

Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz









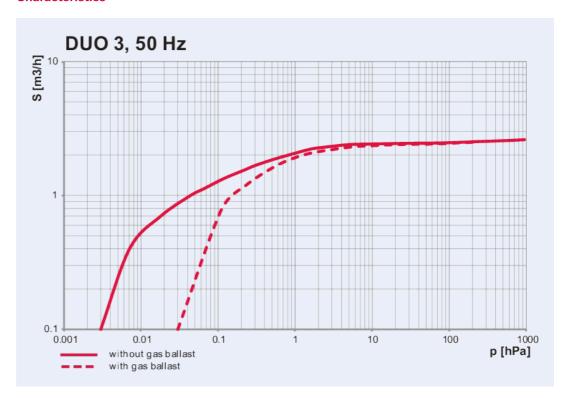
Duo 3



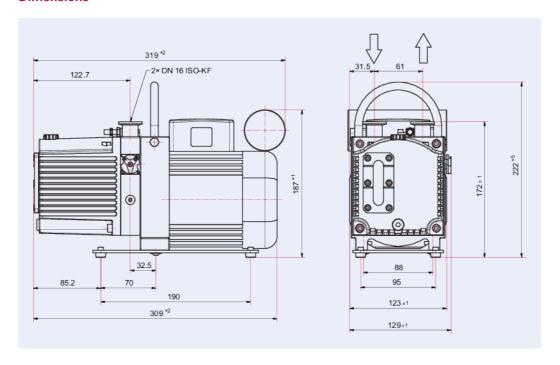
Duo 3, 1-phase motor, 105 V, 50 Hz, 115 - 125 V, 60 Hz

- Dual-stage, high-performance rotary vane pump with a pumping speed of 2.5 m³/h at 50 Hz / 2.9 m³/h at 60 Hz
- With 1-phase motor with C14 connector plug inside the terminal box
- Integrated gas ballast and safety valve
- OME oil return device is included with the pump
- For all low and medium vacuum applications
- Special feature: Various motor voltages for worldwide employment
- Other motor voltages available on request

Characteristics



Dimensions



Connection flange (in) DN 16 ISO-KF Connection flange (out) DN 16 ISO-KF Pumping speed at 50 Hz 2.5 m³/h 1.4715 cfm 41.6675 l/min Pumping speed at 60 Hz 2.9 m³/h 1.70694 cfm 48.3343 l/min Final pressure 3 · 10 ³ hPa 2.25 · 10 ³ Torr 3 · 10 ° 3 mbar Final pressure with gas ballast 3 · 10 ° PPa 2.25 · 10 ° 2 Torr 3 · 10 ° 2 mbar Exhaust pressure, min. Atmospheric pressure Exhaust pressure, max. 1,500 hPa 1,125 Torr 1,500 mbar Water vapor capacity 50 Hz 115 g/h Water vapor capacity 60 Hz 175 g/h Water vapor tolerance at 50 Hz 65 hPa 48.8 Torr 65 mbar Water vapor tolerance at 60 Hz 80 hPa 60 Torr 80 mbar Rotation speed at 60 Hz 3,600 rpm 3,600 min ¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min ¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min ¹ Cooling method Air (Forced convection) Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 60 Hz <th< th=""><th>Technical Data</th><th>Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz</th></th<>	Technical Data	Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz
Pumping speed at 50 Hz 2.5 m³/h 1.4715 cfm 41.6675 l/min	Connection flange (in)	DN 16 ISO-KF
Pumping speed at 60 Hz 2.9 m³/h 1.70694 cfm 48.3343 l/min Final pressure 3 · 10 ³ hPa 2.25 · 10 ³ Torr 3 · 10 ³ mbar Final pressure with gas ballast 3 · 10 ² hPa 2.25 · 10 ² Torr 3 · 10 ² mbar Exhaust pressure, min. Exhaust pressure, max. 1,500 hPa 1,125 Torr 1,500 mbar Water vapor capacity 50 Hz Water vapor tolerance at 50 Hz Water vapor tolerance at 60 Hz 80 hPa 60 Torr 80 mbar Rotation speed at 60 Hz 3,000 rpm 3,000 min ¹ Rotation speed at 60 Hz Cooling method Air (Forced convection) Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. Emission sound pressure level without gas ballast at 50 Hz Emission sound pressure level without gas ballast at 50 Hz Switch Yes Switch included hput voltage 60 Hz Input voltage 60 Hz Recommended on-site electric fuse protection Mains cable No. C14-plug inside the terminal box Agas ballast flow Gas ballast pressure 21,500 hPa ≤1,125 Torr ≤1,500 mbar	Connection flange (out)	DN 16 ISO-KF
Final pressure 3 ⋅ 10 ⁻³ NPa 2.25 ⋅ 10 ⁻³ Torr 3 ⋅ 10 ⁻³ mbar Final pressure with gas ballast 3 ⋅ 10 ⁻² NPa 2.25 ⋅ 10 ⁻² Torr 3 ⋅ 10 ⁻² mbar Exhaust pressure, min. Exhaust pressure, max. 1,500 NPa 1,125 Torr 1,500 mbar Water vapor capacity 50 Hz Water vapor tolerance at 50 Hz Water vapor tolerance at 60 Hz 80 NPa 60 Torr 80 mbar Rotation speed at 60 Hz 3,000 rpm 3,000 min ⁻¹ Rotation speed at 60 Hz Cooling method Air (Forced convection) Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. Emission sound pressure level without gas ballast at 50 Hz Switch 105 V AC Switch Yes Switch included Input voltage 50 Hz Input voltage 60 Hz No Mains cable No, C14-plug inside the terminal box Gas ballast Yes Gas ballast Yes Gas ballast pressure ≤1,500 NPa ≤1,125 Torr ≤1,500 mbar	Pumping speed at 50 Hz	2.5 m ³ /h 1.4715 cfm 41.6675 l/min
Final pressure with gas ballast 3 ⋅ 10 ⁻² hPa 2.25 ⋅ 10 ⁻² Torr 3 ⋅ 10 ⁻² mbar	Pumping speed at 60 Hz	2.9 m ³ /h 1.70694 cfm 48.3343 l/min
Exhaust pressure, min. Exhaust pressure, max. 1,500 hPa 1,125 Torr 1,500 mbar	Final pressure	3 · 10 ⁻³ hPa 2.25 · 10 ⁻³ Torr 3 · 10 ⁻³ mbar
Exhaust pressure, max. 1,500 hPa 1,125 Torr 1,500 mbar	Final pressure with gas ballast	3 · 10 ⁻² hPa 2.25 · 10 ⁻² Torr 3 · 10 ⁻² mbar
Water vapor capacity 50 Hz Water vapor capacity 60 Hz Water vapor tolerance at 50 Hz Water vapor tolerance at 60 Hz Rotation speed at 50 Hz Rotation speed at 60 Hz	Exhaust pressure, min.	Atmospheric pressure
Water vapor capacity 60 Hz 175 g/h Water vapor tolerance at 50 Hz 65 hPa 48.8 Torr 65 mbar Water vapor tolerance at 60 Hz 30 hPa 60 Torr 30 mbar Rotation speed at 50 Hz 3,600 rpm 3,600 min⁻¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min⁻¹ Cooling method Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 dB(A) 50 dB(A) 50 Hz 54 dB(A) Switch Yes Switch included Yes Input voltage 50 Hz 105 V Input voltage 60 Hz 115 - 125 V Input voltage(s) 105 V AC, 50 Hz 115 - 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Mains cable included No Mains cable included No Mains cable story 540 l/h Gas ballast flow 540 l/h Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Opera	Exhaust pressure, max.	1,500 hPa 1,125 Torr 1,500 mbar
Water vapor tolerance at 50 Hz 65 hPa 48.8 Torr 65 mbar Water vapor tolerance at 60 Hz 80 hPa 60 Torr 80 mbar Rotation speed at 50 Hz 3,000 rpm 3,000 min⁻¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min⁻¹ Cooling method Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 60 Hz 50 dB(A) Switch Yes Switch included Yes Input voltage 50 Hz 105 V Input voltage 60 Hz 115 - 125 V Input voltage(s) 105 V AC, 50 Hz 115 - 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 6 A Mains cable included No Mains cable flow 540 l/h Gas ballast flow 540 l/h Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Water vapor capacity 50 Hz	115 g/h
Water vapor tolerance at 60 Hz 80 hPa 60 Torr 80 mbar Rotation speed at 50 Hz 3,000 rpm 3,000 min⁻¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min⁻¹ Cooling method Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 – 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 Hz 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz 54 dB(A) Switch Yes Switch included Yes Input voltage 50 Hz 105 V Input voltage 60 Hz 115 – 125 V Input voltage(s) 105 V AC, 50 Hz 115 – 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 6 A Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 l/h Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Water vapor capacity 60 Hz	175 g/h
Rotation speed at 50 Hz 3,000 rpm 3,000 min⁻¹ Rotation speed at 60 Hz 3,600 rpm 3,600 min⁻¹ Cooling method Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 Hz 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz 54 dB(A) Switch Yes Switch included Yes Input voltage 50 Hz 105 V Input voltage 60 Hz 115 - 125 V Input voltage(s) 105 V AC, 50 Hz 115 - 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 6 A Mains cable included No Mains cable included No Gas ballast flow 540 l/h Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Water vapor tolerance at 50 Hz	65 hPa 48.8 Torr 65 mbar
Rotation speed at 60 Hz 3,600 rpm 3,600 min ⁻¹ Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 Hz Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch Yes Switch Yes Switch Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 G A Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid	Water vapor tolerance at 60 Hz	80 hPa 60 Torr 80 mbar
Air (Forced convection) Motor protection Bimetal Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 dB(A) 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch Yes Switch included Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid	Rotation speed at 50 Hz	3,000 rpm 3,000 min ⁻¹
Motor protection Motor type 1-phase motor Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 Hz Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch Yes Switch included Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar P3	Rotation speed at 60 Hz	3,600 rpm 3,600 min ⁻¹
Ambient temperature Ambient temperature 12 - 40 °C Continuous gas input temperature, max. 40 °C 104 K -233.2 °F Emission sound pressure level without gas ballast at 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch Yes Switch included Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) 105 V AC, 50 Hz 115 − 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar P3	Cooling method	Air (Forced convection)
Ambient temperature Continuous gas input temperature, max. ### Adv C 104 K -233.2 °F ### Emission sound pressure level without gas ballast at 50 dB(A) ### Bound	Motor protection	Bimetal
Continuous gas input temperature, max. Emission sound pressure level without gas ballast at 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch Yes Switch included Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid	Motor type	1-phase motor
Emission sound pressure level without gas ballast at 50 dB(A) Emission sound pressure level without gas ballast at 60 Hz Switch Yes Switch included Yes Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast yes Gas ballast pressure Sydd B(A) 50 dB(A) 60 dB(A) 61 dB(A) 62 dB(A) 63 dB(A) 64 dB(A) 65 dB(A) 66 dB(A) 66 dB(A) 67 dB(A) 68 dB(A) 69 dB(A) 60 dB(A)	Ambient temperature	12 – 40 °C
Emission sound pressure level without gas ballast at 60 Hz Switch Switch Yes Switch included Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable Sas ballast flow Gas ballast Yes Gas ballast pressure Operating fluid	Continuous gas input temperature, max.	40 °C 104 K -233.2 °F
Switch Yes Switch included Yes Input voltage 50 Hz 105 V Input voltage 60 Hz 115 – 125 V Input voltage(s) 105 V AC, 50 Hz 115 – 125 V AC (±10 %), 60 Hz Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 6 A Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 I/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3		50 dB(A)
Switch included Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure Sinch protection 1 Yes 105 V AC, 50 Hz 115 − 125 V AC (±10 %), 60 Hz 6 A No No No No Sinch protection 1 No No Sinch protection 1 Sinch protection 2 Sinch protection 3 Sinch protection 3 Sinch protection 4 No No P3		54 dB(A)
Input voltage 50 Hz Input voltage 60 Hz Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast pressure S1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid	Switch	Yes
Input voltage 60 Hz Input voltage(s) Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow S40 I/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid	Switch included	Yes
Input voltage(s) Recommended on-site electric fuse protection Recommended on-site electric fuse protection 1 Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow Gas ballast Yes Gas ballast pressure Operating fluid 105 V AC, 50 Hz 115 − 125 V AC (±10 %), 60 Hz 6 A No No No S40 No No S40 No No S40 N	Input voltage 50 Hz	105 V
Recommended on-site electric fuse protection 6 A Recommended on-site electric fuse protection 1 6 A Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 l/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Input voltage 60 Hz	115 – 125 V
Recommended on-site electric fuse protection 1 6 A Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 l/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Input voltage(s)	105 V AC, 50 Hz 115 – 125 V AC (±10 %), 60 Hz
Mains cable included No Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 l/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Recommended on-site electric fuse protection	6 A
Mains cable No, C14-plug inside the terminal box Gas ballast flow 540 l/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Recommended on-site electric fuse protection 1	6 A
Gas ballast flow 540 l/h Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Mains cable included	No
Gas ballast Yes Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Mains cable	No, C14-plug inside the terminal box
Gas ballast pressure ≤1,500 hPa ≤1,125 Torr ≤1,500 mbar Operating fluid P3	Gas ballast flow	540 l/h
Operating fluid P3	Gas ballast	Yes
	Gas ballast pressure	≤1,500 hPa ≤1,125 Torr ≤1,500 mbar
Operating fluid amount 0.4 I	Operating fluid	P3
	Operating fluid amount	0.41

Leakage rate safety valve	\leq 1 · 10 ⁻⁵ Pa m ³ \leq 1.33 · 10 ⁻³ \leq 1 · 10 ⁻³ /s mbar l/s
Dimensions (L x W x H)	321 x 130 x 188 mm
Input voltage: tolerance	±10 %
Rated power 50 Hz	0.15 kW
Rated power 60 Hz	0.18 kW
Protection degree	IP40
Certification	CE cTUVus certified according to UL / CSA 61010-1
Weight	11.5 kg 25.35 lb

	Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz
Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz	PK D57 707

Accessories	Duo 3, 1-phase motor, 105 V, 50 Hz, 115 – 125 V, 60 Hz
Maintenance kit DUO 1.6/3, UNO 6	PK E01 040 CT
Maintenance kit, level I, for Duo 1.6 - 11, Uno 6	PK E01 050 CT
Overhaul kit for Duo 3 PK D57	PK E02 040 CT
Vane kit for DUO 1.6 / 3 PK D56 / PK D57	PK E08 030 -T
Maintenance kit level II -RSSR for Duo 1.6 - 11, Uno 6 (with coupling)	PK E06 100 CT



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