

Forced Convection Ovens



Energy Saving Programmable Forced Convection Ovens with Variable Flow Rate

DNF301/401/411/601/611/811/911

Operating temp. range RT +15°C~260°C (Forced convection)

Temp. distribution accuracy $\pm 2.5^{\circ}\text{C}$ (at 260°C) (Forced convection)

Internal capacity 27L DNF301 90L DNF401/411 150L DNF601/611 300L DNF811 540L DNF911

강제 및 자연 대류 "2 in 1" 오븐

- 하나의 기기에서 강제 및 자연 대류(300/400/600 모델과 호환 가능) 가능.
- 0-10 단계의 디지털 가변 풍속 및 조절 가능한 통풍 조절판이 있는 친환경 오븐.
- 전력 소비를 크게 줄이는 프로그램.
- 챔버의 우수한 내열성과 단열성.
- 탁월한 방진, 먼지가 거의 챔버에 들어가지 않음.
- 공기 속도는 컨트롤러의 디지털 설정을 사용하여 10 단계로 변경 가능.
- 반복 운전, 자동 시작, 자동 정지 및 빠른 자동 정지 기능이 있는 99 단계 프로그램 작동 표준.
- 작동을 최적화하기 위해 챔버 정면에서 조절 가능한 통풍 조절판 위치.
- 형광 디스플레이, 상호적인 입력 방법, 교정 오프셋 기능.



Specifications

Model		DNF301	DNF401	DNF411	DNF601	DNF611	DNF811	DNF911	
Circulation method		2 in 1 type: Forced and Natural convection, with manual exhaust damper					Forced convection with manual exhaust damper		
Forced convection (Wind velocity setting: 1-10)	Operating temp. range	Room temp. +15 to 260°C							
	Temp. control accuracy (JTM K05)	±0.3°C(at 260°C)							
	Temp. fluctuation (JIS)	±0.5°C(at 260°C)							
	Temp. distribution accuracy (JTM K05)	±2.5°C(at 260°C)							
	Temp. gradient (JIS)	5°C (at 260°C)	7°C (at 260°C)			8°C (at 260°C)	12°C (at 260°C)	6°C (at 260°C)	
	Max. temp. reaching time	Approx. 70 min.			Approx. 105 min.		Approx. 100 min.	Approx. 60 min.	Approx. 100 min.
Natural convection (Wind velocity setting: 0)	Operating temp. range	Room temp. +25 to 120°C							
	Temp. control accuracy (JTM K05)	±0.5°C (at 120°C)	±0.3°C(at 120°C)			Not applicable			
	Temp. fluctuation (JIS)	±1°C (at 120°C)	±0.8°C (at 120°C)						±0.6°C (at 120°C)
	Temp. distribution accuracy (JTM K05)	±5°C (at 120°C)	±3°C(at 120°C)						
	Temp. gradient (JIS)	15°C (at 120°C)	13°C(at 120°C)						
		Max. temp. reaching time	Approx. 20 min.		Approx. 25 min.				
Interior / Exterior material		Stainless steel / Electro-galvanized steel sheet with epoxy and melamine resin baking finish							
Heat insulating material		Glass wool							
Heater		0.8 kW	0.6 kW×2			0.83 kW×2	1.35 kW×2	1.65 kW×2	
Cable hole		33mm I.D. (Right)×1pc.							
Air in-take hole		33mm I.D. (Right)×1pc.						33mm I.D. (Right and Left) ×1pc. each	
Exhaust port		50mm I.D. (Back)×1pc.						50mm I.D. (Back) x 2pc.	
Temp. controller		PID control by microprocessor							
Temp. setting method		Digital setting by UP/DOWN key							
Timer display range		Fixed value operation for 1 min. to 99 hr 59 min. and 24hr. setting							
Operation function		Fixed temp., Auto-start, Auto-stop, Quick auto stop, Program (Max.99 steps, 99 patterns, repeat)							
Additional functions		Calendar timer (max. 24 Hrs.), Integration time (max. 65535Hrs.), Clock, Calibration off-set, Display the amount of Power consumption / CO ₂ discharge / Heater operation amount, Power failure recovery mode, User setting information save and recall, Wind velocity changeable function							
Sensor		K-thermocouple ×2pcs.							
Safety device		Self diagnosis functions (Sensor, Fan, Heater, Relay, Triac, Automatic overheat prevention), Independent overheat prevention, Key lock function, Electric leakage breaker, Door switch							
Internal dimensions (W×D×Hmm)		300×300×300	450×450×450			600×500×500	600×500×1,000	1,090×500×1,000	
External dimensions (W×D×Hmm)		430×495×740	580×645×890			730×695×940	730×695×1,685	1,220×695×1,685	
Internal capacity		27 liters	90 liters			150 liters	300 liters	540 liters	
Shelf plate with standard load		Approx. 15kg/piece							
Shelf rest step number		6 steps	11 steps			13 steps	29 steps	29 steps x2	
Shelf rest pitch		30 mm							
Power source 50/60Hz		AC115V/AC220V single phase		AC220V single phase	AC115V/AC220V single phase	AC220V single phase			
Weight		Approx. 50 kg	Approx. 75 kg		Approx. 90 kg		Approx. 135 kg	Approx. 210 kg	
Accessories	Shelf (Stainless punching metal)	2 pcs.					4 pcs.	8 pcs.	
	Shelf support	4 pcs.					8 pcs.	16 pcs.	



Control Panel



Interior

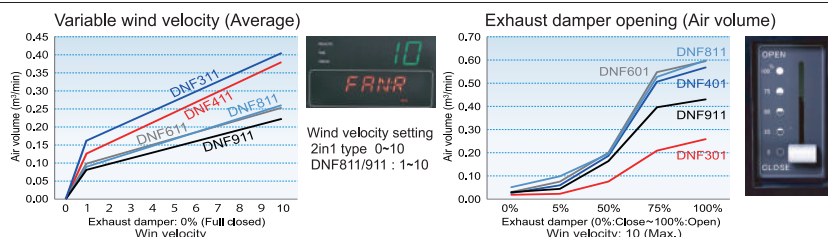


DNF601



DNF911

Wind velocity variable + Exhaust damper



Optional Items

Description	Option Model No.	Main Unit Model No.	Product code
Stand	ON30	DNF301	211180
Stand	ON61	DNF401/411/601/611	211856
Stand	OT42	DNF401/411	212348
Stand	OT62	DNF601/611	212349
Stacking support	ODM44	DNF301	281458
Stacking support	ODN26	DNF401/411	212806
Stacking support	ODN28	DNF601/611	212807
Stainless punching metal shelf (loading up to 15kg/shelf)	-	DNF301	212068
Stainless punching metal shelf (loading up to 15kg/shelf)	-	DNF401/411	212246
Stainless punching metal shelf (loading up to 15kg/shelf)	-	DNF601/611/811	212266
Stainless punching metal shelf (loading up to 15kg/shelf)	-	DNF911	212490
*Cable port 25mm dia	ODM36	DNF601/611/811/911	281454
*Cable port 50mm dia	ODM38	DNF601/611/811/911	281455
*External communication terminal (RS485)	ODM56	DNF401/411/811	281464
*External communication terminal (RS485)	ODM58	DNF301/601/611/911	281465
*External communication adapter set	OIN90	DNF Series	211880
*External Alarm Output Terminal	ODM60	DNF401/411/811	281466
*External Alarm Output Terminal	ODM62	DNF301/601/611/911	281467
*Timeout Output Terminal	ODM64	DNF401/411/811	281468
*Timeout Output Terminal	ODM66	DNF301/601/611/911	281469
*Operation Signal Output Terminal	ODM68	DNF401/411/811	281470
*Operation Signal Output Terminal	ODM70	DNF301/601/611/911	281471
*Event Output Terminal	ODM72	DNF401/411/811	281472
*Event Output Terminal	ODM74	DNF301/601/611/911	281473
Additional sensor (sheath sensor)	ODT48	All models	212946
Silicon plug (with one hole)	ODT52	All models	212947
*Digital recorder, 6 points, sensors are not included	YHR150	All models	281571
*Digital recorder, 6 points, sensors are not included	YHR250	All models	281570
Cable for Recorder (YHR150/250) and External communication function	ODM76	All models	281474
*Exhaust duct (50mm dia with exhaust flange)	ODM46	DNF301	281459
*Exhaust duct (50mm dia with exhaust flange)	ODM48	DNF401/411	281460
*Exhaust duct (50mm dia with exhaust flange)	ODM50	DNF601/611	281461
*Exhaust duct (50mm dia with exhaust flange)	ODM52	DNF811	281462
*Exhaust duct (50mm dia with exhaust flange)	ODM54	DNF911	281463

* Please specify when ordering main unit.