

# CENTRIFUGAL BELT DRIVE FANS

## CBP Series, Double Inlet Low Pressure Fans



### Description

The CBP range comprises of nine (9) nominal model sizes of low pressure, double inlet, forward curve centrifugal fans. The range is supplied as standard with an extended impeller shaft suitable for belt drive transmission. Depending upon the belt and pulley configuration used a very wide range of airflow performances can be obtained.

Air flow performance ranges from 3,400 up to 18,500 m<sup>3</sup>/hr.

### Applications

The CBM range of fans are suitable for many low pressure belt-drive OEM ventilation applications where the fan is incorporated into third party machinery or equipment. Typical applications would include:

- Air Conditioning Units – Air Handling Units
- Fan Cabinets – Commercial Heaters

### Construction

#### Casing (Scroll)

The product casings are manufactured from pressed then electro-welded galvanised sheet steel.

#### Impellers

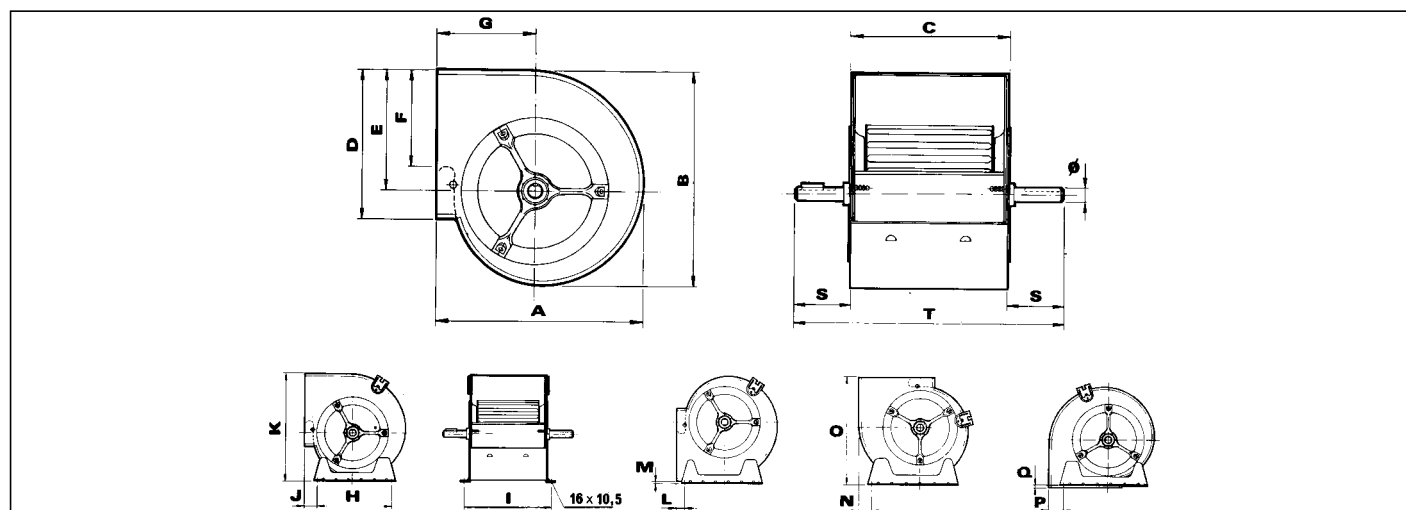
All models incorporate forward curved centrifugal impellers manufactured in galvanised steel and dynamically balanced in accordance with ISO 1940.

The impeller is supported within the casing along the transmission shaft, by two high quality sealed-for-life ball bearing assemblies, which in turn, are enclosed by an antivibration sleeve. These two bearing assemblies are then supported within the fan casing by an aerodynamic die cast "spider-support." Mounting of a belt and pulley system is made directly to the fan shaft which projects from either side of the fan casing to offer flexible installation and positioning.

### Technical characteristics

| Model Type | Size in inches (mm) | Max. recommended speed (r.p.m.) | Maximum air volume (m <sup>3</sup> /h) | Weight (kg) |
|------------|---------------------|---------------------------------|----------------------------------------|-------------|
| CBP-7/7    | 180/180             | 2400                            | 2800                                   | 7           |
| CBP-9/7    | 240/180             | 2400                            | 6000                                   | 10          |
| CBP-9/9    | 240/240             | 2200                            | 7000                                   | 11          |
| CBP-10/8   | 270/200             | 1800                            | 6500                                   | 12          |
| CBP-10/10  | 270/270             | 1800                            | 7000                                   | 13          |
| CBP-12/9   | 320/240             | 1600                            | 8000                                   | 16          |
| CBP-12/12  | 320/320             | 1400                            | 10000                                  | 17          |
| CBP-15/15  | 380/380             | 1300                            | 16000                                  | 22          |
| CBP-18/18  | 460/460             | 1000                            | 22000                                  | 33          |

### Dimensions (mm)

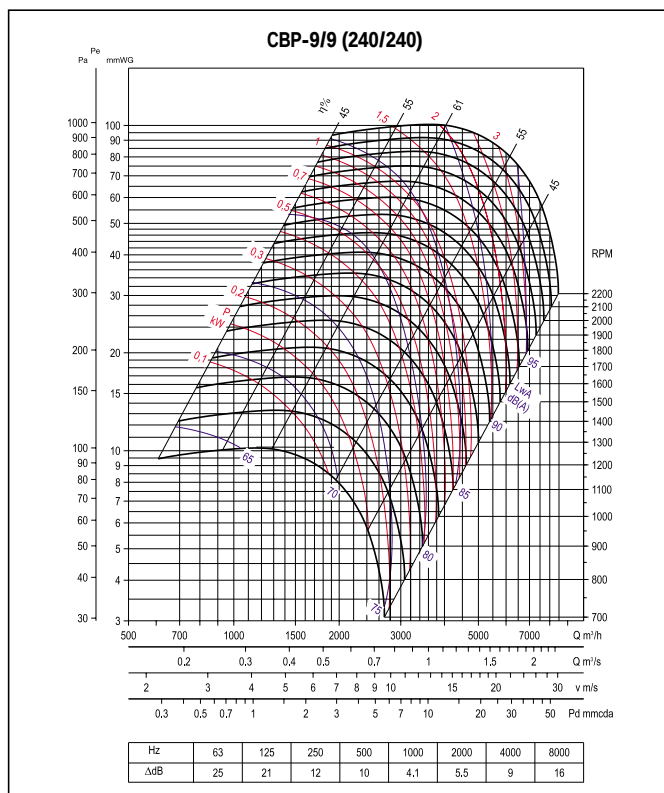
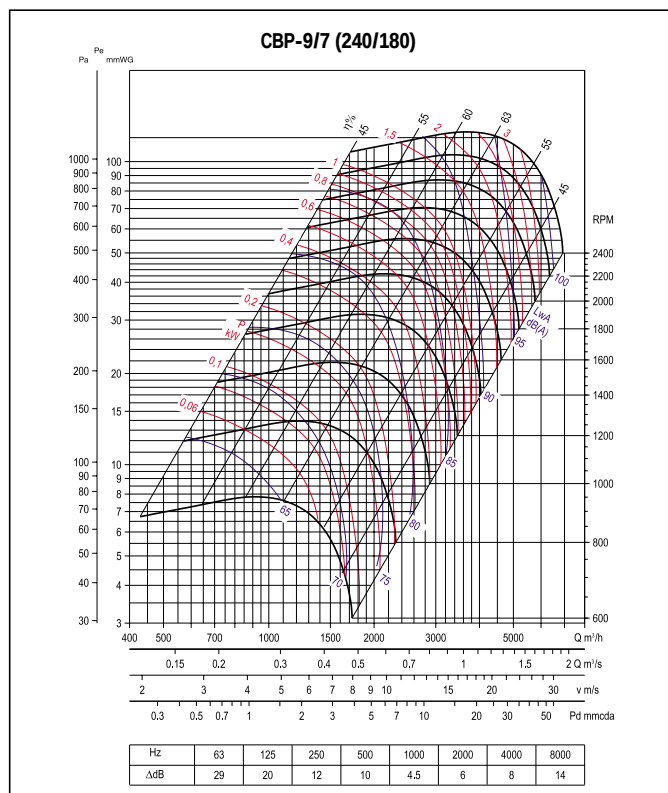
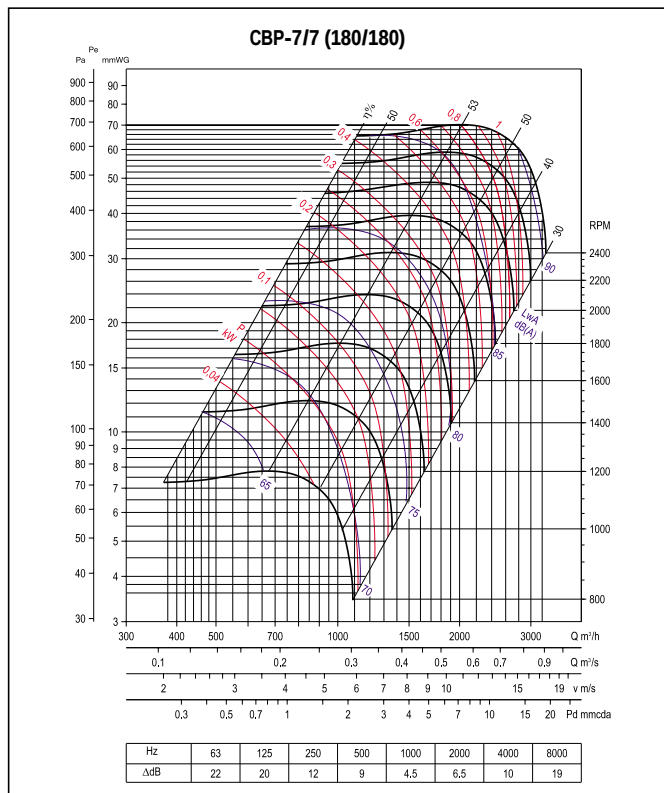


| Type      | A   | B   | C   | D   | E   | F   | G   | H   | I   | J  | K   | L  | M  | N  | O   | P  | Q | S    | T   | Ø  |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|----|----|-----|----|---|------|-----|----|
| CBP-7/7   | 307 | 321 | 232 | 222 | 180 | 148 | 146 | 227 | 259 | 18 | 328 | 18 | 4  | 33 | 310 | 17 | 4 | 49   | 330 | 20 |
| CBP-9/7   | 380 | 392 | 232 | 260 | 218 | 180 | 184 | 297 | 259 | 67 | 395 | 67 | 36 | 33 | 383 | 35 | 7 | 79   | 390 | 20 |
| CBP-9/9   | 380 | 392 | 300 | 260 | 218 | 180 | 184 | 297 | 327 | 67 | 395 | 67 | 36 | 33 | 383 | 35 | 7 | 60   | 420 | 20 |
| CBP-10/8  | 422 | 441 | 266 | 289 | 247 | 213 | 201 | 339 | 293 | 67 | 448 | 65 | 38 | 38 | 423 | 39 | 7 | 62   | 390 | 20 |
| CBP-10/10 | 422 | 441 | 333 | 289 | 247 | 213 | 201 | 339 | 360 | 67 | 448 | 65 | 38 | 38 | 423 | 39 | 7 | 63,5 | 460 | 20 |
| CBP-12/9  | 493 | 524 | 311 | 341 | 293 | 240 | 229 | 407 | 338 | 67 | 530 | 70 | 38 | 38 | 499 | 42 | 7 | 59,5 | 430 | 25 |
| CBP-12/12 | 493 | 524 | 396 | 341 | 293 | 240 | 229 | 407 | 423 | 67 | 530 | 70 | 38 | 38 | 499 | 42 | 7 | 70   | 536 | 25 |
| CBP-15/15 | 573 | 613 | 473 | 403 | 343 | 270 | 267 | 494 | 500 | 64 | 624 | 69 | 38 | 44 | 576 | 48 | 7 | 71   | 615 | 25 |
| CBP-18/18 | 685 | 743 | 556 | 479 | 418 | 290 | 314 | 608 | 583 | 36 | 753 | 52 | 42 | 89 | 689 | 94 | 7 | 68   | 692 | 25 |



## ■ Performance curves

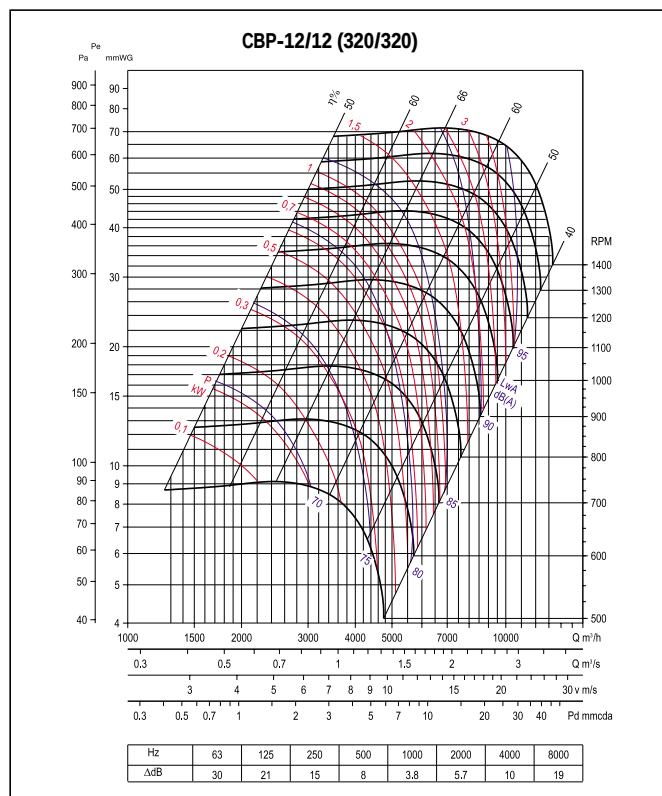
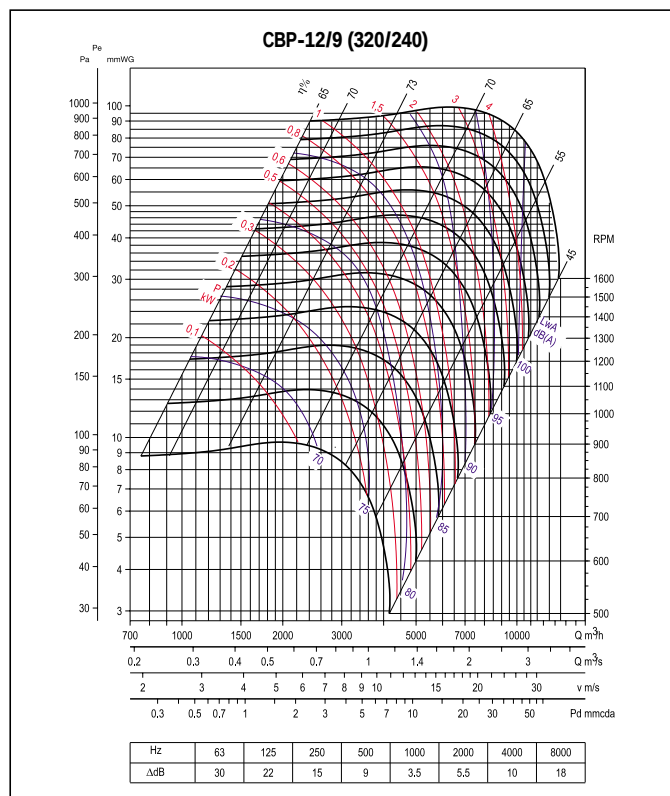
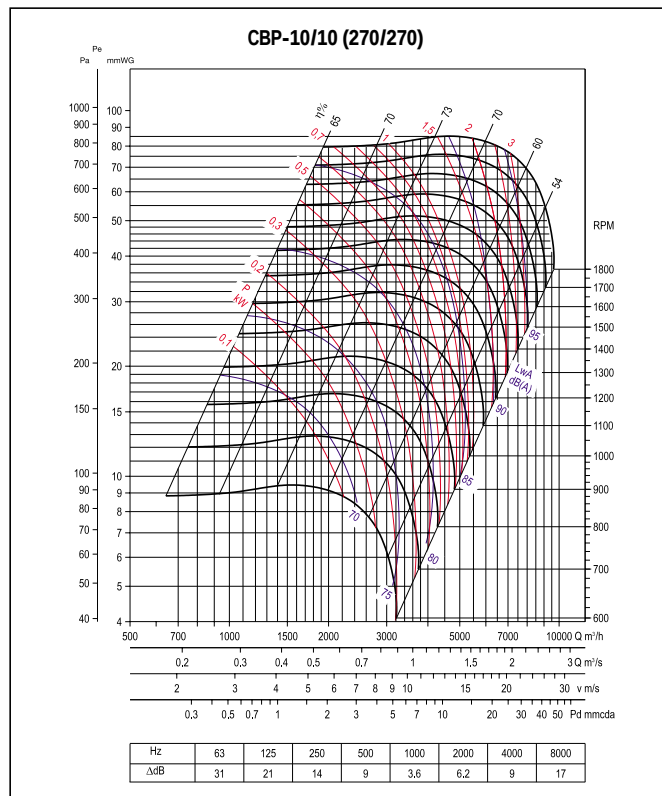
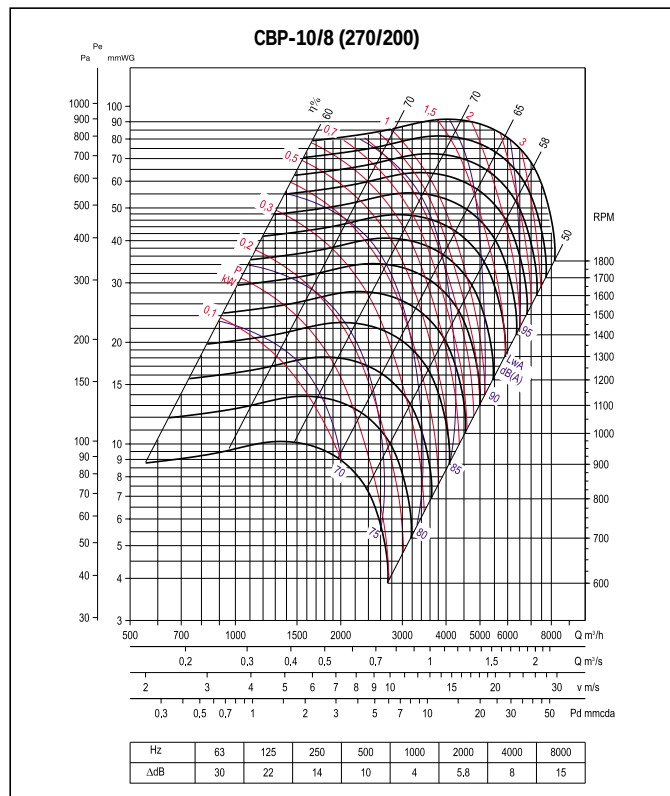
- $Q$  = Air volume in,  $m^3/hr$  and  $m^3/s$
- $P_e$  = Static pressure in mmWG and Pa.
- Dry air at 20 °C and 760 mmHg.
- Air flow data in accordance with the following standards: UNE 100-212-89, BS 848, Part 1, AMCA 210-85 and ASHRAE 51-1985.





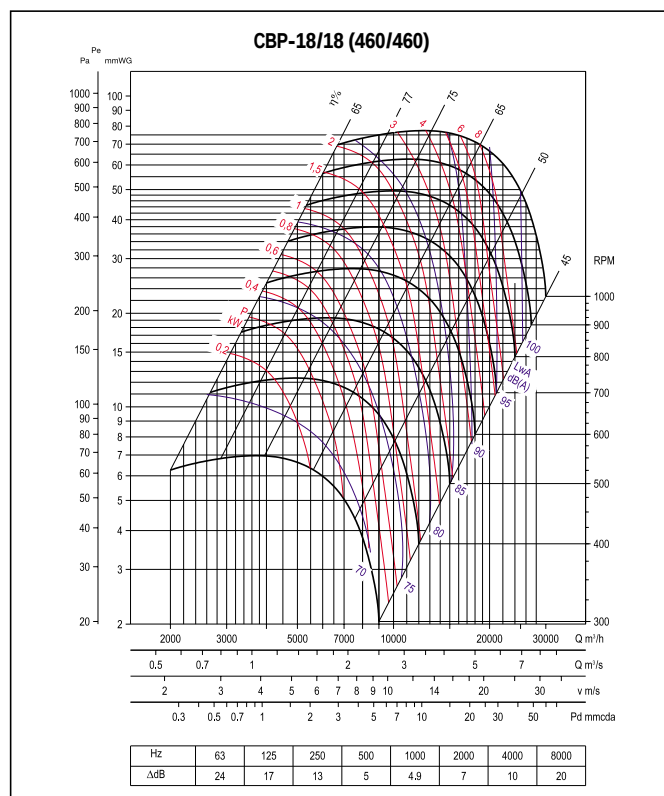
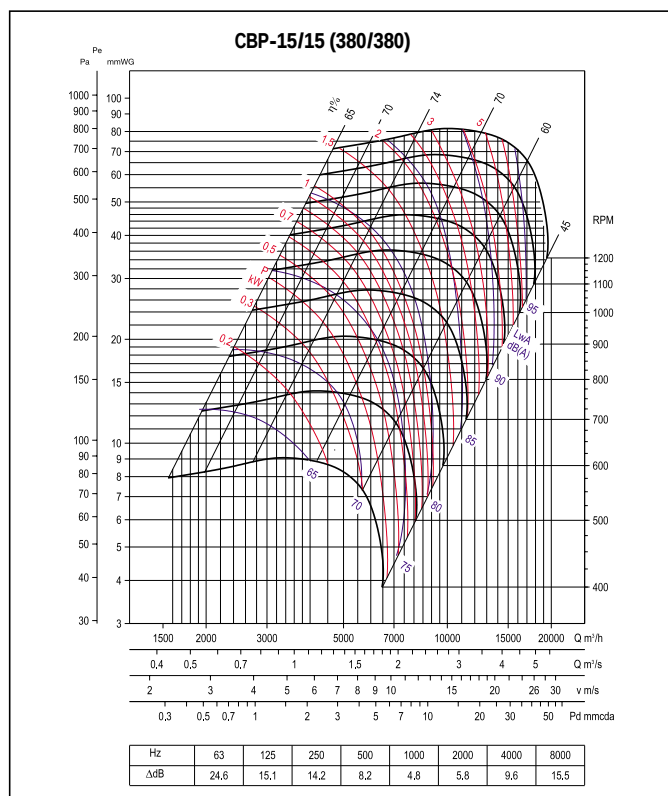
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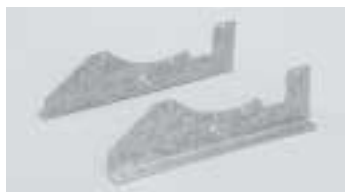


## Mounting accessories

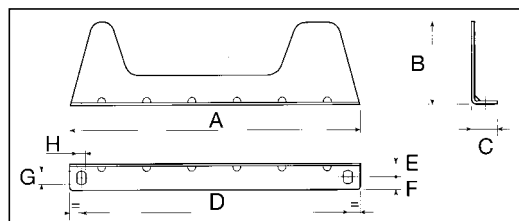
| Type      | Motor mount. bracket + belt tightener | Support feet |
|-----------|---------------------------------------|--------------|
| CBP-7/7   | Motor mount. + belt tightener 7/7     | Support-7    |
| CBP-9/7   | Motor mount. + belt tightener 9/7     | Support-9    |
| CBP-9/9   | Motor mount. + belt tightener 9/9     | Support-9    |
| CBP-10/8  | Motor mount. + belt tightener 10/8    | Support-10   |
| CBP-10/10 | Motor mount. + belt tightener 10/10   | Support-10   |

| Type      | Motor mount. bracket + belt tightener | Support feet |
|-----------|---------------------------------------|--------------|
| CBP-12/9  | Motor mount. + belt tightener 12/9    | Support-12   |
| CBP-12/12 | Motor mount. + belt tightener 12/12   | Support-12   |
| CBP-15/15 | Motor mount. + belt tightener 15/15   | Support-12   |
| CBP-18/18 | Motor mount. + belt tightener 18/18   | Support-18   |

## Dimensions - Support feet and motor mounting bracket (mm)



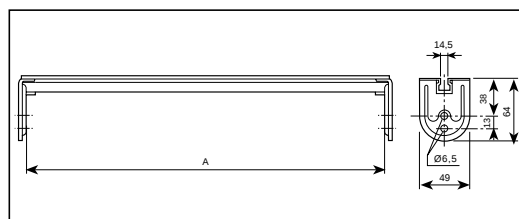
Support feet



| Type    | A   | B   | C  | D   | E    | F    | G  | H    |
|---------|-----|-----|----|-----|------|------|----|------|
| CBP-7/  | 254 | 47  | 26 | 227 | 13,5 | 12,5 | 16 | 10,5 |
| CBP-9/  | 325 | 102 | 26 | 297 | 13,5 | 12,5 | 16 | 10,5 |
| CBP-10/ | 363 | 102 | 26 | 339 | 13,5 | 12,5 | 16 | 10,5 |
| CBP-12/ | 434 | 144 | 26 | 407 | 13,5 | 12,5 | 16 | 10,5 |
| CBP-15/ | 521 | 164 | 26 | 494 | 13,5 | 12,5 | 16 | 10,5 |
| CBP-18/ | 635 | 186 | 26 | 608 | 13,5 | 12,5 | 16 | 10,5 |



Motor mounting bracket



| Type      | A   | Type      | A   |
|-----------|-----|-----------|-----|
| CBP-7/7   | 232 | CBP-12/9  | 311 |
| CBP-9/7   | 232 | CBP-12/12 | 396 |
| CBP-9/9   | 300 | CBP-15/15 | 473 |
| CBP-10/8  | 266 | CBP-18/18 | 556 |
| CBP-10/10 | 333 |           |     |

## ■ Centrifugal belt-drive product range

