

# Standardised Water Pump / Thermal Oil and Hot Water Pump

## 50 Hz

Etanorm, Etanorm SYT  
Etanorm V  
Etabloc, Etabloc SYT  
Etanorm-RSY

## Characteristic Curves Booklet



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Characteristic Curves Booklet 50 Hz

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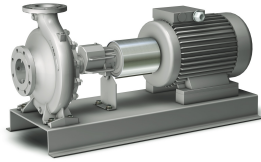
## Centrifugal Pumps with Shaft Seal

Standardised Water Pump / Thermal Oil and Hot Water Pump

### Etanorm/ SYT/ V, Etabloc/ SYT, Etanorm-RSY



Etanorm



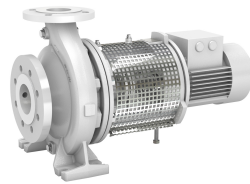
Etanorm SYT



Etanorm V



Etabloc



Etabloc SYT



Etanorm-RSY

#### General

**Acceptance grade:** Characteristic curves to ISO 9906 Class 3B

#### NPSH values

The NPSH values indicated in the characteristic curves correspond to a head drop of 3 %.

#### NPSH values in part-load conditions

NPSH values for flow rates below  $Q = 0.3 \times Q_{BEP}$  can only be measured with intense technical efforts. Evidence of NPSH values in the part-load range cannot be provided.

#### Density of the fluid handled

The indicated heads and performance data apply to pumped fluids with a density  $\rho = 1.0 \text{ kg/dm}^3$  and a kinematic viscosity of up to  $20 \text{ mm}^2/\text{s}$  max. If the density  $\neq 1.0$ , the performance data must be multiplied by  $\rho$ . For a viscosity  $> 20 \text{ mm}^2/\text{s}$  the corresponding data for cold water has to be calculated and the impact on the pump's performance has to be determined.

#### Friction loss

For some design variants (reinforced bearings, specific shaft seals) friction losses must be considered and indicated as additional power requirement in the data sheet.

#### Correction factors

The characteristic curves apply to pumps with cast iron or bronze impellers.

- **Etanorm/SYT, Etabloc/SYT**

When using an impeller made of cast steel materials the efficiency and pump power of the corresponding pump sizes have to be multiplied by the correction factors indicated in the characteristic curves.

- **Etanorm-RSY**

When using an impeller made of 1.4408 the efficiency percentages indicated in the characteristic curves have to be reduced by 2 percentage points each.



**Overview of sizes**

Table 1: Overview of sizes

Size	Type series						Speed [rpm]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	2900	1450	960
040-025-160	X	X	-	X	X	-	(⇒ Page 22)	(⇒ Page 56)	(⇒ Page 130)
040-025-200	X	X	-	X	X	-	(⇒ Page 23)	(⇒ Page 57)	(⇒ Page 131)
050-032-125.1	X	X	X	X	X	-	(⇒ Page 24)	(⇒ Page 58)	(⇒ Page 132)
050-032-160.1	X	X	X	X	X	-	(⇒ Page 25)	(⇒ Page 59)	(⇒ Page 133)
050-032-200.1	X	X	X	X	X	-	(⇒ Page 26)	(⇒ Page 60)	(⇒ Page 134)
050-032-250.1	X	-	X	X	-	-	(⇒ Page 27)	(⇒ Page 61)	(⇒ Page 135)
050-032-125	X	-	X	X	-	-	(⇒ Page 28)	(⇒ Page 62)	(⇒ Page 136)
050-032-160	X	X	X	X	X	-	(⇒ Page 29)	(⇒ Page 63)	(⇒ Page 137)
050-032-200	X	X	X	X	X	-	(⇒ Page 30)	(⇒ Page 64)	(⇒ Page 138)
050-032-250	X	X	X	X	-	-	(⇒ Page 31)	(⇒ Page 65)	(⇒ Page 139)
065-040-125	X	-	X	X	-	-	(⇒ Page 32)	(⇒ Page 66)	(⇒ Page 140)
065-040-160	X	X	X	X	X	-	(⇒ Page 33)	(⇒ Page 67)	(⇒ Page 141)
065-040-200	X	X	X	X	X	-	(⇒ Page 34)	(⇒ Page 68)	(⇒ Page 142)
065-040-250	X	X	X	X	-	-	(⇒ Page 35)	(⇒ Page 69)	(⇒ Page 143)
065-040-315	X	X	X	X	-	-	(⇒ Page 36)	(⇒ Page 70)	(⇒ Page 144)
065-050-125	X	-	X	X	-	-	(⇒ Page 37)	(⇒ Page 71)	(⇒ Page 145)
065-050-160	X	X	X	X	X	-	(⇒ Page 38)	(⇒ Page 72)	(⇒ Page 146)
065-050-200	X	X	X	X	X	-	(⇒ Page 39)	(⇒ Page 73)	(⇒ Page 147)
065-050-250	X	X	X	X	-	-	(⇒ Page 40)	(⇒ Page 74)	(⇒ Page 148)
065-050-315	X	X	X	X	-	-	(⇒ Page 41)	(⇒ Page 75)	(⇒ Page 149)
080-065-125	X	-	X	X	-	-	(⇒ Page 42)	(⇒ Page 76)	(⇒ Page 150)
080-065-160	X	X	X	X	X	-	(⇒ Page 43)	(⇒ Page 77)	(⇒ Page 151)
080-065-200	X	X	X	X	X	-	(⇒ Page 44)	(⇒ Page 78)	(⇒ Page 152)
080-065-250	X	X	X	X	-	-	(⇒ Page 45)	(⇒ Page 79)	(⇒ Page 153)
080-065-315	X	X	X	X	-	-	(⇒ Page 46)	(⇒ Page 80)	(⇒ Page 154)
100-080-160	X	X	X	X	X	-	(⇒ Page 47)	(⇒ Page 81)	(⇒ Page 155)
100-080-200	X	X	X	X	-	-	(⇒ Page 48)	(⇒ Page 82)	(⇒ Page 156)
100-080-250	X	X	X	X	-	-	(⇒ Page 49)	(⇒ Page 83)	(⇒ Page 157)
100-080-315	X	X	X	X	-	-	(⇒ Page 50)	(⇒ Page 84)	(⇒ Page 158)
100-080-400	X	-	X	X	-	-	-	(⇒ Page 85)	(⇒ Page 159)
125-100-160	X	X	X	X	-	-	(⇒ Page 51)	(⇒ Page 86)	(⇒ Page 160)
125-100-200	X	X	X	X	-	-	(⇒ Page 52)	(⇒ Page 87)	(⇒ Page 161)
125-100-250	X	X	X	X	-	-	(⇒ Page 53)	(⇒ Page 88)	(⇒ Page 162)
125-100-315	X	X	X	X	-	-	(⇒ Page 54)	(⇒ Page 89)	(⇒ Page 163)
125-100-400	X	-	X	X	-	-	-	(⇒ Page 90)	(⇒ Page 164)
150-125-200	X	X	X	X	-	-	(⇒ Page 55)	(⇒ Page 91)	(⇒ Page 165)
150-125-250	X	X	X	X	-	-	-	(⇒ Page 92)	(⇒ Page 166)
150-125-315	X	X	X	X	-	-	-	(⇒ Page 93)	(⇒ Page 167)
150-125-400	X	X	X	X	-	-	-	(⇒ Page 94)	(⇒ Page 168)
150-125-510	X	-	-	-	-	-	-	(⇒ Page 95)	(⇒ Page 169)
200-150-200	X	-	X	X	-	-	-	(⇒ Page 96)	(⇒ Page 170)
200-150-250	X	-	X	X	-	-	-	(⇒ Page 97)	(⇒ Page 171)
200-150-315	X	X	X	X	-	-	-	(⇒ Page 98)	(⇒ Page 172)
200-150-400	X	X	X	X	-	-	-	(⇒ Page 99)	(⇒ Page 173)
200-150-510	X	-	-	-	-	-	-	(⇒ Page 100)	(⇒ Page 174)
200-200-250	X	-	-	-	-	-	-	(⇒ Page 101)	(⇒ Page 175)
250-200-275	X	-	-	-	-	-	-	(⇒ Page 102)	(⇒ Page 176)
250-200-320	X	-	-	-	-	-	-	(⇒ Page 103)	(⇒ Page 177)
250-200-375	X	-	-	-	-	-	-	(⇒ Page 104)	(⇒ Page 178)
250-200-435	X	-	-	-	-	-	-	(⇒ Page 105)	(⇒ Page 179)
250-200-510	X	-	-	-	-	-	-	(⇒ Page 106)	(⇒ Page 180)
300-250-295	X	-	-	-	-	-	-	(⇒ Page 107)	(⇒ Page 181)

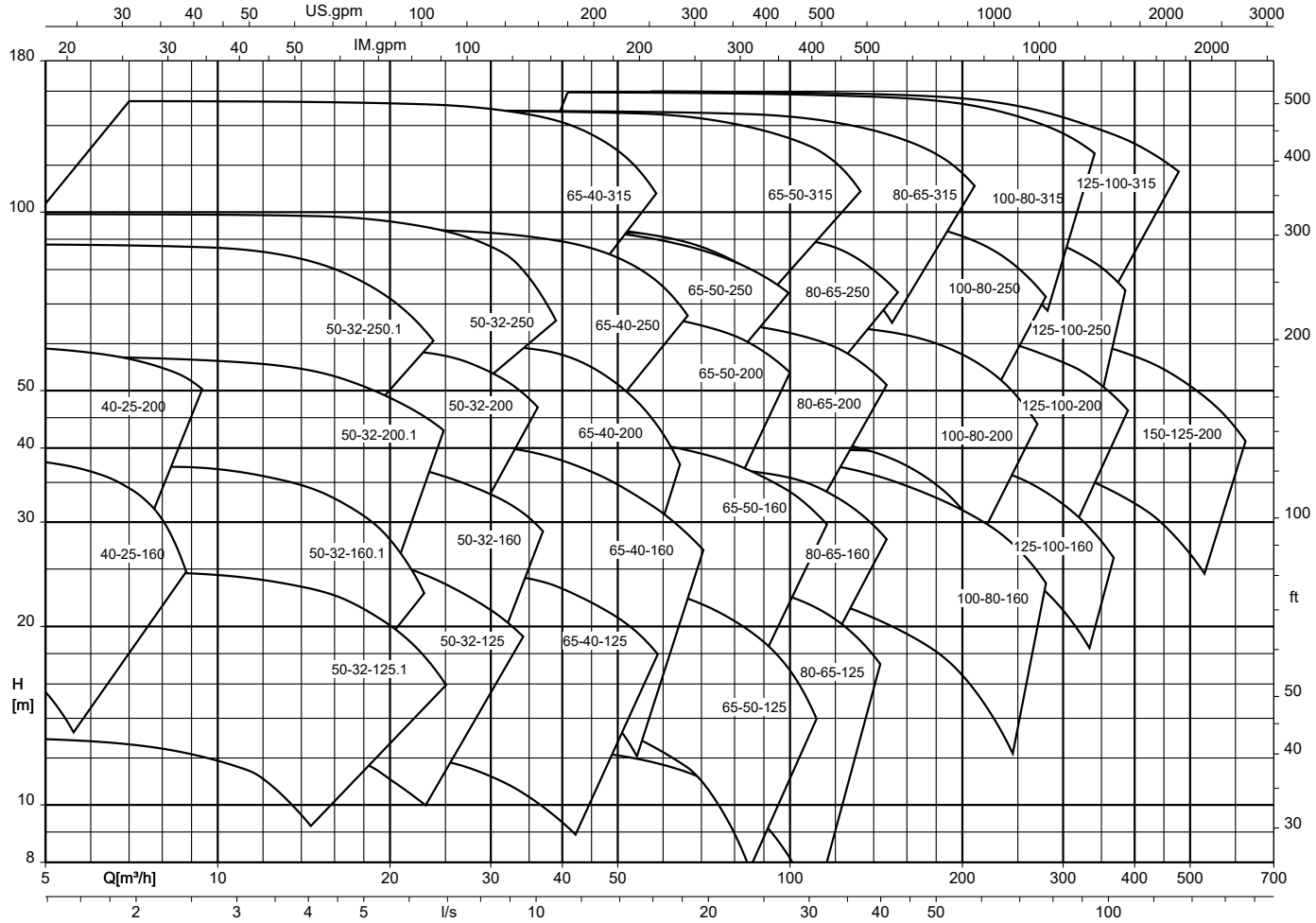
Size	Type series						Speed [rpm]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	2900	1450	960
300-250-295.1	X	-	-	-	-	-	-	(⇒ Page 108)	(⇒ Page 182)
300-250-320	X	-	-	-	-	-	-	(⇒ Page 109)	(⇒ Page 183)
300-250-375	X	-	-	-	-	-	-	(⇒ Page 110)	(⇒ Page 184)
300-250-435	X	-	-	-	-	-	-	(⇒ Page 111)	(⇒ Page 185)
300-250-510	X	-	-	-	-	-	-	(⇒ Page 112)	(⇒ Page 186)
350-300-350	X	-	-	-	-	-	-	(⇒ Page 113)	(⇒ Page 187)
350-300-350.1	X	-	-	-	-	-	-	(⇒ Page 114)	(⇒ Page 188)
350-300-375	X	-	-	-	-	-	-	(⇒ Page 115)	(⇒ Page 189)
350-300-435	X	-	-	-	-	-	-	(⇒ Page 116)	(⇒ Page 190)
350-300-510	X	-	-	-	-	-	-	(⇒ Page 117)	(⇒ Page 191)

Table 2: Overview of sizes

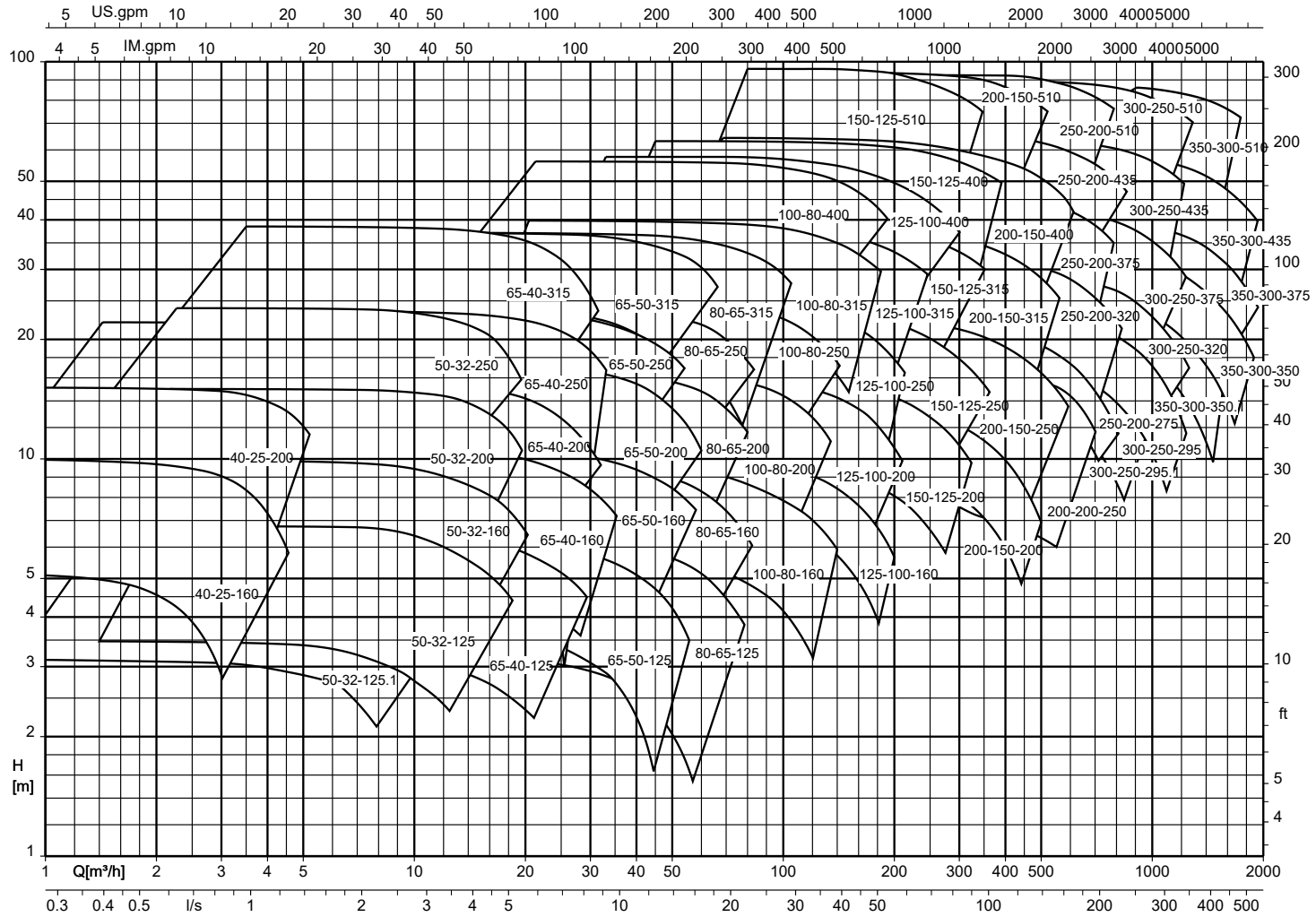
Size	Type series						Speed [rpm]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	2900	1450	960
125-500.2	-	-	-	-	-	X	-	(⇒ Page 118)	(⇒ Page 192)
150-500.1	-	-	-	-	-	X	-	(⇒ Page 119)	(⇒ Page 193)
200-330	-	-	-	-	-	X	-	(⇒ Page 120)	(⇒ Page 196)
200-400	-	-	-	-	-	X	-	(⇒ Page 121)	(⇒ Page 197)
200-500	-	-	-	-	-	X	-	(⇒ Page 122)	(⇒ Page 198)
250-300	-	-	-	-	-	X	-	(⇒ Page 123)	(⇒ Page 199)
250-330	-	-	-	-	-	X	-	(⇒ Page 124)	(⇒ Page 200)
250-400	-	-	-	-	-	X	-	(⇒ Page 125)	(⇒ Page 201)
250-500	-	-	-	-	-	X	-	(⇒ Page 126)	(⇒ Page 202)
300-360	-	-	-	-	-	X	-	(⇒ Page 127)	(⇒ Page 204)
300-400	-	-	-	-	-	X	-	(⇒ Page 128)	(⇒ Page 205)
300-500	-	-	-	-	-	X	-	(⇒ Page 129)	(⇒ Page 206)

Selection charts

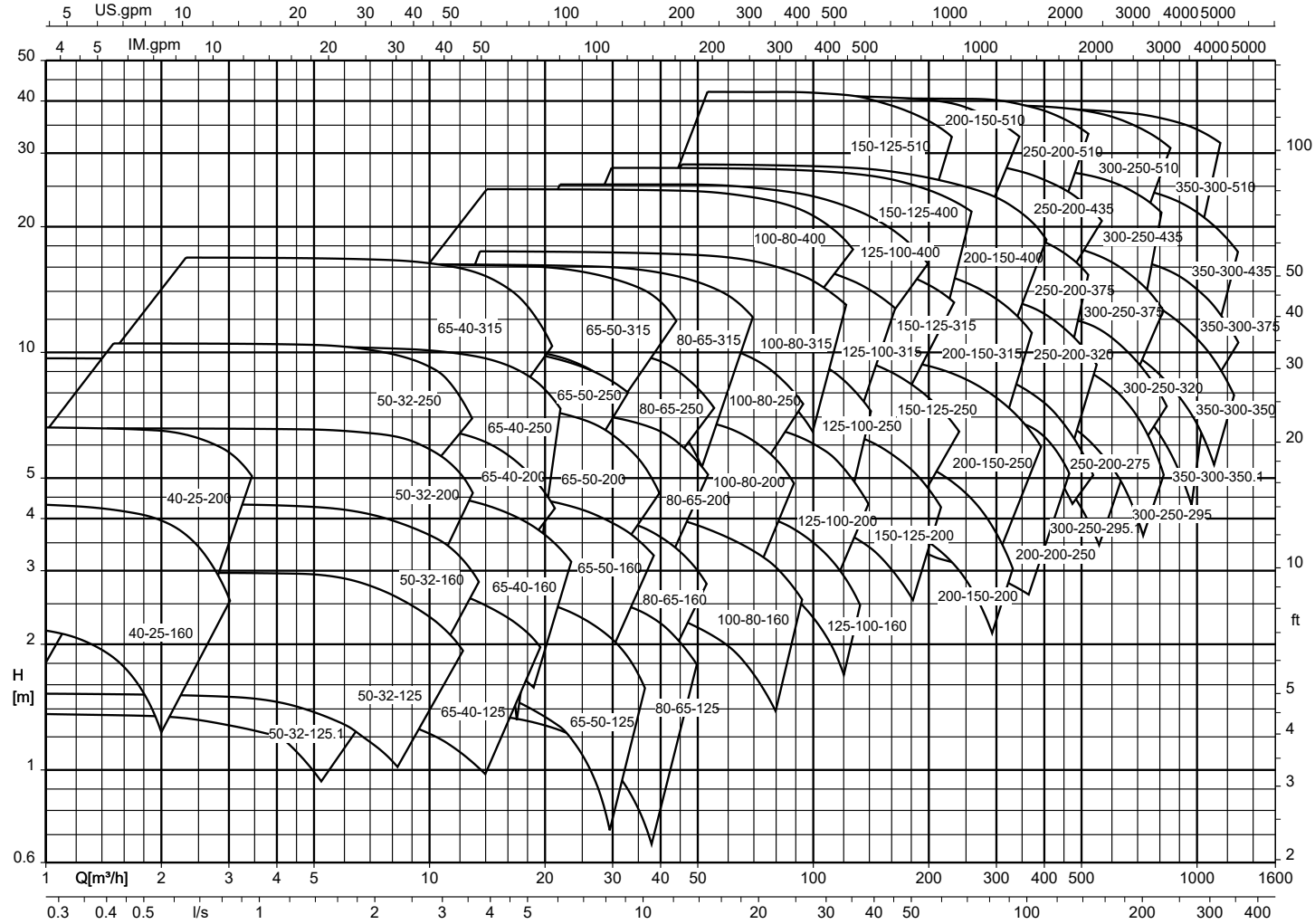
Etanorm, n = 2900 rpm



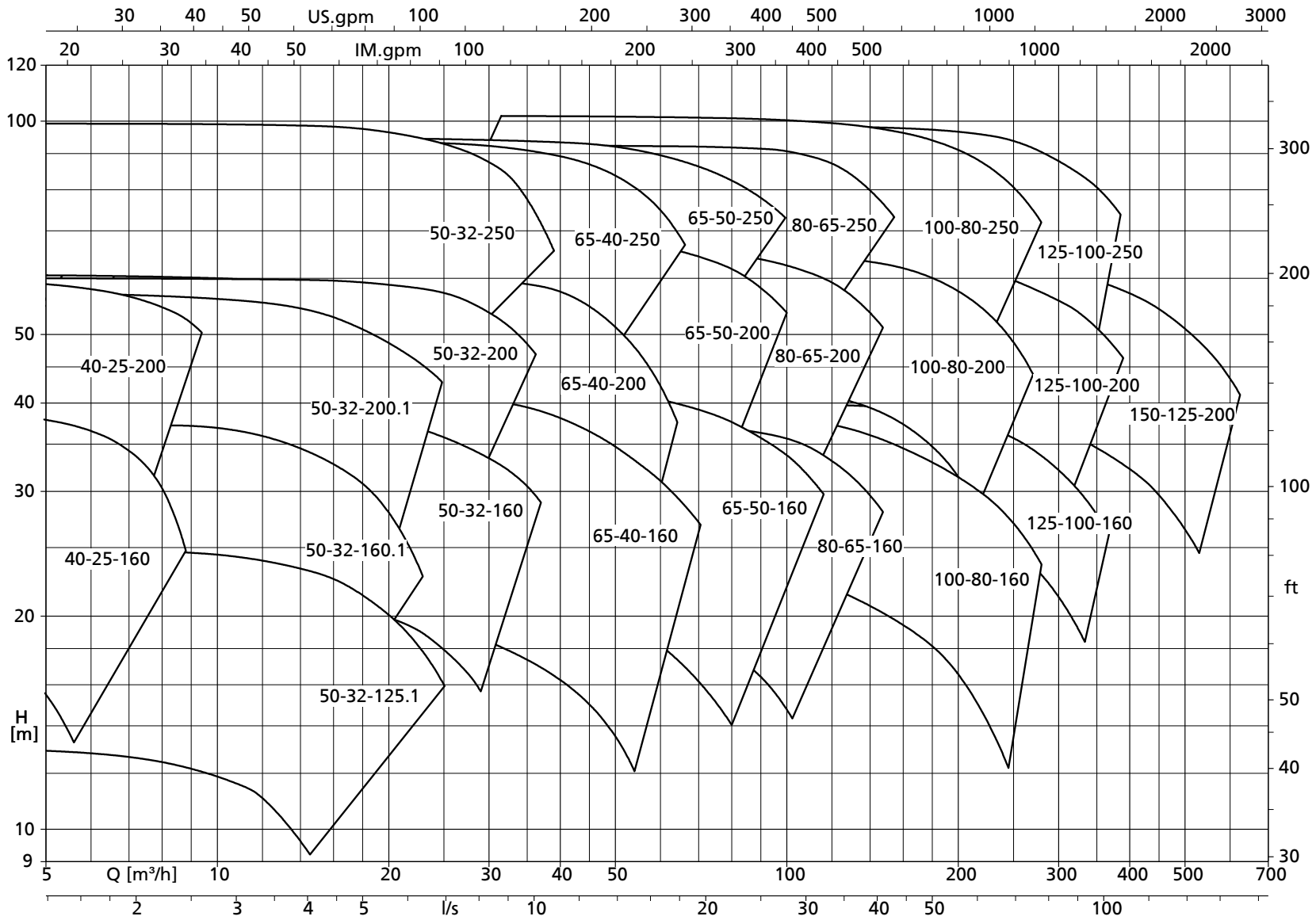
Etanorm, n = 1450 rpm



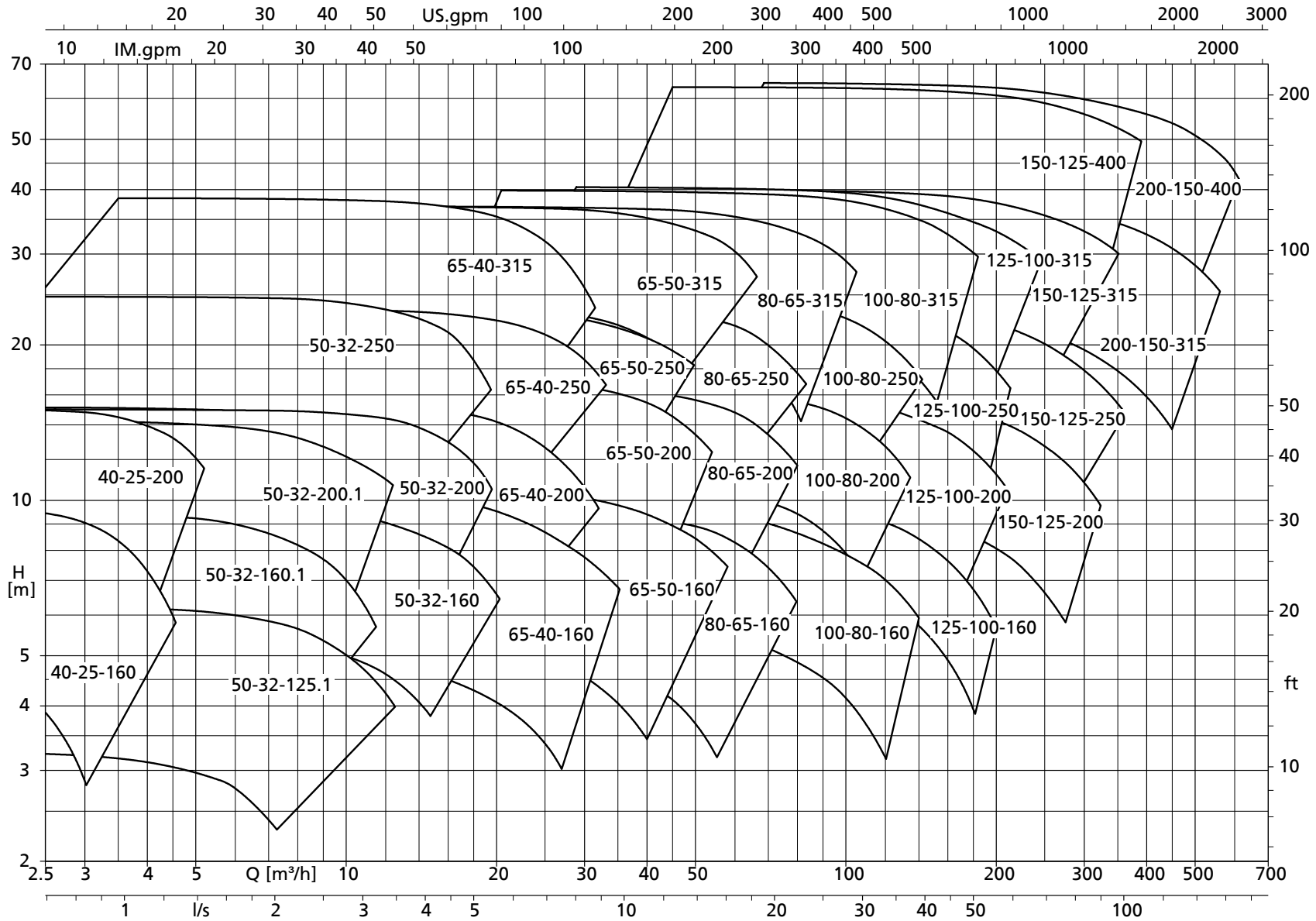
Etanorm, n = 960 rpm



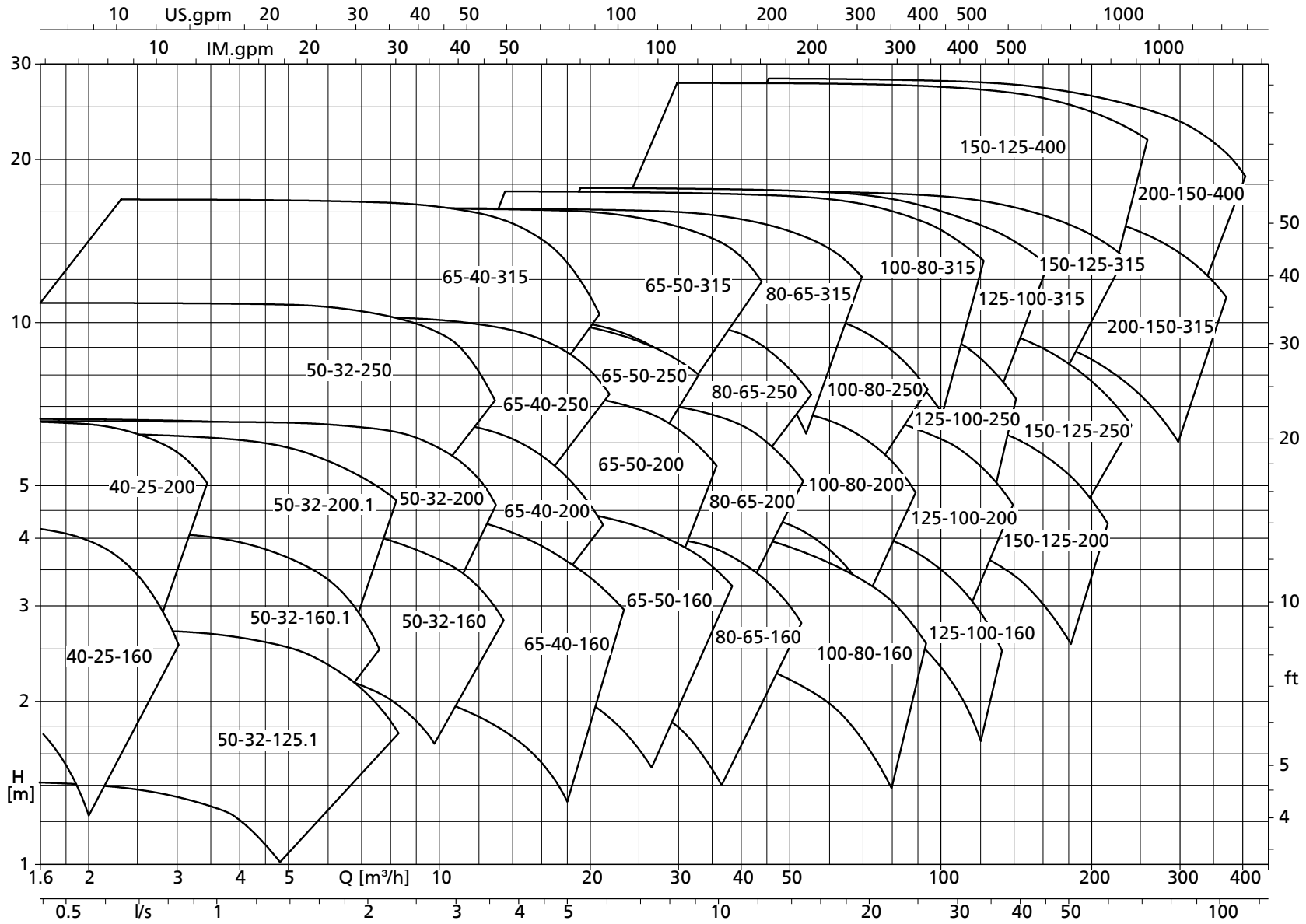
Etanorm SYT, n = 2900 rpm



Etanorm SYT, n = 1450 rpm

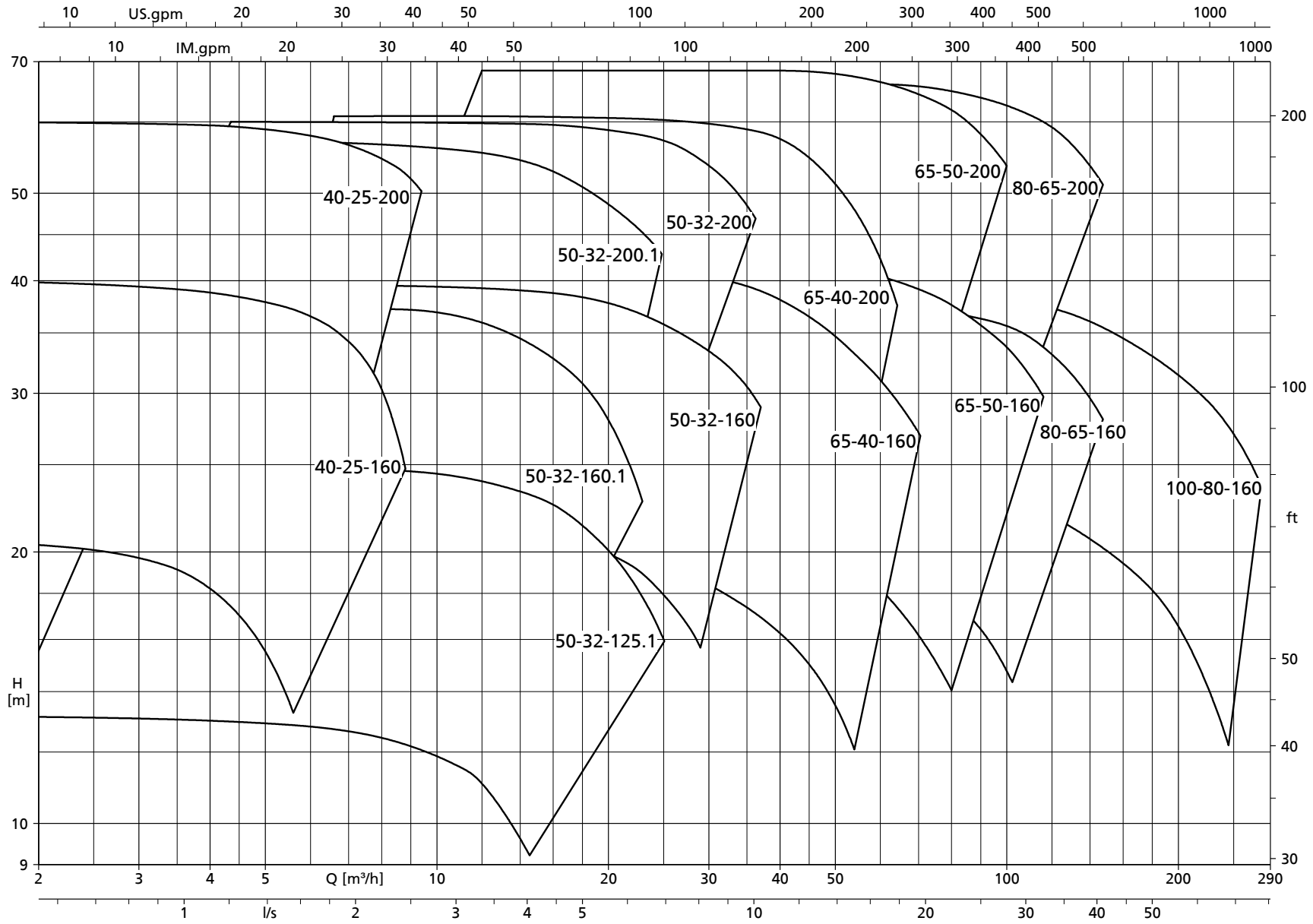


Etanorm SYT, n = 960 rpm

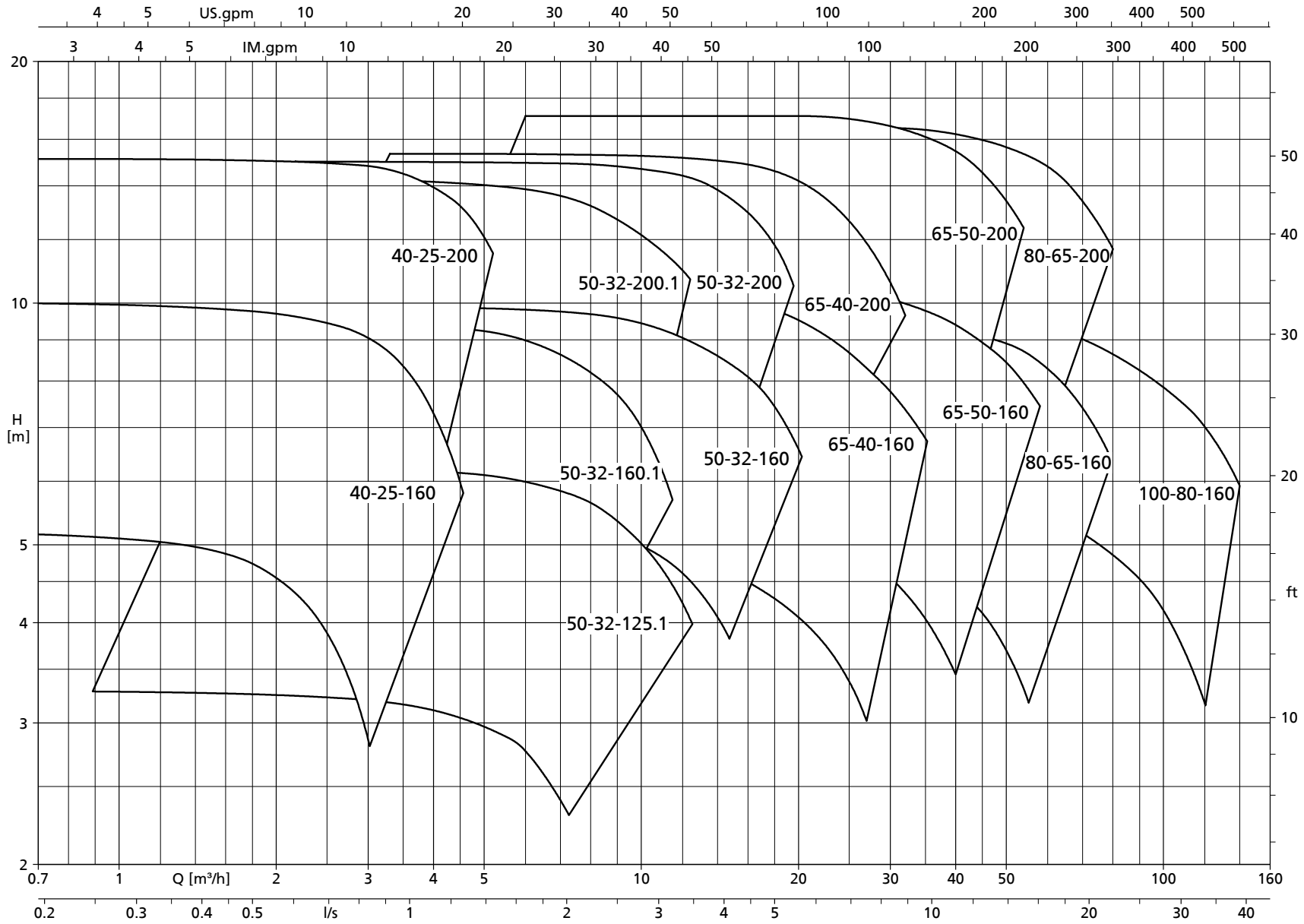




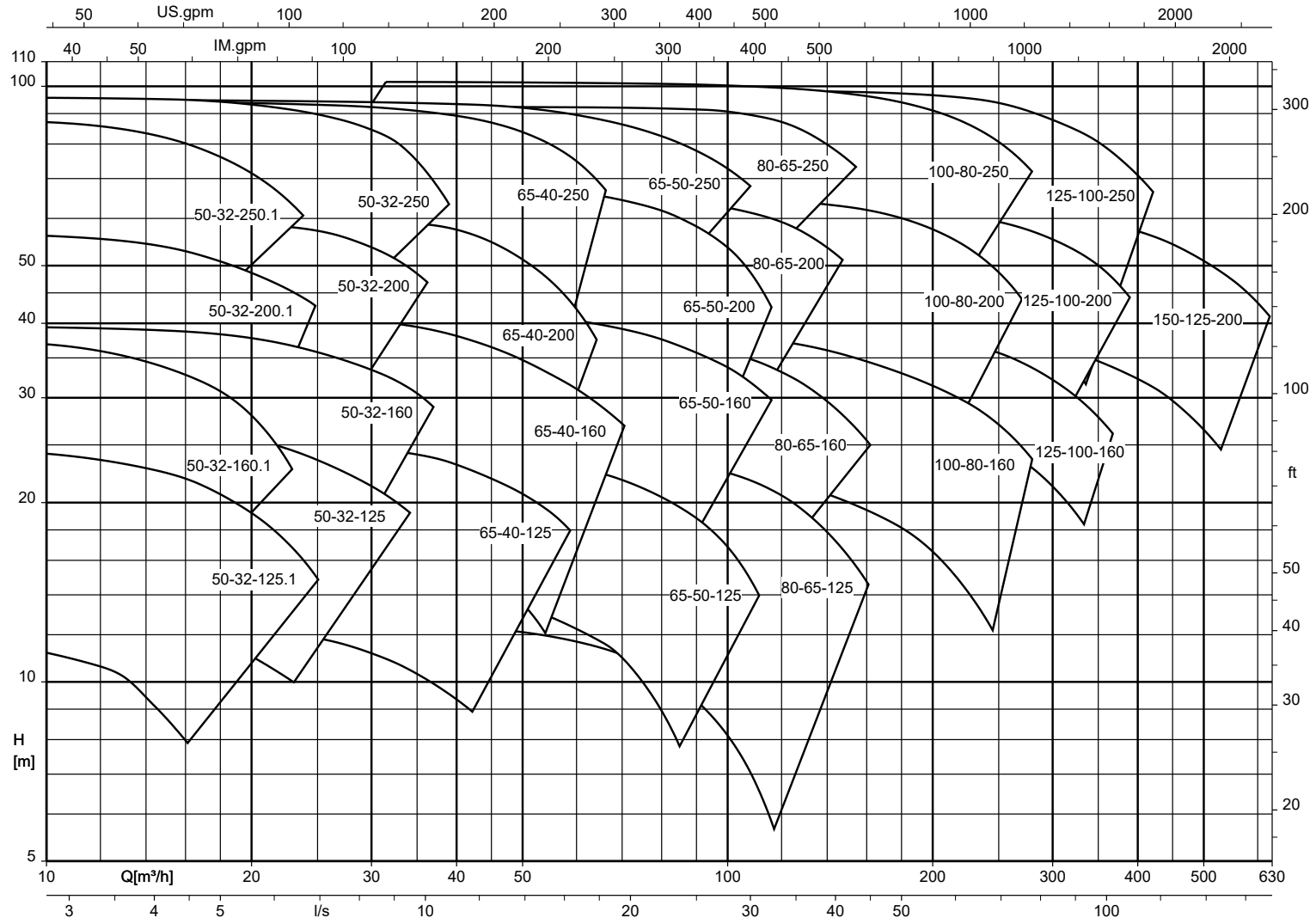
Etabloc SYT, n = 2900 rpm



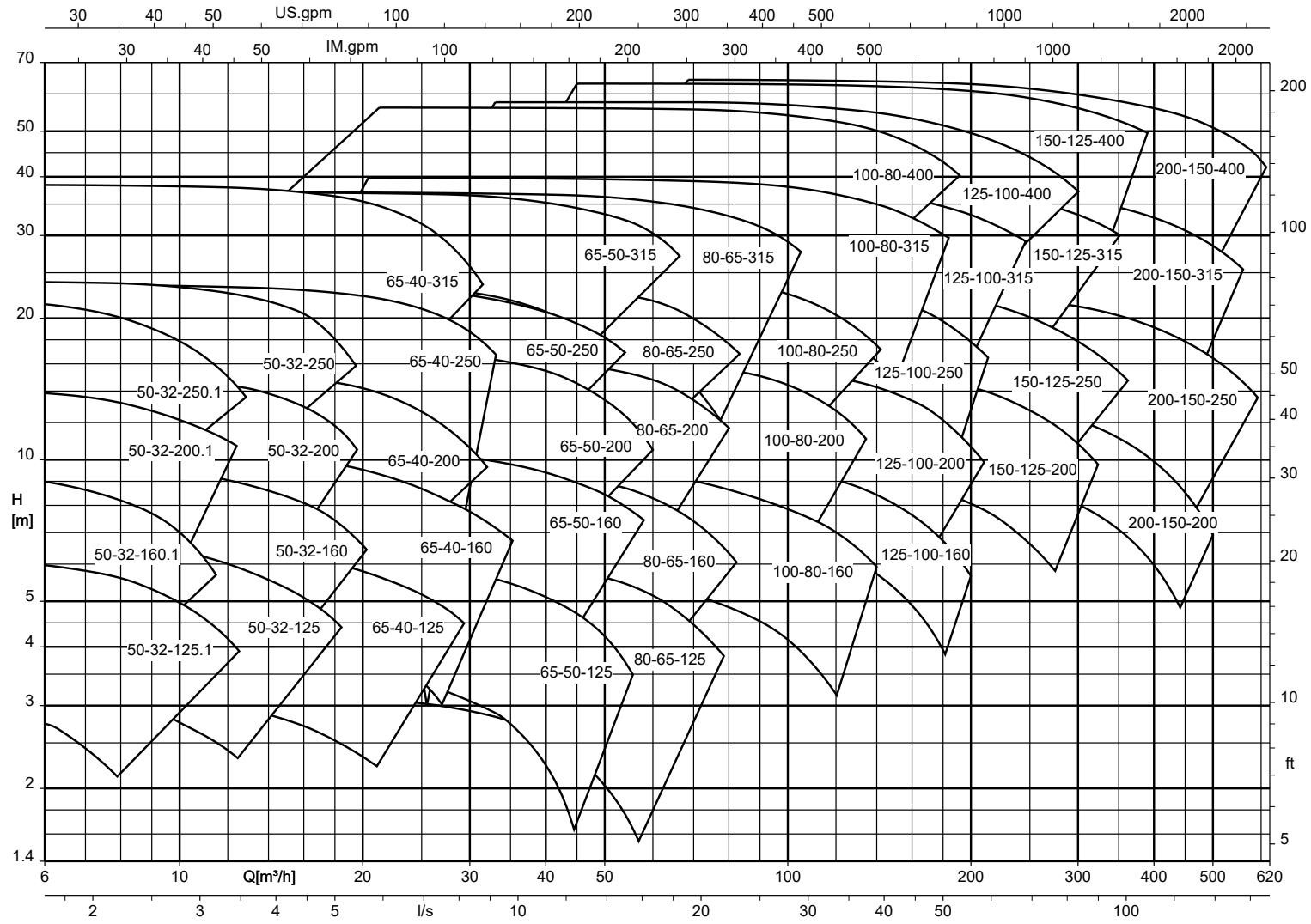
Etabloc SYT, n = 1450 rpm



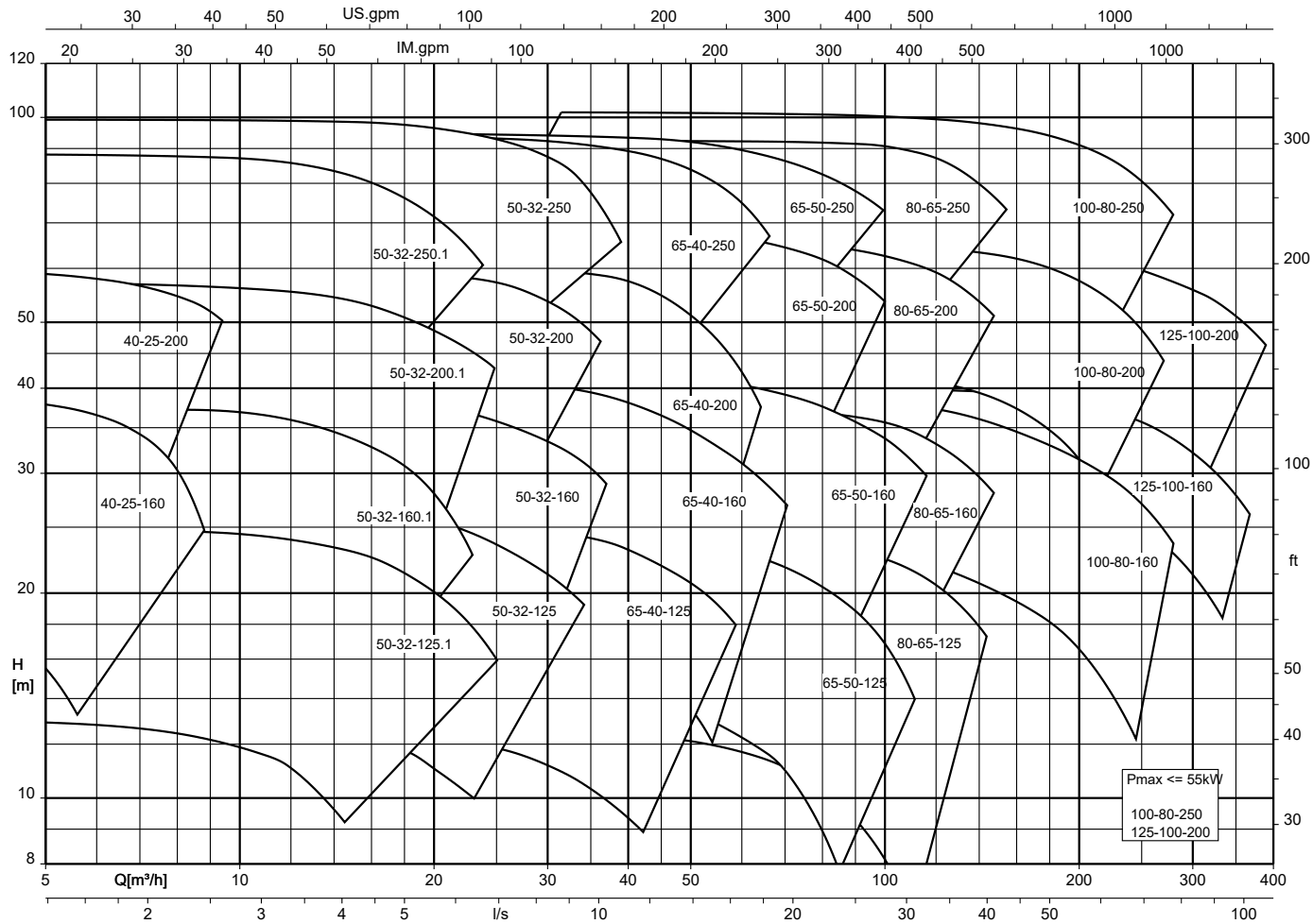
Etanorm V (fixed speed version), n = 2900 rpm



Etanorm V (fixed speed version), n = 1450 rpm

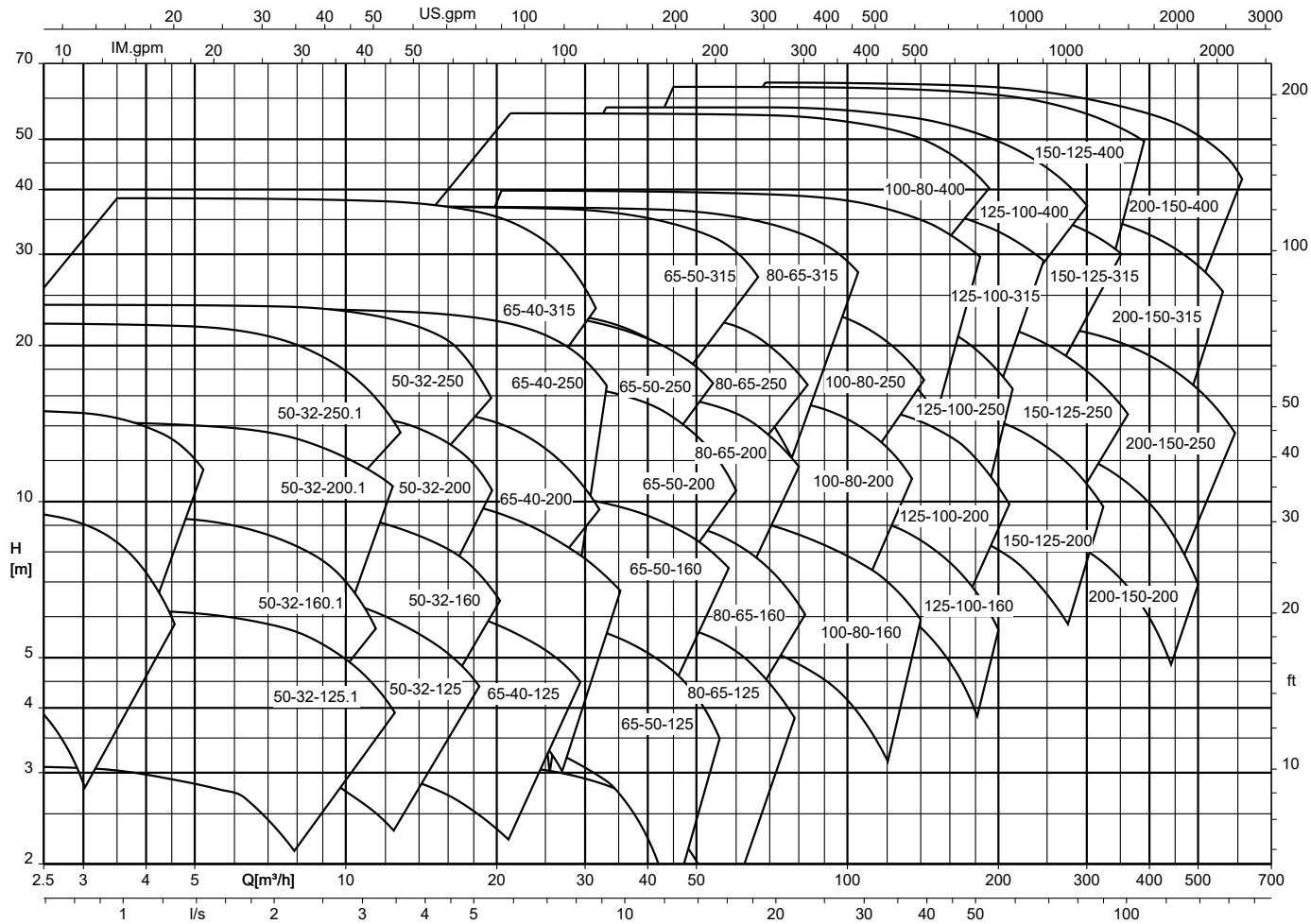


Etabloc, n = 2900 rpm (fixed speed version)



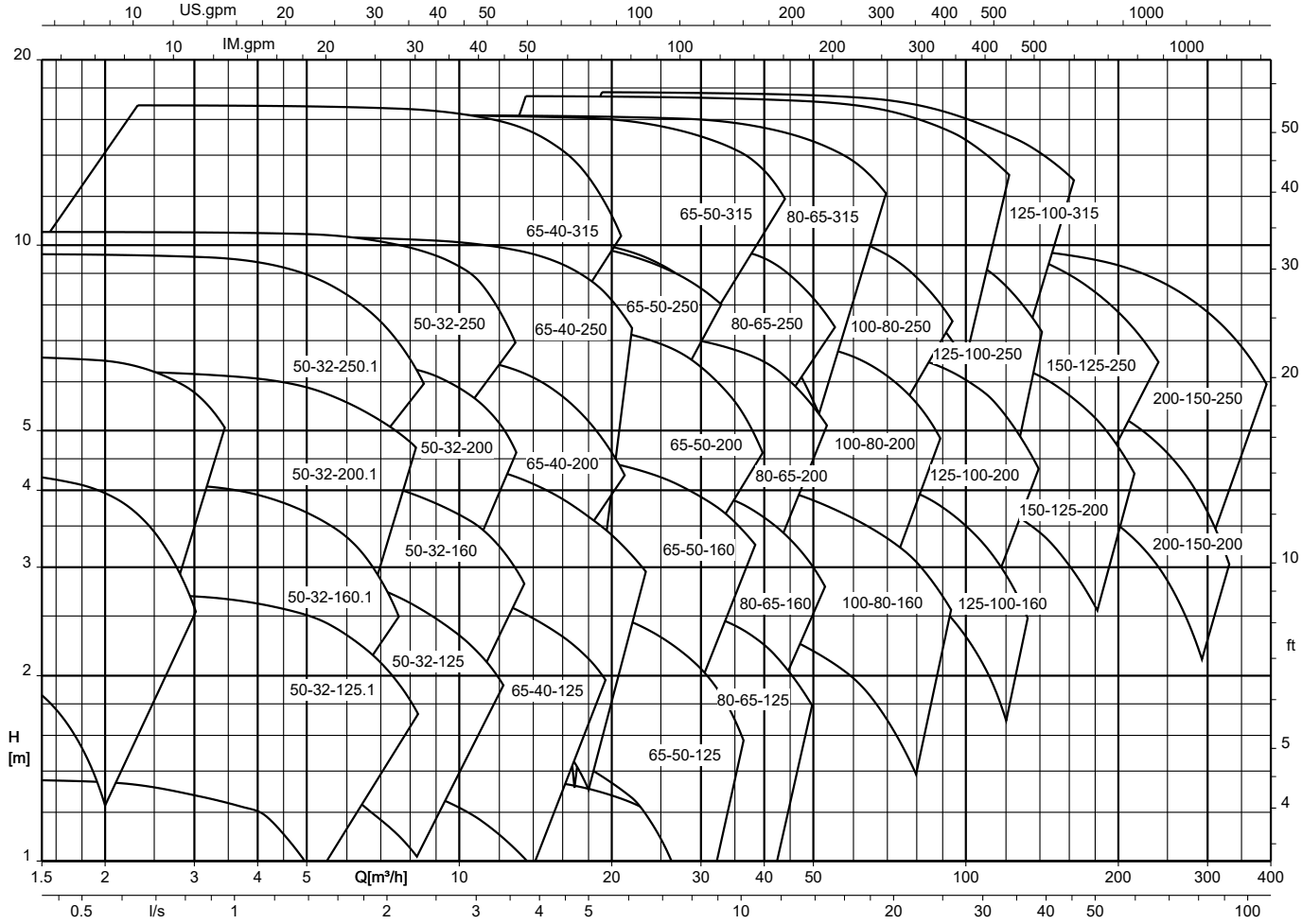
Etabloc 50-315, 65-315, 80-250 and 80-315 not for location: India

Etabloc, n = 1450 rpm (fixed speed version)

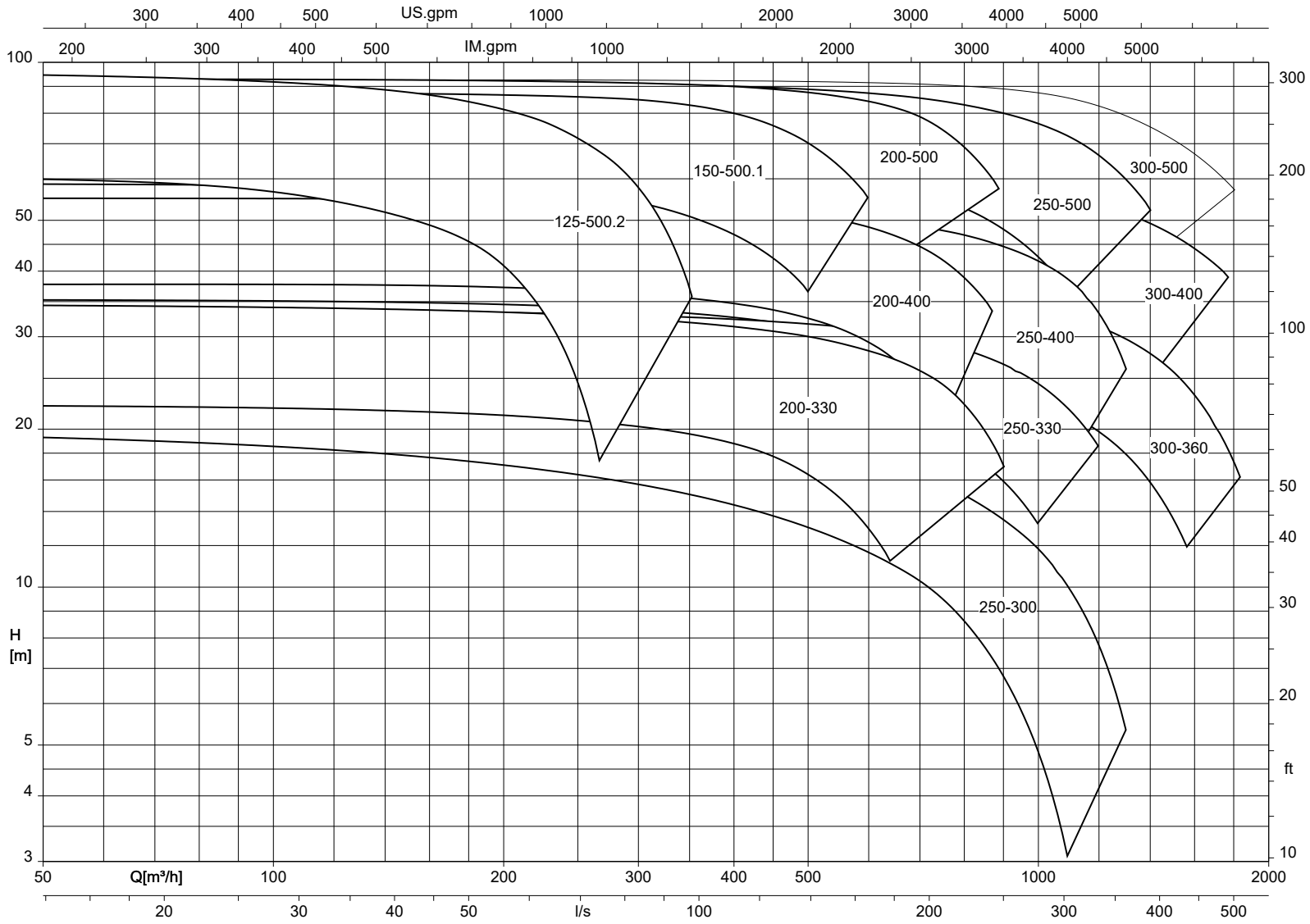


Etabloc 80-400, 100-400, 125-315 and 125-400 not for location: India

Etabloc, n = 960 rpm (fixed speed version)

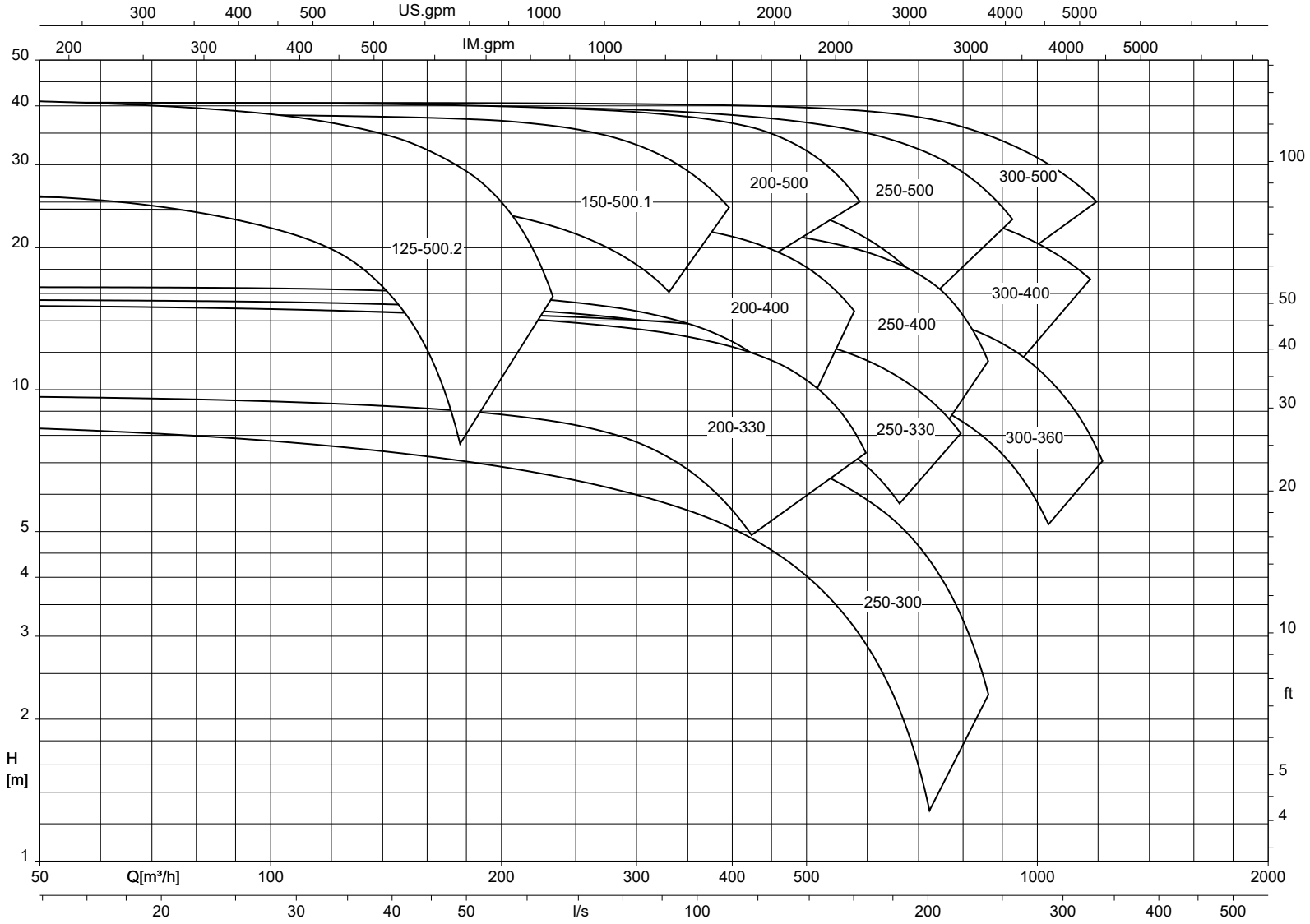


Etanorm-RSY, n = 1450 rpm





Etanorm-RSY, n = 960 rpm

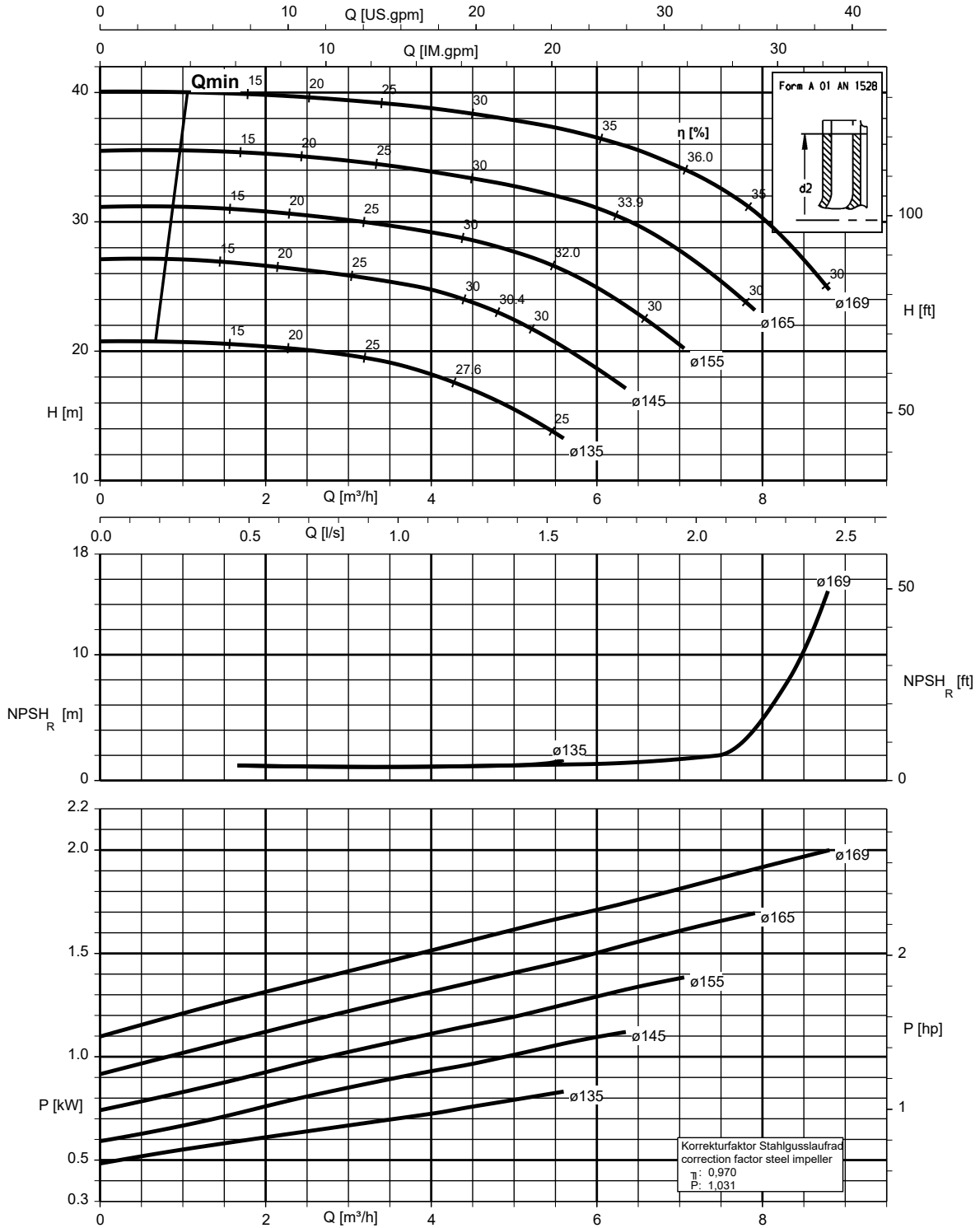


Characteristic curves

n = 2900 rpm

Etanorm 040-025-160, n = 2900 rpm

Etanorm SYT, Etabloc, Etabloc SYT

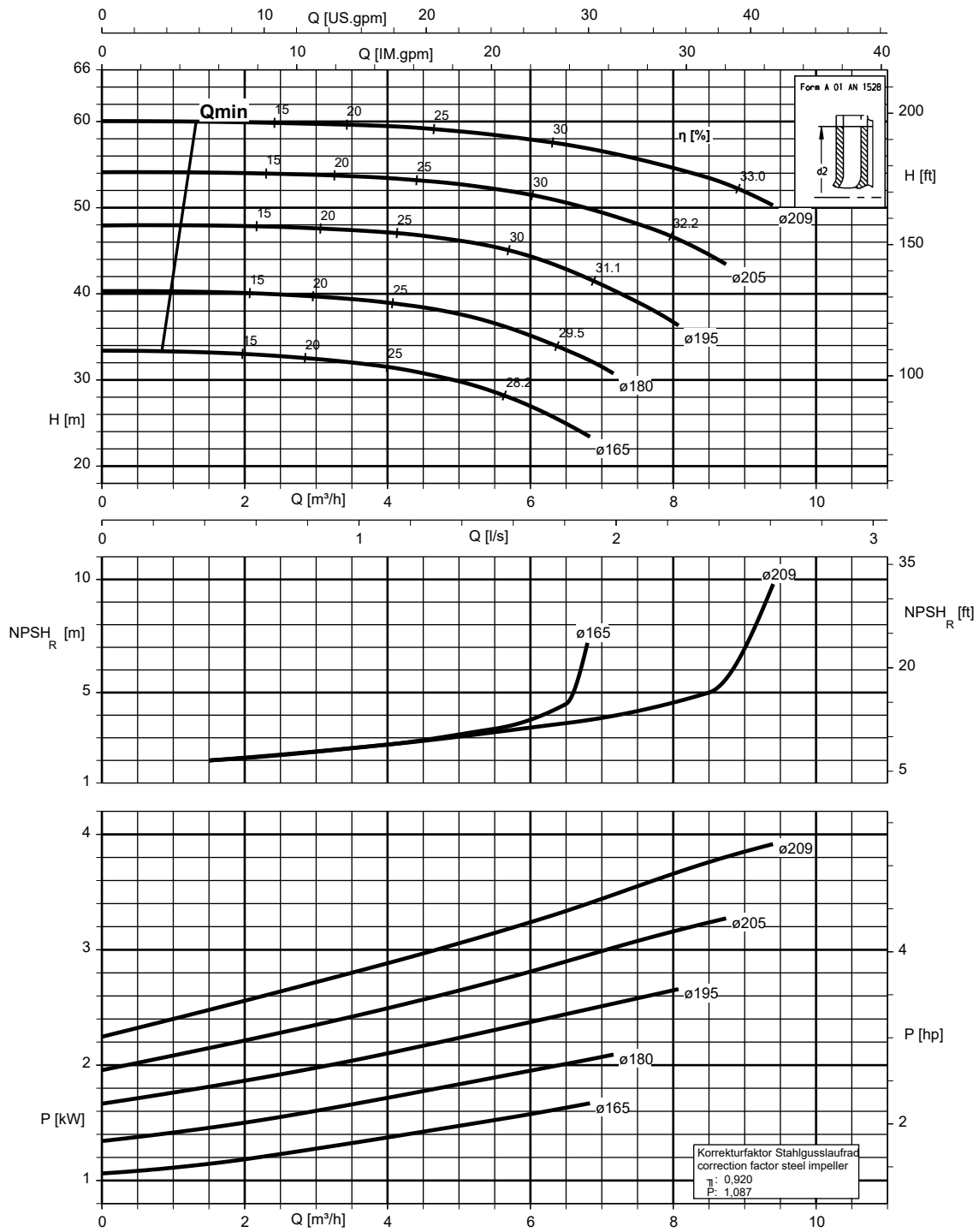


K1311.452/14/2

1311.45/11-EN

Etanorm 040-025-200, n = 2900 rpm

Etanorm SYT, Etabloc, Etabloc SYT

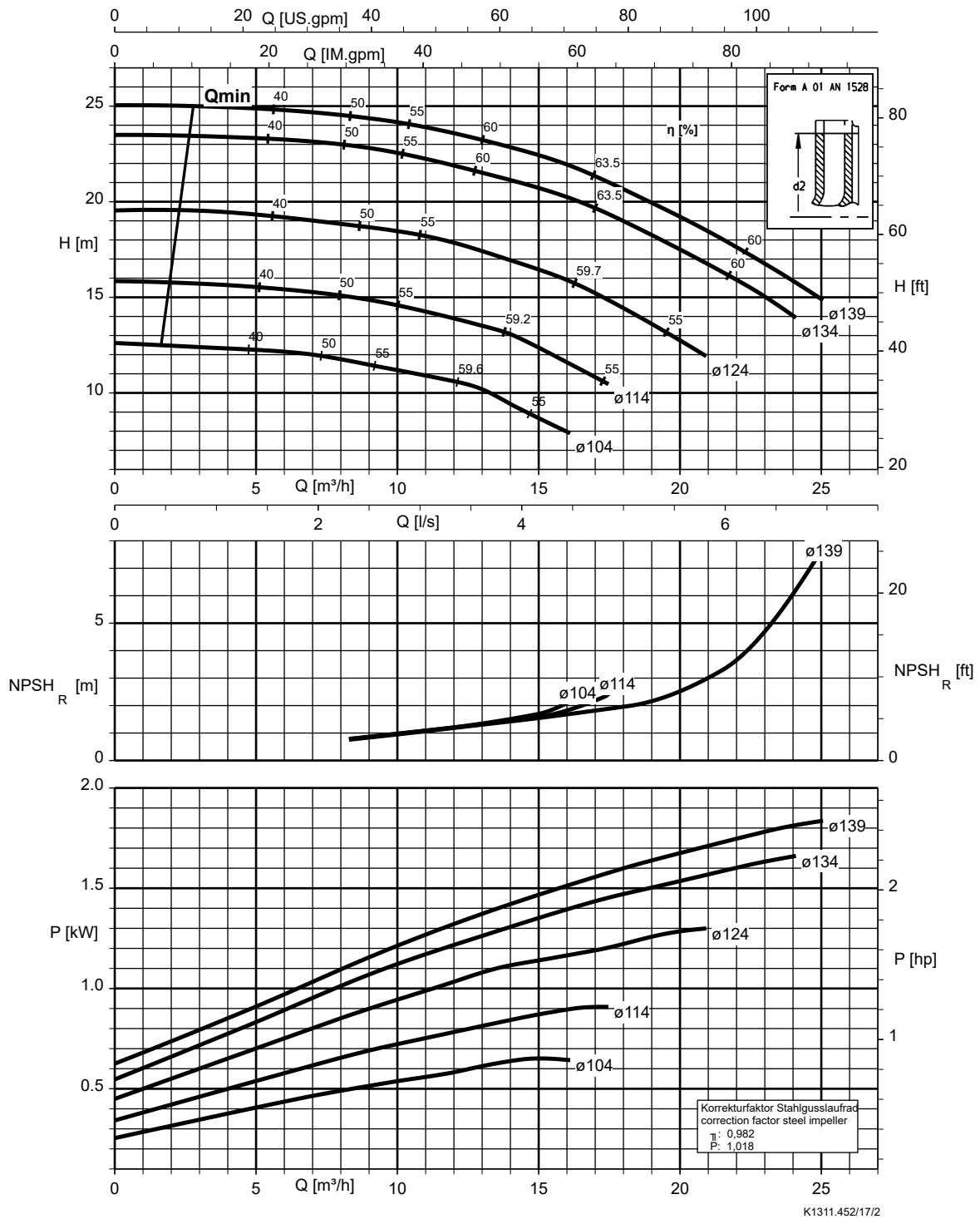


K1311/452/15/2

1311.45/11-EN

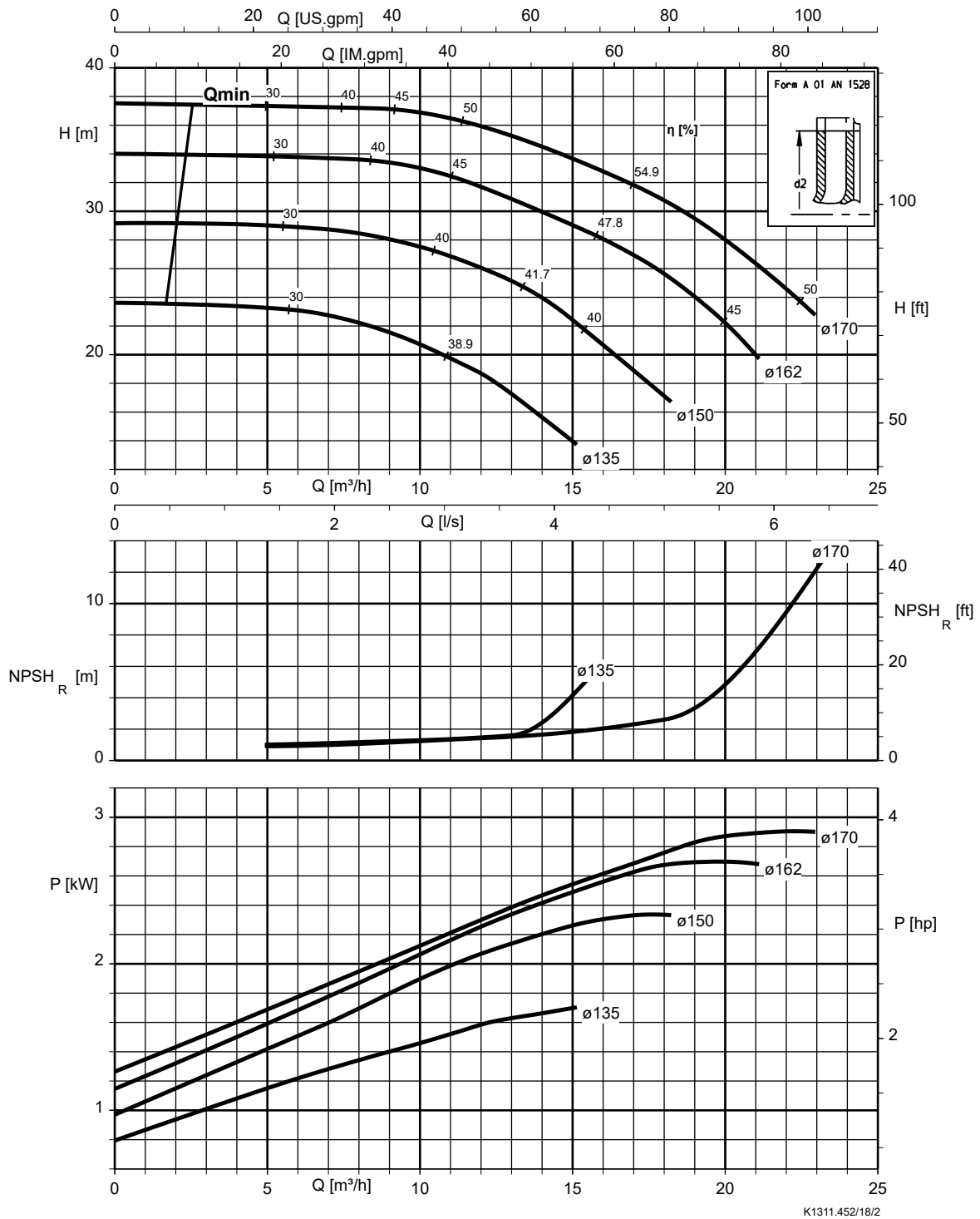
**Etanorm 050-032-125.1, n = 2900 rpm**

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



**Etanorm 050-032-160.1, n = 2900 rpm**

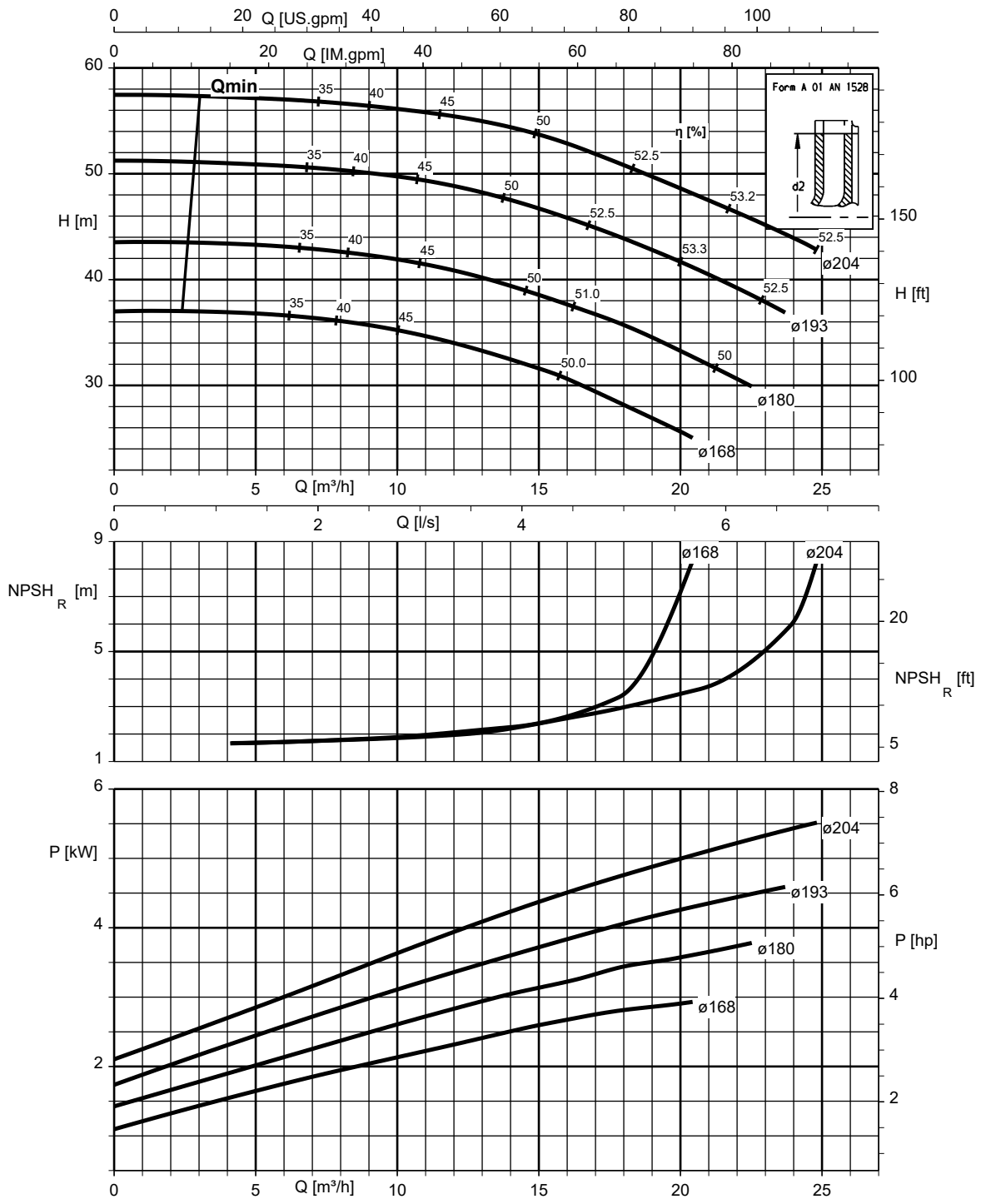
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 050-032-200.1, n = 2900 rpm

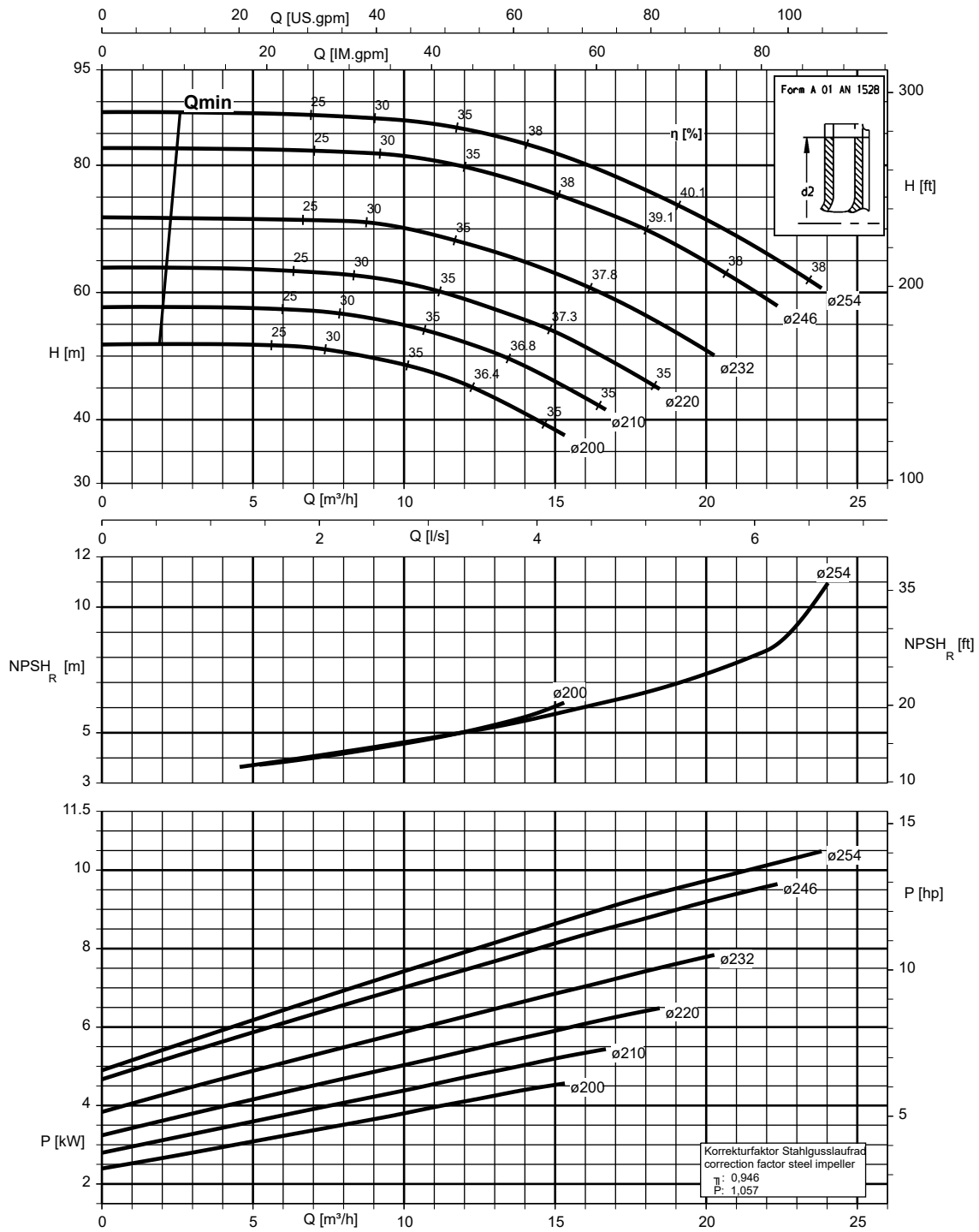
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.452/19/3

Etanorm 050-032-250.1, n = 2900 rpm

Etanorm V, Etabloc

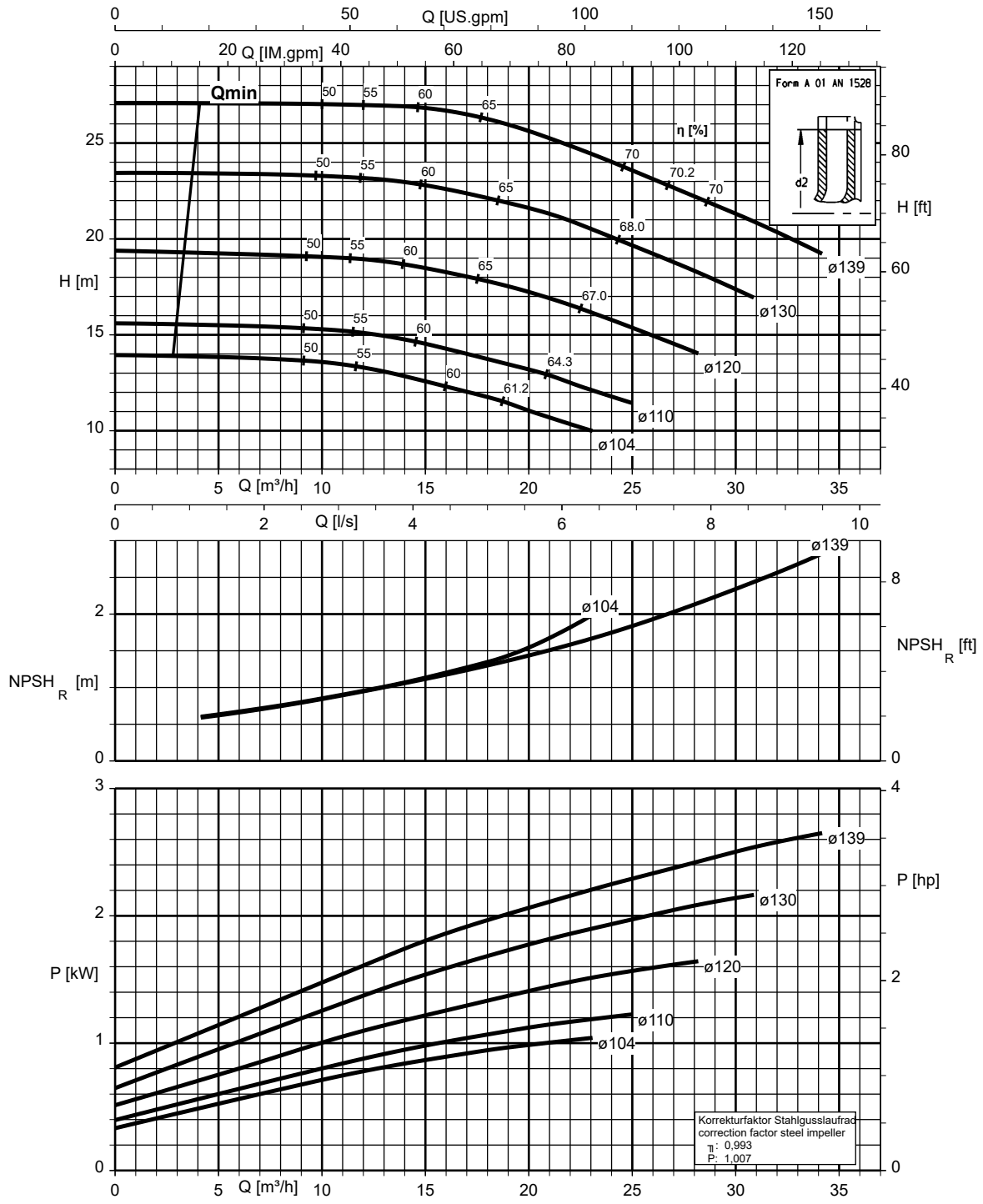


K1311.452/20/2

1311.45/11-EN

Etanorm 050-032-125, n = 2900 rpm

Etanorm V, Etabloc



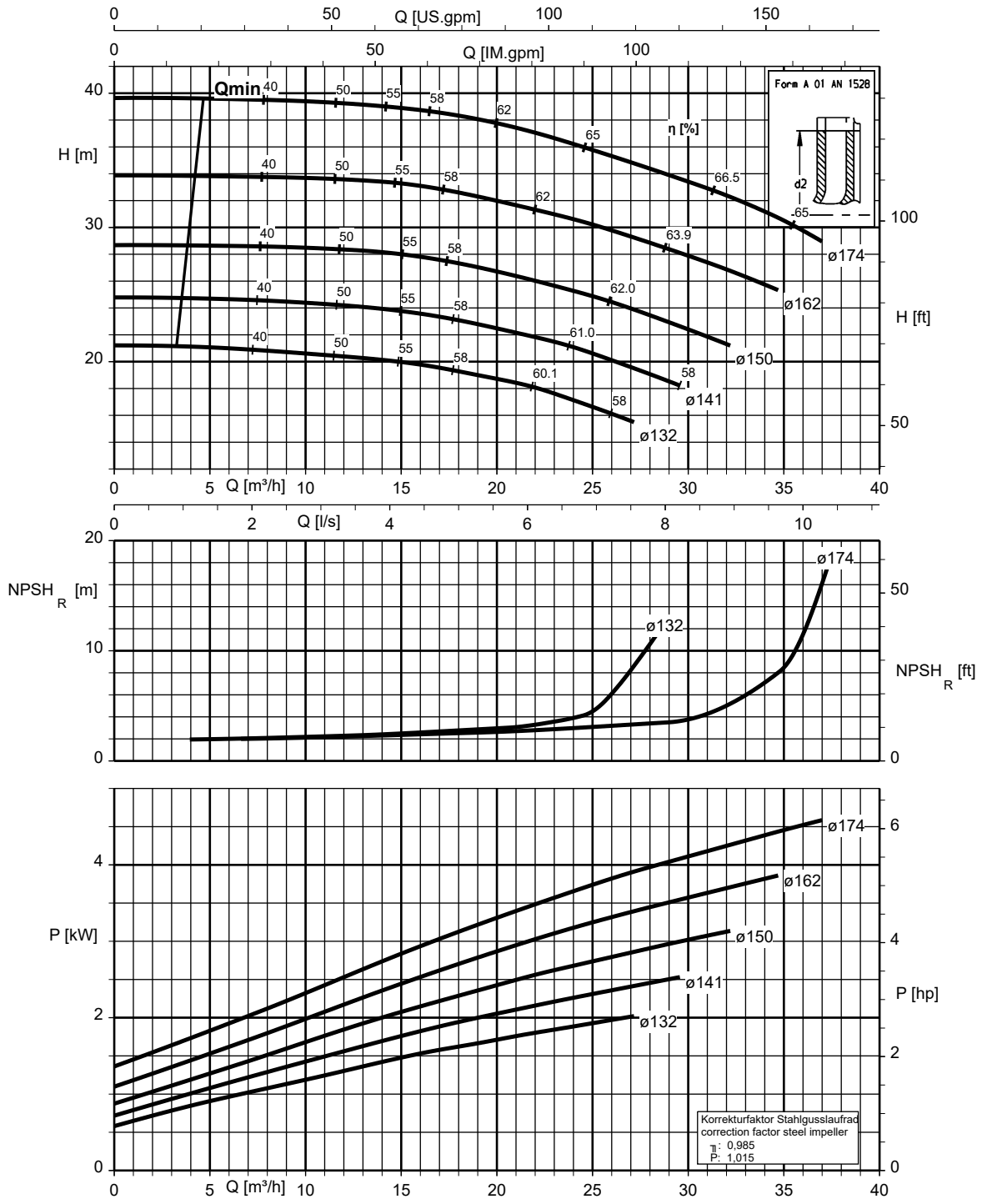
K1311.452/21/2

1311.45/11-EN



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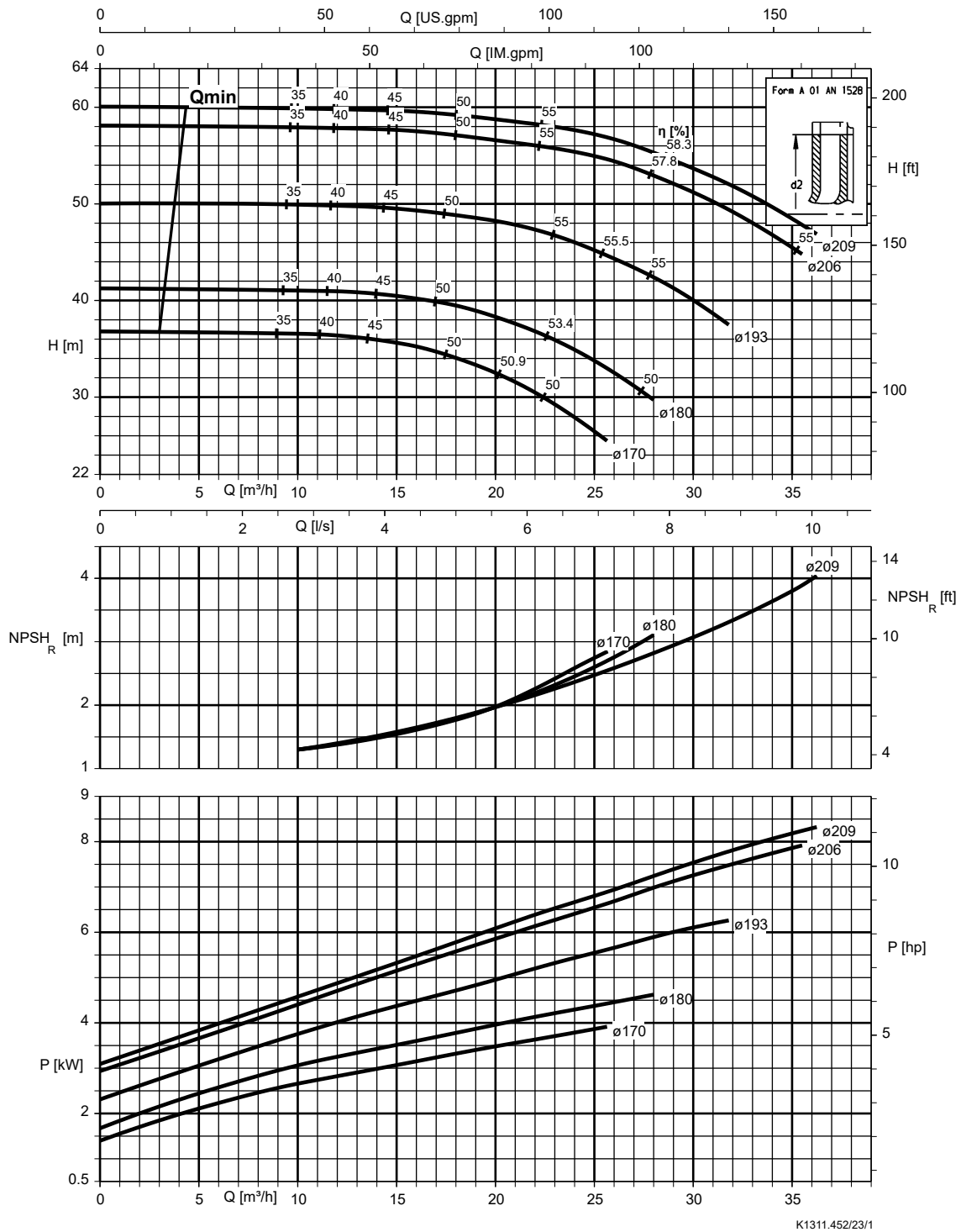
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 050-032-200, n = 2900 rpm

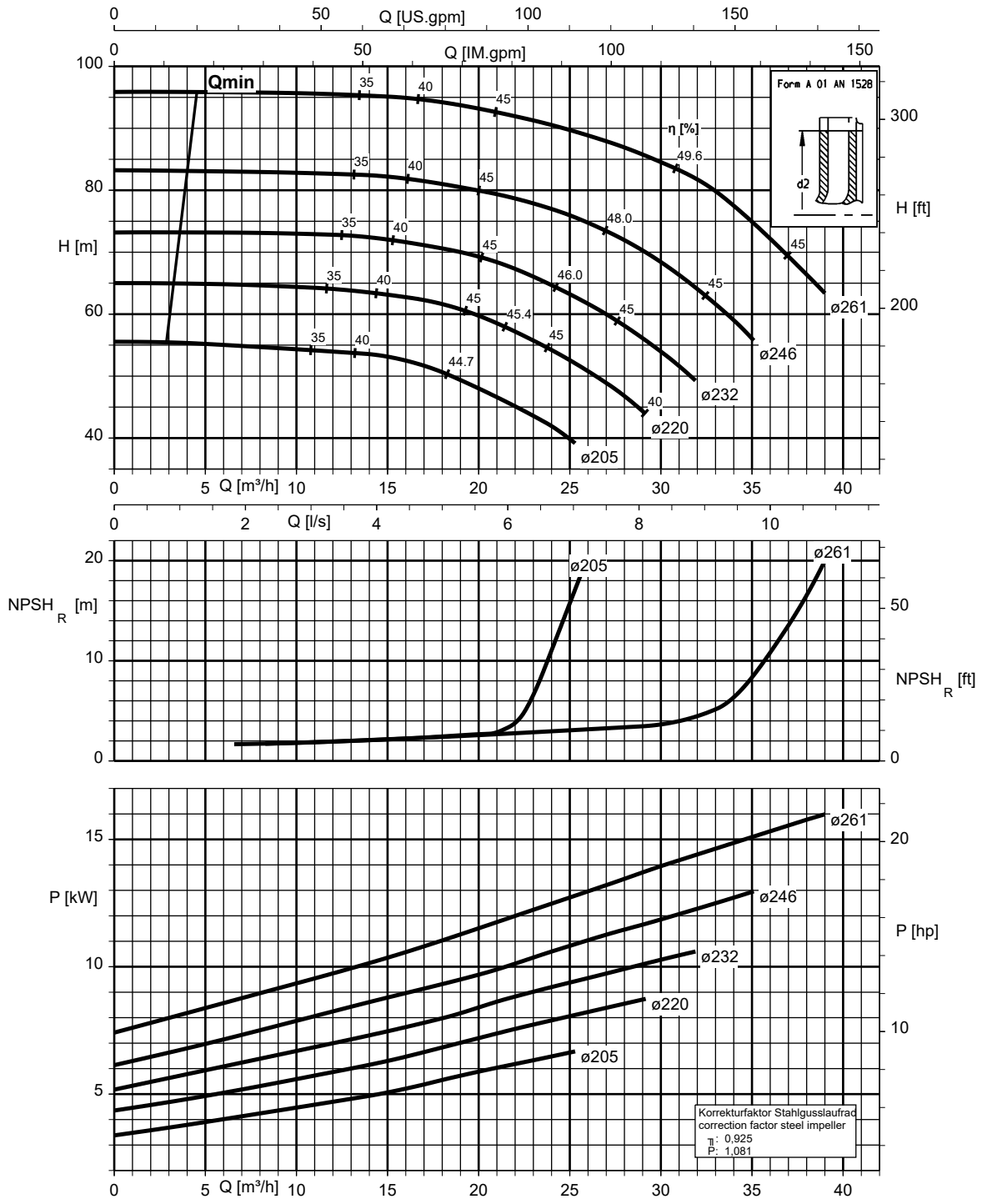
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.452/23/1

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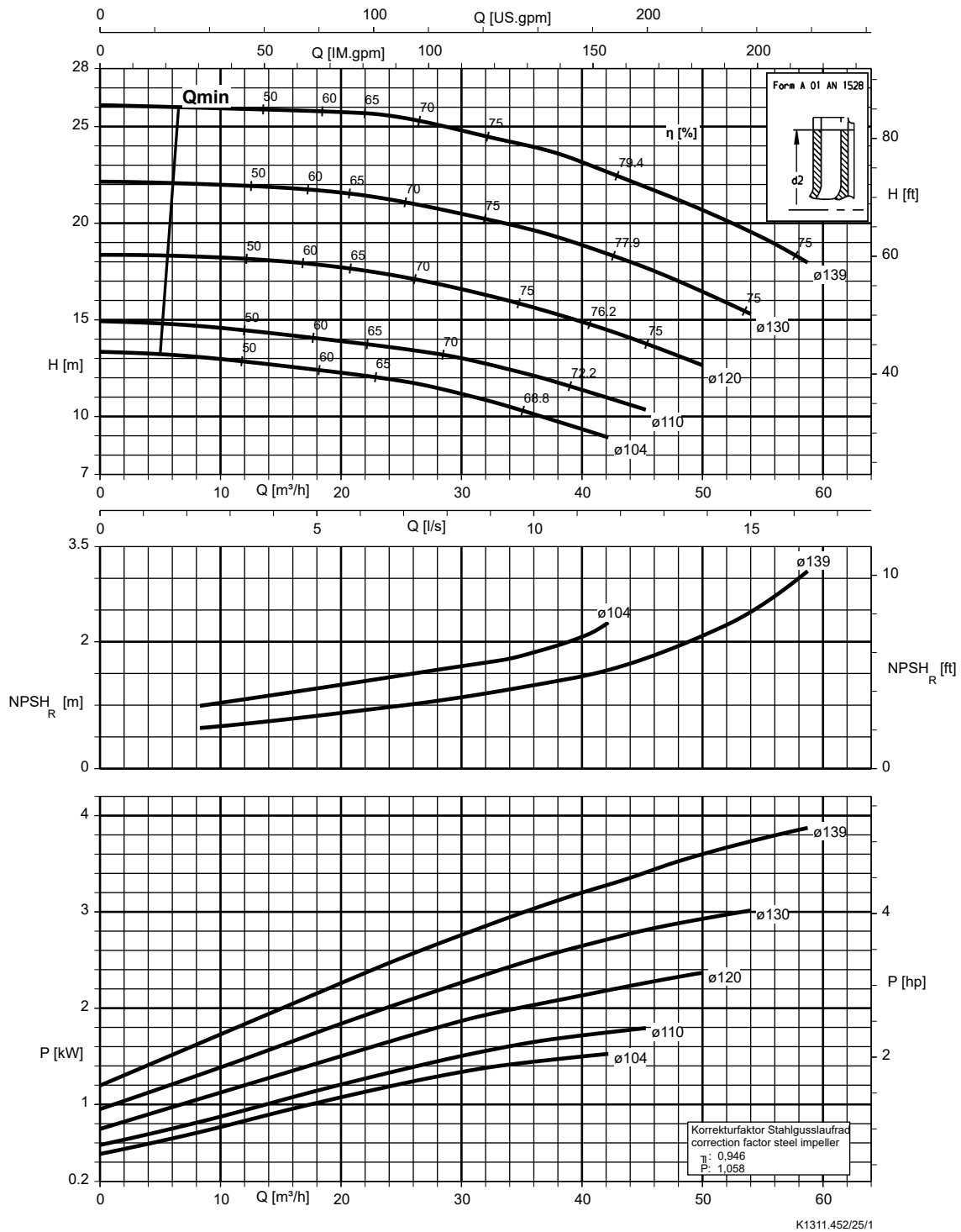
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 065-040-125, n = 2900 rpm

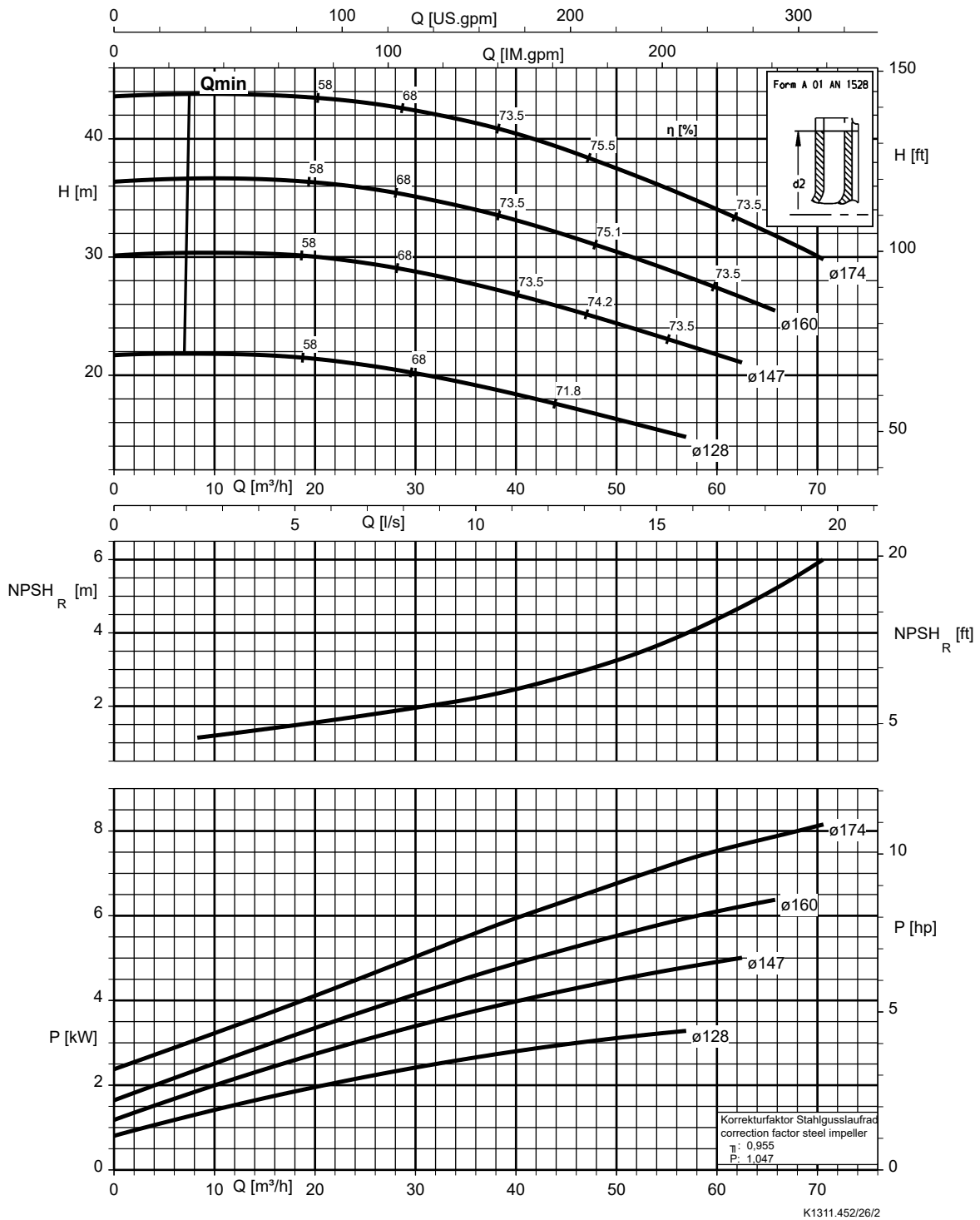
Etanorm V, Etabloc



1311.45/11-EN

Etanorm 065-040-160, n = 2900 rpm

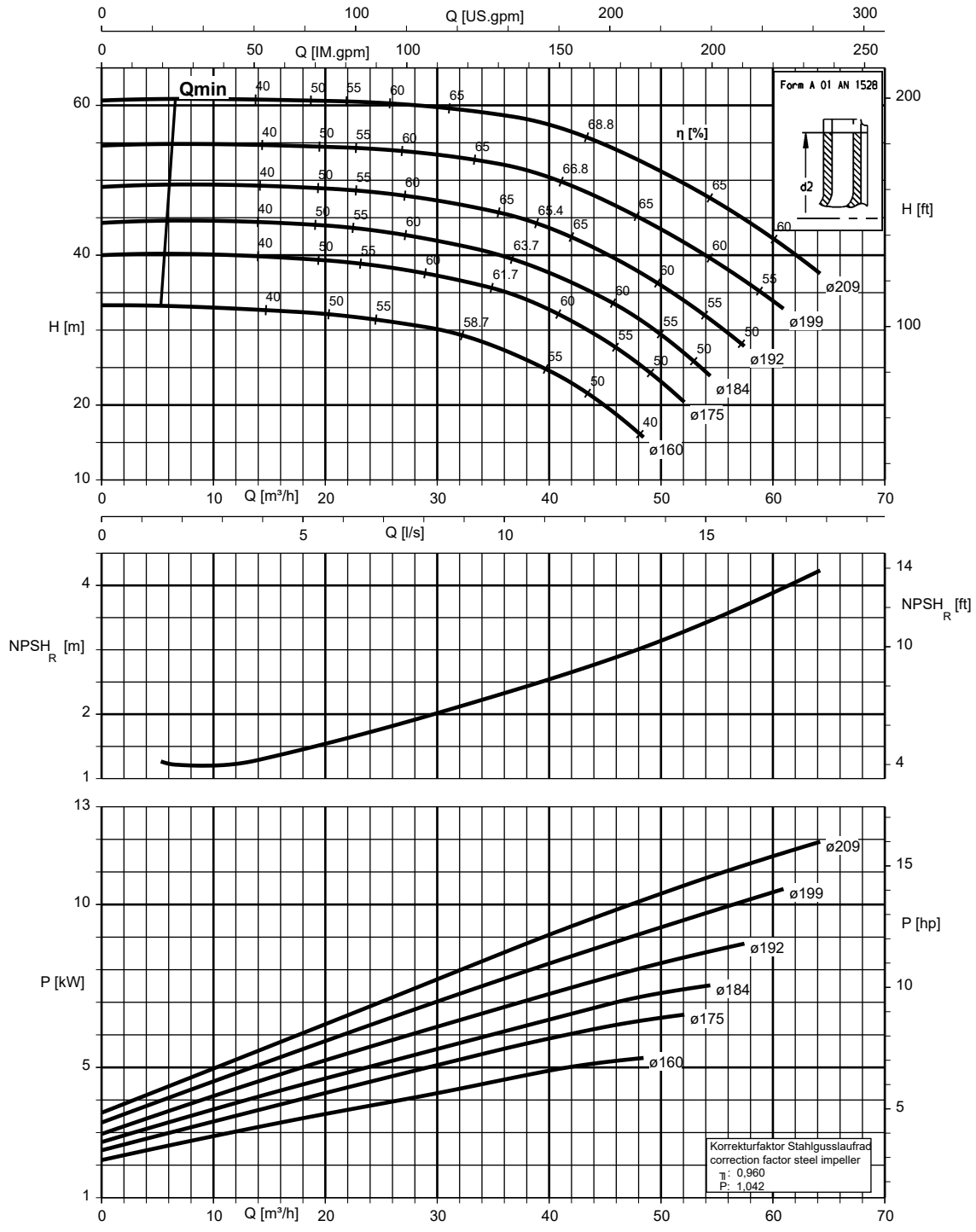
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 065-040-200, n = 2900 rpm

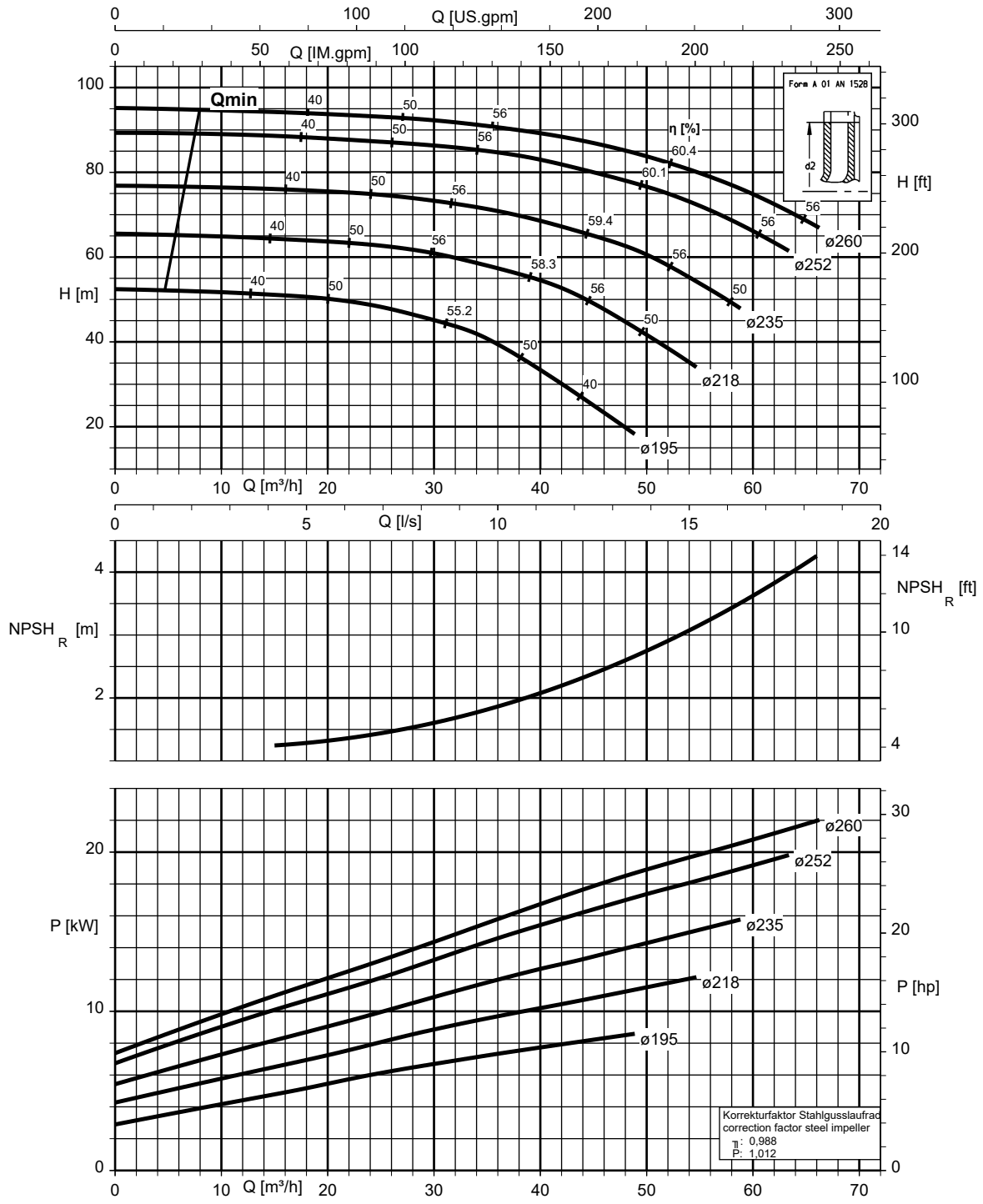
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 065-040-250, n = 2900 rpm

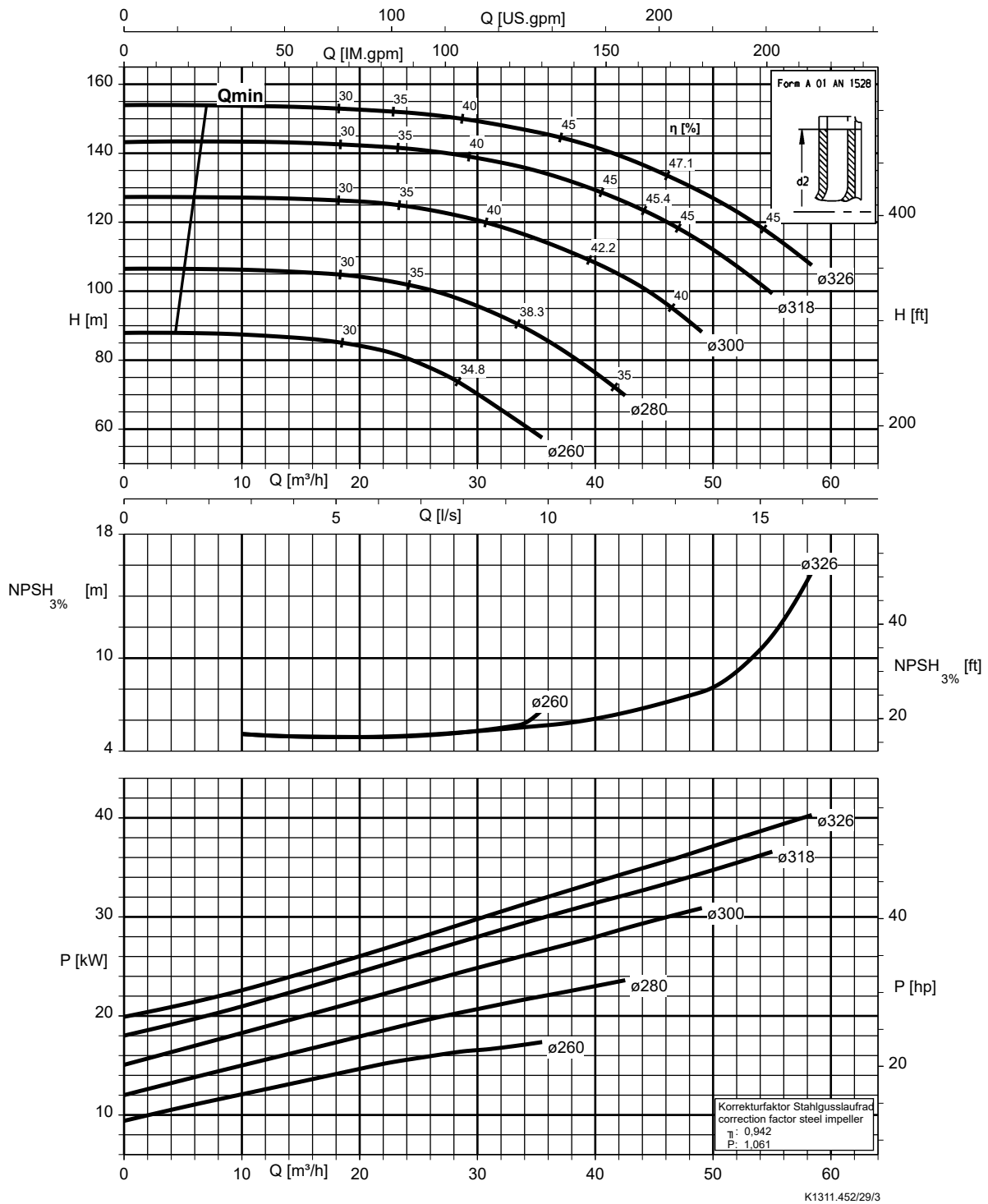
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 065-040-315, n = 2900 rpm

Etabloc

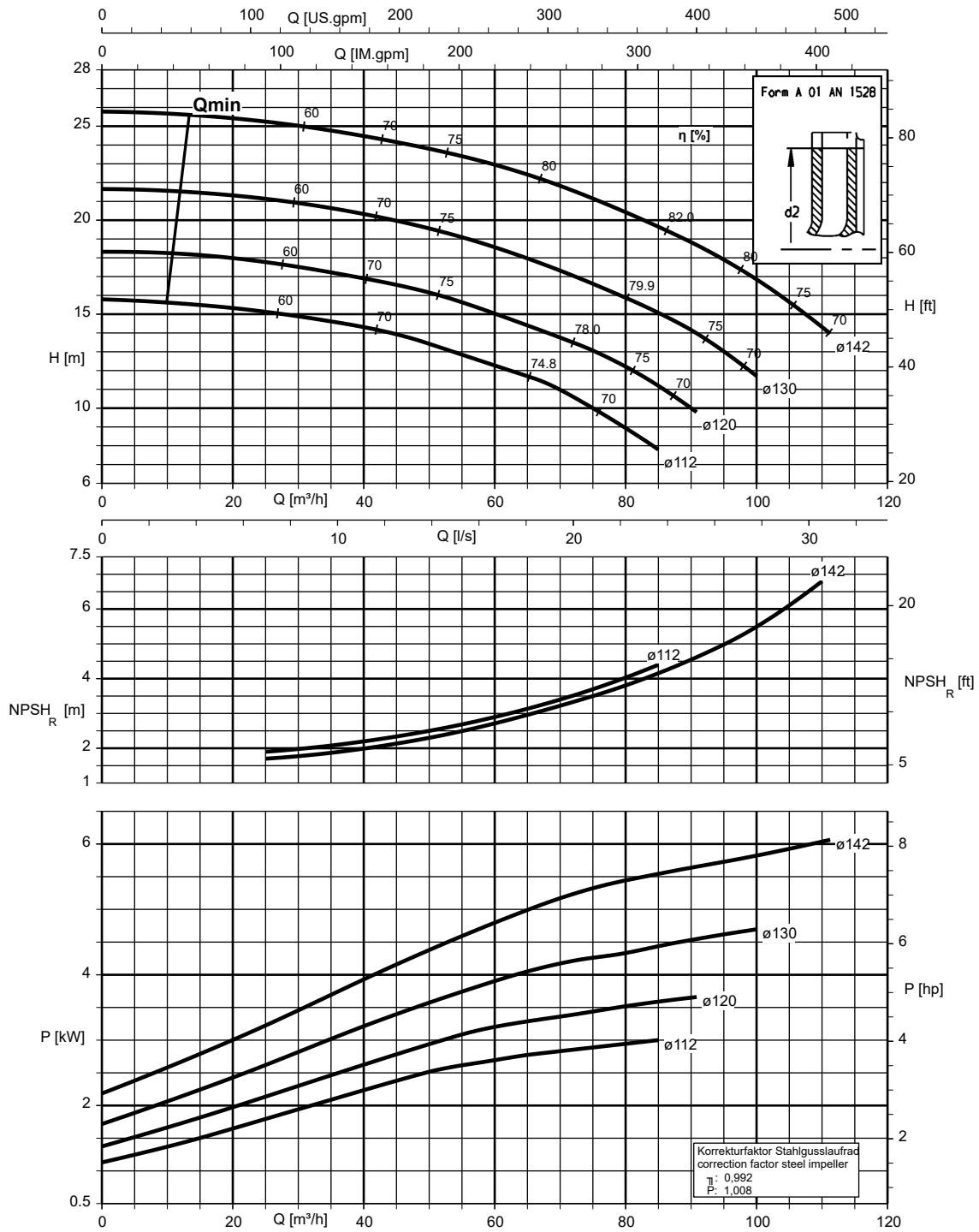


1311.45/11-EN



Etanorm 065-050-125, n = 2900 rpm

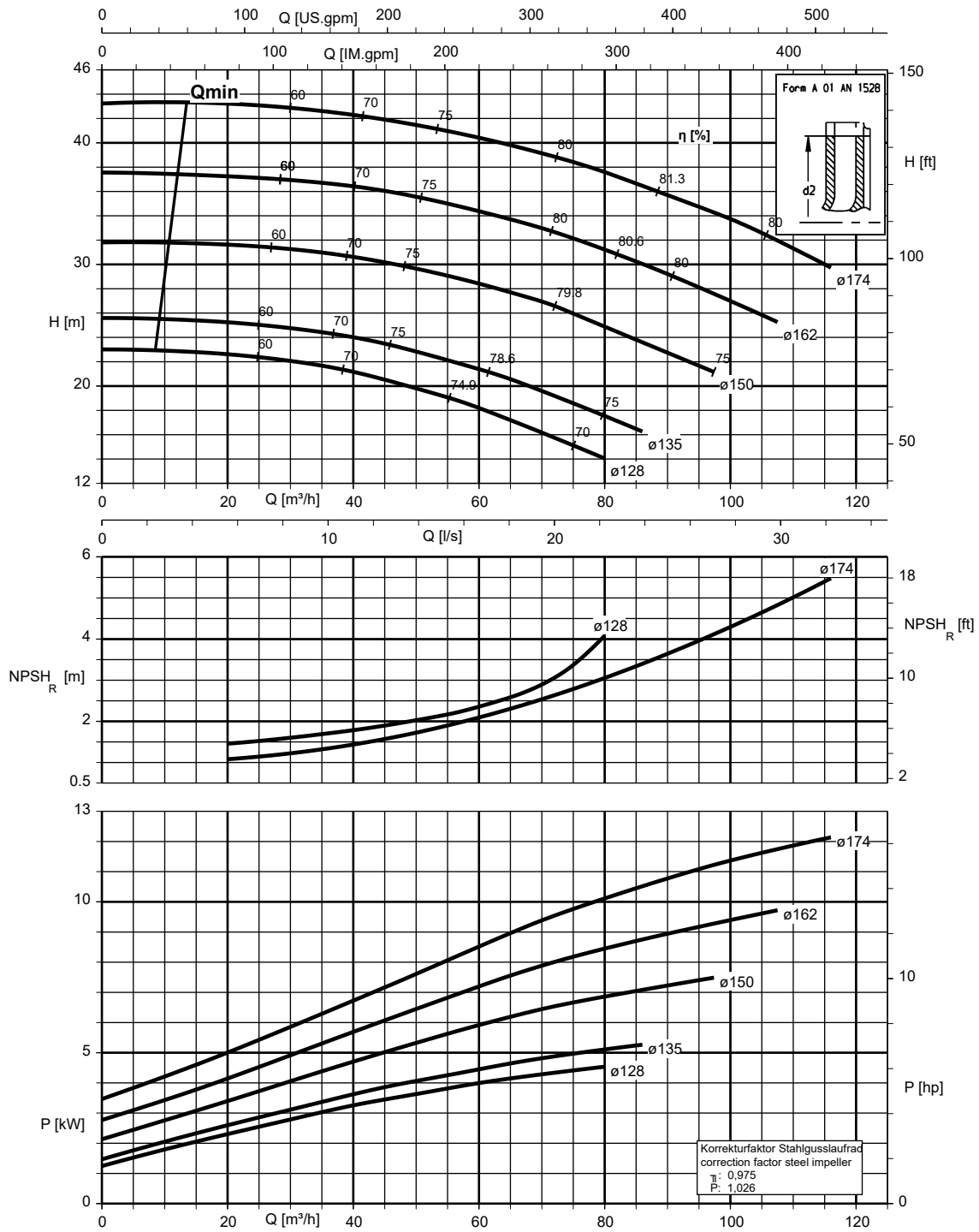
Etanorm V, Etabloc



K1311.452/30/1

Etanorm 065-050-160, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

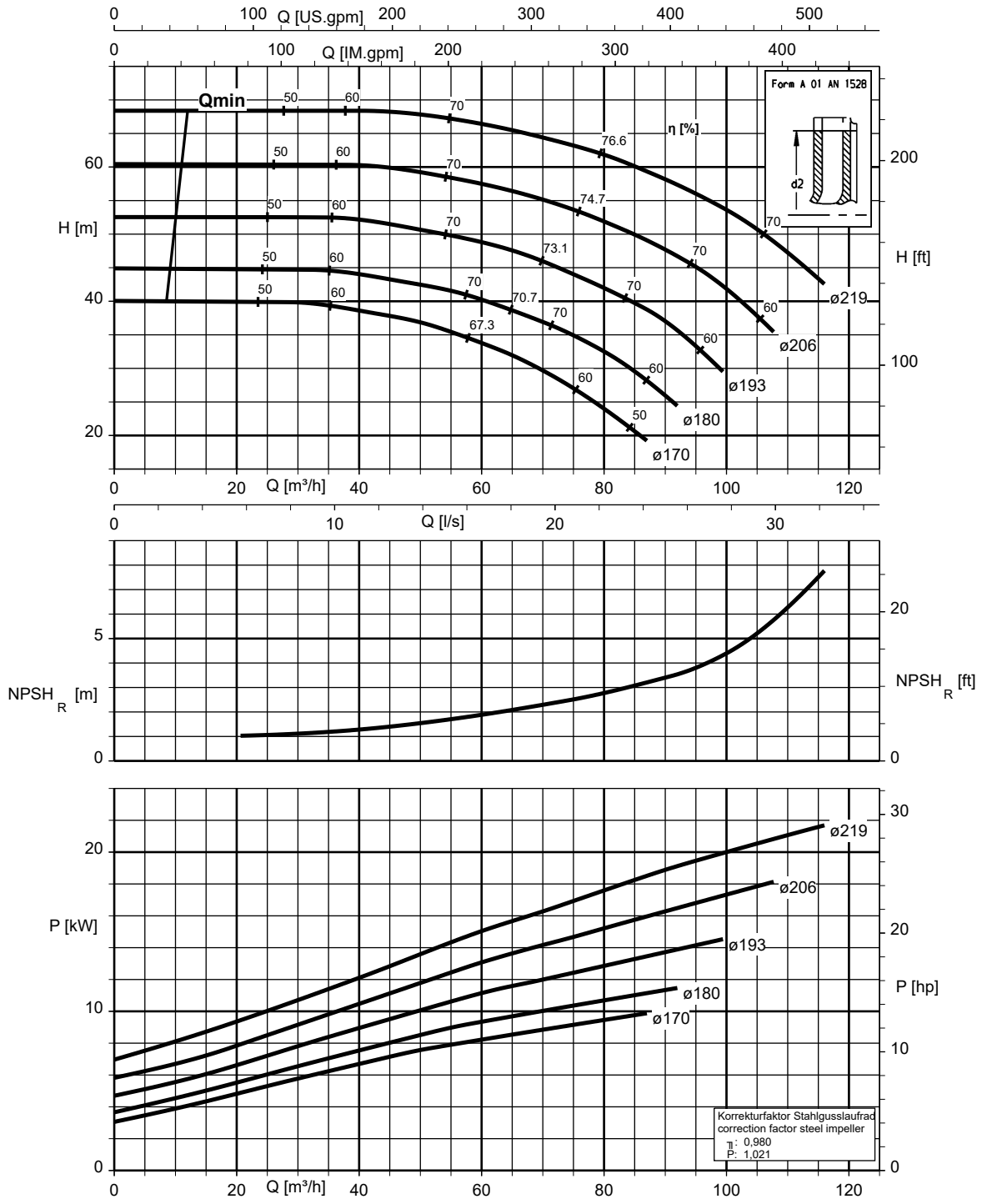


K1311.452/31/1

1311.45/11-EN

Etanorm 065-050-200, n = 2900 rpm

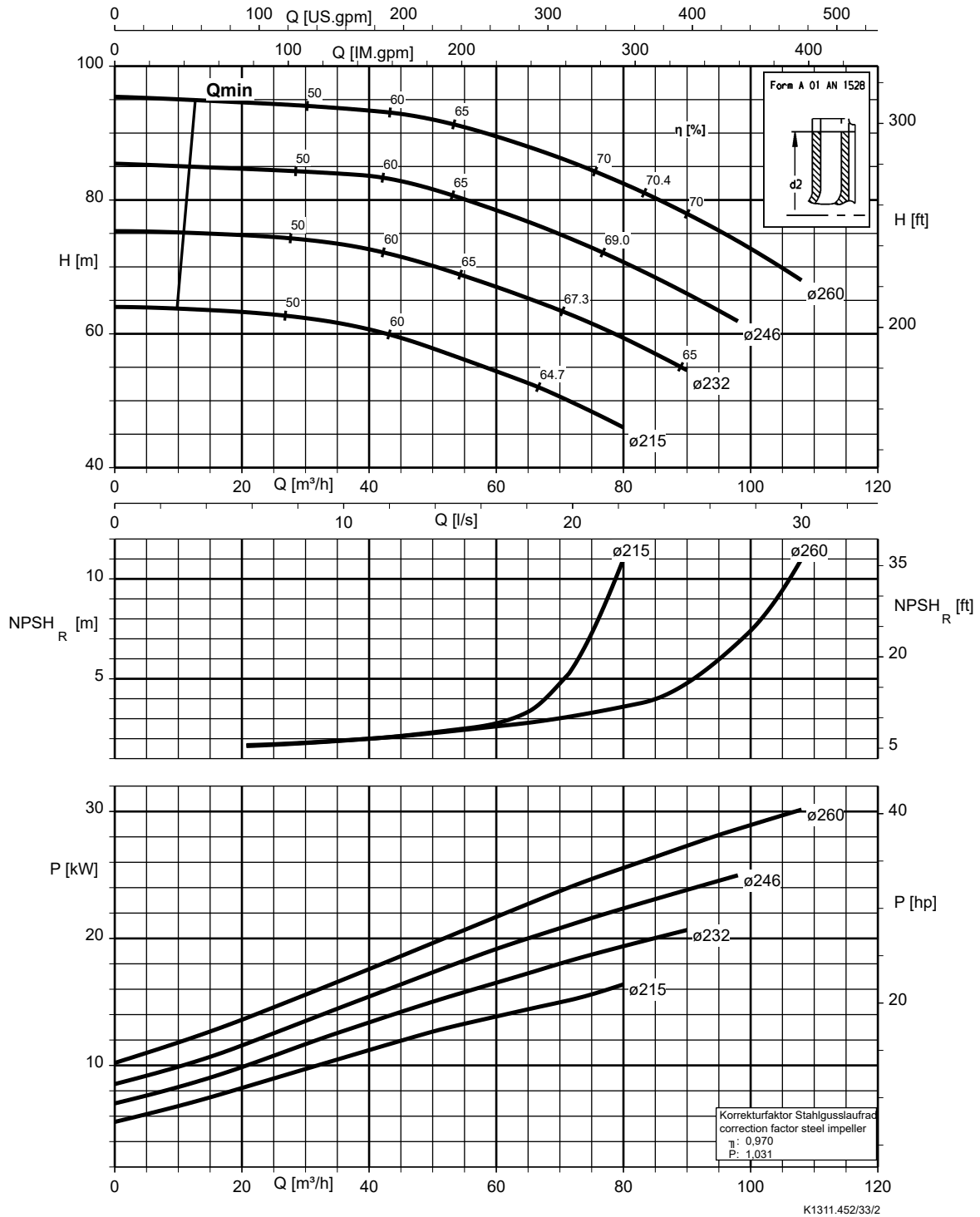
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 065-050-250, n = 2900 rpm

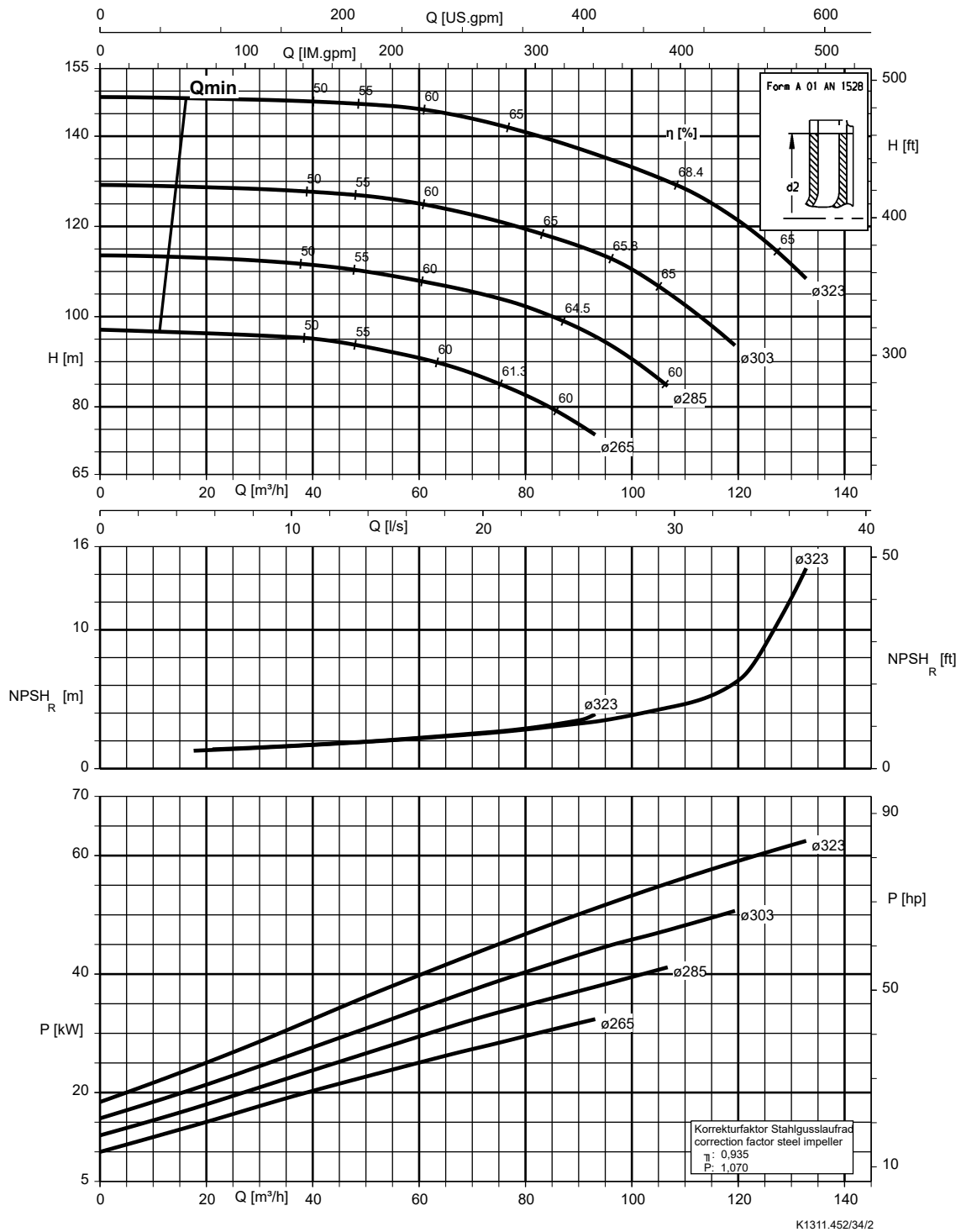
Etanorm SYT, Etanorm V, Etabloc



K1311.452/33/2

Etanorm 065-050-315, n = 2900 rpm

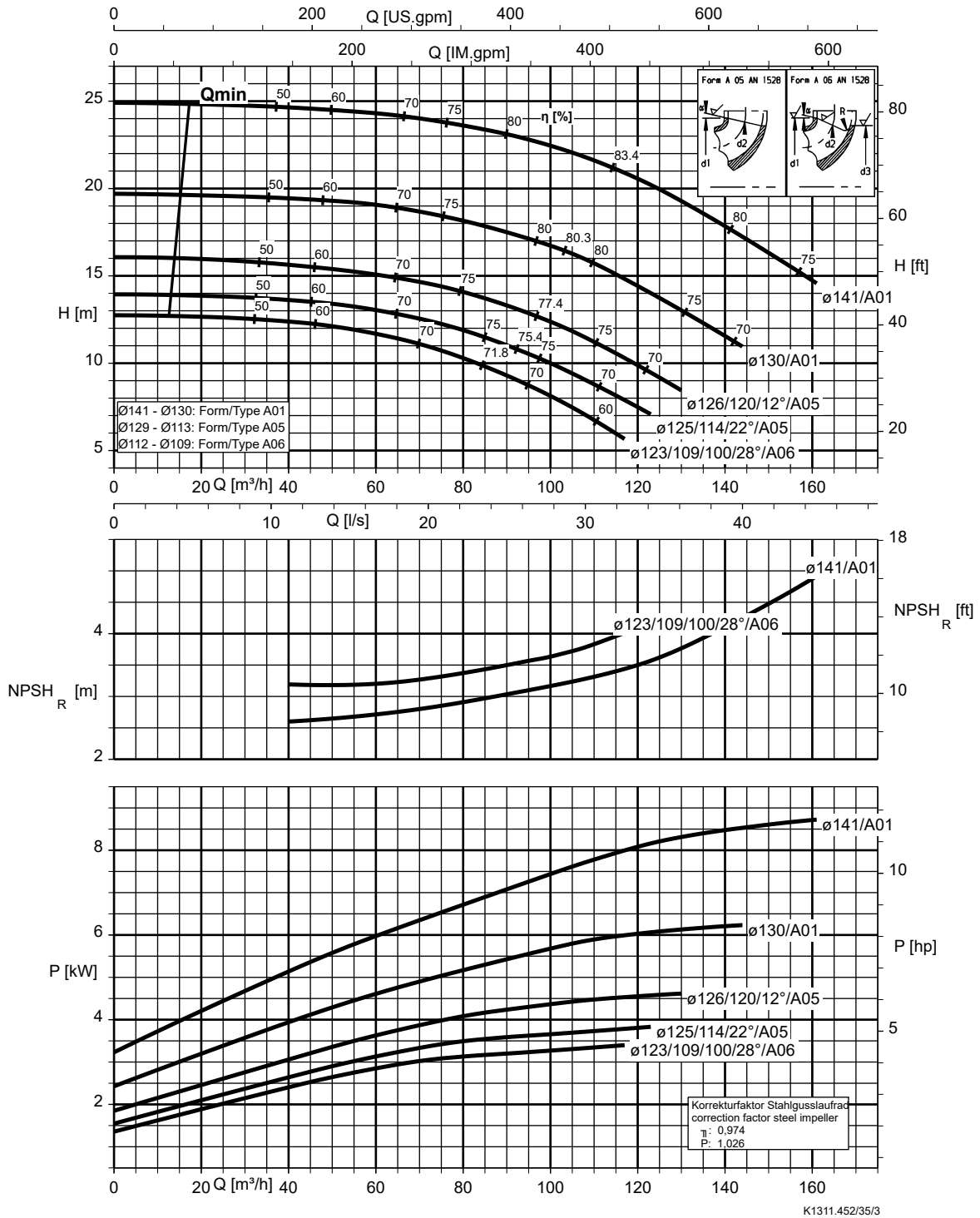
Etabloc



1311.45/11-EN

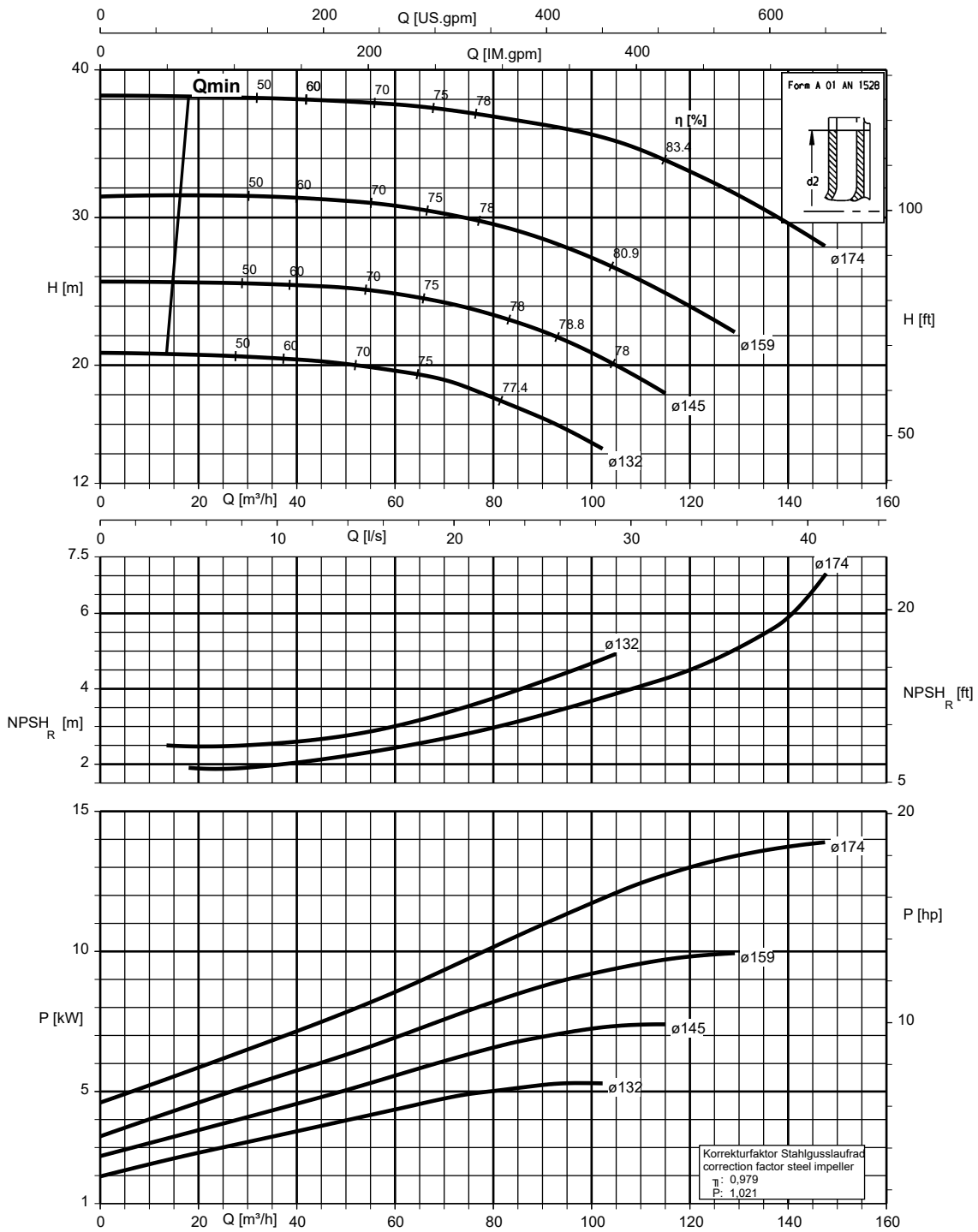
Etanorm 080-065-125, n = 2900 rpm

Etanorm V, Etabloc



Etanorm 080-065-160, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

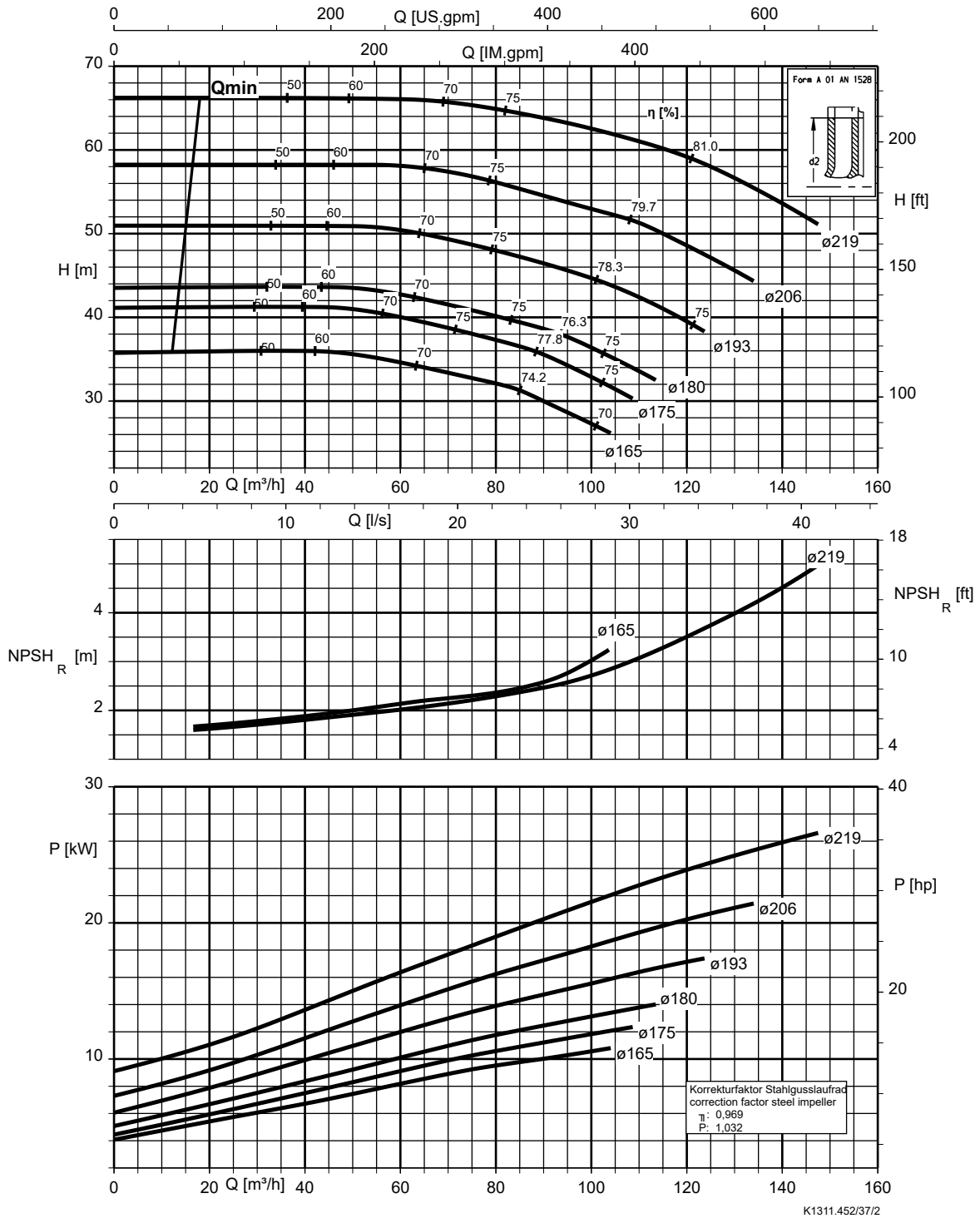


K1311.452/36/2

1311.45/11-EN

Etanorm 080-065-200, n = 2900 rpm

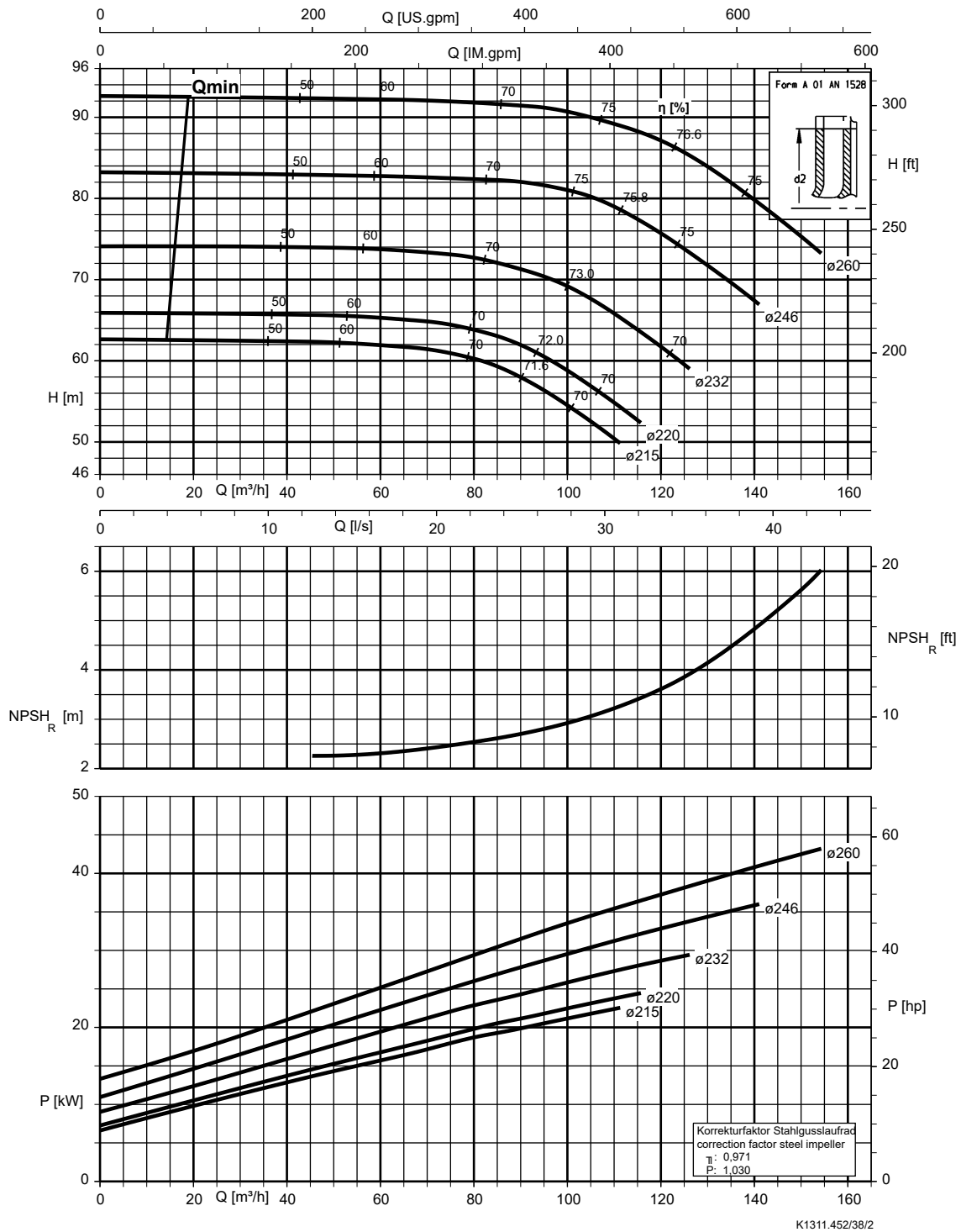
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT





Etanorm 080-065-250, n = 2900 rpm

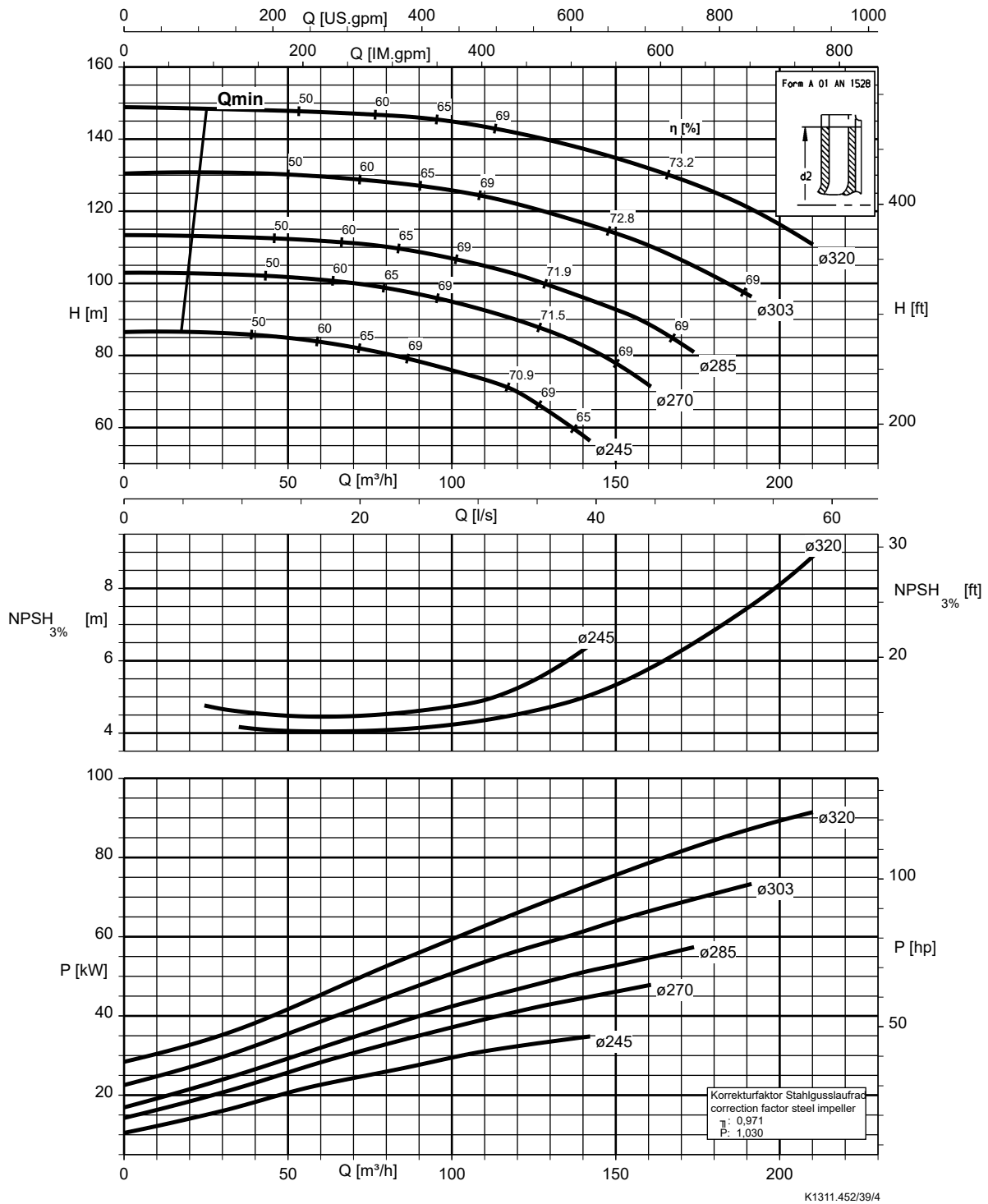
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 080-065-315, n = 2900 rpm

Etabloc

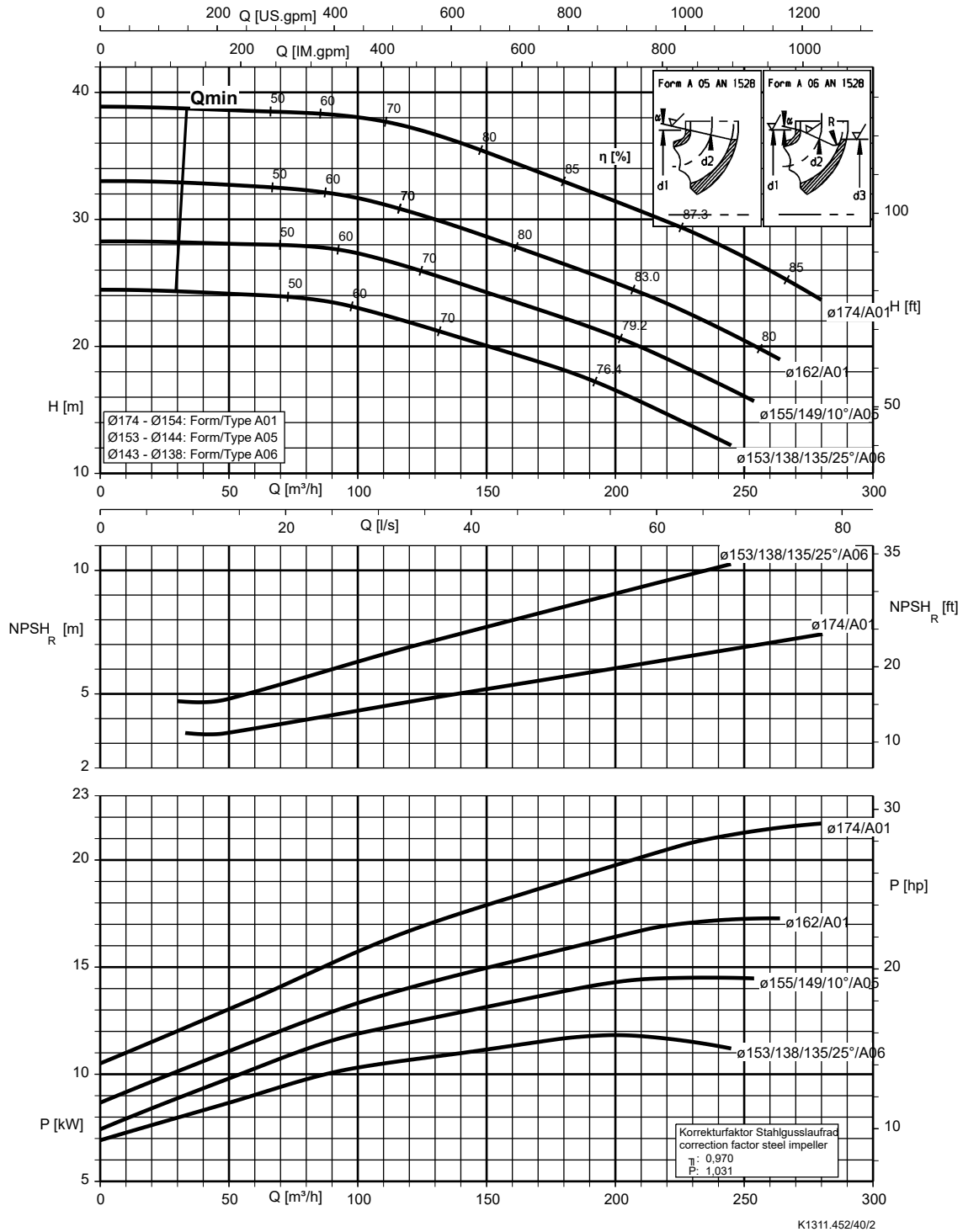


K1311.452/39/4

1311.45/11-EN

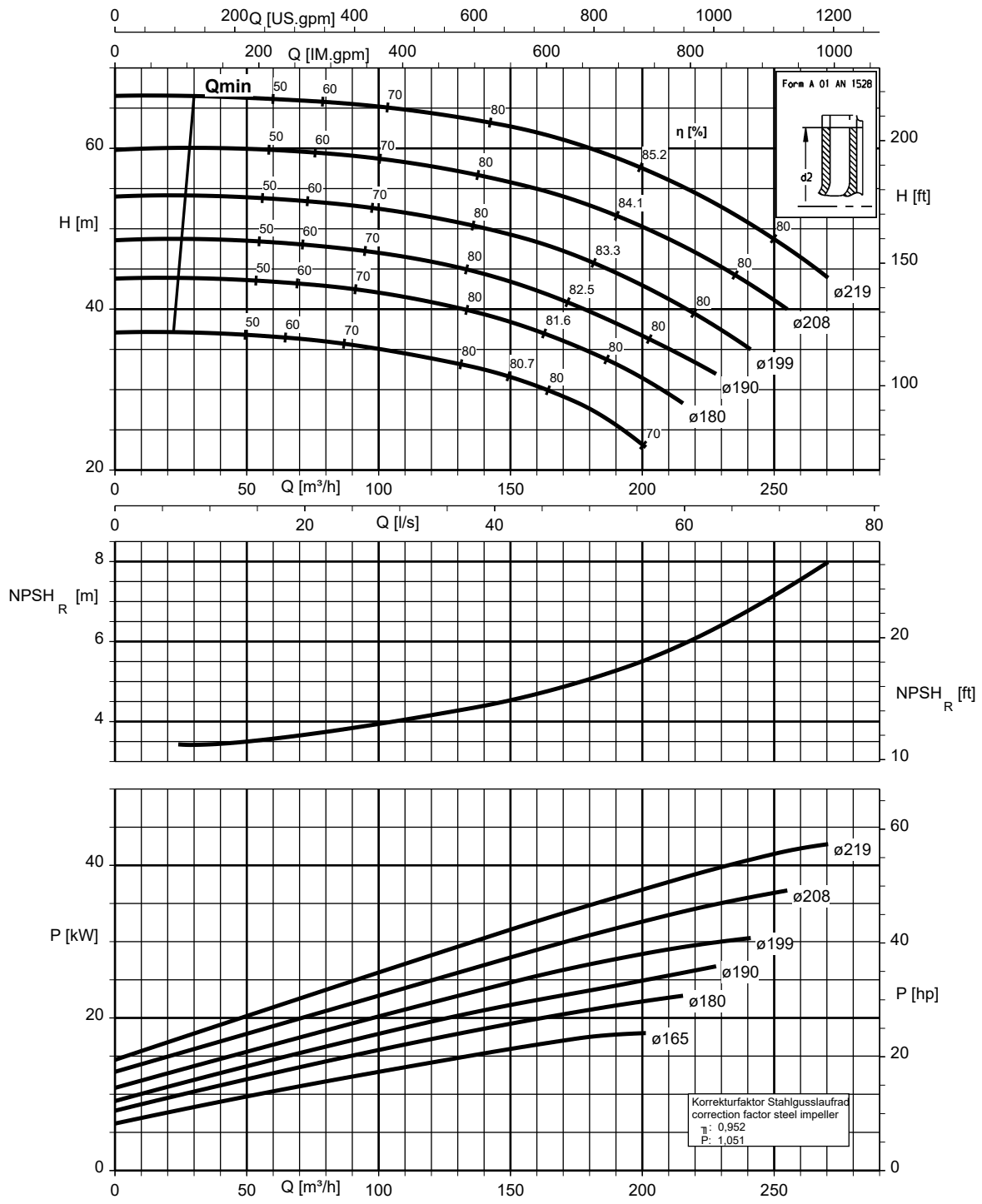
Etanorm 100-080-160, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 100-080-200, n = 2900 rpm

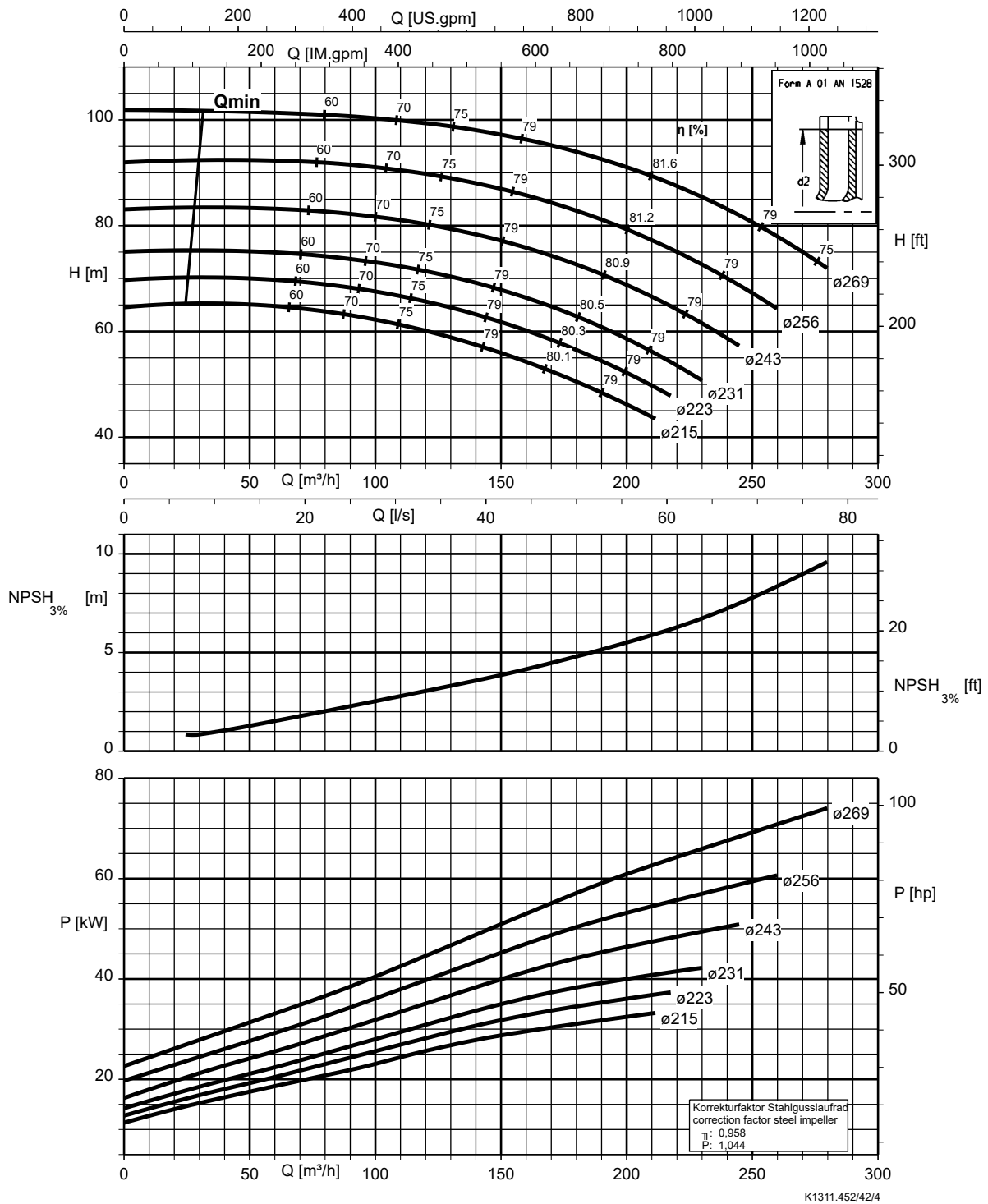
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

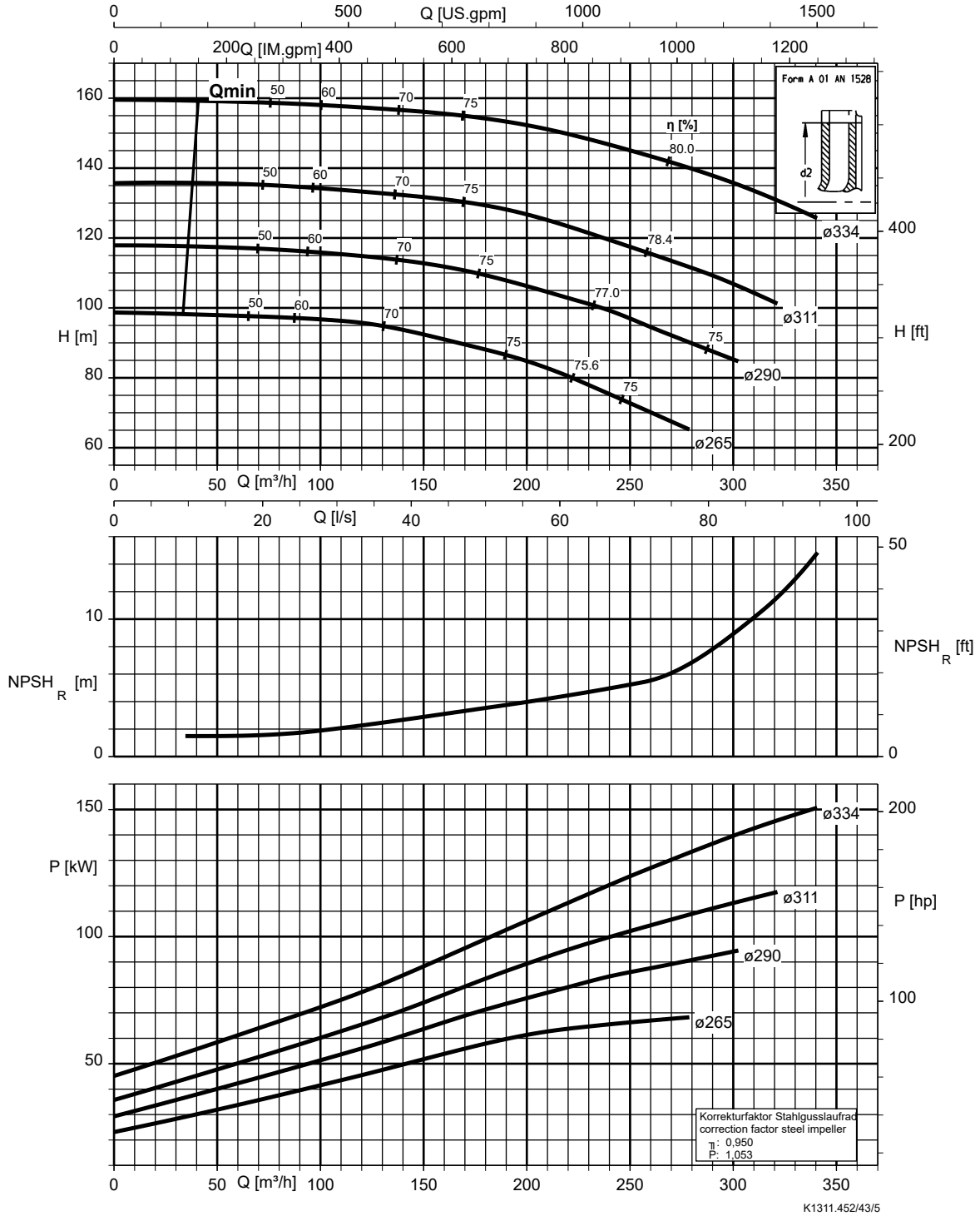
Etanorm 100-080-250, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc



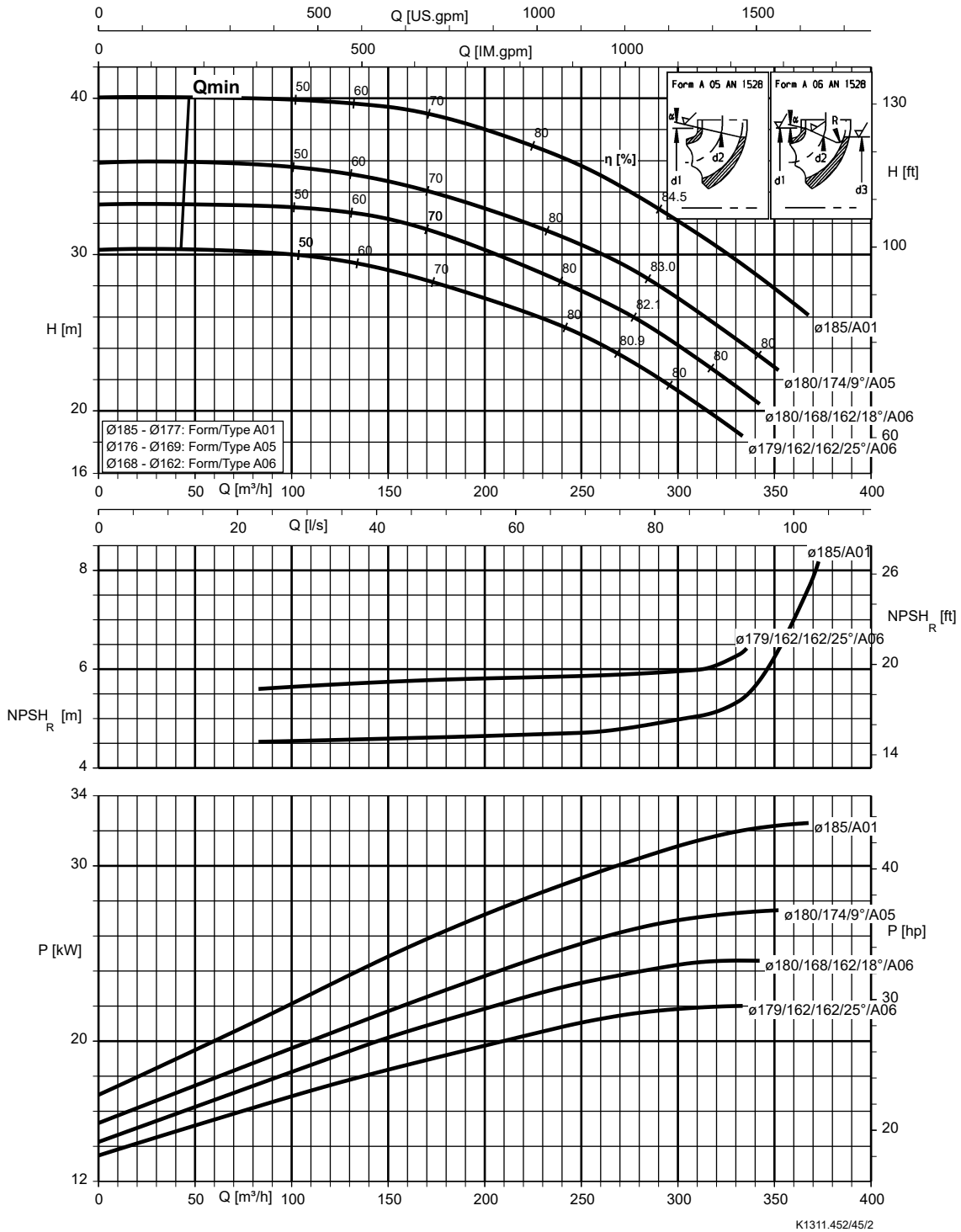
1311.45/11-EN

Etanorm 100-080-315, n = 2900 rpm



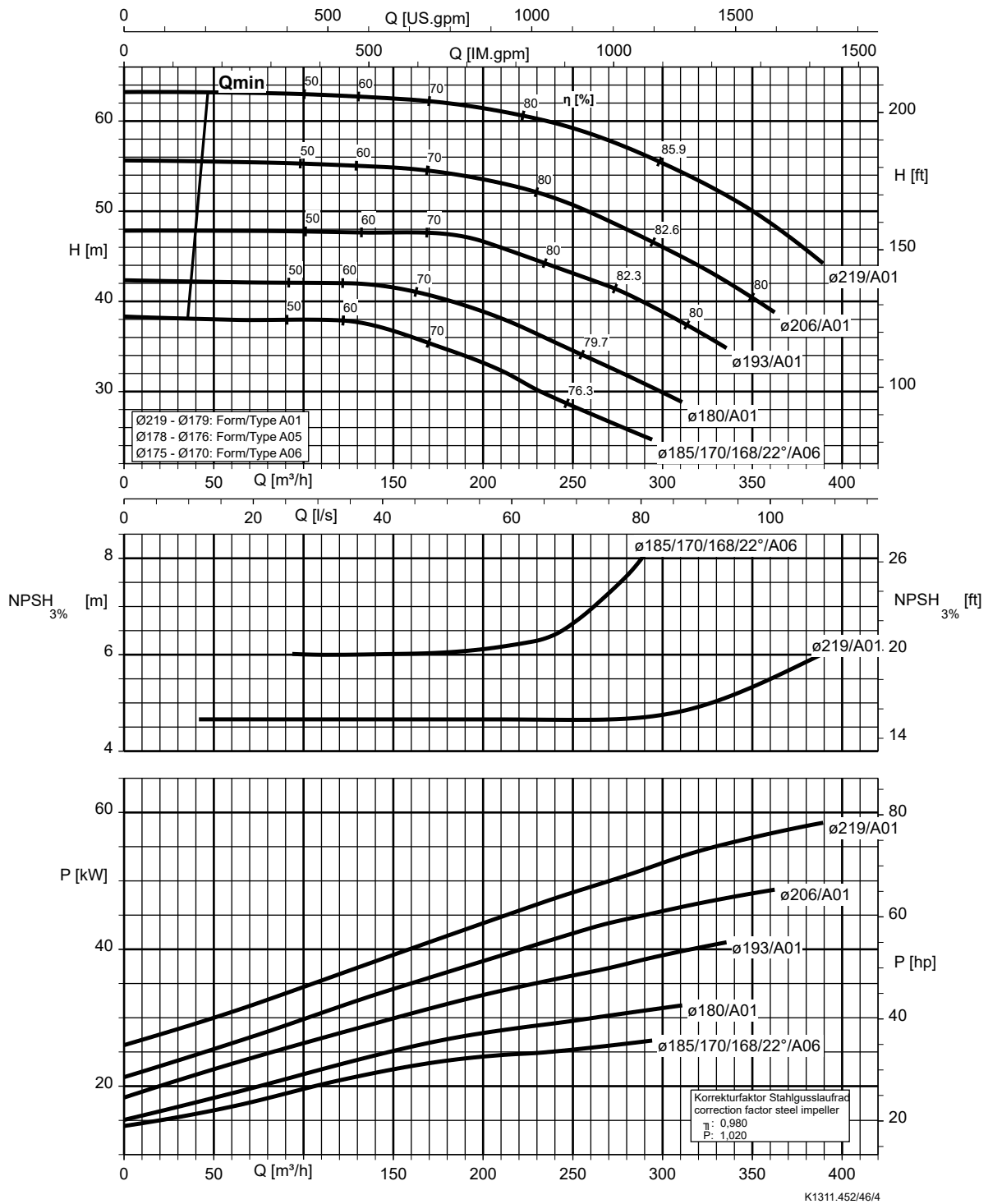
Etanorm 125-100-160, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc



Etanorm 125-100-200, n = 2900 rpm

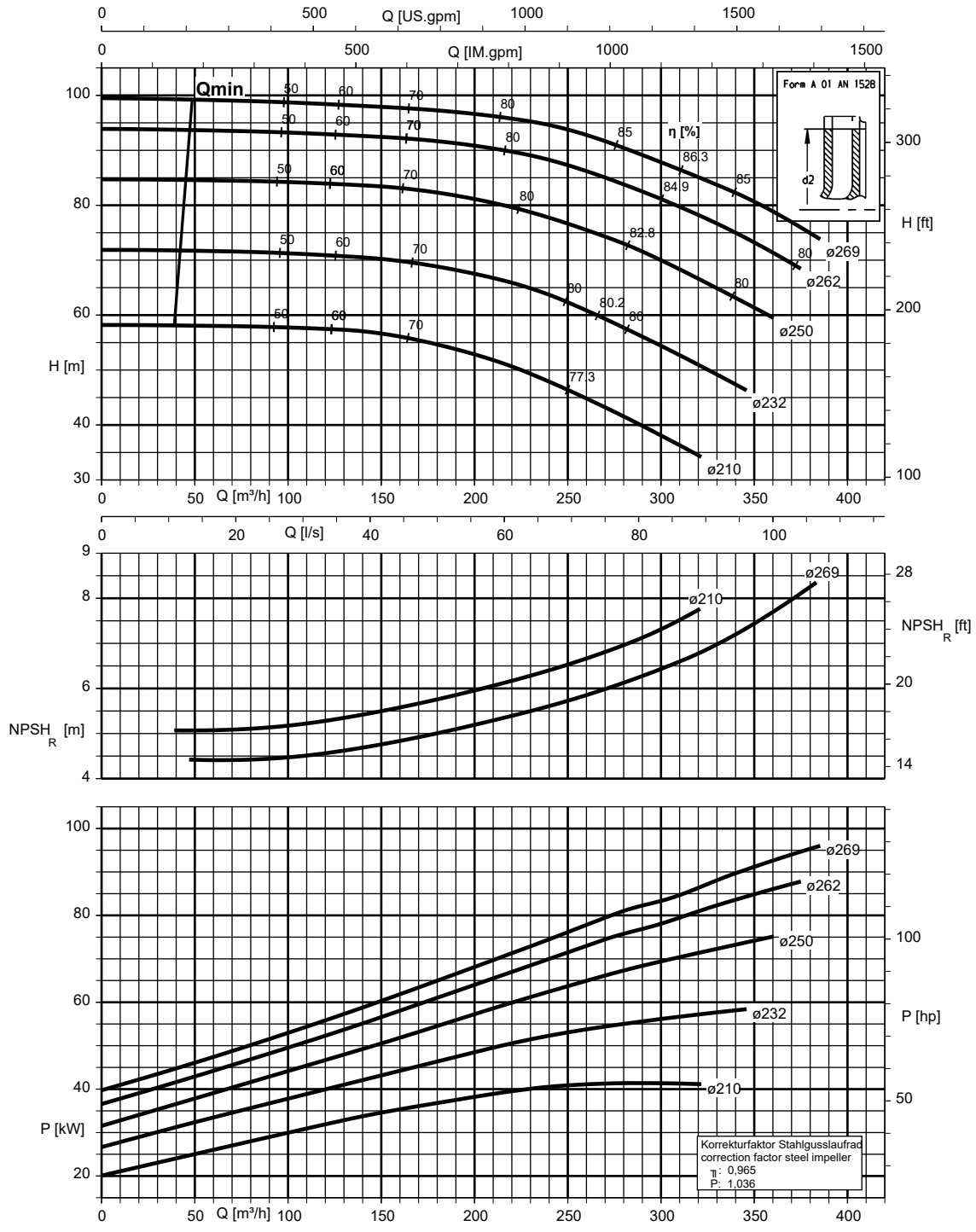
Etanorm SYT, Etanorm V, Etabloc





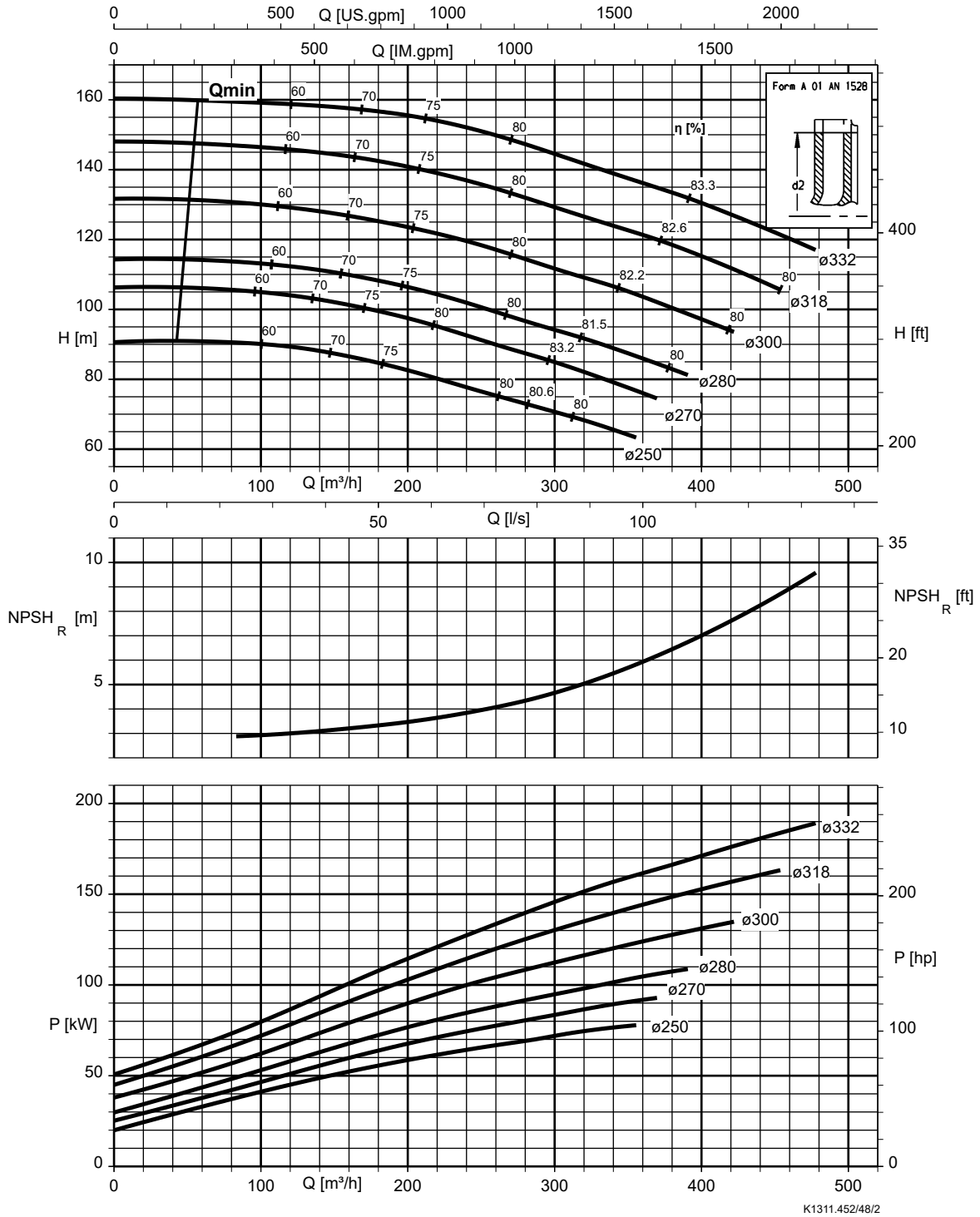
Etanorm 125-100-250, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

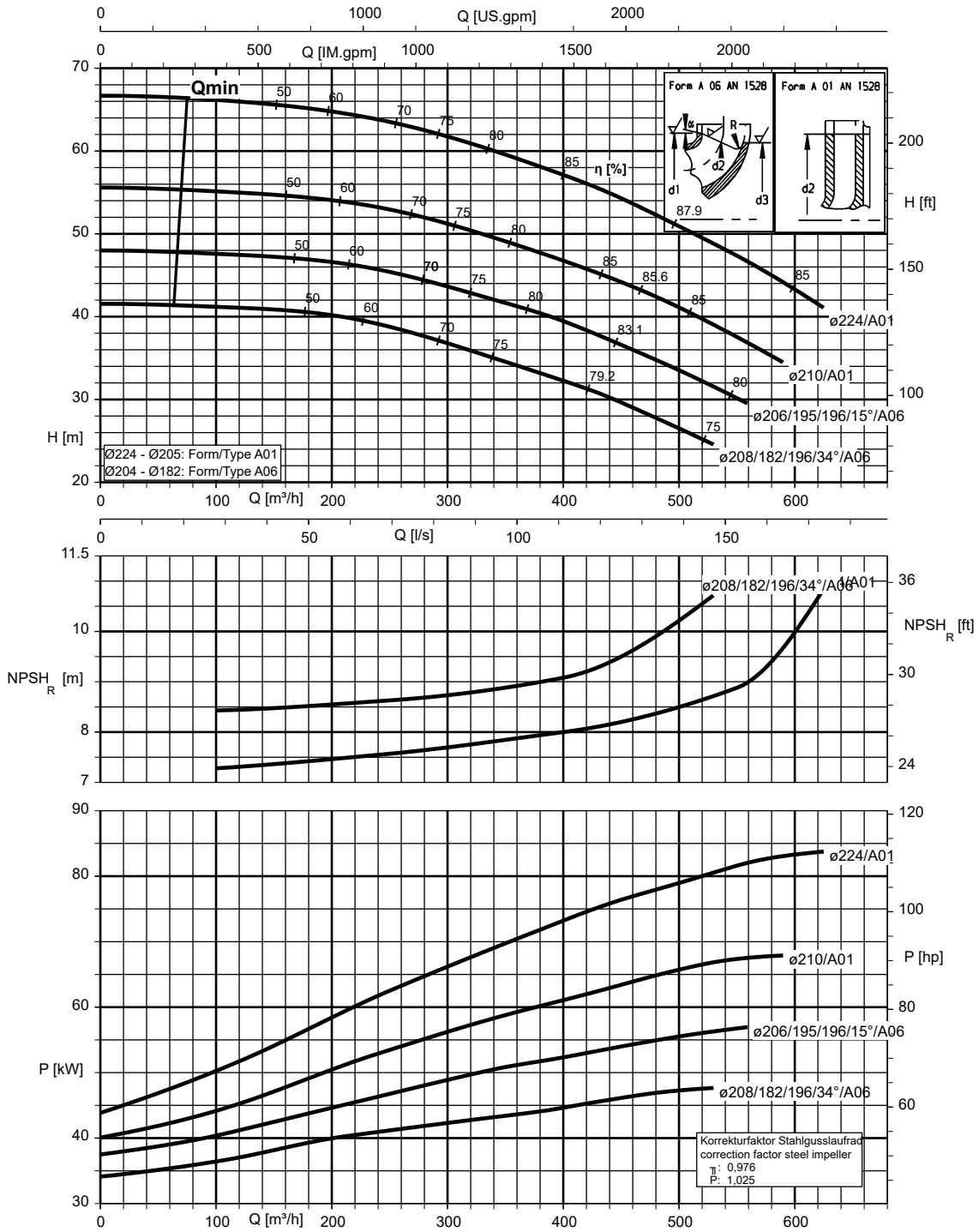
Etanorm 125-100-315, n = 2900 rpm



1311.45/11-EN

Etanorm 150-125-200, n = 2900 rpm

Etanorm SYT, Etanorm V, Etabloc

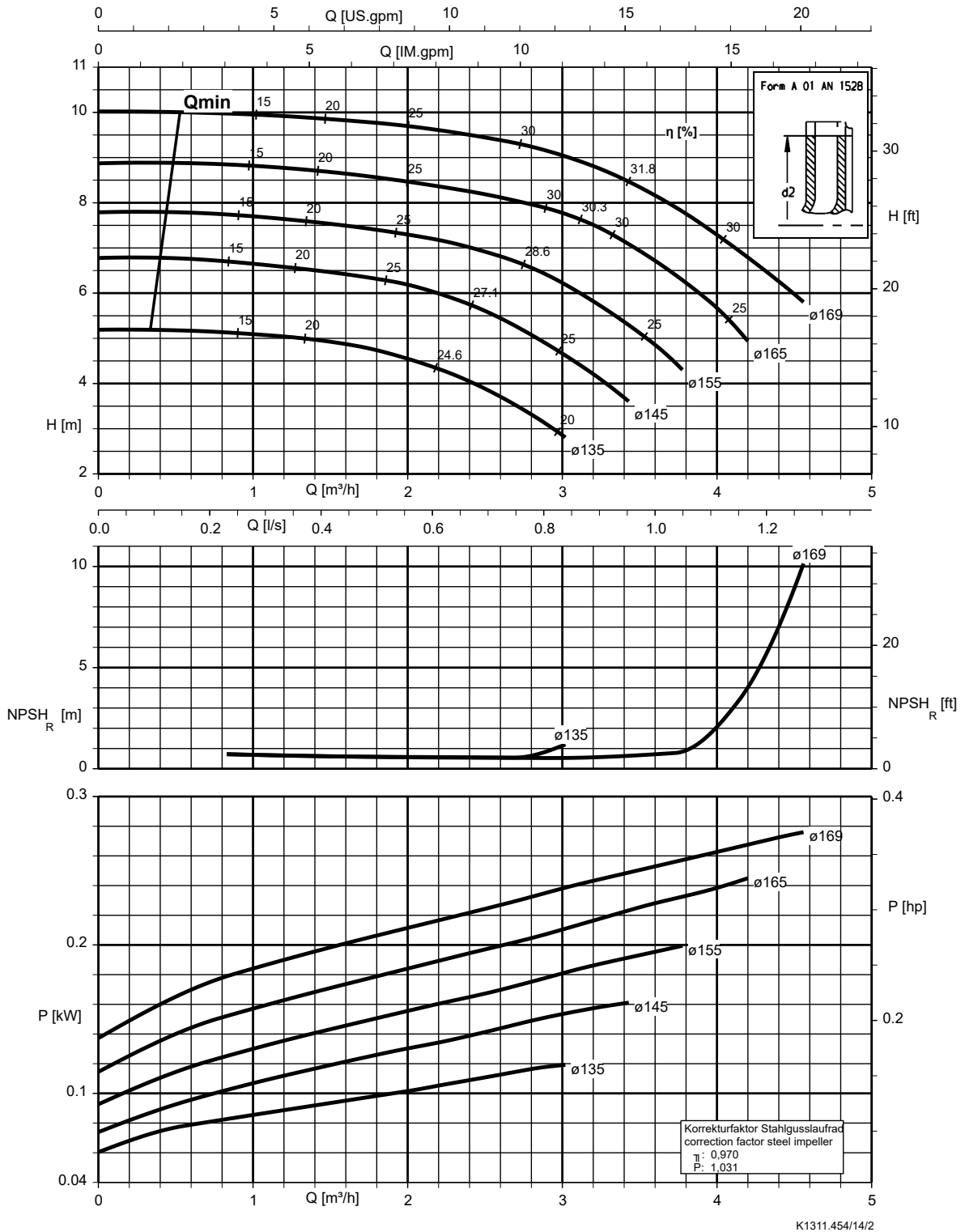


K1311.452/50/2

n = 1450 rpm

Etanorm 040-025-160, n = 1450 rpm

Etanorm SYT, Etabloc, Etabloc SYT

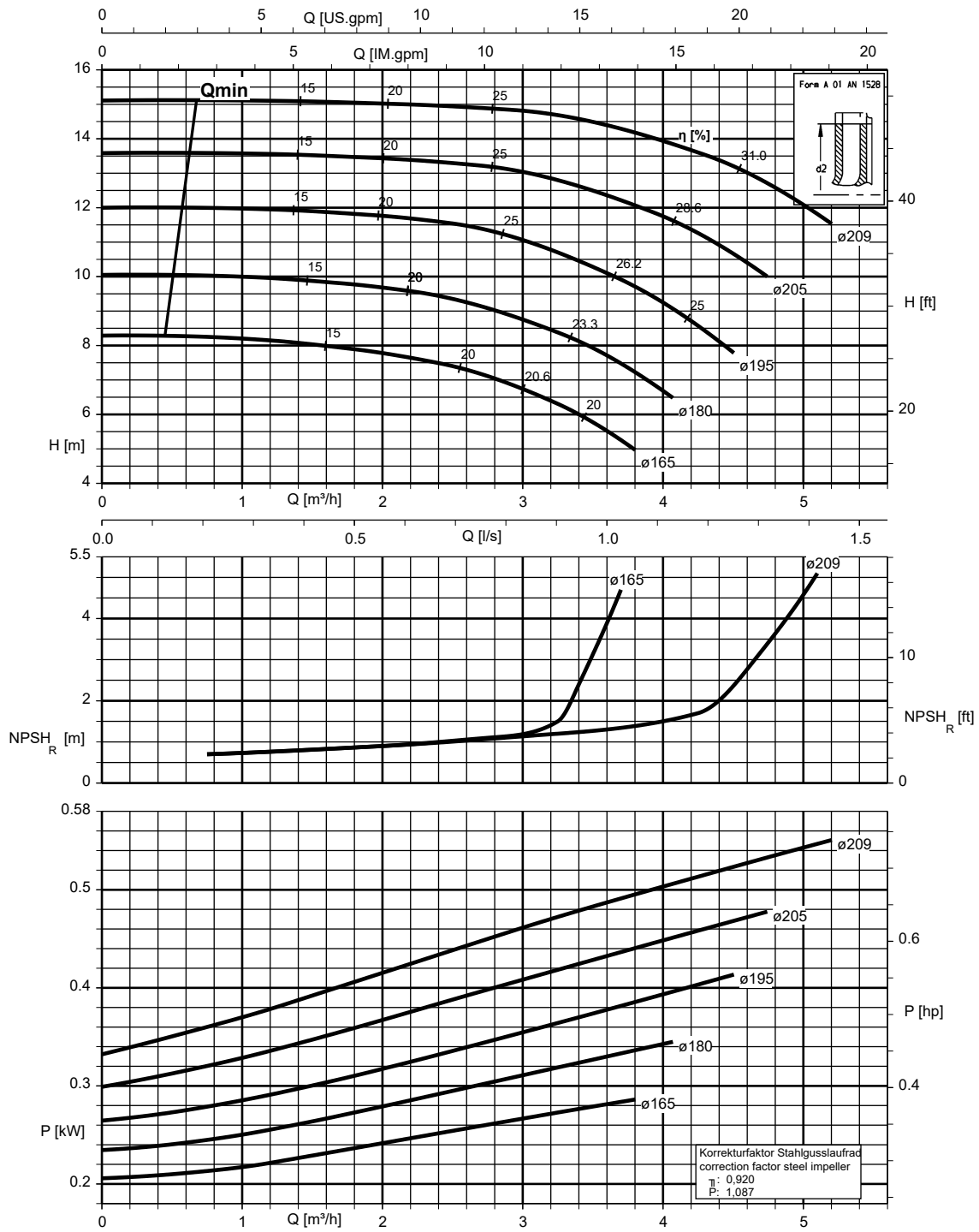


K1311.454/14/2

1311.45/11-EN

Etanorm 040-025-200, n = 1450 rpm

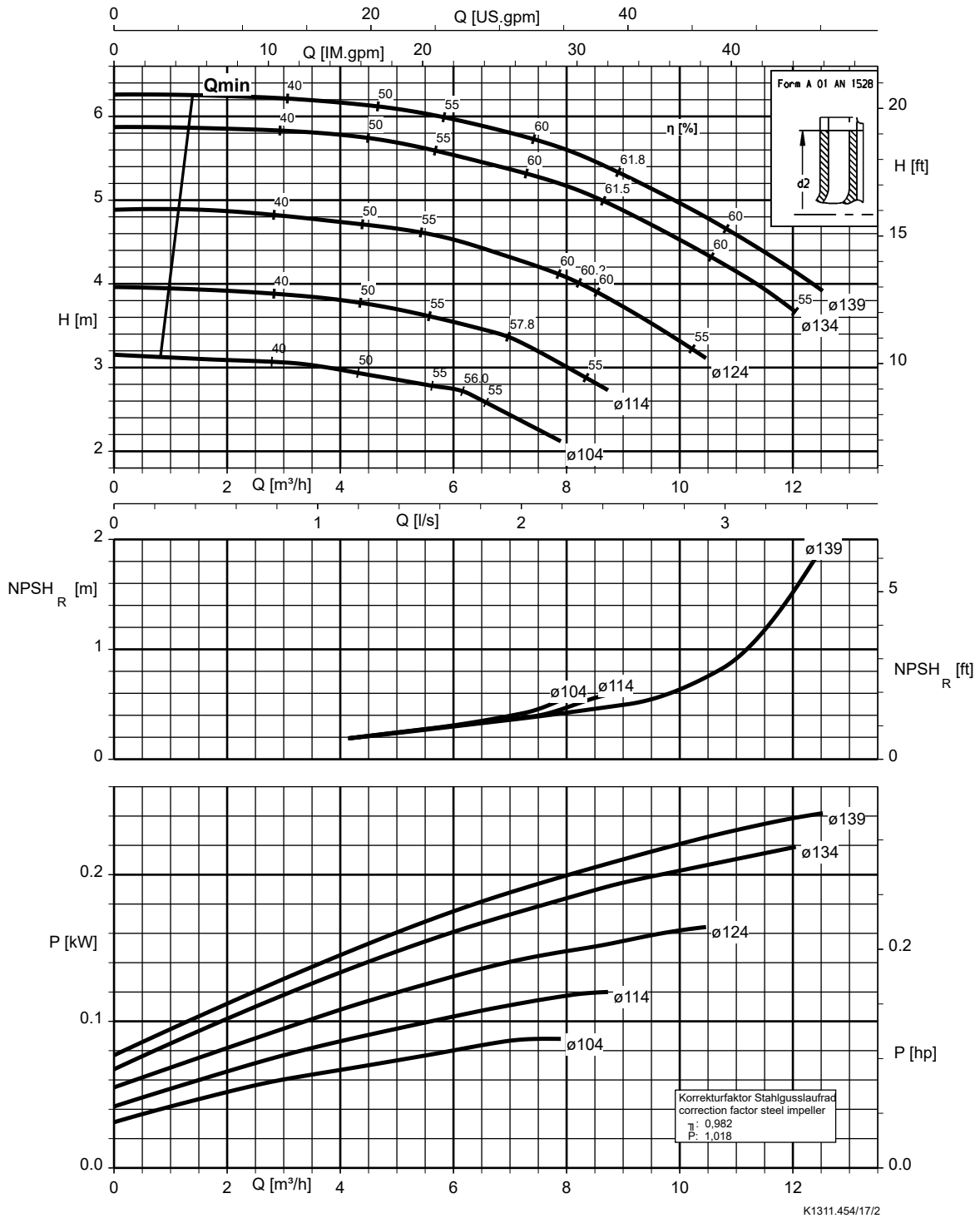
Etanorm SYT, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 050-032-125.1, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

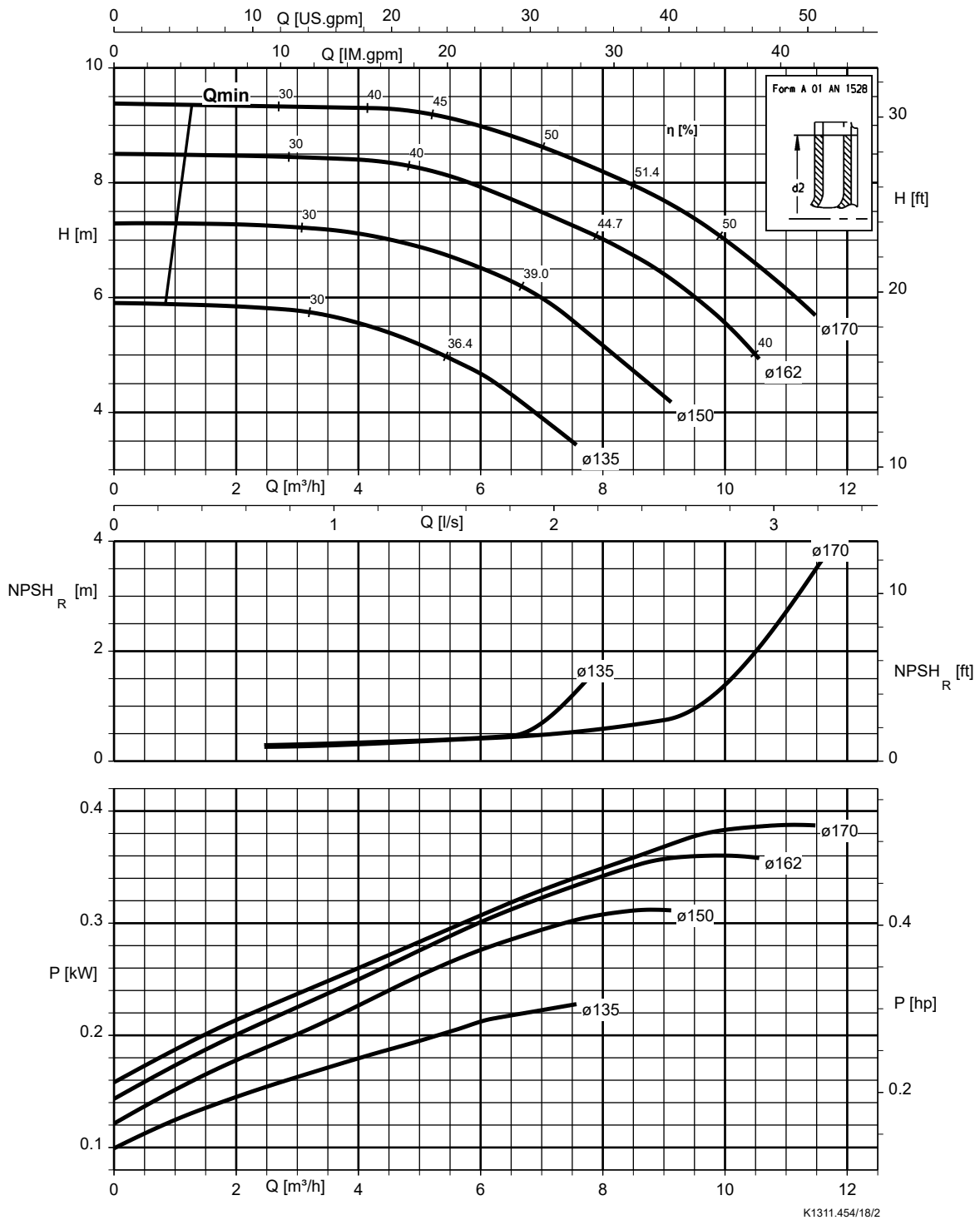


K1311.454/17/2

1311.45/11-EN

Etanorm 050-032-160.1, n = 1450 rpm

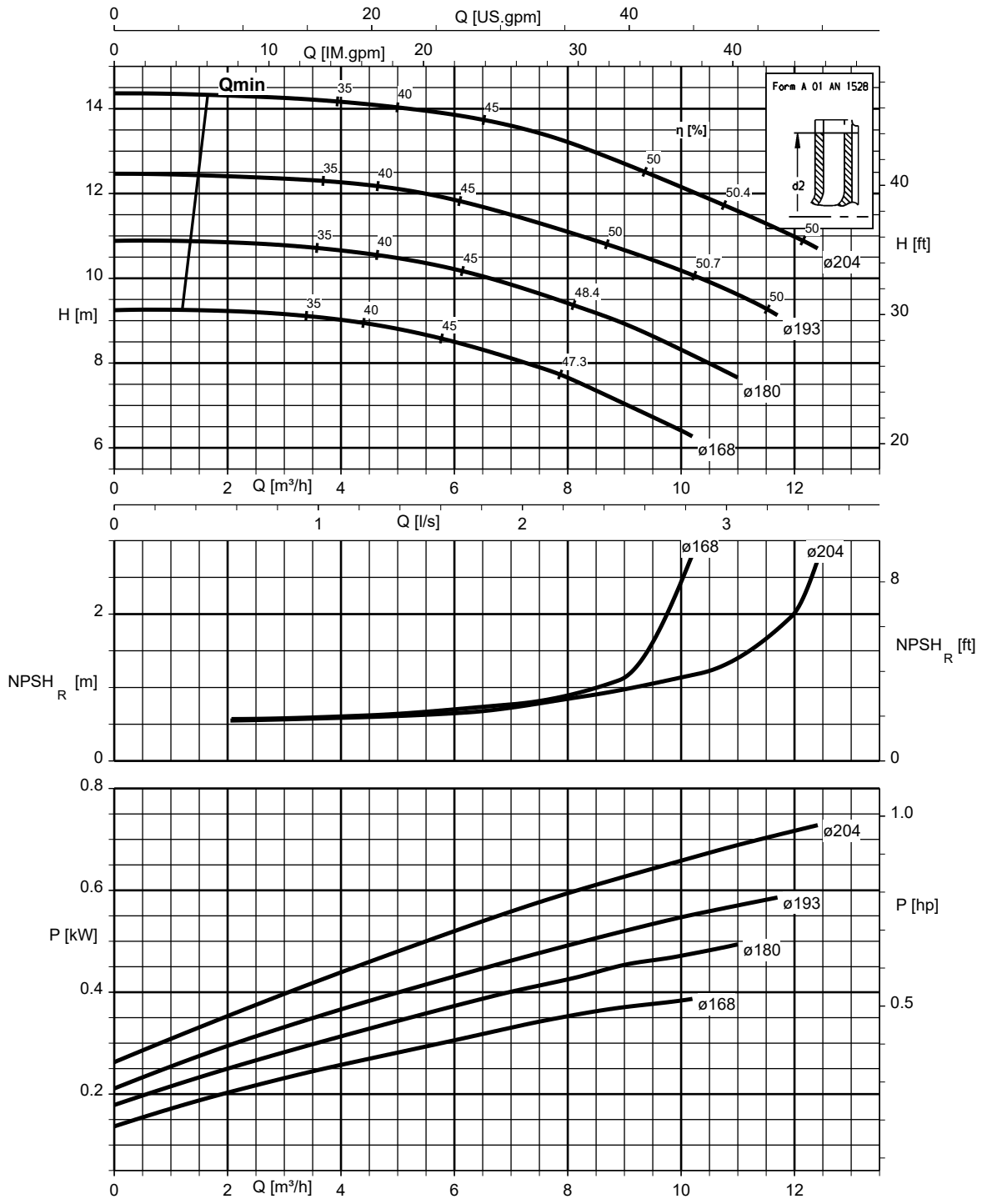
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 050-032-200.1, n = 1450 rpm

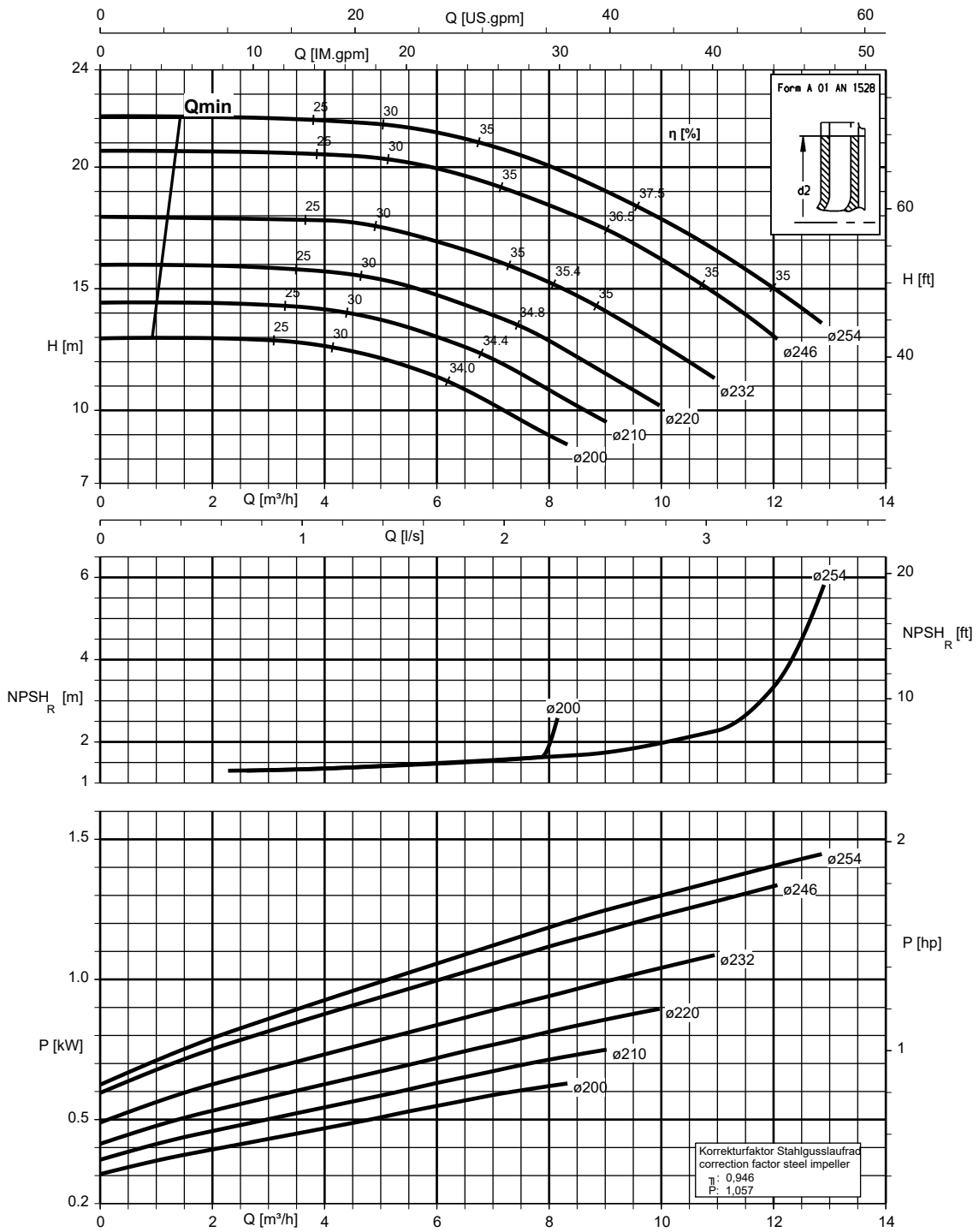
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT





Etanorm 050-032-250.1, n = 1450 rpm

Etanorm V, Etabloc

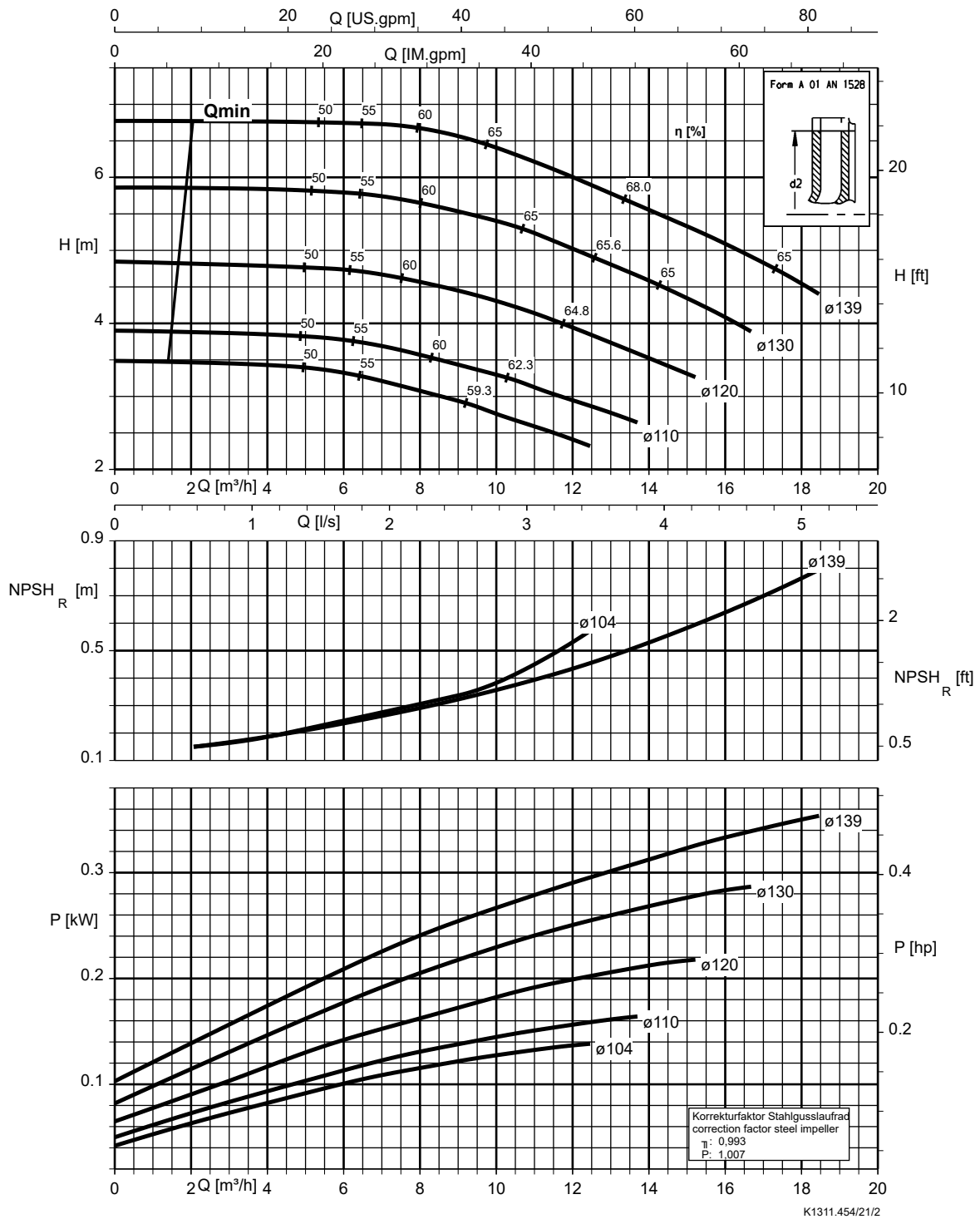


K1311.454/20/2

1311.45/11-EN

Etanorm 050-032-125, n = 1450 rpm

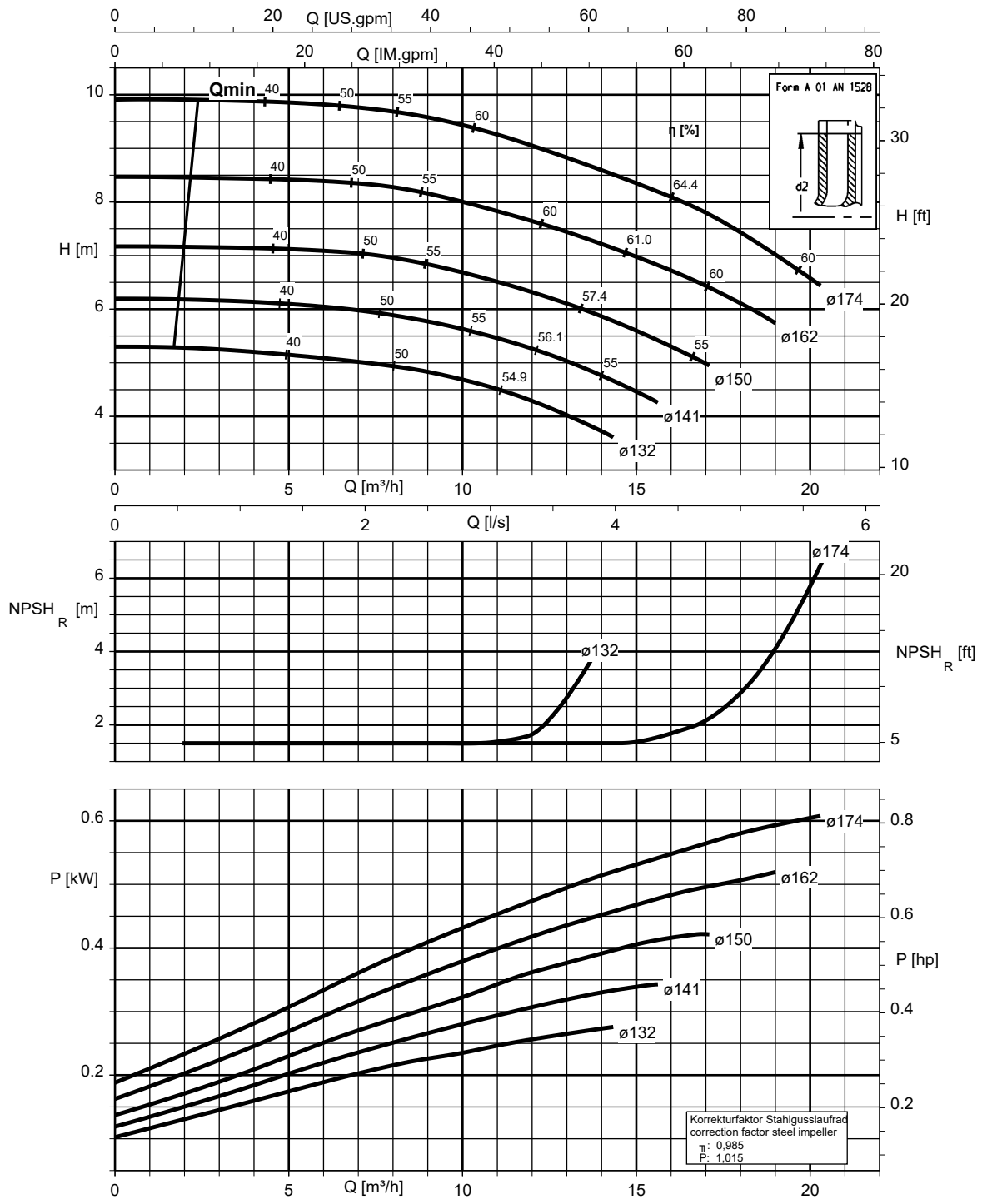
Etanorm V, Etabloc



1311.45/11-EN

Etanorm 050-032-160, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

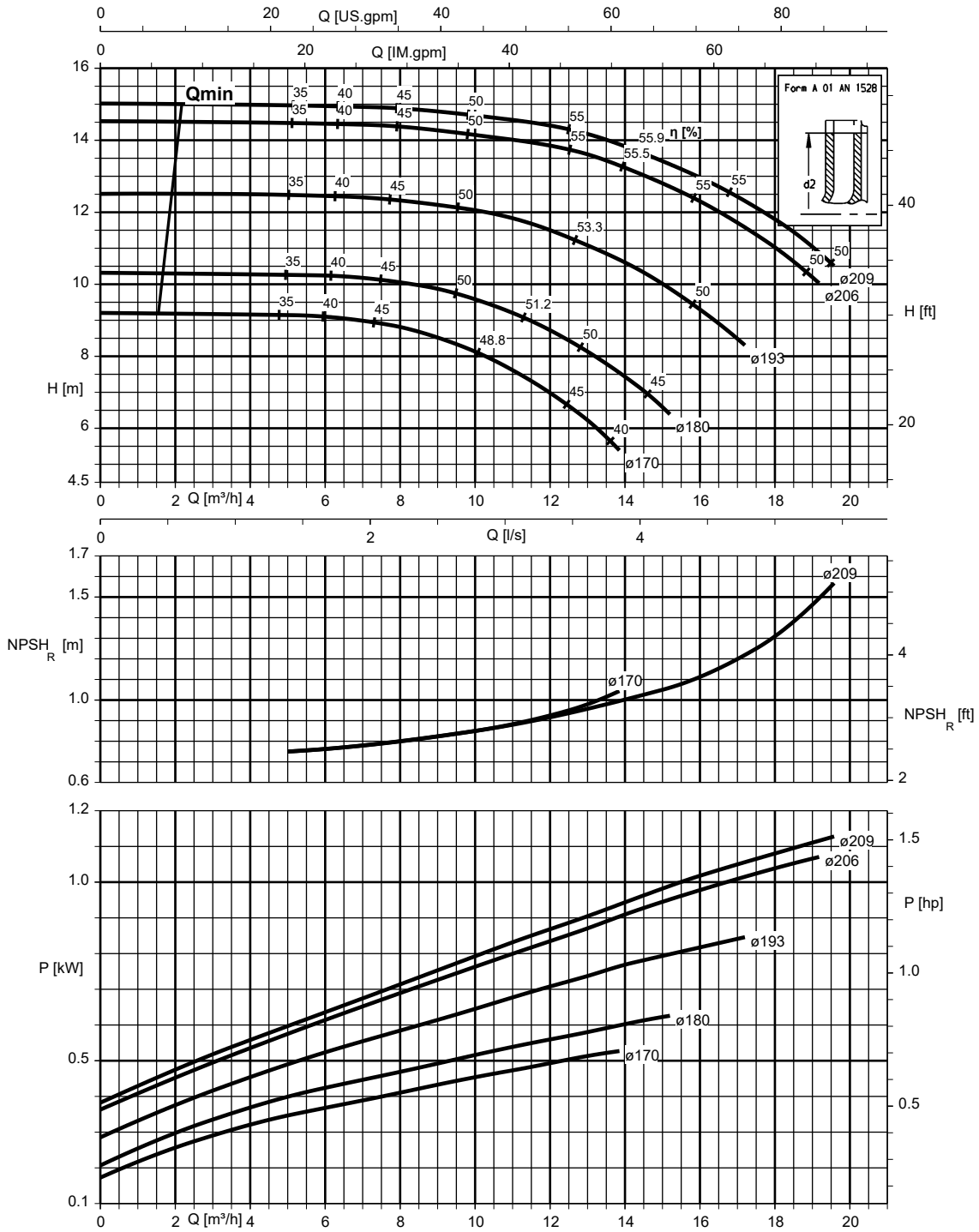


K1311.454/22/3

1311.45/11-EN

Etanorm 050-032-200, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

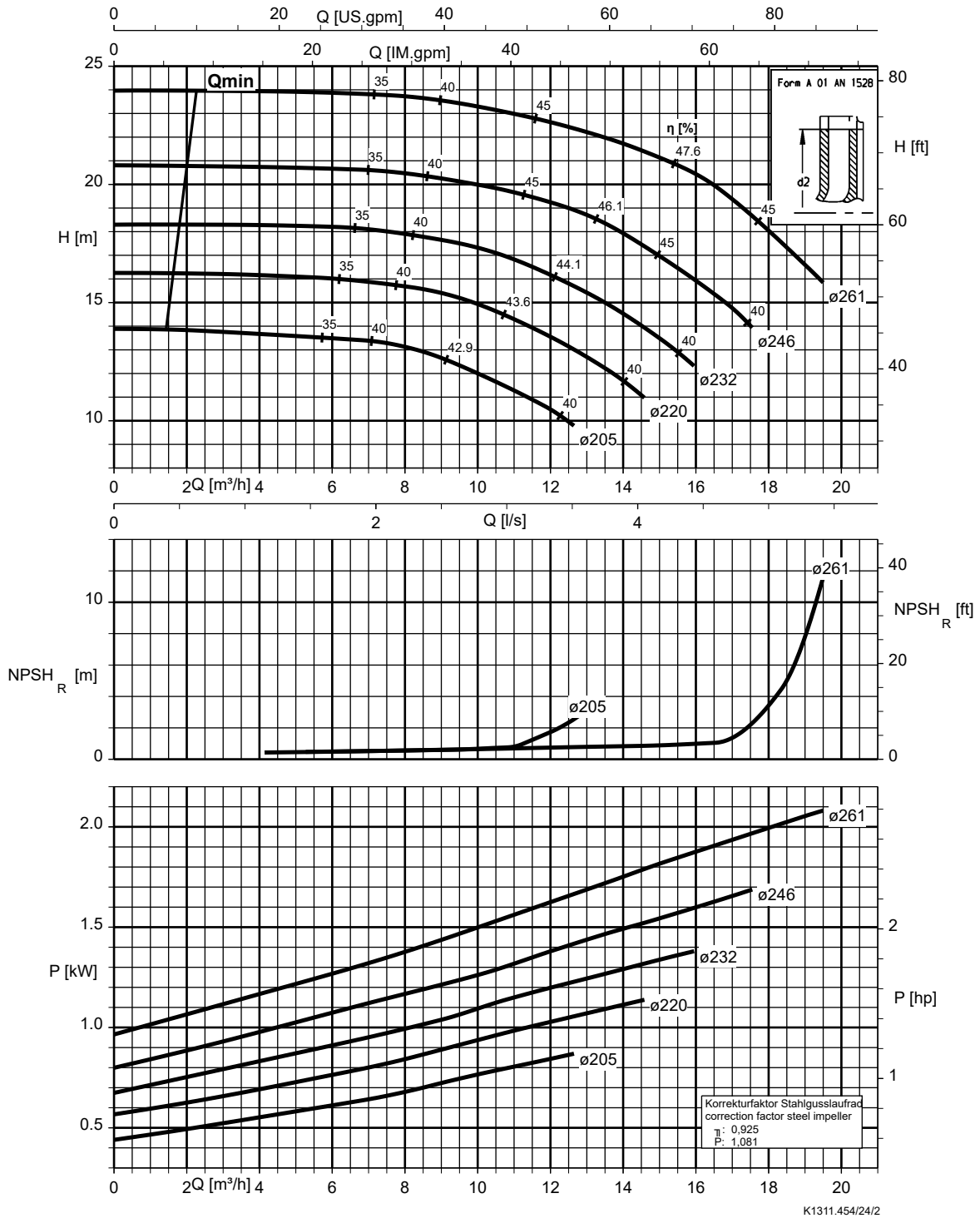


K1311.454/23/1

1311.45/11-EN

Etanorm 050-032-250, n = 1450 rpm

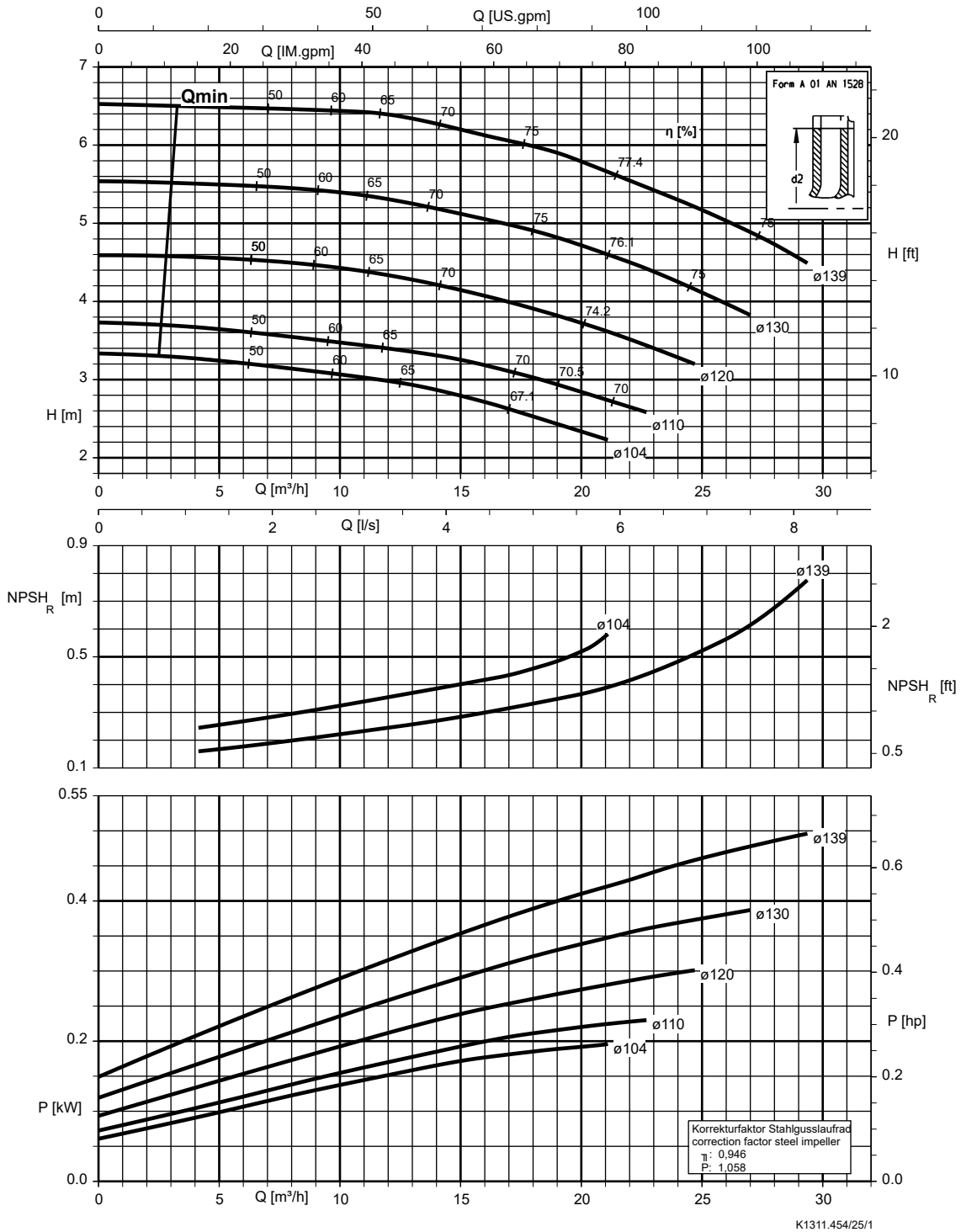
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 065-040-125, n = 1450 rpm

Etanorm V, Etabloc

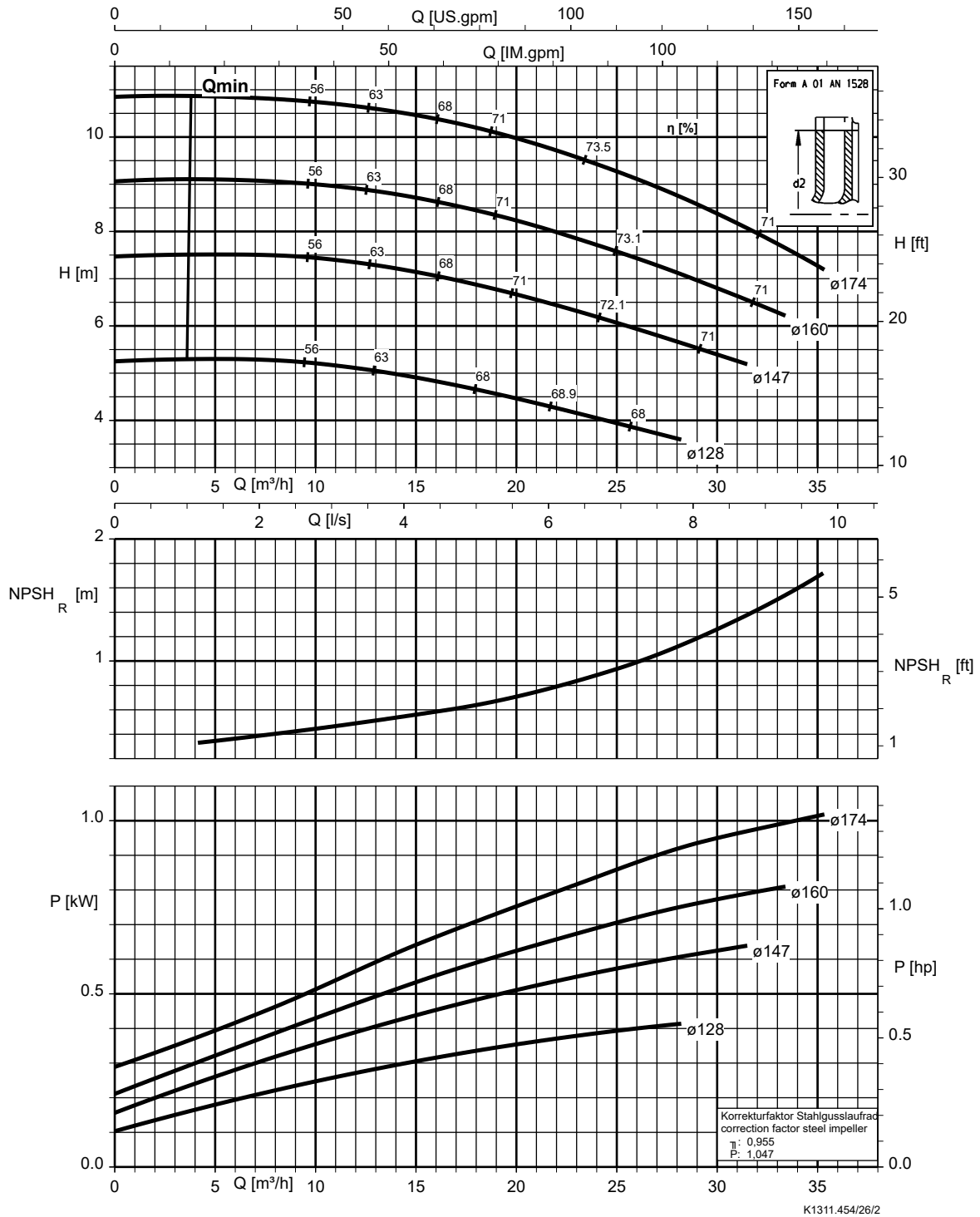


K1311.454/25/1

1311.45/11-EN

Etanorm 065-040-160, n = 1450 rpm

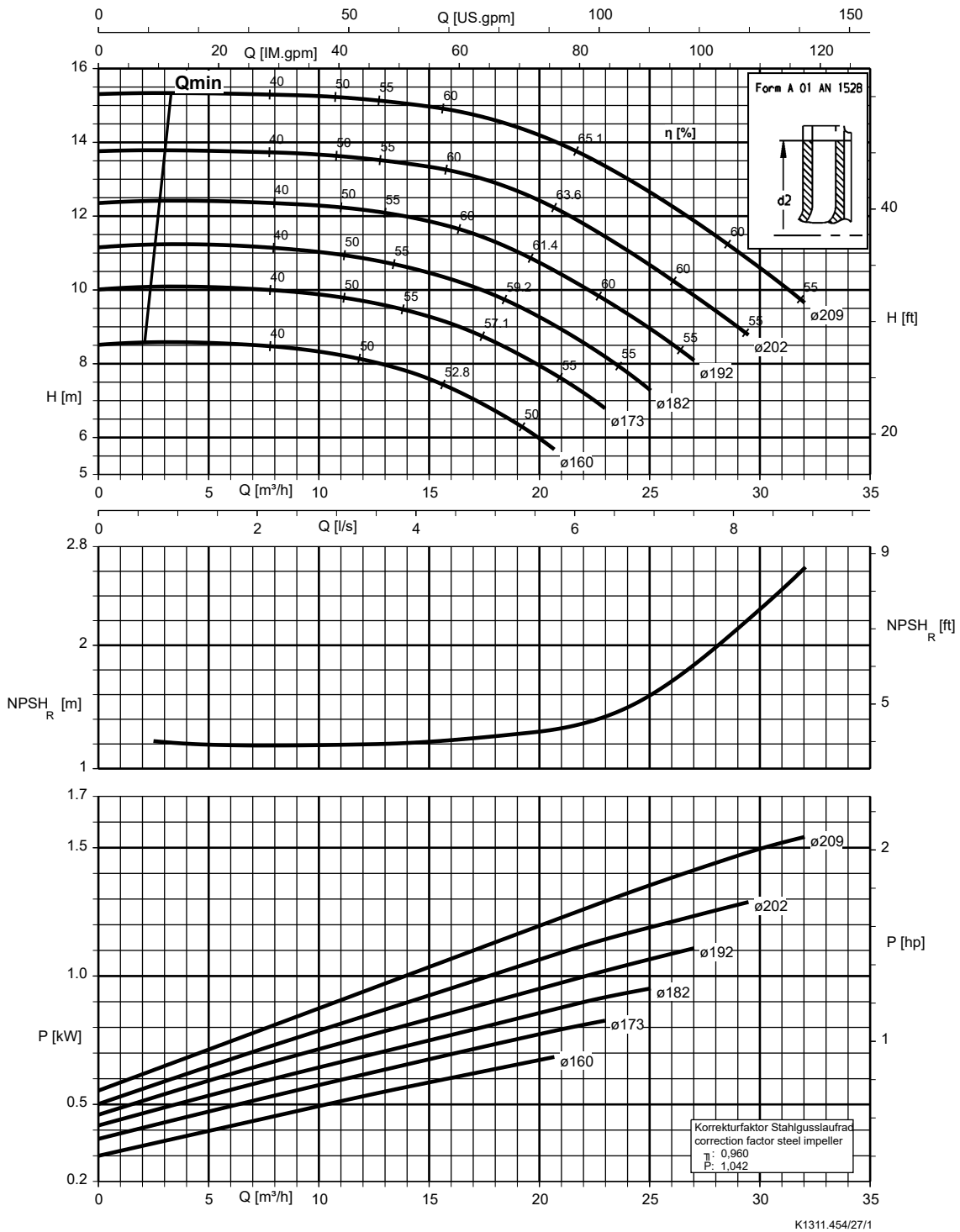
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 065-040-200, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



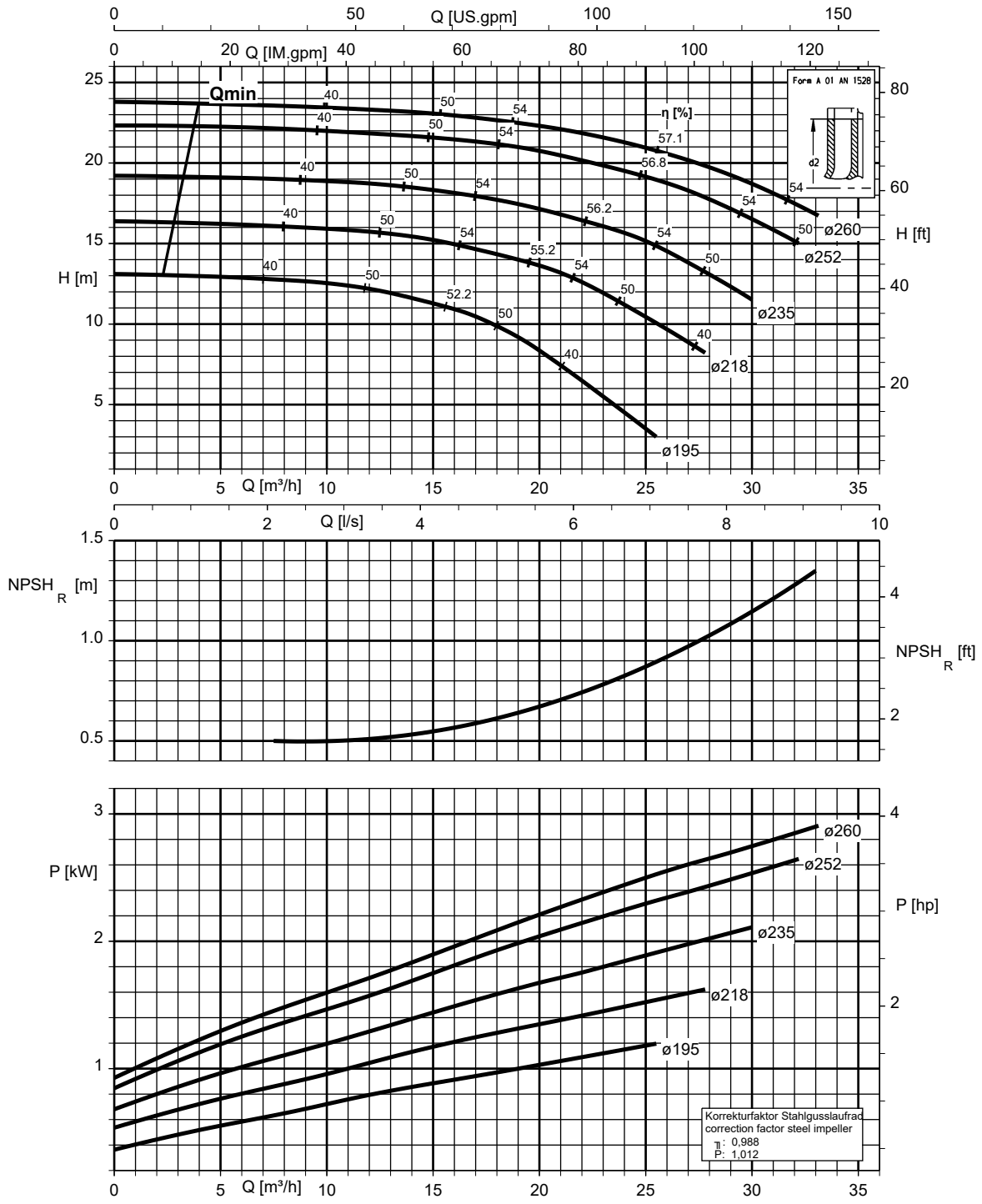
K1311.454/27/1

1311.45/11-EN



Etanorm 065-040-250, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

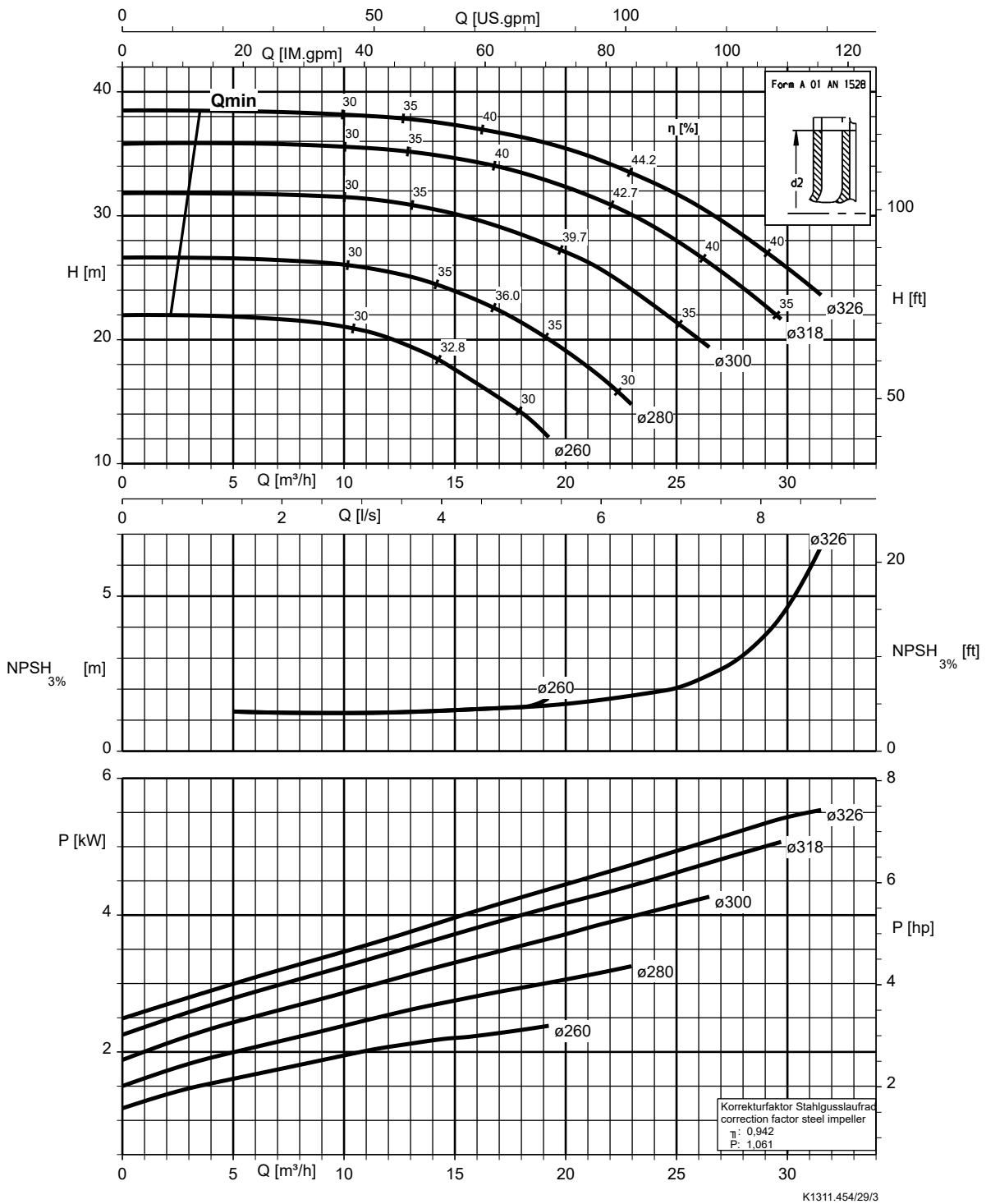


K1311.454/28/2

1311.45/11-EN

Etanorm 065-040-315, n = 1450 rpm

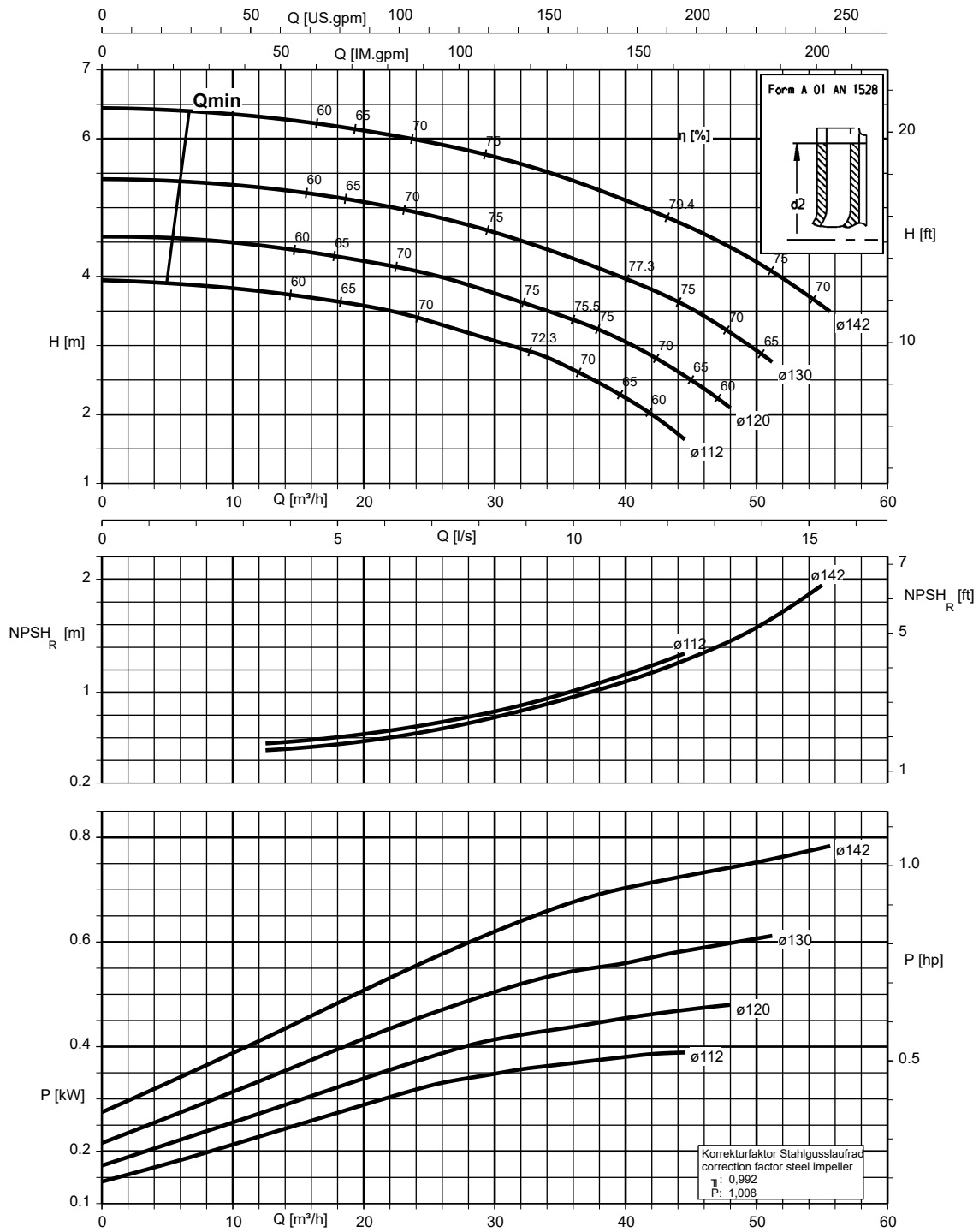
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 065-050-125, n = 1450 rpm

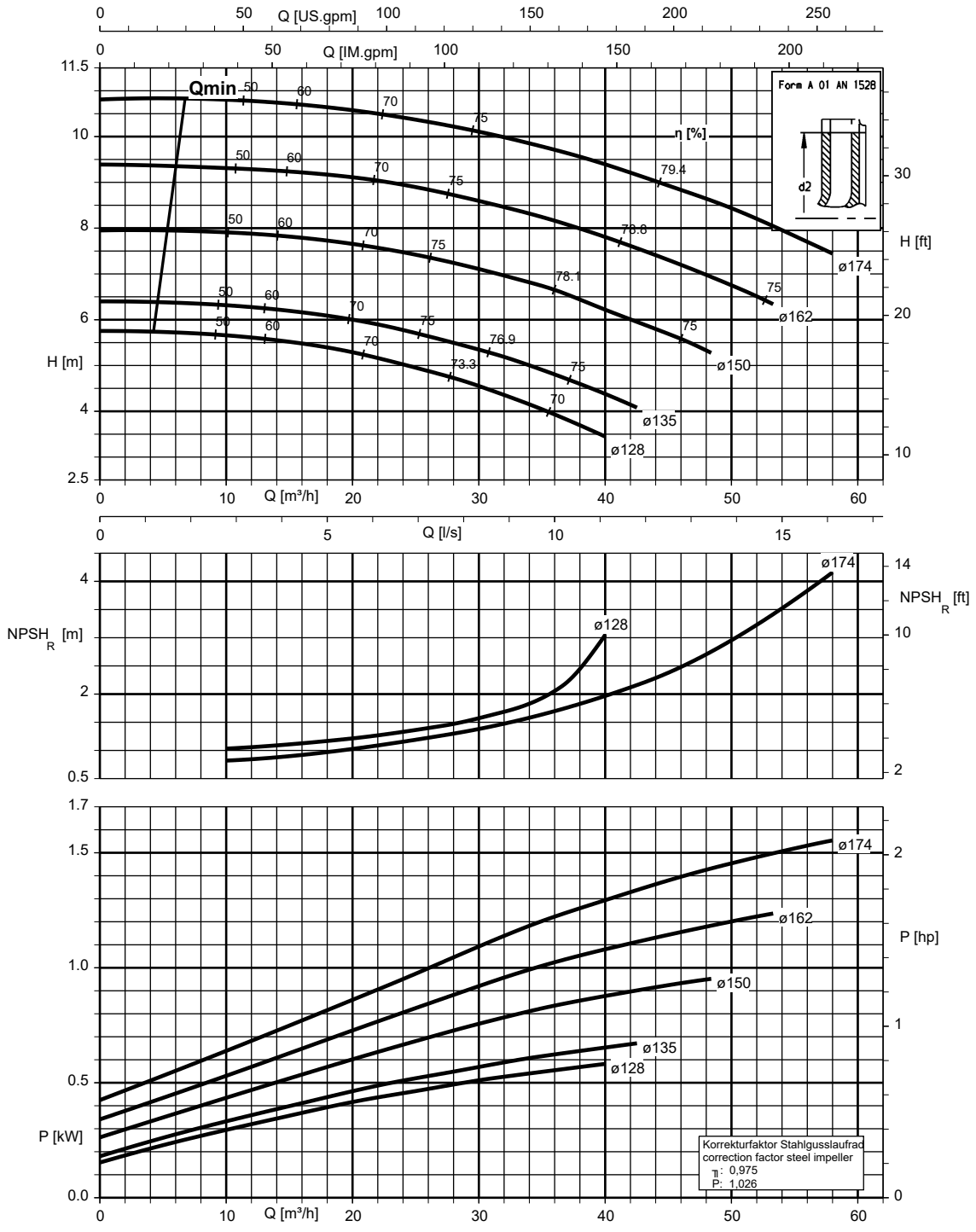
Etanorm V, Etabloc



K1311.454/30/1

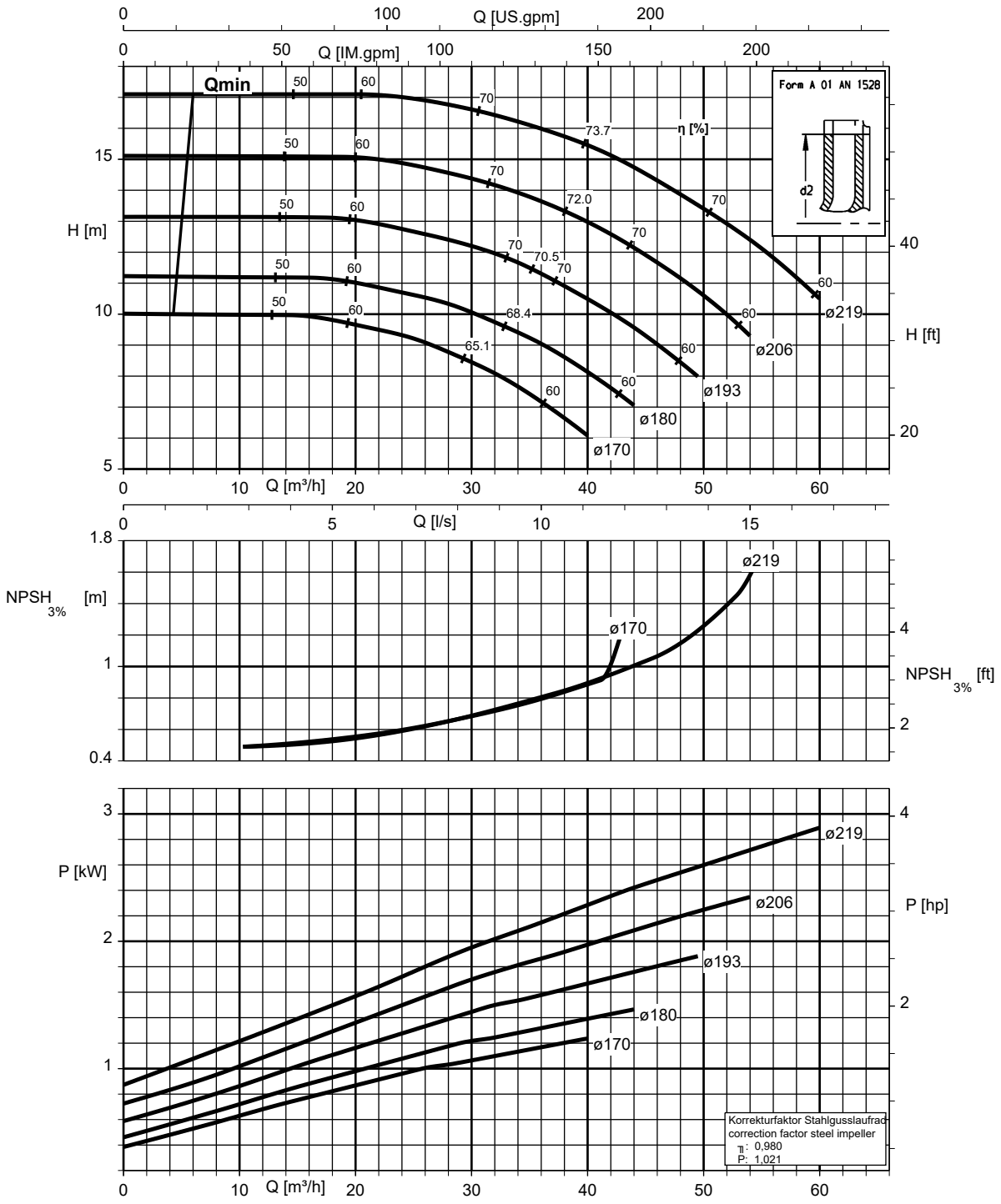
Etanorm 065-050-160, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 065-050-200, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

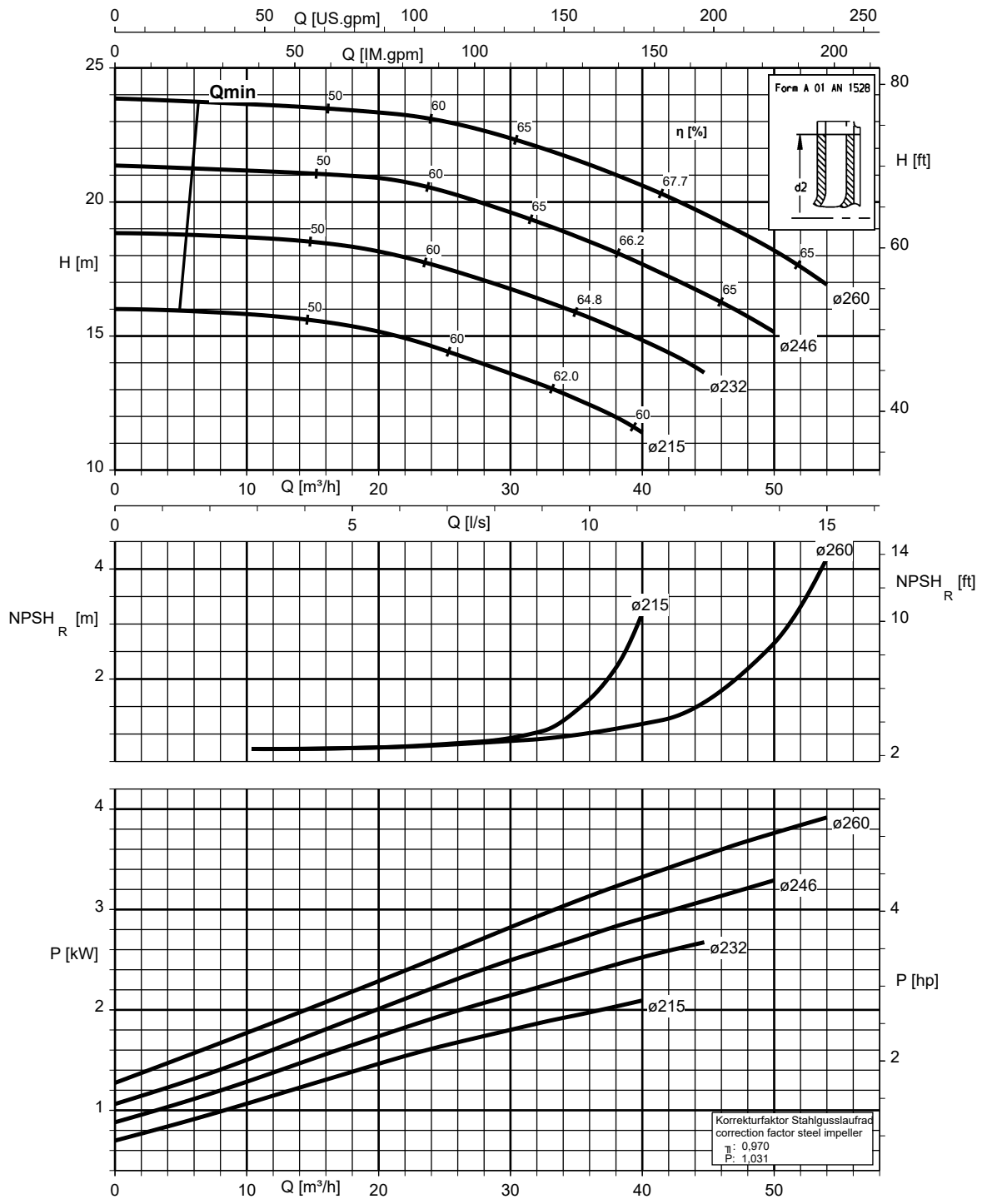


K1311.454/32/3

1311.45/11-EN

Etanorm 065-050-250, n = 1450 rpm

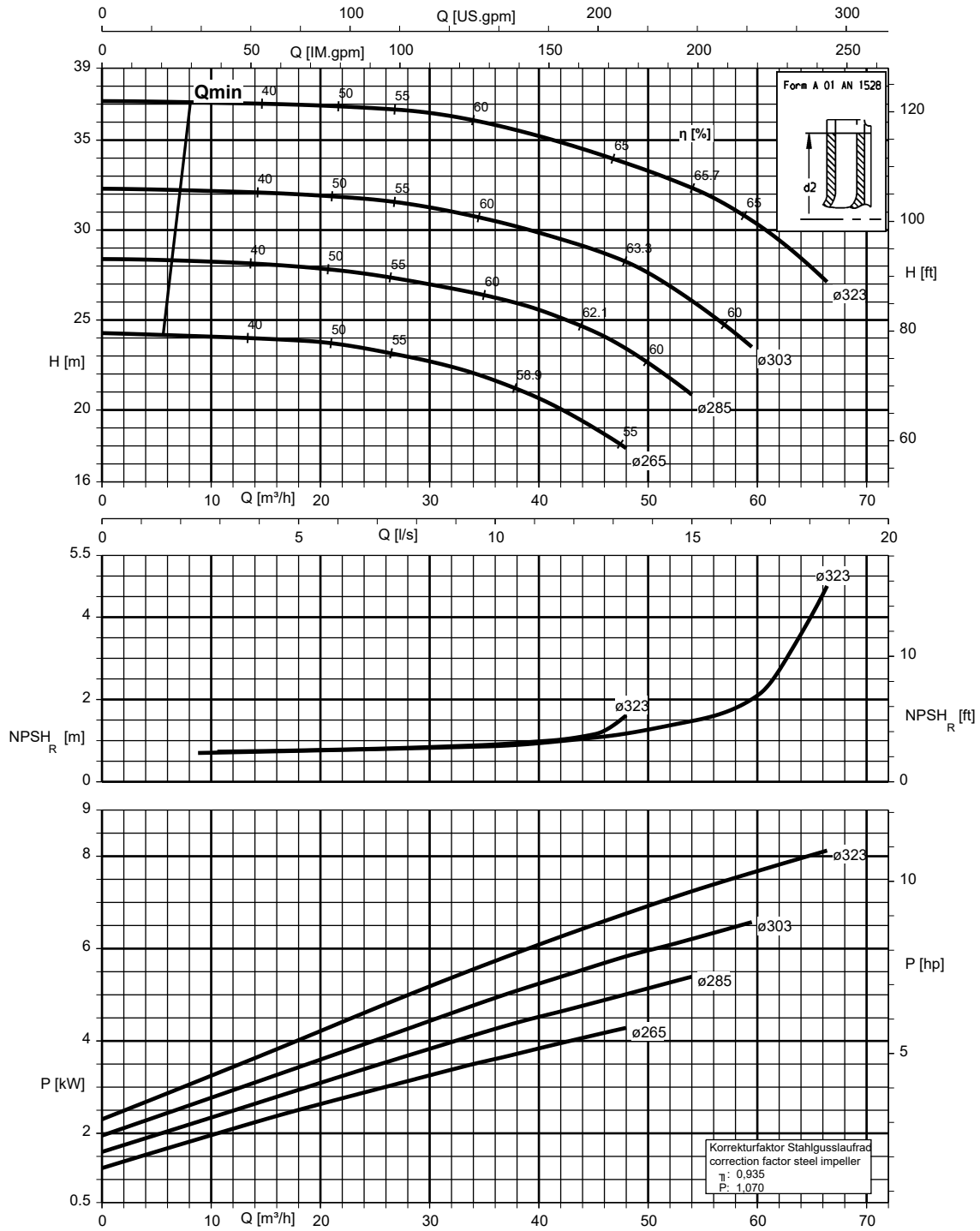
Etanorm SYT, Etanorm V, Etabloc



K1311.454/33/2

Etanorm 065-050-315, n = 1450 rpm

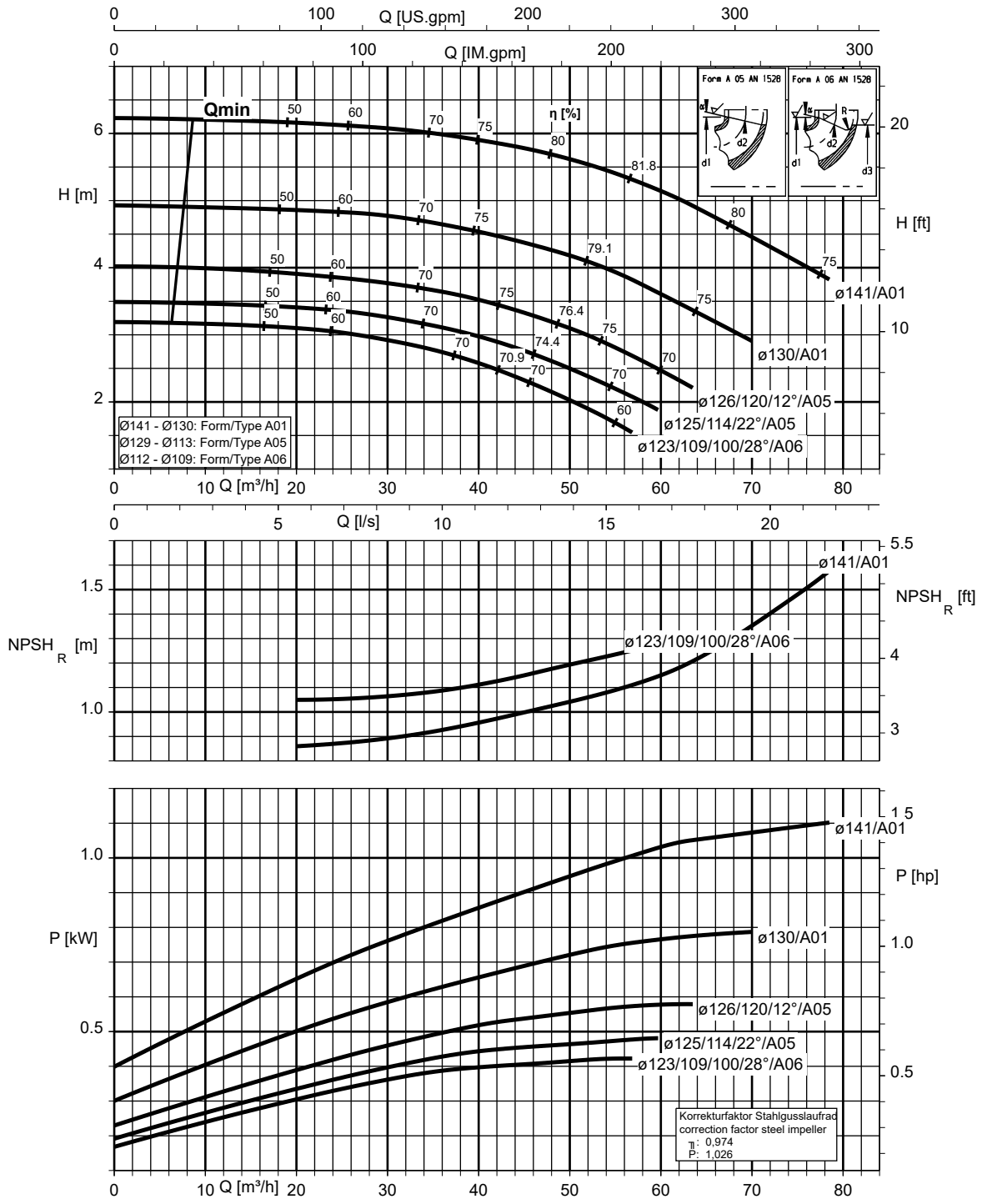
Etanorm SYT, Etanorm V, Etabloc



K1311.454/34/2

Etanorm 080-065-125, n = 1450 rpm

Etanorm V, Etabloc

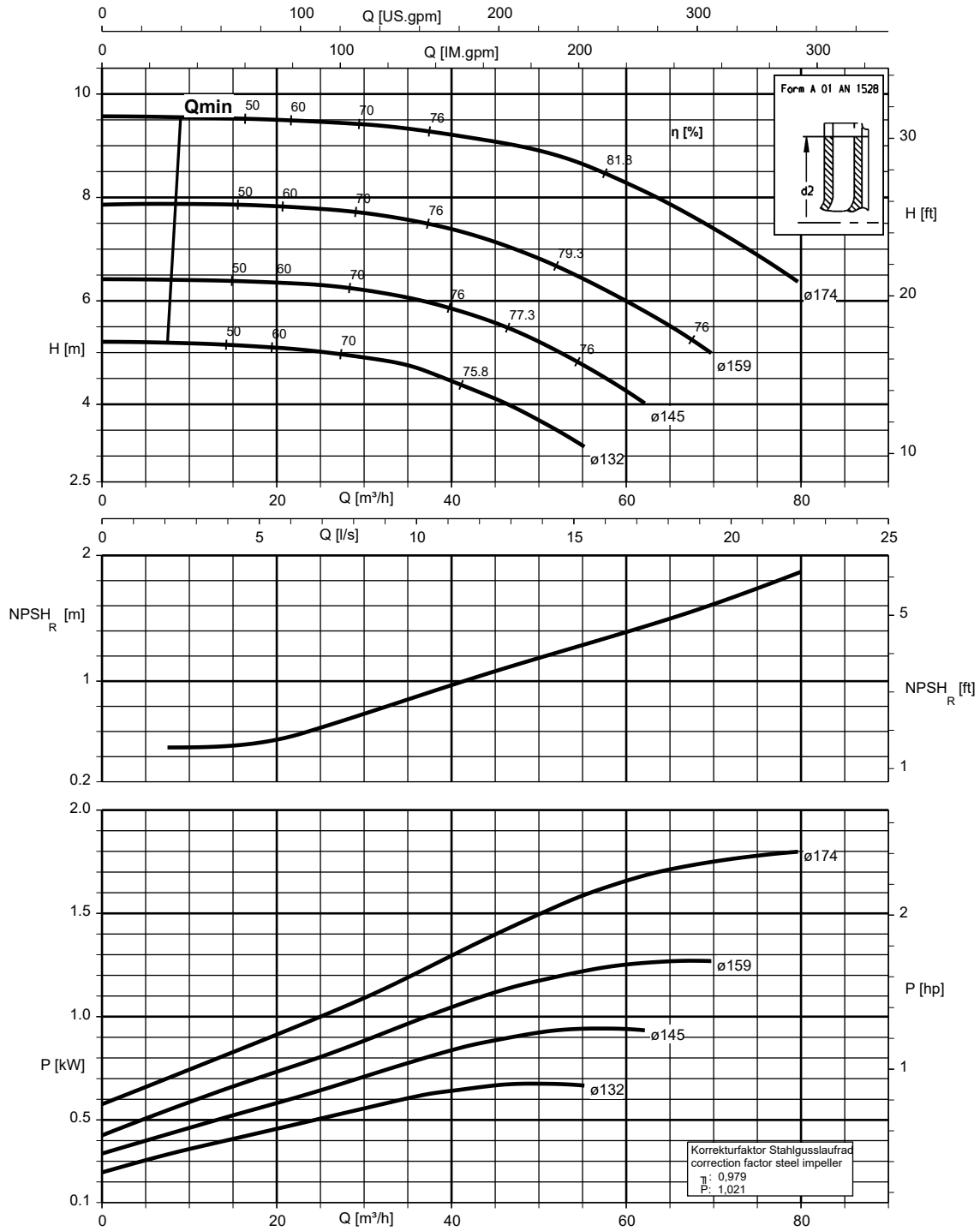


1311.45/11-EN



Etanorm 080-065-160, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

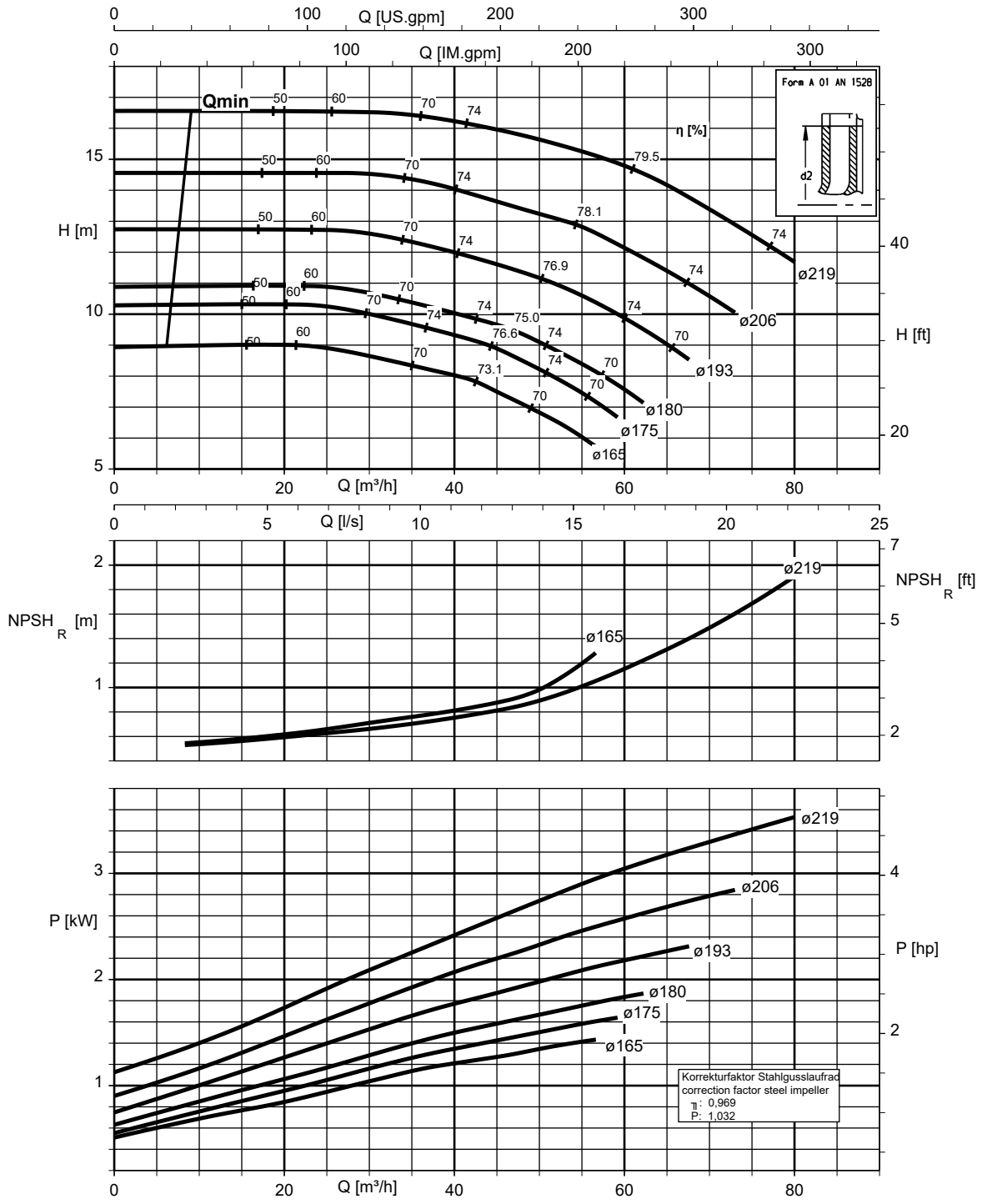


K1311.454/36/2

1311.45/11-EN

Etanorm 080-065-200, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

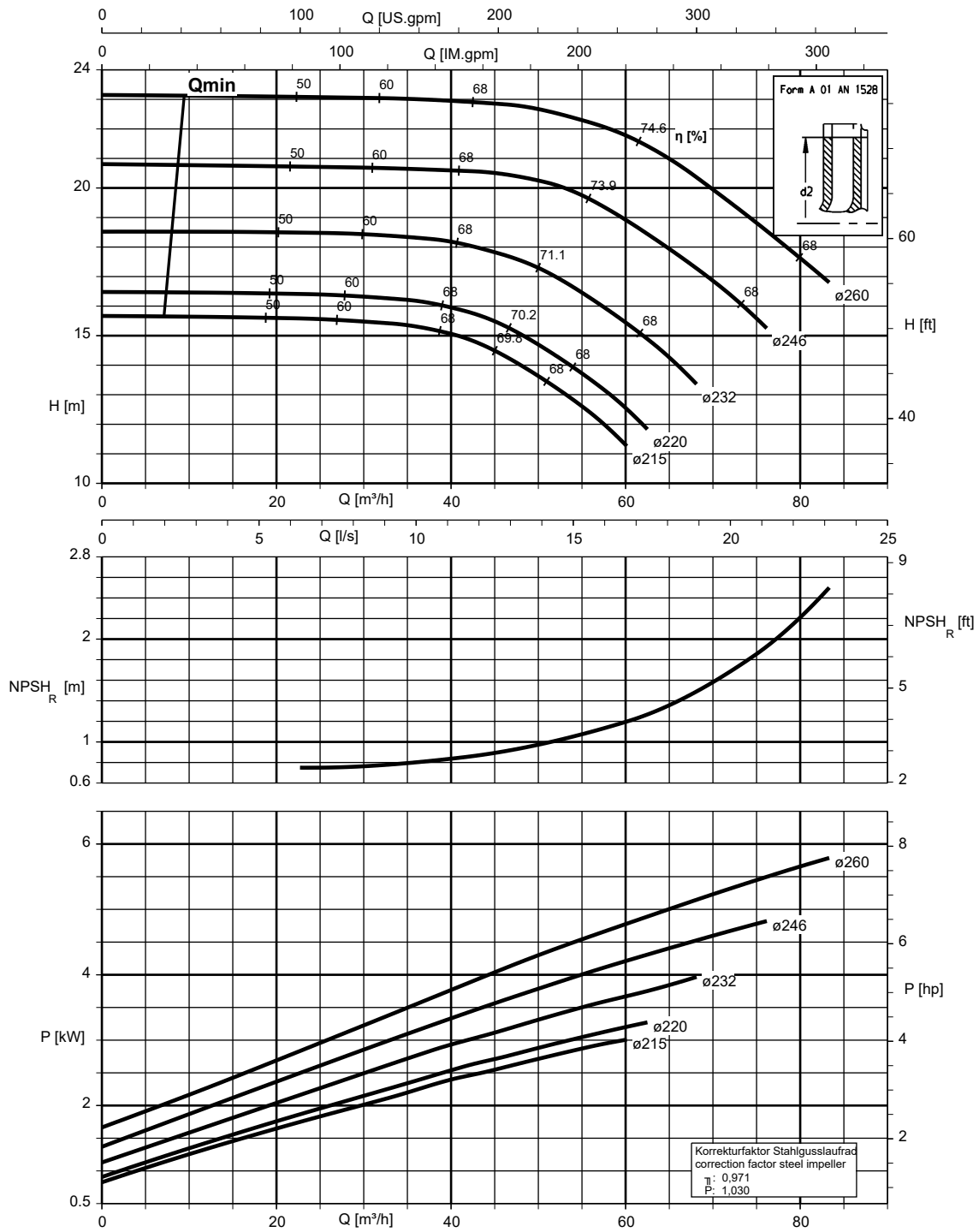


K1311.454/37/2

1311.45/11-EN

Etanorm 080-065-250, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

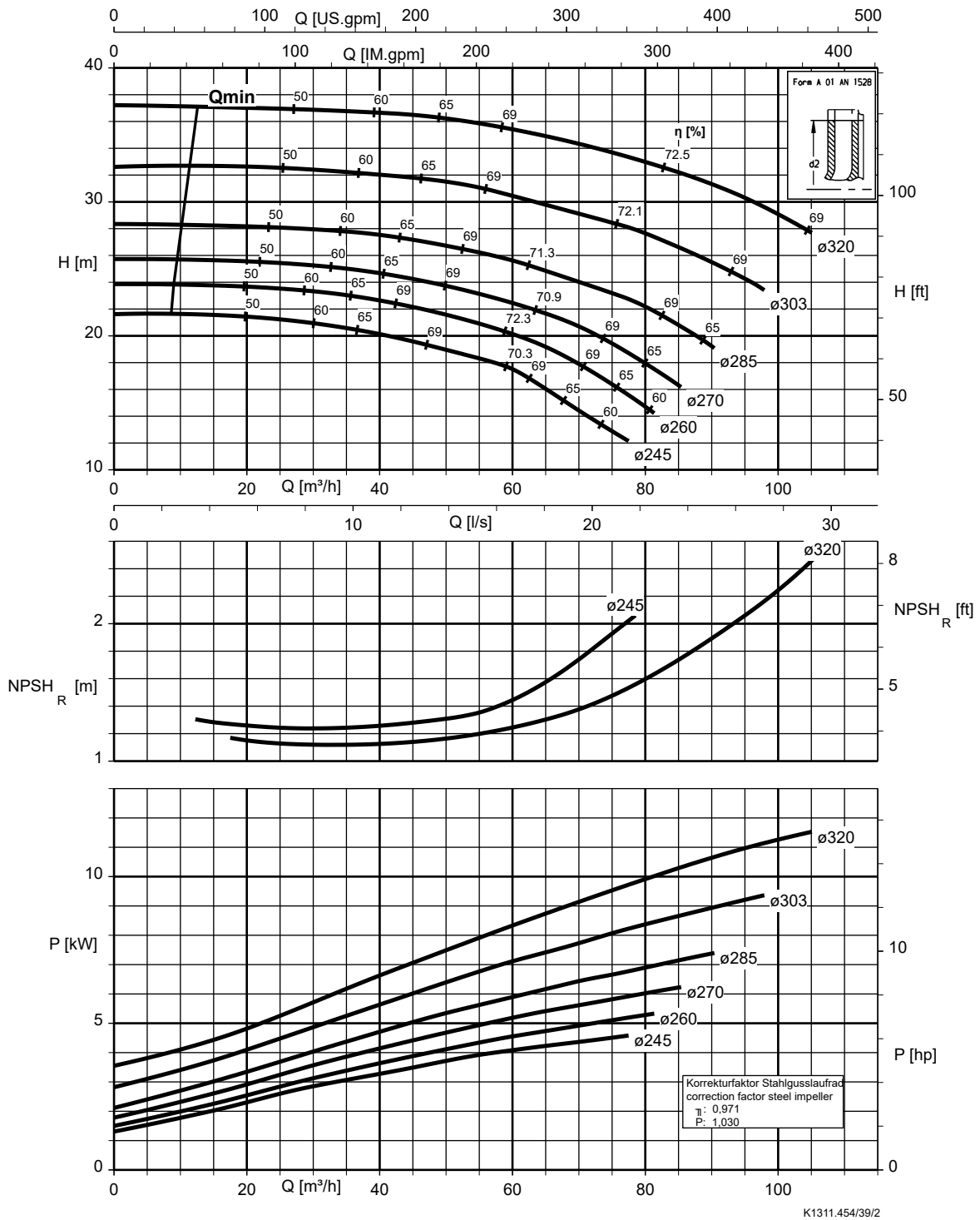


K1311.454/38/2

1311.45/11-EN

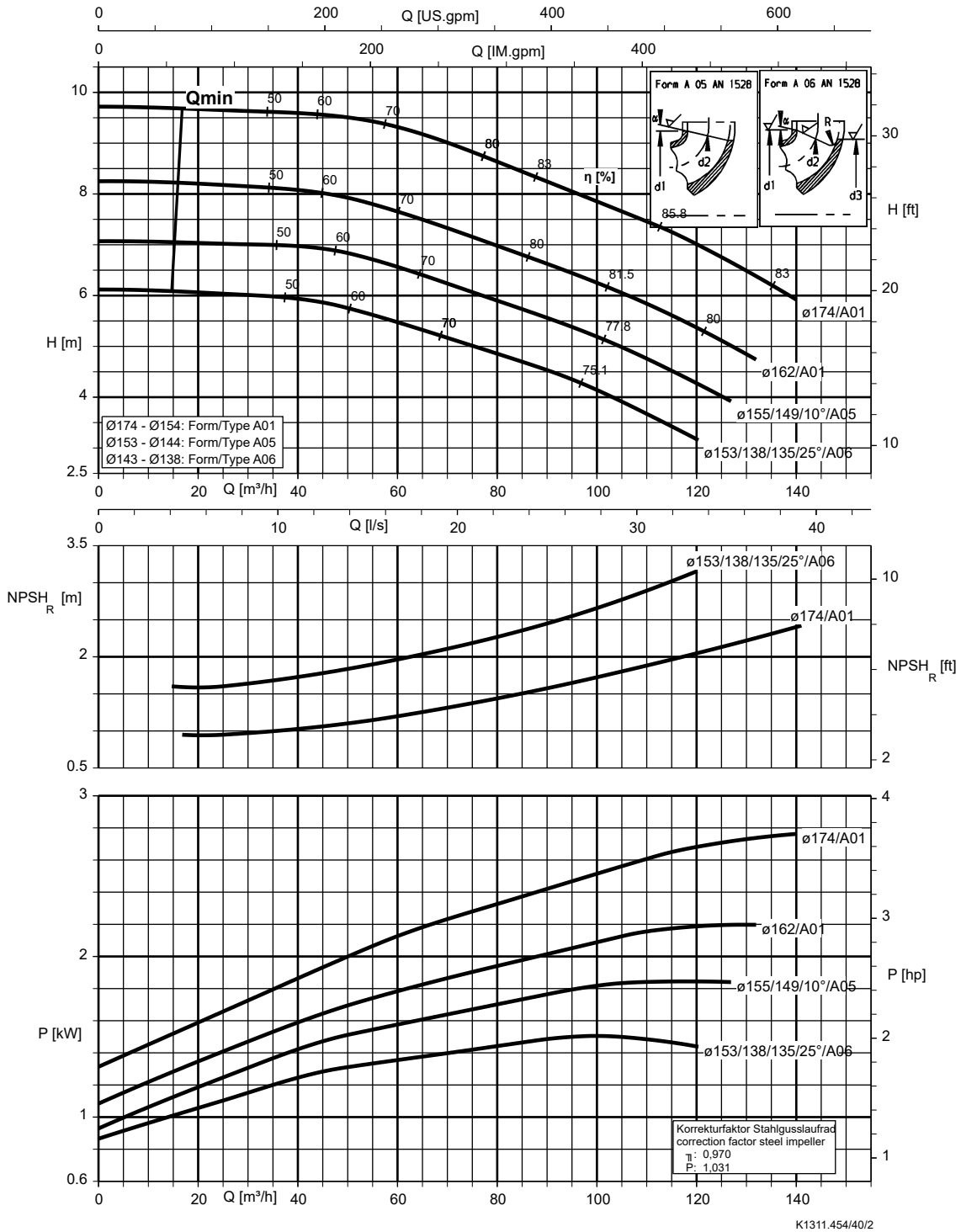
Etanorm 080-065-315, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc



Etanorm 100-080-160, n = 1450 rpm

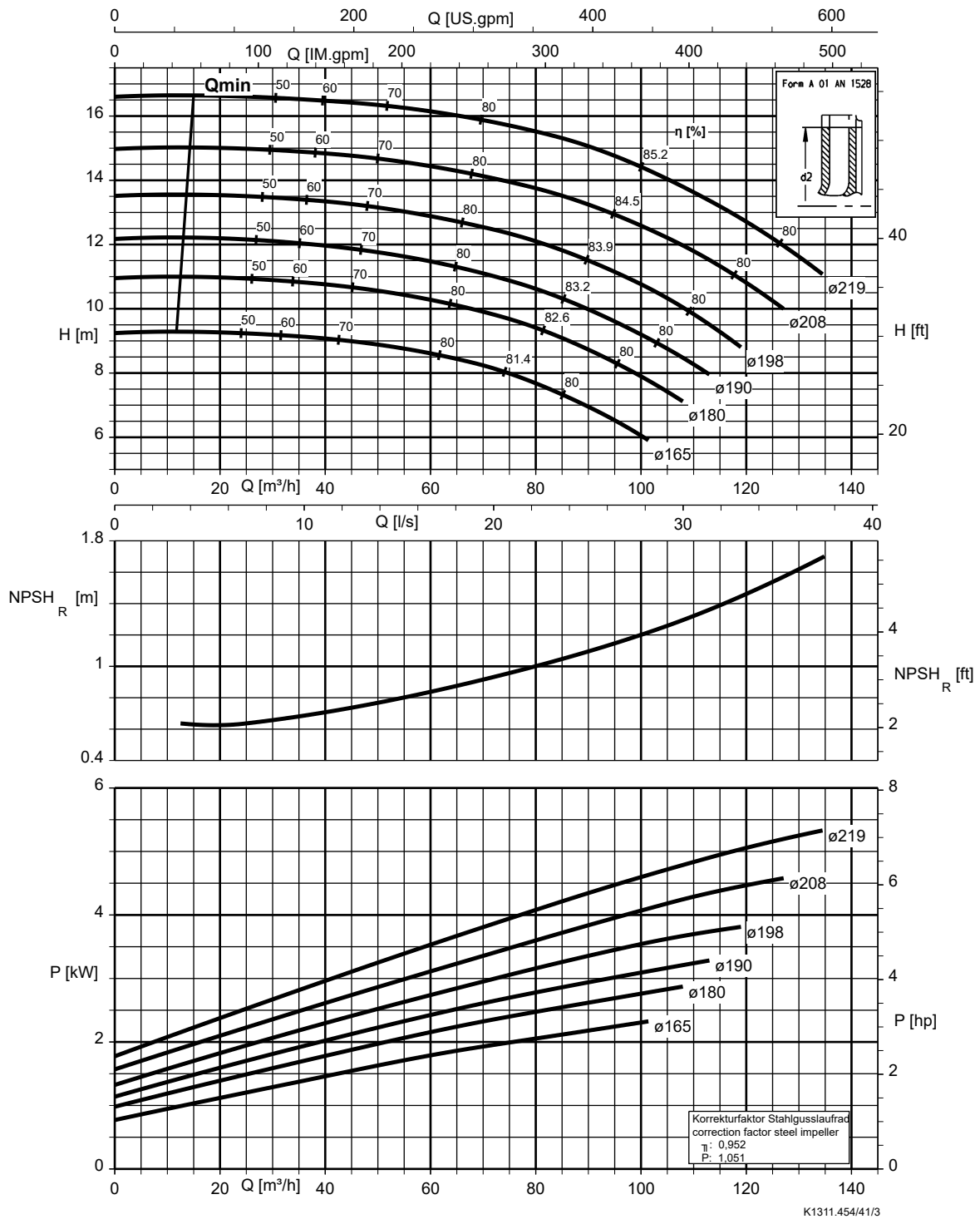
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



1311.45/11-EN

Etanorm 100-080-200, n = 1450 rpm

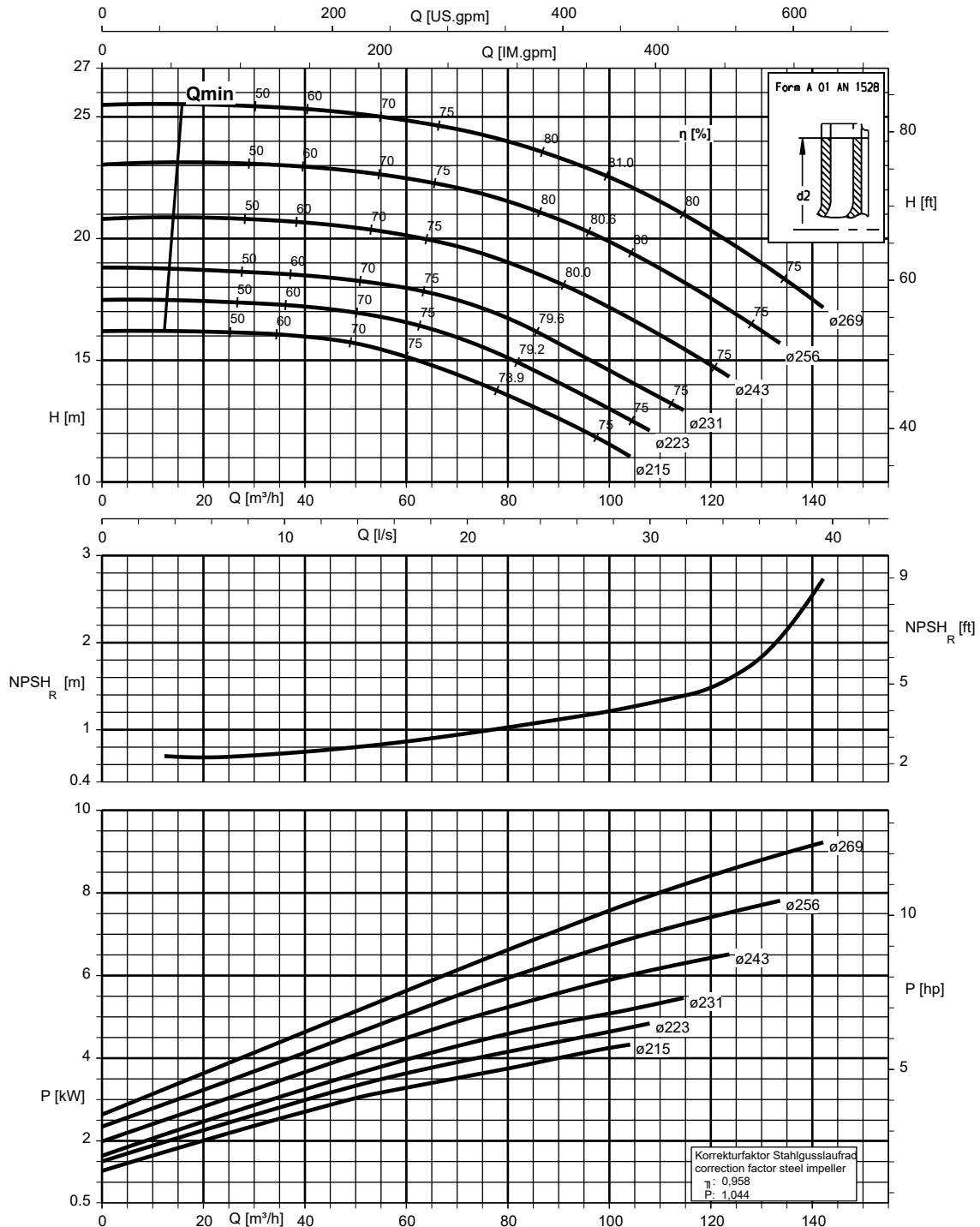
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 100-080-250, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

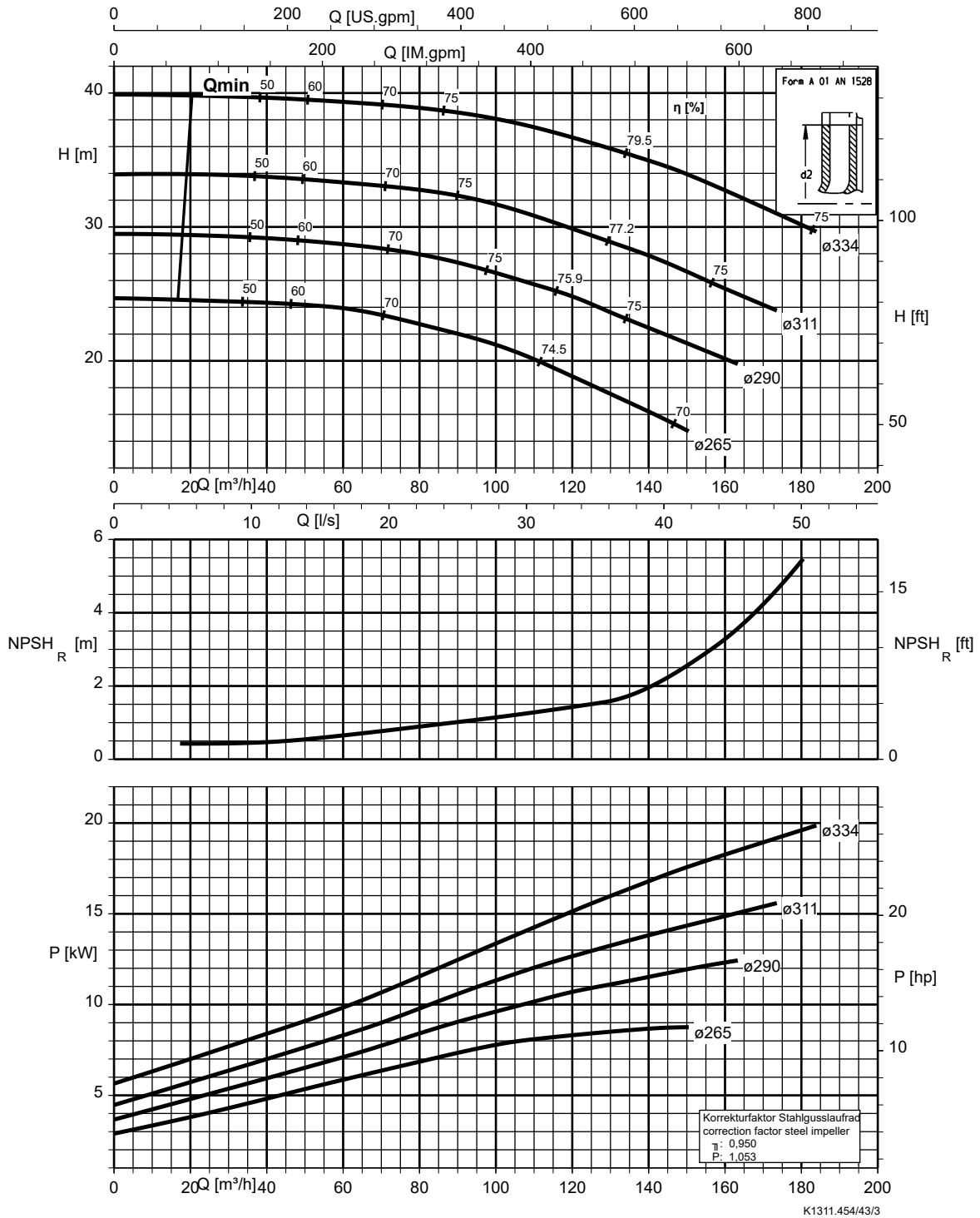


K1311.454/42/2

1311.45/11-EN

Etanorm 100-080-315, n = 1450 rpm

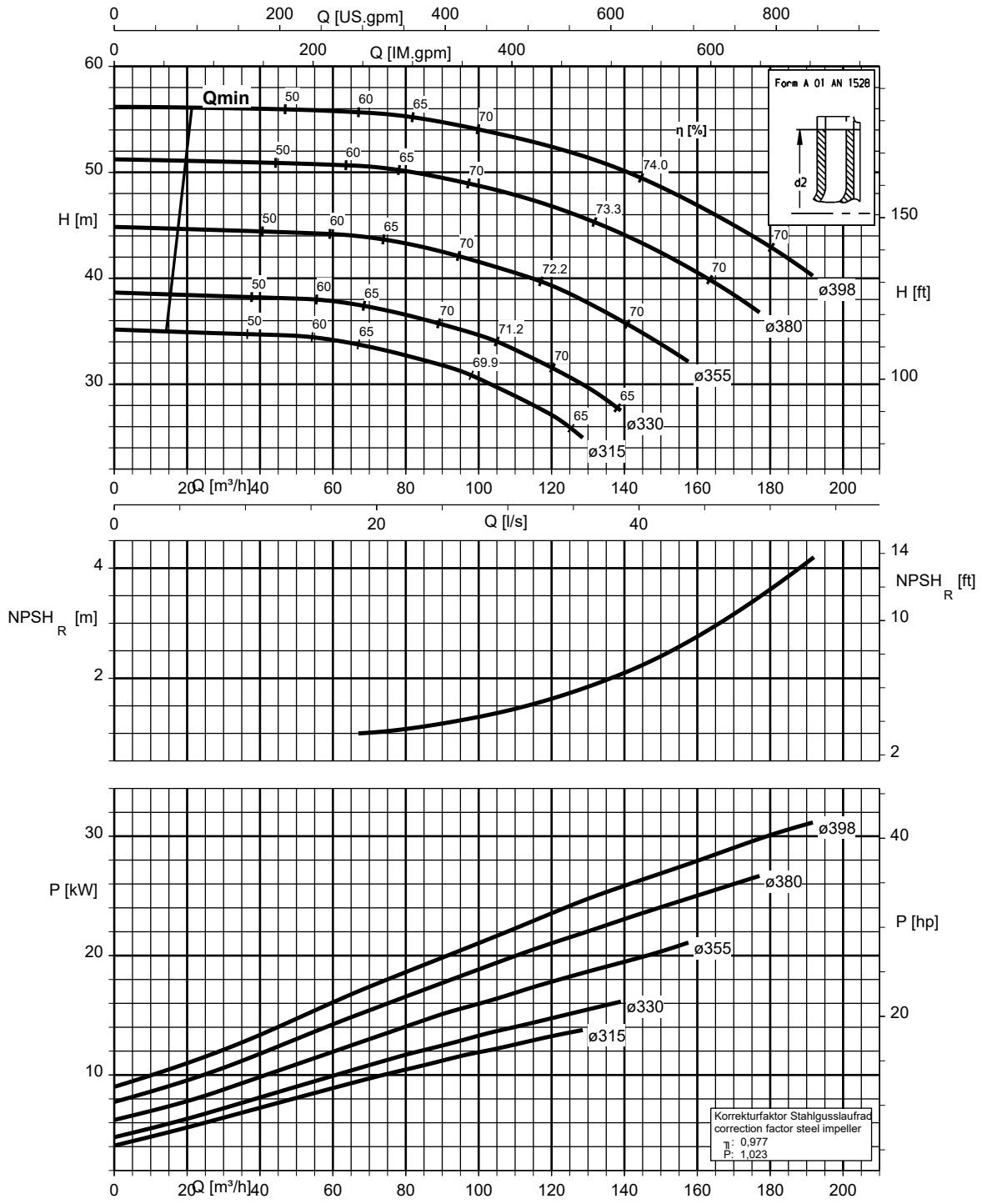
Etanorm SYT, Etanorm V, Etabloc





Etanorm 100-080-400, n = 1450 rpm

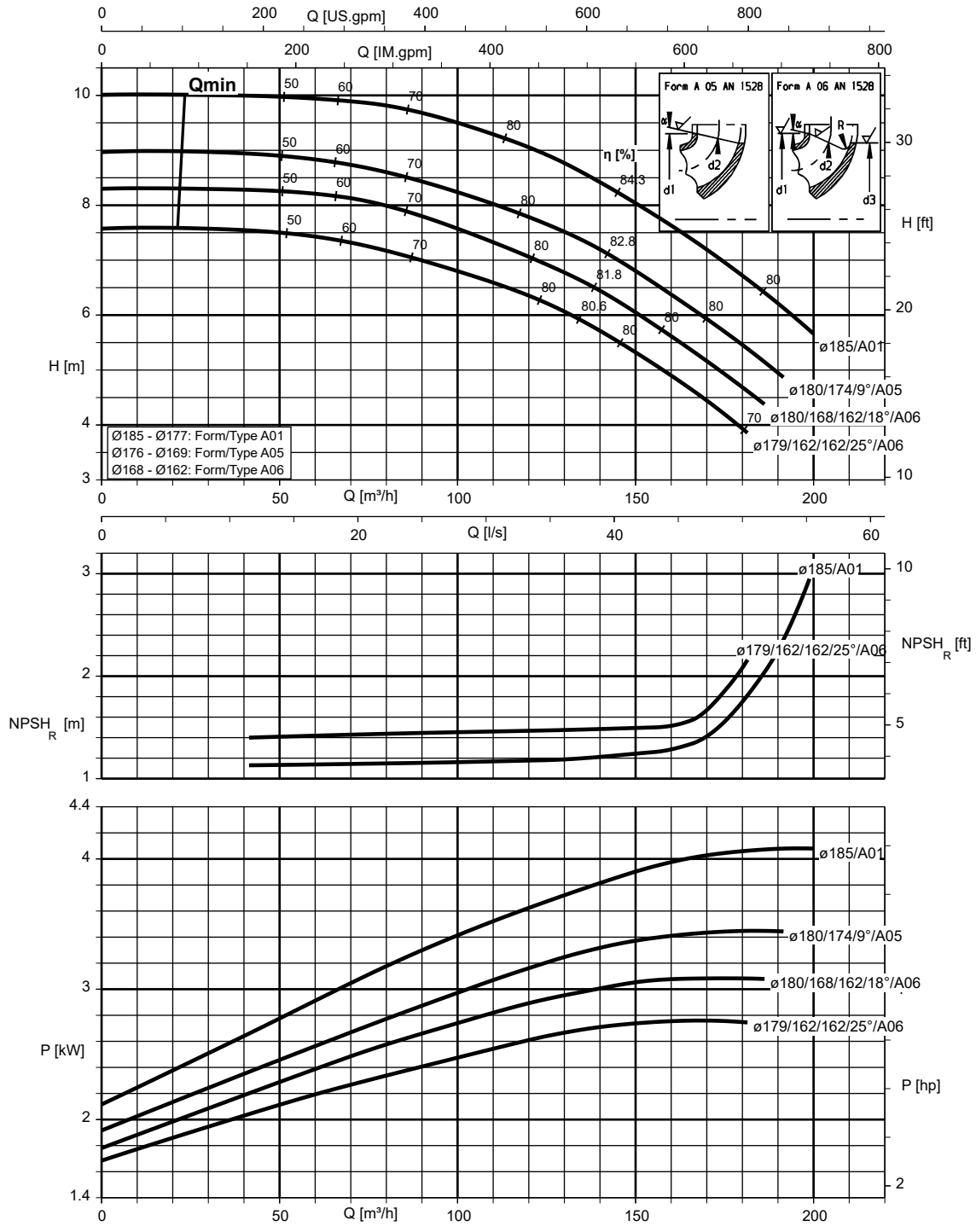
Etanorm V, Etabloc



1311.45/11-EN

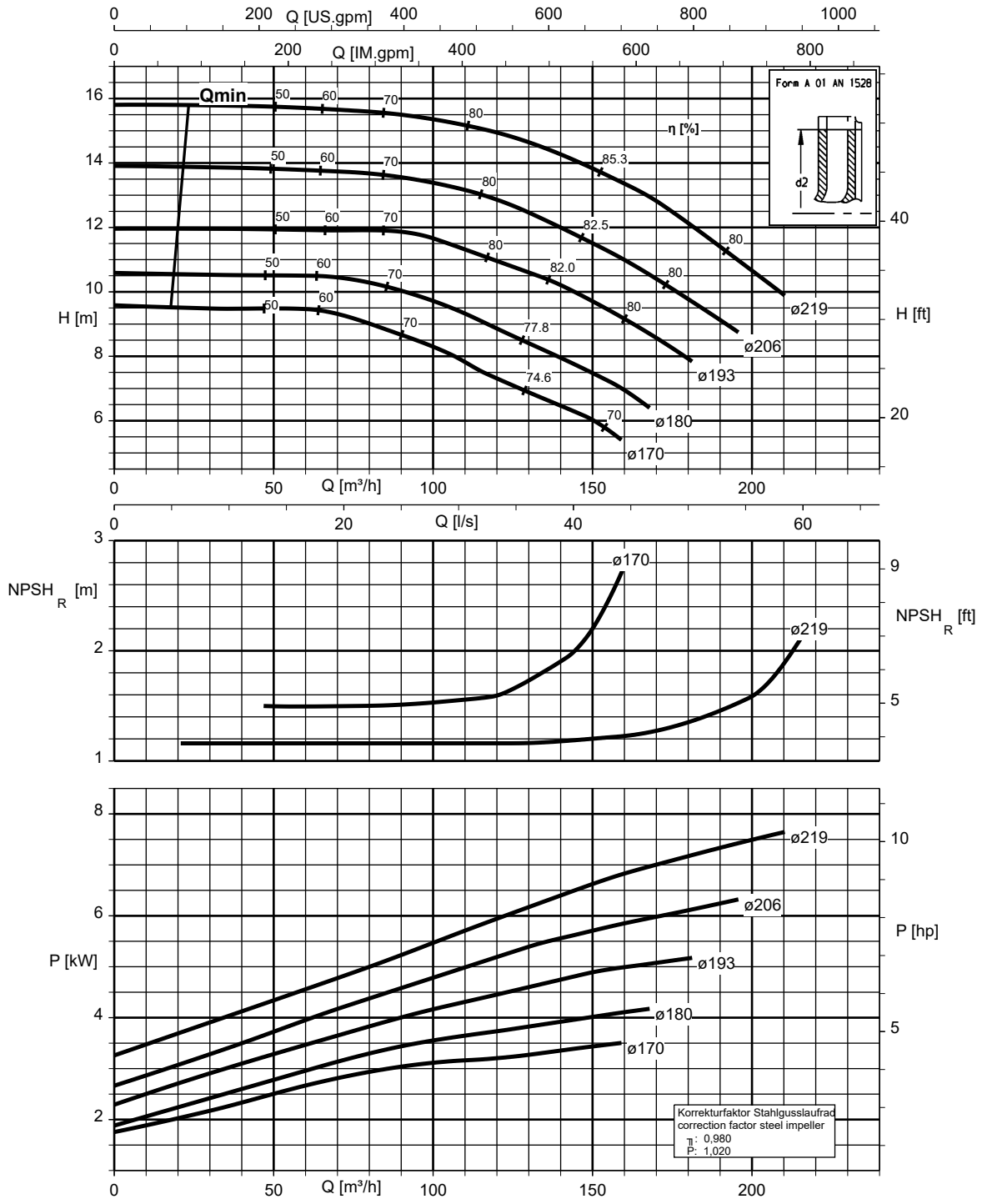
Etanorm 125-100-160, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc



Etanorm 125-100-200, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

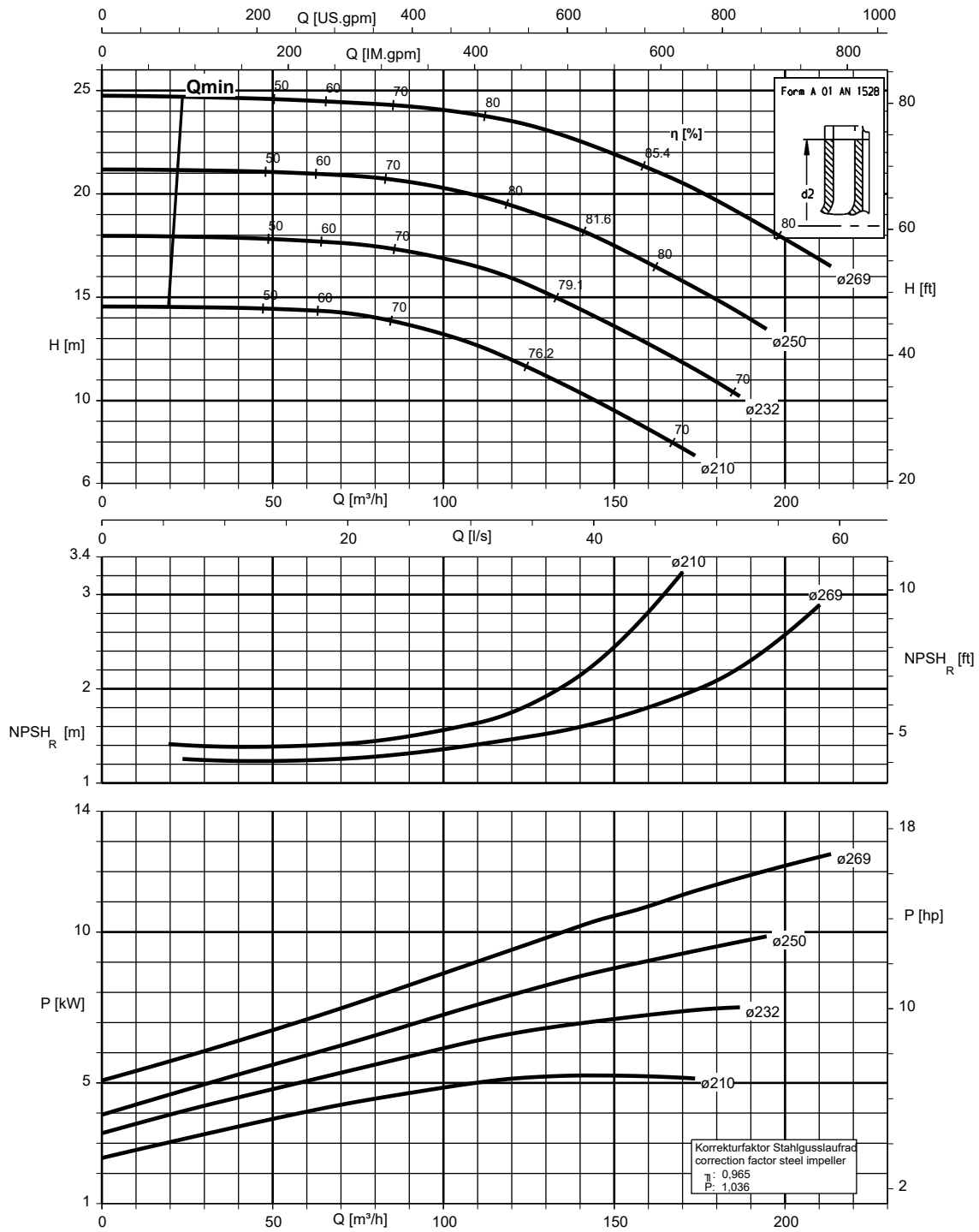


K1311.454/46/2

1311.45/11-EN

Etanorm 125-100-250, n = 1450 rpm

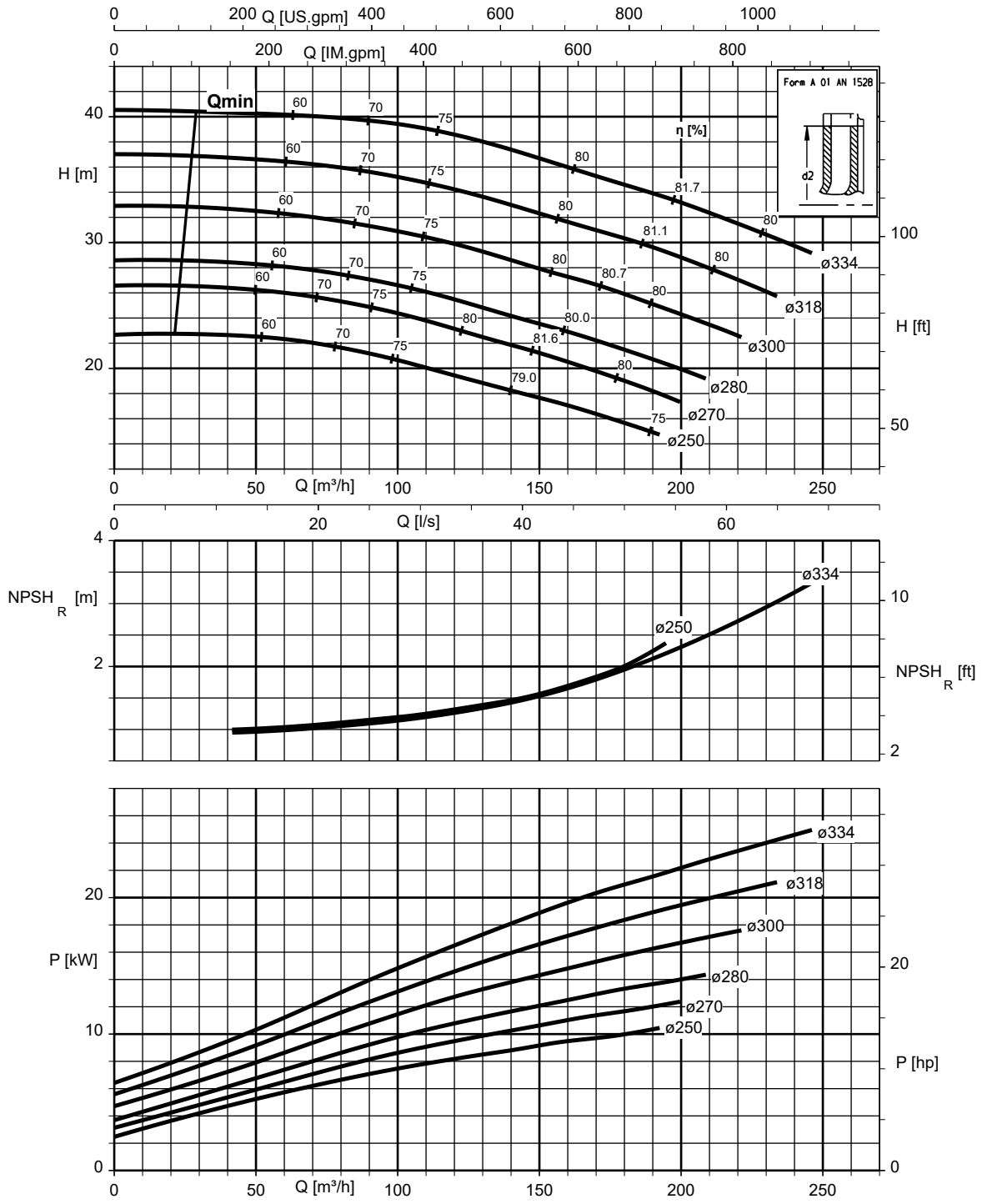
Etanorm SYT, Etanorm V, Etabloc



K1311.454/47/2

Etanorm 125-100-315, n = 1450 rpm

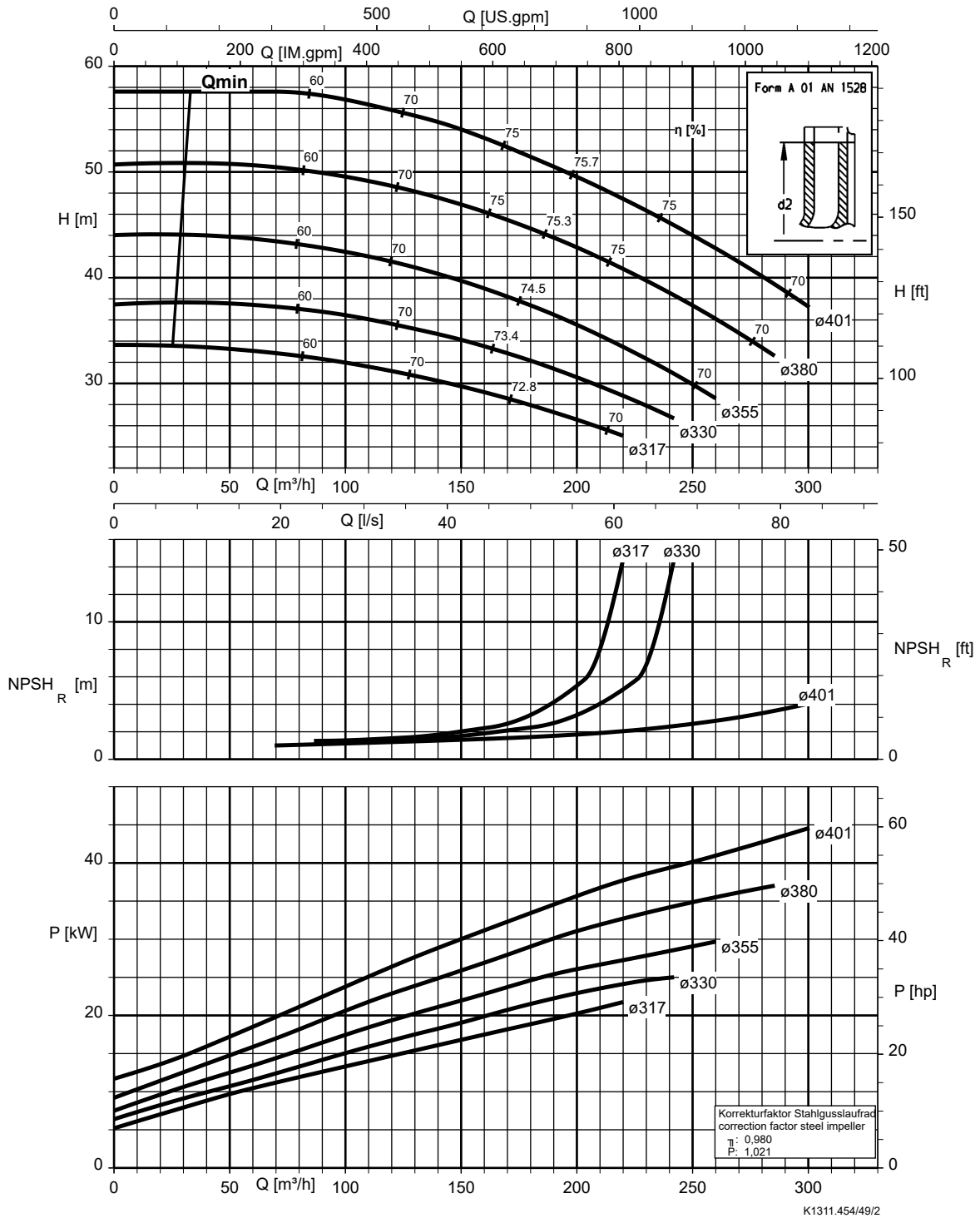
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

Etanorm 125-100-400, n = 1450 rpm

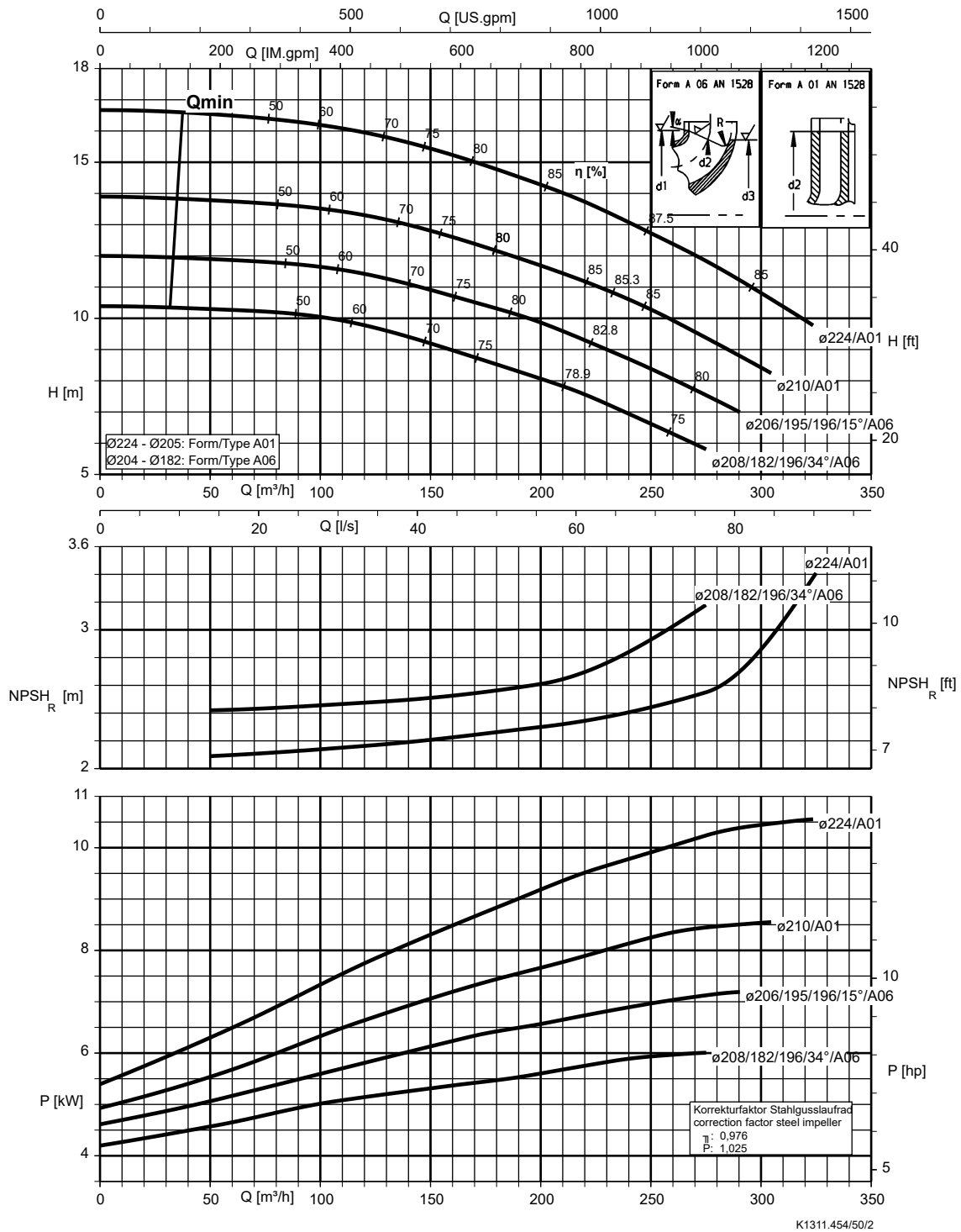
Etanorm V, Etabloc



1311.45/11-EN

Etanorm 150-125-200, n = 1450 rpm

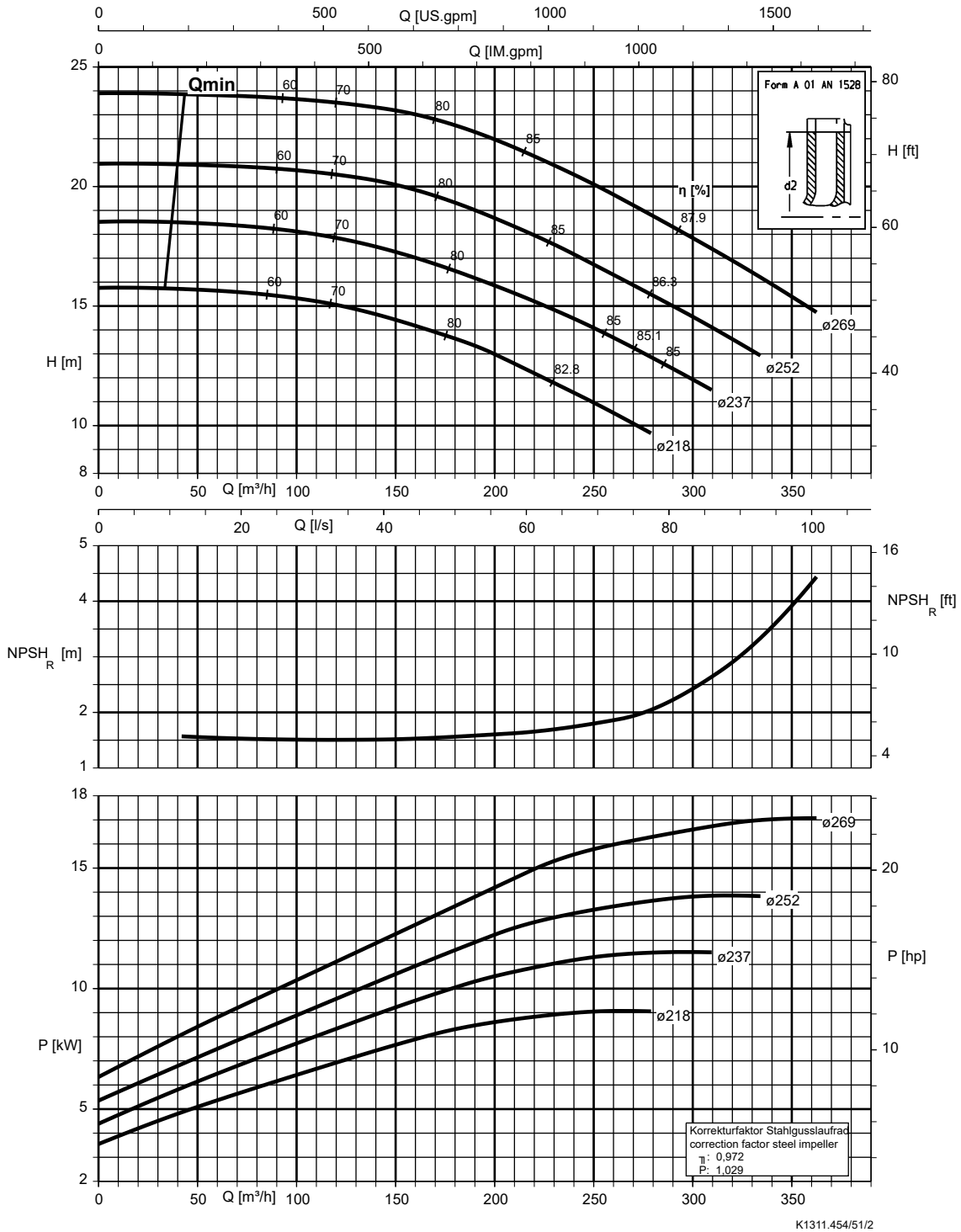
Etanorm SYT, Etanorm V, Etabloc



K1311.454/50/2

Etanorm 150-125-250, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

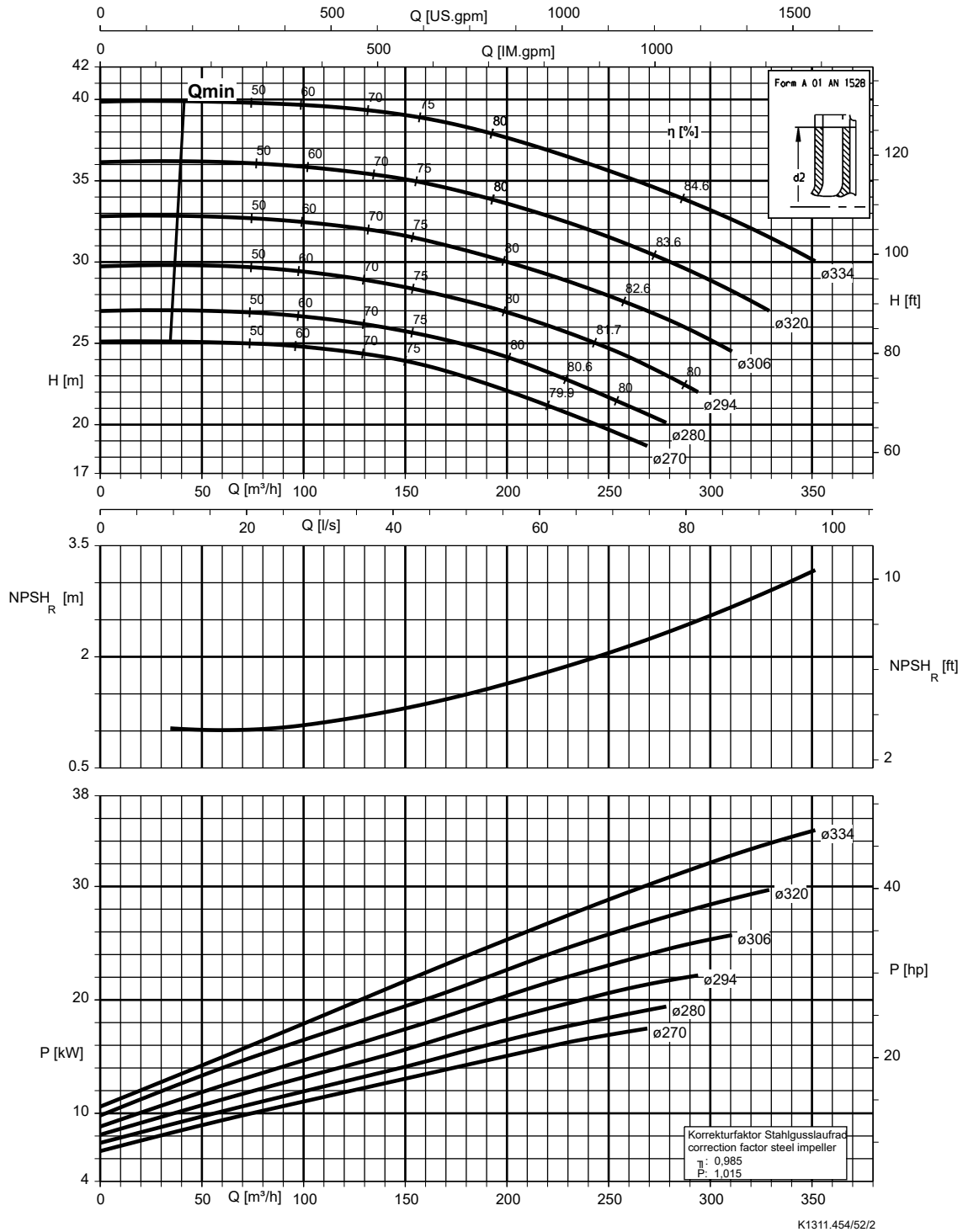


1311.45/11-EN



Etanorm 150-125-315, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

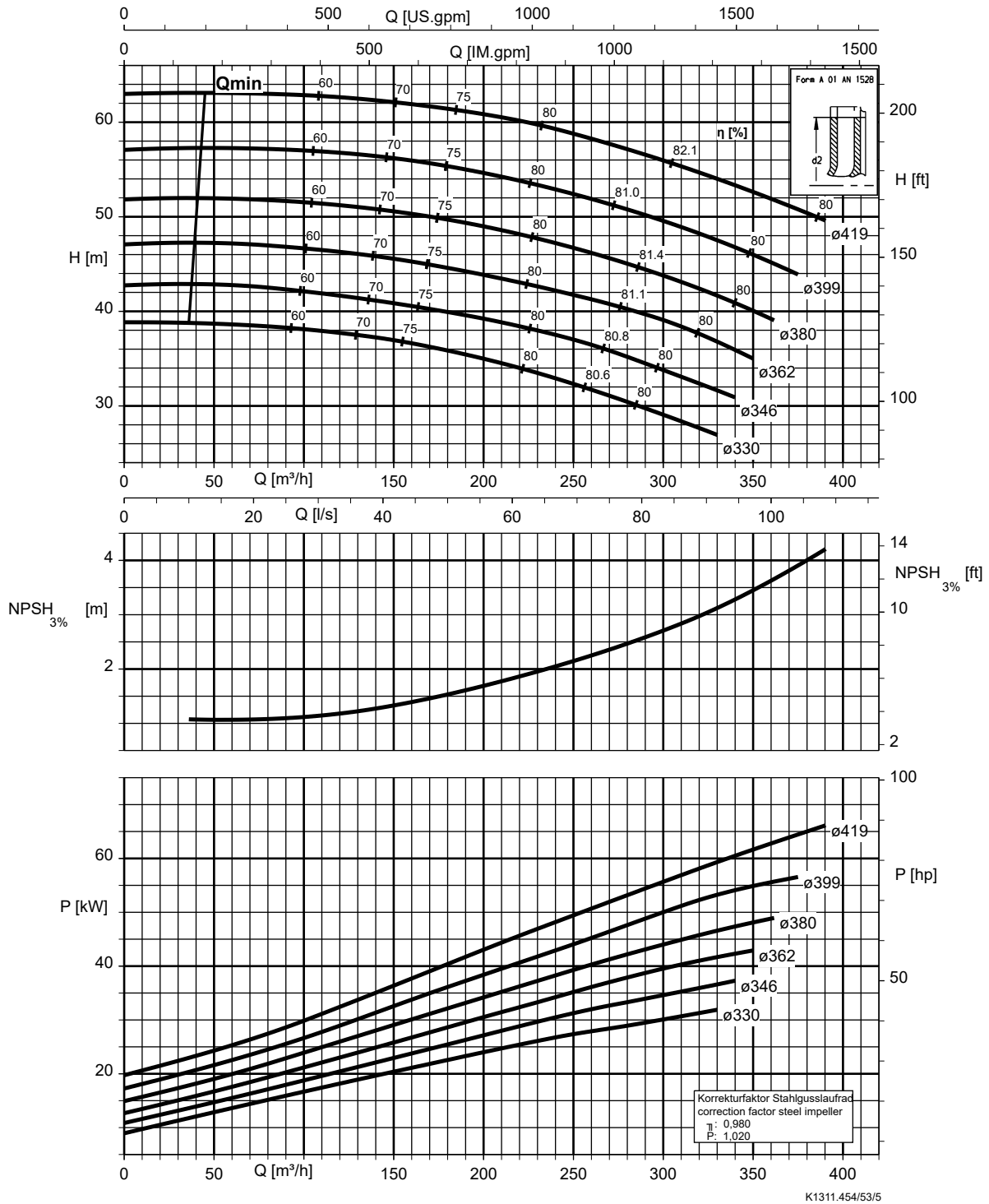


K1311.454/52/2

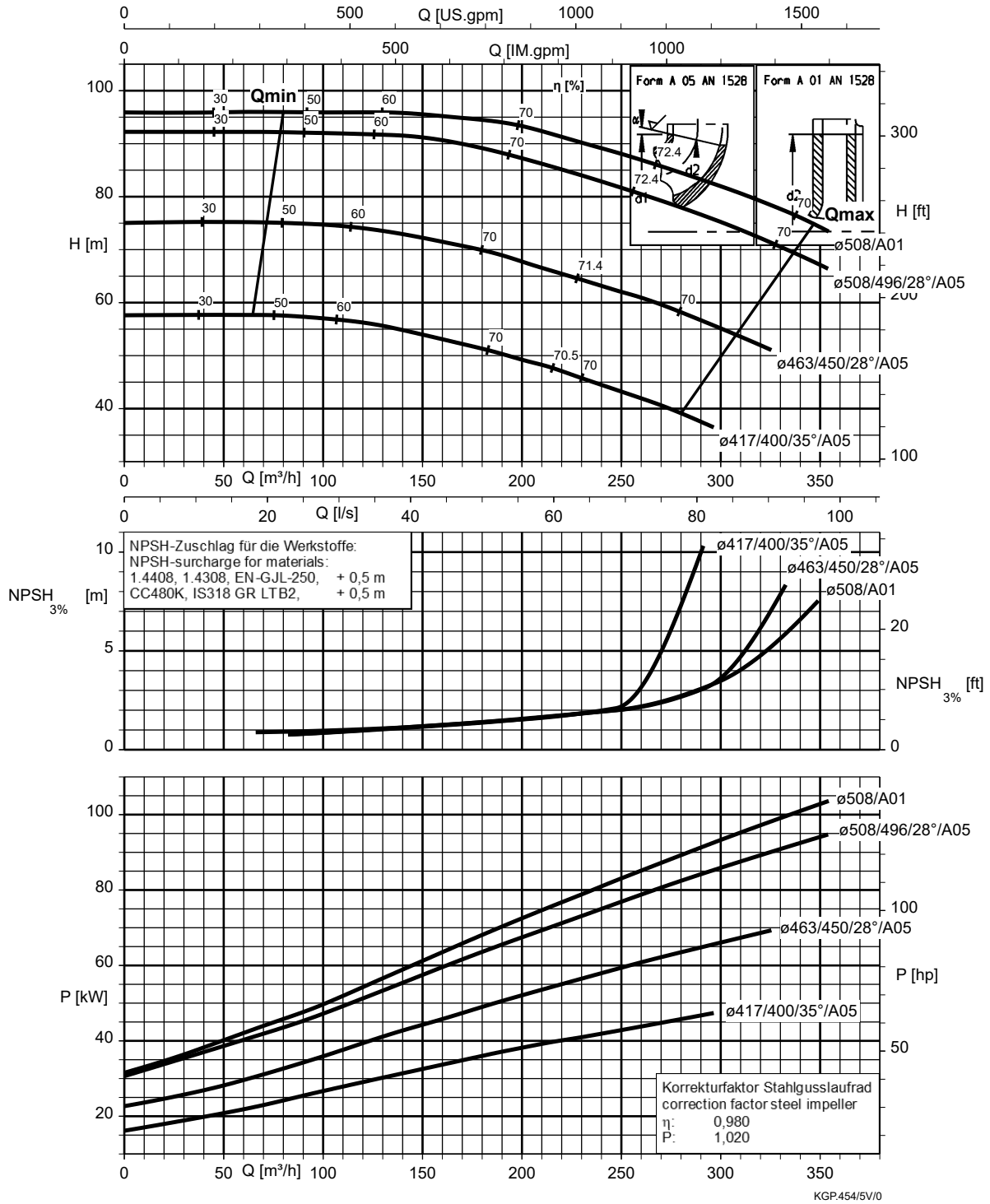
1311.45/11-EN

Etanorm 150-125-400, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc

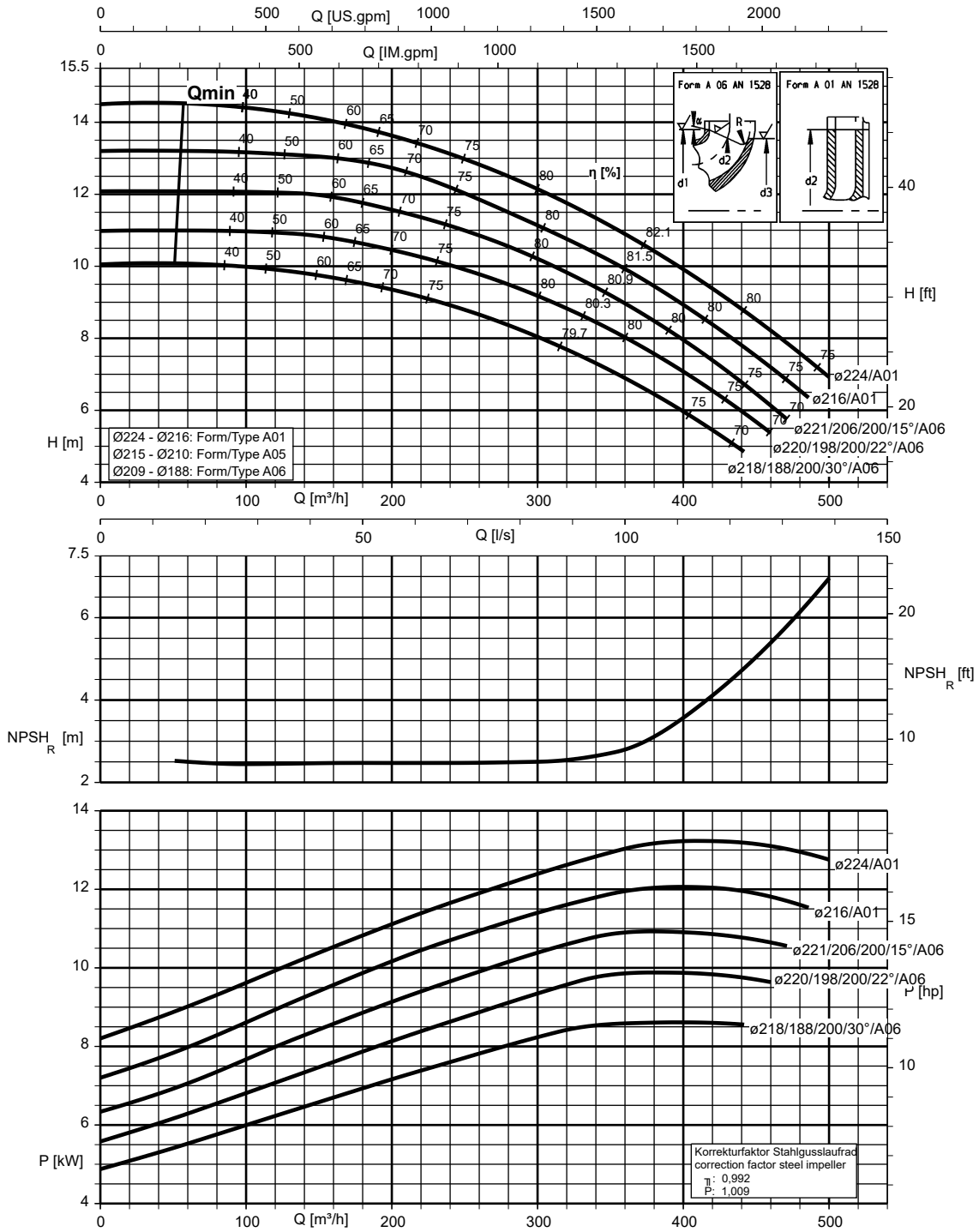


Etanorm 150-125-510, n = 1450 rpm



Etanorm 200-150-200, n = 1450 rpm

Etanorm V, Etabloc

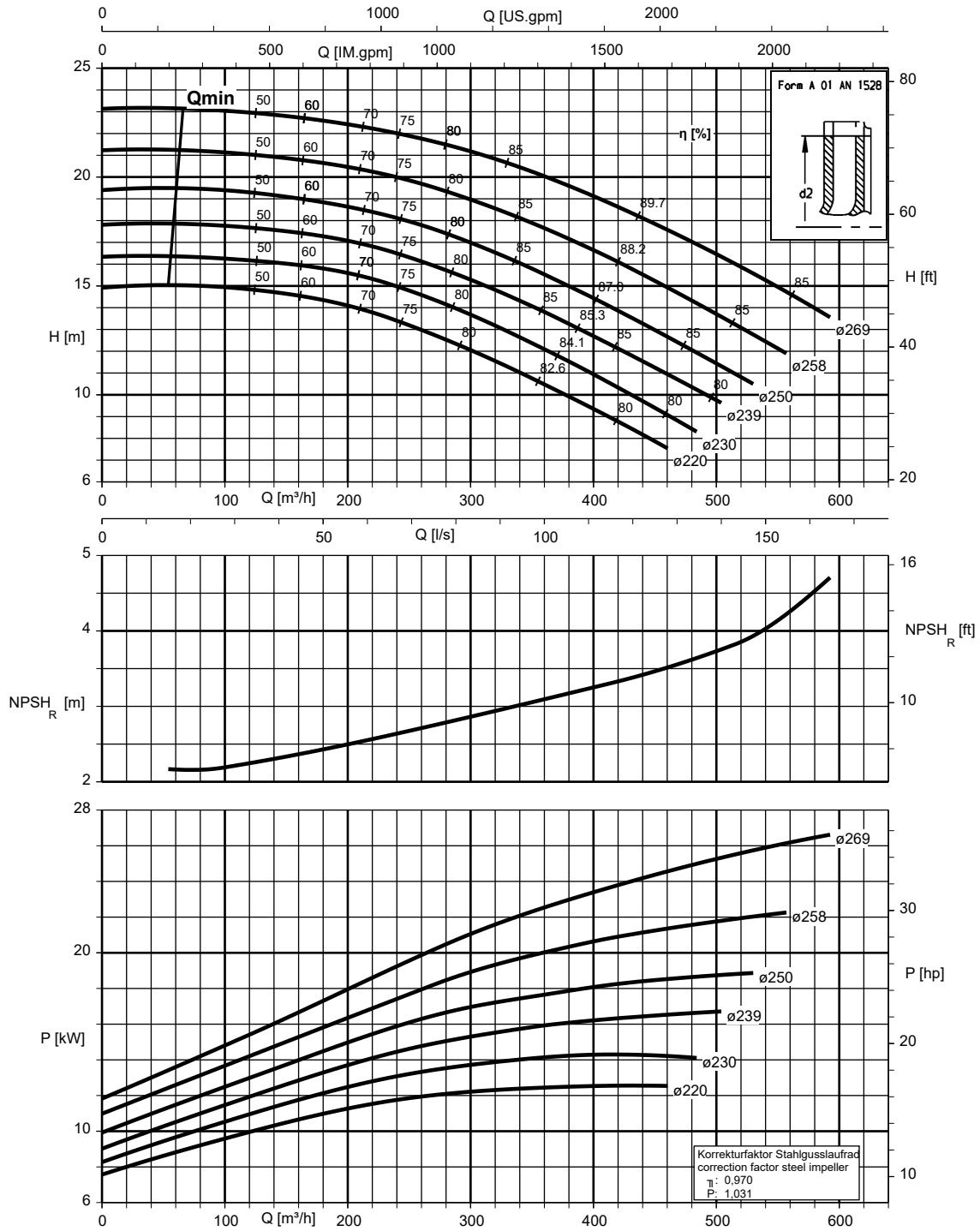


K1311.454/55/2

1311.45/11-EN

Etanorm 200-150-250, n = 1450 rpm

Etanorm V, Etabloc

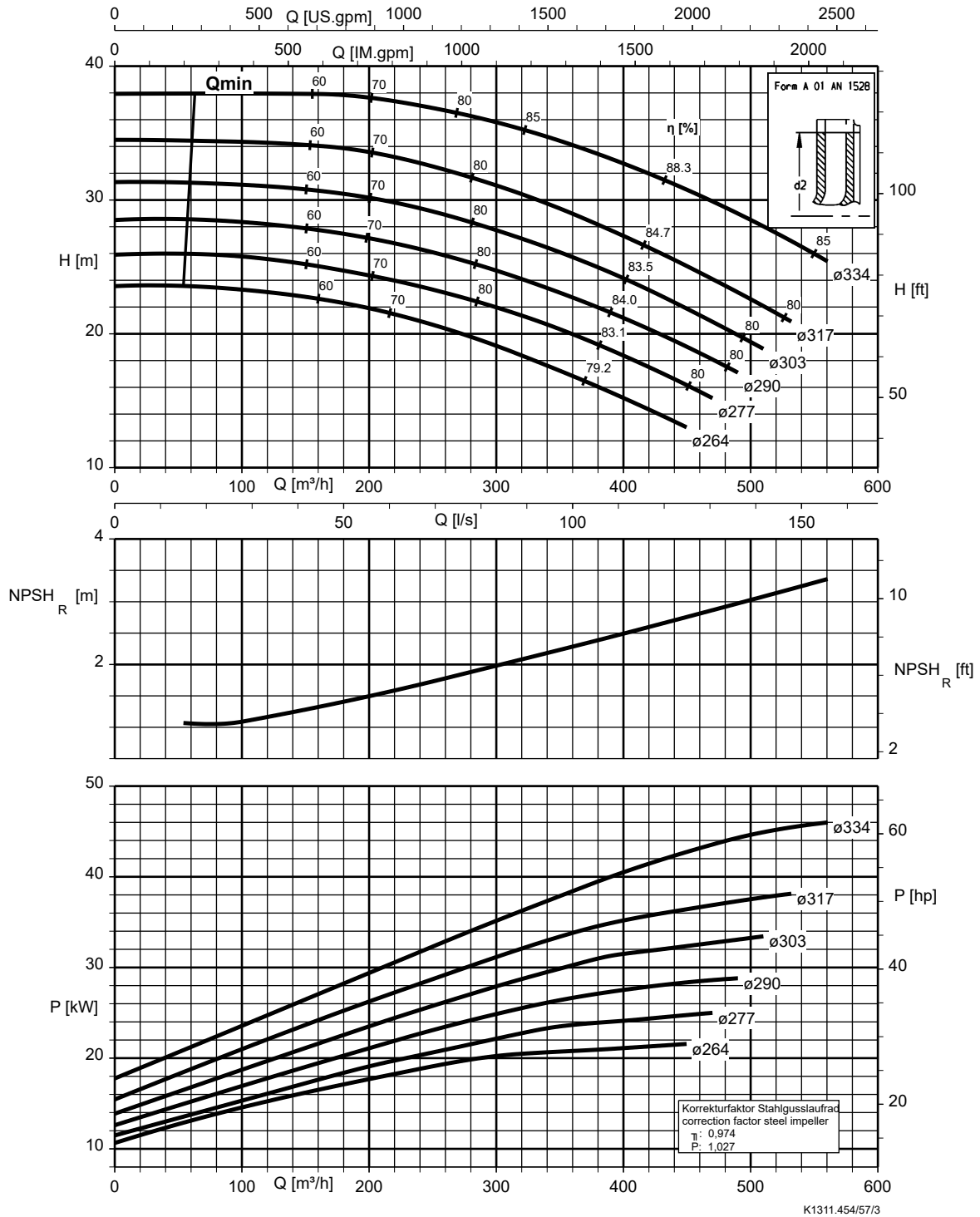


K1311.454/56/2

1311.45/11-EN

Etanorm 200-150-315, n = 1450 rpm

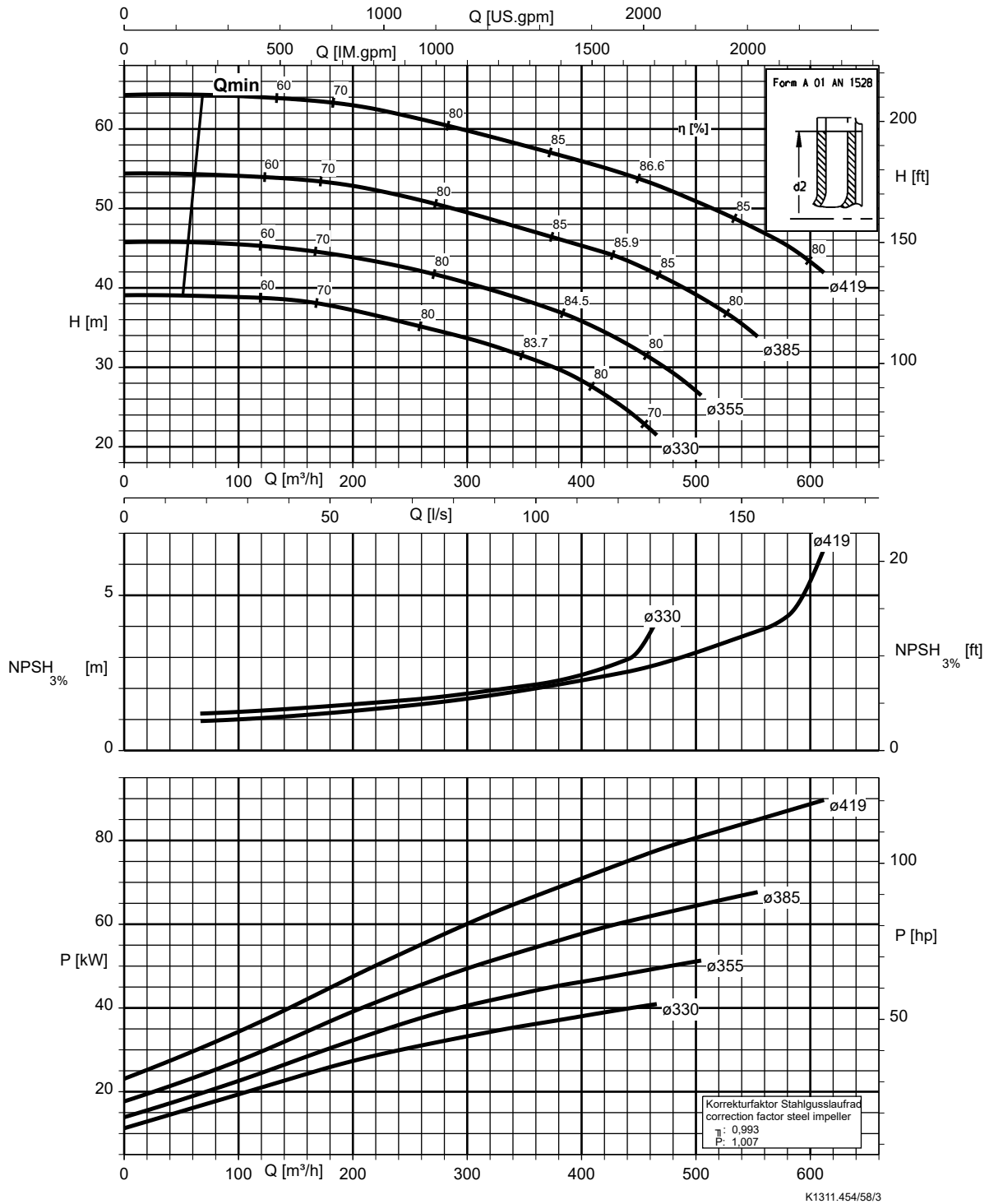
Etanorm SYT, Etanorm V, Etabloc



1311.45/11-EN

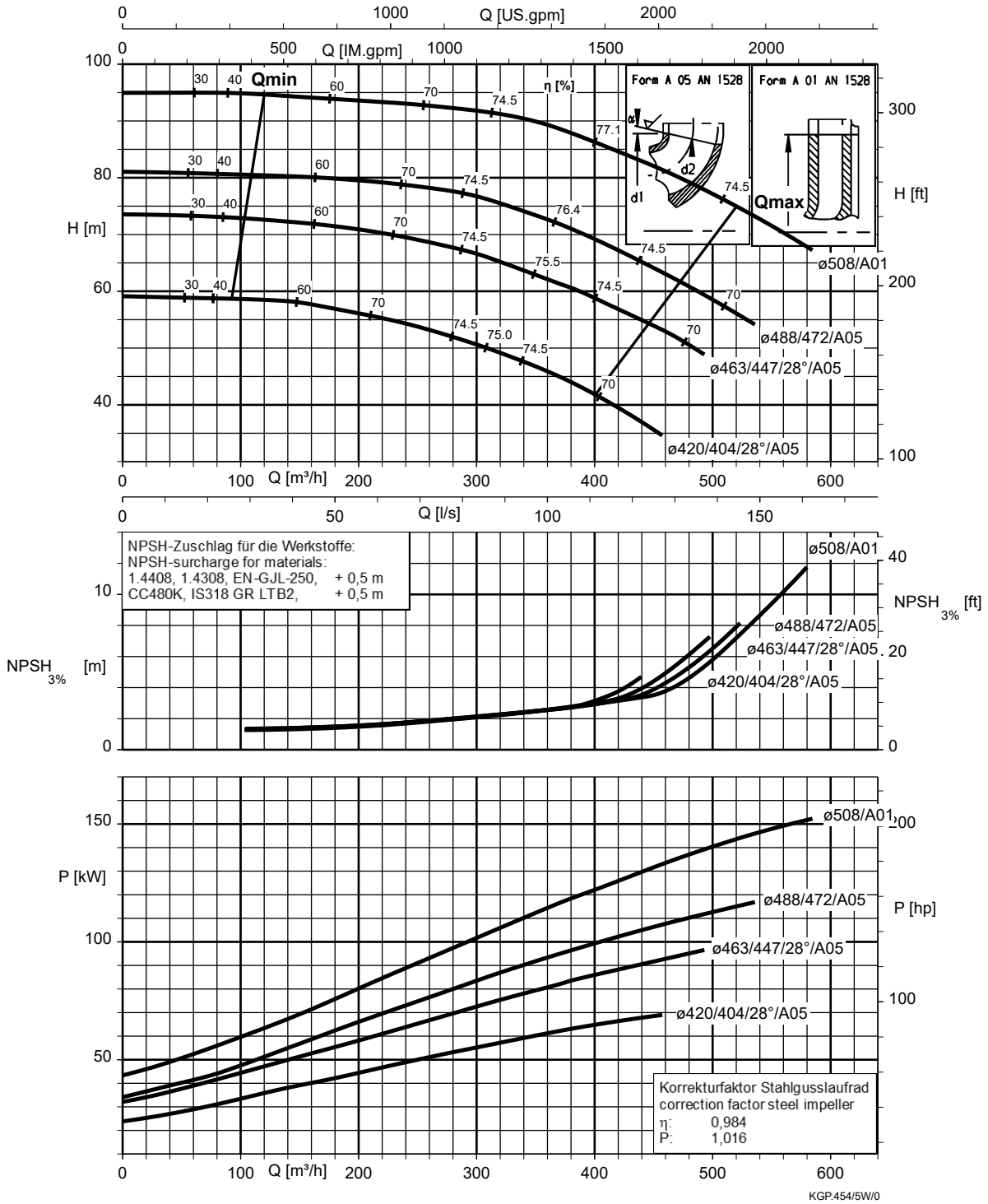
Etanorm 200-150-400, n = 1450 rpm

Etanorm SYT, Etanorm V, Etabloc



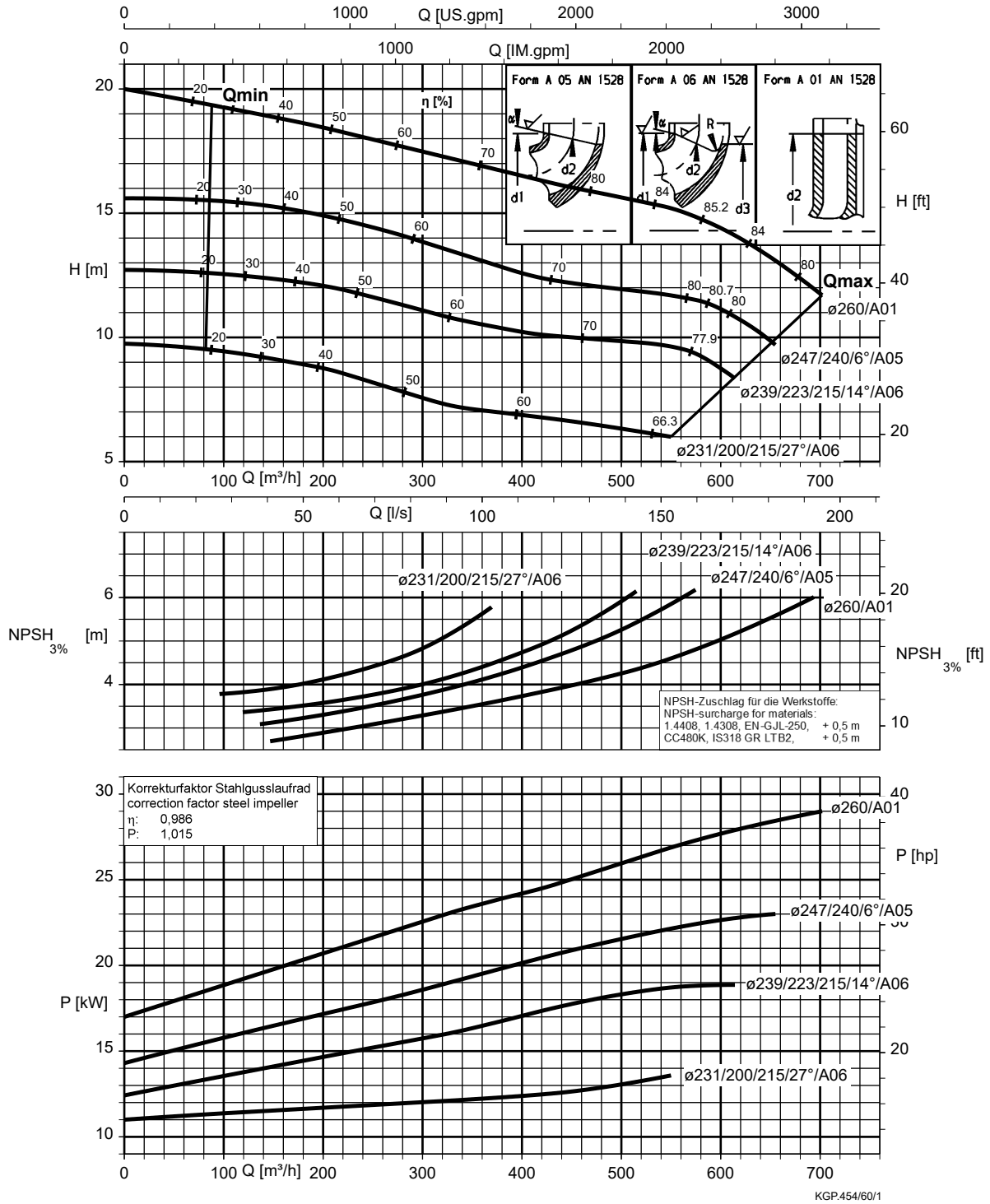
1311.45/11-EN

Etanorm 200-150-510, n = 1450 rpm



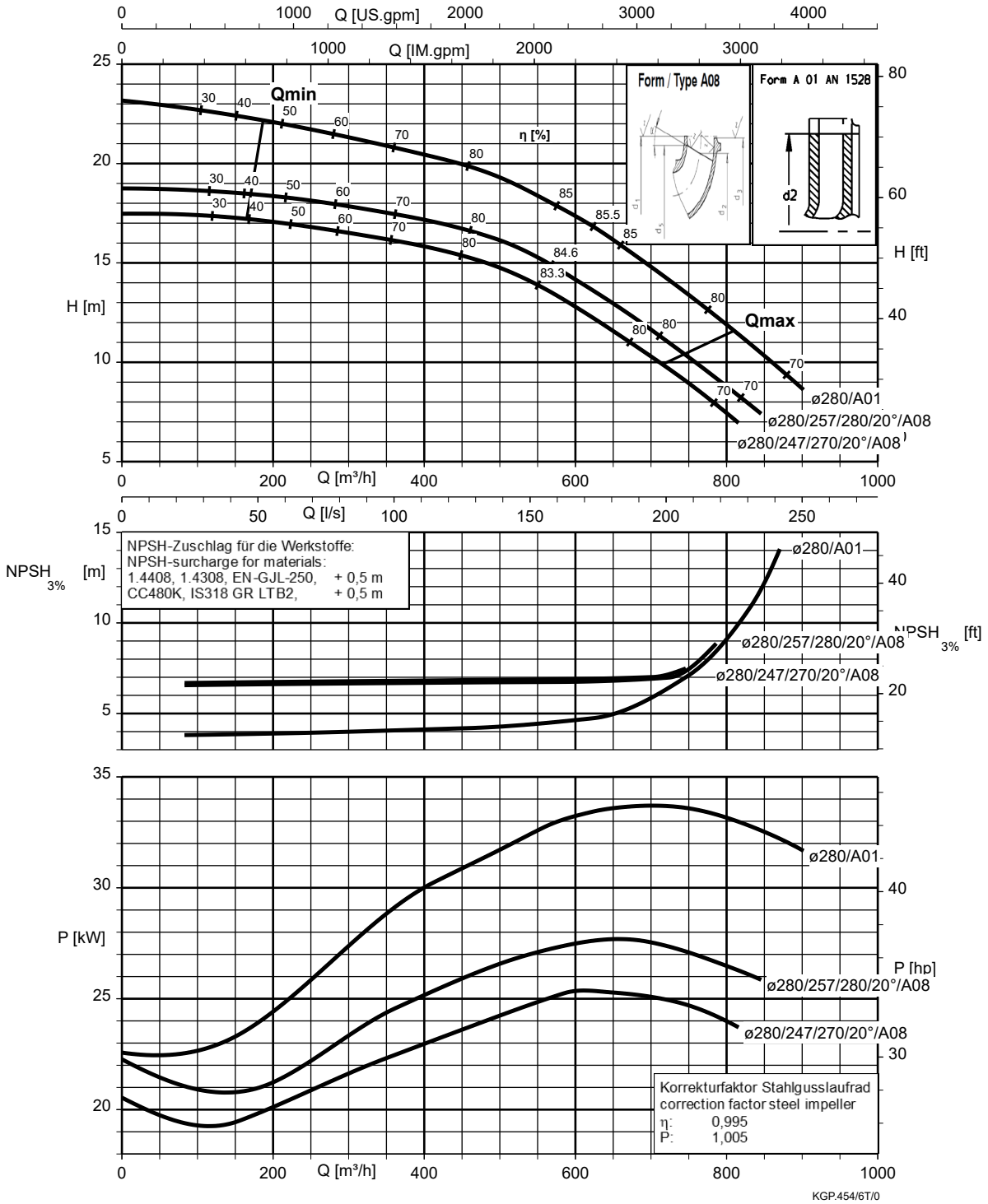


Etanorm 200-200-250, n = 1450 rpm



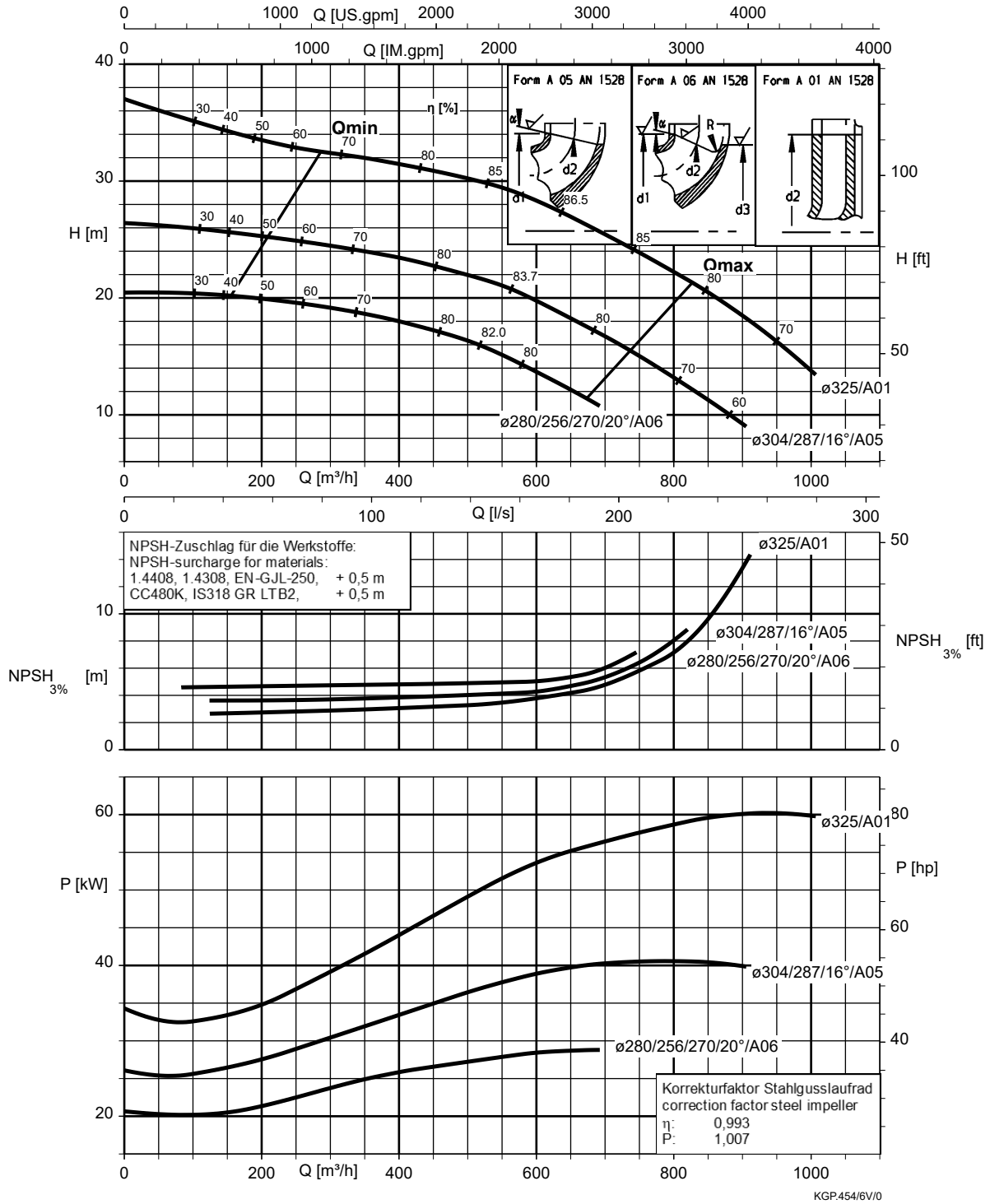
1311.45/11-EN

Etanorm 250-200-275, n = 1450 rpm



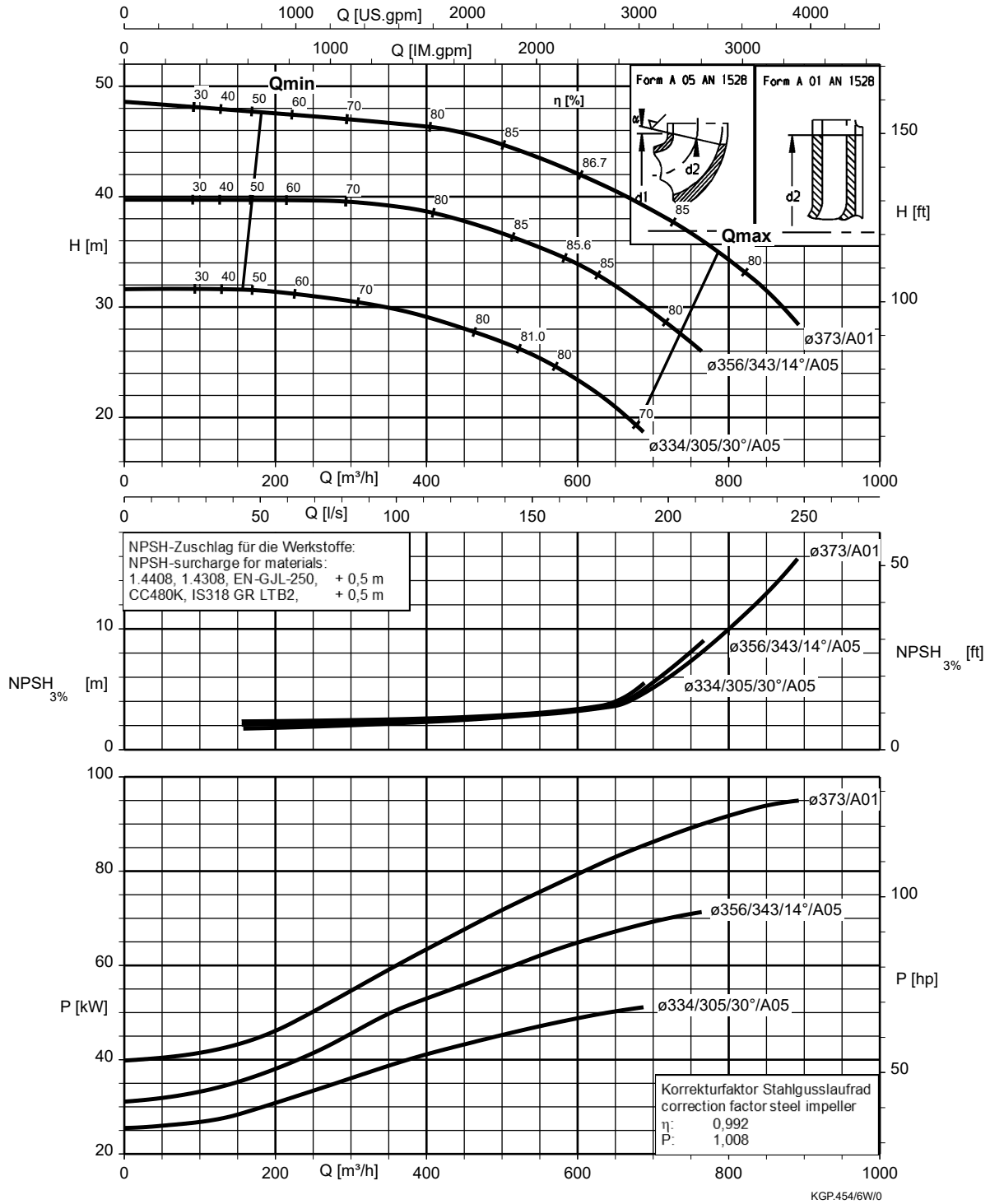
1311.45/11-EN

Etanorm 250-200-320, n = 1450 rpm

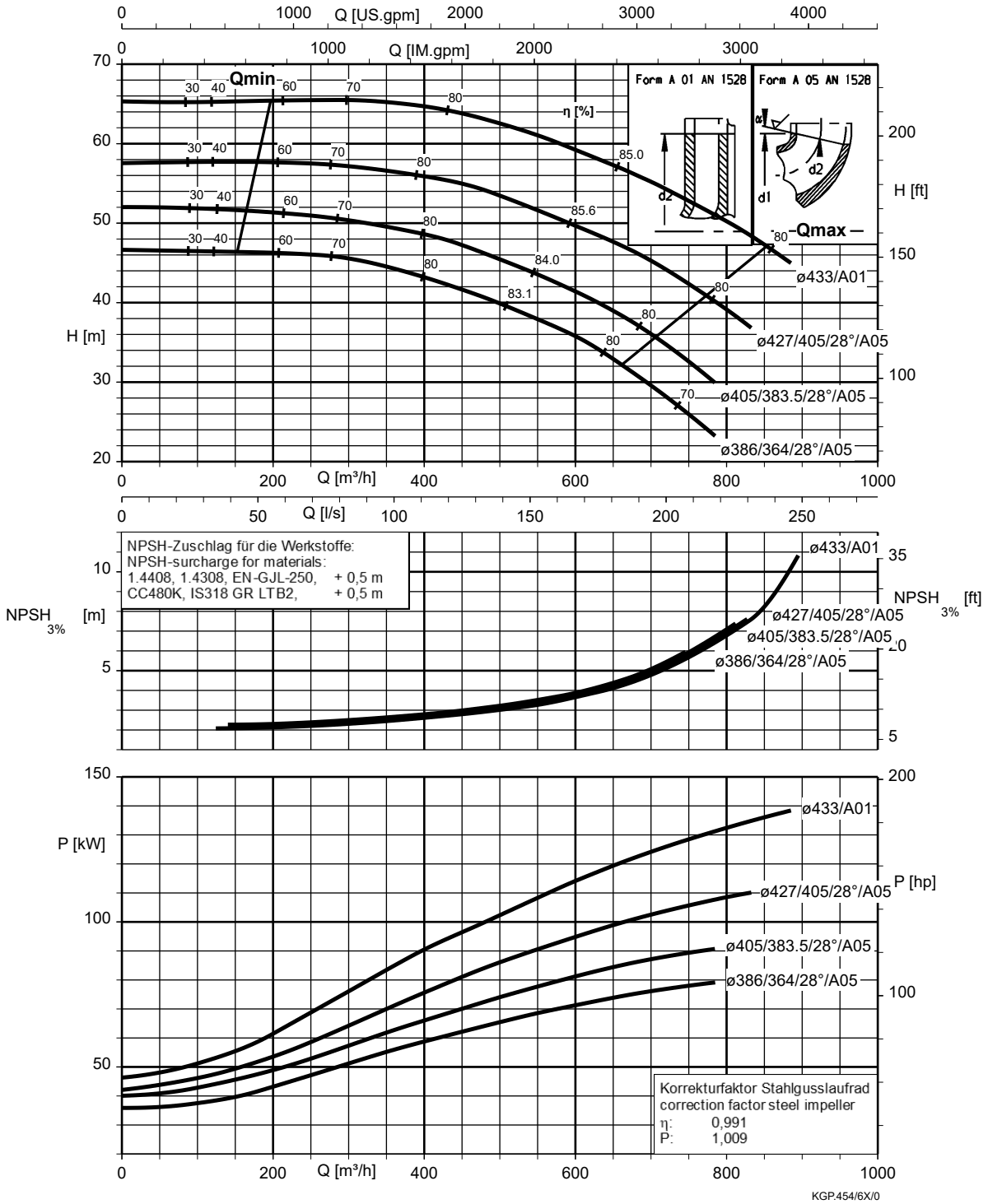


1311.45/11-EN

Etanorm 250-200-375, n = 1450 rpm

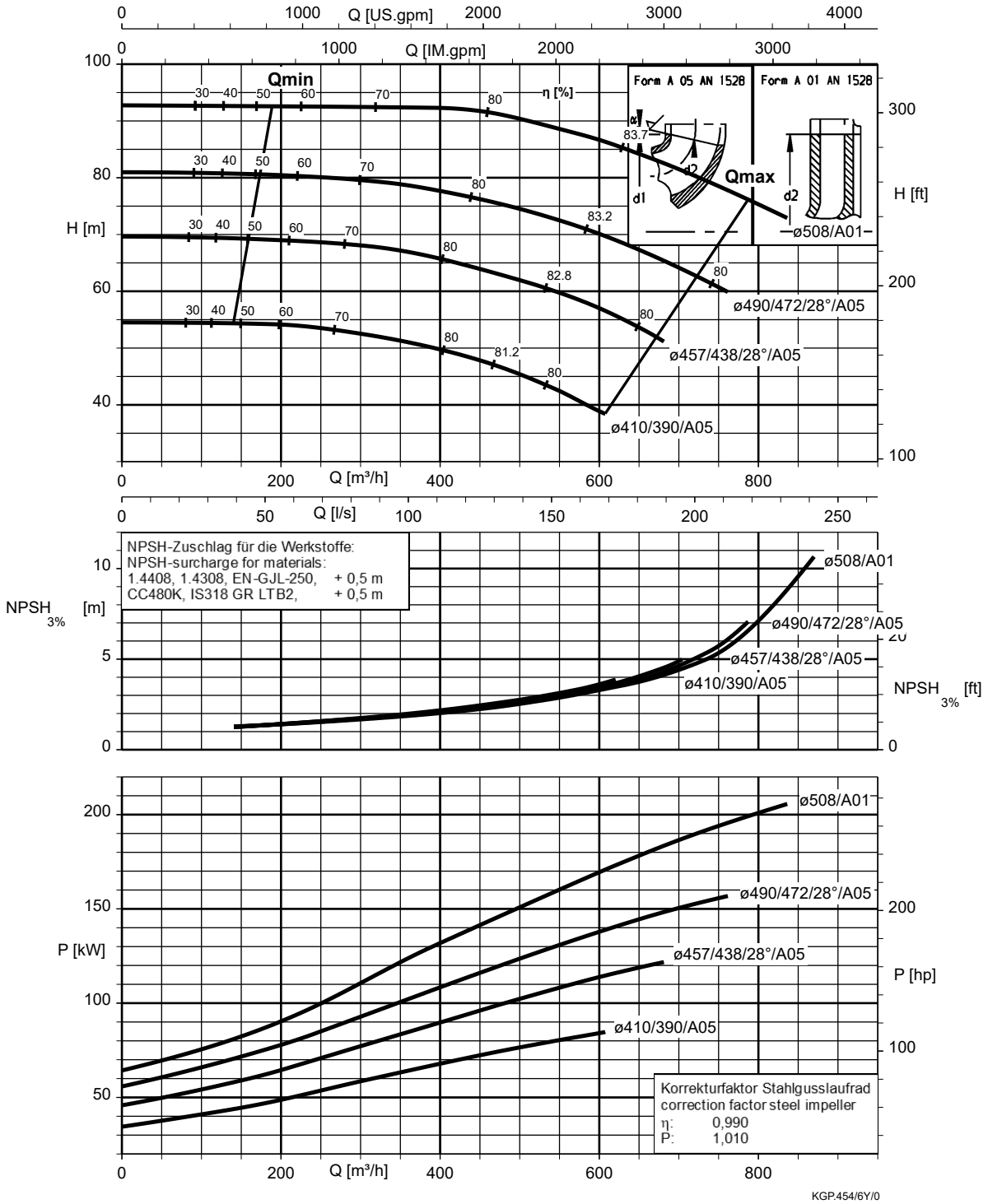


Etanorm 250-200-435 , n = 1450 rpm



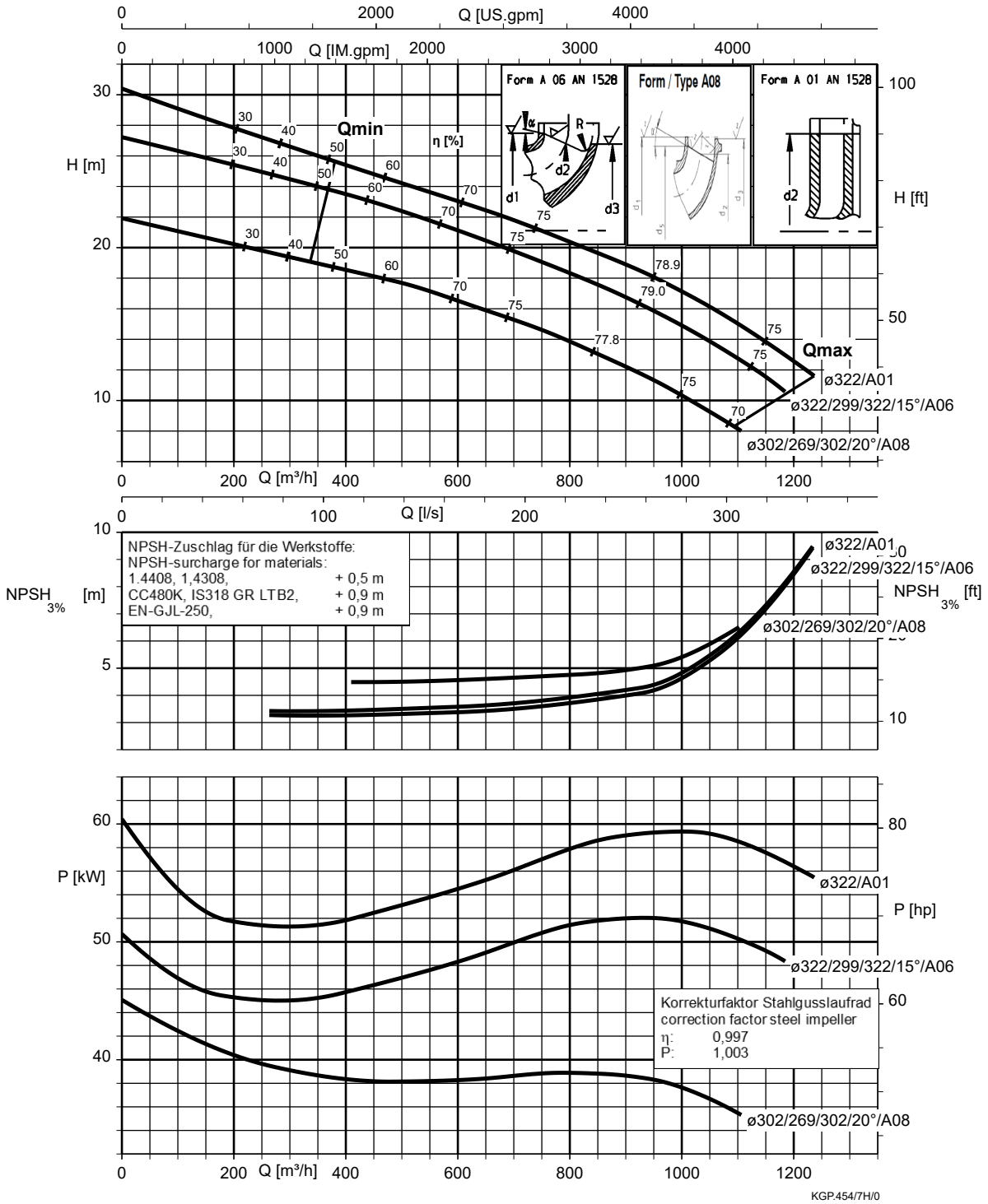
1311.45/11-EN

Etanorm 250-200-510 , n = 1450 rpm



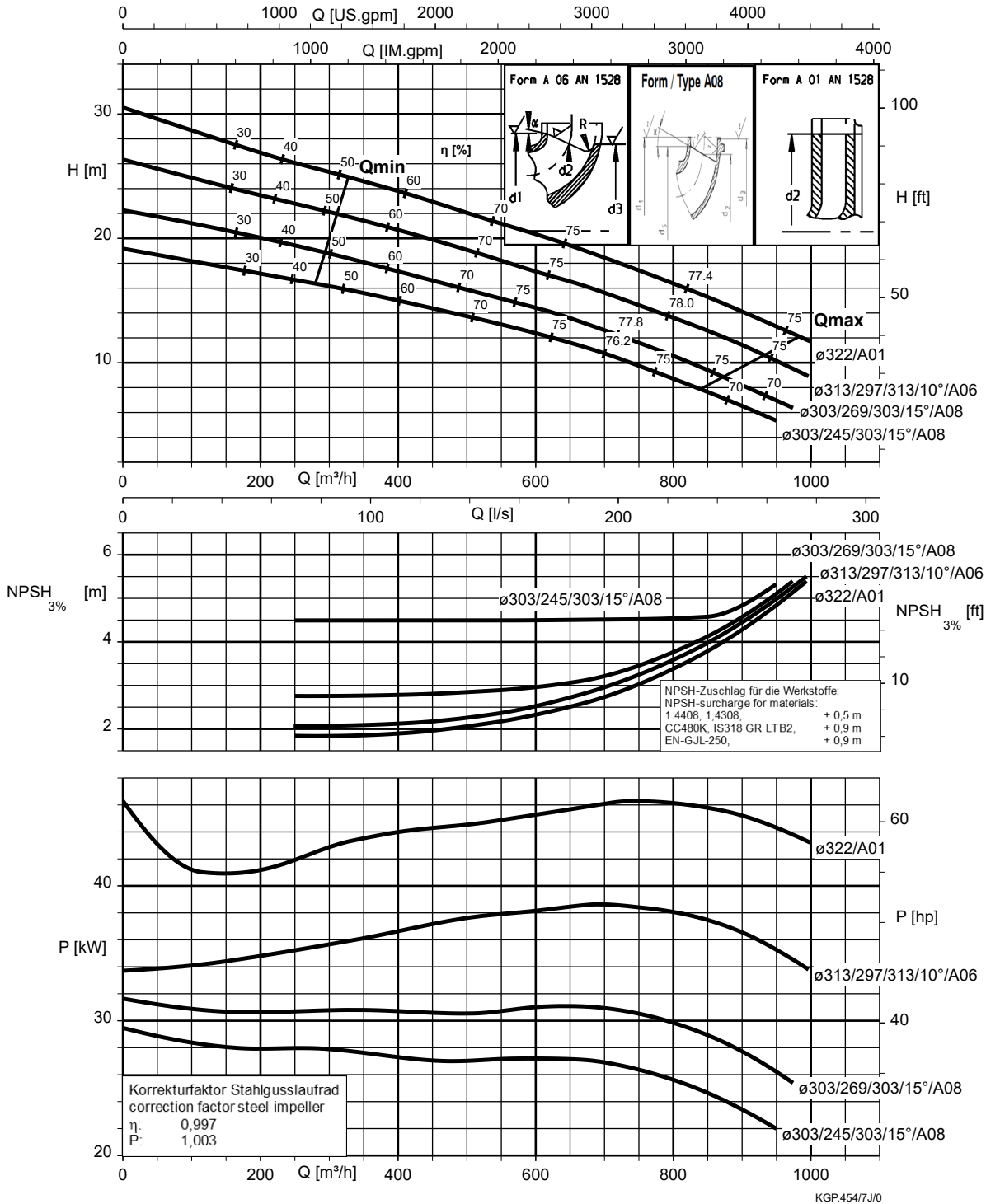
1311.45/11-EN

Etanorm 300-250-295, n = 1450 rpm



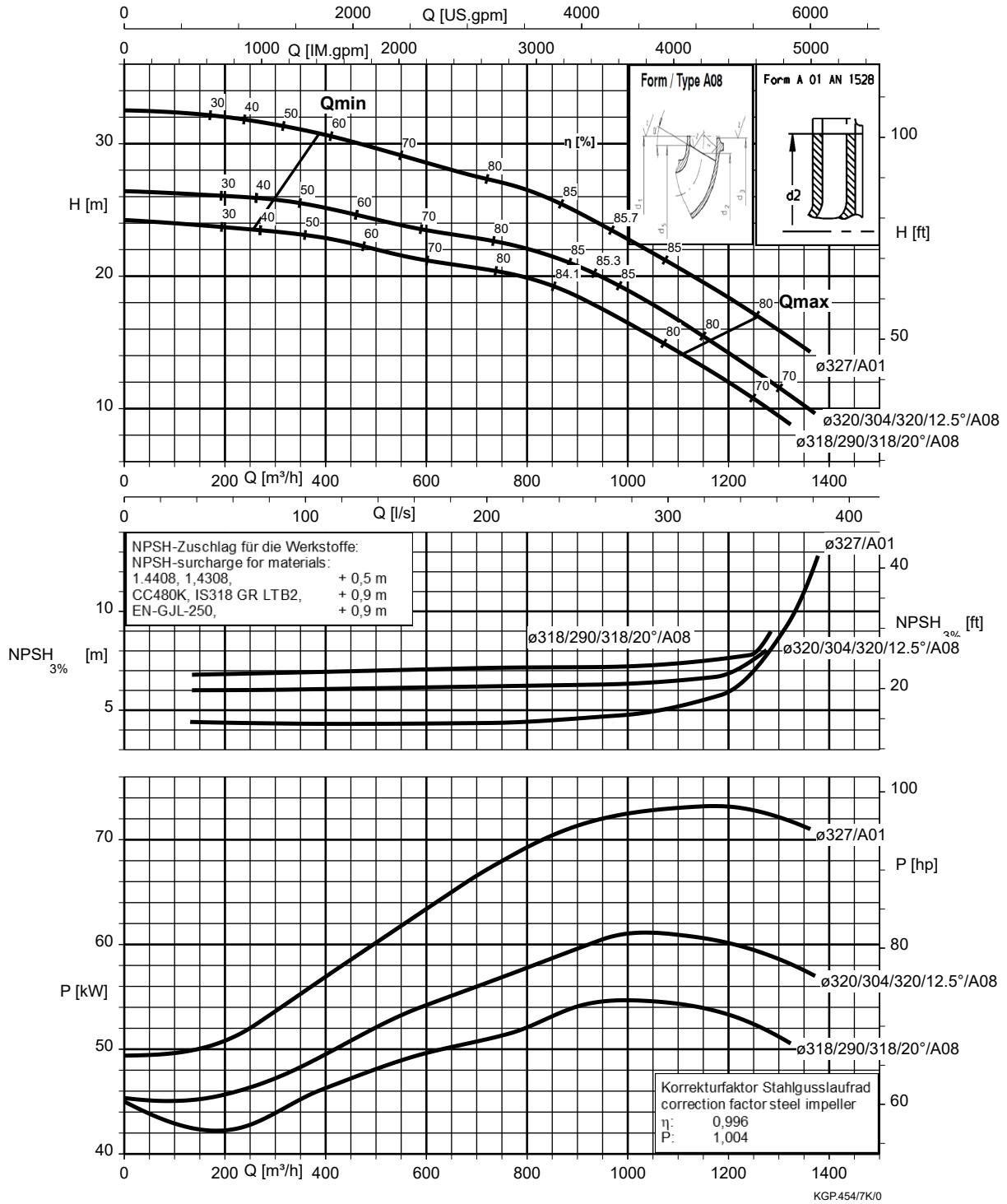
1311.45/11-EN

Etanorm 300-250-295.1 , n = 1450 rpm

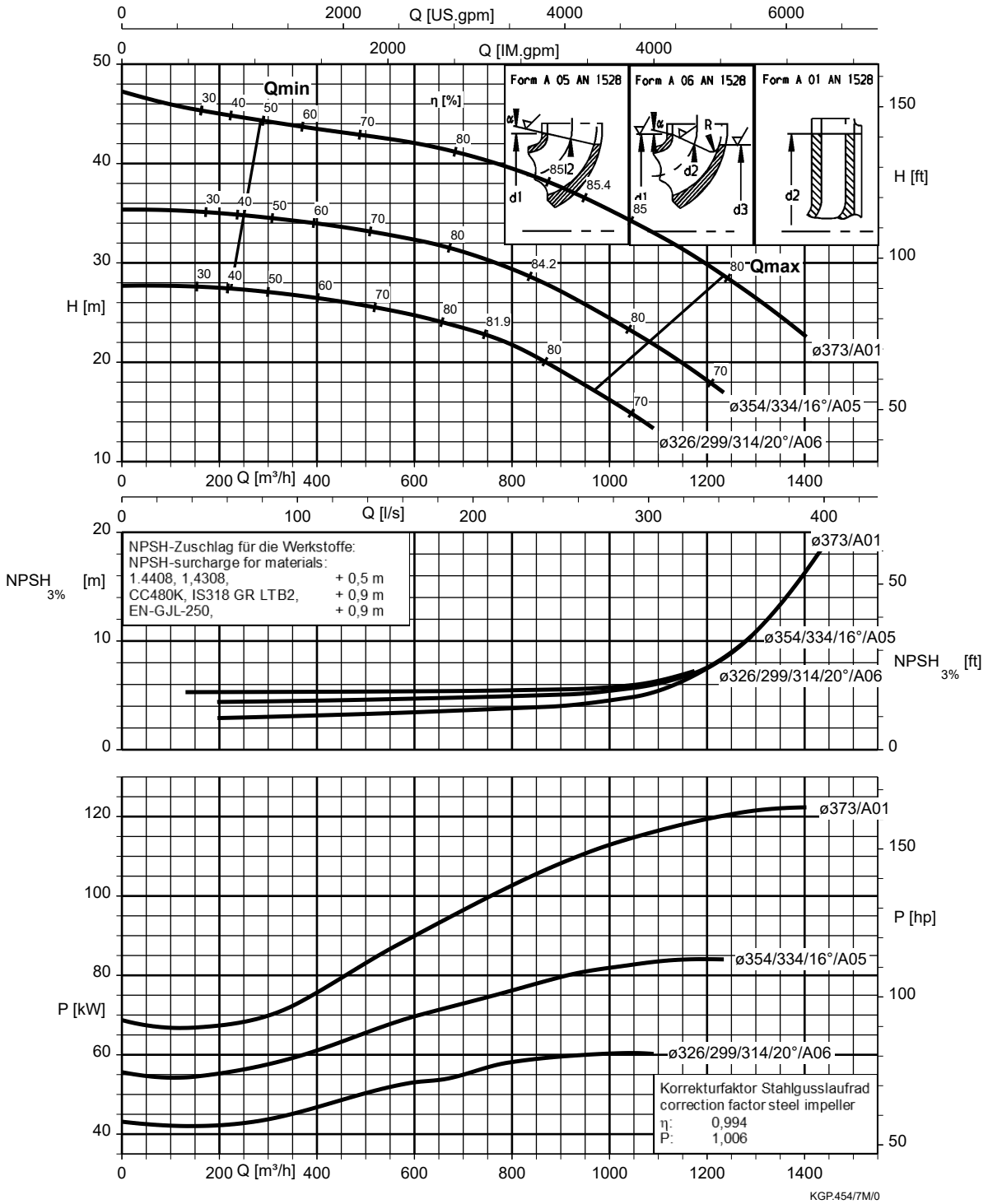




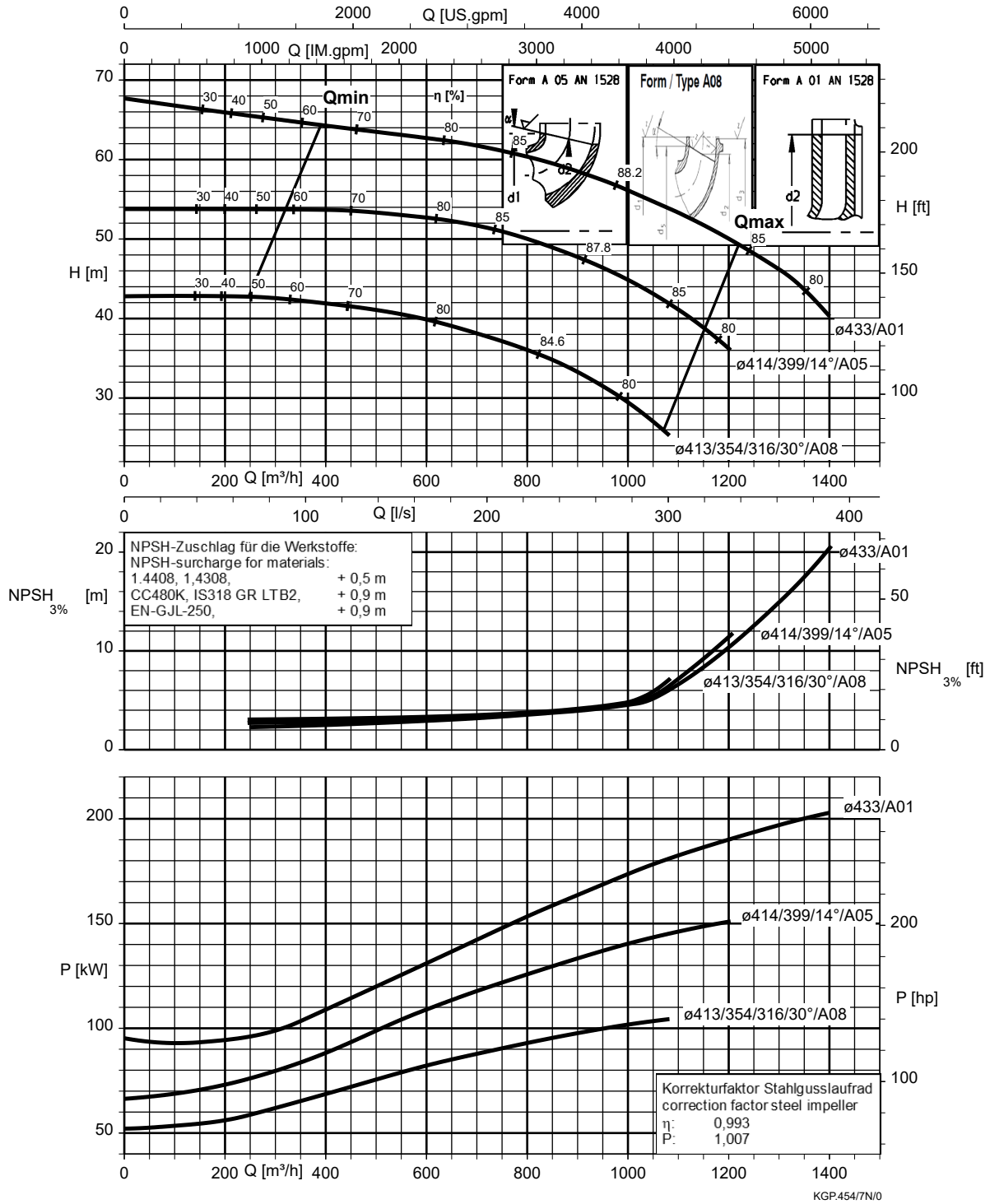
Etanorm 300-250-320 , n = 1450 rpm



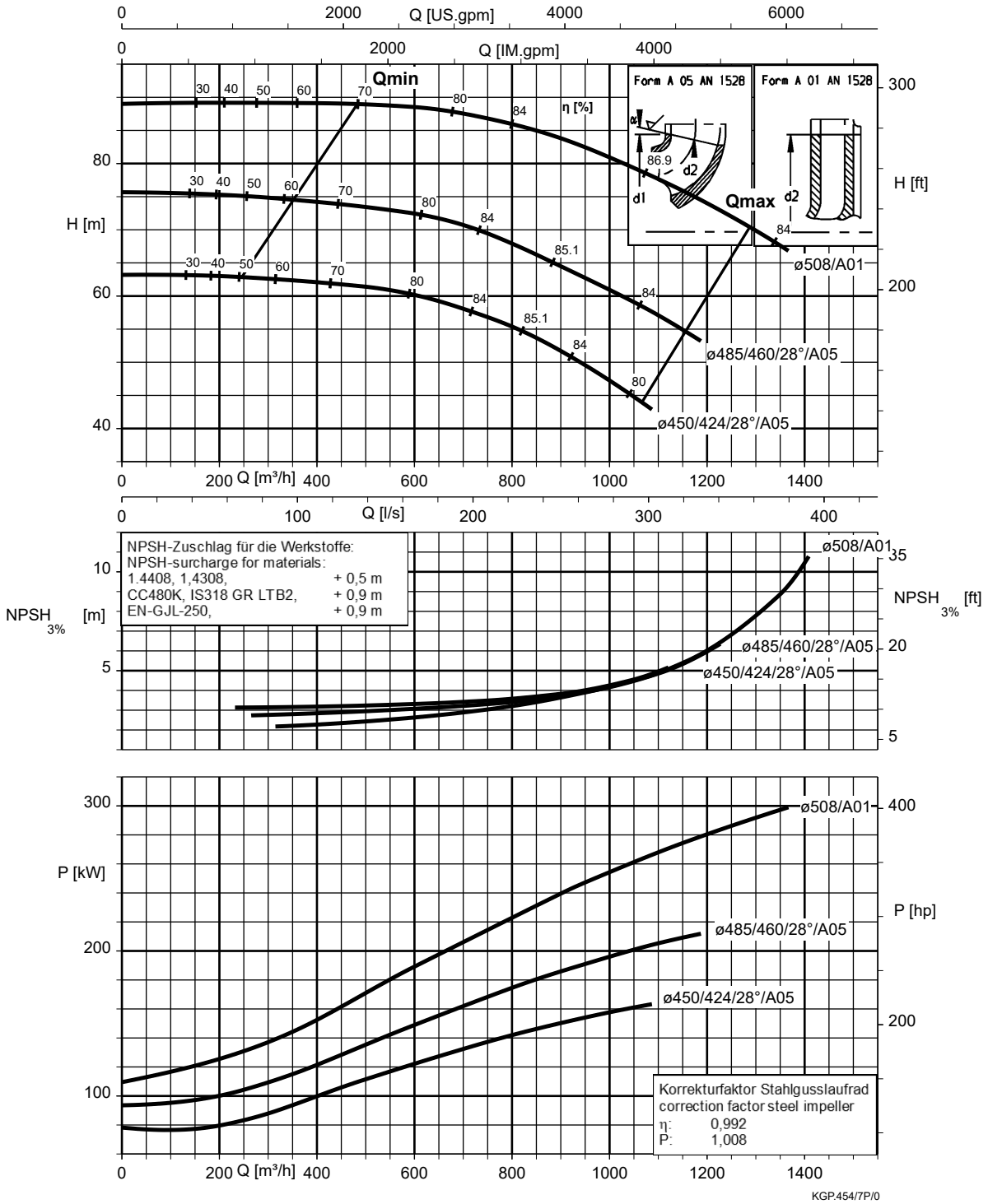
**Etanorm 300-250-375, n = 1450 rpm**



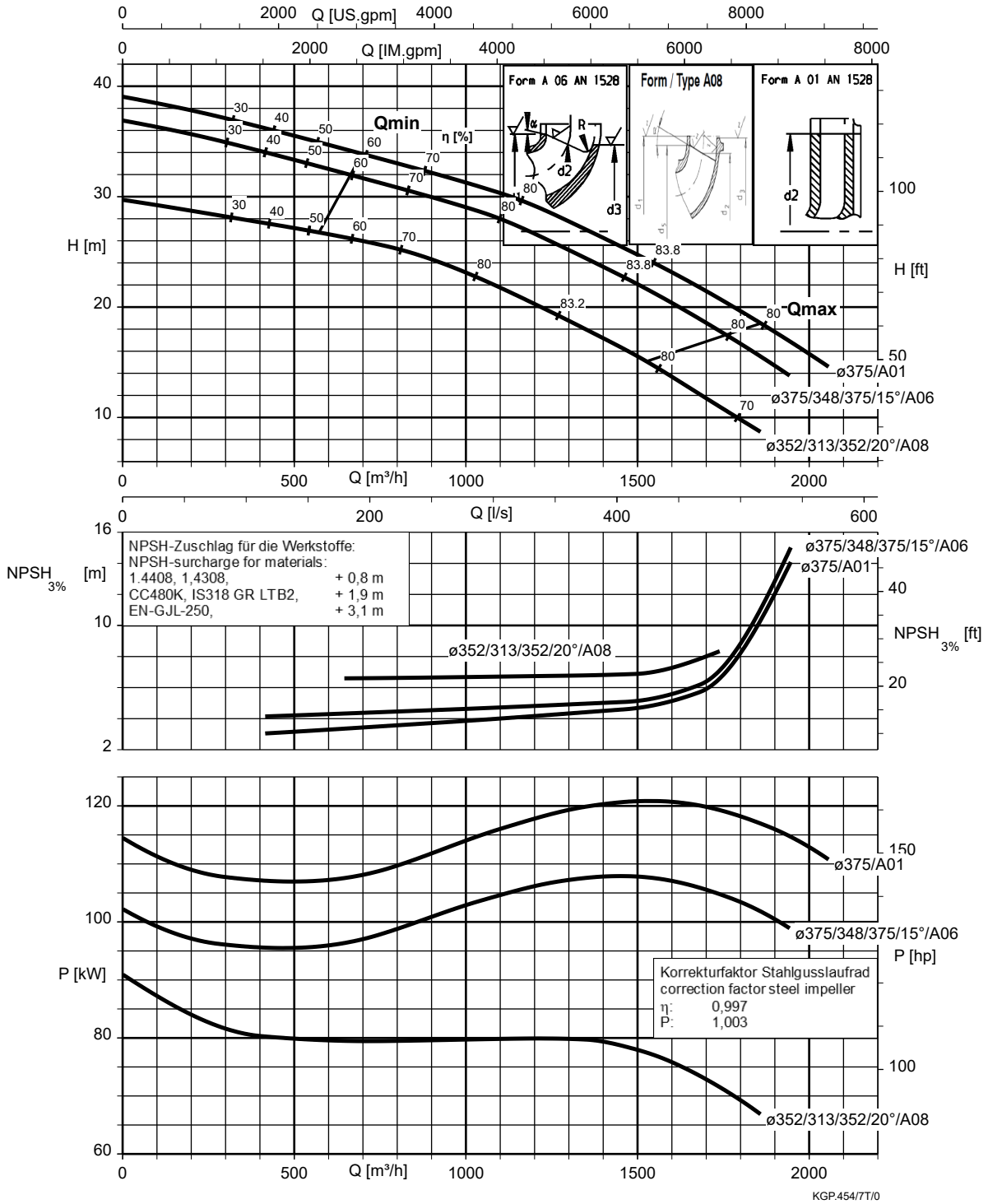
Etanorm 300-250-435 , n = 1450 rpm



Etanorm 300-250-510, n = 1450 rpm

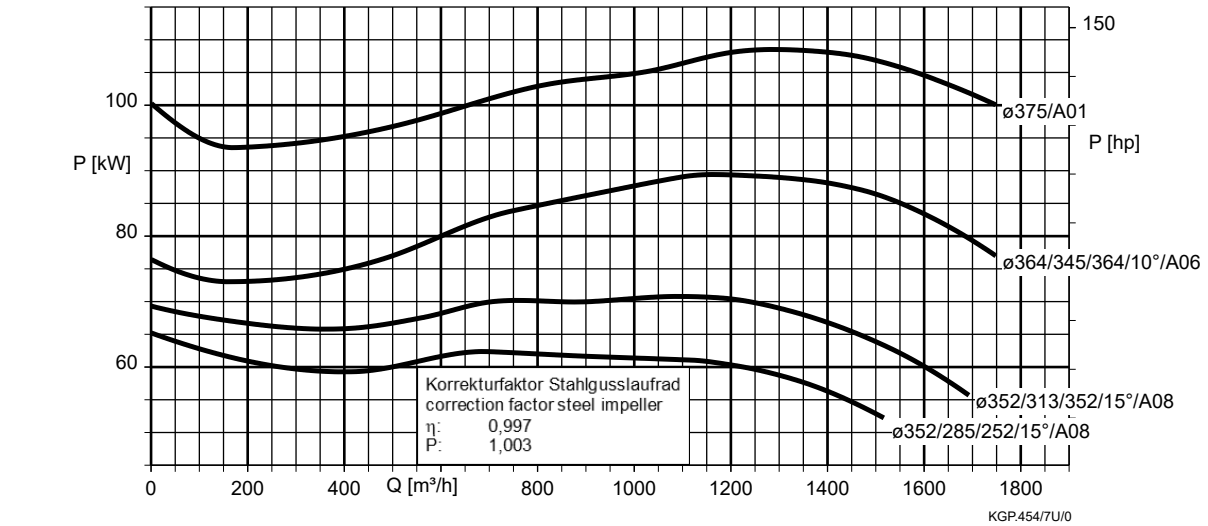
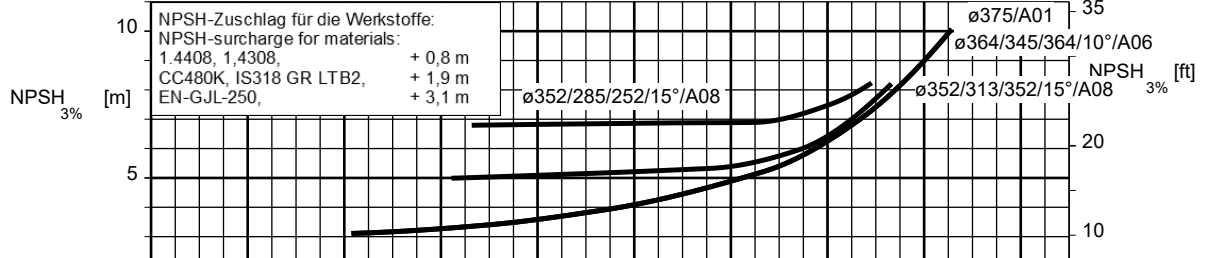
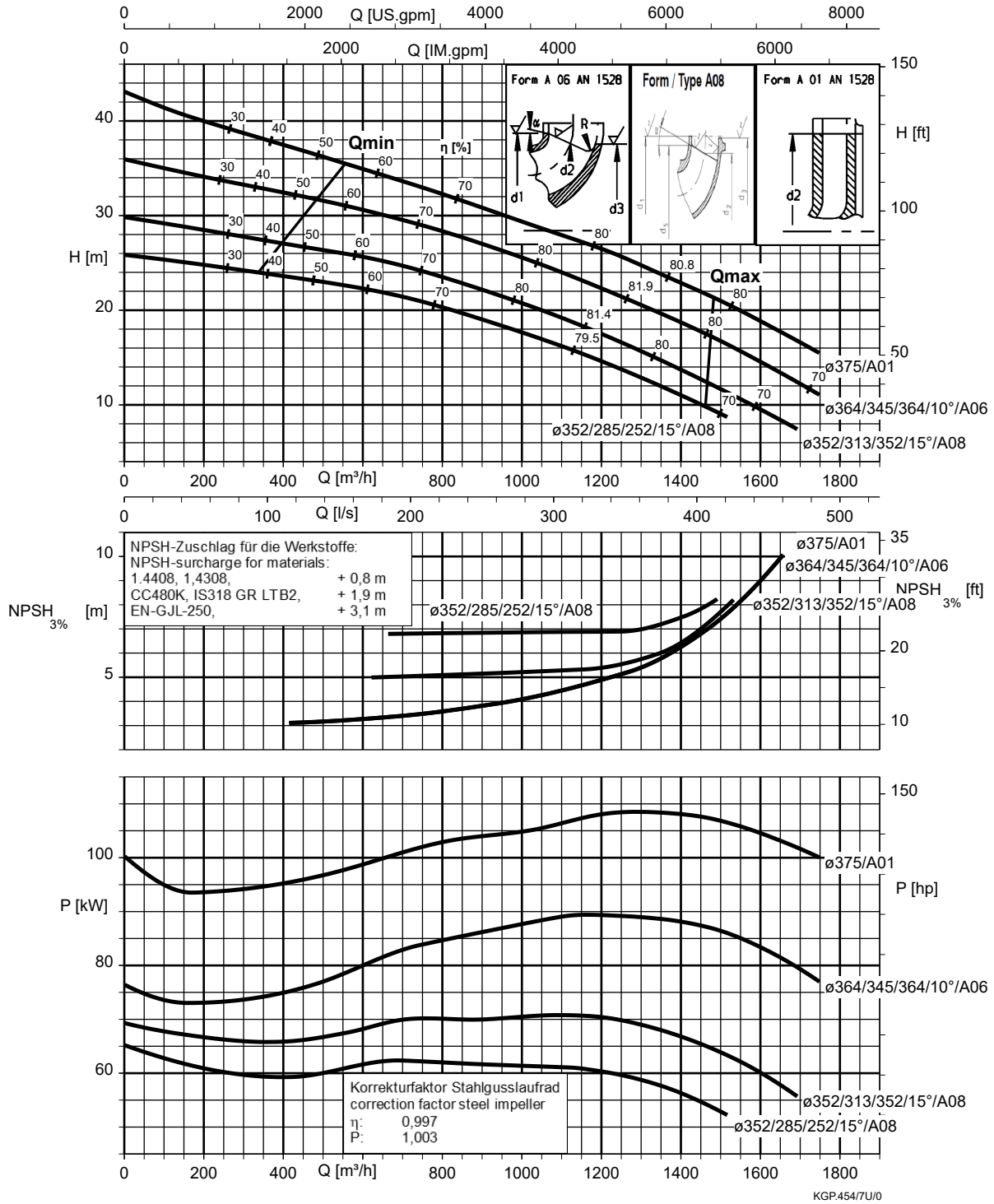


Etanorm 350-300-350, n = 1450 rpm



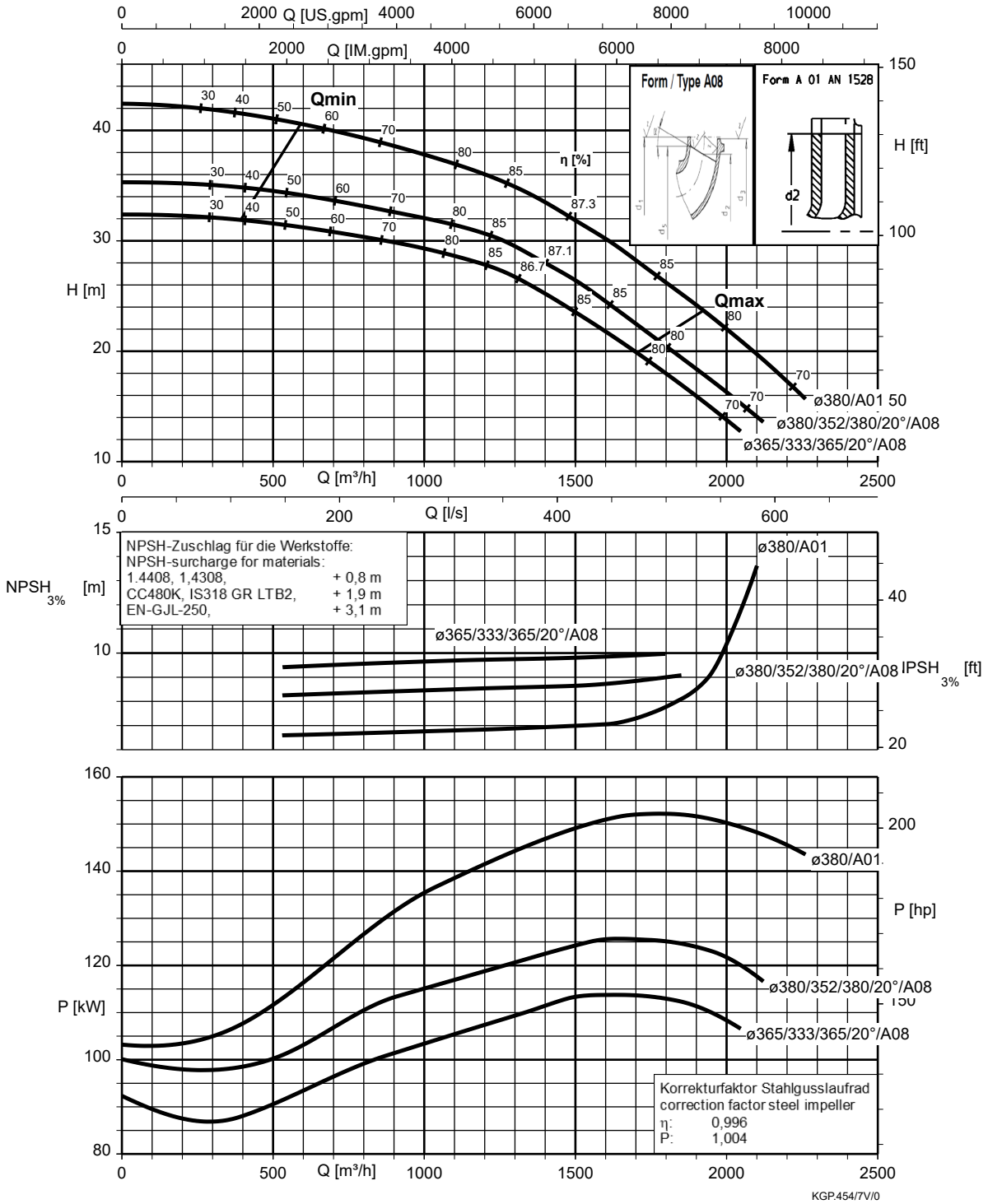
1311.45/11-EN

Etanorm 350-300-350.1, n = 1450 rpm



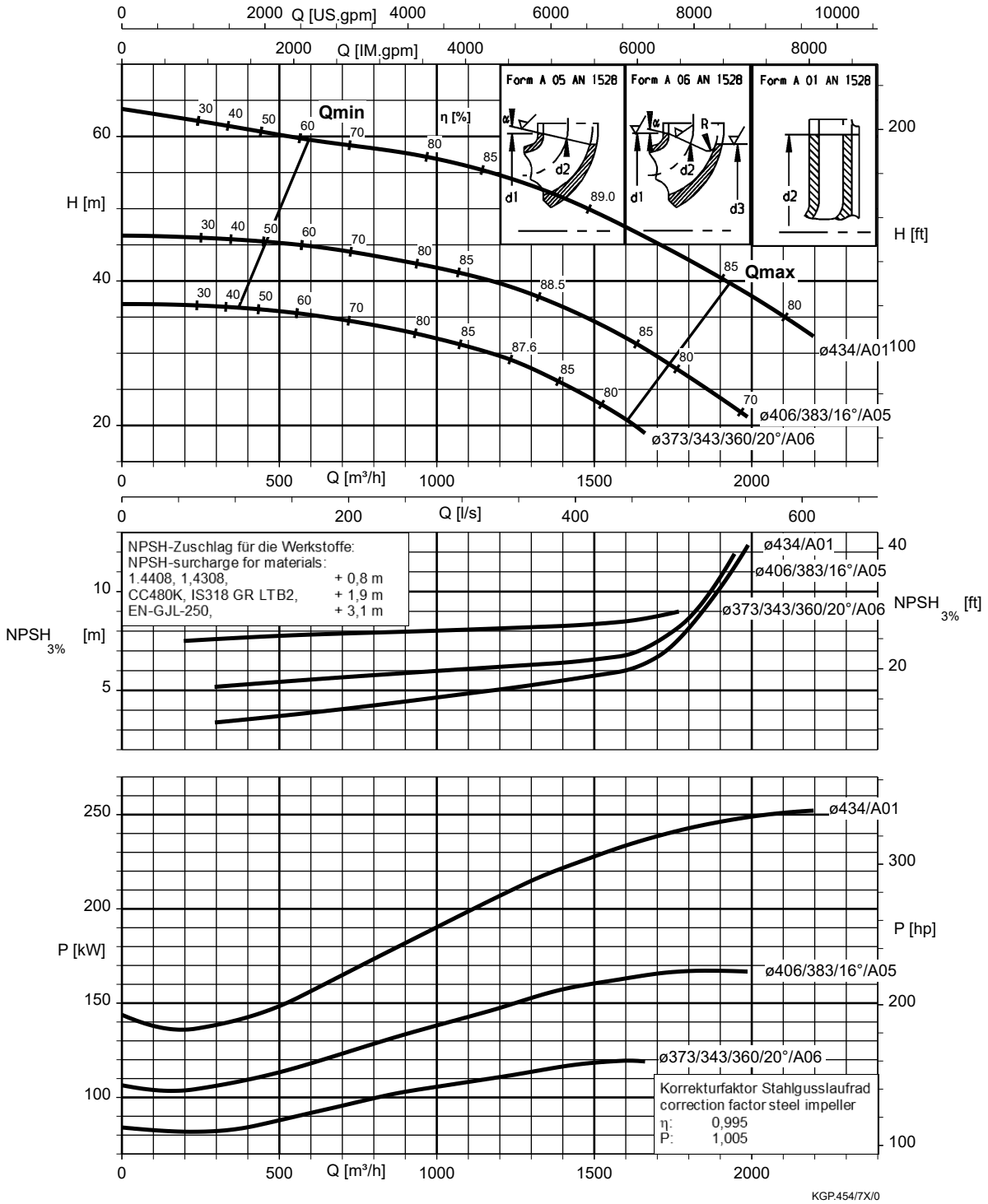
KGP.454/7U/0

Etanorm 350-300-375, n = 1450 rpm



1311.45/11-EN

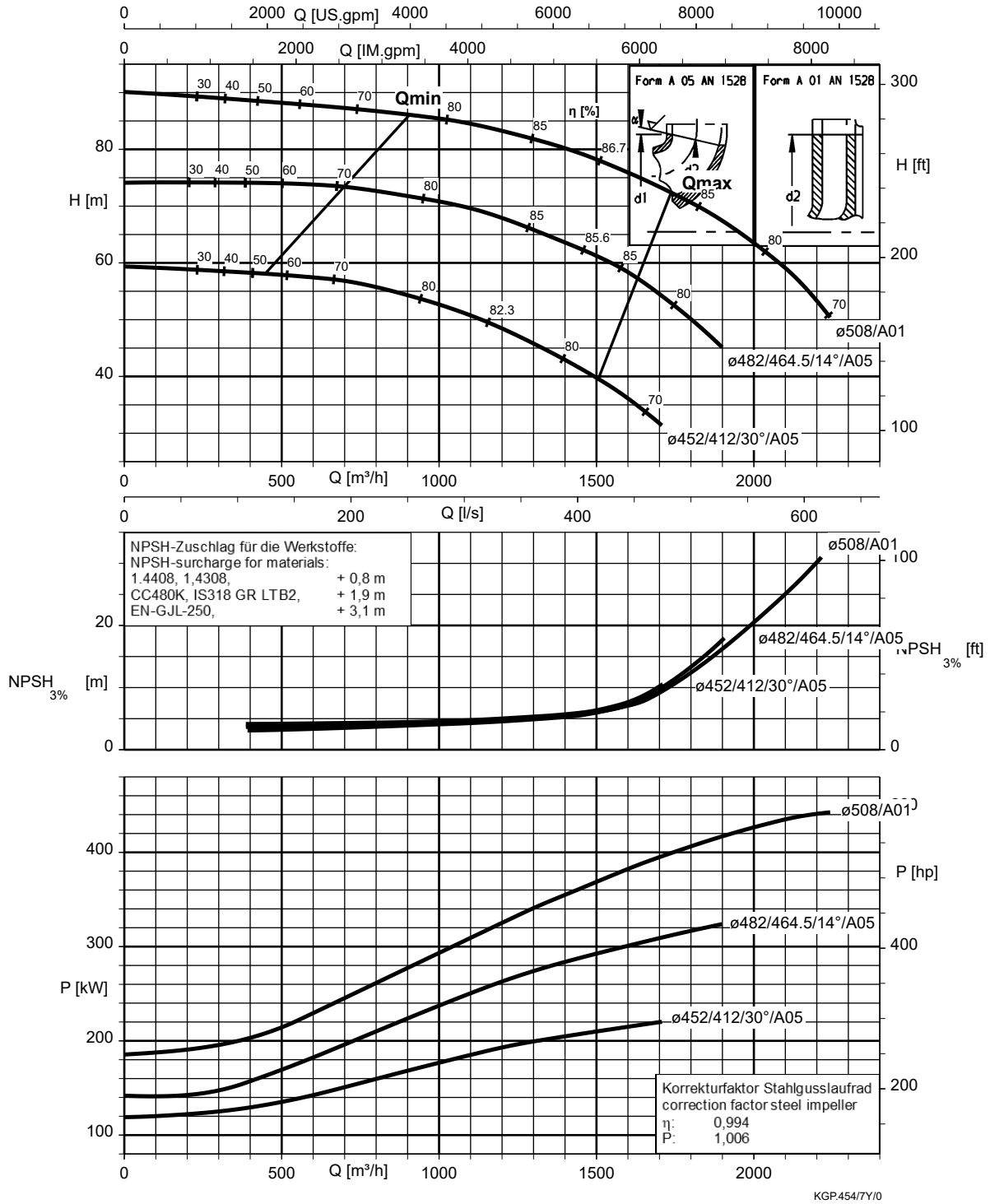
Etanorm 350-300-435 , n = 1450 rpm



KGP454/7X/0



Etanorm 350-300-510 , n = 1450 rpm



Etanorm-RSY 125-500.2, n = 1450 rpm

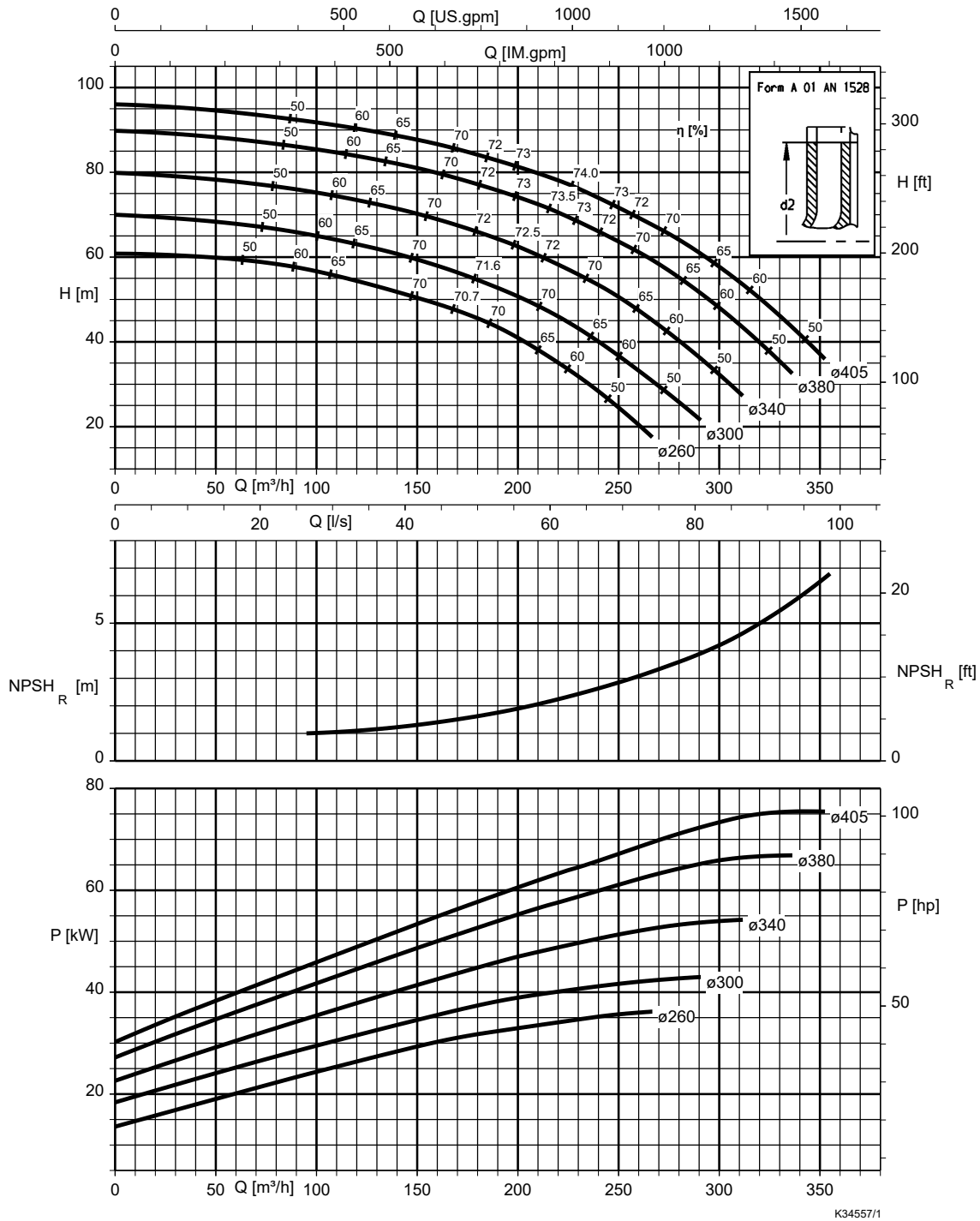


Table 3: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 150-500.1, n = 1450 rpm

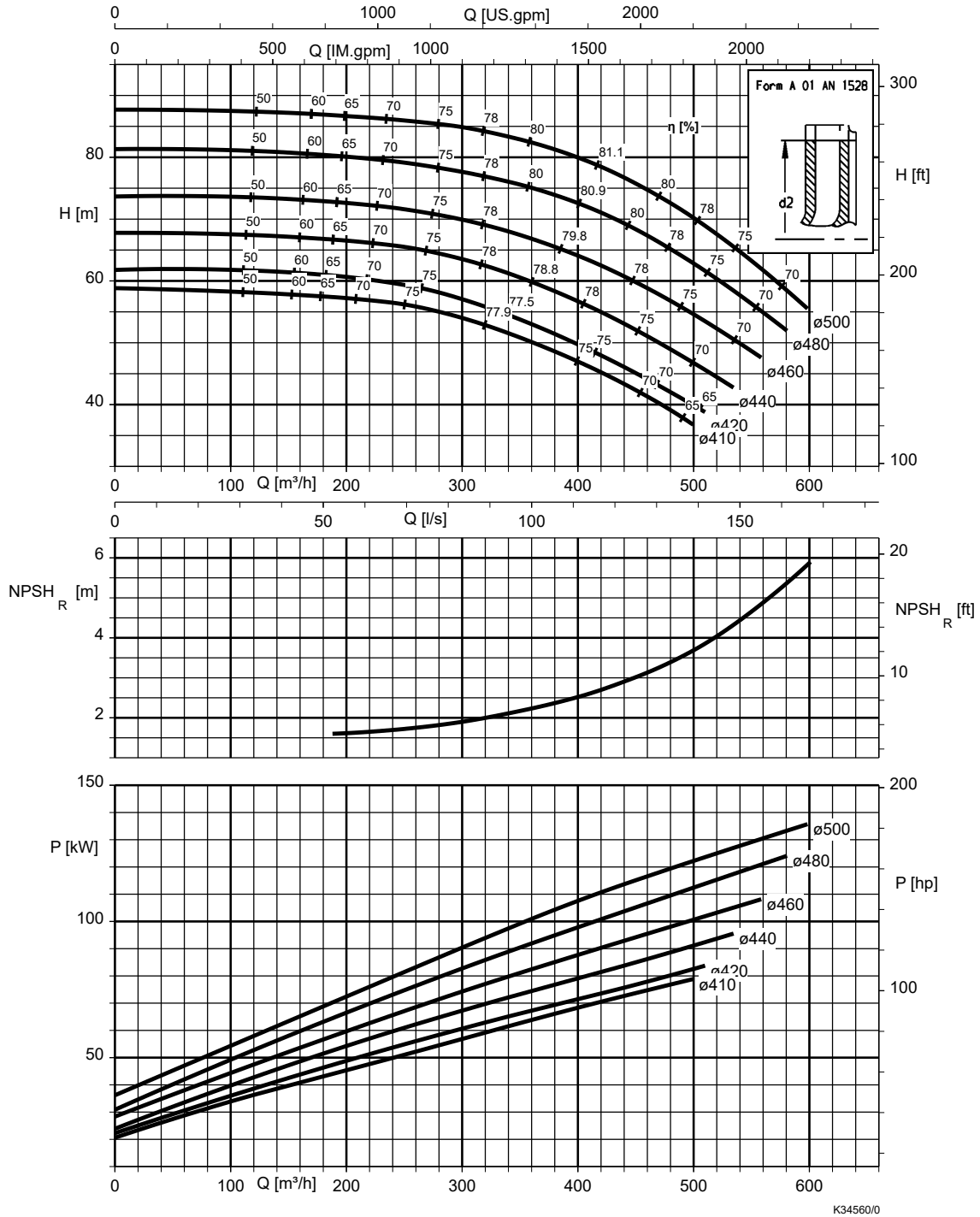


Table 4: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 200-330, n = 1450 rpm

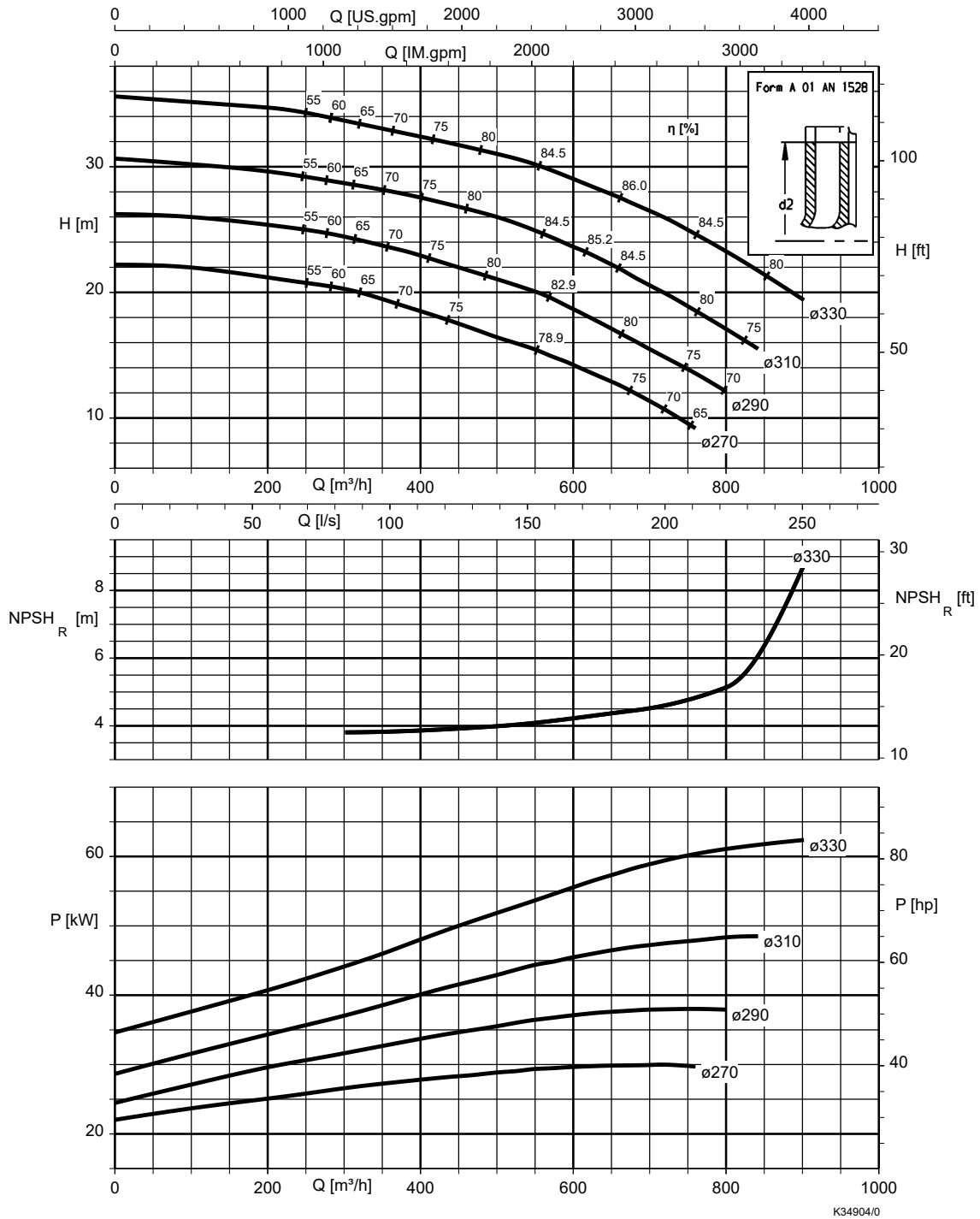


Table 5: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 200-400, n = 1450 rpm

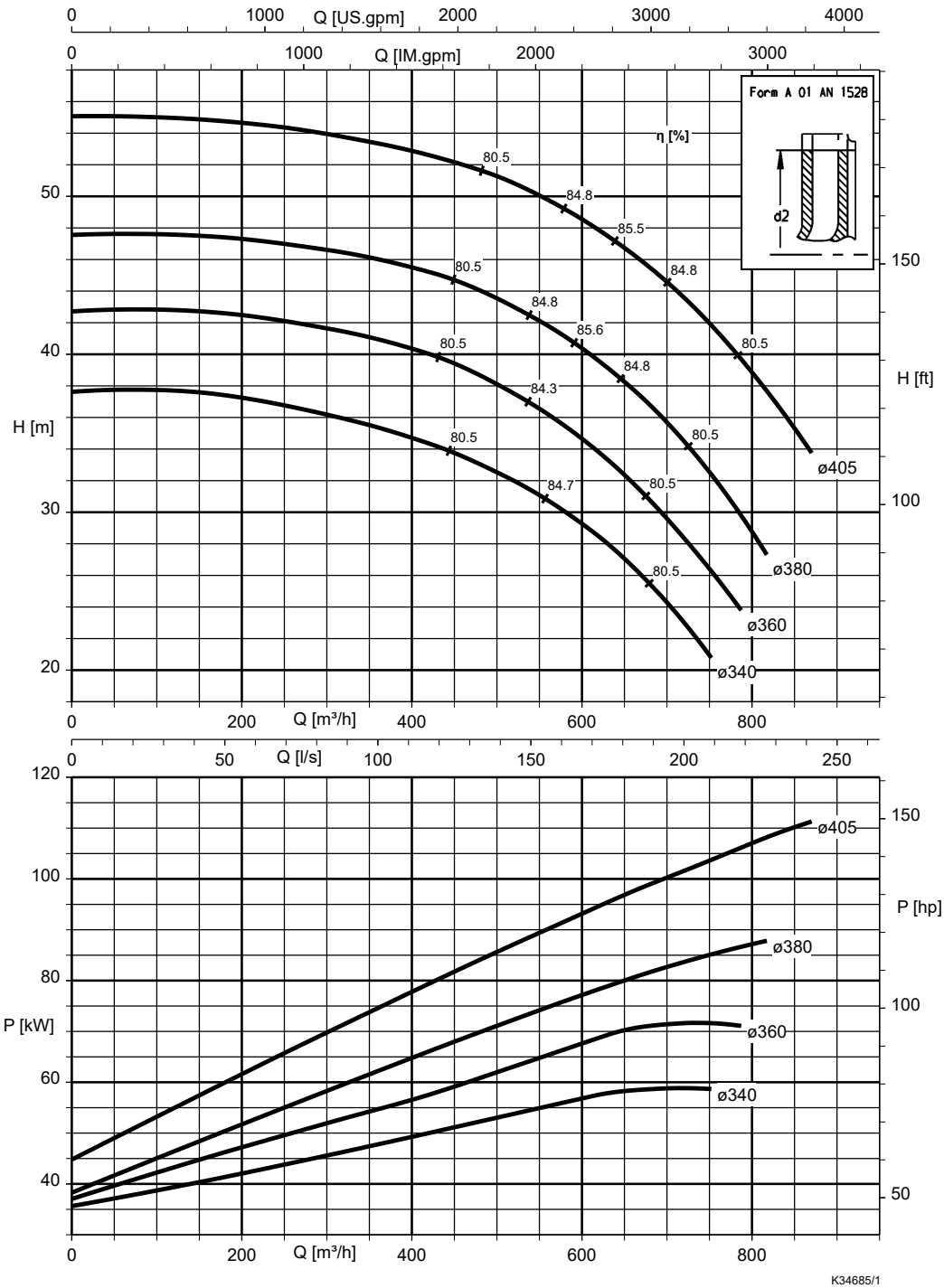


Table 6: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	1,6	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 200-500, n = 1450 rpm

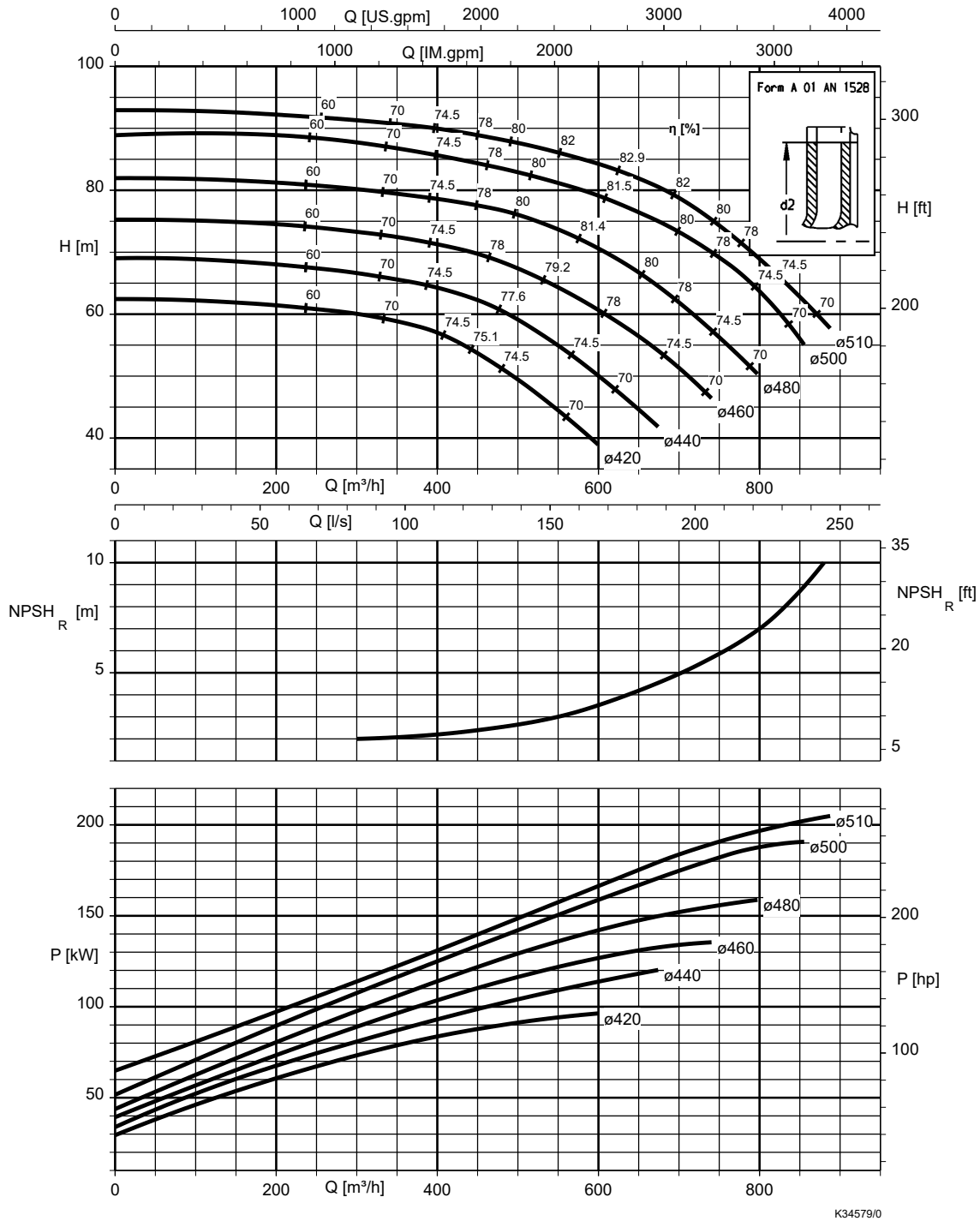


Table 7: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	1,8	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 250-300, n = 1450 rpm

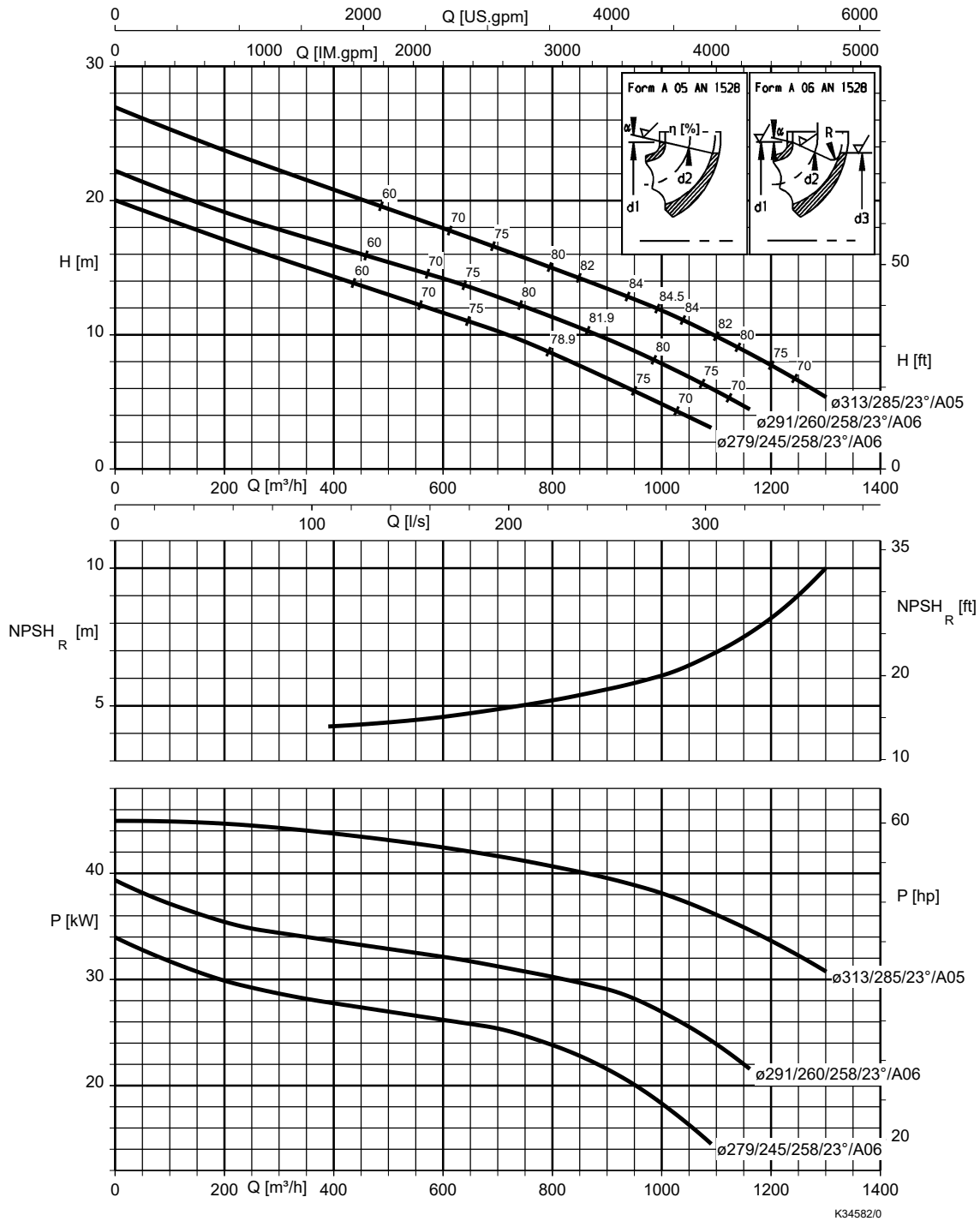


Table 8: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	2,7	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,5	
1.4408	0,5	

1311\_45/11-EN

Etanorm-RSY 250-330, n = 1450 rpm

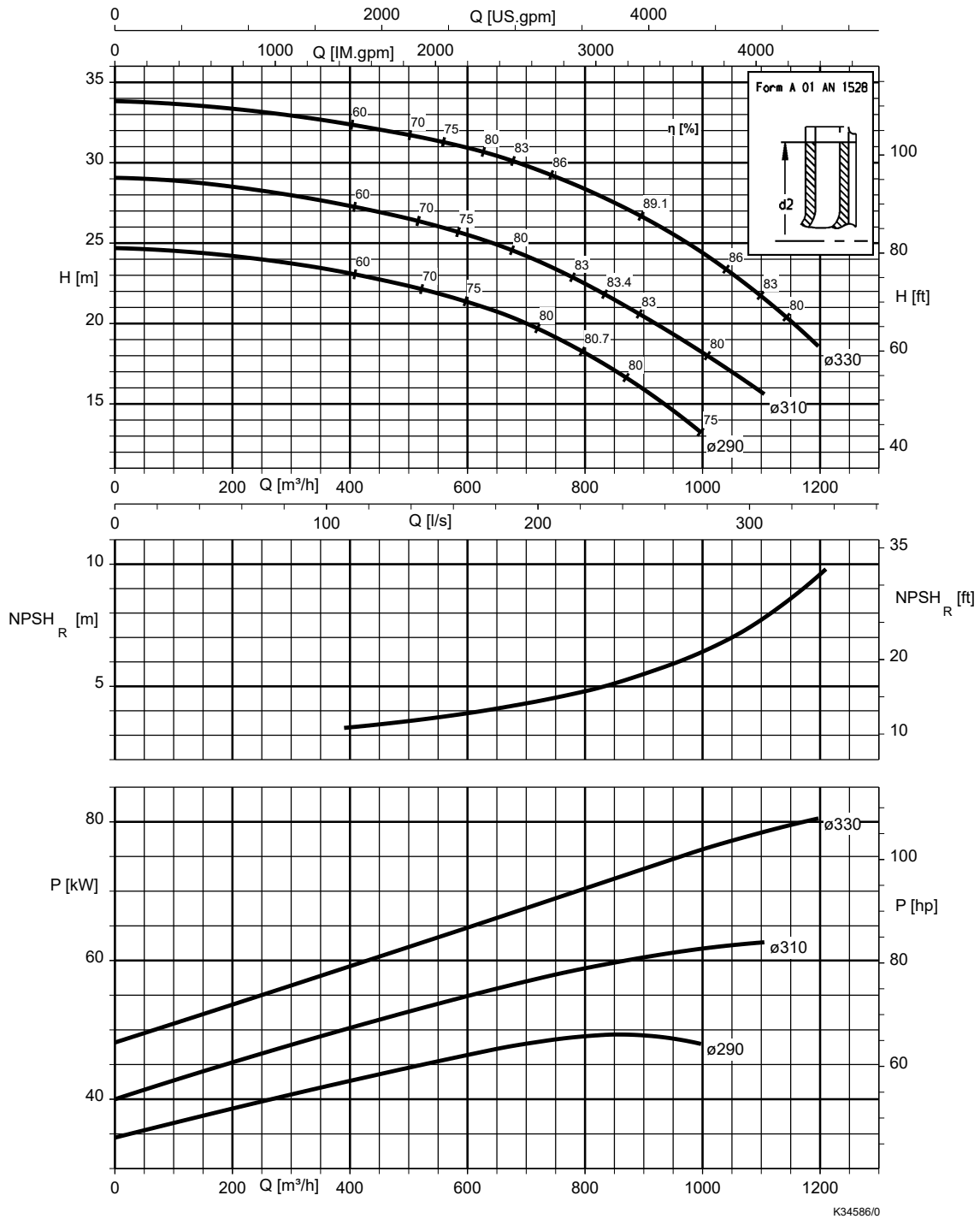


Table 9: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	2,0	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN



Etanorm-RSY 250-400, n = 1450 rpm

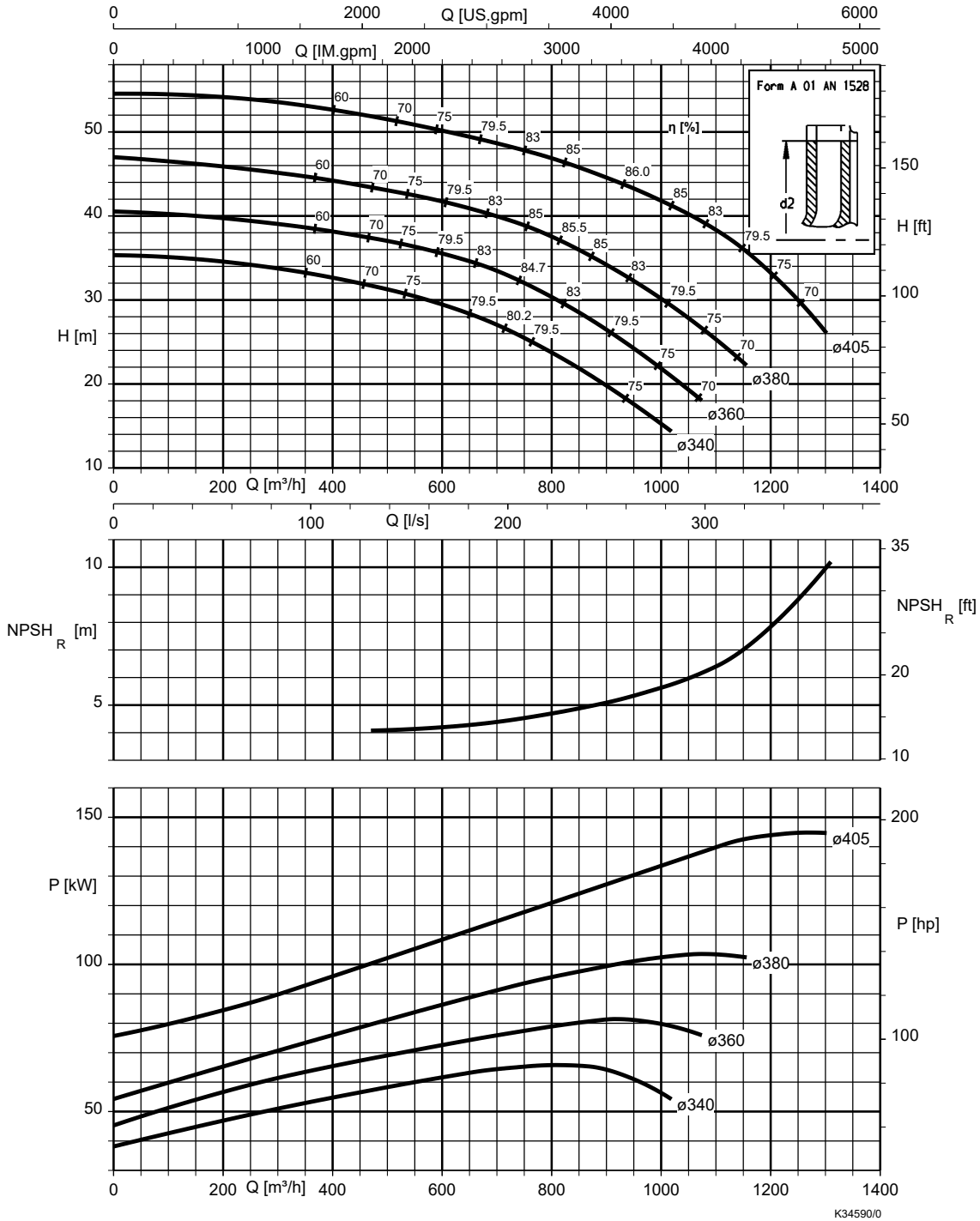


Table 10: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	2,8	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,8	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 250-500, n = 1450 rpm

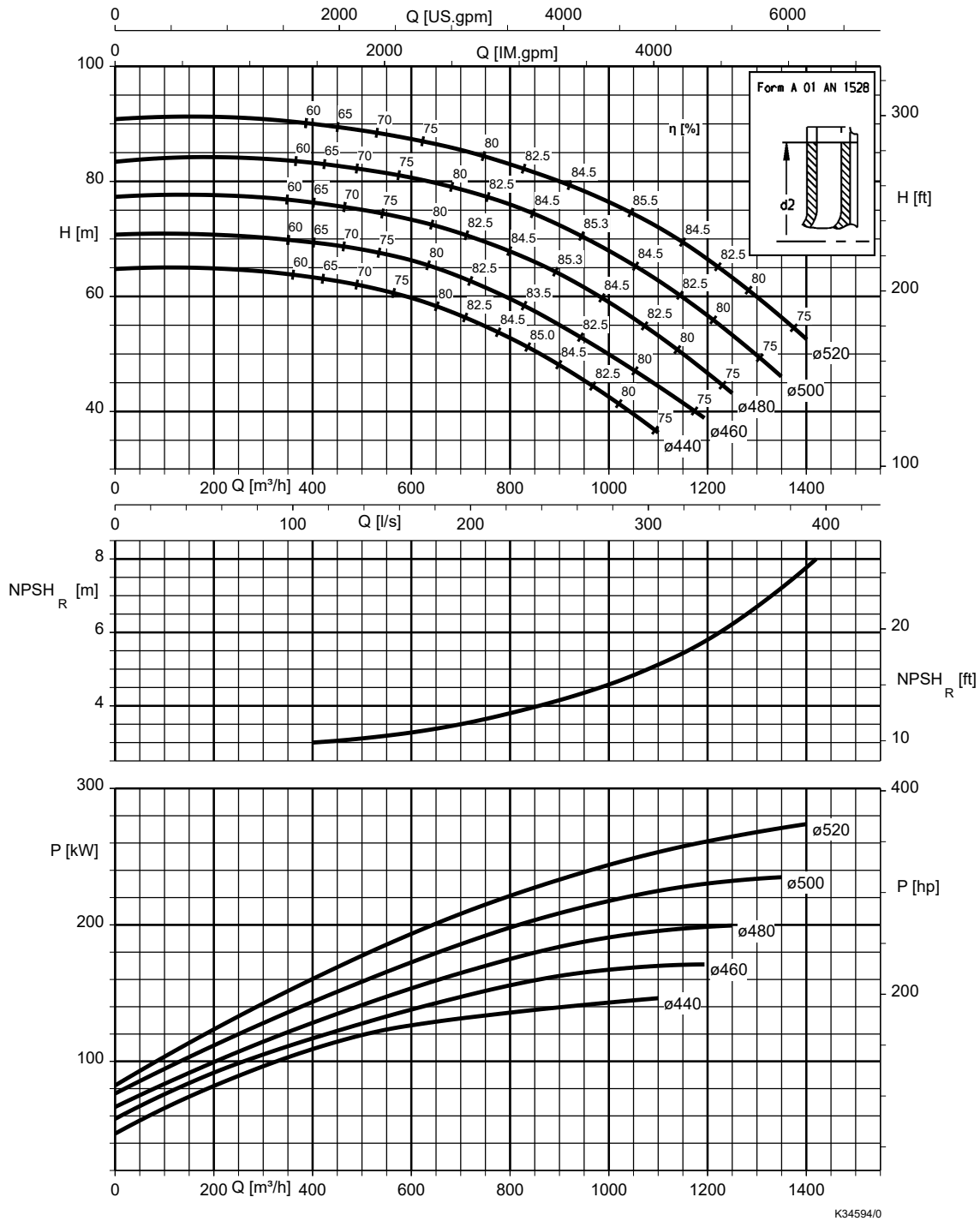


Table 11: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	1,8	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 300-360, n = 1450 rpm

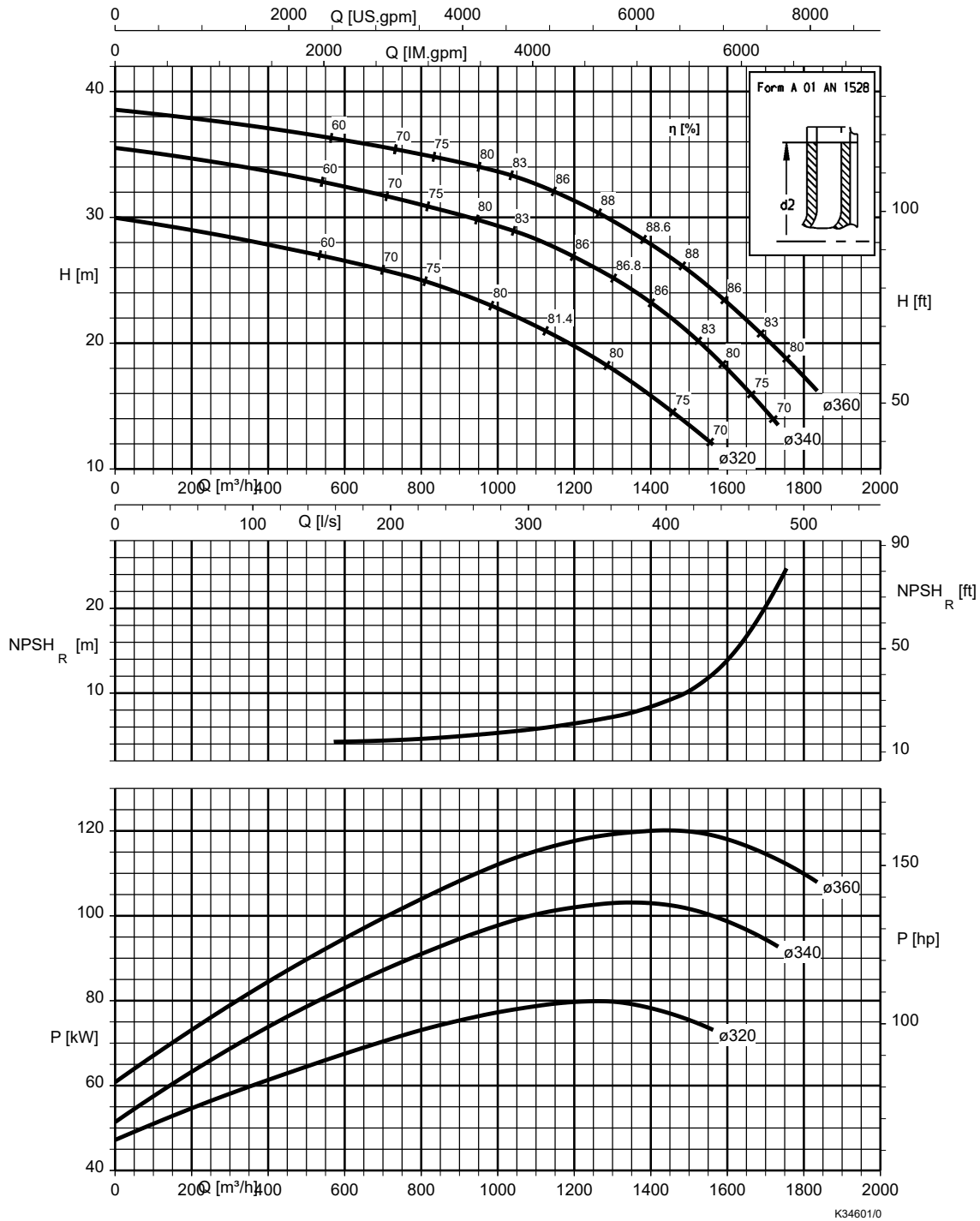


Table 12: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	1,6	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 300-400, n = 1450 rpm

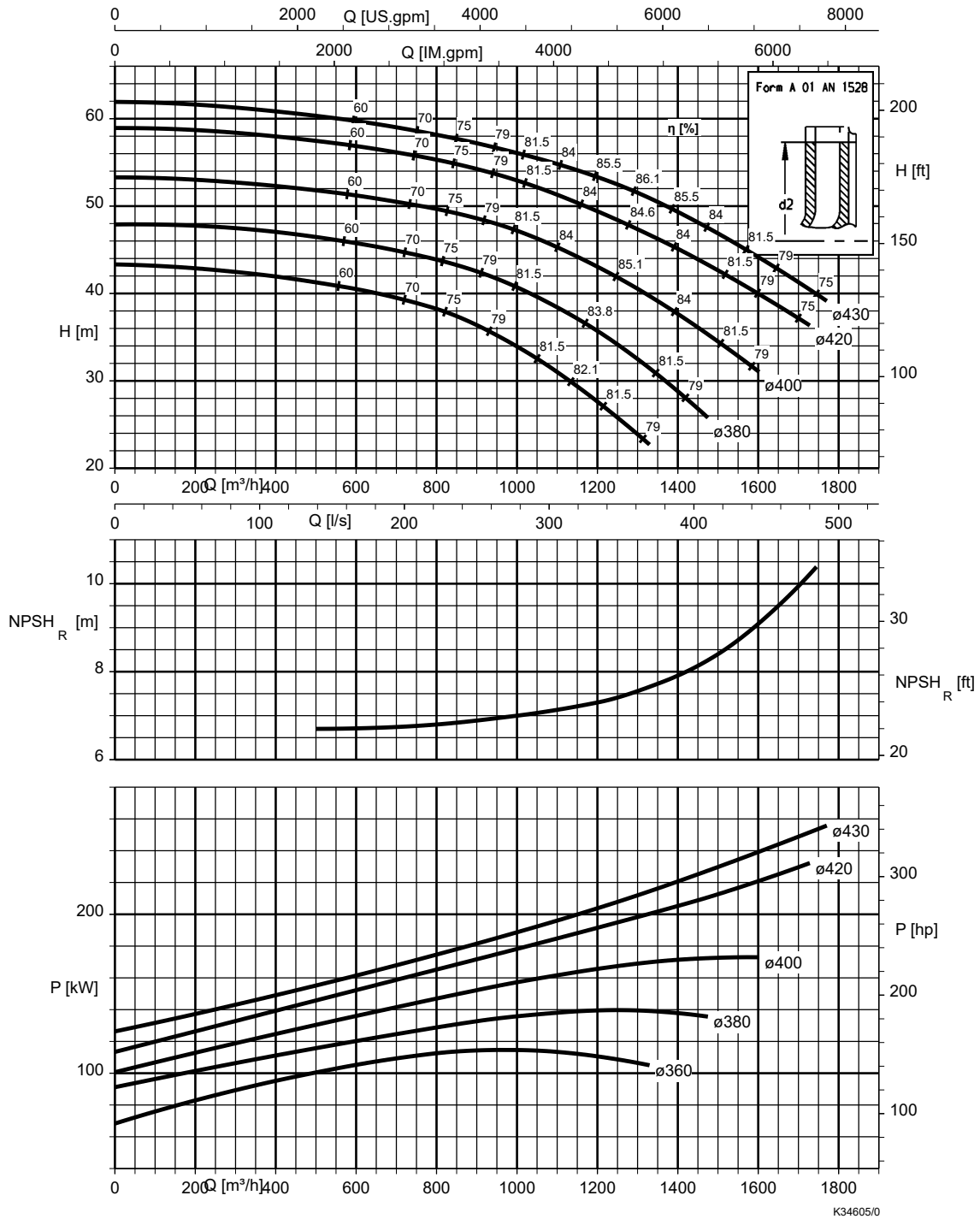


Table 13: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	1,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,0	
1.4408	0,5	

1311.45/11-EN

Etanorm-RSY 300-500, n = 1450 rpm

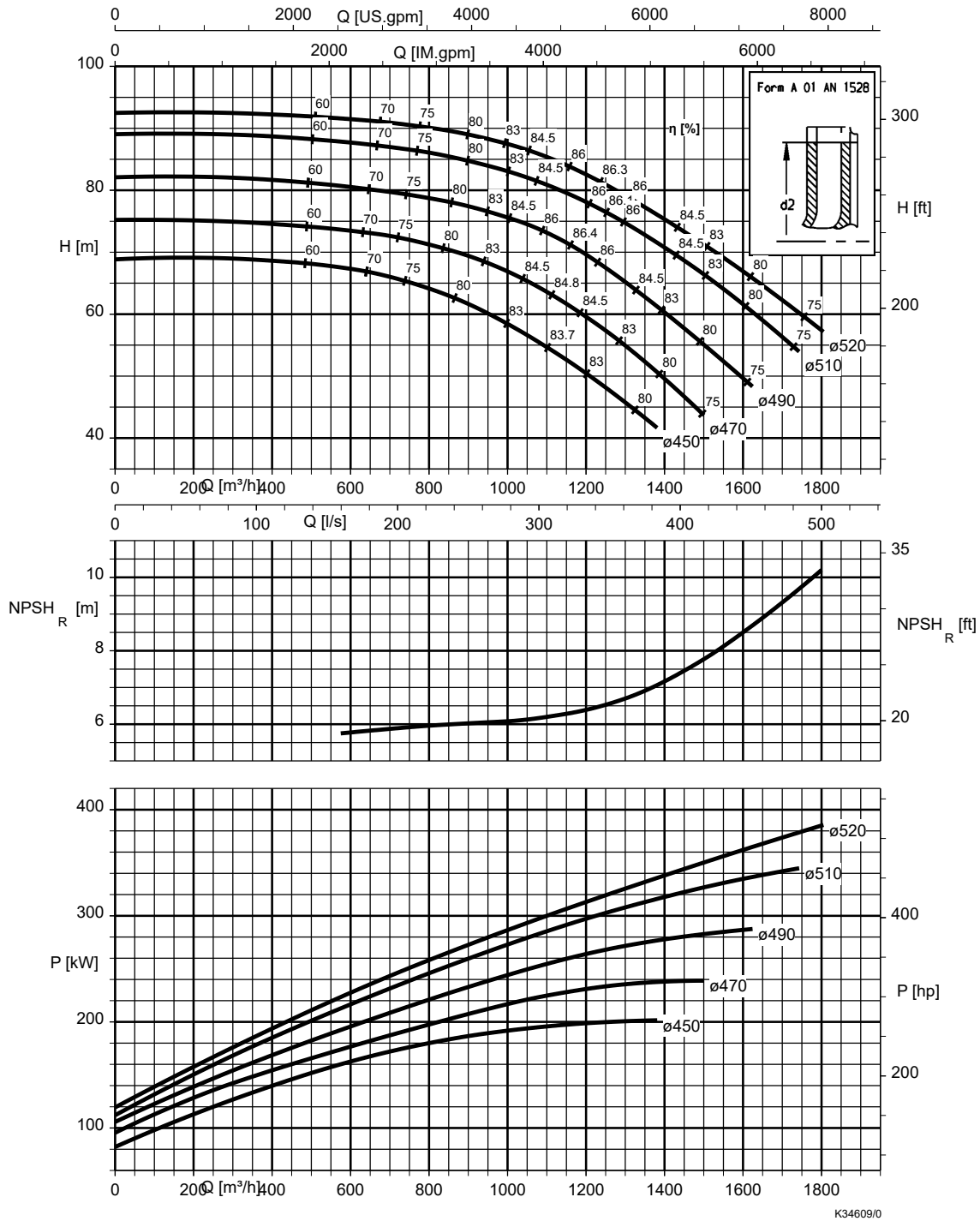


Table 14: Correction coefficients

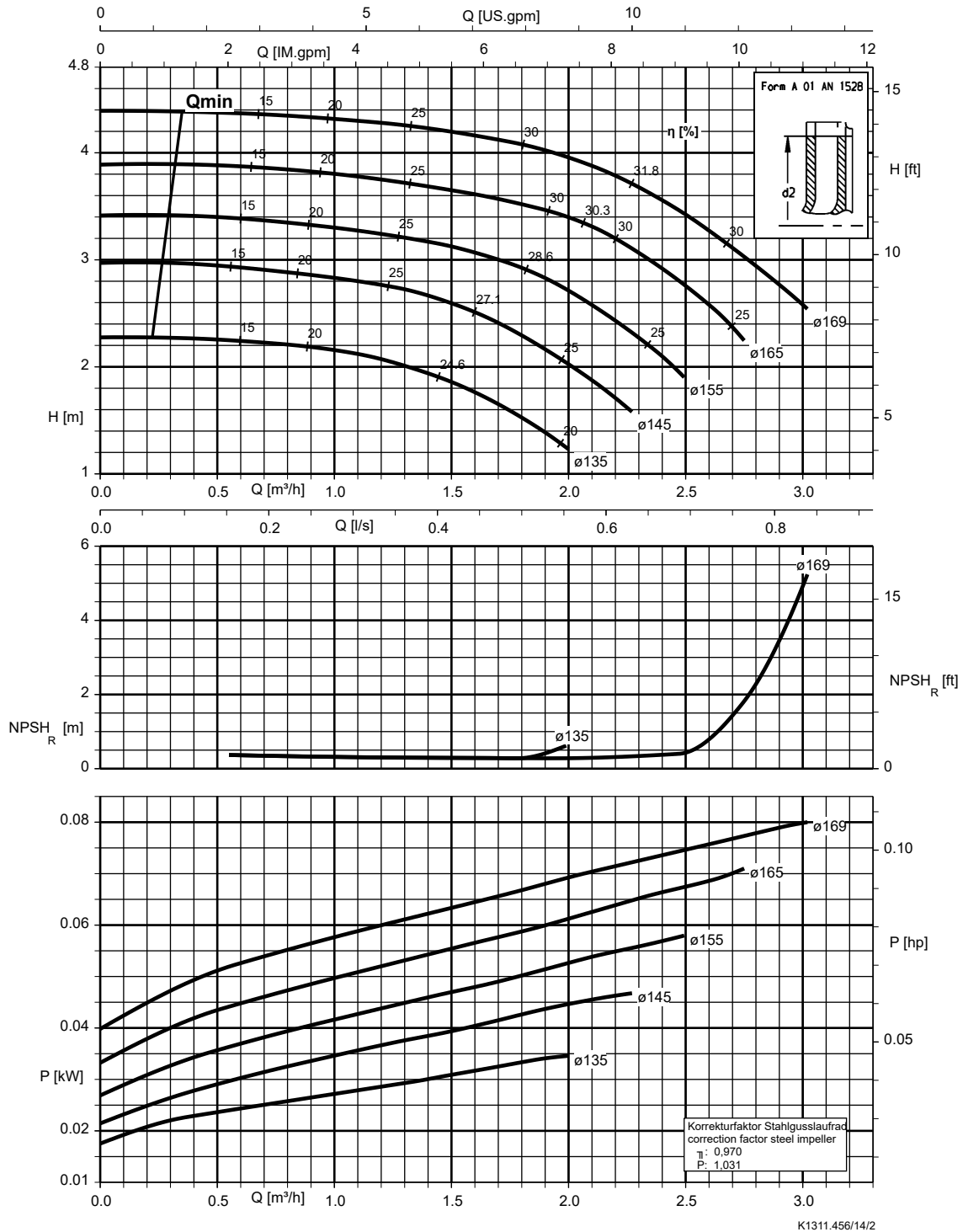
Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	3,2	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	1,5	
1.4408	0,5	

1311.45/11-EN

n = 960 rpm

Etanorm 040-025-160, n = 960 rpm

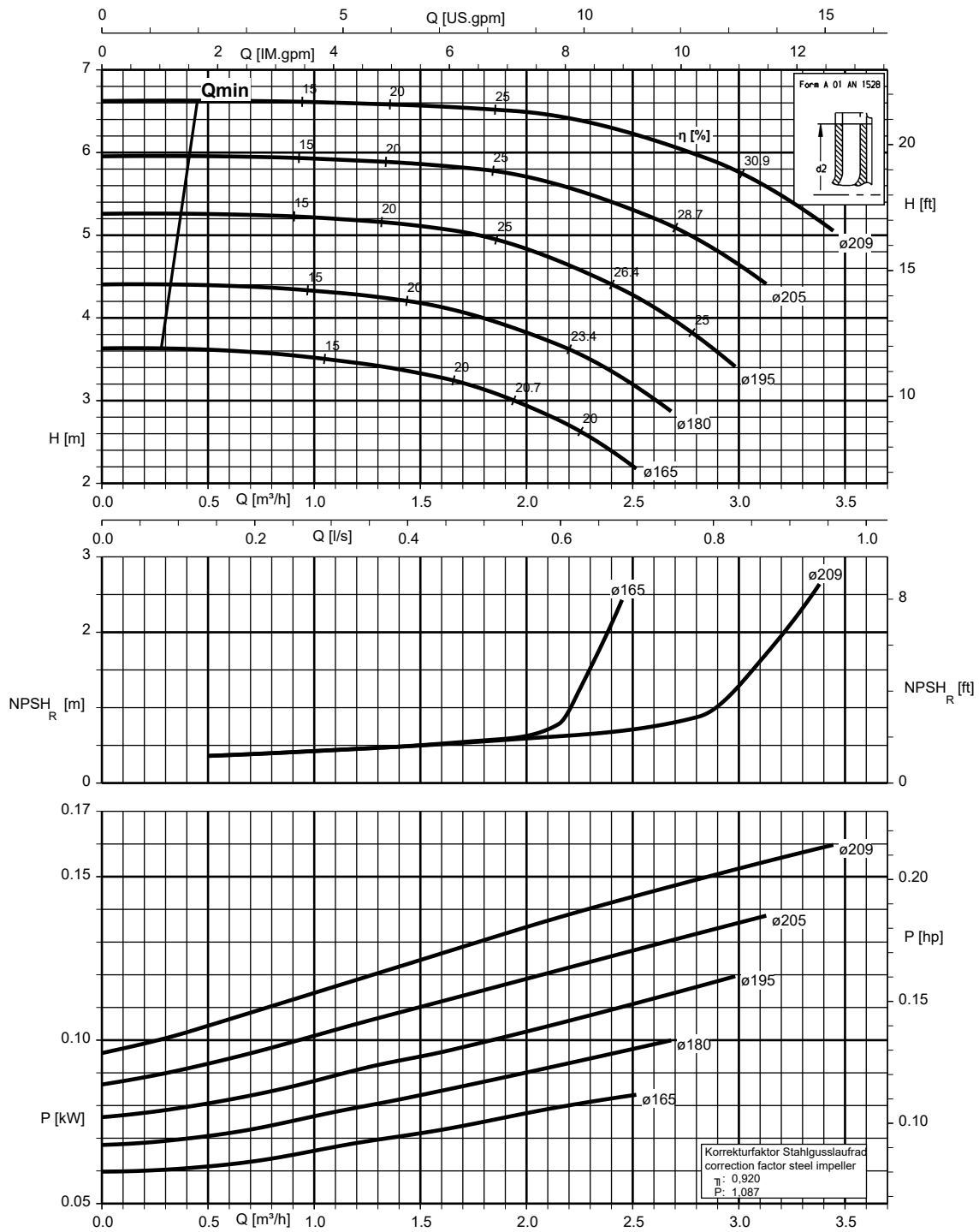
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 040-025-200, n = 960 rpm

Etanorm SYT, Etabloc

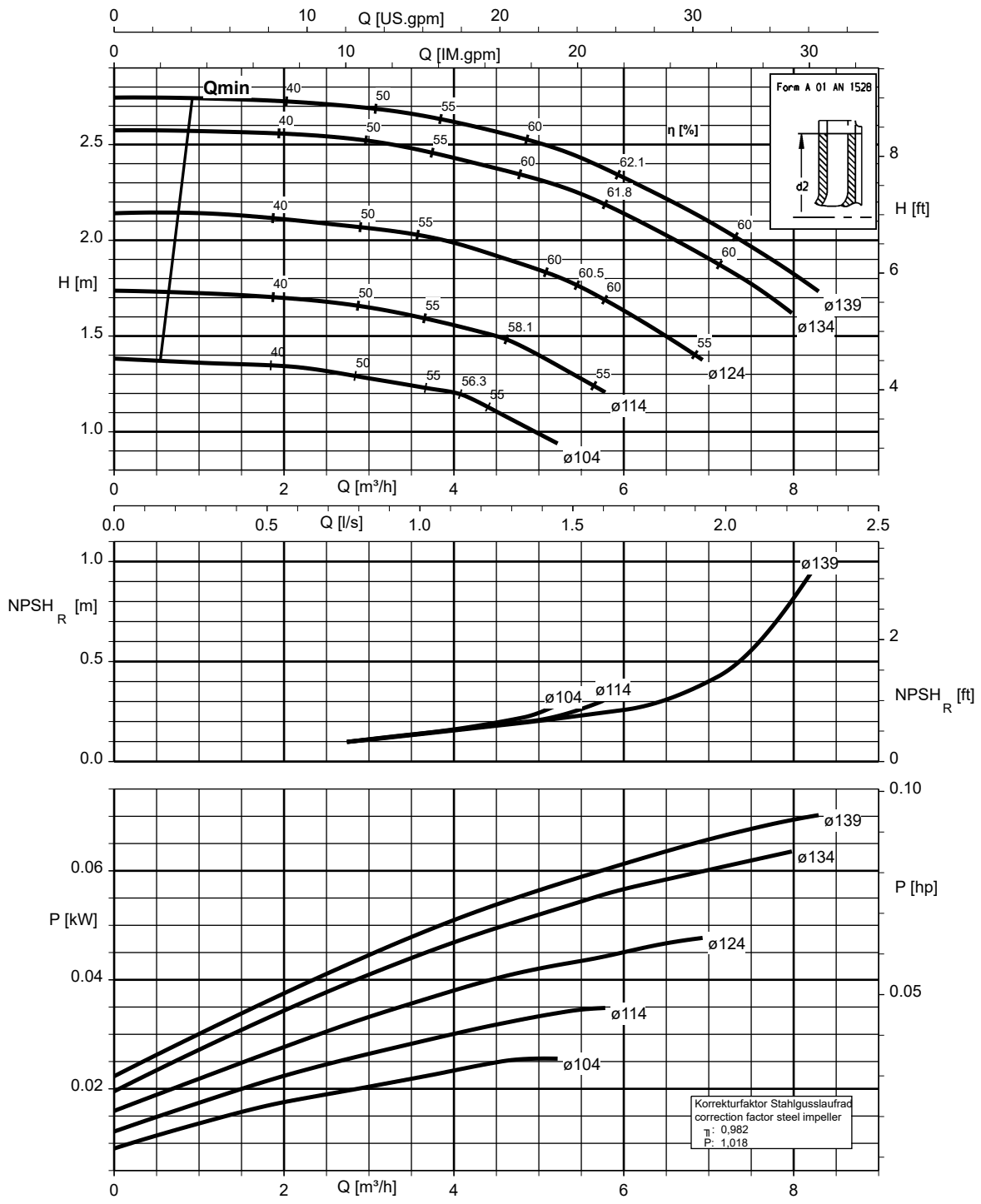


K1311.456/15/2

1311.45/11-EN

Etanorm 050-032-125.1, n = 960 rpm

Etanorm SYT, Etabloc



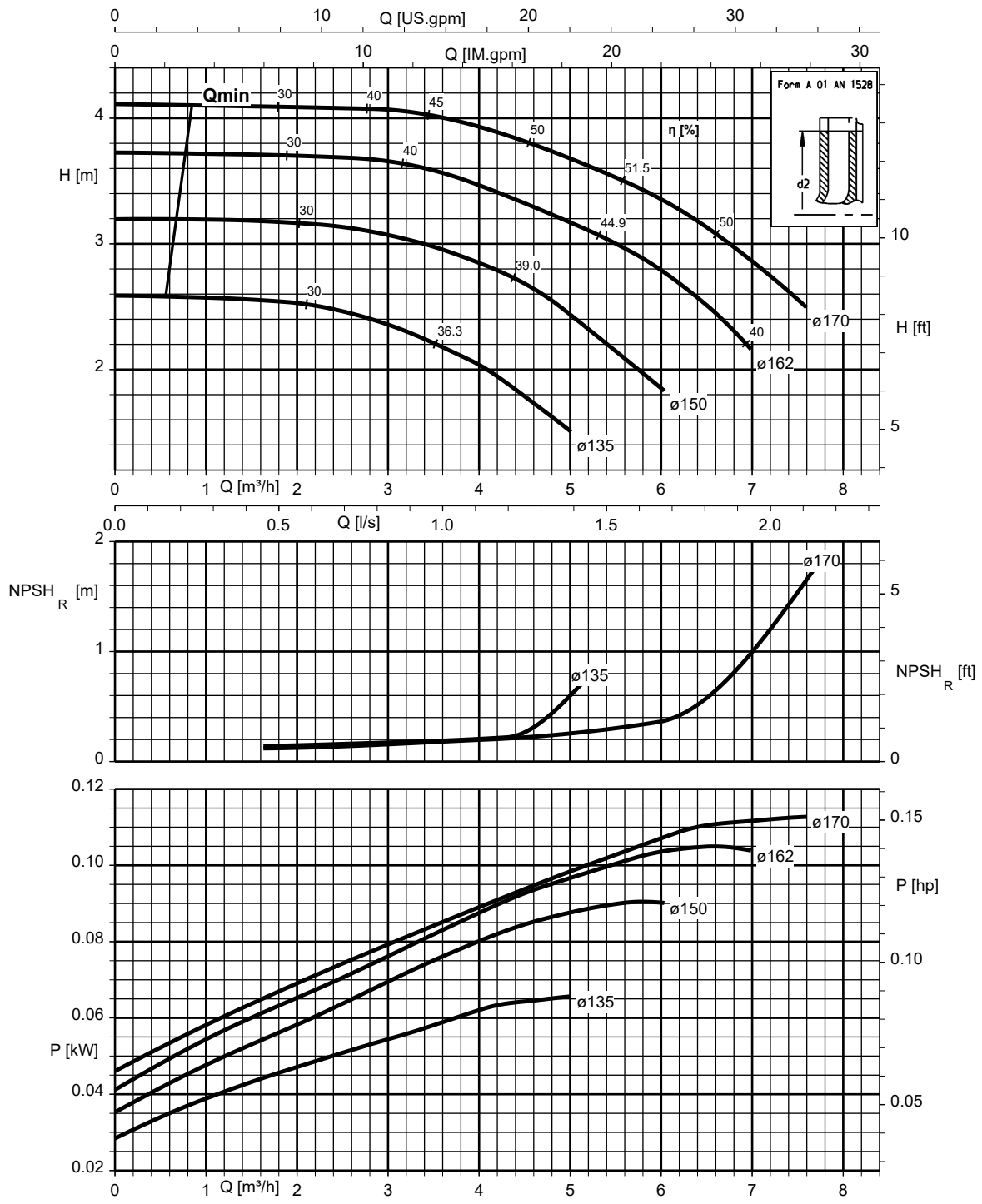
K1311.456/17/2

1311.45/11-EN



Etanorm 050-032-160.1, n = 960 rpm

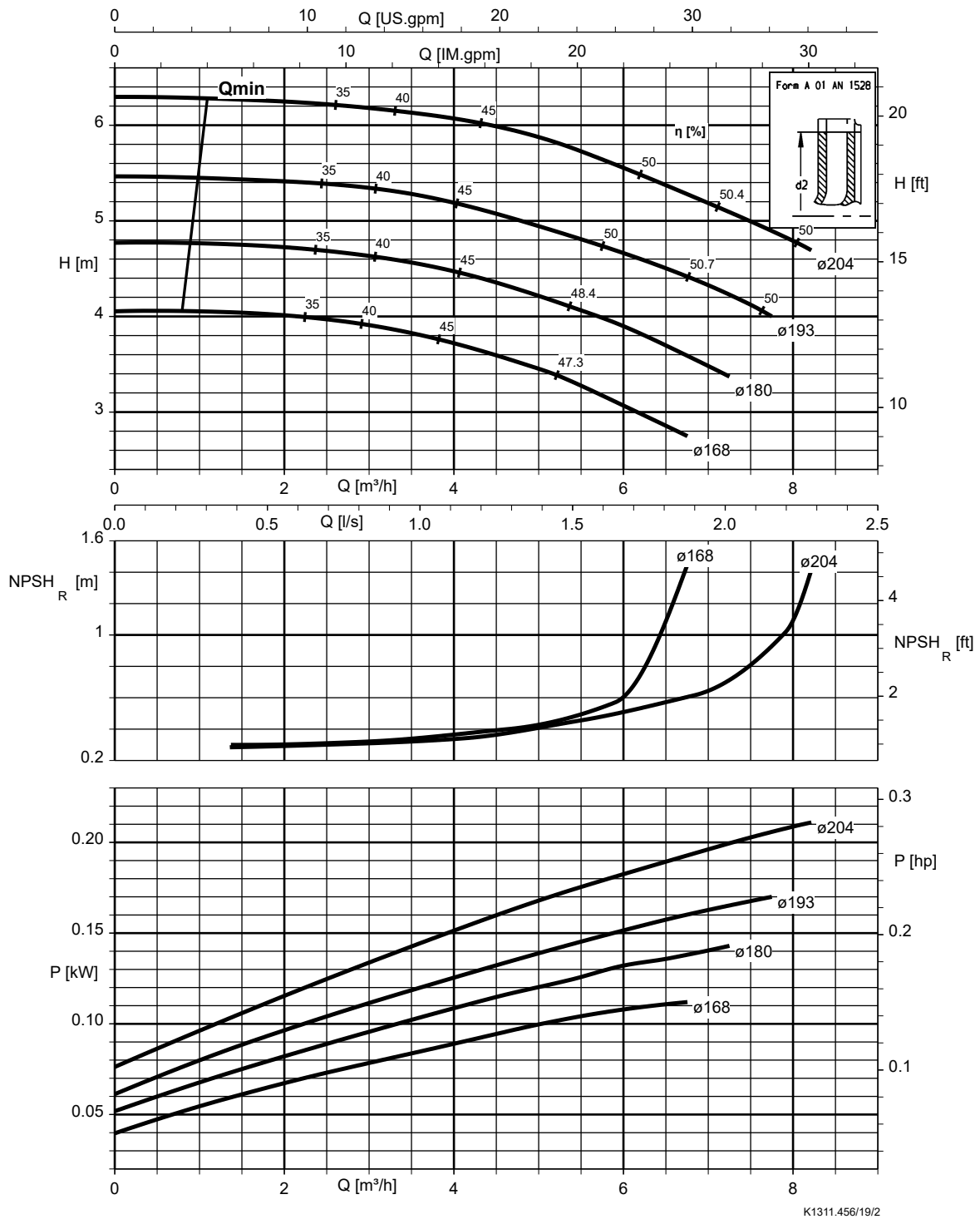
Etanorm SYT, Etabloc



K1311.456/18/2

Etanorm 050-032-200.1, n = 960 rpm

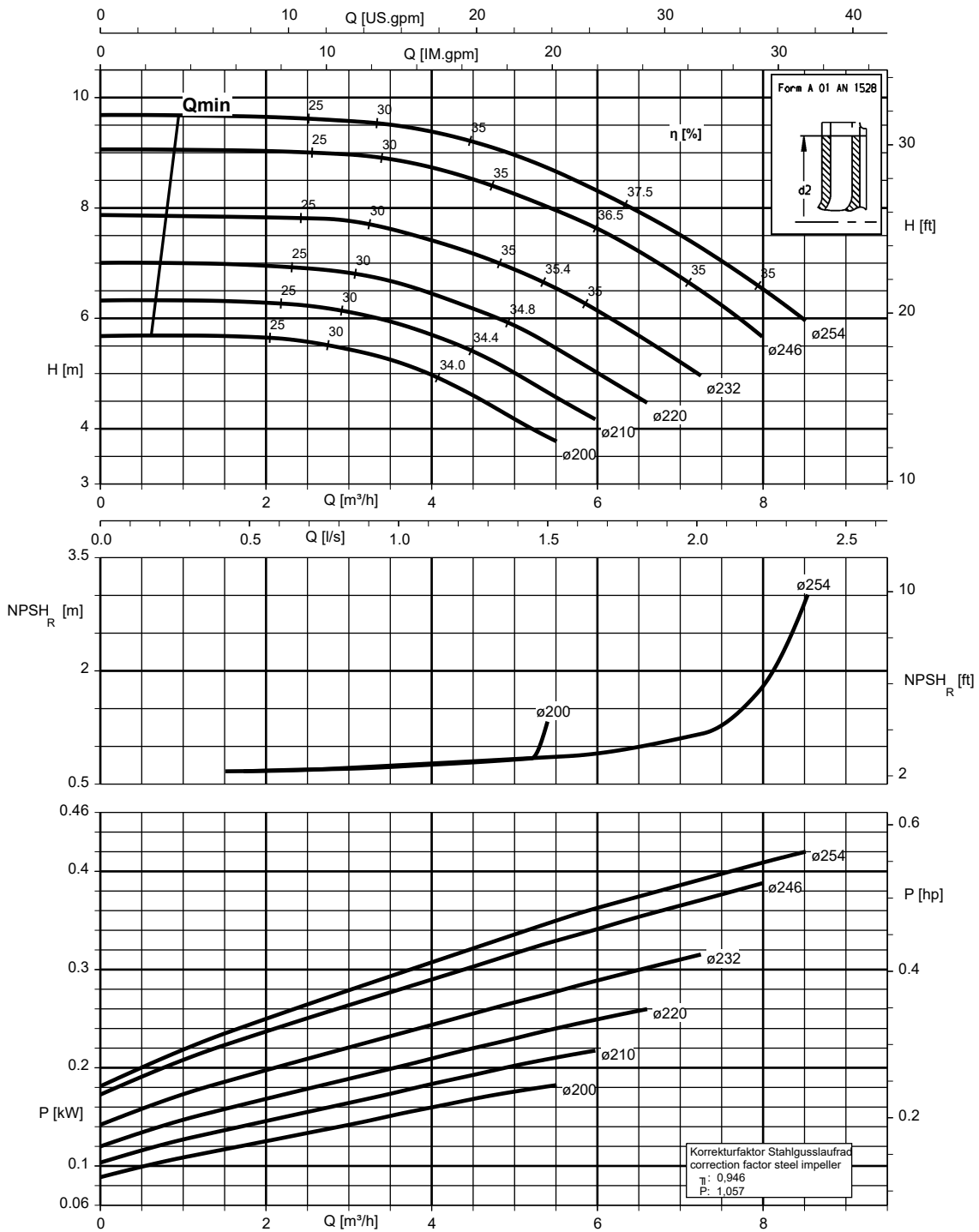
Etanorm SYT, Etabloc



K1311.456/19/2

Etanorm 050-032-250.1, n = 960 rpm

Etabloc

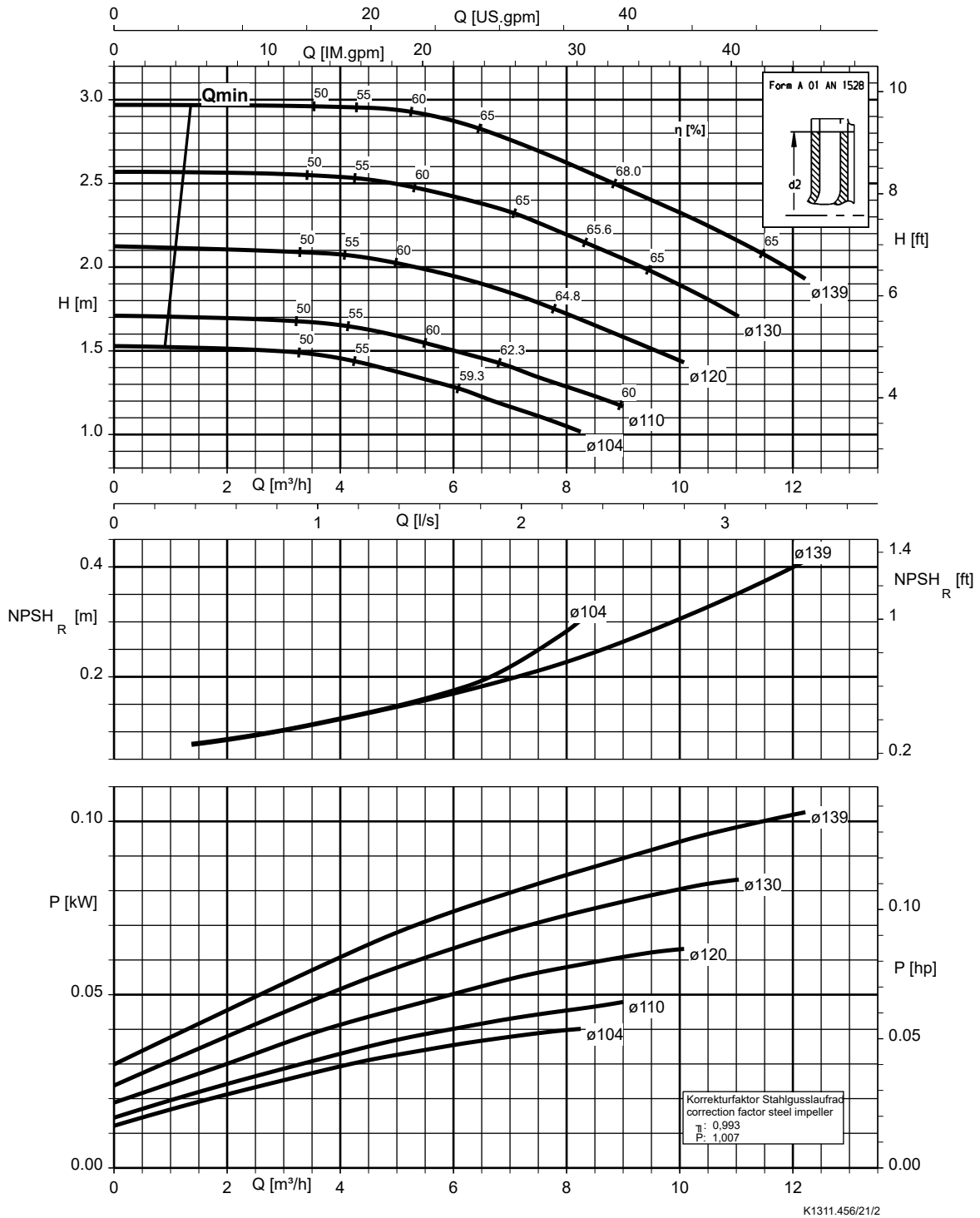


K1311.456/20/2

1311.45/11-EN

Etanorm 050-032-125, n = 960 rpm

Etabloc

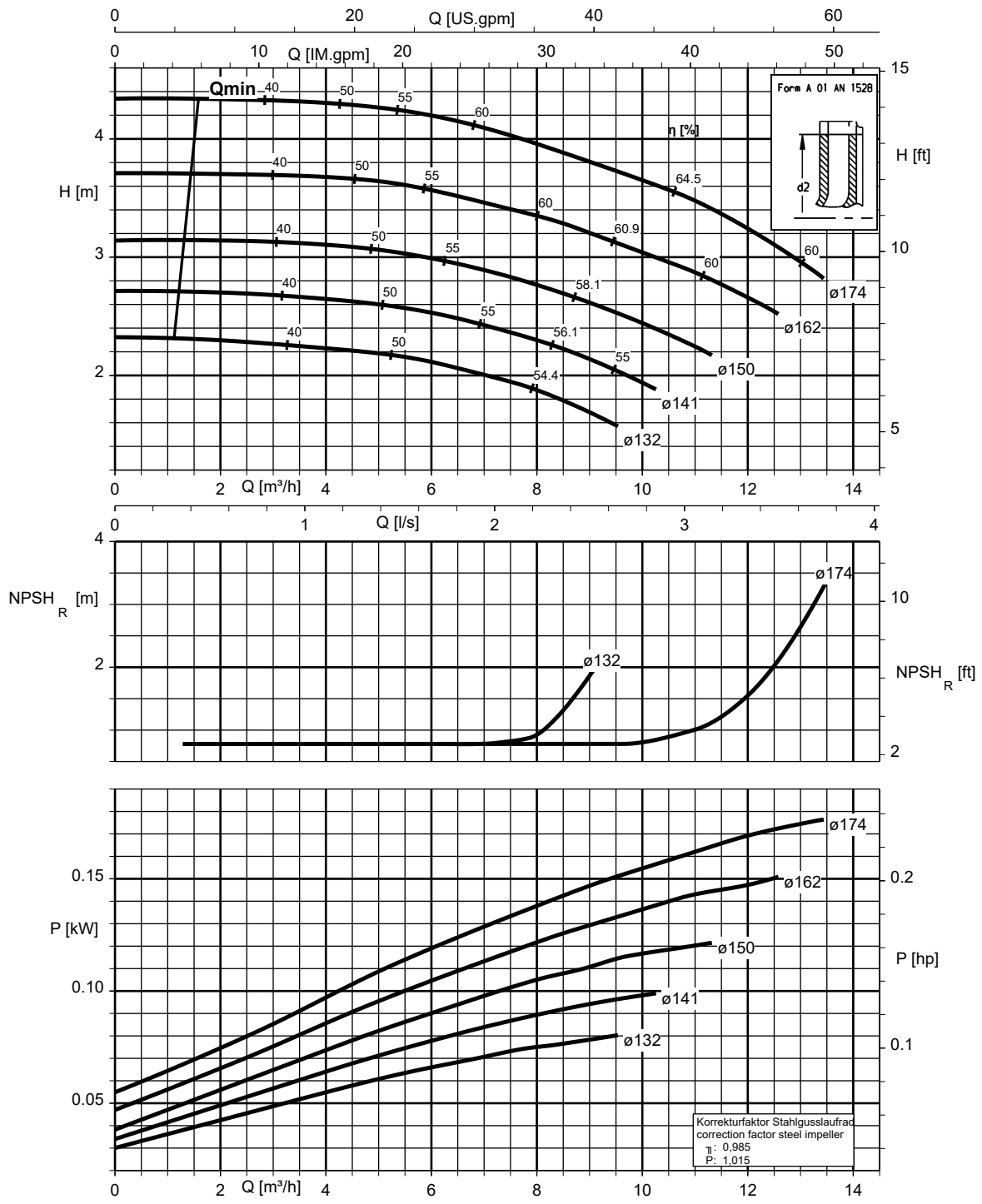


K1311.456/21/2

1311.45/11-EN

Etanorm 050-032-160, n = 960 rpm

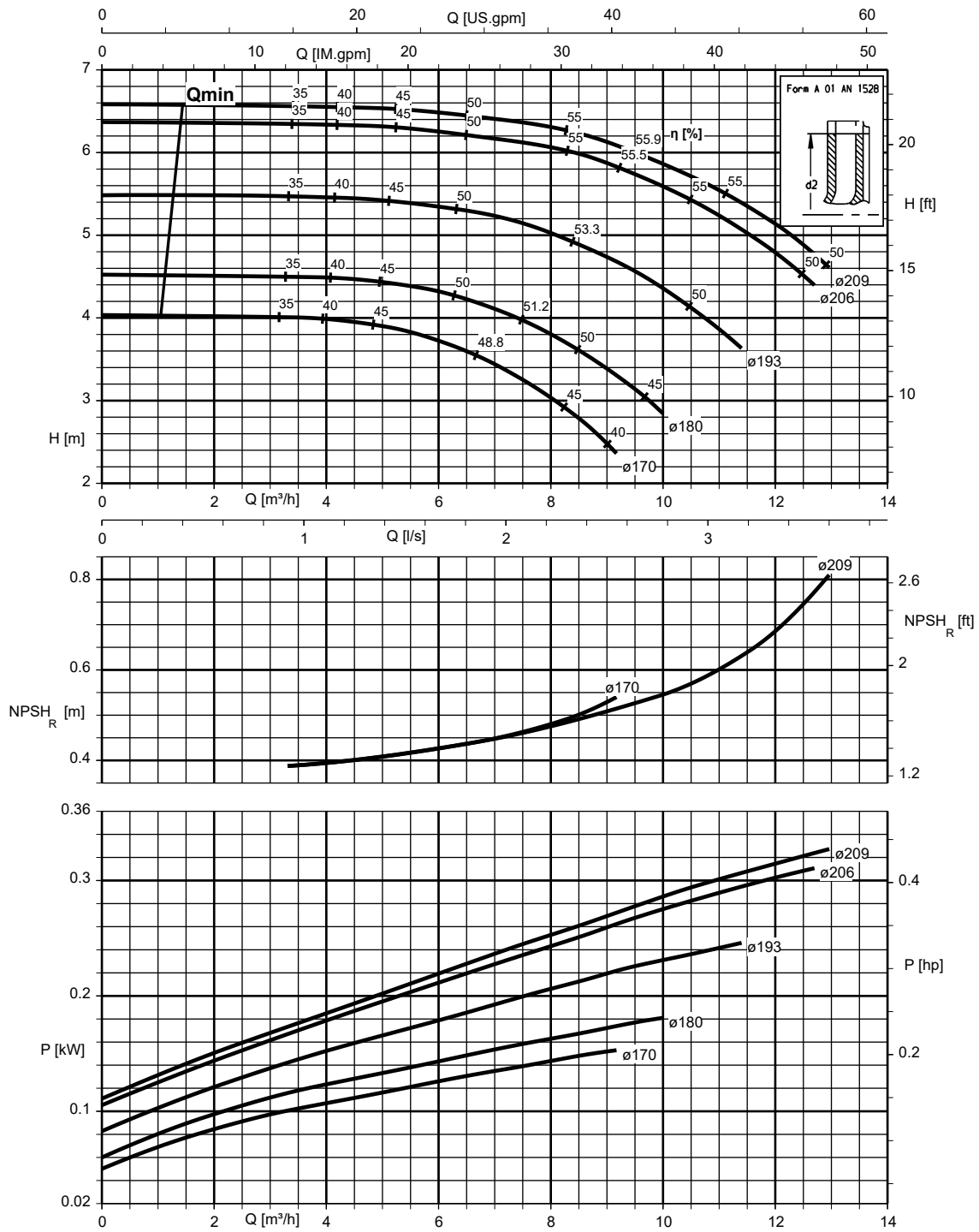
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 050-032-200, n = 960 rpm

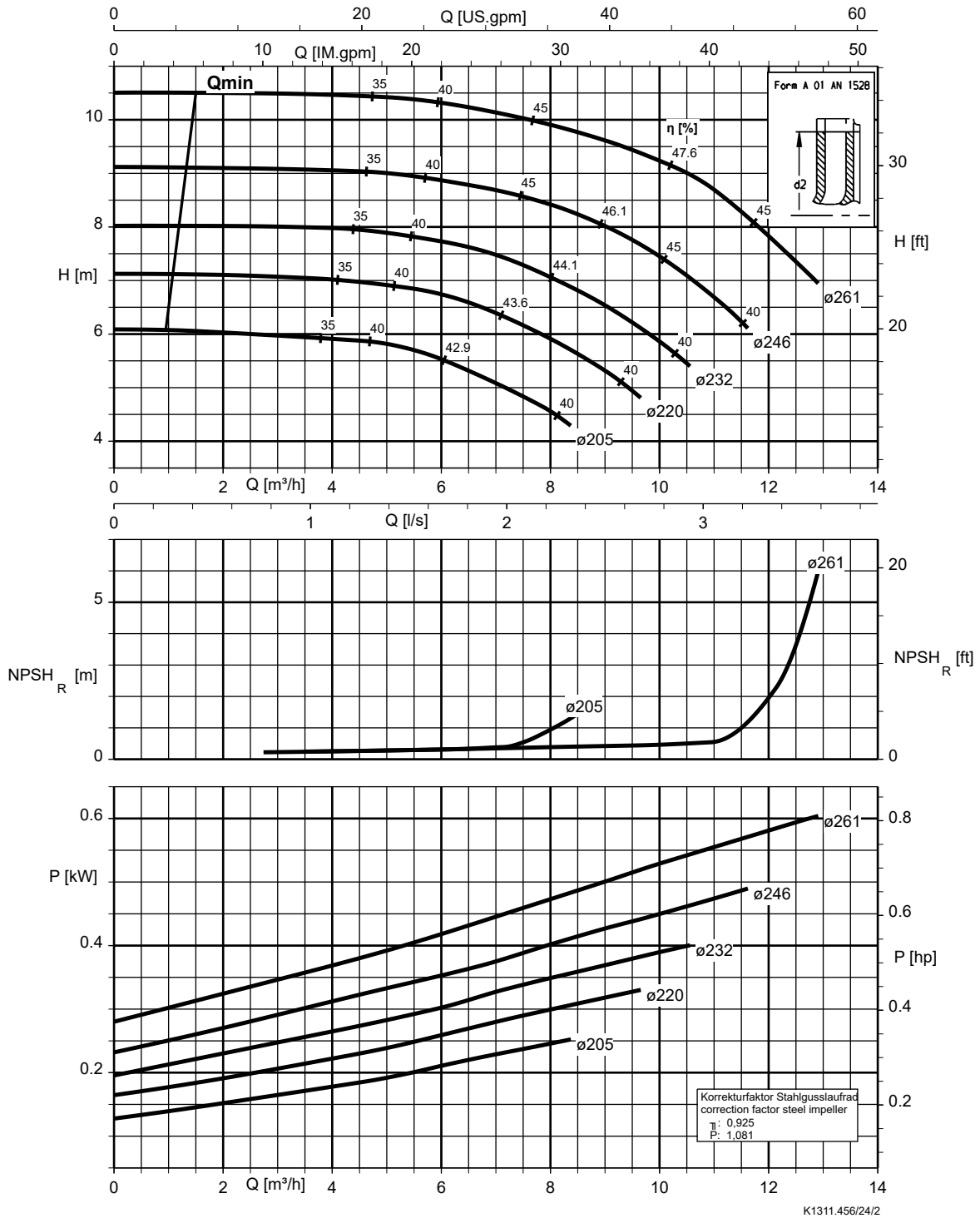
Etanorm SYT, Etabloc



K1311.456/23/1

Etanorm 050-032-250, n = 960 rpm

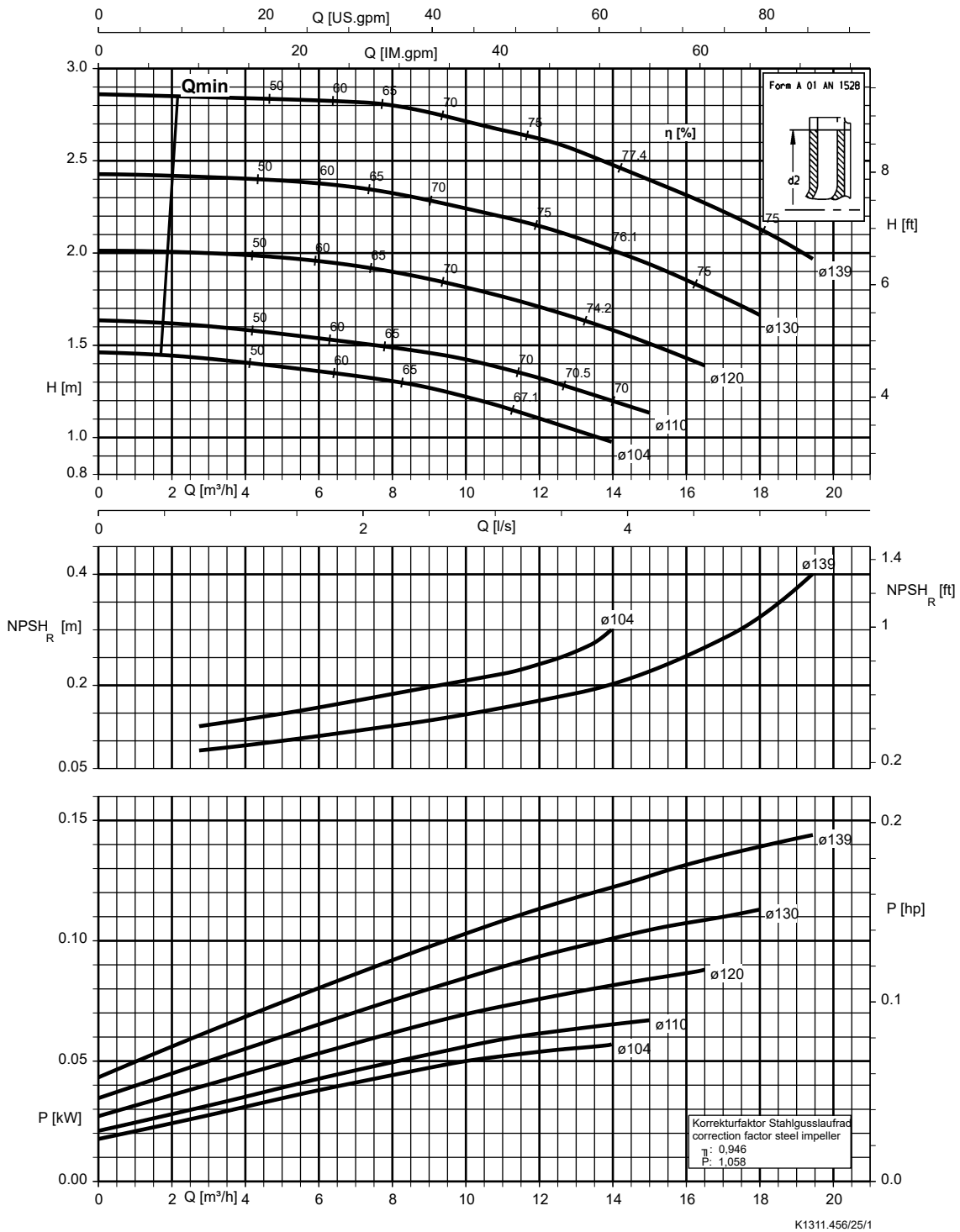
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 065-040-125, n = 960 rpm

Etabloc

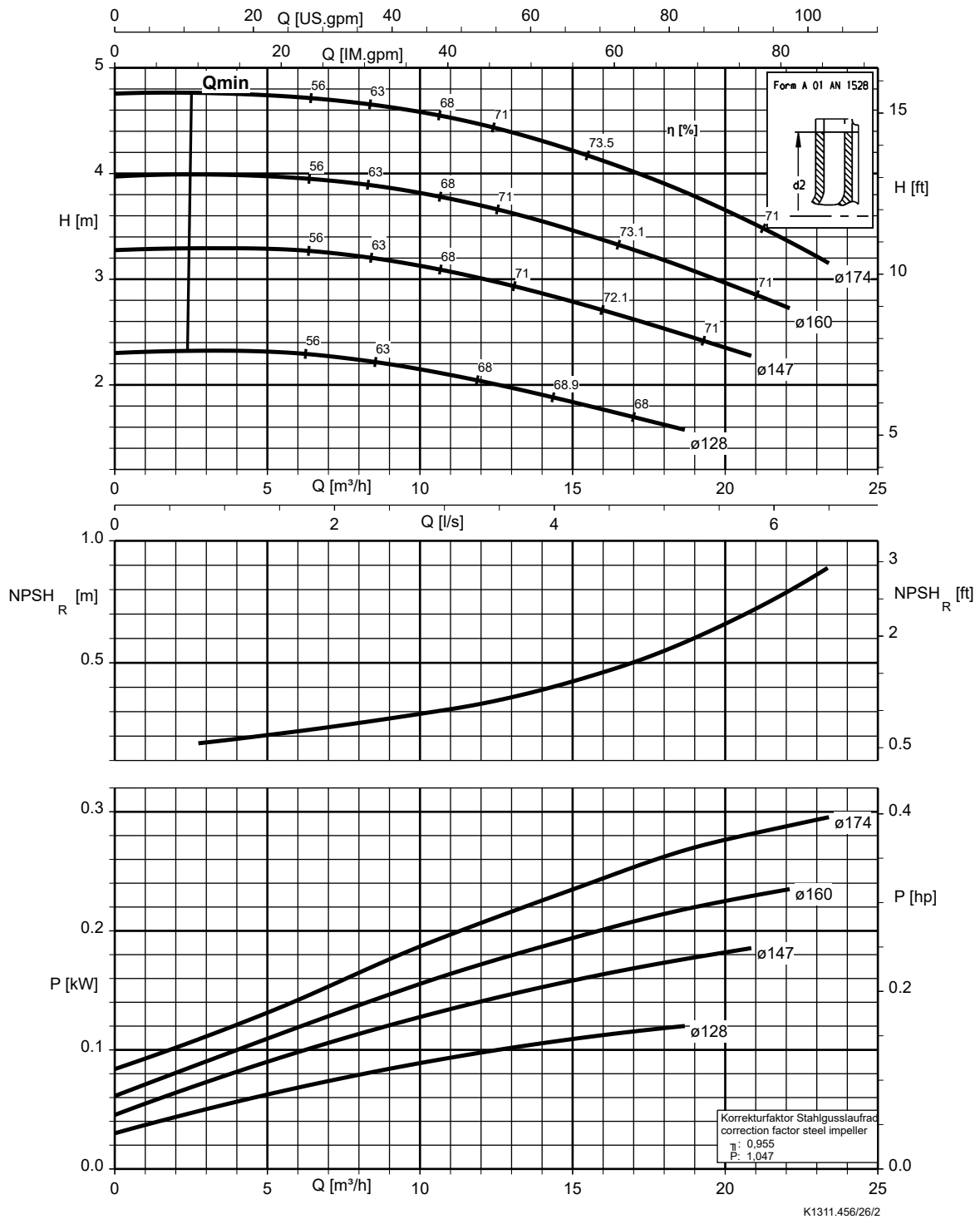


1311.45/11-EN



Etanorm 065-040-160, n = 960 rpm

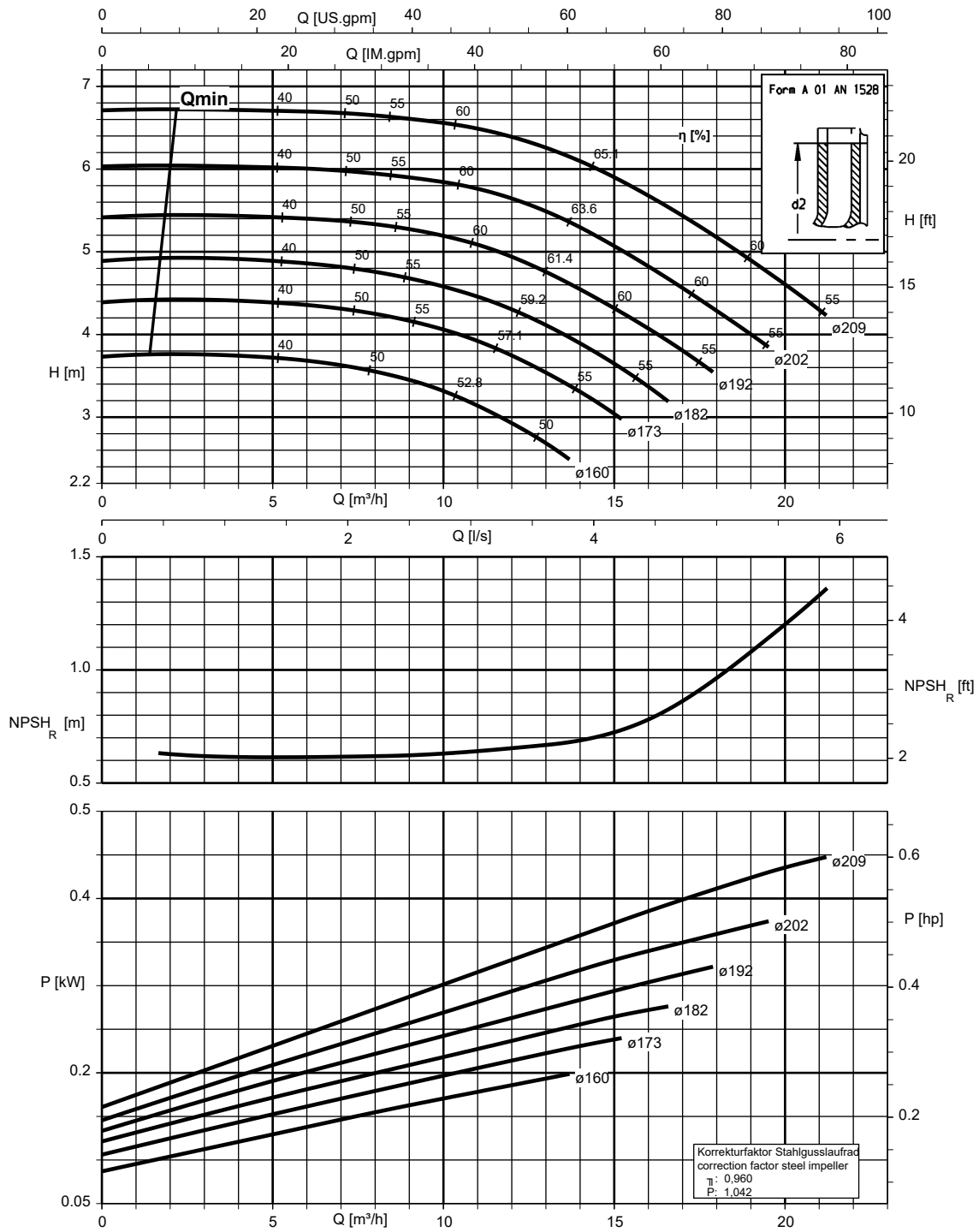
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 065-040-200, n = 960 rpm

Etanorm SYT, Etabloc

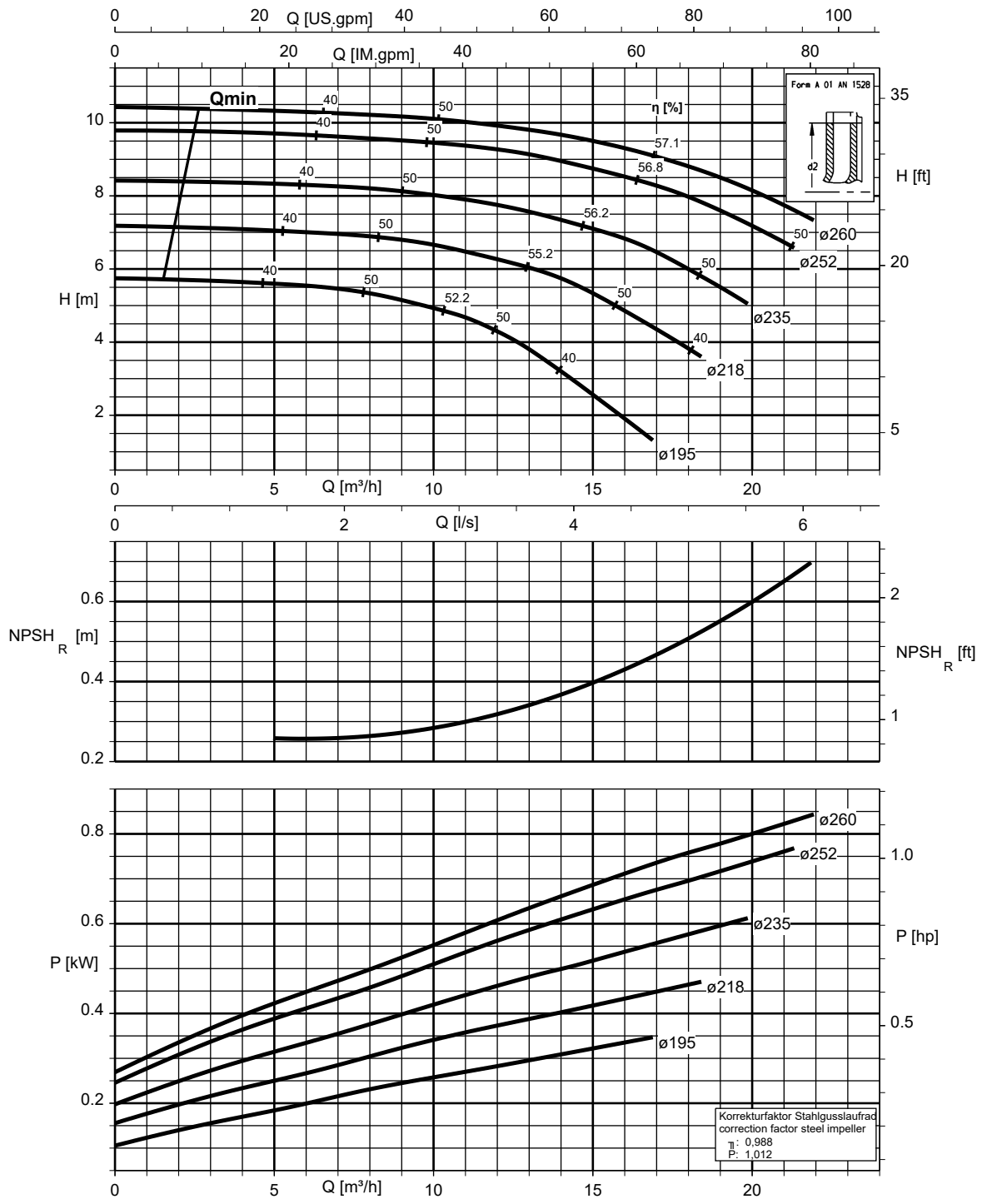


K1311.456/27/1

1311.45/11-EN

Etanorm 065-040-250, n = 960 rpm

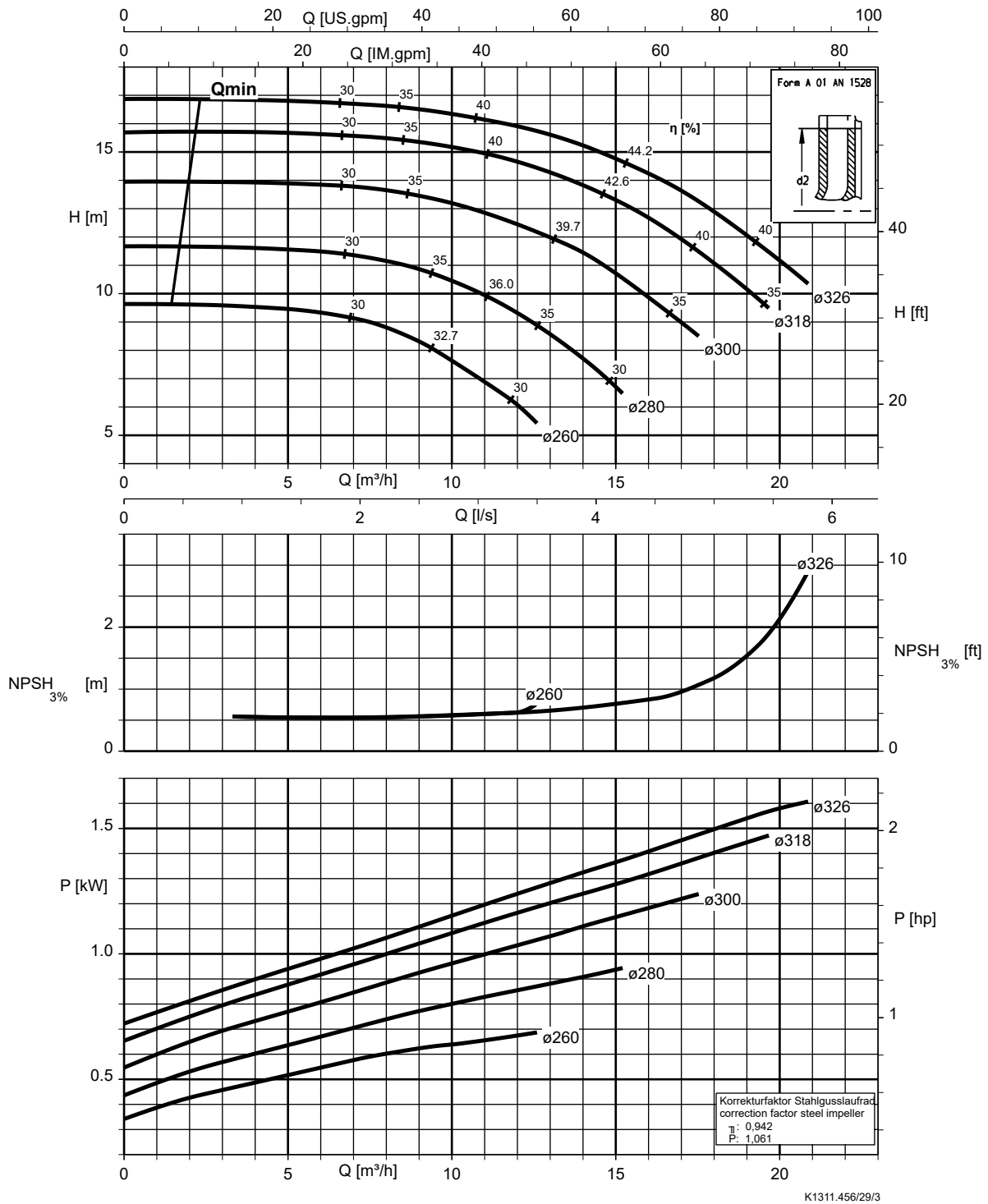
Etanorm SYT, Etabloc



K1311.456/28/2

Etanorm 065-040-315, n = 960 rpm

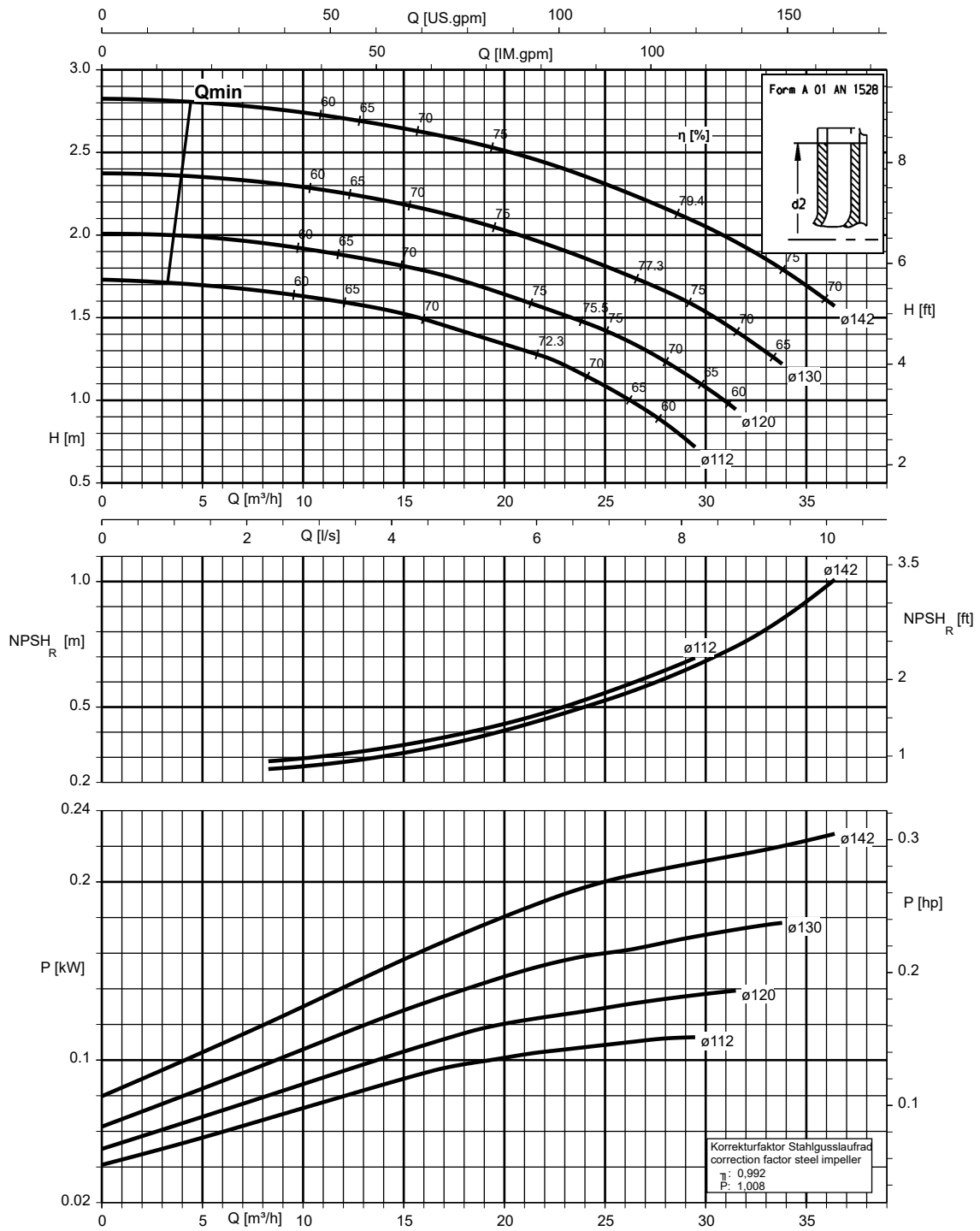
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 065-050-125, n = 960 rpm

Etabloc

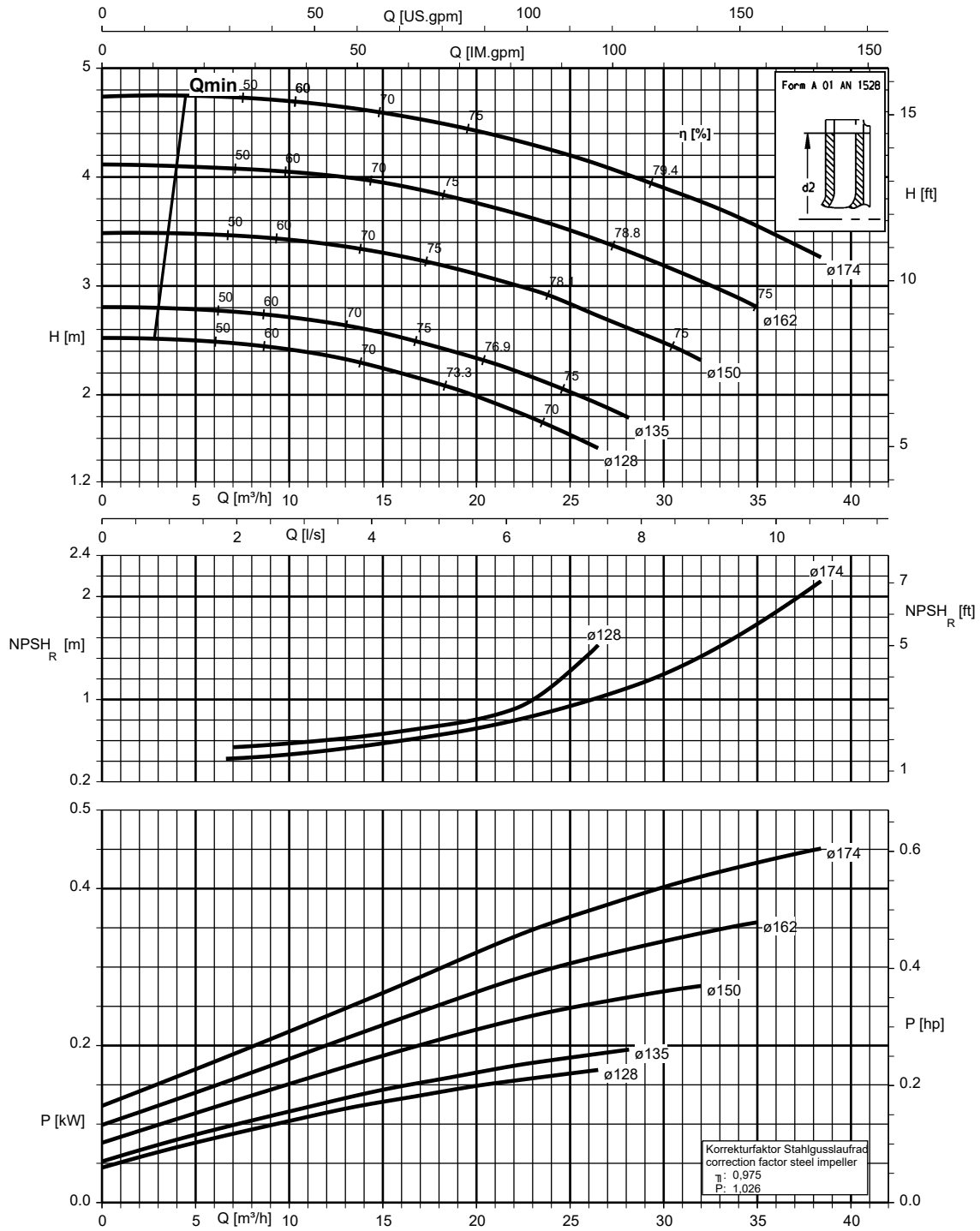


K1311.456/30/1

1311.45/11-EN

Etanorm 065-050-160, n = 960 rpm

Etanorm SYT, Etabloc

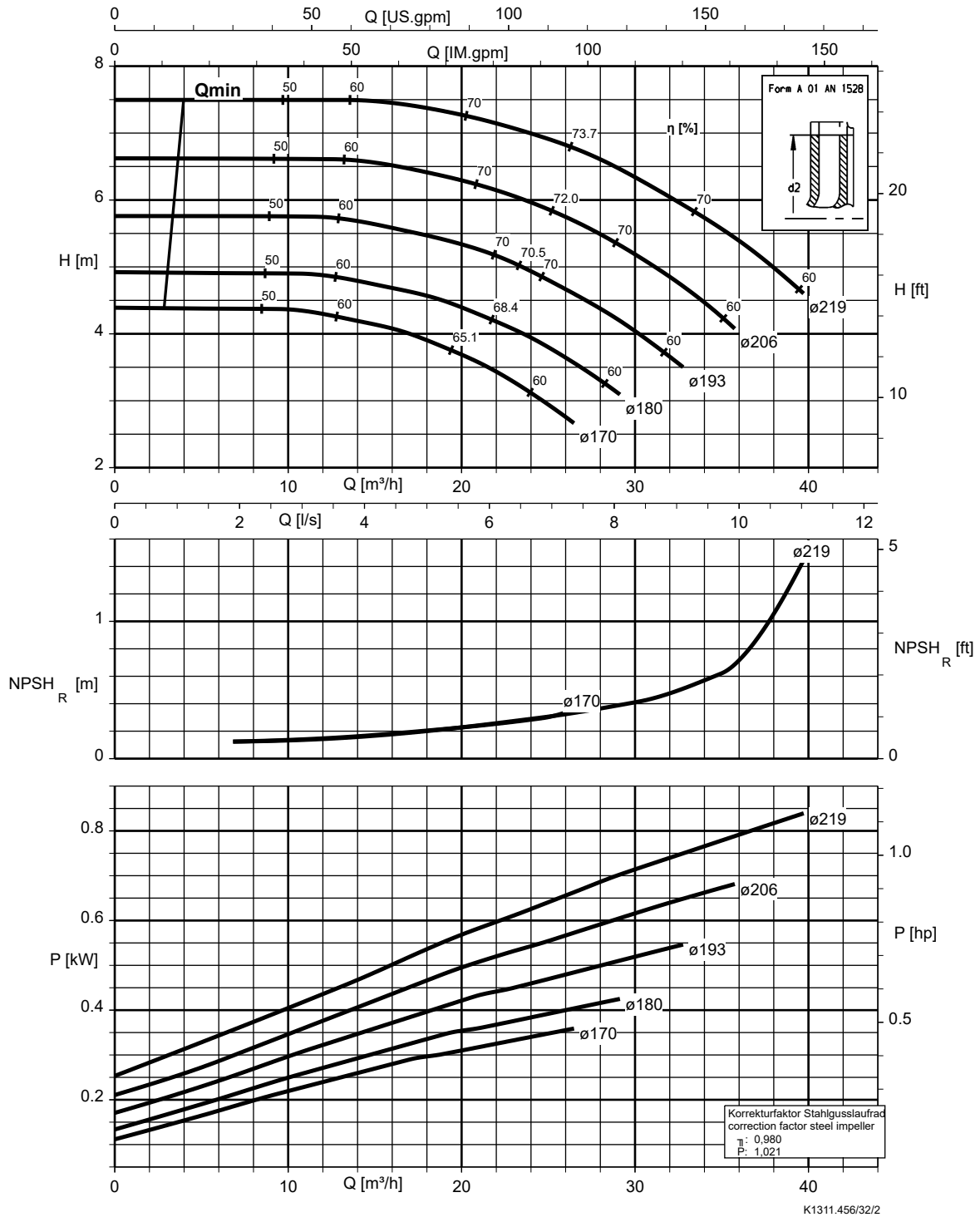


K1311.456/31/1

1311.45/11-EN

Etanorm 065-050-200, n = 960 rpm

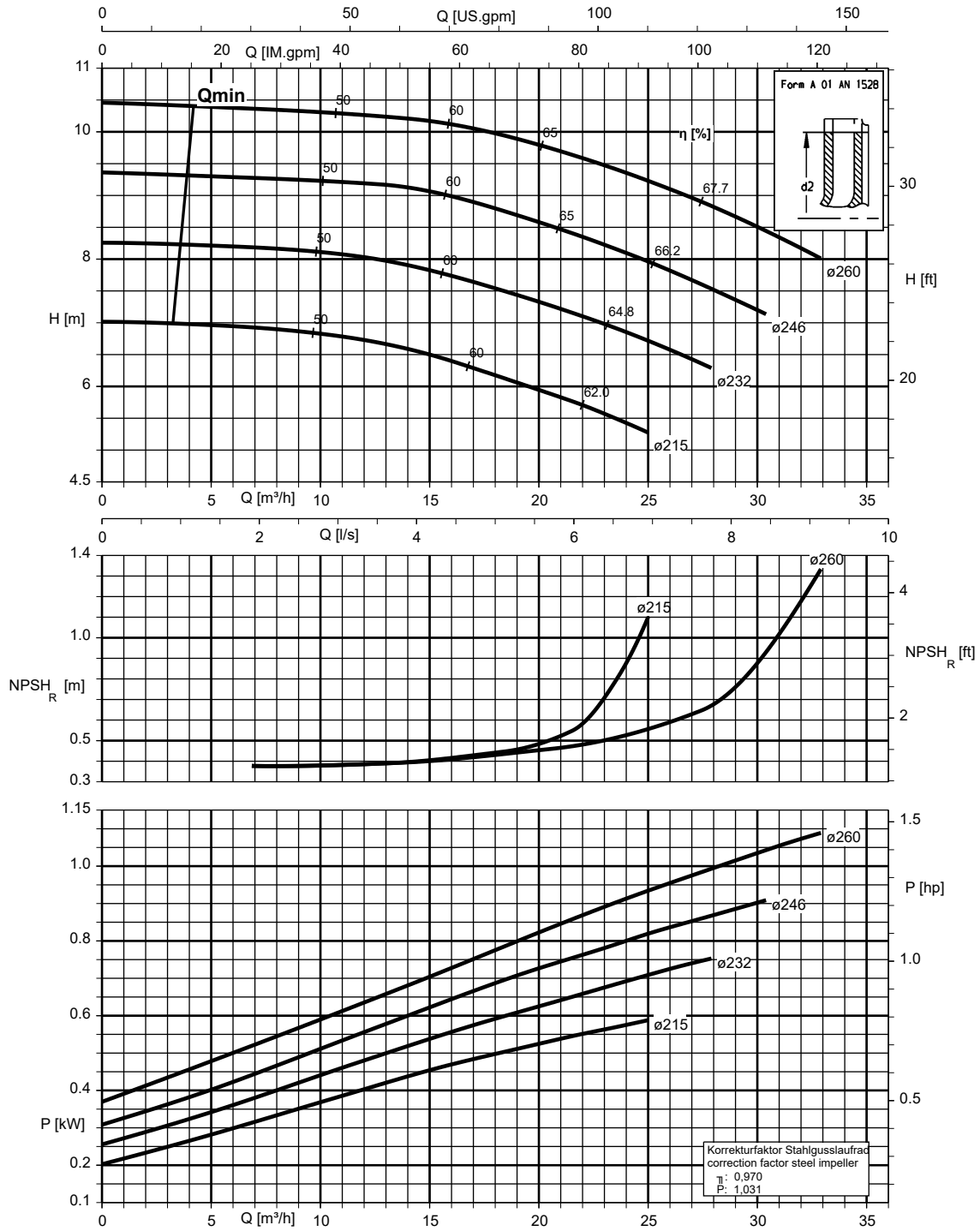
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 065-050-250, n = 960 rpm

Etanorm SYT, Etabloc



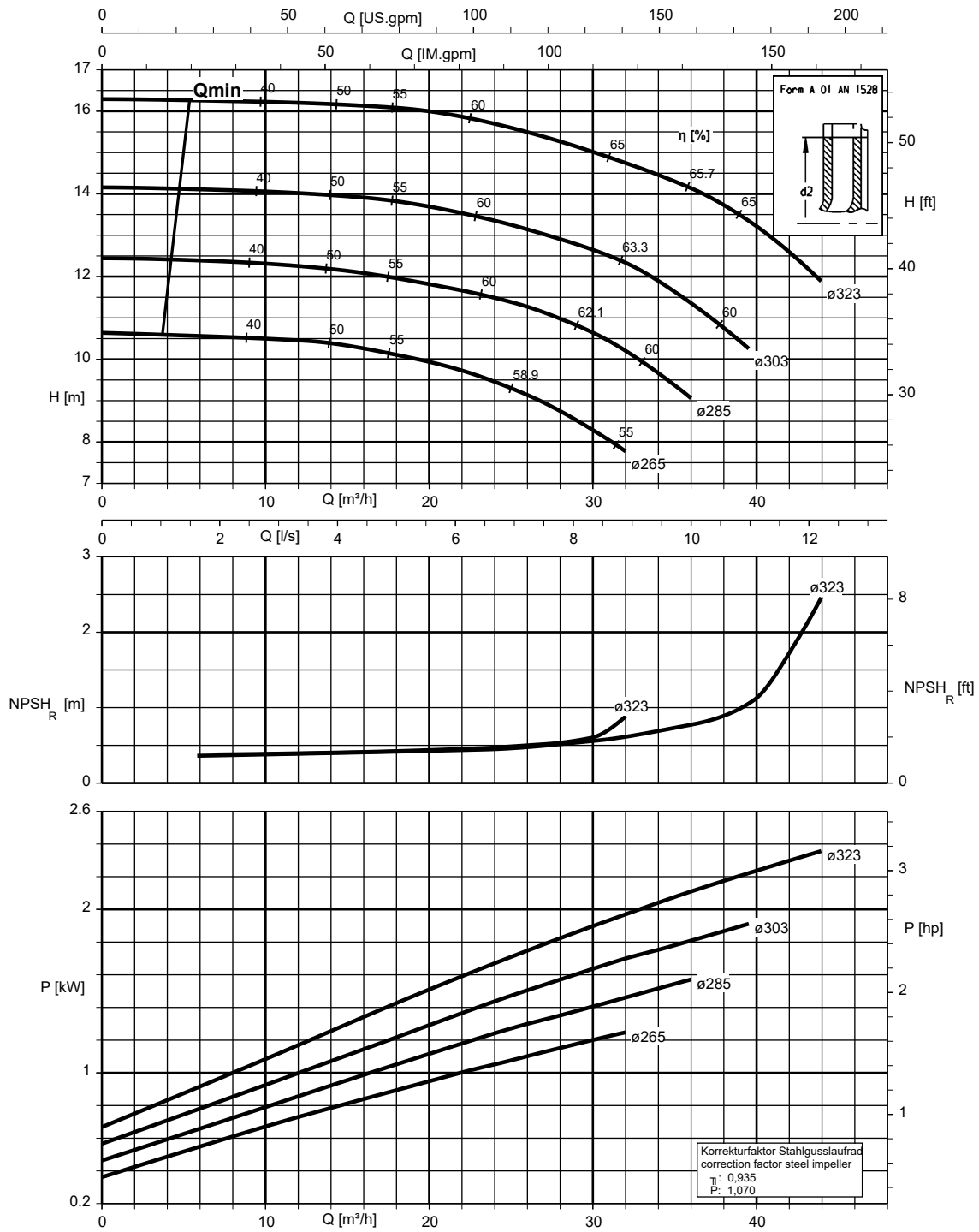
K1311.456/33/1

1311.45/11-EN



Etanorm 065-050-315, n = 960 rpm

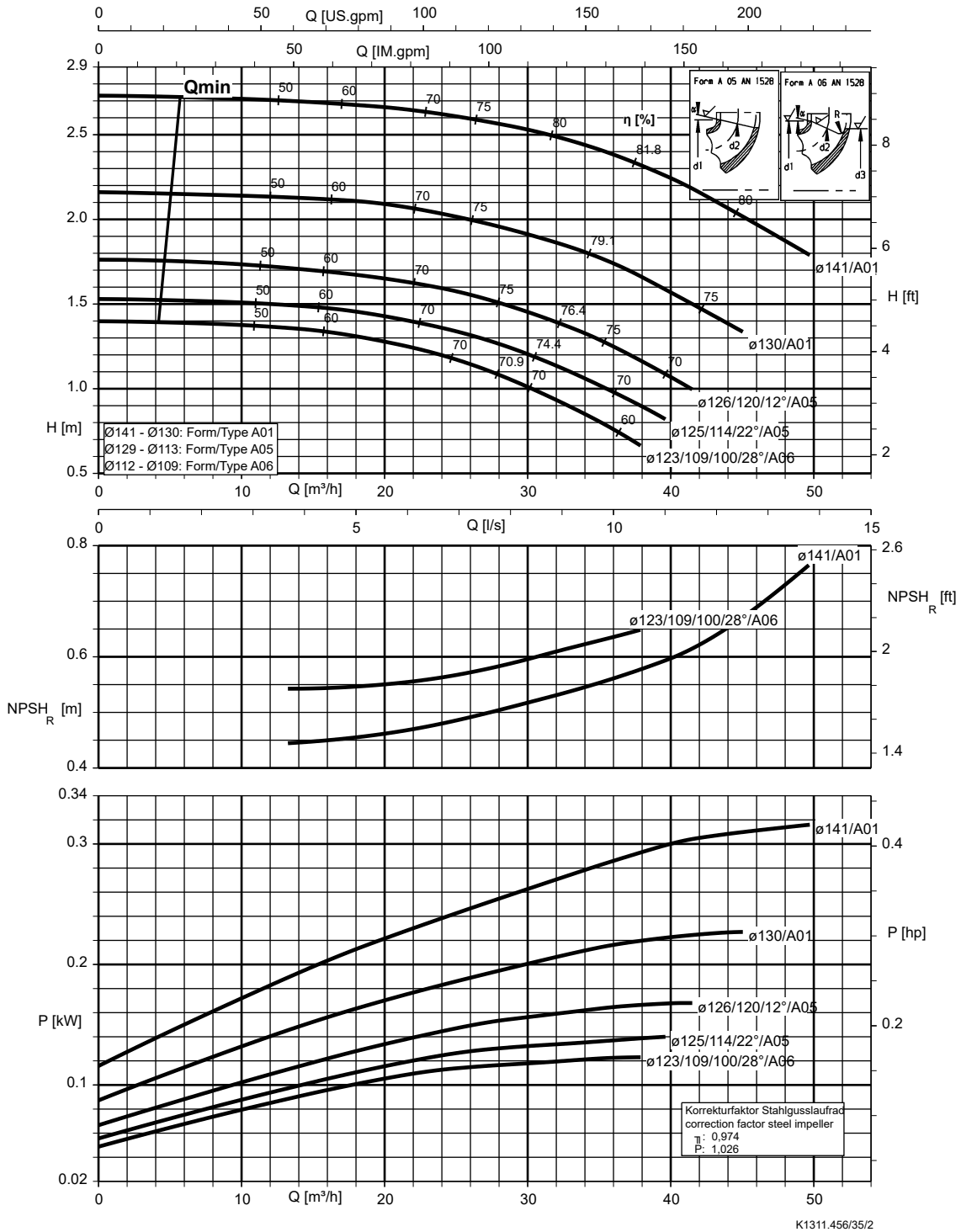
Etanorm SYT, Etabloc



K1311.456/34/2

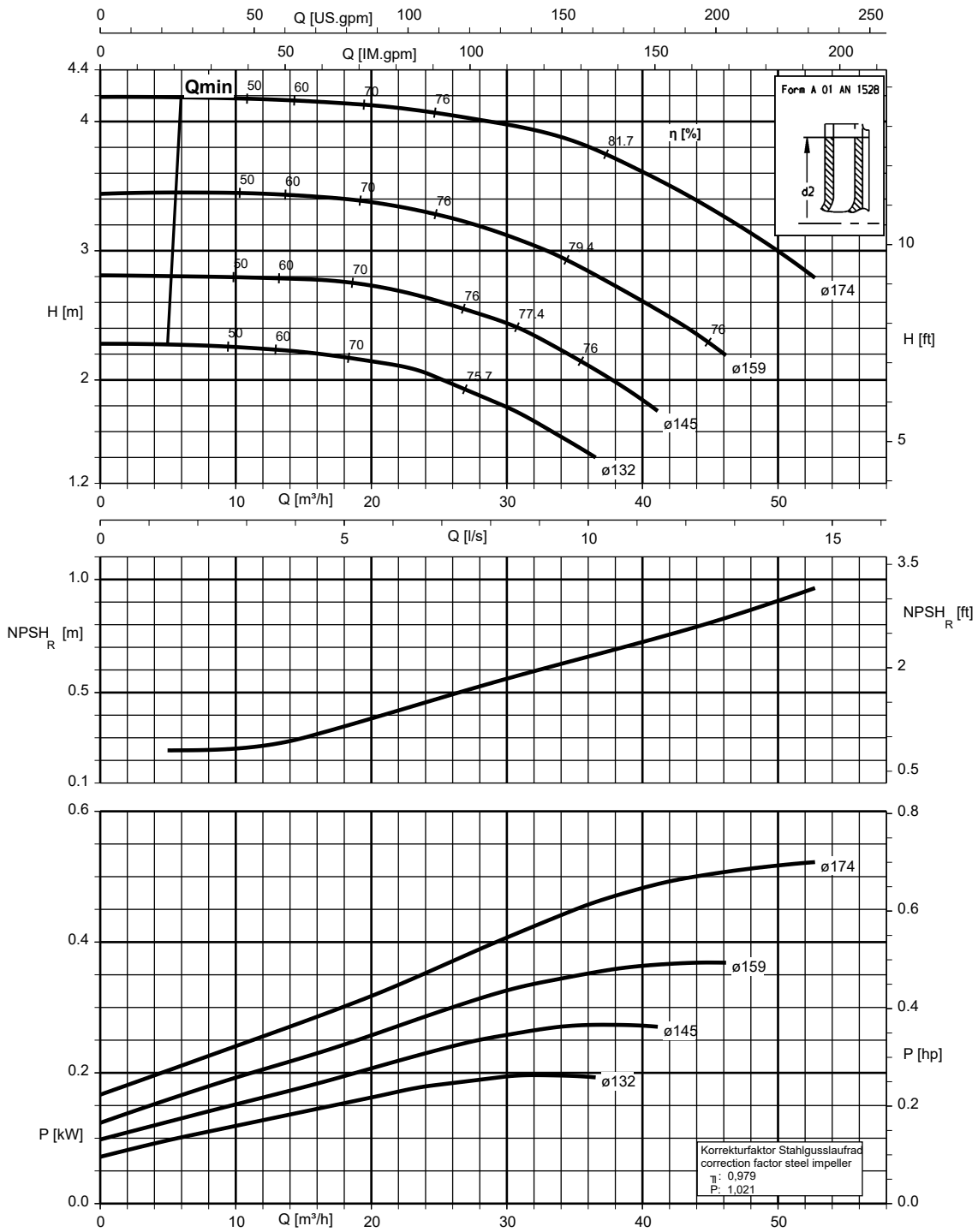
Etanorm 080-065-125, n = 960 rpm

Etabloc



Etanorm 080-065-160, n = 960 rpm

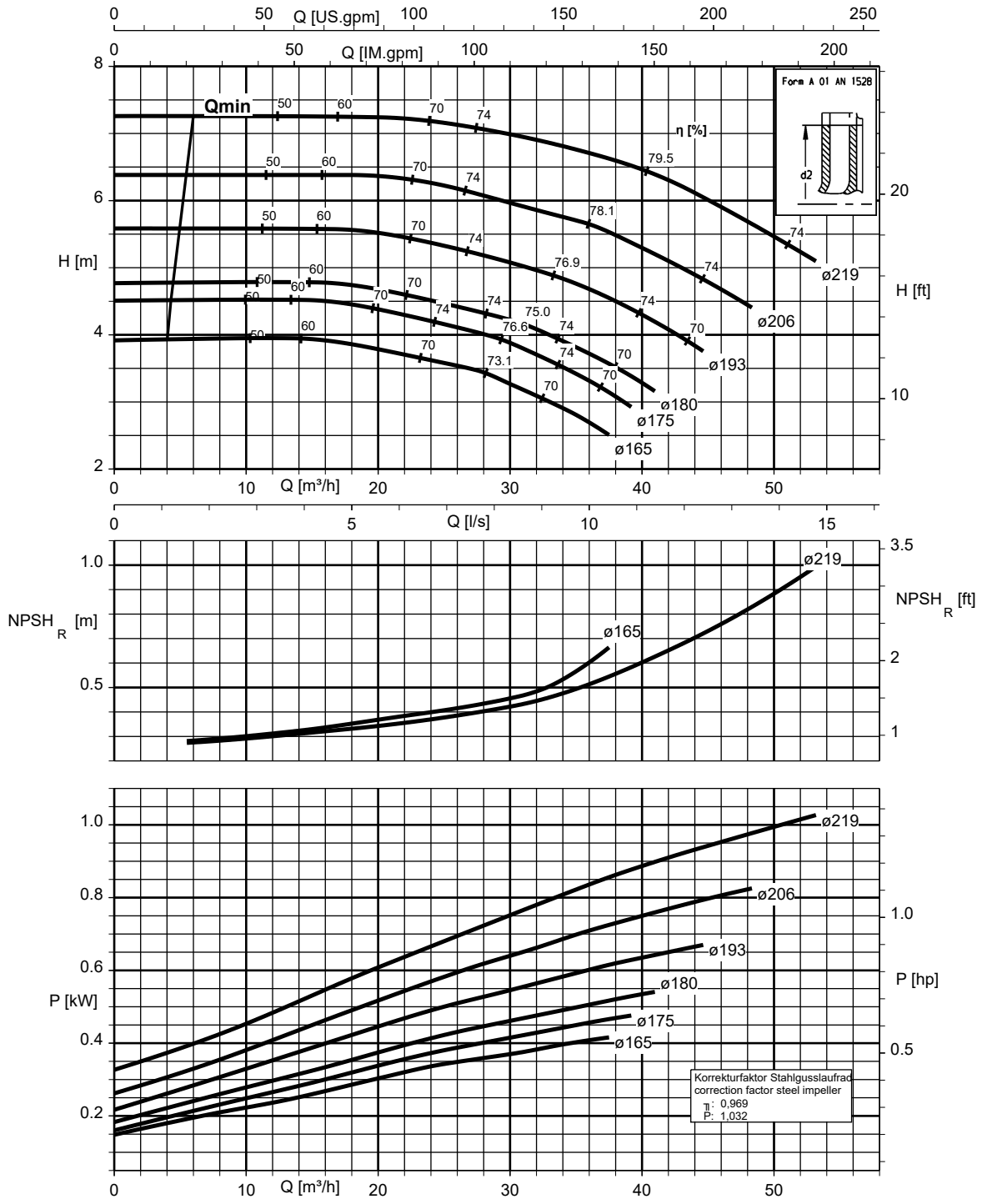
Etanorm SYT, Etabloc



K1311.456/36/2

Etanorm 080-065-200, n = 960 rpm

Etanorm SYT, Etabloc

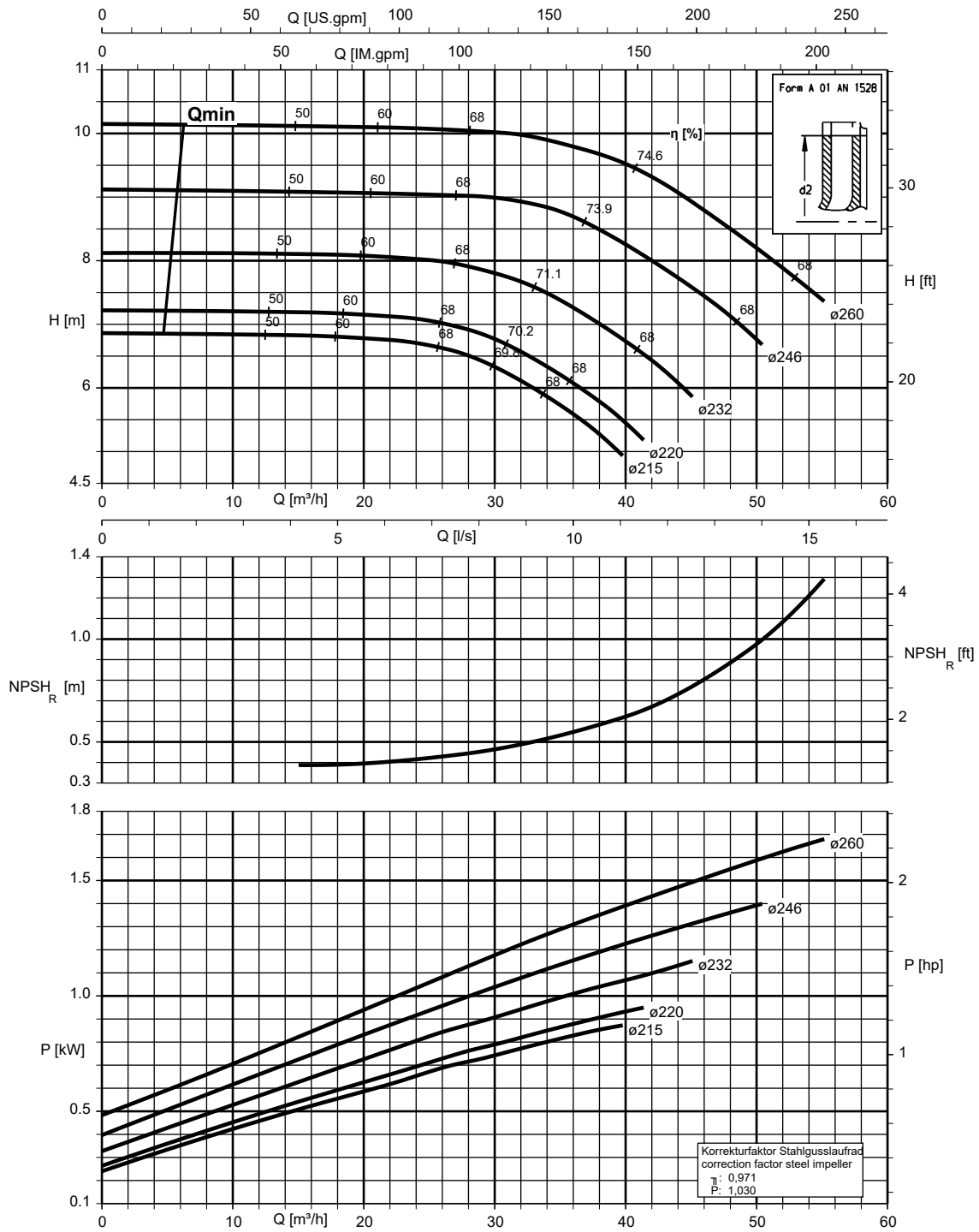


K1311.456/37/2

1311.45/11-EN

Etanorm 080-065-250, n = 960 rpm

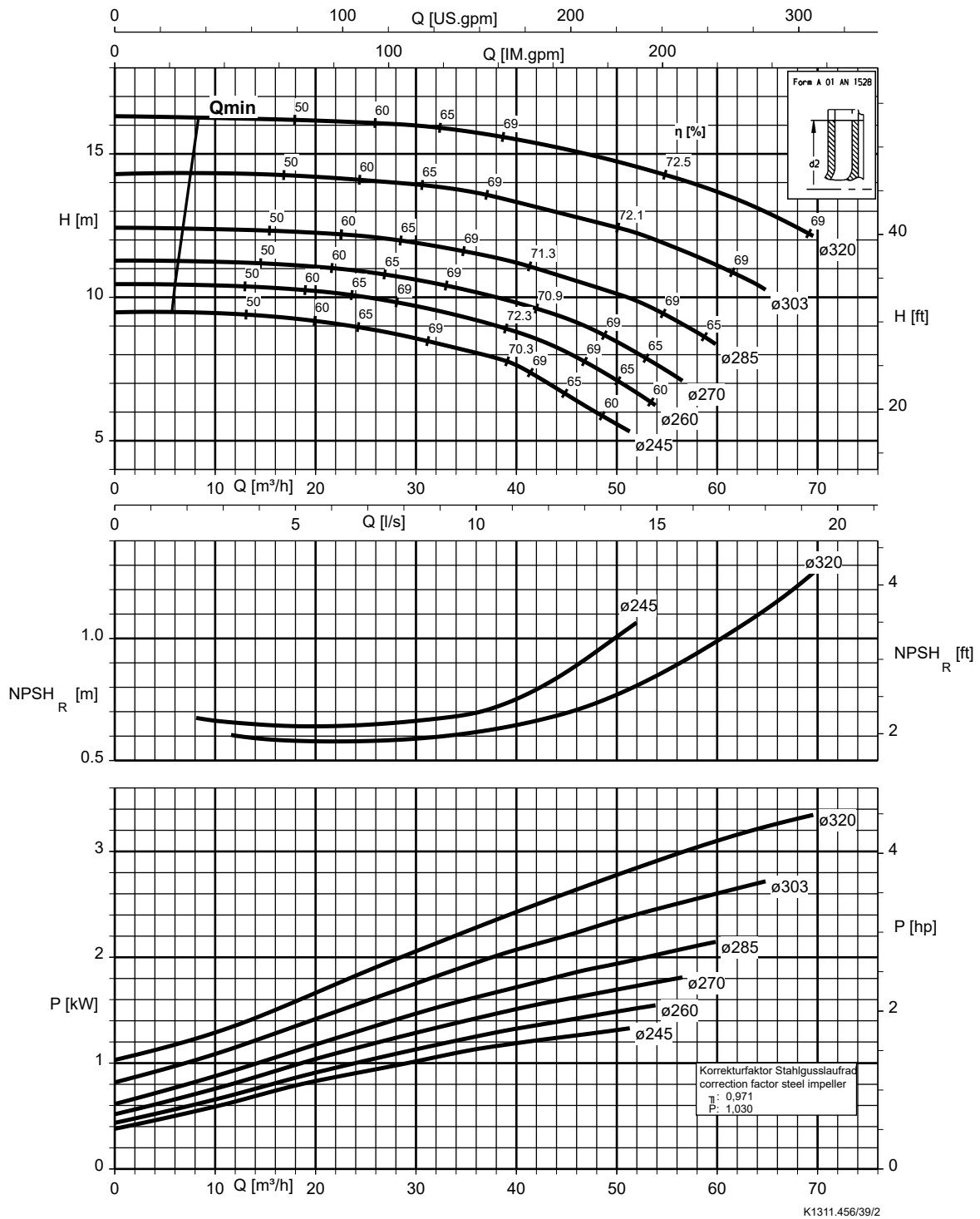
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 080-065-315, n = 960 rpm

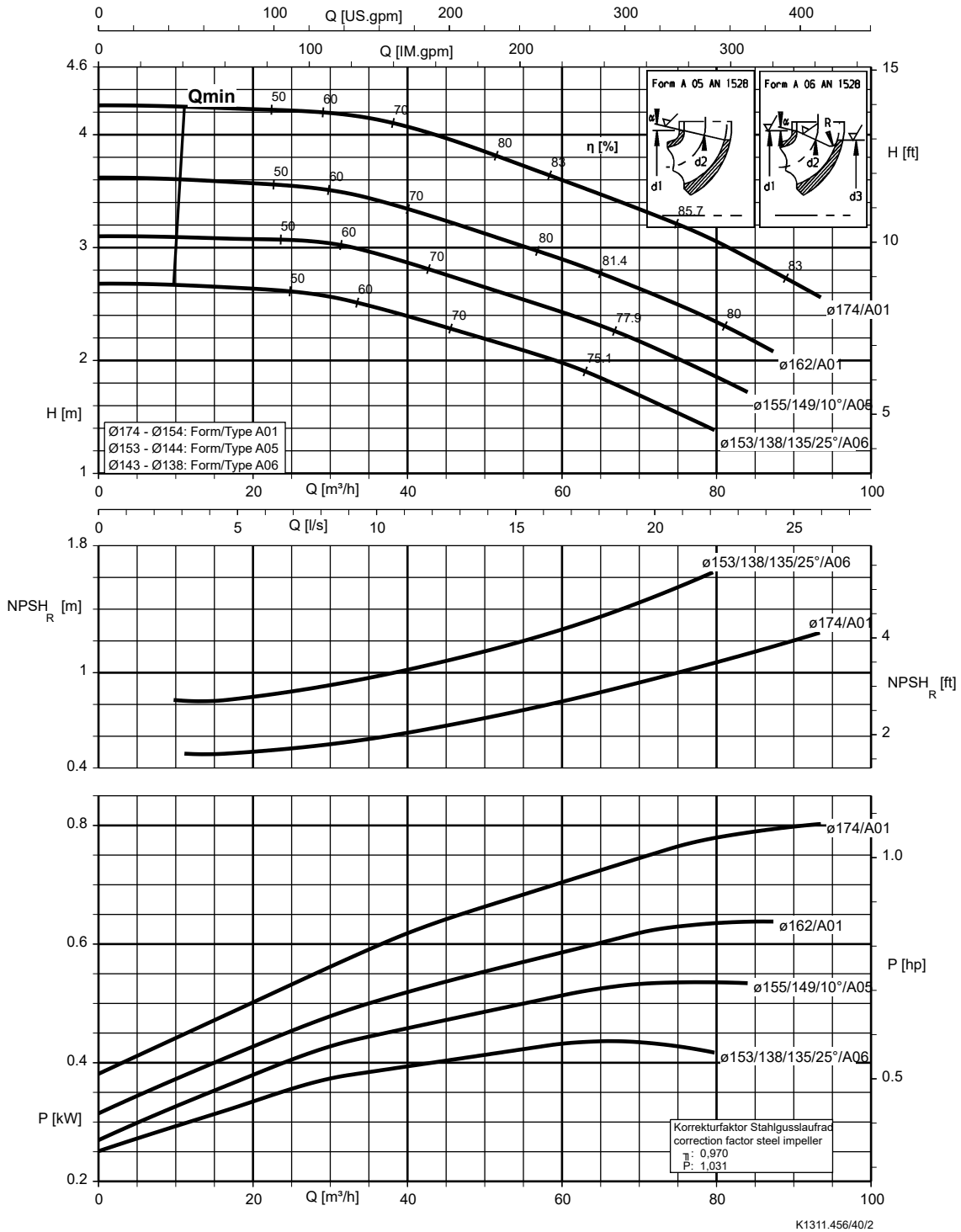
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 100-080-160, n = 960 rpm

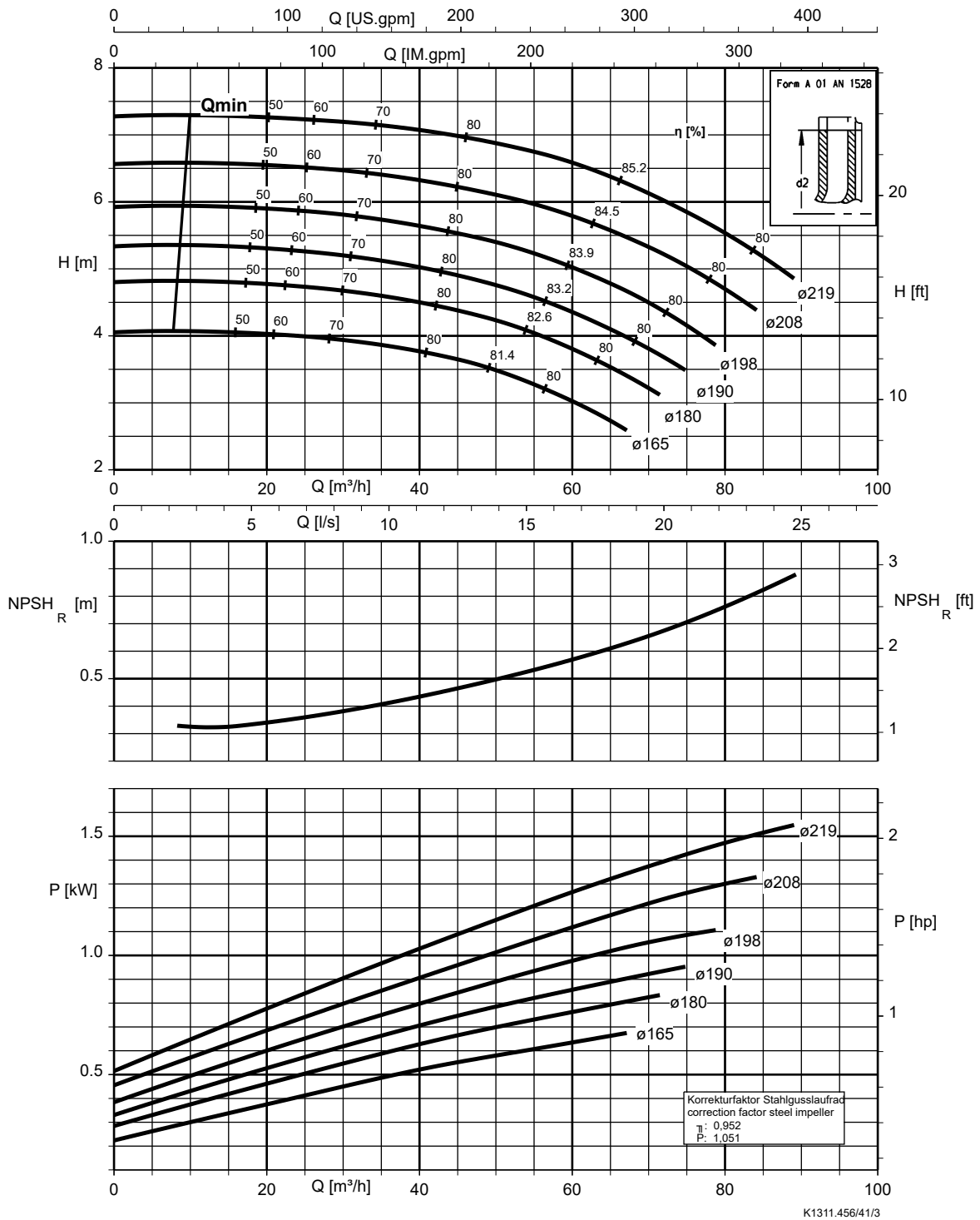
Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 100-080-200, n = 960 rpm

Etanorm SYT, Etabloc

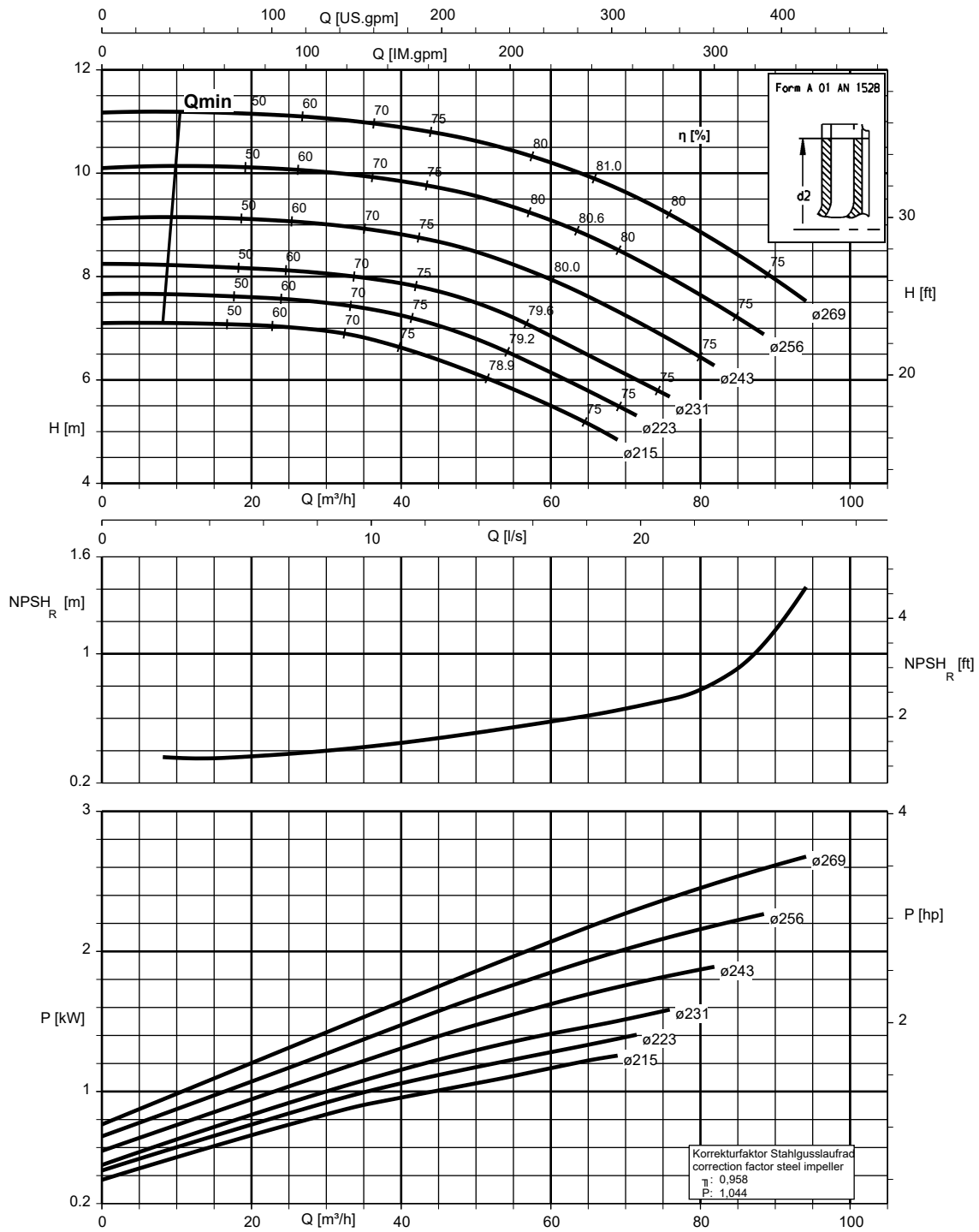


1311.45/11-EN



Etanorm 100-080-250, n = 960 rpm

Etanorm SYT, Etabloc

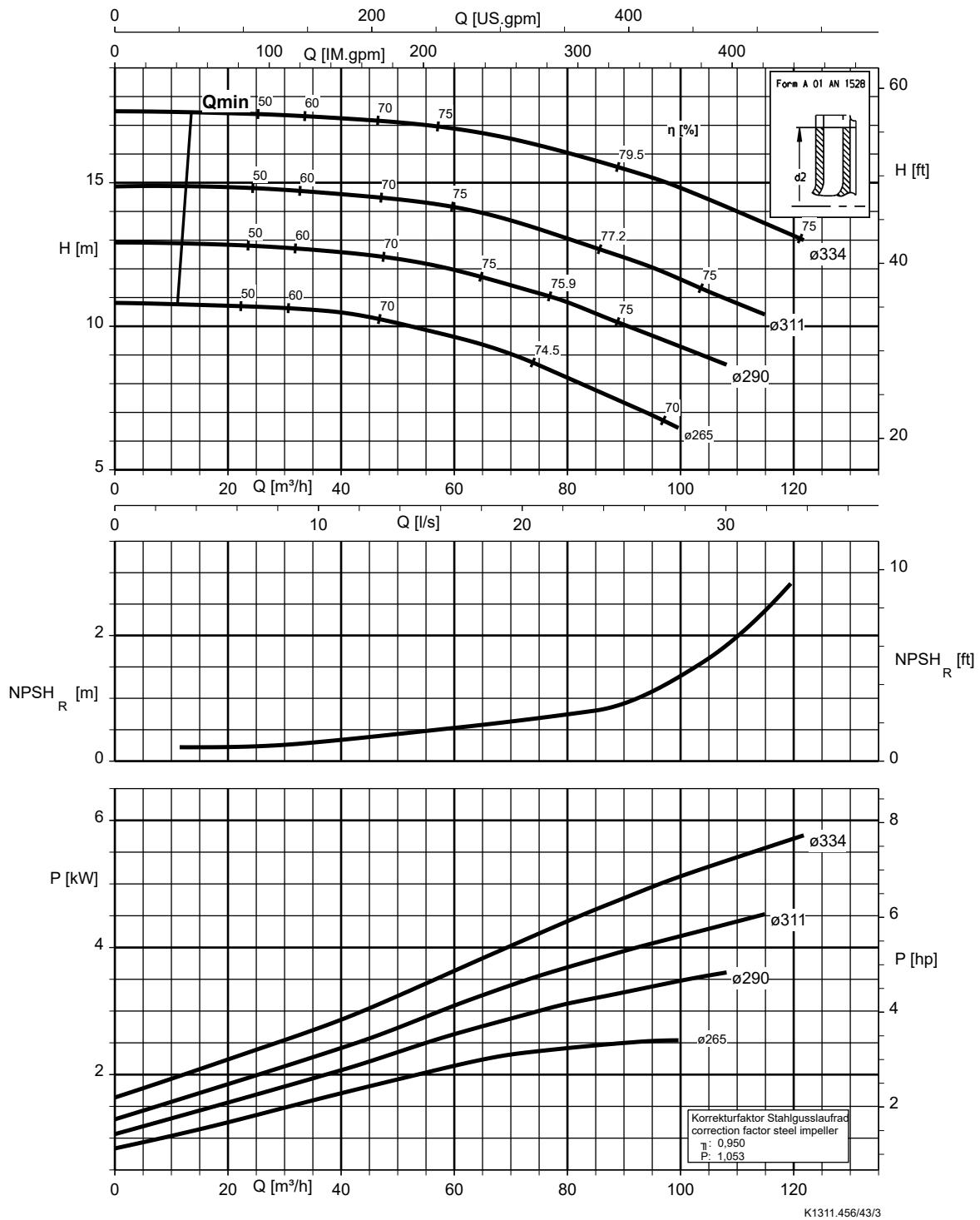


K1311.456/42/2

1311.45/11-EN

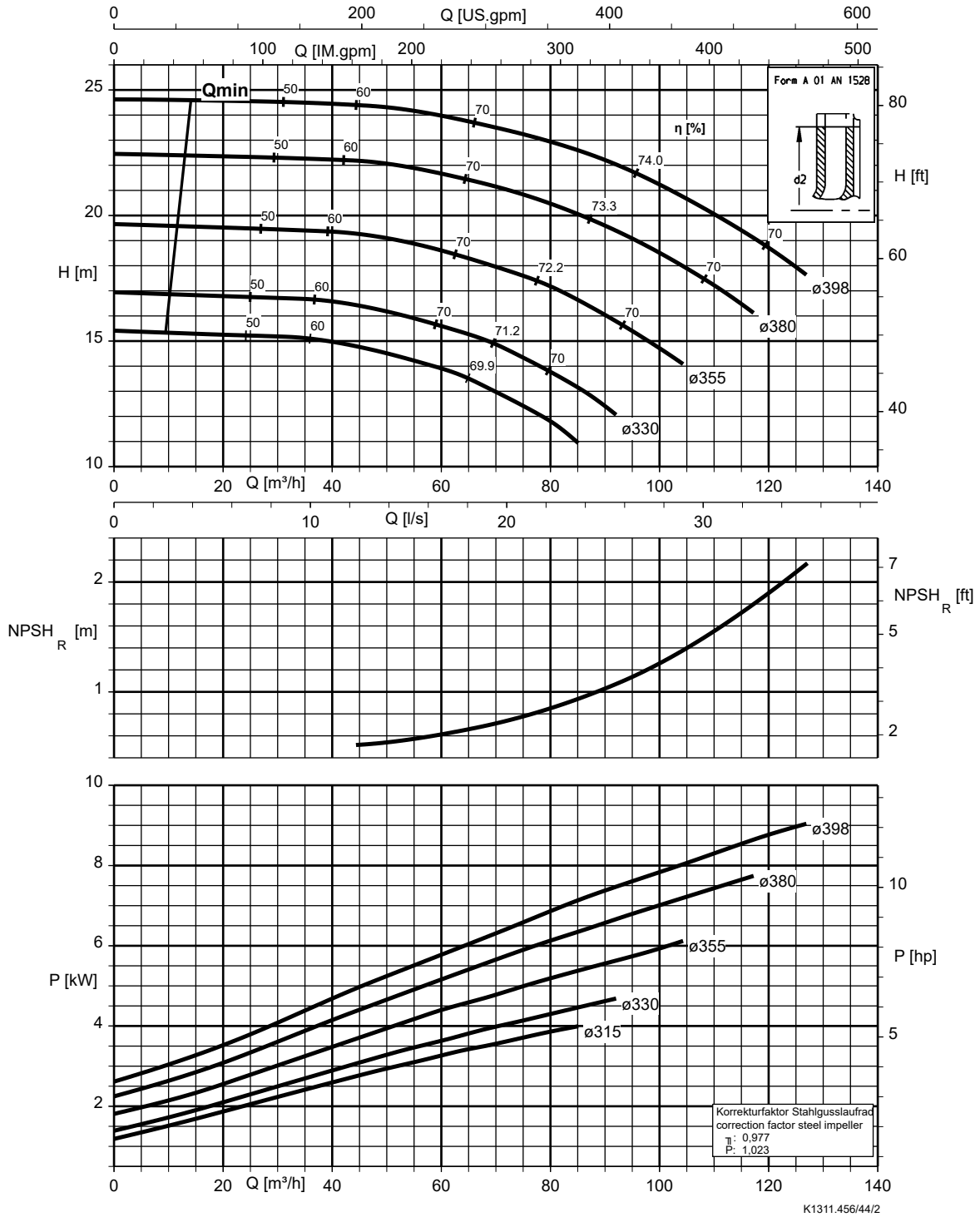
Etanorm 100-080-315, n = 960 rpm

Etanorm SYT, Etabloc



1311.45/11-EN

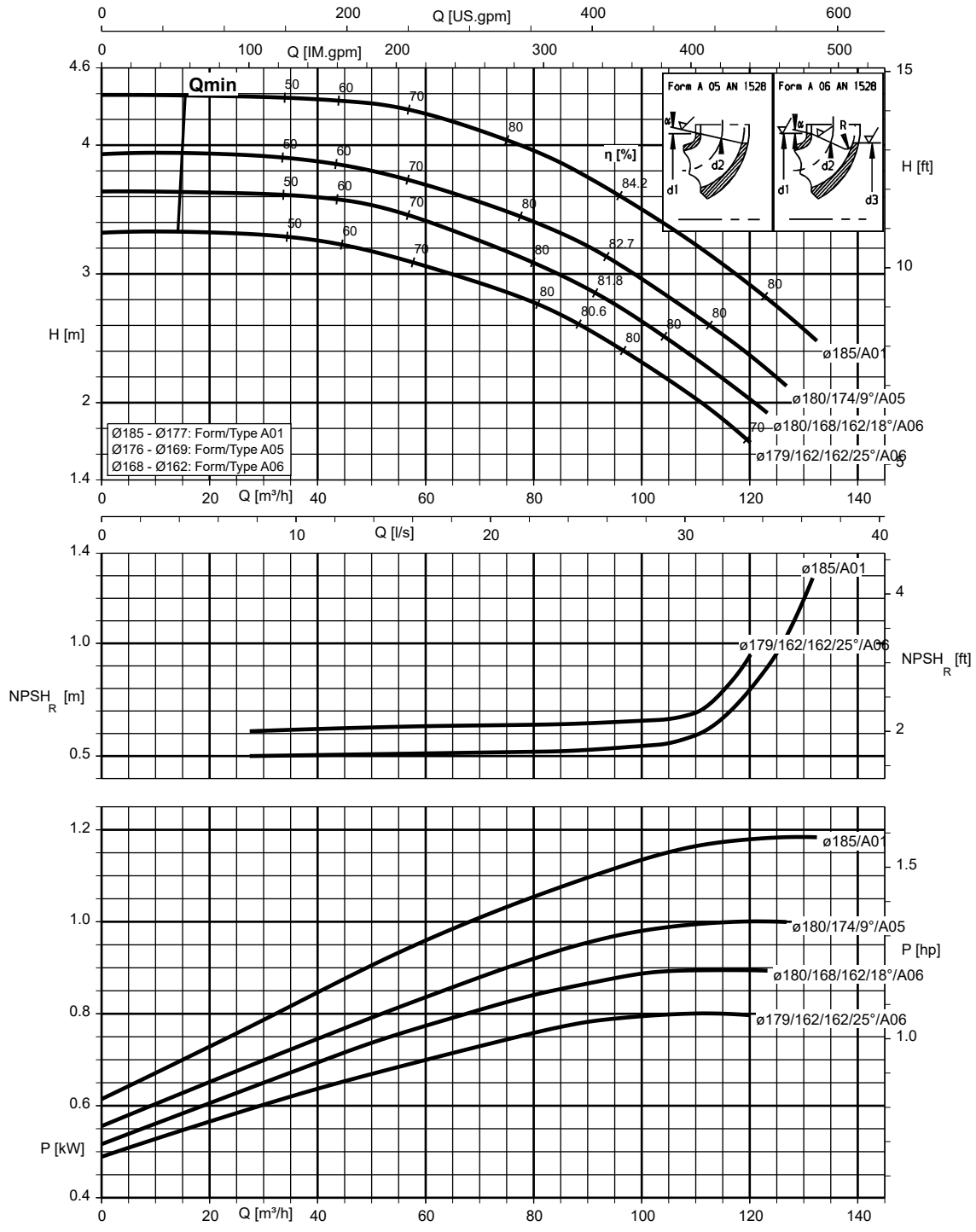
Etanorm 100-080-400, n = 960 rpm



1311.45/11-EN

Etanorm 125-100-160, n = 960 rpm

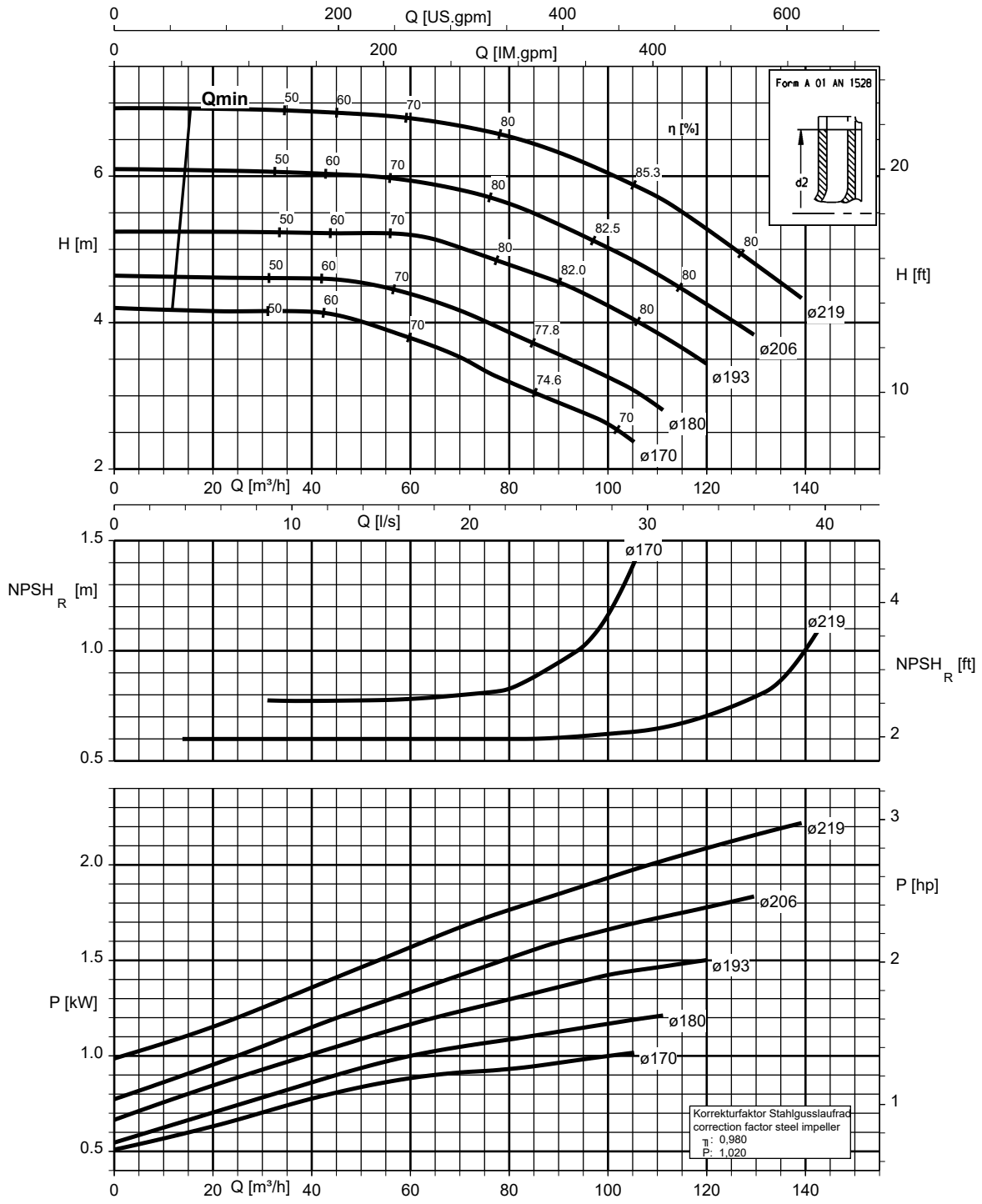
Etanorm SYT, Etabloc



K1311.456/45/2

Etanorm 125-100-200, n = 960 rpm

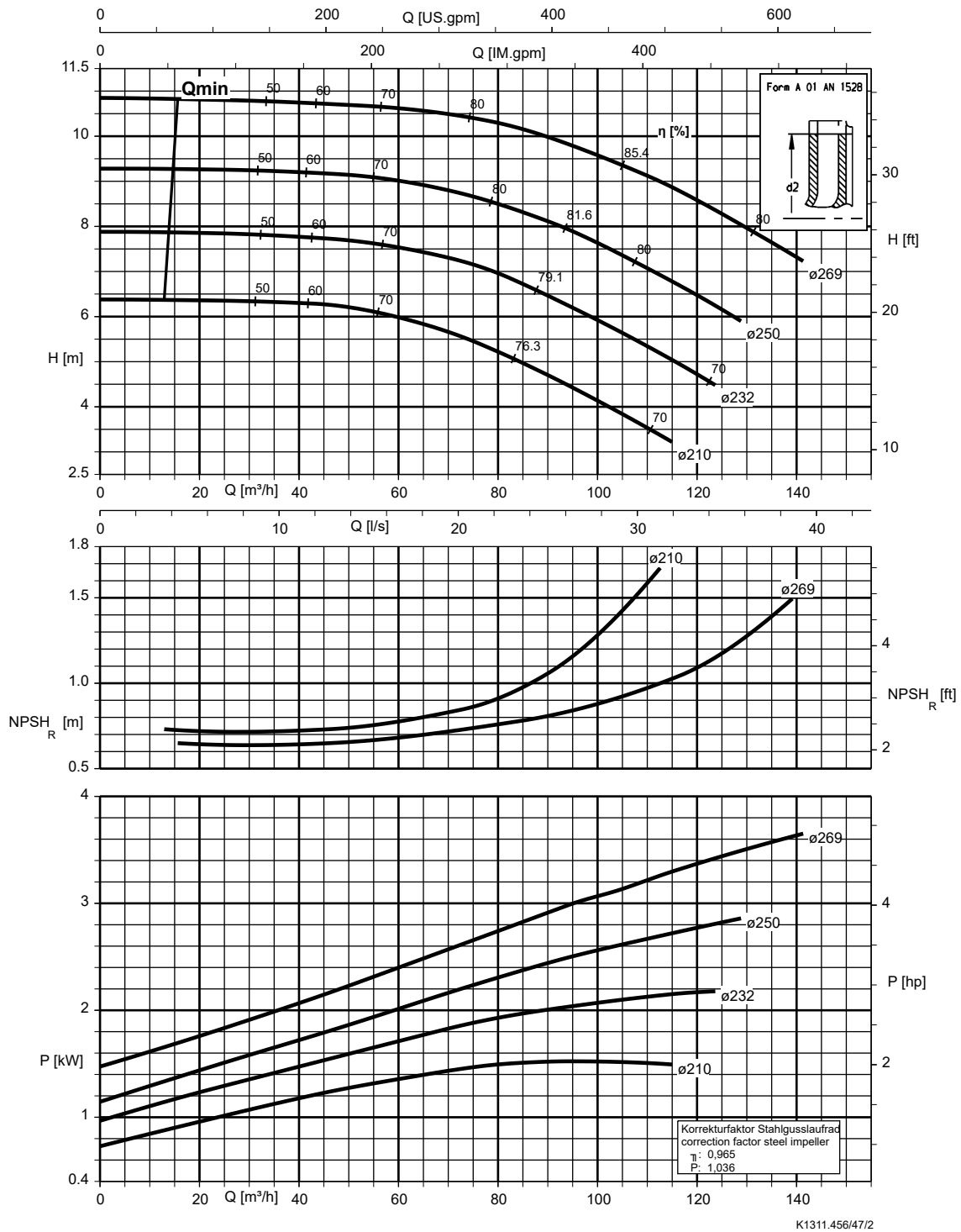
Etanorm SYT, Etabloc



1311.45/11-EN

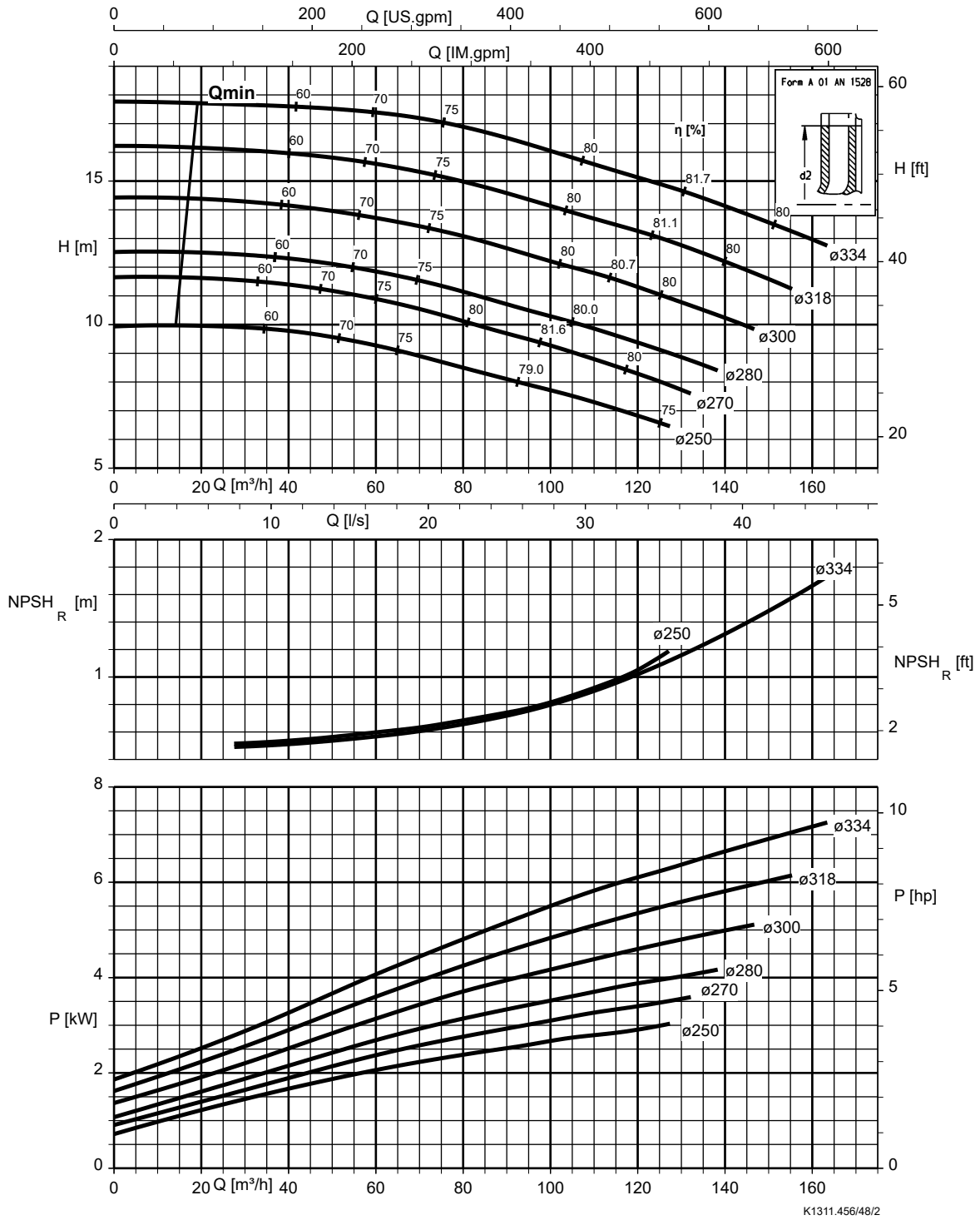
Etanorm 125-100-250, n = 960 rpm

Etanorm SYT, Etabloc



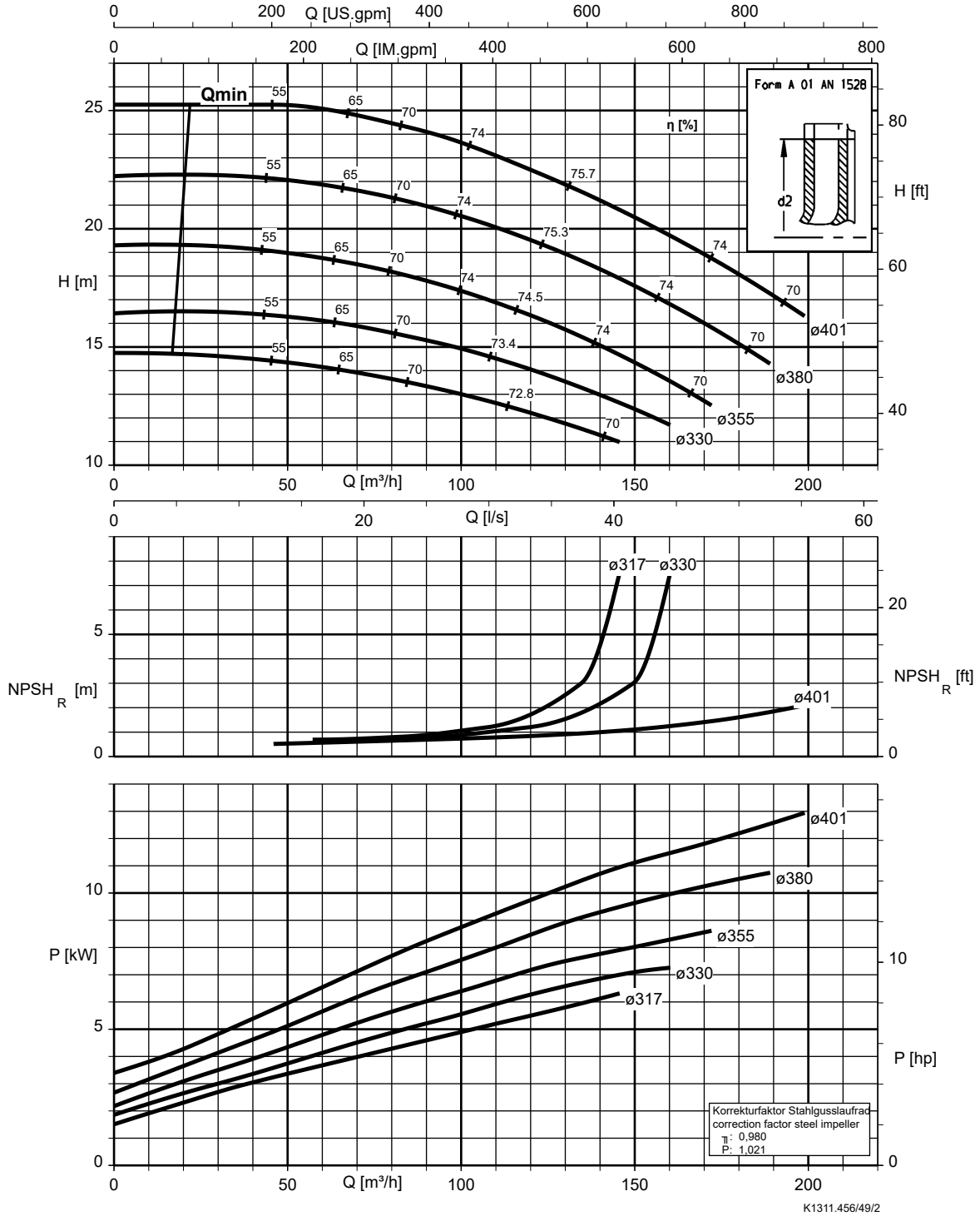
Etanorm 125-100-315, n = 960 rpm

Etanorm SYT, Etabloc



1311.45/11-EN

Etanorm 125-100-400, n = 960 rpm

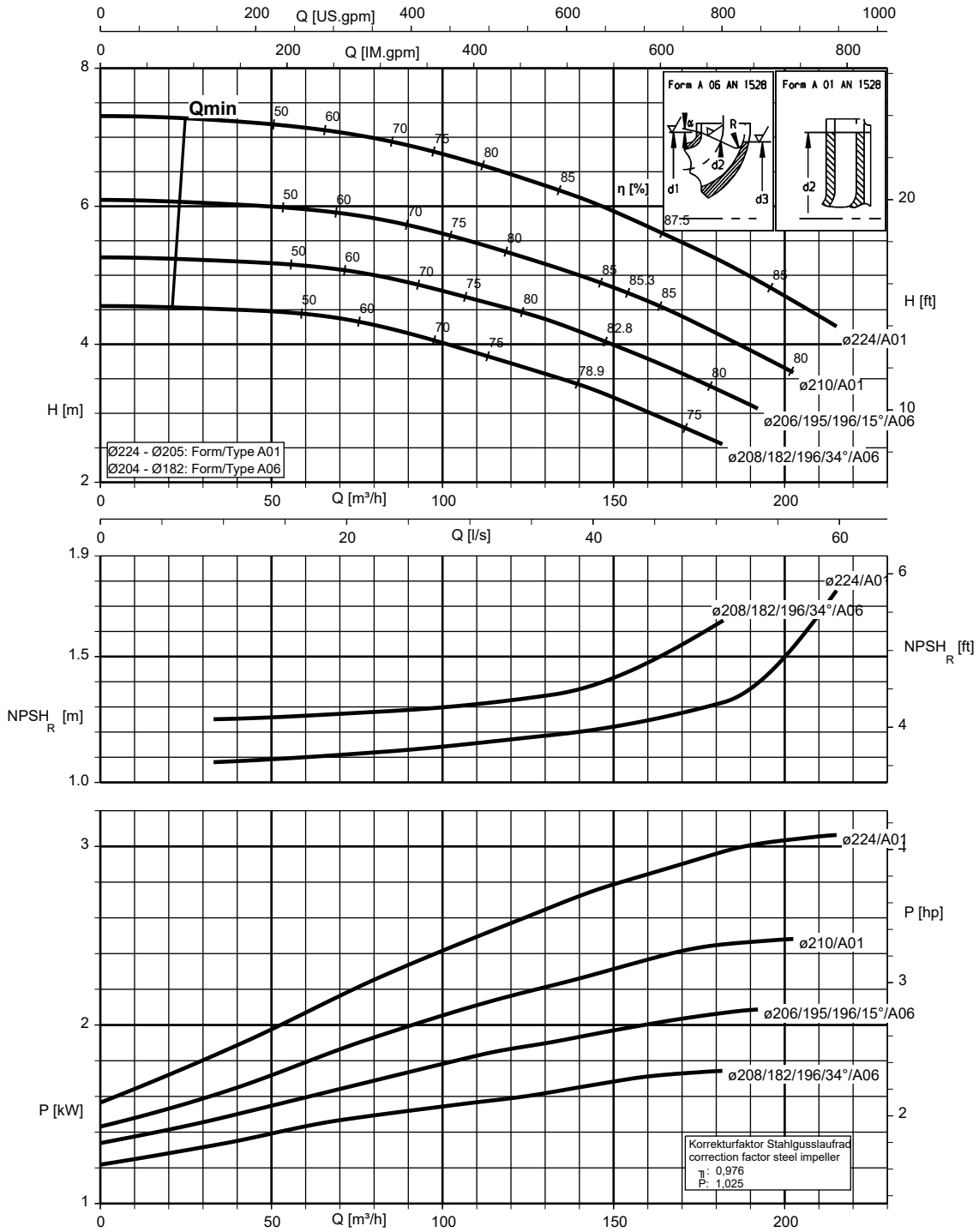


1311.45/11-EN



Etanorm 150-125-200, n = 960 rpm

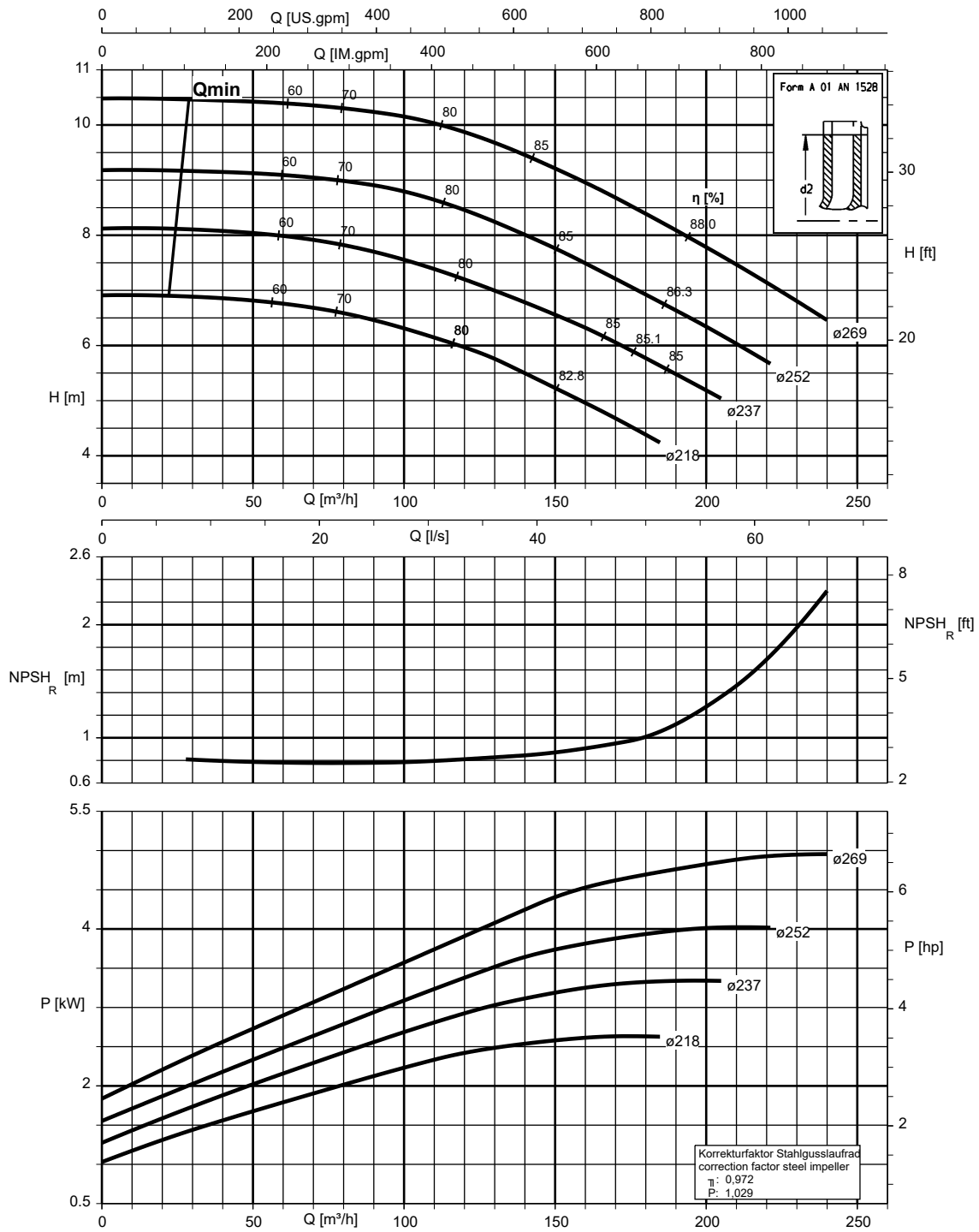
Etanorm SYT, Etabloc



K1311.456/50/2

Etanorm 150-125-250, n = 960 rpm

Etanorm SYT, Etabloc

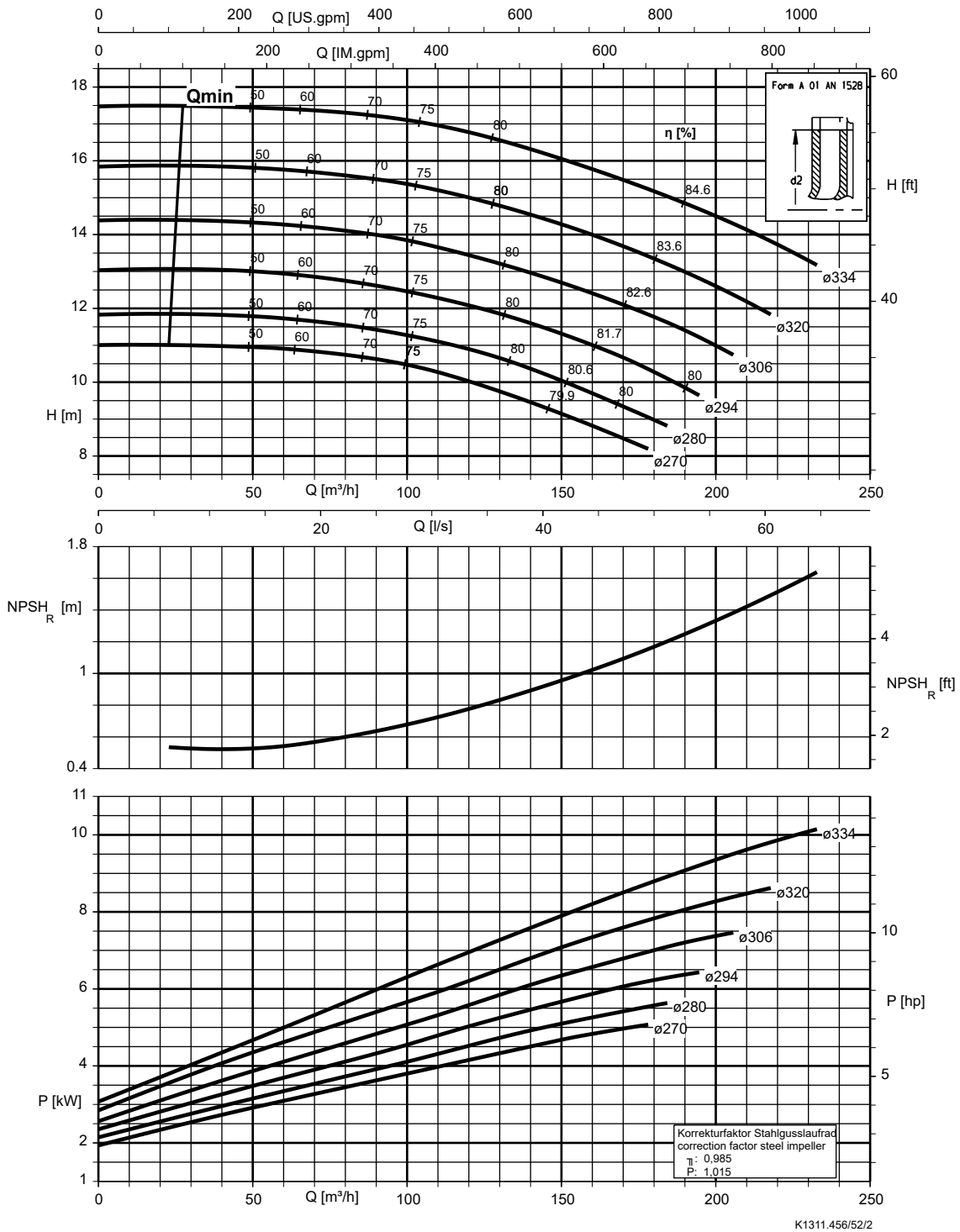


K1311.456/51/2

1311.45/11-EN

Etanorm 150-125-315, n = 960 rpm

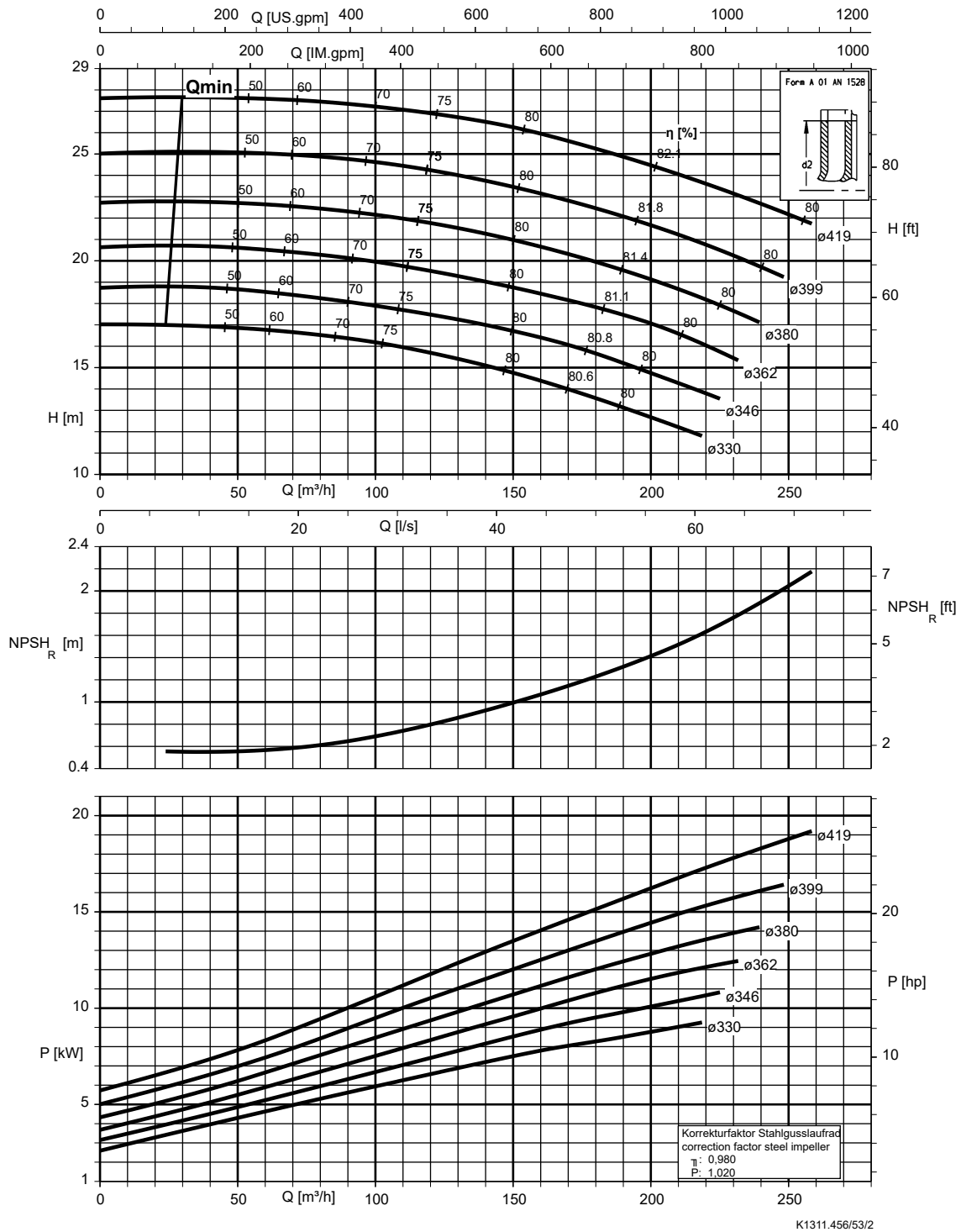
Etanorm SYT



1311.45/11-EN

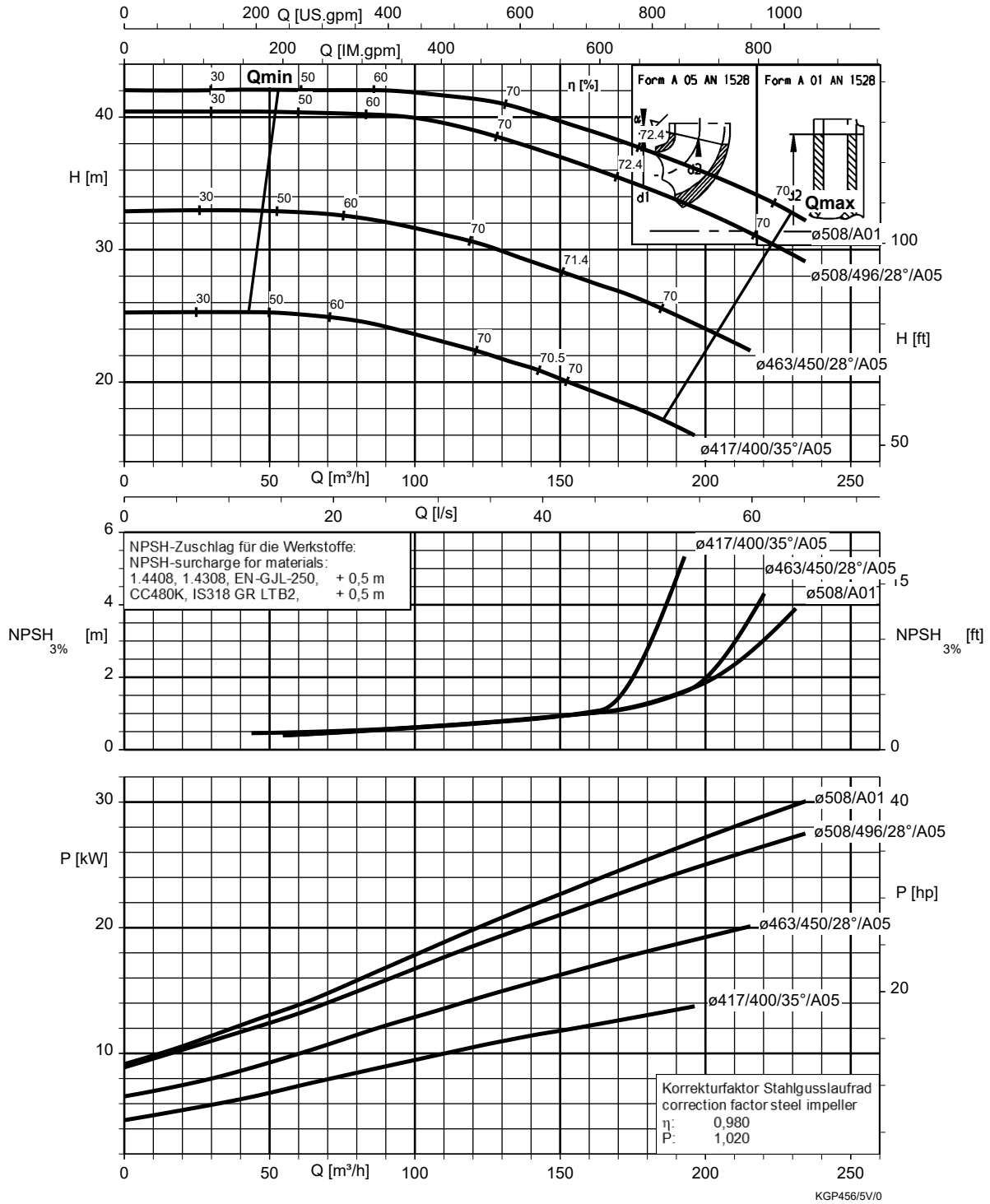
Etanorm 150-125-400, n = 960 rpm

Etanorm SYT



1311.45/11-EN

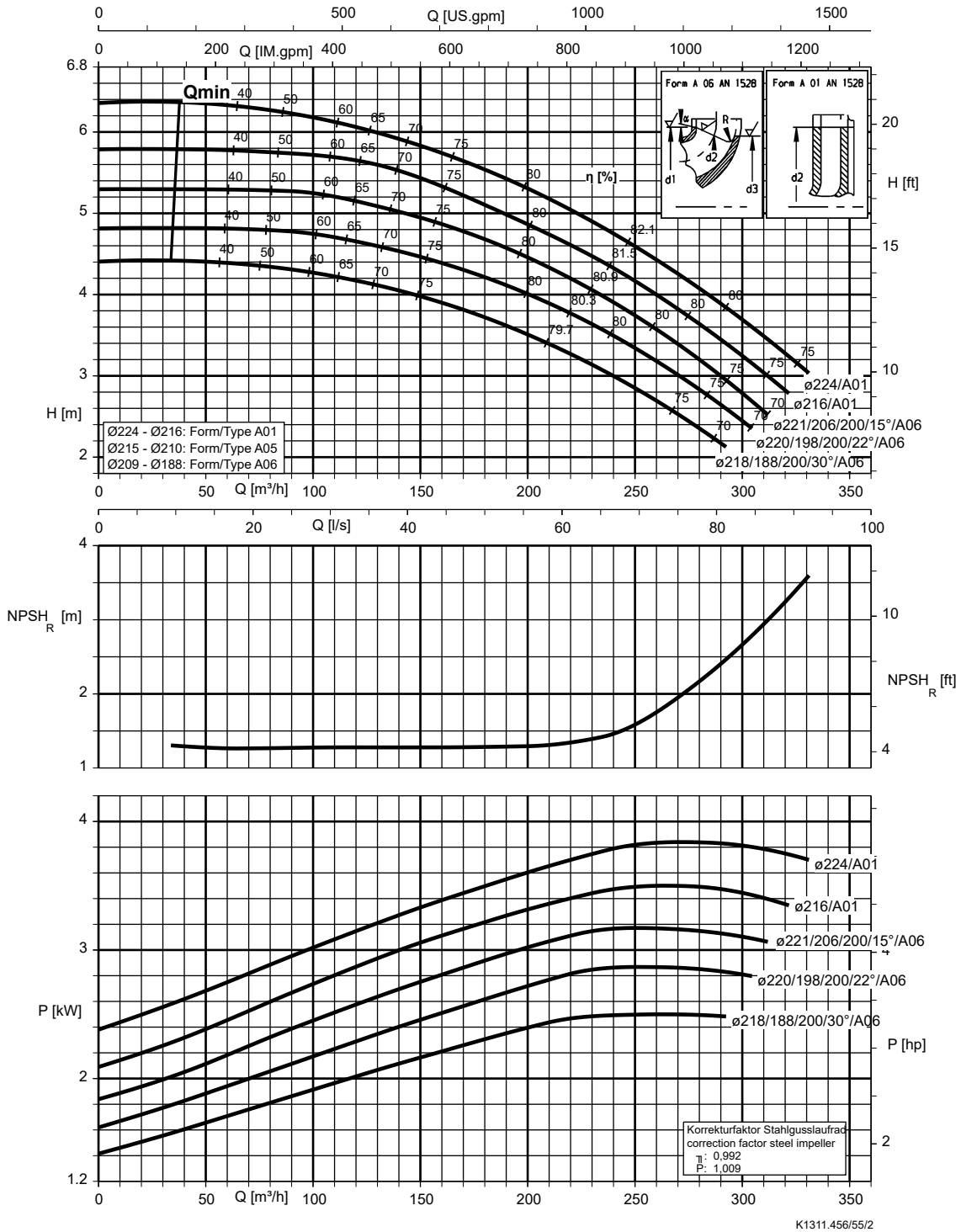
Etanorm 150-125-510, n = 960 rpm



1311.45/11-EN

**Etanorm 200-150-200, n = 960 rpm**

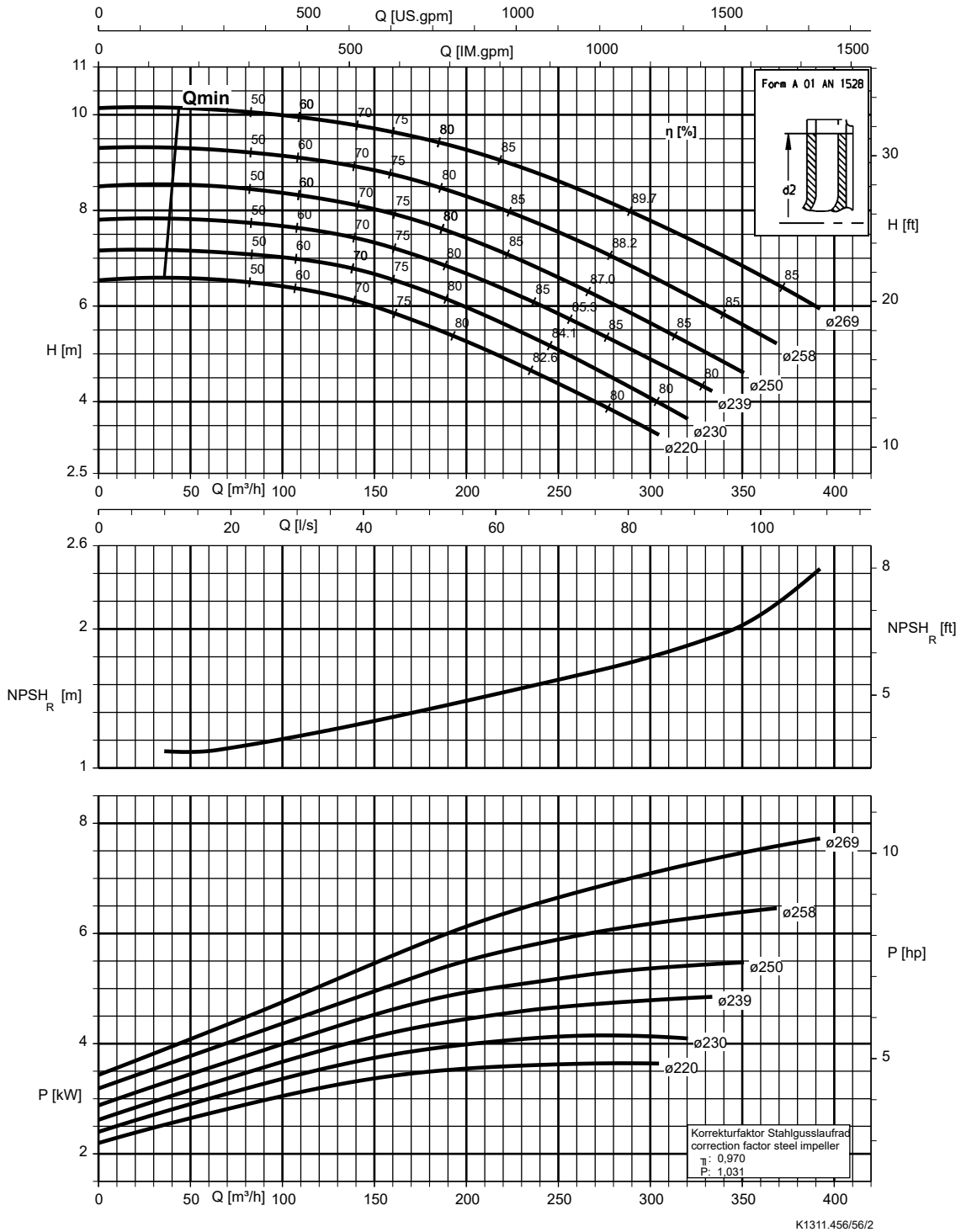
Etabloc



K1311.456/55/2

Etanorm 200-150-250, n = 960 rpm

Etabloc

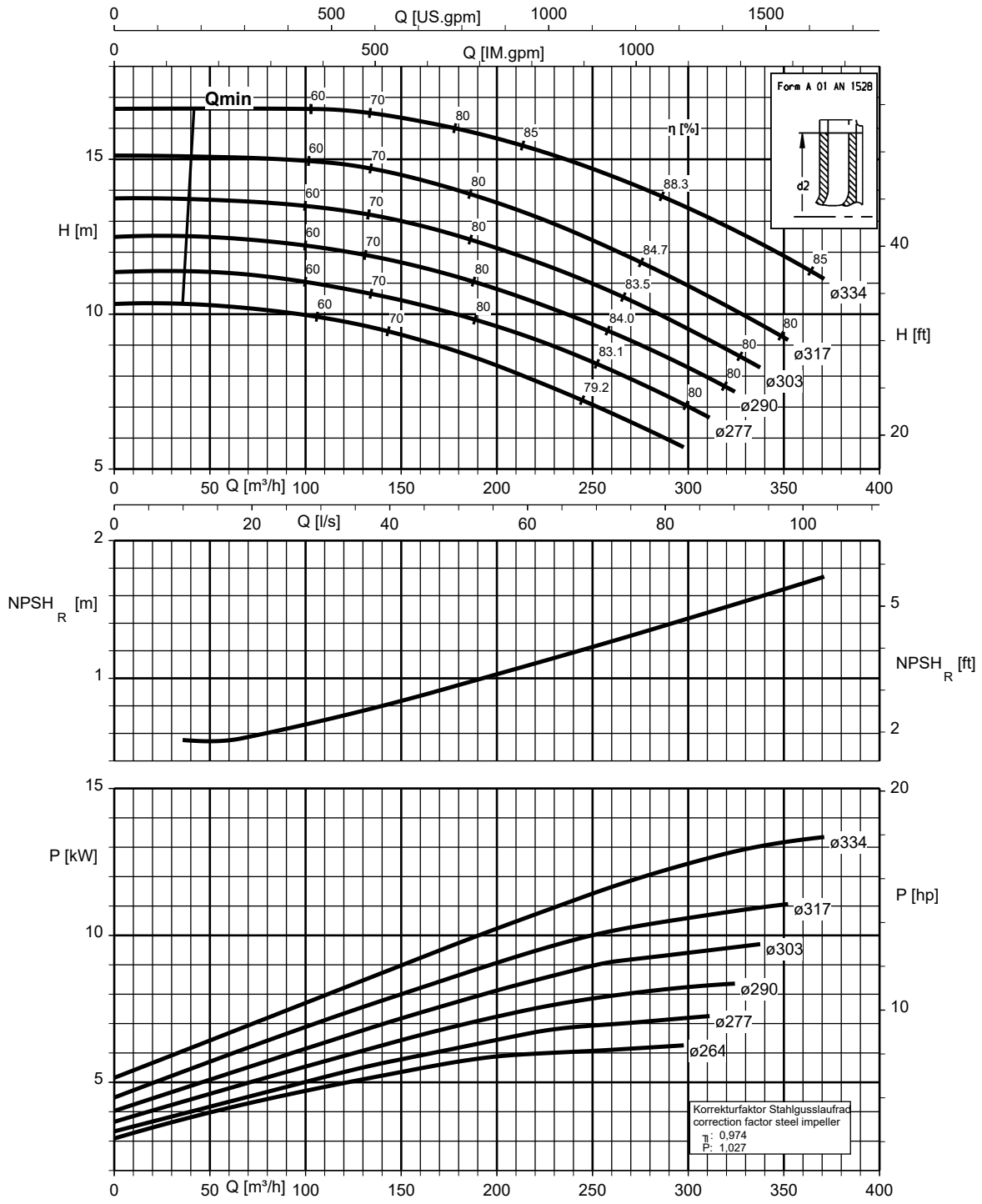


K1311.456/56/2

1311.45/11-EN

Etanorm 200-150-315, n = 960 rpm

Etanorm SYT

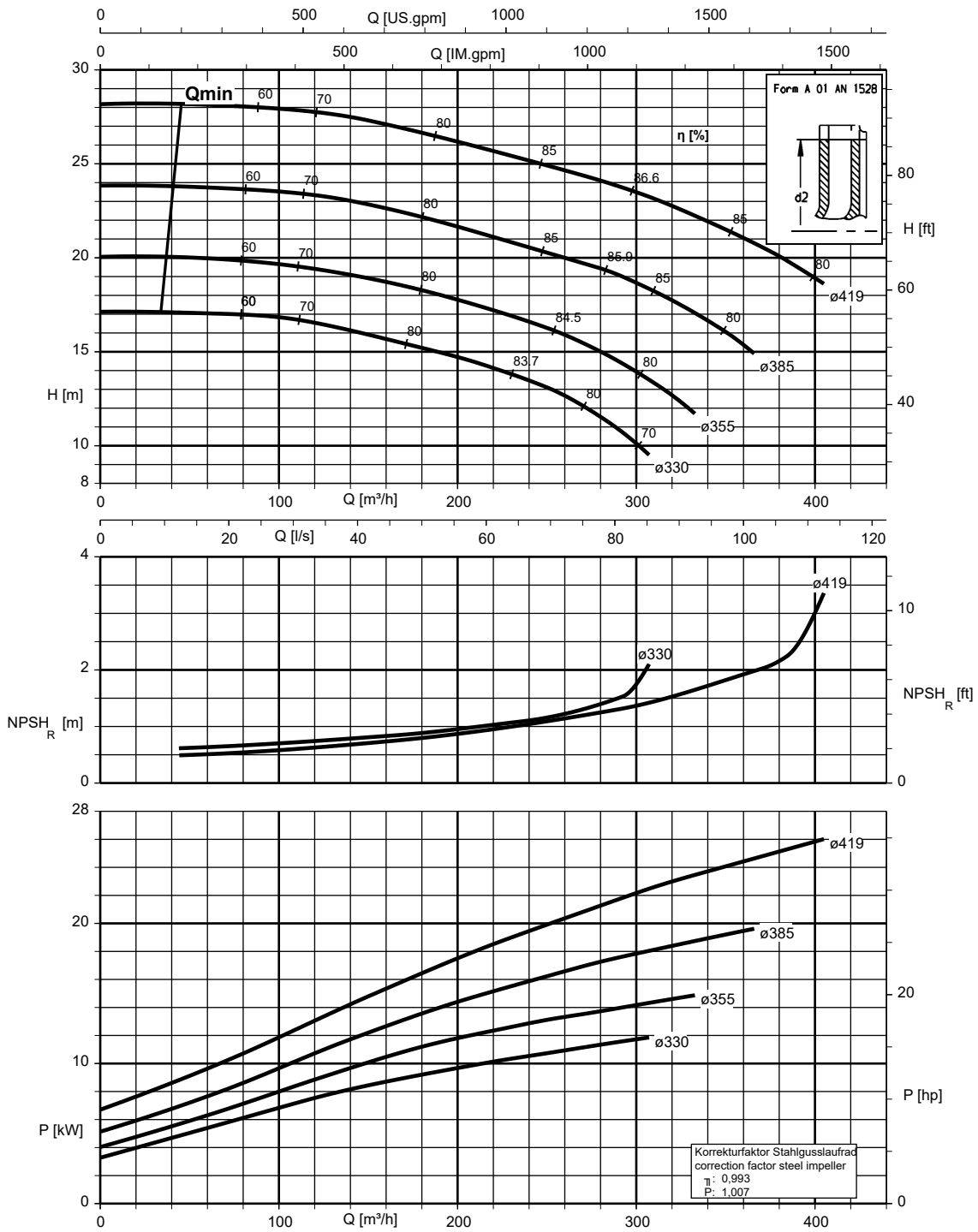


1311.45/11-EN



Etanorm 200-150-400, n = 960 rpm

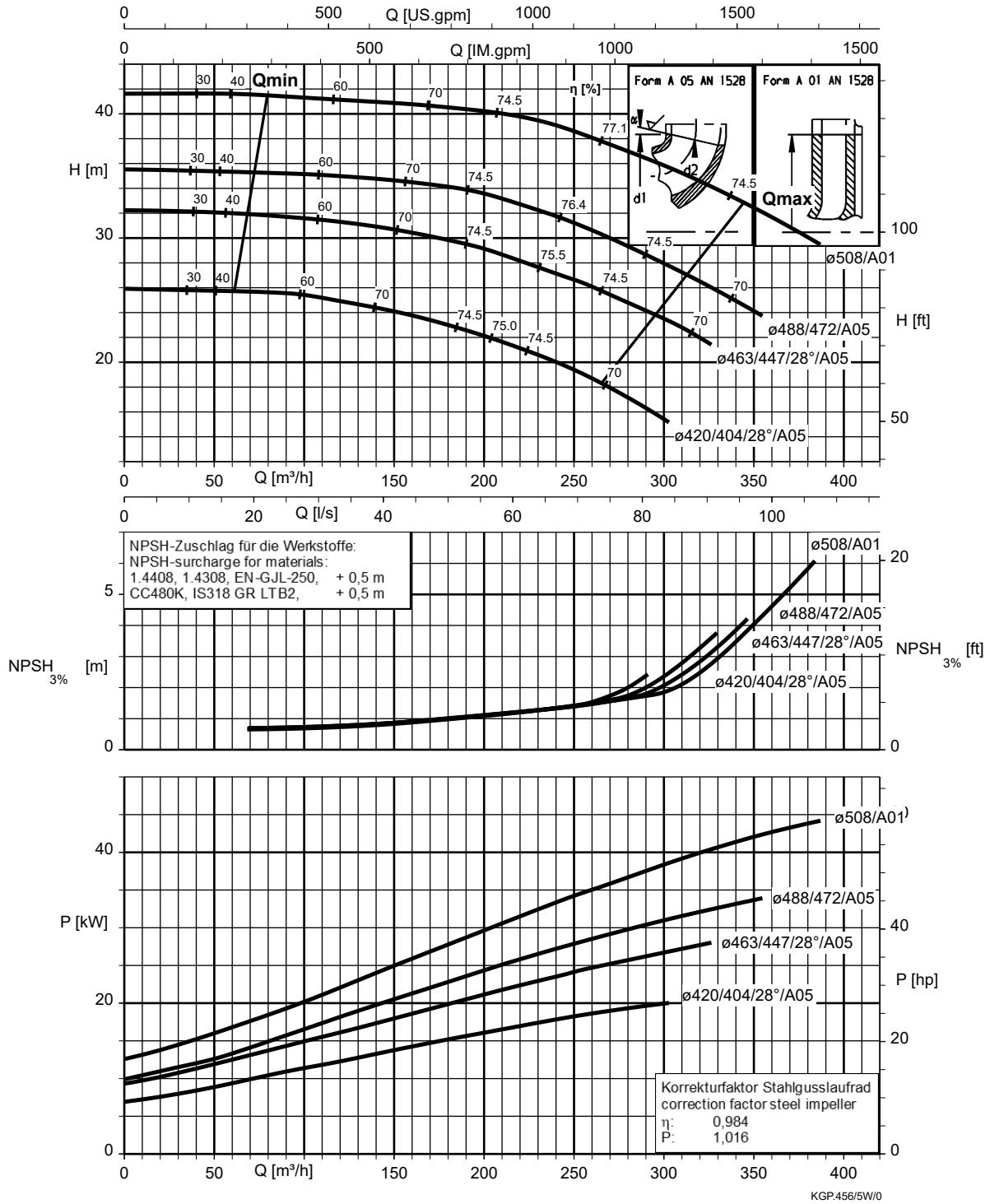
Etanorm SYT



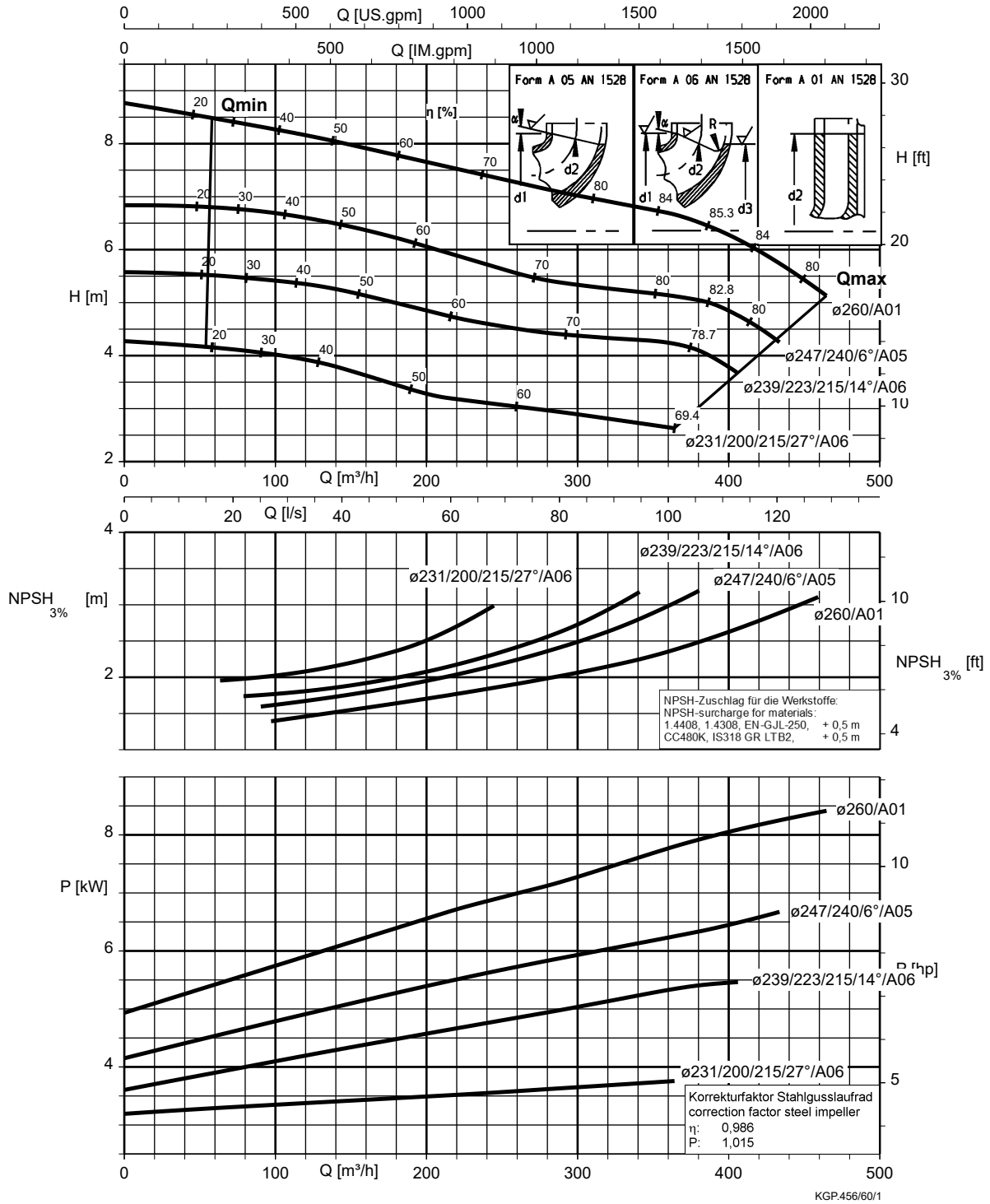
K1311.456/58/1

1311.45/11-EN

Etanorm 200-150-510, n = 960 rpm

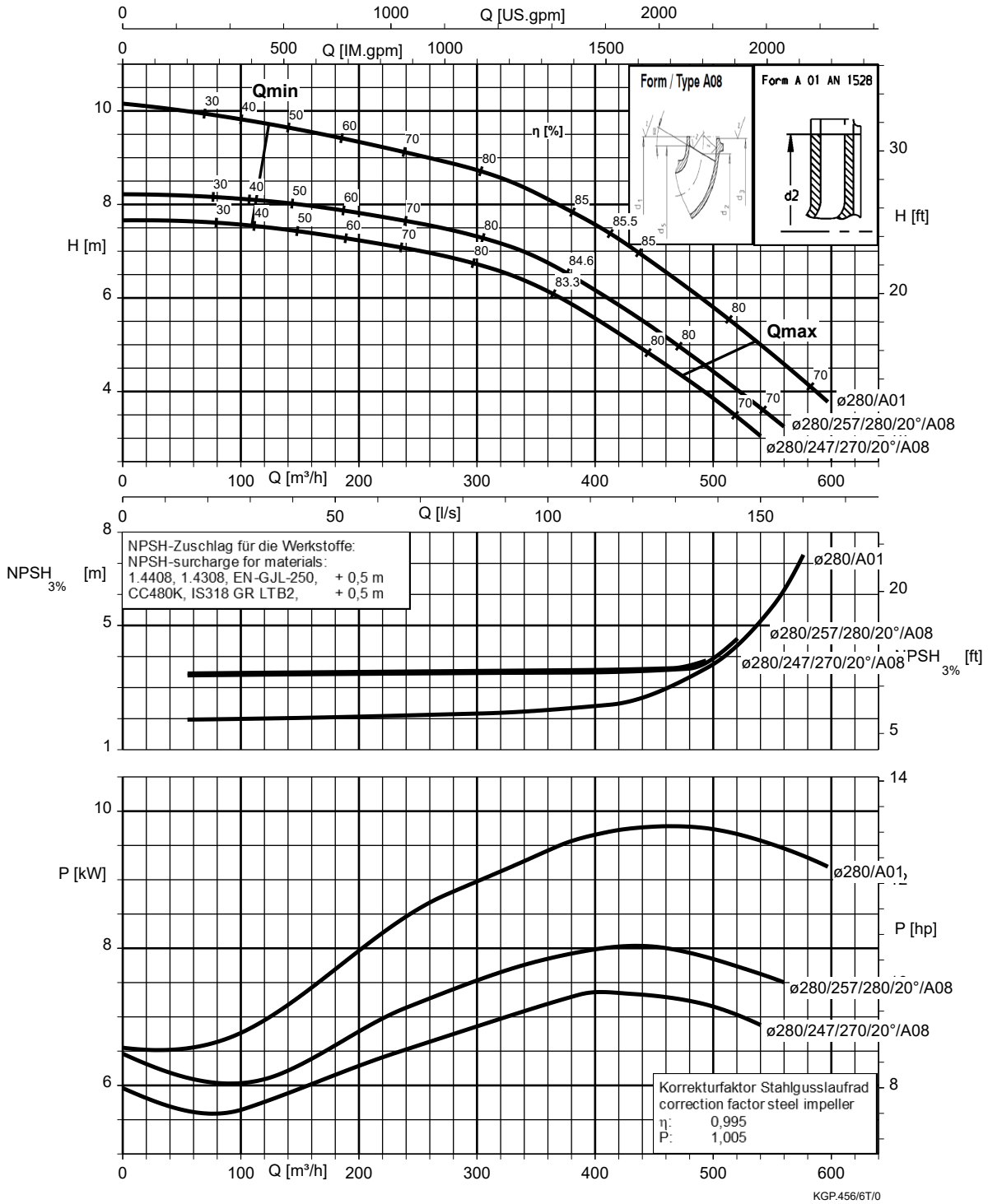


Etanorm 200-200-250, n = 960 rpm



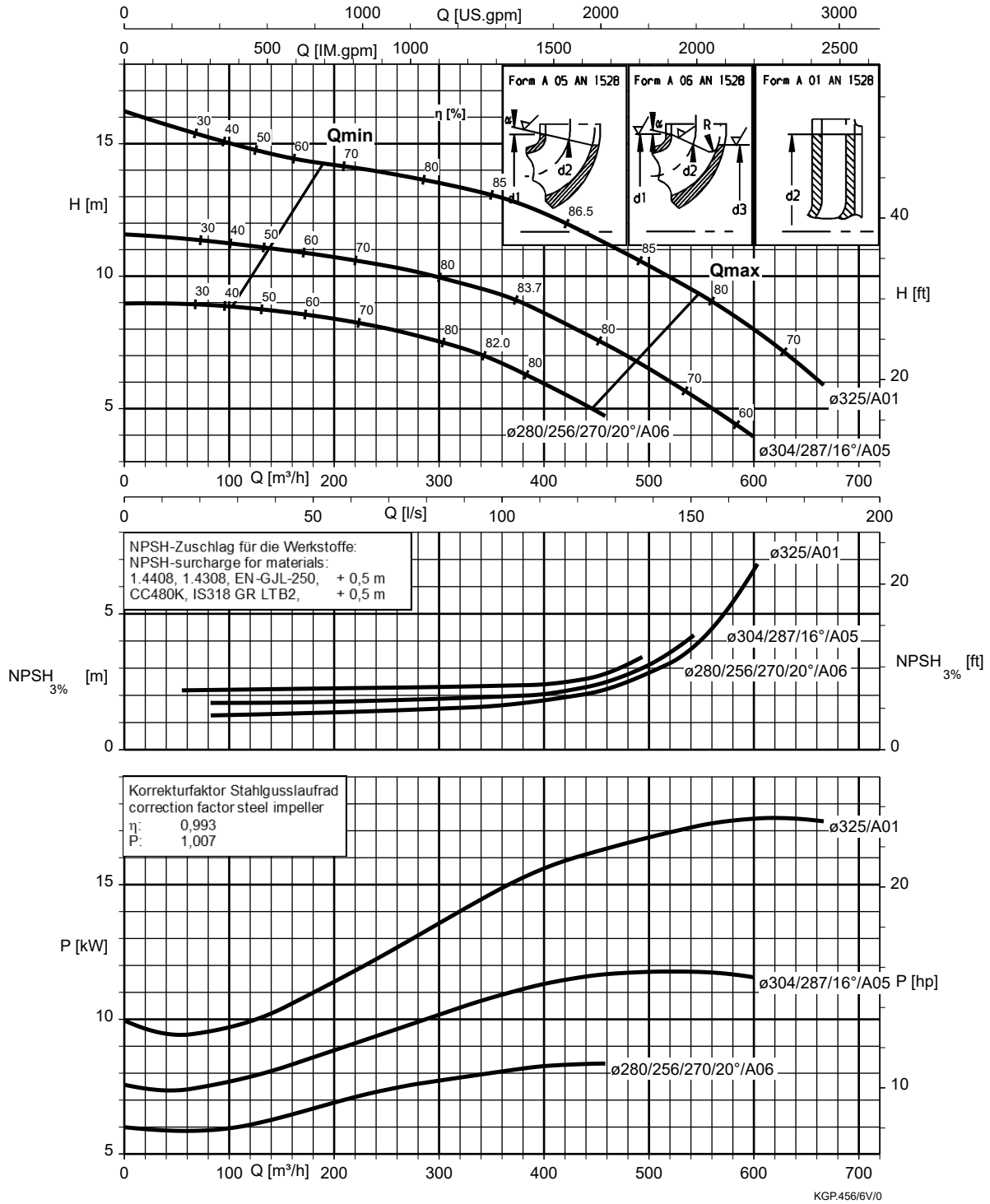
1311.45/11-EN

Etanorm 250-200-275, n = 960 rpm



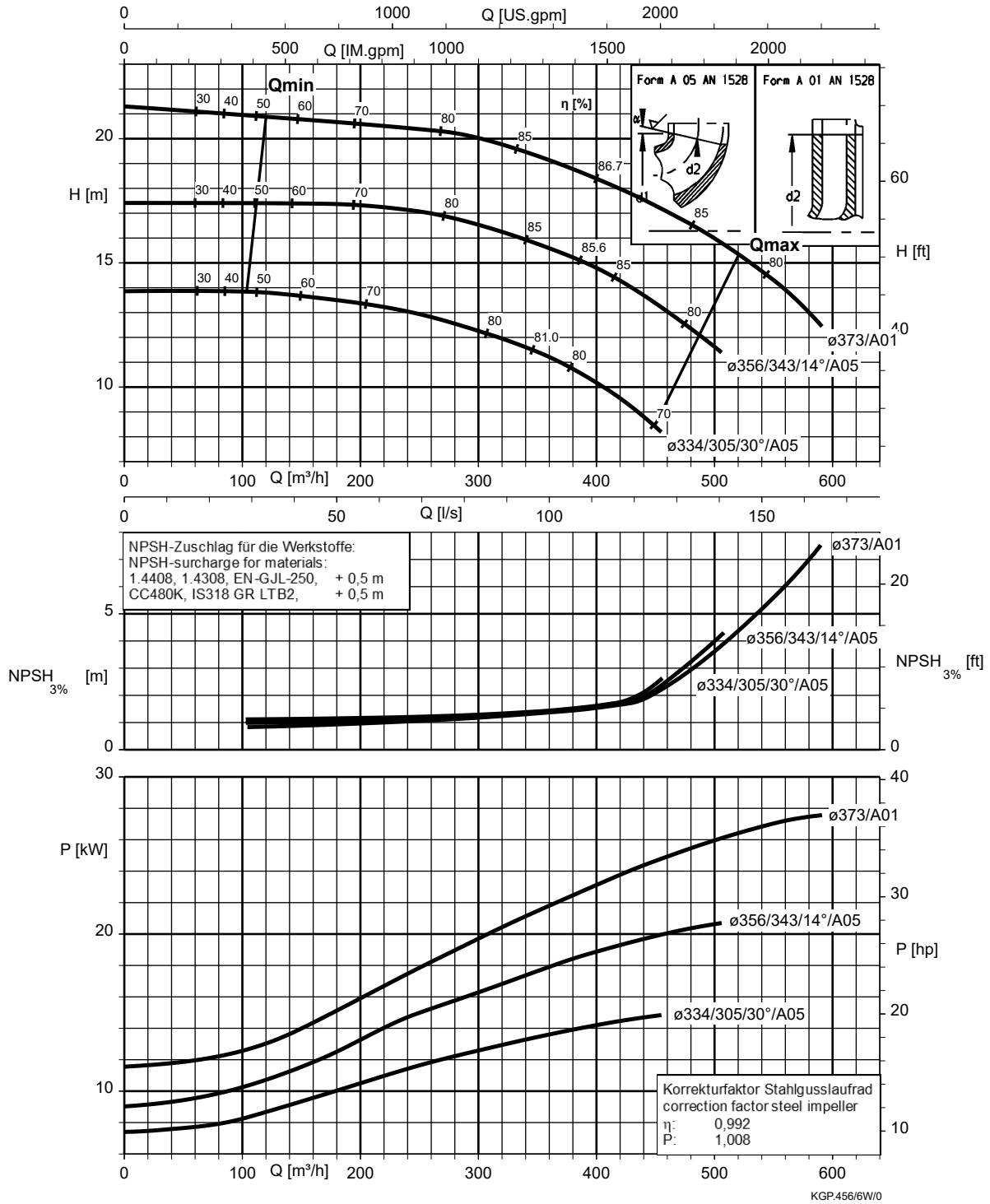
1311.45/11-EN

Etanorm 250-200-320, n = 960 rpm

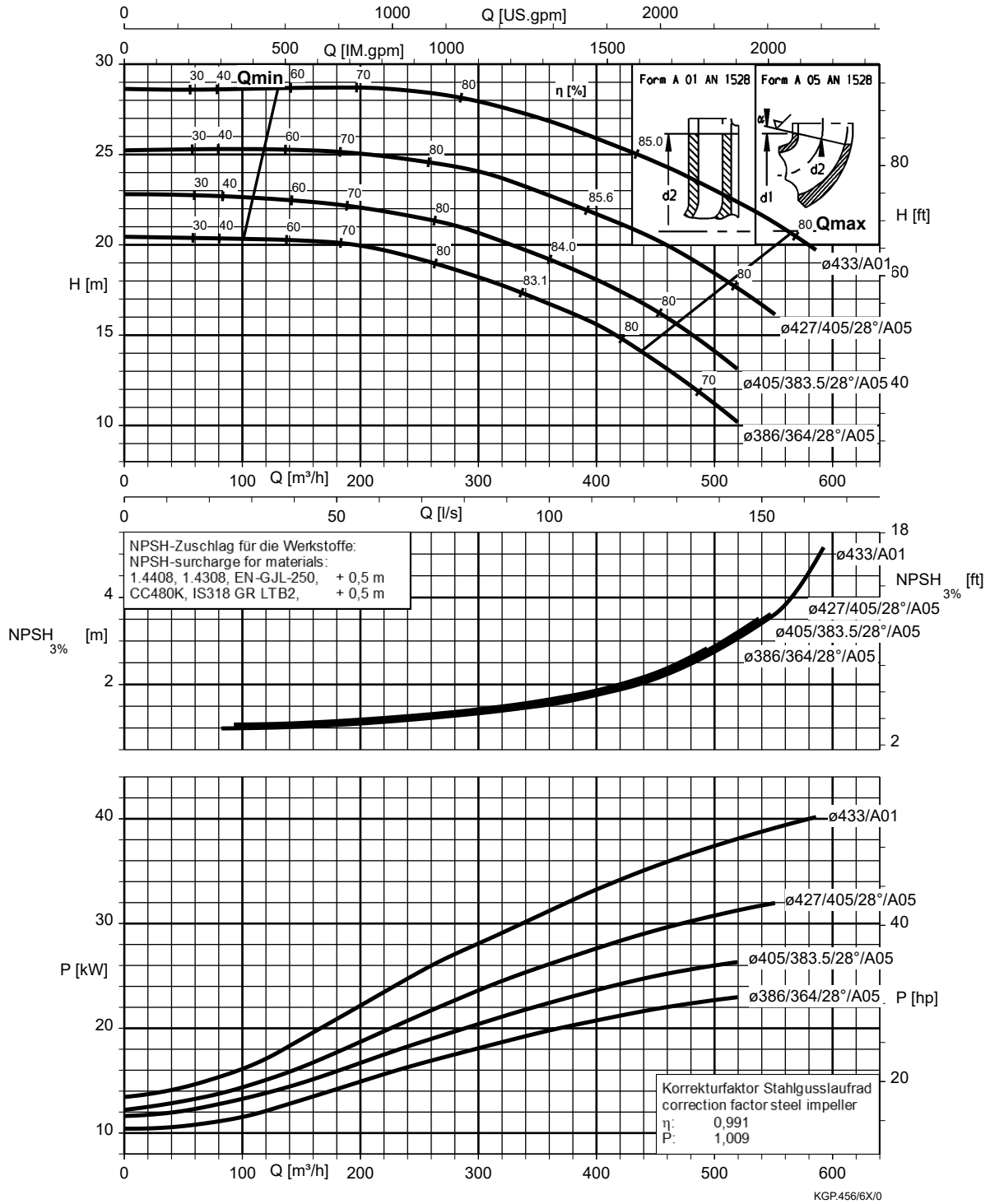


1311.45/11-EN

Etanorm 250-200-375, n = 960 rpm

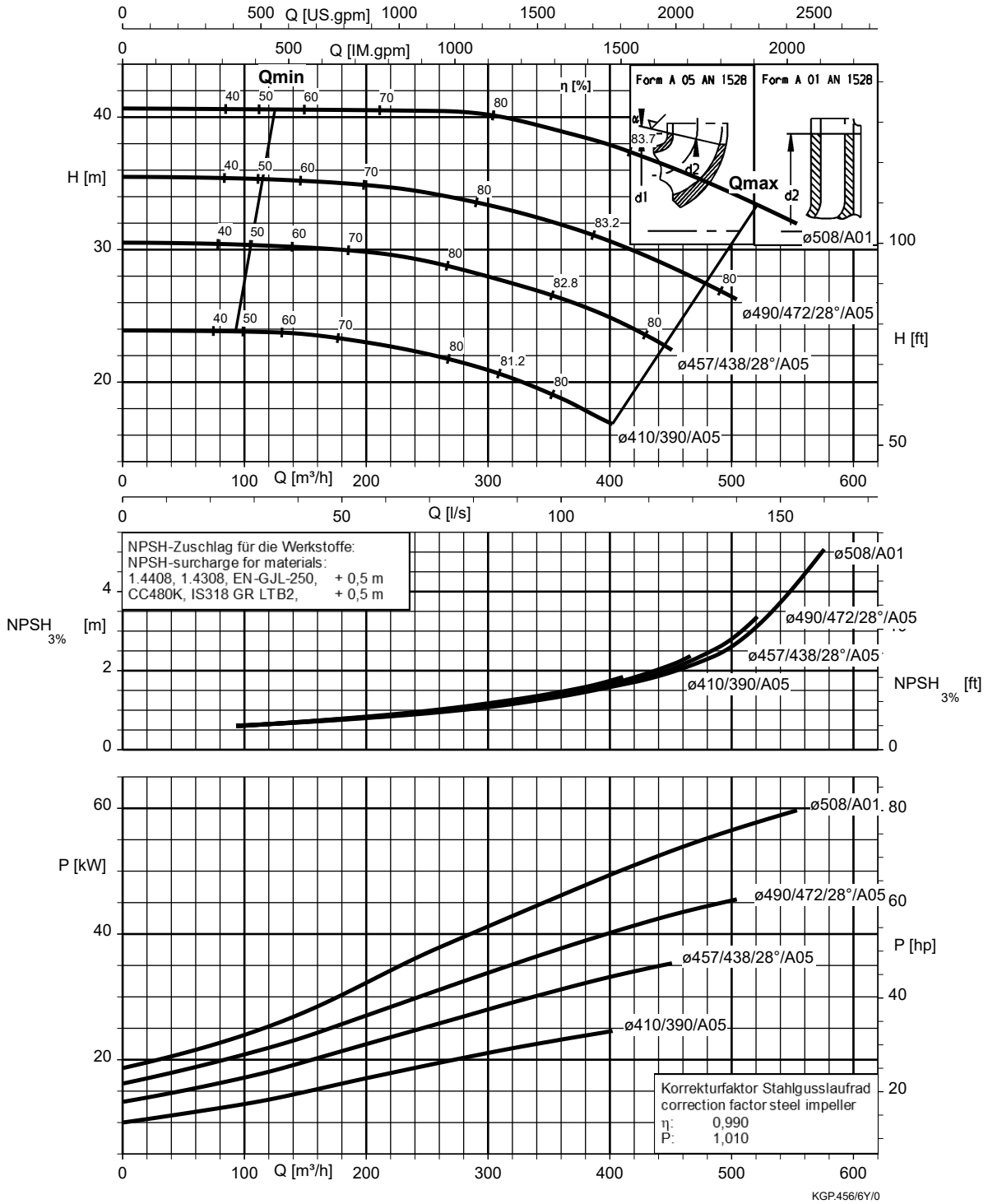


Etanorm 250-200-435 , n = 960 rpm



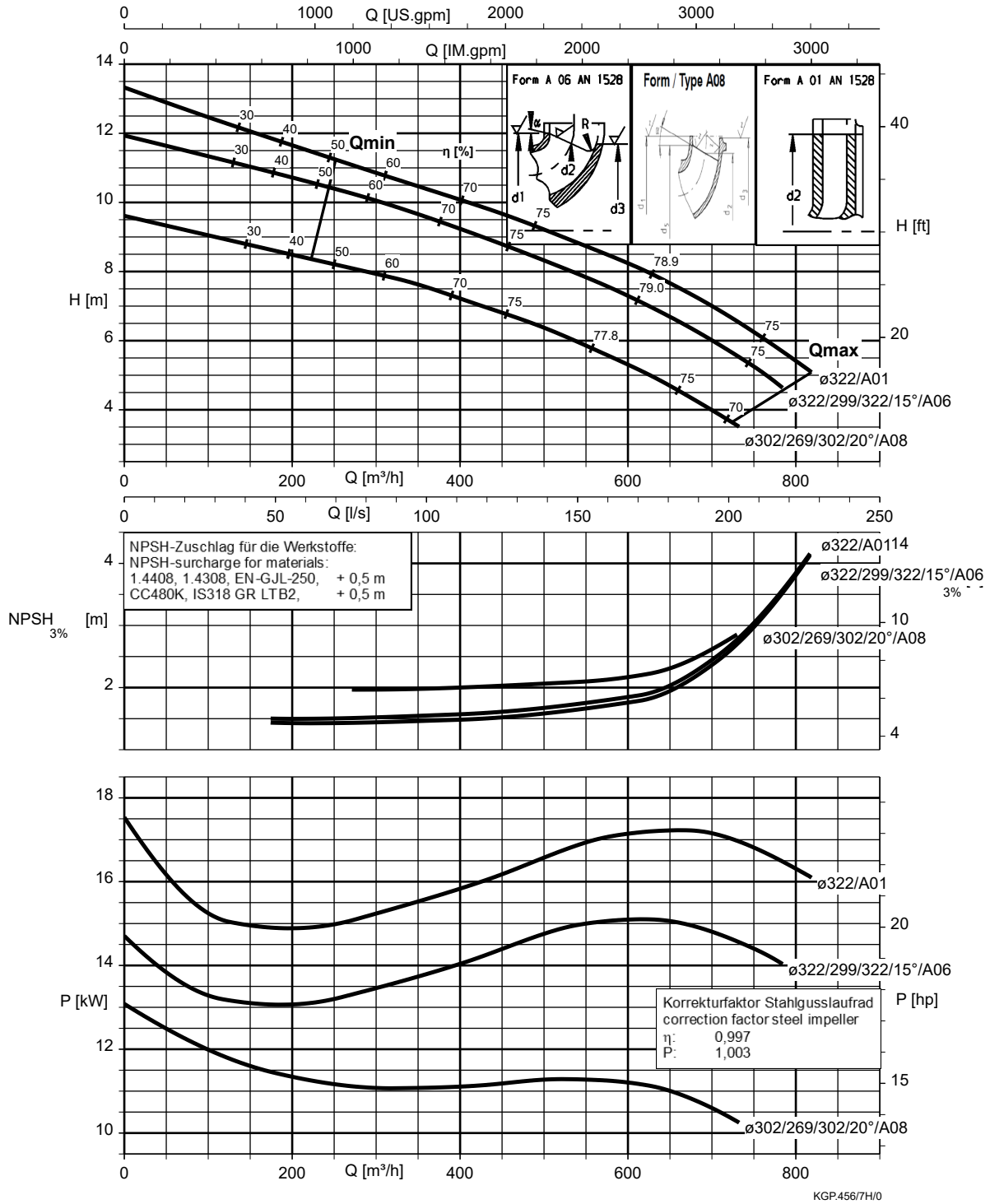
1311.45/11-EN

Etanorm 250-200-510 , n = 960 rpm



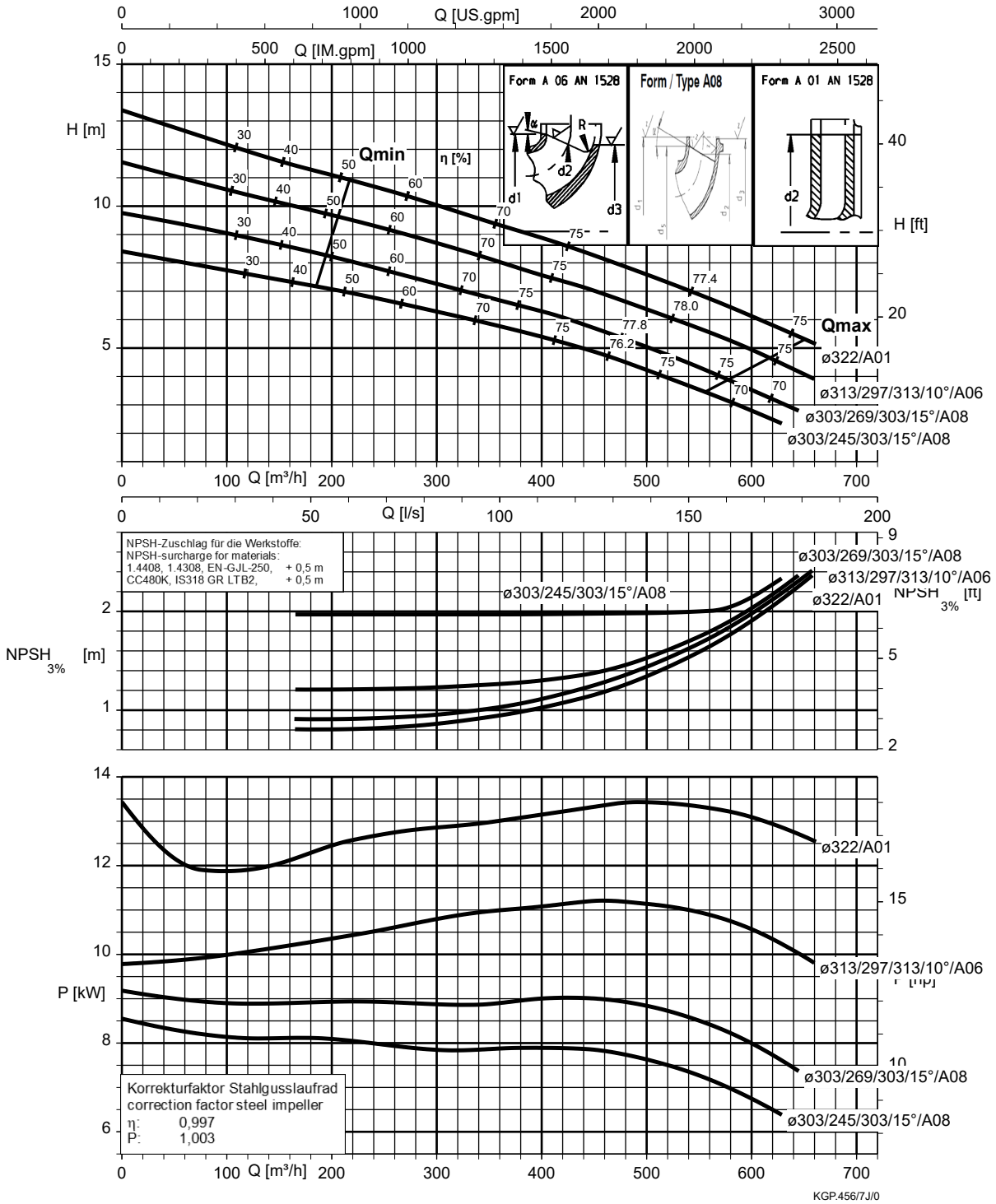


Etanorm 300-250-295, n = 960 rpm



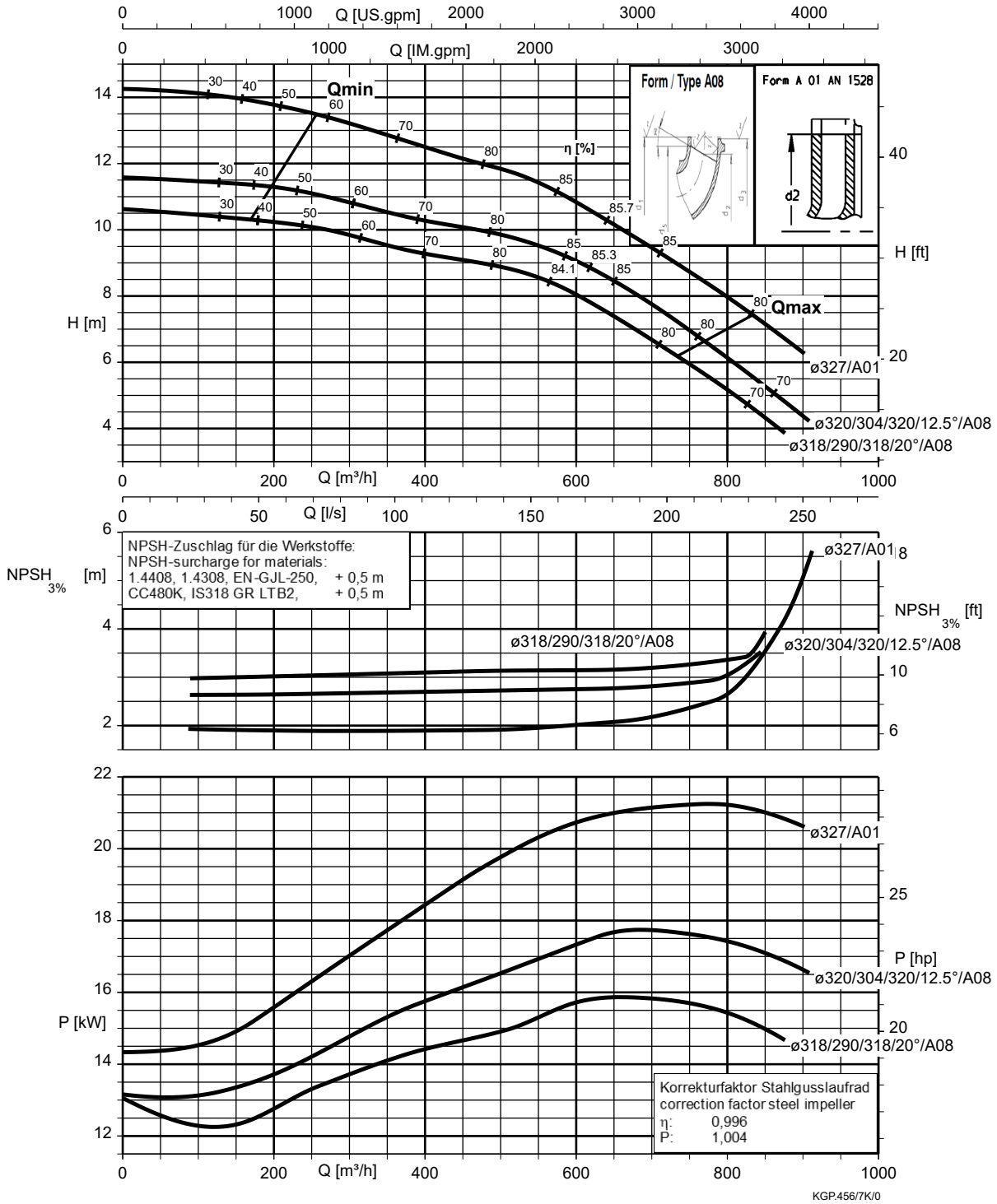
1311.45/11-EN

Etanorm 300-250-295.1 , n = 960 rpm



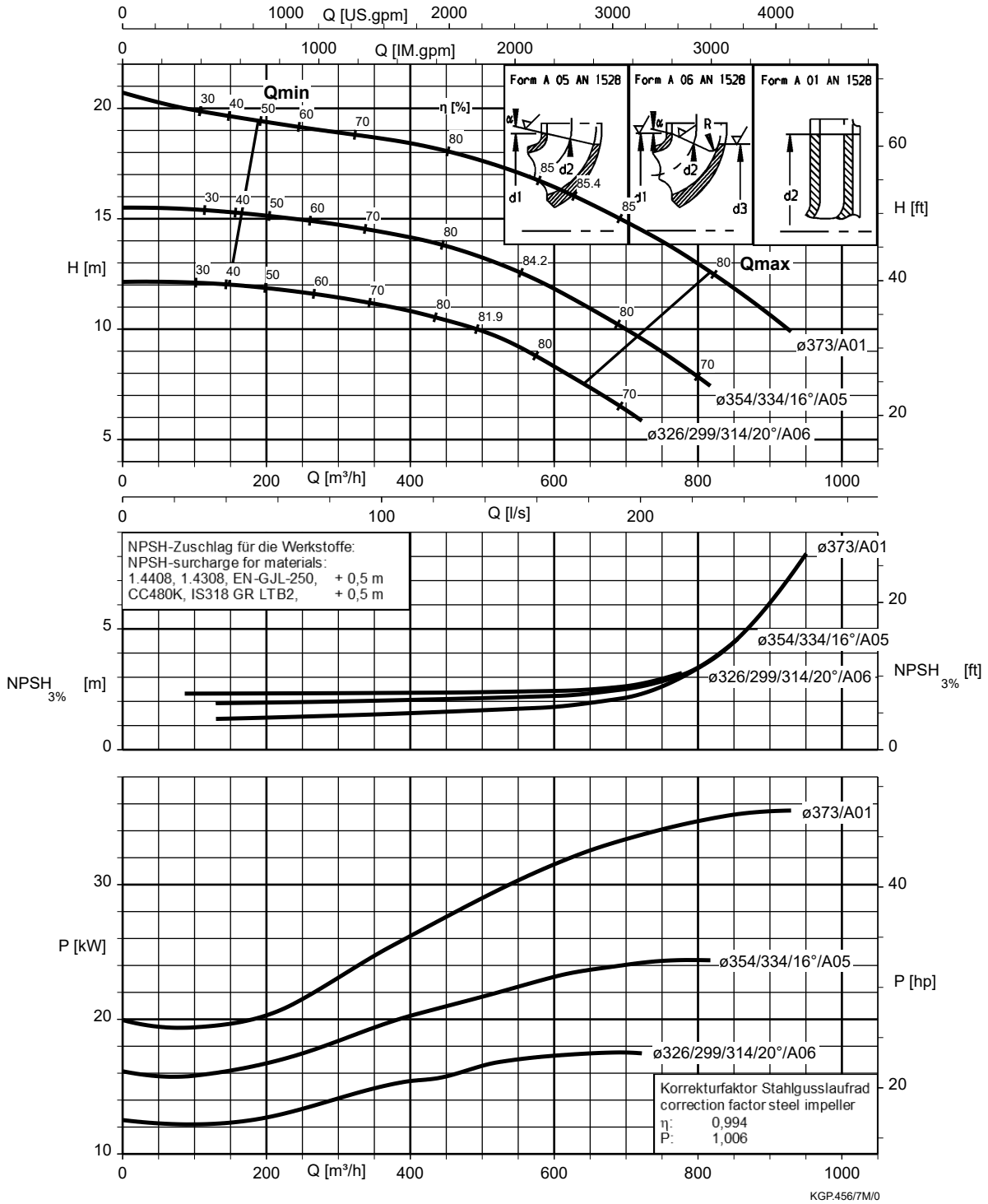
1311.45/11-EN

Etanorm 300-250-320 , n = 960 rpm

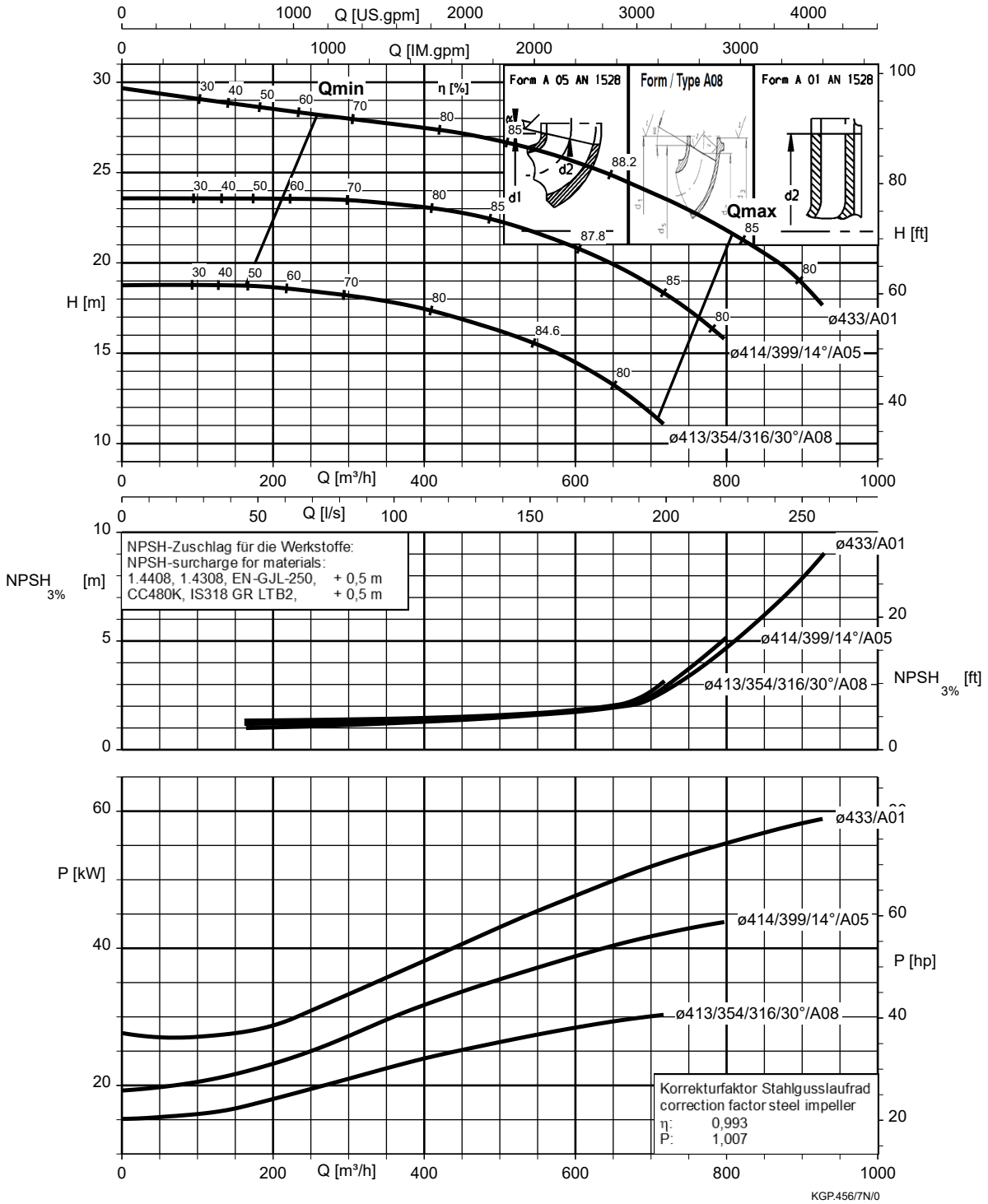


1311.45/11-EN

Etanorm 300-250-375, n = 960 rpm

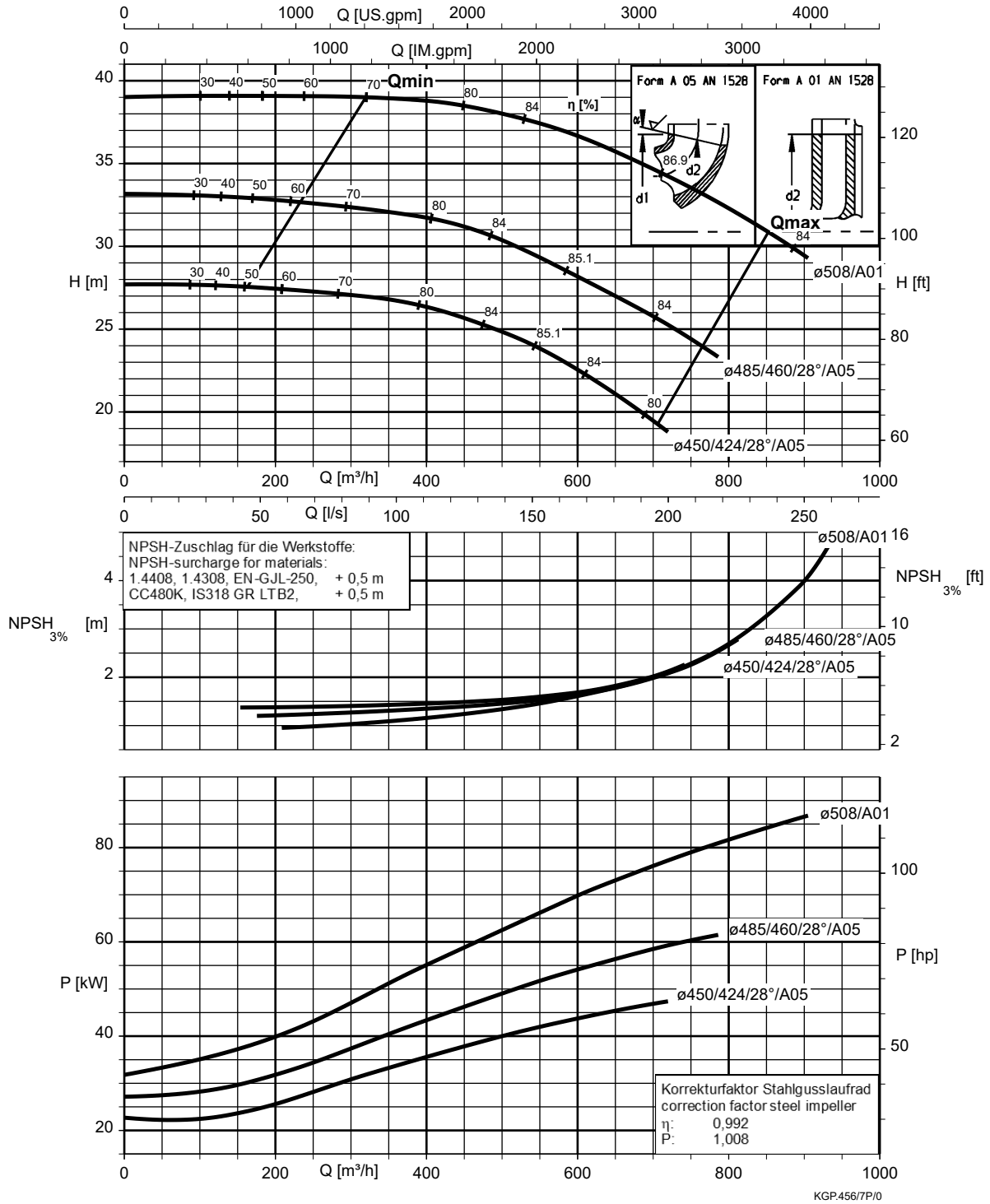


Etanorm 300-250-435, n = 960 rpm

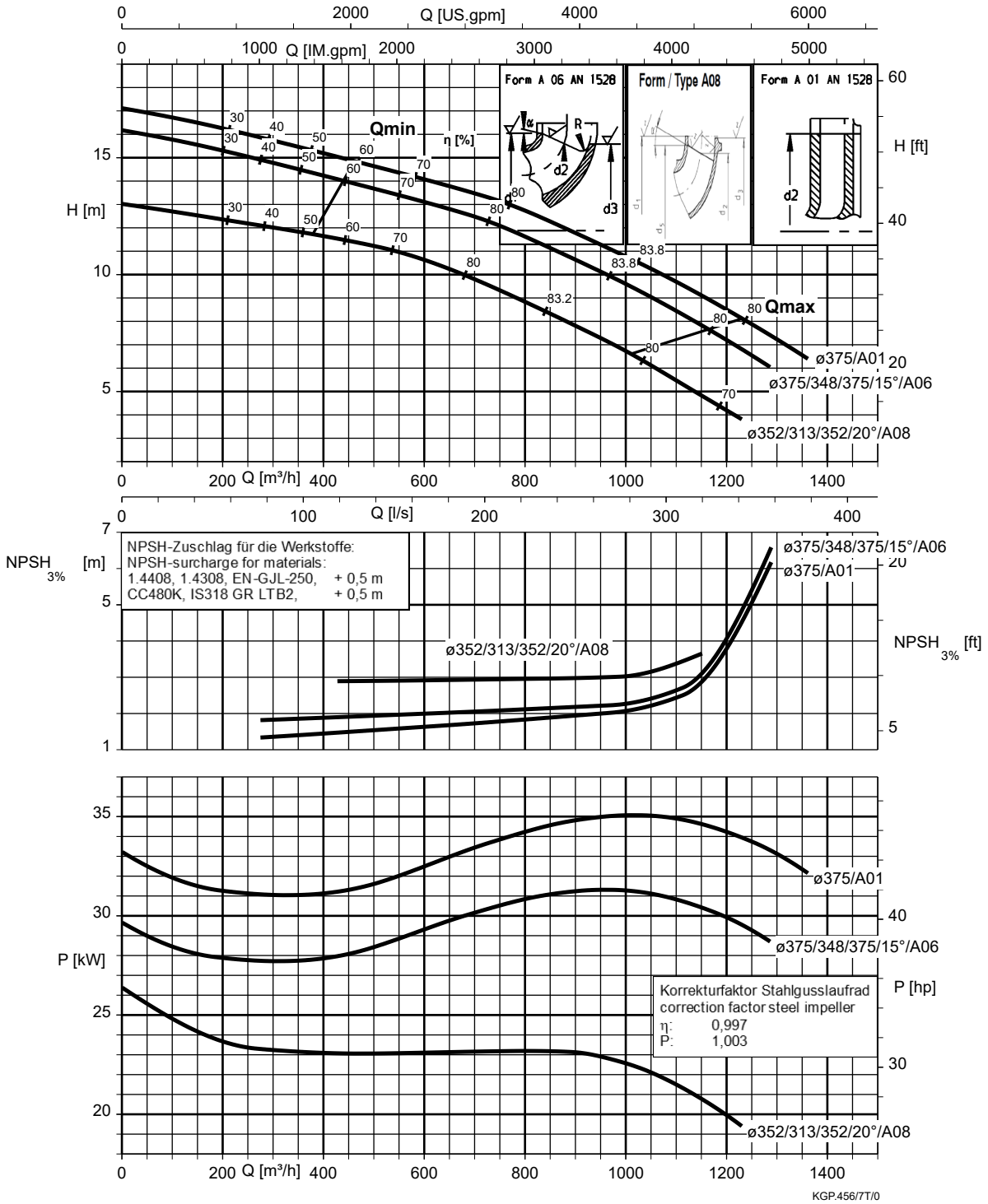


1311.45/11-EN

Etanorm 300-250-510, n = 960 rpm

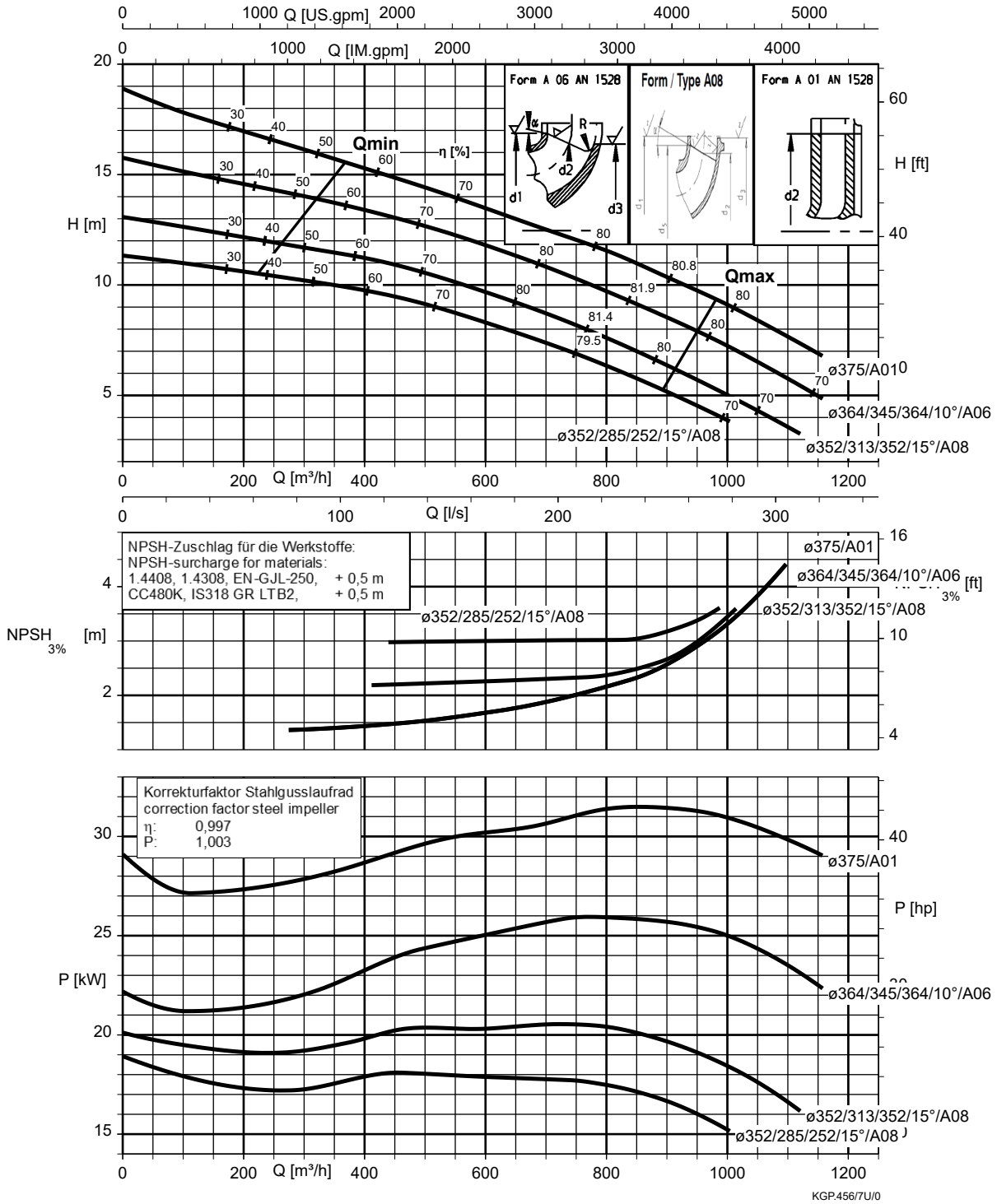


Etanorm 350-300-350, n = 960 rpm



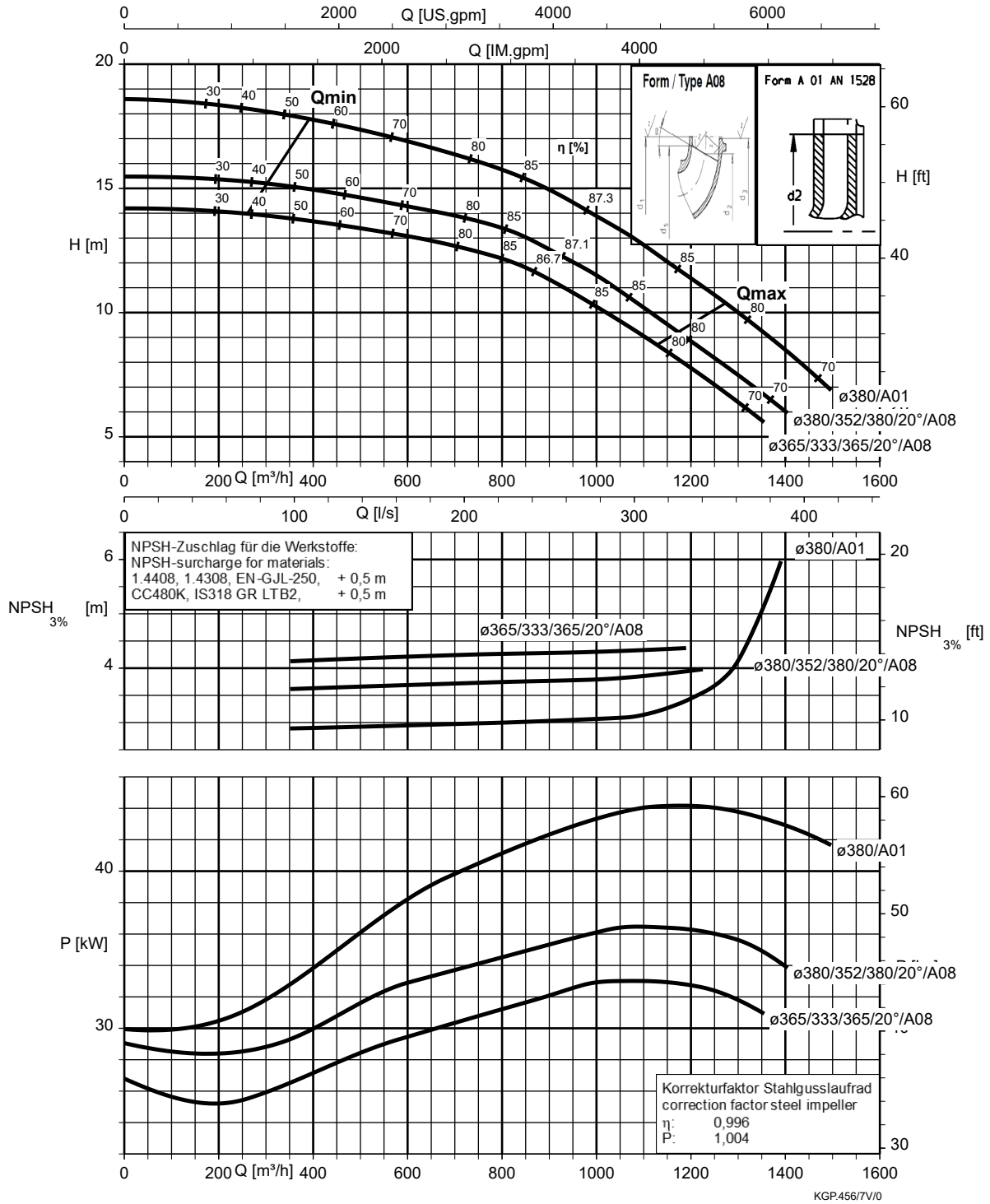
1311.45/11-EN

Etanorm 350-300-350.1 , n = 960 rpm



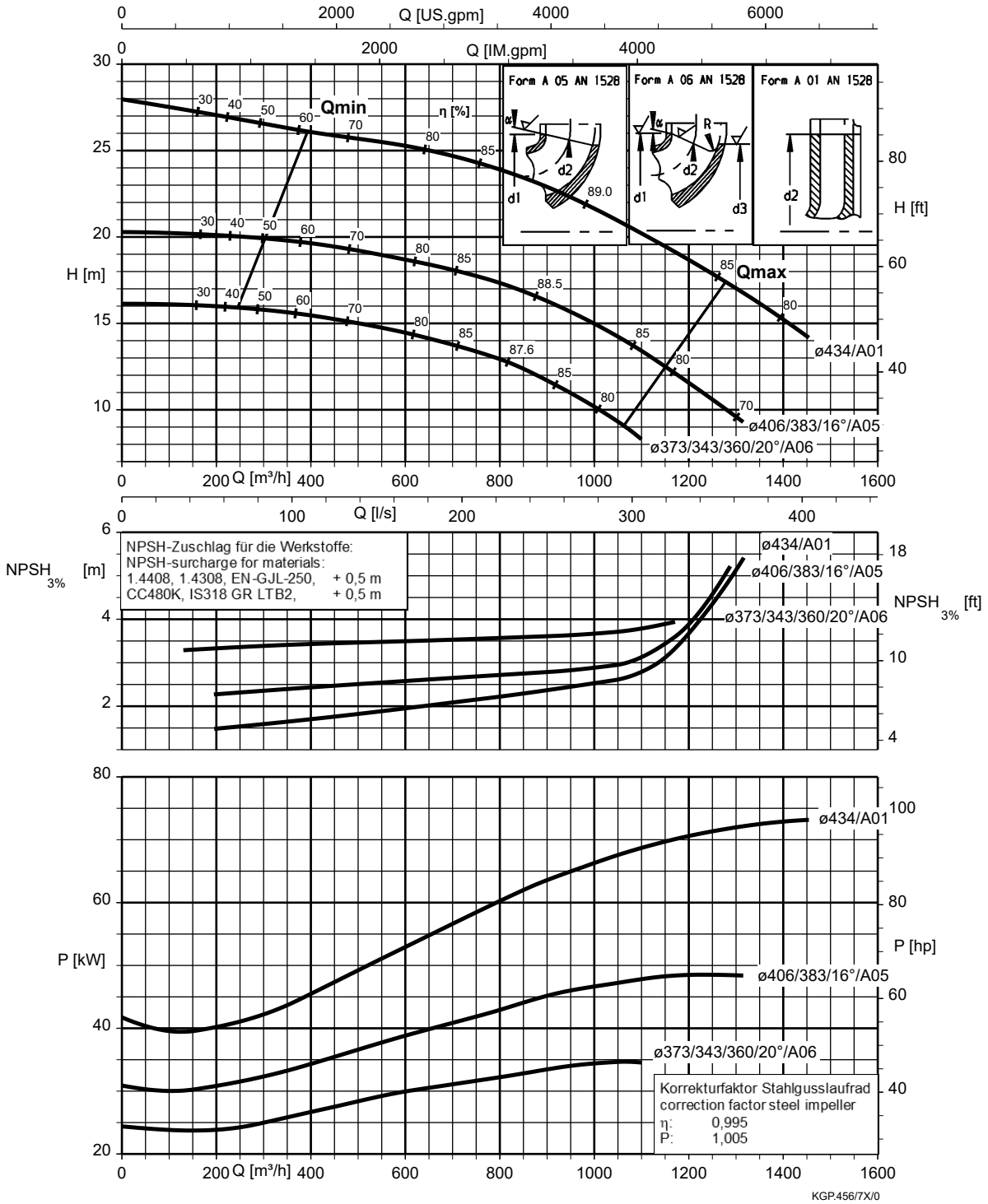


Etanorm 350-300-375, n = 960 rpm

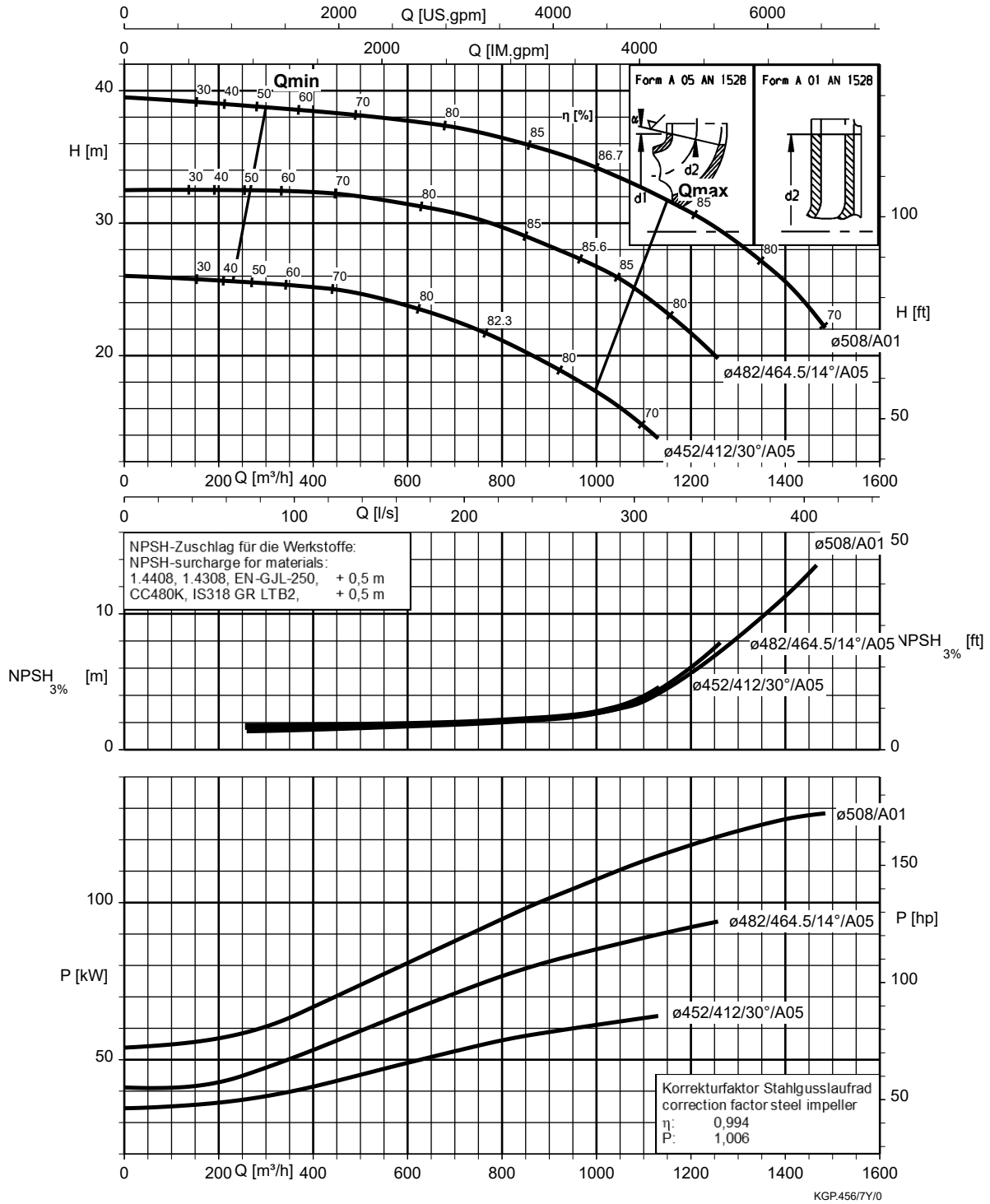


1311.45/11-EN

Etanorm 350-300-435 , n = 960 rpm



Etanorm 350-300-510 , n = 960 rpm



Etanorm-R 125-500.2, n = 960 rpm

Etanorm-RSY

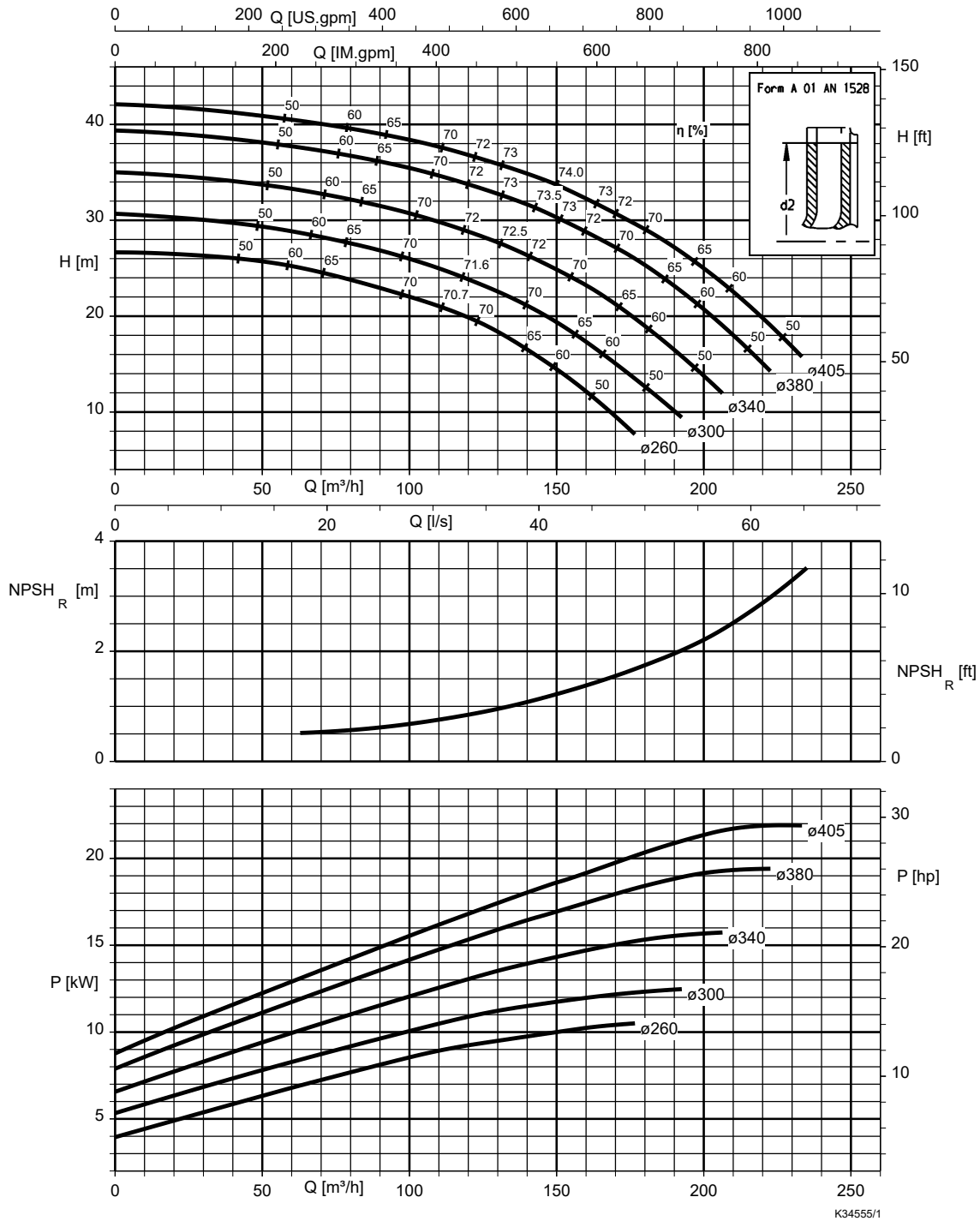


Table 15: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 150-500.1, n = 960 rpm

Etanorm-RSY

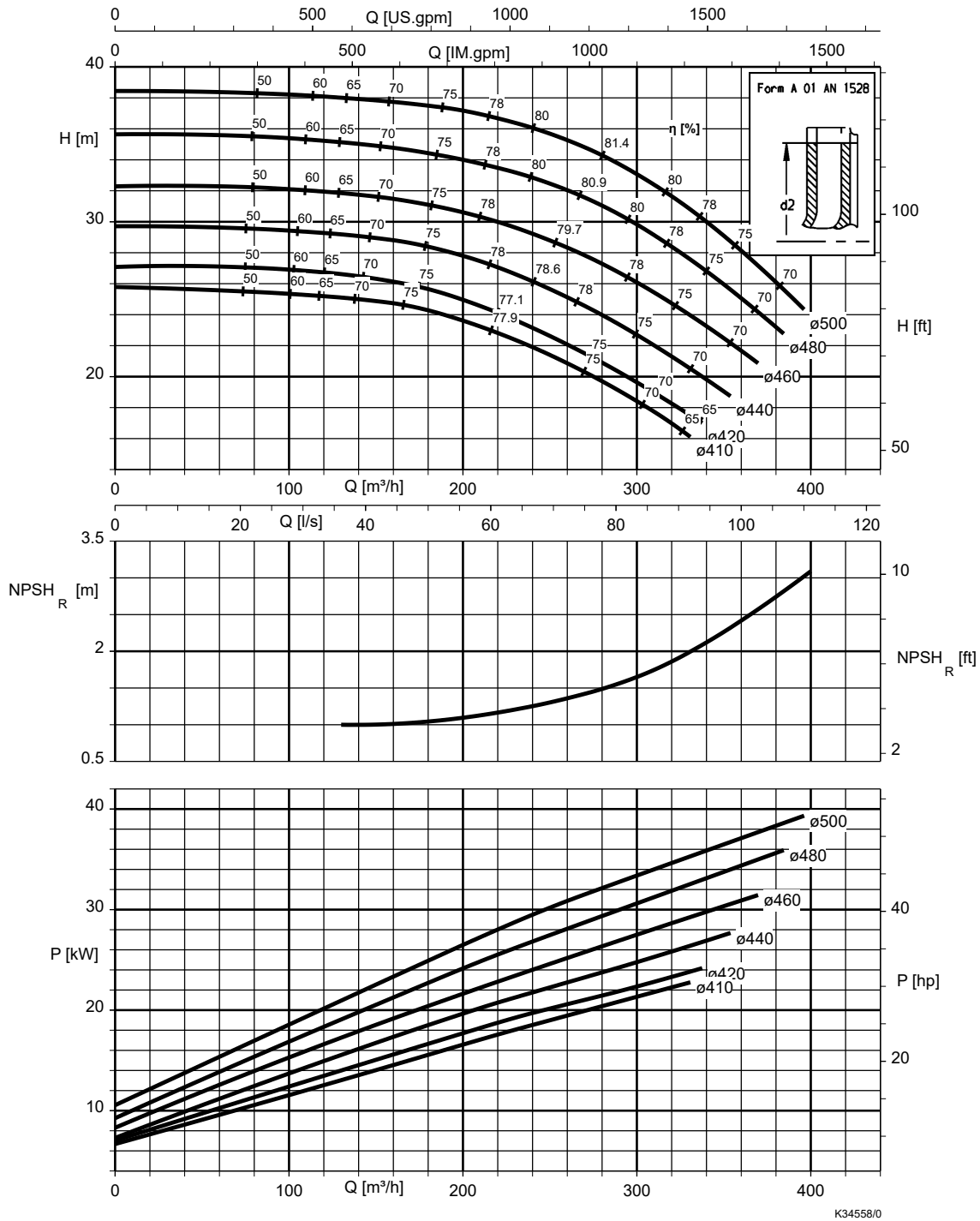


Table 16: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 200-250, n = 960 rpm

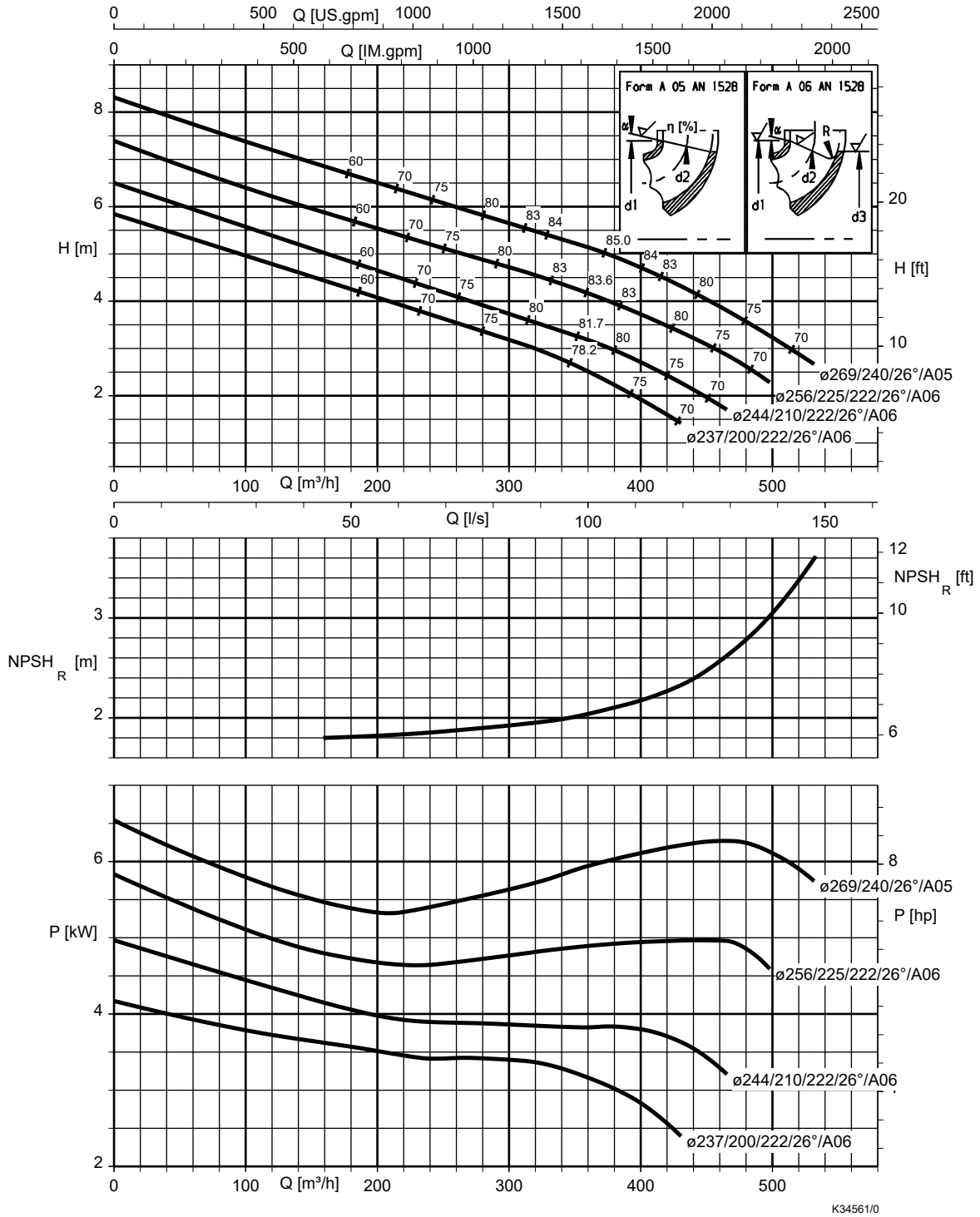


Table 17: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 200-260, n = 960 rpm

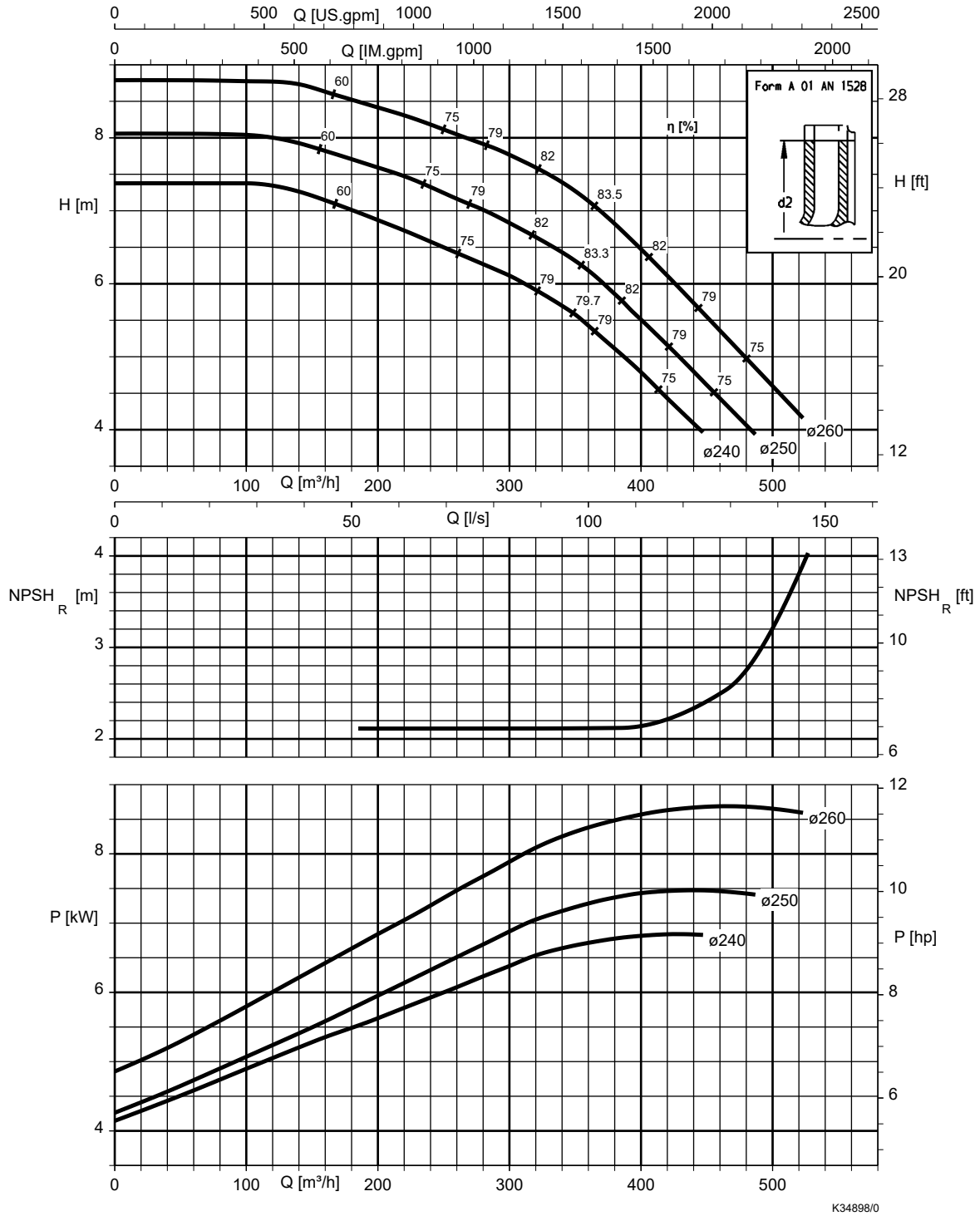


Table 18: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 200-330, n = 960 rpm

Etanorm-RSY

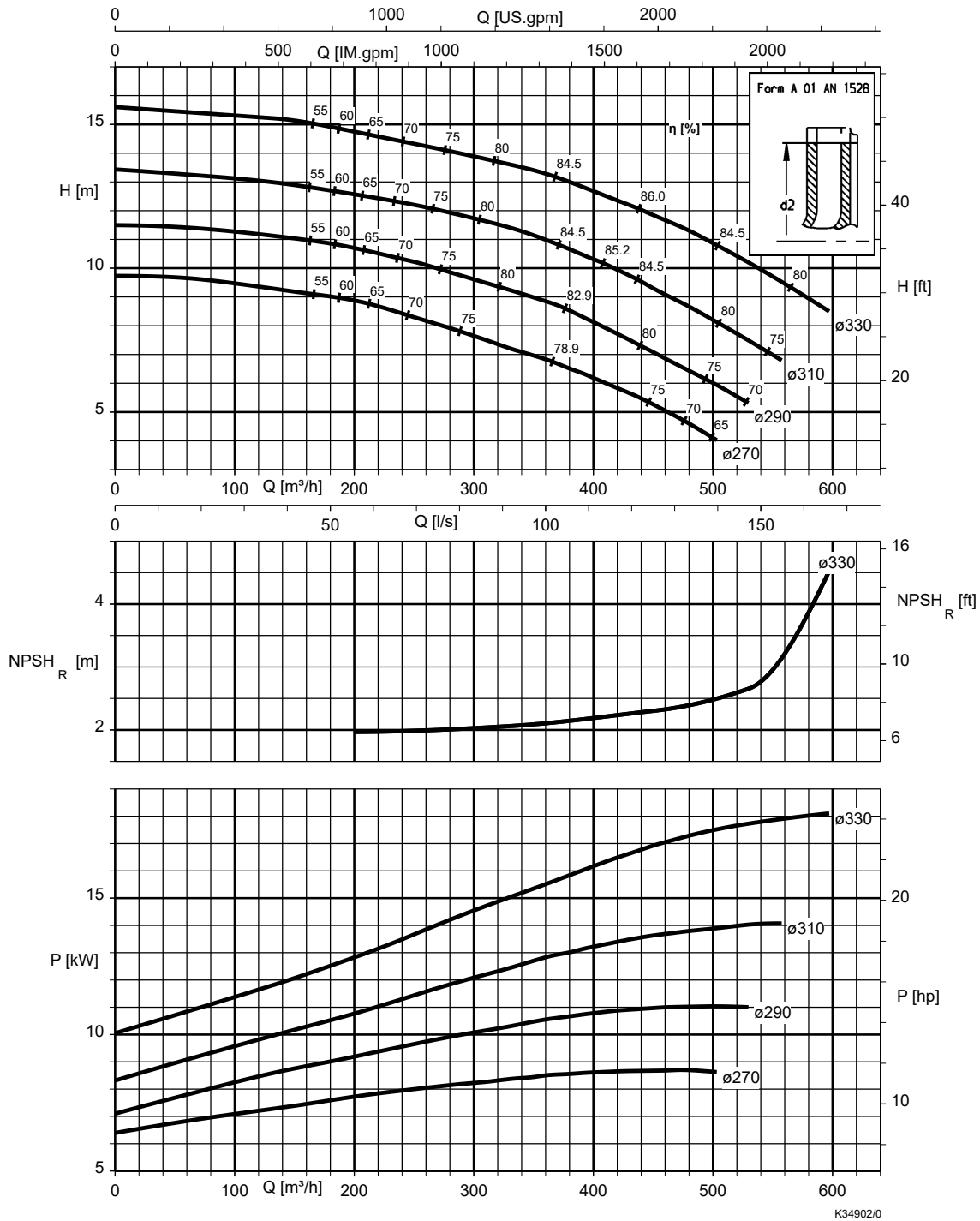


Table 19: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN



Etanorm-R 200-400, n = 960 rpm

Etanorm-RSY

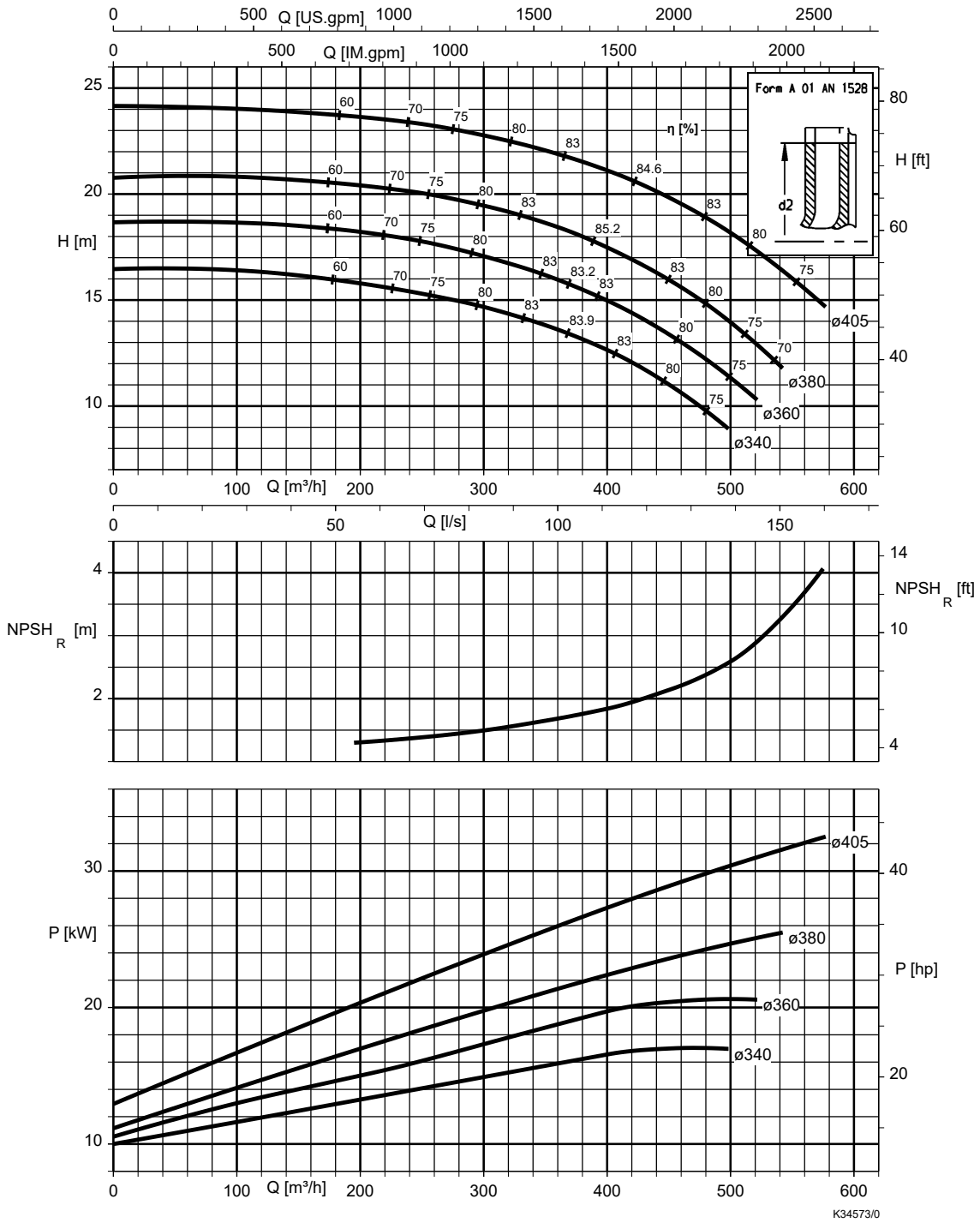


Table 20: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 200-500, n = 960 rpm

Etanorm-RSY

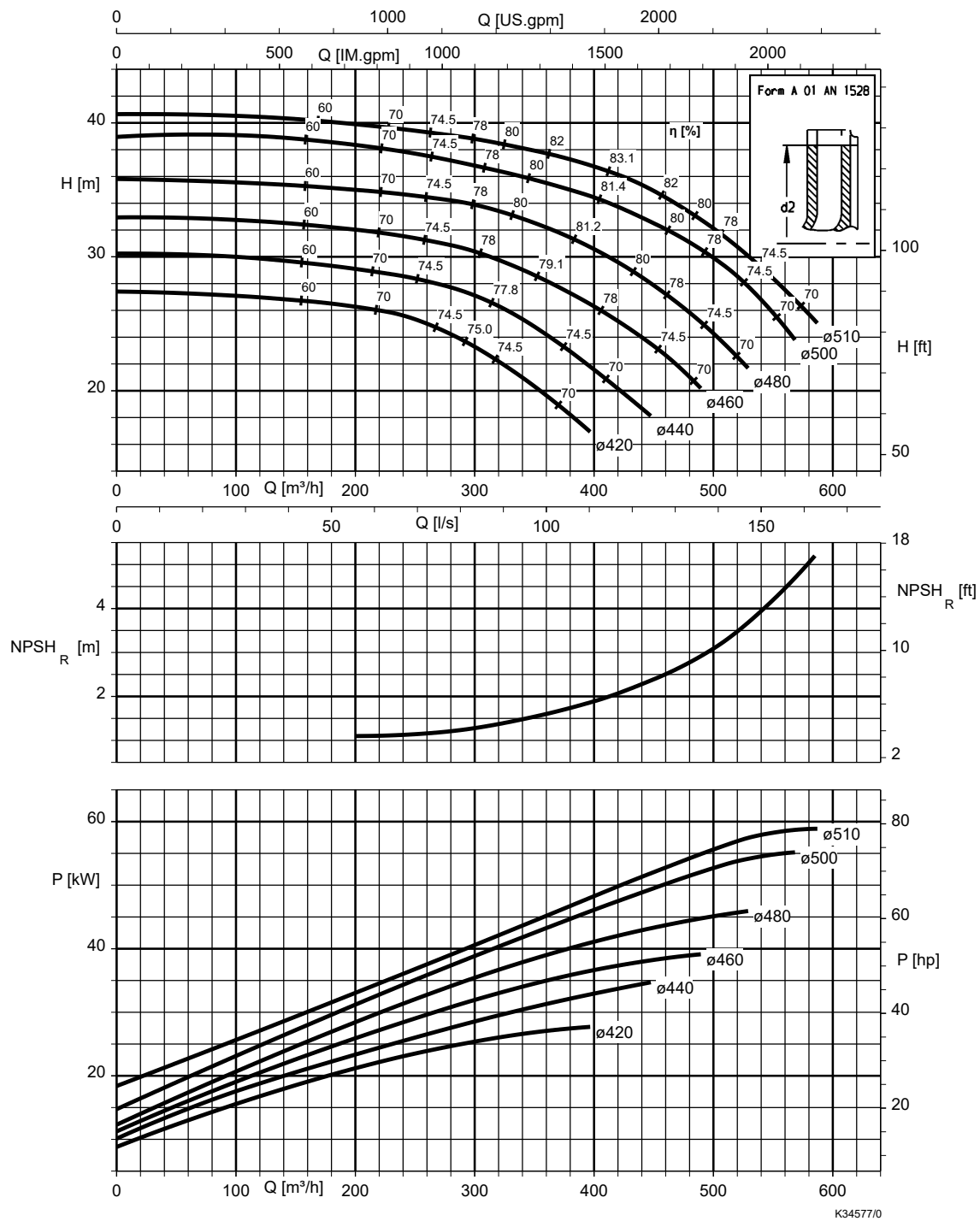


Table 21: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 250-300, n = 960 rpm

Etanorm-RSY

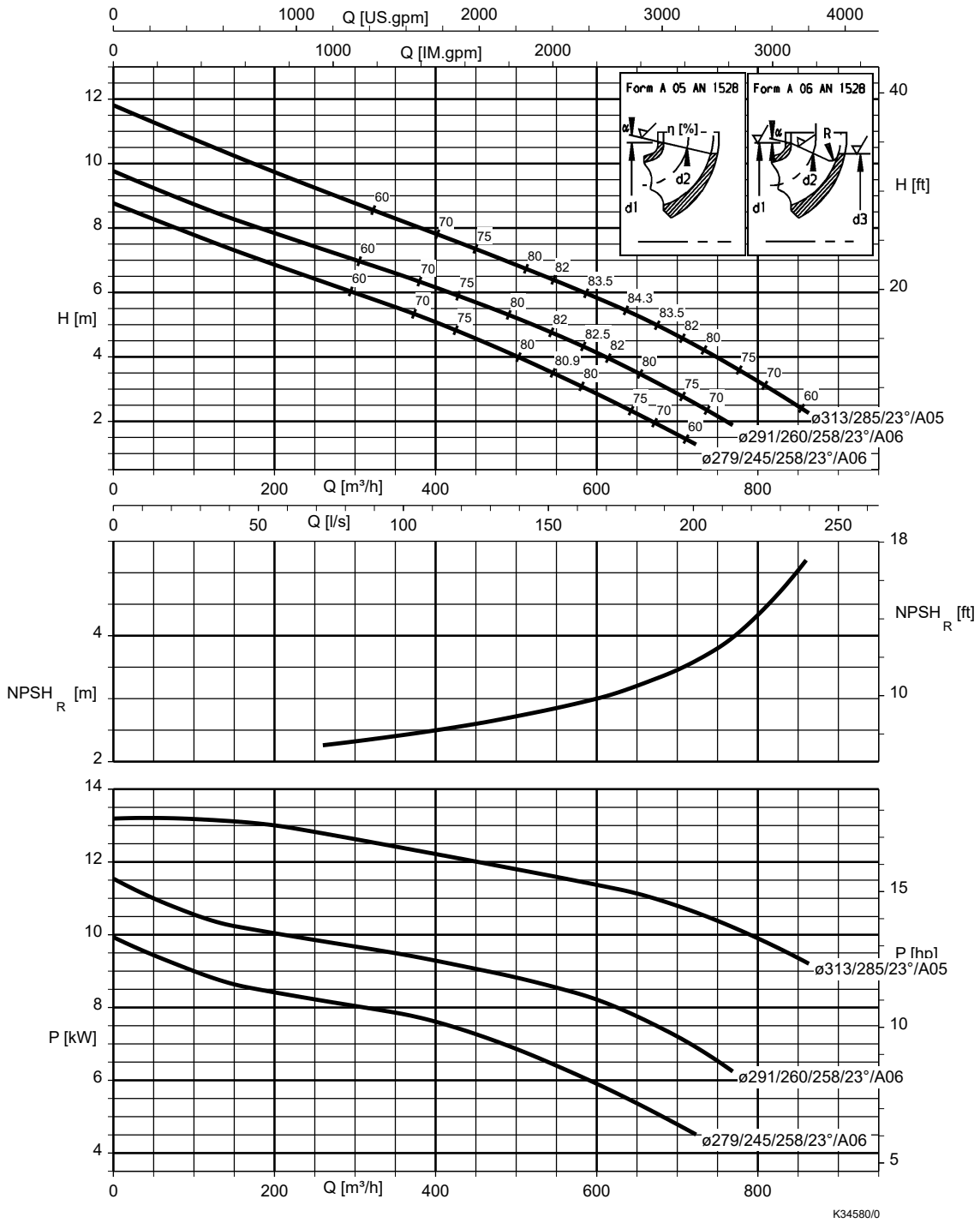


Table 22: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 250-330, n = 960 rpm

Etanorm-RSY

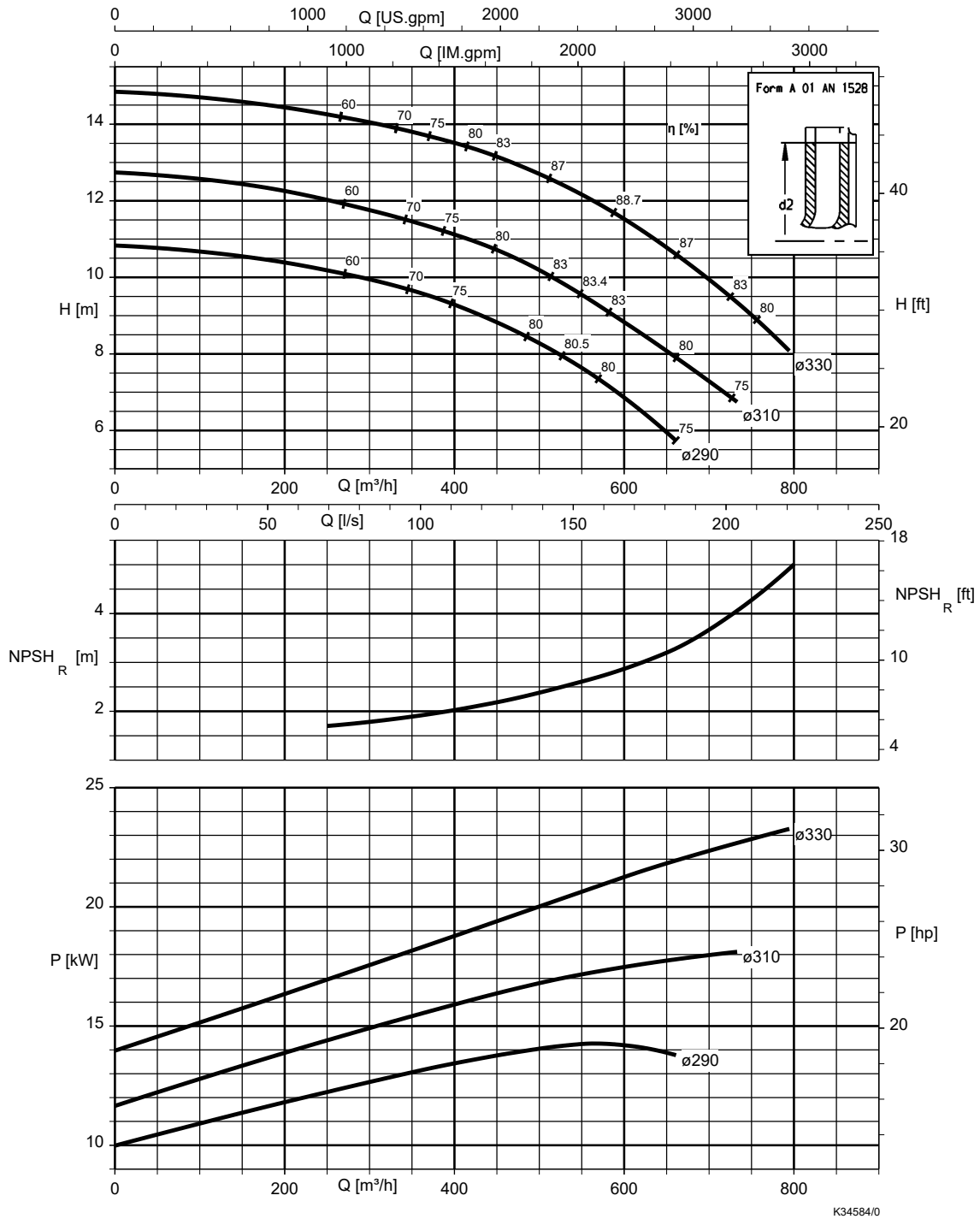


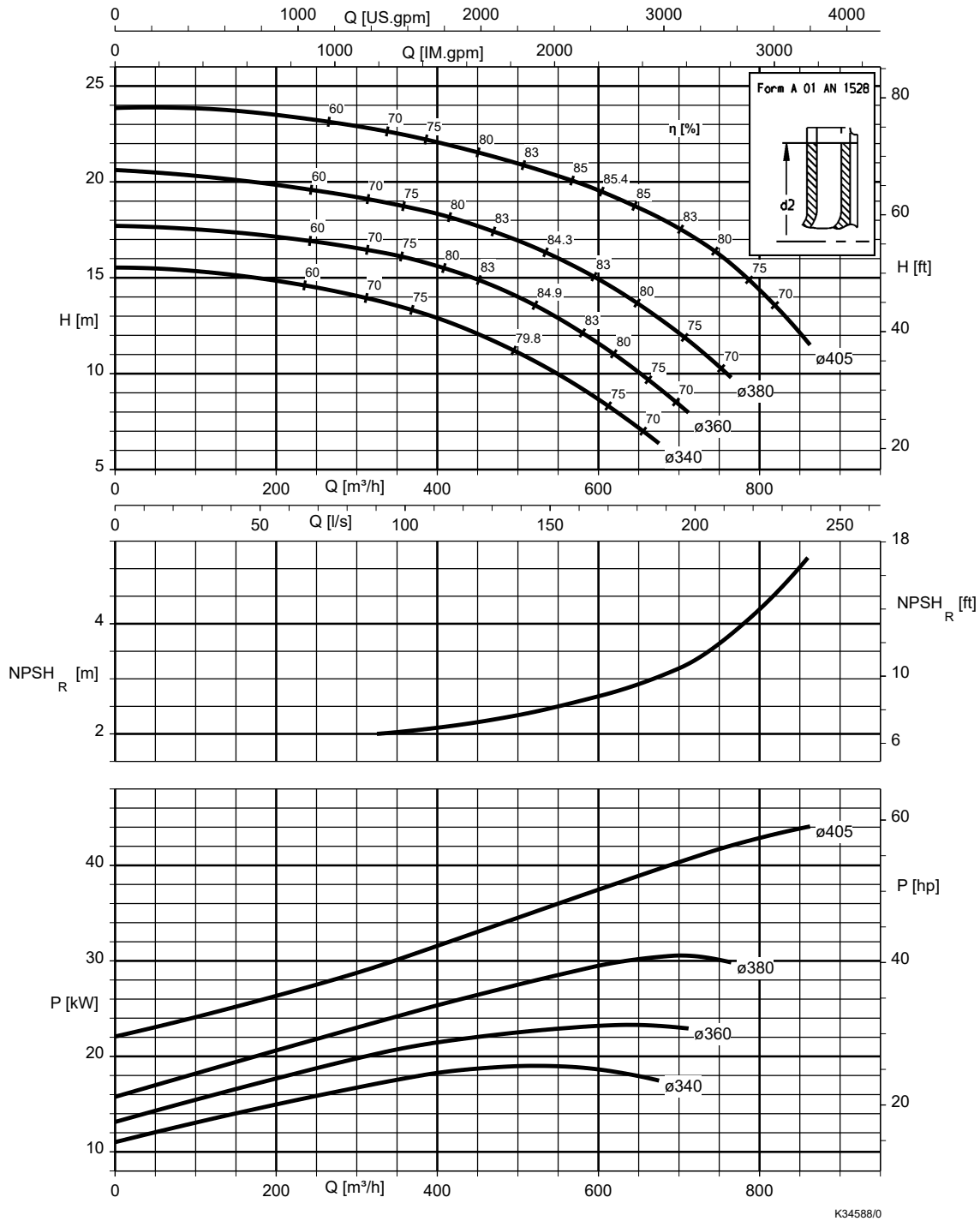
Table 23: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 250-400, n = 960 rpm

Etanorm-RSY



K34588/0

Table 24: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 250-500, n = 960 rpm

Etanorm-RSY

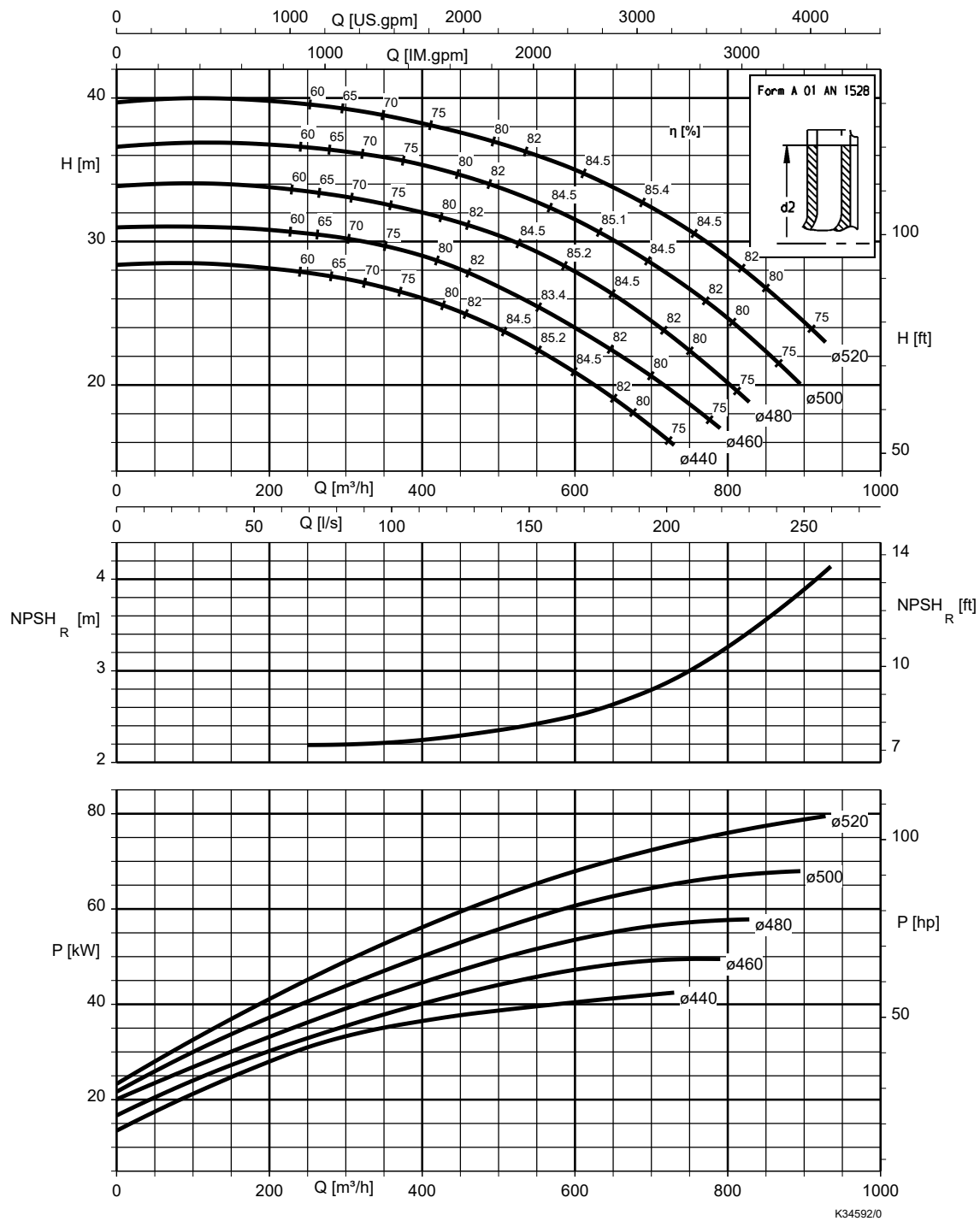


Table 25: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 300-340, n = 960 rpm

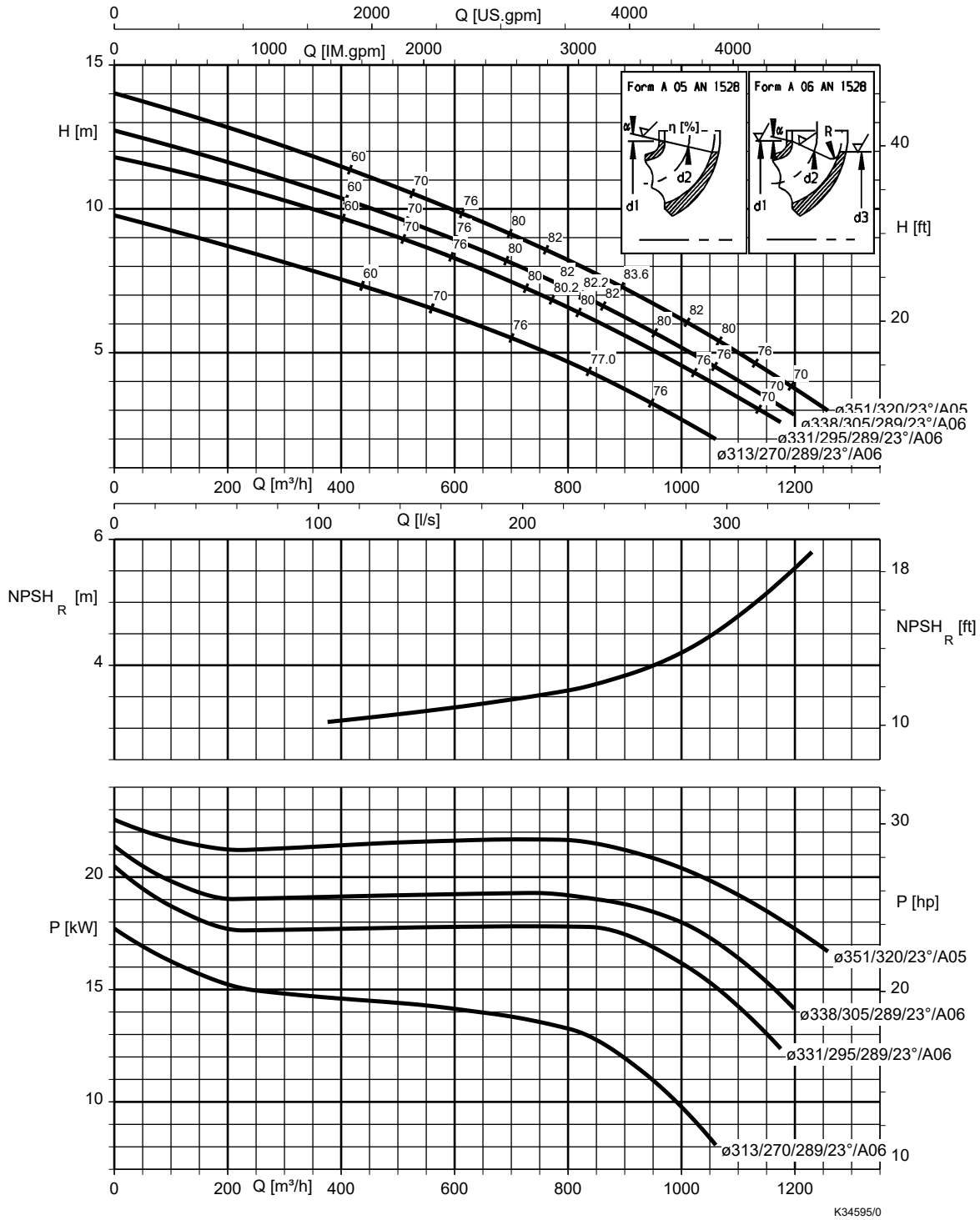


Table 26: Correction coefficients

Impeller material	Correction coefficient S [m]
EN-GJL-250	1,2
CC480K-GS	0,5
1.4408	0,5

**i** NPSH<sub>available</sub> ≥ NPSH + correction coefficient S

1311.45/11-EN

Etanorm-R 300-360, n = 960 rpm

Etanorm-RSY

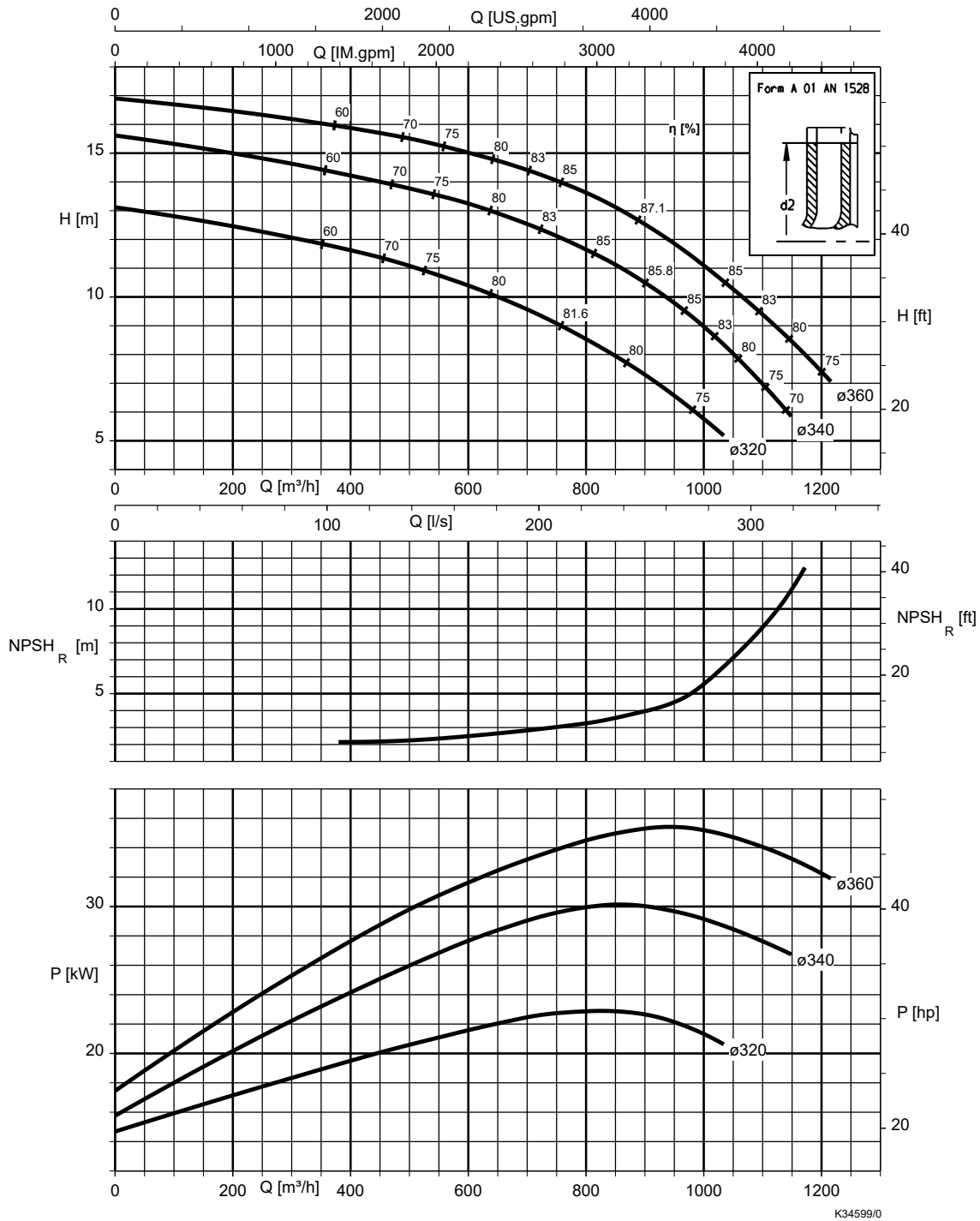


Table 27: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN



Etanorm-R 300-400, n = 960 rpm

Etanorm-RSY

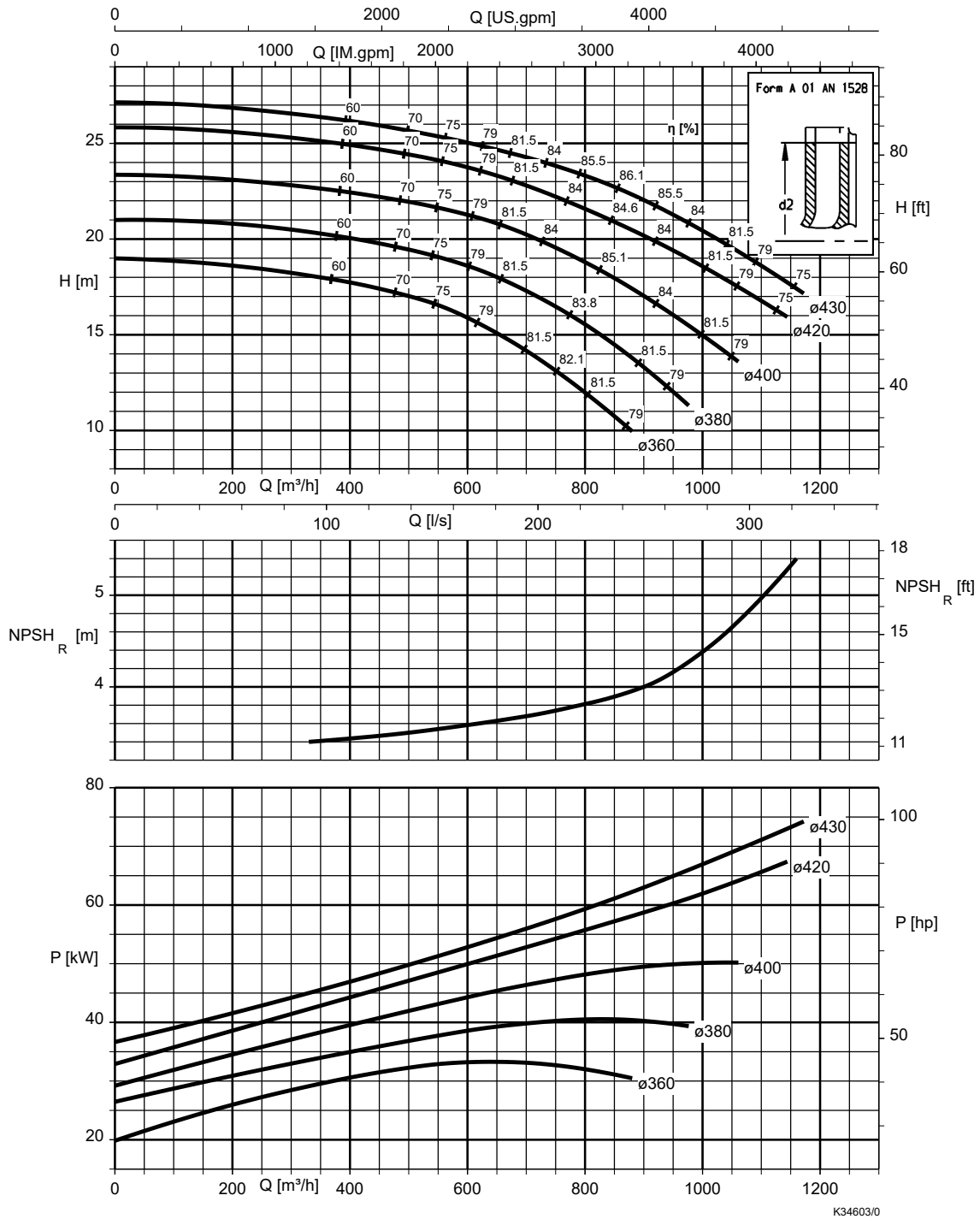


Table 28: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN

Etanorm-R 300-500, n = 960 rpm

Etanorm-RSY

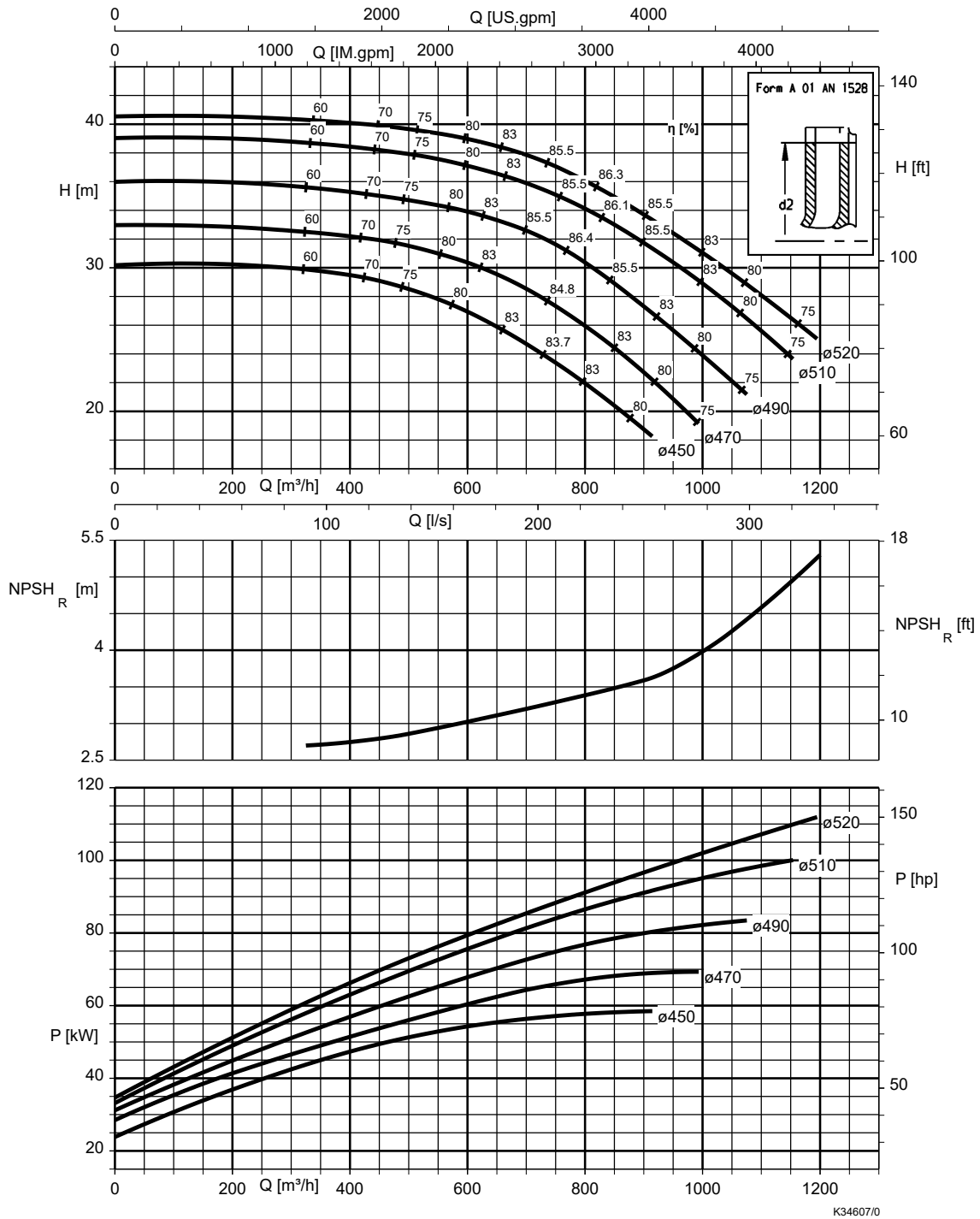


Table 29: Correction coefficients

Impeller material	Correction coefficient S [m]	Calculation
EN-GJL-250	0,5	$NPSH_{available} \geq NPSH + \text{correction coefficient } S$
CC480K-GS	0,5	
1.4408	0,5	

1311.45/11-EN



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