

## PreCoolers for Gas Turbines

### New Installations

### Rest Retrofits

Year	Total ISO Capacity	Type of GT	Unitsize	No of units	Purchaser/User/ Project Name	Branch	Country of Install.	type of cooler ***	Waterquality **	Loc*
2008	320	Frame 6	40	8	Garri Power Plant	Power Ind	Sudan	M	2	A/C
2008	136	Siemens 501D	136	1	Pneumafil/HECO	Power Ind	USA	M	?	C
2008	373	Siemens 501F	187	2	Pneumafil/Arsenal Hill	Power Ind	USA	M	?	C
2008	72	Rolls Royce	36	2	AAF/Braintree	Power Ind	USA	M	?	C
2007	10	Solar	5	2	DCP Midstream/Pegasus	Power Ind	USA	M	?	C
2007	372	Siemens 501F	186	1	Pneumafil/Evander Andrews	Power Ind	USA	M	?	C
2007	372	Siemens 501F	186	1	Pneumafil/Caitness	Power Ind	USA	M	?	C
2007	5	Taurus 60	5	1	Amylum Nisasta	Power Ind	Turkey	M	?	C
2007	11	Taurus 70	5.5	2	Hayat Temizlik	Power Ind	Turkey	M	?	C
2007	15	Solar Taurus 60	5	3	Pagmaya		Turkey	M	?	A
2007	720	GT 13 E2	180	4	Alstom (G+H) Munmorah	Power Ind	Australia	M	?	C
2007	228	GT 11 N2	114	2	Alstom (R&M) Rio TKS	Power Ind	Brasil	M	?	C
2007	900	GT 13 E2	180	5	Alstom (R&M) Al Zhou	Power Ind	Kuwait	M	?	C
2007	1650	V 94.3A	275	6	Siemens (R&M) Jebel Ali M	Power Ind	UAE	M	?	C
2007	11	Solar Taurus 70	5.5	2	Williams Energy	?	Turkey	M	?	A
2007	15	Solar Taurus 60	5	3	Williams Energy	?	Turkey	M	?	A
2007	660	V 94.2A	165	4	Uranquinty	Power Ind	Australia	M	?	C
2007	10	NG Compression	5	2	Williams Energy	Power Ind	US	M	1	A
2007	1530	Frame 9FA	255	6	Mesaieed GE	Power Ind	Qatar	M	?	C
2007	86	LM 6000	43	2	Southern California Energy / GE	Power Ind	US	M	?	C
2007	372	W 501 F	186	2	Thermozula/Pneumafil	Power Ind	US	M	1	C
2007	5	Solar Taurus	5	1	Kombassan	Paper	Turkey	M	?	A
2007	5	Solar Taurus	5	1	Halkali Kagit	Paper	Turkey	M	?	A
2007	270	GT 26B	270	1	Cyco Fos	Power Ind	France	M	?	C
2007	270	GT 26B	270	1	Tallawara	Power Ind	Australien	M	?	C
2007	372	W 501 F	186	2	Pneumafil	Power Ind	US	M	?	C
2006					AAF/Yildiz		Turkey			
2006	270	Alstom GT 26	270	1	Kwinana	Power Ind	Australia	M	1	C
2006	20	Solar Taurus 60	5	4	Kartonsan	Paper	Turkey	M	2	A
2006	5	Solar Taurus 60	5	1	Hayat Kimya	Chemical Ind	Turkey	M	2	A
2006	8	Solar Taurus 70	7.5	1	Kastamanou Entegre	Wood	Turkey	M	2	A
2006	936	6x V94.2A	156	6	First Gas & Power	Energy	Philippines	M	2	A
2006	10	Taurus 60	5	2	Kastamanou Entegre	Wood	Turkey	M	2	A
2006	9	Taurus 60, Kawasaki	4.5	2	Lenzing	Fiber	Austria	M	2	A
2006	10	Solar Taurus 60	5	2	Goodyear	Tyres	Turkey	M	2	A
2006	540	GT 26B	270	2	Alstom (G+H)	Power Ind	Australia	M	3	C
2006	810	V94.3A	270	3	Siemens (G+H)	Power Ind	India	M	3	B
2006	14	Rolls Royce	4.5	3	Kappa Zulpich	Paper	Germany	M	2	A
2006	29	GE LM2500	28.5	1	AAF	Power Ind	US	M	2	
2006	187	Siemens 501F	186.5	1	Pneumafil/Desert Basin	Power Ind	USA	M		
2006	373	Siemens 501F	186.5	2	Pneumafil/Lakeside	Power Ind	USA	M	2	
2006	8	Solar Centaur 50	4.2	2	Ege Seramik	Ceramic	Turkey	M	2	A
2006	5	Solar Taurus 60	5	1	Graniser	Ceramic	Turkey	M	2	A
2006	4	Solar Centaur 50	4.2	1	Termal Seramik	Ceramic	Turkey	M	2	A
2006	5	Solar Taurus 60	5	1	Altinyildiz	Textil	Turkey	M	2	A
2006	54	GT 8C	54	1	Energetica Kladno	Power Ind	CZ	M	2	A
2006	25	Frame 5	25	1	Stora Enso	Paper	Germany	M	2	A
2006	540	V94.3A	270	2	ENEL	Power Ind	Italy	F	3	C
2006	200	5000 F	270	1	Siemens (R&M)	Power Ind	US	M	2	C
2006	810	V94.3A	270	3	Siemens (R&M)	Power Ind	Middle East	M	2	C
2006	1080	V94.3A	270	4	Siemens (R&M)	Power Ind	Middle East	M	2	C
2005	108	ABB GT 8C	54	2	Altair/GSEG	Power Ind	India	M	2	A
2005	29	GE LM2500	28.5	1	AAF/Unisource	Power Ind	USA	M	2	
2005	29	GE LM2500	28.5	1	AAF/Iberese	Power Ind	USA	M		
2005	187	Siemens 501F	186.5	1	Pneumafil/Mankato	Power Ind	USA	M	2	
2005	540	V94.3A	270	2	Siemens (R&M)	Power Ind	Italy	M	2	C
2005	5	Solar Taurus 60	5	1	Alkim Kagit	Paper	Turkey	M	2	A
2005	540	V94.3A	270	2	Siemens (Kaefer)	Power Ind	Singapore	M	2	A
2005	270	V94.3A	270	1	ENEL	Power Ind	Italy	F	3	C
2005	8	Solar Taurus 70	7.5	1	Hayat Kagit	Paper	Turkey	M	2	A

2005	10	Solar Taurus 60	5	2	Desa	Boiler	Turkey	M	2	A
2005	5	Solar Taurus 60	5	1	Ayka Tekstil	Textile	Turkey	M	2	A
2005	5	Solar Taurus	5	1	Tuma Turbomach	Power Ind	Pakistan	M	3	C
2005	495	ABB 13 E2	165	3	Alstom (AAF)	Power Ind	Australia	M	3	C
2005	5	Solar Taurus 60	5	1	Tuma Turbomach	Power Ind	Switzerland	M	3	A
2005	1080	GT 26 B	270	4	Alstom (R&M)	Power Ind	Thailand	M	3	C
2005	96	FT8 Twinpack	48	2	Man Turbo	Power Ind	Germany	M	3	C
2005	1600	Siemens V94.3A	160	10	Siemens (R&M)	Power Ind	Middle East	M	3	C
2005	780	Siemens V94.3A	260	3	Siemens (R&M)	Power Ind	Middle East	M	3	C
2005	260	Siemens V94.3A	260	1	ENEL	Power Ind	Italy	F	3	C
2004	266	GE Frame 9E	133	2	Csepel Energia Kft	Power Ind	Hungary	M	3	C
2004	324	ABB 13 E 2	162	2	Alstom (G+H)	Airhouse	India	M	2	C
2004	30	EGT Typhoon	5	6	Akenerji	Power Ind	Turkey	M	2	A
2004	19	ABB GT 10	19	1	Camfil	Airhouse	Greece	M	3	C
2004	126	LM 6000	42	3	Zorlu Enerji	Power Ind	Turkey	M	2	A
2004	9	Solar Taurus 60	4.5	2	Dresden Papier	Power Ind	Germany	M	2	A
2004	2340	Siemens V94.3A	260	9	ENEL	Power Ind	Italy	F	3	C
2004	40	ABB GT 10	20	2	Modern Enerji	Power Ind	Turkey	M	2	A
2004		Generatorcooling	-	2	Modern Enerji	Power Ind	Turkey	M	2	A
2004	20	Solar Mars	10	2	Modern Enerji	Power Ind	Turkey	M	2	A
2004	40	Frame 6	40	1	EEEE	Power Ind	Turkey	M	2	A
2004	24	Rolls Royce RB 211	24	1	Bilenerji	Power Ind	Turkey	M	2	A
2003	168	LM 6000	42	4	GE/Escatron	Power Ind.	Spain	F	3	C
2003	42	LM 6000	42	1	Zorlu Enerji	Power Ind.	Turkey	M	1	A
2003	246	Frame 9E	123	2	AAF/Fars Iran	Airhouse	Iran	M		A
2003	5	Solar Taurus 60	4.5	1	Form/Akin Tekstil	Textile Ind	Turkey	M		A
2003	5	Solar Taurus 60	4.5	1	Tuma Turbomach/ Pakistan	Power Ind.	Pakistan	M		A
2002	288	LM 6000	48	6	GE/Lawrence County	Power Ind.	Canada	F	3	C
2002	150	P&W Twin Pack	25	6	VAW	Airhouse	USA	M		
2002	762	MHI 501G	254	3	AAF/Covert	Airhouse	USA-MI	M		
2002	508	MHI 501G	254	2	AAF/Tupelo	Airhouse	USA-MS	M		
2002	372	SW 501F	186	2	Pneumafil/Santa Cruz	Airhouse	Brazil	M		
2002	508	SW 501G	254	2	Pneumafil/Tractabel II	Airhouse	USA	M		
2002	558	SW 501F	186	3	Pneumafil/Fisk Peakers	Airhouse	USA	M		
2002	508	SW 501G	254	2	Pneumafil/Tractabel	Airhouse	USA	M		
2002	372	SW 501F	186	2	Pneumafil/Allegheny	Airhouse	USA	M		
2002	558	SW 501F	186	3	Pneumafil/Norte Fluminense	Airhouse	USA	M		
2002	45	LM 6000 sprint	45	1	GE/Ompa Ponca	Power Ind.	USA	F	3	C
2002	50	LM 2500	25	2	Stadtwerke Erfurt	Power Ind.	Germany	M	3	A
2002	270	GT 26	270	1	Swanbank	Power Ind.	Australia	M	3	C
2002	126	LM 6000 sprint	42	3	Pacific Corp	Power Ind.	USA	F	3	C
2002	15	EGT tempest	7.5	2	Zorlu Enerji	Power Ind.	Turkey	M	2	A
2002	27	LM 2500	27	1	Nuh Enerji	Power Ind.	Turkey	M	2	C
2002	27	LM 2500	27	1	Zorlu Enerji	Power Ind.	Turkey	M	2	A
2002	84	LM 6000	42	2	Zorlu Enerji	Power Ind.	Turkey	M	2	A
2002	340	Siemens V84.2	170	2	Oglethorpe	Airhouse	USA	M	2	C
2001	78	GE Frame 6	39	2	Massac - Mid West Energy	IPP	USA-IL	M		
2001	225	P&W Twin Pack	25	9	McGuffey	Airhouse	USA	M		
2001	350	P&W Twin Pack	25	14	VAW	Airhouse	USA	M		
2001	88	GE10	11	8	Alliance Colton	IPP	USA	M		
2001	0	SW		2	Pneumafil	Airhouse	USA-LA	M		
2001	558	SW 501F	186	3	Pneumafil	Airhouse	USA	M		
2001	540	MHI 701F	270	2	Pneumafil/Sithe	Airhouse	USA	M		
2001	508	SW 501G	254	2	Pneumafil/Calpine Hillabee	Airhouse	USA	M		
2001	254	SW 501G	254	1	Pneumafil/Naconagolez	Airhouse	USA	M		
2001	372	SW 501F	186	2	Pneumafil/FPL RISE	Airhouse	USA	M		
2001	372	SW 501F	186	2	Pneumafil/Araucaria	Airhouse	Brazil	M		
2001	744	SW 501F	186	4	Pneumafil/Equistar	Airhouse	USA	M		
2001	78	GE Frame 6B	39	2	Camfil/Farr	Airhouse	USA	F		
2001	84	RB211	28	3	Camfil/Farr	Airhouse	USA	M		
2001	39	GE Frame 6	39	1	International Paper	IPP	USA	M		
2001	70	Rolls Royce	14	5	TriGen-Cynergy	IPP	USA	M		
2001	23	GE Frame5 LA	23	1	Universal Silencer	Airhouse	USA-FL	M		
2001	44	GE10	11	4	Universal Silencer	Airhouse	USA	M		
2001	558	MHI 501F	186	3	AAF/Greystone	Airhouse	USA-TN	M		
2001	186	MHI 501F	186	1	AAF/Campeche	Airhouse	Mexico	M		
2001	744	MHI 501F	186	4	AAF/Tuxpan	Airhouse	Mexico	M		
2001	372	MHI 501F	186	2	AAF/Wyandotte	Airhouse	USA-MI	M		
2001	508	MHI 501G	254	2	AAF/Granbury	Airhouse	USA-TX	M		
2001	372	MHI 501F	186	2	AAF/Altamira	Airhouse	Mexico	M		
2001	550	ABB GT 11 N	110	5	Bioc	Airhouse	Irak	M		C
2001	4	Solar Taurus	4	1	Covap	Packager	Switzerland	M		A
2001	510	Siemens V84.2	170	3	Holden	Airhouse	USA	M	3	C
2001	2720	ABB GT 24	680	4	Monterrey	Airhouse	Mexico	M		C
2001	424	Siemens V84.2	106	4	Oglethorpe	Airhouse	USA	M	2	C
2001	260	ABB GT 26	260	1	Senoko	Power Ind.	Singapore	F	3	C
2001	250	Alstom GT 26	250	1	Swanbank	Power Ind.	Australia	M	3	C
2001	340	MHI 501F	170	2	Union Carbide	Power Ind.	USA	F		C
2000	340	ABB GT 24	170	2	AAF	Airhouse	USA	M	3	C

2000	70	GE Frame 6	70	1	City of Vero Beach	Utility	USA	M		A
2000	70	Frame 6 F	70	1	Dahlmann	Airhouse	India	M	1	C
2000	196	SW 251	49	4	Dyneyg Midwest	Utility	USA	M		A
2000	80	GE Frame 6B	40	2	Formosa Plastics	IPP	USA-LA			
2000	170	ABB GT 24	170	1	Hermosillo	Airhouse	Mexico	M	3	C
2000	680	ABB GT 24	170	4	La Paloma	Airhouse	USA	M	2	C
2000	1000	Pratt&Witney	25	40	McGuffey Systems	Airhouse	USA			
2000	340	ABB GT 24	170	2	Peoples Calumet	Airhouse	USA	M	2	C
2000	3162	SW 501F	186	17	Pneumafil	Airhouse	USA	M		C
2000	330	ABB 13E2	165	2	Pneumafil	Airhouse	Australia	M	3	C
2000	1080	MHI 701F	270	4	Pneumafil	Airhouse	USA-MA		3	
2000	25	Ft 8	25	1	Smurfit	Paper	Spain	M	3	B
2000	56	Soyland Power	28	2	Soyland Power	Utility	USA	M		A
2000	10	Solar 60	5	2	Trigen-St. Louis Energy	Utility	USA	M		A
2000	6	Sulzer 3 D	6	1	Wolff Walsrode	Chemical	Germany	M	3	A
1999	25	Frame 5	25	1	City of Lubhok	Utility	USA	M	1	A
1999	680	ABB GT 24	170	4	Hays	Airhouse	USA	M	3	C
1999	5	Solar Centaur Taurus	5	1	Holsten Brauerei	Brewery	Germany	M	1	A
1999	56	Frame 5	28	2	Hunt Oil	Petro	USA	M	1	A
1999	56	Frame 5	28	2	Hunt Oil	Petro.	Jemen	M	1	A
1999	25	Frame 5	25	1	Jamaica Public Utility	Utility	Jamaica	M		A
1999	5	Solar Centaur Taurus	4.5	1	Kali und Salz	mining	Germany	M	1	B
1999	340	ABB GT 24	170	2	L&G E	Utility	USA	M	1	C
1999	510	ABB GT 24	170	3	Lake Road	Airhouse	USA	M	3	C
1999	5	Solar Centaur Taurus	5	1	MAN		Germany	M	1	A
1999	200	Pratt&Witney	25	8	McGuffey	Airhouse	USA	M		A
1999	340	ABB GT 24	170	2	OHIO PP	Utility	USA	M	1	C
1999	35	TG 20	35	1	PPC Greece	Utility	Greece	M	1	A
1999	25	Frame 5	25	1	PPC Greece	Utility	Greece	M	1	A
1999	108	ABB GT 8B	54	2	PPC Greece	Utility	Greece	M	1	A
1999	10	GE Frame 8	10	1	Rütgers VFT	Chemical	Germany	M	3	A
1999	1	Frame 5	1	1	South Texas Electricity Group	Utility	USA	M	1	A
1999	6	Sulzer 3 D	6	1	Stone Europa Carton	Paper	Germany	M	3	A
1999	680	ABB GT 24	170	4	unknown	Utility	USA	M	1	C
1999	50	LM 2500	25	2	Wintershall Lingen	Oil+Gas	Germany	M	1	A
1998	86	LM 6000	43	2	Delbag	Filter	France	M	3	B
1998	340	Siemens V84.3A	170	2	Enron	IPP	Brazil	M	2	A
1998	160	ABB 11N	80	2	Hawaii Power and Electric	Utility	USA	M	1	A
1998	56	Frame 5	28	2	Hunt Oil	Petro.	Jemen	M	1	A
1998	10	Centrax 507 KB	5.0	2	Leche Pascaul	Food	Spain	M	1	A
1998	40	Frame 6	40	1	Norske Skog	Paper	Austria	M	1	A
1998	4.4	Solar Centaur Taurus	4.4	1	Schoeller	Paper	Germany	M	1	A
1998	672	ABB 11N	84	8	Southern Power	Utility	USA	M	1	A
1997	10	Solar Mars	10.0	1	Colortex	Fabric	Spain	M	1	A
1997	6	Sulzer 3 D	6.0	1	Novartis AG	Chemical	Switzerland	M	3	A
1997	4.6	Solar Centaur Taurus	4.6	1	Papierfabrik Varel	Paper	Germany	M	1	A
1997	39	Frame 6	39.0	1	Papierfabriks- u. Verlags AG	Paper	Austria	M	1	A
1997	117	Frame 6	39.0	3	Smithfield		Australia	M	1	A
1996	26	AEG Kanis IMS 5001	26.0	1	Bayer AG	Chemical	Germany	M	3	A
1996	39	Frame 6	39.0	1	BHP	Mine	Australia	M	1	A
1996	5.8	Ruston Tornado	5.8	1	Grace	Chemical	Germany	M	2	A
1996	492	ABB GT 13 E2	164.0	3	GSP	IPP	Malaysia	M	1	A
1996	50	Frame 5	25.0	2	GSP	IPP	Malaysia	M	1	A
1996	4.4	Solar Centaur Taurus	4.4	1	Offizine Lorenzia		Italy	M		B
1996	4.4	Solar Centaur Taurus	4.4	1	Wepa	Paper	Germany	M	3	A
1995	4.5	unknown	4.5	1	Boroil Gas	Oil	Australia	M	1	A
1995	6.3	EGT 8	6.3	1	Foret	Paper	Spain	M	2	A
1995	117	Frame 6	39.0	3	Parkson Power	Utility	Australia	M	1	A
1994	6.3	EGT 6	6.3	1	BASF	Chemical	Spain	M	2	B
1994	6.3	EGT 6	6.3	1	Bayer AG	Chemical	Spain	M	2	B
1994	4.4	Solar Centaur Taurus	4.4	1	Buchmann	Paper	Germany	M	1	A
1994	90	Fiat TG 50 C	90.0	1	ENEL	Utility	Italy	M		A
1994	3.5	Ruston TB 5000	3.5	1	Moritz J. Weig	Paper	Germany	M	1	A
1994	38	Frame 6	38.0	1	Saica	Paper	Spain	M	1	B
1993	1.1	Solar Saturn	1.1	1	Brauerei Felsenkeller	Food	Germany	M	2	A
1993	16.8	ABB GT 35	16.8	1	Motor Oil	Refinery	Greece	M		
1993	1.1	Solar Saturn	1.1	1	Tivoli Werke	Chemical	Germany	M	1	A

**Total 55,525 MW 523 Units**

\*Location A=before 1. stage filter  
B=between 1. stage and 2. stage filter  
C=behind 2. Stage filter

\*\*Water Quality 1 = untreated water  
2 = treated water  
3 = demineralized water  
\*\*\* type of cooler M = media based  
F = fogging system