



**EBARA**

# **EBARA CONSTANT SPEED PRESSURE BOOSTER UNIT**

**MODEL UD3**



# CONSTANT SPEED PRESSURE BOOSTER UNIT

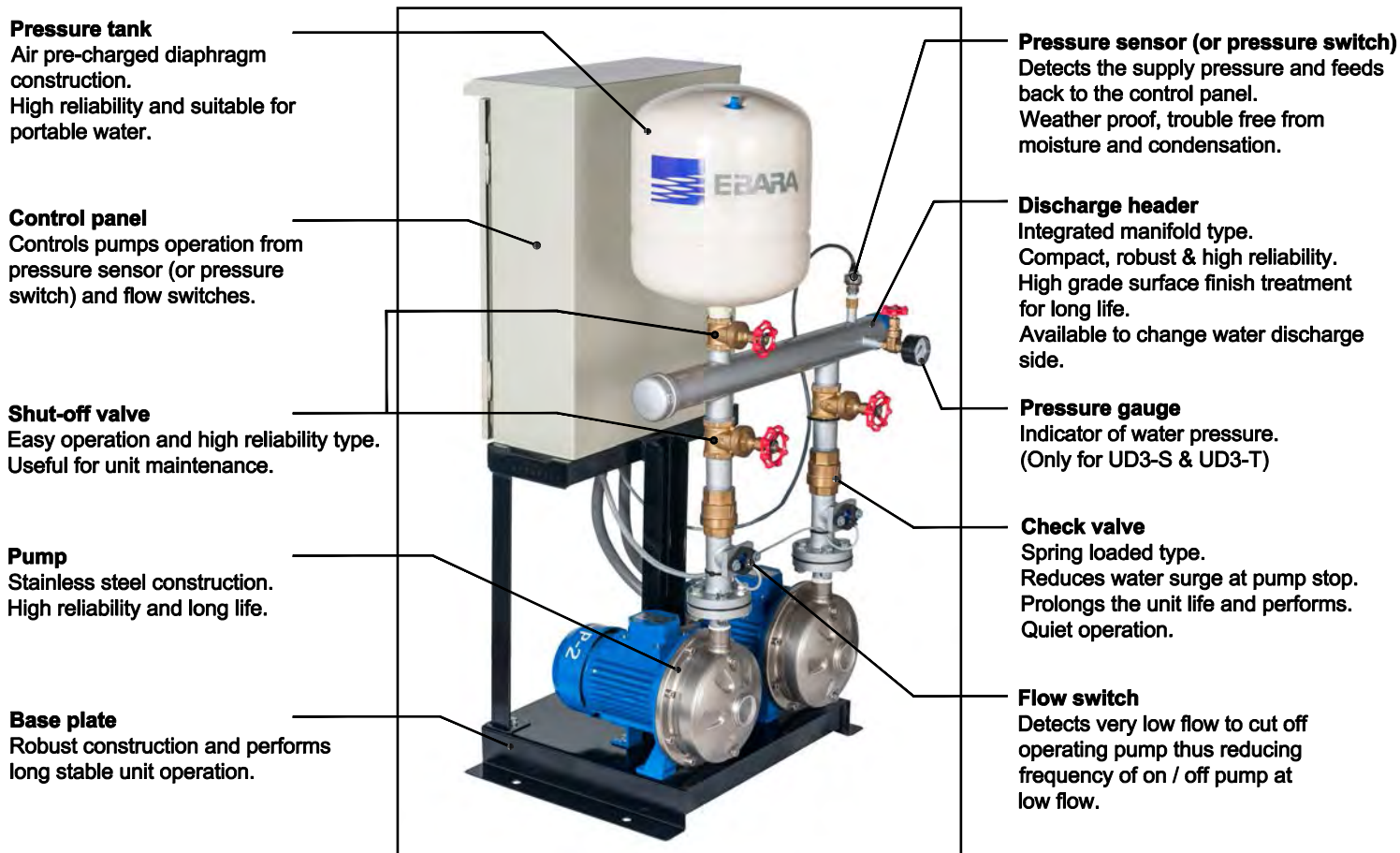
## MODEL : UD3

### APPLICATIONS

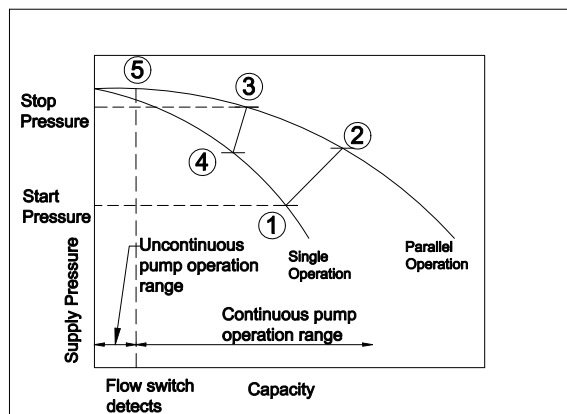
1. Domestic : High-rise buildings, Condominiums, Apartments etc.
2. Commercial : Office buildings, Hotels, Shopping centers etc.
3. Industrial : Factory utility, Manufacturing & processing industries applications etc.
4. Social service : Schools, Hospitals etc.

### FEATURES

1. *All components are integrated* on a rugged steel base. It is *ready for use* by only connecting with supply piping and to the power source.
2. Layout is *very compact* and *much lighter* than conventional units, It occupies *lesser space* and requires *easier installation* than conventional units.
3. The flow control system which *prevents frequent start and stop* of pumps, requires only small hydro-pneumatic pressure tank and ensures *constant fresh water supply*.
4. Pumps are in parallel operation for high demand and alternating in low demand, suitable for *energy-saving*.
5. *Various options are available* on request.



### CONTROL SYSTEM



- Step 1) Both pumps are stopped when water tank is fully charged. In this condition water is supplied from the pressure tank, and water pressure in tank gradually decreases.
- Step 2) When water pressure decreases, first pump starts at pressure point ① and water is supplied from pump.
- Step 3) When more water is required and water pressure decreases to lower point ① again, second pump also starts, operation point shifts to point ② and system shifts to parallel operation.
- Step 4) When second pump starts, the timer starts to count. After that when water consumption decreases, the water pressure increases to point ③, and 60 seconds pass after second pump starts. First pump is stopped and operation point shifts to point ④.
- Step 5) When water consumption further decreases, and the flow switch detects small flow rate. Second pump stops (point ⑤). Flow switch detecting point is at small capacity point, therefore pump continuous operation range is much wider, accordingly pump start frequency is greatly decreased.

# CONSTANT SPEED PRESSURE BOOSTER UNIT

## MODEL : UD3

### ■ SPECIFICATIONS STANDARD

Model		UD3-S	UD3-D	UD3-T
Handled liquid property		Fresh water, 0-60 degree C (Except CMA1.00 : 0-40 degree C)		
Installation		Outdoor design		
Operation system	Pump speed	Constant		
	Control	Pressure switch & flow switch*	Pressure sensor & flow switch*	Pressure switch & flow switch*
Power source		AC, Three phases, 50Hz, 380V		
Max. working pressure		6 to 10 kg/cm <sup>2</sup> G (refer to model)		
Allowable suction pressure		Min. : -0.3 kg/cm <sup>2</sup> G, Max. : Refer to model		
Pump operation No.		1	2	3
Pump model		CDX, 2CDX & 3M	CMA, CDX, 2CDX & 3M	CMA, CDX, 2CDX & 3M
Control panel	Starting method	DOL (Up to 5.5kW) or Star-Delta (7.5 to 11kW)		
	Construction	Weather & dust proof type		
	Operation key	Push button & selector switch type	Push button & slide switch type	Push button & selector switch type
Pressure tank	Construction	Air pre-charged diaphragm type		
	Capacity	24 liters (standard)		
	Quantity	Refer to model		
Accessories		Control panel & support, Flow switch*, Pressure gauge* <sup>1</sup> Common base, Pressure tank, Piping & valves, Electrical wiring		

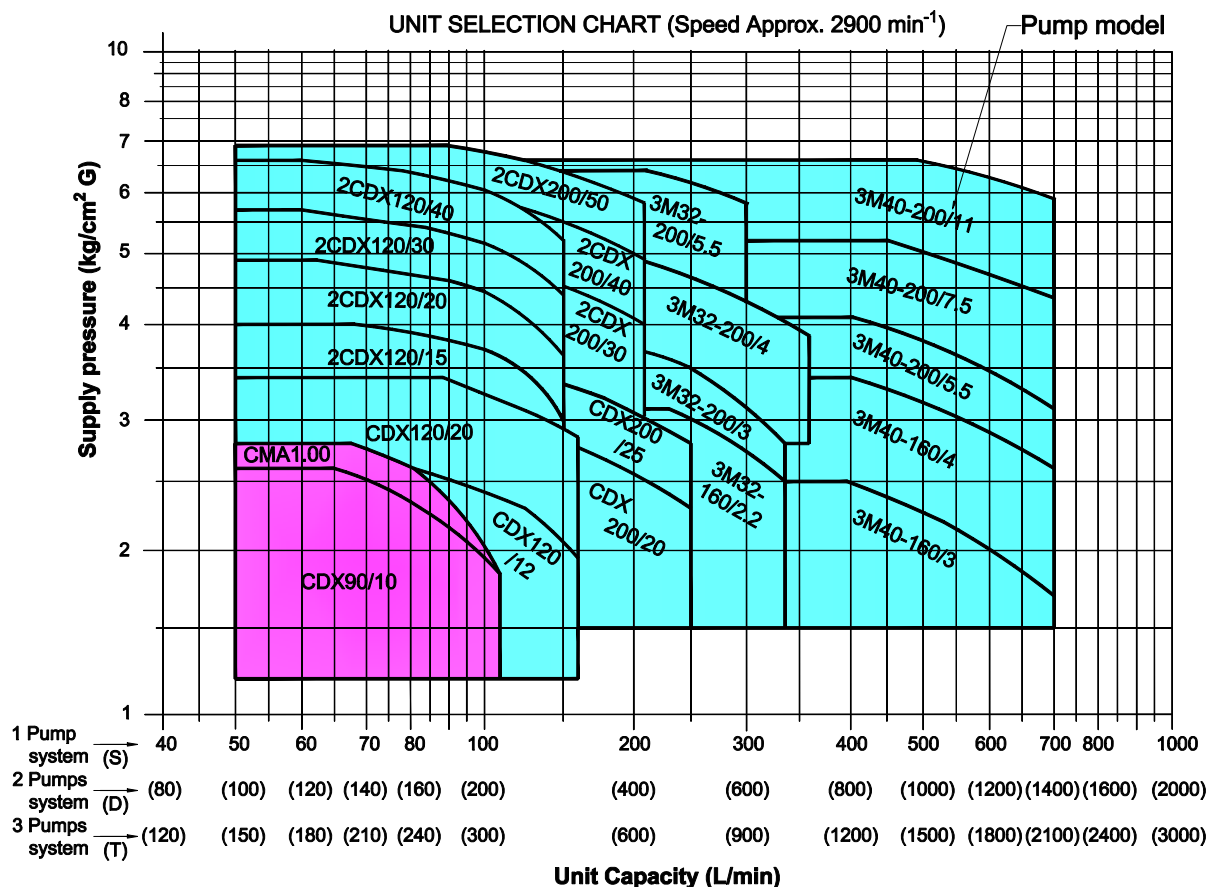
### OPTION

Pump model	Other models upon request
Pressure tank	Large capacity upon request
Others	On request

Note) \* In case of pump model CDX90/10 & CMA1.00, flow switch is not provided.

\*1 In UD3-S, UD3-T, pressure gauge is provided.

### ■ SELECTION CHART AND MODEL CODE



#### Pressure Booster Unit Model Code

UD3 -S CDX 90/10

Pump model

Operation system

Constant speed pressure booster

S : 1 Pump operation system  
D : 2 Pumps operation system  
T : 3 Pumps operation system

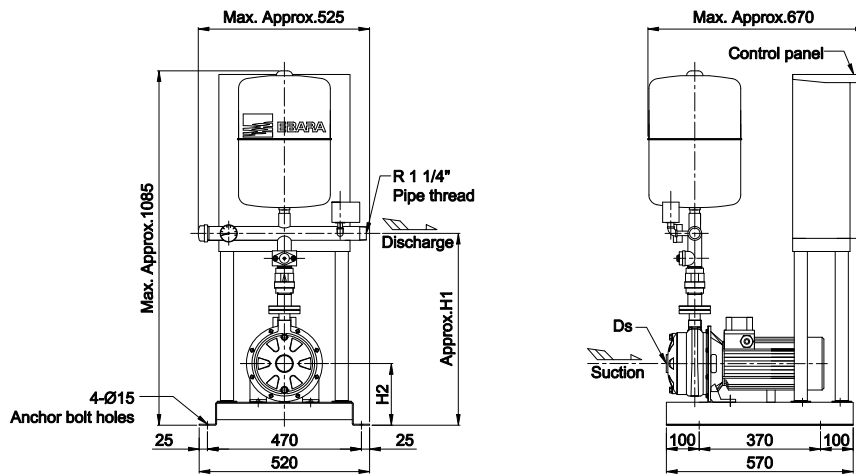
Note : Models for pump CMA1.00 & CDX90/10 are UD3-D and UD3-T (2 pumps and 3 pumps operation system) only.

# CONSTANT SPEED PRESSURE BOOSTER UNIT

## MODEL : UD3

### ■ DIMENSIONS

#### MODEL UD3-S CDX & 2CDX



Unit : H1 to H2 (mm.)  
: Weight (kg.)

**DIMENSIONS TABLE**

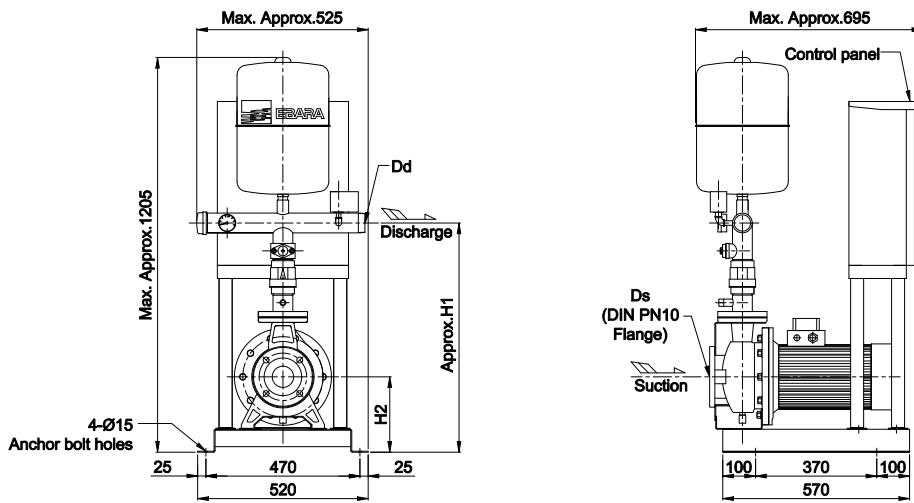
MODEL	kW	Ds	H1	H2	Approx. weight
UD3-S CDX 120/12	0.9	G1 1/4"	565	176	80
UD3-S CDX 120/20	1.5	G1 1/4"	585	188	85
UD3-S 2CDX 120/15	1.1	G1 1/4"	565	176	83
UD3-S 2CDX 120/20	1.5	G1 1/4"	565	176	85
UD3-S 2CDX 120/30	2.2	G1 1/4"	585	188	93
UD3-S 2CDX 120/40	3.0	G1 1/4"	585	188	95
UD3-S CDX 200/20	1.5	G1 1/2"	565	176	83
UD3-S CDX 200/25	1.8	G1 1/2"	585	188	83
UD3-S 2CDX 200/30	2.2	G1 1/2"	565	176	93
UD3-S 2CDX 200/40	3.0	G1 1/2"	585	188	95
UD3-S 2CDX 200/50	3.7	G1 1/2"	585	188	103

Note : 1) All specifications subject to change without prior notice.

# CONSTANT SPEED PRESSURE BOOSTER UNIT MODEL : UD3

## ■ DIMENSIONS

### MODEL UD3-S 3M



DIMENSIONS TABLE Unit : H1 to H2 (mm.)  
: Weight (kg.)

MODEL	kW	Ds	Dd	H1	H2	Approx. weight
UD3-S 3M32-160/2.2	2.2	DN50	R1 1/2"	635	202	100
UD3-S 3M32-200/3.0	3.0	DN50	R1 1/2"	685	230	108
UD3-S 3M32-200/4.0	4.0	DN50	R1 1/2"	685	230	110
UD3-S 3M32-200/5.5	5.5	DN50	R1 1/2"	685	230	125
UD3-S 3M40-160/3.0	3.0	DN65	R 2"	650	202	99
UD3-S 3M40-160/4.0	4.0	DN65	R 2"	650	202	113
UD3-S 3M40-200/5.5	5.5	DN65	R 2"	700	230	125
UD3-S 3M40-200/7.5	7.5	DN65	R 2"	700	230	128
UD3-S 3M40-200/11	11	DN65	R 2"	700	230	140

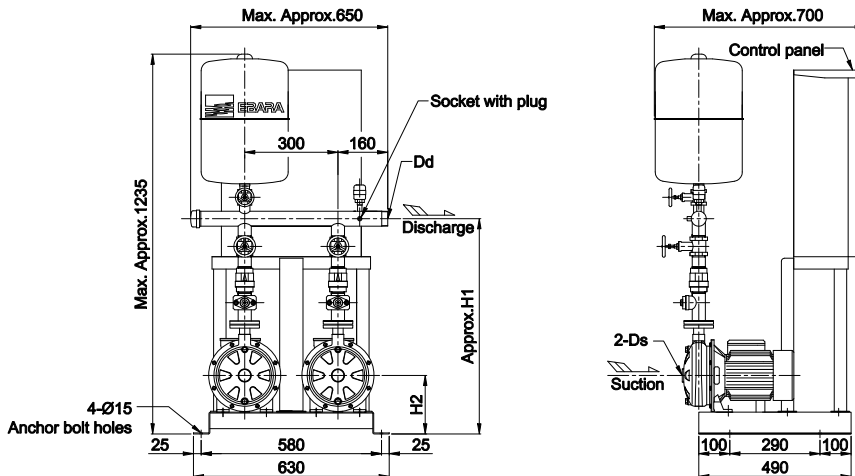
Note : 1) All specifications subject to change without prior notice.

# CONSTANT SPEED PRESSURE BOOSTER UNIT

## MODEL : UD3

### ■ DIMENSIONS

#### MODEL UD3-D CMA, CDX & 2CDX

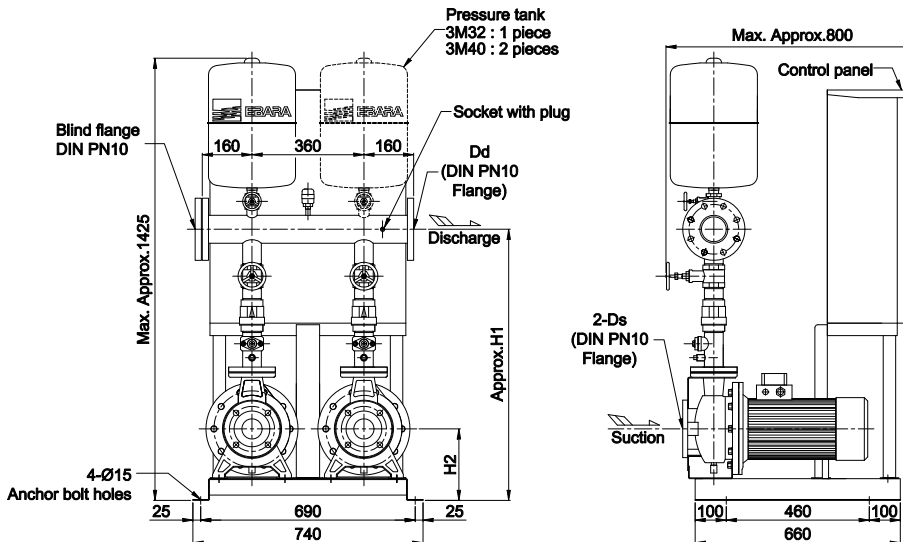


**DIMENSIONS TABLE**

Unit : H1 to H2 (mm.)  
: Weight (kg.)

MODEL	kW	Ds	Dd	H1	H2	Approx. weight
UD3 - D CMA 1.00	0.75	G 1"	R1 1/4"	630	167	97
UD3 - D CDX 90/10	0.75	G1 1/4"	R1 1/4"	630	176	97
UD3 - D CDX 120/12	0.9	G1 1/4"	R1 1/2"	675	176	99
UD3 - D CDX 120/20	1.5	G1 1/4"	R1 1/2"	695	188	109
UD3 - D 2CDX 120/15	1.1	G1 1/4"	R1 1/2"	675	176	106
UD3 - D 2CDX 120/20	1.5	G1 1/4"	R1 1/2"	675	176	109
UD3 - D 2CDX 120/30	2.2	G1 1/4"	R1 1/2"	695	188	125
UD3 - D 2CDX 120/40	3.0	G1 1/4"	R1 1/2"	695	188	130
UD3 - D CDX 200/20	1.5	G1 1/2"	R 2"	680	176	107
UD3 - D CDX 200/25	1.8	G1 1/2"	R 2"	700	188	107
UD3 - D 2CDX 200/30	2.2	G1 1/2"	R 2"	680	176	127
UD3 - D 2CDX 200/40	3.0	G1 1/2"	R 2"	700	188	130
UD3 - D 2CDX 200/50	3.7	G1 1/2"	R 2"	700	188	146

#### MODEL UD3-D 3M



**DIMENSIONS TABLE**

Unit : H1 to H2 (mm.)  
: Weight (kg.)

MODEL	kW	Ds	Dd	H1	H2	Approx. weight
UD3 - D 3M32-160/2.2	2.2	DN50	DN65	800	202	165
UD3 - D 3M32-200/3.0	3.0	DN50	DN65	850	230	180
UD3 - D 3M32-200/4.0	4.0	DN50	DN65	850	230	186
UD3 - D 3M32-200/5.5	5.5	DN50	DN65	850	230	214
UD3 - D 3M40-160/3.0	3.0	DN65	DN80	825	202	170
UD3 - D 3M40-160/4.0	4.0	DN65	DN80	825	202	199
UD3 - D 3M40-200/5.5	5.5	DN65	DN80	875	230	222
UD3 - D 3M40-200/7.5	7.5	DN65	DN80	875	230	230
UD3 - D 3M40-200/11	11	DN65	DN80	875	230	251

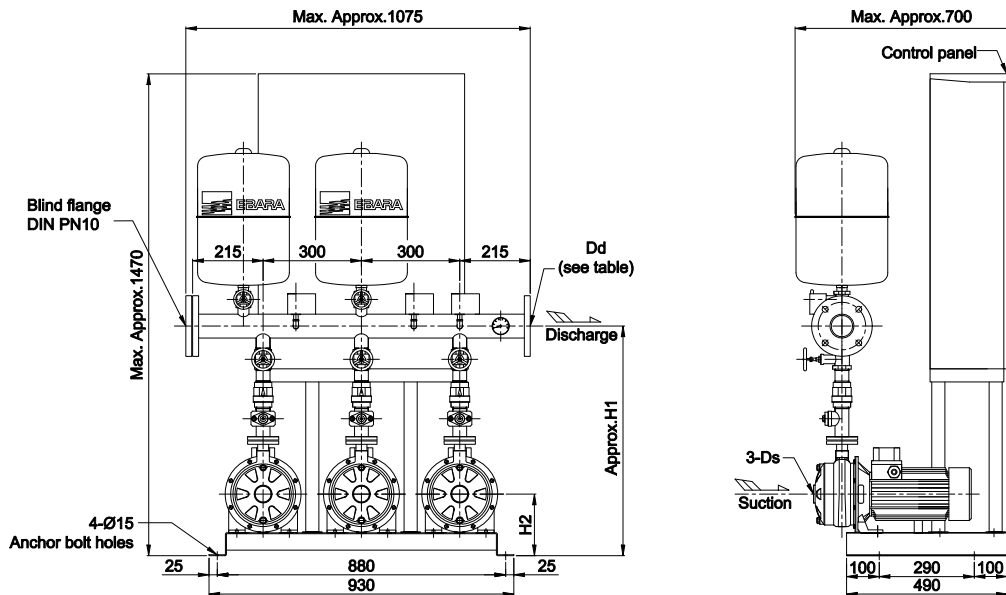
Note : 1) kW shown output per 1 pump.  
2) All specifications subject to change without prior notice.

# CONSTANT SPEED PRESSURE BOOSTER UNIT

## MODEL : UD3

### ■ DIMENSIONS

#### MODEL UD3-T CMA, CDX & 2CDX



**DIMENSIONS TABLE**

Unit : H1 to H2 (mm.)  
: Weight (kg.)

MODEL	kW	Ds	Dd	H1	H2	Approx. weight
UD3-T CMA 1.00	0.75	G 1"	R1 1/2"	630	167	144
UD3-T CDX 90/10	0.75	G1 1/4"	R1 1/2"	630	176	142
UD3-T CDX 120/12	0.9	G1 1/4"	R 2"	675	176	147
UD3-T CDX 120/20	1.5	G1 1/4"	R 2"	695	188	161
UD3-T 2CDX 120/15	1.1	G1 1/4"	R 2"	675	176	156
UD3-T 2CDX 120/20	1.5	G1 1/4"	R 2"	675	176	162
UD3-T 2CDX 120/30	2.2	G1 1/4"	R 2"	695	188	185
UD3-T 2CDX 120/40	3.0	G1 1/4"	R 2"	695	188	193
UD3-T CDX 200/20	1.5	G1 1/2"	DN65	680	176	158
UD3-T CDX 200/25	1.8	G1 1/2"	DN65	700	188	157
UD3-T 2CDX 200/30	2.2	G1 1/2"	DN65	680	176	187
UD3-T 2CDX 200/40	3.0	G1 1/2"	DN65	700	188	192
UD3-T 2CDX 200/50	3.7	G1 1/2"	DN65	700	188	216

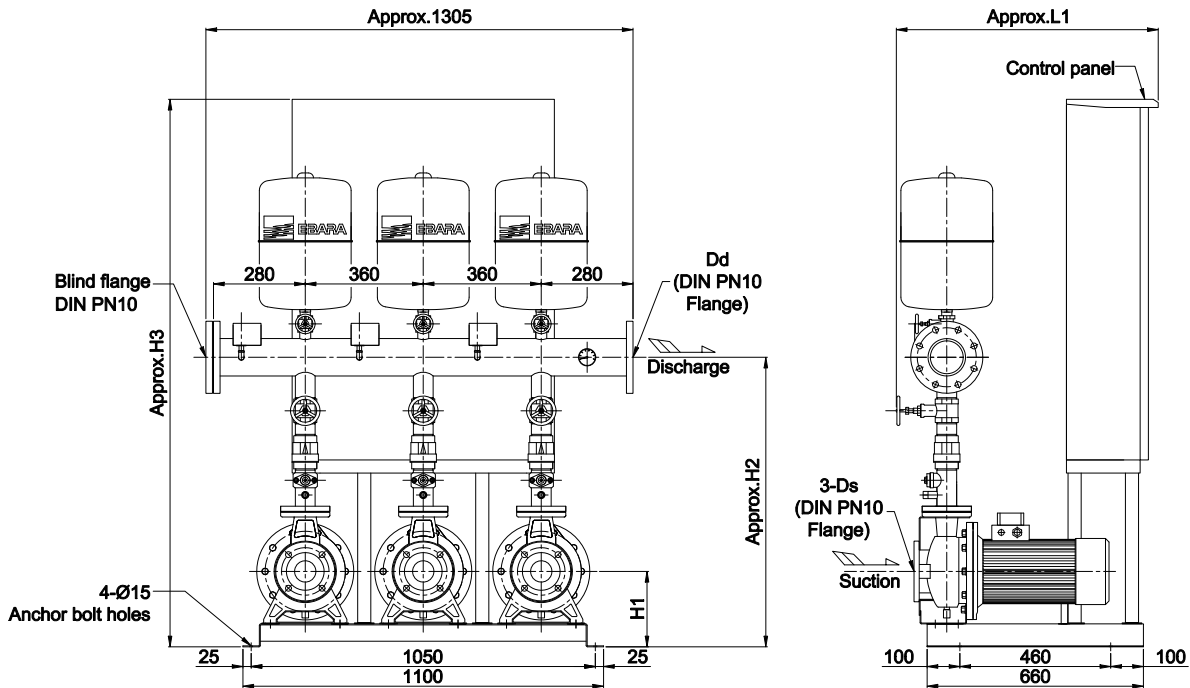
- Note : 1) kW shown output per 1 pump.  
 2) All specifications subject to change without prior notice.  
 3) Flange pressure rating, PN10 is provided as standard.

# CONSTANT SPEED PRESSURE BOOSTER UNIT

## MODEL : UD3

### ■ DIMENSIONS

#### MODEL UD3 - T 3M



DIMENSIONS TABLE

Unit : H1 to L1 (mm.)  
: Weight (kg.)

MODEL	KW	Ds	Dd	H1	H2	H3	L1	Approx. weight
UD3 - T 3M32-160/2.2	2.2	DN50	DN80	202	805	1470	790	269
UD3 - T 3M32-200/3.0	3.0	DN50	DN80	230	850	1470	790	291
UD3 - T 3M32-200/4.0	4.0	DN50	DN80	230	850	1470	790	300
UD3 - T 3M32-200/5.5	5.5	DN50	DN80	230	850	1470	790	342
UD3 - T 3M40-160/3.0	3.0	DN65	DN100	202	835	1470	800	280
UD3 - T 3M40-160/4.0	4.0	DN65	DN100	202	835	1470	800	323
UD3 - T 3M40-200/5.5	5.5	DN65	DN100	230	885	1470	800	358
UD3 - T 3M40-200/7.5	7.5	DN65	DN100	230	885	1670	800	369
UD3 - T 3M40-200/11	11	DN65	DN100	230	885	1670	800	402

Note : 1) kW shown output per 1 pump.

2) All specifications subject to change without prior notice.



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