

OAM Purger™

Oil, Acid and Moisture Purging System for
Centrifugal Chillers

Can save \$24,000 per year or more in Chiller Energy Cost

File Literature 1106-03B

2004 HVACR NEWS Magazine GOLD AWARD Recipient

Features & Benefits:

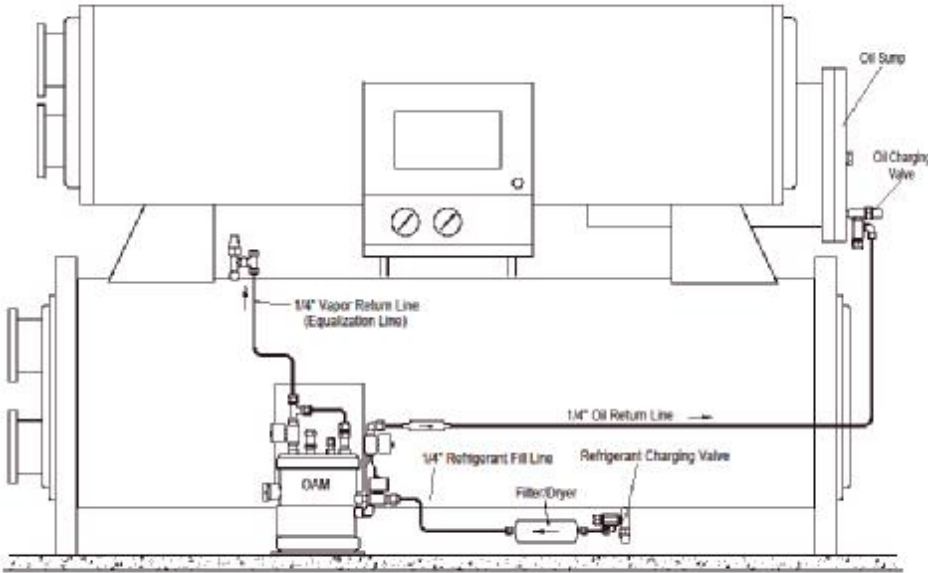
- Continuously removes oil from refrigerant charge and returns it to the compressor oil sump where it belongs
- Typically restores refrigerant charge to clean oil free condition in about 30 days (500 ton chiller)
- Once cleaned refrigerant is maintained OIL FREE
- Continuously removes moisture and acid from refrigerant
- Restores chiller to peak operating capacity
- Pays for itself in lower energy cost in approximately 4 months and keeps on saving energy cost month after month
- Patented process utilizes gravity, heat and pressure without the need for an ejector or mechanical pump
- Continuous operation whether chiller is operating or not
- Reduces chiller maintenance and helps avoid premature failure
- Easy installation



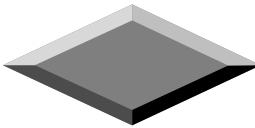
SPECIFICATIONS: Models OAM-400LPC and OAM-400HPC

ELECTRICAL REQUIREMENTS.....120 VAC, 15 Amp (other options available)
CONNECTIONS.....three ¼" O.D. copper lines
DISTILLATION TEMPERATURE.....145° F
REFRIGERANT PROCESS RATE.....850 lbs to 1250 lbs week average
REFRIGERANT PROCESSED PER CYCLE.....10 lbs typical
WEIGHT.....60 lbs (shipping weight 95 lbs)

Refrigerant and Oil Line Hook-up



All OAM Purger Models require only three 1/4" OD line connections between the refrigeration system and the purge unit (see illustration).



EFFECTS OF OIL IN REFRIGERANT	
LOSS OF EFFICIENCY	100
	95
	90
	85
	80
	75
	70
	65
	60
	55
Typical Efficiency Loss	45
	40
	35
	30
	25
	20
	15
	10
	5
	5
% OIL BY WEIGHT	

Note: The table includes a diagonal line labeled 'Actual Test Data' and a dashed line labeled 'Projected Loss'.

CHILLER REFRIGERANT CHARGE BY WEIGHT IN lbs.												
	100	200	300	400	500	600	700	800	900	1000	1100	1200
% OIL	lbs. of Oil in Refrigerant Charge based on % by weight											
1%	1	2	3	4	5	6	7	8	9	10	11	12
2%	2	4	6	8	10	12	14	16	18	20	22	24
3%	3	6	9	12	15	18	21	24	27	30	33	36
4%	4	8	12	16	20	24	28	32	36	40	44	48
5%	5	10	15	20	25	30	35	40	45	50	55	60
6%	6	12	18	24	30	36	42	48	54	60	66	72
7%	7	14	21	28	35	42	49	56	63	70	77	84
8%	8	16	24	32	40	48	56	64	72	80	88	96
9%	9	18	27	36	45	54	63	72	81	90	99	108
10%	10	20	30	40	50	60	70	80	90	100	110	120
11%	11	22	33	44	55	66	77	88	99	110	121	132
12%	12	24	36	48	60	72	84	96	108	120	132	144
13%	13	26	39	52	65	78	91	104	117	130	143	156
14%	14	28	42	56	70	84	98	112	126	140	154	168
15%	15	30	45	60	75	90	105	120	135	150	165	180
16%	16	32	48	64	80	96	112	128	144	160	176	192
17%	17	34	51	68	85	102	119	136	153	170	187	204
18%	18	36	54	72	90	108	126	144	162	180	198	216
19%	19	38	57	76	95	114	133	152	171	190	209	228
20%	20	40	60	80	100	120	140	160	180	200	220	240
21%	21	42	63	84	105	126	147	168	189	210	231	252
22%	22	44	66	88	110	132	154	176	198	220	242	264
23%	23	46	69	92	115	138	161	184	207	230	253	276
24%	24	48	72	96	120	144	168	192	216	240	264	288
25%	25	50	75	100	125	150	175	200	225	250	275	300
OIL WEIGHS APPROXIMATELY 7 LBS. PER GALLON												
60 Lbs = approximately 8.5 Gallons												

Studies supported by ASHRAE (which also site other studies) and statements of a major chiller OEM indicate that oil in refrigerant reduces heat transfer and therefore efficiency. Oil content of 1% (by weight) produces a reduction of 3% efficiency and up to 15% produces a reduction of 40 to 50% in efficiency. The reduction in efficiency tends to be consistent for different refrigerants.

According to ASHRAE study 601-TRP the Average Chiller has 12% oil by weight in its Refrigerant Charge. A 500 lbs. Refrigerant Charge at 12% by weight contains 60 lbs., or 8.5 gallons of oil.

