IBM

RS/6000
Environmentally Conscious Products Program

RS/6000 Model 170

"Designing with a green pen" signifies IBM's commitment to continuously improve the environmental quality of its RS/6000® products and processes.

Our commitment to environmentally conscious products is outlined in the IBM corporate environmental affairs policy statement:

"To develop, manufacture and market products that are safe for their intended use, efficient in their use of energy, protective of the environment and that can be reused, recycled or disposed of safely".

This brochure highlights many of the activities that are helping us reach these goals.

The RS/6000 product line is designed and manufactured by product teams in Rochester MN, Austin TX, Poughkeepsie NY, Montpellier France and Dublin Ireland.

The RS/6000 product line, as well as the iSeries™, zSeries™ and NUMA-Q® product lines, are part of the IBM Server Group family.

Accomplishments

In 1997, IBM became the world's first major multinational company to have earned a single global registration to ISO 14001 covering its worldwide manufacturing and hardware development operations. ISO 14001 is a voluntary international standard that defines the elements of an environmental management system necessary for an organization to effectively manage its impact on the environment. The registration includes the RS/6000 development and manufacturing facilities worldwide.

The RS/6000 design team has continued the integration of the use of recycled content resins into new product design. The RS/6000 7043-150 workstation and server incorporates the use of 25 percent recycled content resin in it's decorative plastic covers. Recycled resin used in the system unit is formulated to IBM specifications by its supplier from both pre- and post-consumer resin sources. Post consumer sources may include water bottles, CDs and windows.

RS/6000 43P Model 150

Awards

The RS/6000 43P model 260 won the prestigious Industrie Forum Product Design Award and Ecology Design Award for the year 2000. This award focuses attention on the ecological aspects of product design and underlines the belief that industrial goods should be manufactured, marketed, used and disposed of in ways that do not harm the environment.

In 2000, IBM Italy received an Honorable Mention for its eco-efficient products in the Eco-efficient Company 2000 Award. The RS/6000 and AS/400 product lines were included in this Mention of Merit.
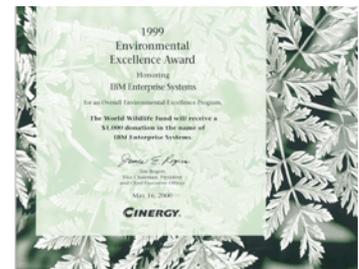

In 2000, IBM Enterprise Systems Group and IBM Corporation were selected by Cinergy Corporation as their overall Supplier for Environmental Excellence. A $1000 donation to the World Wildlife Fund has been made in recognition of this award.

In 1999, the IBM Server Group was selected to receive the Tennessee Governor's Award for Industrial Pollution Prevention for Product Stewardship.

The IBM Server Group received the 1998 Minnesota Governor's Award for Excellence in Waste and Pollution Prevention Management for its Product Environmental Design Program.

Energy Use of RS/6000 Products*

	Workstation/ Servers		Midrange Servers			Enterprise Servers
Relative Performance - The chart shows how the 2000 RS/6000 models achieve higher performance per watt of energy.						
2000	**7044-170**	**7044-270**	**7025-F80**	**7026-H80 (CEC)**	**7026-M80 (CEC)**	**7017-S85**
Relative Performance**	14.5	23.3	23	23	65	219
Processor MHZ	400	375	450	450	500	600
Maximum Memory	2 GB	8 GB	16 GB	16 GB	32 GB	96 GB
Floor Area per Unit (sq in)	187.3	376.5	545	565.2	568.7	1935
Typical Power Consumption per Unit***	220 W	297 W	560 W	300 W	370 W	2383 W
Typical Power Consumption per Unit/Relative Performance**	**15.17 W**	**14.14 W**	**24.34 W**	**13.0 W**	**5.69 W**	**10.9 W**
1999						**7017-S80**
Relative Performance**						139
Processor MHZ						450
Maximum Memory						64 GB
Floor Area per Unit (sq in)						1935
Typical Power Consumption per Unit***						2383 W
Typical Power Consumption per Unit/Relative Performance**						**17.1 W**
1998	**7043-150**	**7043-260**				**7017-S7A**
Relative Performance**	6.0	10.5				52.7
Processor MHZ	375	200				262
Maximum Memory	1 GB	4 GB				32 GB
Floor Area per Unit (sq in)	166	367				1935
Typical Power Consumption per Unit***	125 W	275 W				2058 W
Typical Power Consumption per Unit/Relative Performance**	**20.83 W**	**26.19 W**				**39.05 W**
1997	**7043-140**	**7025-F50**	**7025-F50**			**7017-S70**
Relative Performance**	5.3	8.2	8.2			24.6
Processor MHZ	332	166	166			125
Maximum Memory	768MB	3 GB	3 GB			16 GB
Floor Area per Unit (sq in)	166	401	401			1935
Typical Power Consumption per Unit***	125 W	285 W	285 W			2058 W
Typical Power Consumption per Unit/Relative Performance**	**23.58 W**	**34.75 W**	**34.75 W**			**83.66 W**

CEC is the Central Electronics Complex

* The energy use numbers in this chart are provided only for information purposes. Power consumption may vary depending on configuration and application of a given RS/6000 total solution. For installation planning, consult the RS/6000 Site and Hardware Planning Information Manual (SA38-0508). Models 7026 H80 and M80 are not compared to previous release models because there are no previous comparable RS/6000 products.

** Relative OLTP (On-Line Transaction Processing) is an estimate of commercial processing performance derived from an IBM analytical model. The model simulates some of the system's operations such as CPU, cache, and memory. However, the model does not simulate disk or network I/O operations. Although the model uses general database and operating system parameters, the model does not reflect specific databases or AIX version or releases.

*** This information is available in the RS/6000 Site and Hardware Planning Information Manual or at **www.rs6000.ibm.com/**

**** The Typical Power Consumption per Unit/Relative Performance is a relative system/watts performance ratio used in RS/6000 computing environments. The typical power consumption is calculated to be a percentage of the maximum measured power consumption.

Customize your RS/6000 solution with these energy-saving peripherals.

IBM Infoprint 70

IBM Infoprint 21

IBM Infoprint 40

IBM 6400 Line
Matrix Printer

4247 Multi
Form Printer

655123N
IBM P96
Color Monitor

RS/6000 7017-S85*

655223N
IBM P260
Color Monitor

655163N
IBM P96
Color Monitor

655263N
P260
Color Monitor

IBM Network Station
Series 300,1000,
2200 and 2800

ENERGY STAR®

The ENERGY STAR® Office Equipment program is a voluntary partnership effort between the United States Environmental Protection Agency (EPA) and equipment manufacturers to promote the introduction of energy-efficient personal computers, monitors and printers. Computer manufacturers that design and sell energy-efficient equipment meeting the requirements of the program are eligible to have the product identified with this EPA ENERGY STAR® logo found below.

IBM participates in the ENERGY STAR® Program and has developed products that meet these requirements. Some of these qualifying products are pictured on this page.

The ENERGY STAR® logo does not represent EPA endorsement of any product or service.

As an ENERGY STAR® Partner, IBM has determined the referenced products meet the ENERGY STAR® Program guidelines for energy efficiency.

* The RS/6000 7017-S80 does not qualify for the ENERGY STAR® computers program. This model is not a personal computer, but is a server servicing medium to large businesses. It is shown here only as a representation of a RS/6000 product with peripheral equipment.

Material Management:

Plastics: IBM maintains a corporate standard for marking plastic parts used in IBM systems. These markings enhance the ability to identify plastic resins used and recycle the plastic where recycling programs exist. This identification system is a key component in establishing future plastic recycling efforts.

Paper: RS/6000 technical manuals produced in the USA by the IBM Software Fulfillment Center are printed with soy-based ink on recycled paper containing up to 20% post-consumer waste fiber. This paper is manufactured using the elemental chlorine free process. RS/6000 technical manuals produced in Europe by IBM Software Manufacturing Solutions are printed on paper manufactured using the total chlorine free process by a mill certified to ISO 14001.

Metals: Powder coatings are used on almost all black exterior metal covers of the RS/6000 products manufactured worldwide. Powder coatings offer several quality and environmental benefits. Powder coatings contain minimal solvents and the over spray from the process can be easily reclaimed. This reduces concerns about air pollution and waste disposal while providing a durable and high quality finish.

Suppliers: Environmental design specifications are provided to suppliers of parts to assist them in meeting RS/6000 environmental design objectives and worldwide environmental requirements. The IBM Corporation through IBM Global Procurement is also encouraging our suppliers to receive ISO 14001 registration.

Chemical Management

The IBM Corporation has eliminated the use of chlorofluorocarbons (CFCs), hydrochloroflurocarbons (HCFCs) and methyl chloroform from manufacturing processes.

Product and Supplies Return Programs

IBM takes back used RS/6000 systems in 12 European and African countries. In the United States, IBM offers customers a range of services to manage end-of-life products and supplies for reuse, remanufacturing and recycling.

For more information on the IBM Product End-of-Life Management (PELM) program in the U.S. call 1-800-334-9693 Option 2.
Note: This program is not available for the System/390 through ES/9000 families of products.

Much of the equipment returned to IBM Material Recovery Centers is disassembled into reusable or recyclable parts. This process helps ensure the small percentage of hazardous components within a computer are disposed of properly.

In the United States, IBM has established a program for the collection, reuse, recycling and disposal of lead acid, nickel-cadmium and nickel-metal hydride batteries used in IBM products. For battery return information, call 1-800-IBM-4333.

For more information
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