

Section 2

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N°.: INDEX 2.0

**WATER SEALED ONCE THROUGH "SOT" AND PARTIAL
RECOVERY "SPR" SYSTEMS SINGLE STAGE AND TWO STAGE
VACUUM PUMPS - TRS-TRM-TRV-TRH**

TECHNICAL DATA SHEET

Standard Components

- Travaini base mounted liquid ring vacuum pump
- Heavy duty flexible coupling, requires no field alignment or lubrication
- NEMA motors, TEFC 3 Phase, 50 or 60 Hertz, class F insulation, 1.15 service factor
- Common carbon steel baseplate
- Pump mounted separator reservoir
- Seal liquid line solenoid valve, Y-strainer, isolating valve, flow control valve and compound gauge for the pump service liquid
- Inlet vacuum type check valve
- Vacuum gauge, liquid filled, 2½" Dial
- Service water piping and fittings all galvanized

Standards Components, Partial Recovery Systems

These systems include the components as for once through systems plus:

- Partial recovery systems feature the return line from separator to pump service water line to minimize the water consumption by 50% and more.

Engineered Options

- Electrical control panel with NEMA 12 enclosure and following components:
Simplex - Full voltage starter with overloads, control transformer, start/stop push button, pump operating light, hour meter.
Duplex - Two full voltage starters with overloads, two H-O-A selector switches, one control transformer, two pump operating lights, two hour meters, automatic alternation, two vacuum switches field adjustable.
- Inlet isolating valve
- Vacuum receiver, ASME coded, galvanized inside and outside
- Flexible pipe connectors to facilitate piping alignment and eliminate pipe strain on system components
- Fused disconnect or circuit breaker switch
- Warning lights and/or alarms
- Dual control transformers, Programmable controller and Custom built electrical panels are available.



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ENGINEERED STANDARD SYSTEMS SOT & SPR

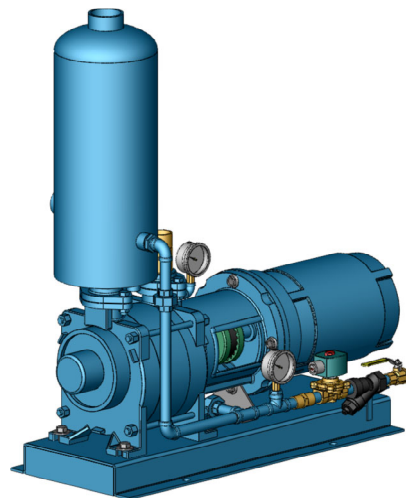
ONCE THROUGH AND PARTIAL RECOVERY SYSTEMS - TRS/TRM/TRV

System Model	Nominal Data At 20"Hg & 60Hz		End Vacuum Torr. (mmHgAbs.)	Inlet Pipe Conn.	Water Pipe Conn.	Pump Model	Weight Approx. Kg.
	Motor HP	ACFM					
TRW 20M-SOT	1½	15	30	1"	3/8"	TRMB 25-30/GH	67
TRW 20S-SOT	1½	17	100	1¼"	3/8"	TRSE 32-20/C/RZ	116
TRW 40M-SOT	3	35	30	1"	3/8"	TRMB 32-50/GH	70
TRW 38S-SOT	3	37	100	1¼"	3/8"	TRSE 32-50/C/RZ	122
TRW 40S-SOT	3	40	100	1½"	½"	TRSE 40-55/C/RZ	127
TRW 50M-SOT	5	50	30	1½"	½"	TRMB 32-75/GH	122
TRW 70V-SOT	7½	75	25	1½"	½"	TRVB 40-110/GH	209
TRW 70S-SOT	5	76	100	1½"	½"	TRSE 40-100/C/GH	209
TRW 100V-SOT	7½	100	25	1½"	½"	TRVB 40-150/GH	263
TRW 100S-SOT	7½	100	100	1½"	½"	TRSE 40-150/C/GH	268
TRW 150V-SOT	10	145	25	2"	½"	TRVA 50-220/C/GH	360
TRW 150S-SOT	10	150	100	2"	¾"	TRSE 50-220/C/GH	365
TRW 200V-SOT	15	200	25	2½"	¾"	TRVA 65-300/C/GH	505
TRW 300V-SOT	20	300	25	2½"	¾"	TRVA 65-450/1C/GH	478
TRW 400S-SOT	25	385	100	4"	1"	TRSC 100-550/C/F	562
TRW 500S-SOT	40	510	100	4"	1"	TRSC 100-700/C/F	773
TRW 700S-SOT	50	750	150	5"	1¼"	TRSE 125-1250/C/F	915
TRW 900S-SOT	60	920	150	5"	1¼"	TRSE 125-1550/C/F	1045

Optional accessories, mounted at pump suction side:

Vacuum relief valve, spring loaded	P/N VRO-038-AA840A	For systems TRW 20M through TRW 70S
	P/N VRO-034-AA308	For systems TRW 70V through TRW 300V
	P/N VRO-852-125C000	For systems TRW 400S through TRW 900S
Inlet Filter Assembly	P/N FIL-100-CSL842	For systems TRW 20M and TRW 40M
	P/N FIL-125-CSL842	For systems TRW 20S, TRW 38S and TRW 40S
	P/N FIL-150-CSL848	For systems TRW 50M through TRW 100S
	P/N FIL-200-CSL850	For systems TRW 150V and TRW 150S
	P/N FIL-300-CT348	For systems TRW 200V and TRW 300V
	P/N FIL-400-CT348	For systems TRW 400S and TRW 500S
	P/N FIL-500-CSL345	For systems TRW 700S and TRW 900S

SOT = SIMPLEX ONCE THROUGH
SPR = SIMPLEX PARTIAL RECOVERY



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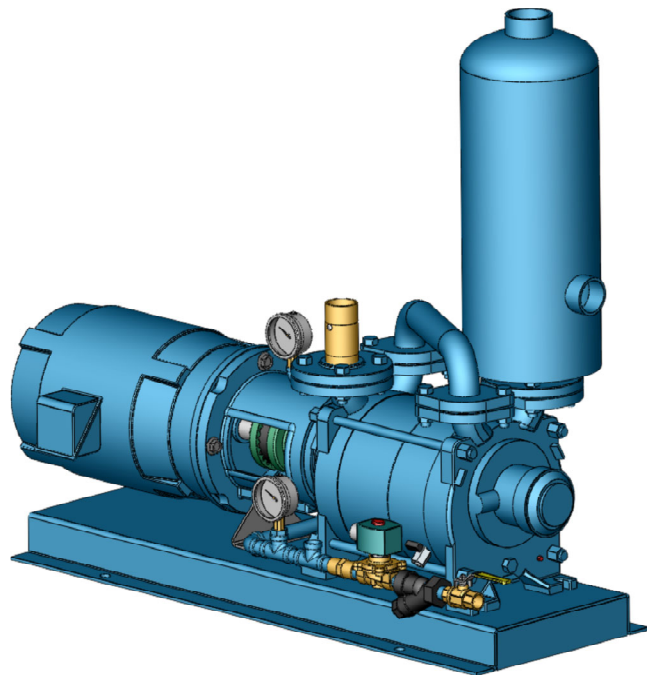
ENGINEERED STANDARD SYSTEMS
SOT & SPR
ONCE THROUGH AND PARTIAL RECOVERY SYSTEMS - TRH

System Model	Nominal Data At 25"Hg & 60Hz		End Vacuum Torr. (mmHgAbs.)	Inlet Pipe Conn.	Water Pipe Conn.	Pump Model	Weight Approx. Kg.
	Motor HP	ACFM					
TRW 15H-SOT	2	15	30	1¼"	3/8"	TRHE 32-20/C/RZ	87
TRW 30H-SOT	3	33	30	1¼"	3/8"	TRHE 32-45/C/GH	90
TRW 40H-SOT	5	44	25	1¼"	3/8"	TRHE 32-60/C/GH	140
TRW 75H-SOT	7½	75	25	1½"	½"	TRHE 40-110/C/GH	313
TRW 100H-SOT	7½	100	25	1½"	½"	TRHE 40-140/C/GH	320
TRW 130H-SOT	10	137	25	1½"	½"	TRHE 40-190/C/GH	350
TRW 200H-SOT	15	200	25	2"	¾"	TRHE 50-280/C/GH	495
TRW 250H-SOT	20	250	25	2"	¾"	TRHE 50-340/C/GH	550
TRW 300H-SOT	25	280	25	2"	¾"	TRHE 50-420/C/GH	580
TRW 400H-SOT	40	420	25	3"	1"	TRHE 80-600/C/GH	790
TRW 500H-SOT	50	500	25	3"	1"	TRHE 80-750/C/GH	860
TRW 580H-SOT	50	580	30	4"	1¼"	TRHE 100-870/C/F	950
TRW 750H-SOT	50	750	30	4"	1¼"	TRHE 100-1260/C/F	1000
TRW 900H-SOT	60	980	30	4"	1¼"	TRHE 100-1600/C/F	1135

Optional accessories, mounted at pump suction side:

Vacuum relief valve, spring loaded	P/N VRO-038-AA840A	For systems TRW 15H through TRW 40H
	P/N VRO-034-AA308	For systems TRW 75H through TRW 500H
	P/N VRO-852-125C000	For systems TRW 580H through TRW 900H
Inlet Filter Assembly	P/N FIL-125-CSL842	For systems TRW 15H through TRW 40H
	P/N FIL-150-CSL848	For systems TRW 75H through TRW 130H
	P/N FIL-200-CSL850	For systems TRW 200H and TRW 300H
	P/N FIL-300-CT348	For systems TRW 400H and TRW 500H
	P/N FIL-400-CT348	For systems TRW 580H through TRW 900H

SOT = SIMPLEX ONCE THROUGH
SPR = SIMPLEX PARTIAL RECOVERY



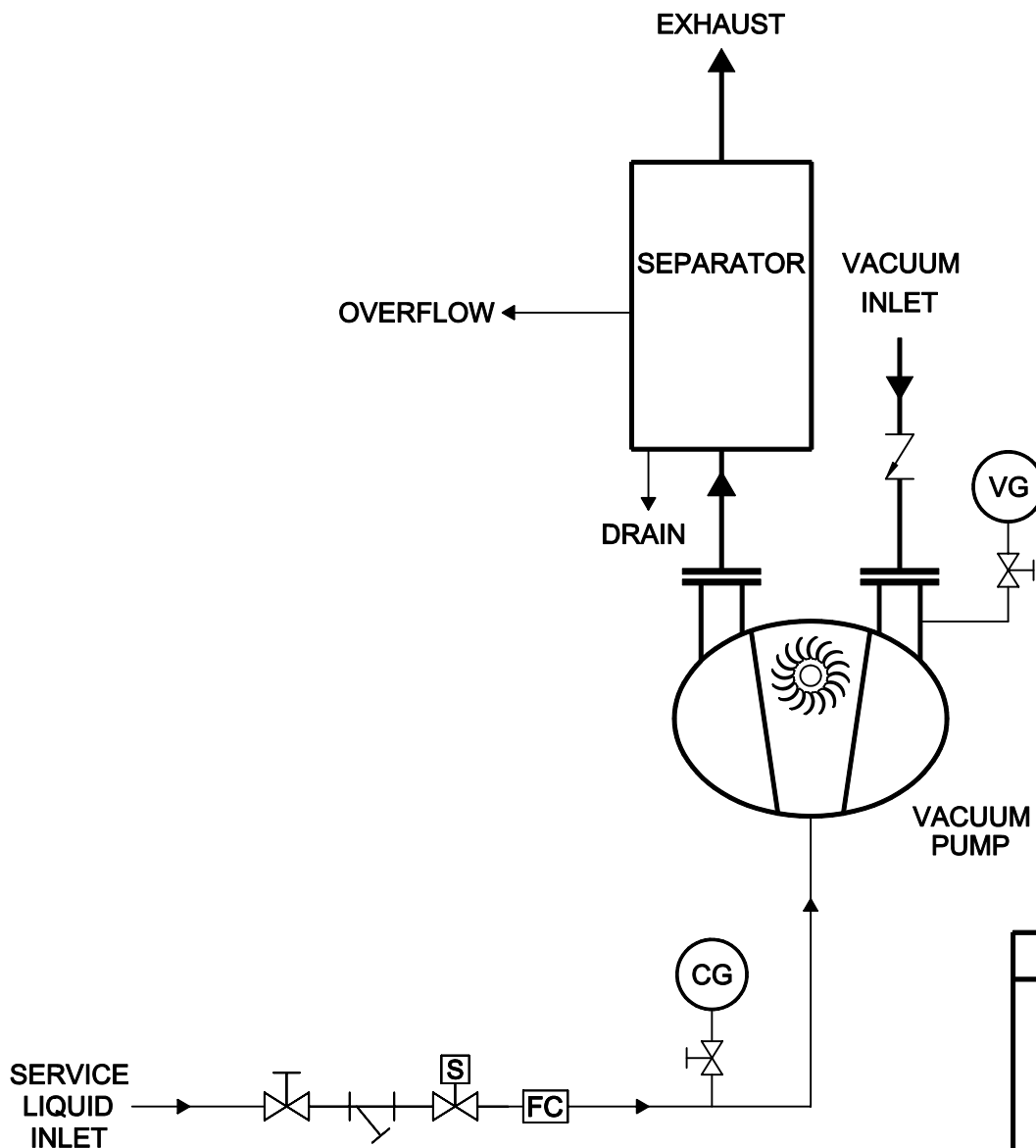
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FLOW DIAGRAM FOR WATER SEALED ONCE-THRU VACUUM SYSTEM "SOT"



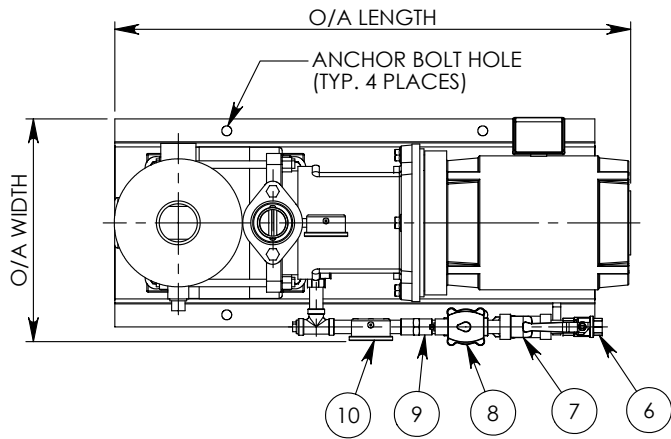
LEGEND	
	VACUUM GAUGE
	COMPOUND GAUGE
	FLOW CONTROLLER
	SOLENOID VALVE
	MANUAL VALVE
	CHECK VALVE
	Y-STRAINER



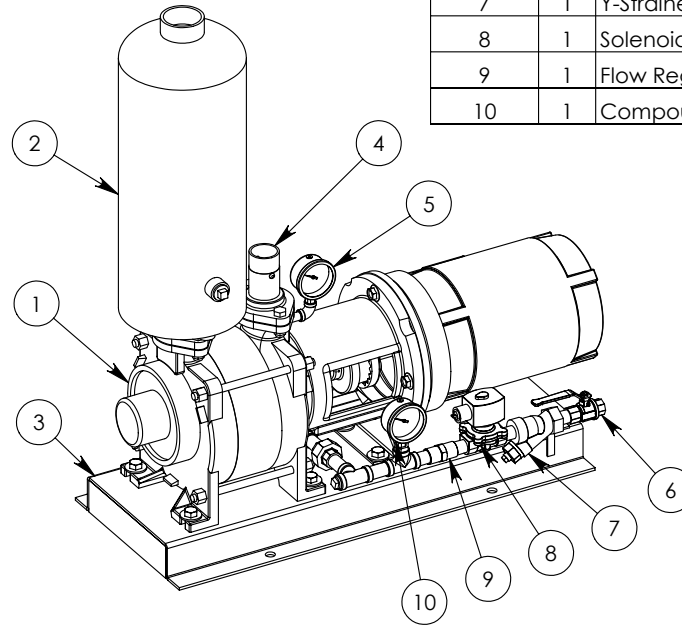
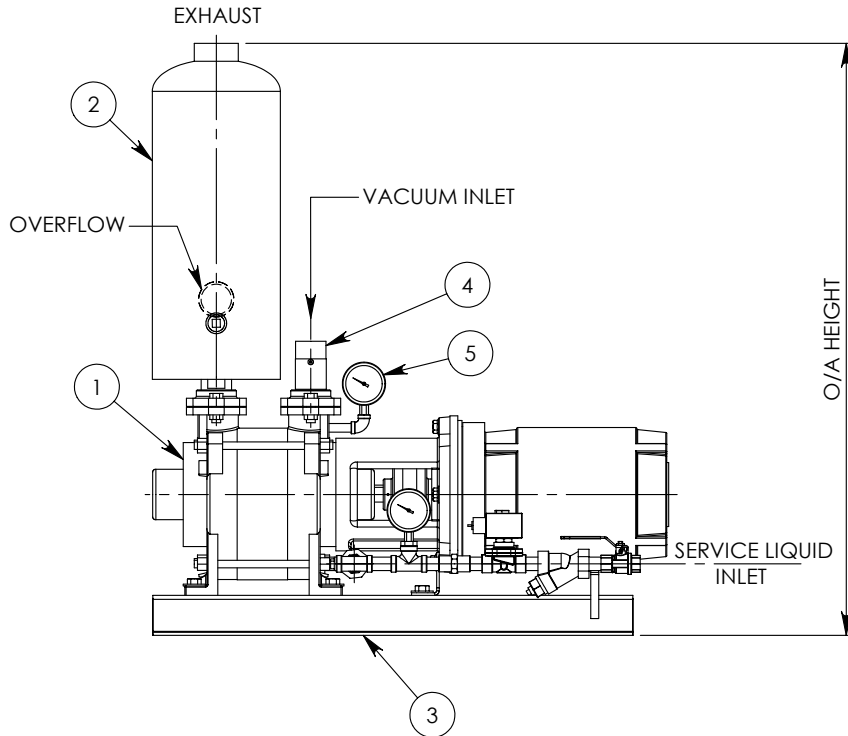
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"SOT" ONCE-THRU VACUUM SYSTEM



ITEM NO.	QTY.	DESCRIPTION
1	1	Vacuum Pump/Motor Assembly
	1	Travaini Vacuum Pump
	1	MOTOR 1800RPM 3/60 TEFC C-FLANGE
	2	Coupling Flange
	1	Coupling Insert
	1	Lantern
	1	Adapter Flange
	1	Foot
2	1	Separator
3	1	Baseplate
4	1	Inlet Check Valve
5	1	Vacuum Gauge (0-30" Hg)
6	1	Isolation Valve
7	1	Y-Strainer
8	1	Solenoid Valve
9	1	Flow Regulator
10	1	Compound Gauge



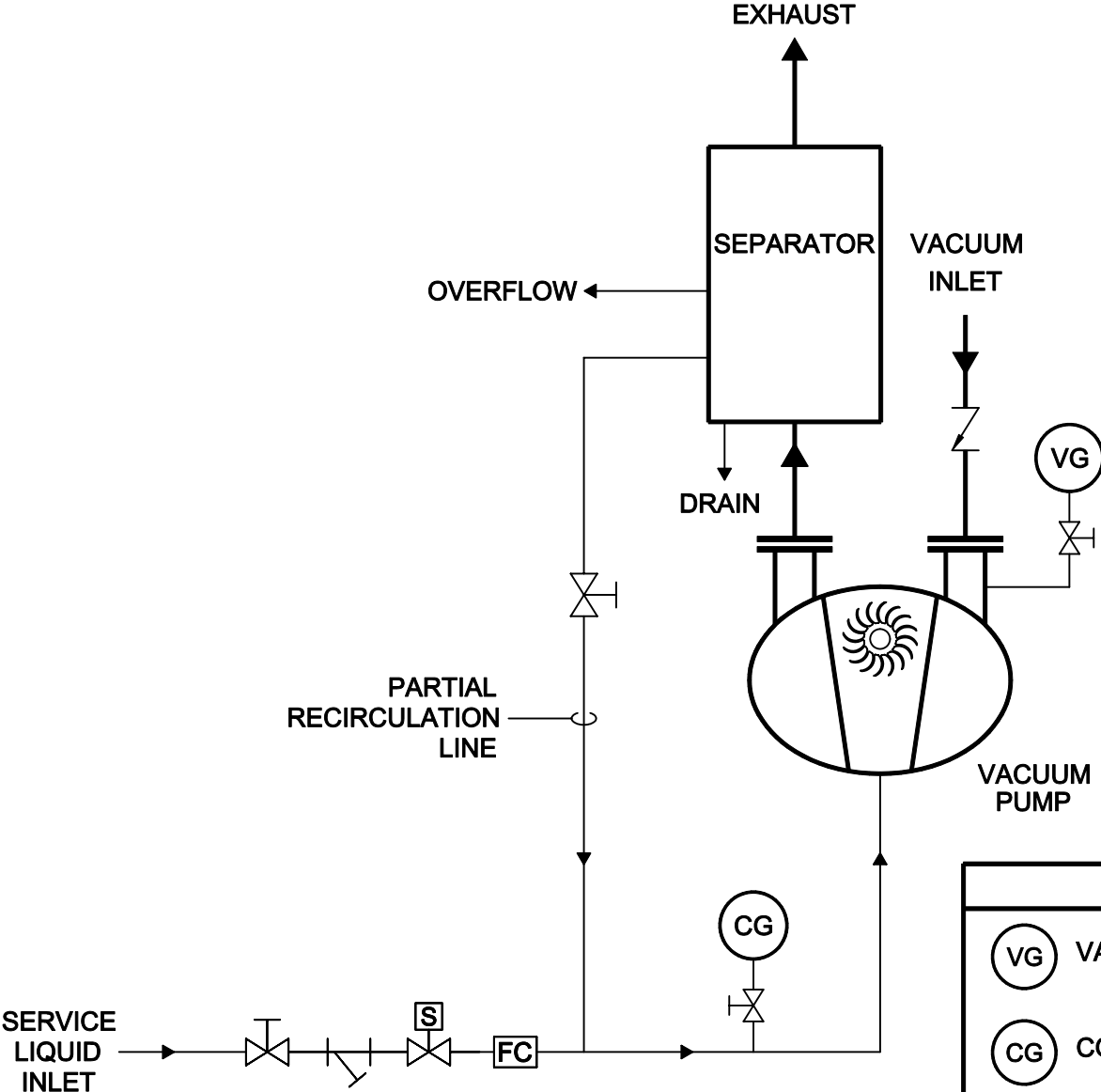
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FLOW DIAGRAM FOR WATER SEALED PARTIAL RECOVERY VACUUM SYSTEM "SPR"



LEGEND	
(VG)	VACUUM GAUGE
(CG)	COMPOUND GAUGE
[FC]	FLOW CONTROLLER
[S]	SOLENOID VALVE
[M]	MANUAL VALVE
[Z]	CHECK VALVE
[Y]	Y-STRAINER

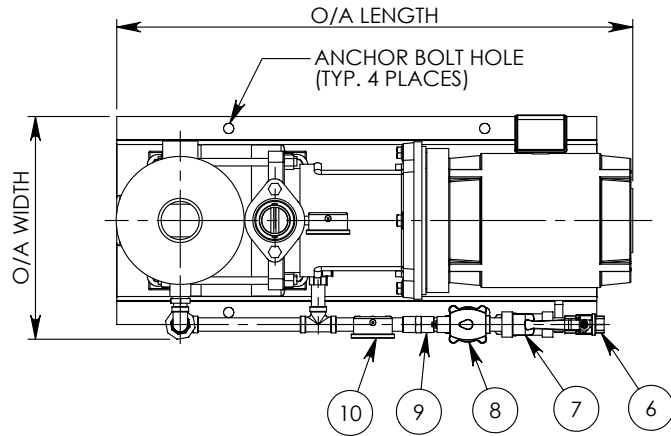


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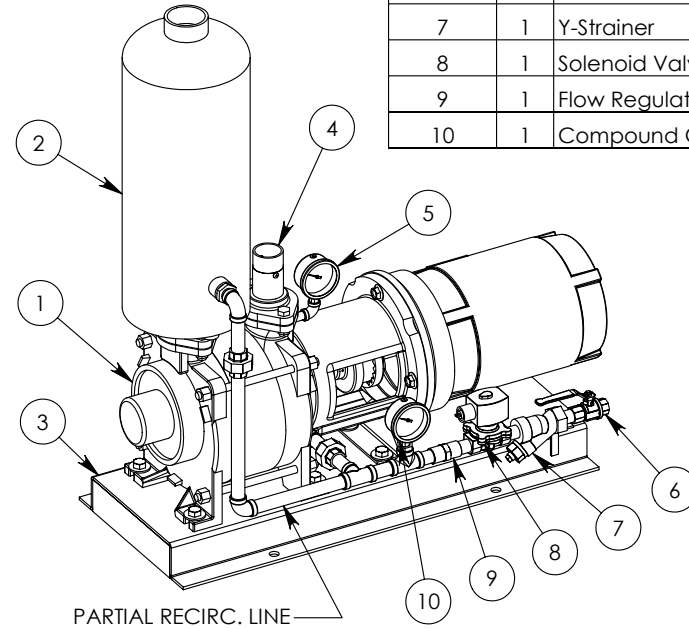
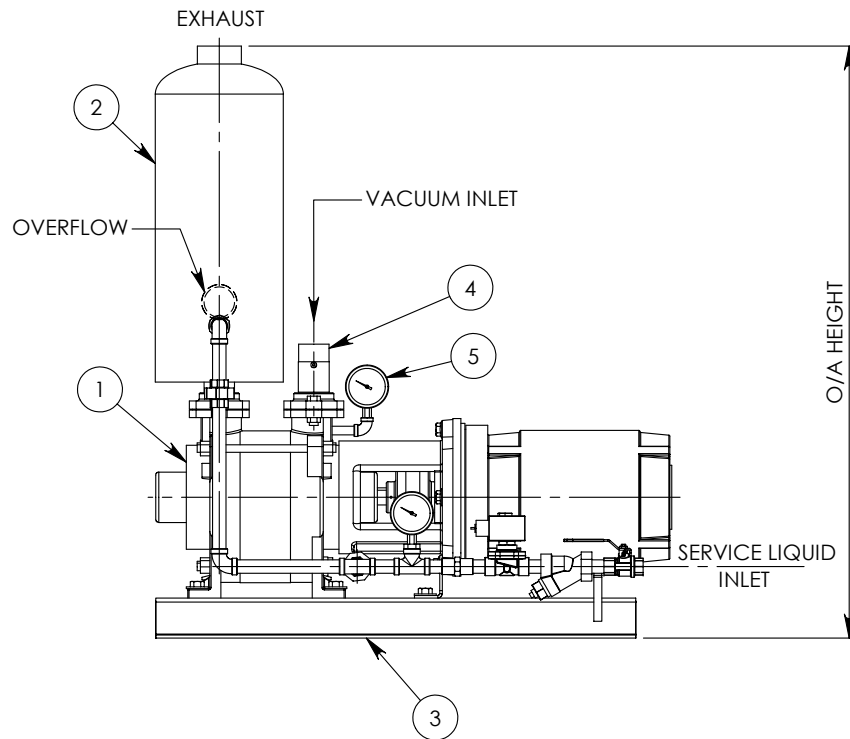
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"SPR" PARTIAL RECOVERY VACUUM SYSTEM

ITEM NO.	QTY.	DESCRIPTION
1	1	Vacuum Pump/Motor Assembly
	1	Travaini Vacuum Pump
	1	MOTOR 1800RPM 3/60 TEFC C-FLANGE
2	1	Coupling Flange
1	1	Coupling Insert
1	1	Lantern
1	1	Adapter Flange
1	1	Foot
2	1	Separator
3	1	Baseplate
4	1	Inlet Check Valve
5	1	Vacuum Gauge (0-30" Hg)
6	1	Isolation Valve
7	1	Y-Strainer
8	1	Solenoid Valve
9	1	Flow Regulator
10	1	Compound Gauge



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WATER SEALED FULL RECOVERY SYSTEMS "HYDROSYS"
SINGLE STAGE AND TWO STAGE VACUUM PUMPS
TRS-TRM -TRV-TRH

TECHNICAL DATA SHEET

Standard Components

- Travaini base mounted liquid ring vacuum pump
- Heavy duty flexible coupling, requires no field alignment or lubrication
- NEMA motors, TEFC 3 Phase, 50 or 60 Hertz, class F insulation, 1.15 service factor
- Common carbon steel baseplate
- Seal liquid separator reservoir in carbon steel complete with sight level indicator, overflow and drain valve
- Automatic make-up valve for the separator
- Shell & Tube heat exchanger with brass shell and copper tubes selected with 6°C approach when using 15°C cooling water
- Seal liquid line Y-strainer, isolating valve, temperature gauges, flow control valve and compound gauge
- Inlet vacuum type check valve
- Vacuum gauge, liquid filled, 2-1/2" Dial
- Service water piping and fittings all galvanized.

Engineered Options

- Electrical control panel with NEMA 12 enclosure and following components:
Simplex - Full voltage starter with overloads, control transformer, start/stop push button, pump operating light, hour meter.
Duplex - Two full voltage starters with overloads, two H-O-A selector switches, one control transformer, two pump operating lights, two hour meters, automatic alternation, two vacuum switches field adjustable.
- Inlet isolating valve
- Vacuum receiver, ASME coded, galvanized inside and outside
- Flexible pipe connectors to facilitate piping alignment and eliminate pipe strain on system components
- Fused disconnect or circuit breaker switch
- Warning lights and/or alarms
- Dual control transformers, Programmable controller and Custom built electrical panels are available.



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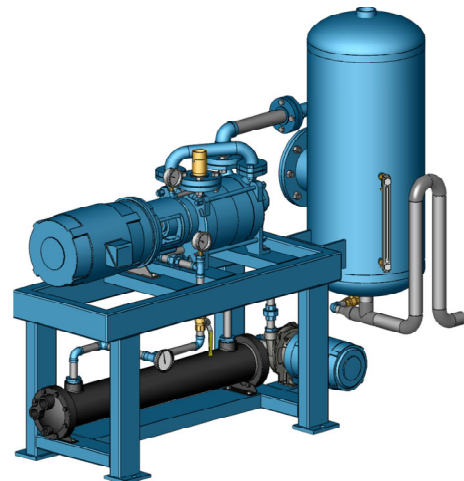
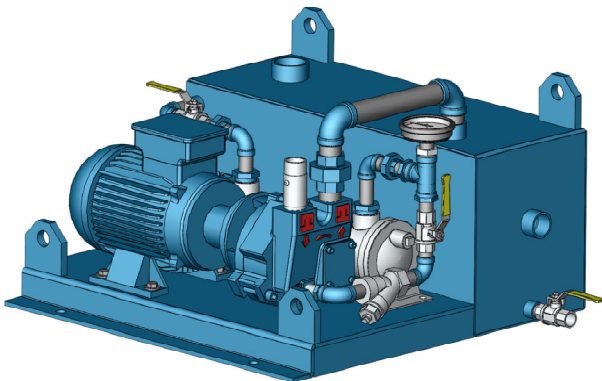
ENGINEERED STANDARD SYSTEMS HYDROSYS FULL RECOVERY SYSTEMS - TRS/TRM/TRV

Hydrosys System Model	Nominal Data At 20"Hg & 60Hz		End Vacuum Torr. (mmHgAbs.)	Inlet Pipe Conn.	Pump Model	Weight Approx. Kg.
	Motor HP	ACFM				
TRW 20M-SFR	1½	15	30	1"	TRMB 25-30/GH	80
TRW 20S-SFR	1½	17	100	1¼"	TRSE 32-20/C/RZ	154
TRW 40M-SFR	3	35	30	1"	TRMB 32-50/GH	122
TRW 38S-SFR	3	37	100	1¼"	TRSE 32-50/C/RZ	183
TRW 40S-SFR	3	40	100	1½"	TRSE 40-55/C/GH	320
TRW 50M-SFR	5	50	30	1½"	TRMB 32-75/GH	135
TRW 70V-SFR	7½	75	25	1½"	TRVB 40-110/GH	440
TRW 70S-SFR	5	76	100	1½"	TRSE 40-100/C/GH	390
TRW 100V-SFR	7½	100	25	1½"	TRVB 40-150/GH	450
TRW 100S-SFR	7½	100	100	1½"	TRSE 40-150/C/GH	410
TRW 150V-SFR	10	145	25	2"	TRVA 50-220/C/GH	480
TRW 150S-SFR	10	150	100	2"	TRSE 50-220/C/GH	470
TRW 200V-SFR	15	200	25	2½"	TRVA 65-300/C/GH	532
TRW 300V-SFR	20	300	25	2½"	TRVA 65-450/1C/GH	571
TRW 400S-SFR	25	385	100	4"	TRSC 100-550/C/F	655
TRW 500S-SFR	40	510	100	4"	TRSC 100-700/C/F	864
TRW 700S-SFR	50	750	150	5"	TRSE 125-1250/C/F	1000
TRW 900S-SFR	60	920	150	5"	TRSE 125-1550/C/F	1136

Optional accessories, mounted at pump suction side:

Vacuum relief valve, spring loaded	P/N VRO-038-AA840A P/N VRO-034-AA308 P/N VRO-852-125C000	For systems TRW 20M through TRW 70S For systems TRW 70V through TRW 300V For systems TRW 400S through TRW 900S
Inlet Filter Assembly	P/N FIL-100-CSL842 P/N FIL-125-CSL842 P/N FIL-150-CSL848 P/N FIL-200-CSL850 P/N FIL-300-CT348 P/N FIL-400-CT348 P/N FIL-500-CSL345	For systems TRW 20M and TRW 40M For systems TRW 20s, TRW 38S and TRW 40S For systems TRW 50M through TRW 100S For systems TRW 150V and TRW 150S For systems TRW 200V and TRW 300V For systems TRW 400S and TRW 500S For systems TRW 700S and TRW 900S

SFR = SIMPLEX FULL RECOVERY OF SERVICE LIQUID



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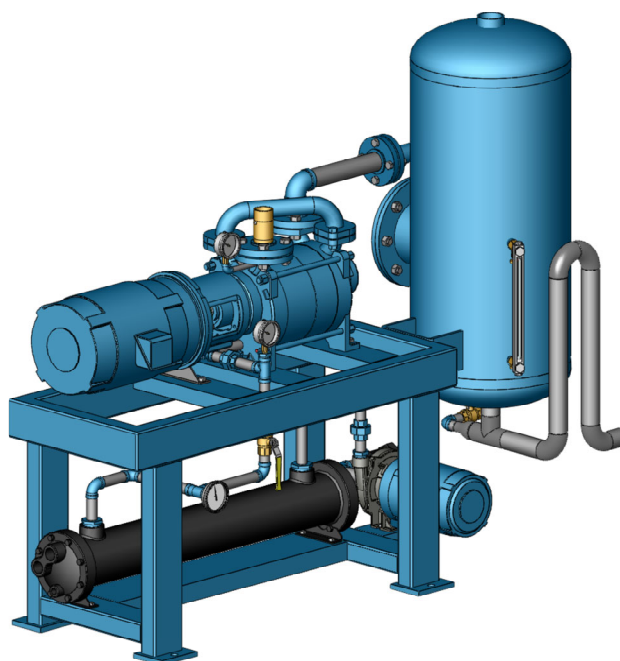
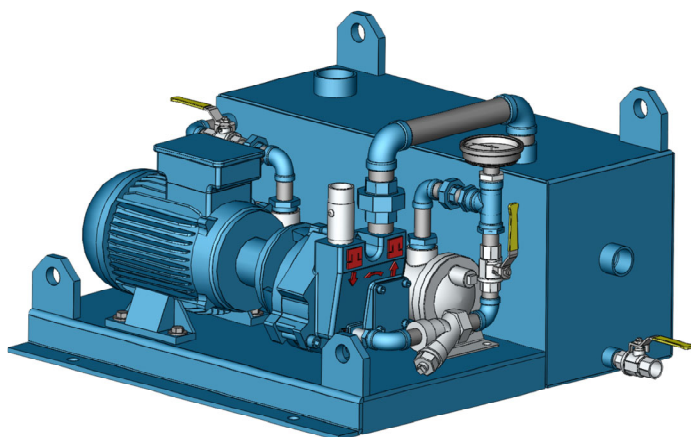
ENGINEERED STANDARD SYSTEMS HYDROSYS FULL RECOVERY SYSTEMS - TRH

Hydrosys System Model	Nominal Data At 25"Hg & 60Hz		End Vacuum Torr. (mmHgAbs.)	Inlet Pipe Conn.	Pump Model	Weight Approx. Kg.
	Motor HP	ACFM				
TRW 15H-SFR	2	15	30	1¼"	TRHE 32-20/C/RZ	160
TRW 30H-SFR	3	33	30	1¼"	TRHE 32-45/C/RZ	165
TRW 40H-SFR	5	44	25	1¼"	TRHE 32-60/C/GH	190
TRW 75H-SFR	7½	75	25	1½"	TRHE 40-110/C/GH	300
TRW 100H-SFR	7½	100	25	1½"	TRHE 40-140/C/GH	385
TRW 130H-SFR	10	137	25	1½"	TRHE 40-190/C/GH	400
TRW 200H-SFR	15	200	25	2"	TRHE 50-280/C/GH	680
TRW 250H-SFR	20	250	25	2"	TRHE 50-340/C/GH	725
TRW 300H-SFR	25	280	25	2"	TRHE 50-420/C/GH	750
TRW 400H-SFR	40	420	25	3"	TRHE 80-600/C/GH	995
TRW 500H-SFR	50	500	25	3"	TRHE 80-750/C/GH	1110
TRW 580H-SFR	50	580	30	4"	TRHE 100-870/C/F	1400
TRW 750H-SFR	50	750	30	4"	TRHE 100-1260/C/F	1600
TRW 900H-SFR	60	980	30	4"	TRHE 100-1600/C/F	1825

Optional accessories, mounted at pump suction side:

Vacuum relief valve, spring loaded	P/N VRO-038-AA840A	For systems TRW 15H through TRW 40H
	P/N VRO-034-AA308	For systems TRW 75H through TRW 500H
	P/N VRO-852-125C000	For systems TRW 580H through TRW 900H
Inlet Filter Assembly	P/N FIL-125-CSL842	For systems TRW 15H through TRW 40H
	P/N FIL-150-CSL848	For systems TRW 75H through TRW 130H
	P/N FIL-200-CSL850	For systems TRW 200H and TRW 300H
	P/N FIL-300-CT348	For systems TRW 400H and TRW 500H
	P/N FIL-400-CT348	For systems TRW 580H through TRW 900H

SFR = SIMPLEX FULL RECOVERY OF SERVICE LIQUID



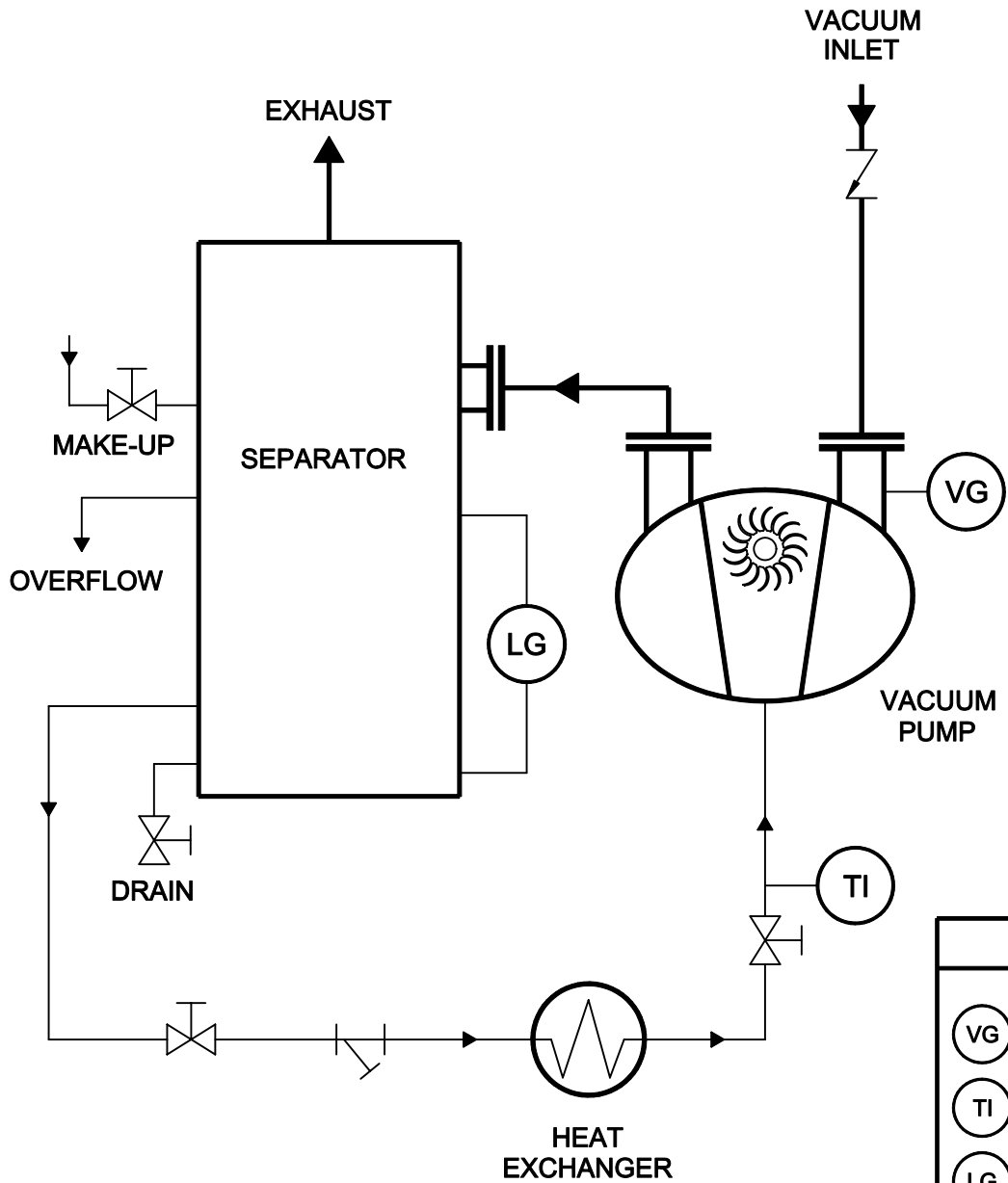
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
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DATE : DECEMBER 2006

Nº.: 2.10

FLOW DIAGRAM FOR WATER SEALED FULL RECOVERY VACUUM SYSTEM "HYDROSYS"



LEGEND	
	VACUUM GAUGE
	TEMPERATURE INDICATOR
	LEVEL GAUGE
	MANUAL VALVE
	CHECK VALVE
	Y-STRAINER



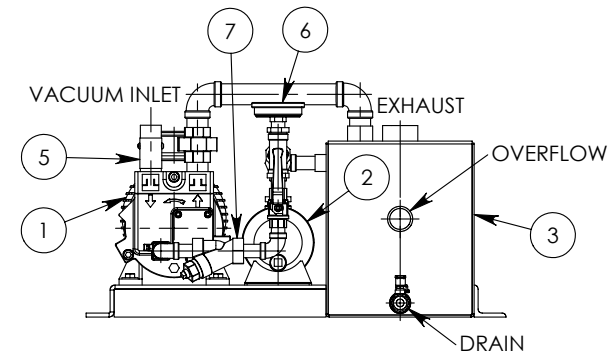
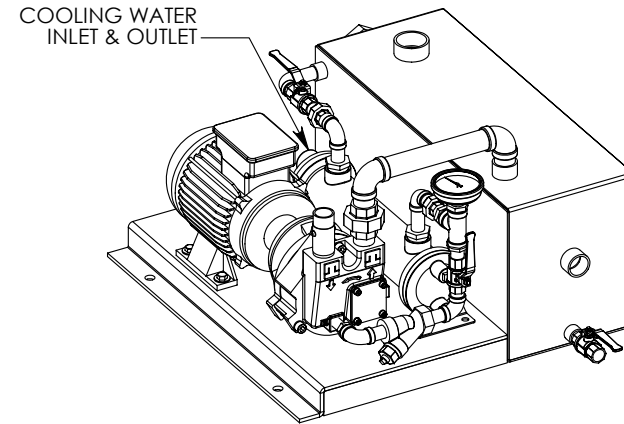
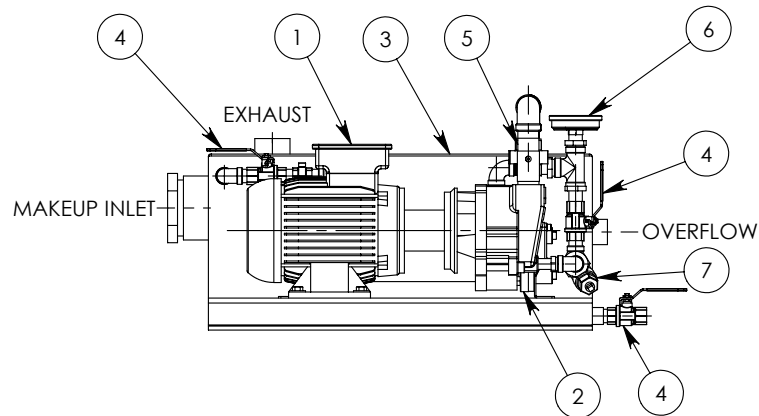
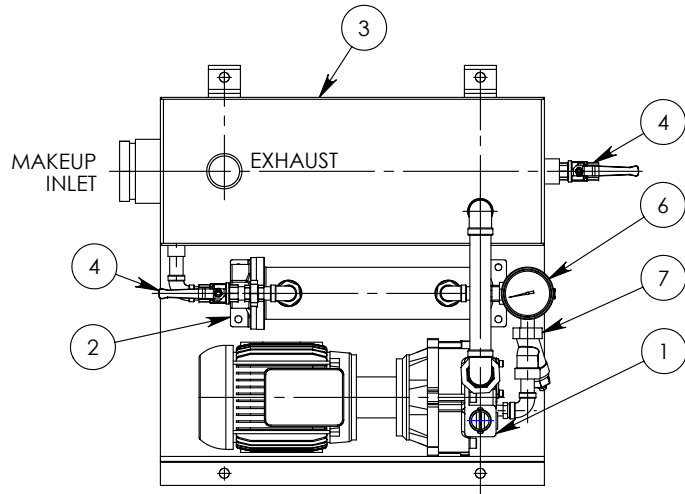
Premier Fluid Systems
Canadian Home Of Travaini Pumps

4460 Harvester Rd. Burlington, Ont. Canada, L7L 4X2
Tel: 1-800-461-2611 or (905) 637-2611 Fax: (905) 333-4722
Email: info@pfspumps.com Website: www.pfspumps.com

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HYDROSYS FULL RECOVERY VACUUM SYSTEM



ITEM NO.	QTY.	DESCRIPTION
1	1	Travaini Liquid Ring Vacuum Pump c/w TEFC Motor
2	1	Shell & Tube Heat Exchanger
3	1	Separator Tank/Reservoir
4	3	Isolation Valve
5	1	Inlet Check Valve
6	1	Temperature Gauge (0-120 F)
7	1	Y-Strainer



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