ Post filter ☐ Adsorbent filter ☐ Automatic drain ☐ Others: ☐

Application type	Location

Transportation accessory	Distance from the wall	Access to the compressor
Removed ☐	In meters	Proper ☐ Improper ☐

Ventilation	Ventilation access (m)
Proper ☐ Improper ☐ Features ventilation duct ☐	Door x Window x

System fixed to the compressor/tank
With flexible pipe ☐ With flange ☐ With expansion joint ☐ Others: ☐

System type
Open ☐ Closed loop ☐ Grid type ☐ ø air system* ☐

Outlet pipe for the system allows the return of water to the compressor Yes ☐ No ☐

Installation environment	Air filter
Aggressive ☐ Regular ☐ Good ☐	Standard ☐ Vehicular ☐ Other: ☐

Activation Type

Direct start ☐ Y Δ ☐ Soft start ☐ Other ☐

Control type

Analog ☐ Electronic ☐ Other: ☐

Initial Start

Power grid

Proper ☐ Improper ☐

Features grounding ☐ Yes ☐ No

Distance of supply cable ☐ m

Cable section ☐ mm²

Only neuter ☐

Check

Rotation direction ☐ Level of lubricant oil ☐ tension belt ☐

Voltage of the grid in operation	Main motor current	Fan motor current
V	Time H Under load A In relief A	

Check overload relay	Fan motor	Check electric connections
Main electric motor A	A	Electric panel ☐ Motor Main ☐ Motor Fan ☐

Protection (do not use automatic reactivation systems)

Fuse ☐ NH____A ☐ Diazed____A ☐ Circuit Breaker Motor ☐ adjustment_ _A ☐

Relief time

adjustment minutes

Ambient temperature	Operating temperature	Operating pressure	Relief pressure
°C	°C	barg	barg

Documents that come with the product

Compressor Manual ☐ Pressure vessel record ☐ Electric Motor Manual ☐ Manual Soft Starter ☐

Customer instructed

Manual content Yes ☐ No ☐ Preventive maintenance Yes ☐ No ☐

Compressor meets user's requirements

Yes ☐ No ☐ Post sale Yes ☐ No ☐

Operation

Compressor operation in minutes

Under load ☐ In relief ☐ Won't relief ☐

Technical start of the compressor

Number of hours in the hour meter H

Additional comments

Product identification tag	Product identification tag

Note: This record must return to the factory.

Owner/Responsible	Authorized Technician

SERVIÇOS E ATENDIMENTO AO CLIENTE

SAC

SCHULZ

ATENDIMENTO TÉCNICO BRASIL

0800 474141

de segunda a sexta-feira, das 8h às 18h

SCHULZ

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PIEZAS ORIGINALES

Consulte Distribuidor Autorizado

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