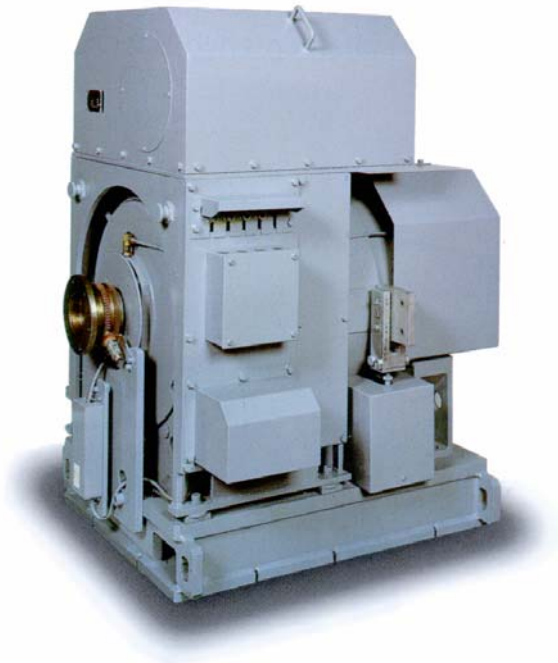


# MEIDEN FREC AC Dynamometer

**Meiden FREC Dynamometers** are a new series of AC dynamometer. Its development is based on many years of accumulated experience and technology from the manufacturing of dynamometers and induction motors as well as inverters and inverter controls. Meiden has realized high performance and low noise by use of IGBT power devices, all digital sine wave PWM control, and by applying the latest inverter control techniques.

## Features

- **A wide control range**  
0.02 to 250Hz (1 to 15,000 min<sup>-1</sup> with bipolar machine) is available.
- **High accuracy and high response**  
Utilizes the latest AC motor and inverter technology.
- **Low noise**  
Reduced electromagnetic noise [about 9dB(A) lower than the former model]
- **Space saving in control panel**  
Reduced external dimensions (about 25% smaller than the former model)  
Front access for ease of maintenance
- **High speed digital control interface (Option)**  
Fully digitalized test system is available.
- **High harmonic suppression (Option)**  
Sine wave PWM converter control



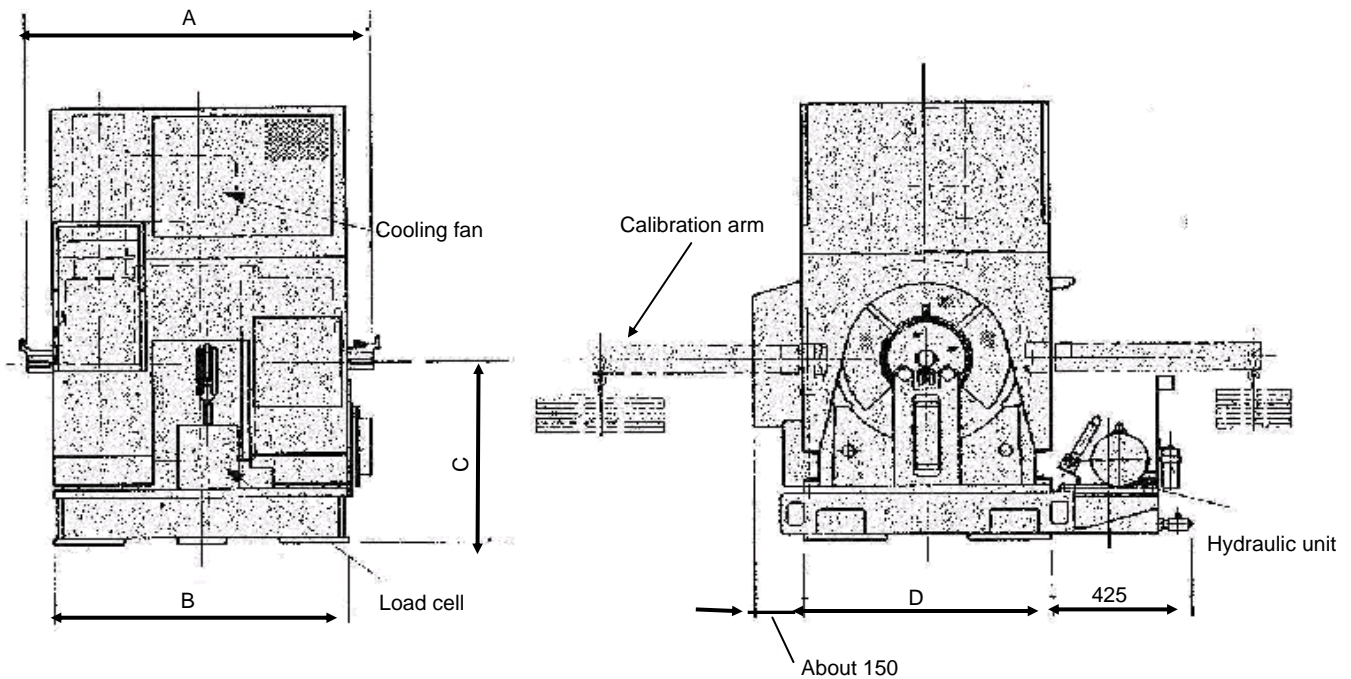
## Performance

Item		Standard	Option
Capacity		55 to 550 kW	Small type : 3.7 to 55 kW Large type : 600 to 1100 kW
DY main circuit voltage		360 V AC	
Cradle system		Oil floated frame	
Torque detection accuracy		±0.2% F.S. Max.	±0.1% F.S. Max.
Circuit system	Converter	IGBT 120° current carrying control	Sine wave PWM current control
	Inverter	IGBT voltage type current control	
Control system		Torque control by vector control All digital sine wave PWM control	
Speed control (ASR)	Set resolution	Analog and digital : 0.01%	
	Setting method	Analog : 0 to 10 V	Digital : Serial communication
	Accuracy	±0.1% F.S. (25°C ± 10°C)	
	Max. Speed	15,000 min <sup>-1</sup> (controller)	
Torque control (ATR)	Set resolution	Analog and digital : 0.01%	
	Setting method	Analog : -10 to 10 V	Digital : Serial communication
	Accuracy	±0.2% F.S. + accuracy of detector (25°C ± 10°C)	Digital : ±0.01% F.S. + accuracy of detector
Current control (ACR)	Set resolution	Analog and digital : 0.01%	
	Setting method	Analog : -10 to 10 V	Digital : Serial communication
	Response	2000 rad/s	
Source power factor		0.9	1.0



**Standard Rating**

Absorption Capacity (kW)	Motoring Capacity (kW)	Base speed (min <sup>-1</sup> )										Voltage (V)
		2800		2500		3150		3550		4000		
		Frame No.	Max. speed	Frame No.	Max. speed	Frame No.	Max. speed	Frame No.	Max. speed	Frame No.	Max. speed	
75	55	250M	8000	250M	9000	250M	10000	250M	10000	250M	10000	360
110	80	280M	8000	280M	9000	250M	10000	250M	10000	250M	10000	
150	110	315S	8000	315S	8000	280M	10000	280M	10000	250M	10000	
185	130	315M	8000	315S	8000	315S	9000	280M	9000	280M	10000	
220	160	315L	8000	315M	8000	315S	9000	315S	9000	280M	10000	
260	190	355M	8000	315L	8000	315M	9000	315S	9000	315S	10000	
300	220	355L	8000	355M	8000	315M	8000	315M	9000	315S	10000	
370	250	400S2	6000	355L	8000	355M	8000	355M	8000	315M	9000	
450	370	400M4	5000									
550	450	400L4	5000									



Frame No.	Dimension (mm)				Allowable shaft end load (N)	Approx. mass (kg)	Moment of inertia (kgm <sup>2</sup> )
	A	B	C	D			
250M	890	770	500	600	120	1100	0.33
280M	1000	840	550	700	120	1300	0.66
315S	1060	900	600	760	120	1950	0.93
315M	1160	960	600	760	150	2000	1.3
315L	1160	960	600	760	150	2450	1.3
355M	1290	1080	650	840	150	2700	2.7
355L	1350	1140	650	840	150	3100	3.0
400S2	1450	1150	700	860	250	4500	5.85
400M4	1450	1150	700	860	300	4500	8.9
400L4	1450	1150	700	860	300	4500	14.0

Note : Dimensions are subject to change without notice. Detailed plan will be submitted when ordering.