CHEMCO








Chemical Resistant Plastic Fans

Direct Drive

JCH 11.5

CHEMCO = chemical resistant plastic fan

Role

Chemco has played a leading role in the manufacture of equipment made from anti-corrosive and chemical resistant plastics. Chemco fans are specially designed for high efficiency and reliability and have a superior corrosion resistance quality. They are also developed to give trouble-free service, and are economical in use.

Quality

Chemco supply a complete range of highly quality and efficient radial tip backward curve fans, which offer an excellent performance with a low noise level. All fans drives and accessories are produced to strict quality standards. Only the best quality materials are used and all fans are tested and rated in accordance with DIN 24163 and ISO 5801.

Sound Level

In order to make possible an assessment of sound projection adequate to human ear the A-assessed description of sound level according to DIN 45635 has been chosen.

The ascertaining of the sound power level follows the enveloping surfaces method according to DIN 45635 section 38 or the channel technique DIN 45635, section 9.

Fan Type Code

CHEM 160 PP DD

- DD — Type of drive
  - DD = direct drive
  - BD = belt drive
- PP — Material
  - PP = Polypropylene
  - GRP = Glass Reinforced Plastics
- 160 — Size = Inlet/Outlet diameter
- CHEM — Chemical Fan

Chemical Resistant Plastic Centrifugal Fan Design

Casing

The fan casing is constructed from thermoplastic such as PP, PVC, PE, PVDF or Glass Reinforced Plastic -Vinyl ester grade (GRP or FRP). The fan casing is built to a true volute form and has high efficiency inlet cone to give an even distribution of air over the full width of the runner.

The smaller range of fan sizes, model **CHEM 75 - 315** are completely plastic injection moulded and suitable for dual rotation at any position. The plastic injection moulded backplate or inlet cover can be easily removed for changing of rotation, and for maintenance purposes. The **CHEM 125 - 200** fan casing with outlet flange is fitted with a chemical resistant seal to prevent air leakage. The **CHEM 75 - 110 & CHEM 250 - 315** casings have circular plain outlet spigots suitable for direct connection to similar sized duct via flexible connection sleeve. Standard casing material is Polypropylene (PP).

The **CHEM 400** casing is of GRP construction. The GRP fan casing has circular plain inlet/outlet spigots suitable for direct connection with flexible connector to similar sized duct.

Radial Tip Backward Curve Impellers

Chemco fan impellers are a Single Inlet Single Width (SISW) type. Impellers are of precision plastic injection moulded design with cast-in metal hub and mechanically welded to highest quality standard with excellent aerodynamic properties.

Standard impellers are of PP however, depending on the type of applications, impellers can be made of PE, PC, PVC or PVDF. Impellers can also be supplied in a thermoplastic material blended with composites to ensure reliable perform in situations such as high temperature, flame retardant resistant, ultraviolet or electrostatic discharge protection to suit customer‘s requirements. Each impeller is statically and dynamically balanced in two planes in accordance with Q2.5 of VDI 2060. The hubs are designed for use with taper-bushes and are made of high-grade cast metal to guarantee reliability at high peripheral speeds.

Fan Base and Support

Fan support stands are precision manufactured from heavy gauge steel. Corrosion prevention is achieved by zinc plating and powder coating as standard but galvanising and stainless steel options are also available. The design of the support stand allows rotation of the fan casing to achieve different discharge directions.

Motor

All motors are Totally Enclosed and Fan Cooled. Standard protection rating is IP55 but can be upgraded to IP56, IP66 or IP66 in stainless steel, upon request. The motors are single/three phase, 50/60 Hz suitable for 240/415 volts.

Electrical Switchgear

Chem 75 - 110 single-phase fans are supplied with 1m electrical cable.

Chem 125 - 400 fans are supplied with wiring to an integral weatherproof isolator.

Explosion Proof

Explosion proof motors can be supplied upon request.

Standard Colour

All PP - Equivalent to PANTONE Warm Grey 1C,

All GRP - Equivalent to PANTONE 430

Identification

All fans are labelled with nameplate securely attached showing the model number, serial number, drive duty, direction of rotation and date of manufacture.

Accessories

- Anti-vibration ruber or spring mounts
- Condensate water drain nipple (standard 25dia on Chem 125 - 400)
- Shower-proof motor cover
- Inlet/Outlet flexible connection sleeves, flanges and duct connection options
- Adjustable-pitch roof brackets and mounting options
- Speed control phase inverters

Optional (minimum quantities may apply)

- Full range of colours
- Flame Retardant construction
- Construction suitable for High Temperature
- Anti-static casings and impellers
- Ultra Violet protection
- Frequency Inverter Speed Controller

Thermal and Chemical Resistance

The temperature of the air and gases must not exceed that specified for the materials:

Material	max. Temp. [°C]
PVC	60
PP	80
GRP	100
PVDF	120

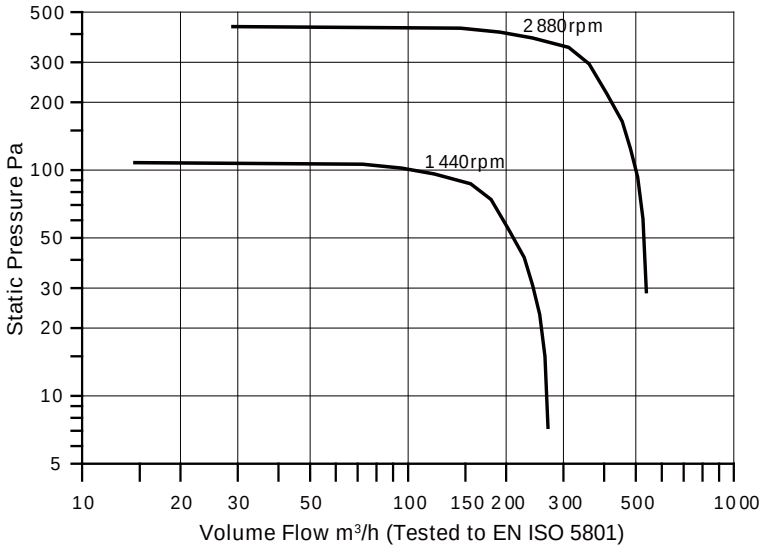
Please contact our sales engineers for chemical resistance information.

Drive Arrangement

Chemco fans are supplied in Direct Drive arrangement.

Belt Drive arrangements are available upon request.

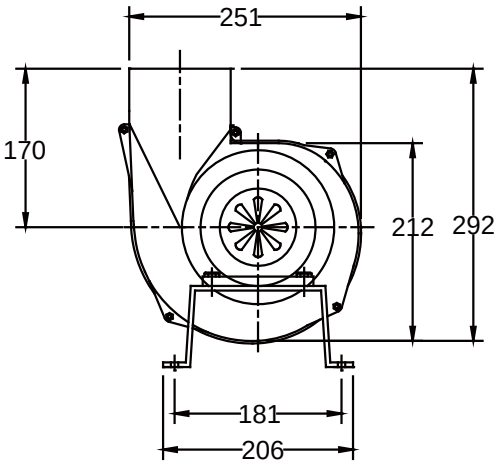
CHEM 110FC

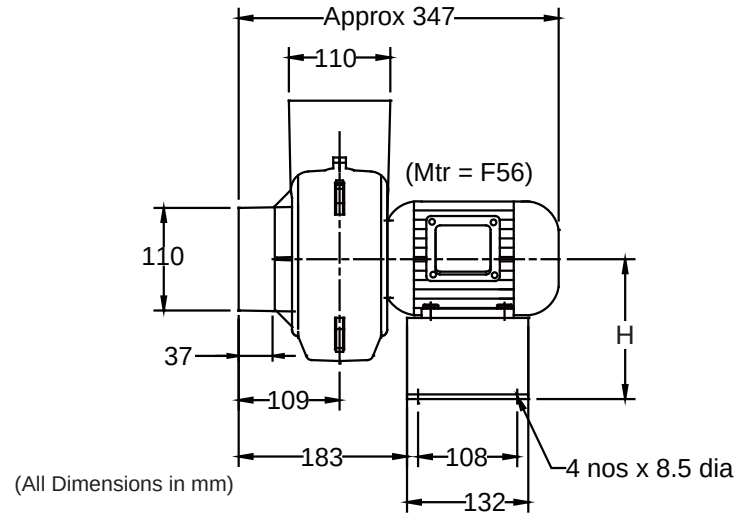


Performance Data

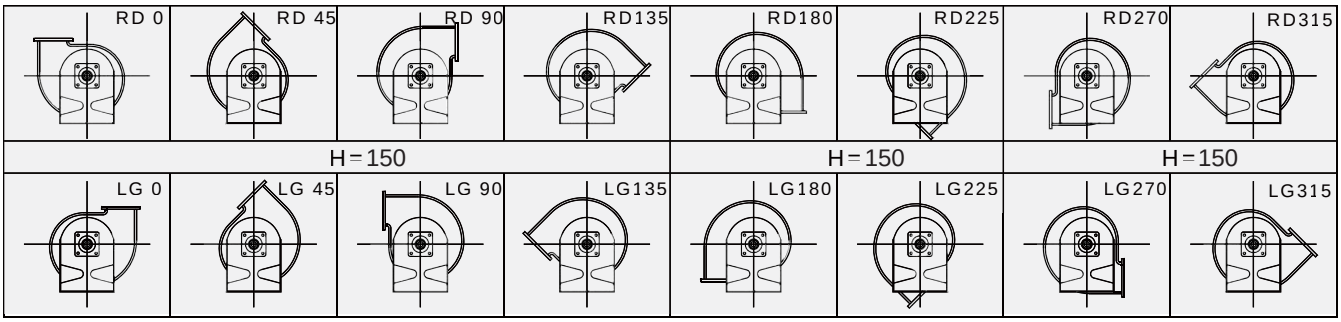
CHEM 110FC		1440rpm	1440rpm	2880rpm	2880rpm
U	V	230	400	230	400
f	Hz	50	50	50	50
Phase	~	1	3	1	3
P	kW	0.05	0.05	0.11	0.11
Ia	A	0.4	0.1	1.2	0.3
$\dot{V}_{max.}$	m³/h	279	279	558	558
n	min⁻¹	1440	1440	2880	2880
L_W	dB(A)	43	43	57	57
4	Enclosure	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1
)	kg	5.6	5.6	5.6	5.6

Dimensional Data

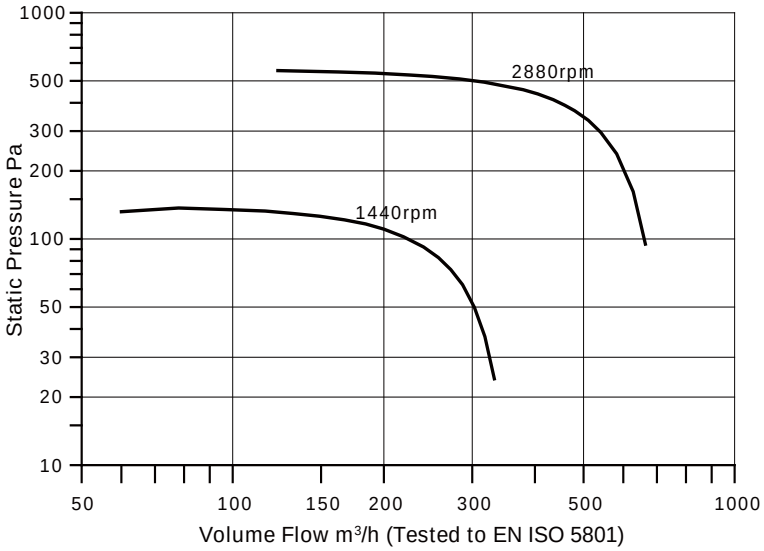




(All Dimensions in mm)



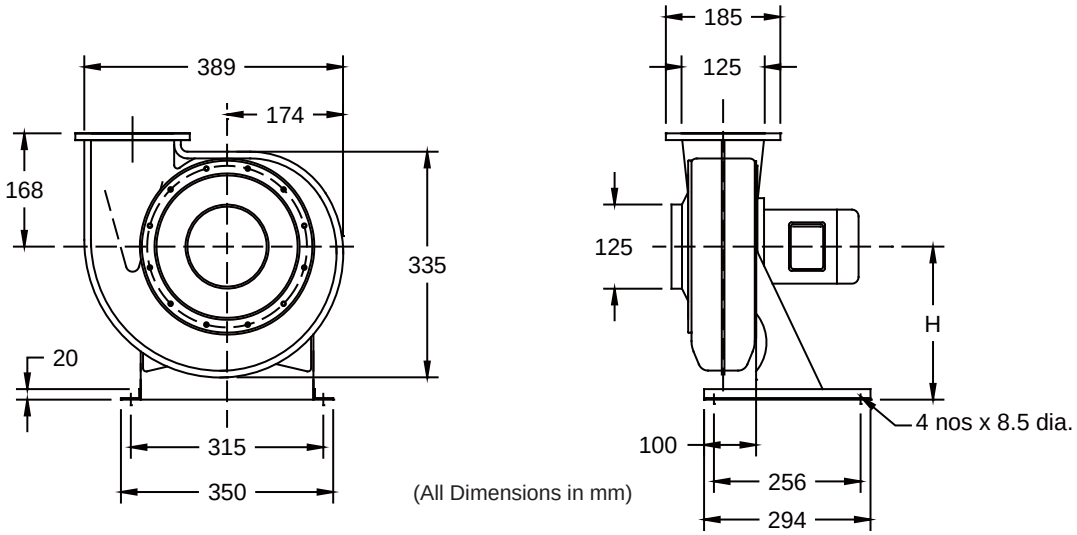
CHEM 125

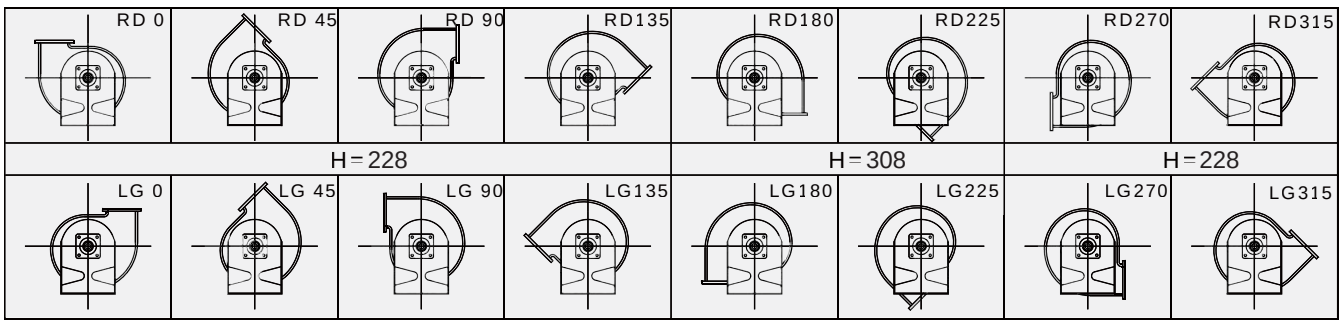


Performance Data

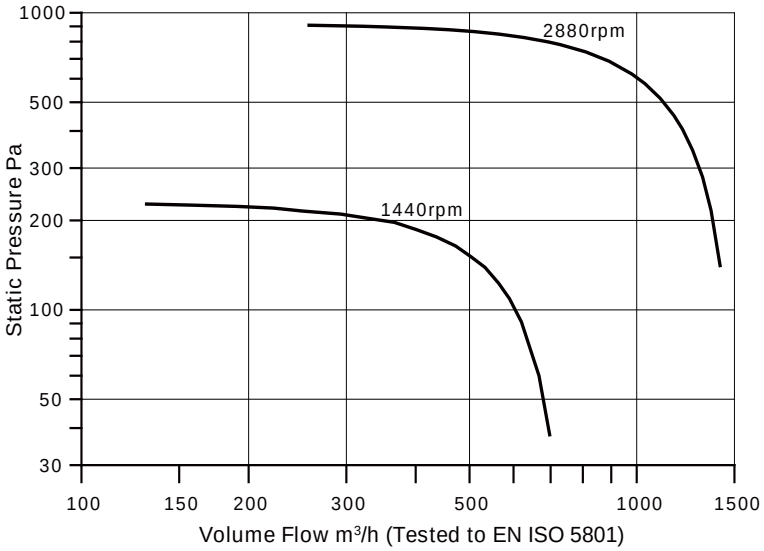
CHEM 125		1440rpm	1440rpm	2880rpm	2880rpm
U	V	230	400	230	400
f	Hz	50	50	50	50
Phase	~	1	3	1	3
P	kW	0.25	0.25	0.37	0.37
Ia	A	2.4	0.64	3.6	0.88
$\dot{V}_{max.}$	m³/h	333	333	664	664
n	min^{-1}	1440	1440	2880	2880
L_W	dB(A)	44	44	58	58
4	Enclosure	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1
)	kg	18	18	18	18

Dimensional Data





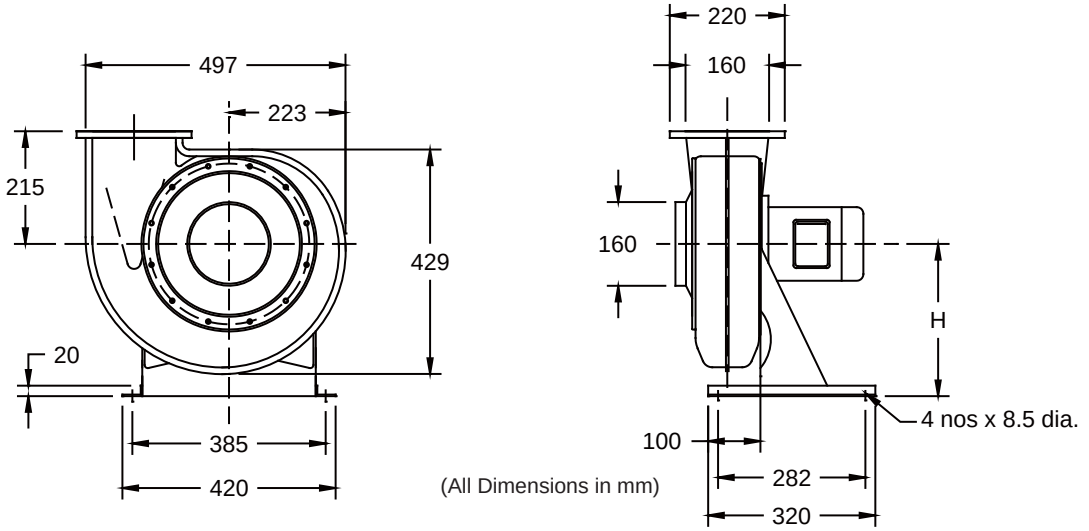
CHEM 160

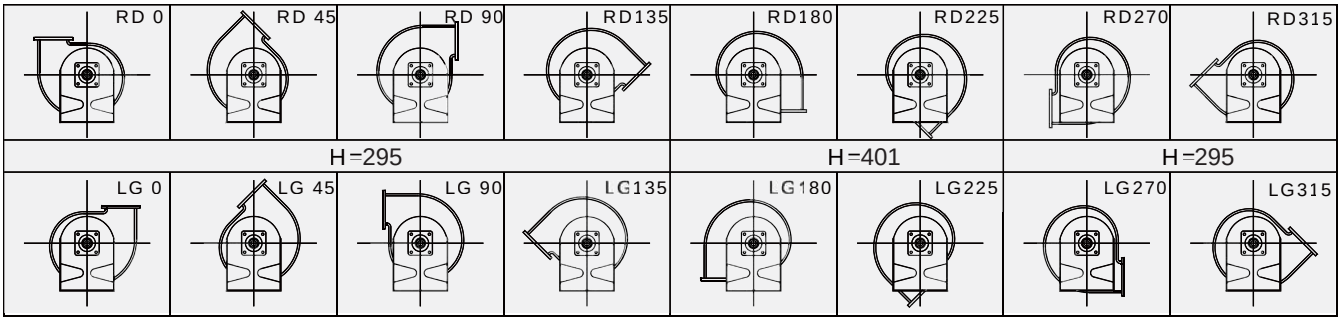


Performance Data

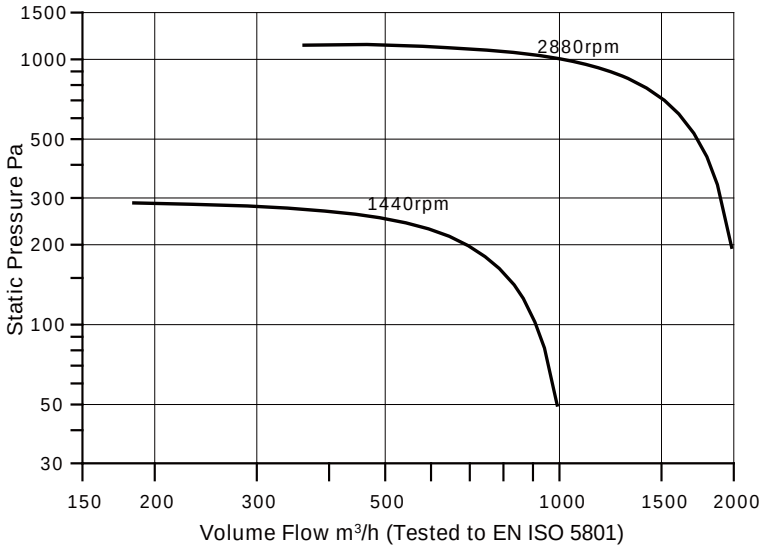
CHEM 160		1440rpm	1440rpm	2880rpm	2880rpm
U	V	230	400	230	400
f	Hz	50	50	50	50
Phase	~	1	3	1	3
P	kW	0.25	0.25	0.55	0.55
Ia	A	1.6	0.64	4.5	1.4
$\dot{V}_{max.}$	m³/h	696	696	1413	1413
n	min⁻¹	1440	1440	2880	2880
L_W	dB(A)	49	49	60	60
4	Enclosure	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1
)	kg	32	32	32	32

Dimensional Data





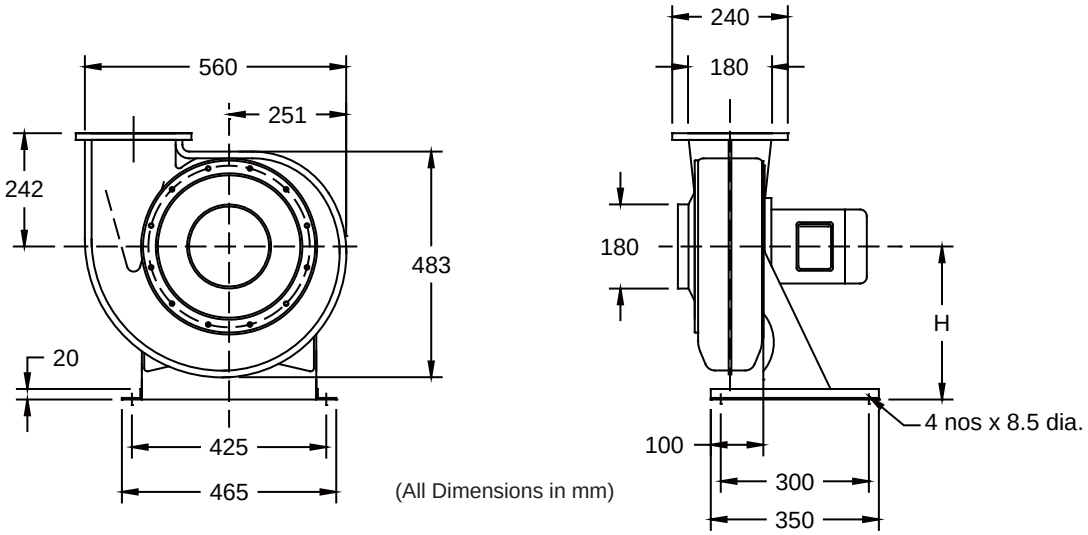
CHEM 180



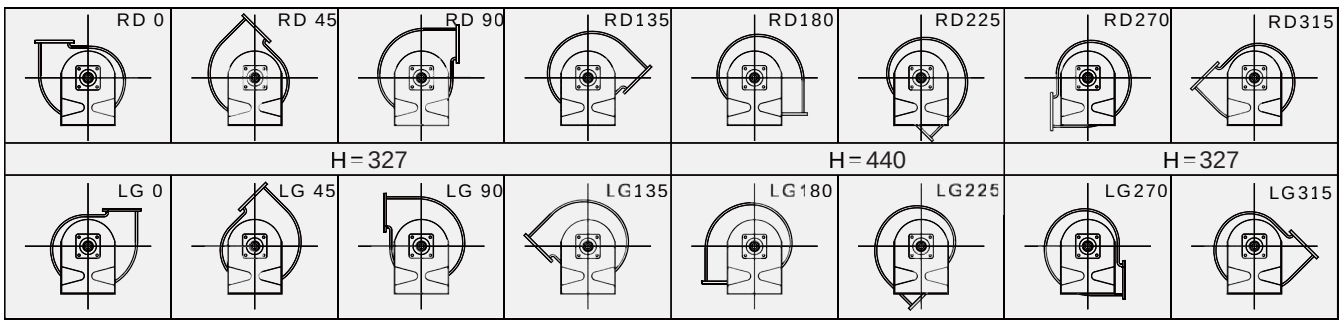
Performance Data

	CHEM 180		950rpm	950rpm	1440rpm	1440rpm	2880rpm	2880rpm
	U	V	230	400	230	400	230	400
	f	Hz	50	50	50	50	50	50
	Phase	~	1	3	1	3	1	3
	P	kW	0.25	0.25	0.25	0.25	1.1	1.1
	Ia	A	2.6	0.73	2.4	0.64	9.5	2.46
	$\dot{V}_{max.}$	m³/h	650	650	991	991	1983	1983
	n	min^{-1}	950	950	1440	1440	2880	2880
	L_W	dB(A)	43	43	52	52	63	63
	4	Enclosure	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC
	Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1	-	F2S/F2
	)	kg	33	33	33	33	38	38

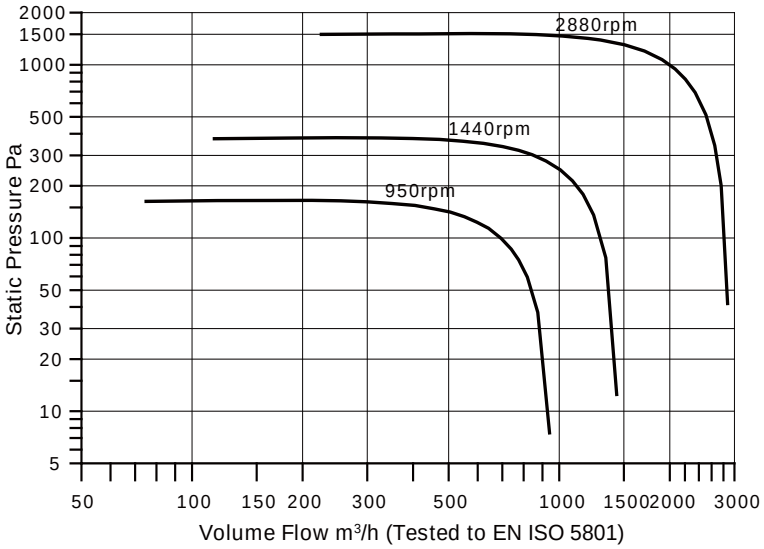
Dimensional Data



(All Dimensions in mm)



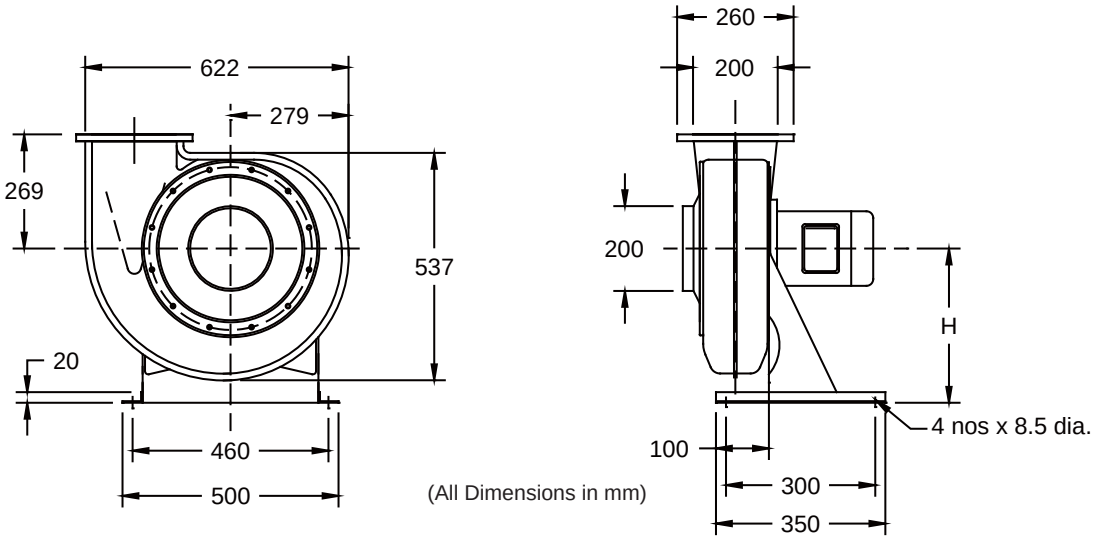
CHEM 200

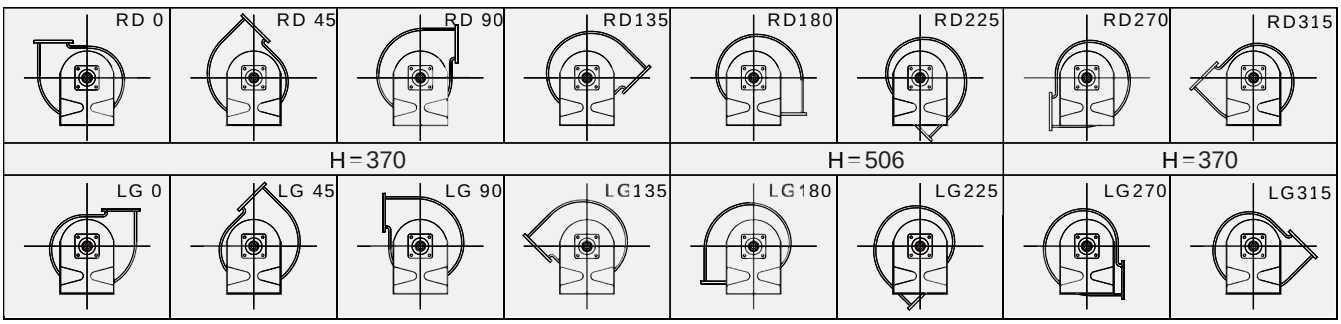


Performance Data

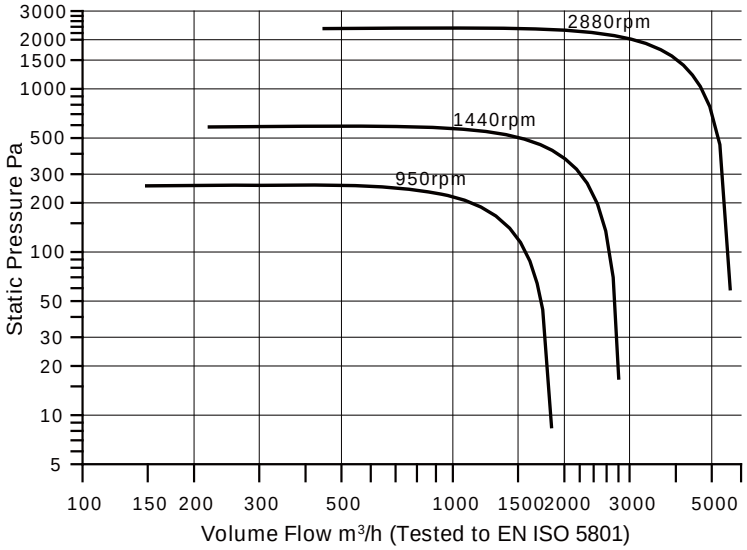
CHEM 200		950rpm	950rpm	1440rpm	1440rpm	2880rpm	2880rpm
U	V	230	400	230	400	230	400
f	Hz	50	50	50	50	50	50
Phase	~	1	3	1	3	1	3
P	kW	0.25	0.25	0.37	0.37	1.5	1.5
Ia	A	2.6	1.27	3.2	1.21	11	3.18
$\dot{V}_{max.}$	m³/h	950	950	1438	1438	2870	2870
n	min^{-1}	950	950	1440	1440	2880	2880
L_W	dB(A)	44	44	53	53	70	70
4	Enclosure	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1	-	F2S/F2
)	kg	34	34	34	34	43	43

Dimensional Data





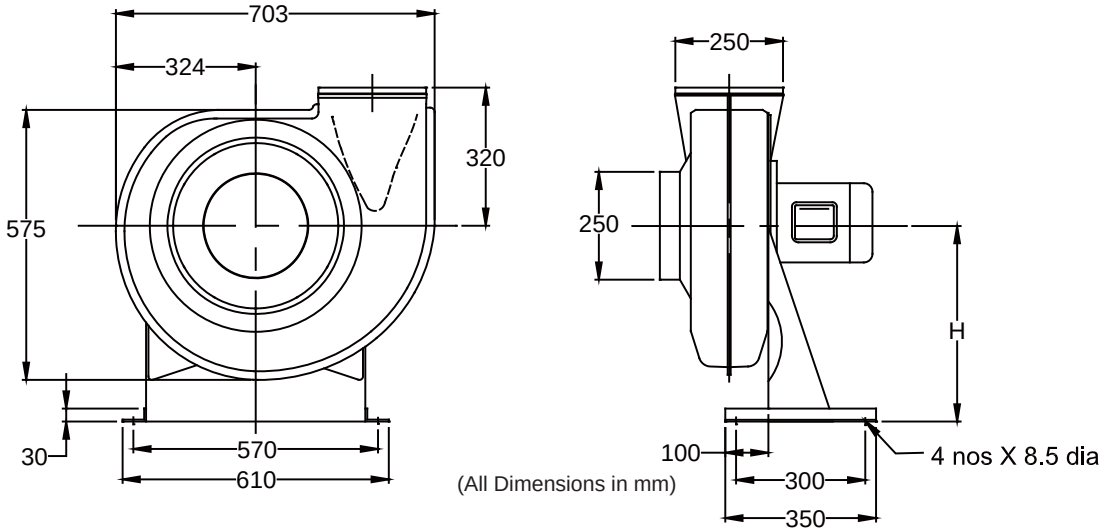
CHEM 250

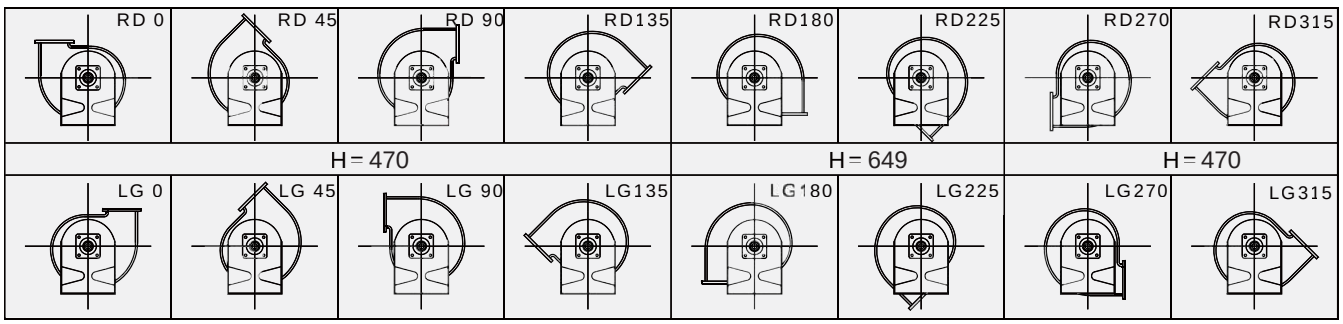


Performance Data

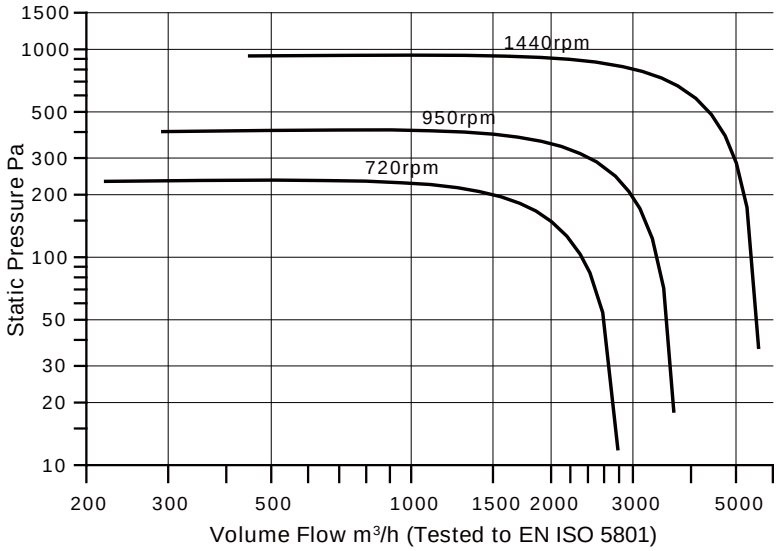
CHEM 250		950rpm	950rpm	1440rpm	1440rpm	2880rpm	2880rpm
U	V	230	400	230	400	400	400
f	Hz	50	50	50	50	50	50
Phase	~	1	3	1	3	3	3
P	kW	0.37	0.37	0.75	0.75	4.0	5.5
Ia	A	3.5	1.27	5.6	1.99	7.36	11.1
$\dot{V}_{max.}$	m³/h	1849	1849	2804	2804	3930	5609
n	min^{-1}	950	950	1440	1440	2880	2880
L_W	dB(A)	50	50	62	62	73	73
4	Enclosure	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	-	F1S/F1	-	F1S/F1	F4	F5
)	kg	38	38	38	38	50	58

Dimensional Data





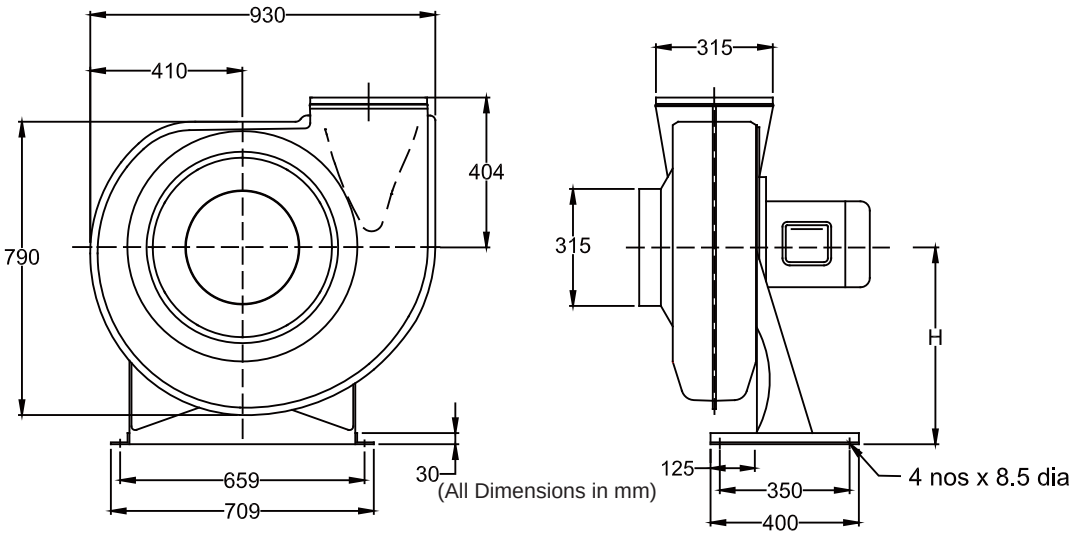
CHEM 315

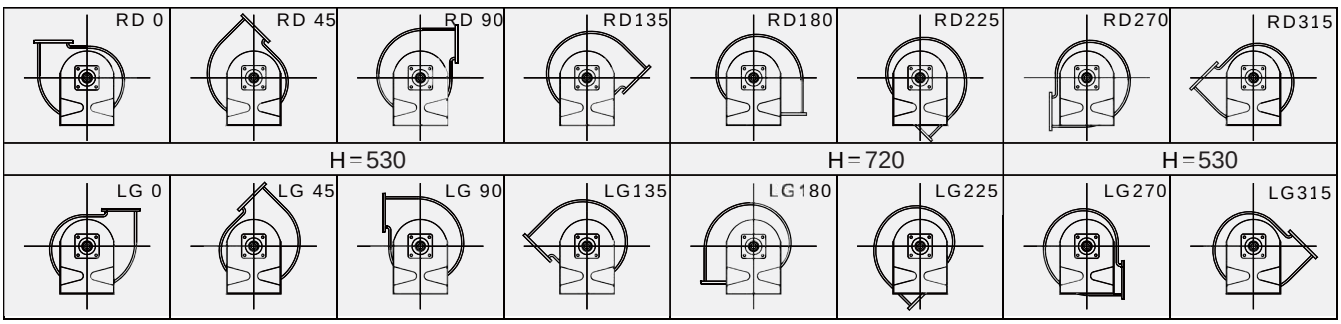


Performance Data

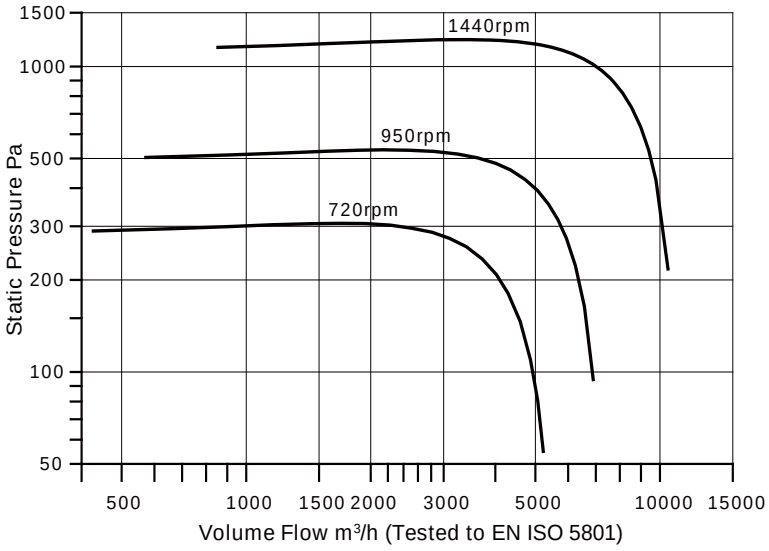
CHEM 315		720rpm	950rpm	950rpm	1440rpm	1440rpm	1440rpm	1440rpm
U	V	400	230	400	230	400	230	400
f	Hz	50	50	50	50	50	50	50
Phase	~	3	1	3	1	3	1	3
P	kW	0.37	0.75	0.75	1.5	1.5	2.2	2.2
Ia	A	1.42	6	2.16	10.5	3.66	14.5	5.08
$\dot{V}_{max.}$	m³/h	2804	3699	3699	4000	4000	5609	5609
n	min^{-1}	720	950	950	1440	1440	1440	1440
L_W	dB(A)	52	58	58	67	67	67	67
4	Enclosure	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC
Freq	Invertor (page II)	F1S/F1	-	F1S/F1	-	F2S/F2	-	F3S/F3
)	kg	61	61	61	66	66	78	78

Dimensional Data





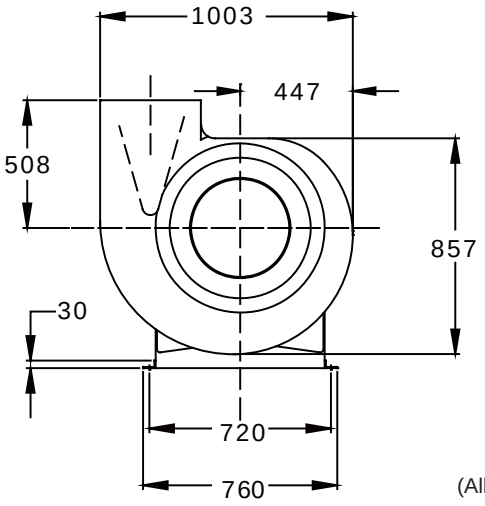
CHEM 400

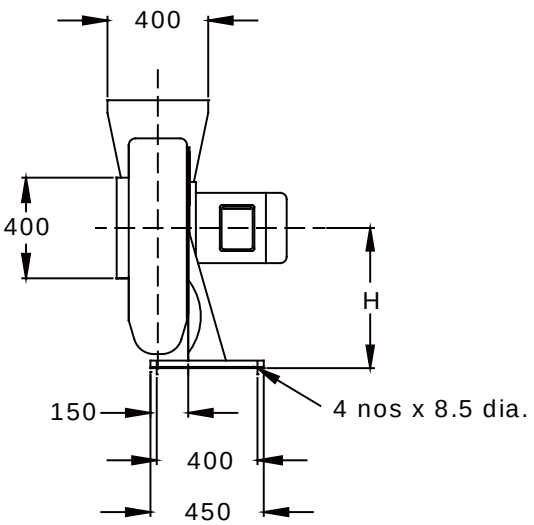


Performance Data

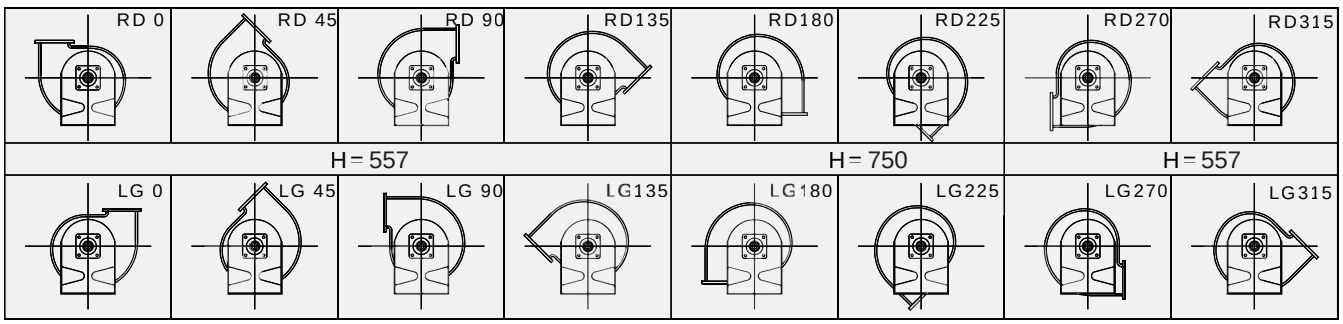
CHEM 400			720rpm	950rpm	950rpm	950rpm	950rpm	950rpm	1440rpm	1440rpm	1440rpm
U	V		400	230	400	230	400	400	400	400	400
f	Hz		50	50	50	50	50	50	50	50	50
Phase	~		3	1	3	1	3	3	3	3	3
P	kW		0.75	1.1	1.1	1.5	1.5	2.2	4.0	5.5	7.5
Ia	A		2.53	7.2	3.31	10	4	5.53	8.03	12	15.2
$\dot{V}_{max.}$	m³/h		5225	3400	3400	5520	5520	6900	4972	9215	10450
n	min^{-1}		720	950	950	950	950	950	1440	1440	1440
L_W	dB(A)		61	67	67	67	67	67	73	73	73
4	Enclosure		TEFC	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC	TEFC	
Freq	Invertor (page II)		F1S/F1	-	F2S/F2	-	F2S/F2	F3S/F3	F4	F5	F6
)	kg		95	90	90	98	98	106	108	127	142

Dimensional Data

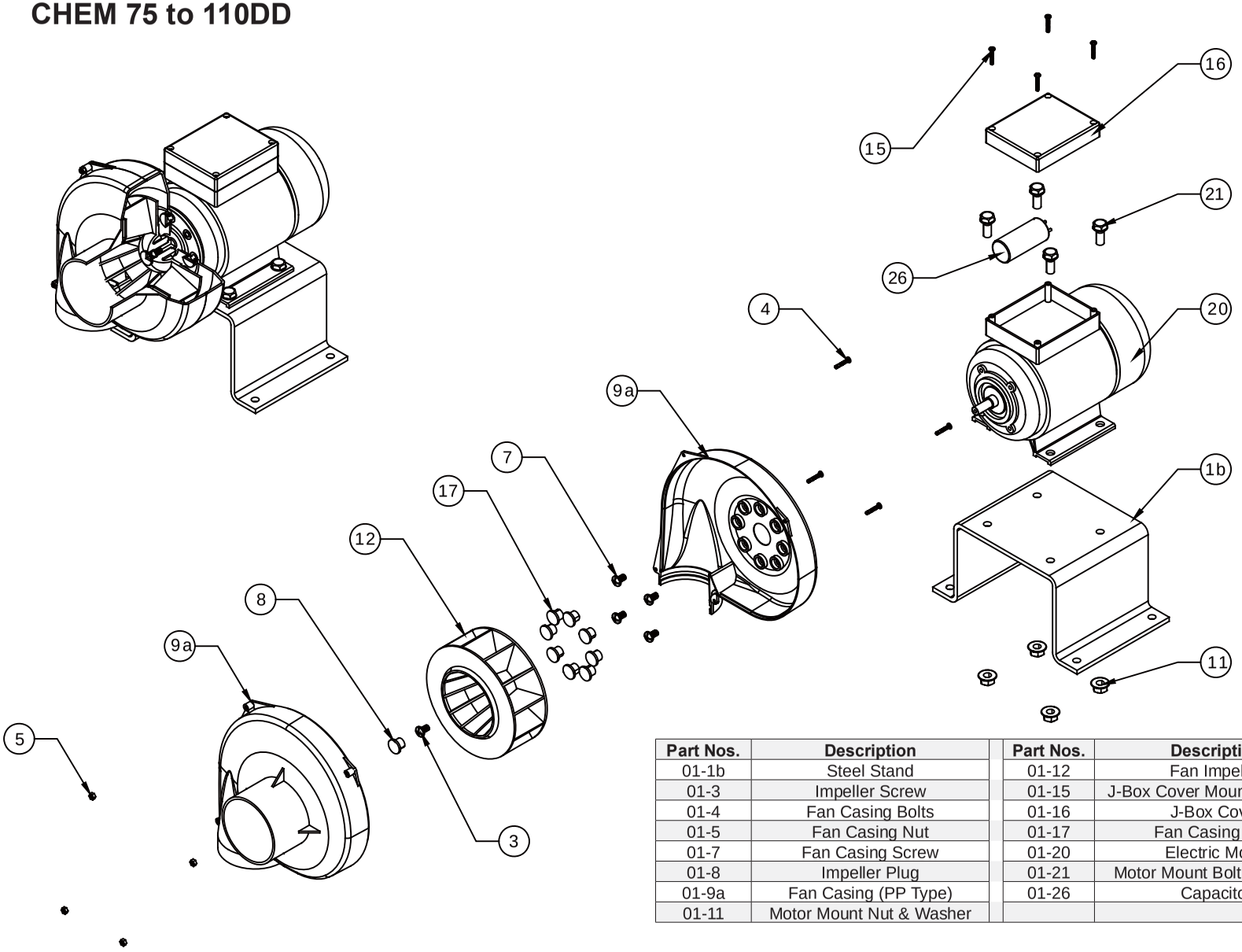




(All Dimensions in mm)



CHEM 75 to 110DD

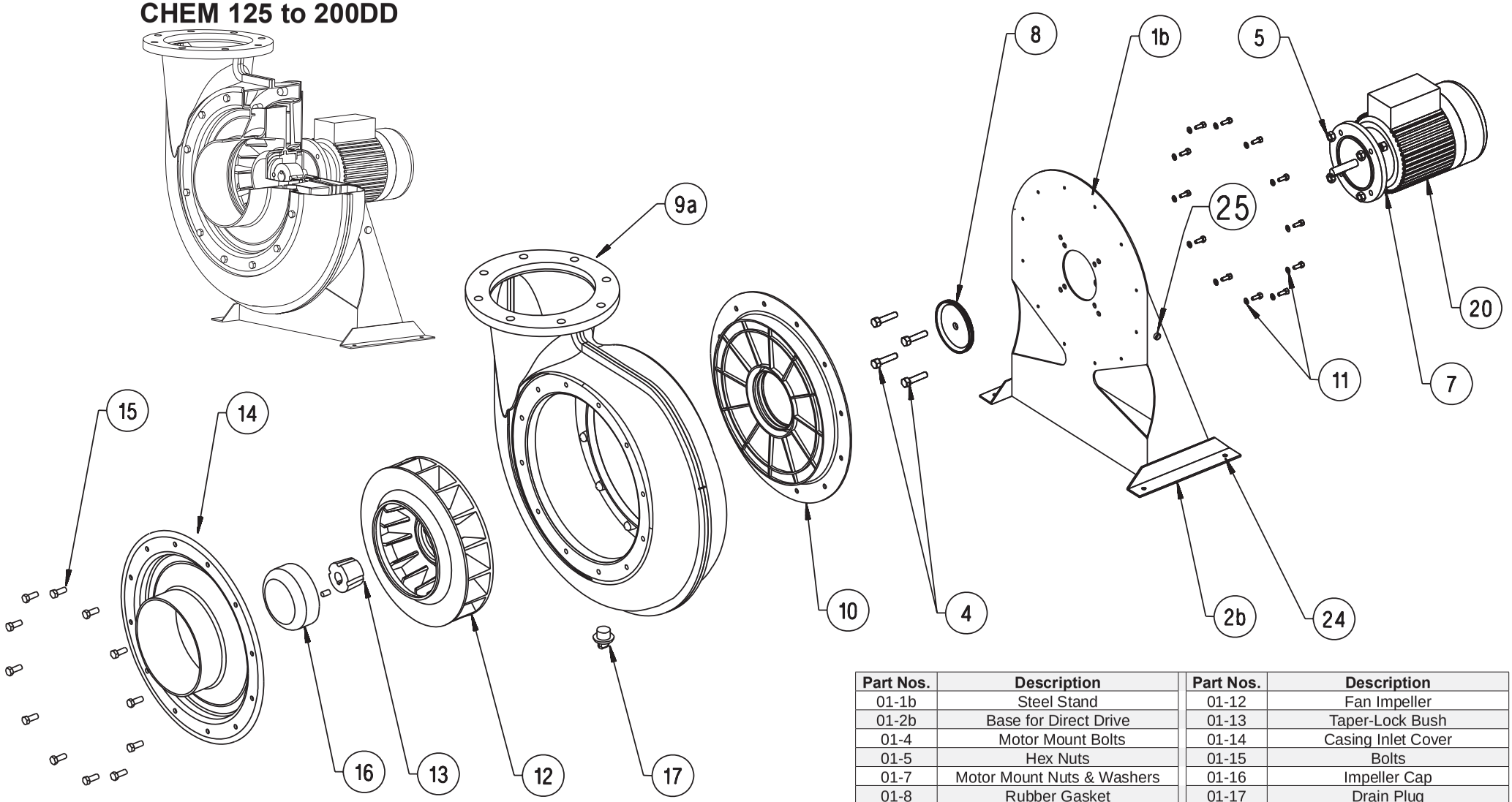


Part Nos.	Description		Part Nos.	Description
01-1b	Steel Stand		01-12	Fan Impeller
01-3	Impeller Screw		01-15	J-Box Cover Mounting Screw
01-4	Fan Casing Bolts		01-16	J-Box Cover
01-5	Fan Casing Nut		01-17	Fan Casing Plug
01-7	Fan Casing Screw		01-20	Electric Motor
01-8	Impeller Plug		01-21	Motor Mount Bolt & Washer
01-9a	Fan Casing (PP Type)		01-26	Capacitor
01-11	Motor Mount Nut & Washer			

CHEMCO

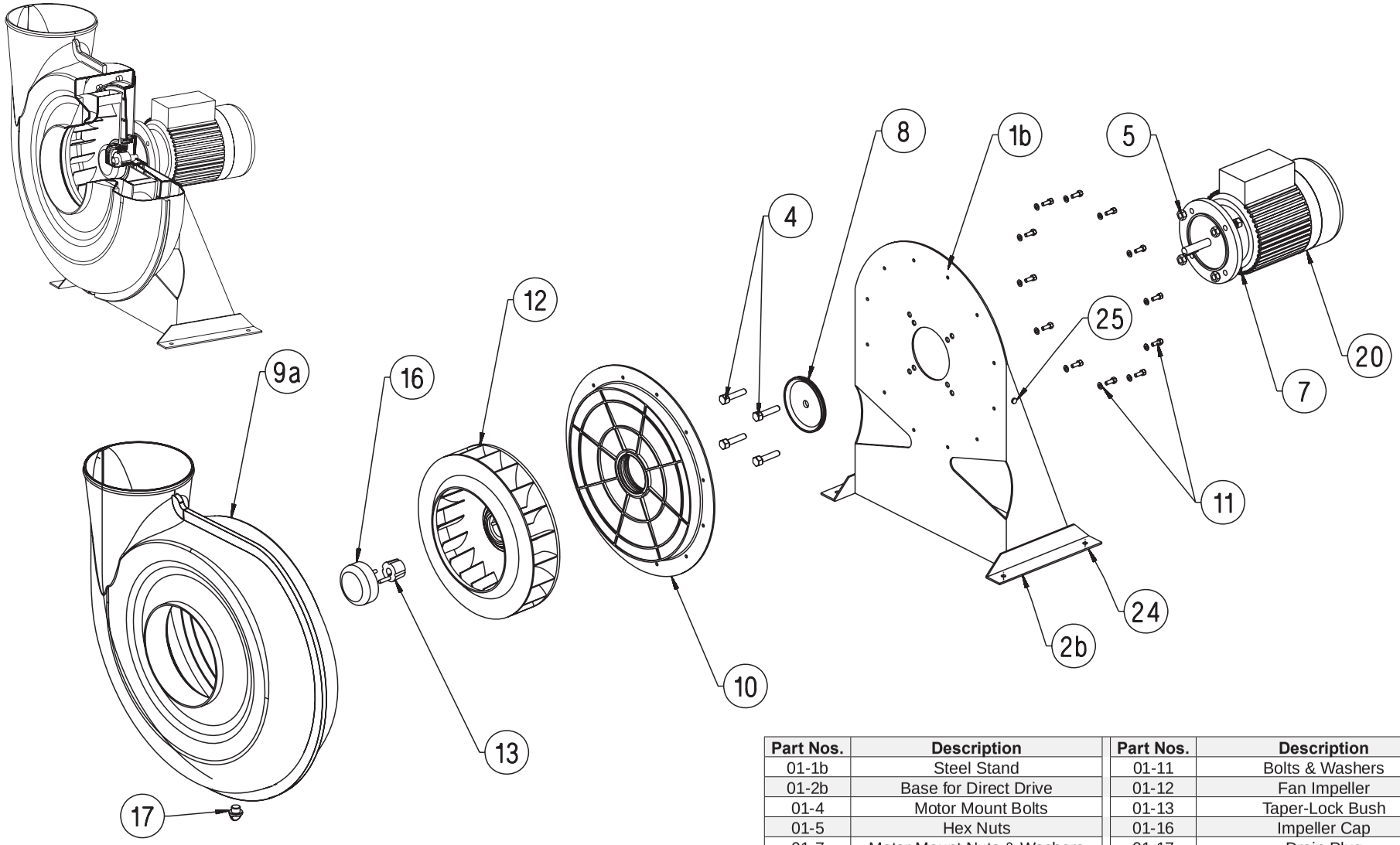
Assembly and Mounting

CHEM 125 to 200DD



Part Nos.	Description	Part Nos.	Description
01-1b	Steel Stand	01-12	Fan Impeller
01-2b	Base for Direct Drive	01-13	Taper-Lock Bush
01-4	Motor Mount Bolts	01-14	Casing Inlet Cover
01-5	Hex Nuts	01-15	Bolts
01-7	Motor Mount Nuts & Washers	01-16	Impeller Cap
01-8	Rubber Gasket	01-17	Drain Plug
01-9a	Fan Casing (PP Type)	01-20	Electric Motor
01-10	Casing Back Cover	01-24	Mounting Holes
01-11	Screws & Washers	01-25	Hoisting Holes

CHEM 250 to 315DD

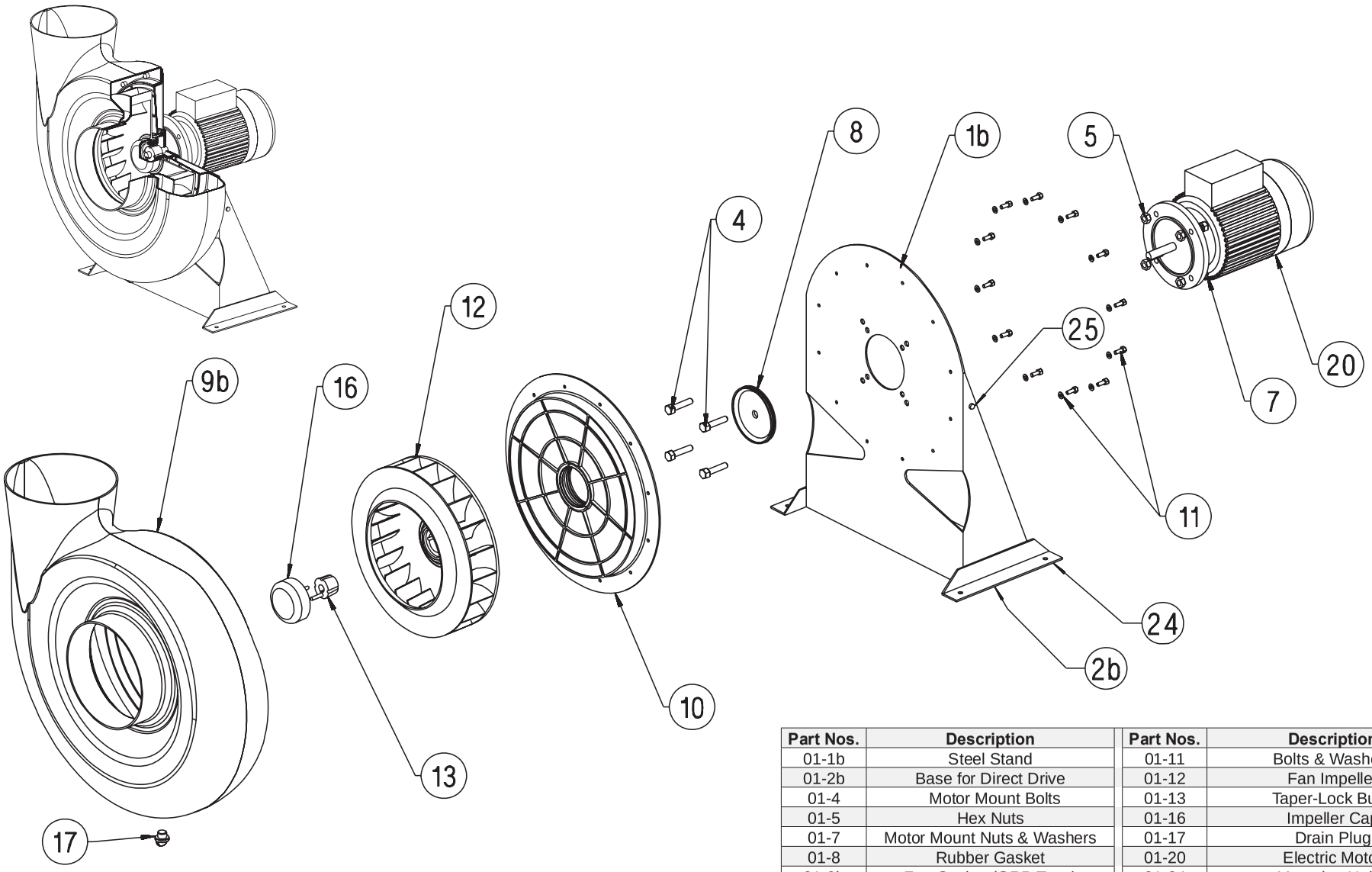


Part Nos.	Description	Part Nos.	Description
01-1b	Steel Stand	01-11	Bolts & Washers
01-2b	Base for Direct Drive	01-12	Fan Impeller
01-4	Motor Mount Bolts	01-13	Taper-Lock Bush
01-5	Hex Nuts	01-16	Impeller Cap
01-7	Motor Mount Nuts & Washers	01-17	Drain Plug
01-8	Rubber Gasket	01-20	Electric Motor
01-9a	Fan Casing (PP Type)	01-24	Mounting Holes
01-10	Casing Back Cover	01-25	Hoisting Holes

CHEMCO

Assembly and Mounting

CHEM 400DD



Part Nos.	Description	Part Nos.	Description
01-1b	Steel Stand	01-11	Bolts & Washers
01-2b	Base for Direct Drive	01-12	Fan Impeller
01-4	Motor Mount Bolts	01-13	Taper-Lock Bush
01-5	Hex Nuts	01-16	Impeller Cap
01-7	Motor Mount Nuts & Washers	01-17	Drain Plug
01-8	Rubber Gasket	01-20	Electric Motor
01-9b	Fan Casing (GRP Type)	01-24	Mounting Holes
01-10	Casing Back Cover	01-25	Hoisting Holes

Ace Advance Engineering. •
Tel: +603-7883 0064 • Hp: 016-2123 249 • www.chemcofans.com • tong36@gmail.com