

# AD1000

**Nidec**  
All for dreams



## What makes the AD1000 the preferred choice?

### Lower energy costs

- Can be configured to run multiple pumps at once
- Continuously monitors conditions to optimize energy consumption

### Maximum process uptime

- Automatically monitors and schedules automated pump motor cleaning
- Facilitates preventive and predictive maintenance programming

### Pump Ready

- Built-in Process PID
- Improves reliability and process-control in pumping applications
- Can be programmed to meet system demands

### Extends equipment life

- Reduces startup stress on the pump system
- Continually monitors conditions and protects the pump motor

## Product Overview

AD1000 is a high-performance variable frequency drive that can reduce energy demand significantly by automatically adjusting to pumps' operating conditions to meet system demands in a wide range of water, wastewater, irrigation and other pump applications.

The AD1000 drive is designed with today's pump system requirements in mind. Developed by pump automation experts at Nidec, the versatile and reliable AD1000 is designed for optimum performance and reliability with minimal maintenance. While virtually 'plug and play' for standard applications, the AD1000's flexible, modular design can also be easily configured to meet the most challenging applications.

Its highly responsive, built-in intelligence enables it to continuously monitor operating conditions and adjust automatically to changes to ensure safe operation and optimal flow control.

A wide range of communications features help expand the AD1000's capabilities and functionality. These features make it easy for systems integrators to customize solutions to meet their customers' precise requirements.

### Pump Control Functions

- Process PID
- Anti-Blocking
- Auto Cleaning
- Frost Protection
- Soft Fill
- Motor Pause
- Well Draw-Down
- Constant Pressure Suction control
- Low suction pressure detection

### Key Features

- Easy to program and use
- Quick Start available for simple applications
- Auto-tuning menu offers a wide range of easy-to-set parameters
- Remote or onsite setup, monitoring and troubleshooting
- Parameters can be stored and transferred with keypad to other drives
- Password security options to prevent tampering
- Comprehensive, easy-to-understand alerts and alarms

# Technical Data

CONTROL CHARACTERISTICS	
Control Method:	V/Hz, Sensorless Vector
Switching frequency:	See Manual
Frequency accuracy (V/Hz):	0.1% (analog control) 0.01% (digital control)
Torque control response time:	5ms (sensorless)
ENVIRONMENTAL CONDITIONS	
Operating temperature:	0-40°C (1% current derating for every °C, 55°C max)
Storage temperature:	-25 to +70°C
Relative humidity:	95% (without condensation)
Altitude ASL:	1000m (1% current derating for every 100m, max 3000m)
Protection grade:	IP20 Frames I-VIN IP00 Frames VII-VIII
Cooling:	Air cooling with internal fan

## IEC

AD1000 Chassis - 6 pulse AC version - 380/480 V +/-10%											
Model	Frame	CI.1 - Overload: 110% for 1 min, every 10 min			CI.2 - Overload: 150% for 1 min, every 10 min			Dimensions			
		Rated output current	Typical motor (4p) @400V		Rated output current	Typical motor (4p) @400V		Height	Width	Depth	Weight
			A	KW		A	A				
AD1A0P3FBBNH	I	3.8	1.5	3.6	2.1	0.75	2	271	133	169.5	4
AD1A0P4FBBNH	I	5.6	2.2	5	3.8	1.5	3.6	271	133	169.5	4
AD1A0P6FBBNH	I	9.5	4	8.6	5.6	2.2	5	271	133	169.5	4
AD1A008FBBNH	II	12	5.5	11.5	9.5	4	8.6	341.5	130	223.5	5.5
AD1A011FBBNH	III	16	7.5	15.5	12	5.5	11.5	441.5	130	223.5	8
AD1A015FBBNH	III	21	9	18.4	16	7.5	15.5	441.5	130	223.5	8
AD1A018FBBNH	IIIX	25	11	22.5	21	9	18.4	466.5	130	245.5	8
AD1A022FBBNH	IIIX	32	15	30.2	25	11	22.5	466.5	130	245.5	8
AD1A028FBBNH	IIIL	40	18.5	37	32	15	30.2	466.5	130	260	10.5
AD1A030FBBFH	IIIN	40	18.5	37	32	15	30.2	454	246	279	32
AD1A036FBBFH	IIIN	52	22	43	40	18.5	37	454	246	279	32
AD1A045FBNFH	IVN	65	30	58	52	22	43	675	290	289	36
AD1A053FBNFH	IVN	77	37	69	65	30	58	675	290	289	36
AD1A066FBNFH	IVN	96	45	84	77	37	69	675	290	289	40
AD1A086FBNFH	VN	124	55	100	96	45	84	755	290	304.5	52
AD1A108FBNFH	VN	156	75	135	124	55	100	755	290	304.5	52
AD1A125FBNFH	VIN	180	90	160	156	75	135	1000	300	334.5	88
AD1A150FBNFH	VIN	210	110	195	180	90	160	1000	300	334.5	96
AD1A166FBNFH	VIN	240	132	239	200	110	195	1000	300	334.5	96
AD1A210FBNFH	VII	300	160	287	240	132	239	1068	290	526	120
AD1A260FBNFH	VII	370	200	356	285	160	287	1068	290	526	120
AD1A290FBNFH	VII	410	225	395	320	160	287	1068	290	526	120
AD1A350FBNFH	VIII	510	280	480	385	200	356	1490	290	526	200
AD1A370FBNFH	VIII	540	280	480	410	225	395	1490	290	526	200
AD1A440FBNFH	VIII	640	355	616	510	280	480	1490	290	526	200
AD1A480FBNFH	VIII	690	400	690	530	280	480	1490	290	526	200
AD1A520FBNFH	VIII	750	450	750	585	315	551	1490	290	526	200