Vacuum Pump System

Industrial Oil-sealed Vacuum Pumps and System

Industrial Dry Vacuum Pumps

90 Years in Vacuum

ISO 9001: 2008
FM 514390

Refrigeration Market

Potencial application

- Refrigeration compressor manufacturer
- Refrigerator / air conditioning manufacturer

Oil treatment system for degassing,dehydrating and filtering ester and mineral oils with nominal flow rate of 100 to 500 liters/hour.

The ester oils are 100 times more hygroscopic then a mineral oil. The Edwards equipment are designed to reduce the moisture from 300 ppm to below 15 ppm in only one pass.

200HCS

Advantages of Edwards oil treatment plants

- Increase life and efficiency of refrigeration compressor
- Avoid freezing points inside RAC system.
- Automatic moisture controller in the equipment
- Automatic operation.

Technical Data

Models			100HCD	200HCD	200HCS	500HCS
Storage Tank			NOT INCLUDED	NOT INCLUDED	YES	YES
Moisture Controller - Panametrics			Optional			
Initial Oil Condition			200 - 300 ppm			
Outlet Single Pass Performance			5 - 15 ppm			
Throughput @ 60 Hz		($l\ h^{-1}$)	100	200	200	500
High Vacuum Pumping Capacity		($m^3\ h^{-1}$)	280	480	480	1000
Ultimate Vacuum			2×10^{-3}			
Filter Nominal Porosity			$\beta_{200} = 3_{\mu}$			
Installed power		(kW)	16	18	20	34
Approximate Dimensions	Width	(mm)	1200	1200	1800	
	Length	(mm)	1800	1800	3000	1800
	Heigth	(mm)	1950	1950	1950	4050
	Weigth (without trailer)	(kg)	700	850	1650	1850

EDWARDS
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OIL TREATMENT PLANT

- Insulating
- Refrigeration Compressor
- Lubricating
- Synthetic
- Hydraulic
- Turbine
- Brake Fluids

8000SO

Trailer mounted

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INNOVATIVE PRODUCTS GLOBAL STRENGTH LOCAL SUPPORT VACUUM EXPERTISE

Electricity Market

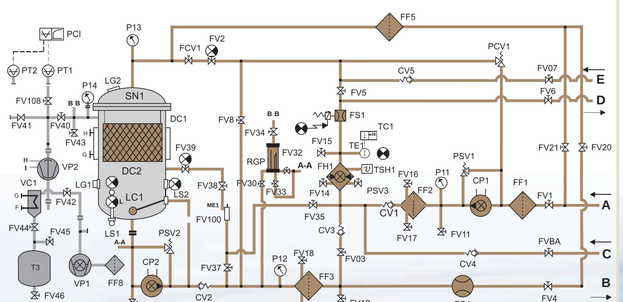
SS Oil Treatment plant and Transformer Drying System

The SS range of oil treatment plant is designed to remove all contaminants including solid particulate, dissolved moisture and gases in a single pass trough the plant. The plant can also treat the cores and windings of transformers by the recirculation of hot treated oil or hot oil spray system hence drying the transformer and thus improving its performance and life.

4000SS

Models			4000SS	6000SS	10.000SS
Throughput @ 60 Hz		(l h-1)	4000	6000	10000
Heating capacity (equivalent to Δt of 40° C)		(kW)	68	108	216
Temperature Control Range		(°C)	0 - 120		
High Vacuum Pumping Capacity		(m3 h-1)	605	1435	3110
Ultimate Vacuum		(mbar)	5 x 10-3		
Filter Porosity		(micron)	0,5		
Electrical Suplly (alternatives available to order)			380V, 60 Hz, 3 ∅		
Installed power		(kW)	83	142	266
Approximate Dimensions	Width	(mm)	1510	2115	2520
	Length	(mm)	2210	3570	4020
	Heigth	(mm)	2075	2350	2750
	Weigth (without trailer)	(kg)	2170	3420	4500

Flow Diagram



CP1 - Feed pump
CP2 - Extraction pump
CV1 - Non return valve
DC1 - Degasser chamber
DC2 - Degasser column
FCV1 - Flow control valve
FF1 - Degasser inlet filter
FF2 - Degasser primary filter
FF3 - Polish filter
FF5 - Hose evacuation filter
FH1 - Heater
FQ1 - Flow totalizer
FS1 - Flow swith
FV01 - Degasser inlet valve
FV02 - Degasser chamber inlet valve
FV03 - Degasser internal recirculation valve
FV04 - Degasser outlet valve
FV05 - Regeneration bypass valve
FV06 - Outlet valve for regeneration
FV07 - Return valve from regeneration
FV08 - Filtration valve
FV11 - Inlet sample valve
FV12 - Outlet sample valve
FV13 - Drain / Aditive valve
FV14 - Heater drain valve
FV15 - Heater air admittance valve
FV16 - Primary filter air admittance valve
FV17 - Primary filter drain valve
FV18 - Polish filter air admittance valve
FV19 - Polish filter drain valve
FV20 - Outlet hose evacuation valve
FV21 - Inlet hose evacuation valve
FV30 - RGP inlet valve
FV32 - RGP drain valve
FV33 - RGP overflow valve
FV34 - RGP vacuum valve
FV40 - Degasser vacuum valve
FV41 - Auxiliary vacuum valve
FV43 - Degasser air admittance valve
FV44 - Condenser drain valve
FV45 - Condenser reservoir air admittance valve
FV46 - Condesnser reservoir drain valve
FV52 - Oil condenser drain valve
LC1 - Degasser oil level control
LG1 - Lower sight glass
LG2 - Upper sight glass
LS1 - Degasser oil level switch
LS2 - Foam detector
PCI - Vacuum controller
PCV1 - Pressure control valve
P11 - Feed pressure indicator
P12 - Extraction pressure indicator
P13 - Flow control pressure indicator
P14 - Vacuum indicator
PSV1 - Pressure switch valve
PSV2 - Gear pump pressure switch valve
PT1 - Vacuum gauge head
RGP - Residual gas pressure indicator
SN1 - Spray nozzle
SV1 - Vacuum pump gas ballast valve
T3 - Condenser reservoir
TC1 - Temperature controller
VC1 - Condenser
VC2 - Vacuum condenser
VP1 - Vacuum pump
VP2 - Auxiliary vacuum pump

P.S.: Some of the items wich are show in the diagram are optional.

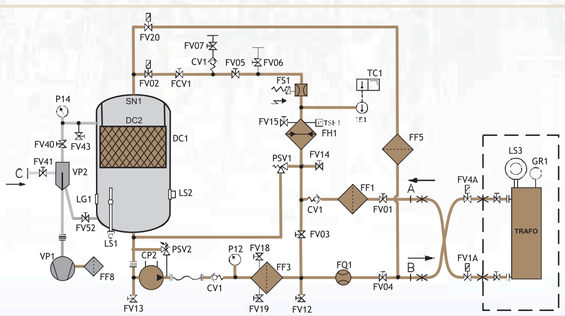
Speedy Oil Compact Unit

Compact oil treatment system for degassing, dehydrating and filtering insulating oil for transformers manufacturer and service companies. The standard plant comprises a heating system with low power dissipation,degasser chamber, inlet strainer, extraction pump, fine filter, vacuum pump and control panel. All process valves, interconnecting pipework, instrumentation and controls are included for normal plant operation.

2000SO

Models			500SO	1000SO	2000SO
Throughput @ 60 Hz		(l h-1)	500	1000	2000
High Vacuum Pumping Capacity		(m3h-1)	11,7	25	38,9
Ultimate Vacuum		(mbar)	5 x 10-2		
Heating Capacity		(kW)	7	14	28
Filter Porosity		(micron)	0,5		
Electrical Suplly (alternatives available to order)			380V, 60 Hz, 3 ∅		
Installed power		(kW)	9	16	31
Approximate Dimensions	Width	(mm)	1200	1200	1360
	Length	(mm)	900	900	1050
	Heigth	(mm)	1820	1820	2010
	Weigth (without trailer)	(kg)	490	520	600

Flow Diagram



P.S.: Some of the items wich are show in the diagram are optional.

Typical Features for Models SS and Speedy Oil

System Performance

The typical performance in a single pass throught the system is:

Models	SS	Speedy Oil	Speedy Oil + Roots Pump
Water - From 50ppm	3	10	5
Gas - From 10%	0,1	0,5	0,3
Particles - Over 5 micrometers	99%		

Acidity: with the addition of optional fullers earth filters, complete with control valves for the reduction of acidity of oils from 0,3 to 0,05 mg KOH/g

Advantages

Automatic operation
Excellent single pass performance
Low heating density
Eletronic temperature controller
Short star up times, typically less than 5 minutes
Plant designed for long term unattended operation including failsafe and automatic restart controls
Plants are designed for simple one man operation and maintenance

Optional Accessories

Flow rate meter;
Gas content measurement;
Water Condensing system;
Vacuum/oil hoses;
Auxiliary circulation pump;
Spray nozzle for hot oil spray transformer drying
trailer for highway transport;
Castor kit;
System for oil treatment with the transformer in operation

Note: Due to our policy of continuous development of our products we reserve the right to modify any of the information contained in this brochure.

Speedy Oil Ultimate Line

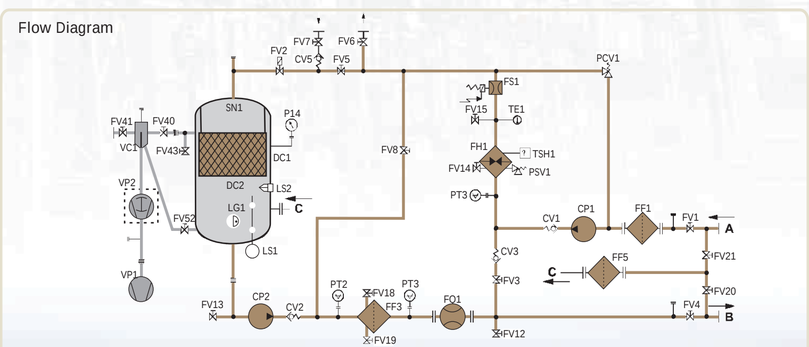
Key Features:

- Automatic Operation
- Variable Throughtput
- Centrifugal Pumps (Lower noise/Non particle generation)
- Touch Screen HMI (optional)

4000SO

Models			4000SO	8000SO	12.000SO
Throughput @ 60 Hz		(l h-1)	1000 ~ 4000	1500 ~ 8000	2500 ~ 12000
High Vacuum Pumping Capacity		(m3h-1) without / with Roots Pump	96/605	96/605/1040	192 / 1040/2210
Ultimate Vacuum		(mbar)	5 x 10-2		
Heating Capacity		(kW)	36	72	144
Filter Porosity		(micron)	0,5		
Electrical Suplly (alternatives available to order)			380V, 60 Hz, 3 ∅		
Installed power		(kW)	47	90	184
Approximate Dimensions	Width	(mm)	1450	1900	2400
	Length	(mm)	1950	2700	3150
	Heigth	(mm)	1900	2200	2600
	Weigth (without trailer)	(kg)	1330	2240	3500

Flow Diagram



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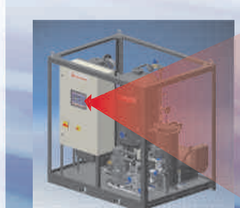
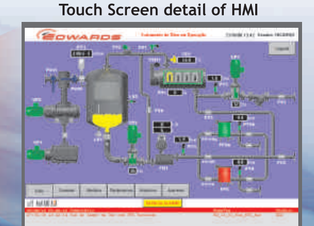
Touch Screen detail of HMI



4000SO



4000SO