**FG**

**Máy bơm ly tâm “EN 733” được tiêu chuẩn hóa**

## PHẠM VI HIẾU SUÂT

* Lưu lượng lên đến **6000 l/min** (360 m³/h)
* Cột áp đến **98 m**

## LẮP ĐẶT VÀ SỬ DỤNG

#### Cấp nước **•** Bộ vệ sinh

#### Tăng áp **•** Bộ chữa cháy

#### Tưới tiêu **•** Ứng dụng CN

## GIỚI HẠN ỨNG DỤNG

#### Lực hút áp suất nâng lên đến **7 m**

* Nhiệt độ chất lỏng giữa **-10 °C** và **+90 °C**

#### Luân chuyển nước trong các đơn vị điều hòa không khí

**•** Ứng dụng NN

* Áp suất tối đa trong thân bơm **10 bar** (PN10)

## TIÊU CHUẨN THI CÔNG VÀ AN TOÀN

**EN 733 **  **QUY ĐỊNH EU N. 547/2012**

## TÙY CHỌN CÓ SẴN THEO YÊU CẦU

#### Bộ KIT mặt bích hoàn chỉnh với bu lông, đai ốc và vòng đệm

#### Phốt cơ khí đặc biệt

#### Máy bơm tương thích với động cơ 60 Hz

#### Khả năng tương thích với chất lỏng nóng hơn hoặc lạnh hơn

#### Khả năng tương thích với môi trường nóng hơn hoặc lạnh hơn

## CHỨNG NHẬN

Công ty có hệ thống quản lý DNV đạt chứng



chỉ ISO 9001: CHẤT LƯỢNG

## TỶ LỆ HIỆU SUẤT

**n= 2900 min-1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | 300 |  | 400 | 500 |  | 1000 |  | US g.p.m. |
|  | 30 |  | 40 | 50 |  | 100 |  | 200 |  | 300 |  | 400 | 500 |  | 1000 | Imp g.p.m. |

30 40 50 100 200

### 120

**110**

### 100

**90**

### 80

**70**

### 60

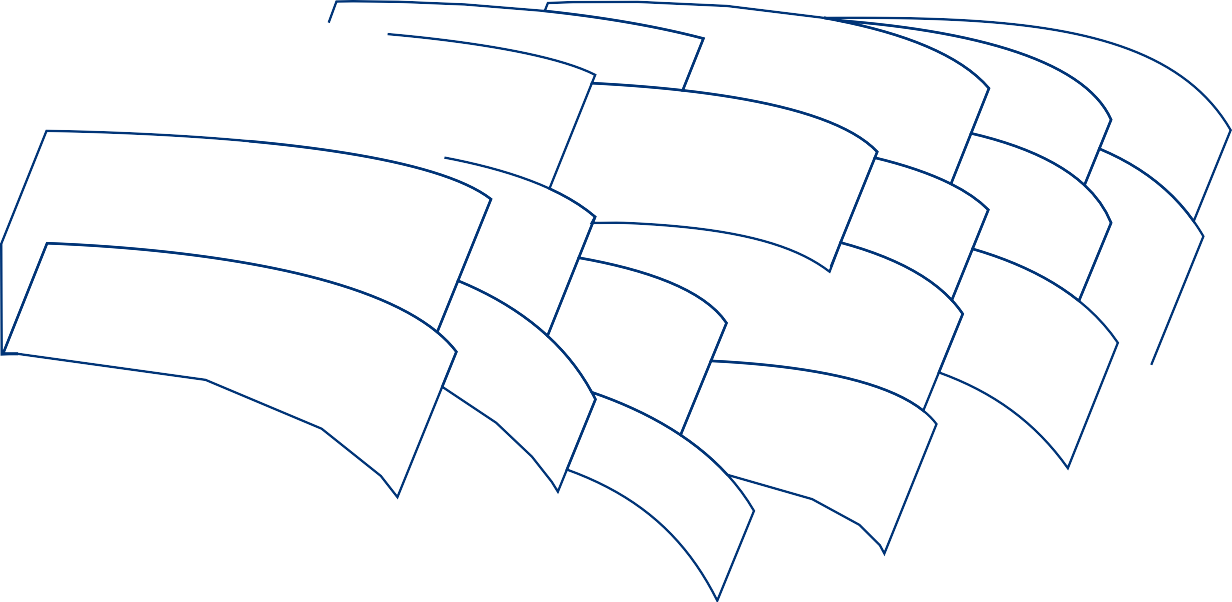
**50**

**Cột áp H (metres)** 

### 40

feet 350

300



**FG2**

**50/250**

**0/160**

**10**

**65/125**

**/125**

**50**

**5**

**40/12**

**0**

**80/16**

**65/160**

**/160**

**50**

**0**

**40/16**

**32/160**

**0/200**

**10**

**0**

**80/20**

**65/200**

**/200**

**50**

**40/200**

**32/200**

**0/250**

**10**

**0**

**80/25**

**65/250**

**40/250**

**32/250**

250

200

150

**30** 100

90

**25** 80

70

### 20

60

**15** 50

40

### 10

**9**

### 8

**100 150 200 300 400 500**

### 1000 1500 2000 3000 4000 5000

30

### l/min

6 7 8 9 10 20 30 40 50 60 70 80 90 100 150 200 250 300 350 m³/h

**Lưu lượng Q** 

## DỮ LIỆU HIỆU SUẤT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MODEL** | **MOTOR PAIRING** | | **PERFORMANCE**  **n= 2900 min-1** | |
| **kW** | **HP** | **Q** m³/h | **H** metres |
| **FG2-32/160C** | 1.5 | 2 | 6 – 21 | 24 – 14 |
| **FG2-32/160B** | 2.2 | 3 | 6 – 24 | 30 – 17 |
| **FG2-32/160A** | 3 | 4 | 6 – 27 | 37 – 24 |
| **FG2-32/200C** | 4 | 5.5 | 6 – 27 | 44 – 31.5 |
| **FG2-32/200B** | 5.5 | 7.5 | 6 – 30 | 51 – 36 |
| **FG2-32/200A** | 7.5 | 10 | 6 – 30 | 57 – 44 |
| **FG2-32/200BH** | 3 | 4 | 6 – 18 | 45 – 37 |
| **FG2-32/200AH** | 4 | 5.5 | 6 – 19.2 | 55 – 44 |
| **FG2-32/250C** | 9.2 | 12.5 | 6 – 27 | 75 – 60 |
| **FG2-32/250B** | 11 | 15 | 6 – 30 | 87 – 70 |
| **FG2-32/250A** | 15 | 20 | 6 – 30 | 97 – 80 |
| **FG2-40/125C** | 1.1 | 1.5 | 6 – 33 | 16 – 6 |
| **FG2-40/125B** | 1.5 | 2 | 6 – 36 | 20.5 – 9 |
| **FG2-40/125A** | 2.2 | 3 | 6 – 42 | 26 – 10 |
| **FG2-40/160C** | 2.2 | 3 | 6 – 36 | 27 – 14 |
| **FG2-40/160B** | 3 | 4 | 6 – 36 | 32 – 20 |
| **FG2-40/160A** | 4 | 5.5 | 6 – 42 | 38 – 20 |
| **FG2-40/200B** | 5.5 | 7.5 | 6 – 42 | 47 – 28 |
| **FG2-40/200A** | 7.5 | 10 | 6 – 42 | 55 – 41 |
| **FG2-40/250C** | 9.2 | 12.5 | 6 – 42 | 64 – 47 |
| **FG2-40/250B** | 11 | 15 | 6 – 42 | 71 – 55 |
| **FG2-40/250A** | 15 | 20 | 6 – 42 | 88 – 72 |
| **FG2-50/125C** | 2.2 | 3 | 18 – 72 | 17.5 – 6 |
| **FG2-50/125B** | 3 | 4 | 18 – 72 | 20.7 – 9 |
| **FG2-50/125A** | 4 | 5.5 | 18 – 72 | 23.5 – 13 |
| **FG2-50/160C** | 4 | 5.5 | 18 – 60 | 27 – 16 |
| **FG2-50/160B** | 5.5 | 7.5 | 18 – 66 | 32 – 21 |
| **FG2-50/160A** | 7.5 | 10 | 18 – 66 | 37 – 27 |
| **FG2-50/200C** | 11 | 15 | 24 – 102 | 44 – 30 |
| **FG2-50/200B** | 15 | 20 | 24 – 102 | 52 – 38 |
| **FG2-50/200A** | 18.5 | 25 | 24 – 108 | 61 – 45 |
| **FG2-50/200AR** | 22 | 30 | 24 – 108 | 69 – 53 |
| **FG2-50/250D** | 9.2 | 12.5 | 18 – 54 | 51 – 32 |
| **FG2-50/250C** | 11 | 15 | 18 – 54 | 59 – 42 |
| **FG2-50/250B** | 15 | 20 | 18 – 60 | 72 – 59 |
| **FG2-50/250A** | 18.5 | 25 | 18 – 60 | 85 – 73 |
| **FG2-50/250AR** | 22 | 30 | 18 – 60 | 95 – 83 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MODEL** | **MOTOR PAIRING** | | **PERFORMANCE**  **n= 2900 min-1** | |
| **kW** | **HP** | **Q** m³/h | **H** metres |
| **FG2-65/125C** | 4 | 5.5 | 36 – 108 | 16 – 11 |
| **FG2-65/125B** | 5.5 | 7.5 | 36 – 120 | 18 – 13 |
| **FG2-65/125A** | 7.5 | 10 | 36 – 132 | 23 – 18 |
| **FG2-65/160C** | 9.2 | 12.5 | 36 – 132 | 32 – 22 |
| **FG2-65/160B** | 11 | 15 | 36 – 144 | 36.5 – 23 |
| **FG2-65/160A** | 15 | 20 | 36 – 144 | 40.5 – 28 |
| **FG2-65/200B** | 15 | 20 | 12 – 144 | 44 – 30.5 |
| **FG2-65/200A** | 18.5 | 25 | 12 – 150 | 50 – 36.5 |
| **FG2-65/200AR** | 22 | 30 | 12 – 156 | 57 – 42 |
| **FG2-65/250C** | 30 | 40 | 24 – 141 | 76 – 53 |
| **FG2-65/250B** | 37 | 50 | 24 – 150 | 87 – 62 |
| **FG2-65/250A** | 45 | 60 | 24 – 156 | 95 – 68 |
| **FG2-80/160D** | 11 | 15 | 30 – 240 | 25 – 10 |
| **FG2-80/160C** | 15 | 20 | 30 – 240 | 30 – 15 |
| **FG2-80/160B** | 18.5 | 25 | 30 – 240 | 35 – 20 |
| **FG2-80/160A** | 22 | 30 | 30 – 240 | 40 – 25 |
| **FG2-80/200B** | 30 | 40 | 30 – 219 | 56 – 34.5 |
| **FG2-80/200A** | 37 | 50 | 30 – 234 | 62 – 40 |
| **FG2-80/250B** | 45 | 60 | 36 – 216 | 77 – 54 |
| **FG2-80/250A** | 55 | 75 | 36 – 234 | 88.5 – 60 |
| **FG2-100/160C** | 15 | 20 | 60 – 300 | 30 – 12 |
| **FG2-100/160B** | 18.5 | 25 | 60 – 312 | 34 – 14.5 |
| **FG2-100/160A** | 22 | 30 | 60 – 330 | 38 – 17.5 |
| **FG2-100/200C** | 30 | 40 | 48 – 279 | 51 – 28 |
| **FG2-100/200B** | 37 | 50 | 48 – 294 | 57 – 33 |
| **FG2-100/200A** | 45 | 60 | 48 – 315 | 63 – 38 |
| **FG2-100/250B** | 55 | 75 | 48 – 309 | 75 – 48 |
| **FG2-100/250A** | 75 | 100 | 48 – 345 | 89 – 58 |

**Q** = Lưu lượng

**H** = Tổng áp

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

**FG2-32/160**

40

**32/160A**

**FG2**

51

55

57

58

**32/160B**

60

**32/160C**

η = 62%

60

58

**Ø 169**

57

55

51

**Ø 155**

**Ø 143**

**MEI≥ 0.40**

30

**H (m)**

20

103 6 9 12 15 18 21 24 27 30

3,0

**Ø 169**

**C**

**B**

**A**

2,5

**Ø 155**

**P2 (kW)**

2,0

**Ø 143**

1,5

1,03 6 9 12 15 18 21 24 27 30

6

**Ø 169**

**NPSH (m)**

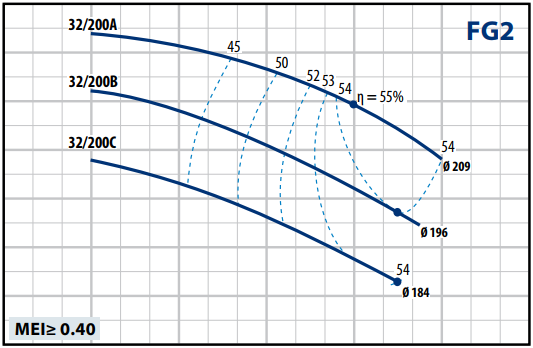
4

2

03 6 9 12 15 18 21 24 27 30

**Q (m³/h)**

# FG2-32/200

60

55

50

45

**H (m)**

40

35

30

250 6 12 18 24 30 36

7

**Ø 209**

**Ø 196**

**Ø 184**

**C**

**B**

**A**

6

5

**P2 (kW)**

4

3

20 6 12 18 24 30 36

8

**Ø 209**

**NPSH (m)**

4

00 6 12 18 24 30 36

**Q (m³/h)**

# FG2-32/200H FG2-32/250

60

**32/200AH**

**FG2**

40

43

45

48

50

51.5

**32/200BH**

η = 53.5%

**Ø 205**

**Ø 192**

55

50

45

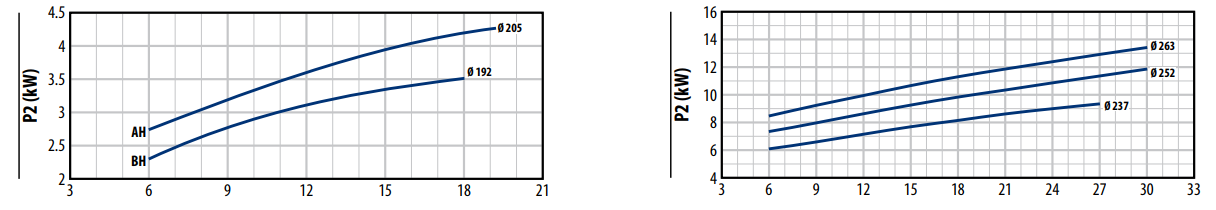
**H (m)**

40

35

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MEI≥ 0.40** |  | | | | | | | | | | | | | | | | | | | |
| 3 6 |  |  | 9 |  |  |  | 12 | |  |  | 15 | | |  |  | 18 | |  |  | 21 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  | |  |  |  | | |  |  |  | |  |  |  |

30



8

**Ø 205**

**NPSH (m)**

4

03 6 9 12 15 18 21

### Q (m³/h)

110

100

90

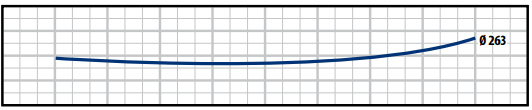
80

**H (m)**

70

60

503 6 9 12 15 18 21 24 27 30 33

6

**NPSH (m)**

5

4

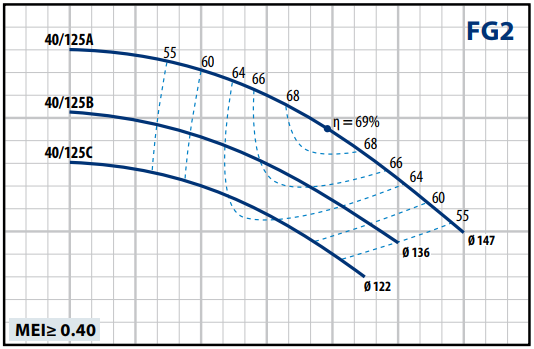
3

23 6 9 12 15 18 21 24 27 30 33

**Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG2-40/125 FG2-40/160

30

20

**H (m)**

10

0

2.5

2

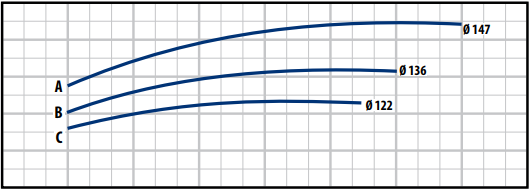
1.5

**P2 (kW)**

1

0.5

0 6 12 18 24 30 36 42 48



45

40

**FG2**

**40/160A**

55

60 63

**40/160B**

65

**40/160C**

η = 68%

65

63

60

**Ø 157 Ø 169**

**Ø 148**

**MEI≥ 0.40**

35

30

**H (m)**

25

20

15

100 6 12 18 24 30 36 42 48

4

**Ø 169**

**Ø 148**

**C**

**B**

**A**

**Ø 157**

3

**P2 (kW)**

2

00 6 12 18 24 30 36 42 48

6

**Ø 147**

**NPSH (m)**

5

4

3

2

10 6 12 18 24 30 36 42 48

### Q (m³/h)

10 6 12 18 24 30 36 42 48

8

**Ø 169**

**NPSH (m)**

4

00 6 12 18 24 30 36 42 48

**Q (m³/h)**

# FG2-40/200 FG2-40/250

60 100

**40/200A**

50

**FG2**

55 57

59

**40/200B**

63 η = 64%

63

**Ø 205**

59

57

55

54

**Ø 188**

**MEI≥ 0.40**

**FG2**

**40/250A**

42

46

48

50

**40/250B**

52 η = 53%

**Ø 260**

**40/250C**

**Ø 233**

**Ø 223**

**MEI≥ 0.40**

90

50

80

40 70

**H (m)**

**H (m)**

30

200 4

8

**Ø 205**

**B**

**A**

**Ø 188**

7

6

**P2 (kW)**

5

4

3

20 4

8

**Ø 205**

**NPSH (m)**

8 12 16 20

8 12 16 20

24 28

24 28

32 36

32 36

40 44 48

40 44 48

60

50

400

16

**B C**

**A**

**Ø 223**

**Ø 233**

14

12

**P2 (kW)**

10

8

6

40

8

**NPSH (m)**

4 8 12 16

4 8 12 16

20 24

20 24

28 32

28 32

36 40

**Ø 260**

36 40

**Ø 260**

44 48

44 48

4

00 4

8 12 16 20

24 28

32 36

40 44 48

4

00 4

8 12 16

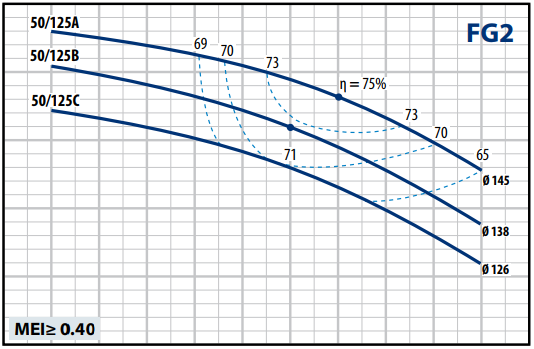
20 24

28 32

36 40

44 48

### Q (m³/h) Q (m³/h)

25 40

**50/160A**

62 64

**FG2**

67

70

**50/160B**

η = 71%

70

**50/160C**

71

67

**Ø 171**

64

**Ø 161**

62

**Ø 152**

**MEI≥ 0.40**

20 35

30

15

**H (m)**

**H (m)**

25

10

20

5 15

0

12 18 24

4

**Ø 145**

**B**

**C**

**2**

**A**

3.5

3

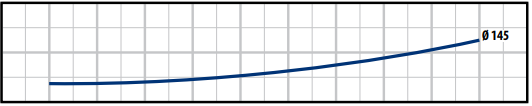
**P2 (kW)**

2.5

2

1.5

12 18 24

8

**NPSH (m)**

30 36 42 48 54 60 66

30 36 42 48 54 60 66

72 78

**Ø 138**

**Ø 126**

72 78

10

12 18 24

7.5

**B C**

**A**

6.5

5.5

**P2 (kW)**

4.5

3.5

2.5

12 18 24

8

**Ø 171**

**NPSH (m)**

30 36

30 36

42 48

42 48

54 60 66 72

**Ø 171**

**Ø 161**

**Ø 152**

54 60 66 72

4 4

0 0

18

24

30

36

42

48

54

60

66

72

78

12 12

18 24

30 36

42 48

54 60 66 72

**Q (m³/h) Q (m³/h)**

# FG2-50/200 FG2-50/250

75



**50/200AR**

62

65

**FG2**

67 68

**50/200A**

η = 70%

**50/200B**

69

**Ø 224**

**50/200C**

**Ø 215**

68

67

**Ø 200**

**MEI≥ 0.40**

**Ø 185**

65

55

**H (m)**

45

35

25 108

24

36

48

60

72

84

96

12

25

**Ø 224**

**A B C**

**AR**

**Ø 185**

**Ø 200**

**Ø 215**

20

**P2 (kW)**

15

10

5 108

24

36

48

60

72

84

96

12

8

**Ø 224**

**NPSH (m)**

4

0 108

24

36

48

60

72

84

96

12

120

120

120

100

90

80

70

**H (m)**

60

50

40

30

20

12 18

25

**Ø 248**

**Ø**

**D**

**Ø 204**

**C**

**213**

**A**

**B**

**AR**

**235**

**Ø**

**261**

**Ø**

20

**P2 (kW)**

15

10

5

12 18

8

**NPSH (m)**

4

0

12 18

24 30

24 30

24 30

36 42

36 42

36 42

48 54

48 54

48 54

60 66

60 66

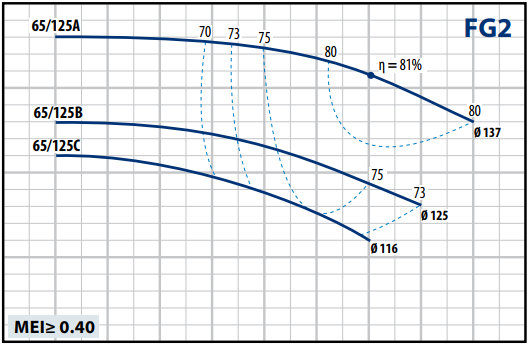
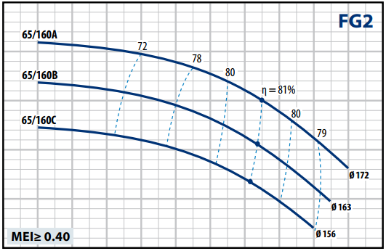
**Ø 261**

60 66

**Q (m³/h) Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG2-65/125 FG2-65/160

25 45

40

20

35

**H (m)**

**H (m)**

15

30

10

25

5

24 36 48

9

**Ø 125**

**C**

**Ø 116**

**B**

**A**

**3**

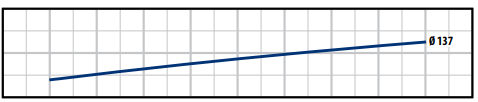
7

**P2 (kW)**

5

3

24 36 48

8

**NPSH (m)**

4

60 72 84

60 72 84

96 108

96 108

120

120

132

**Ø 137**

132

144

144

20

24 36 48

16

**A**

**B**

**C**

**Ø 163**

13

**P2 (kW)**

10

7

4

24 36 48

8

**Ø 172**

**NPSH (m)**

4

60 72

60 72

84 96

84 96

108

108

120

120

132

**Ø 156**

132

144

**Ø 172**

144

156

156

0 108

36

48

60

72

84

96

24

120

132

144

0 108

120

132

144

156

**Q (m³/h) Q (m³/h)**

36

48

60

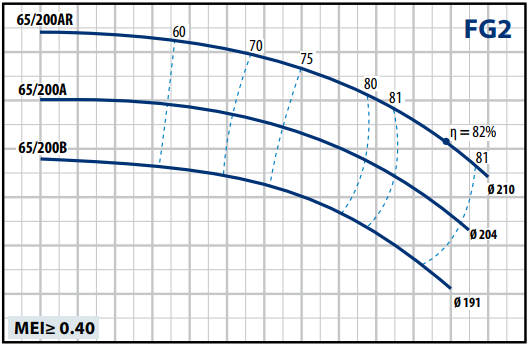
72

84

96

24

# FG2-65/200 FG2-65/250

60

55

50

45

**H (m)**

40

35

30

250 12 24 36 48 60 72 84 96 108 120 132 144 156 168

25

**Ø 210**

**Ø 191**

**B**

**A**

**AR**

**Ø 204**

20

**P2 (kW)**

15

10

50 12 24 36 48 60 72 84 96 108 120 132 144 156 168

8

**10**

**Ø 21**

**NPSH (m)**

4

100

90

80

**H (m)**

70

60

500

50

**Ø 258**

**Ø 248**

**Ø 232**

**B**

**A**

**C**

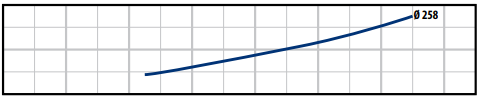
40

**P2 (kW)**

30

20

100

8

**NPSH (m)**

4

24 48 72

24 48 72

96 120

96 120

144

144

168

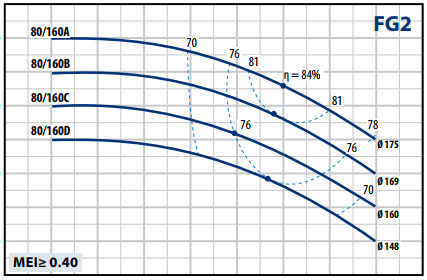
168

00 12 24 36 48 60 72 84 96 108 120 132 144 156 168

### Q (m³/h)

00 24 48 72 96 120 144 168

### Q (m³/h)

45



**FG2**

**80/200A**

60

68 70

72

**80/200B**

75

79

η = 82%

79

75

72

**Ø 215**

**MEI≥ 0.40**

**Ø 206**

40

35

30

25

**H (m)**

20

15

10

70

76 81

60

50

**H (m)**

40

50 30 60 90 120 150 180 210 240 270

25

**Ø 175**

**Ø 169**

**Ø 160**

**A B C D**

**Ø 148**

20

**P2 (kW)**

15

10

50 30 60 90 120 150 180 210 240 270

8

**Ø 175**

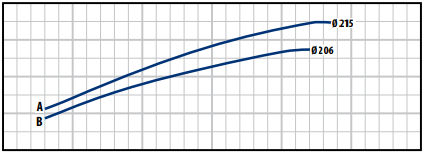
**NPSH (m)**

4

00 30 60 90 120 150 180 210 240 270

### Q (m³/h)

300 50 100 150 200 250 300

40

30

**P2 (kW)**

20

10

00 50 100 150 200 250 300

10

**Ø 215**

**NPSH (m)**

5

00 50 100 150 200 250 300

**Q (m³/h)**

# FG2-80/250

100

**80/250A**

**FG2**

70

75

**80/250B**

76

η = 77%

75

71

69

**Ø 253**

**Ø 238**

**MEI≥ 0.40**

90

80

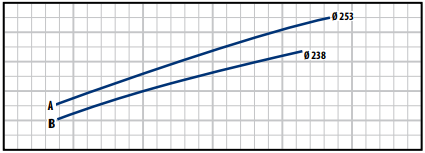
70

**H (m)**

60

50

400

60

50

40

**P2 (kW)**

30

20

100

8

**NPSH (m)**

50 100

50 100

150

150

200

200

250

250

300

300

**Ø 253**

4

00 50

100

150

200

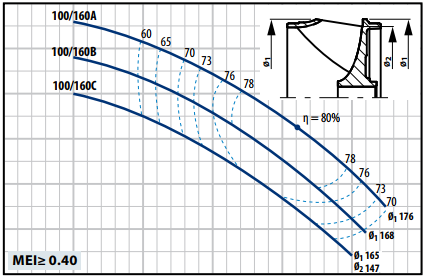
250

300

**Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG2-100/160

40

35

30

25

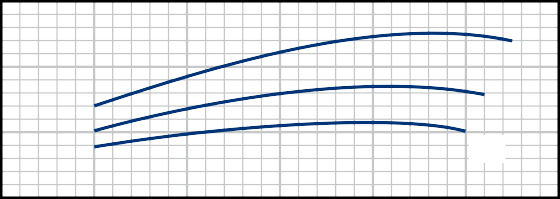
**H (m)**

20

15

100 60 120 180 240 300 360

25



**Ø1 176**

**Ø1 168**

**Ø1 165**

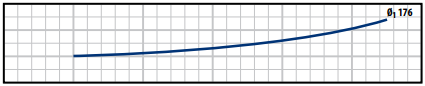
**Ø2 147**

20

**P2 (kW)**

15

100 60 120 180 240 300 360

12

**NPSH (m)**

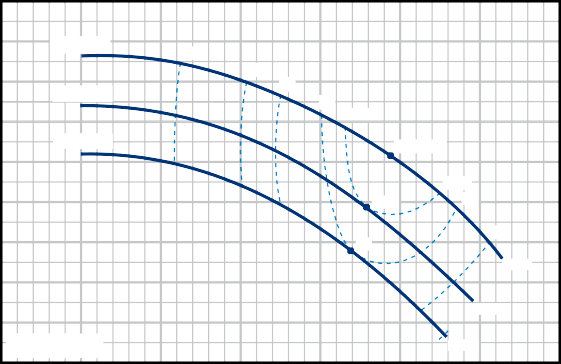
8

4

00 60 120 180 240 300 360

# FG2-100/200

70



**100/200A**

**FG2**

60

71

**100/200B**

75

79

80.5

**100/200C**

η = 81%

80.5

80.5 79

79 75

**Ø 220**

71

**Ø 210**

**MEI≥ 0.40**

**Ø 201**

65

60

55

50

**H (m)**

45

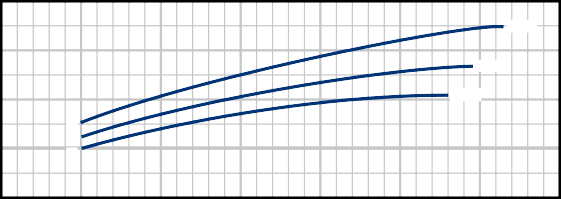
40

35

30

250 50 100 150 200

50



**Ø 220**

**Ø 210**

**Ø 201**

**A B**

**C**

40

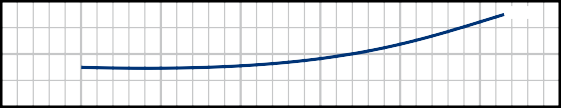
**P2 (kW)**

30

20

100 50 100 150 200

8



**NPSH (m)**

4

00 50 100 150 200

**n= 2900 min-1**

250 300 350

250 300 350

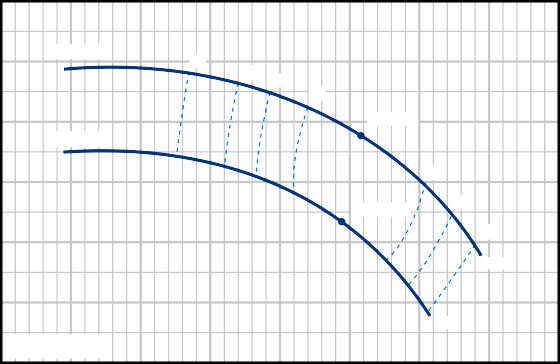
**Ø 220**

250 300 350

**Q (m³/h) Q (m³/h)**

# FG2-100/250

100



**FG2**

**100/250A**

65

72 75

78

η = 80%

**100/250B**

78

η = 79.5%

75

71

**Ø 256**

**Ø 236**

**MEI≥ 0.40**

90

80

70

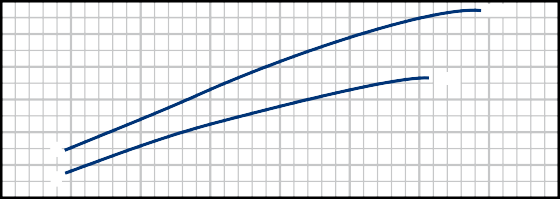
**H (m)**

60

50

400

80



**Ø 256**

**A**

**B**

**36**

**Ø 23**

70

60

**P2 (kW)**

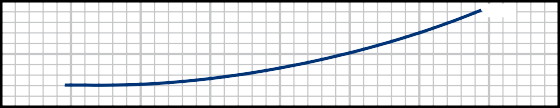
50

40

30

200

10



**NPSH (m)**

5

00

50 100

50 100

50 100

150

150

150

200

200

200

250

250

250

300

300

300

350

350

**Ø 256**

350

400

400

400

**Q (m³/h)**

**TỈ LỆ HIỆU SUẤT**

15 20 25 30 35 40 45 50 100 200 300 400 500

US g.p.m.

**n= 1450 min-1**

### 30

15

20 25 30 35 40 45 50

100

200

300

400 500 Imp g.p.m.

**FG4**

**32/250**

**40/250**

**50/250**

**65/250**

**80/250**

**100/250**

**32/200**

**40/200**

**50/200**

**65/200**

**80/200**

**100/200**

**32/160**

**80/160**

**40/160**

**50/160**

**65/160**

**65/125**

**100/160**

**20**

### 15

**10**

**Head H (metres)** 

### 9

**8**

### 7

**6**

### 5

**4**

### 3

**2**

### 50 60

**70 80 90100 150 200 300 400 500 1000 2000 3000**

feet 90

80

70

60

50

45

40

35

30

25

20

15

10

9

8

7

### l/min

3 4 5 6 7 8 9 10 20 30 40 50 60 70 80 90 100 150 200 m³/h

**Flow rate Q** 

## DỮ LIỆU HIỆU SUẤT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MODEL** | **MOTOR PAIRING** | | **PERFORMANCE**  **n= 1450 min-1** | |
| **kW** | **HP** | **Q** m³/h | **H** metres |
| **FG4-32/160C** | 0.25 | 0.33 | 3 – 10.5 | 6 – 3.5 |
| **FG4-32/160B** | 0.37 | 0.5 | 3 – 12 | 7.5 – 4 |
| **FG4-32/160A** | 0.37 | 0.5 | 3 – 13.5 | 9 – 6 |
| **FG4-32/200C** | 0.55 | 0.75 | 3 – 13.5 | 11 – 8 |
| **FG4-32/200B** | 0.75 | 1 | 3 – 15 | 12.5 – 9 |
| **FG4-32/200A** | 1.1 | 1.5 | 3 – 15 | 14 – 11 |
| **FG4-32/200BH** | 0.55 | 0.75 | 3 – 9 | 11 – 9 |
| **FG4-32/200AH** | 0.55 | 0.75 | 3 – 9.6 | 13.8 – 11 |
| **FG4-32/250C** | 1.1 | 1.5 | 3 – 13.2 | 18.4 – 15 |
| **FG4-32/250B** | 1.5 | 2 | 3 – 15 | 21.7 – 17.4 |
| **FG4-32/250A** | 2.2 | 3 | 3 – 16.2 | 23.8 – 18.7 |
| **FG4-40/160C** | 0.37 | 0.5 | 3 – 18 | 6.5 – 3.5 |
| **FG4-40/160B** | 0.37 | 0.5 | 3 – 18 | 8 – 5 |
| **FG4-40/160A** | 0.55 | 0.75 | 3 – 21 | 9.5 – 5 |
| **FG4-40/200B** | 0.75 | 1 | 3 – 21 | 11.5 – 7 |
| **FG4-40/200A** | 1.1 | 1.5 | 3 – 21 | 13.5 – 10 |
| **FG4-40/250C** | 1.1 | 1.5 | 3 – 21 | 16 – 11.5 |
| **FG4-40/250B** | 1.5 | 2 | 3 – 21 | 17.5 – 13.5 |
| **FG4-40/250A** | 2.2 | 3 | 3 – 21 | 22 – 18 |
| **FG4-50/125C** | 0.37 | 0.5 | 9 – 36 | 4.3 – 1.5 |
| **FG4-50/125B** | 0.55 | 0.75 | 9 – 36 | 5.1 – 2.3 |
| **FG4-50/125A** | 0.55 | 0.75 | 9 – 36 | 5.8 – 3.2 |
| **FG4-50/160C** | 0.55 | 0.75 | 9 – 30 | 7 – 4 |
| **FG4-50/160B** | 0.75 | 1 | 9 – 33 | 8 – 5 |
| **FG4-50/160A** | 1.1 | 1.5 | 9 – 33 | 9 – 7 |
| **FG4-50/200C** | 1.5 | 2 | 12 – 51 | 11 – 7.5 |
| **FG4-50/200B** | 2.2 | 3 | 12 – 51 | 13 – 9.5 |
| **FG4-50/200A** | 2.2 | 3 | 12 – 54 | 15 – 11 |
| **FG4-50/200AR** | 3 | 4 | 12 – 54 | 17 – 13 |
| **FG4-50/250D** | 1.1 | 1.5 | 9 – 27 | 12.5 – 8 |
| **FG4-50/250C** | 1.5 | 2 | 9 – 27 | 14.5 – 10.5 |
| **FG4-50/250B** | 2.2 | 3 | 9 – 30 | 18 – 14.5 |
| **FG4-50/250A** | 2.2 | 3 | 9 – 30 | 21 – 18 |
| **FG4-50/250AR** | 3 | 4 | 9 – 30 | 24 – 21 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MODEL** | **MOTOR PAIRING** | | **PERFORMANCE**  **n= 1450 min-1** | |
| **kW** | **HP** | **Q** m³/h | **H** metres |
| **FG4-65/125C** | 0.55 | 0.75 | 18 – 54 | 4 – 2.7 |
| **FG4-65/125B** | 0.75 | 1 | 18 – 60 | 4.5 – 3.2 |
| **FG4-65/125A** | 1.1 | 1.5 | 18 – 66 | 5.8 – 4.5 |
| **FG4-65/160C** | 1.1 | 1.5 | 18 – 66 | 8 – 5.5 |
| **FG4-65/160B** | 1.5 | 2 | 18 – 72 | 9 – 5.5 |
| **FG4-65/160A** | 2.2 | 3 | 18 – 72 | 10 – 7 |
| **FG4-65/200B** | 2.2 | 3 | 6 – 72 | 10.5 – 7.3 |
| **FG4-65/200A** | 2.2 | 3 | 6 – 75 | 12 – 8.5 |
| **FG4-65/200AR** | 3 | 4 | 6 – 78 | 14 – 10 |
| **FG4-65/250C** | 3 | 4 | 12 – 70.5 | 19 – 13 |
| **FG4-65/250B** | 4 | 5.5 | 12 – 75 | 21.5 – 15.5 |
| **FG4-65/250A** | 5.5 | 7.5 | 12 – 78 | 23.5 – 17 |
| **FG4-80/160D** | 1.5 | 2 | 15 – 120 | 6 – 2.5 |
| **FG4-80/160C** | 2.2 | 3 | 15 – 120 | 7.5 – 3.5 |
| **FG4-80/160B** | 2.2 | 3 | 15 – 120 | 8.5 – 5 |
| **FG4-80/160A** | 3 | 4 | 15 – 120 | 10 – 6 |
| **FG4-80/200B** | 4 | 5.5 | 15 – 109.5 | 14 – 8.5 |
| **FG4-80/200A** | 5.5 | 7.5 | 15 – 117 | 15.5 – 10 |
| **FG4-80/250B** | 5.5 | 7.5 | 18 – 108 | 19 – 13.5 |
| **FG4-80/250A** | 7.5 | 10 | 18 – 117 | 22 – 15 |
| **FG4-100/160C** | 2.2 | 3 | 24 – 144 | 7.5 – 3 |
| **FG4-100/160B** | 2.2 | 3 | 24 – 156 | 8.3 – 3.5 |
| **FG4-100/160A** | 3 | 4 | 24 – 168 | 9.5 – 3.8 |
| **FG4-100/200C** | 4 | 5.5 | 24 – 139.5 | 12.5 – 7 |
| **FG4-100/200B** | 5.5 | 7.5 | 24 – 147 | 14 – 8 |
| **FG4-100/200A** | 5.5 | 7.5 | 24 – 157.5 | 15.5 – 9.5 |
| **FG4-100/250B** | 7.5 | 10 | 24 – 154.5 | 18.5 – 12 |
| **FG4-100/250A** | 9.2 | 12.5 | 24 – 172.5 | 22 – 14.5 |

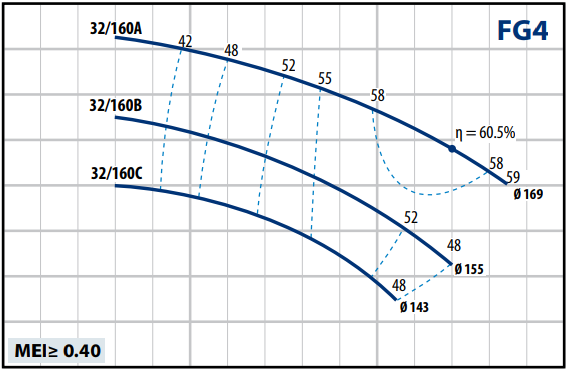
**Q** = Lưu lượng

**H** = Tổng áp

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG4-32/160

10

9

8

7

**H (m)**

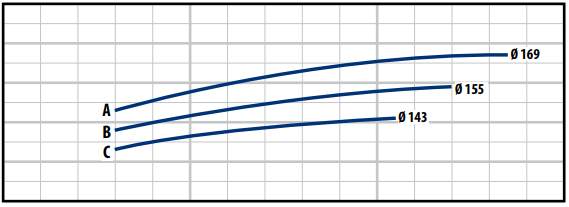
6

5

4

3

20 5 10 15

0.5

0.4

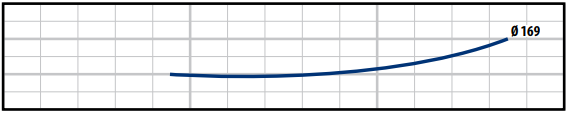
0.3

**P2 (kW)**

0.2

0.1

00 5 10 15

6

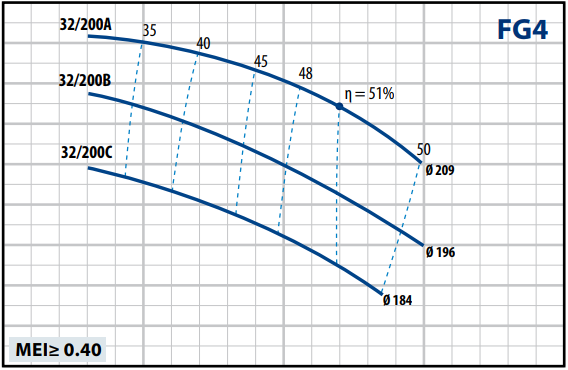
**NPSH (m)**

4

2

00 5 10 15

# FG4-32/200

15

14

13

12

11

**H (m)**

10

9

8

7

60 5 10

1

**Ø 209**

**Ø 184**

**C**

**B**

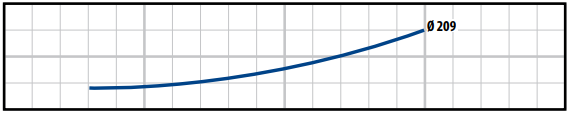
**A**

**Ø 196**

0.5

**P2 (kW)**

00 5 10

8

**NPSH (m)**

4

00 5 10

**n= 1450 min-1**

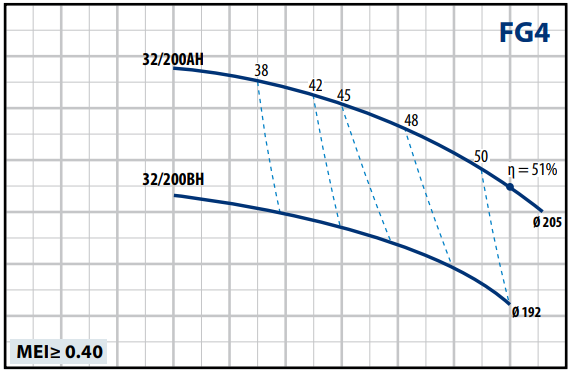
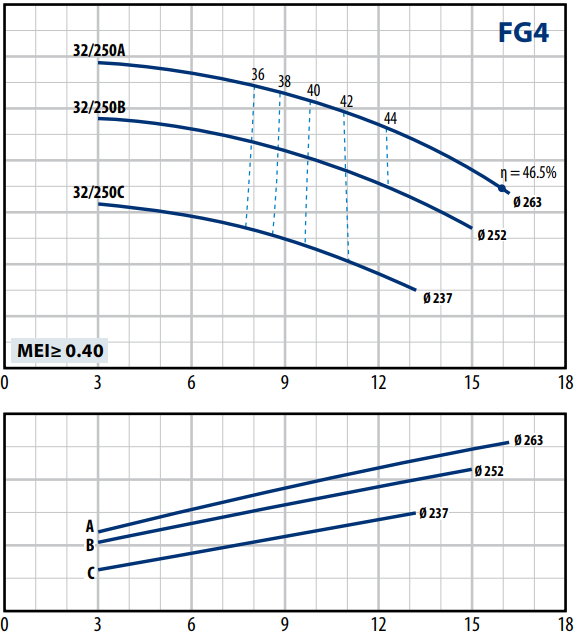
15 20

15 20

15 20

**Q (m³/h) Q (m³/h)**

# FG4-32/200H FG4-32/250

15 26

14 24

13 22

12 20

**H (m)**

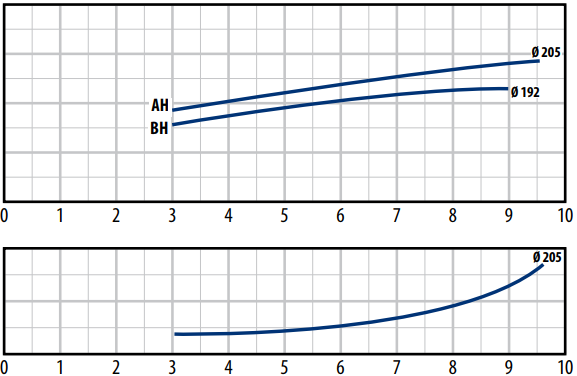
**H (m)**

11 18

10

9

80

0.8

0.6

**P2 (kW)**

0.4

0.2

0

8

**NPSH (m)**

4

00

1 2 3 4 5 6 7 8

9 10

16

**Ø205**

14

12

2,0

1,5

**P2 (kW)**

1,0

0,5

5

**Ø 263**

**NPSH (m)**

4

3

2

1

00

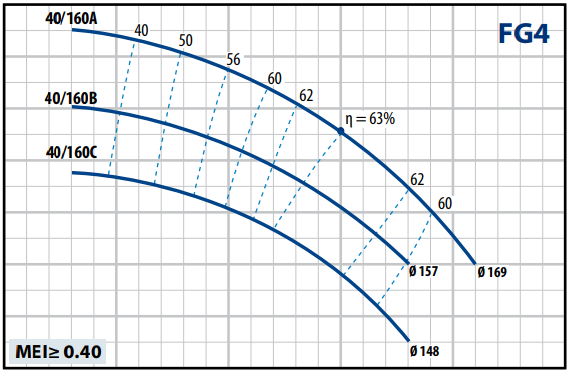
3 6 9

12 15 18

**Q (m³/h) Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG4-40/160

10

9

8

7

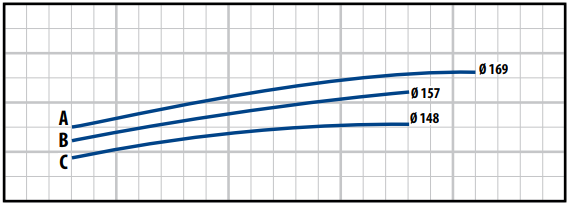
**H (m)**

6

5

4

30 5 10 15 20 25

0.8

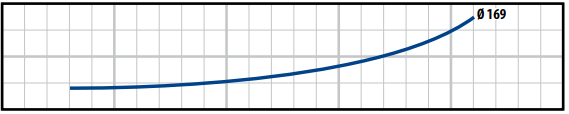
0.6

**P2 (kW)**

0.4

0.2

00 5 10 15 20 25

8

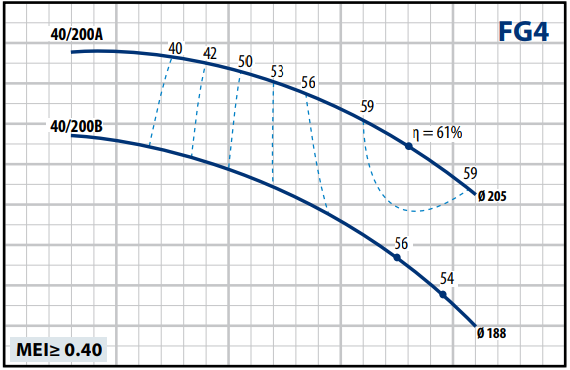
**NPSH (m)**

4

00 5 10 15 20 25

# FG4-40/200

**n= 1450 min-1**

15

14

13

12

11

**H (m)**

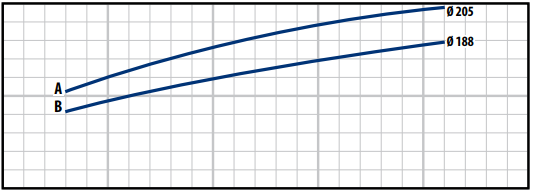
10

9

8

7

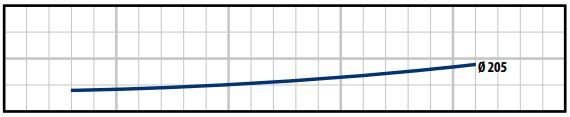
60 5 10 15

1

0.5

**P2 (kW)**

00 5 10 15

8

**NPSH (m)**

4

00 5 10 15

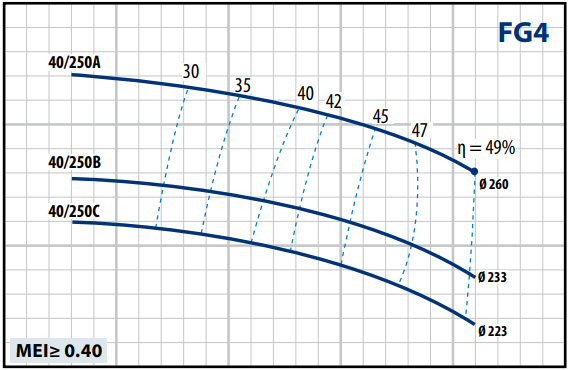
20 25

20 25

20 25

**Q (m³/h) Q (m³/h)**

# FG4-40/250

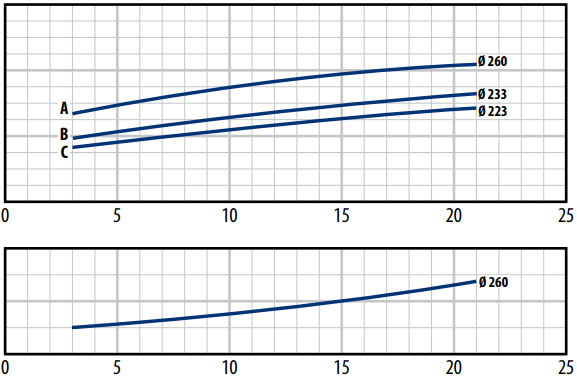
25

20

**H (m)**

15

100 5 10 15 20 25

3

2

**P2 (kW)**

1

0

8

**NPSH (m)**

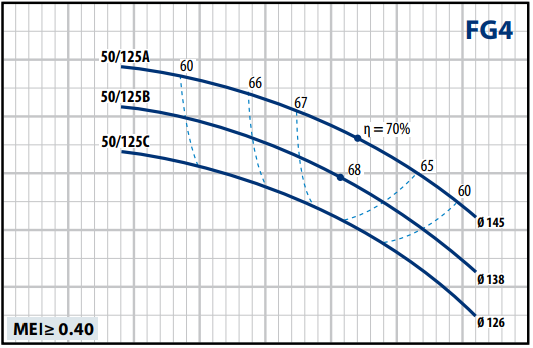
4

0

**Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG4-50/125 FG4-50/160

7

6

5

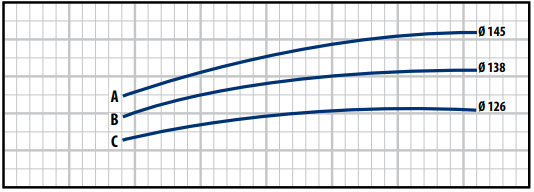
4

**H (m)**

3

2

10 5 10 15 20 25 30 35 40

0.6

0.5

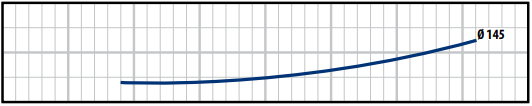
0.4

**P2 (kW)**

0.3

0.2

0.10 5 10 15 20 25 30 35 40

8

**NPSH (m)**

4

00 5 10 15 20 25 30 35 40

### Q (m³/h)

10

9

8

7

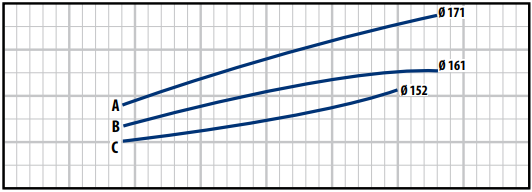
**H (m)**

6

5

4

30 5 10 15 20 25 30 35 40

1

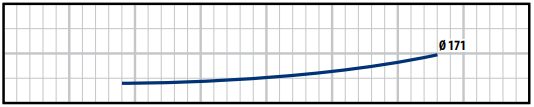
0.8

**P2 (kW)**

0.6

0.4

0.20 5 10 15 20 25 30 35 40

8

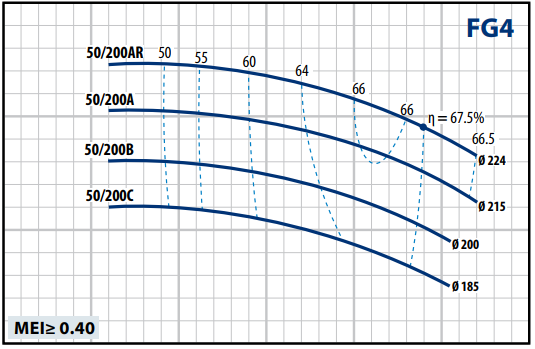
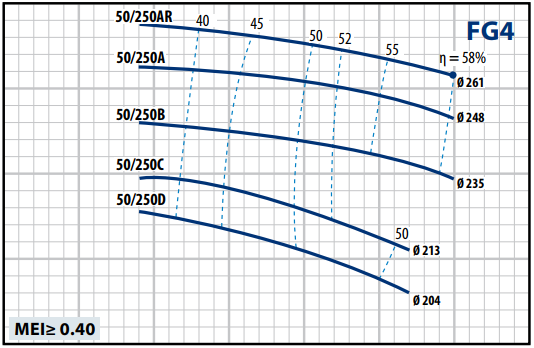
**NPSH (m)**

4

00 5 10 15 20 25 30 35 40

**Q (m³/h)**

# FG4-50/200 FG4-50/250

20 25

20

15

15

**H (m)**

**H (m)**

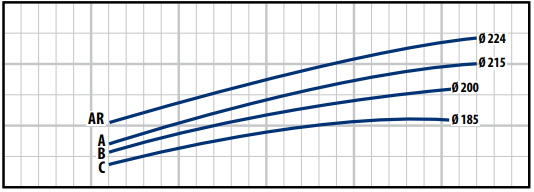
10

10

5

3.5

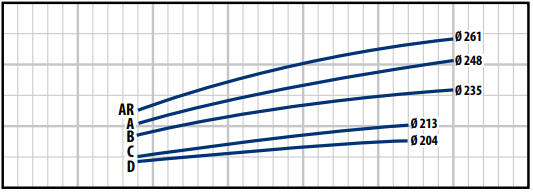
0 10



20 30 40

50 60

50

3.5

5 10 15 20 25

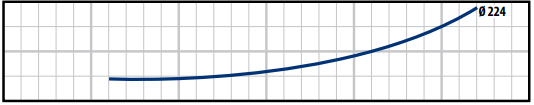
30 35

2.5 2.5

**P2 (kW)**

**P2 (kW)**

1.5

0.50 8

**NPSH (m)**

4

00

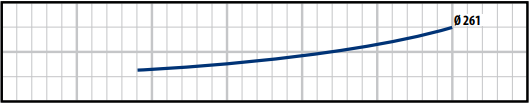
10 20 30 40

10 20 30 40

50 60

50 60

1.5

0.50 8

**NPSH (m)**

4

00

5 10 15 20 25

5 10 15 20 25

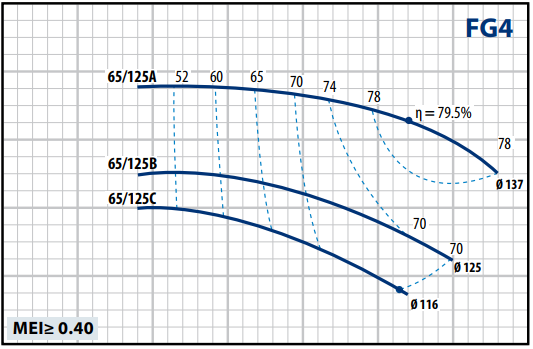
30 35

30 35

**Q (m³/h)**  **Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

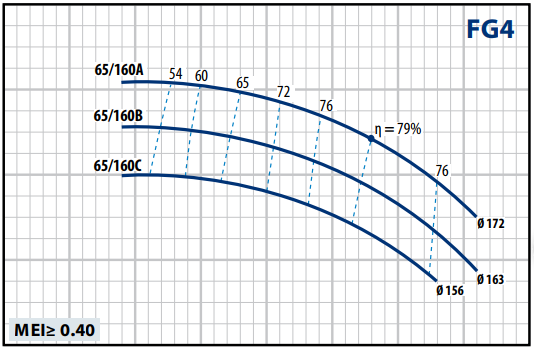
# FG4-65/125

7

6

**n= 1450 min-1**

# FG4-65/160

12

10

5

**H (m)**

**H (m)**

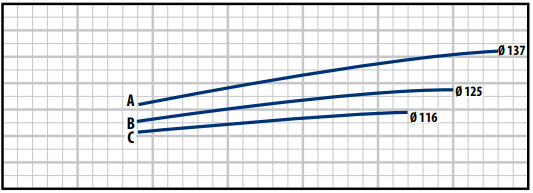
8

4

6

3

20 10 20 30 40 50 60 70

1.4

1.2

1

**P2 (kW)**

0.8

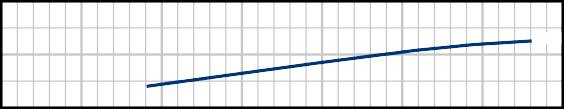
0.6

0.4

0.2

00 10 20 30 40 50 60 70

8



**NPSH (m)**

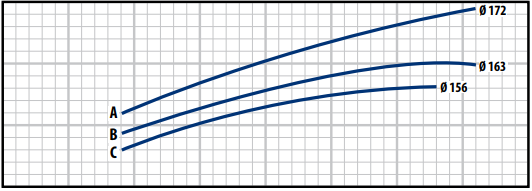
**Ø 137**

4

00 10 20 30 40 50 60 70

### Q (m³/h)

40 10 20 30 40 50 60 70 80

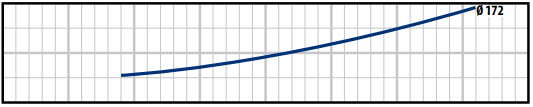
2

1.5

**P2 (kW)**

1

0.50 10 20 30 40 50 60 70 80

8

**NPSH (m)**

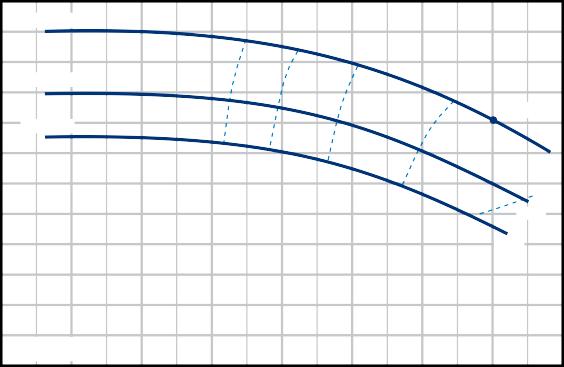
4

00 10 20 30 40 50 60 70 80

**Q (m³/h)**

# FG4-65/200 FG4-65/250

15



**65/200AR**

65

70

**FG4**

75

**65/200A**

77

η = 78%

**65/200B**

**Ø 210**

74

**Ø 204**

**Ø 191**

**MEI≥ 0.40**

14

13

12

11

10

**H (m)**

9

8

7

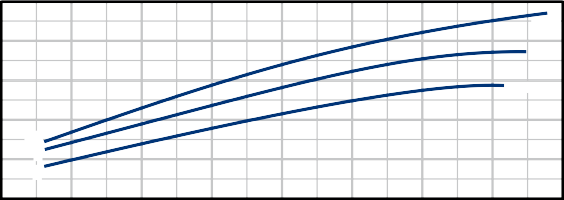
6

5

4

30 10 20 30 40 50 60 70 80

3



**Ø 210**

**B**

**A**

**AR**

**Ø 204**

2.5

2

**Ø 191**

**P2 (kW)**

1.5

1

25

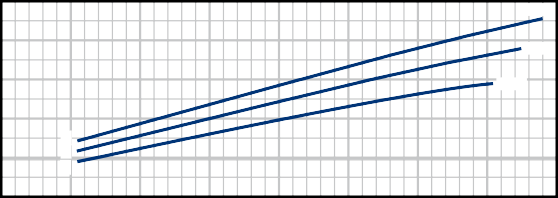
20

**H (m)**

15

100

6



**Ø 258**

**Ø 248**

**Ø 232**

**B C**

**A**

5

4

**P2 (kW)**

3

2

10 20

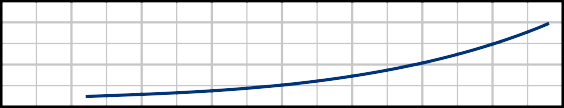
30 40

50 60

70 80

0.50 10 20 30 40 50 60 70 80

8



**Ø 210**

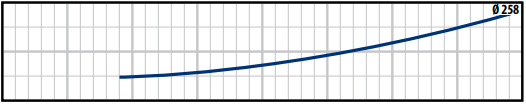
**NPSH (m)**

4

00 10 20 30 40 50 60 70 80

### Q (m³/h)

10 10 20 30 40 50 60 70 80

8

**NPSH (m)**

4

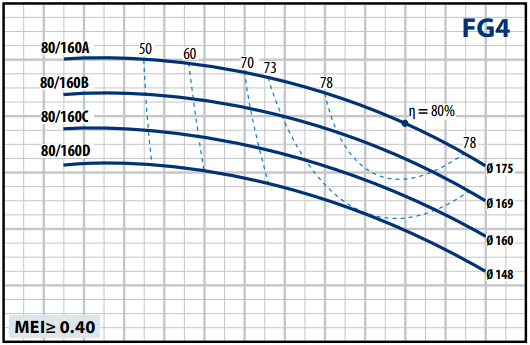
00 10 20 30 40 50 60 70 80

**Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

**n= 1450 min-1**

# FG4-80/160 FG4-80/200

12

10

8

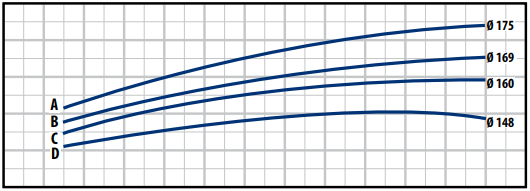
6

**H (m)**

4

2

00 10 20 30 40 50 60 70 80 90 100 110 120 130

3

2.5

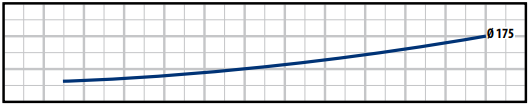
2

**P2 (kW)**

1.5

1

0.50 10 20 30 40 50 60 70 80 90 100 110 120 130

12

**NPSH (m)**

8

4

00 10 20 30 40 50 60 70 80 90 100 110 120 130

### Q (m³/h)

18

17

16

15

14

13

**H (m)**

12

11

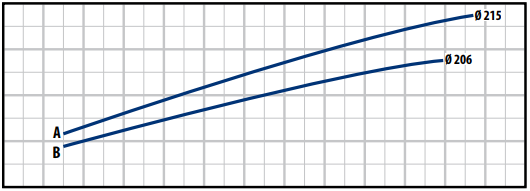
10

9

8

7

60 10 20 30 40 50 60 70 80 90 100 110 120 130

5

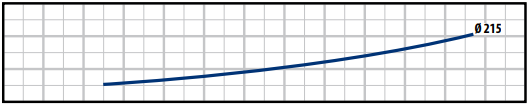
4

**P2 (kW)**

3

2

10 10 20 30 40 50 60 70 80 90 100 110 120 130

12

**NPSH (m)**

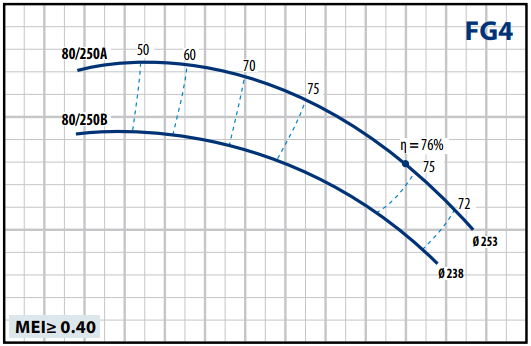
8

4

00 10 20 30 40 50 60 70 80 90 100 110 120 130

**Q (m³/h)**

# FG4-80/250

25

20

**H (m)**

15

100 10 20 30 40 50 60 70 80 90 100 110 120 130

8

**Ø 238**

**A**

**B**

**Ø 253**

7

6

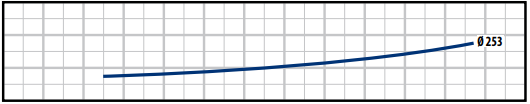
**P2 (kW)**

5

4

3

20 10 20 30 40 50 60 70 80 90 100 110 120 130

12

**NPSH (m)**

8

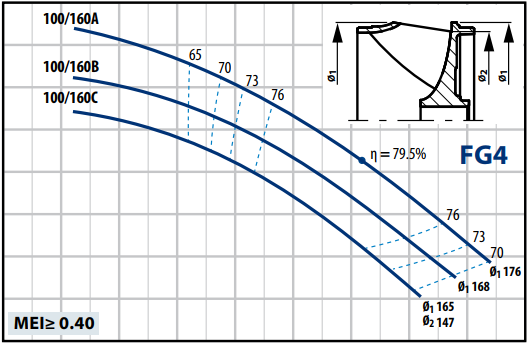
4

00 10 20 30 40 50 60 70 80 90 100 110 120 130

**Q (m³/h)**

**ĐƯỜNG CONG ĐẶC TÍNH**

# FG4-100/160

10

9

8

7

**H (m)**

6

5

4

3

20 20 40 60 80 100 120 140 160 180

3

**Ø1 176**

**Ø1 168**

**Ø1 165**

**Ø2 147**

2

**P2 (kW)**

10 20 40 60 80 100 120 140 160 180

8

**176**

**Ø**

**NPSH (m)**

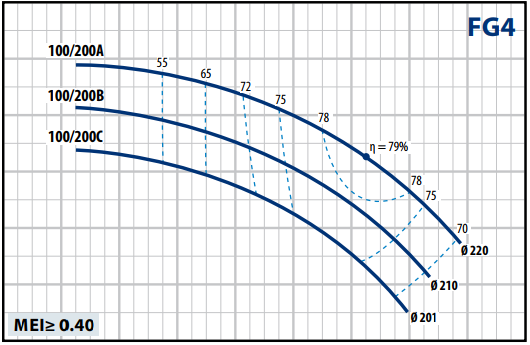
4

00 20 40 60 80 100 120 140 160 180

**Q (m³/h)**

**n= 1450 min-1**

# FG4-100/200

18

16

14

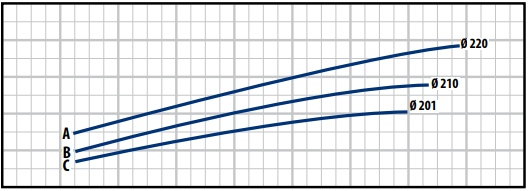
12

**H (m)**

10

8

60 20 40 60 80 100 120 140 160 180

7

6

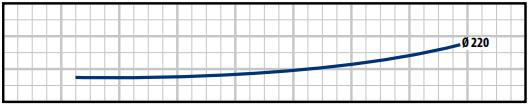
5

**P2 (kW)**

4

3

20 20 40 60 80 100 120 140 160 180

12

**NPSH (m)**

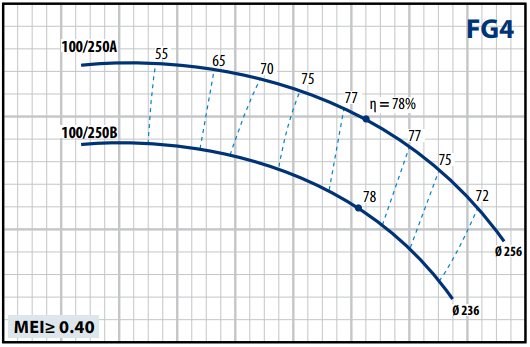
8

4

00 20 40 60 80 100 120 140 160 180

**Q (m³/h)**

# FG4-100/250

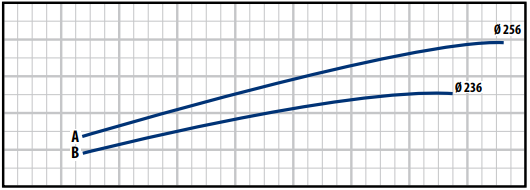
25

20

**H (m)**

15

100 20 40 60 80 100 120 140 160 180

12

10

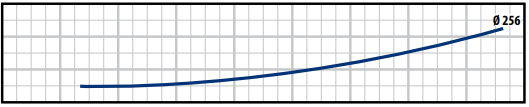
8

**P2 (kW)**

6

4

20 20 40 60 80 100 120 140 160 180

12

**NPSH (m)**

8

4

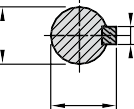
00 20 40 60 80 100 120 140 160 180

**Q (m³/h)**



**h1**

**KÍCH THƯỚC – TRỌNG LƯỢNG**



**e**

**DN1**

**d**

**d**

**c**

**h2**

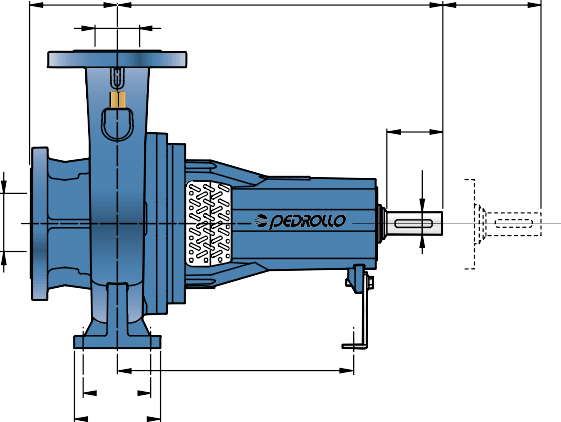


**TRỤC mm**

|  |  |  |
| --- | --- | --- |
| d | c | e |
| 24 k6 | 8 | 27 |
| 32 k6 | 10 | 35 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MODEL** | **KÍCH THƯỚC mm** | | | | | | | | | | | | | | | | | **kg** |
| **DN1** | **DN2** | a | f | h1 | h2 | b | m1 | m2 | n1 | n2 | s1 | s2 | w | x | d | l |
| **FG 32/160** | 50 | 32 | 80 | 360 | 132 | 160 | 55 | 96 | 71 | 240 | 190 | 14 | 14 | 260 | 100 | 24 | 50 | **33.0** |
| **FG 32/200** | 160 | 180 | 55 | 95 | **38.5** |
| **FG 32/200H** | 160 | 180 | 55 | **36.8** |
| **FG 32/250** | 100 | 180 | 225 | 65 | 125 | 95 | 320 | 250 | **53.0** |
| **FG 40/125** | 65 | 40 | 80 | 112 | 140 | 50 | 100 | 70 | 210 | 160 | **34.0** |
| **FG 40/160** | 132 | 160 | 240 | 190 | **35.0** |
| **FG 40/200** | 100 | 160 | 180 | 55 | 265 | 212 | **40.0** |
| **FG 40/250** | 180 | 225 | 65 | 125 | 95 | 320 | 250 | **59.0** |
| **FG 50/125** | 65 | 50 | 132 | 160 | 50 | 100 | 70 | 240 | 190 | **33.0** |
| **FG 50/160** | 160 | 180 | 55 | 265 | 212 | **38.3** |
| **FG 50/200** | 160 | 200 | 50 | **50.3** |
| **FG 50/250** | 180 | 225 | 65 | 125 | 95 | 320 | 250 | **57.0** |
| **FG 65/125** | 80 | 65 | 160 | 180 | 65 | 280 | 212 | **45.0** |
| **FG 65/160** | 160 | 200 | 65 | **48.0** |
| **FG 65/200** | 180 | 225 | 65 | 320 | 250 | 140 | **55.0** |
| **FG 65/250** | 470 | 200 | 250 | 80 | 160 | 120 | 360 | 280 | 18 | 340 | 32 | 80 | **83.0** |
| **FG 80/160** | 100 | 80 | 125 | 360 | 180 | 225 | 65 | 125 | 95 | 320 | 250 | 14 | 260 | 24 | 50 | **53.0** |
| **FG 80/200** | 470 | 180 | 250 | 65 | 345 | 280 | 340 | 32 | 80 | **75.0** |
| **FG 80/250** | 200 | 280 | 80 | 160 | 120 | 400 | 315 | 18 | **93.0** |
| **FG 100/160** | 125 | 100 | 360 | 200 | 280 | 80 | 360 | 280 | 260 | 24 | 50 | **94.0** |
| **FG 100/200** | 470 | 200 | 280 | 80 | 340 | 32 | 80 | **87.0** |
| **FG 100/250** | 140 | 225 | 280 | 80 | 400 | 315 | **104.0** |

## CỔNG MẶT BÍCH MẶT BÍCH ĐỐI



**a**

**f**

**x**

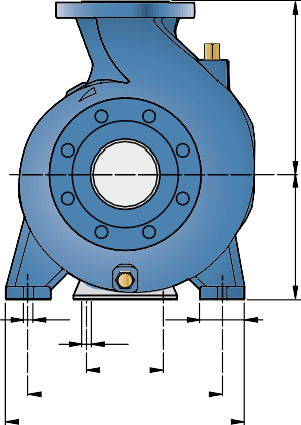
**DN2**

**l**

**w**

**m2**

**m1**



**S1**

**b**

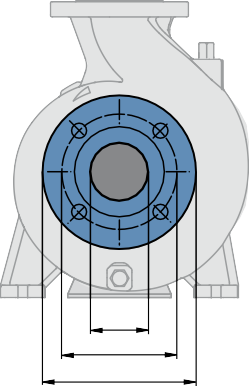
**S2**

**110**

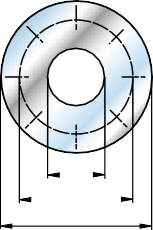
**n2**

**n1**

(CÓ THỂ ĐẶT RIÊNG LẺ)



**DN K D**



**F**

**K D**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DN MẶT BÍCH**  **mm** | **D**  **mm** | **K**  **mm** | **HOLES** | |
| **N°** | **Ø (mm)** |
| **32** | 140 | 100 | 4 | 18 |
| **40** | 150 | 110 |
| **50** | 165 | 125 |
| **65** | 185 | 145 |
| **80** | 200 | 160 | 8 |
| **100** | 220 | 180 |
| **125** | 250 | 210 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **DN MẶT BÍCH**  **mm** | **F**  **MẶT BÍCH ĐỐI** | **D**  **mm** | **K**  **mm** | **HOLES** | |
| **N°** | **Ø (mm)** |
| 32 | **1¼"** | 140 | 100 | 4 | 18 |
| 40 | **1½"** | 150 | 110 |
| 50 | **2"** | 165 | 125 |
| 65 | **2½"** | 185 | 145 |
| 80 | **3"** | 200 | 160 | 8 |
| 100 | **4"** | 220 | 180 |
| 125 | **5"** | 250 | 210 |