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**ENERGY EQUIPMENT  
COST DIRECTORY  
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ENERGY CONSERVATION SERVICES PROGRAM  
FOURTH EDITION**

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Prepared by:

**Hagler, Bailly & Company  
2301 M Street, NW  
Washington, DC 20037**

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## FOREWORD

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This cost directory has been sponsored by the Office of Energy, Bureau for Science and Technology, United States Agency for International Development, Washington, D.C. under the Energy Conservation Services Program. The prices and operational characteristics are presented as a guide to assist people in developing countries when considering the purchase of energy-efficient equipment.

The information contained in the cost directory has been obtained from manufacturers by Hagler, Bailly & Company, Washington, D.C., which does not endorse or recommend any one manufacturer nor guarantee the performance or operation of any equipment that may be purchased based upon its inclusion in the directory.

Neither Hagler, Bailly nor USAID accepts any responsibility for any errors or omissions from the directory. Before placing any orders, Hagler, Bailly strongly recommends that users of this guide contact suppliers and manufacturers to verify the performance and price of any equipment considered for purchase.

We acknowledge the assistance of the manufacturers and their representatives who provided us with the performance and cost information presented herein.

## INTRODUCTION

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The fourth edition of this directory has been prepared to provide information about manufacturers and prices of energy-efficient equipment to people in developing countries. Information of this nature is often not readily available in developing countries, and collecting it can be a protracted exercise.

When a specific energy conservation project is identified, the user of the directory can quickly determine its economic feasibility using the equipment costs provided. All prices are F.O.B. U.S.A. and do not include any applicable shipping, insurance, duty, tax, or installation cost (unless otherwise stated).

While the third and fourth editions were expanded from the second edition which in turn contained approximately twice the number of product listings as the first edition, this fourth edition is by no means exhaustive. To limit production and distribution costs, it was necessary to restrict the number of equipment categories and entries included in the directory. Often only one model was selected to represent a category of equipment similar to the equipment described herein.

To enhance the use of the directory, each page is prefaced by a blank outline of the page. Here, the user can include specific information about alternate manufacturers producing equipment similar to the equipment described herein.

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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: BURNERS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
COMBINATION	WB-1-16	20 MM BTU/HR NATURAL GAS/NO 6 FUEL OIL STEAM ATOMIZATION 89-100 PSIG ATOMIZATION = 1% OF OUTPUT	KEELER DORR-OLIVER PO BOX 548 WILLIAMSPORT PA 17703 717-326-3361	29500
GAS	A556	CAPACITY TO 3 MMBTU/HR FULLY MODULATING OTHER SIZES AVAILABLE SPARK IGNITION	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	4200
GAS	E20A	MAXIMUM INPUT 225 MBTU/HR CONSTANT PILOT	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	260
GAS	F400-33	MAXIMUM INPUT 700 MBTU/HR SPARK IGNITION	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	1300
GAS REGULATOR-DIAPHRAGM	INDUSTRIAL	INLET PRESSURE TO 125 PSI OUTLET FLOW TO 90M SCFH PRICE FOR MODEL 1903 (9M SCFH @30 PSI)	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	150
GAS REGULATOR-SLEEVE	AFV	INLET PRESSURE TO 1440 PSI OUTLET FLOW TO 32 MMSCFH PRICE FOR 2" LINE	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	530
GAS/OIL	A5860	CAPACITY TO 2.8 MMBTU/HR FULLY MODULATING OTHER SIZES AVAILABLE SPARK IGNITION	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	5200
OIL	A5870	CAPACITY TO 20 GAL/HR FULLY MODULATING OTHER SIZES AVAILABLE	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	2400

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 - - T O T A L S F O R B U R N E R S - -  
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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: COMBUSTION CONTROLS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTROCHEMICAL	150	ANALYZES O2, COMBUSTIBLES USE WITH ANY FUEL ACCURACY +/- 0.25% OF READING	BOILER TRIM INC 7325 ENDICOTT AVE ST PAUL MN 55114 612-646-0006	8500
ELECTROCHEMICAL	TC900	ANALYZES O2 IN FLUE GAS ACCURACY 1% OF READING TEMP LIMIT 1000 F INCLUDES ANALYZER	WESTINGHOUSE ELECTRIC PO BOX 910 ORRVILLE, OH 44667	9000
MICROPROCESSOR	8095	USED WITH GAS/OIL BURNERS NEEDS SEPARATE ANALYZER	NORTH AMERICAN MFG 4455 E 71 ST CLEVELAND OH 44105	4000
OXYGEN TRIM	OL 230	ACCURACY O2 +/- 2% OF SPAN CO2 +/- 1% OF SPAN RESPONSE TIME < 3 SECONDS	BAILEY CONTROLS 29001 EUCLID AVE WICKLIFFE OH 44092	10200
OXYGEN TRIM	OXYTRIM		CLEAVER-BROOKS PO BOX 421 MILWAUKEE WI 53201 414-962-0100	10000
OXYGEN TRIM	7310	REQUIRES ANALYZER CONTROLS AIR/FUEL RATIO	ECONICS 540 OAKMEAD PKWY SUNNYVALE CA 94086	6000
OXYGEN TRIM	OXY-TRIM A 10026	FIRETUBE BOILERS ONLY INCLUDES OXYGEN ANALYZER	HAYS-REPUBLIC 4333 S OHIO ST MICHIGAN CITY IN 46360	3000

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 - - T O T A L S FOR COMBUSTION CONTROLS - -  
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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: HEAT RECOVERY  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ECONOMIZER	ECONO/600M	FOR 400 HP BOILER CIRCULAR ECONOMIZER 4' DIA RECOVERS 600,000 BTU/HR	BELTRAM ASSOCIATES 200 OAK DRIVE SYOSSET NY 11791 516-921-7900	7200
ECONOMIZER	ECON-400HP	PRICE FOR 400 HP BOILER FOR USE WITH GAS FIRED BOILERS STAINLESS STEEL	KEMCO SYSTEMS 3520 N 126 ST BROOKFIELD WI 53005 414-781-5200	32000
ECONOMIZER	ECONOMIZER	RAISES FEEDWATER TEMP TO 300F INCLUDES SOOTBLOWER	YORK SHIPLEY PO BOX 349 YORK PA 17405 717-755-1081	12300
FLUE GAS HEAT RECOVERY	SH/TU	SHELL/TUBE UNIT TEFLON COATED SIZED FOR 11.4 TON/HR BOILER RECOVERS 1.34 MMBTU/HR RECOVERS SENSIBLE/LATENT HEAT	CONDENSING HEAT EXCHANG 678 TROY-SCHEN ROAD LATHAM NY 12110 518-785-1234	74,500

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 T O T A L S FOR HEAT RECOVERY  
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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: SMALL COGENERATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTRIC/CHILLED WATER	INTELL	FIRES .85 MMBTU/HR NATURAL GAS 65 KW ELECTRIC, 340000 BTU/HR HOT WATER AT 240 F, 240000 BTU/HR CHILLED WATER AT 46 F	INTELLICON 7750 DAGGETT ST SAN DIEGO CA 92111	105000
ELECTRIC/HOT WATER	H-1006WI	FIRES NATURAL GAS 1.15MMBTU/HR 100 KW ELECTRIC, 635000 BTU/HR HOT WATER AT 180 F PRICE IS DELIVERED/INSTALLED	COGENIC ENERGY SYSTEMS 127 E 64 ST NEW YORK NY 10021 212-772-7500	100000
ELECTRIC/HOT WATER	M-120DWS	FIRES DIESEL FUEL 1.25MMBTU/HR 120 KW ELECTRIC, 700000 BTU/HR HOT WATER AT 180 F PRICE IS DELIVERED/INSTALLED	COGENIC ENERGY SYSTEMS 127 E 64 ST NEW YORK NY 10021 212-772-7500	100000
ELECTRIC/HOT WATER	SERIES 2000	FIRES 2.78 MMBTU/HR NAT GAS 230 KW ELECTRIC, 1.3 MMBTU/HR HOT WATER; PRICE FOR ABOVE SIZES 230-650 KW HOT WATER/STM	MARTIN COGENERATION PO BOX 1698 TOPEKA KS 66601 913-266-5770	415000
ELECTRIC/HOT WATER	TECOGEN	FIRES 0.76 MMBTU/HR NAT GAS 60 KW ELECTRIC, 440000 BTU/HR HOT WATER AT 240 F	THERMO ELECTRON 101 FIRST AVE WALTHAM MA 02254 617-890-8700	36000
ELECTRIC/THERMAL	200 DFV	FIRES 2.28MMBTU/HR DIESEL 200 KW ELECTRIC, 692000 BTU/HR STEAM AND/OR HOT WATER	ONAN CORP 1400 73 AVE MINNEAPOLIS MN 55432	135000

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 T O T A L S FOR SMALL COGENERATION  
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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: STEAM GENERATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
BOILER-FIRETUBE	LB-400-400-150	WORKING PRESSURE 150 PSIG GAS/HEAVY OIL 6.4 TONS/HR	CLEAVER-BROOKS PO BOX 421 MILWAUKEE WI 53201 414-962-0100	73000
BOILER-FIRETUBE	BLR	GAS/OIL FUEL 400 HP BOILER PRICE INCLUDES INSTALLATION	INDUSTRIAL BOILER CO PO BOX 2258 THOMASVILLE GA 31799 912-226-3024	50000
BOILER-FIRETUBE	400 HP BOILER	6.4 TONS STEAM/HR GAS/HEAVY OIL WORKING PRESSURE 125 PSI 02 TRIM SYSTEM	YORK SHIPLEY PO BOX 349 YORK PA 17405 717-755-1001	72000
DEAERATOR	DEAERATOR	SIZED FOR 6.4 TON/HR DUPLEX PUMPS	INDUSTRIAL BOILER CO PO BOX 2258 THOMASVILLE GA 31799 912-226-3024	24000
DEAERATOR	YSD15	OPERATES AT 5 PSI DUPLEX DEAERATOR	YORK SHIPLEY PO BOX 349 YORK PA 17405 717-755-1001	23000
FEEDWATER SYSTEM	FEEDWATER SYST	INCLUDES FEEDWATER TANK 6.5TON INCLUDES DUPLEX PUMPS	YORK SHIPLEY PO BOX 349 YORK PA 17405 717-755-1001	9700
FLUIDIZED BED COMBUSTION	DEDERT	ATMOSPHERIC SYSTEM; EFF 70-80% 10:1 TURNDOWN RATIO; TO 250 PSI 4000-100000 LB/HR PRICE FOR LARGEST SIZE	DEDERT CORP 20000 GOVERNOR'S DRIVE OLYMPIA FIELDS IL 60461	3000000
FLUIDIZED BED COMBUSTION	EPI	ATMOSPHERIC SYSTEM; EFF 85% 3:1 TURNDOWN RATIO; 12000-22000 LB/HR INSTALLED PRICE FOR LARGEST	ENERGY PRODUCTS OF IDAHO 4006 INDUSTRIAL AVE COEUR DALENE ID 83014	1200000
FLUIDIZED BED COMBUSTION	FLUIDYNE	ATMOSPHERIC SYSTEM; EFF 75-84% 3:1 TURNDOWN RATIO; 20000-100000 LB/HR INSTALLED PRICE FOR LARGEST	FLUIDYNE ENGINEERING 6900 OLSON MEM HIGHWAY MINNEAPOLIS MN 55422	5000000
FLUIDIZED BED COMBUSTION	PYROFLOW	ATMOSPHERIC SYSTEM; EFF 85% 3:1 TURNDOWN RATIO; UP TO 1000000 LB/HR INSTALLED PRICE FOR 400 KLB/HR	PYROPOWER CORP PO BOX 85480 SAN DIEGO CA 92130	4000000

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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: STEAM GENERATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
FLUIDIZED BED COMBUSTION	FLUIDFIRE SERIES	ATMOSPHERIC SYSTEM; EFF 80-84% 4:1 TURNDOWN RATIO SIZES 2500-70000 LB/HR INSTALLED PRICE FOR LARGEST	STONE JOHNSON 300 PINE ST FERRYSBURG MI 49409	2100000
FLUIDIZED BED COMBUSTION	WORMSER FBC	ATMOSPHERIC SYSTEM; EFF 95-98% 6:1 TURNDOWN RATIO SIZES 20000 - 200000 LB/HR INSTALLED PRICE FOR LARGEST	WORMSER ENGINEERING 225 MERIMAC ST WOBURN MA 01861	4000000
MULTI-FUEL BOILERS	HRT SERIES	FIRES AGWASTE, COAL, GAS, WOOD OIL; 70% EFFICIENCY SIZES 1400 TO 15000 LB/HR PRICE FOR 15000 LB/HR 300 PSI	ABCO INDUSTRIES 2675 E HIGHWAY 80 ABILENE TX 79604	190000
MULTI-FUEL BOILERS	MA SERIES	FIRES BIOMASS, COAL, GAS, OIL, IND WASTE, WOOD; 80-82% EFF SIZES TO 50000 LB/HR PRICE FOR 35000 LB/HR LOW PRES	AQUACHEM PO BOX 421 MILWAUKEE WI 53201	700000
MULTI-FUEL BOILERS	CMB TRI-FUEL	FIRES COAL, GAS, WOOD, AGWASTE IND. WASTE; SIZE TO 1000 HP 78.5 TO 80% EFFICIENCY PRICE FOR 1000 HP. 300 PSI	COMBUSTION SERVICE 2016 BABCOCK BLVD PITTSBURGH PA 15209	359000
MULTI-FUEL BOILERS	RANGER	FIRES COAL, OIL, GAS, WOOD RESIDUE; 80% EFFICIENCY SIZES 1300-14000 LB/HR PRICE: 400HP 200 PSI INSTALLED	INDUSTRIAL BOILER CO 221 LAW ST THOMASVILLE GA 31799	200000
MULTI-FUEL BOILERS	COAL MULTI-FUEL	82% EFF COAL; 80% GAS/OIL SIZES 50-1200 HP 300 PSI PACKAGE FIRE-TUBE BOILER PRICE: 1250HP, 300PSI INSTALLED	RAY BURNER COMPANY 1301 SAN JOSE AVENUE SAN FRANCISCO CA 94112	800000

----- T O T A L S FOR STEAM GENERATION -----  
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 CATEGORY: BOILER SYSTEMS  
 FUNCTION: STEAM TURBINES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
RADIAL INFLOW	TURBONETICS	300-3000 HP; 62-77% EFF 500KW-\$610/KW; 2000KW-\$230/KW 1000KW-\$140/KW PRICE FOR 2000 KW	TURBONETICS ENERGY/MTI 968 ALBANY-SHAKER ROAD LATHAM NY 12110 518-785-2531	460000
VERTICALLY SPLIT	TYPE A TURBINES	17.5-370 HP SIZES SINGLE STAGE PRICE FOR LARGEST TURBINE	CARLING TURBINE BLOWER 8 NEBRASKA ST WORCESTER MA 01613 617-752-2896	13,500
VERTICALLY SPLIT	TYPE C TURBINES	54-545 HP SINGLE STAGE PRICE FOR LARGEST TURBINE	CARLING TURBINE BLOWER 8 NEBRASKA ST WORCESTER MA 01613 617-752-2896	20000

----- T O T A L S FOR STEAM TURBINES -----  
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CATEGORY: BOILER SYSTEMS  
 FUNCTION: THERMAL FLUID HEATERS

TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTRIC	FT-N	SIZES FROM 75-1720 MBTU/HR PRICE FOR 644 MBTU/HR HEAT TO 650 DEG F 96% EFFICIENCY	FULTON THERMAL CORP PO BOX 222 PULASKI NY 13142 315-298-6597	21300
GAS/OIL	FT-A	SIZES FROM 207-1740 MBTU/HR PRICE FOR 693 MBTU/HR DUAL FUEL 80% EFFICIENT	FULTON THERMAL CORP PO BOX 222 PULASKI NY 13142 315-298-6597	23000

TOTALS FOR THERMAL FLUID HEATERS

TOTALS FOR BOILER SYSTEMS

CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: COMPRESSED AIR DRYERS

TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ADSORPTION	MPS50	100 SCFM, 100 PSIG HEATERLESS DRYER, 110 V USES 15% OF DRY AIR	ANDERSON INDUSTRIAL PROD PO BOX 9129 WETHERSFIELD CT 06109 203-721-7000	2500
ADSORPTION	950 V	1500 SCFM, 100 PSIG HEATLESS, PRESSURE SWING	GAS DRYING INC PO BOX D-2 WHARTON NJ 07885 201-361-2212	15000
ADSORPTION	TYPE 0	1500 SCFM 100 PSIG -40 DEG F INTERNAL HEAT ACTIVATED	GAS DRYING INC PO BOX D-2 WHARTON NJ 07885 201-361-2212	17000
ADSORPTION	HL1300	1300 SCFM AT 100 PSIG HEATLESS REGENERATIVE	VAN AIR SYSTEMS 349 MECHANIC ST LAKE CITY PA 16423 814-774-2631	14000
ADSORPTION EXTERNAL HEAT	1450 BDA	1500 SCFM 100 PSIG -40 DEG F FULLY AUTOMATIC TWO COLUMN EXTERNALLY HEATED ELECTRIC RESISTANCE	GAS DRYING INC PO BOX D-2 WHARTON NJ 07885 201-361-2212	25000
DESSICANT	D-12	95 SCFM 100 PSIG 110 LB DESSICANT DRYER DESSICANT COST \$0.64/LB	VAN AIR SYSTEMS 349 MECHANIC ST LAKE CITY PA 16423 814-774-2631	1100

--- T O T A L S FOR COMPRESSED AIR DRYERS ---

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 CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: DRIVES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AC MOTORS	E SQUARE	84 TO 95% EFFICIENCY 150 HP 3600 RPM	DELCO PRODUCTS PO BOX 1042 DAYTON OH 45401	12000
AC MOTORS	ENERGYSAVER MOTO	84-96% EFFICIENCY SIZES 0.25-800 HP 900-3600 RPM PRICE FOR 250 HP	GENERAL ELECTRIC 1635 BROADWAY FORT WAYNE IN 46801	10000
AC MOTORS	WATTRIMMER 1 HP	85.5 % EFFICIENCY 1740 RPM	GRANGER/DAYTON ELECTRIC 5959 W HOWARD STREET CHICAGO IL 60648	180
AC MOTORS	WATTRIMMER 10HP	90.2% EFFICIENCY 1740 RPM	GRANGER/DAYTON ELECTRIC 5959 W HOWARD STREET CHICAGO IL 60648	340
AC MOTORS	SPARTON	89 TO 96% EFFICIENCY 250 HP 3600 RPM	LOUIS ALLIS 427 E STEWART ST MILWAUKEE WI 53201 414-481-6000	13000
AC MOTORS	BLUE CHIP XRI	SIZES 1.5 - 150 HP 87.5-96.2% EFFICIENCY PRICE FOR 150 HP MOTOR	MARATHON ELECTRIC 100 E RANDOLPH ST WAUSAU WI 55401	12000
AC MOTORS	XE DUTYMASTER	82 TO 96% EFFICIENCY 250 HP 3600 RPM	RELIANCE ELECTRIC 24701-T EUCLID AVE CLEVELAND OH 44117 216-266-7000	14500
AC MOTORS	PREMIUM EFFICIEN	81.5-96.2% EFFICIENCY CAN BE USED AT 15% ABOVE HP 1-200 HP AVAILABLE PRICE FOR 200 HP	US ELECTRICAL MOTORS 125 OLD GATE LANE MILFORD CT 06460	10000
AC MOTORS	MAC II	EFFICIENCY 85.5 TO 96.2% 300 HP 3600 RPM	WESTINGHOUSE ELECTRIC PO BOX 225 BUFFALO NY 14240	18000
VARIABLE SPEED	AIR MODULATOR	CONTROLLER FOR HVAC FANS SIZES 5-50 HP PNEUMATIC/ELECTRIC SIGNAL PRICE FOR 50 HP	BORG WARNER PO BOX 1592 YORK PA 17405	8100

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 CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: DRIVES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
VARIABLE SPEED	AFTROL II	15 HP, 230 V VARIABLE FREQUENCY 0 TO 120 HZ	GENERAL ELECTRIC 1100 LAWRENCE PKWY ERIE PA 16531	9500
VARIABLE SPEED	VSPEED	300 HP, 460 V, 3 PHASE	GRAHAM CO PO BOX 23800 MILWAUKEE WI 53223 414-355-8800	25000
VARIABLE SPEED	VLT 220	STATIC FREQUENCY CONVERTER FOR HVAC FANS, 1-20 HP PRICE FOR 20 HP	HAMPTON/DANFOSS 2995 EASTROCK AVENUE ROCKFORD IL	9000
VARIABLE SPEED	PF SERIES	SIZE 15-400 HP FOR HVAC/PROCESS DRIVES PRICE FOR 400 HP MOTOR	RAMSEY CONTROLS 333 ROUTE 17 MAHWAH NJ 07403	50000
VARIABLE SPEED	VAR SPEED	500 HP, 460 V VARIABLE FREQUENCY 6 TO 200 HZ	RELIANCE ELECTRIC 24701-T EUCLID AVE CLEVELAND OH 44117 216-266-7000	72000
VARIABLE SPEED	ACCUTROL	500 HP, 460 V, 3 PHASE	WESTINGHOUSE ELECTRIC PO BOX 817-W OLDSMAR FL 33557 813-855-4621	56000

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 T O T A L S F O R D R I V E S  
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 CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: GENERATORS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AIR COOLED DIESEL	DE1401L4-J	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 14 KW 3 PHASE PF=0.8	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	6100
AIR COOLED DIESEL	DE1401L4-W	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 14 KW 1 PHASE PF=1.0	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	6100
AIR COOLED DIESEL	DE25L4-J	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 25 KW 3 PHASE PF=0.8	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	11100
AIR COOLED DIESEL	DE25L4-W	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 25 KW 1 PHASE PF=1.0	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	11100
AIR COOLED DIESEL	DE4L4-A	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 3.75 KW 1 PHASE PF=1.0	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	3450
AIR COOLED DIESEL	DE605L4-J	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 6.5 KW 3 PHASE PF=0.8	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	4600
AIR COOLED DIESEL	DE605L4-W	VOLTAGE REGULATION +/- 5% FREQUENCY REGULATION +/- 5% ELECTRIC START 120/240V 60HZ 6.5 KW 1 PHASE PF=1.0	WINPOWER CORP 1207 FIRST AVE EAST NEWTON IOWA 50208 515-792-1301	4600
WATER COOLED DIESEL	4BT3.9-6C	ELECTRIC START 3 PHASE PF=0.8 60 KW (60HZ) 50 KW (50HZ)	CUMMINS METROPOWER 890 ZAREGA AVE BRONX NY 10473 212-892-2400	7900
WATER COOLED DIESEL	KTA-50-6S1	ELECTRIC START 3 PHASE PF=0.8 900 KW (60HZ) 800 KW (50HZ)	CUMMINS METROPOWER 890 ZAREGA AVE BRONX NY 10473 212-892-2400	78500
WATER COOLED DIESEL	NT-495-6S	ELECTRIC START 3 PHASE PF=0.8 110 KW (60HZ) 100 KW (50HZ)	CUMMINS METROPOWER 890 ZAREGA AVE BRONX NY 10473 212-892-2400	10400

CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: GENERATORS

TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
WATER COOLED DIESEL	VTA-28-6S1	ELECTRIC START 3 PHASE PF=0.8 500 KW (50HZ)	CUMMINS METROPOWER 890 ZAREGA AVE BRONX NY 10473 212-892-2400	38100
WATER COOLED DIESEL	WC DIESEL	SIZES FROM 15-1200 KW PRICE PER KW: \$320 (25 KW) TO \$97 (750 KW) PRICE FOR 750 KW	FERMONT/DCA 141 NORTH AVE BRIDGEPORT CT 06606 203-366-5211	73000
WATER COOLED DIESEL	081025K-DW63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 1000 KW (60HZ) 895 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	94400
WATER COOLED DIESEL	081225D-D63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 1200 KW (60HZ) 1040 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	131500
WATER COOLED DIESEL	08140D-DW63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 135 KW (60HZ) 115 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	16400
WATER COOLED DIESEL	081430D-DW63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 1400 KW (60HZ) 1200 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	134100
WATER COOLED DIESEL	08310K-DW63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 300 KW (60HZ) 280 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	25000
WATER COOLED DIESEL	08500D-DW63	ELECT START BATTERIES INCLUDED TURBOCHARGED DIESEL ENGINE PRICE INCLUDES EXPORT CRATING 500 KW (60HZ) 345 KW (50HZ)	O'BRIEN MACHINERY WASHINGTON & GREEN ST DOWNINGTON PA 19335 215-269-6600	50000
WATER COOLED NATURAL GAS	WC NATGAS	SIZES FROM 15-55 KW PRICE PER KW: \$256 (25 KW) TO \$172 (55 KW) PRICE FOR 55 KW	FERMONT/DCA 141 NORTH AVE BRIDGEPORT CT 06606 203-366-5211	9500

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CATEGORY: ELECTRIC SYSTEMS  
FUNCTION: POWER FACTOR CORRECTION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
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T T A L S FOR GENERATORS  
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 CATEGORY: ELECTRIC SYSTEMS  
 FUNCTION: POWER FACTOR CORRECTION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CAPACITOR	CLASS 8117	MULTIPLE UNIT CAPACITORS AVAILABLE FOR 240/480/600 V PRICED FOR 360 KVAR/480 V	FEDERAL PACIFIC ELECTRIC 1605 E RODNEY FRENCH NEW BEDFORD MA 02744 617-996-8561	3700
CAPACITOR	CALMOUNT SERIES	SIZES 2 TO 75 KVAR, 480 V PRICED FOR 75 KVAR	MYROM ZUCKER 700 W LONG LAKE ROAD BLOOMFIELD HILLS MI 313-543-2277	1100
CAPACITOR	MAC II SERIES	IMPROVES MOTOR POWER FACTOR FOR 1 TO 200 HP MOTORS PRICE FOR 200 HP MOTORS	WESTINGHOUSE ELECTRIC DISTRIBUTION APPARATUS BLOOMINGTON IN 47401	400
CAPACITOR	TYPE MDP	MULTIPLE SIZES, VOLTAGES AVAILABLE PRICE FOR 480V, 300 KVAR	WESTINGHOUSE ELECTRIC DISTRIBUTION APPARATUS BLOOMINGTON IN 47401	4000

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 T O T A L S FOR POWER FACTOR CORRECTION -  
 T O T A L S FOR ELECTRIC SYSTEMS -  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: ECONOMIZER CONTROLS  
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TYPE	MODEL NUMRER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ECONOMIZER CYCLE CONTROL	W859C 1040	MAX AMBIENT TEMP 125F MAX RETURN AIR TEMP 125F	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	460
ENTHALPY CONTROLLER	H205A 1012	MAXIMUM TEMPERATURE 150F	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	200
ENTHALPY CONTROLLER	HP973A 1006	RETURN AIR 65-85 DEG F 20-75% RH OUTDOOR AIR 32-100 DEG F 15-85% RH	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	230
SINGLE ZONE CONTROL SYS	W973	COMPLETE CONTROL PACKAGE FOR AIR HANDLING SYSTEM	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	1500

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 T O T A L S FOR ECONOMIZER CONTROLS  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: ENERGY MANAGEMENT SYSTEM  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
MICROPROCESSOR EMS	SERIES 6100	16 ANALOG INPUTS, 4 PULSE OR 8 DISCRETE INPUTS, 16 CONTROL OUTPUTS; EXPANDABLE TO NETWORK SYSTEM; PRICE FOR BASE UNIT	AMF CONTROL SYSTEMS PO BOX 59469 DALLAS TX 75229 214-241-9016	2500
MICROPROCESSOR EMS	47000 II	10 OR 20 LOADS CONTROLLED TIME OF DAY ON/OFF DUTY CYCLING; DEMAND SHEDDING 7 DAY CLOCK WITH HOLIDAYS	HONEYWELL 1985 DOUGLAS DRIVE N GOLDEN VALLEY MN 55422	9700
MICROPROCESSOR EMS	DSC-8500	UP TO 16 LOADS; ECONOMIZER CONTROL; TEMPERATURE RESETS; OPT ON/OFF TIME; DUTY CYCLING CHILLER OPTIMIZATION	JOHNSON CONTROLS 507 E MICHIGAN ST MILWAUKEE WI 53201 414-274-4000	14000
MICROPROCESSOR EMS	P/P 5000	HANDLES UP TO 32 LOADS OPTIMUM TIME OF DAY ON/OFF DUTY CYCLING; DEMAND SHEDDING 7 DAY CLOCK WITH HOLIDAYS	JOHNSON CONTROLS 507 E MICHIGAN ST MILWAUKEE WI 53201 414-274-4000	11400
MICROPROCESSOR EMS	16 SIXTY FOUR	UP TO 64 LOADS; PEAK SHEDDING; OPT ON/OFF TIME; DUTY CYCLING; 7 DAY CLOCK WITH HOLIDAYS	PACIFIC TECHNOLOGIES 11825 E 120 ST KIPKLAND WA 98033 206-823-7100	9500
MICROPROCESSOR EMS		UP TO 64 LOADS; PEAK SHEDDING OPT ON/OFF TIME; DUTY CYCLING;	SOLIDYME 2207 HAMMOND DRIVE SCHAUMBERG IL 60195 312-397-8500	800

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 T O T A L S FOR ENERGY MANAGEMENT SYSTEM  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: FACILITY MANAGEMENT SYS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
BUILDING AUTOMATION	AI 2100 REX	HANDLES UP TO 48 POINTS DDC, PROCESS CONTROL, ENERGY MANAGEMENT PRICE PER POINT	AMERICAN AUTOMATRIX 1 TECHNOLOGY DRIVE EXPGRT PA 15632 412-733-2800	130
BUILDING AUTOMATION	ALPHA/NET	HANDLES 3000 POINTS, EXPANDS ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL	AMF CONTROL SYSTEMS PO BOX 59469 DALLAS TX 75229 800-445-0121	110000
BUILDING AUTOMATION	MP-128	48 POINTS, EXPANDABLE ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL	FACILITEC CONTROLS 412 W 9 ST KANSAS CITY MO 64105 816-221-4292	11500
BUILDING AUTOMATION	DELTANET	HANDLES UP TO 270 POINTS ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL	HONEYWELL HONEYWELL PLAZA WEST MINNEAPOLIS MN 55408 612-870-5355	30000
BUILDING AUTOMATION	JC/85 SERIES	UNLIMITED EXPANDABILITY ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL; \$ PER POINT	JOHNSON CONTROLS PO BOX 423 MILWAUKEE WI 53201 414-274-4000	1000
BUILDING AUTOMATION	8600	ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL; \$ PER POINT	MARGAUX SYSTEMS 727 AIRPORT BLVD ANN ARBOR MI 48104	750
BUILDING AUTOMATION	SYSTEM 600	ENERGY MANAGEMENT, FIRE AND SECURITY, MAINTENANCE SCHED, ACCESS CONTROL; \$ PER POINT 100 TO 10000 POINTS	MCC POWERS 2942 MACARTHUR BLVD NORTHBROOK IL 60062 312-272-9555	800

----- T O T A L S FOR FACILITY MANAGEMENT SYS -----  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: LOAD MANAGEMENT CONTROL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
DEMAND CONTROLLER	2024	CONTROLS UP TO 24 LOADS SHEDS ON PRIORITY BASIS OR ROTATING PRIORITY BASIS CAN ALSO DUTY CYCLE LOADS	DENCOR 1450 WEST EVANS DENVER CO 80223 303-922-1888	3000
DEMAND CONTROLLER	810A	MONITORS AND FORECASTS DEMAND HANDLES UP TO 60 LOADS CAPABILITIES CAN BE EXPANDED BY ADDITION OF MODULES	PACIFIC TECHNOLOGY 11825 120 ST NE KIRKLAND WA 98033 206-823-7100	11900
DEMAND CONTROLLER	DC 8	HANDLES 8 LOADS PRIORITIZES SHEDDING FOR EACH LOAD	POWER CONTROL PRODUCTS PO BOX 10013 CLEARWATER FL 33517 813-461-3833	1620

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 T O T A L S FOR LOAD MANAGEMENT CONTROL  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: OPTIMIZER-CHILLER  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CHILLER CONTROL	SYSTEM 400	OUTSIDE AIR RESET CONTROL FOR RECIPROCATING CHILLERS ONLY	CESCO 1240 NE 175 ST SEATTLE WA 98155 206-365-1234	650
CHILLER CONTROL	SYSTEM 700	OUTSIDE AIR RESET CONTROL FOR CENTRIFUGAL CHILLERS ONLY CONTROLS PUMPS AND CHILLER LEAD/LAG CONTROL	CESCO 1240 NE 175 ST SEATTLE WA 98155 206-365-1234	2300
CHILLER CONTROL	370	LEAD/LAG CONTROL OF 5 CHILLERS MONITORS CHILLED WATER TEMP	PACIFIC TECHNOLOGY 11825 120 ST NE KIRKLAND WA 98033 206-823-7100	2820

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 T O T A L S FOR OPTIMIZER-CHILLER  
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 CATEGORY: ENERGY MNGT/CONTROLS  
 FUNCTION: OPTIMIZER-HEATING  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
OPTIMUM START/STOP	WP51A 1009	OPTIMUM START/STOP OF HEATING SYSTEM	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	510
OUTSIDE AIR RESET	T475A	MAXIMUM OUTDOOR TEMP 70F	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	175
OUTSIDE AIR RESET	TA240U	RESETS HOT WATER TEMP BASED ON OUTSIDE AIR TEMP; NIGHT SET-BACK CONTROL; YEAR CLOCK/CAL OPTIMUM START/STOP	TOUR & ANDERSSON 652 GLENROCK RD STAMFORD CT 06906 203-324-0106	1350

----- T O T A L S FOR OPTIMIZER-HEATING -----  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: OPTIMIZER-HVAC  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
OPTIMUM START/STOP	ENERGYCENSOR4/12	OPTIMUM START/STOP DUTY CYCLING; MULTIPLE ZONES MULTIPLE TEMP RESETS 7 DAY CLOCK WITH HOLIDAYS	FUEL COMPUTER CORP 419 WHALLEY AVE NEW HAVEN CT 06511 203-865-3844	2930
OPTIMUM START/STOP	240 OTP	HEATING/COOLING CONTROL AUTOMATIC SWITCHOVER OPTIMUM S/S; DUTY CYCLING; YEAR CLOCK/CALENDAR	TOUR & ANDERSSON 352 GLENROCK RD STAMFORD CT 06906 203-324-0106	1150

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 T O T A L S FOR OPTIMIZER-HVAC  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: OPTIMIZER-LIGHTING  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
DAYLIGHTING CONTROL	CONSERVOLITE	ADJUSTS FLUORESCENT LIGHT FIX- TURE OUTPUT TO MAXIMIZE USE OF NATURAL LIGHT REPLACES BALLAST	CONSERVOLITE PO BOX 215 OAKDALE PA 15071 412-787-8800	60
DAYLIGHTING CONTROL	FLEXIMATT IV	ADJUSTS FLUORESCENT LIGHT OUT- PUT FROM 20 - 100% OPTIMIZES USE OF NATURAL LIGHT UP TO 16 TUBES PER UNIT	CONTROLLED ENVIRONMENT PO BOX 11098 ROCKVILLE MD 20850 301-424-1570	60
DAYLIGHTING CONTROL	M277-90	ADJUSTS FLUORESCENT LIGHT FIX- TURE OUTPUT TO MAXIMIZE USE OF NATURAL LIGHT	ENERTRON 1100 WICOMICO ST BALTIMORE MD 21230 301-837-1837	400
DAYLIGHTING CONTROL	PAESAR PRF	ADJUSTS FLUORESCENT LIGHT FIX- TURE OUTPUT TO MAXIMIZE USE OF NATURAL LIGHT	LUTRON SUTER ROAD COOPERSBURG PA 18036 215-282-3800	940
FLUORESCENT DIMMER	FLEXIMATT II	REDUCES FLUORESCENT LIGHT OUTPUT IN PROPORTION TO DAYLIGHT CONTROLS UP TO 16 LAMPS	CONTROLLED ENVIRONMENT PO BOX 11098 ROCKVILLE MD 20850 301-424-1570	15
FLUORESCENT DIMMER	MINIDIM	REDUCES FLUORESCENT LIGHT OUTPUT IN PROPORTION TO DAYLIGHT CONTROLS UP TO 16 LAMPS	ENERTRON 1100 WICOMICO ST BALTIMORE MD 21230	150
----- T O T A L S FOR OPTIMIZER-LIGHTING -----				
REFLECTOR	LTBL	PERMITS DELAMPING WHILE MAINTAINING 85% OF LIGHT LEVEL - 8FT FIXTURE	LEG ASSOCIATES RPD #1 NEWMARKET NH 03857 603-659-2853	45

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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: THERMOSTAT-ELECTRIC  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
SETBACK THERMOSTAT	15015-0931-100	7 DAY CLOCK THERMOSTAT	AMMARK 22 RIVER ROAD FAIR LAWN NJ 07410 201-796-2500	80
SETBACK THERMOSTAT	15015-2531	MANUAL SETBACK CONTROL SINGLE ZONE HEATING ONLY	AMMARK 22 RIVER ROAD FAIR LAWN NJ 07410 201-796-2500	20
SETBACK THERMOSTAT	LI/TRONIC LT2	PHOTOCELL CONTROLS SETBACK	FEDERAL PACIFIC ELECTRIC 150 AVENUE L NEWARK NJ 07101 201-589-7500	45
SETBACK THERMOSTAT	T7400	HEATING/COOLING CONTROL 7 DAY CLOCK/MANUAL OVERRIDE 32-99 DEG F RANGE PRICED FOR BASIC MODEL	HONEYWELL 1985 DOUGLAS DRIVE N GOLDEN VALLEY MN 55422	370
SPACE THERMOSTAT	TP-1012/1033	HEATING (1012); COOLING (1033) HEATING RANGE 45-75 F COOLING RANGE 75-105 F	BARBER COLMAN 1300 ROCK ST ROCKFORD IL 61101 815-968-2402	130
SPACE THERMOSTAT	T7500S 1001	PROPORTIONAL CONTROL SETPOINT RANGE 60-90 DEG F	HONEYWELL 1985 DOUGLAS DRIVE N GOLDEN VALLEY MN 55422	100

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 T O T A L S FOR THERMOSTAT-ELECTRIC  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: THERMOSTAT-PNEUMATIC  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AIRSTREAM THERMOSTAT	LP910A 1007	TEMP RANGE 40-230 DEG F SINGLE PIPE SYSTEM	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	125
AIRSTREAM THERMOSTAT	T3200-1	PROPORTIONAL CONTROL	JOHNSON CONTROLS 507 E MICHIGAN AVE MILWAUKEE WI 53201 414-274-4000	250
SETBACK THERMOSTAT	TK1302/1303	HEATING (1302) COOLING (1303) 20 DEG F SETBACK/FORWARD HEATING RANGE 45-75 F COOLING RANGE 75-105 F	BARBER COLMAN 1300 ROCK ST ROCKFORD IL 61101 815-968-2402	135
SETBACK THERMOSTAT	TK13131	HEATING AND COOLING CONTROL HEATING RANGE 55-85 F COOLING RANGE 55-85 F	BARBER COLMAN 1300 ROCK ST ROCKFORD IL 61101 815-968-2402	195
SPACE THERMOSTAT	TK1002/1003	HEATING(1002) COOLING (1003) HEATING RANGE 45-75 DEG F COOLING RANGE 75-105 DEG F	BARBER COLMAN 1300 ROCK ST ROCKFORD IL 61101 815-968-2402	100
SPACE THERMOSTAT	TP970A	TEMPERATURES UP TO 150 DEG F TWO PIPE SYSTEM	HONEYWELL HONEYWELL PLAZA MINNEAPOLIS MN 55408 612-870-5355	55
SPACE THERMOSTAT	T4056	ADJUSTABLE DEAD BAND HEATING AND COOLING SENSORS	JOHNSON CONTROLS 507 E MICHIGAN AVE MILWAUKEE WI 53201 414-274-4000	160

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 T O T A L S FOR THERMOSTAT-PNEUMATIC  
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 CATEGORY: ENERGY MNGMT/CONTROLS  
 FUNCTION: TIME OF DAY CONTROL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
TIME CLOCK-ELECTROMECH	4004-71S	24 HOUR CLOCK MANUAL OVERRIDE WEEKEND SCHEDULING CAPABILITY UP TO 7 ON/OFF EVENTS DAILY	AMF PARAGON 606 PARKWAY BLVD TWO RIVERS WI 54241 414-793-1161	50
TIME CLOCK-ELECTROMECH	7218-00	7 DAY CLOCK MANUAL OVERRIDE 4 ON/OFF EVENTS DAILY	AMF PARAGON 606 PARKWAY BLVD TWO RIVERS WI 54241 414-793-1161	230
TIME CLOCK-ELECTROMECH	7220 TIME CLOCK	24 HOUR CLOCK OPERATION MANUAL OVERRIDE	TORK 1 GROVE ST MOUNT VERNON NY 10550 914-664-3542	100
TIME CLOCK-ELECTROMECH	8007 DUTY CYCLE	24 HOUR CLOCK DAY OMISSION CAPABILITY UP TO 48 DAILY ON/OFF EVENTS	TORK 1 GROVE STREET MOUNT VERNON NY 10550 914-664-3542	225
TIME CLOCK-ELECTROMECH	W220 TIME CLOCK	7 DAY CLOCK OPERATION MANUAL OVERRIDE	TORK 1 GROVE ST MOUNT VERNON NY 10550 914-664-3542	110
TIME CLOCK-SOLID STATE	EC700 SERIES	HANDLES UP TO 12 LOADS 64 ON/OFF OPERATIONS DAILY 7 DAY CLOCK MANUAL OVERRIDE	AMF PARAGON 606 PARKWAY BLVD TWO RIVERS WI 54241 414-793-1161	900
TIME CLOCK-SOLID STATE	EC702	HANDLES UP TO 12 CIRCUITS HAS DUTY CYCLING CAPABILITY 1 TO 60 MINUTES; 7 DAY CLOCK MANUAL OVERRIDE	AMF PARAGON 606 PARKWAY BLVD TWO RIVERS WI 54241 414-793-1161	1100

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 T O T A L S FOR TIME OF DAY CONTROL -----

T O T A L S FOR ENERGY MNGMT/CONTROLS -----  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: COMBUSTION ANALYZERS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTROCHEMICAL	760	SENSES OXYGEN CONTENT IN % ACCURATE TO +/- 0.1%	ANALYTICAL PRODUCTS 221 RIVERMOOR ST BOSTON MA 02132	2600
ELECTROCHEMICAL	770	SENSES O2, COMBUSTIBLES ACCURACY O2 +/- 0.1%, COMBUSTIBLES +/- 5%	ANALYTICAL PRODUCTS 221 RIVERMOOR ST BOSTON MA 02132	4300
ELECTROCHEMICAL	7210	MEASURES O2, CO2, CO, HC, OPACITY AND TEMPERATURE ACCURACY O2 +/- 5% CO +/- 40 PPM CO2 +/- 2%	ECONICS 540 OAKMEAD PKWY SUNNYVALE CA 94086	15000
ELECTROCHEMICAL	OISEN SYSTEM 20	ANALOG READOUT, MOUNTS ON STACK WEATHERPROOF MONITORS O2 ACCURACY +/- 2%	HAGUE INTERNATIONAL 3 ADAMS ST PORTLAND ME 04106	4700
ELECTROCHEMICAL	OISEN SYSTEM 90	CHART RECORDER ACCURACY +/- 2%; DUSTPROOF MONITORS O2 INTERFACES WITH EMS	HAGUE INTERNATIONAL 3 ADAMS ST PORTLAND ME 04106	3200
ELECTROCHEMICAL	9100	O2/CO ANALYZER INSTALLS OUTSIDE STACK ACCURACY +/- 5% OF READING	TELEDYNE 16830 CHESTNUT ST CITY OF INDUSTRY CA	7900
ELECTROCHEMICAL	9200	O2/CO ANALYZER INSTALLS PARTLY INSIDE STACK ACCURACY +/- 5% OF READING	TELEDYNE 16830 CHESTNUT ST CITY OF INDUSTRY CA	2400

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 T O T A L S F O R C O M B U S T I O N A N A L Y Z E R S  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-ELECTRICAL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AMMETER	SERIES 63A	ANALOG DIAL 3.5" 0-50 AMPS AC	EMILO 123 N MAIN ST DUBLIN PA 18917 215-249-9330	50
AMMETER	582	50 MV MOVEMENT +/- 2% ACCURACY 0-3000 A 3.5" ROUND ANALOG DIAL	HOYT ELECTRICAL INST LINDEN ST PENACOKK NH 03303 603-753-6321	60
AMMETER/VOLTMETER	2S AKV 600	TORQUE BAND RANGE 0-600V 2" METER	MODUTEC INC 18 MARSHALL ST NORWALK CT 06856 203-853-3636	65
ENERGY MONITOR	600	RANGE 80-600 VAC 2/20/200 KW ACCURACY +/- 0.25% MEASURES KW, KWH	DOWTY RFL INDUSTRIES INSTRUMENTATION DIV BOONTON NJ 07005 201-334-3100	1350
FREQUENCY METER	2163	50 OR 60 HZ NOMINAL MODELS ACCURACY +/- 0.3% OF MIDSCALE	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	90
KILOWATT-HOUR	PCS-4/PA1-1000P	WATT TRANSDUCER WITH ELECTRONIC TOTALIZER BATTERY BACKUP	OHIO SEMITRONICS 1205 CHESAPEAKE AVE COLUMBUS OH 43212 614-486-9561	590
KILOWATT-HOUR	W4/1044-7	PULSE TRANSDUCER WITH ELECTRO- MECHANICAL TOTALIZER	OHIO SEMITRONICS 1205 CHESAPEAKE AVE COLUMBUS OH 43212 614-486-9561	670
MULTI-METER	255	MEASURES VOLTS, AMPS, WATTS 5mA-5A, 20-1000V, 100mW-5000W	CLARKE-HESS 17 W 17 ST NEW YORK NY 10011 212-255-2940	1400
POWER ANALYZER	636	RANGE TO 600 V, 50 A ACCURACY +/- 0.5% MEASURES WATTS, AMPS, VOLTS, PF, VARS, FREQ	DOWTY RFL INDUSTRIES INSTRUMENTATION DIV BOONTON NJ 07005 201-334-3100	6650
POWER ANALYZER	2524	2 REQUIRED FOR 3 PHASE/3 WIRE 3 REQUIRED FOR 3 PHASE/4 WIRE MEASURES VOLTS, AMPS, WATTS, PF	YOKOGAWA CORP OF AMERICA 2 DART ROAD SHENANDOAH GA 30265 404-253-7000	1550

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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-ELECTRICAL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
VOLTMETER	SERIES 63	ANALOG DIAL 3.5" UP TO 600VAC	EMILO 123 N MAIN ST DUBLIN PA 18917 215-249-9330	55
VOLTMETER	10406	RANGE 0 TO 250 VAC VISCIOUS DAMPED IRON VANE	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	40
WATTMETER	620	RANGE TO 750 V, 25 A ACCURACY +/- 0.25% MEASURES WATTS, VOLTS, AMPS	DOWTY RFL INDUSTRIES INSTRUMENTATION DIV BOONTON NJ 07005 201-334-3100	2800
WATTMETER	SERIES 800	460 V	DRANETZ INDUSTRIAL PROD 1000 NEW DURHAM RD EDISON NJ 08818 201-287-3680	3700

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 T O T A L S FOR METERING-ELECTRICAL  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-GAS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
DIAPHRAGM	AL SERIES	WORKING PRESS TO 100 PSIG FLOW TO 50.5 SCFH INSTRUMENT OR DIRECT READING PRICE FOR MODEL AL900	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	340
ELECTRONIC	EVA 4000 SERIES	AIR VELOCITY SENSOR FLOW RANGE 100:1 AUTO AVERAGING ACROSS FLOW PRICE FOR SENSOR/DISPLAY	KURZ INSTRUMENTS PO BOX 849 CARMEL VALLEY CA 93924 408-659-3421	2900
INTEGRATOR	CONTINUOUS INTEG	VOLUME CORRECTORS PRESSURE TO 1500 PSIG TEMP RANGE 160 DEG F PRICE FOR PRESSURE CORRECTOR	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	1000
POSITIVE DISPLACEMENT	AL-1400	ACCURACY +/- 1% PRICED FOR 3" LINE DIRECT READING TOTALIZER	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	2500
ROTARY	CVM SERIES	WORKING PRESS TO 1440 PSIG FLOW RATES TO 520 MSCFH INSTRUMENT OR DIRECT READING PRICE FOR MODEL 2N CVM	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	760
THERMAL MASS FLOW SENSOR	SERIES 555	ACCURACY +/- 2% READ + .5% FS 1 SECOND RESPONSE TIME RANGES 0-300 TO 0-12000 SCFH PRICE FOR BASE UNIT ONLY	KURZ INSTRUMENTS PO BOX 849 CARMEL VALLEY CA 93924 408-659-3421	2995
TURBINE	6T SERIES	WORKING PRESS TO 1440 PSIG FLOW RATES TO 14.8 MNSCFH INSTRUMENT OR DIRECT READING PRICE FOR 3" 6T	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	1200
TURBINE	MARK II SERIES	SIZES FROM 4" - 12" MAX FLOW TO 13 MM CUB FT/HR DIRECT OR DIAL READING PRICED FOR 4" SIZE	ROCKWELL INTERNATIONAL 411 N LEXINGTON AVE PITTSBURGH PA 15208 412-247-3000	2700
VORTEX SHEDDING	49506	ACCURACY +/- 1% OF RATE ELECTROMECHANICAL TOTALIZER PRICED FOR 3" PIPE	EASTECH 26 W HIGHLAND AVE ATLANTIC HIGHLANDS NJ 201-291-3500	1900
VORTEX SHEDDING	10 LV3000 SERIES	7 DIGIT NON-RESET TOTALIZER AND RATE INDICATOR PRICED FOR 3" LINE	FISCHER AND PORTER 125 E COUNTY LINE RD WARMINSTER PA 18974 215-674-6000	1600

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CATEGORY: FIXED INSTRUMENTATION  
FUNCTION: METERING-LIQUID  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
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T O T A L S FOR METERING-GAS  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-LIQUID  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AVERAGING PITOT TUBE	DCR25CA2MA4HA2	PIPE SIZE 1-40 IN TEMPERATURE TO 750 DEG F PRICE FOR 6 IN ELEMENT AND DP CELL AND LOCAL READOUT	DIETRICH STANDARD CORP BOX 9000 BOULDER CO 80301 303-530-9600	900
BTU METER	EM6025	MEASURES 2 INDEPENDENT FLOWS IN ENERGY UNITS; ACC +/- 3.4% RANGE 1-30 FT/SEC, 0-100 C FOR 0.5-60" PIPE	FLOW RESEARCH CORP PO BOX 27871 HOUSTON TX 77227 713-623-2143	2600
INSERTION IMPELLER	TR400B/FL1000RT	ACCURACY +/- 3% OF RATE DISPLAY INCLUDES TOTALIZER RANGE OF MATERIALS AVAILABLE PRICE FOR BRASS	FLOW RESEARCH CORP PO BOX 27871 HOUSTON TX 77227 713-623-2143	910
TEE-TYPE IMPELLER	TR475P/FL1000RT	ACCURACY +/- 3% OF RATE DISPLAY INCLUDES TOTALIZER RANGE OF MATERIALS AVAILABLE PRICE FOR 1.5" T, PVC	FLOW RESEARCH CORP PO BOX 27871 HOUSTON TX 77227 713-623-2143	940
ULTRASONIC	UFT-603 CW	PIPE SIZE 0.25 - 60 INCHES TEMPERATURE TO 800F FLOW RATES 0-2.5 FT/SEC OR 0-20 FT/SEC	DYNASONICS PO BOX 667 NAPERVILLE IL 60540 312-355-3055	3200
ULTRASONIC	DHT-HYDRA PORT	FLOW RATE 0 - 5 FT/SEC TEMPERATURE -10 - 140 DEG F	POLYSONICS PO BOX 22428 HOUSTON TX 77227 713-623-2134	5600

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 T O T A L S FOR METERING-LIQUID  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-OIL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
PISTON	MINI MAJOR	SIZE 0.25 INCHES FLOW RANGE 0.6 - 40 GAL/HR PRESSURE TO 400 PSI PRICE FOR SS; BRONZE- \$210	KENT METER SALES PO BOX 1852B OCALA FL 32670 904-732-4670	420
POSITIVE DISPLACEMENT	LS-21-212	OVAL GEAR METER MODELS FOR LIGHT AND HEAVY OIL FLOW RANGE 5-200 GAL/HR	BROOKS INSTRUMENT DIV 407 W VINE ST HATFIELD PA 19440 215-362-3500	400
POSITIVE DISPLACEMENT	46736	FLOW RATE 0.1-20 GAL/HR TEMP RANGE -20 - 140 DEG F	MARADYNE CORP 6503 BABERTON AVE CLEVELAND OH 44102 216-281-1050	190
POSITIVE DISPLACEMENT	TYPE S METER	FLOW RATE 5-50 GAL/MIN MAXIMUM PRESSURE 150 PSI	NEPTUNE MEASUREMENT PO BOX 792 GREENWOOD SC 29646 803-223-1212	510
POSITIVE DISPLACEMENT	LN-DSB2009-16-70	FLOW RATE 0-200 GAL/MIN ALUMINUM CONSTRUCTION	UNIVERSAL FLOW MONITORS 1751E NINE MILE ROAD HAZEL PARK MI 48030 800-521-6302	1200
TURBINE	FSB 1502	PRESSURE TO 6000 PSI FLOW RANGE 0.5 - 350 GAL/MIN PRICED FOR 200 GAL/MIN MODEL	FLO-TECH 403 S WASHINGTON BLVD MUNDELEIN IL 60060 312-566-9120	400

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 T O T A L S FOR METERING-OIL  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-PRESSURE  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
DIFFERENTIAL TRANSDUCER	126 SERIES	RANGES 0-5 OR 0-15 PSI DIFF PROVIDES MILLIVOLT OUTPUT	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	40
DIGITAL MANOMETER	2654-21	AVAILABLE FOR DIFFERENT PRESSURE RANGES 2 SECOND RESPONSE TIME ACCURACY +/- 0.2%	YOKOGAWA CORP OF AMERICA 2 DART ROAD SHENANDOAH GA 30265 404-253-7000	3200
FLOW CONTROL SYSTEM	SERIES 7500	INCLUDES 0-10 SCFM METER, VALVE CONTROLLER, RAMP VALVE, DIS- PLAY, TOTALIZER PRICE VARIES BY APPLICATION	KURZ INSTRUMENTS PO BOX 849 CARMEL VALLEY CA 93924 408-659-3421	6400
TRANSDUCER	600 SERIES	SIZES FROM 0-200 TO 0-10 K PSI PROVIDES MILLIVOLT OUTPUT FLUSH MOUNT SUBMINIATURE	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	400
TRANSDUCER INDICATOR	DP 2000S	COMPATIBLE WITH MILLIVOLT TRANSDUCERS; LED DISPLAY ACCURACY +/- 0.05% FS	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	360

--- T O T A L S FOR METERING-PRESSURE ---  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-STEAM  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
AVERAGING PITOT TUBE	DHF25HA2SA26H65A	HOT TAP, LINE SIZES 1-24 IN PRICE FOR 4 IN S40 PIPE, GEAR INSERTION AND ISOLATION VALVE AND MOUNTING HARDWARE	DIETRICH STANDARD CORP BOX 9000 BOULDER CO 80301 303-530-9600	3200
FLOW MONITORING	DIGISTRIP 4S	HANDLES UP TO 64 INPUTS MODULARLY EXPANDABLE TO HANDLE CONTROL FUNCTIONS BUILTIN PRINTER	KAYE INSTRUMENTS 17 DE ANGELO DRIVE BEDFORD MA 01730 800-343-4624	8100
ORIFICE PLATE	1700/3400 SERIES	ACCURACY +/- 1.5% PRICED FOR 4" LINE INCLUDES PRESSURE TRANSMITTER AND TOTALIZER	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	1700
ORIFICE PLATE	DRI-FLO II	DIFF PRESSURE TO 200" WC OPERATING PRESS 2500 PSIG CHART RECORDER WITH 1 PEN	AMERICAN METER 13500 PHILMONT AVE PHILADELPHIA PA 19116 215-673-2100	800
ORIFICE PLATE	BC2421514	INCLUDE ORIFICE PLATE, TRANS- MITTER, RECORDER/TOTALIZER ACCURACY +/- 0.25% OF SPAN PRICED FOR 4" LINE	BAILEY CONTROLS 29801 EUCLID AVENUE WICKLIFFE OH 44092 216-585-8500	1200
ORIFICE PLATE	4331-16C	INC ORIFICE PLATE, FLANGE, TRANSMITTER, RECORDER/TOTALIZ PRICED FOR 4" LINE	BRISTOL BARCOCK 40 BRISTOL ST WATERBURY CT 203-575-3000	2600
ORIFICE PLATE	IEP500	SINGLE PEN RECORDER WITH TOTALIZER INCLUDES ORIFICE PLATE, FLANGE PRICED FOR 4" LINE	BRISTOL BARCOCK 40 BRISTOL ST WATERBURY CT 203-575-3000	2600
ORIFICE PLATE	HD	INCLUDES LCD DISPLAY, BYPASS AND ORIFICE PLATE PRICED FOR 4" LINE	CADILLAC METER CO PO BOX 1175T PORT TOWNSEND WA 98368 206-385-5500	3500
ORIFICE PLATE	ORIFICE PLATE	INCLUDES ORIFICE PLAT, FLANGES TRANSMITTER AND INTEGRATOR PRICED FOR 3.5" LINE	LEEDS & NORTHROP PO BOX 279 UNION NJ 07083 201-686-5200	4000
VORTEX SHEDDING	10LV3000 SERIES	7 DIGIT NON-RESET TOTALIZER AND RATE INDICATOR PRICED FOR 4" LINE ACCURACY TO +/- .5%	FISCHER AND PORTER 125 E COUNTY LINE RD WARMINSTER PA 18974 215-674-6000	1750



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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-STEAM  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
VORTEX SHEDDING	YF 100 SERIES	PRICED FOR 3" LINE REMOTE MOUNTED ELECTRONICS	YOKOGAWA CORP OF AMERICA 2 DART ROAD SHENANDOAH GA 30265 404-253-7000	1950

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 T O T A L S FOR METERING-STEAM  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-TEMPERATURE  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
PYROMETER	2PYRE-J1000	RANGE 0 - 100 DEG F	MODUTEC INC 18 MARSHALL ST NORWALK CT 06856 203-853-3636	95
TEMPERATURE LOGGER	2058	INCLUDES PRINTER AND DISPLAY PROGRAMMABLE LOGGING SEQUENCE HANDLES UP TO 36 CHANNELS MULTIPLE THERMOCOUPLE TYPES	DORIC SCIENTIFIC 3883 RUFFIN RD SAN DIEGO CA 92123 619-565-4415	4000
TEMPERATURE LOGGER	PB 707-A	10 CHANNEL LOGGER LINEAR ANALOG OUTPUT MULTIPLE THERMOCOUPLE TYPES	HADES MANUFACTURING 151-T VERDI ST FARMINGDALE NY 11735 516-249-4244	420
TEMPERATURE LOGGER	OM-302-10	10 CHANNEL MONITOR/LOGGER PROGRAMMABLE INCLUDES PRINTER AND DISPLAY MULTIPLE THERMOCOUPLE TYPES	OMEGA ENGINEERING PO BOX 4647 STAMFORD CT 06907 203-359-1660	1300
TEMPERATURE LOGGER	DATA FORCE	10 CHANNEL DISPLAY TYPE K THERMOCOUPLES EXPANDABLE TO ADD CONTROL PRINTER AVAILABLE SEPARATELY	WAHL INSTRUMENTS 5750A HANNUM AVE CULVER CITY CA 90230 213-641-6931	5600
THERMOCOUPLE INDICATOR	707	MULTIPLE THERMOCOUPLE TYPES TOTAL ERROR < 2 F OVER RANGE	HADES MANUFACTURING 151-T VERDI STREET FARMINGDALE NY 11735 516-249-4244	240

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 T O T A L S FOR METERING-TEMPERATURE  
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 CATEGORY: FIXED INSTRUMENTATION  
 FUNCTION: METERING-WATER  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
MAGNETIC TURBINE	TN3000	SIZE 1.5 - 12 INCH FLOW RATE 4 - 6500 GAL/MIN PRICE FOR 2" BRONZE CAST IRON - \$275	KENT METER SALES PO BOX 1852B OCALA FL 32678 904-732-4670	350
POSITIVE DISPLACEMENT	DS 9000 SERIES	OVAL GEAR METER FLOW RATE UP TO 31 GAL/MIN STAINLESS STEEL CONSTRUCTION FOR DEIONIZED WATER	BROOKS INSTRUMENT DIV 407 W VINE ST HATFIELD PA 19440 215-362-3500	2000
POSITIVE DISPLACEMENT	C700	SIZE 0.5 - 2 INCH TEMP RANGE 0 - 50 C FLOW RATE 0.25 - 60 GAL/MIN PRICE FOR 2"	KENT METER SALES PO BOX 1852B OCALA FL 32678 904-732-4670	560
TURBINE	2 INCH TURBO	RANGE 0 - 160 GAL/MIN 2 INCH CAST IRON TOTALIZING REGISTER	BADGER METER 4545 W BROWN DEER ROAD MILWAUKEE WI 53223 414-355-0400	700
TURBINE	FSB-1502	PRESSURE TO 6000 PSI FLOW RANGE 0.5 - 350 GAL/MIN PRICED FOR 200 GAL/MIN MODEL	FLO-TECH 403 S WASHINGTON BLVD MUNDELEIN IL 60060 312-566-9120	400
VORTEX SHEDDING	4050W	ACCURACY +/- 1% OF RATE ELECTROMECHANICAL TOTALIZER PRICED FOR 3" PIPE	EASTECH 26 W HIGHLAND AVE ATLANTIC HIGHLANDS NJ 201-291-3500	1900

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 T O T A L S FOR METERING-WATER -  
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T O T A L S FOR FIXED INSTRUMENTATION  
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 CATEGORY: HEAT EXCHANGERS  
 FUNCTION: AIR TO AIR  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
COUNTERFLOW	E-2-AIRE 70/85	SIZES 900-2200 SCFM 70-85% EFFECTIVENESS PRICE FOR 1275 SCFM BASE UNIT	DES CHAMPS LABORATORIES PO BOX 440 EAST HANOVER NJ 07936 201-884-1460	3400
COUNTERFLOW	PK/PZ SERIES	SIZES 4000-10000 NOM SCFM INCLUDES BLOWERS PRICE FOR 6000 SCFM BASE UNIT CONTROLS/OPTIONS ADDITIONAL	DES CHAMPS LABORATORIES PO BOX 440 EAST HANOVER NJ 07936 201-884-1460	18300
COUNTERFLOW	PV SERIES	SIZES 2000-32000 NOM SCFM INCLUDES BLOWERS PRICE FOR 16000 SCFM BASE UNIT CONTROLS/OPTIONS ADDITIONAL	DES CHAMPS LABORATORIES PO BOX 440 EAST HANOVER NJ 07936 201-884-1460	33500
COUNTERFLOW PLATE	SERIES 75	SIZES 4000-10000 NOM SCFM 68% EFFICIENCY PRICE FOR 8000 SCFM ALUMINUM/STEEL CONSTRUCTION	DES CHAMPS LABORATORIES PO BOX 440 EAST HANOVER NJ 07936 201-884-1460	7800

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 T O T A L S FOR AIR TO AIR  
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 CATEGORY: HEAT EXCHANGERS  
 FUNCTION: LIQUID TO LIQUID  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
PLATE	GPX	FLOW RATES DEPEND ON APPLICATION; PRICE TYPICAL FOR SMALL, MED USE PRICE RANGE \$100-150,000	BELL AND GOSSETT 4711 GOLF ROAD SKOKIE IL 60076 800-243-8160	7500
PLATE	PLT	SIZE ON APPLICATION FLOW RATES DEPEND ON APPLIC PRICE TYP FOR SMALL, MED USES PRICE RANGE \$500 - \$750000	MUELLER COMPANY PO BOX 828 SPRINGFIELD MI 65801 417-831-3000	7500
PLATE	SUPERCHANGER	SIZE ON APPLICATION FLOW RATES DEPEND ON APPLIC PRICE TYP FOR SMALL, MED USES PRICE RANGE \$1000 - \$100000	TRANTER 705 EAST HAZEL ST LANSING MI 48909 817-723-7125	7500
SHELL AND TUBE	HEAT RECLAIMER	SIZE ON APPLICATION PRICE FOR WASTE WATER HEAT RECOVERY FLOW RATE AT 20 GPM REMOVABLE SHELL FOR CLEANING	AERCO INTERNATIONAL INC 159 PARIS AVE NORTHVALE NJ 07647 201-768-2400	30000
SHELL AND TUBE	PARCA,SU,WU,CHX	SIZE ON APPLICATION PRICE TYP FOR SMALL, MED USE PRICE RANGE \$100-150,000	BELL AND GOSSETT 4711 GOLF ROAD SKOKIE IL 60076 800-243-8160	7500

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 - - - T O T A L S FOR LIQUID TO LIQUID - - -  
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 CATEGORY: HEAT EXCHANGERS  
 FUNCTION: STEAM GENERATORS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
WASTE HEAT	E SERIES	SIZES UP TO 500 HP; PRICE FOR 90-125 HP/125 PSI 1800 DEG F 7500 CFM AIR FLOW PRICE DEPENDS ON APPLICATION	CLAYTON INDUSTRIES 4213 N TEMPLE CITY BLVD EL MONTE CA 91734 818-443-9381	35000

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 T O T A L S FOR STEAM GENERATORS  
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CATEGORY: HEAT EXCHANGERS  
FUNCTION: WATER HEATING  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
DIRECT CONTACT	TE-100	SIZE RANGE 0.75 - 16 MMBTU/HR DIREST FIRED-NAT GAS/PROPANE GUARANTEE 97% EFFICIENCY SIZE FOR 2 MMBTU/HR UNIT	KEMCO SYSTEMS 11800 28TH STREET NORTH ST PETERSBERG FL 33702 813-577-8989	22000

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TOTALS FOR WATER HEATING -----  
TOTALS FOR HEAT EXCHANGERS -----  
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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: HIGH TEMP INSULATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
INSULATION-CERAMIC FIBER	CE CER FIB	TEMPERATURE UP TO 1400 F PRICED PER SQ METER	C-E REFRACTORIES PO BOX 828 T VALLEY FORGE PA 19482 215-337-1100	5
INSULATION-CERAMIC FIBER	DURABOARD 3000	TEMPERATURE UP TO 3000 F THICKNESS 1.5" DENSITY 11 LB/CUBIC FT PRICED PER SQ METER	CARBORUNDUM CORP PO BOX 808 NIAGARA FALLS NY 14302 716-337-1100	300
INSULATION-CERAMIC FIBER	DURABOARD HD	TEMPERATURE UP TO 2300 F THICKNESS 1" DENSITY 24 LB/CUBIC FT PRICED PER SQ METER	CARBORUNDUM CORP PO BOX 808 NIAGARA FALLS NY 14302 716-337-1100	50
INSULATION-CERAMIC FIBER	FIBERFRAX	TEMPERATURE UP TO 2300 F THICKNESS 1" DENSITY 8 LB/CUBIC FT PRICED PER SQ METER	CARBORUNDUM CORP PO BOX 808 NIAGARA FALLS NY 14302 716-278-6221	22
INSULATION-CERAMIC FIBER	FIBERFRAX CH	TEMPERATURE UP TO 2600 F THICKNESS 1" DENSITY 8 LB/CUBIC FT PRICED PER SQ METER	CARBORUNDUM CORP PO BOX 808 NIAGARA FALLS NY 14302 716-337-1100	31
INSULATION-CERAMIC FIBER	COTRONIC BLANKET	TEMPERATURE UP TO 1200 C THICKNESS 1" PRICED PER SQ METER	COTRONICS 3379A SHORE PARKWAY BROOKLYN NY 11235 718-646-7996	35
INSULATION-CERAMIC FIBER	CERAFIBER	DENSITY 3-8 LB/CUBIC FOOT TEMP TO 2400 DEG F THICKNESS 0.25 - 2 INCH PRICED PER SQ METER	MANVILLE PO BOX 5108 DENVER CO 80217 800-243-8160	30

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 T O T A L S FOR HIGH TEMP INSULATION  
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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: PIPING INSULATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
INSULATION-FIBERGLAS	FIBERFLEX FIBERG	THICKNESS 6"; R-VALUE 19 PRICED PER SQ METER	FIBERFLEX 574-T FERRY ST NEWARK NJ 07105 800-526-8047	3
INSULATION-FIBERGLAS	MICROLOK 650	SUPPLIED IN 1 METER LENGTHS K = 0.23 BTU/SQFT/DEGF/HR TEMP TO 343 C; UP TO 30" THICK PRICED PER LINEAR METER	MANVILLE PO BOX 5100 DENVER CO 80217 800-243-8160	4
INSULATION-FIBERGLAS	700 SERIES	THICKNESS 2.5"; R-VALUE 10.3 TEMPERATURE UP TO 200 F PRICED PER SQ METER	OWENS CORNING FIBERGLAS FIBERGLAS TOWER TOLEDO OH 43659 419-248-8000	3
INSULATION-MINERAL WOOL	JANOS MIN WOOL	THICKNESS 2"; R-VALUE 8.25 TEMPERATURE TO 1200 F PRICED PER SQ METER	JANOS INDUSTRIAL 86 W COMMERCIAL AVE MOONACHIE NJ 07074 201-933-5854	5
INSULATION-MINERAL WOOL	USG MIN WOOL	THICKNESS 2" PRICED PER SQ METER	UNITED STATES GYPSUM 101 S WACKER DRIVE CHICAGO IL 60606 312-321-4345	5

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 T O T A L S FOR PIPING INSULATION  
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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: STEAM SYSTEMS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CONTROL VALVES	ST 2"	TEMP RANGE 35-240 F STEEL CONSTRUCTION	OGONTZ PO BOX 479 WILLOW GROVE PA 19098 215-657-4470	1100

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 T O T A L S FOR STEAM SYSTEMS  
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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: STEAM TRAPS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
BIMETALLIC/THERMOSTATIC	BK	TO 3120 PSI TO 15000 LB/HR PRICED FOR LARGEST SIZE	GESTRA 215 UNION ST HACKENSACK NJ 07601	1400
DISC	CD40/60 DISC	10-600 PSI SATURATED TO 2850 LB/HR PRICE FOR LARGEST CAPACITY	ARMSTRONG MACHINE WORKS 816 MAPLE ST THREE RIVERS MI 49093 616-273-1415	200
DISC	SERIES 650	TO 600 PSI/750 F TO 2850 LB/HR PRICED FOR LARGEST SIZE	HOFFMAN SPECIALTY-ITT 1700 W 10TH ST INDIANAPOLIS IN 46222 317-632-7546	130
FLOAT/THERMOSTATIC	SERIES FT	TO 150 PSI TO 12095 LB/HR PRICED FOR LARGEST SIZE	CLARK-RELIANCE 15901 INDUSTRIAL PKWY CLEVELAND OH 44135 216-267-6868	800
FLOAT/THERMOSTATIC	SERIES 50	TO 125 PSI/750 F TO 12095 LB/HR PRICED FOR LARGEST SIZE	HOFFMAN SPECIALTY-ITT 1700 W 10TH ST INDIANAPOLIS IN 46222 317-632-7546	250
FLOAT/THERMOSTATIC	FT-125	TO 125 PSI/353 F TO 6600 LB/HR PRICED FOR LARGEST SIZE	SPIRAX SARCO 1951 26 ST ALLENTOWN PA 18105 215-797-5830	320
FLOATING DISC	SERIES FD/SFD	5 TO 600 PSI/750 F TO 5600 LB/HR PRICED FOR LARGEST SIZE	CLARK-RELIANCE 15901 INDUSTRIAL PKWY CLEVELAND OH 44135 216-267-6868	160
INVERTED BUCKET	U1010	0.5" INVERTED BUCKET TRAP STAINLESS STEEL 680 LB/HR CAPACITY AT 125 PSIG OPERATES TO 450 PSIG	ARMSTRONG MACHINE WORKS 8091 MAPLE ST THREE RIVERS MI 49093 616-273-1415	80
INVERTED BUCKET	INV BUCKET	TO 1000 PSI/850 F TO 31000 LB/HR PRICED FOR LARGEST SIZE	CLARK-RELIANCE 15901 INDUSTRIAL PKWY CLEVELAND OH 44135	1300
INVERTED BUCKET	SERIES 600	TO 250 PSI/406 F TO 20000 LB/HR PRICED FOR LARGEST SIZE	HOFFMAN SPECIALTY-ITT 1700 W 10TH ST INDIANAPOLIS IN 46222 317-632-7546	410

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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: STEAM TRAPS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
INVERTED BUCKET	UNIBODY 790/795	TO 400 PSI/750 F TO 800 LB/HR PRICED FOR LARGEST SIZE	YARWAY NORRISTOWN ROAD BLUE BELL PA 19422	190
ORIFICE	STEAMGUARD	TO 2000 PSI/1125 F TO 100000 LB/HR PRICED FOR LARGEST SIZE	ENGINEERING RESOURCES 8550 W BRYN MAWR AVE CHICAGO IL 60631	410
TEMPERATURE ACTUATED	CTV 1/2"	TEMP RANGE 60-240 F TUBULAR STAINLESS STEEL	OGONTZ PO BOX 479 WILLOW GROVE PA 19090 215-657-4470	100
THERMODYNAMIC	TD52L	TO 600 PSI/800 F TO 1250 LB/HR PRICED FOR LARGEST SIZE	SPIRAX SARCO 1951 26 ST ALLENTOWN PA 18105 215-797-5830	120
THERMODYNAMIC DISC	UNIBODY 710/720	TO 600 PSI/750 F TO 1400 LB/HR PRICED FOR LARGEST SIZE	YARWAY NORRISTOWN ROAD BLUE BELL PA 19422	215
THERMOSTATIC	SERIES TTF	UP TO 300 PSI SATURATED TO 15900 LB/HR PRICE FOR LARGEST CAPACITY	ARMSTRONG MACHINE WORKS 816 MAPLE ST THREE RIVERS MI 49093 616-273-1415	95
THERMOSTATIC	SERIES 8/9/17	TO 125 PSI/353 F TO 1250 LB/HR PRICED FOR LARGEST SIZE	HOFFMAN SPECIALTY-ITT 1700 W 10TH ST INDIANAPOLIS IN 46222 317-632-7546	110
THERMOSTATIC	T300	TO 300 PSI/421 F TO 580 LB/HR PRICED FOR LARGEST SIZE	SPIRAX SARCO 1951 26 ST ALLENTOWN PA 18105 215-797-5830	160
THERMOSTATIC	SERIES 151	TO 300 PSI/500 F TO 12000 LB/HR PRICED FOR LARGEST SIZE	YARWAY NORRISTOWN ROAD BLUE BELL PA 19422	300
THERMOSTATIC/BIMETALLIC	DM25	UP TO 320 PSI/750 F TO 2800 LB/HR COLD STARTUP TO 110 LB/HR HOT RUNNING LOAD	BESTOBELL 4545 PINE TIMBERS HOUSTON TX 77041	100

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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: STEAM TRAPS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
THERMOSTATIC/BIMETALLIC	SERIES 46	TO 200 PSI/750 F TO 400 LB/HR PRICED FOR LARGEST SIZE	PROCESS TECHNOLOGY OF PA 445 BETHLEHEM PIKE COLMAR PA 18915	50
THERMOSTATIC/MEMBRANE	MK	TO 465 PSI TO 400000 LB/HR PRICED FOR LARGEST SIZE	GESTRA 215 UNION ST HACKENSACK NJ 07601	1500

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 T O T A L S FOR STEAM TRAPS  
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 CATEGORY: HEATED MEDIUM DIST SYS  
 FUNCTION: SURFACE INSULATION  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
INSULATION-FIBERGLAS	GP BLANKET	THICKNESS 6"; R-VALUE 19 TEMPERATURE LIMIT 200F PRICED PER SQ METER	GEORGIA PACIFIC 133 PEACHTREE ST ATLANTA GA 30303 800-243-8160	3
INSULATION-MINERAL WOOL	SHEET	THICKNESS 2" TEMPERATURE UP TO 1400 F PRICED PER SQ METER	MACO INC 2924 BELLS ROAD RICHMOND VA 23224 804-222-8440	5

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 T O T A L S FOR SURFACE INSULATION - - - - -

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 T O T A L S FOR HEATED MEDIUM DIST SYS - - - - -  
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 CATEGORY: HEATING EQUIPMENT  
 FUNCTION: GAS BURNERS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
BLOWER MIXER	PREMIX SERIES	53 SIZES; AIR/GAS RATIO CONTROL AT ALL FIRING RATES; PADDLE WHEEL IMPELLER PRICE FOR MID-SIZE APPLICATION	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	940
NOZZLES	SERIES SN	SIZES UP TO 6" ELIMINATES SECONDARY AIR CAP TO 10 MBTU/HR AT 20 INWC PRICE FOR 3" W/SEAL, SUPPORT	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	504
NOZZLES	STICKTITE SERIES	SIZES UP TO 8" CAP TO 20 MBTU/HR AT 20 INWC PRICE FOR 3" HIGH TEMPERATURE	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	190
PREMIX LINE BURNER	LINOFLAME SERIES	7:1 TURNDOWN RATIO CAPACITY TO 0.5 MMBTU/HR/FT PRICE FOR 12" STRAIGHT, CAST IRON RAIL	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	60
RADIANT HEATING	INFRAWAVE SERIES	10:1 TURNDOWN RATIO CAPACITY TO 132 MBTU/HR/FT PRICE FOR 12" STRAIGHT PLAIN, WITH PILOT, IGNITOR	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	200

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 T O T A L S FOR GAS BURNERS  
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 CATEGORY: HEATING EQUIPMENT  
 FUNCTION: GAS/OIL BURNERS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
NOZZLE MIX DESIGN	MULTIFIRE SERIES	SIZES TO 25 MMBTU/HR; WIDE TURNDOWN RATIO; ON-RATIO OR EXCESS AIR FIRING; PRICE FOR 7.5 MMBTU/HR W/SEAL, SUPPORT	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	2750
NOZZLE MIX DESIGN	SERIES 500 EBSP	BURNS NAT GAS, PROPANE, LIGHT FUEL OIL; EXTERNAL AIR SOURCE CAP TO 11.7 MMBTU/HR PRICE FOR 5.3 MMBTU/HR	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	2700
NOZZLE MIX DESIGN	SERIES 500 SP	BURNS NAT GAS, PROPANE, LIGHT FUEL OIL; CAP TO 5 MMBTU/HR INTEGRAL BLOWER PRICE FOR 2.5 MMBTU/HR	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	3050
RADIAL FLAME BURNERS	VORTIFLARE	SIZES TO 3 MMBTU/HR 12:1 TURNDOWN RATIO PRICE FOR 840 MBTU/HR WITH SEAL/SUPPORT	MAXON CORPORATION 201 E 18 ST MUNCIE IN 47302 317-284-3304	1400

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 T O T A L S F O R G A S / O I L B U R N E R S  
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 CATEGORY: HEATING EQUIPMENT  
 FUNCTION: INCINERATOR BURNERS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
GAS FIRED	J-121-3	CAPACITY 1.2 MMBTU/HR SPARK IGNITION	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	1060
GAS FIRED	J-81 DS	CAPACITY TO 800 MBTU/HR SPARK IGNITION	MIDCO INTERNATIONAL 2717 N GREENVIEW AVE CHICAGO IL 60614 312-549-3900	480

----- T O T A L S FOR INCINERATOR BURNERS -----  
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 CATEGORY: HEATING EQUIPMENT  
 FUNCTION: OVENS-ELECTRIC  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CABINET	530	TEMPERATURE TO 260C 10 CUBIC FEET WORK VOLUME CONSUMES 1600 W	GRIEVE CORPORATION 500 HART ROAD ROUND LAKE IL 60073 312-546-8225	3400
LABORATORY	LW201C	TEMPERATURE TO 200C 2 CUBIC FEET INSIDE VOLUME CONSUMES 1600 W	GRIEVE CORPORATION 500 HART ROAD ROUND LAKE IL 60073 312-546-8225	330
VACUUM	VL300	TEMPERATURE UP TO 300 C 1.7 CUBIC FEET WORK VOLUME CONSUMES 1600 W VACUUM TO 30 INHG	GRIEVE CORPORATION 500 HART ROAD ROUND LAKE IL 60073 312-546-8225	3100

----- T O T A L S FOR OVENS-ELECTRIC -----  
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 CATEGORY: HEATING EQUIPMENT  
 FUNCTION: OVENS-GAS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CABINET	VB-1250	TEMPERATURE TO 700 C 30 CUBIC FEET OF WORK SPACE CAPACITY 200000 BTU/HR ALSO AVAIL FOR ELECTRIC HEAT	GRIEVE CORPORATION 500 HART ROAD ROUND LAKE IL 60073 312-546-8225	15300
WALK-IN	B4H-750	TEMPERATURE TO 400 C 360 CUBIC FEET OF WORK SPACE CAPACITY 1 MMBTU/HR ALSO AVAIL FOR ELECTRIC HEAT	GRIEVE CORPORATION 500 HART ROAD ROUND LAKE IL 60073 312-546-8225	24500

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 T O T A L S FOR OVENS-GAS -----  
 T O T A L S FOR HEATING EQUIPMENT -----  
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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: FLUORESCENT BALLASTS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTRONIC	ELECTROBALLAST	120 V SOLID STATE	CONTROL TECHNOLOGY LIGHT 3000 HEMPSTEAD TURNPIKE LEVITOWN NY 11576 516-579-7370	30
ELECTRONIC	SSB 1-277-2/40	USES 57 W TO OPERATE 2 X 34 W FIXTURE 277 OR 120 VOLT MODELS	ELECTRONIC BALLAST TECH 20695 S WESTERN AVE TORRANCE CA 90501	35
ELECTRONIC	2120-48 AD	120 V 0.4 AMPS LINE CURRENT	ELECTRONIC TRANSFORMER 575 ASHLEY PLACE GRANTS PASS OR 97526 503-476-6900	30
ELECTRONIC	OPTIMISER	AVAILABLE FOR 120 OR 277 V	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	35
ELECTRONIC	WNB-234	VOLTAGE 120 OR 277 V USE WITH 3' OR 4' TUBES	THOMAS INDUSTRIES PO BOX 100 SPARTA TN 38583 615-738-2241	25
STANDARD	MARK III	VOLTAGE 120 OR 277 V	ADVANCE TRANSFORMER 2950 N WESTERN AVE CHICAGO IL 60618 312-267-8100	25
STANDARD	412 L SLH TC-P	VOLTAGE 120 V	UNIVERSAL MFG CO 200 ROBIN ROAD PARAMUS NJ 07652 201-967-7600	21

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 T O T A L S FOR FLUORESCENT BALLASTS  
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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: LIGHTING CONTROL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CAPACITOR CONTROL	BP-450 NO-WATT	REDUCES LIGHTING POWER FOR FLUORESCENT TUBES ONE REQ'D PER 2 TUBE BALLAST PRICED IN QUANTITIES OF 100	RENTEC SYSTEMS 1341 W 130 ST GARDENA CA 90247	11
INFRARED SENSOR	IR 100	TURNS OFF LIGHTS AFTER PRESET INTERVAL WHEN NO OCCUPANCY DETECTED	BUILDING MONITORING SYST 942 EIGHTH AVE NEW YORK NY 10019	150
INFRARED SENSOR	INFRACOM	CONTROLS UP TO 2500 W FLUOR, 5000 W INCAND; 2500 SQ FT/SENS 4 SENSOR/UNIT; PRICE FOR BASE UNIT; ADD \$80/SENSOR	TISHMAN RESEARCH 666 FIFTH AVE NEW YORK NY 10103	135
PHOTOCELL	2104 PHOTOCELL	ADJUSTABLE SENSITIVITY - 2-50 FOOTCANDLES OPERATING TEMP -60 TO 150 F	TORK 1 GROVE STREET MOUNT VERNON NY 10550 914-664-3542	25
ULTRASONIC SENSOR	01-071 SENSOR	POWER REQ'D 24 VAC +/- 10% RANGE CEILING MOUNT 8 FT HIGH- 14' CIRCLE; 120 OR 277V WALL MOUNT RANGE 200 SQ FT	NOVITAS 1523 26 ST SANTA MONICA CA 90404 213-452-7890	140
ULTRASONIC SENSOR	C-600	CEILING MOUNT RANGE 600 SQ FT 120 OR 277 V	UNIVERSAL ENERGY CONTROL 2555 NICHOLSON ST SAN LEANDRO CA 94577 415-352-1802	78

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 T O T A L S FOR LIGHTING CONTROL  
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ULTRASONIC SENSOR	TRANSMITTER	CEILING MOUNT	KEI, INC 84 MINNESOTA TROY MI 48064 313-583-1173	80
	MASTER RECEIVER	CEILING MOUNT COVERS 600 SQ FT		65
	SLAVE RECEIVER	UP TO 4 SLAVES PER MASTER FOR 3000 SQ FT COVERAGE		40

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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: LIGHTING SOURCES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
HIGH EFF FLUORESCENT	OPTIMA 32	34 WATT PER 4 FOOT TUBE 53 LUMENS/WATT	DURO-TEST 2321 KENNEDY BLVD NORTH BERGEN NJ 07047	12
HIGH EFF FLUORESCENT	OPTIMA 50	34 WATT PER 4 FOOT TUBE 48 LUMENS/WATT	DURO-TEST 2321 KENNEDY BLVD NORTH BERGEN NJ 07047	13
HIGH EFF FLUORESCENT	MOD-U-LINE	HIGH EFFICIENCY U-TUBES 34 WATT PER TUBE 76 LUMENS/WATT	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	9
HIGH EFF FLUORESCENT	WATT MISER II	HIGH EFFICIENCY 4 FOOT TUBES 34 WATT; 71 LUMENS/WATT AVERAGE LIFE 20000 HOURS	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	4
HIGH EFF FLUORESCENT	CURVALUME	HIGH EFFICIENCY U-TUBES 34 WATTS PER TUBE	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	9
HIGH EFF FLUORESCENT	OCTRON	32 WATT PER 4 FOOT TUBE 80 LUMENS/WATT REQUIRES SPECIAL BALLAST	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	3
HIGH EFF FLUORESCENT	SUPERSAVER II	34 WATT PER 4 FOOT TUBE 76 LUMENS/WATT	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	3
HIGH EFF FLUORESCENT	SUPERSAVER III	34 WATT PER 4 FOOT TUBE 76 LUMENS/WATT	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	4
HIGH EFF FLUORESCENT	SUPERSAVER PLUS	32 WATT PER 4 FOOT TUBE 81 LUMENS PER WATT	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	4
HIGH EFF FLUORESCENT	COLOR 84	40 WATTS PER 4 FOOT TUBE 86 LUMENS PER WATT	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZE BLOOMFIELD NJ 07003 609-449-0700	7

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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: LIGHTING SOURCES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
HIGH EFF FLUORESCENT	ECONOWATT	34 WATT PER 4 FOOT TUBE 74 LUMENS PER WATT	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	3
HIGH EFF FLUORESCENT 8'	COOL W WATTS AVER	60 WATTS PER TUBE 72 LUMENS/WATT	DURO-TEST 2321 KENNEDY BLVD NORTH BERGEN NJ 07047	24
HIGH EFF FLUORESCENT 8'	LITE W WATTMISER	60 WATTS PER TUBE 92 LUMENS/WATT	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	6
HIGH EFF FLUORESCENT 8'	SUPERSAVER III-8	60 WATTS PER TUBE 90 LUMENS/WATT	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	7
HIGH EFF FLUORESCENT 8'	COOLWHITE ECONO	60 WATTS PER TUBE 86 LUMENS/WATT	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	6
HIGH EFF INCANDESCENT	MISER/WATT-MISER	CONSUME 15% LESS THAN STANDARD INCANDESCENT BULBS SIZES TO 135 W PRICE FOR 135 W	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	2
HIGH EFF INCANDESCENT	SUPERSAVER XL	CONSUMES 15% LESS ENERGY THAN STANDARD INCANDESCENT BULBS SIZES 34 TO 135 W PRICE FOR 135 W	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	2
HIGH EFF INCANDESCENT	WATT-WATCHER	CONSUMES 12.5% LESS ENERGY THAN STANDARD INCANDESCENTS SIZES 35 TO 135 WATT PRICE FOR 135 W	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	2
HIGH PRESSURE SODIUM	LUCALOX	PRICE VARIES WITH SIZE SIZES 35 TO 1000 W 64 TO 140 LUMENS/WATT PRICE FOR 1000 W	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	125
HIGH PRESSURE SODIUM	LUMALUX	PRICE VARIES WITH SIZE SIZES 35 TO 1000 WATT 61 TO 140 LUMENS/WATT PRICE FOR 1000 W	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	130

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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: LIGHTING SOURCES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
HIGH PRESSURE SODIUM	UNALUX	DIRECT REPLACEMENT FOR MERCURY VAPOR LAMPS SIZES 150 TO 800 W PRICE FOR 360 W	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	55
HIGH PRESSURE SODIUM	CERAMALUX	PRICE VARIES WITH SIZE SIZES 35 TO 1000 W 100 TO 140 LUMENS/WATT PRICE FOR 1000 W	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	135
HIGH PRESSURE SODIUM	HPS VANDALITE	SIZES 50, 70 AND 100 WATT 72 TO 95 LUMENS/WATT INCLUDES FIXTURE AND DIFFUSER PRICE FOR 100 W	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	160
LOW PRESSURE SODIUM	MINISOX 18W	FOR AREAS UP TO 1500 SQ FT INCLUDES FIXTURE AND PHOTOCCELL CONSUMES 18W, LIGHT EQUIVALENT TO 150W INCANDESCENT	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	110
LOW PRESSURE SODIUM	SOX 55W	FOR AREAS UP TO 3000 SQ FT INCLUDES FIXTURE AND PHOTOCCELL CONSUMES 55W, 183 LUMENS/WATT	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	160
MERCURY VAPOR	GE MERC VAPOR	PRICE VARIES WITH SIZE SIZES 40 TO 1000 W 28 TO 63 LUMENS/WATT PRICE FOR 1000 W	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	50
MERCURY VAPOR	GTE MERC VAPOR	PRICE VARIES WITH SIZE SIZES 40 TO 1000 WATT 34 TO 63 LUMENS/WATT PRICE FOR 1000 W	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	135
MERCURY VAPOR	LIFEGUARD	PRICE VARIES WITH SIZE SIZES 40 TO 1000 WATT 40 TO 50 LUMENS/WATT PRICE FOR 1000 W	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	200
METAL HALIDE	MULTI-VAPOR	PRICE VARIES WITH SIZE SIZES 175 TO 1000 WATT 80 TO 115 LUMENS/WATT PRICE FOR 1000 W	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	95
METAL HALIDE	SUPER METALARC	PRICE VARIES WITH SIZE SIZES 175 TO 1000 WATT 80 TO 125 LUMENS/WATT PRICED FOR 1000 W	GTE SYLVANIA 100 ENDICOTT ST DANVERS MA 01923 617-777-1900	110



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 CATEGORY: LIGHTING SYSTEMS  
 FUNCTION: LIGHTING SOURCES  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
METAL HALIDE	LIFEGUARD MH	PRICE VARIES WITH SIZE SIZES 175 TO 1500 WATT 70 TO 90 LUMENS PER WATT PRICE FOR 1500 W	NORTH AMERICAN PHILLIPS 1 WESTINGHOUSE PLAZA BLOOMFIELD NJ 07003 609-448-0700	110
METAL HALIDE	HQI	PRICE VARIES WITH SIZE SIZES 70 TO 3500 W 70 TO 90 LUMENS/WATT PRICE FOR 3500 W	OSRAM SALES PO BOX 7062 NEWBURGH NY 12550	350
SCREW-IN FLUORESCENT	CIRCLE-MISER	DIRECT REPLACEMENT OF 75 W INCANDESCENT BULB; REQUIRES 22 WATTS	GENERAL ELECTRIC NELA PARK CLEVELAND OH 44112 216-266-4256	15
SCREW-IN FLUORESCENT	SL SERIES	DIRECT REPLACEMENT FOR INCAN- DESCENT BULBS; LIFE - 7500 HR REDUCES ENERGY BY 75%	NORTH AMERICAN PHILLIPS BANK STREET HIGHTSTOWN NJ 08520 609-448-4000	20

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 T O T A L S FOR LIGHTING SOURCES -----  
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T O T A L S FOR LIGHTING SYSTEMS -----  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-ELECTRICAL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CLAMPON AMMETER	HE 94	RANGE 0 TO 100 A DIGITAL DISPLAY AC OR DC OPERATION	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	625
CLAMPON AMP/VOLT/OHM	278000	RANGES 0-999 .1-99.1 V/A/O ACCURACY +/- 1% FS +/- 1 DIGIT	BIDDLE INSTRUMENTS 510 TOWNSHIP LINE ROAD BLUE BELL PA 19422 215-646-9200	200
CLAMPON AMP/VOLT/OHM	1000	VOLTAGE RANGE 0.1 - 999 V RESOLUTION 0.1 OR 1 V CURRENT RANGE 0.1 - 999 A RESISTANCE RANGE 0.1 - 500 OHM	TIF INSTRUMENTS 3661 NW 74 ST MIAMI FL 33147 305-696-7100	210
CLAMPON AMP/VOLT/OHM	243302	RANGES 20-200 KW; 20-200 A; 200-600V ACCURACY +/- 1% OF READING + 0.5% OF RANGE	YOKOGAWA CORP OF AMERICA 2 DART ROAD SHENANDOAH GA 30265 404-253-7000	1030
CLAMPON AMP/VOLTMETER	278002	OPERATING RANGE 1 - 999 V 1 - 999 A ACCURACY +/- 2% TEMPERATURE +/- 20 C	BIDDLE INSTRUMENTS 510 TOWNSHIP LINE ROAD BLUE BELL PA 19422 215-646-9200	160
CLAMPON AMP/VOLTMETER	ID 1000Z	OPERATING RANGE 0-1000 A 0- 600 V ACCURACY +/- 1.5% FS +/- 1 DIGIT TEMPERATURE +/- 20 C	EPIC INC 150 NASSAU ST NEW YORK NY 10038 212-349-2470	320
CLAMPON WATTMETER	KW480Z	ACCURACY +/- 1.5% +/- 1 DIGIT RANGE 600 V, 1200 A, 50/60 HZ TEMPERATURE +/- 20 C	EPIC INC 150 NASSAU ST NEW YORK NY 10038 212-349-2470	500
CLAMPON WATTMETER	2000A	HIGH/LOW RANGE RANGE 0.01 - 199.9 KW ACCURACY +/- 2% +/- 1 DIGIT	TIF INSTRUMENTS 3661 NW 74 ST MIAMI FL 33147 305-696-7100	440
MULTIMETER	MODEL 463	DIGITAL DISPLAY DISPLAYS VOLTAGE, AMPERAGE RESISTANCE	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	210
POWER FACTOR METER	139.100	RANGE 0 LEAD TO 1 TU 0 LAG INPUT 4-200 A; 60-2000 A VOLTAGE 0-199.9 V; 0-600 V ACCURACY +/- 3%	AENC CORP 99 CHAUNCEY ST BOSTON MA 02111 617-451-0227	800

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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-ELECTRICAL  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
POWER FACTOR METER	263	DIGITAL DISPLAY ACCURACY +/- 1% OF READING +/- 3 DIGITS	CLARKE-HESS 17 W 17 ST NEW YORK NY 10011 212-255-2940	900
POWER FACTOR METER	COS 051Z	RANGE TO 500V, 1200 A 50/60 HZ ACCURACY +/- 2.5% +/- 1 DIGIT AMBIENT TEMP + 20 C RANGE 0 LEAD TO 1 TO 0 LAG	EPIC INC 150 NASSAU ST NEW YORK NY 10038 212-349-2470	485
POWER FACTOR METER	PF METER	RANGE 600 V, 500 A, 50/60 HZ ACCURACY +/- 3% F.S. AMBIENT TEMP 0-40 C	TIF INSTRUMENTS 3661 NW 74 ST MIAMI FL 33147 305-696-7100	330

--- T O T A L S FOR MEASUREMENT-ELECTRICAL ---  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-FLOW  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ROTAMETER	BROOKS ROTAMETER	LIQUID/GAS APPLICATION	BROOKS INSTRUMENT DIV 407 W VINE ST HATFIELD PA 19440 215-362-3500	700
ROTAMETER	10A2227	METAL TUBE, STAINLESS STEEL LIQUID FLOW UP TO 380L/HR PRESSURE TO 1500 PSIG	FISCHER AND PORTER 125 E COUNTY LINE ROAD WARMINGSTER PA 18974 215-674-6000	450
ROTAMETER	M2000	LIQUID FLOW UP TO 20000 L/HR OTHER INSTRUMENTS AVAILABLE FOR LOWER FLOW	FLUID SERVICES PO BOX 898 HIGHLAND PARK IL 60035 312-433-7010	750
ROTAMETER	FL1300 SERIES	SIZES UP TO 19 GAL/HR RATED TO 200 PSIG/250 DEG F ACCURACY +/- 10% FS	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	390
ROTAMETER	FL1600 SERIES	SIZES UP TO 6.3 GAL/MIN ACCURACY +/- 2% FS	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	500
ROTAMETER	ROTAMETER	LIQUID 5 - 5000 GAL/HR GLASS, PLASTIC, METAL CONSTR PRICE DEPENDS ON APPLICATION	UNIVERSAL FLOW MONITORS 1751E NINE MILE ROAD HAZEL PARK MI 48030 313-398-3704	1000
ROTAMETER	WAUKEE ROTAMETER	LIQUID/GAS APPLICATION ALUMINUM CONSTRUCTION	WAUKEE ENGINEERING 5641 W FLORIST AVE MILWAUKEE WI 53210 414-462-8200	750
ULTRASONIC	FD603	SWITCHABLE RANGES TO 50 FT/SEC LOW FLOW TO 0.12 FT/SEC FOR SLURRIES AND CLEAN LIQUIDS	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	2300

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 T O T A L S FOR MEASUREMENT-FLOW  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-GAS ANALYSIS  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
CHEMICAL	10/5020	MEASURES CO2, O2 RANGE CO2 0-20%, O2 0-20% TEMPERATURE +/- 30 ACCURACY +/- 0.5%	BACHARACH INSTRUMENTS 301 ALPHA DRIVE PITTSBURGH PA 15238 412-963-2000	360
CHEMICAL	1200-E	MEASURES CO2 RANGE 0 -16% ACCURACY +/- 0.5% TEMPERATURE +/- 30	DWYER INSTRUMENTS PO BOX 373 T MICHIGAN CITY IN 46360 219-872-9141	220
ELECTROCHEMICAL	200	MEASURES CO2, CO, O2	BACHARACH INSTRUMENTS 301 ALPHA DRIVE PITTSBURGH PA 15238 412-963-2000	1800
ELECTROCHEMICAL	POCKET 50	MEASURES EFFICIENCY, NET STACK TEMPERATURE, O2, CO2 ACCURACY EFF +/-1.5%, O2 +/- 0.3%; OIL/GAS FIRING ONLY	ENERGY EFFICIENCY SYSTEM 1211 STEWART AVE BETHPAGE NY 11714 516-938-6600	1100
ELECTROCHEMICAL	KM9000	MEASURES O2, CO2, NET STACK T ACCURACY -0.1% - 0.2% O2 RANGE 0 - 21 %	KANE-MAY 265 HATHAWAY DRIVE STRATFORD CT 06497 203-378-2772	750
ELECTROCHEMICAL	FUEL EFF MONITOR	MEASURES EFFICIENCY, NET STACK TEMPERATURE, O2 ACCURACY O2: +/- .25% OF READ TEMP: +/- 1% READ +/- 4 DEG C	NEOTRONICS PO BOX 370 GAINESVILLE GA 30503 404-535-0600	1500
ELECTROCHEMICAL	PCO 960	MEASURES EFFICIENCY, TEMP, CO, O2. ACCURACY: O2 +/- .25% READ; CO +/- 2.5% READ; TEMP +/- 1% READ +/- 4C	NEOTRONICS PO BOX 370 GAINESVILLE GA 30503 404-535-0600	2600
ELECTROCHEMICAL	PCO 961	MEASURES EFFICIENCY, TEMP, CO, O2. ACCURACY: O2 +/- .25% READ; CO +/- 2.5% READ; TEMP +/- 1% READ +/- 4C	NEOTRONICS PO BOX 370 GAINESVILLE GA 30503 404-535-0600	3200
ELECTROCHEMICAL	P24	RANGE 0-20% CO2, 0-25% O2 TEMP 0-1000 F FUELS GAS, OIL, SOLID FUEL	THERMCO INSTRUMENT PO BOX 309 T LA PORTE IN 46350 219-362-6250	1550

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CATEGORY: PORTABLE INSTRUMENTATION  
FUNCTION: MEASUREMENT-GAS FLOW  
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TYPE                    MODEL NUMBER            OPERATING CHARACTERISTICS            SUPPLIER            PRICE US \$  
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T O T A L S FOR MEASUREMENT-GAS ANALYSIS -  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-GAS FLOW  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ANEMOMETER	SERIES 480	RANGE 0 - 6000 FPM ACCURACY HI RANGE +/- 3%+1%FS ACCURACY LO RANGE +/- 3%+2%FS RESP TIME 5 MILLISEC	KURZ INSTRUMENTS PO BOX 849 CARMEL VALLEY CA 93924 800-424-7356	425
ANEMOMETER-VANE	210	200-10000 FT/MIN RANGE TEMPERATURES UP TO 250 F	KERNCO INSTRUMENTS 422 KENAZO AVE EL PASO TX 915-852-3375	390
PITOT	SERIES 6000P	RANGES 0-300;0-1250;0-2500; 0-5000;0-10000 FPM; ACCURACY +/- 2% F.S. FPM +/-5% PRESSURE; PRESSURE 0-10 INWG	ALHOR INSTRUMENT CO 7303 N CALDWELL AVE NILES IL 312-647-7866	800
PITOT TUBE AND MANOMETER	PITOT	PRESSURE 0-10 IN W.G. RANGE 400-12000 FPM TEMPERATURE LIMIT 1500 DEG F ACCURACY +/- 2% F.S.	DWYER INSTRUMENTS PO BOX 373-T MICHIGAN CITY IN 46360 219-872-9141	320

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 T O T A L S FOR MEASUREMENT-GAS FLOW  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-HUMIDITY  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ASPIRATED PSYCHROMETER	PSYCHRO	WEIGHT 2.5 LB RESP TIME 1.5 - 2 MIN TEMP RANGE 0 - 120 DEG F ACCURACY +/- 0.3 DEG F	ENVIRONMENTAL TECTONICS SOUTHAMPTON PA 18968	120
ASPIRATED PSYCHROMETER	23015	RANGE -10 - 40 C ACCURACY +/- 1 DIVISION RESPONSE TIME 1.5 - 2 MINUTES MEASURES DRY, WET BULB	H-B INSTRUMENT CO 4303 N AMERICAN ST PHILADELPHIA PA 19140 215-329-6300	130
ASPIRATED PSYCHROMETER	PSYCHROMETER	HUMIDITY RANGE 10-95% TEMP RANGE -10 TO 110 DEG F ACCURACY +/- 0.3 DEG F WEIGHT 12 OZ	VISTA SCIENTIFIC 85 INDUSTRIAL DRIVE IVYLAND PA 18974 215-322-2255	140
ELECTRONIC PSYCHROMETER	6400	REL HUM 5 - 98% ACCURACY +/- 2% +/- 1 DIGIT RESOLUTION 0.1% TEMPERATURE -199.9 - 199.9 F	TESTOTERM INC PO BOX 468 MOUNT FREEDOM NJ 07970 201-989-8869	800

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 T O T A L S FOR MEASUREMENT-HUMIDITY  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-LIGHTING  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
LIGHTMETER	PD 94	RANGE 0 - 3000 LUX ACCURACY 3% OF READING + 0.5% F.S.	AEMC CORP 99 CHAUNCEY ST BOSTON MA 02111 617-451-0227	495
LIGHTMETER	408-2	RANGE 0 - 500 LUX ACCURACY +/- 5%	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	350

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 T O T A L S FOR MEASUREMENT-LIGHTING  
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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-PRESSURE  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTRONIC MANOMETER	EDM-1	DIGITAL DISPLAY 4 RANGES UP TO 20 IN H2O IMPERIAL/S.I. DISPLAY	NEOTRONICS PO BOX 370 GAINESVILLE GA 30503 404-535-0600	1350
ELECTRONIC MANOMETER	EPM MODEL 201	DIGITAL DISPLAY SINGLE RANGE +/- 20 PSI	NEOTRONICS PO BOX 370 GAINESVILLE GA 30503 404-535-0600	450
U-TUBE MANOMETER	1211-30	RANGE -15/0/15 INCHES WATER FLEXTUBE MANOMETER	DWYER INSTRUMENTS PO BOX 373-T MICHIGAN CITY IN 46360 219-872-9141	30
U-TUBE MANOMETER	1211-60	RANGE -30/0/30 INCHES WATER FLEXTUBE MANOMETER	DWYER INSTRUMENTS PO BOX 373-T MICHIGAN CITY IN 46360 219-872-9141	35

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 T O T A L S FOR MEASUREMENT-PRESSURE  
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CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-TEMPERATURE

TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ANALOG ELECTRONIC	385-3L	RANGE -50 TO 70 F THERMISTOR TYPE ACCURACY +/- 1F AT CENTER	SIMPSON ELECTRIC 853 DUNDEE AVE ELGIN IL 60120 312-697-2260	110
BIMETALLIC	134	TEMP RANGE -40-500 DEG C ACCURACY +/- 2 DIVISIONS RESPONSE TIME 1-2 MINUTES 8 IN STEM, 1.5 IN DIAL	WEISS INSTRUMENTS 85 BELL ST WEST BABYLON NY 11704 516-752-1655	35
DIGITAL ELECTRONIC	450	TYPE K THERMOCOUPLE ACCURACY +/- 0.25 C +/- 1 % RANGE -139.8 - 203.7 C	DORIC SCIENTIFIC 3883-T RUFFIN ROAD SAN DIEGO CA 92183 800-854-2700	380
DIGITAL ELECTRONIC	3000 SERIES	FOR TYPE K THERMOCOUPLE ACCURACY +/- 0.5 DEG F RANGE -40 - 2200 F SWITCHABLE DEG F/C	H-B INSTRUMENT CO 4303 N AMERICAN ST PHILADELPHIA PA 19140 215-329-6300	270
DIGITAL ELECTRONIC	382	TYPE K THERMOCOUPLE ACCURACY +/- 2.5% + 1 C RANGE -440 - 2000 F SWITCHABLE F/C	MORAL INC 23602 MERCANTILE DRIVE CLEVELAND OH 44122 216-231-2345	230
DIGITAL ELECTRONIC	TK2-K-450AKT	TYPE K THERMOCOUPLE ACCURACY +/- 0.8 C +/- 1% READ RANGE -189 - 1372 C PRICE INCLUDES THERMOCOUPLE	OMEGA ENGINEERING PO BOX 4047 STAMFORD CT 06907 203-359-1660	590
DIGITAL ELECTRONIC	DIPSTICK	RANGE 0 TO 2000 F DIRECT IMMERSION OF THERMO- COUPLE INTO HOT FLUID 72" PROBE TYPE K THERMOCOUPLE	WAHL INSTRUMENTS 5750 HANNUM AVE CULVER CITY CA 90231 213-641-6931	700
MERCURY IN GLASS	20321	RANGE 20 - 500 F ACCURACY +/- 2 DIVISIONS RESPONSE TIME 2 MINUTES	H-B INSTRUMENT CO 4303 N AMERICAN ST PHILADELPHIA PA 19140 215-329-6300	10
PYROMETER	80 HT-3CPH	TEMP RANGE 1100 - 1750 DEG C SPECTRAL RESP 0.70 - 1.06 WORKING DIST 0 - 12 METERS ACCURACY +/- 1%	MIKROM INSTRUMENT PO BOX 211 RIDGWOOD NJ 07451 201-891-7330	1800
PYROMETER	R2HT	RANGE 400 - 3000 DEG C ACCURACY +/- 1% OF READING EMISSIVITY 0.1 - 1.0 TARGET RANGE 10 METERS	RAYTEK 1201 SHAFFER ROAD SANTA CRUZ CA 95060 408-458-1110	2000

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 CATEGORY: PORTABLE INSTRUMENTATION  
 FUNCTION: MEASUREMENT-TEMPERATURE  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
PYROMETER	8500	TEMP RANGE 0-700 DEG C ACCURACY +/- 1 DEG C EMISSIVITY 0.4 - 1.0 RESOLUTION 1 DEG C	TESTOTERM INC PO BOX 468 MOUNT FREEDOM NJ 07970 201-989-8869	1250
PYROMETER	DHS-19XT	TEMP RANGE 600 TO 1760 C ACCURACY +/- 0.5% FS EMISSIVITY RANGE 0.2 - 1.0 MEASURES THROUGH FLAME	WAHL INTERNATIONAL 5750 HANNUM AVENUE CULVER CITY CA 90230 213-641-6931	2300
THERMOCOUPLE	3105K	TYPE K THERMOCOUPLE  RANGE -40 - 2200 F	H-B INSTRUMENT CO 4303 N AMERICAN ST PHILADELPHIA PA 19140 215-329-6300	70
THERMOCOUPLE	38253/L=24 IN	TYPE K THERMOCOUPLE W/HANDLE & 3 FT CORD RANGE -440 - 2000 F	MORAL INC 23602 MERCANTILE DRIVE CLEVELAND OH 44122 216-831-2345	65

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 - - - T O T A L S FOR MEASUREMENT-TEMPERATURE - - -  
 - - - T O T A L S FOR PORTABLE INSTRUMENTATION - - -  
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 CATEGORY: RENEWABLE ENERGY  
 FUNCTION: SOLAR HEATER  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
FLAT PLATE	SS 12	32 SQUARE FOOT PANEL SELECTIVE SURFACE SRCC RATING NO 29.85 PRICE PER SQ FT	AMERICAN SOLAR KING 7200 IMPERIAL DRIVE WACO TX 76710 817-776-3860	25
FLAT PLATE	MSC32	32 SQUARE FOOT PANEL SELECTIVE SURFACE SRCC RATING NO 31.62 PRICE PER SQ FT	MORNINGSTAR MFG 138 INDUSTRIAL ROUTE W ORANGE PARK FL 904-264-2649	12
FLAT PLATE	OPTIMA-2 48SC	32 SQUARE FOOT PANEL SELECTIVE SURFACE SRCC RATING NO 30.35 PRICE PER SQ FT	NOVAN ENERGY 1630 N 63 ST BOULDER CO 80301 303-447-9193	20
FLAT PLATE	CF2S6C	32 SQUARE FOOT PANEL SELECTIVE SURFACE SRCC RATING NO 31.99 PRICE PER SQ FT	US SOLAR CORP PO BOX K HAMPTON FL 32044 800-874-2190	15

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 T O T A L S FOR SOLAR HEATER  
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 CATEGORY: RENEWABLE ENERGY  
 FUNCTION: WIND GENERATOR  
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TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	SUPPLIER	PRICE US \$
ELECTRIC	1800	DOWNWIND, FIXED PITCH, 3 BLADE 4M DIA, GENERATOR INDUCTION TYPE - 230 VAC @ 60 HZ, 3 PH COST INSTALLED ON 60 FT	ENERTECH WIND SYSTEMS PO BOX 420 NORWICH VT 05055 802-649-1145	12000
ELECTRIC	21/5	DOWNWIND, FIXED PITCH, 3 BLADE 6.3 M DIA, GENERATOR - INDUC- TION @ 220/240 VAC @ 60 HZ, 1 PHASE, INSTALLED ON 80 FT	ENERTECH WIND SYSTEMS PO BOX 420 NORWICH VT 05055 802-649-1145	45000
ELECTRIC	L-916	DOWNWIND, VARIABLE PITCH 2 BLADES, 9 M DIA, GENERATOR - INDUCTION @ 240 VAC @ 60 HZ, 3 PHASE, COST INSTALLED ON	NORTH WIND POWER COMPANY BOX 556 MORETOWN VT 05660 802-496-2955	29000

----- T O T A L S FOR WIND GENERATOR -----

----- T O T A L S FOR RENEWABLE ENERGY -----  
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