

# PREFAB SUPERTALL DATA CENTER

## LIMITED RESOURCES, UNLIMITED AI

- 1. **Super Seismic-Resistant:** The building adopts BROAD's proprietary sandwich-structure "Steel Core Slab" and uses zero concrete, making it ultra-light and ultra-strong in the structure.
- 2. **Super Land-Saving:** The weight of the "Core Slab" building is only 1/6 of the concrete building, which reduces the cost of constructing high-rise. If building data center upward to 45-140 stories, it will save about 5-40 times the land usage than a typical data center. This makes the data center suitable for urban locations, which can solve the pain point of recruitment difficulty, and reduce the costs of network construction and operation.
- 3. **Zero-Carbon Cooling:** Employing BROAD's proprietary exhaust gas absorption chiller, which utilizes 100% of the exhaust gas from power generation for cooling.
- 4. **Fast Delivery:** Building modules and MEP are 100% prefabricated in the factory by intelligent streamlined production. On-site construction achieves 3 floors per day. Furthermore, construction cost can be reduced by 20%-70%.

Type	Model		B130	B600	B1000	B5000
Building	Building Model	-	45F54	70F93	90F54m4	140F93m4
	Floors	F	45	70	90	140
	Building Size (LxWxH)	m	54x54x223	93x93x345	148x148x440	246x246x680
	Minimum Lot Size	m	84x84 (0.7 ha)	123x123 (1.5 ha)	178x178 (3.2 ha)	276x276 (7.6 ha)
	Building area	m <sup>2</sup>	131,220	605,430	1,049,760	4,843,440
	Cabinet area	m <sup>2</sup>	86,600	400,000	692,800	3,030,600
Generator	NVL72 Cabinet	Set	29,000	133,000	200,000	1,000,000
	Generator Model (Qty)	-	7HA.03(1)	7HA.03(4)	7HA.03(6)	7HA.03(30)
	Total Power Generation	MW	430	1,720	2,580	12,900
	Total Natural Gas Consumption	m <sup>3</sup> /h	108,700	434,800	652,200	3,261,000
Chiller	Chiller Model (Qty)	-	BE2000(14)	BE2000(64)	BE2000(96)	BE2000(480)
	Total Cooling Capacity	MW	450	1,800	2,710	13,540
Cost. \$	Building System	M	448	2,064	3,446	16,741
	Power Generation System	M	300	1,200	1,800	9,000
	Cooling System	M	40	183	274	1,371
	Total	M	788	3,447	5,520	27,112
	Cost / Cabinet	\$	27,172	25,917	27,600	27,112

Note: Building sizes & floors are adjustable per customer's needs.

### Building Technical Data:

- 1. Structural Material: High-strength carbon steel.
- 2. Floor and Beam Material: Steel Core Slab.
- 3. Column Spacing/Diameter: 13m/0.95m
- 4. Floor Height/Clear Height: 4.8m/4m
- 5. Generator and Chiller Location: Refuge floor and rooftop.
- 6. Technical Standards: ANSI/TIA-942-C, ASHRAE 90.4
- 7. Construction Method: building module & MEP 100% factory prefabricated.
- 8. Construction Period: Design and prefabrication 3-7 months, installation 3 floors/day.



Floor Slab & Beam Material:  
Steel Core Slab



Figure: Model B1000