

Wassernormpumpe/ Wärmeträgeröl-/
Heißwasserpumpe

60 Hz

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

Kennlinienheft



Impressum

Kennlinienheft 60 Hz

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Generell gilt: Technische Änderungen vorbehalten.

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Inhaltsverzeichnis

Kreiselpumpen mit Wellendichtung	4
Wassernormpumpe/ Wärmeträgeröl-/Heißwasserpumpe	4
Etanorm/ SYT/ V; Etabloc/ SYT; Etanorm-RSY	4
Allgemein	4
Baugrößenübersicht.....	5
Kennfelder.....	7
Etanorm, $n = 3500 \text{ min}^{-1}$	7
Etanorm, $n = 1750 \text{ min}^{-1}$	8
Etanorm, $n = 1160 \text{ min}^{-1}$	9
Etanorm SYT, $n = 3500 \text{ min}^{-1}$	10
Etanorm SYT, $n = 1750 \text{ min}^{-1}$	11
Etanorm SYT, $n = 1160 \text{ min}^{-1}$	12
Etanorm V (ungeregelte Ausführung), $n = 3500 \text{ min}^{-1}$	13
Etanorm V (ungeregelte Ausführung), $n = 1750 \text{ min}^{-1}$	14
Etabloc, $n = 3500 \text{ min}^{-1}$ (ungeregelte Ausführung)	15
Etabloc, $n = 1750 \text{ min}^{-1}$ (ungeregelte Ausführung)	16
Etabloc, $n = 1160 \text{ min}^{-1}$ (ungeregelte Ausführung)	17
Etabloc SYT, $n = 3500 \text{ min}^{-1}$	18
Etabloc SYT, $n = 1750 \text{ min}^{-1}$	19
Etanorm-RSY, $n = 1160 \text{ min}^{-1}$	20
Etanorm-RSY, $n = 1750 \text{ min}^{-1}$	21
Kennlinien	22
$n = 3500 \text{ min}^{-1}$	22
$n = 1750 \text{ min}^{-1}$	51
$n = 1160 \text{ min}^{-1}$	123

Kreiselpumpen mit Wellendichtung

Wassernormpumpe/ Wärmeträgeröl-/Heißwasserpumpe

Etanorm/ SYT/ V; Etabloc/ SYT; Etanorm-RSY



Etanorm



Etanorm SYT



Etanorm V



Etabloc



Etabloc SYT



Etanorm-RSY

Allgemein

Abnahmeklasse: Kennlinien gemäß ISO 9906-Klasse 3B

NPSH-Werte

Die in den Kennlinien angegebenen NPSH-Messwerte entsprechen einem Förderhöhenabfall von 3%.

NPSH-Wert im Teillastgebiet

NPSH-Werte für Förderströme kleiner als $Q = 0,3 \times Q_{opt}$ können nur mit sehr hohem Aufwand gemessen werden. Der Nachweis von NPSH-Werten im Teillastgebiet wird nicht erbracht.

Dichte des Fördermediums

Förderhöhen und Leistungsangaben gelten für Fördermedien mit einer Dichte $\rho = 1,0 \text{ kg/dm}^3$ und einer kinematischen Viskosität ν bis max. $20 \text{ mm}^2/\text{s}$. Ist die Dichte $\neq 1,0$, muss die Leistungsangabe mit ρ multipliziert werden. Bei Viskosität $>20 \text{ mm}^2/\text{s}$ müssen entsprechende Kaltwasserdaten berechnet und der Einfluss auf die Leistung der Pumpe ermittelt werden.

Reibleistung

Bei bestimmten Ausführungen (verstärkte Lagerung, bestimmte Wellendichtungen) müssen Reibleistungen berücksichtigt werden und als Zusatzleistung im Datenblatt angegeben werden.

Abwertefaktoren

Die Kennlinien gelten für Pumpen mit Gusseisen- bzw. Bronze-Laufrädern.

▪ Etanorm/SYT; Etabloc/SYT

Bei Verwendung eines Laufrads aus einem Stahlgusswerkstoff müssen Wirkungsgrad und Leistung bei betroffenen Baugrößen mit den in den Kennlinien angegebenen Abwertefaktoren korrigiert werden.

▪ Etanorm-RSY

Bei Verwendung eines Laufrads aus 1.4408 müssen die in den Kennlinien angegebenen Wirkungsgradprozente jeweils um 2 %-Punkte reduziert werden.

Baugrößenübersicht
Tabelle 1: Baugrößenübersicht

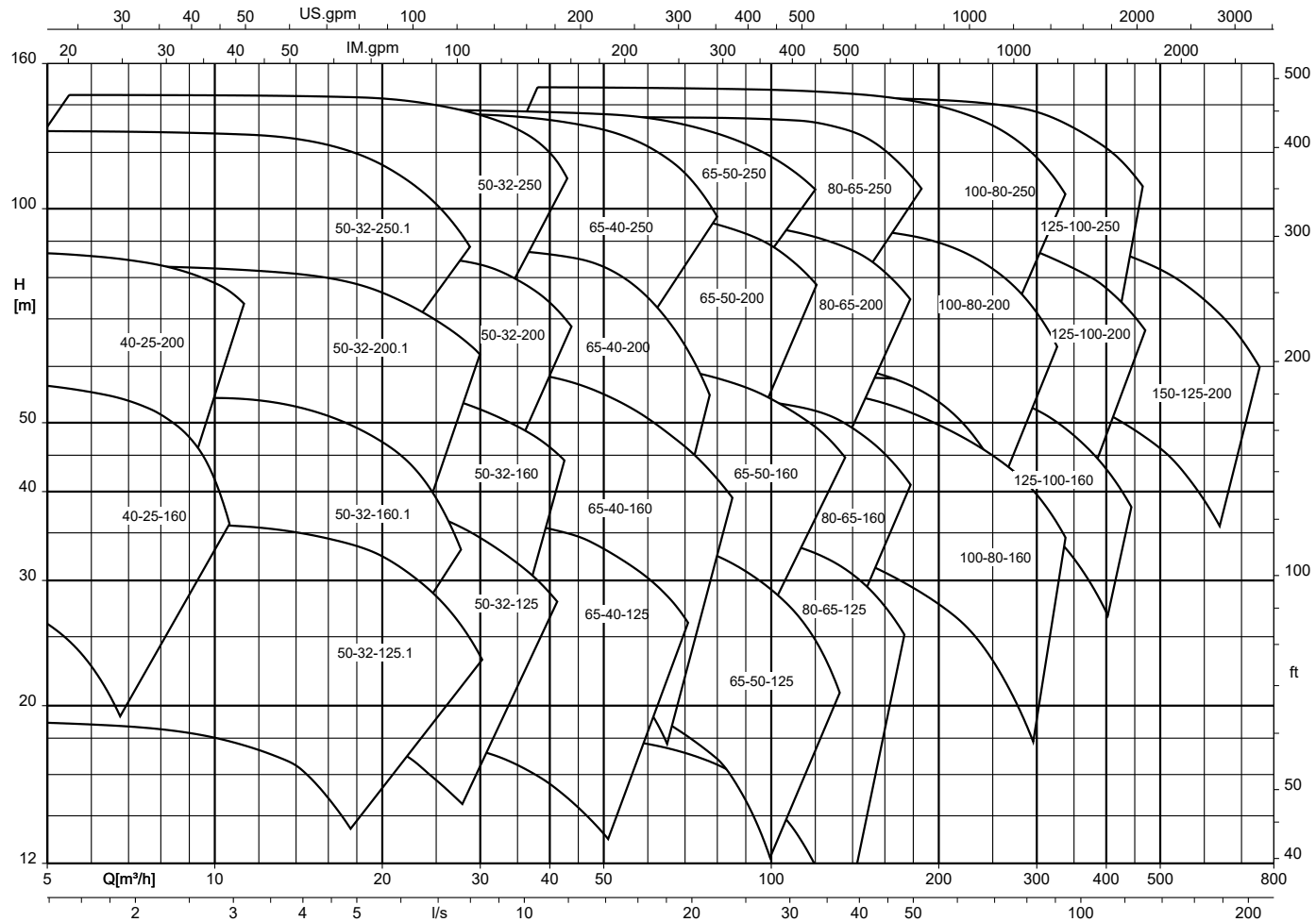
Baugröße	Baureihe						Drehzahl [min ⁻¹]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	3500	1750	1160
040-025-160	X	X	-	X	X	-	(⇒ Seite 22)	(⇒ Seite 51)	(⇒ Seite 123)
040-025-200	X	X	-	X	X	-	(⇒ Seite 23)	(⇒ Seite 52)	(⇒ Seite 124)
050-032-125.1	X	X	X	X	X	-	(⇒ Seite 24)	(⇒ Seite 53)	(⇒ Seite 125)
050-032-160.1	X	X	X	X	X	-	(⇒ Seite 25)	(⇒ Seite 54)	(⇒ Seite 126)
050-032-200.1	X	X	X	X	X	-	(⇒ Seite 26)	(⇒ Seite 55)	(⇒ Seite 127)
050-032-250.1	X	-	X	X	-	-	(⇒ Seite 27)	(⇒ Seite 56)	(⇒ Seite 128)
050-032-125	X	-	X	X	-	-	(⇒ Seite 28)	(⇒ Seite 57)	(⇒ Seite 129)
050-032-160	X	X	X	X	X	-	(⇒ Seite 29)	(⇒ Seite 58)	(⇒ Seite 130)
050-032-200	X	X	X	X	X	-	(⇒ Seite 30)	(⇒ Seite 59)	(⇒ Seite 131)
050-032-250	X	X	X	X	-	-	(⇒ Seite 31)	(⇒ Seite 60)	(⇒ Seite 132)
065-040-125	X	-	X	X	-	-	(⇒ Seite 32)	(⇒ Seite 61)	(⇒ Seite 133)
065-040-160	X	X	X	X	X	-	(⇒ Seite 33)	(⇒ Seite 62)	(⇒ Seite 134)
065-040-200	X	X	X	X	X	-	(⇒ Seite 34)	(⇒ Seite 63)	(⇒ Seite 135)
065-040-250	X	X	X	X	-	-	(⇒ Seite 35)	(⇒ Seite 64)	(⇒ Seite 136)
065-040-315	X	X	X	X	-	-	-	(⇒ Seite 65)	(⇒ Seite 137)
065-050-125	X	-	X	X	-	-	(⇒ Seite 36)	(⇒ Seite 66)	(⇒ Seite 138)
065-050-160	X	X	X	X	X	-	(⇒ Seite 37)	(⇒ Seite 67)	(⇒ Seite 139)
065-050-200	X	X	X	X	X	-	(⇒ Seite 38)	(⇒ Seite 68)	(⇒ Seite 140)
065-050-250	X	X	X	X	-	-	(⇒ Seite 39)	(⇒ Seite 69)	(⇒ Seite 141)
065-050-315	X	X	X	X	-	-	-	(⇒ Seite 70)	(⇒ Seite 142)
080-065-125	X	-	X	X	-	-	(⇒ Seite 40)	(⇒ Seite 71)	(⇒ Seite 143)
080-065-160	X	X	X	X	X	-	(⇒ Seite 41)	(⇒ Seite 72)	(⇒ Seite 144)
080-065-200	X	X	X	X	X	-	(⇒ Seite 42)	(⇒ Seite 73)	(⇒ Seite 145)
080-065-250	X	X	X	X	-	-	(⇒ Seite 43)	(⇒ Seite 74)	(⇒ Seite 146)
080-065-315	X	X	X	X	-	-	-	(⇒ Seite 75)	(⇒ Seite 147)
100-080-160	X	X	X	X	X	-	(⇒ Seite 44)	(⇒ Seite 76)	(⇒ Seite 148)
100-080-200	X	X	X	X	-	-	(⇒ Seite 45)	(⇒ Seite 77)	(⇒ Seite 149)
100-080-250	X	X	X	X	-	-	(⇒ Seite 46)	(⇒ Seite 78)	(⇒ Seite 150)
100-080-315	X	X	X	X	-	-	-	(⇒ Seite 79)	(⇒ Seite 151)
100-080-400	X	-	X	X	-	-	-	(⇒ Seite 80)	(⇒ Seite 152)
125-100-160	X	X	X	X	-	-	(⇒ Seite 47)	(⇒ Seite 81)	(⇒ Seite 153)
125-100-200	X	X	X	X	-	-	(⇒ Seite 48)	(⇒ Seite 82)	(⇒ Seite 154)
125-100-250	X	X	X	X	-	-	(⇒ Seite 49)	(⇒ Seite 83)	(⇒ Seite 155)
125-100-315	X	X	X	X	-	-	-	(⇒ Seite 84)	(⇒ Seite 156)
125-100-400	X	-	X	X	-	-	-	(⇒ Seite 85)	(⇒ Seite 157)
150-125-200	X	X	X	X	-	-	(⇒ Seite 50)	(⇒ Seite 86)	(⇒ Seite 158)
150-125-250	X	X	X	X	-	-	-	(⇒ Seite 87)	(⇒ Seite 159)
150-125-315	X	X	X	X	-	-	-	(⇒ Seite 88)	(⇒ Seite 160)
150-125-400	X	X	X	-	-	-	-	(⇒ Seite 89)	(⇒ Seite 161)
150-125-510	X	-	-	-	-	-	-	(⇒ Seite 90)	(⇒ Seite 162)
200-150-200	X	-	X	X	-	-	-	(⇒ Seite 91)	(⇒ Seite 163)
200-150-250	X	-	X	X	-	-	-	(⇒ Seite 92)	(⇒ Seite 164)
200-150-315	X	X	X	X	-	-	-	(⇒ Seite 93)	(⇒ Seite 165)
200-150-400	X	X	X	-	-	-	-	(⇒ Seite 94)	(⇒ Seite 166)
200-150-510	X	-	-	-	-	-	-	(⇒ Seite 95)	(⇒ Seite 167)
200-200-250	X	-	-	-	-	-	-	(⇒ Seite 96)	(⇒ Seite 168)
250-200-275	X	-	-	-	-	-	-	(⇒ Seite 97)	(⇒ Seite 169)
250-200-320	X	-	-	-	-	-	-	(⇒ Seite 98)	(⇒ Seite 170)
250-200-375	X	-	-	-	-	-	-	(⇒ Seite 99)	(⇒ Seite 171)
250-200-435	X	-	-	-	-	-	-	(⇒ Seite 100)	(⇒ Seite 172)
250-200-510	X	-	-	-	-	-	-	(⇒ Seite 101)	(⇒ Seite 173)
300-250-295	X	-	-	-	-	-	-	(⇒ Seite 102)	(⇒ Seite 174)

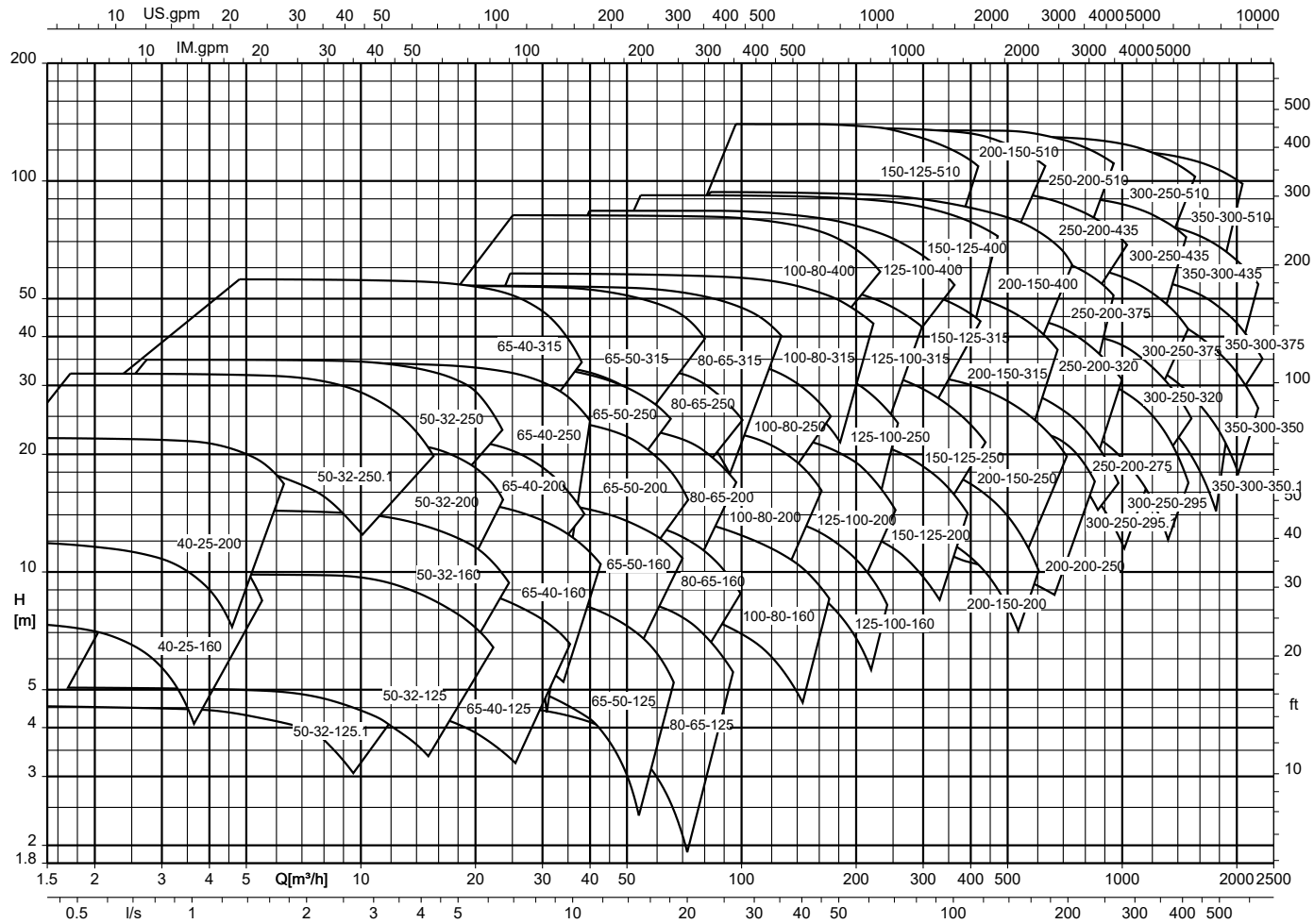
Baugröße	Baureihe						Drehzahl [min ⁻¹]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	3500	1750	1160
300-250-295.1	X	-	-	-	-	-	-	(⇒ Seite 103)	(⇒ Seite 175)
300-250-320	X	-	-	-	-	-	-	(⇒ Seite 104)	(⇒ Seite 176)
300-250-375	X	-	-	-	-	-	-	(⇒ Seite 105)	(⇒ Seite 177)
300-250-435	X	-	-	-	-	-	-	(⇒ Seite 106)	(⇒ Seite 178)
300-250-510	X	-	-	-	-	-	-	(⇒ Seite 107)	(⇒ Seite 179)
350-300-350	X	-	-	-	-	-	-	(⇒ Seite 108)	(⇒ Seite 180)
350-300-350.1	X	-	-	-	-	-	-	(⇒ Seite 109)	(⇒ Seite 181)
350-300-375	X	-	-	-	-	-	-	(⇒ Seite 110)	(⇒ Seite 182)
350-300-435	X	-	-	-	-	-	-	(⇒ Seite 111)	(⇒ Seite 183)
350-300-510	X	-	-	-	-	-	-	(⇒ Seite 112)	(⇒ Seite 184)

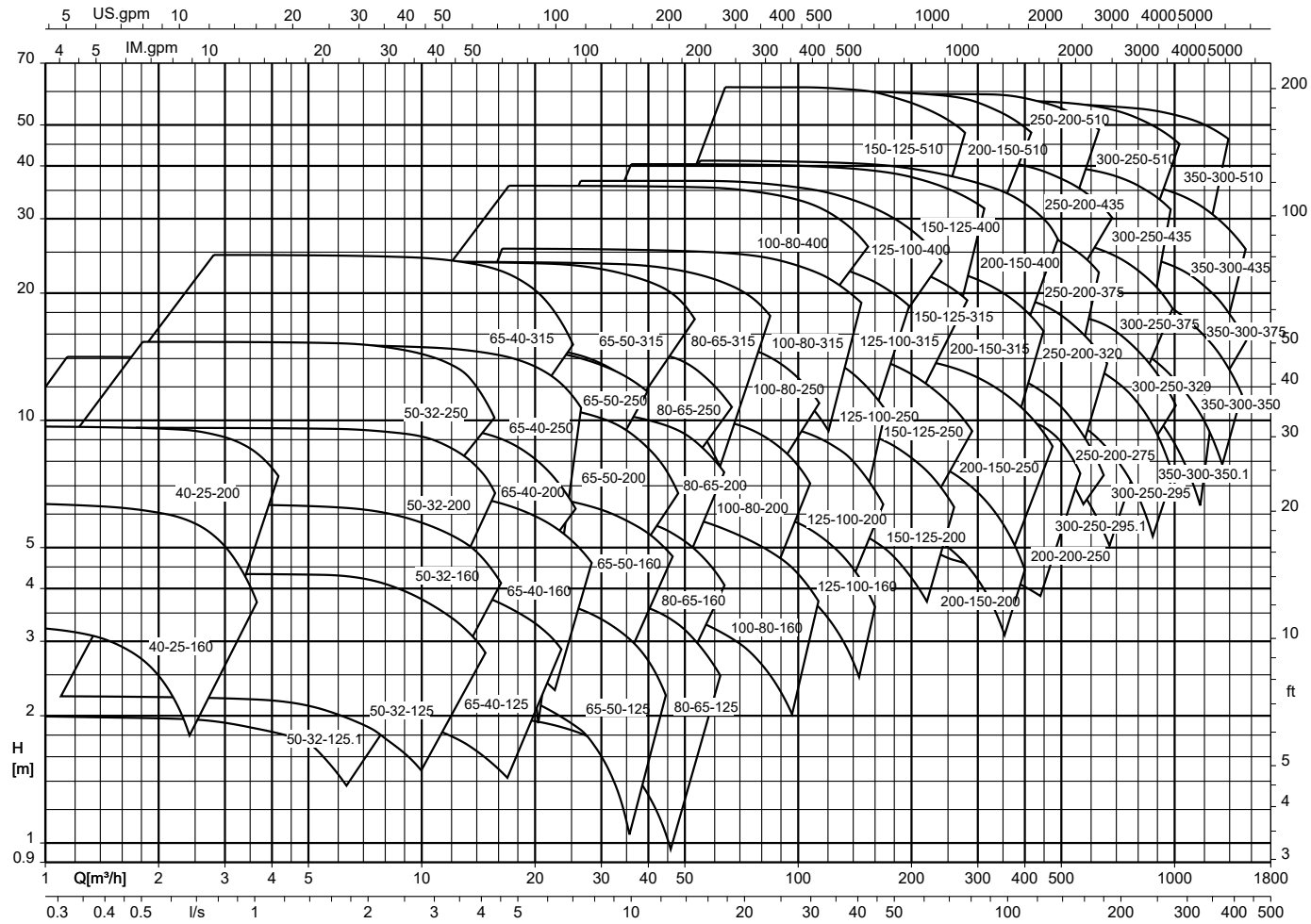
Tabelle 2: Baugrößenübersicht

Baugröße	Baureihe						Drehzahl [min ⁻¹]		
	Etanorm	Etanorm SYT	Etanorm V	Etabloc	Etabloc SYT	Etanorm-RSY	3500	1750	1160
125-500.2	-	-	-	-	-	X	-	-	(⇒ Seite 185)
150-500.1	-	-	-	-	-	X	-	-	(⇒ Seite 186)
200-330	-	-	-	-	-	X	-	(⇒ Seite 115)	(⇒ Seite 187)
200-400	-	-	-	-	-	X	-	(⇒ Seite 116)	(⇒ Seite 188)
200-500	-	-	-	-	-	X	-	-	(⇒ Seite 189)
250-300	-	-	-	-	-	-	-	(⇒ Seite 117)	-
250-330	-	-	-	-	-	X	-	(⇒ Seite 118)	(⇒ Seite 190)
250-400	-	-	-	-	-	X	-	(⇒ Seite 119)	(⇒ Seite 191)
250-500	-	-	-	-	-	X	-	-	(⇒ Seite 192)
300-360	-	-	-	-	-	X	-	(⇒ Seite 121)	(⇒ Seite 194)
300-400	-	-	-	-	-	-	-	(⇒ Seite 122)	-
300-500	-	-	-	-	-	X	-	-	(⇒ Seite 195)

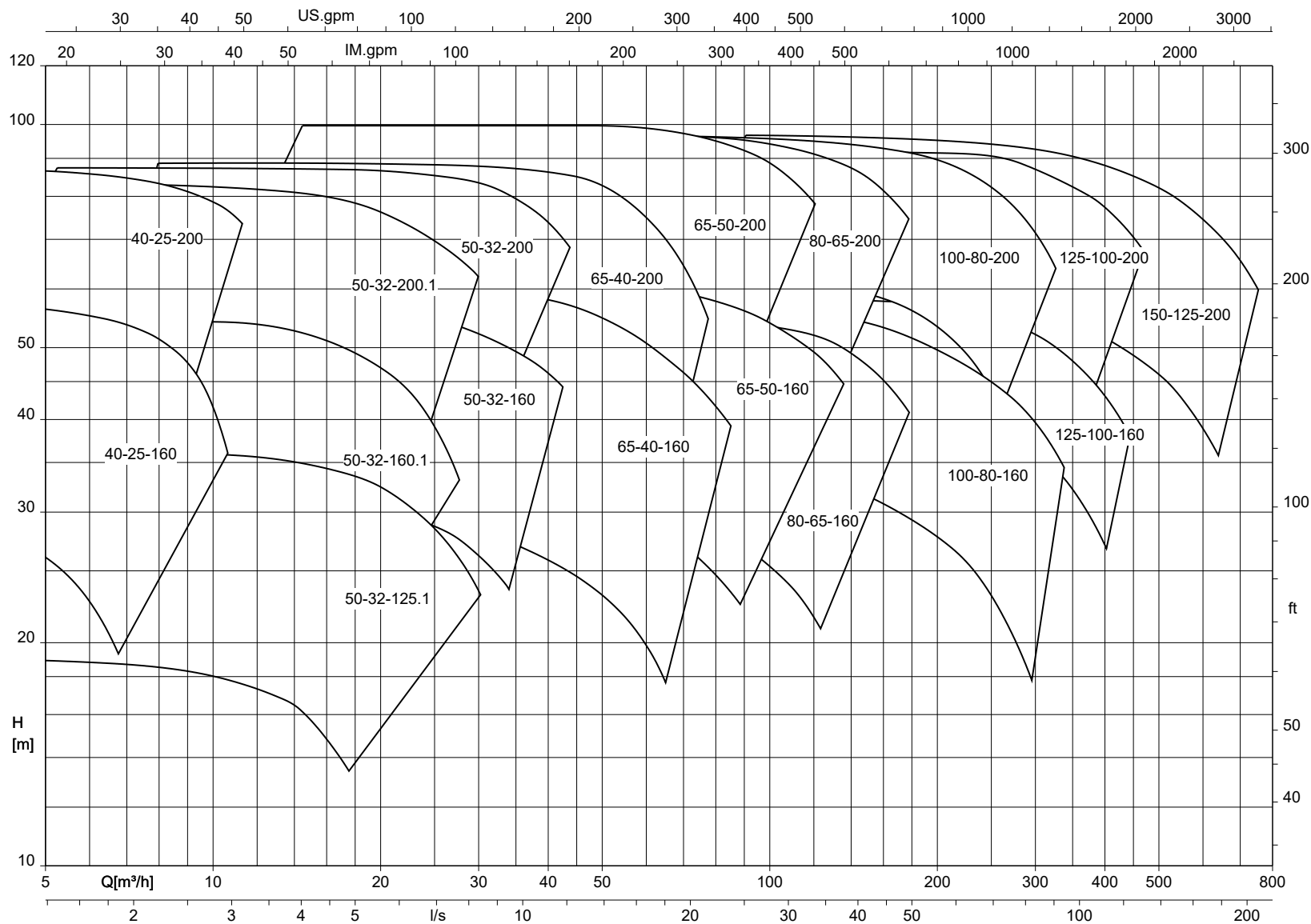
Kennfelder

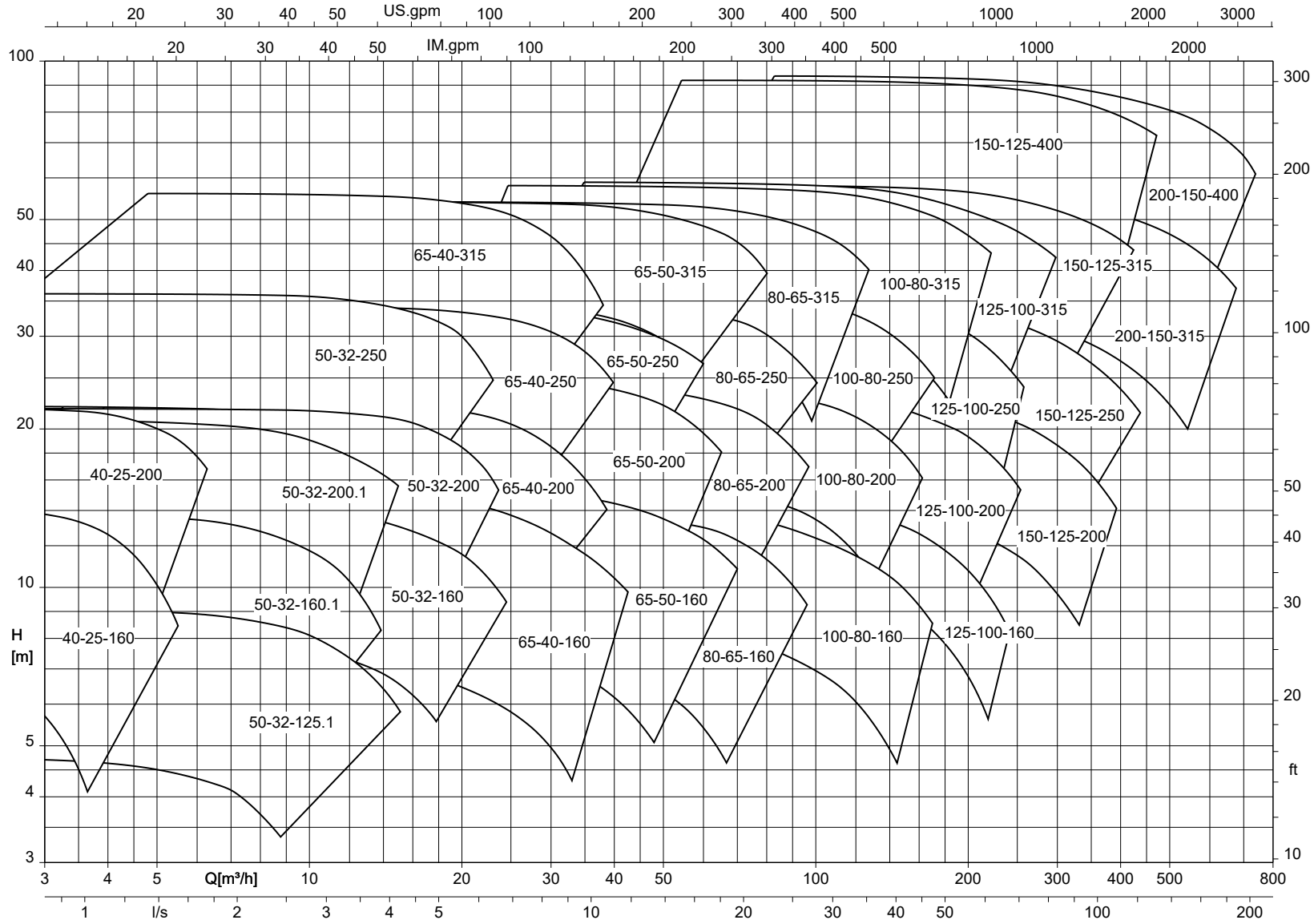
Etanorm, $n = 3500 \text{ min}^{-1}$ 

Etanorm, $n = 1750 \text{ min}^{-1}$ 

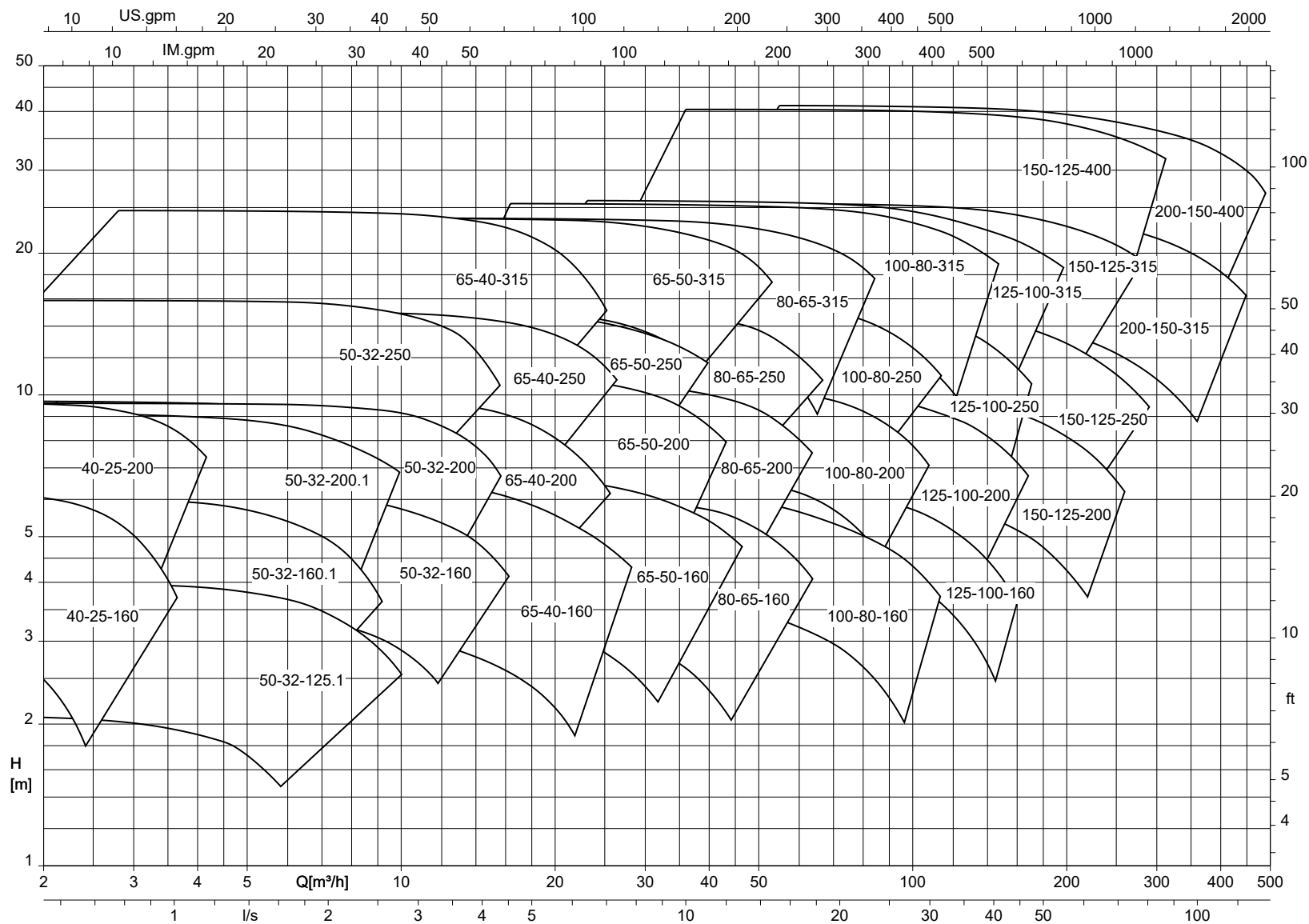
Etanorm, $n = 1160 \text{ min}^{-1}$ 

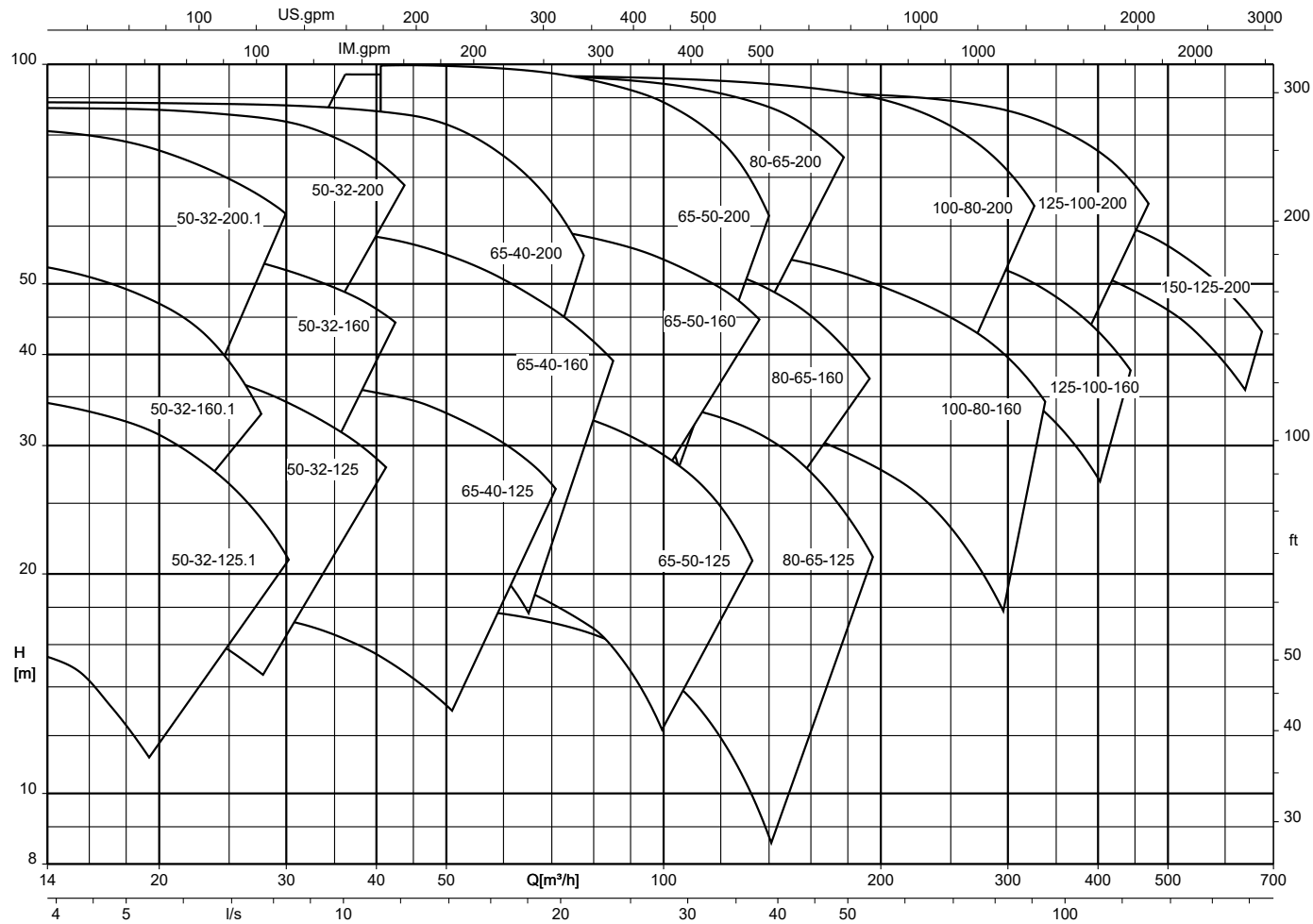
Etanorm SYT, $n = 3500 \text{ min}^{-1}$



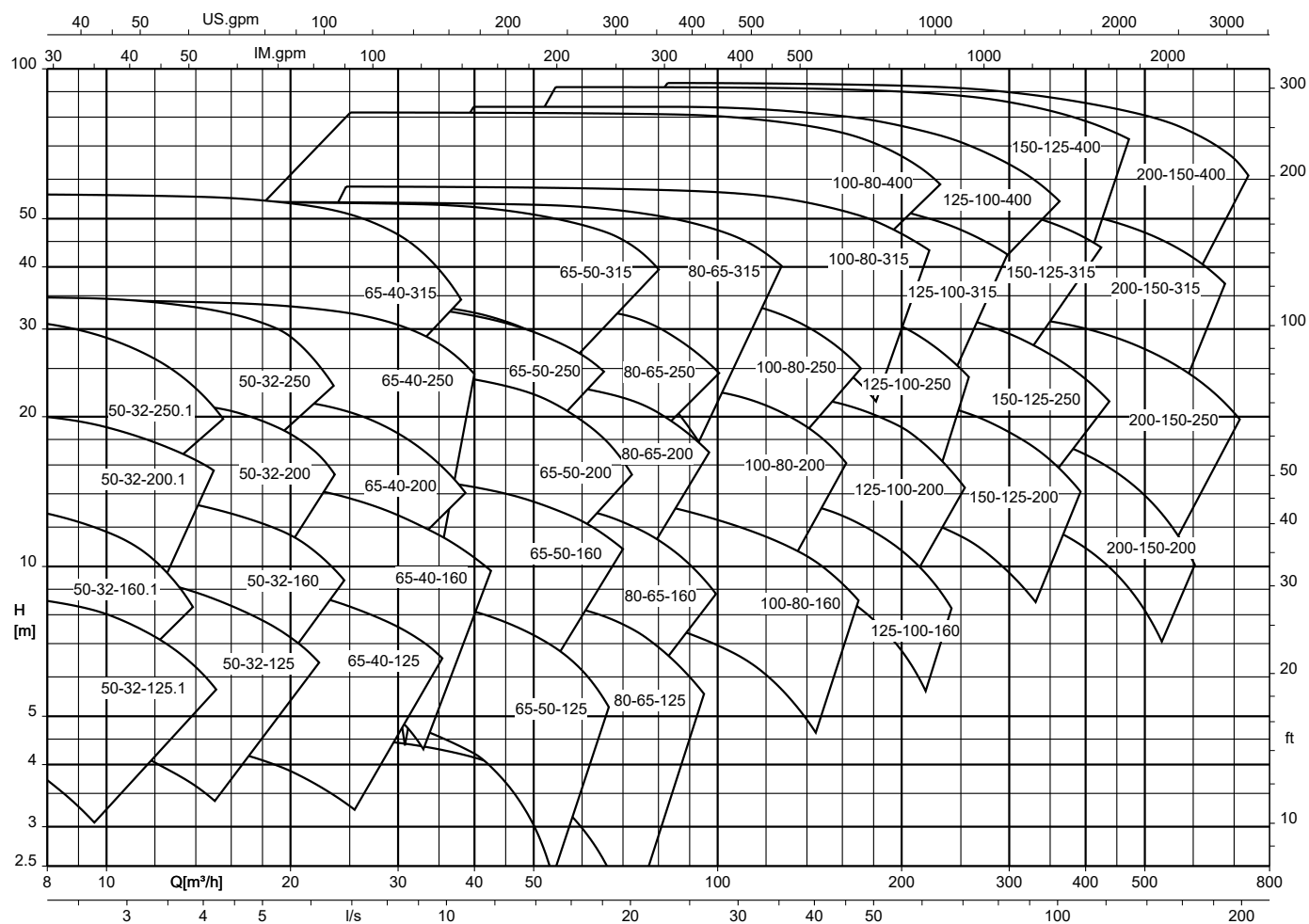
Etanorm SYT, $n = 1750 \text{ min}^{-1}$ 

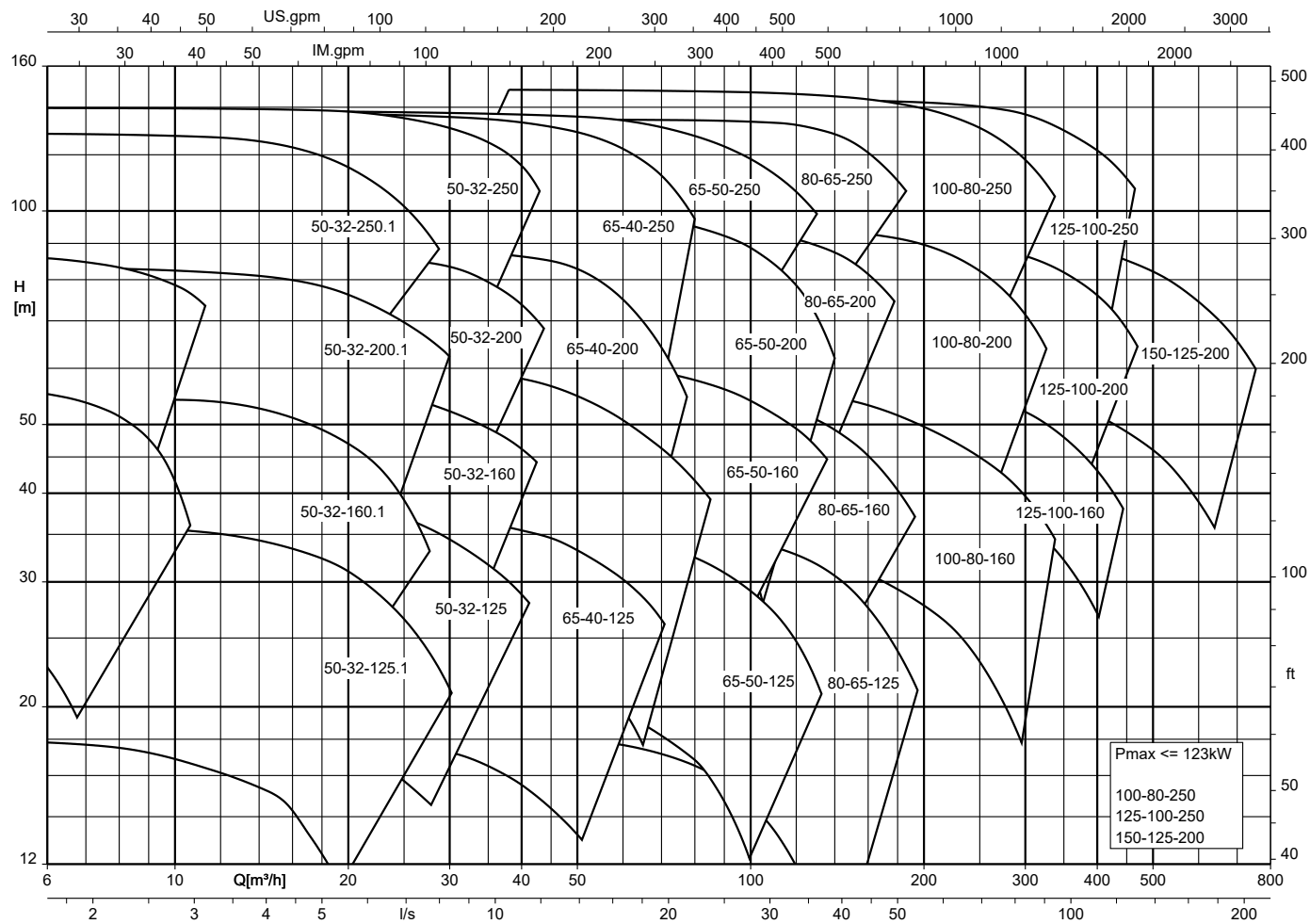
Etanorm SYT, $n = 1160 \text{ min}^{-1}$

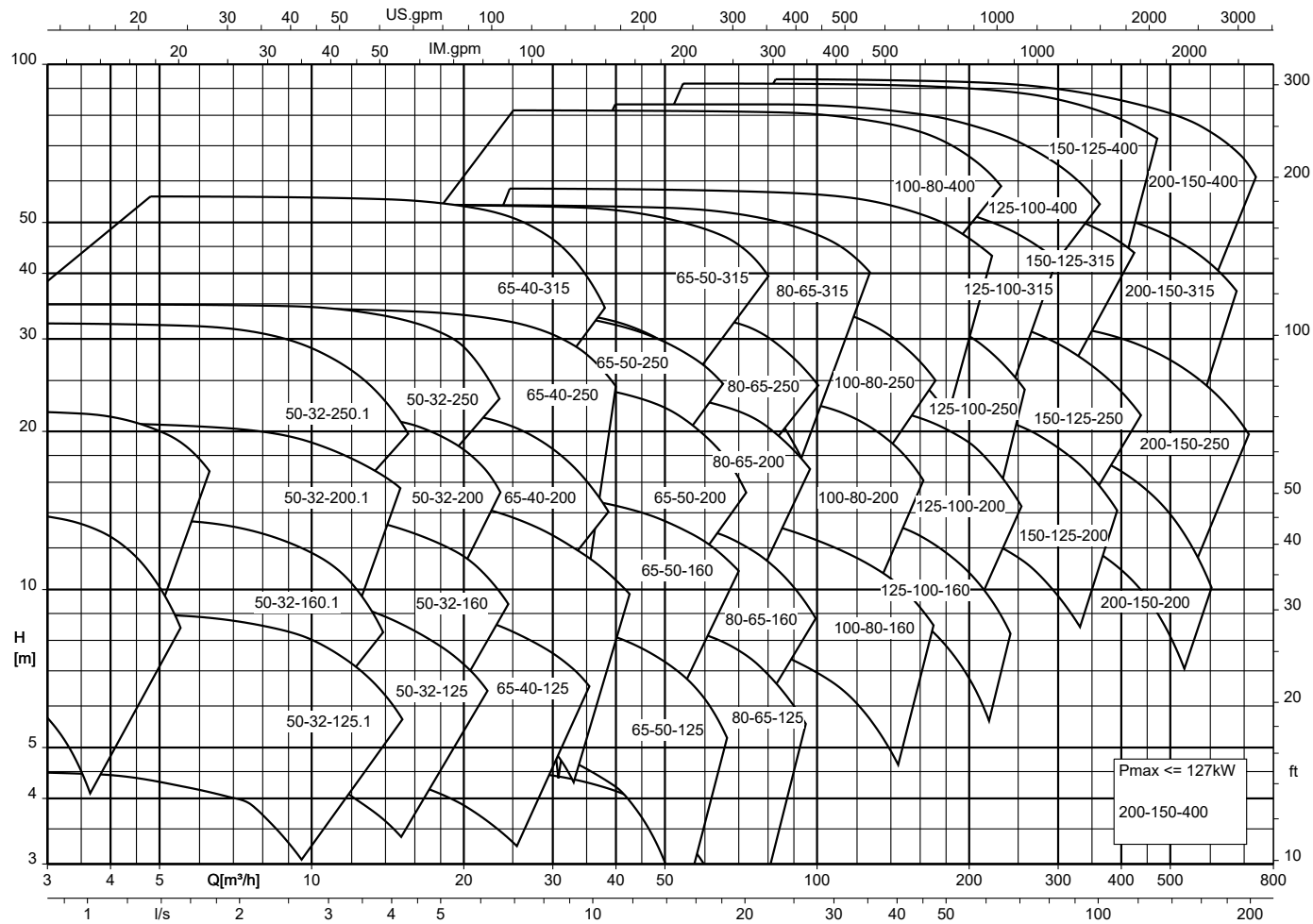


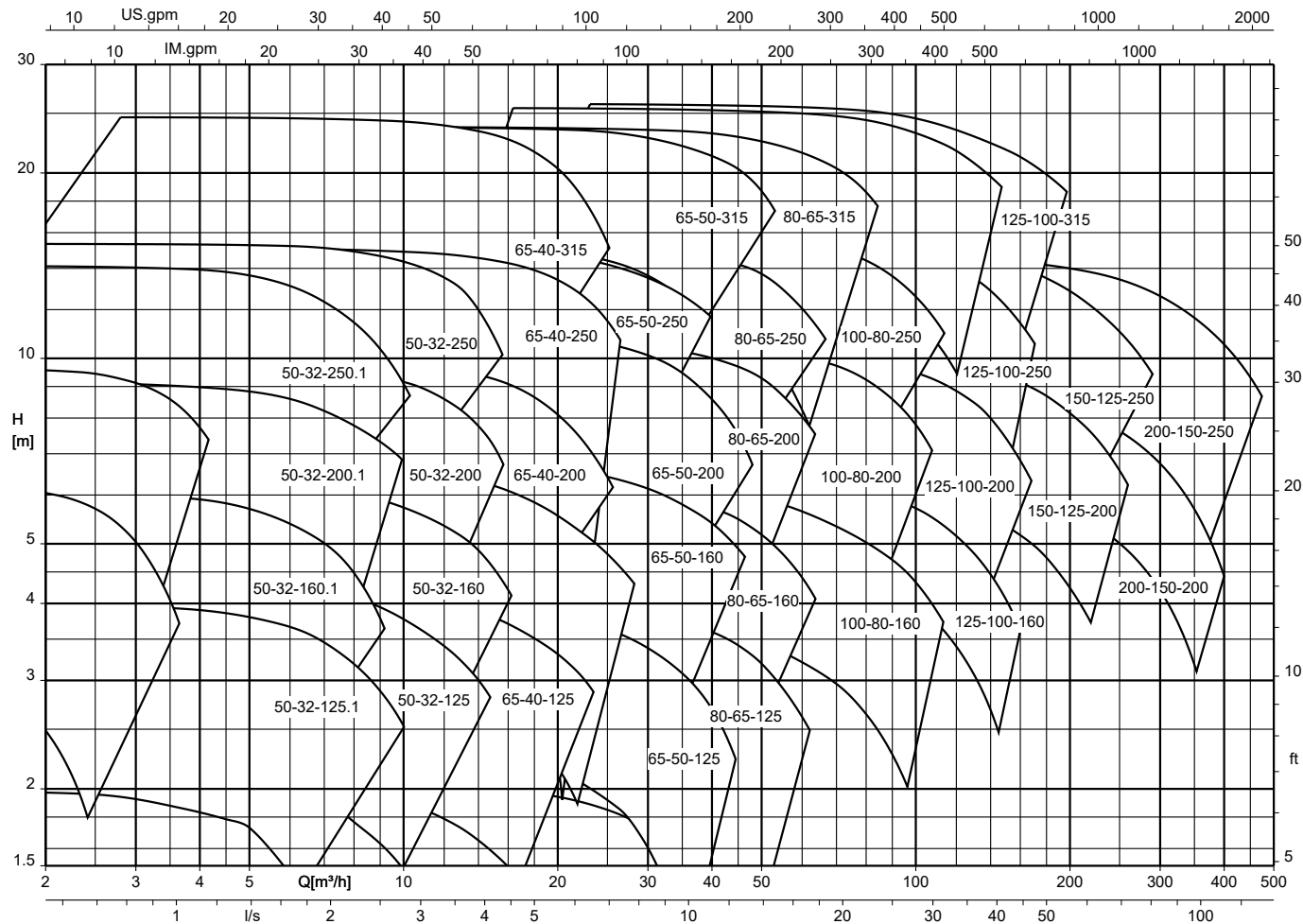
Etanorm V (ungeregelte Ausführung), $n = 3500 \text{ min}^{-1}$ 

Etanorm V (ungeregelte Ausführung), $n = 1750 \text{ min}^{-1}$

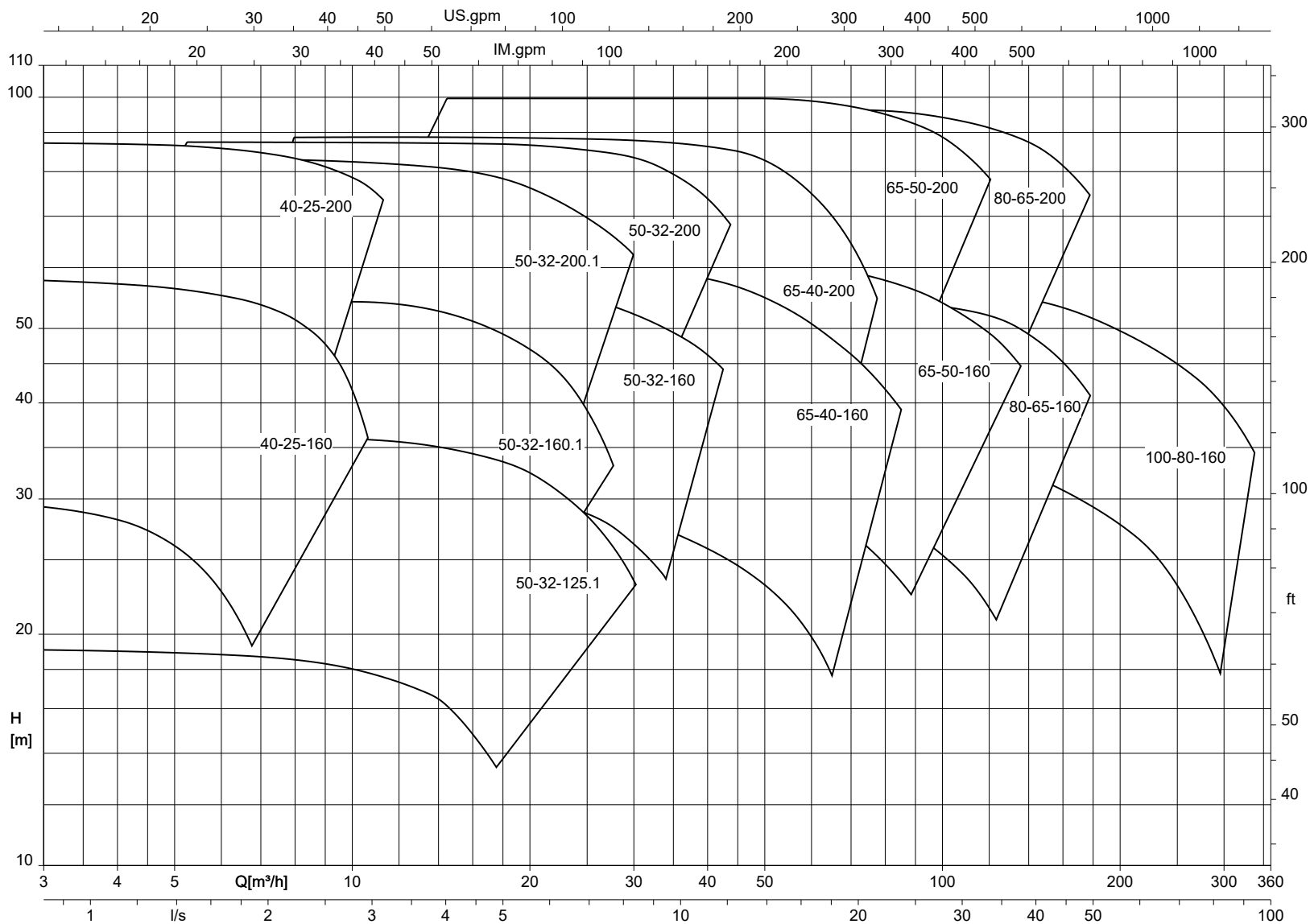


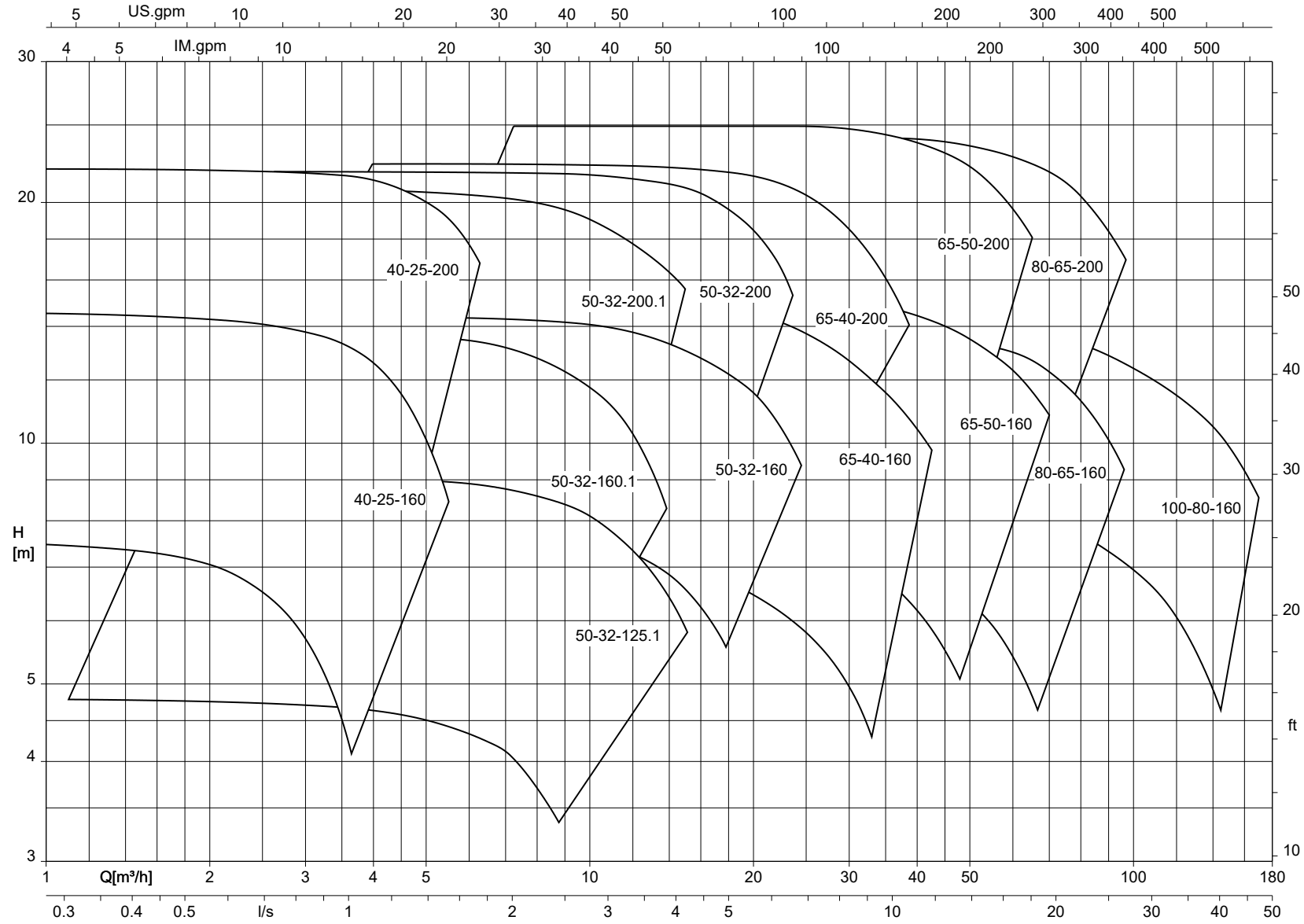
Etabloc, $n = 3500 \text{ min}^{-1}$ (ungeregelte Ausführung)

Etabloc, $n = 1750 \text{ min}^{-1}$ (ungeregelte Ausführung)

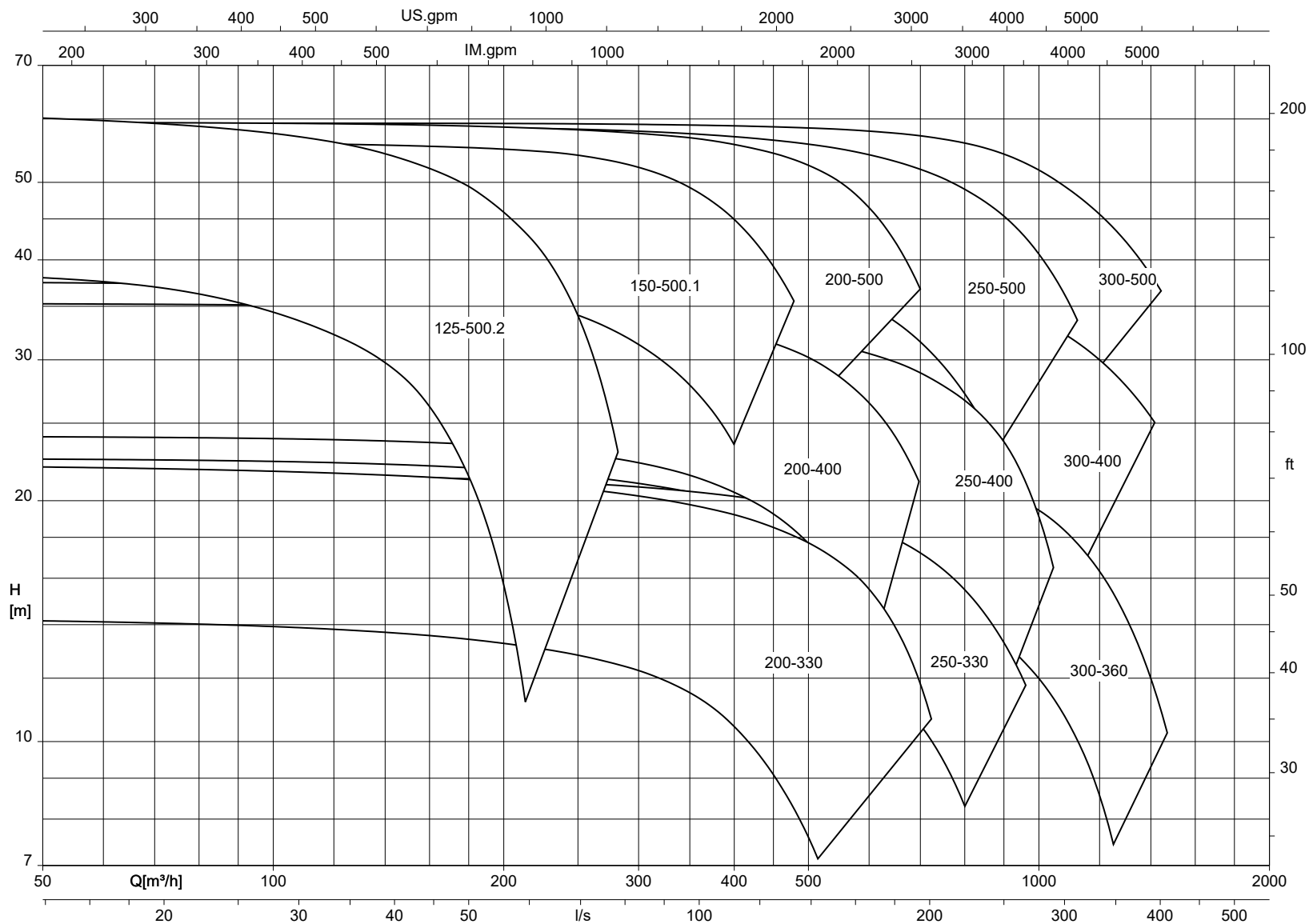
Etabloc, $n = 1160 \text{ min}^{-1}$ (ungeregelte Ausführung)

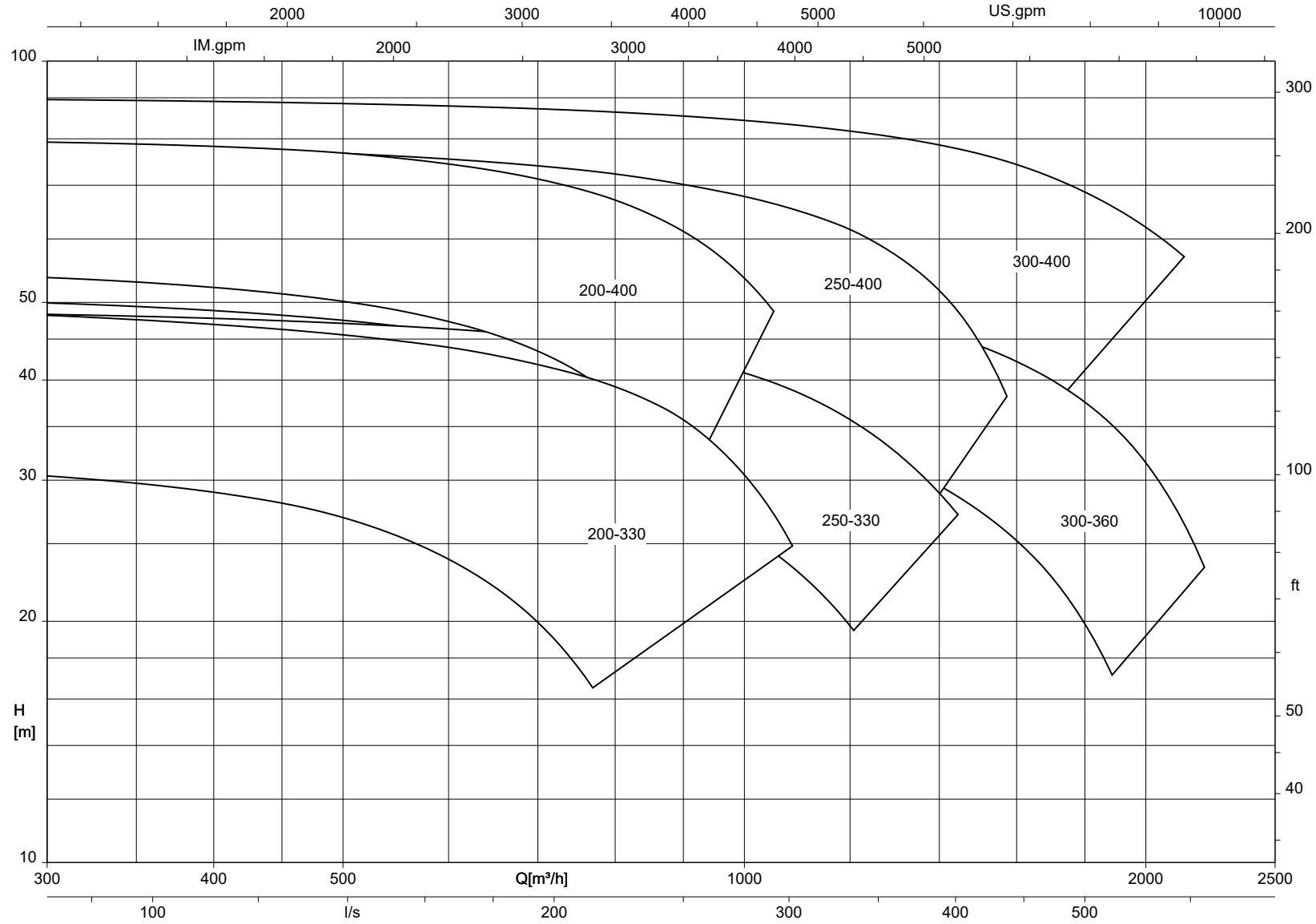
Etabloc SYT, n = 3500 min⁻¹



Etabloc SYT, $n = 1750 \text{ min}^{-1}$ 

Etanorm-RSY, $n = 1160 \text{ min}^{-1}$



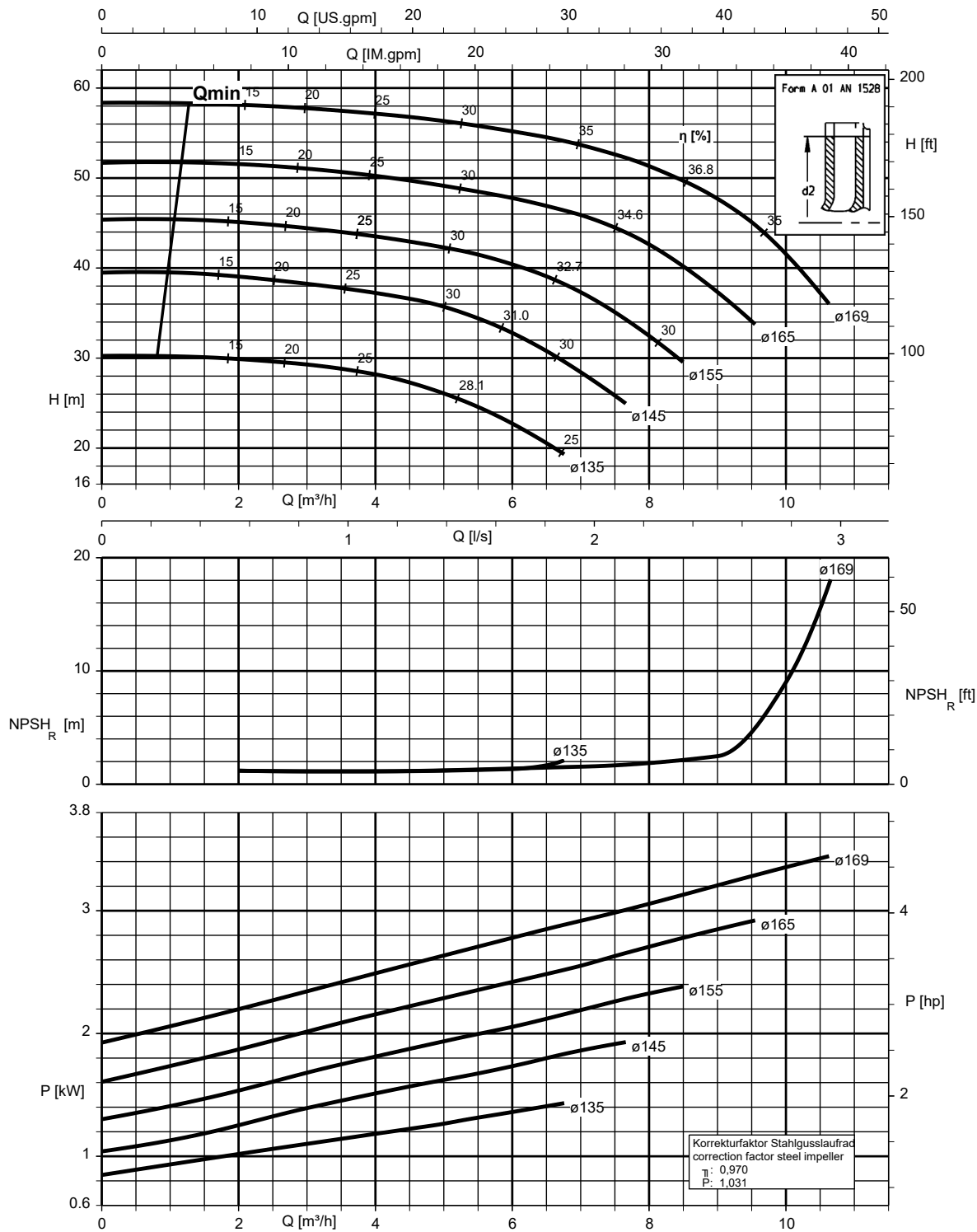
Etanorm-RSY, $n = 1750 \text{ min}^{-1}$ 

Kennlinien

$n = 3500 \text{ min}^{-1}$

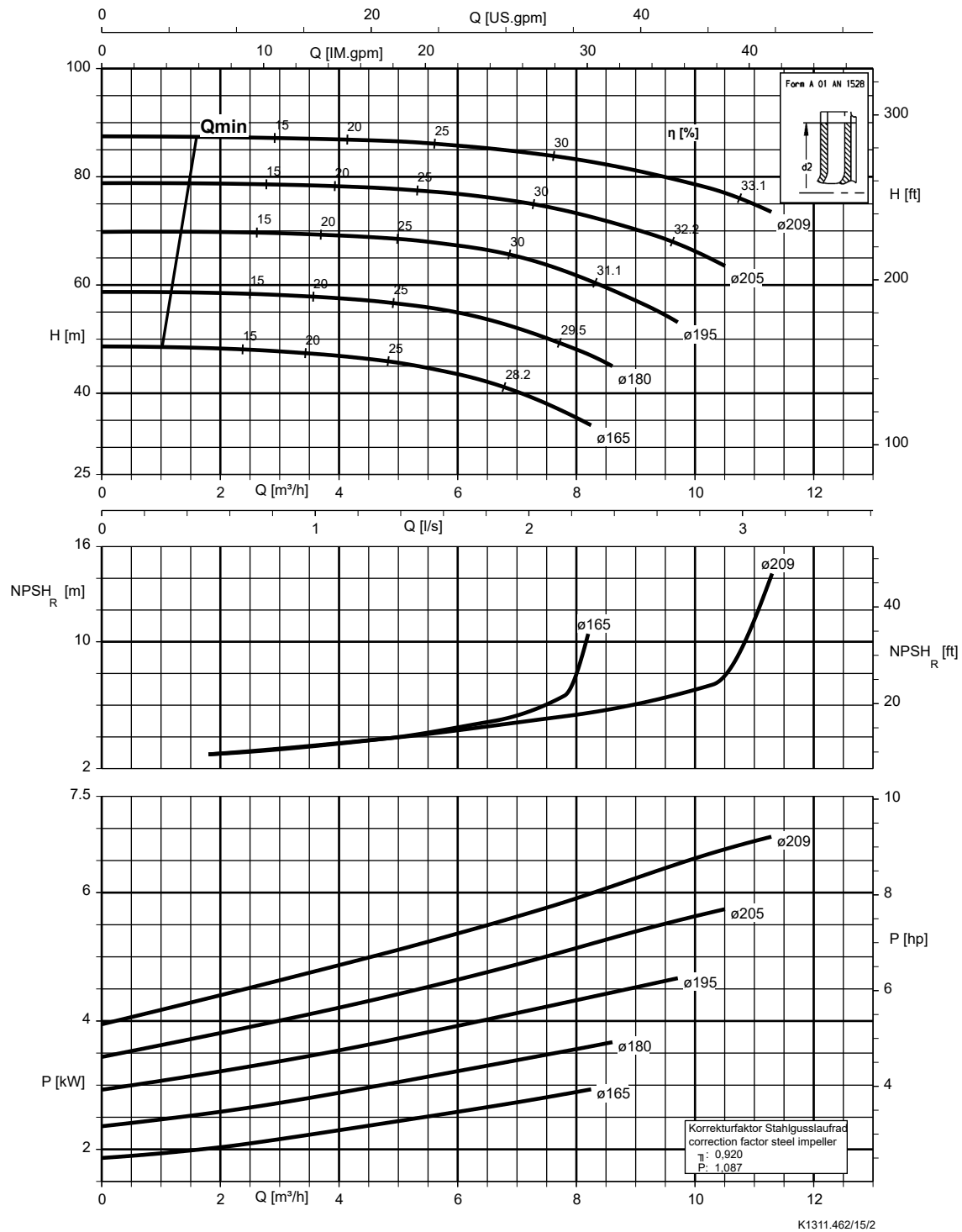
Etanorm 040-025-160, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etabloc, Etabloc SYT



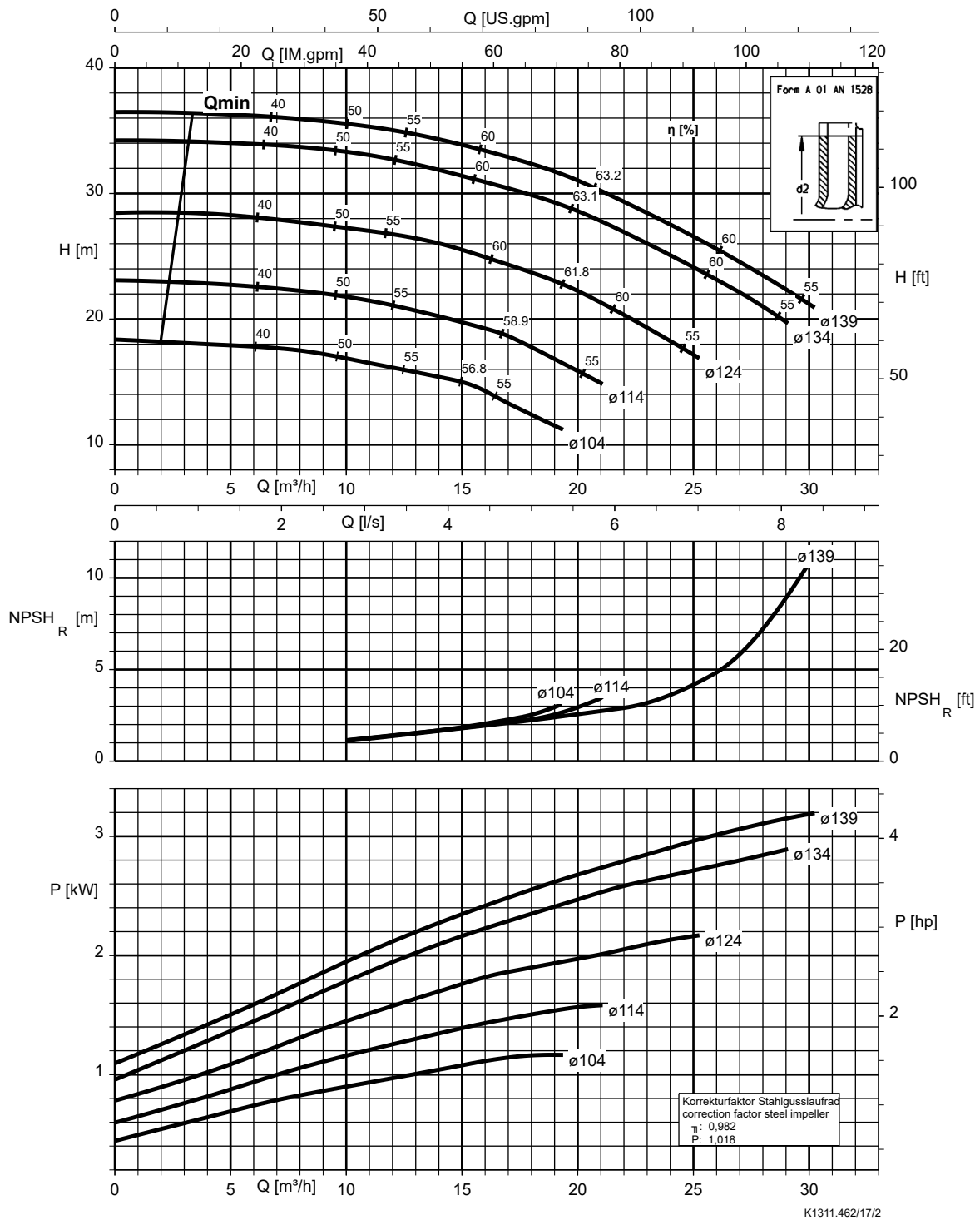
Etanorm 040-025-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etabloc, Etabloc SYT



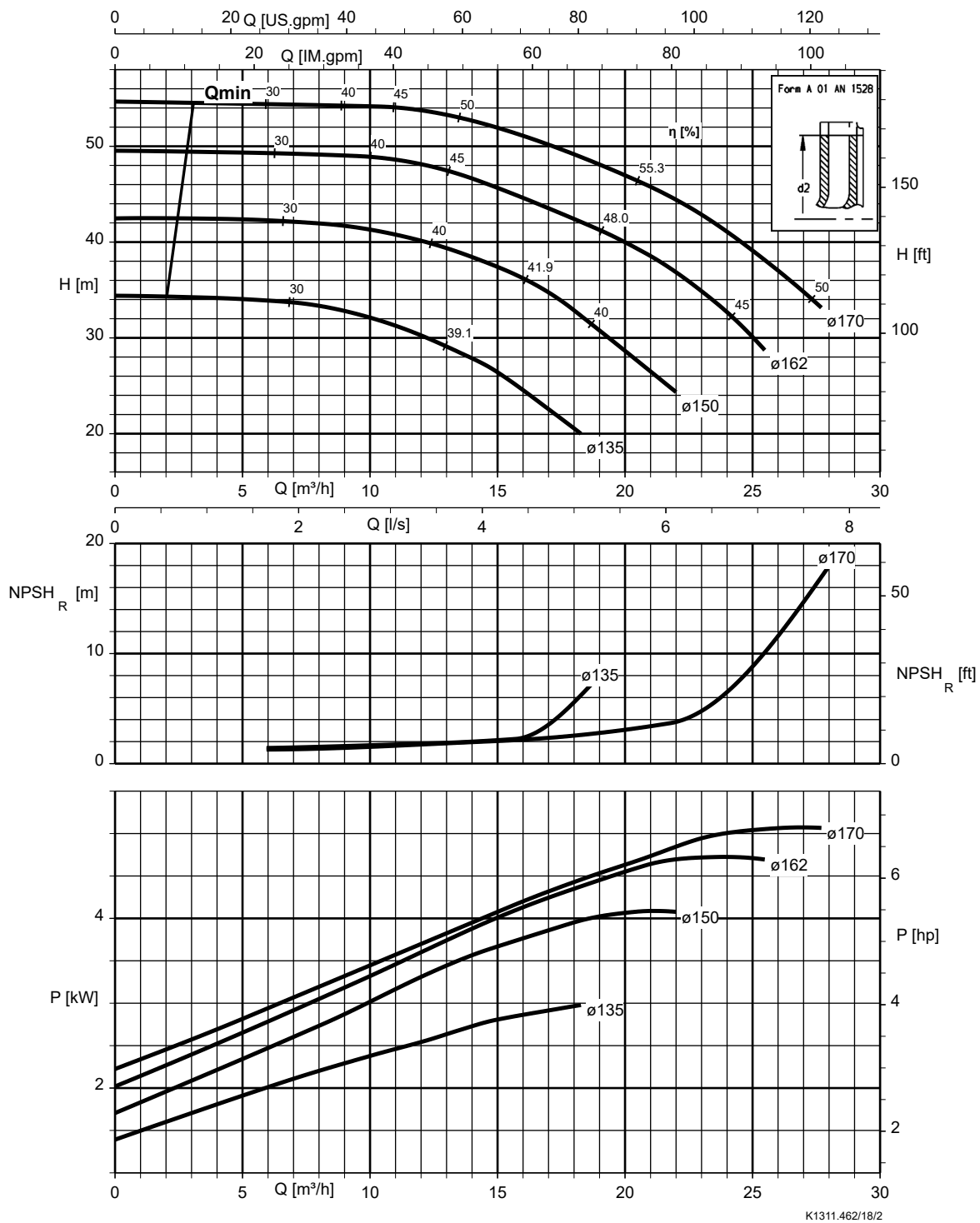
Etanorm 050-032-125.1, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



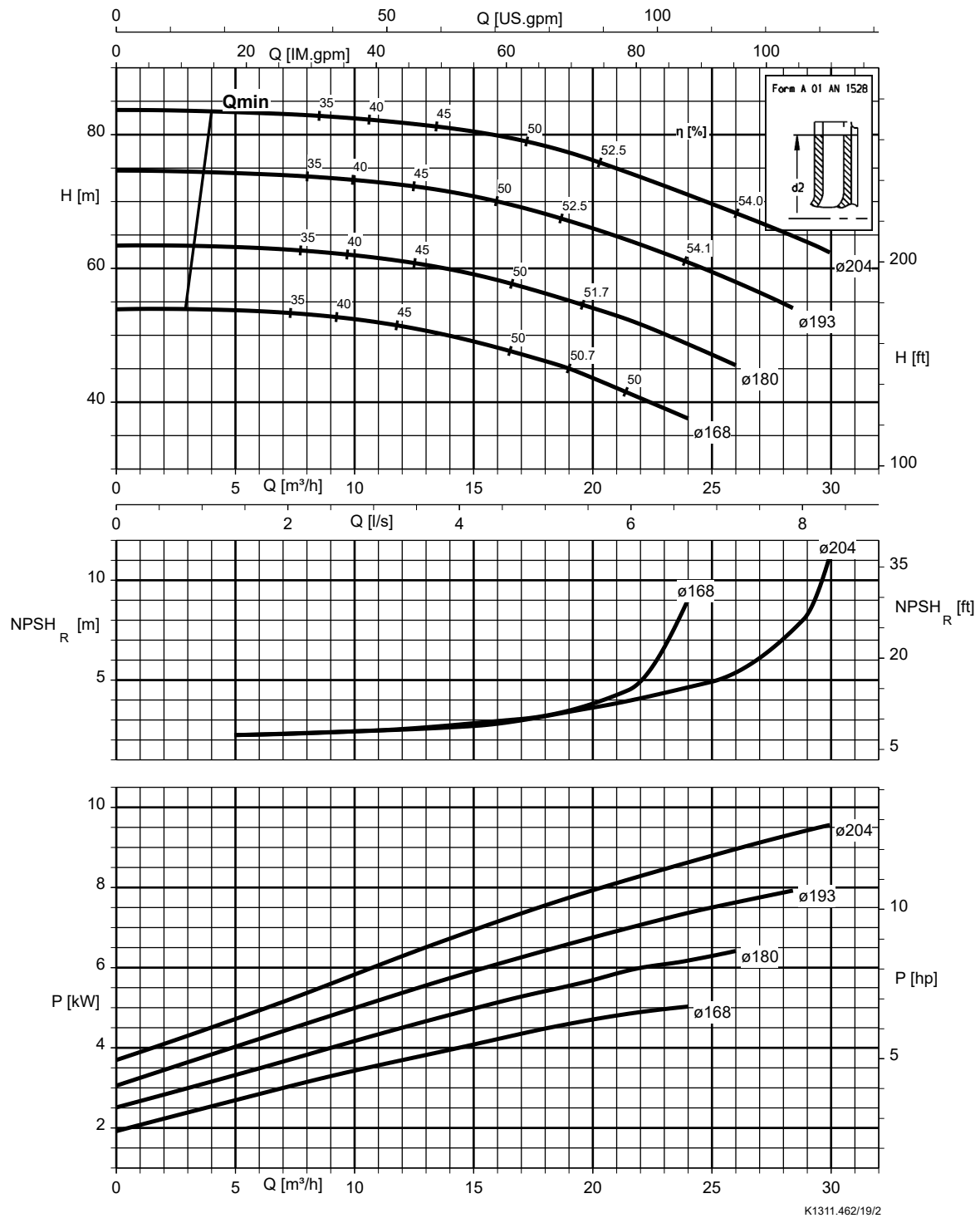
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Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



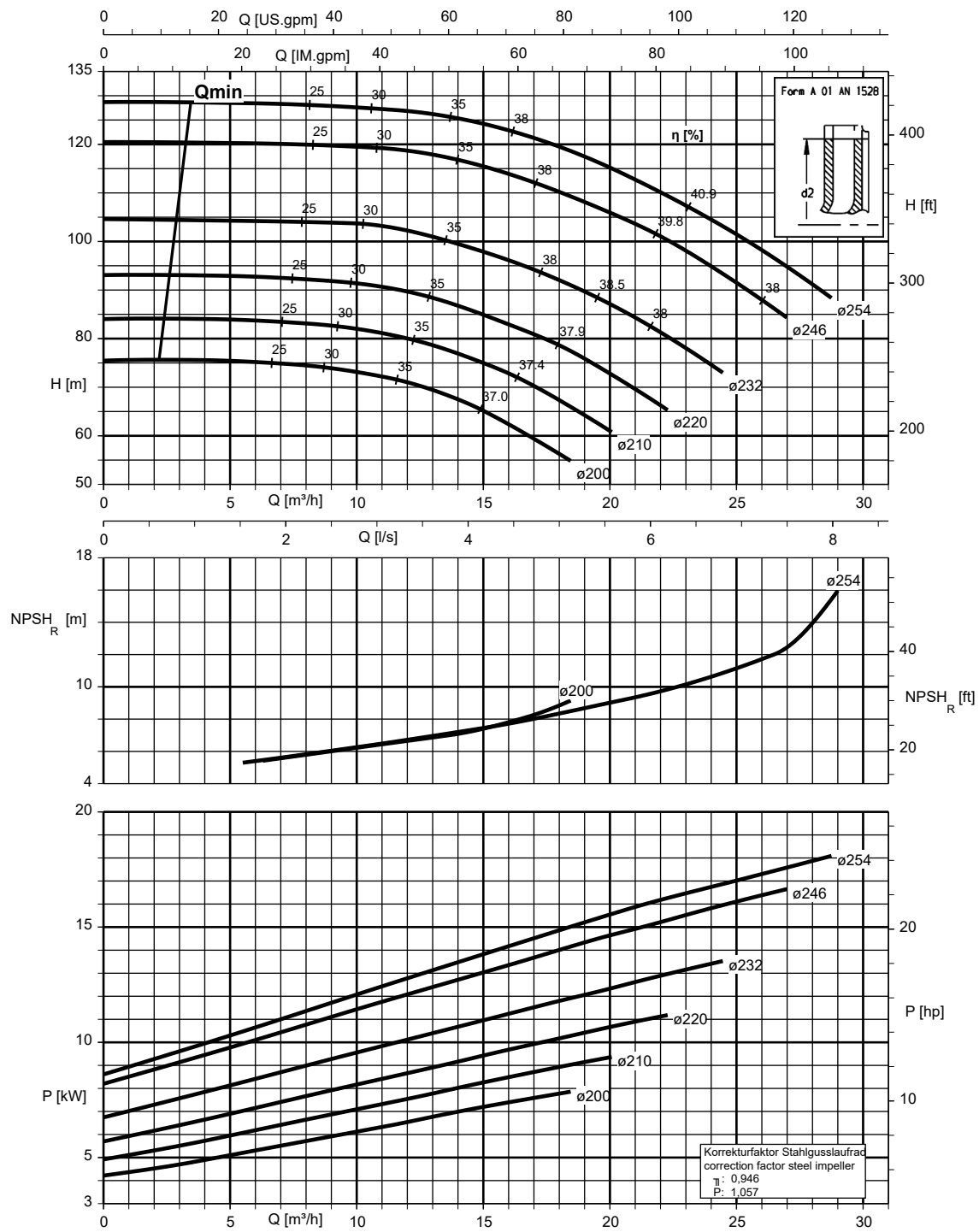
Etanorm 050-032-200.1, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 050-032-250.1, $n = 3500 \text{ min}^{-1}$

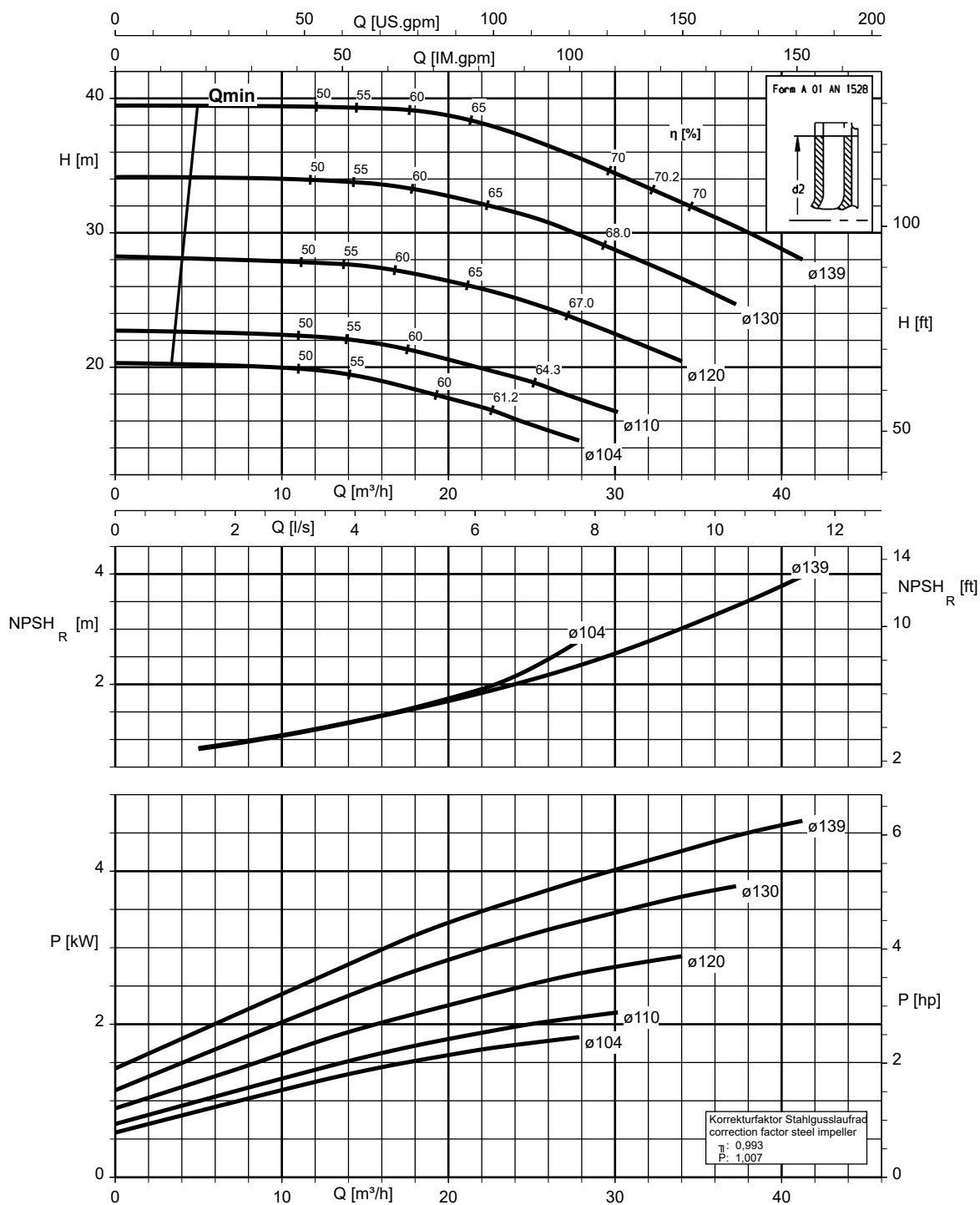
Etabloc



K1311.462/20/2

Etanorm 050-032-125, $n = 3500 \text{ min}^{-1}$

Etanorm V, Etabloc

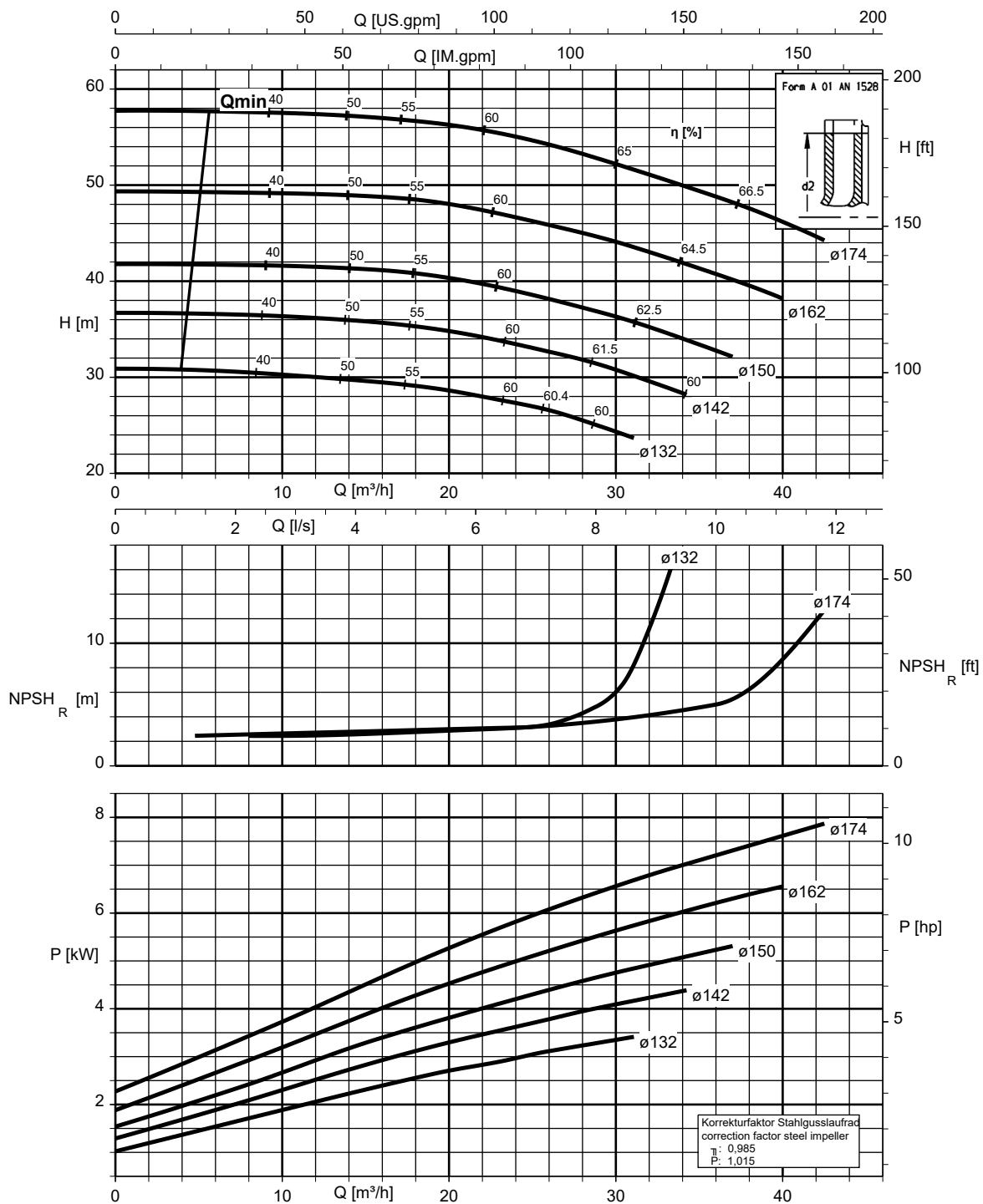


K1311.462/21/2

1311.46/11-DE

Etanorm 050-032-160, $n = 3500 \text{ min}^{-1}$

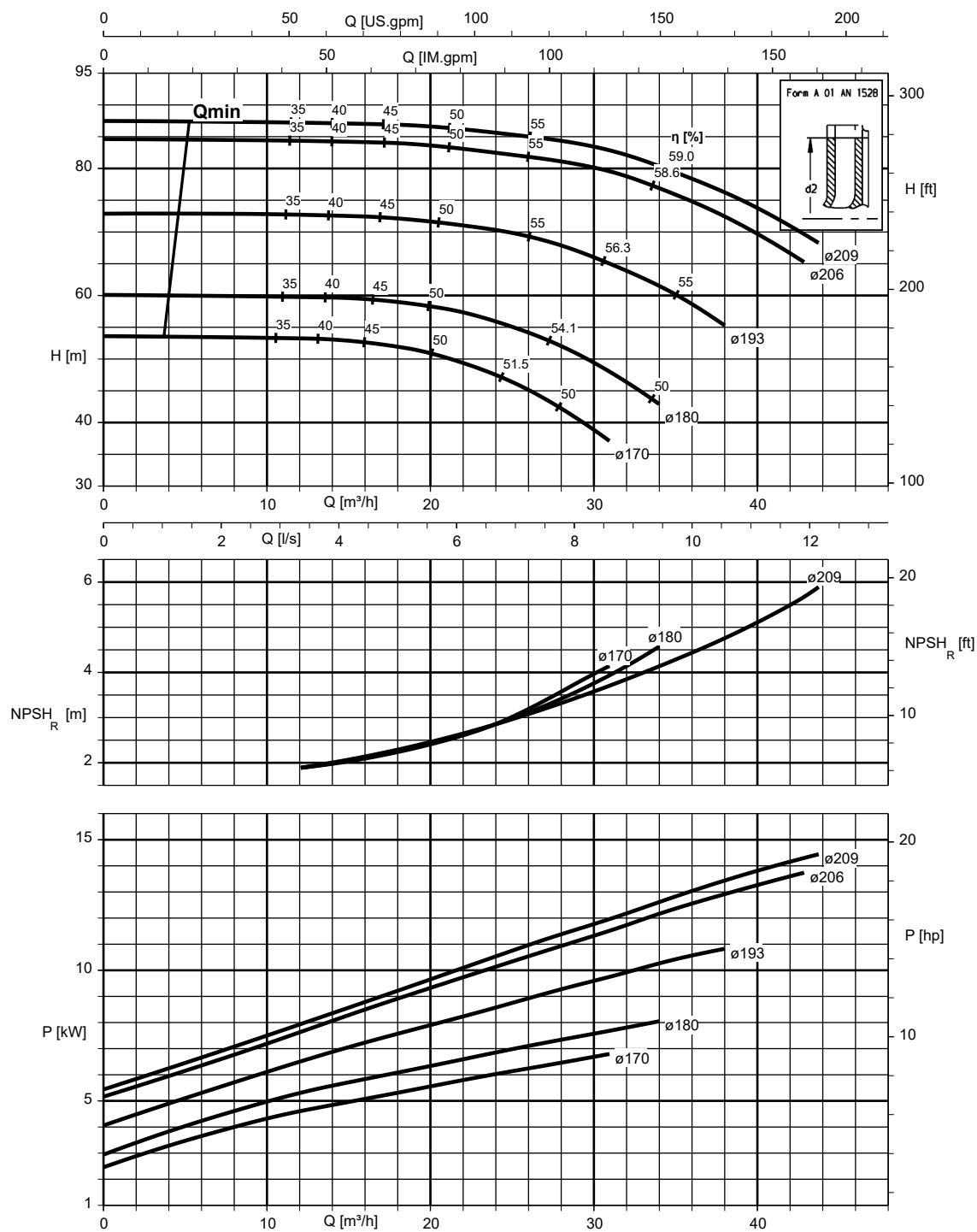
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.462/22/3

Etanorm 050-032-200, $n = 3500 \text{ min}^{-1}$

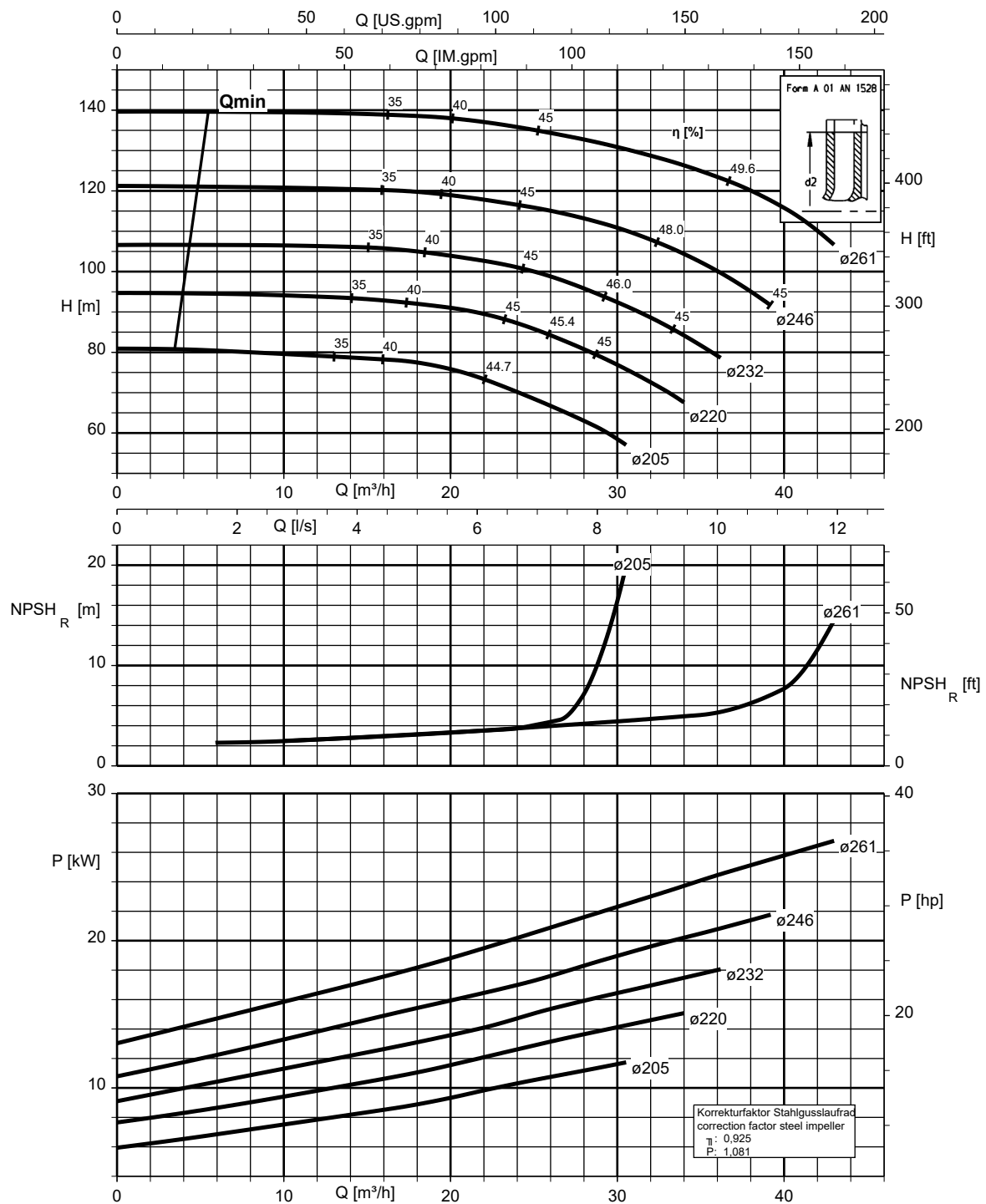
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.462/23/1

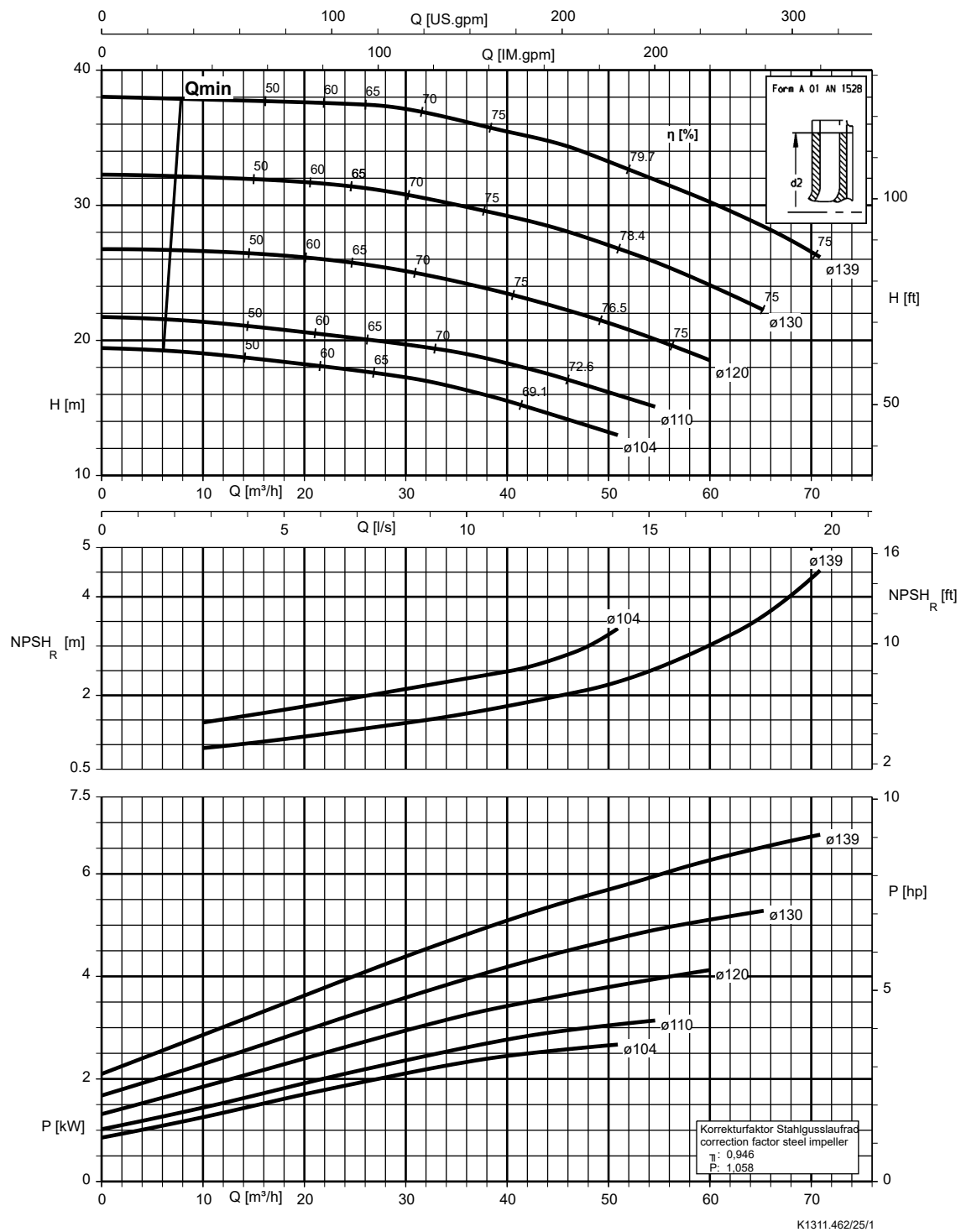
Etanorm 050-032-250, $n = 3500 \text{ min}^{-1}$

Etabloc



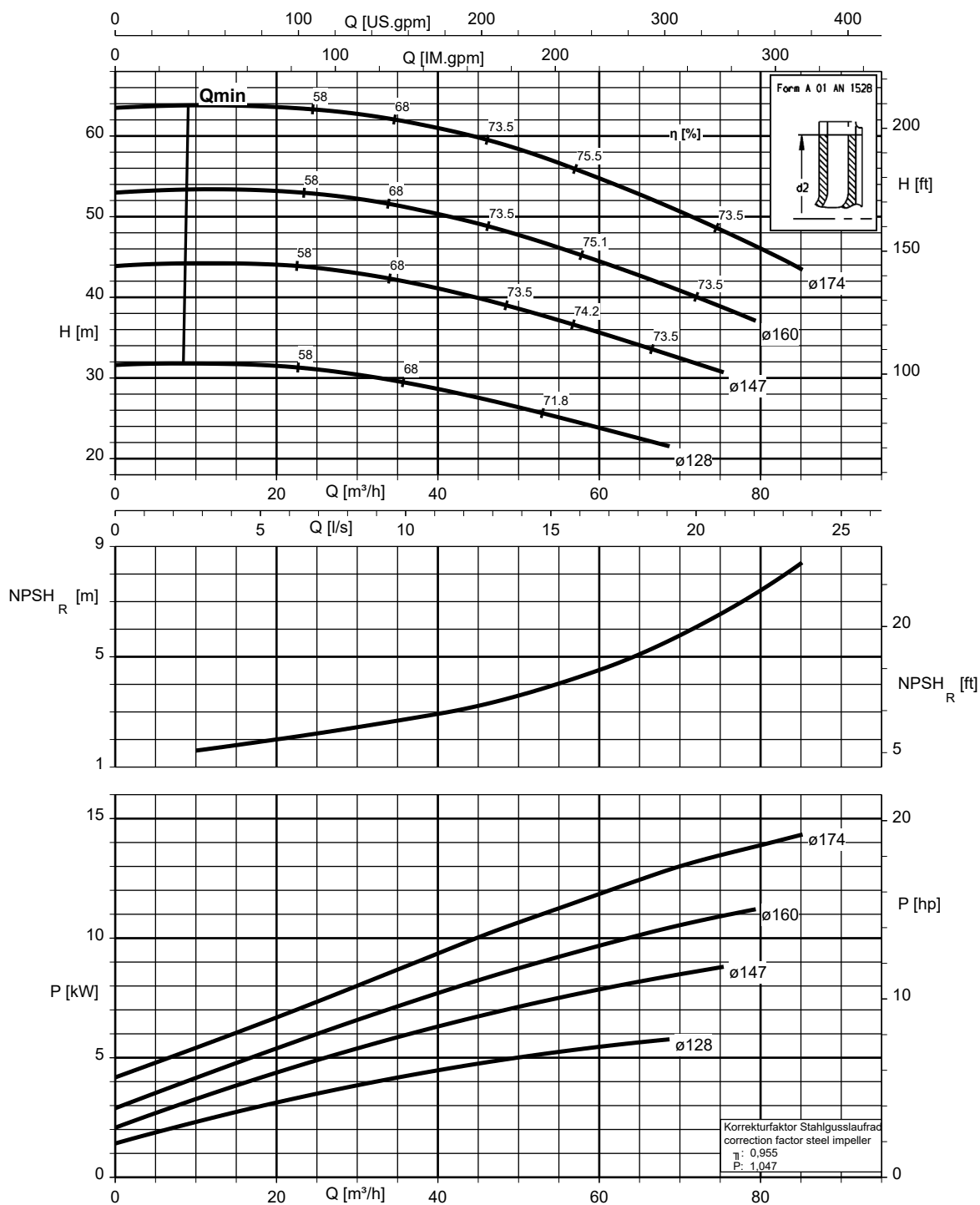
Etanorm 065-040-125, $n = 3500 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 065-040-160, $n = 3500 \text{ min}^{-1}$

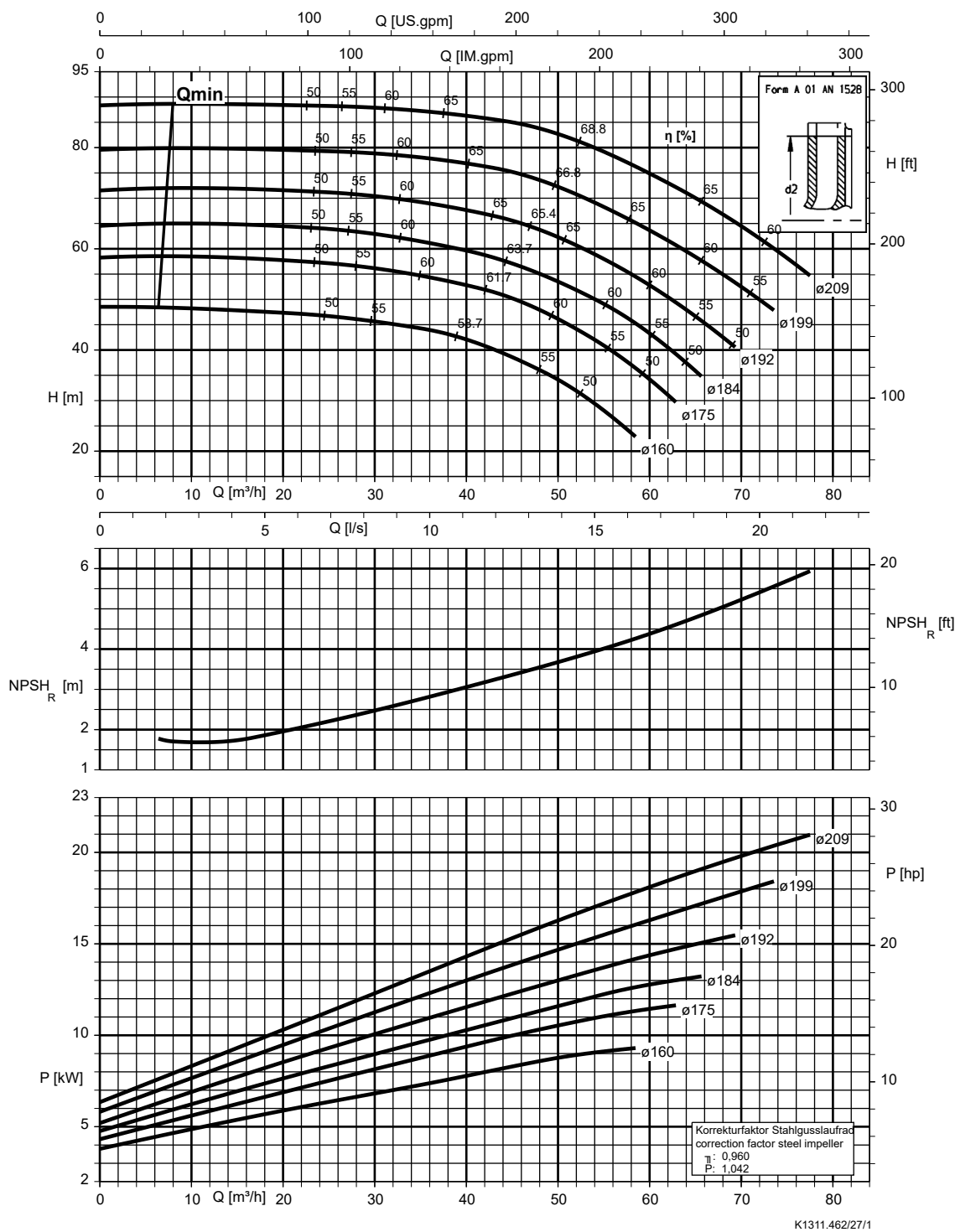
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.462/26/2

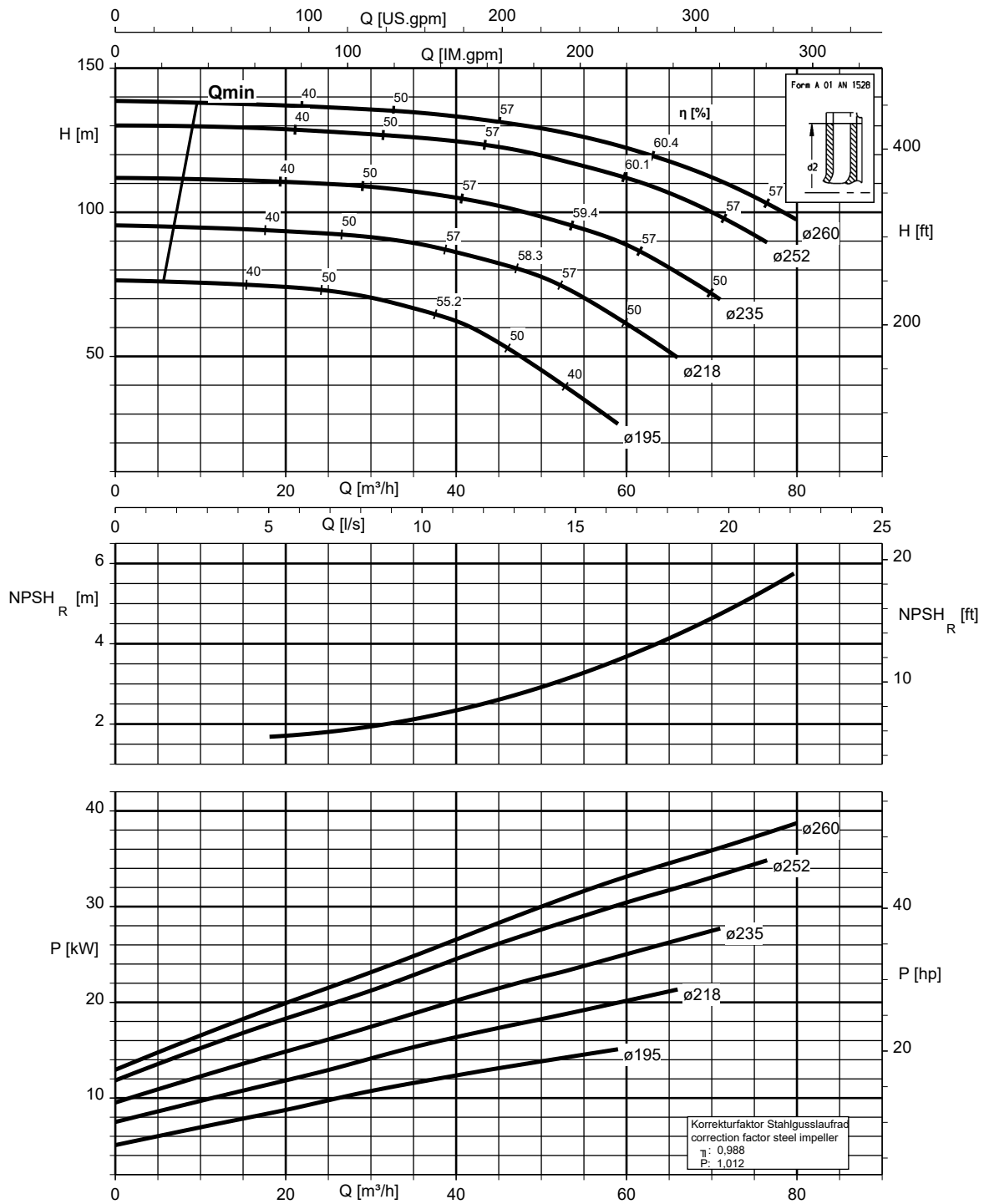
Etanorm 065-040-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 065-040-250, $n = 3500 \text{ min}^{-1}$

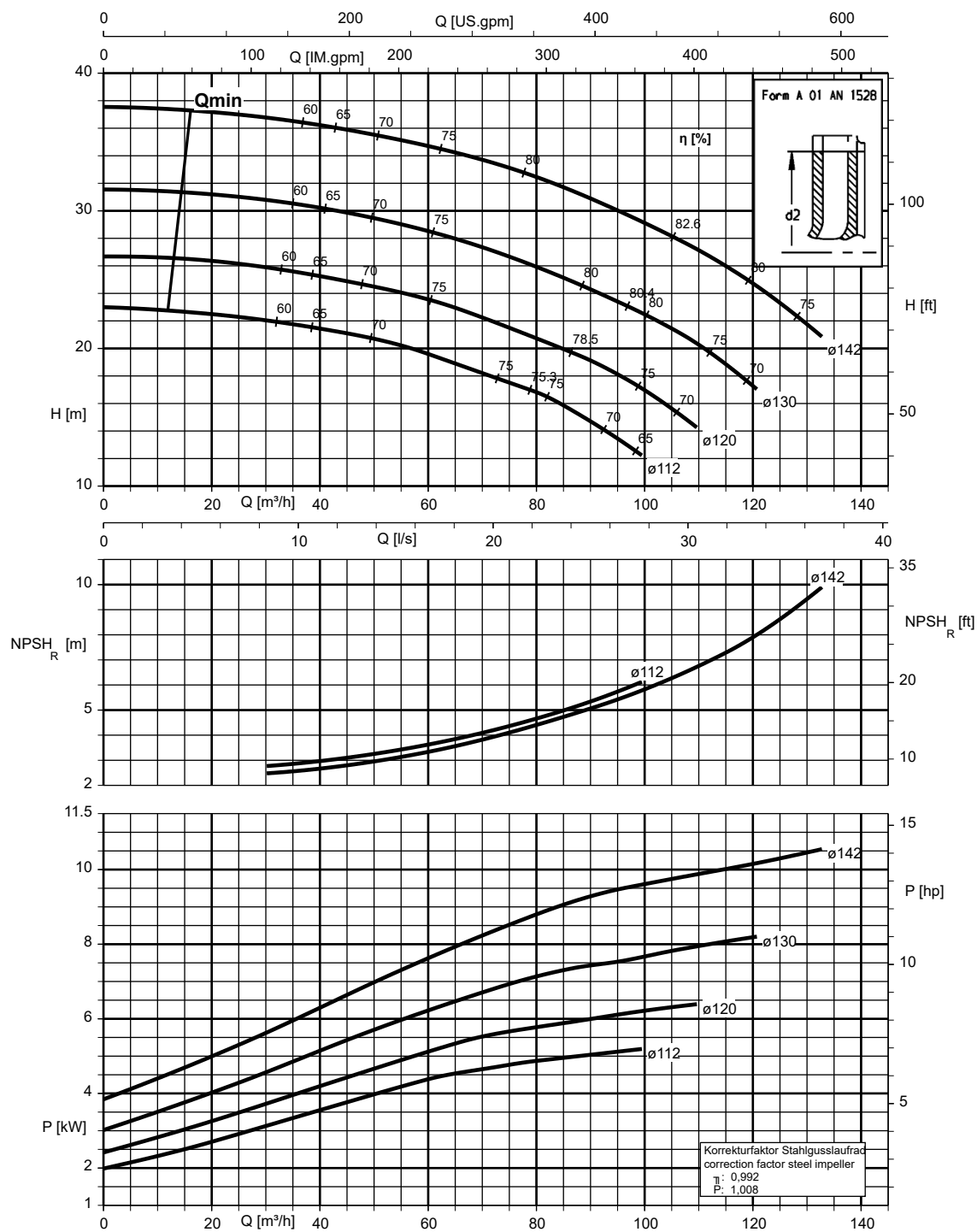
Etabloc



K1311.462/28/2

Etanorm 065-050-125, $n = 3500 \text{ min}^{-1}$

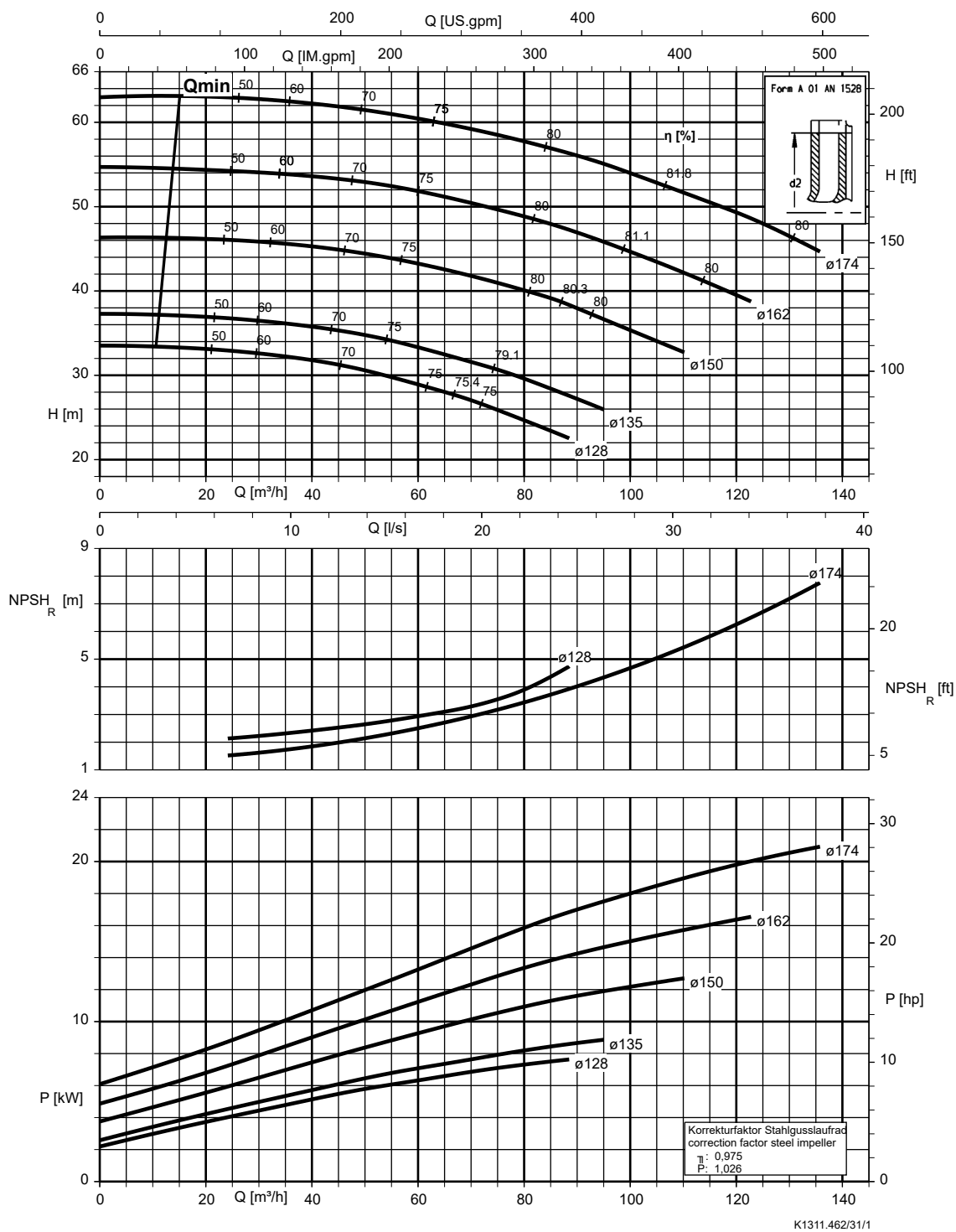
Etanorm V, Etabloc



K1311.462/30/1

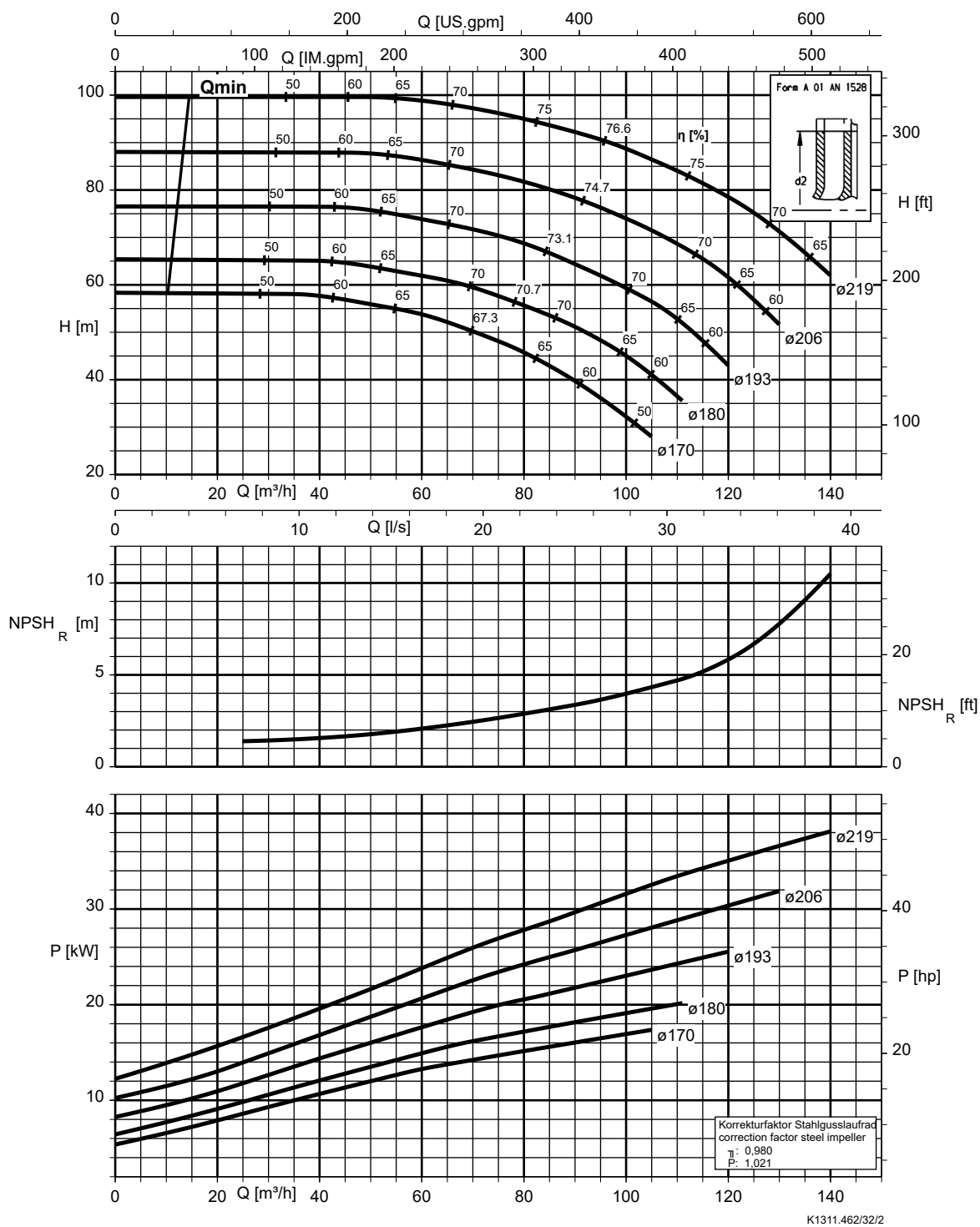
Etanorm 065-050-160, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



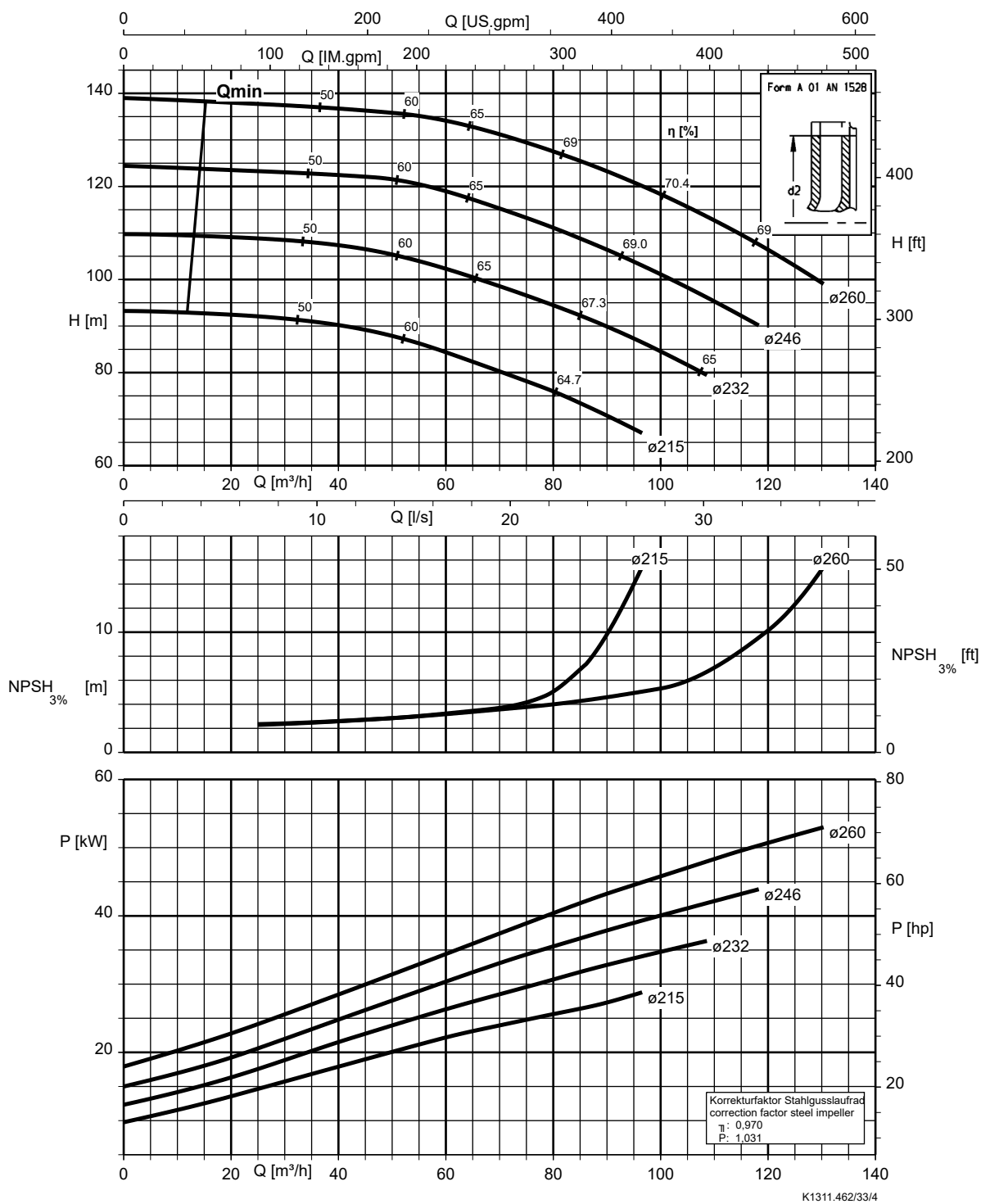
Etanorm 065-050-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



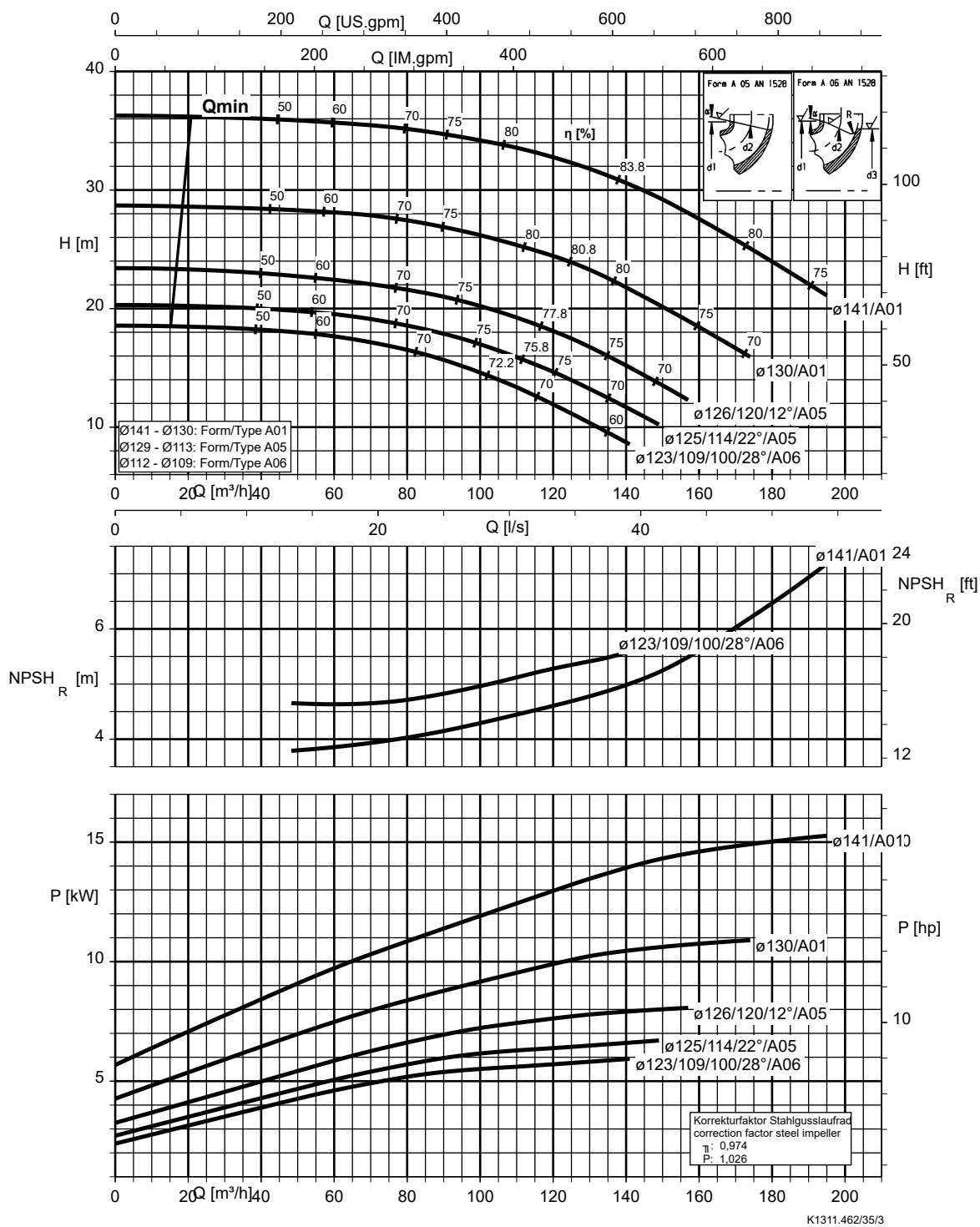
Etanorm 065-050-250, $n = 3500 \text{ min}^{-1}$

Etabloc



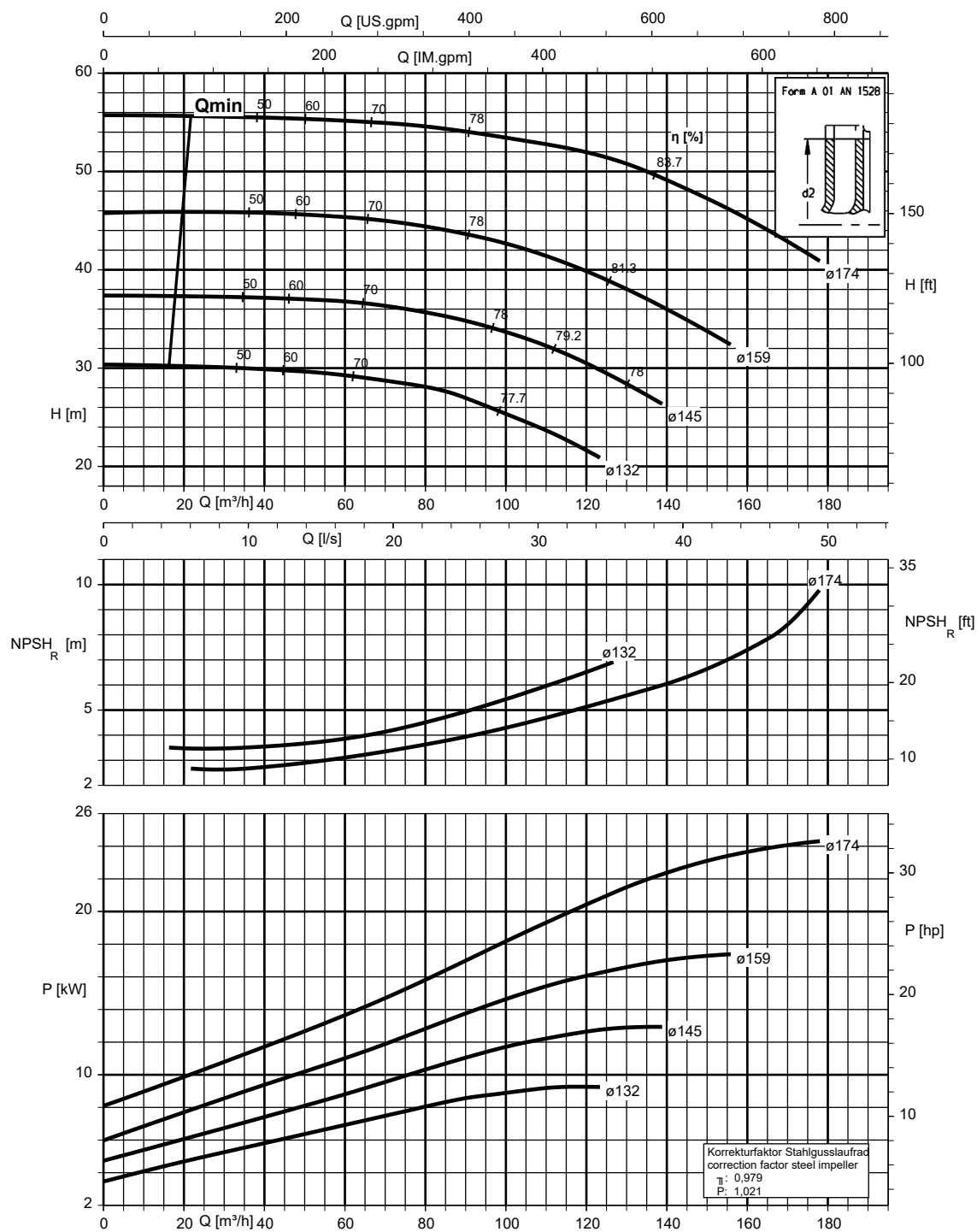
Etanorm 080-065-125, $n = 3500 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 080-065-160, $n = 3500 \text{ min}^{-1}$

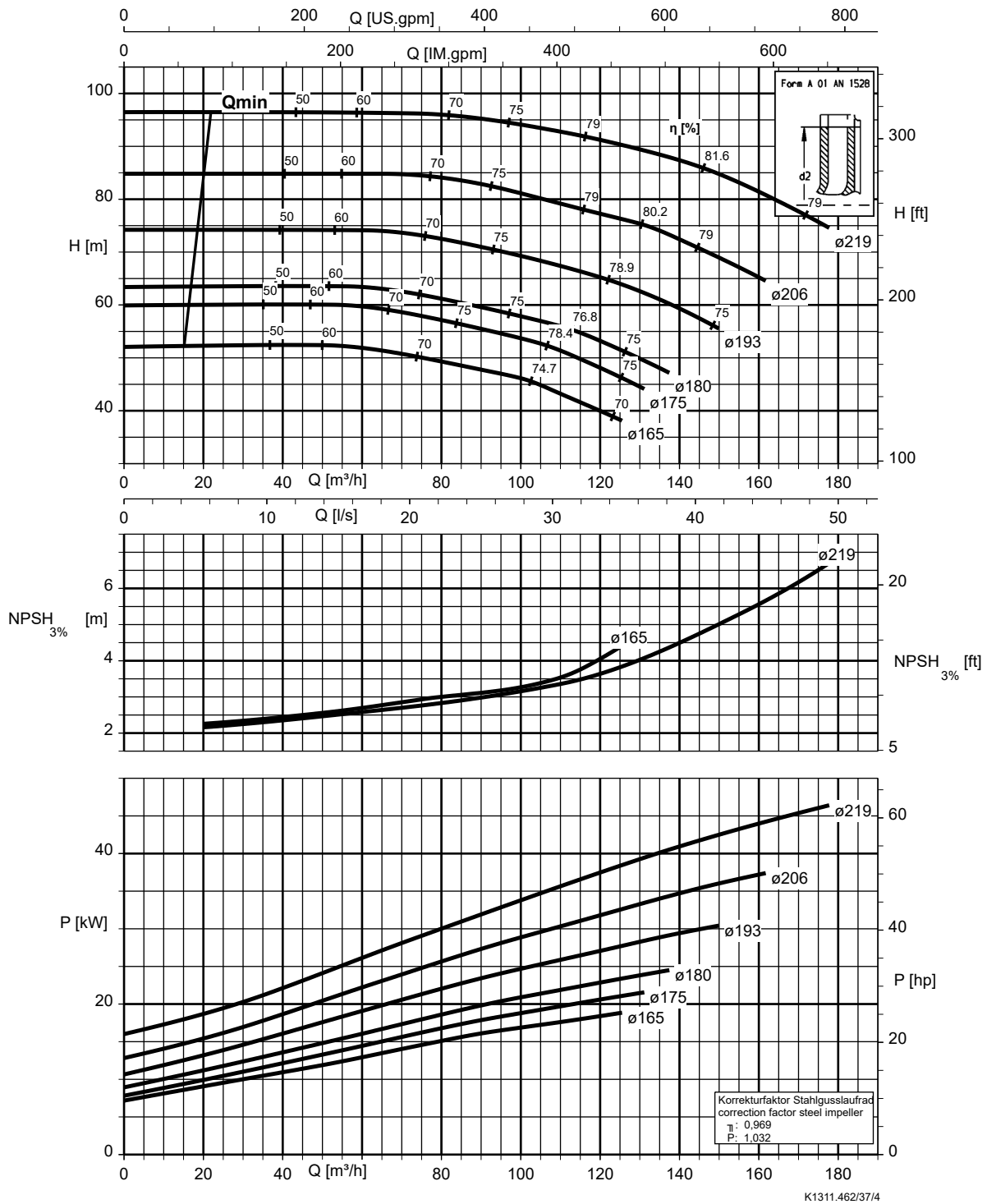
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.462/36/2

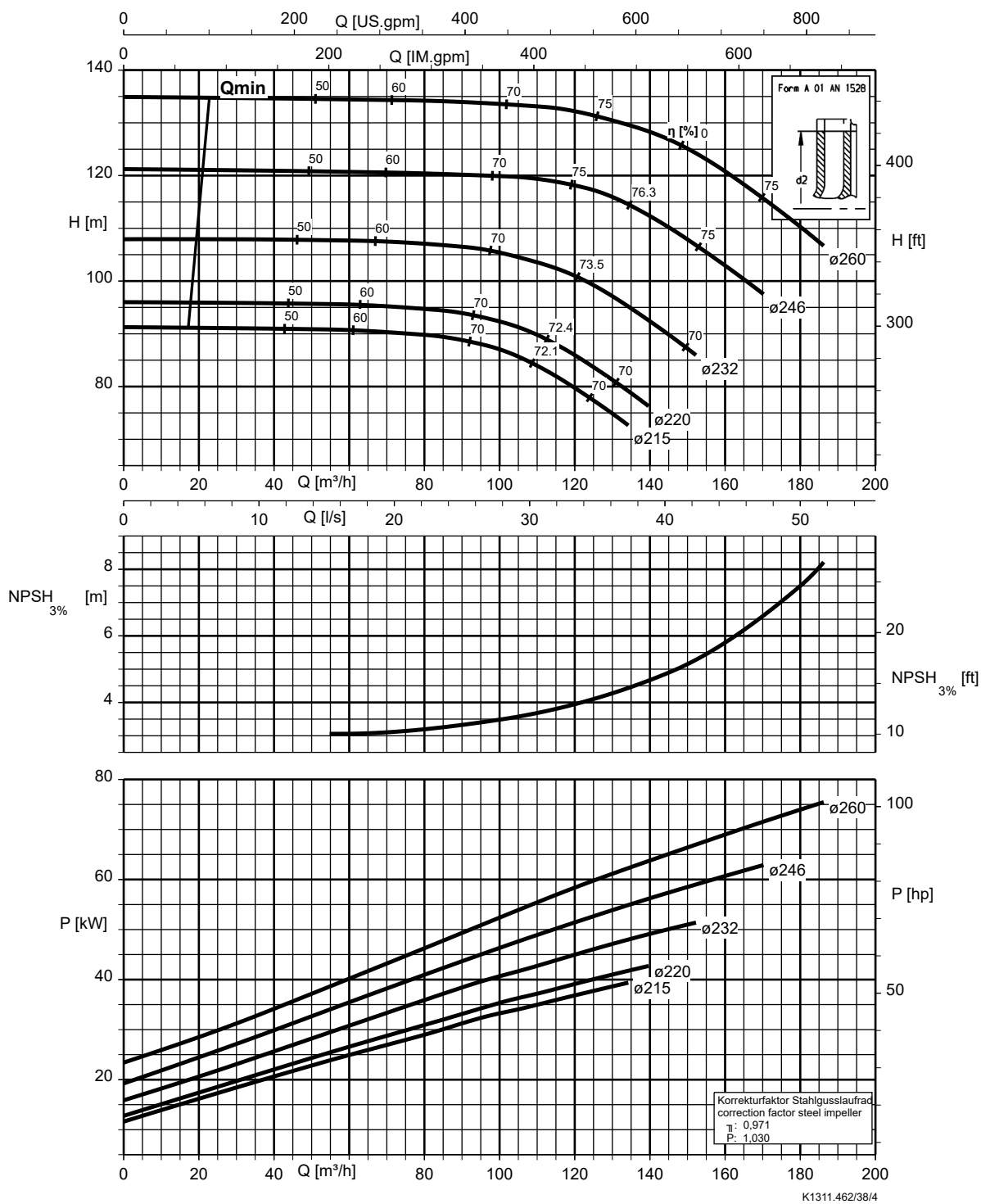
Etanorm 080-065-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



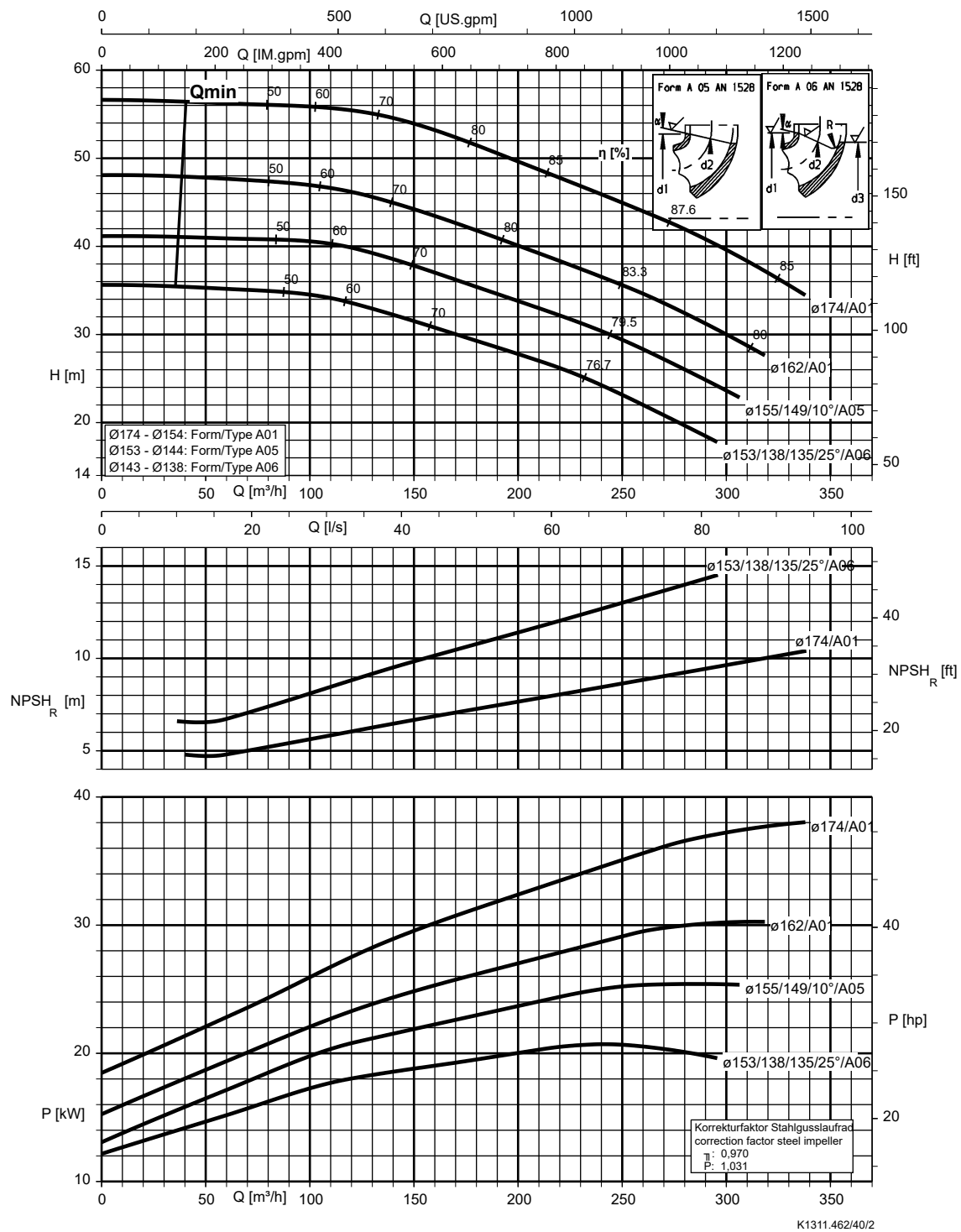
Etanorm 080-065-250, $n = 3500 \text{ min}^{-1}$

Etabloc



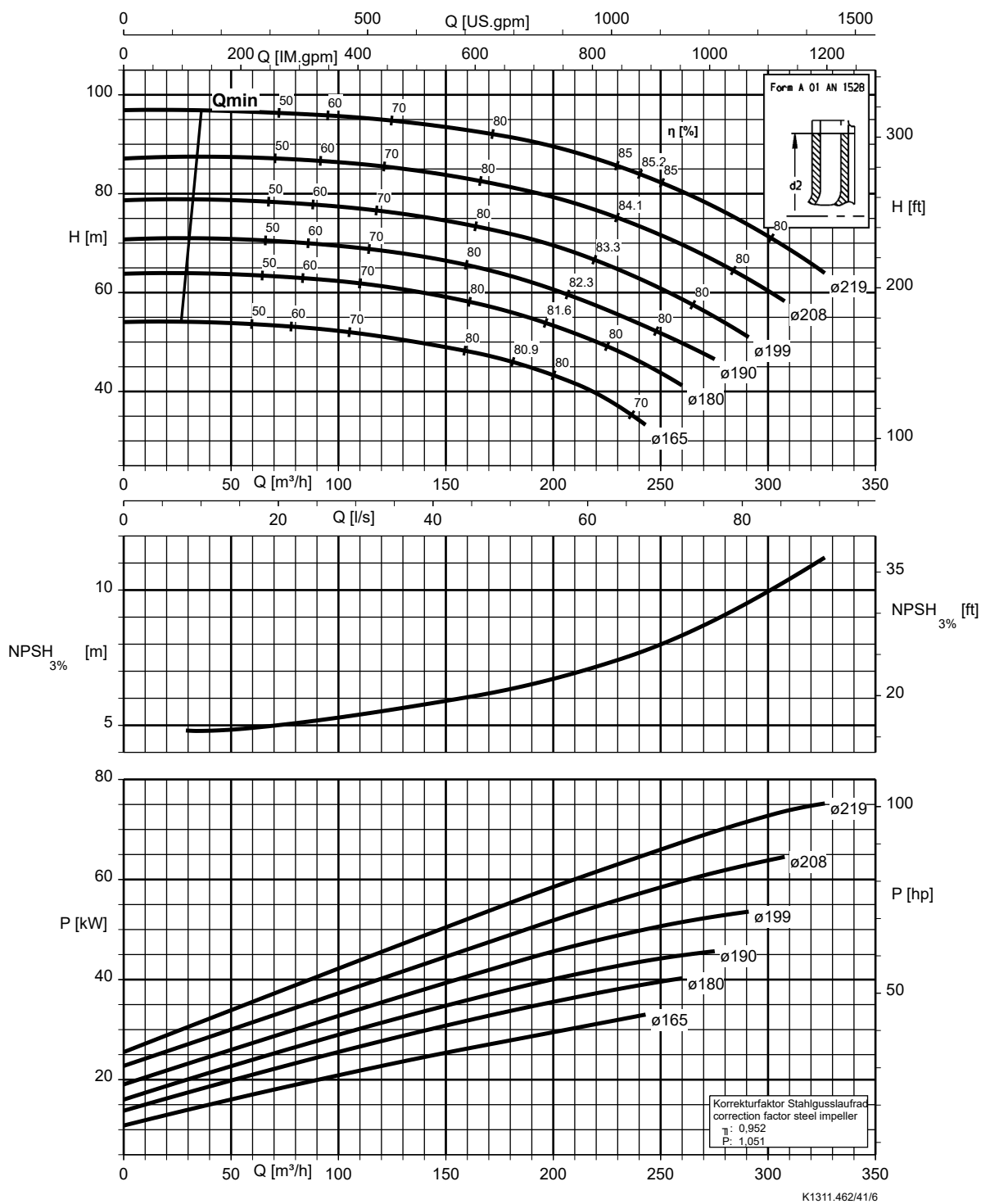
Etanorm 100-080-160, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT

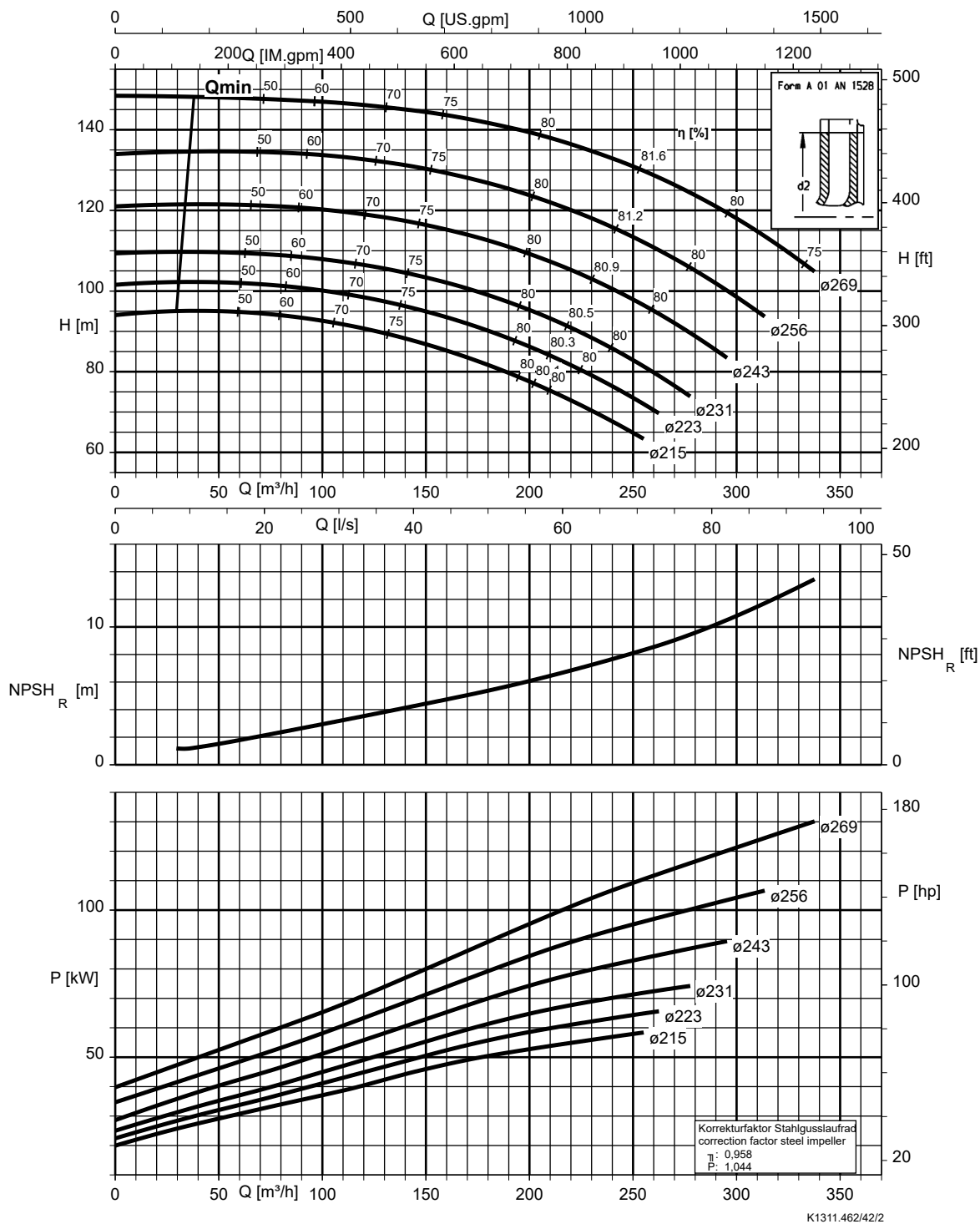


Etanorm 100-080-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc

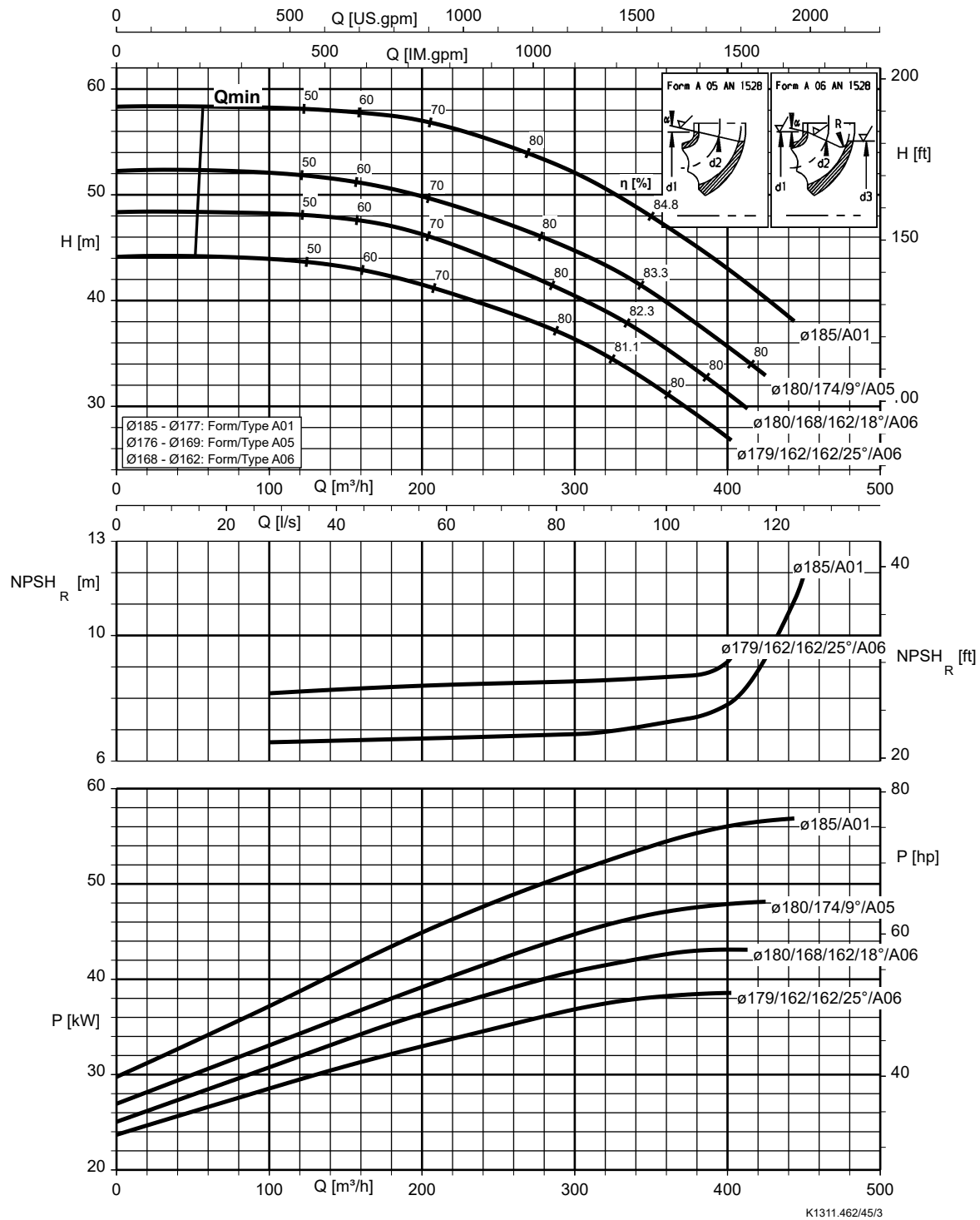


Etanorm 100-080-250, $n = 3500 \text{ min}^{-1}$



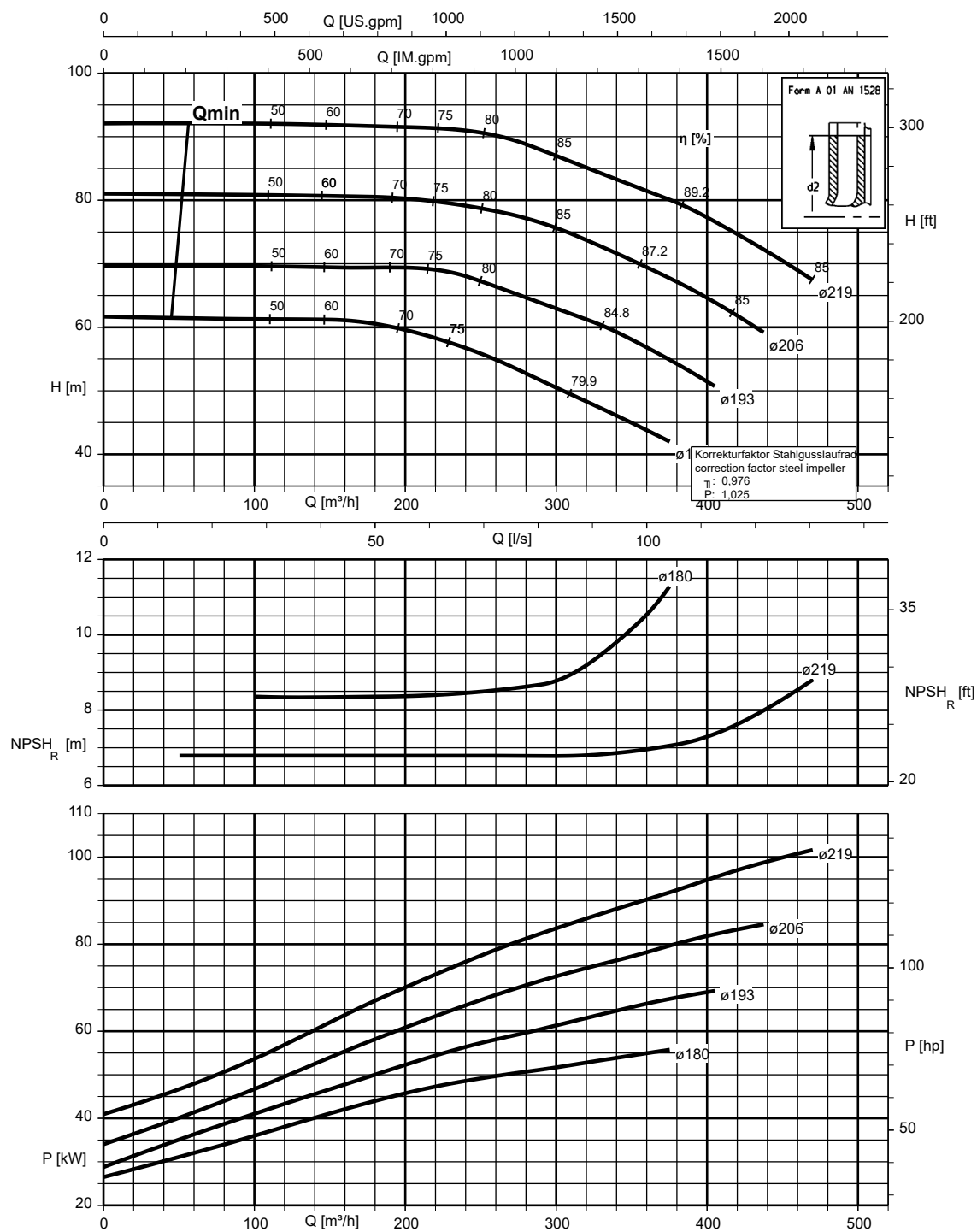
Etanorm 125-100-160, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



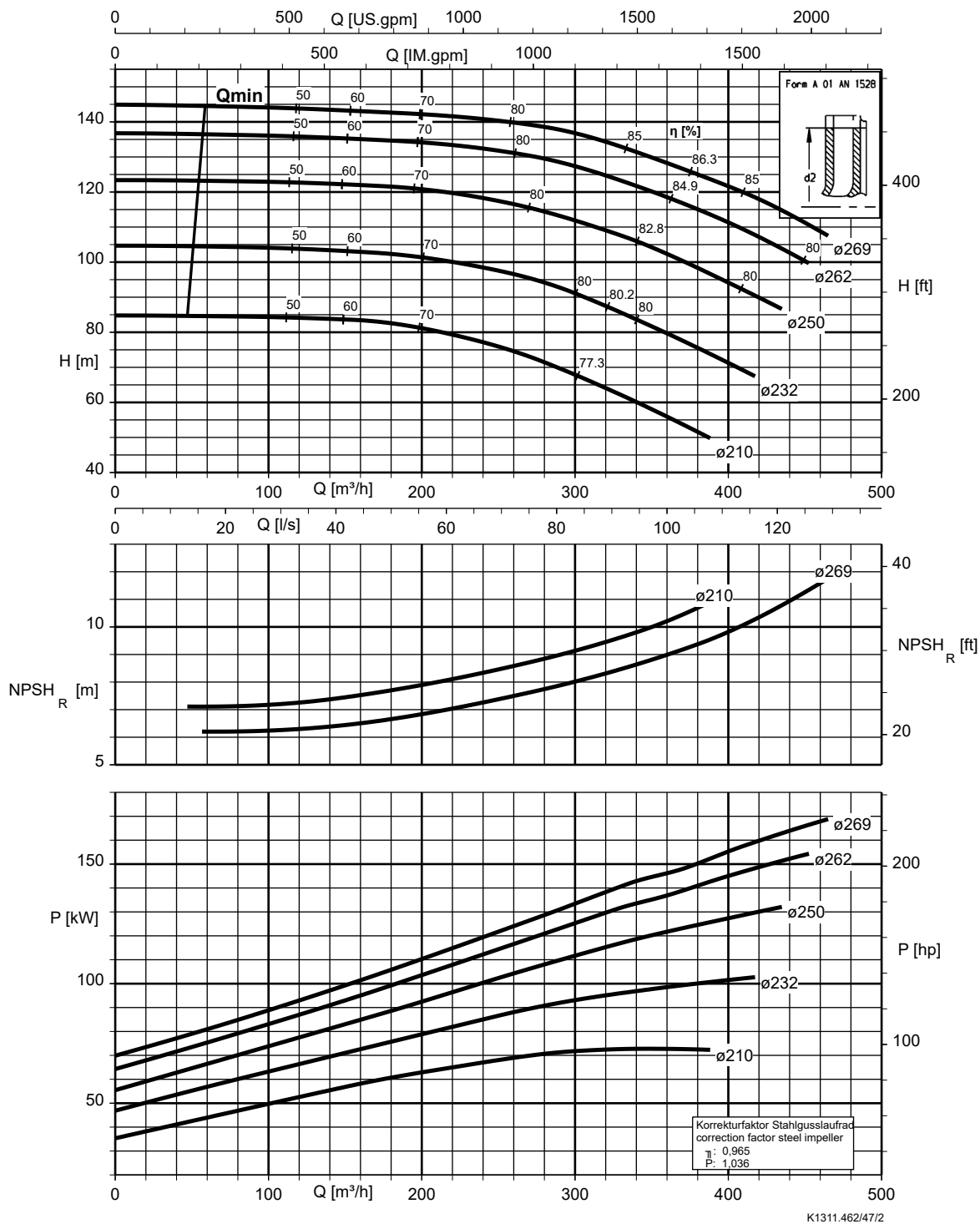
Etanorm 125-100-200, $n = 3500 \text{ min}^{-1}$

Etanorm SYT, Etanorm V



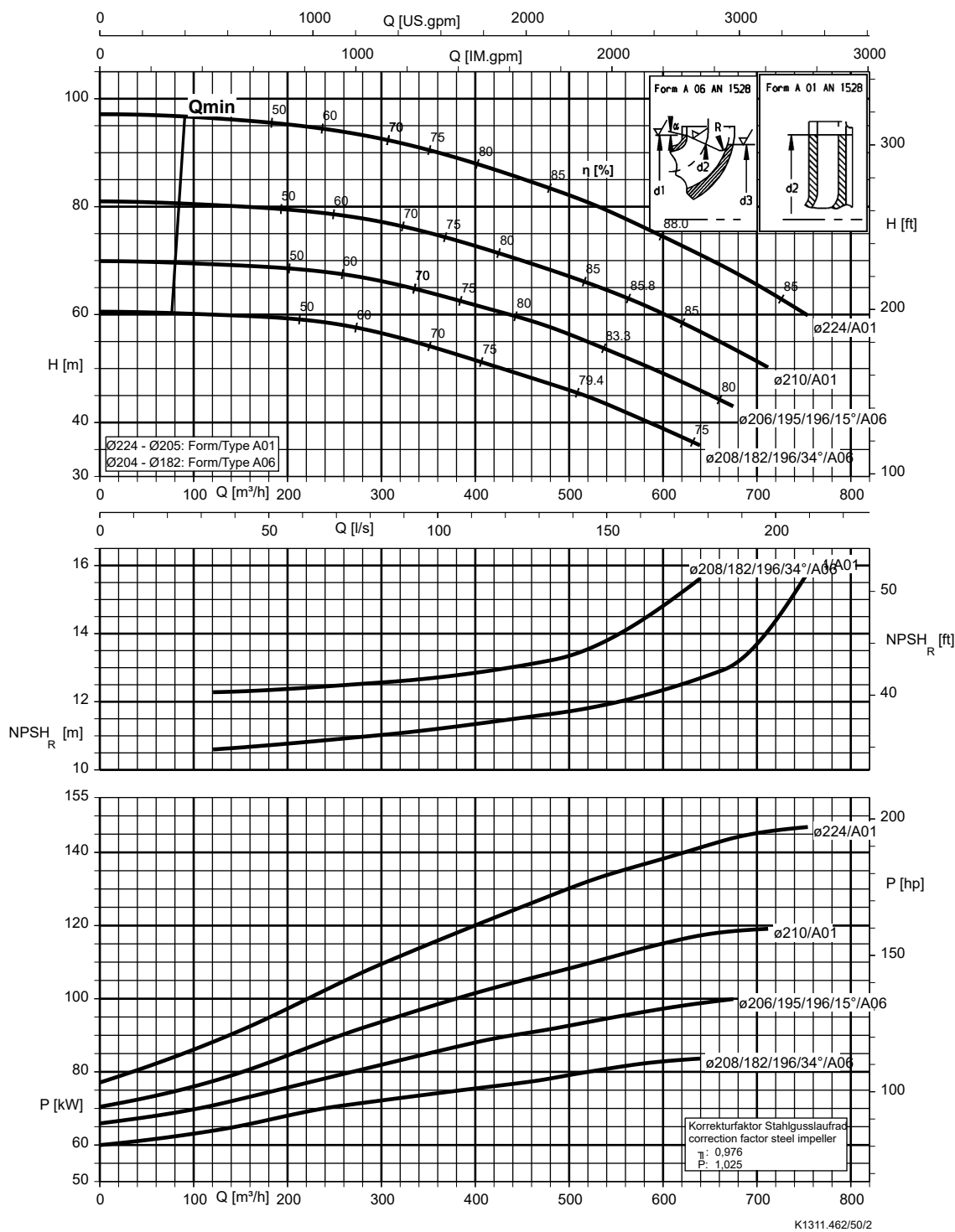
K1311.462/46/1

Etanorm 125-100-250, $n = 3500 \text{ min}^{-1}$



Etanorm 150-125-200, $n = 3500 \text{ min}^{-1}$

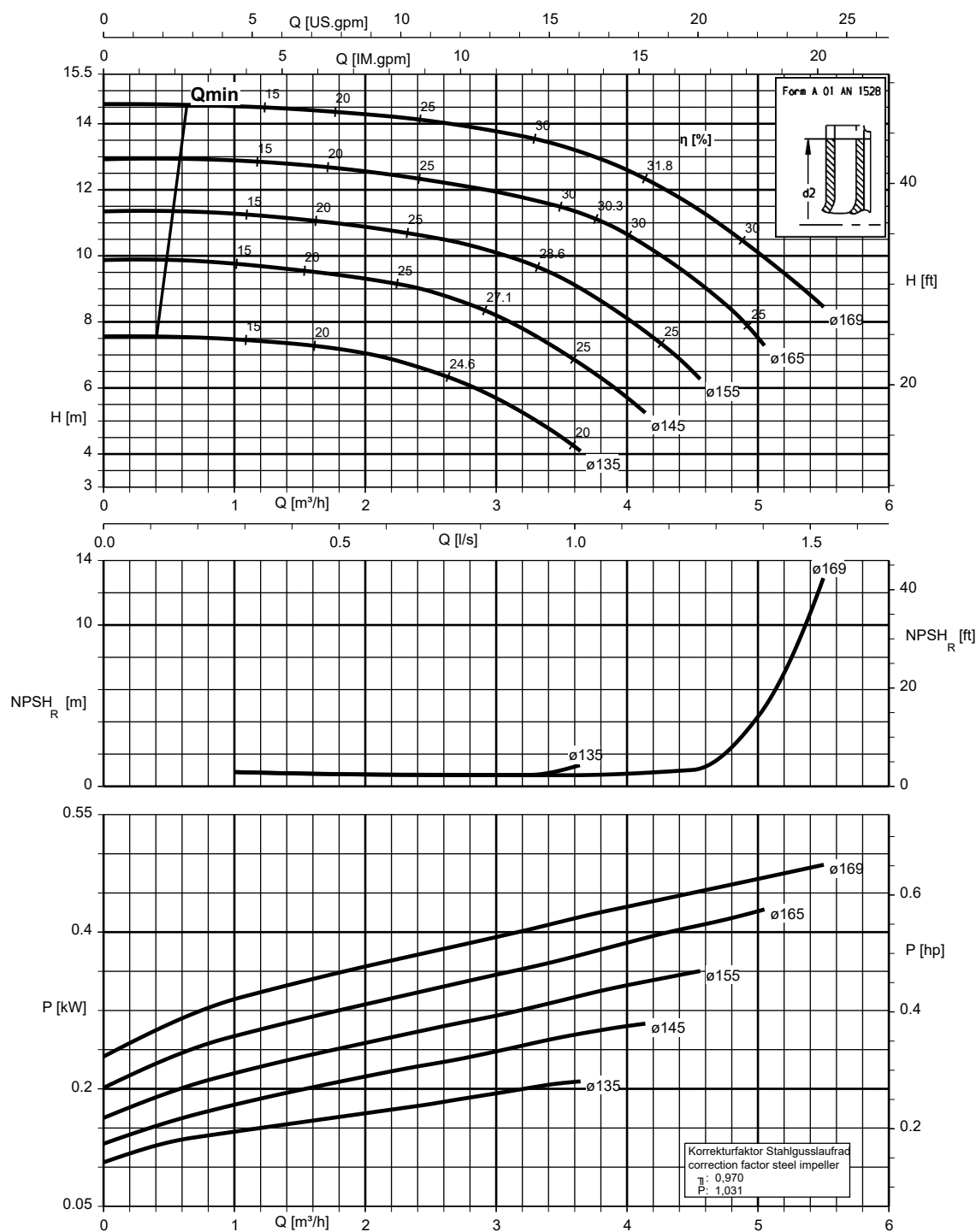
Etanorm SYT, Etanorm V



$n = 1750 \text{ min}^{-1}$

Etanorm 040-025-160, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etabloc, Etabloc SYT

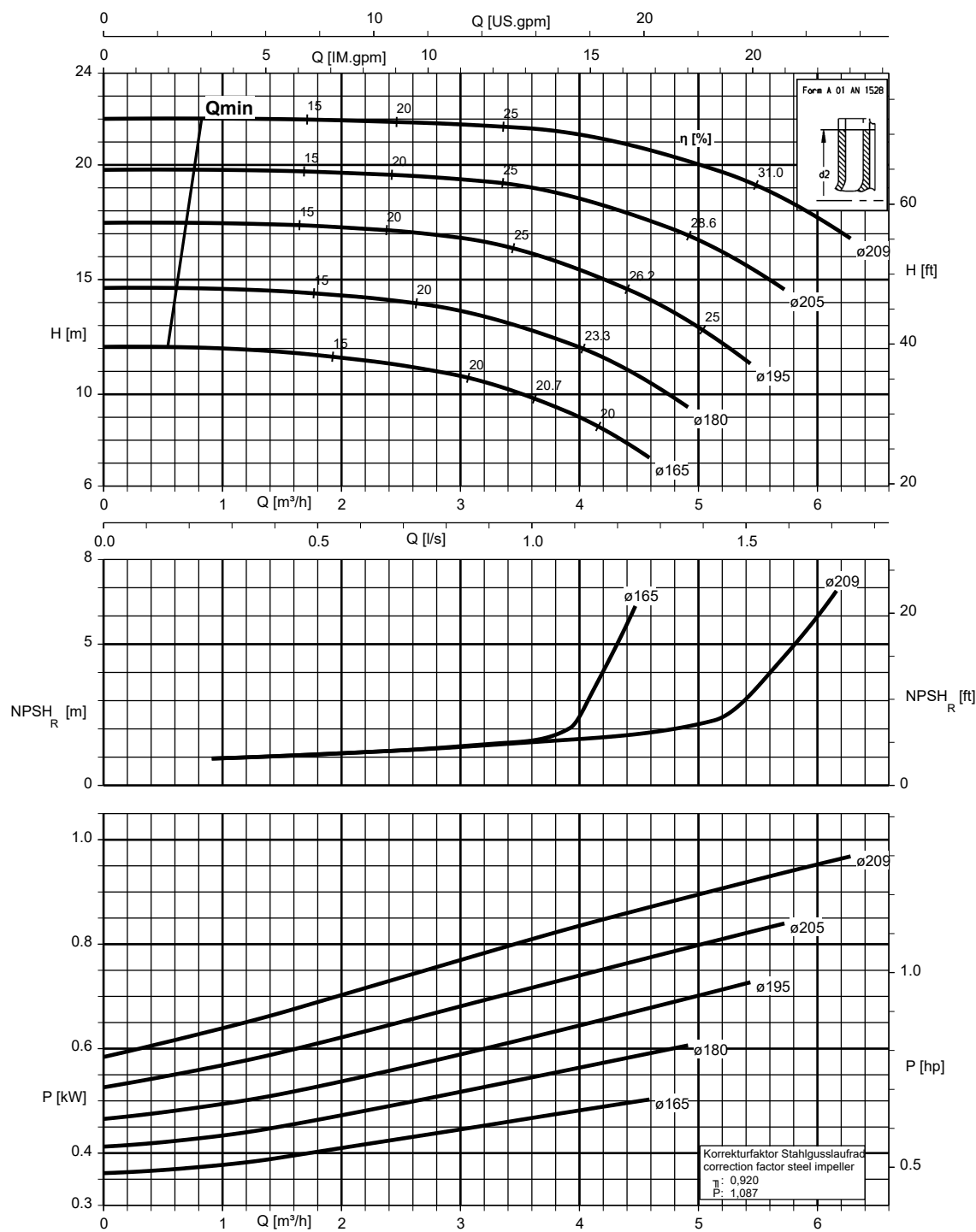


K1311.464/14/2

1311.46/11-DE

Etanorm 040-025-200, $n = 1750 \text{ min}^{-1}$

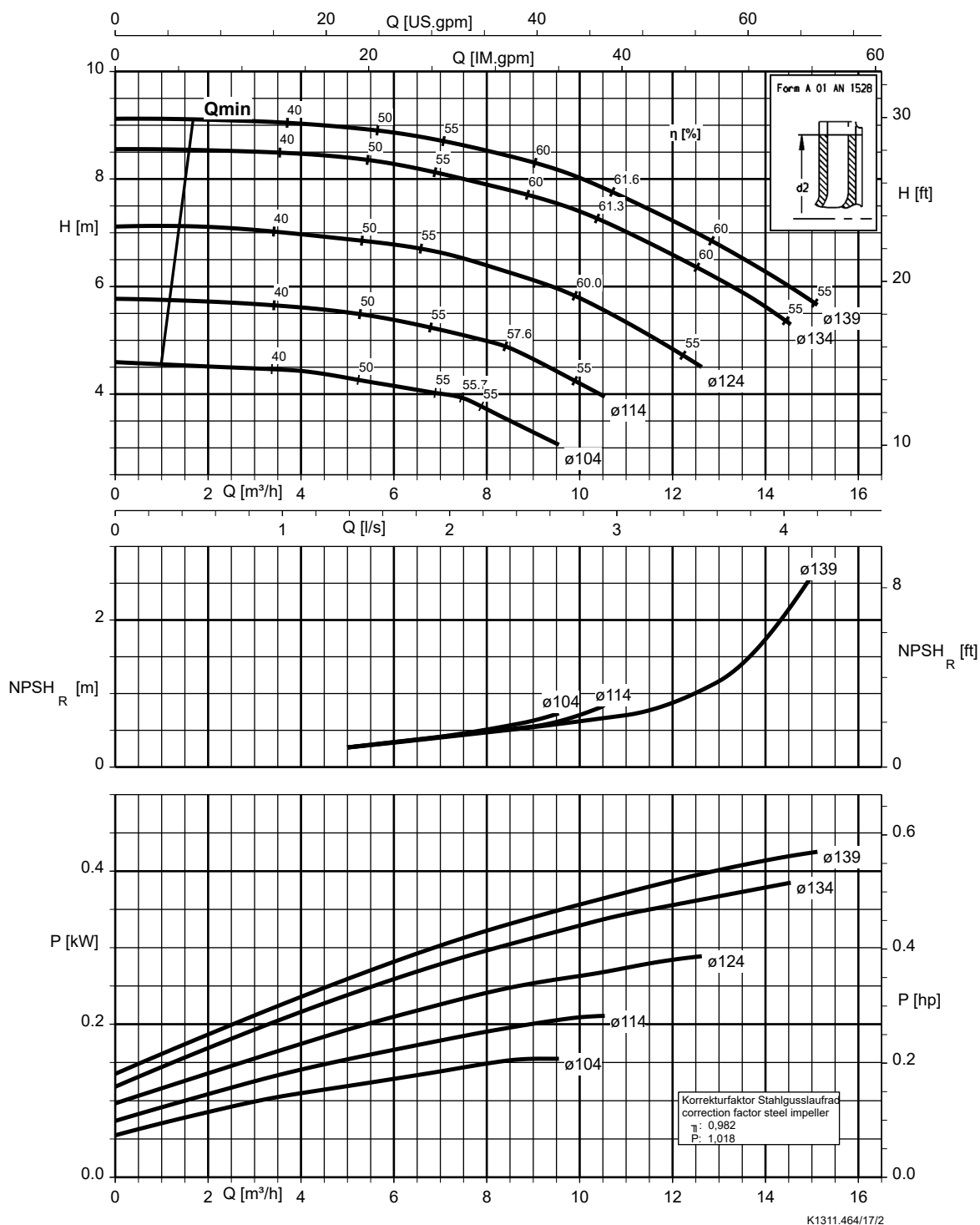
Etanorm SYT, Etabloc, Etabloc SYT



K1311.464/15/2

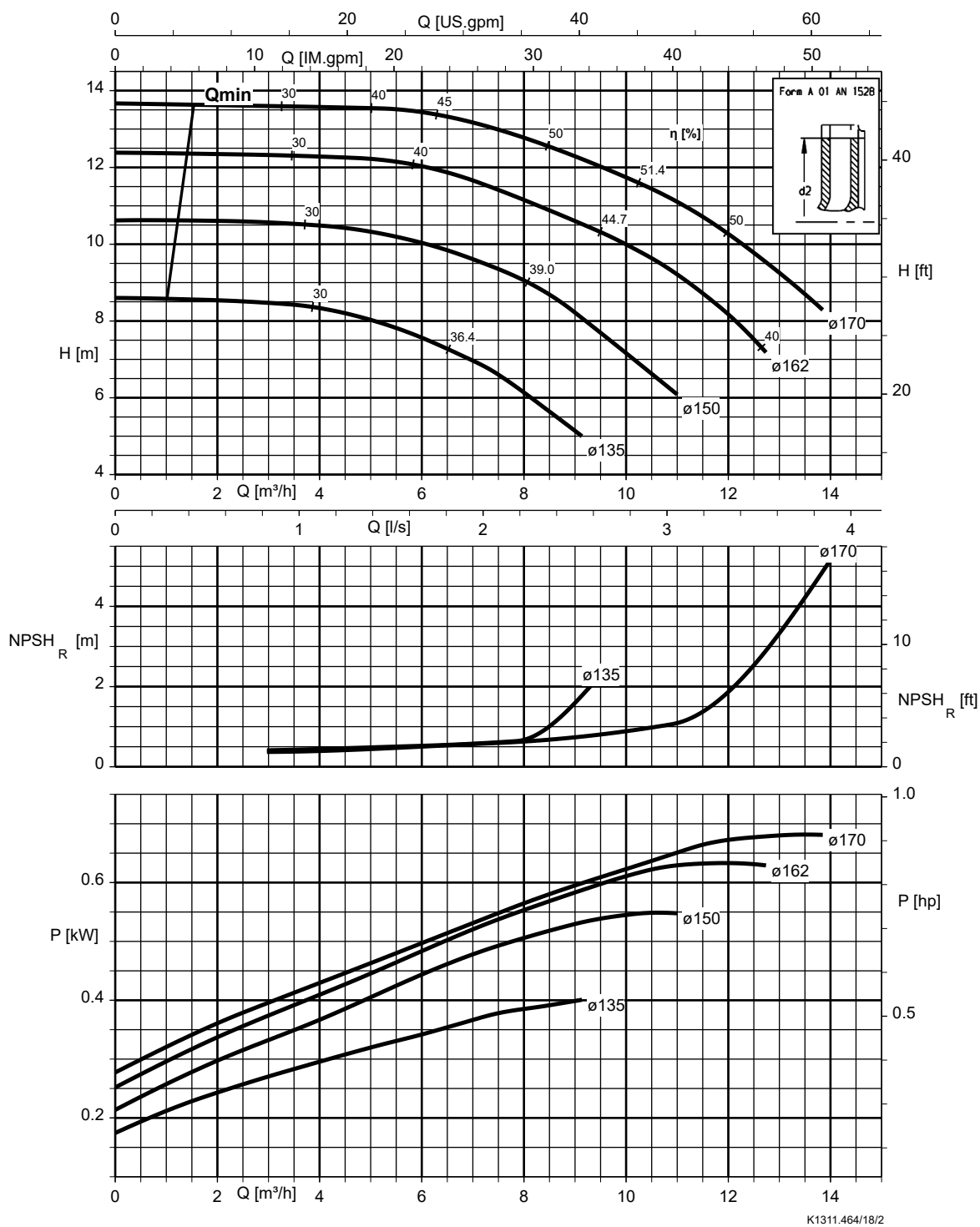
Etanorm 050-032-125.1, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



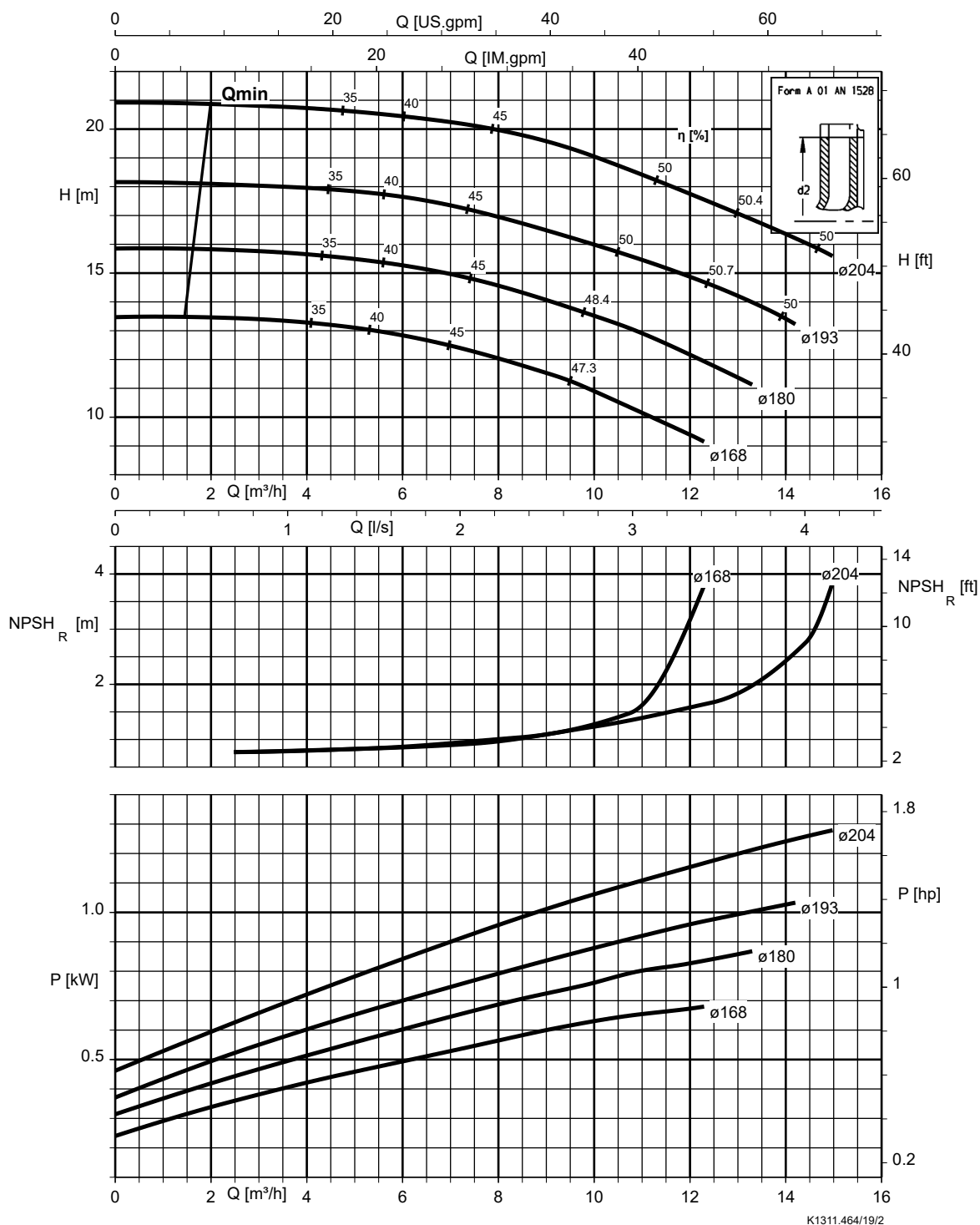
Etanorm 050-032-160.1, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



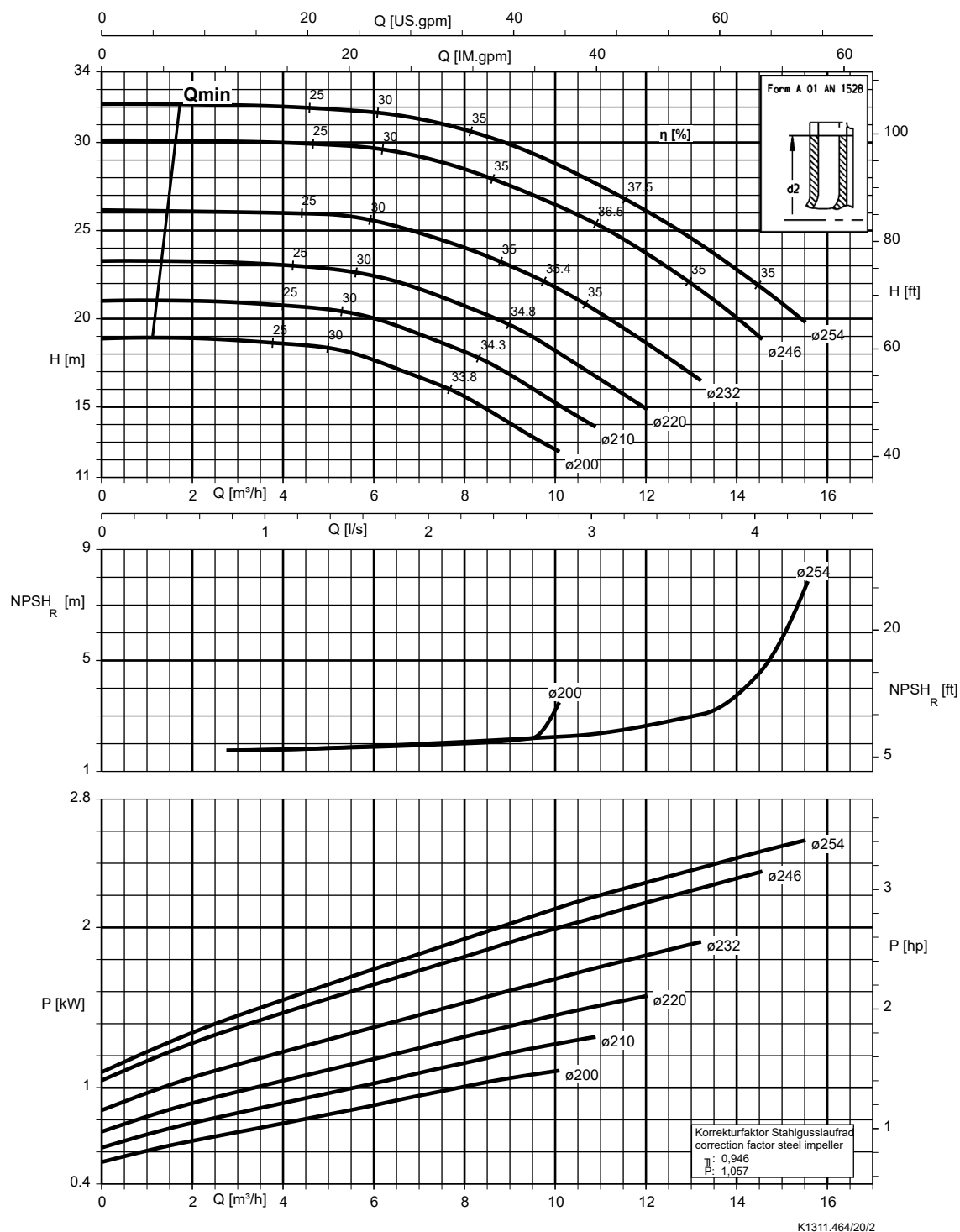
Etanorm 050-032-200.1, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



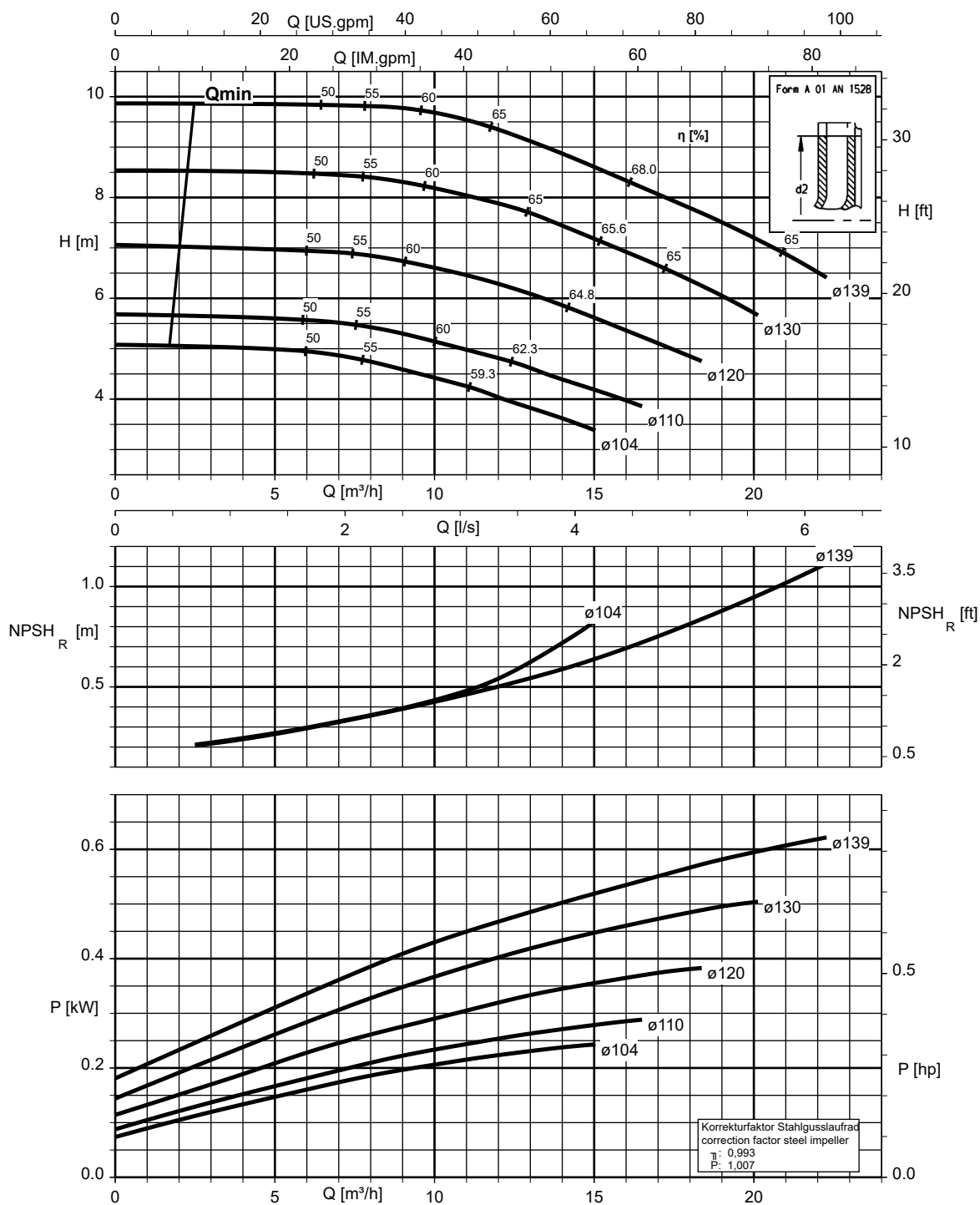
Etanorm 050-032-250.1, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 050-032-125, $n = 1750 \text{ min}^{-1}$

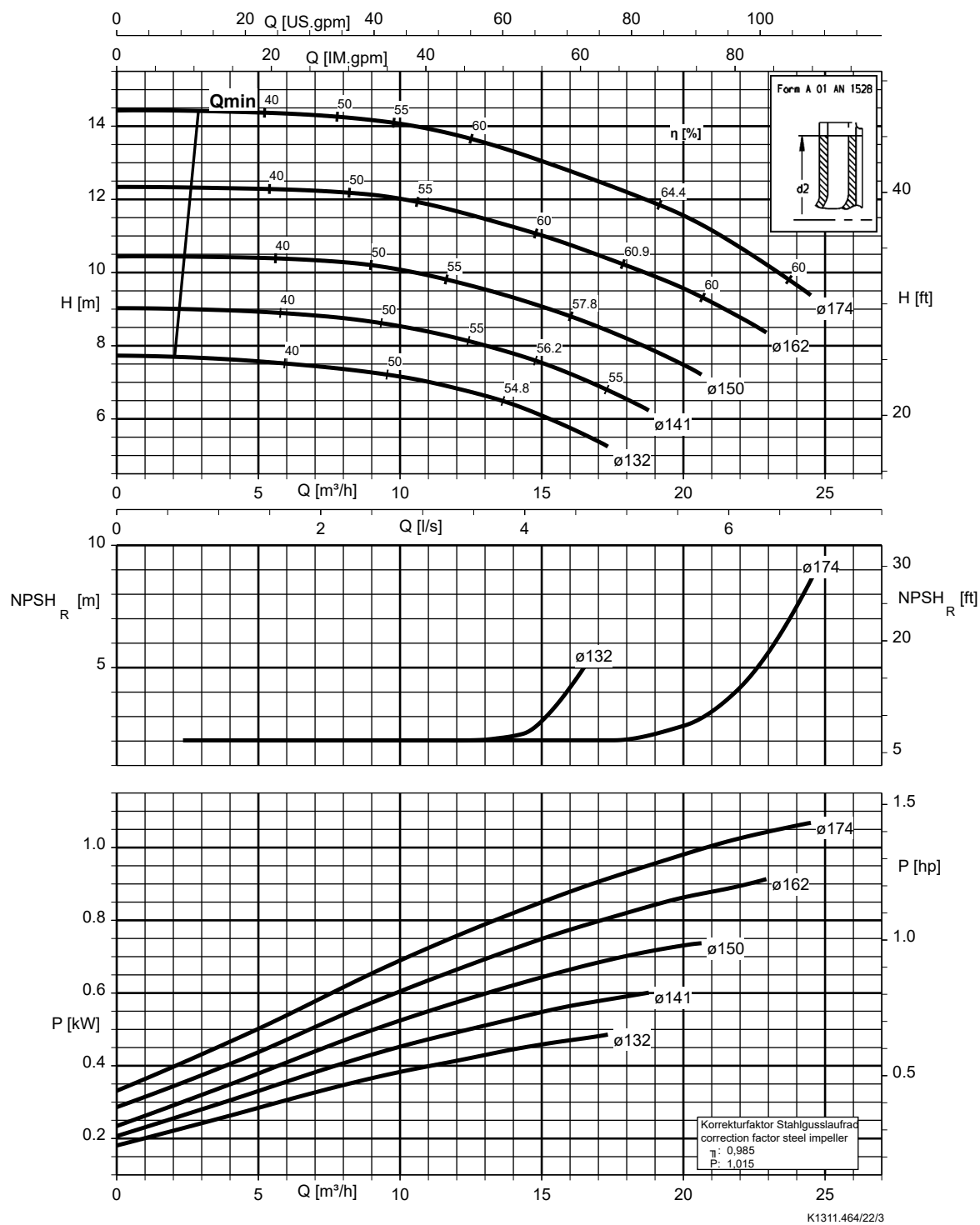
Etanorm V, Etabloc



K1311.464/21/2

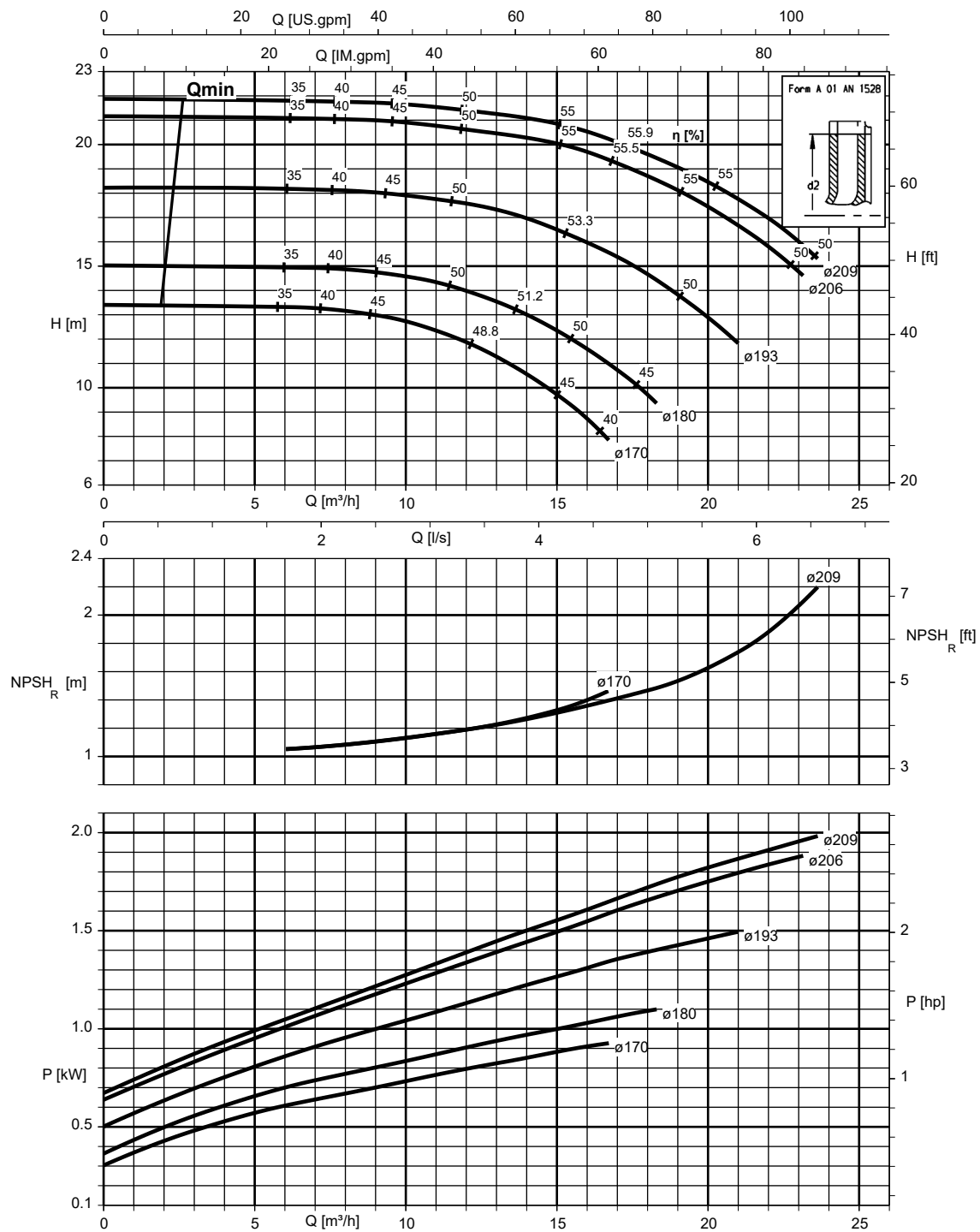
Etanorm 050-032-160, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 050-032-200, $n = 1750 \text{ min}^{-1}$

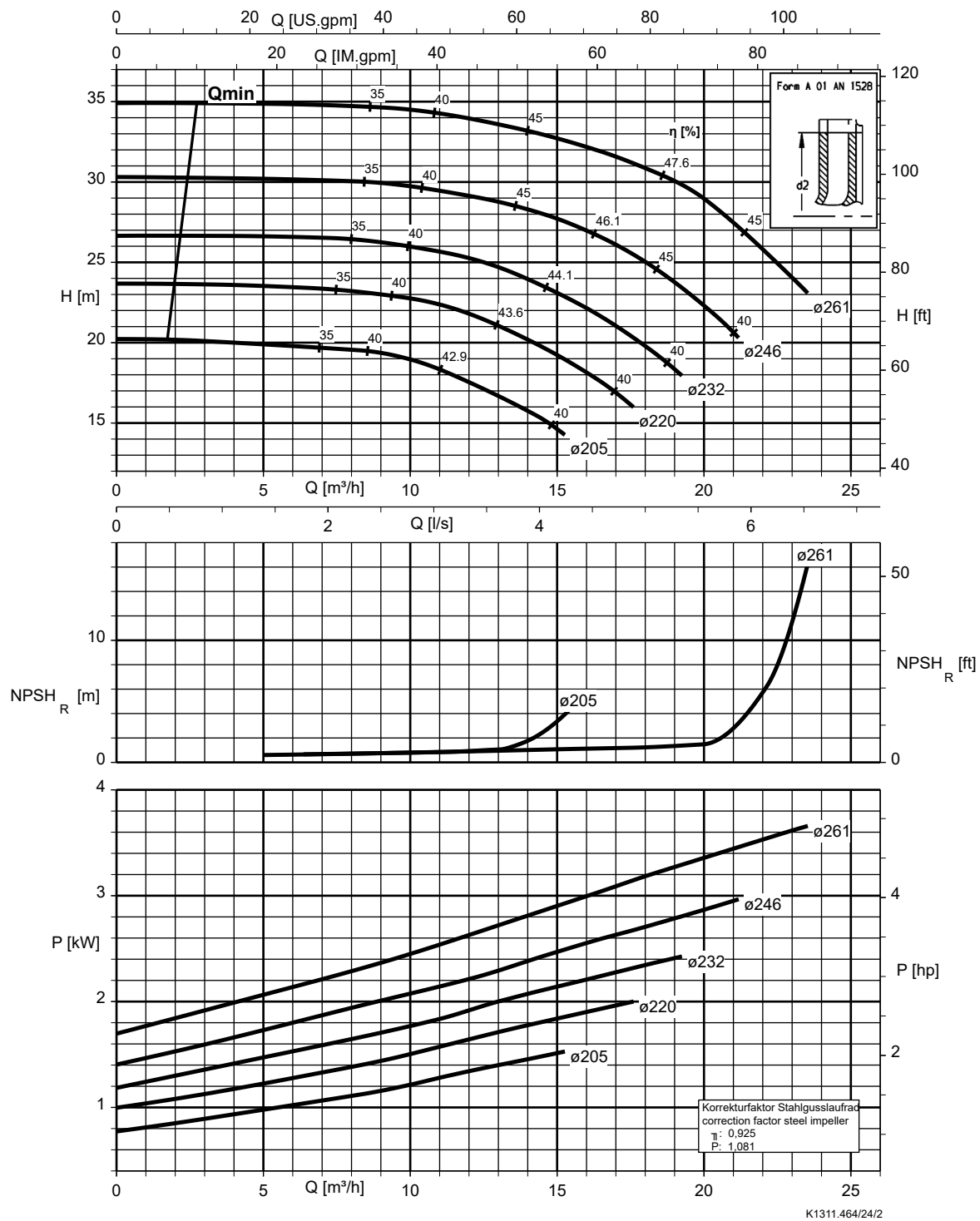
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.464/23/1

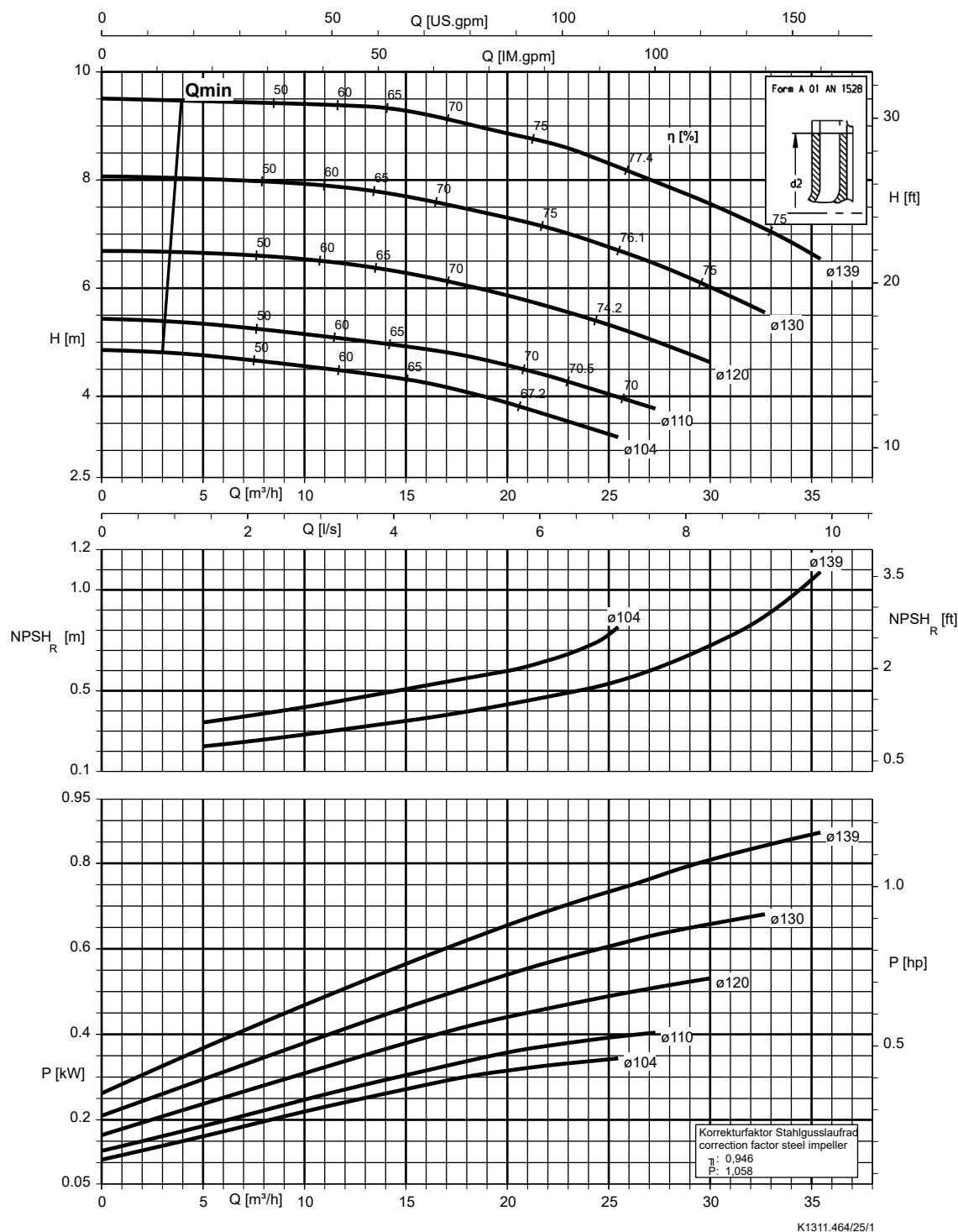
Etanorm 050-032-250, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



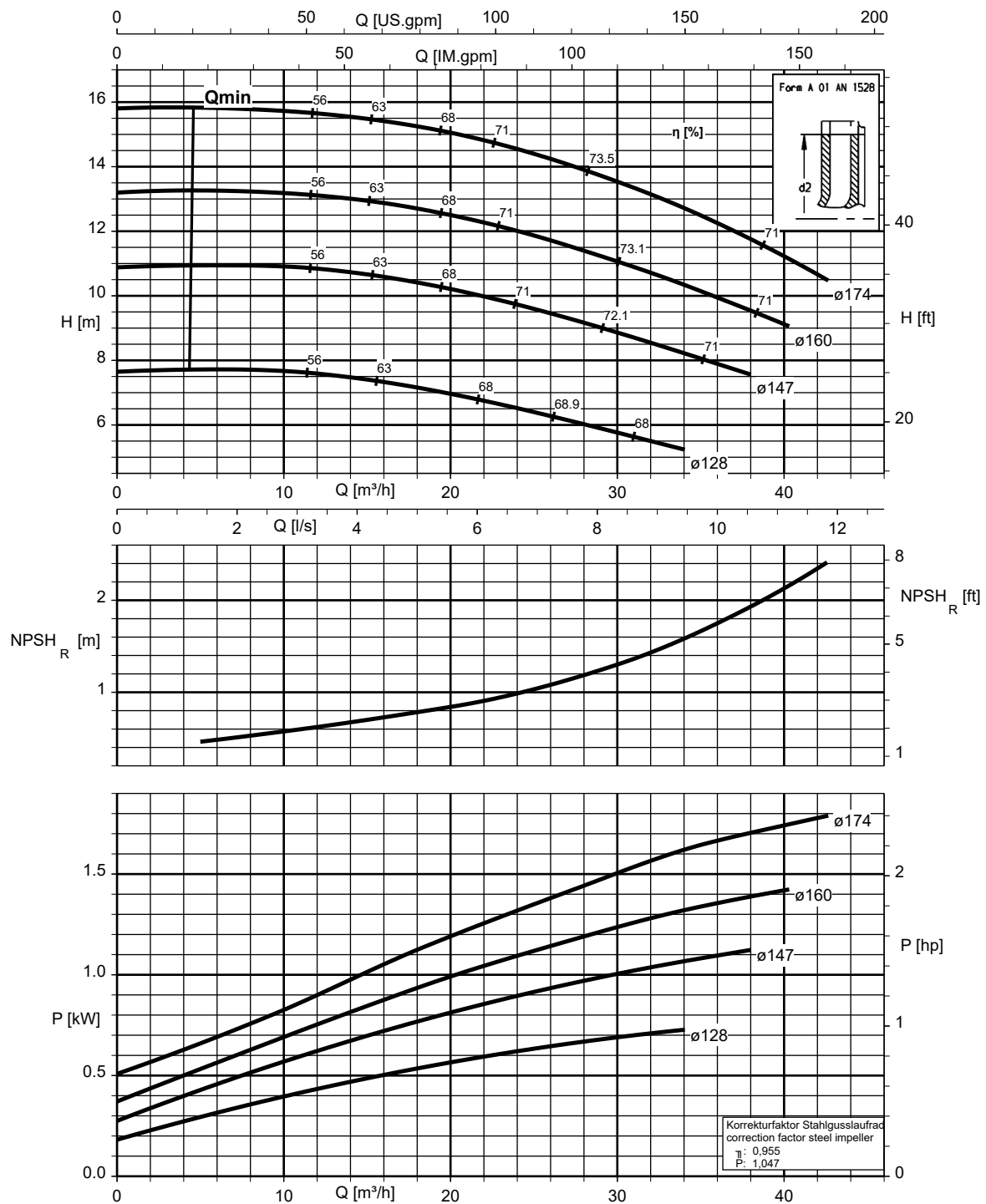
Etanorm 065-040-125, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 065-040-160, $n = 1750 \text{ min}^{-1}$

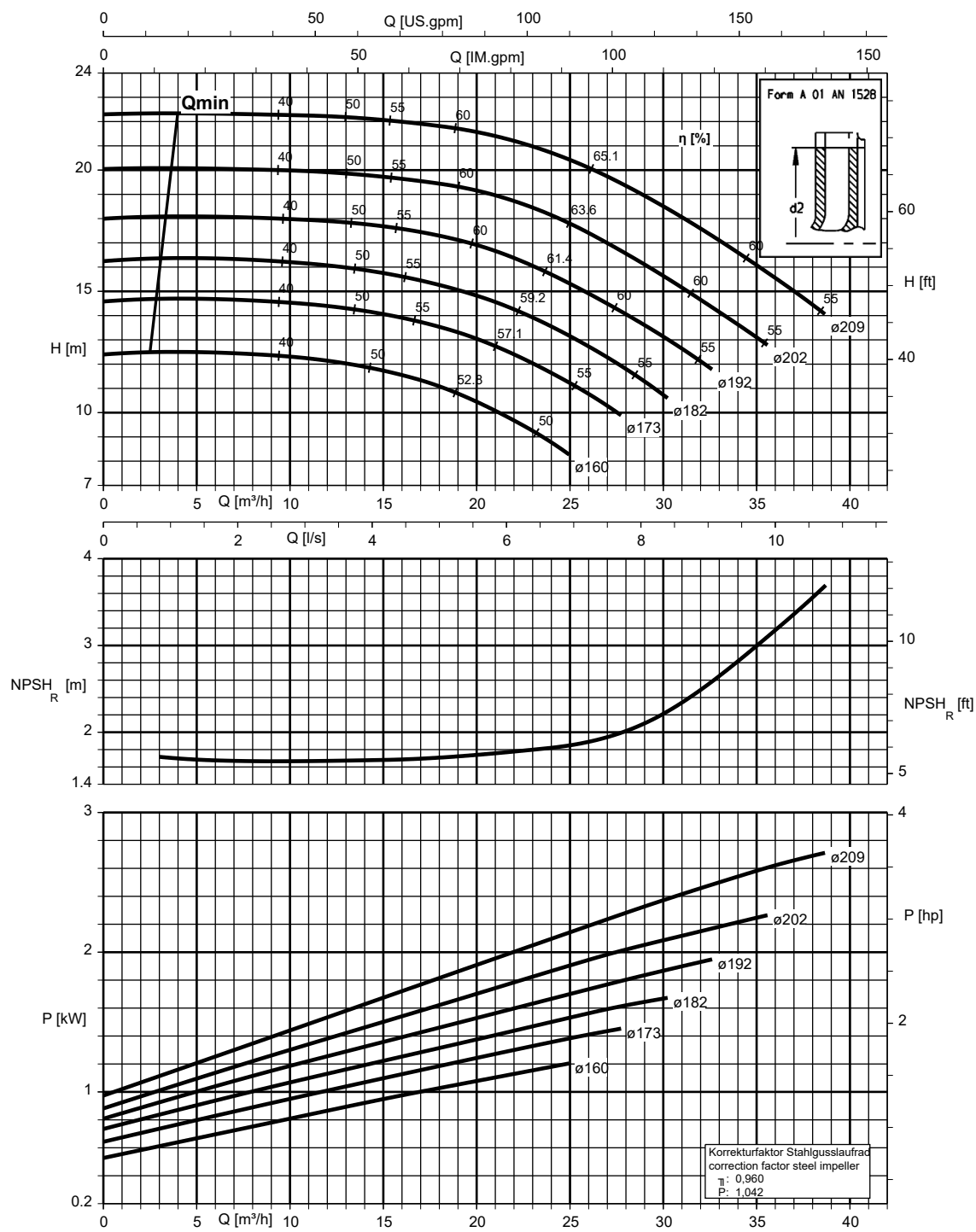
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.464/26/2

Etanorm 065-040-200, $n = 1750 \text{ min}^{-1}$

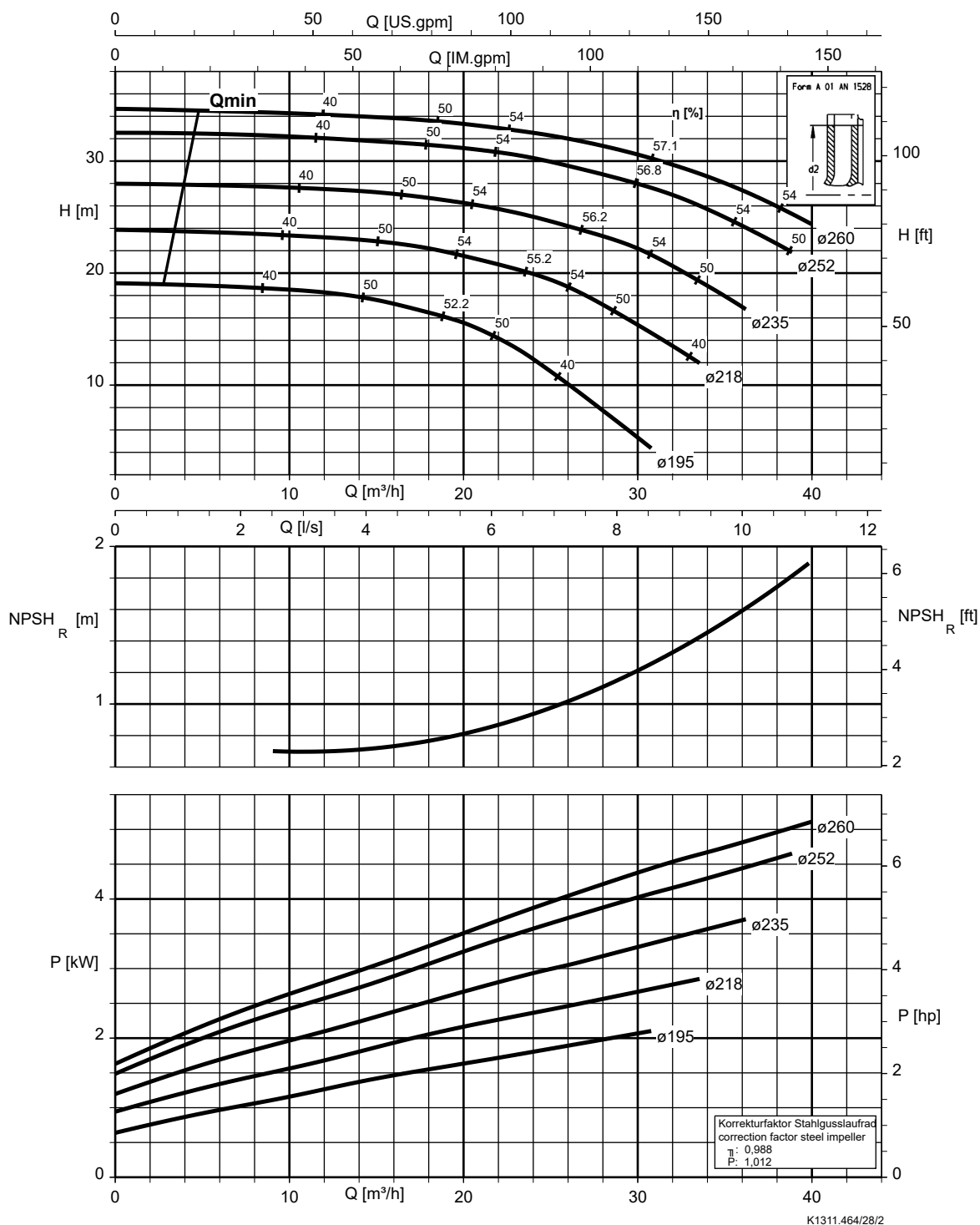
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.464/27/1

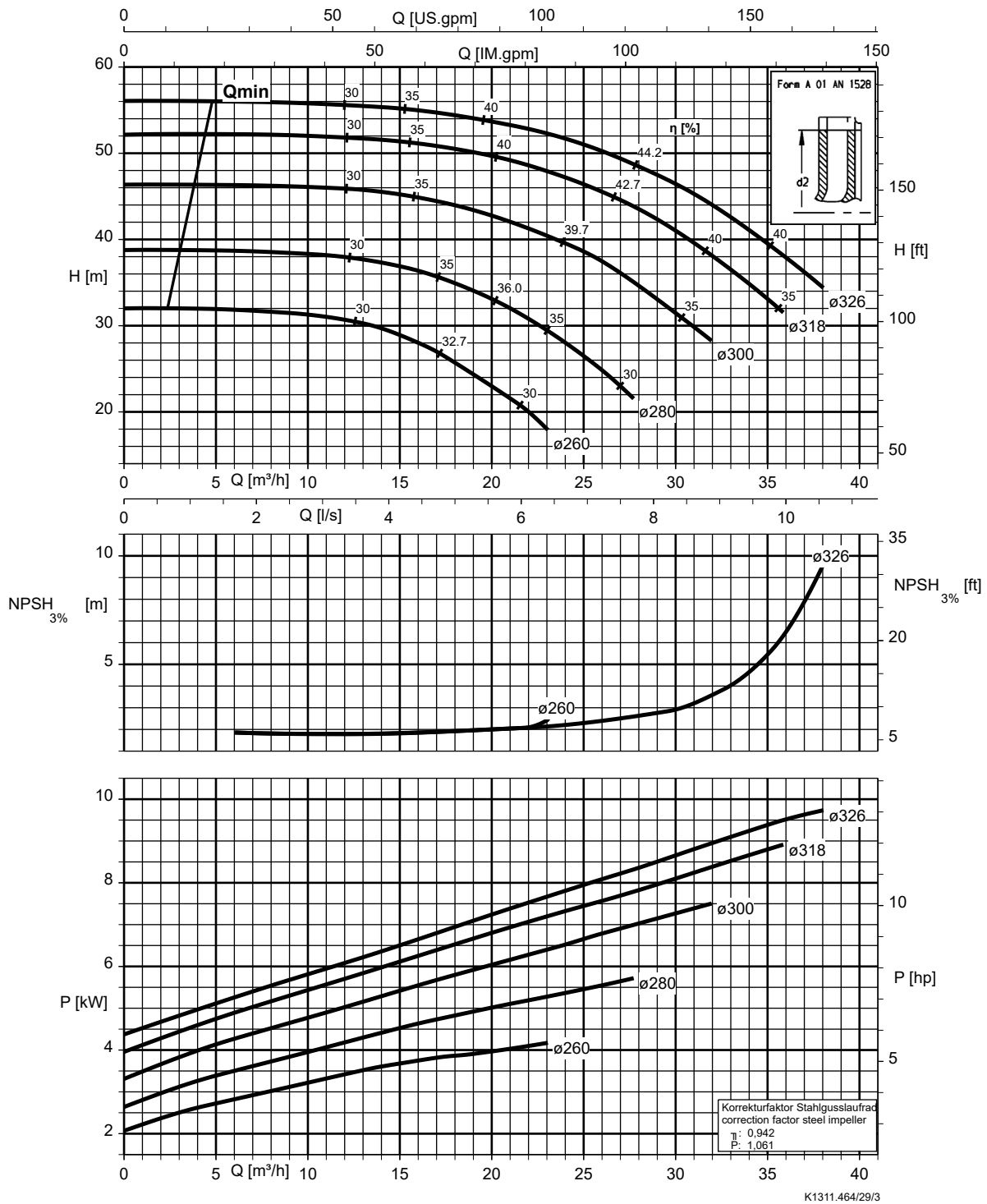
Etanorm 065-040-250, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



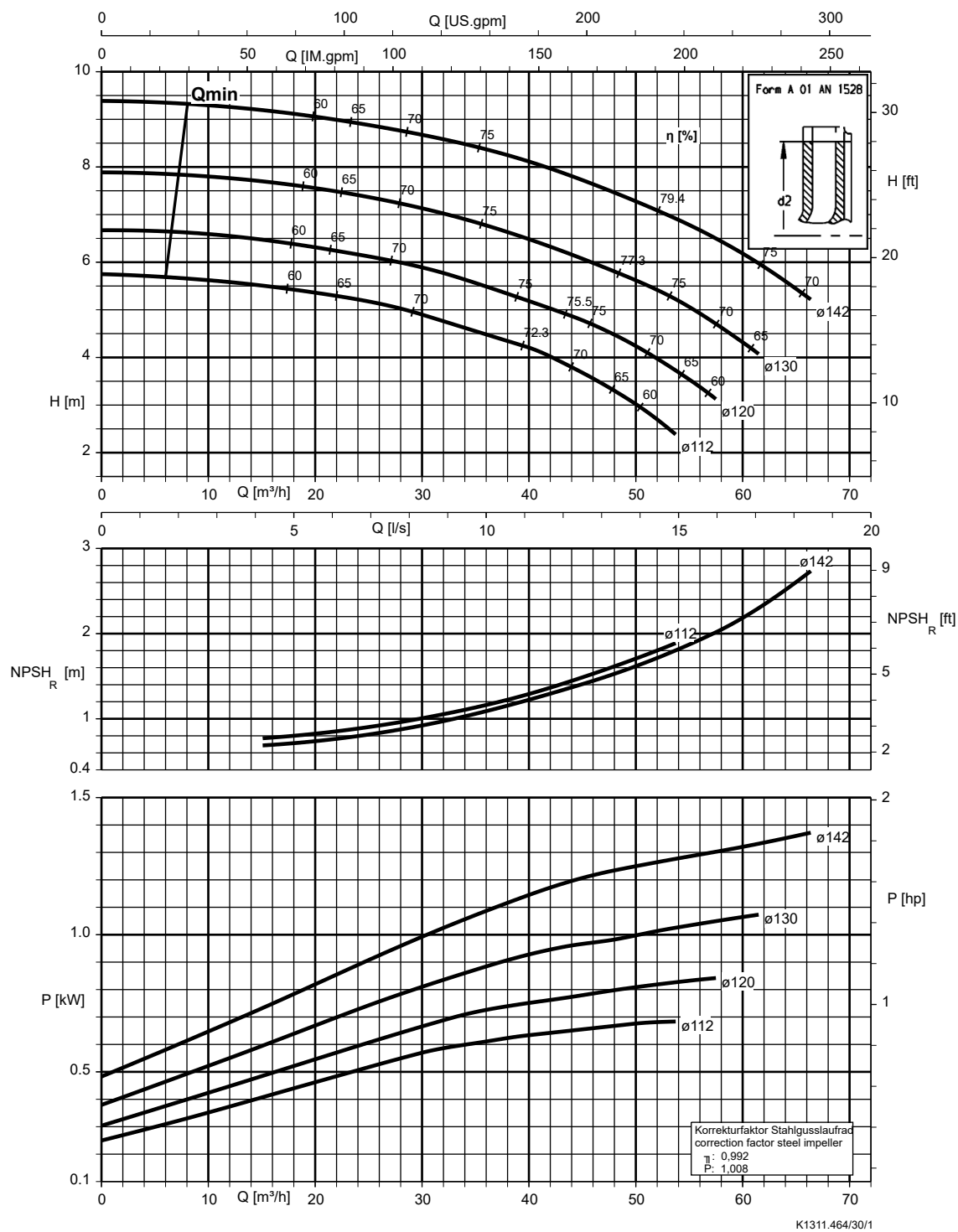
Etanorm 065-040-315, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



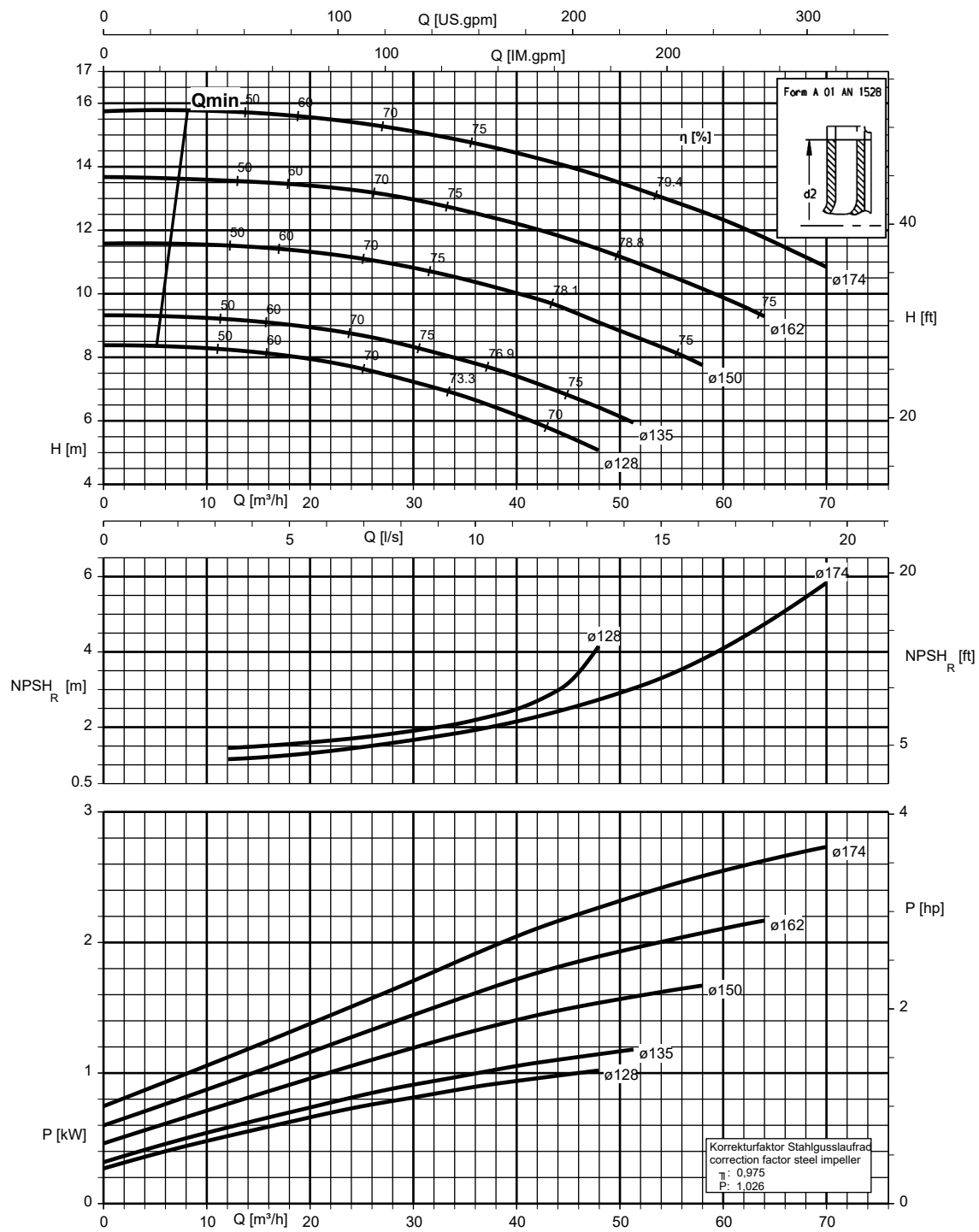
Etanorm 065-050-125, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 065-050-160, $n = 1750 \text{ min}^{-1}$

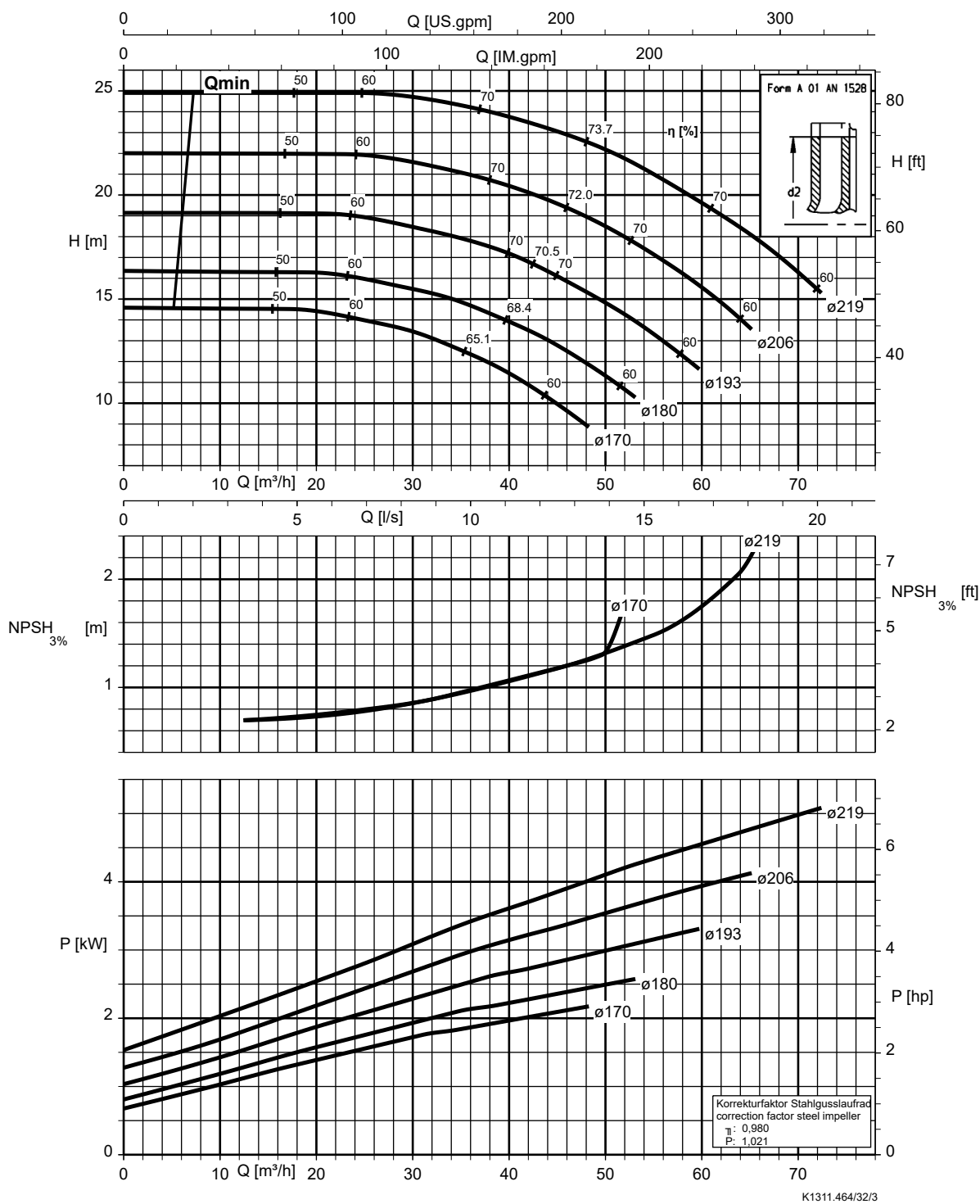
Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



K1311.464/31/1

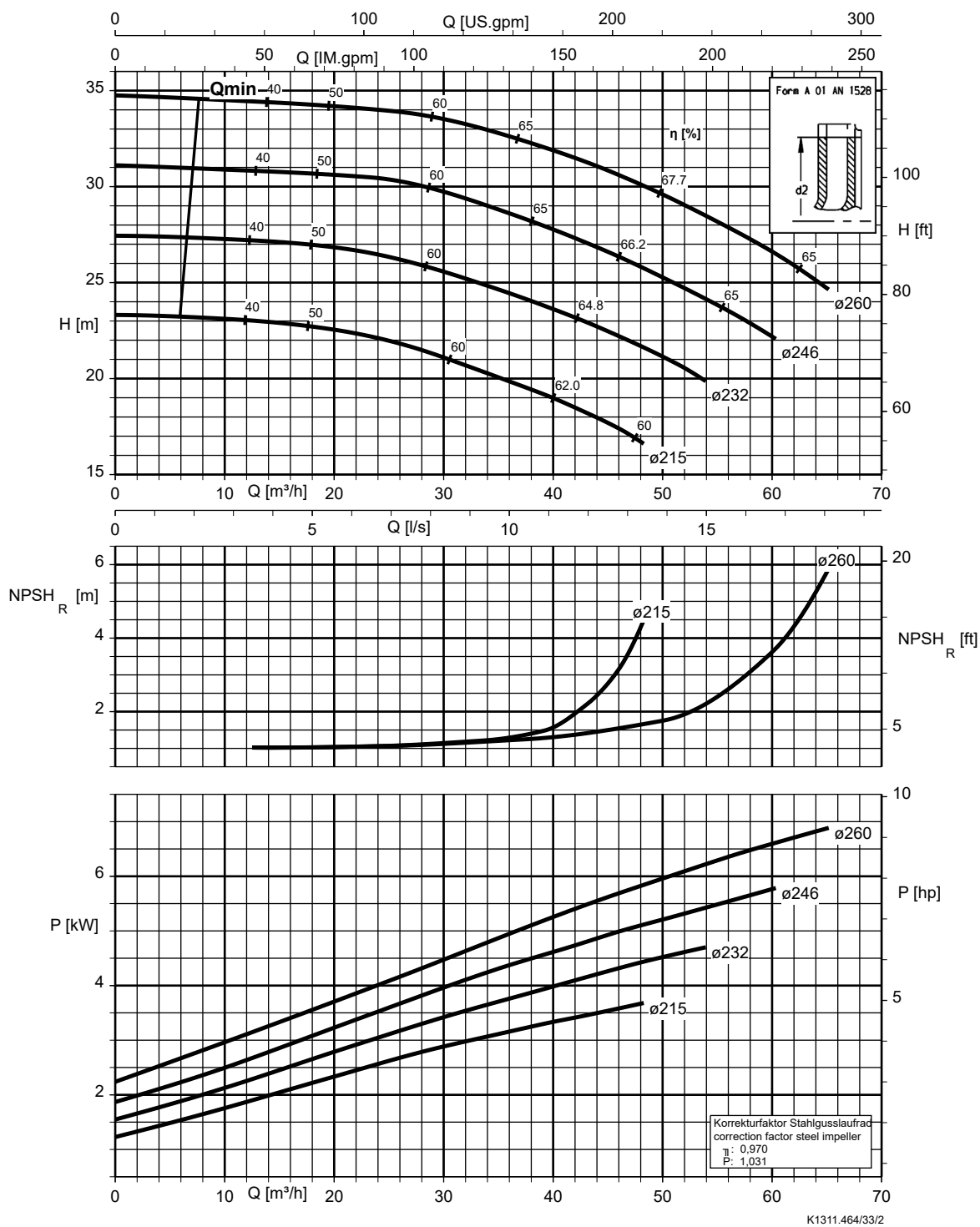
Etanorm 065-050-200, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



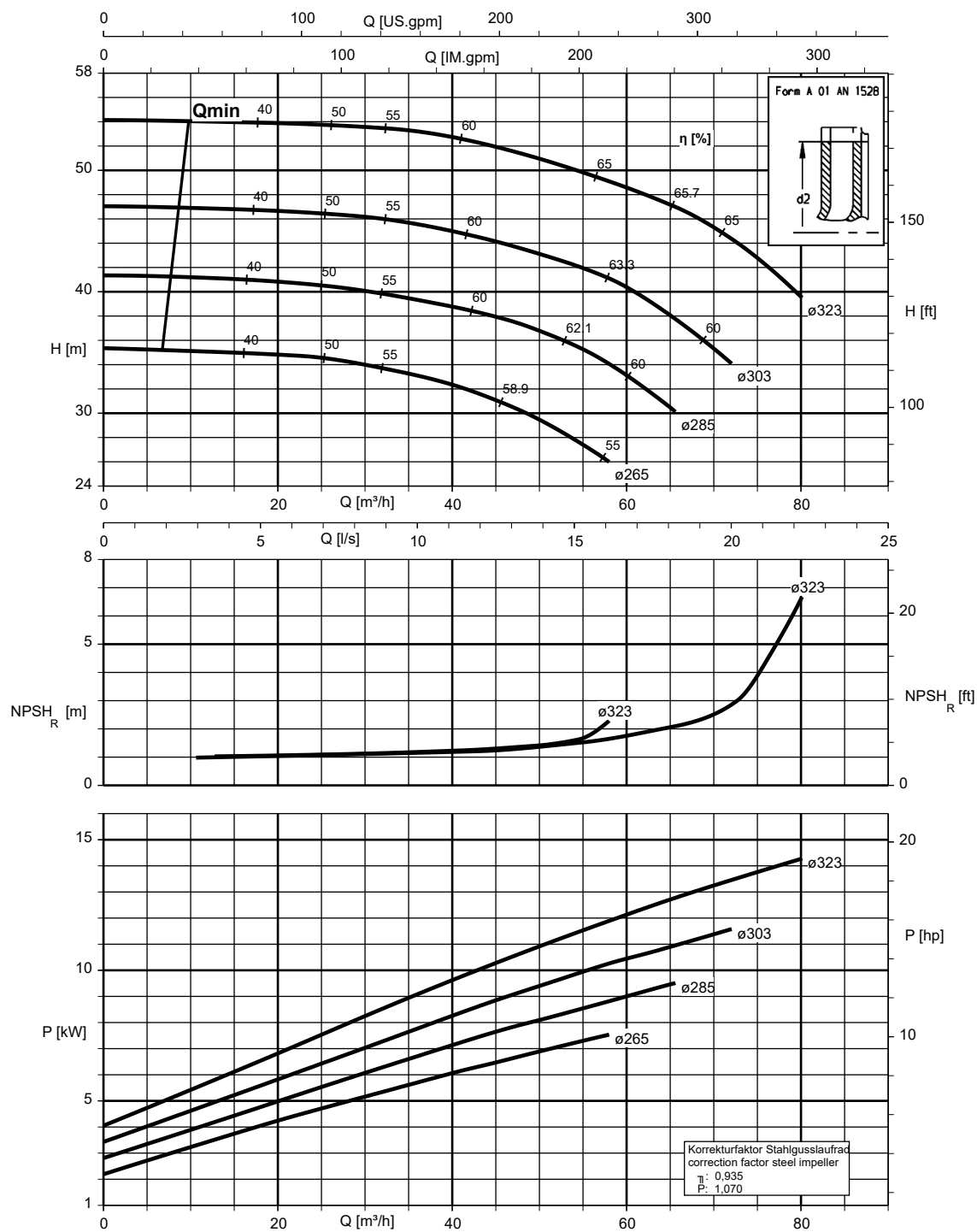
Etanorm 065-050-250, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



Etanorm 065-050-315, $n = 1750 \text{ min}^{-1}$

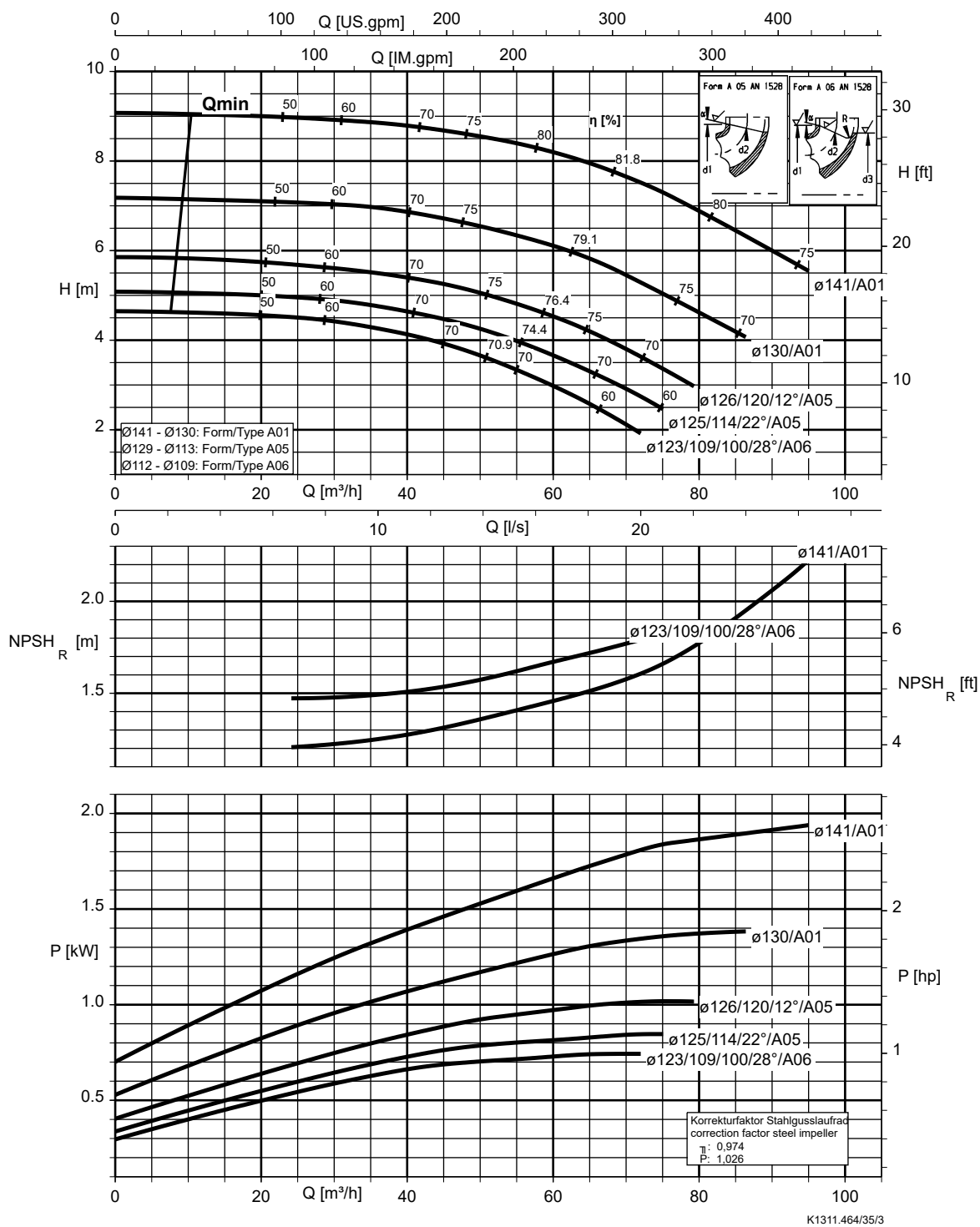
Etanorm SYT, Etanorm V, Etabloc



K1311.464/34/2

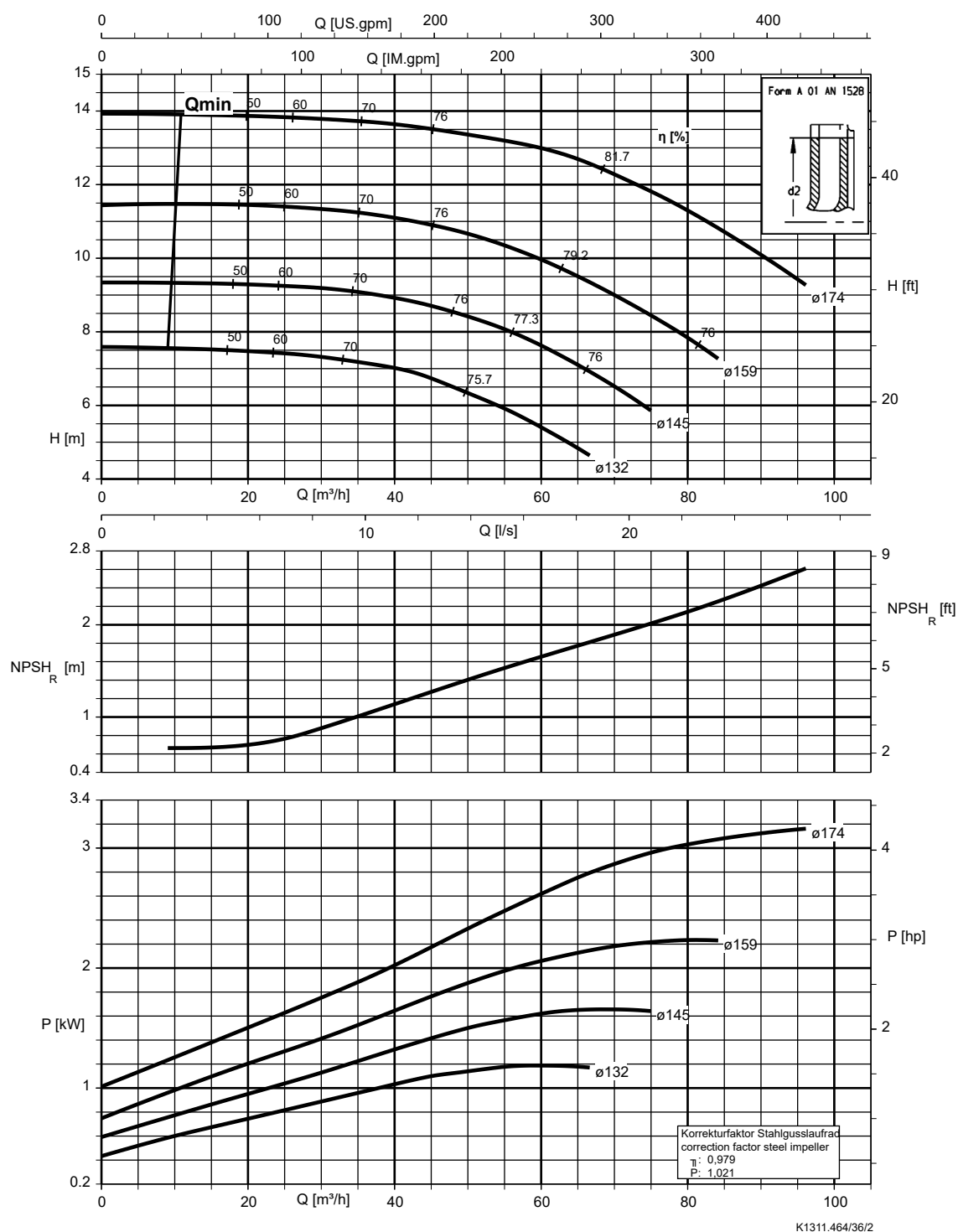
Etanorm 080-065-125, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



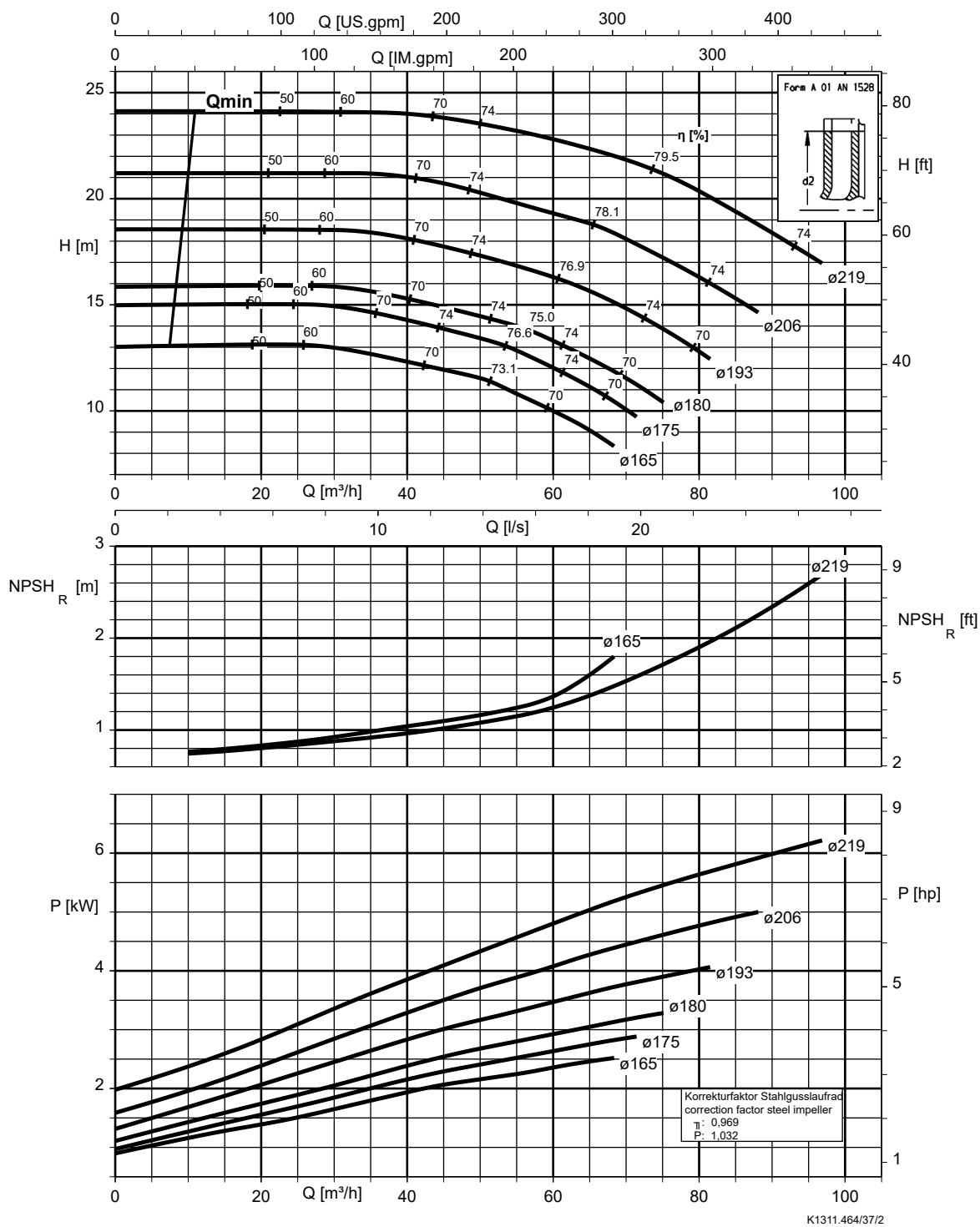
Etanorm 080-065-160, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



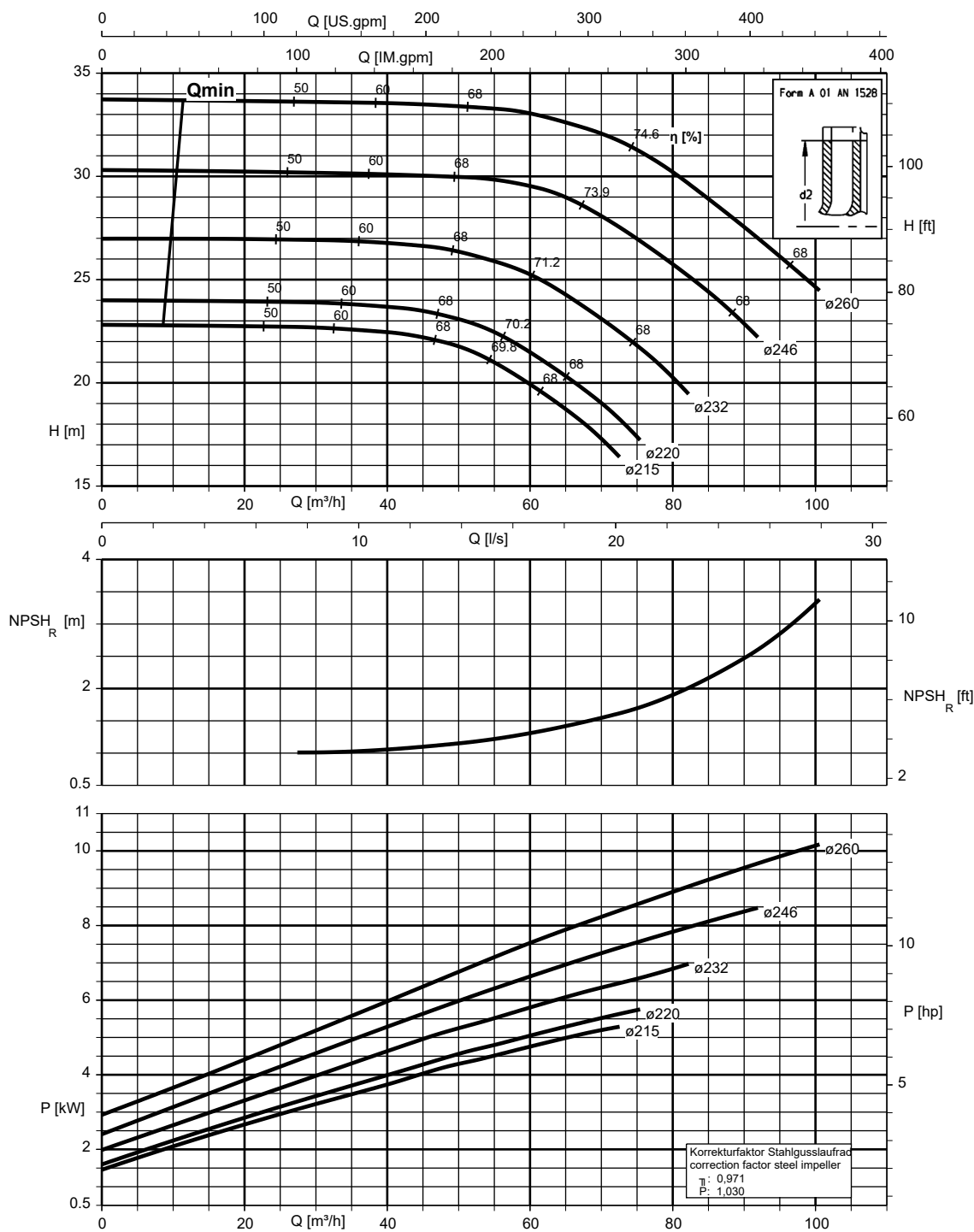
Etanorm 080-065-200, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



Etanorm 080-065-250, $n = 1750 \text{ min}^{-1}$

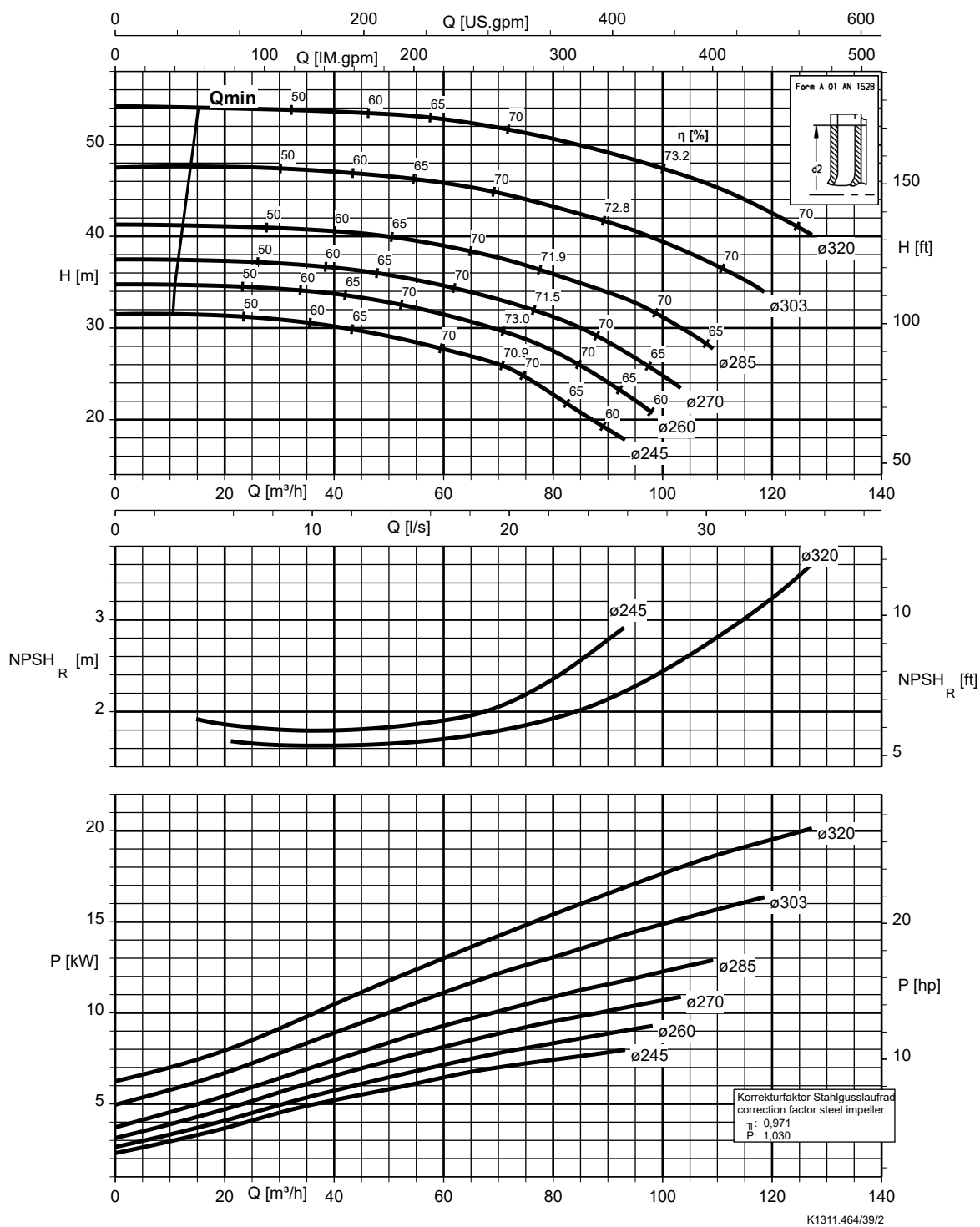
Etanorm SYT, Etanorm V, Etabloc



K1311.464/38/2

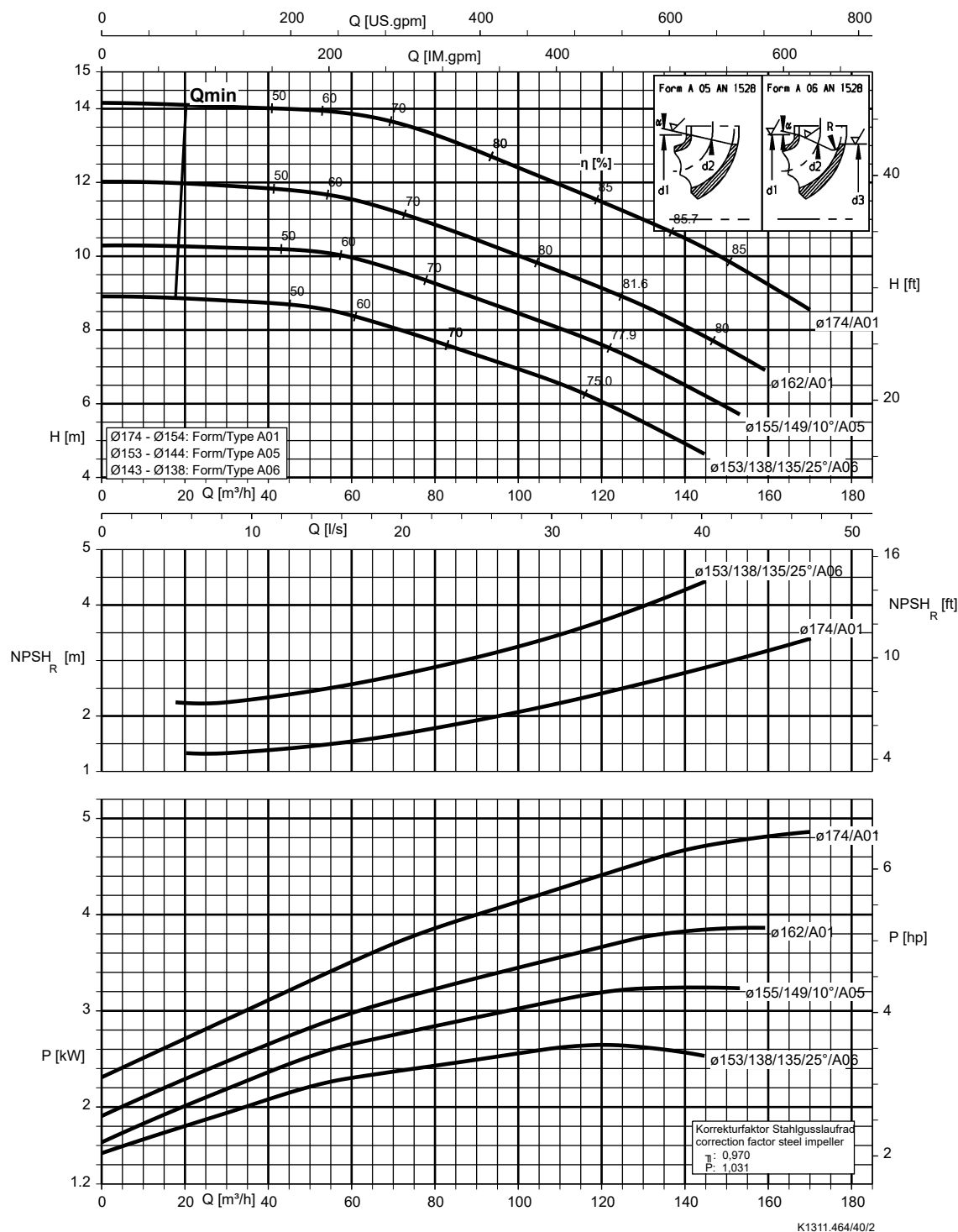
Etanorm 080-065-315, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



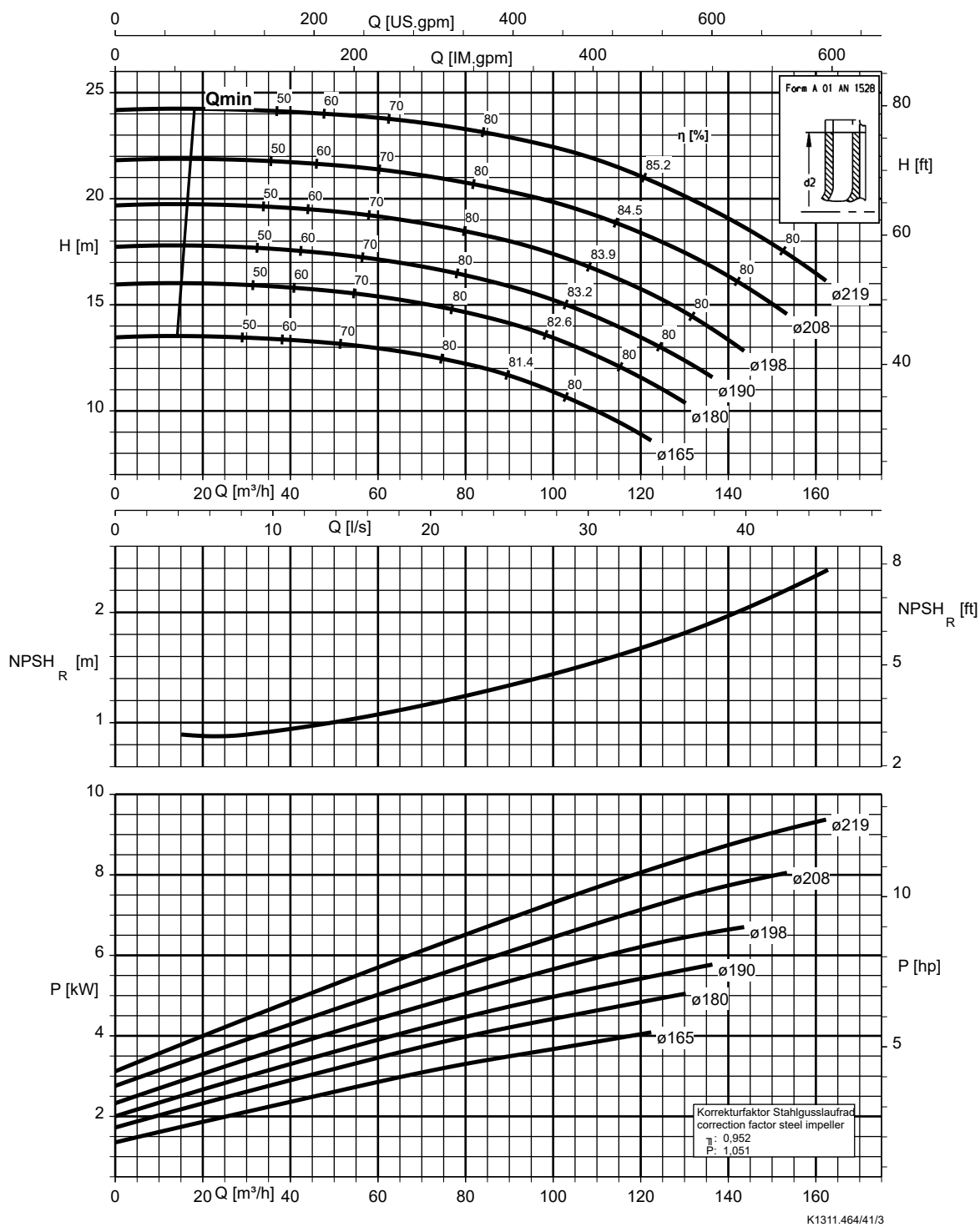
Etanorm 100-080-160, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc, Etabloc SYT



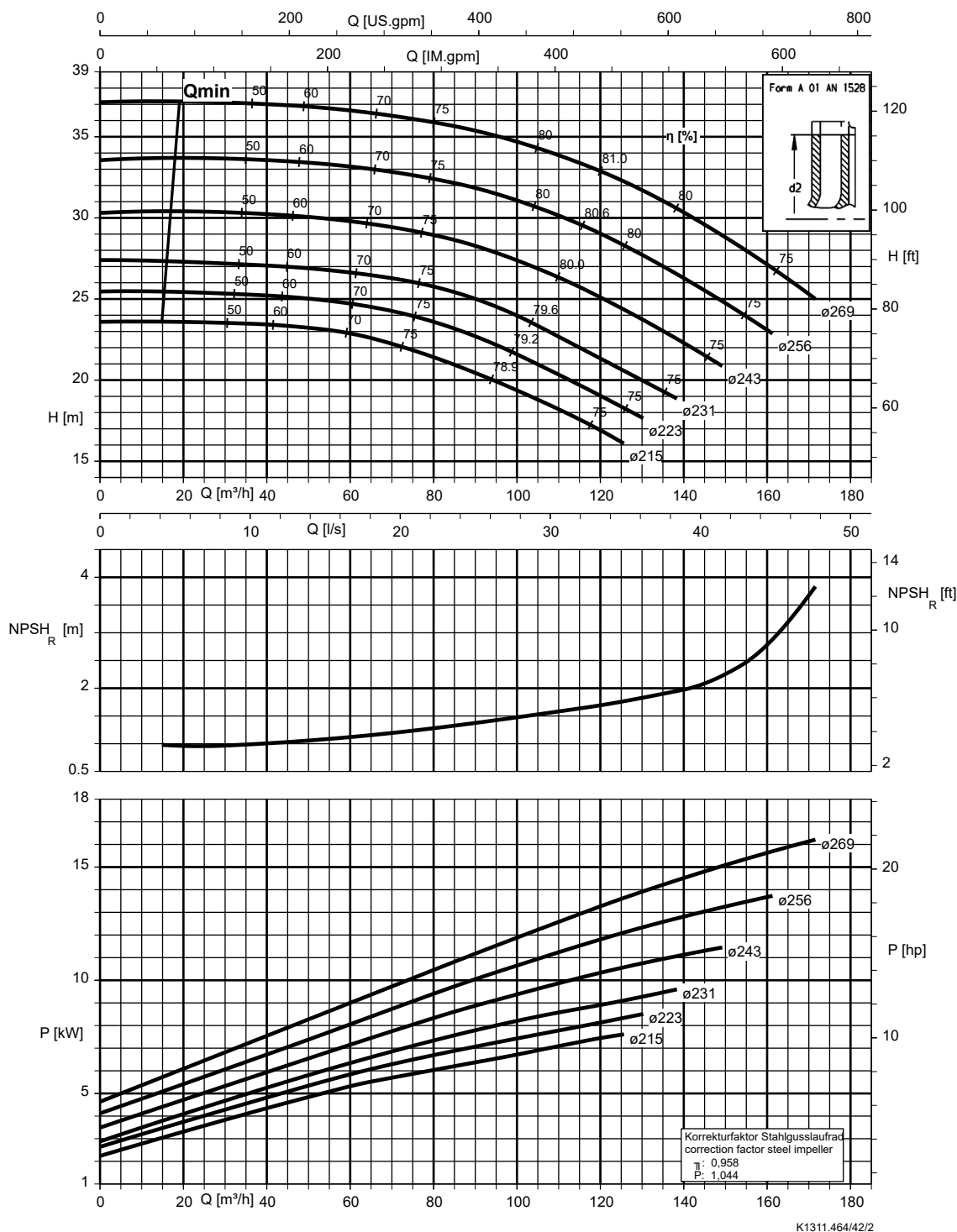
Etanorm 100-080-200, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



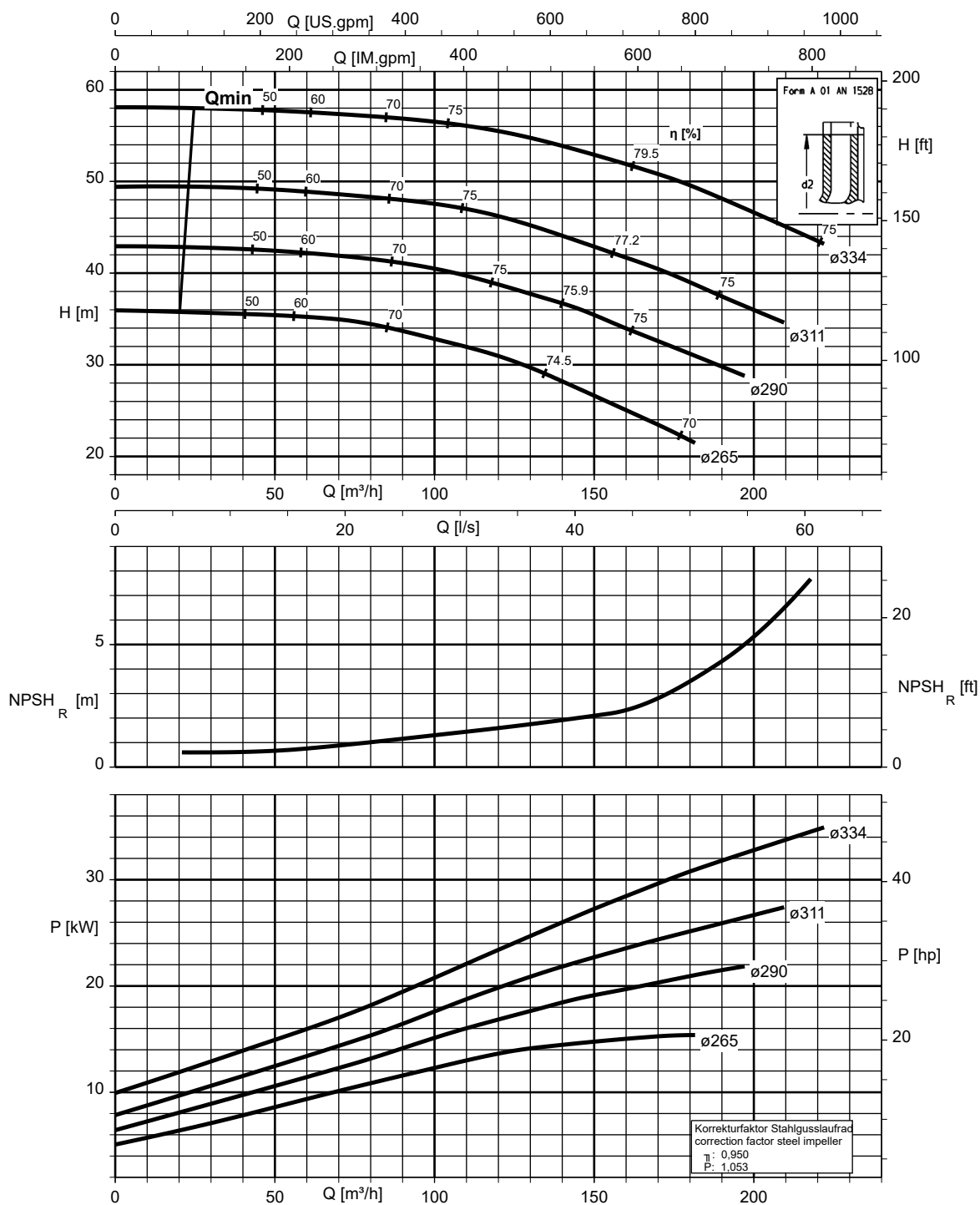
Etanorm 100-080-250, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



Etanorm 100-080-315, $n = 1750 \text{ min}^{-1}$

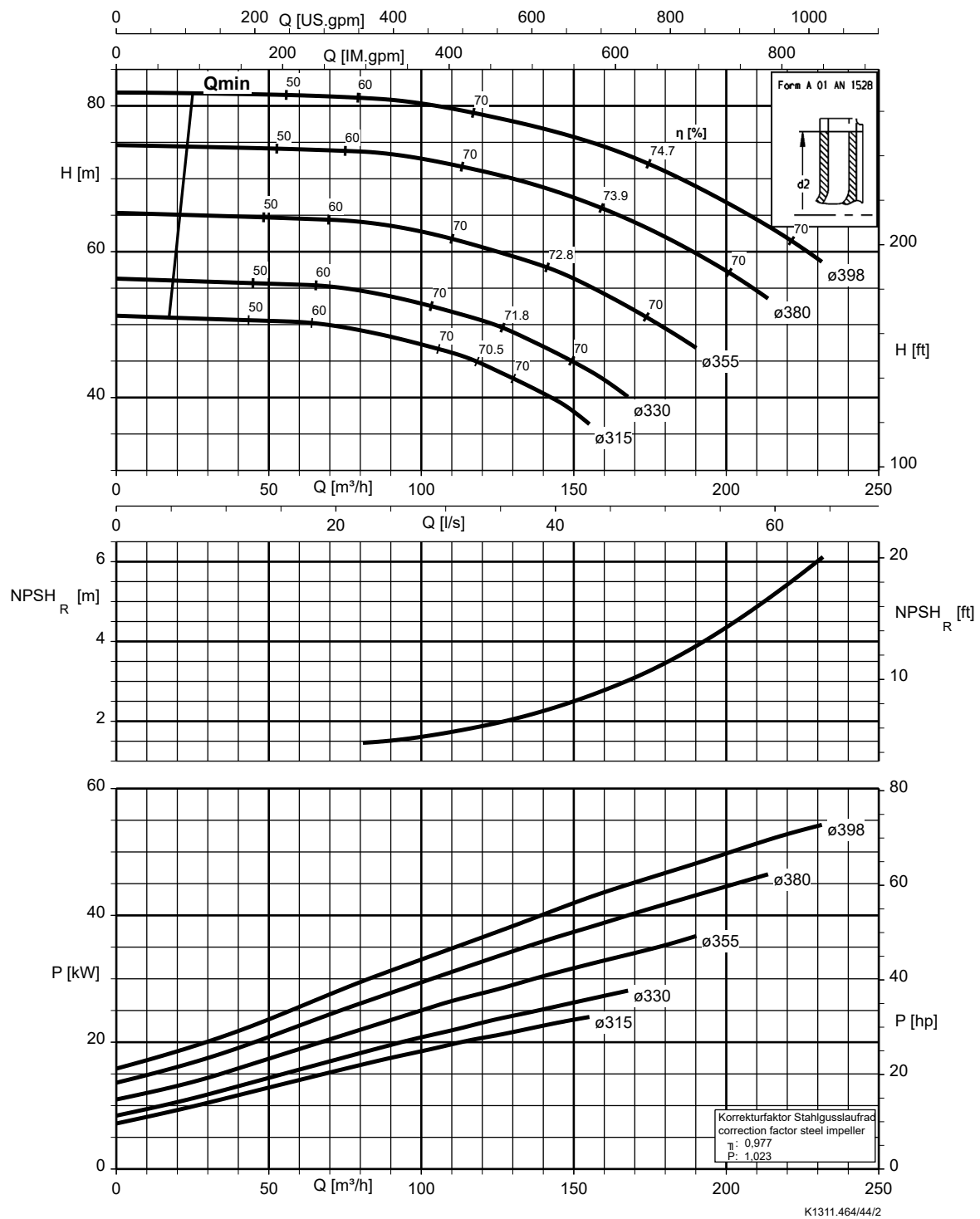
Etanorm SYT, Etanorm V, Etabloc



K1311.464/43/3

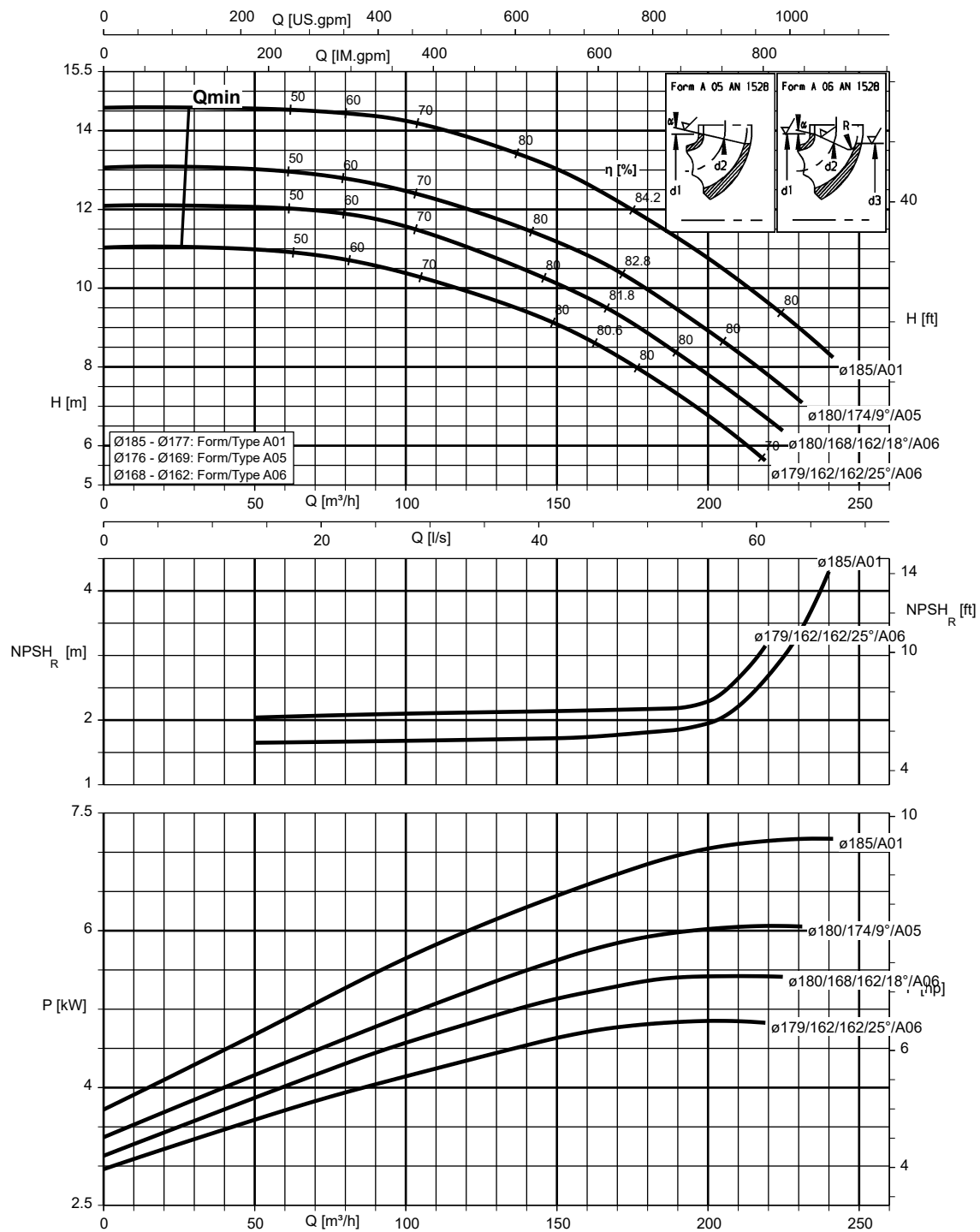
Etanorm 100-080-400, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



Etanorm 125-100-160, $n = 1750 \text{ min}^{-1}$

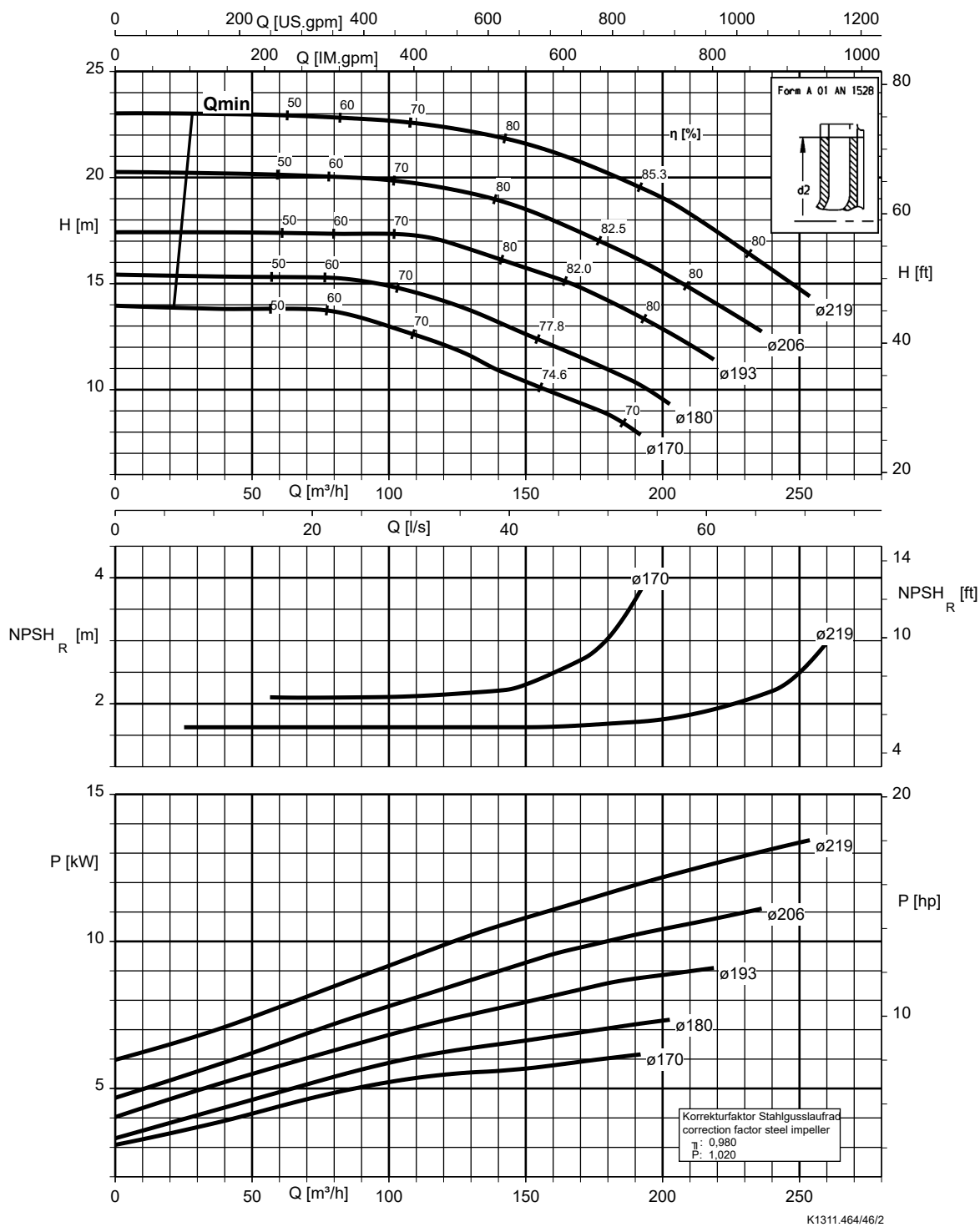
Etanorm SYT, Etanorm V, Etabloc



K1311.464/45/2

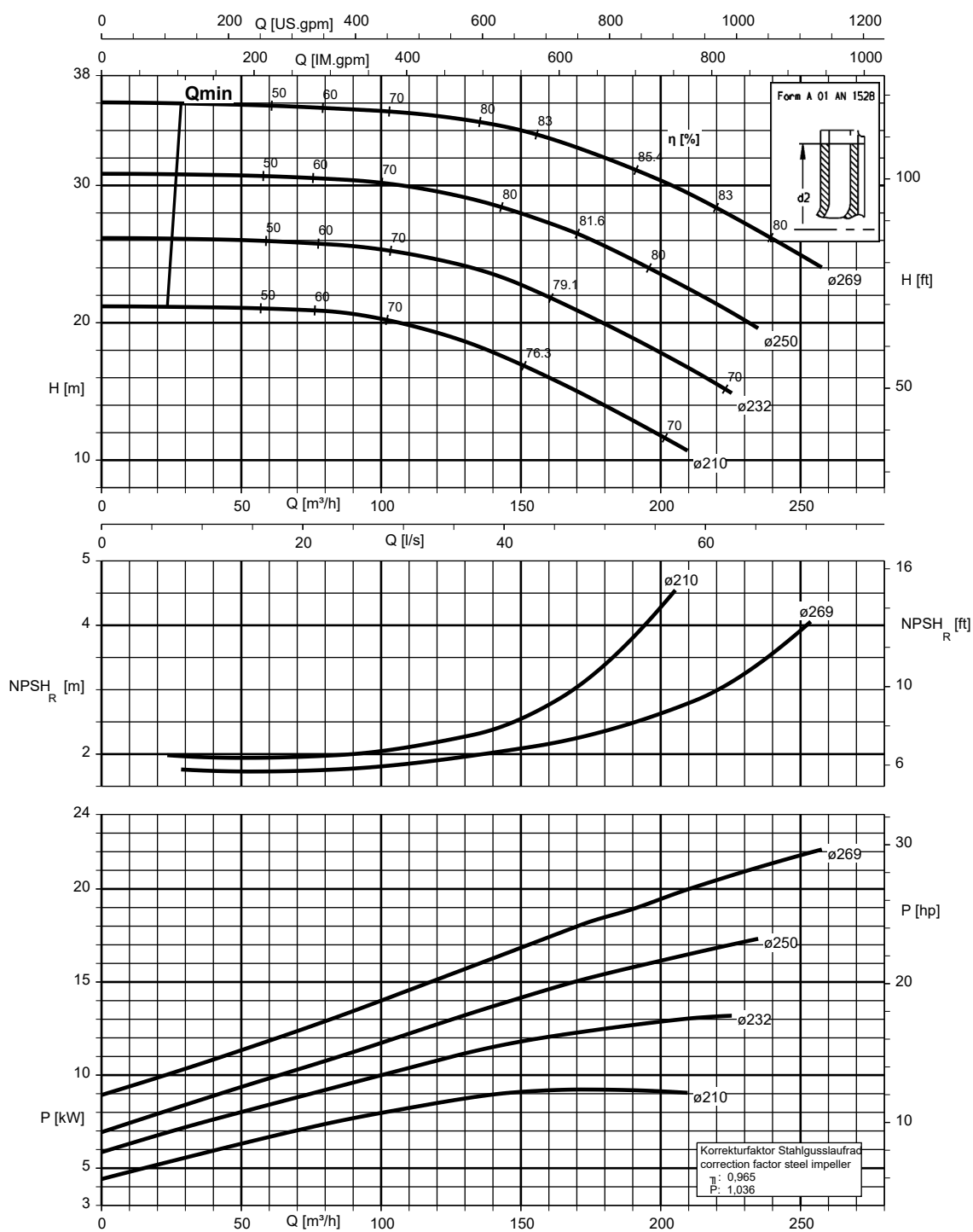
Etanorm 125-100-200, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



Etanorm 125-100-250, $n = 1750 \text{ min}^{-1}$

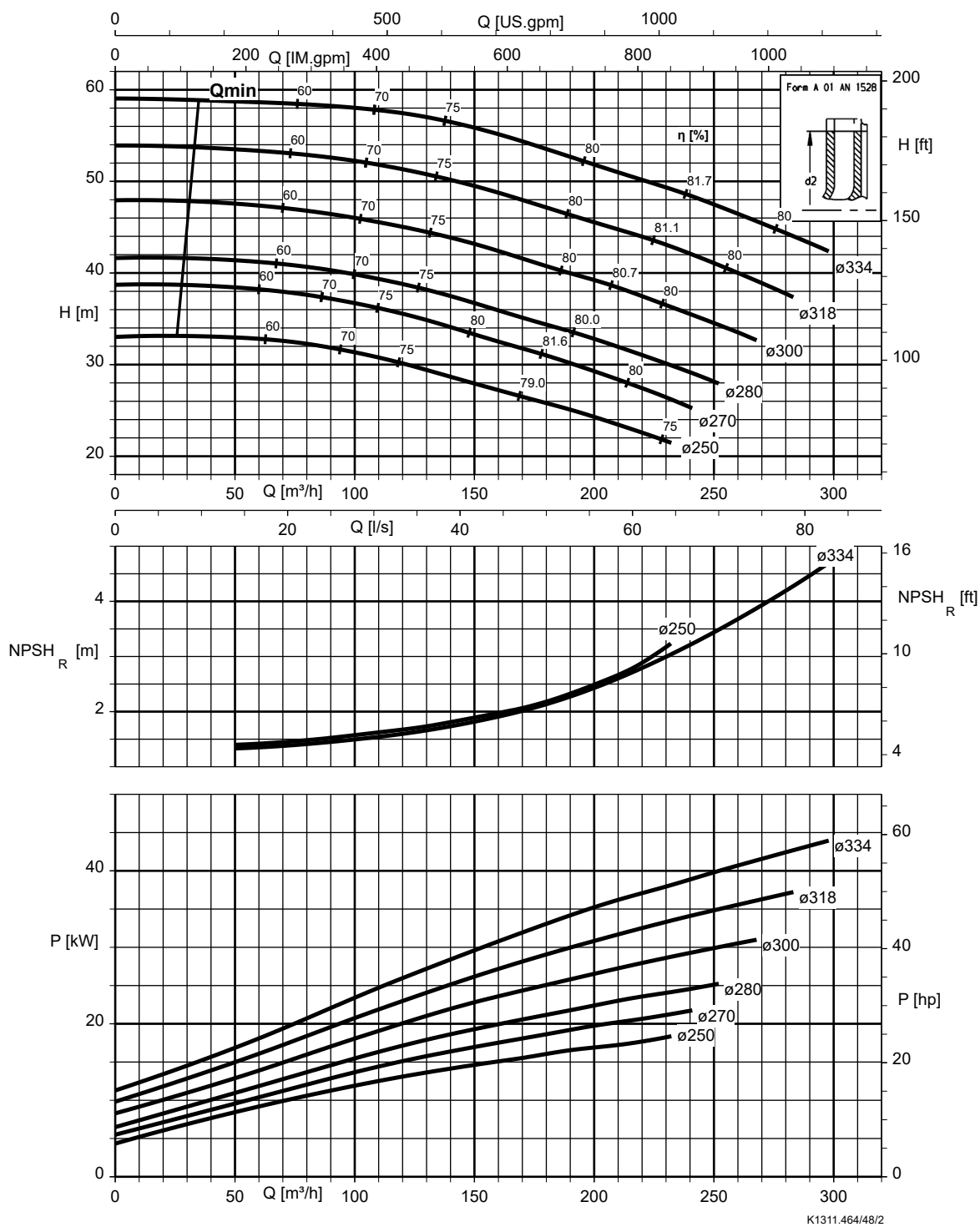
Etanorm SYT, Etanorm V, Etabloc



K1311.464/47/2

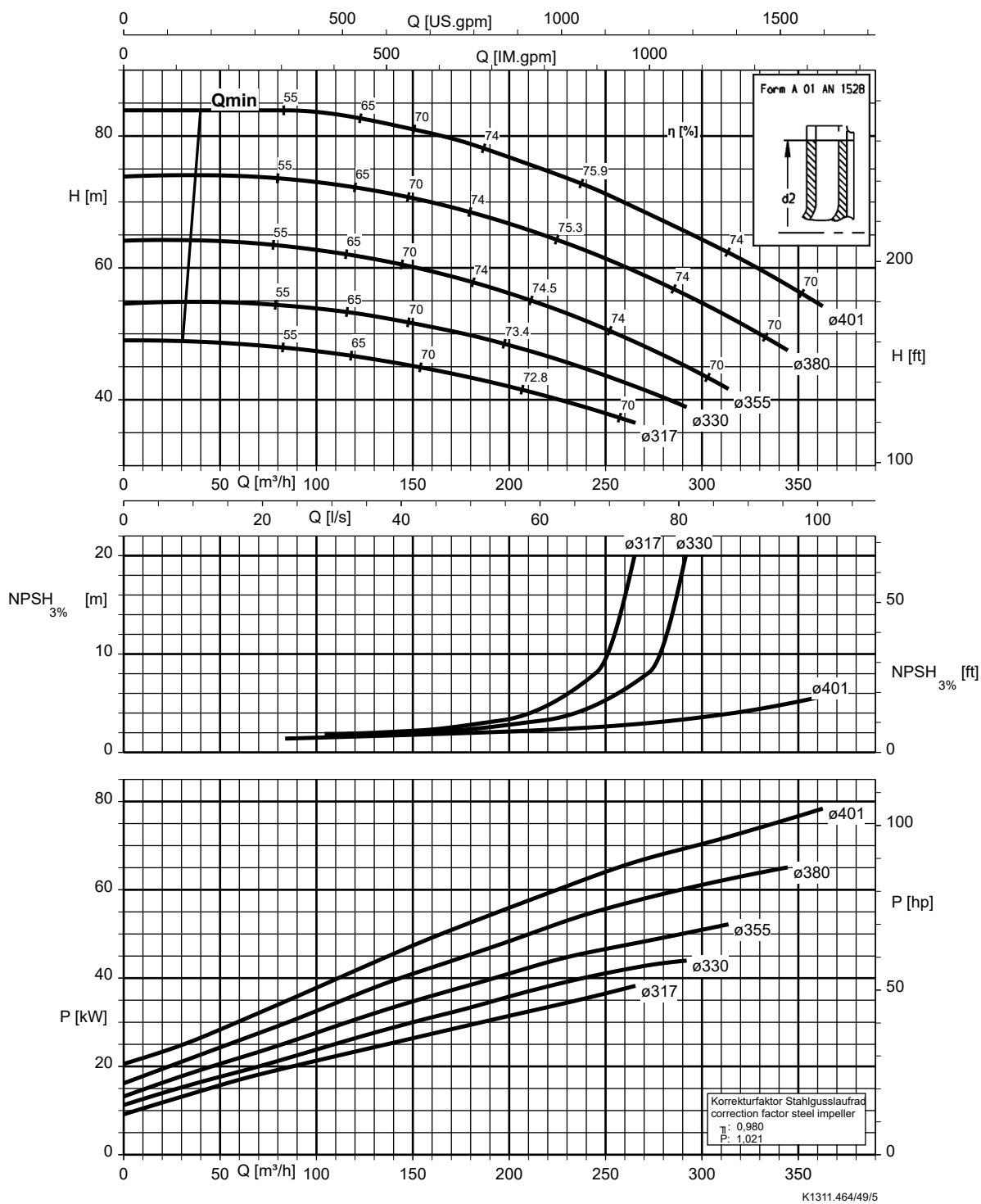
Etanorm 125-100-315, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



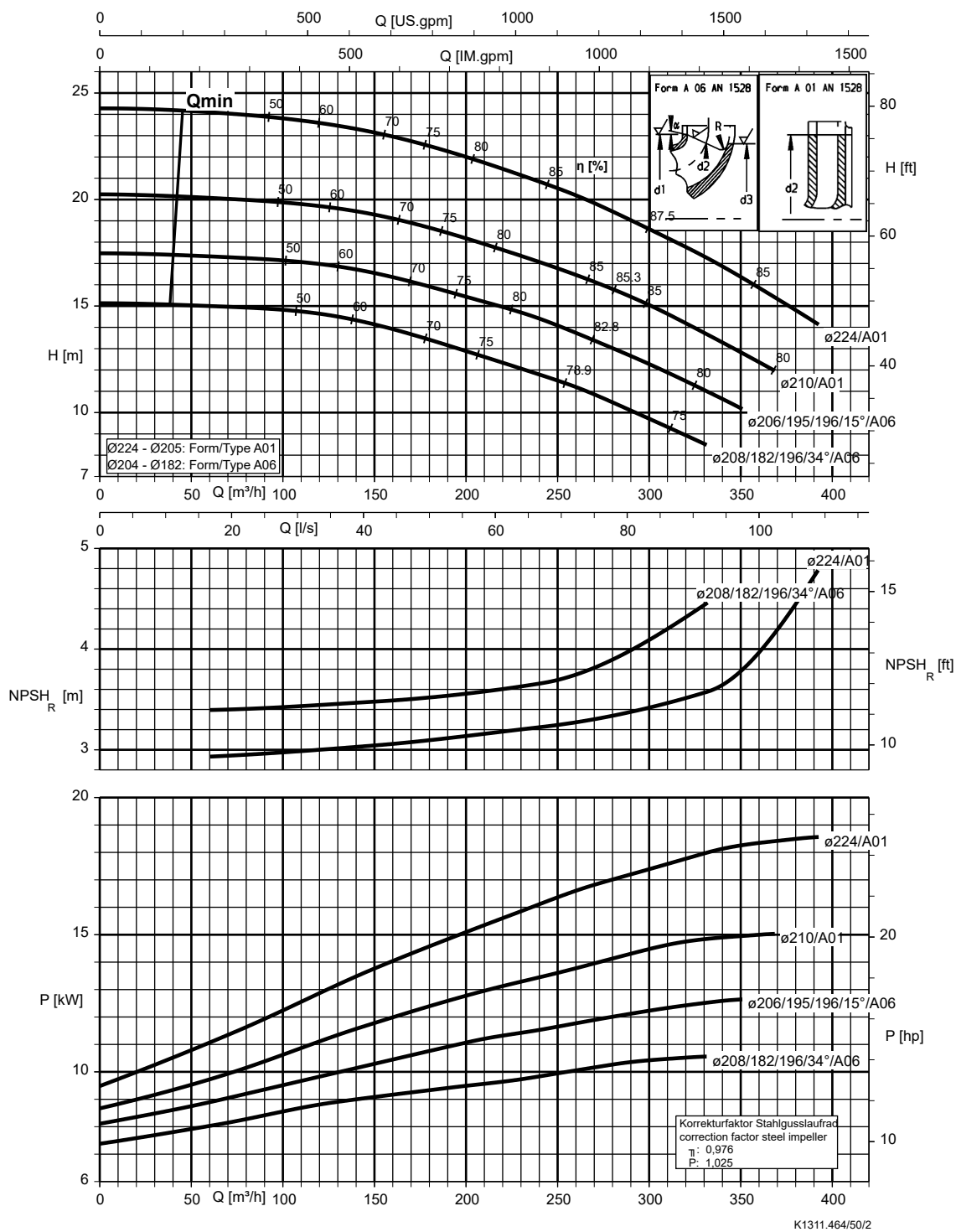
Etanorm 125-100-400, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



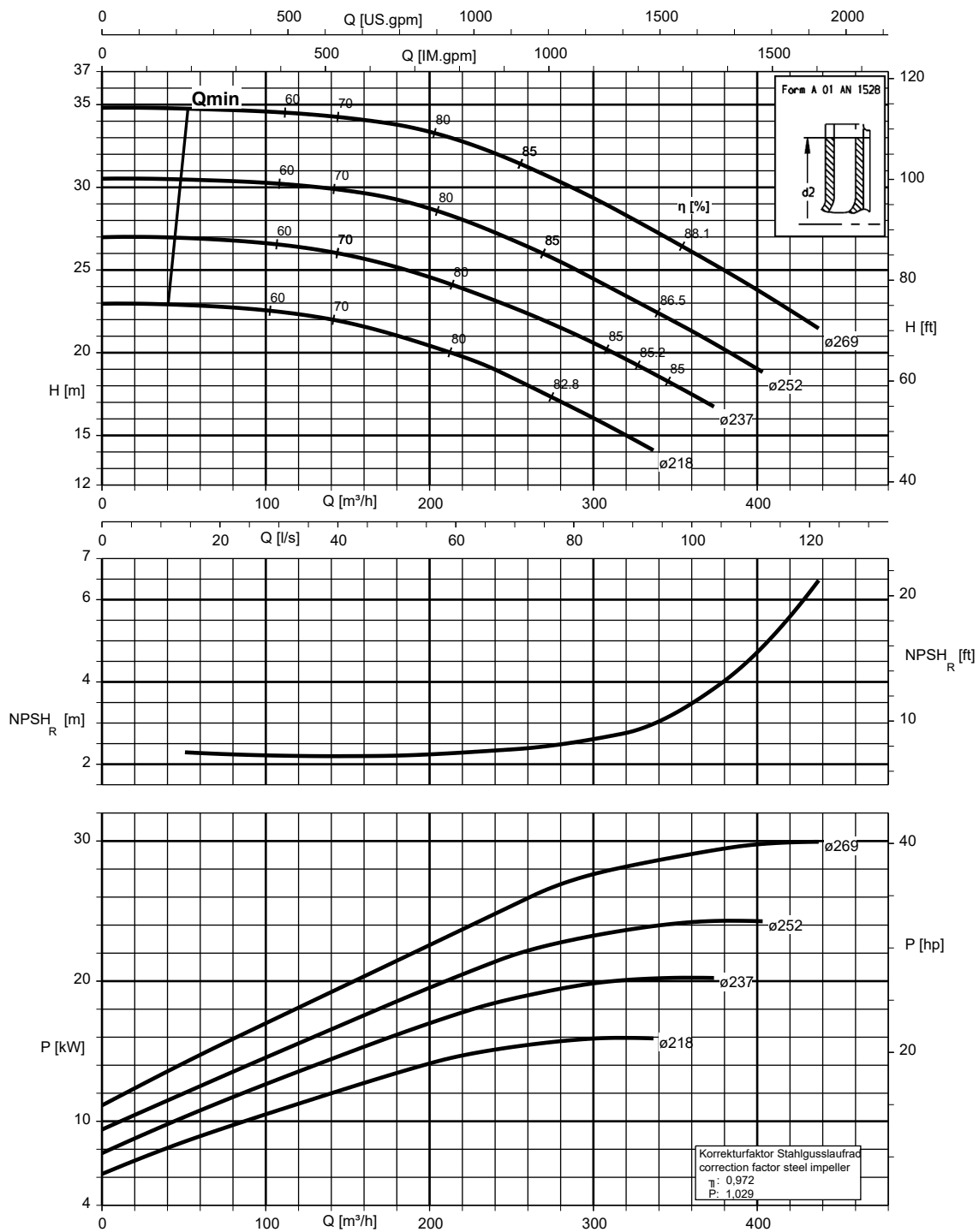
Etanorm 150-125-200, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc



Etanorm 150-125-250, $n = 1750 \text{ min}^{-1}$

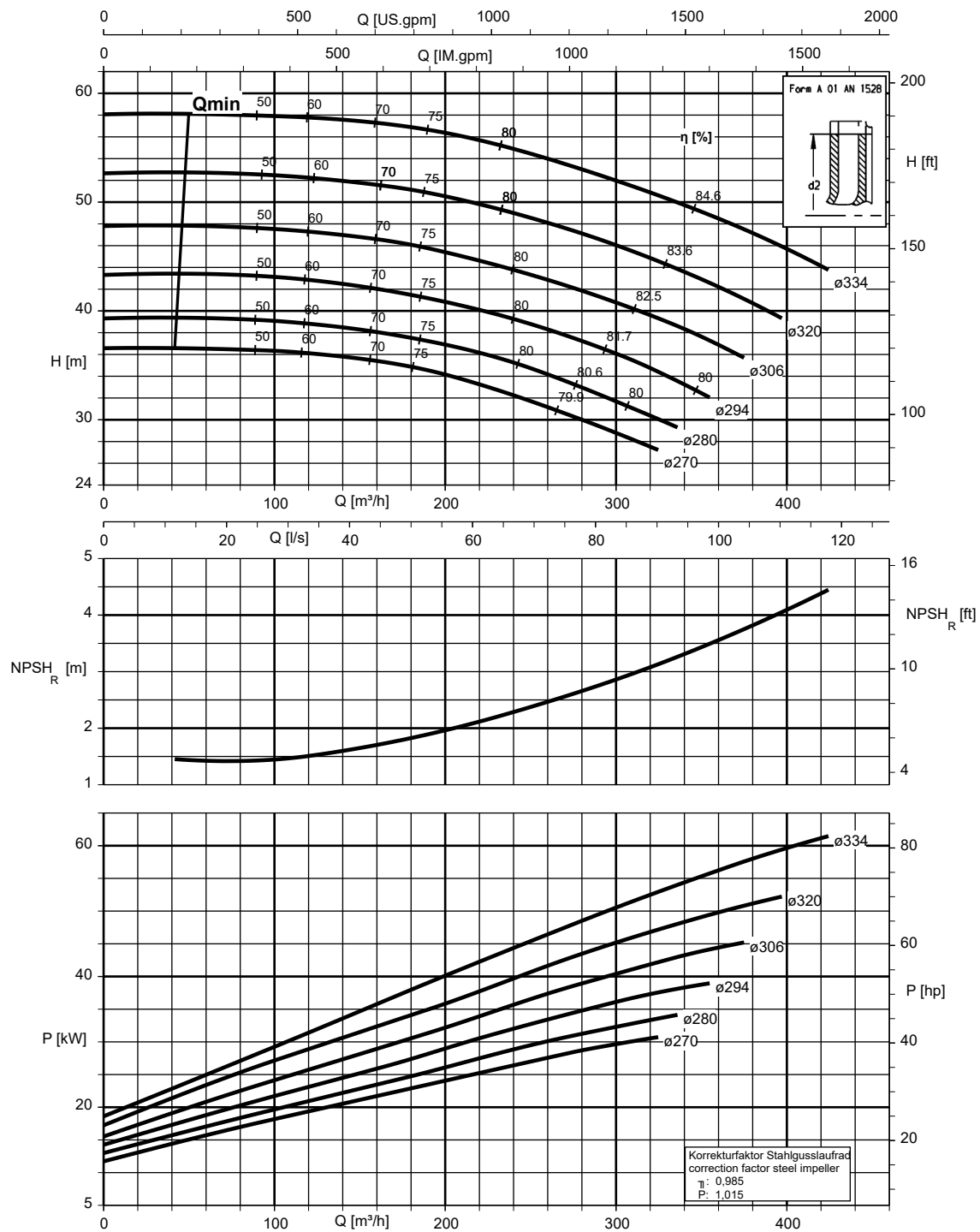
Etanorm SYT, Etanorm V, Etabloc



K1311.464/51/2

Etanorm 150-125-315, $n = 1750 \text{ min}^{-1}$

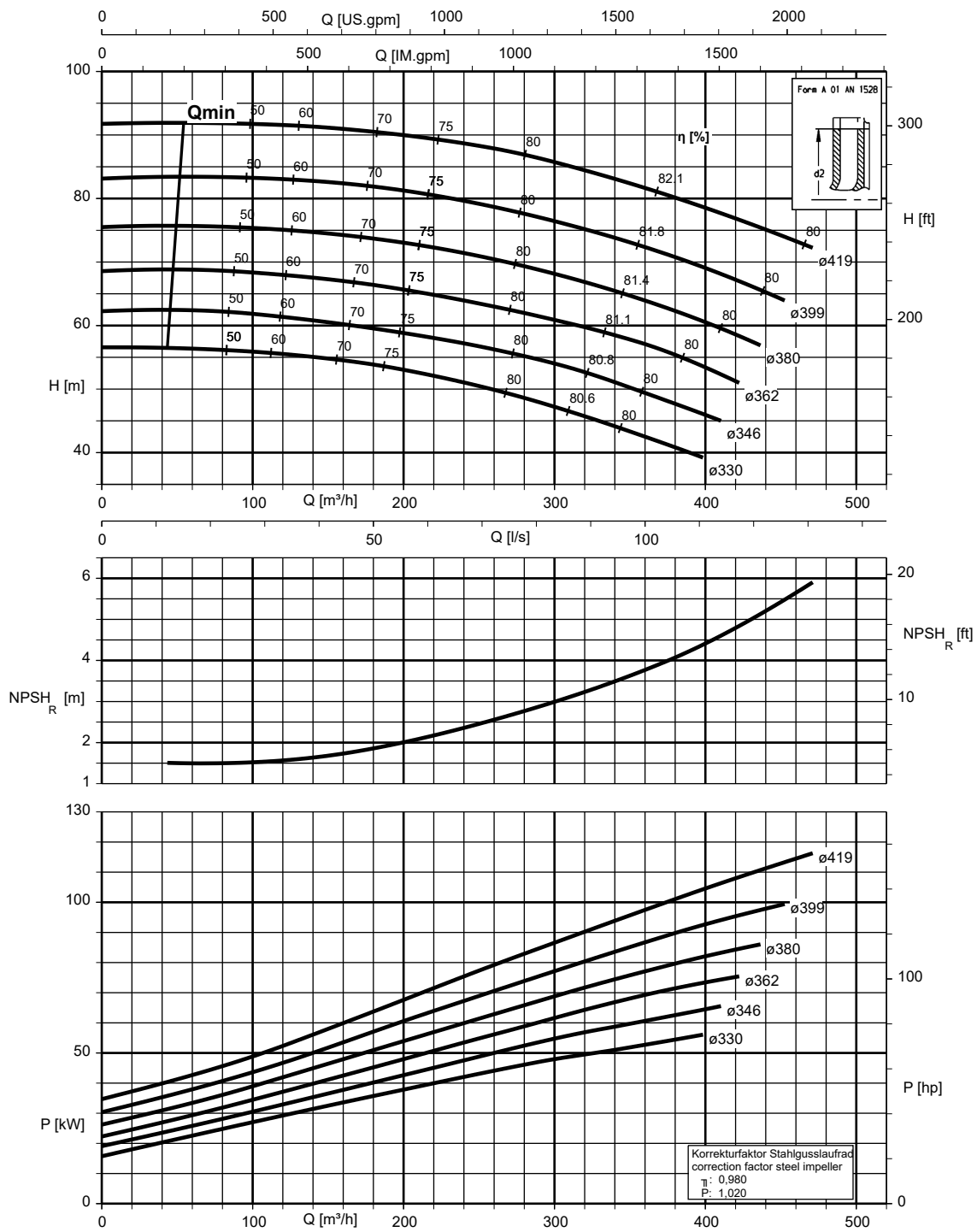
Etanorm SYT, Etanorm V, Etabloc



K1311.464/52/2

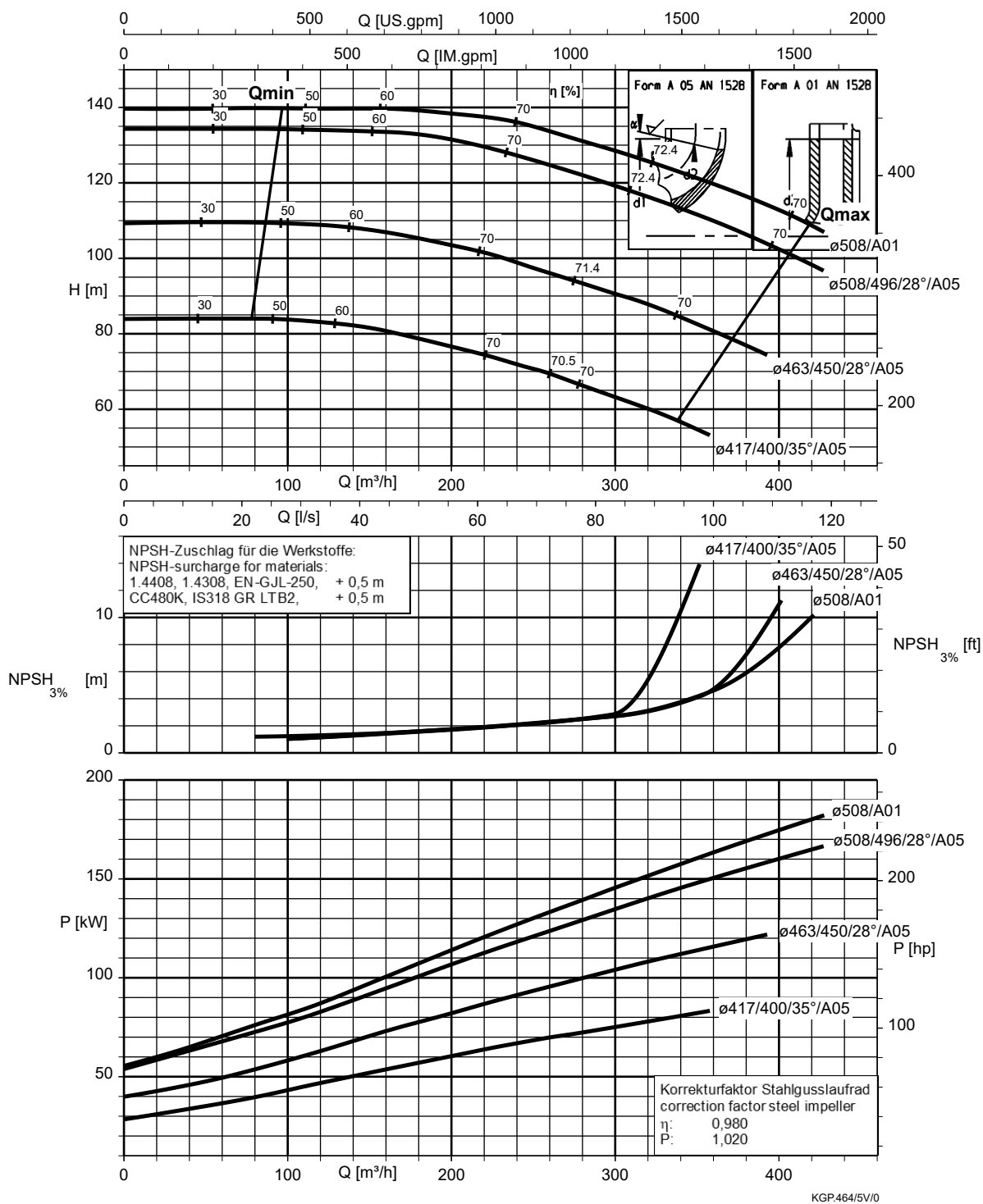
Etanorm 150-125-400, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V



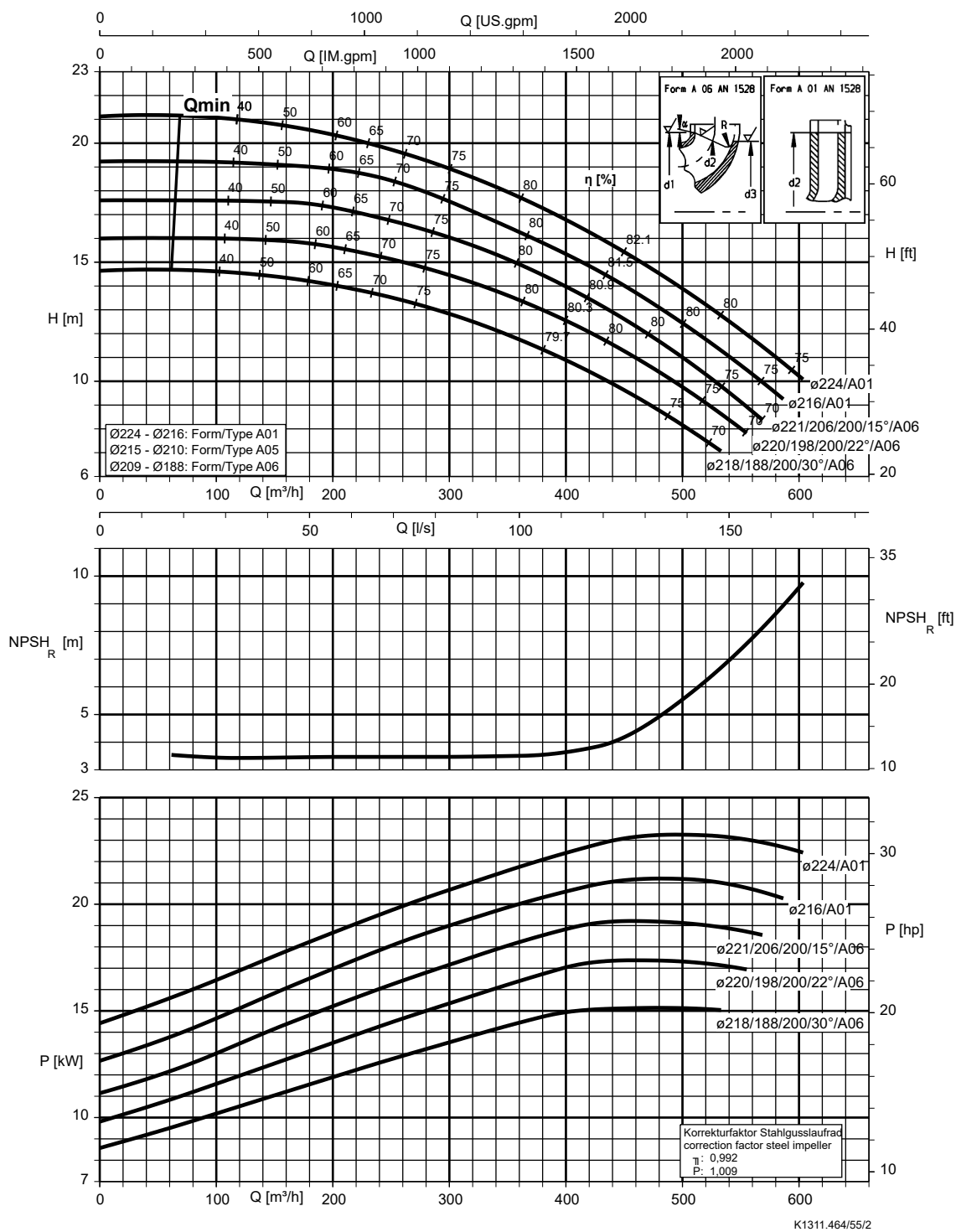
K1311.464/53/2

Etanorm 150-125-510, $n = 1750 \text{ min}^{-1}$



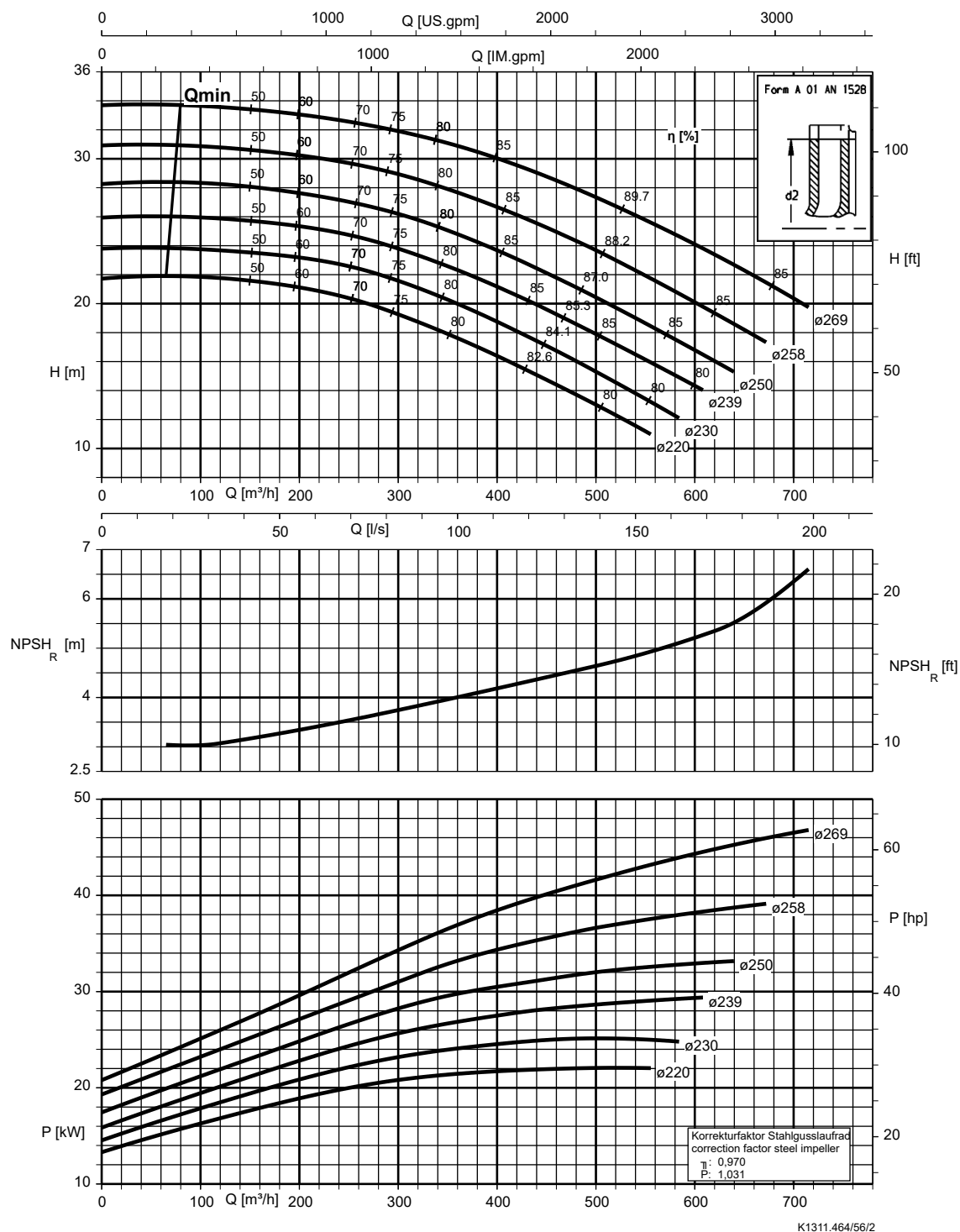
Etanorm 200-150-200, n = 1750 min⁻¹

Etanorm V, Etabloc



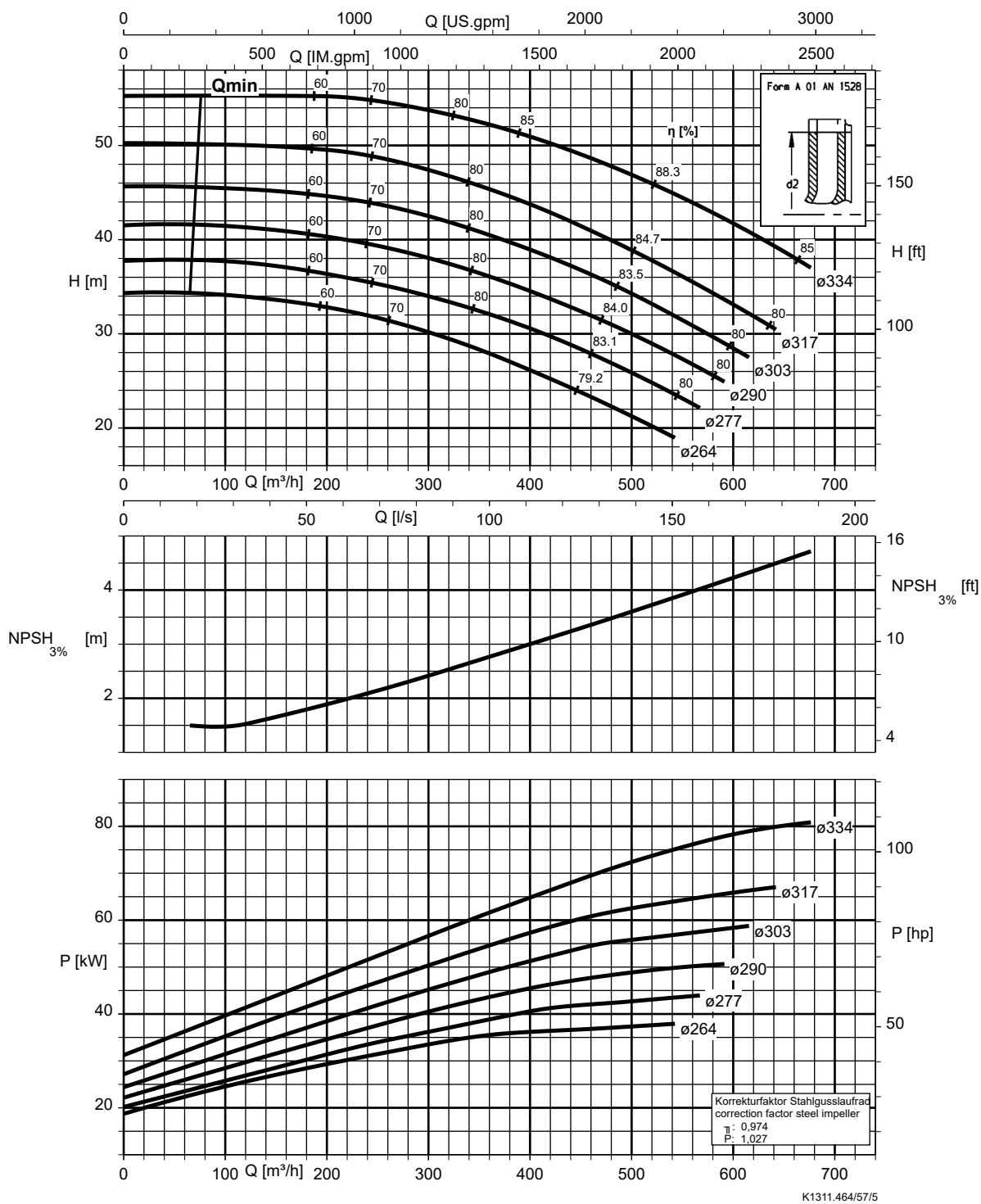
Etanorm 200-150-250, $n = 1750 \text{ min}^{-1}$

Etanorm V, Etabloc



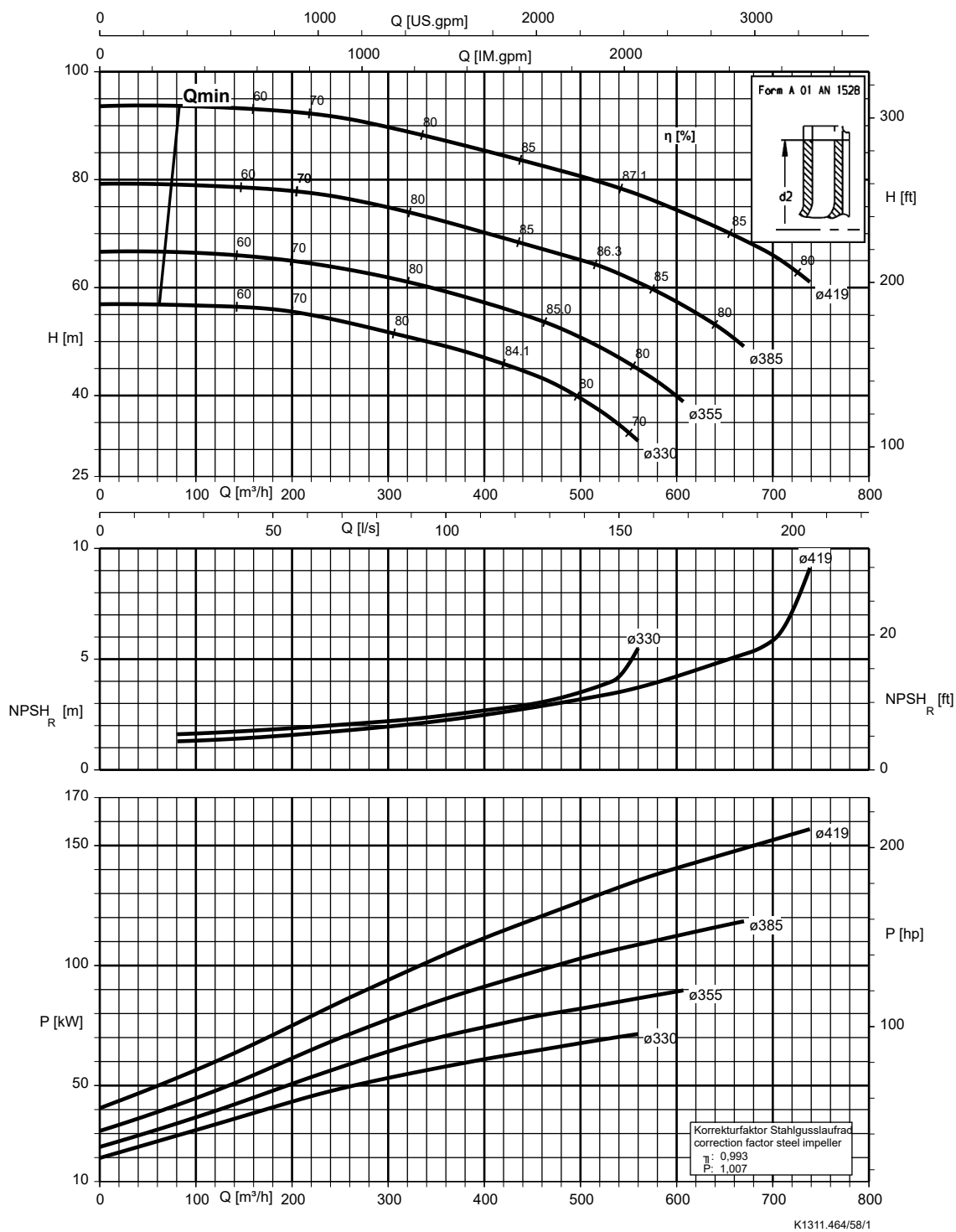
Etanorm 200-150-315, $n = 1750 \text{ min}^{-1}$

Etanorm SYT, Etanorm V, Etabloc

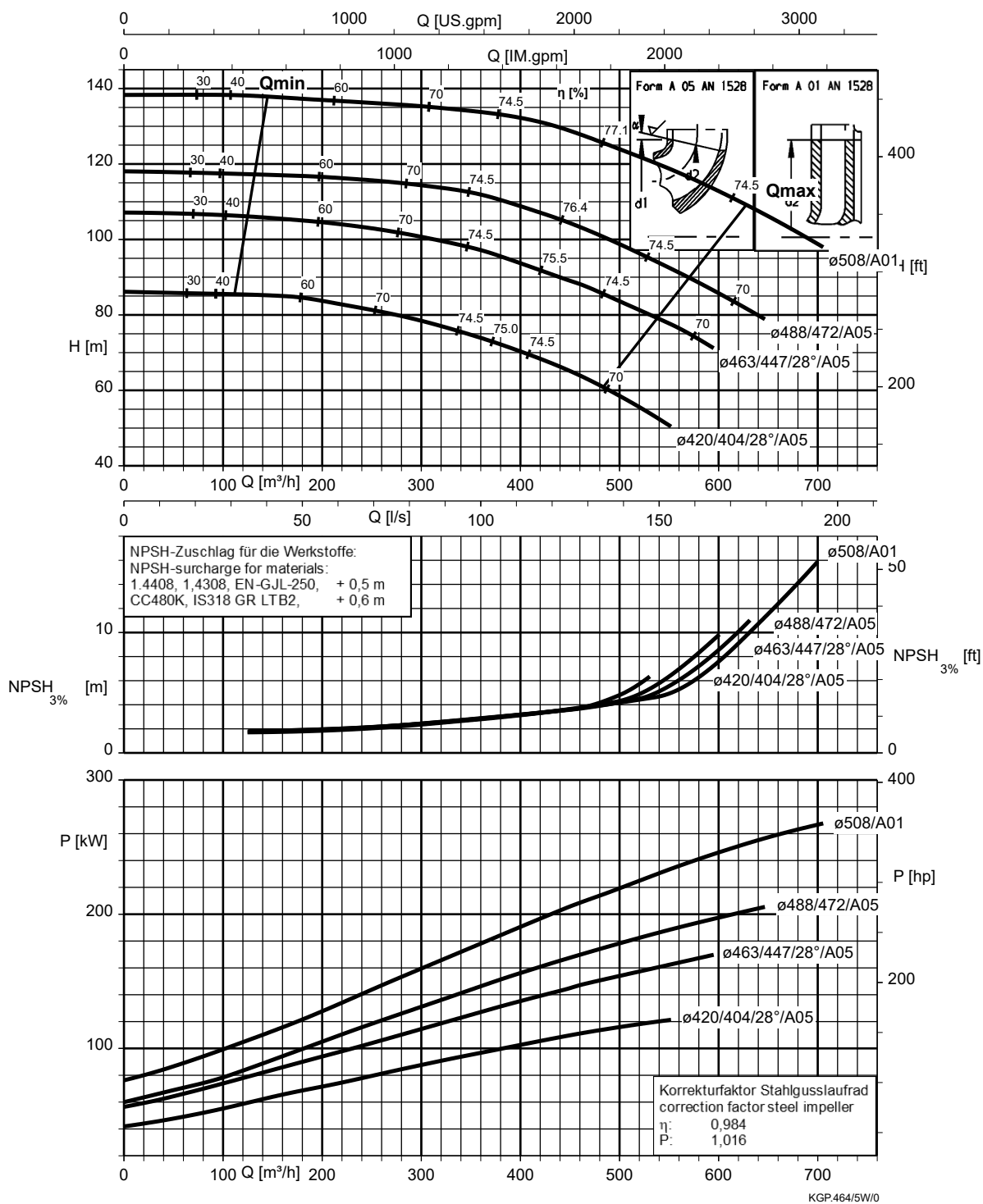


Etanorm 200-150-400, $n = 1750 \text{ min}^{-1}$

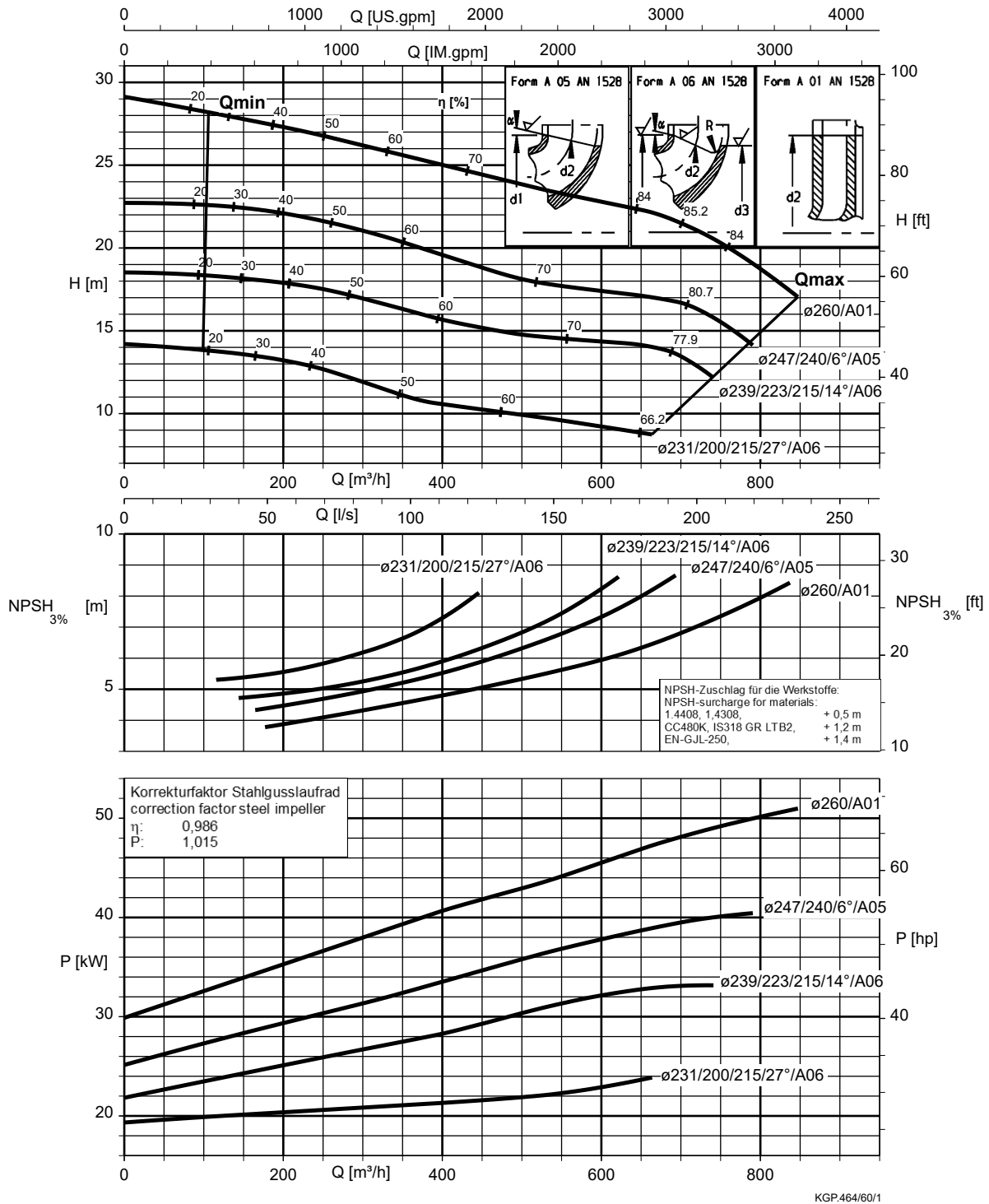
Etanorm SYT, Etanorm V



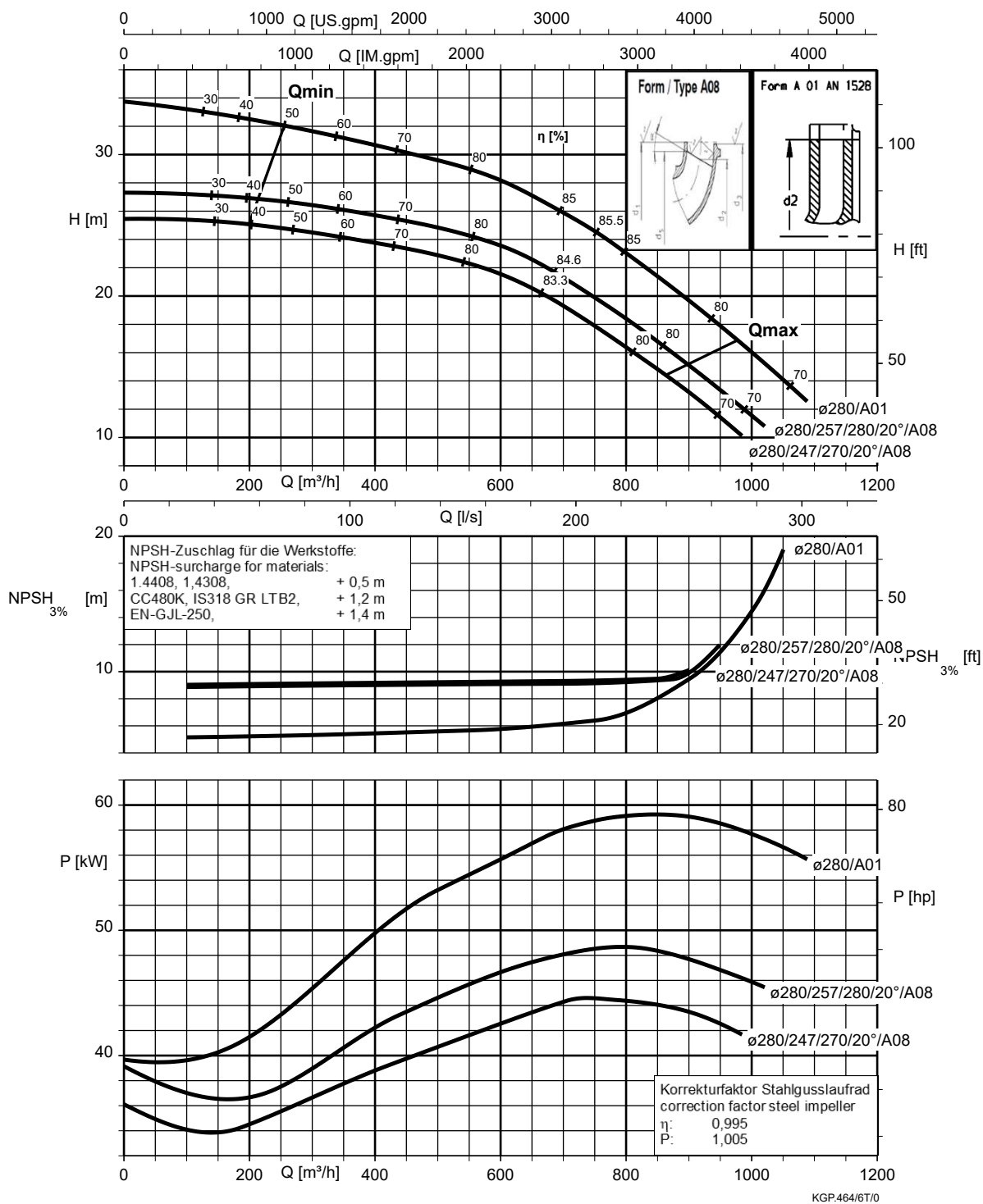
Etanorm 200-150-510, $n = 1750 \text{ min}^{-1}$



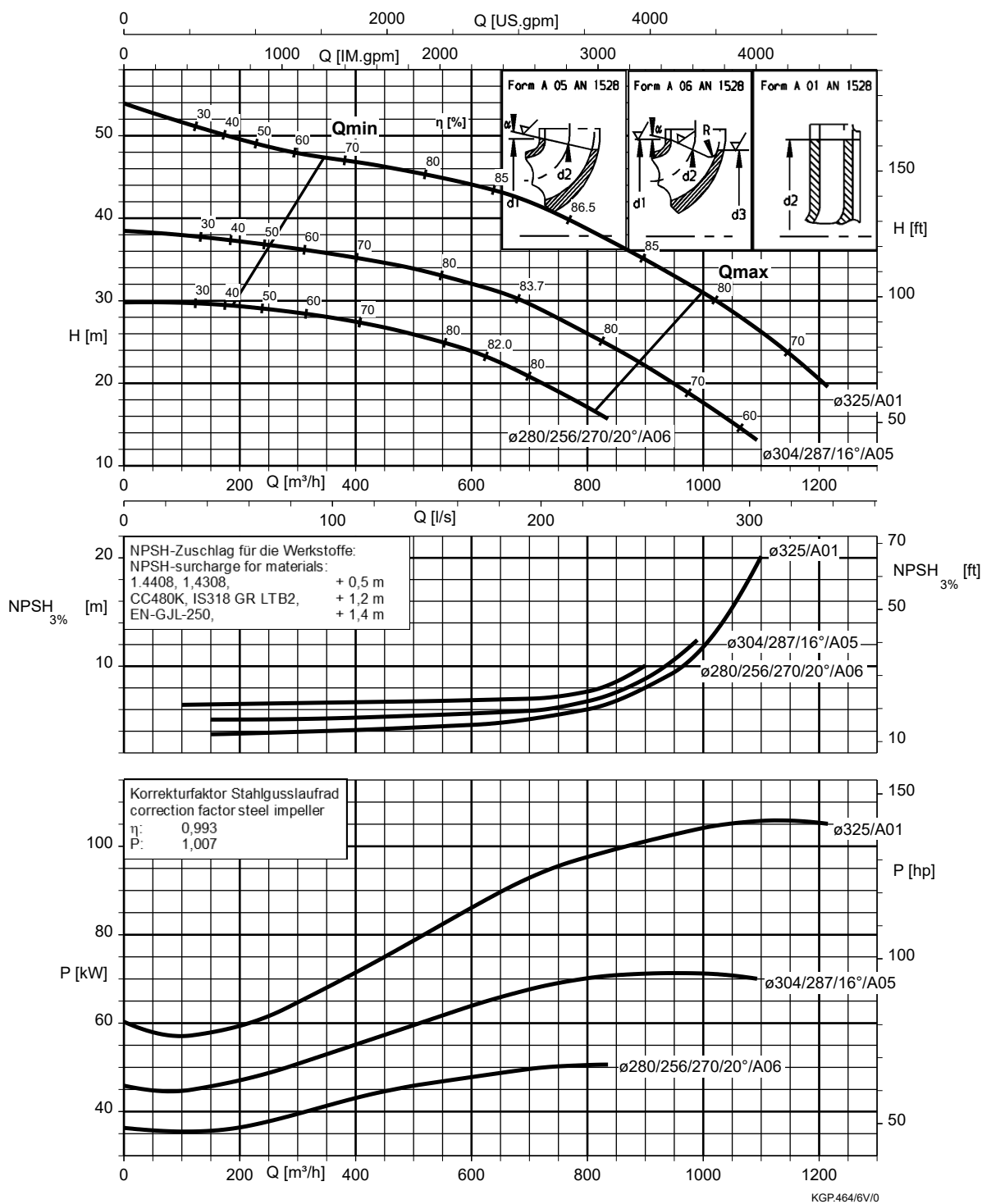
Etanorm 200-200-250, $n = 1750 \text{ min}^{-1}$



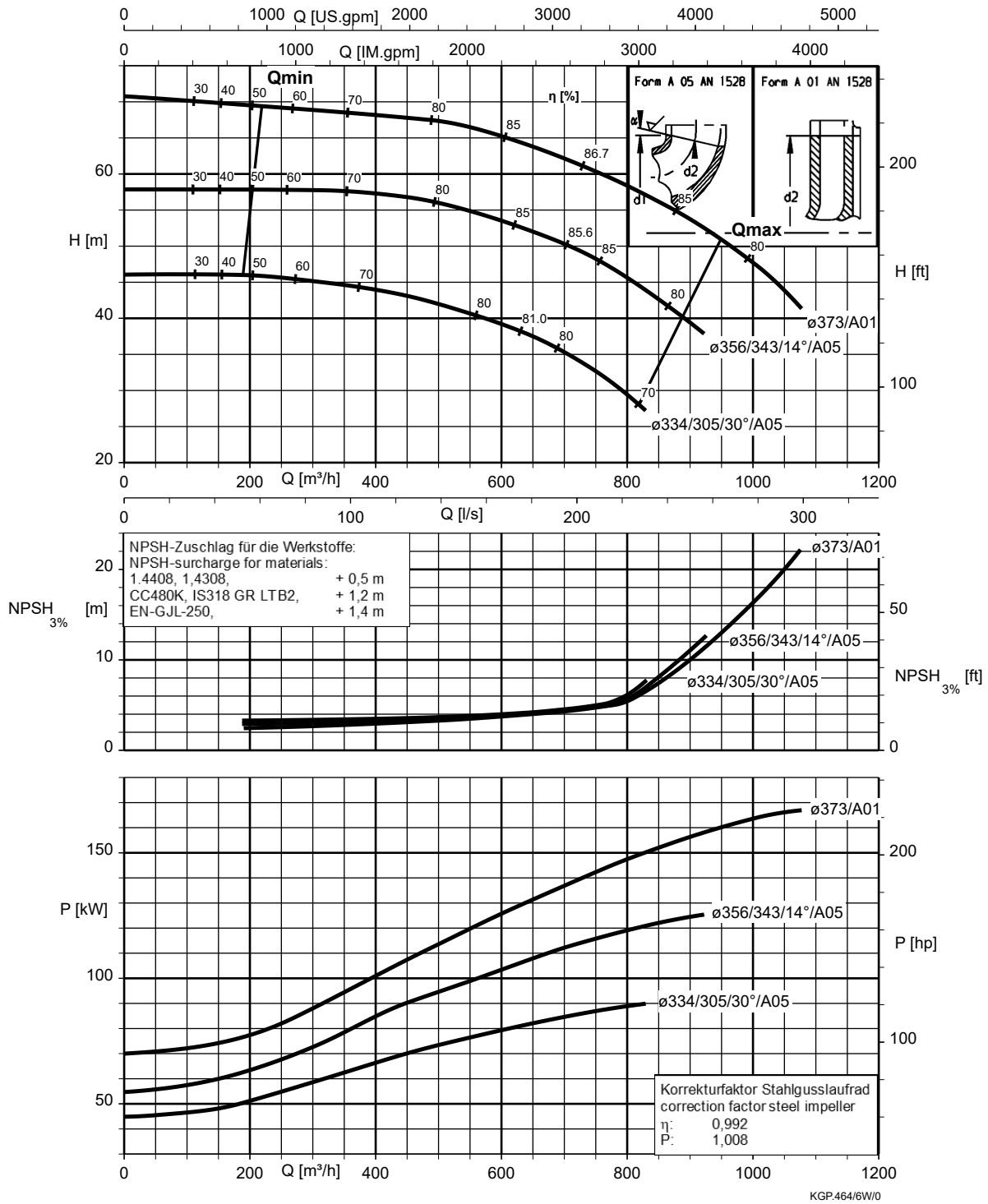
Etanorm 250-200-275, $n = 1750 \text{ min}^{-1}$



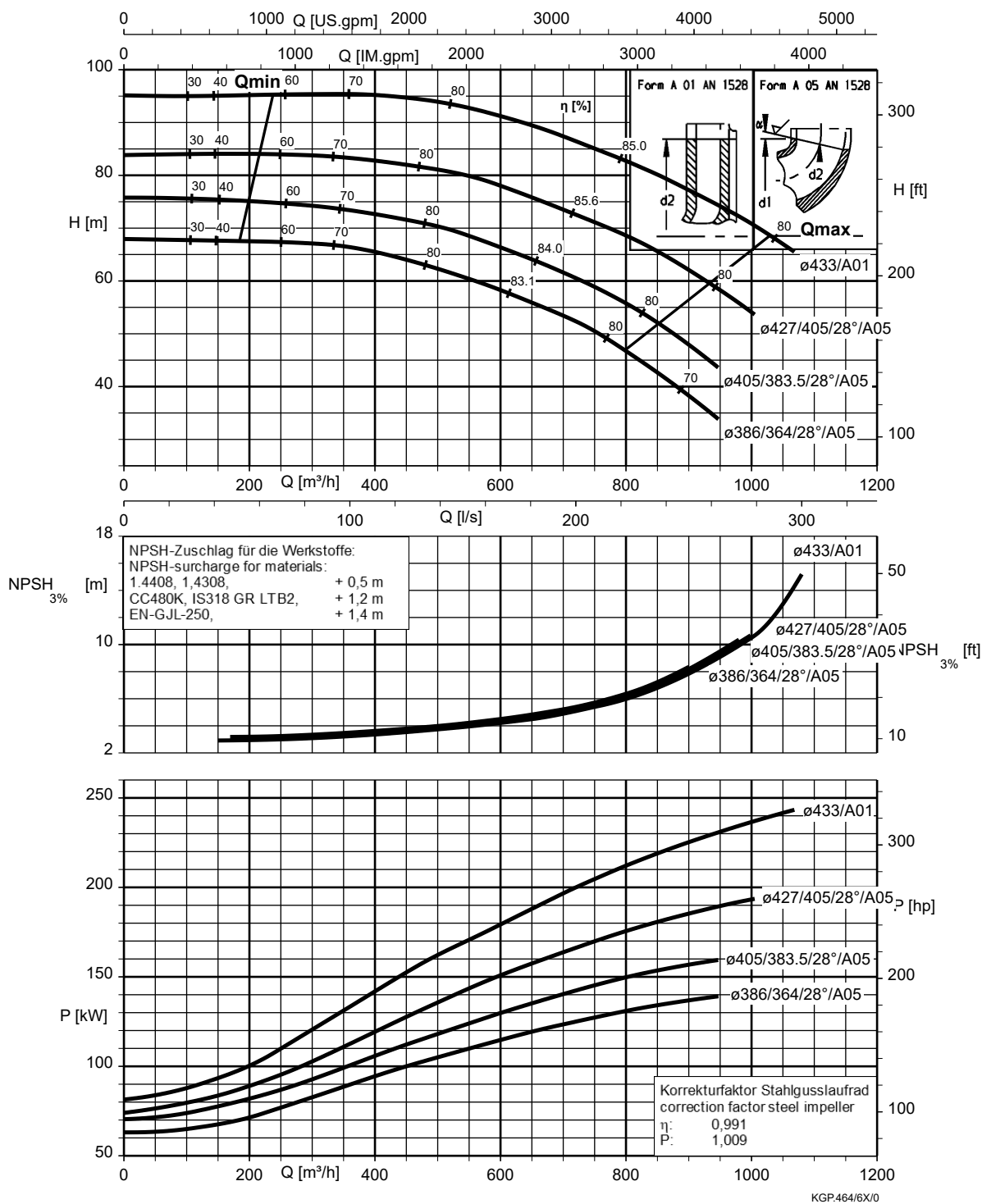
Etanorm 250-200-320, $n = 1750 \text{ min}^{-1}$



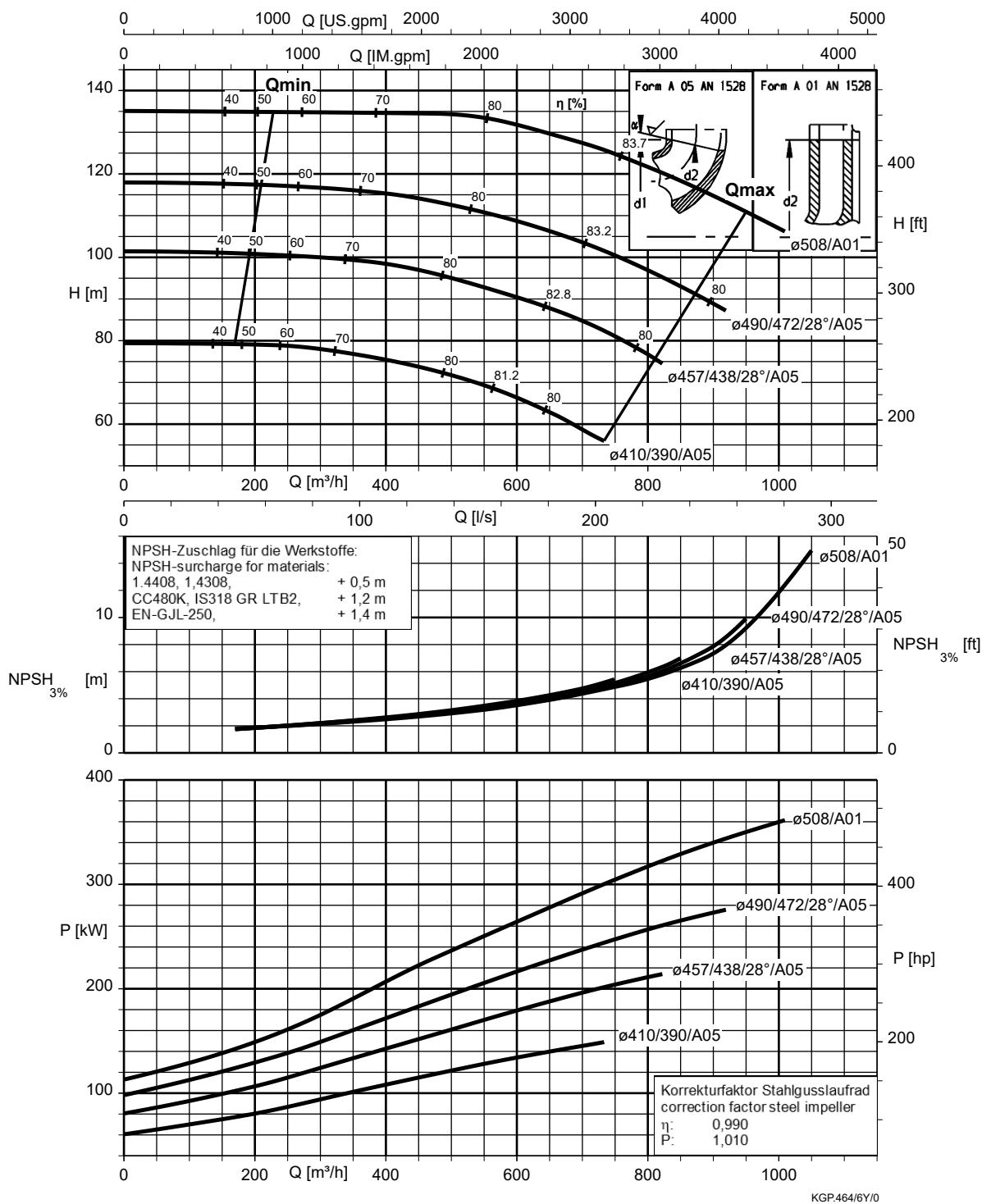
Etanorm 250-200-375, $n = 1750 \text{ min}^{-1}$



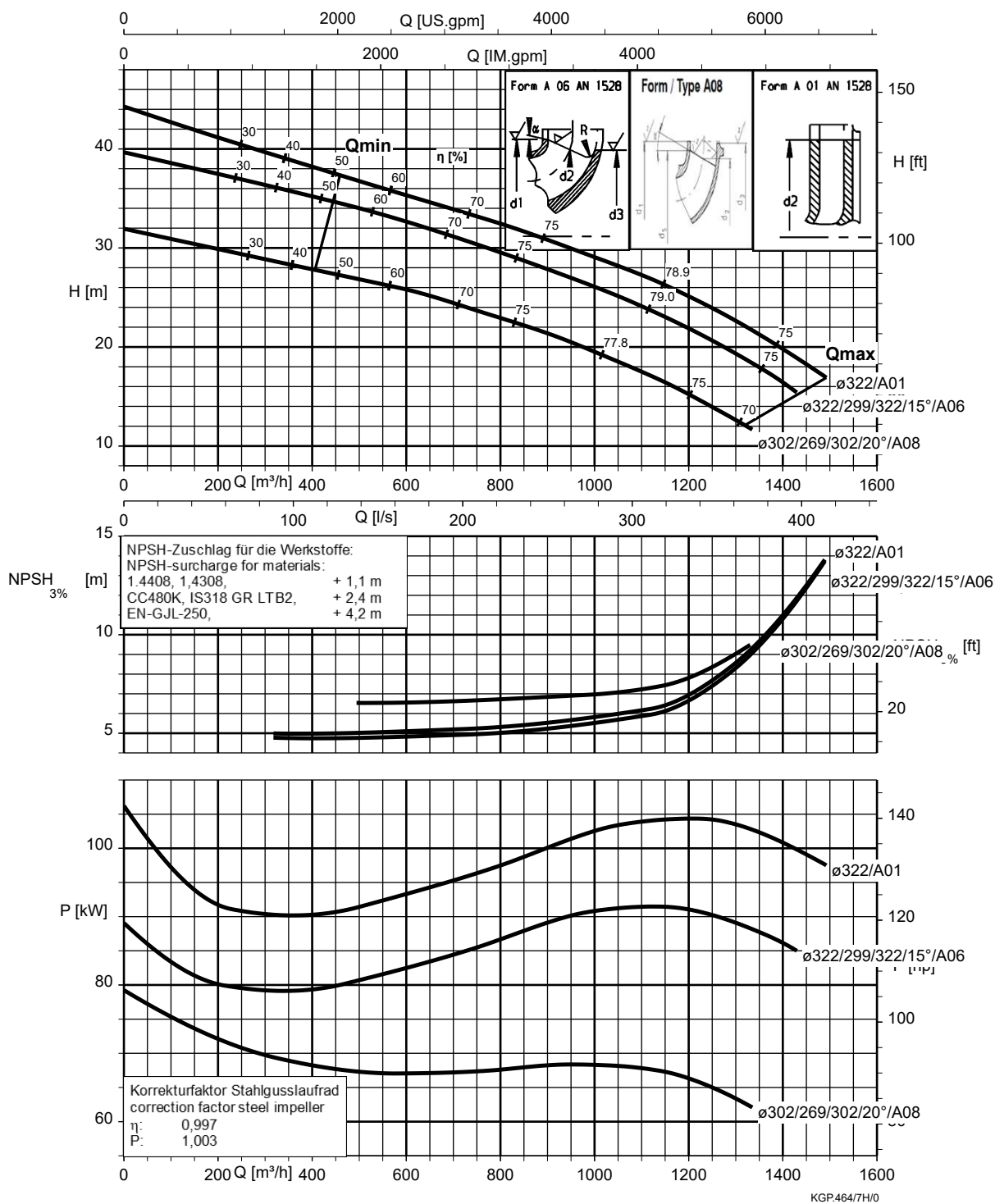
Etanorm 250-200-435 , $n = 1750 \text{ min}^{-1}$



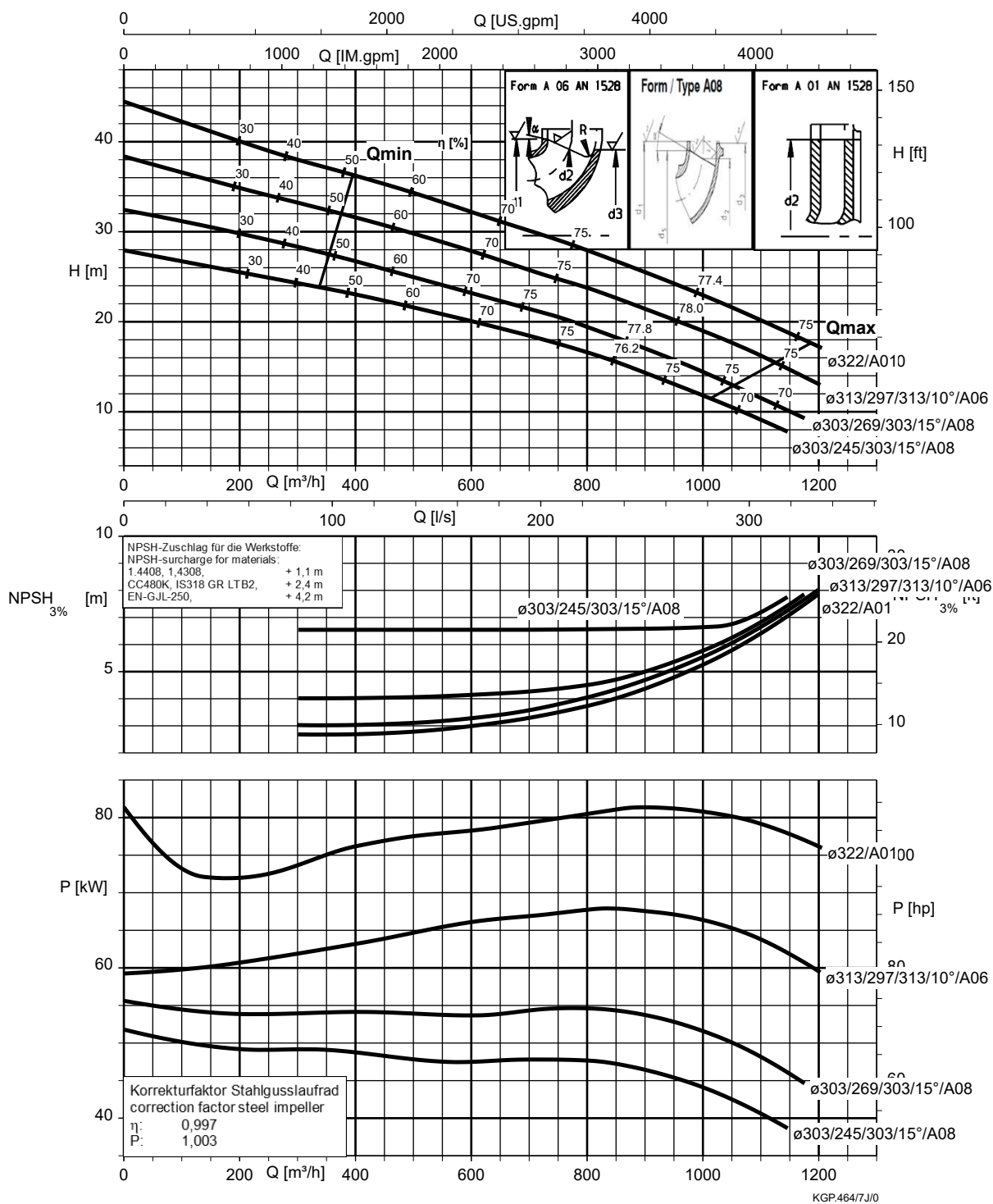
Etanorm 250-200-510 , $n = 1750 \text{ min}^{-1}$



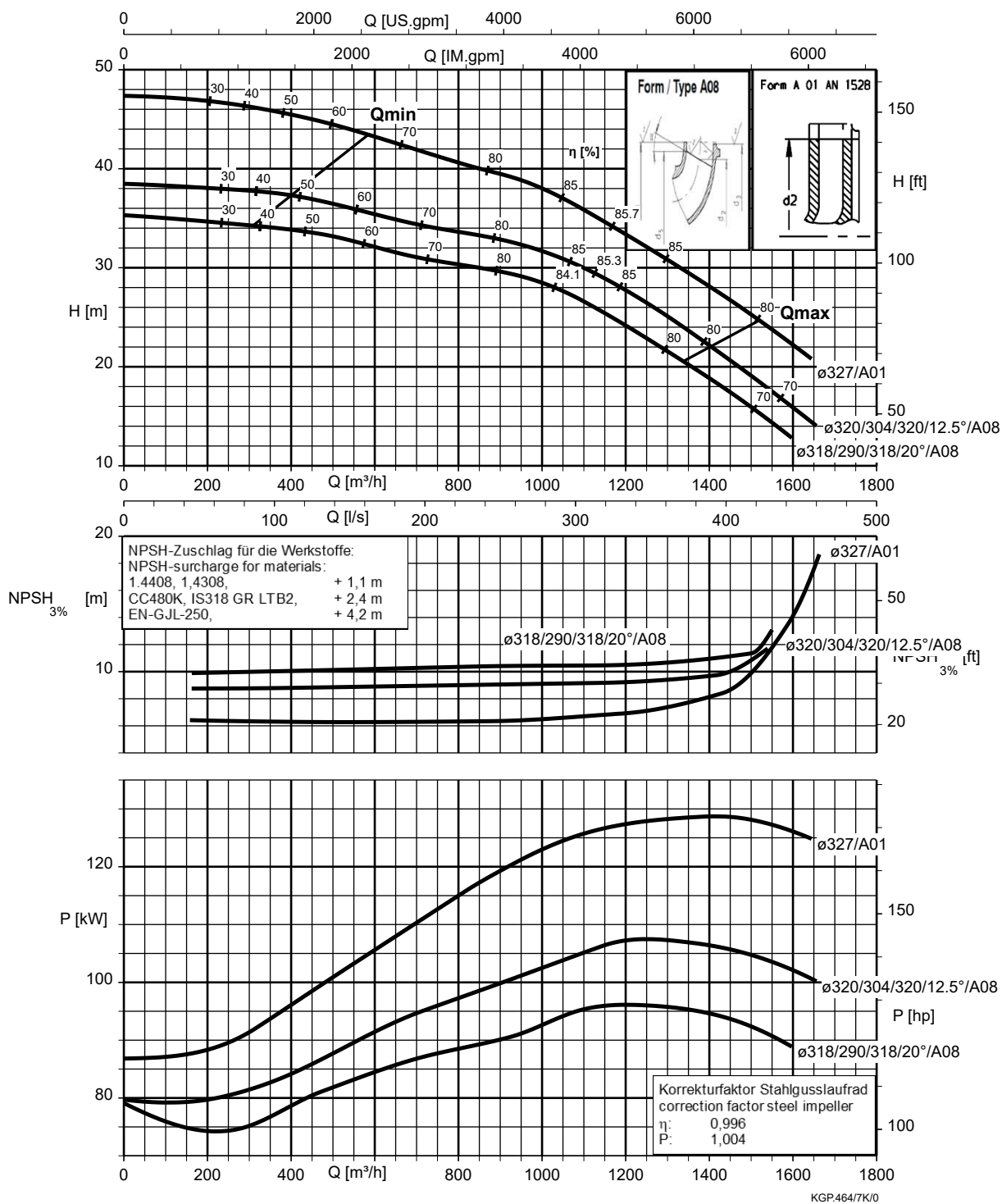
Etanorm 300-250-295, $n = 1750 \text{ min}^{-1}$



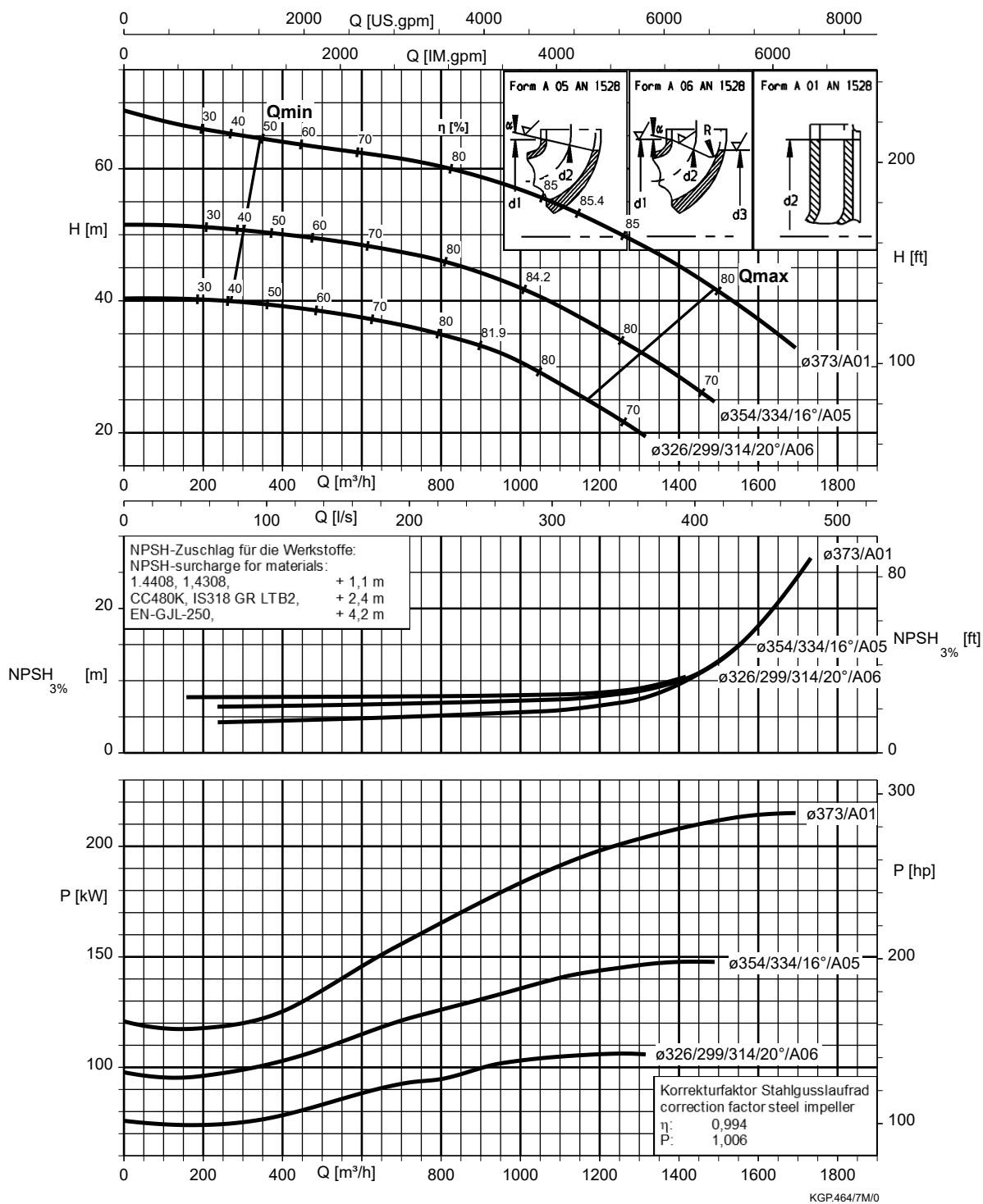
Etanorm 300-250-295.1, $n = 1750 \text{ min}^{-1}$



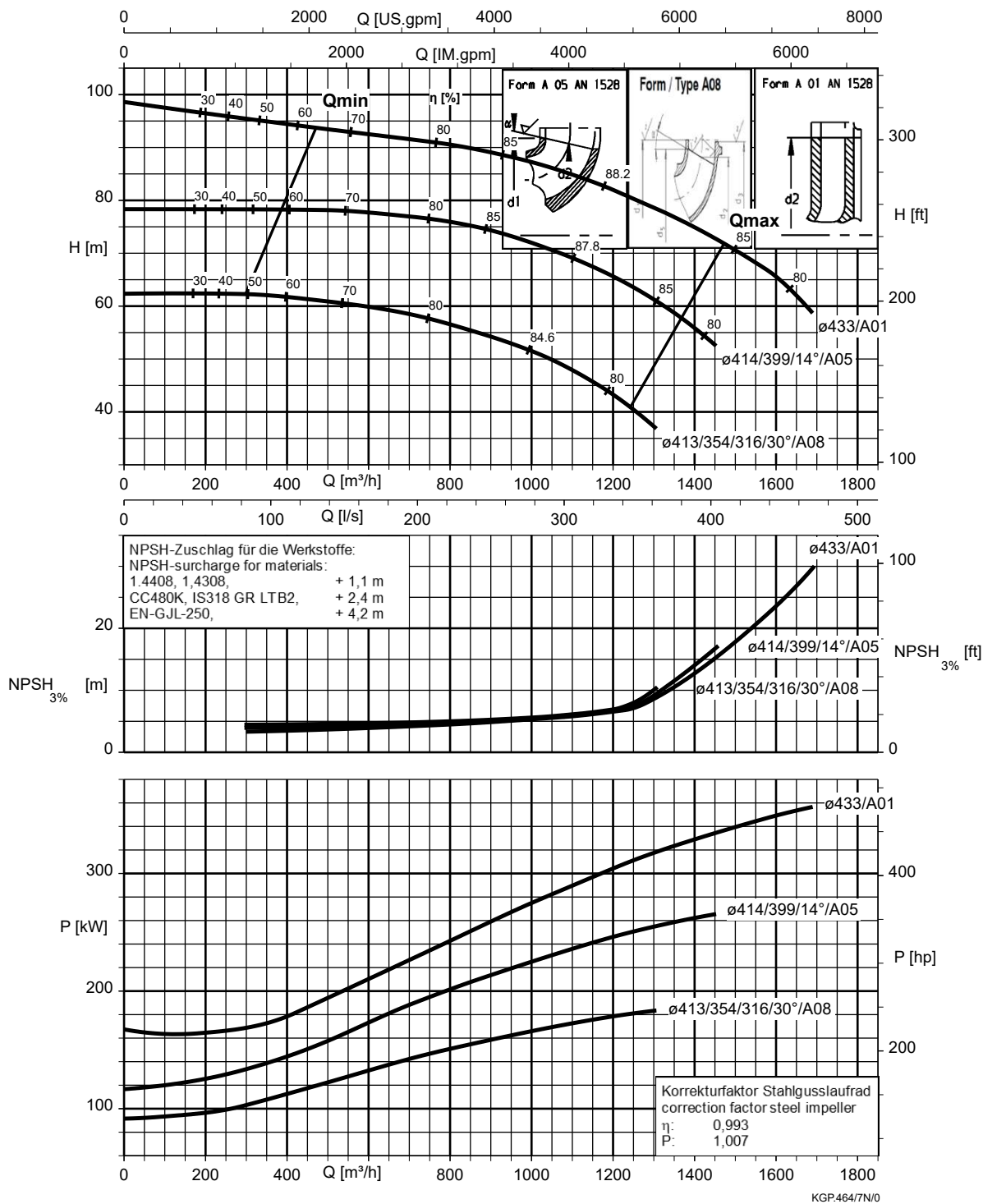
Etanorm 300-250-320 , n = 1750 min⁻¹



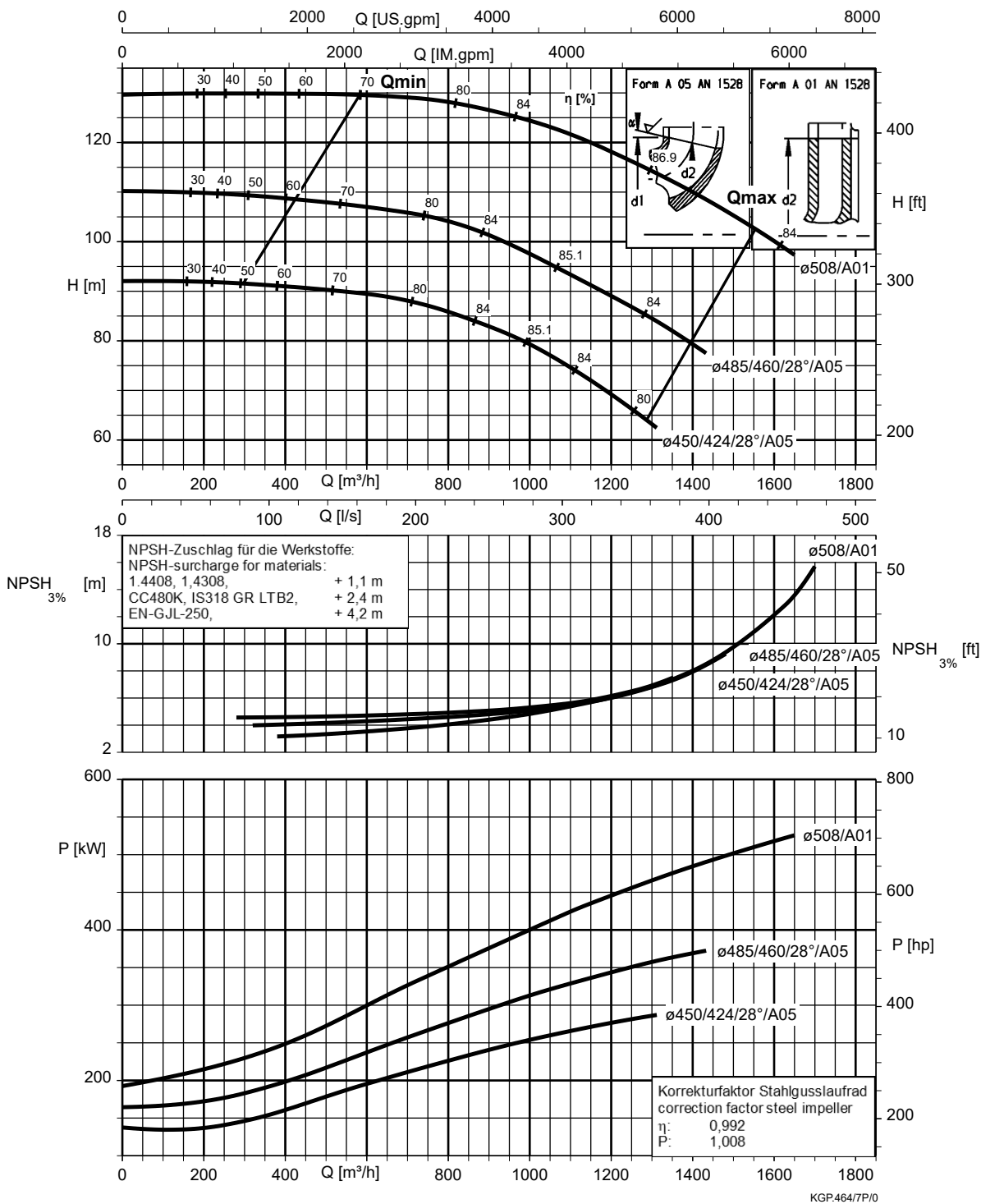
Etanorm 300-250-375, $n = 1750 \text{ min}^{-1}$



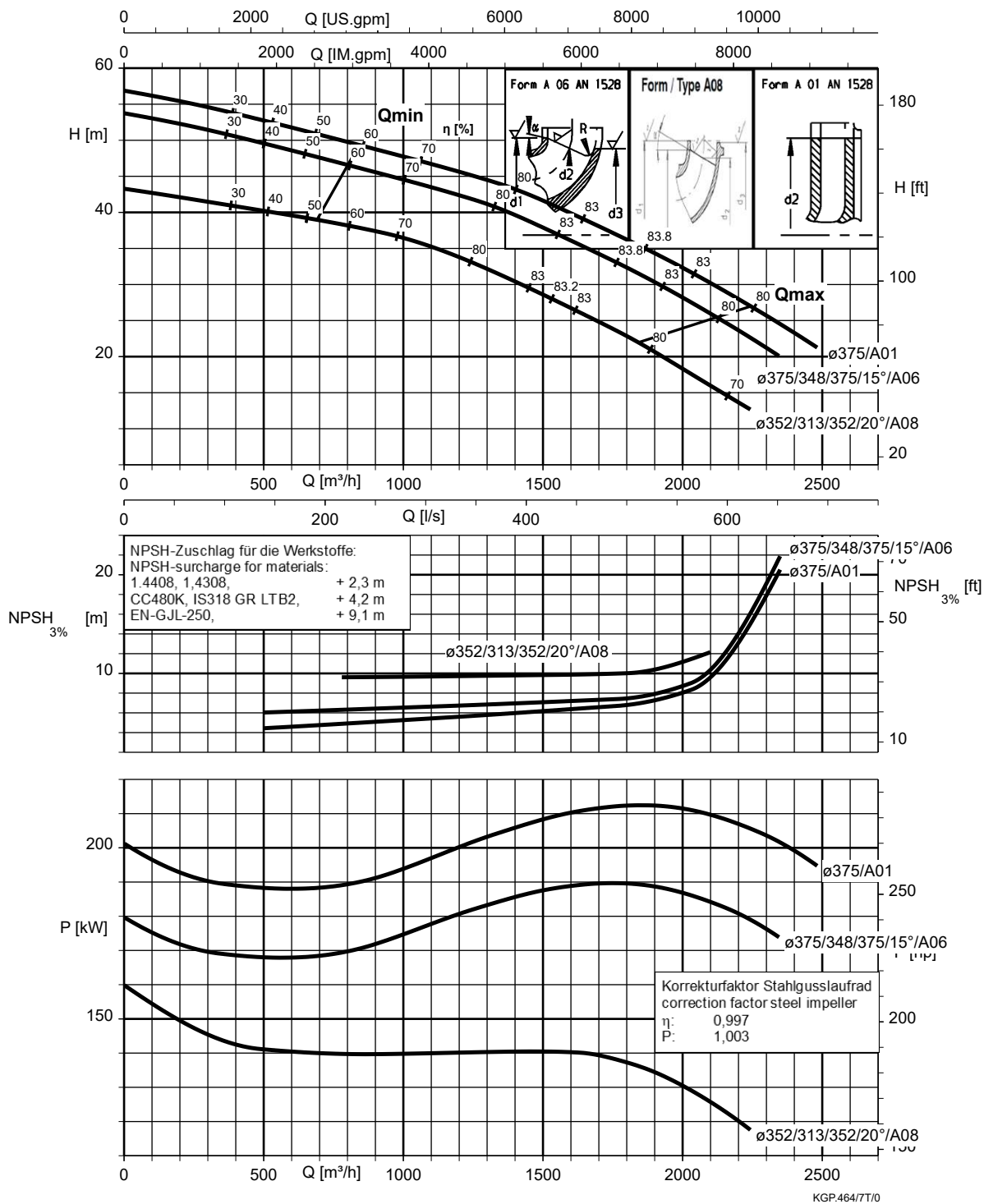
Etanorm 300-250-435, $n = 1750 \text{ min}^{-1}$



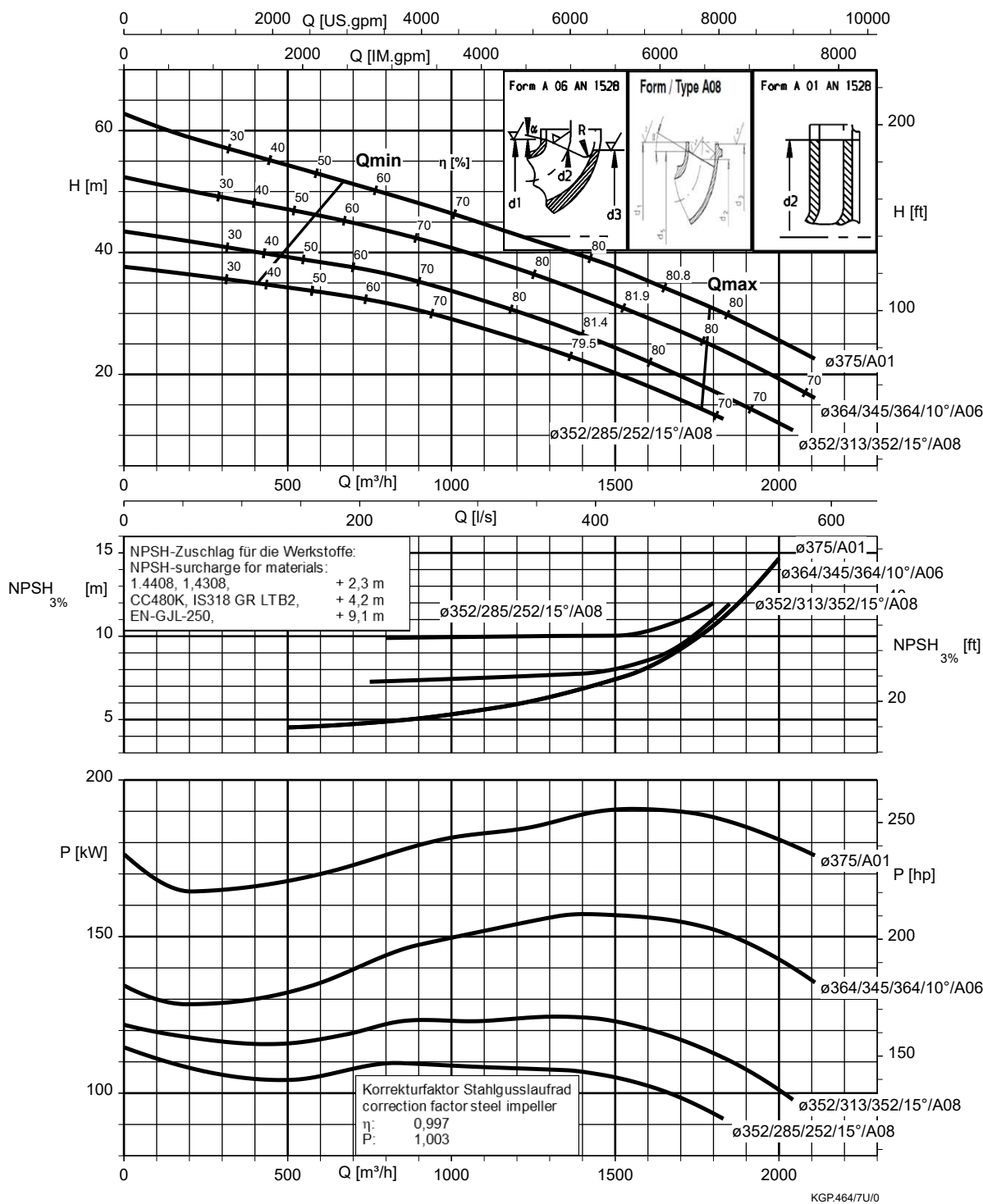
Etanorm 300-250-510, $n = 1750 \text{ min}^{-1}$



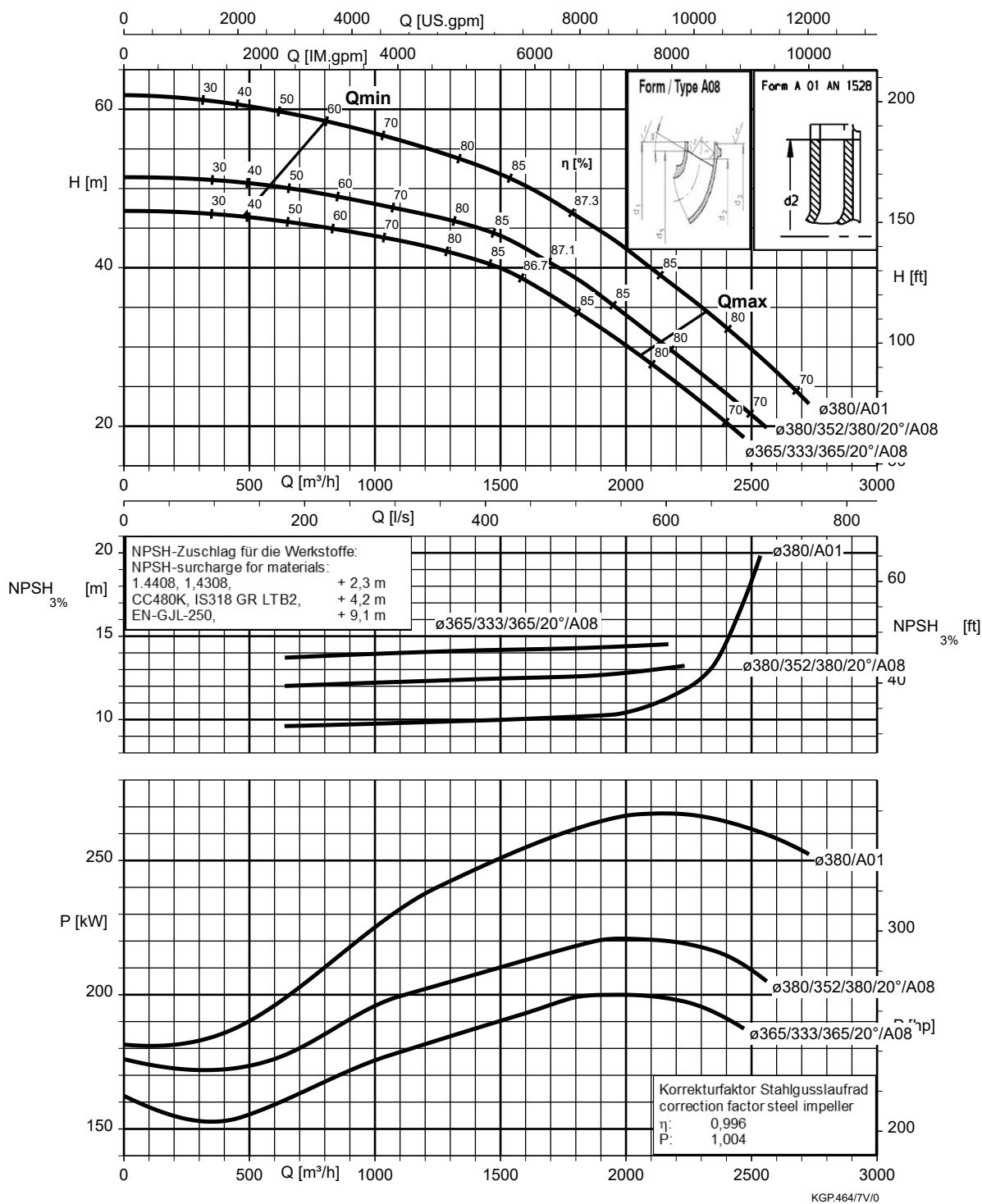
Etanorm 350-300-350, $n = 1750 \text{ min}^{-1}$



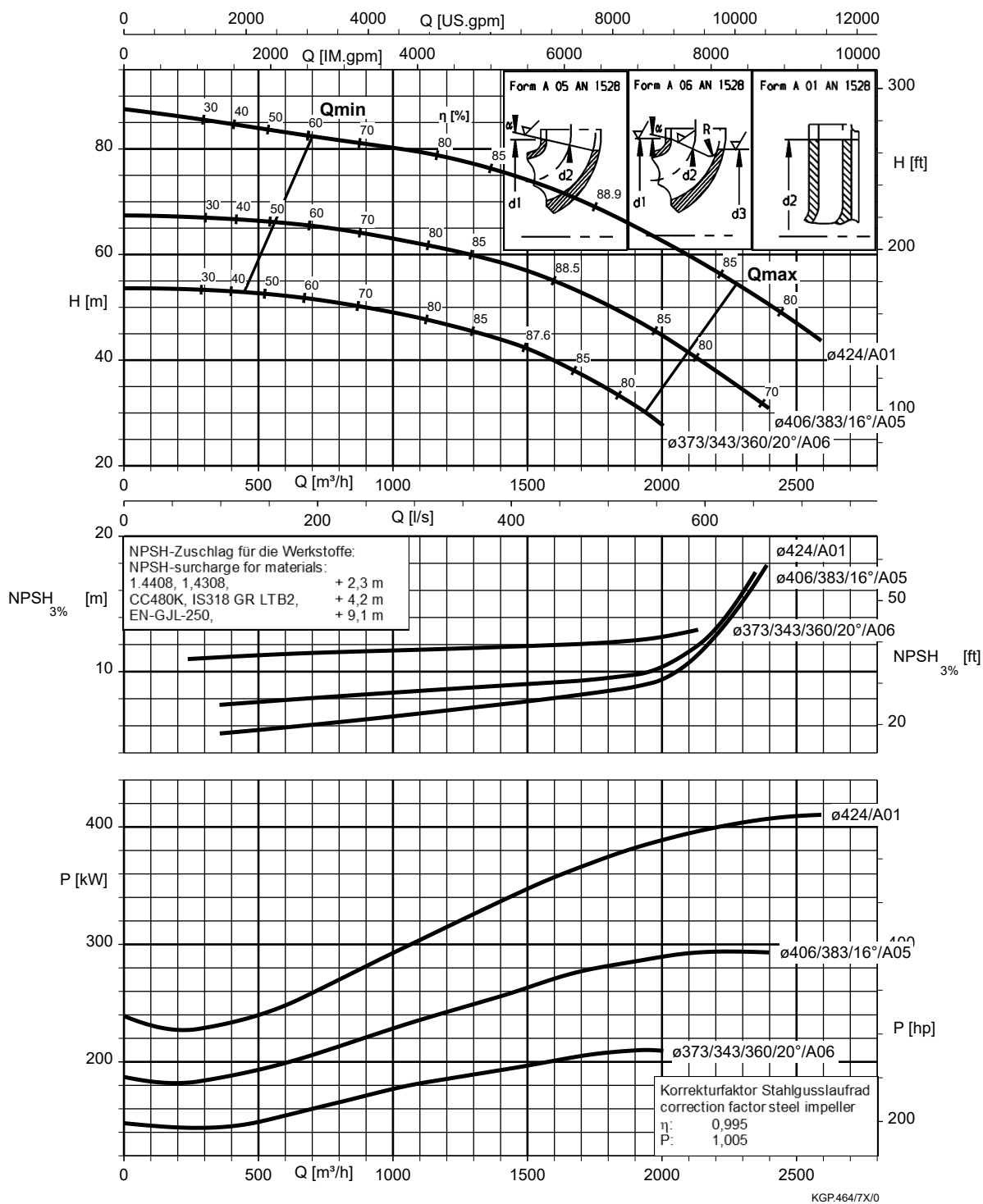
Etanorm 350-300-350.1 , $n = 1750 \text{ min}^{-1}$



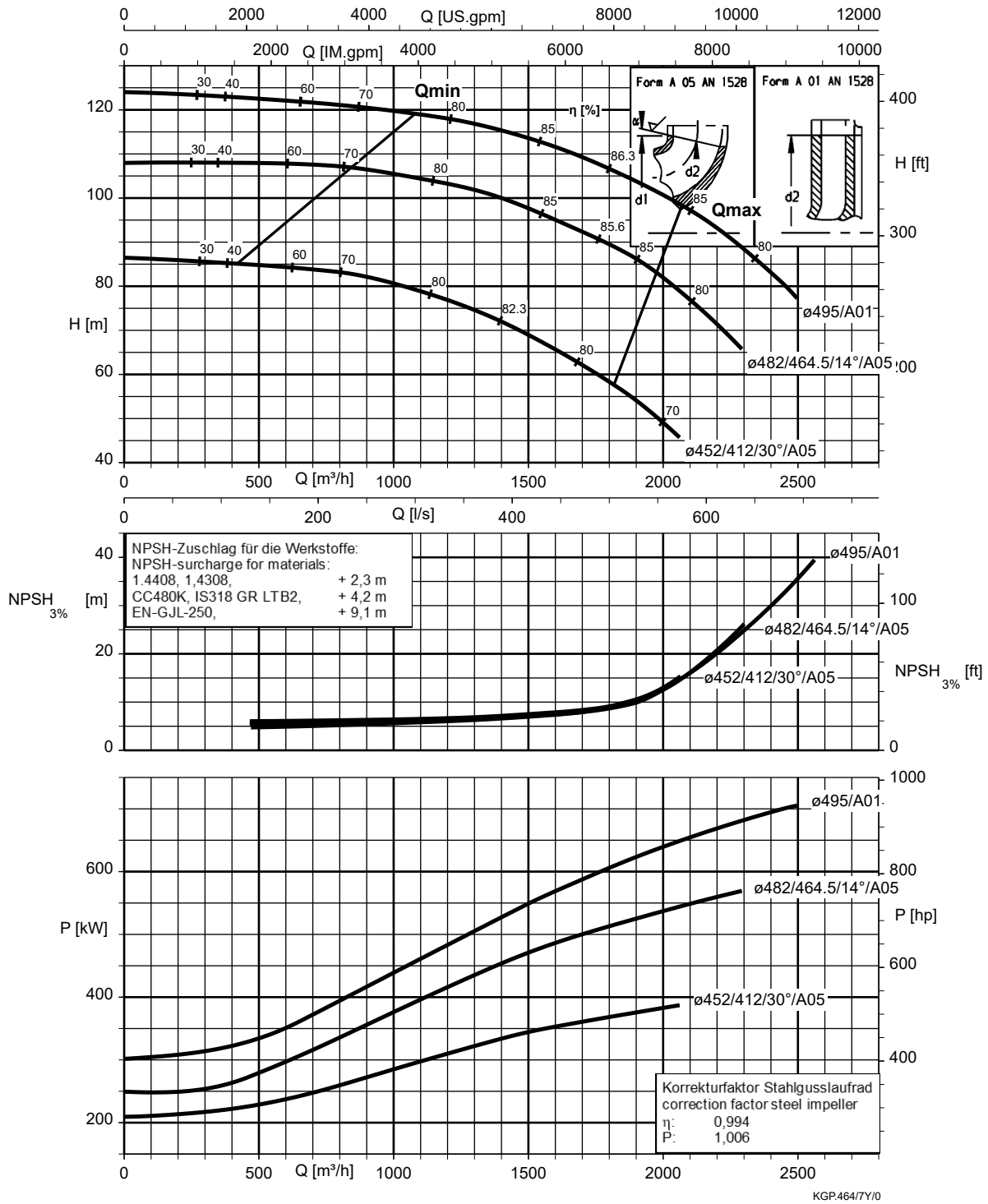
Etanorm 350-300-375, $n = 1750 \text{ min}^{-1}$



Etanorm 350-300-435 , $n = 1750 \text{ min}^{-1}$



Etanorm 350-300-510 , $n = 1750 \text{ min}^{-1}$



Etanorm-R 200-250, n = 1750 min⁻¹

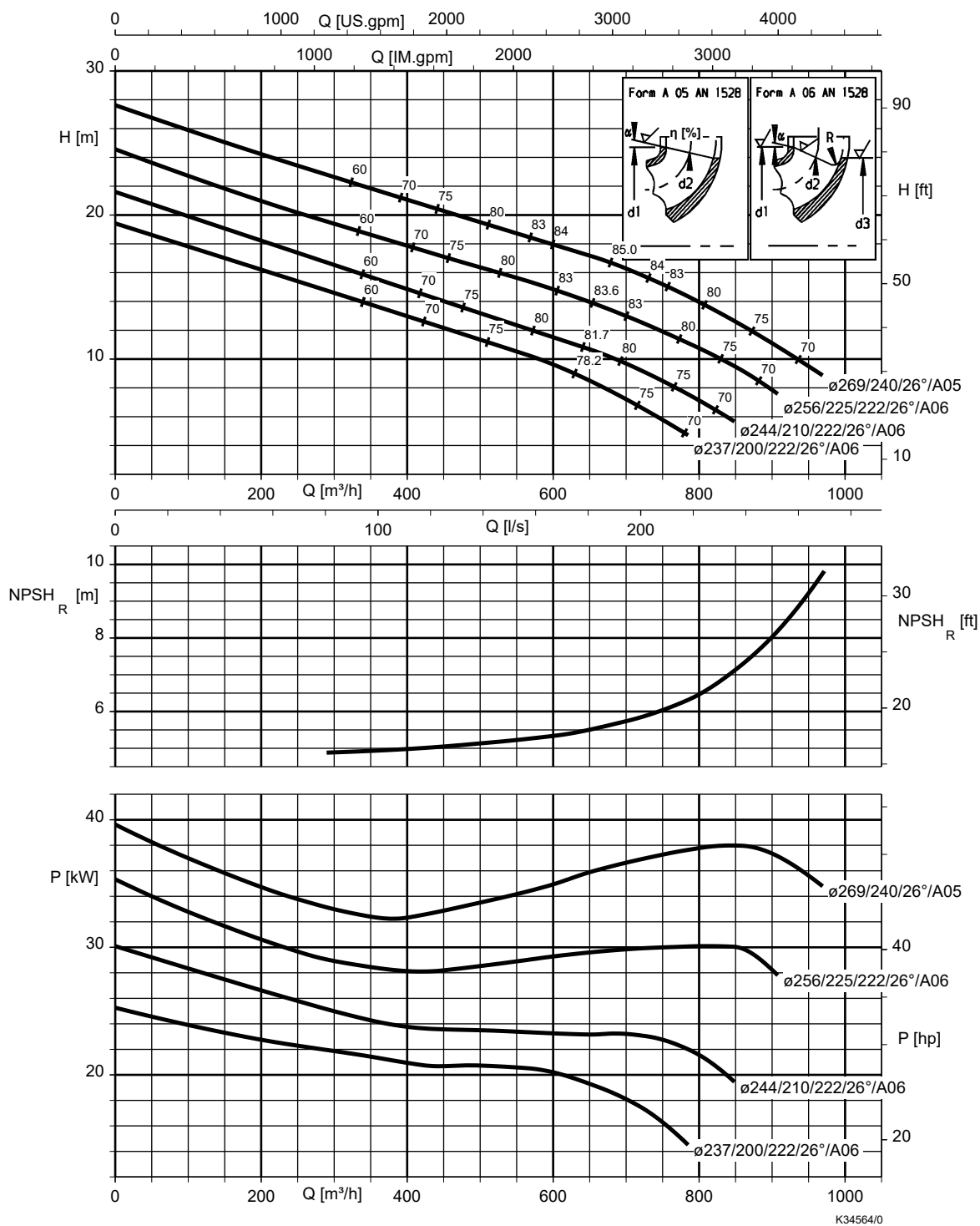


Tabelle 3: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	4,0	$\text{NPSH}_{\text{Anlage}} \geq \text{NPSH} + \text{Korrekturwert S}$
CC480K-GS	2,2	
1.4408	0,5	

Etanorm-R 200-260, $n = 1750 \text{ min}^{-1}$

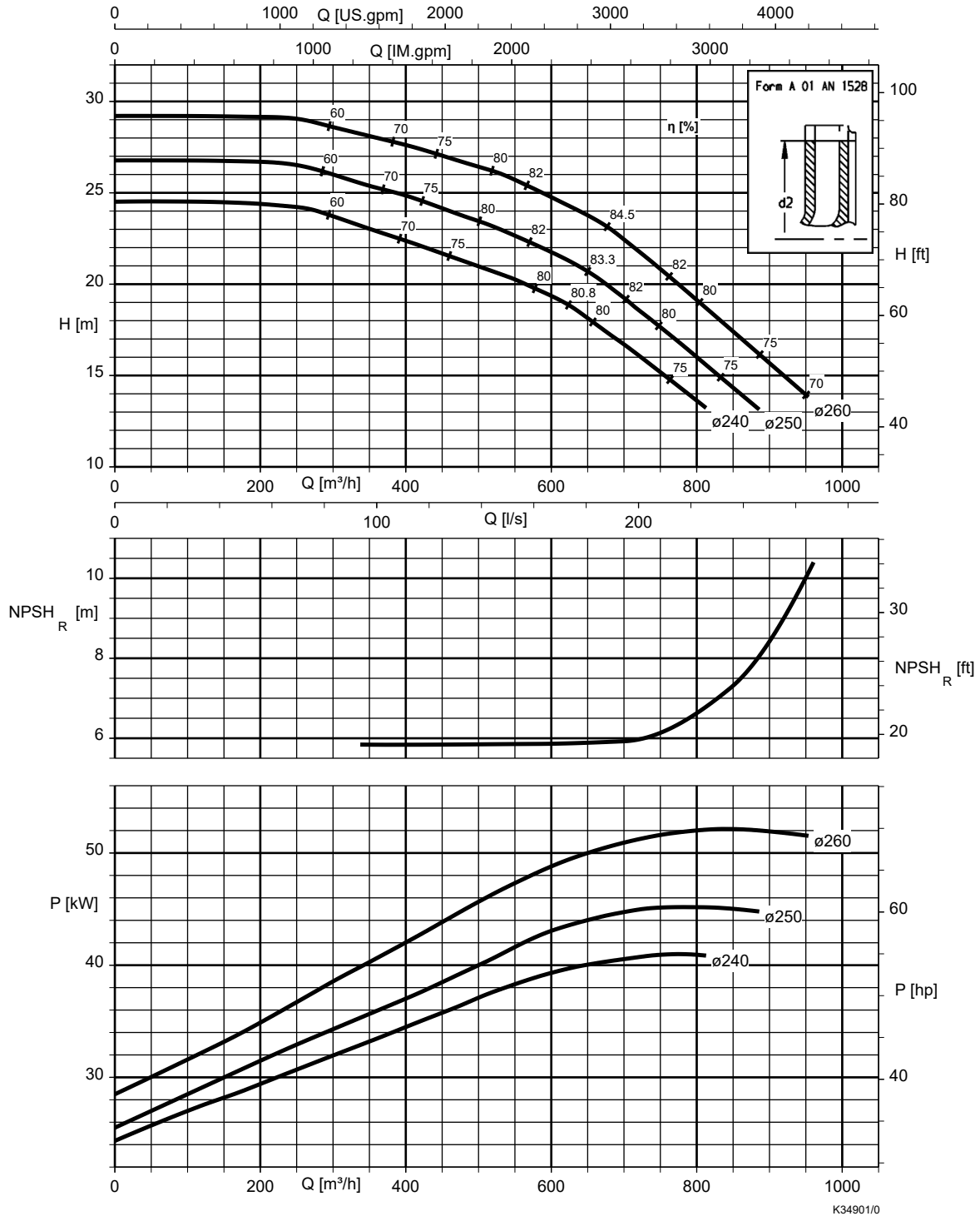


Tabelle 4: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-R 200-330, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

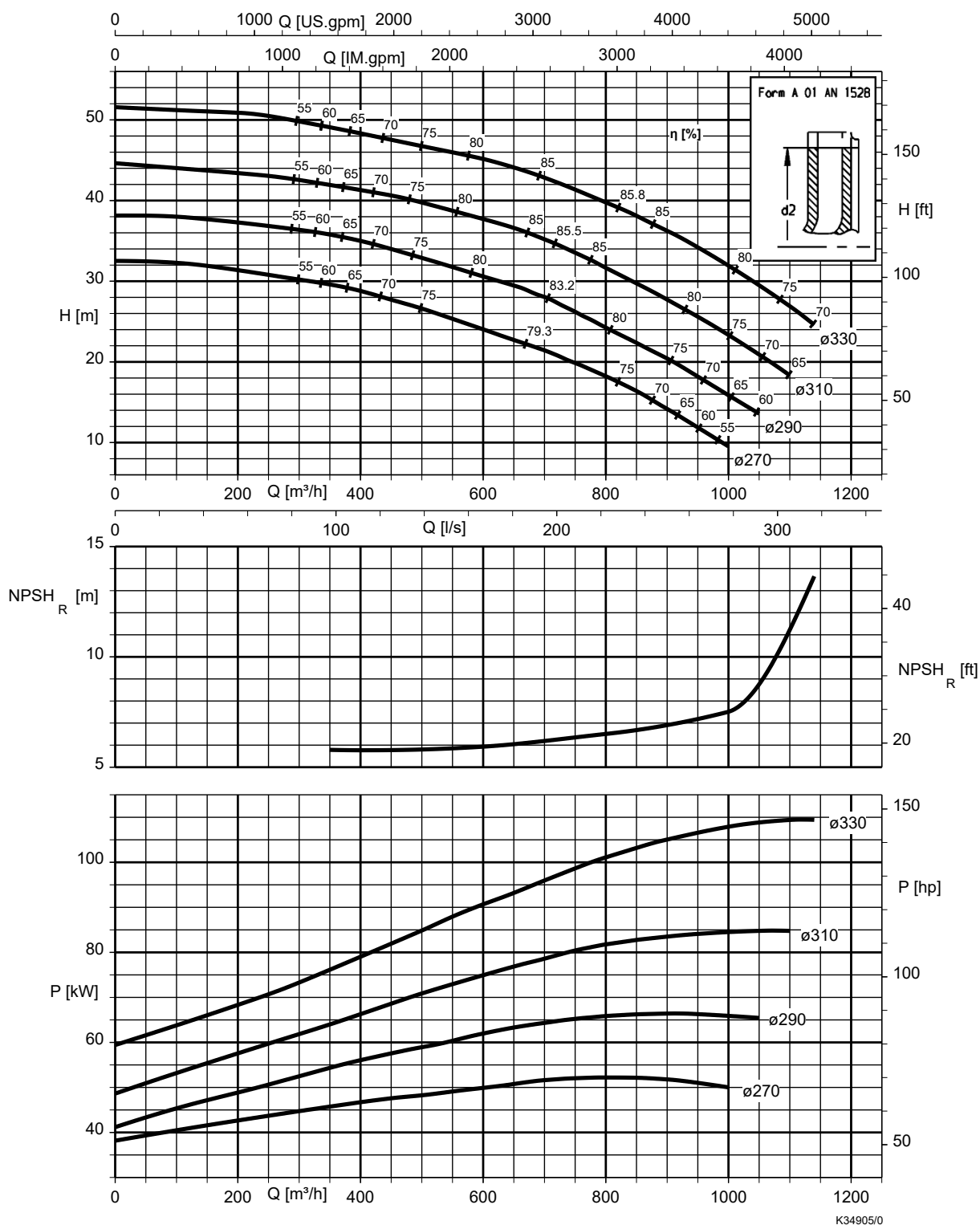


Tabelle 5: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-R 200-400, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

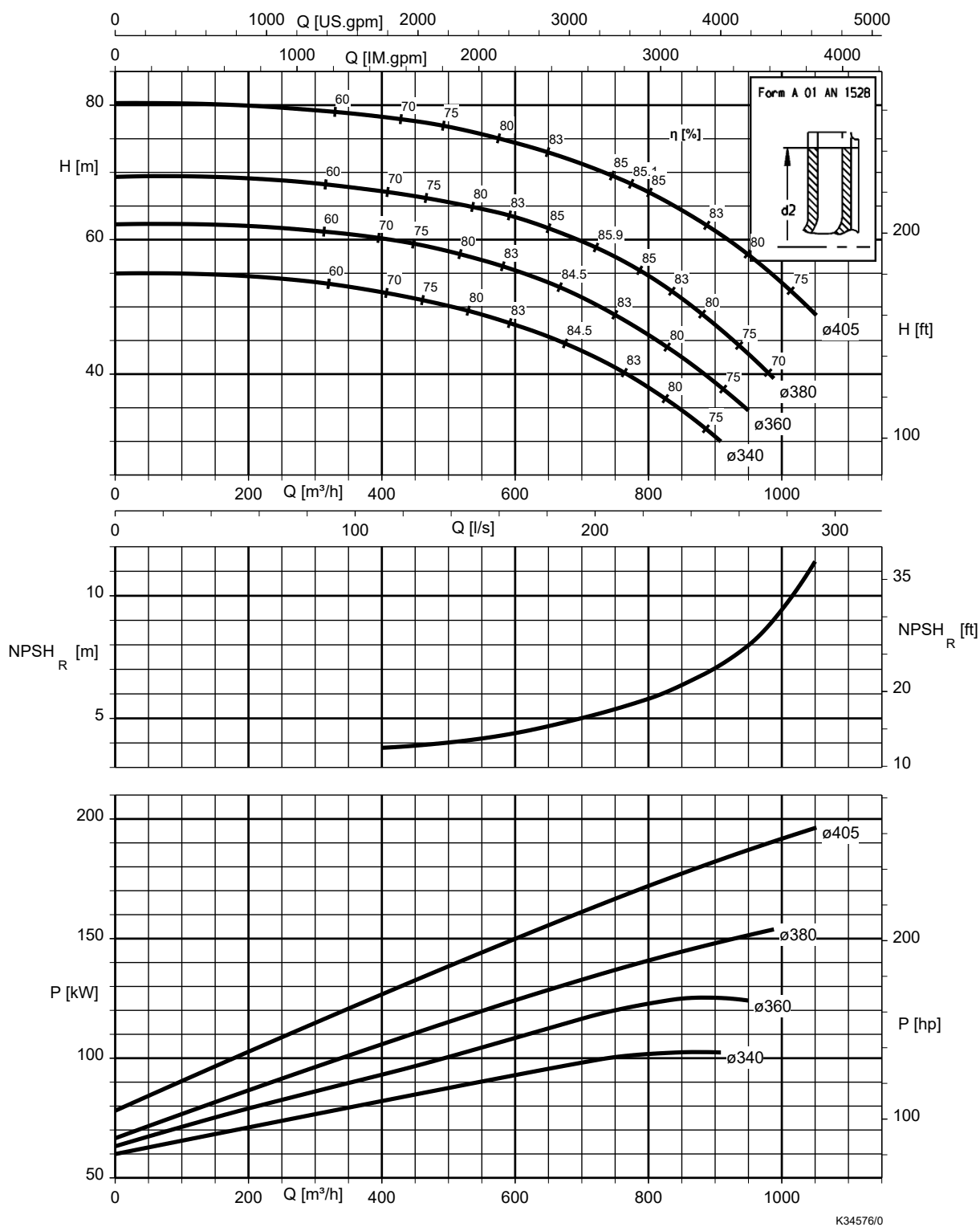


Tabelle 6: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	3,0	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	1,6	
1.4408	0,5	

Etanorm-R 250-300, $n = 1750 \text{ min}^{-1}$

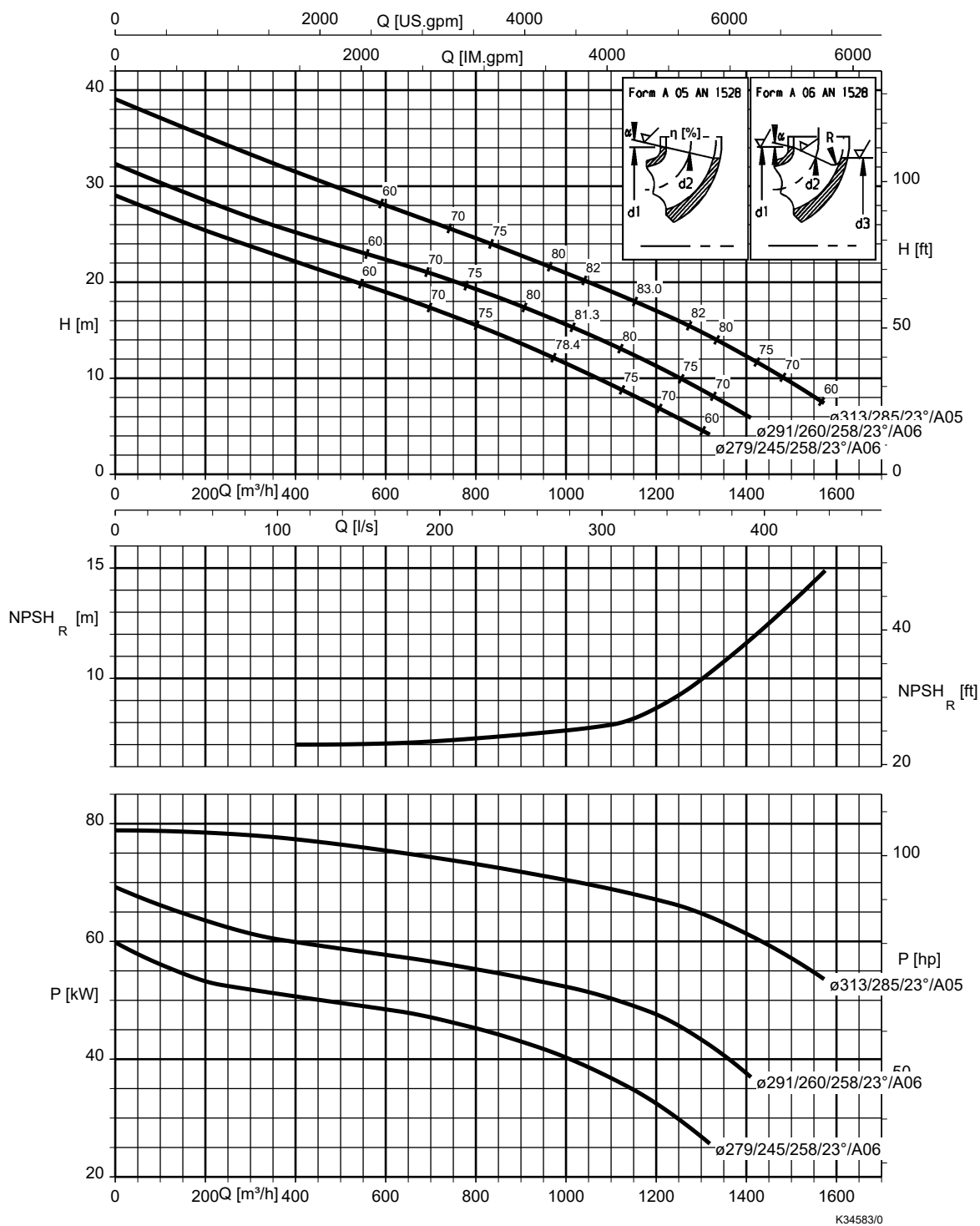


Tabelle 7: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	2,6	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	1,4	
1.4408	0,5	

Etanorm-R 250-330, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

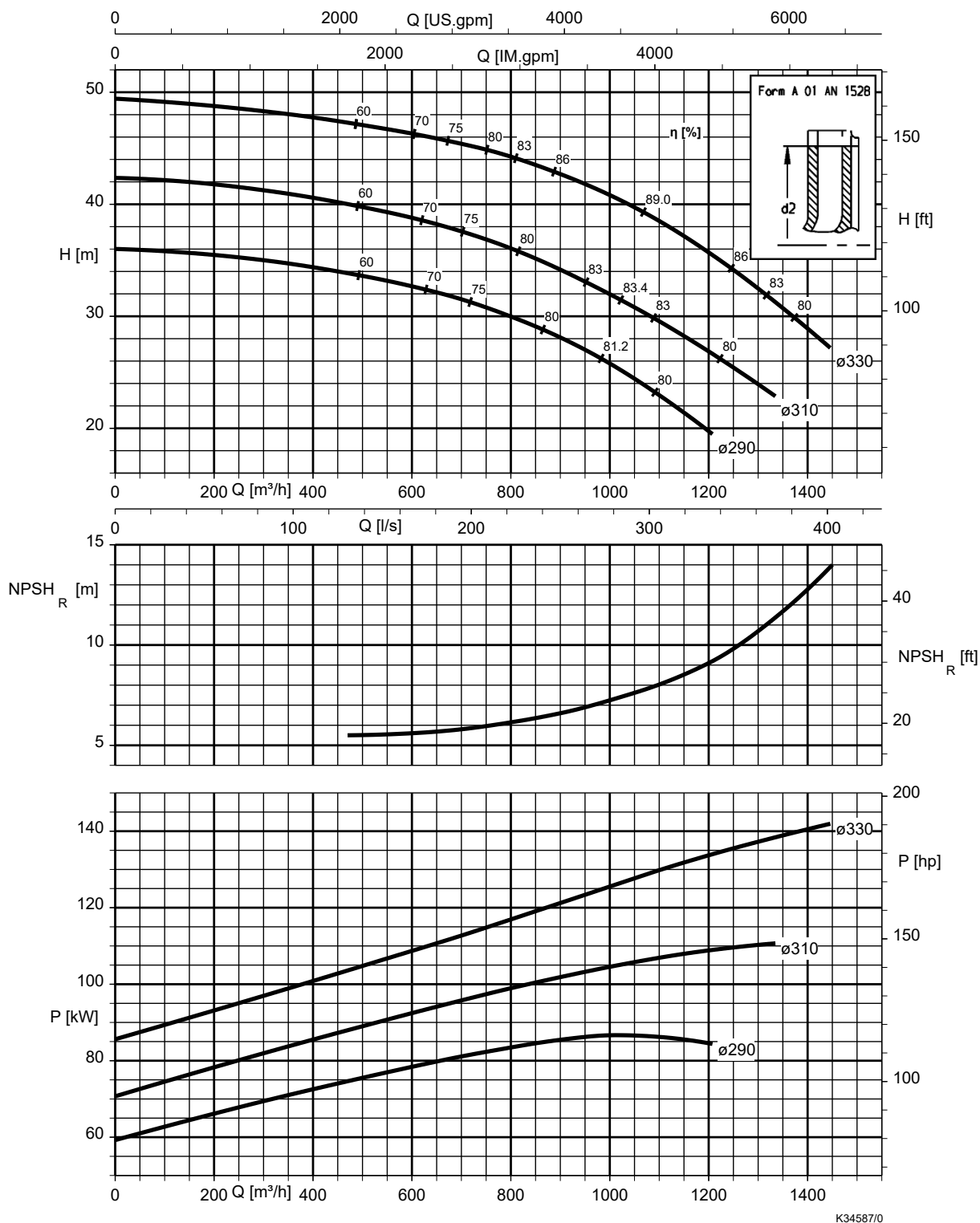


Tabelle 8: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	3,8	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	2,0	
1.4408	0,5	

Etanorm-R 250-400, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

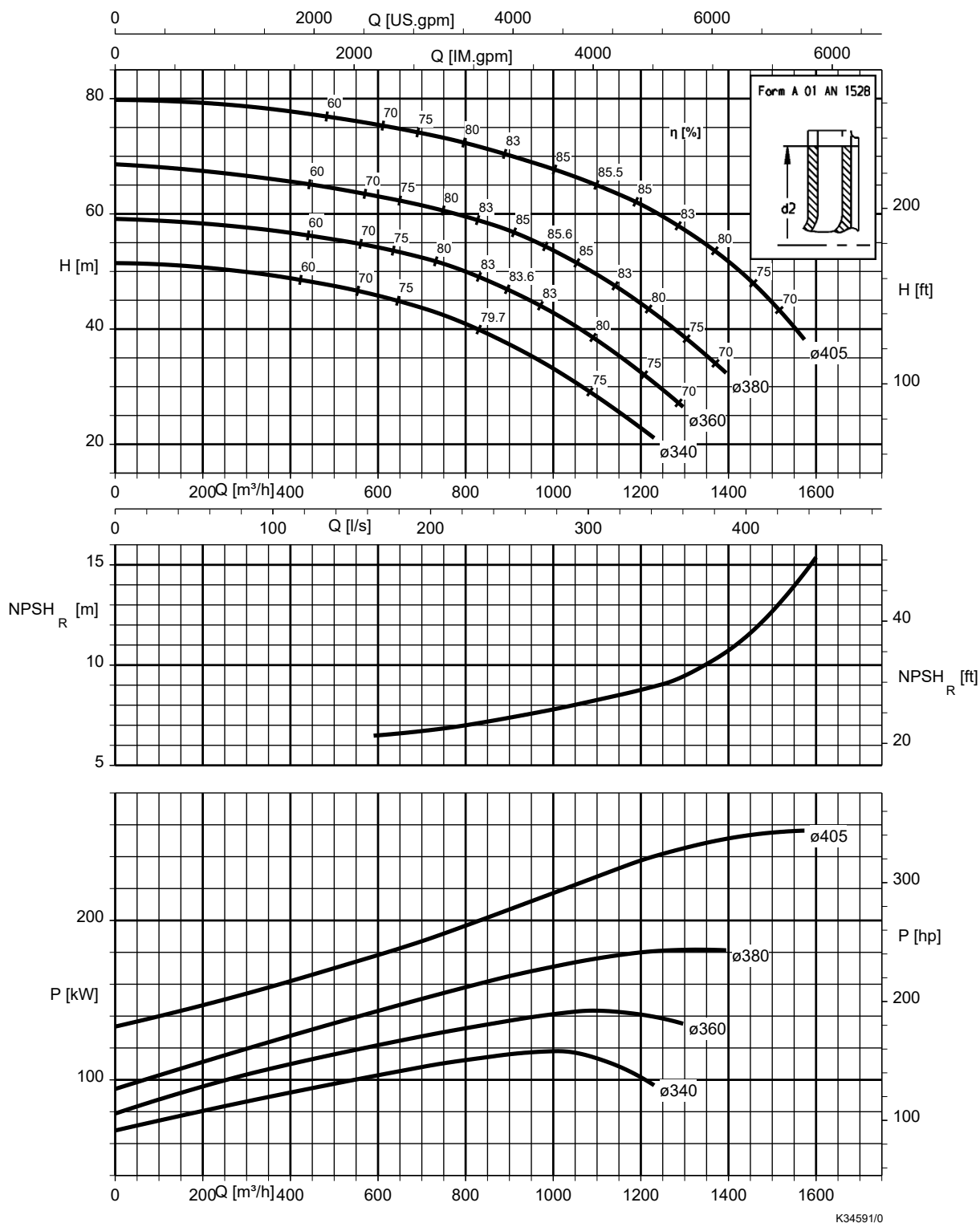


Tabelle 9: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	5,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	3,6	
1.4408	0,5	

Etanorm-R 300-340, $n = 1750 \text{ min}^{-1}$

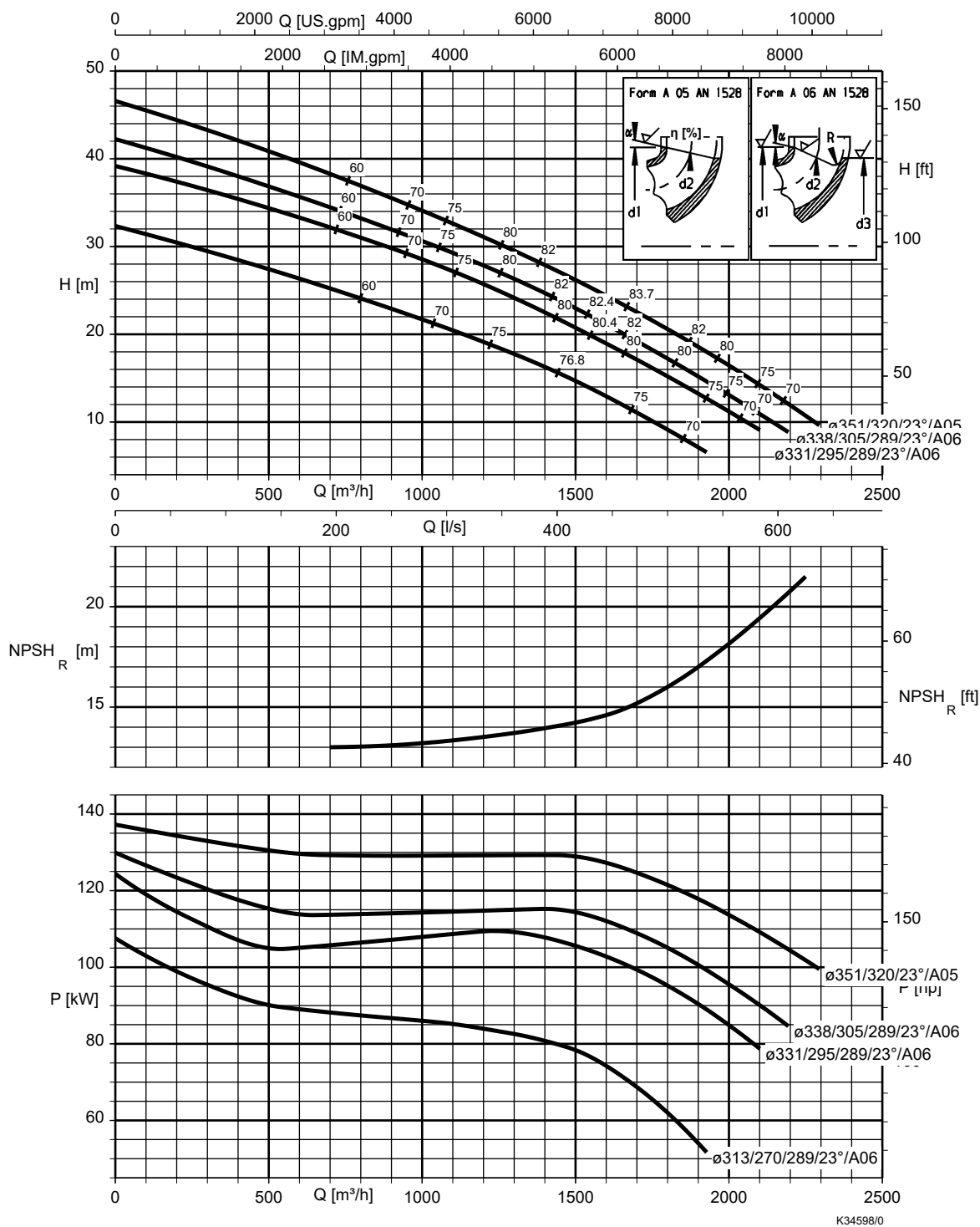


Tabelle 10: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	3,8	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	2,1	
1.4408	0,5	

Etanorm-R 300-360, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

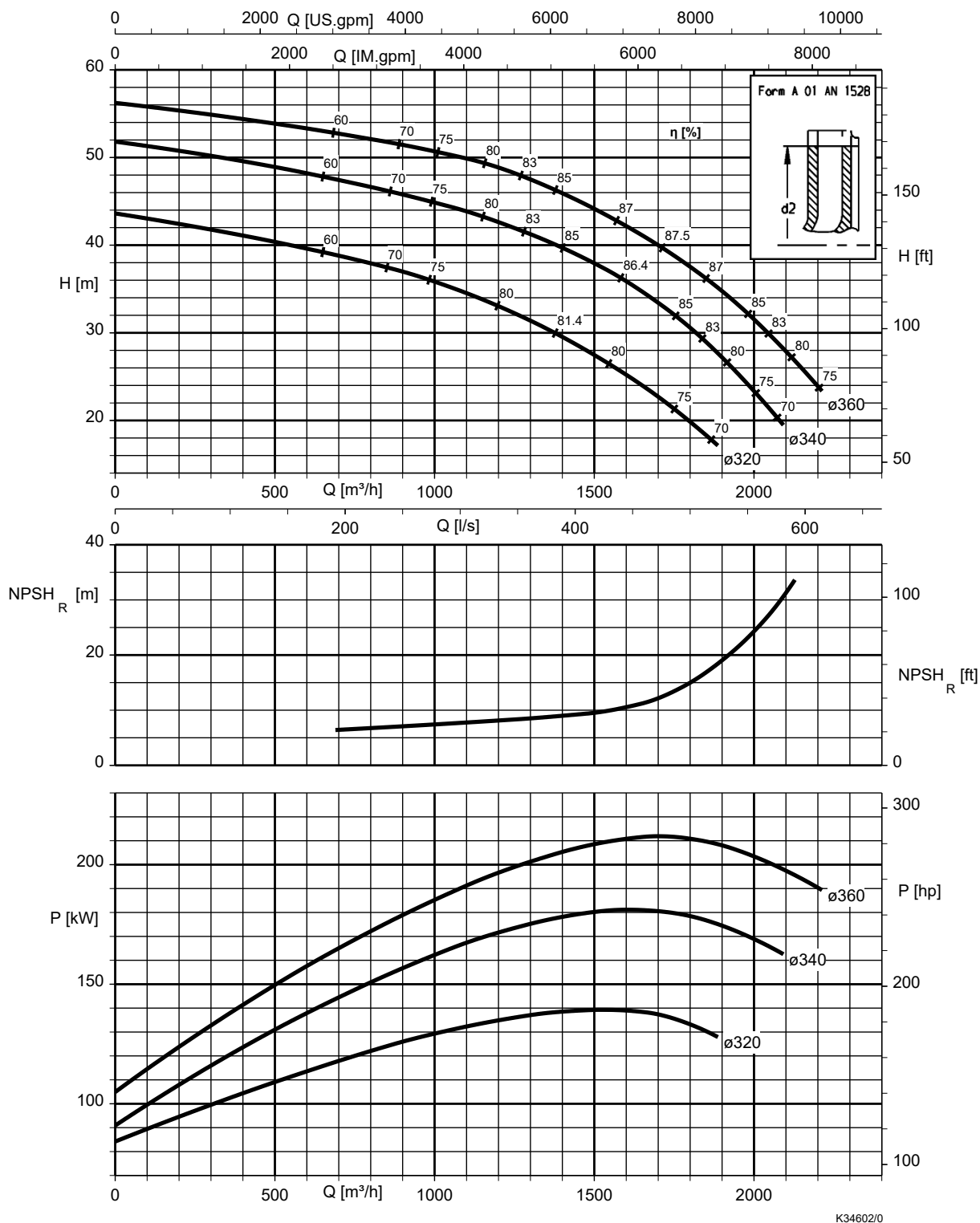


Tabelle 11: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	2,5	$\text{NPSH}_{\text{Anlage}} \geq \text{NPSH} + \text{Korrekturwert S}$
CC480K-GS	1,3	
1.4408	0,5	

Etanorm-R 300-400, $n = 1750 \text{ min}^{-1}$

Etanorm-RSY

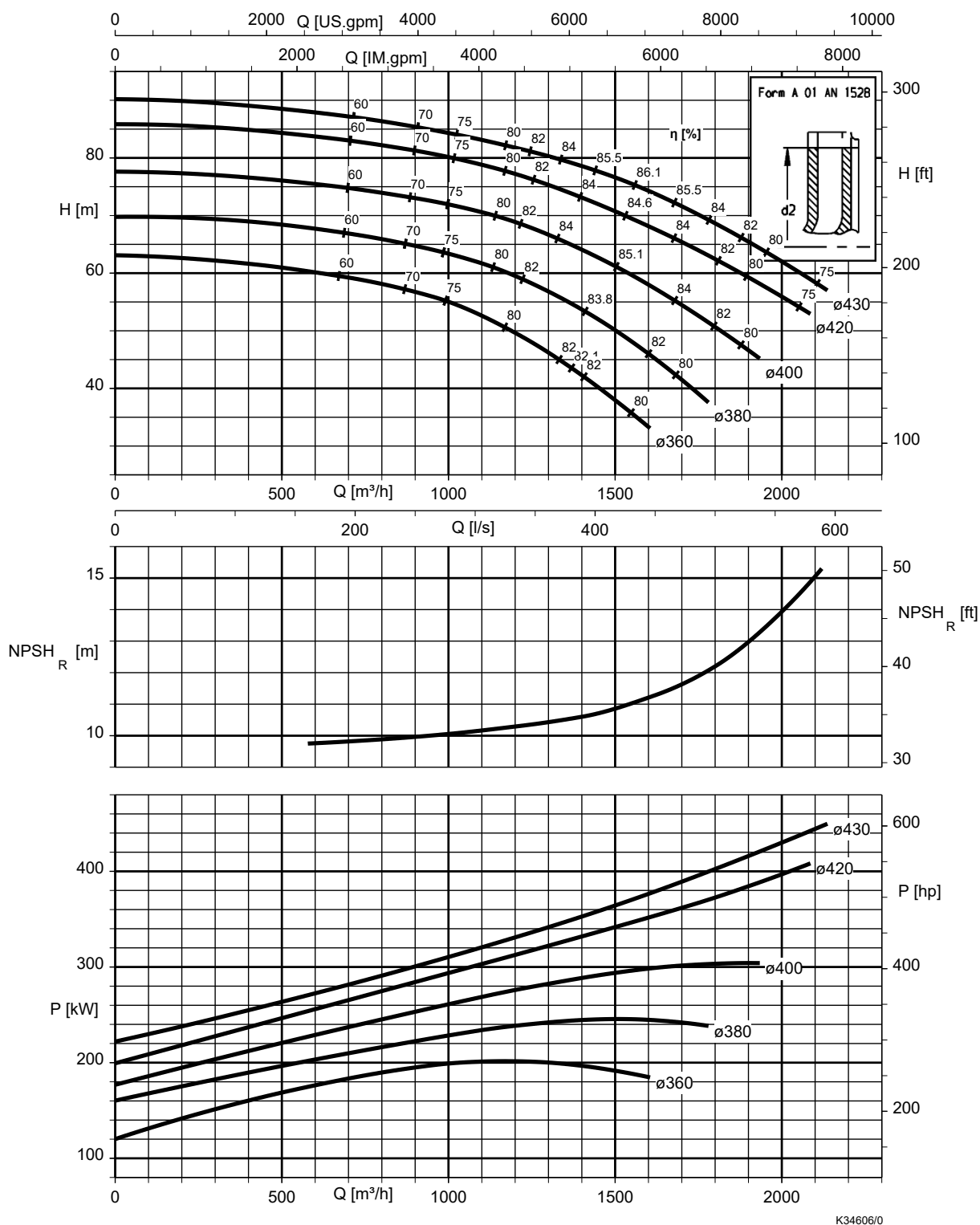


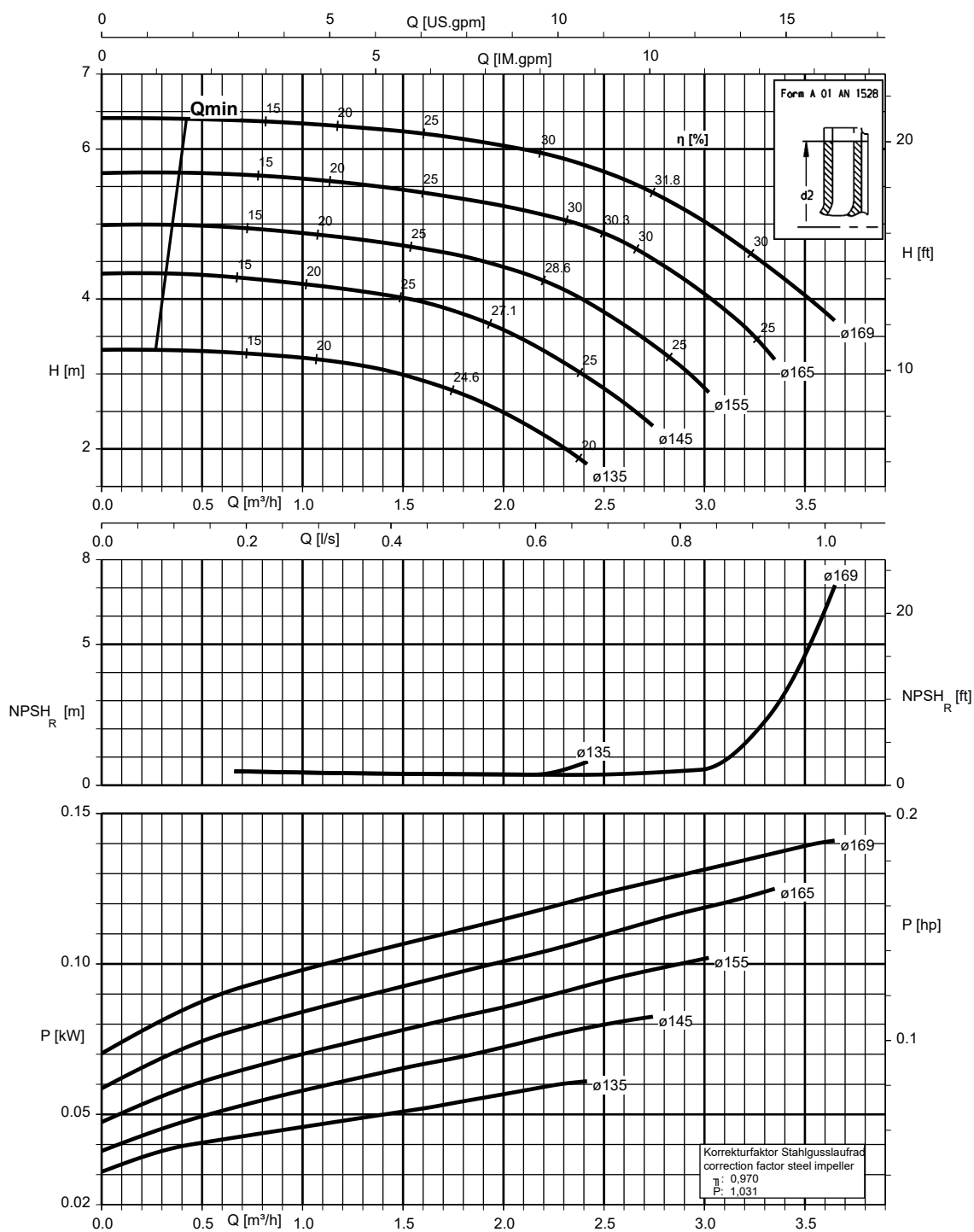
Tabelle 12: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	4,7	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	2,8	
1.4408	0,5	

$n = 1160 \text{ min}^{-1}$

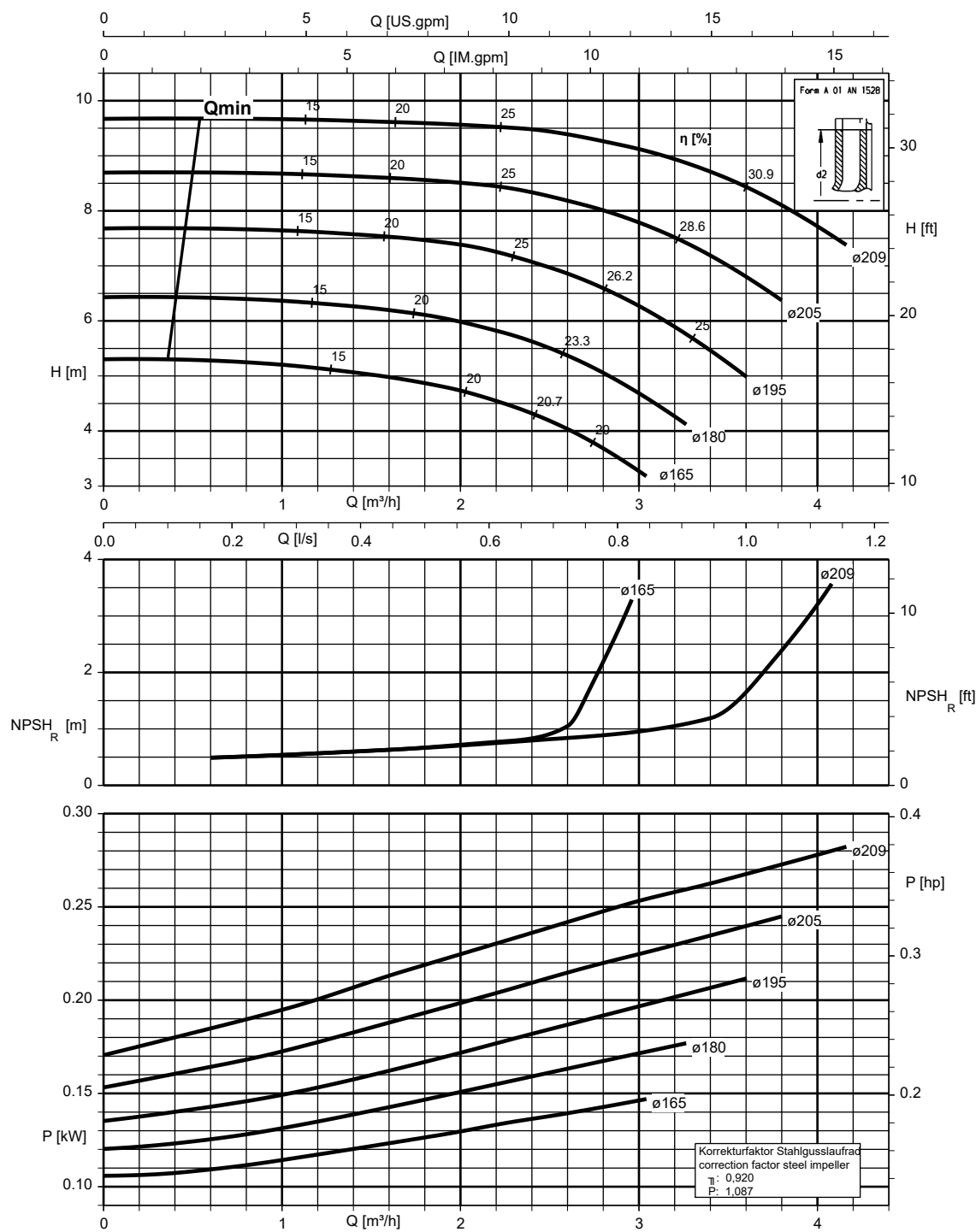
Etanorm 040-025-160, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 040-025-200, $n = 1160 \text{ min}^{-1}$

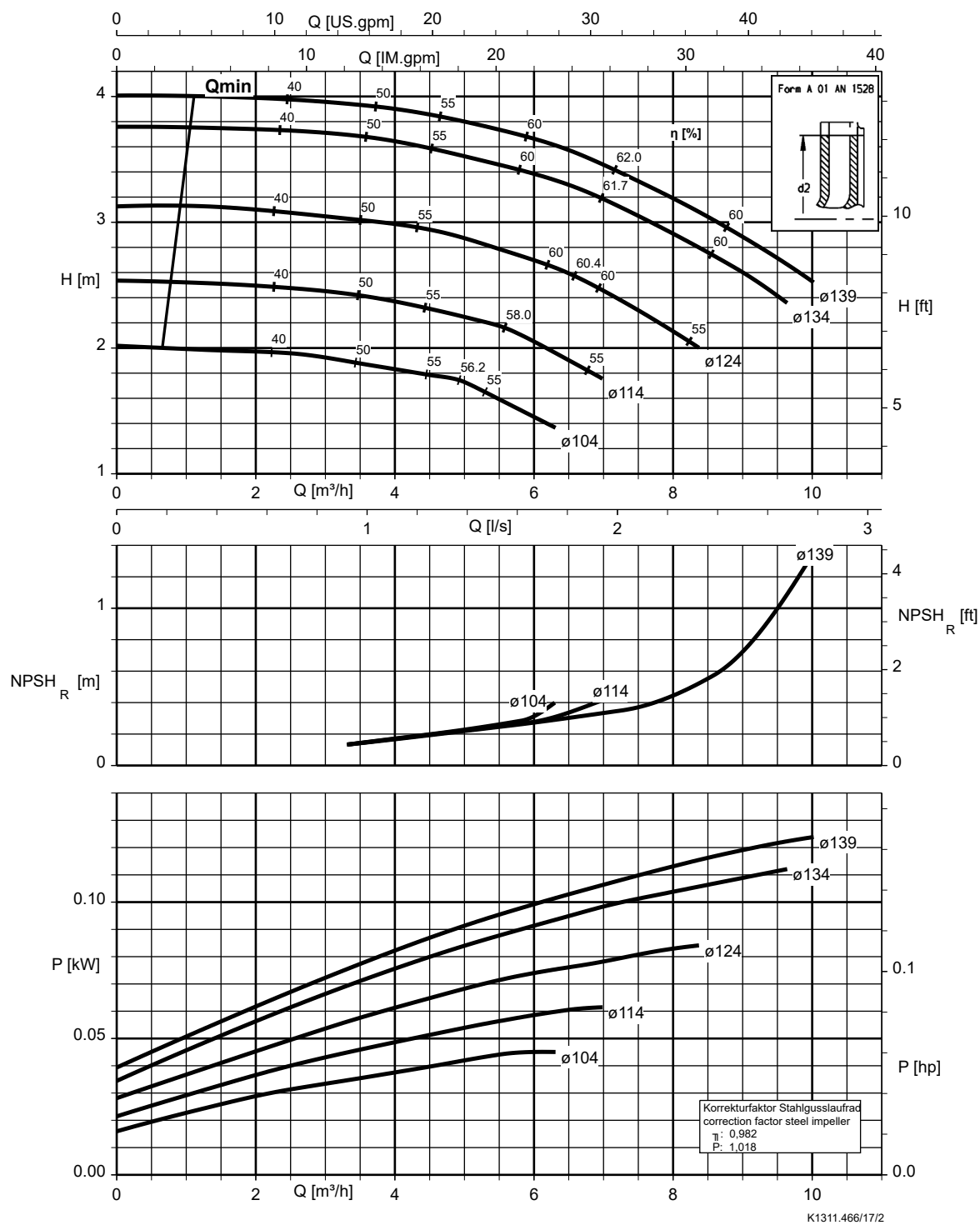
Etanorm SYT, Etabloc



K1311.466/15/2

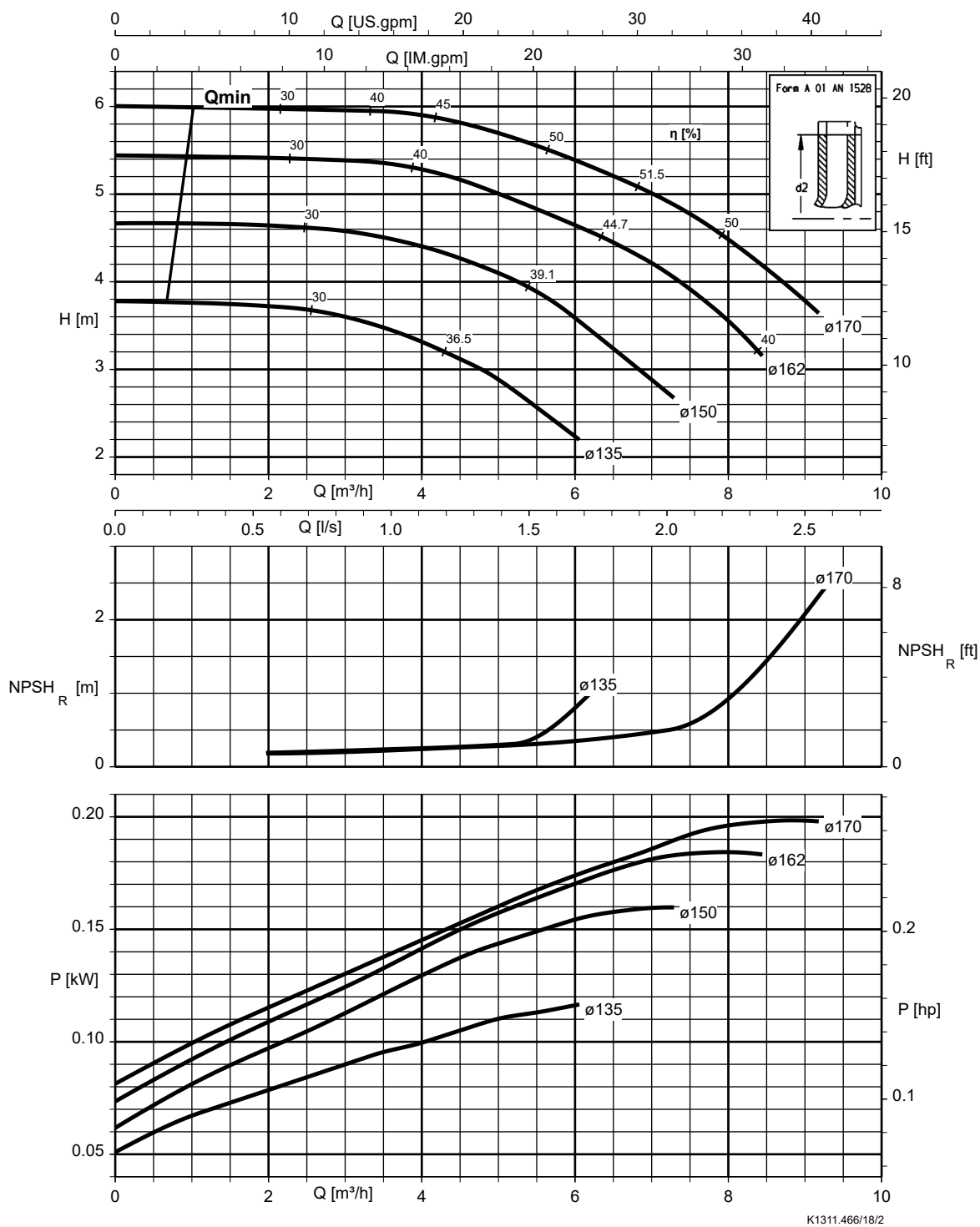
Etanorm 050-032-125.1, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



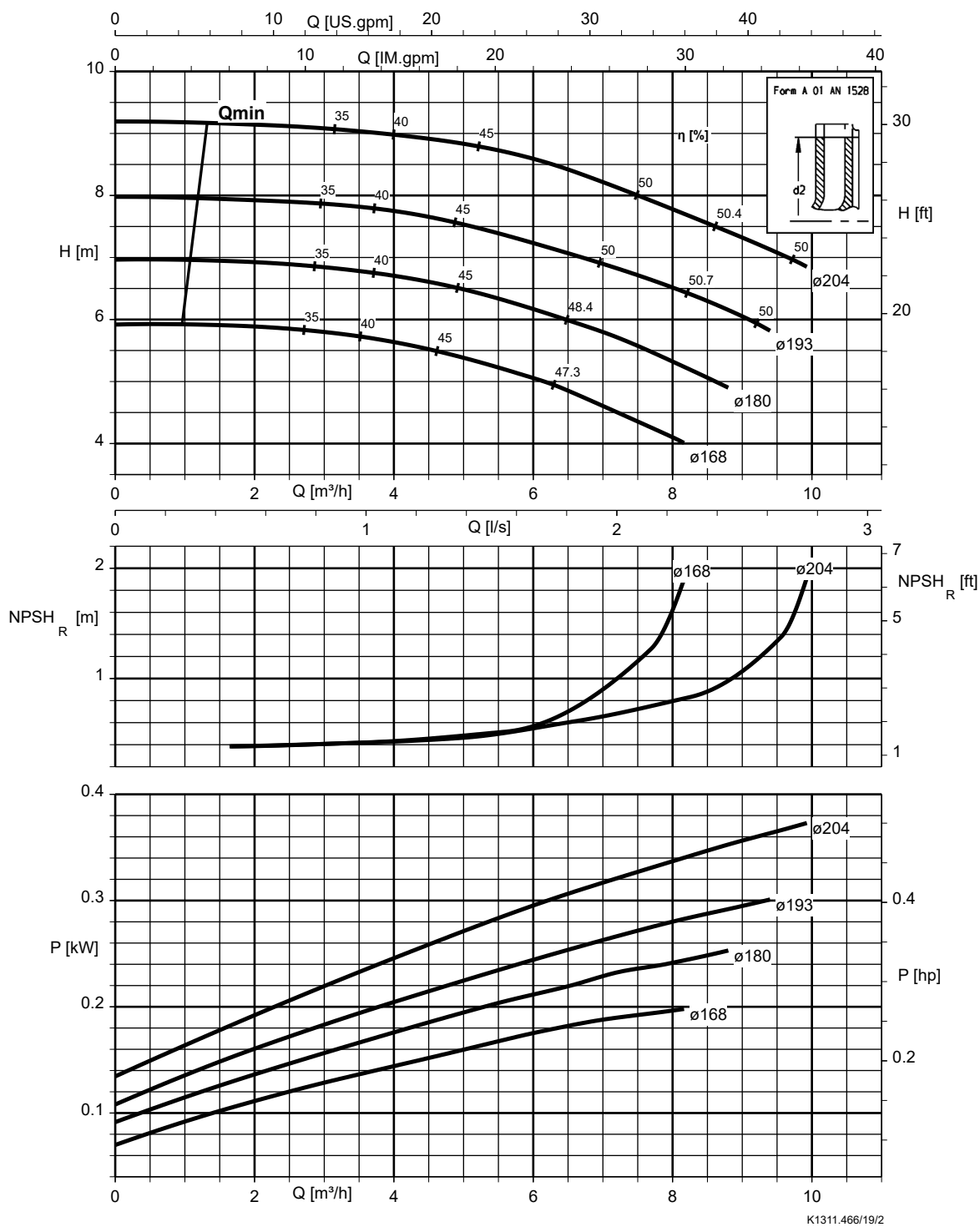
Etanorm 050-032-160.1, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



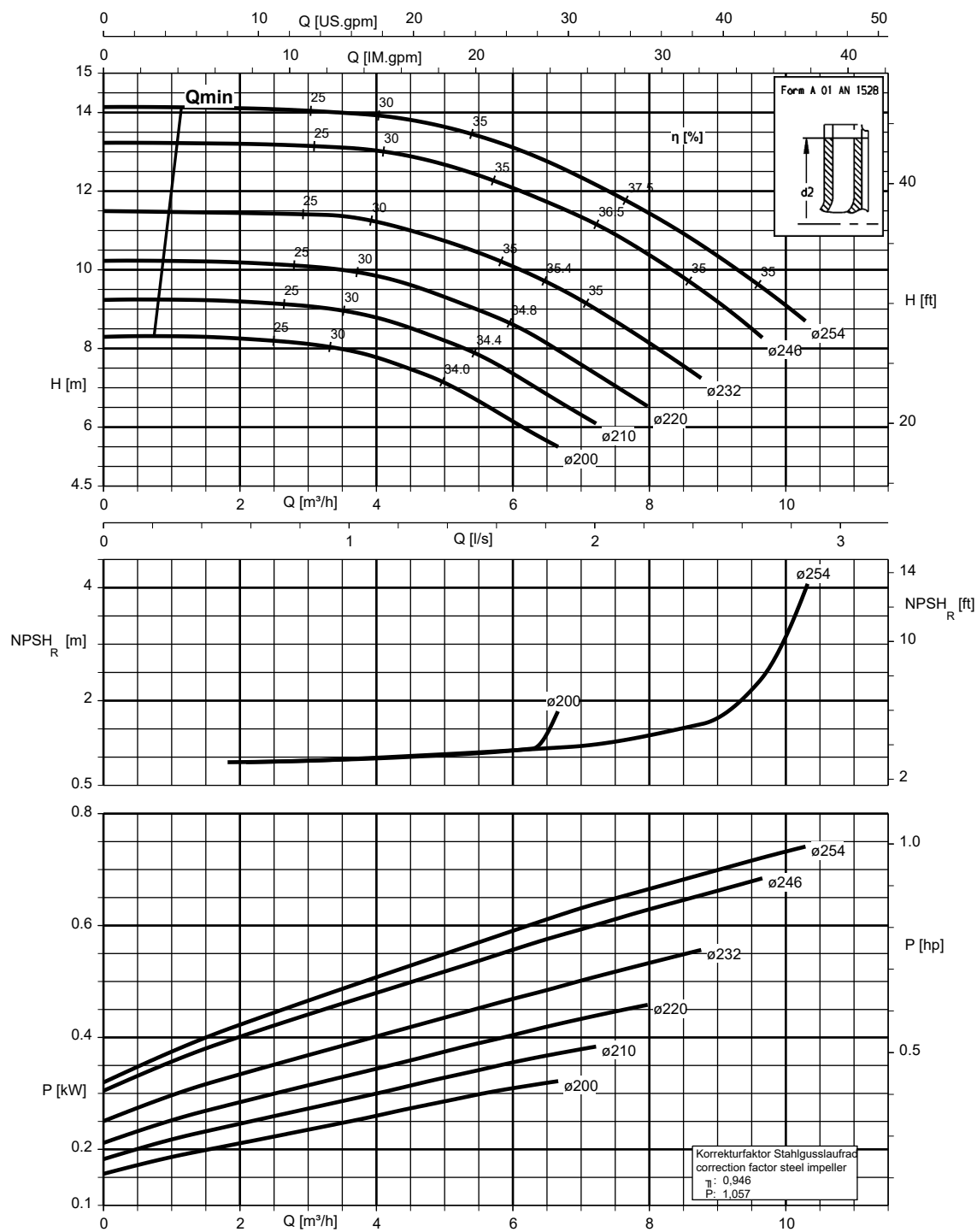
Etanorm 050-032-200.1, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 050-032-250.1, $n = 1160 \text{ min}^{-1}$

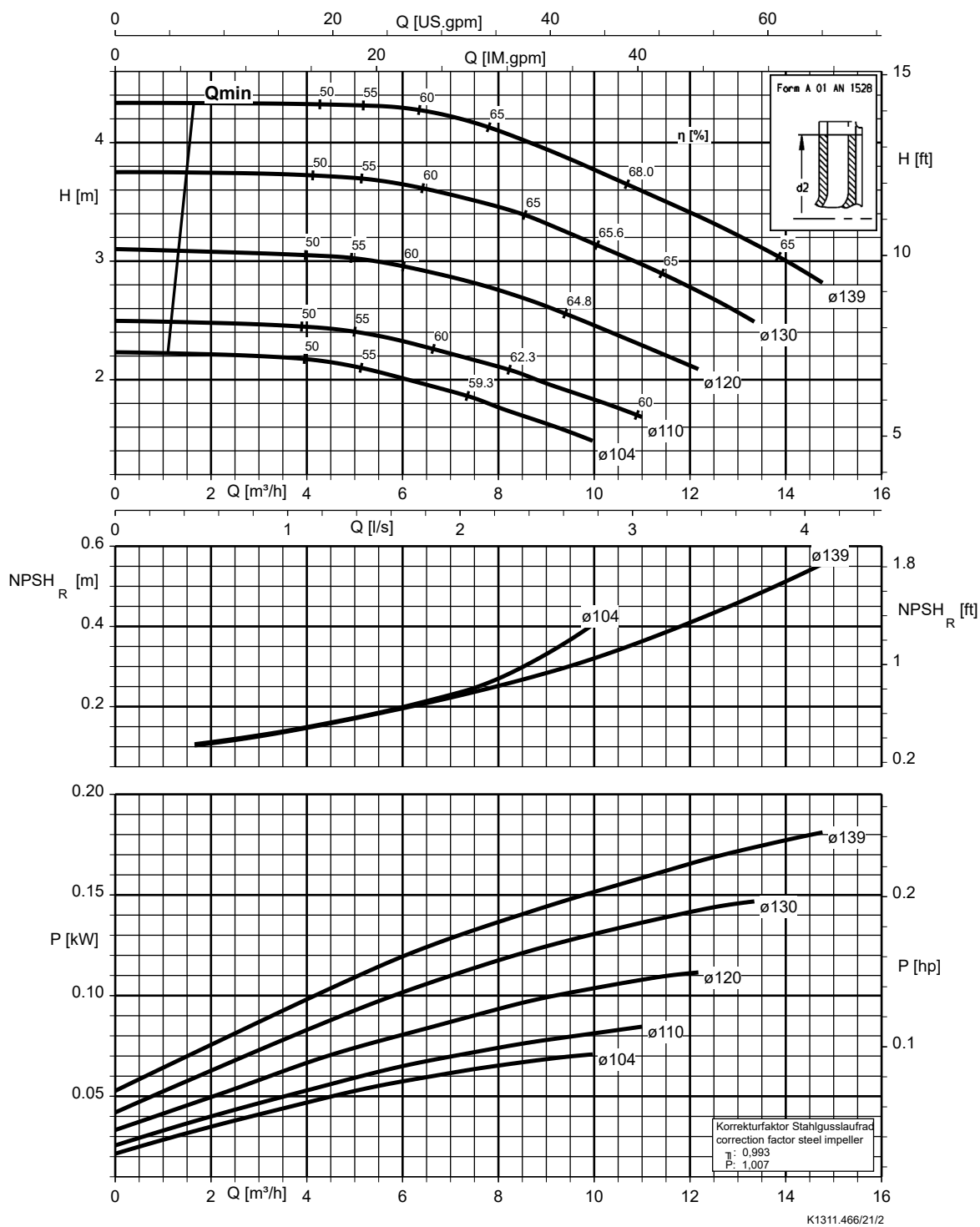
Etabloc



K1311.466/20/2

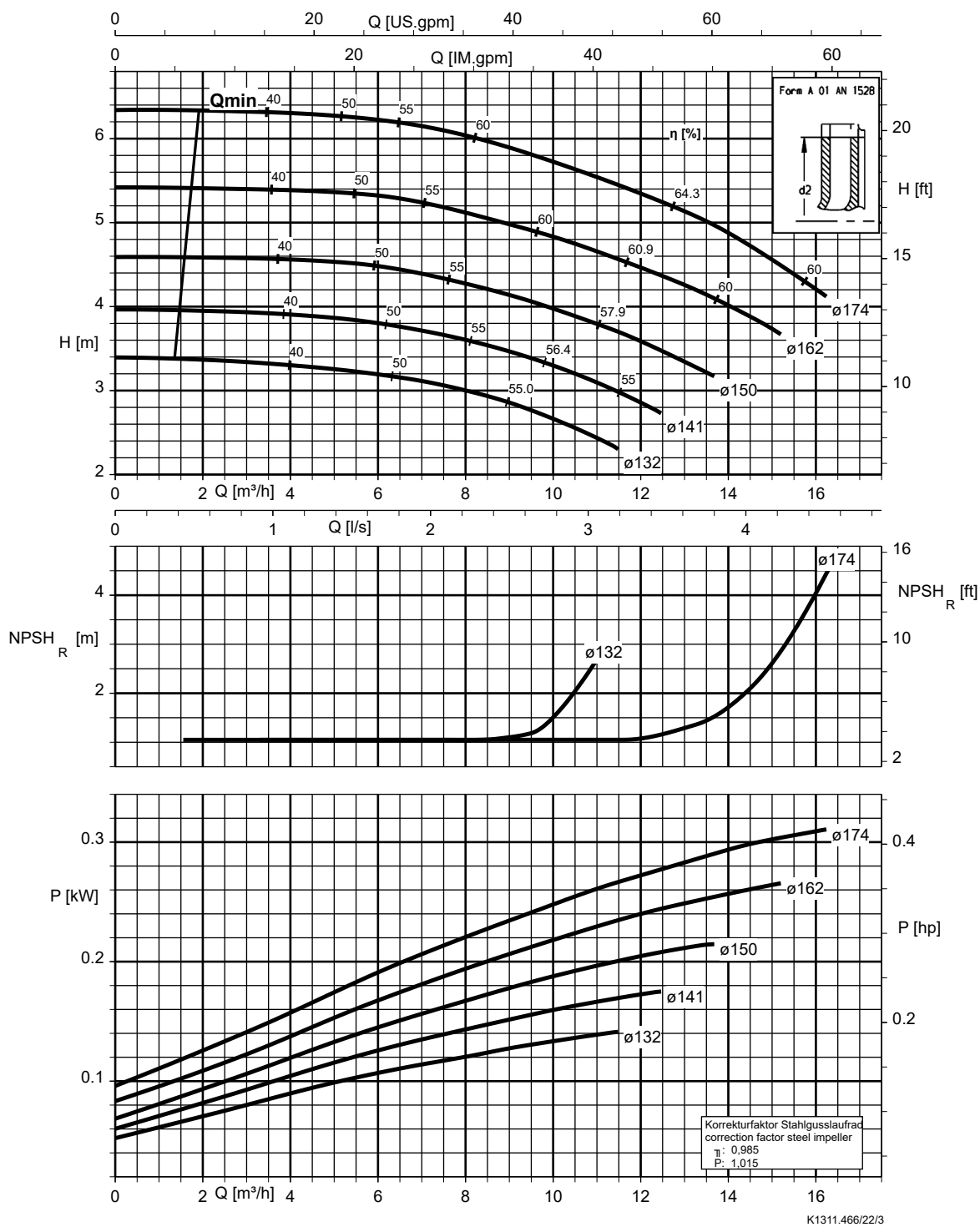
Etanorm 050-032-125, $n = 1160 \text{ min}^{-1}$

Etabloc



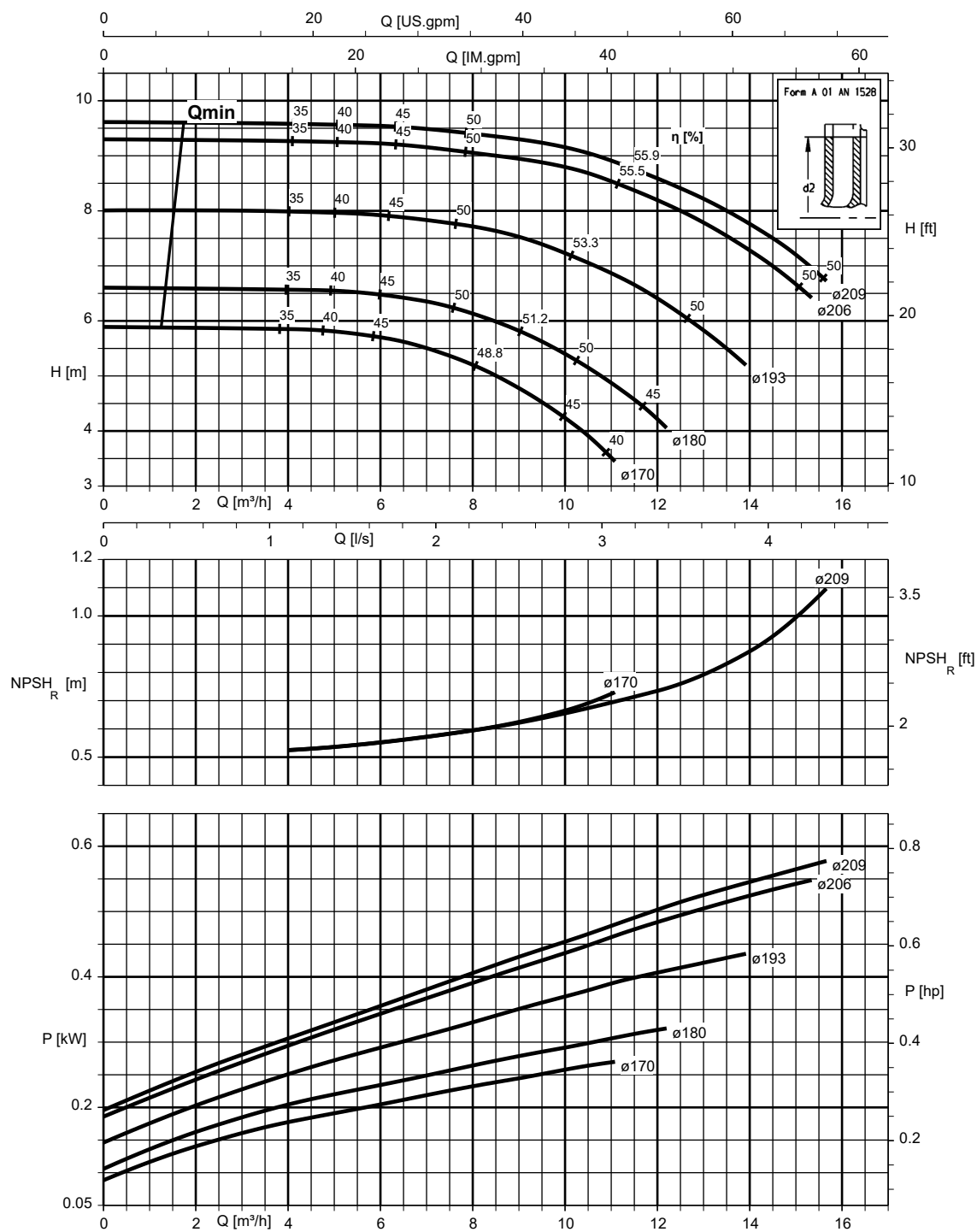
Etanorm 050-032-160, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 050-032-200, $n = 1160 \text{ min}^{-1}$

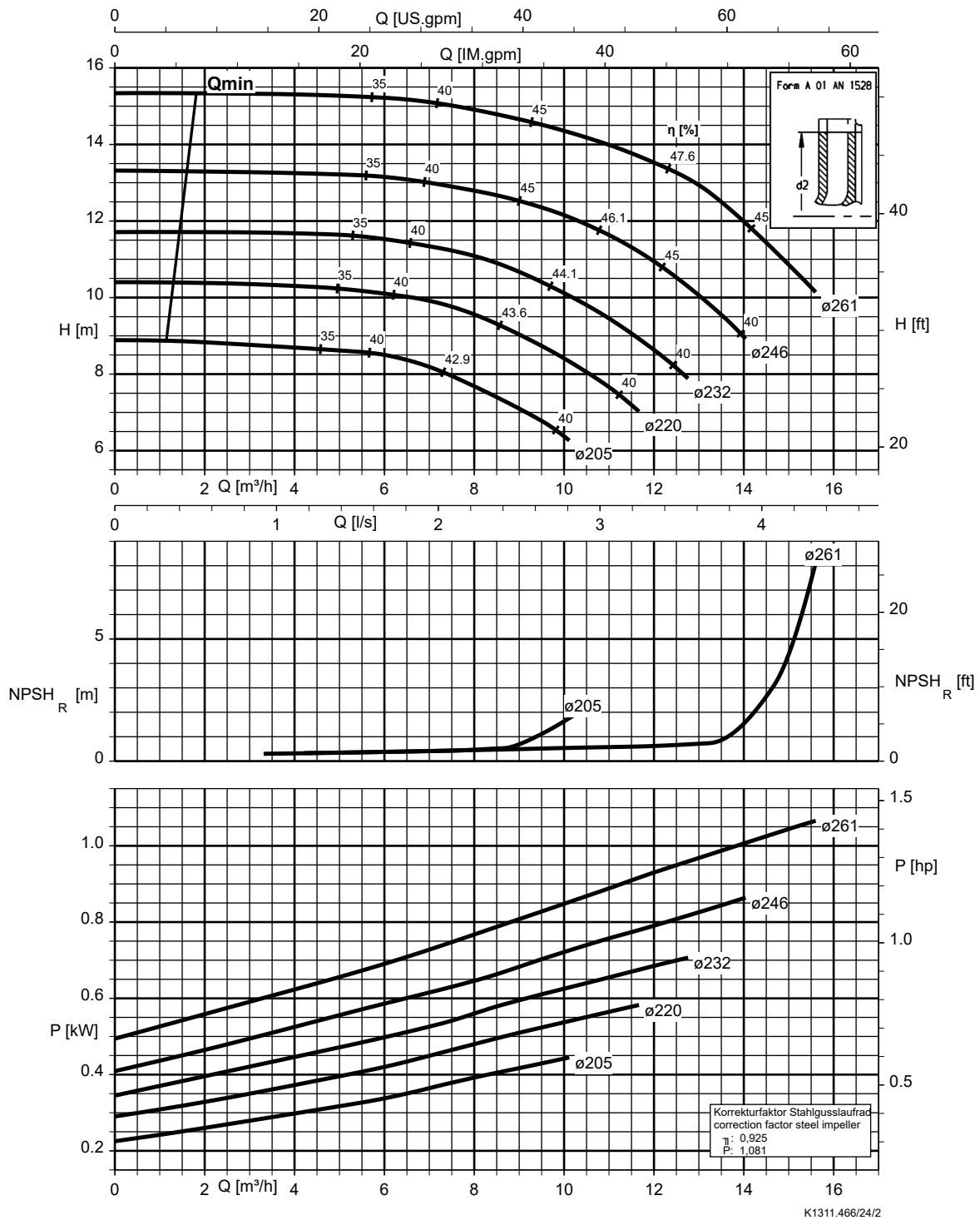
Etanorm SYT, Etabloc



K1311.466/23/1

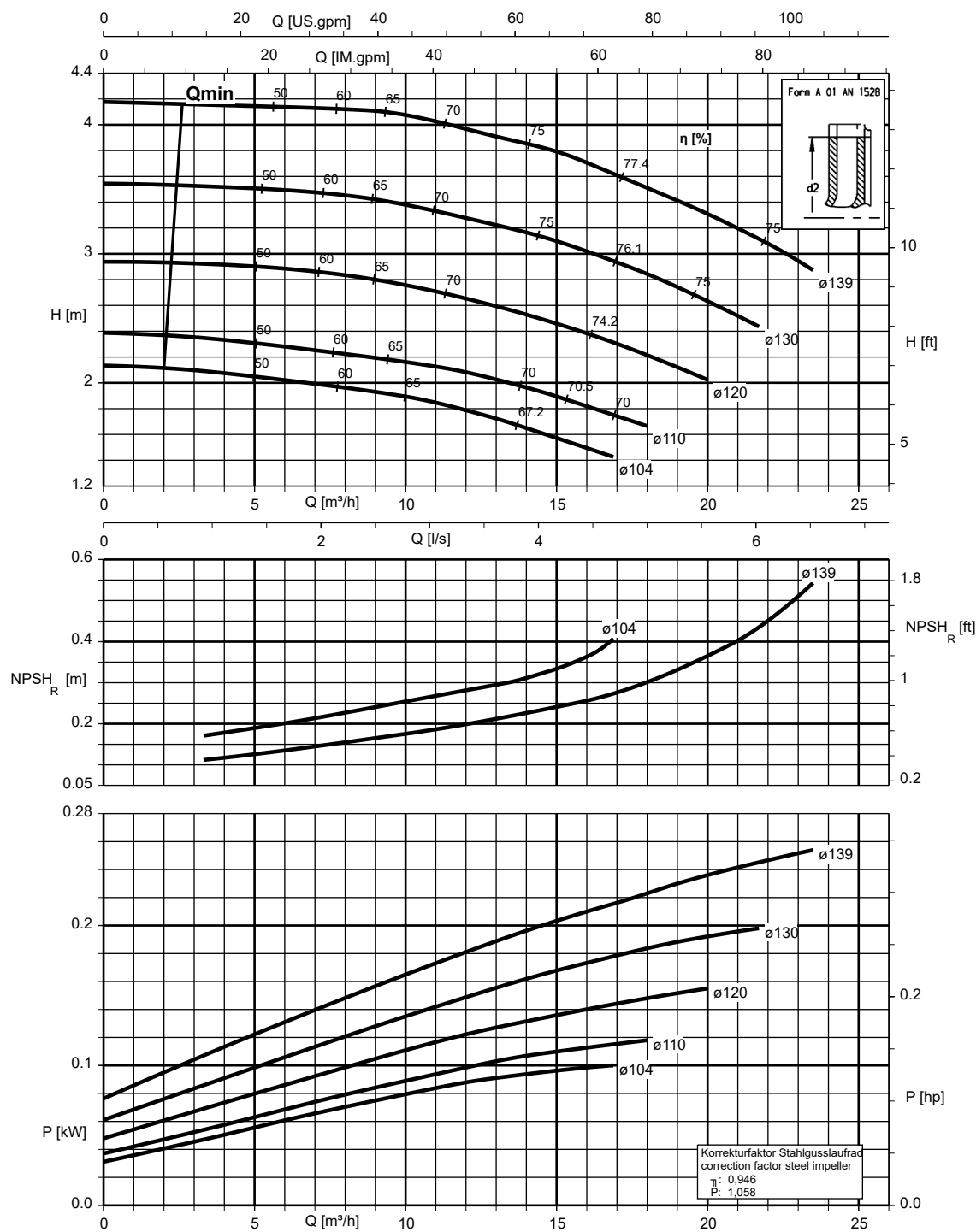
Etanorm 050-032-250, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 065-040-125, $n = 1160 \text{ min}^{-1}$

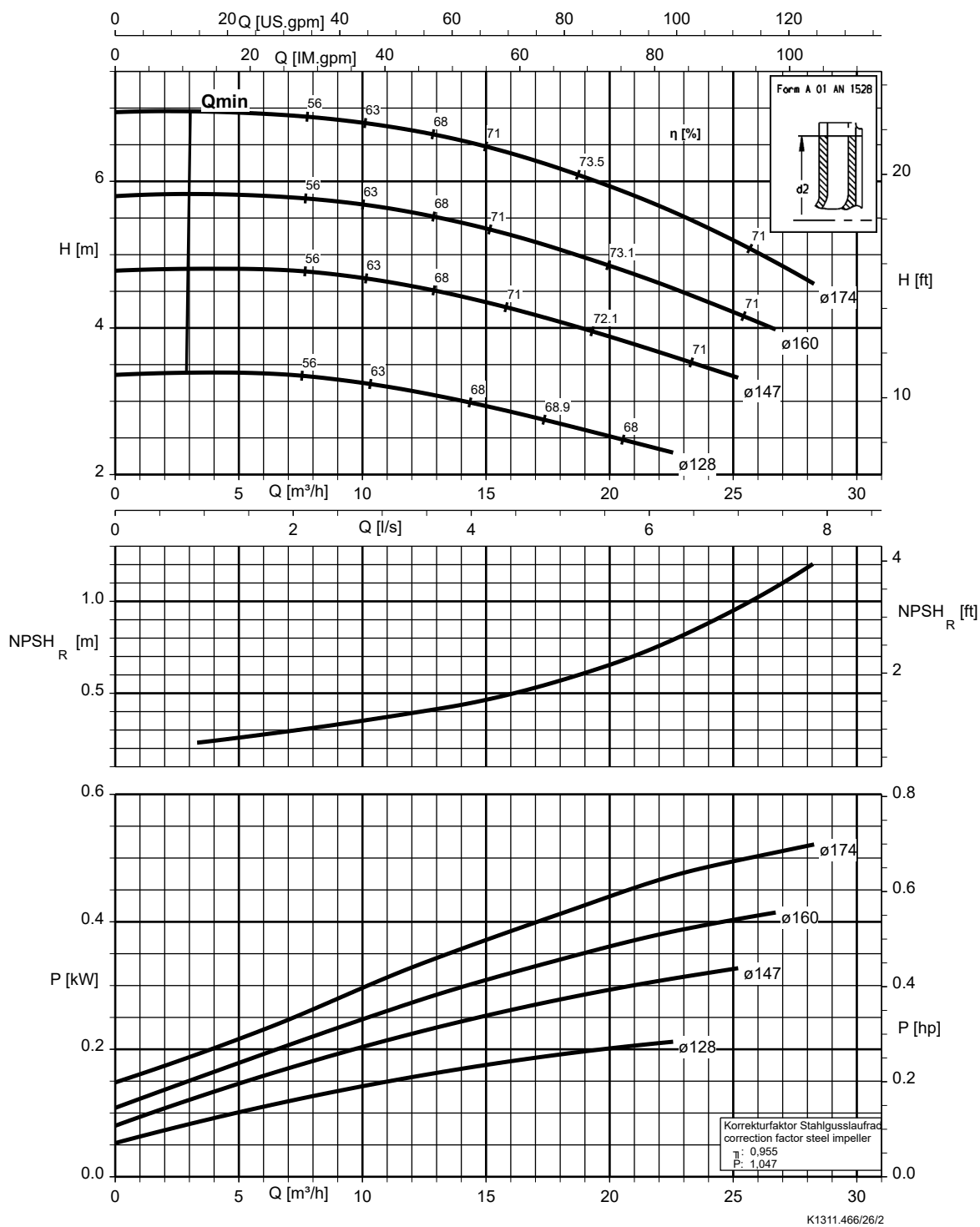
Etabloc



K1311.466/25/1

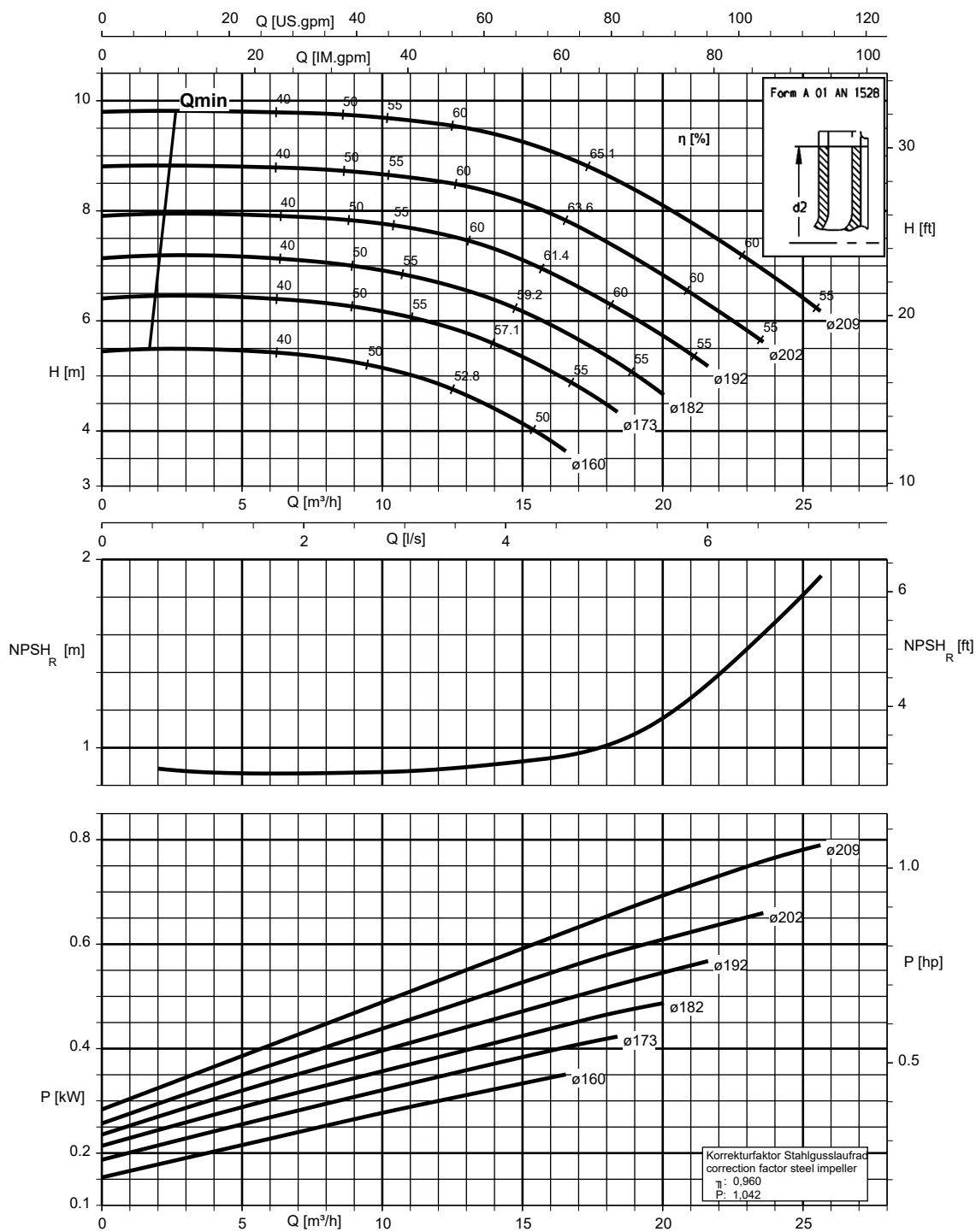
Etanorm 065-040-160, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 065-040-200, $n = 1160 \text{ min}^{-1}$

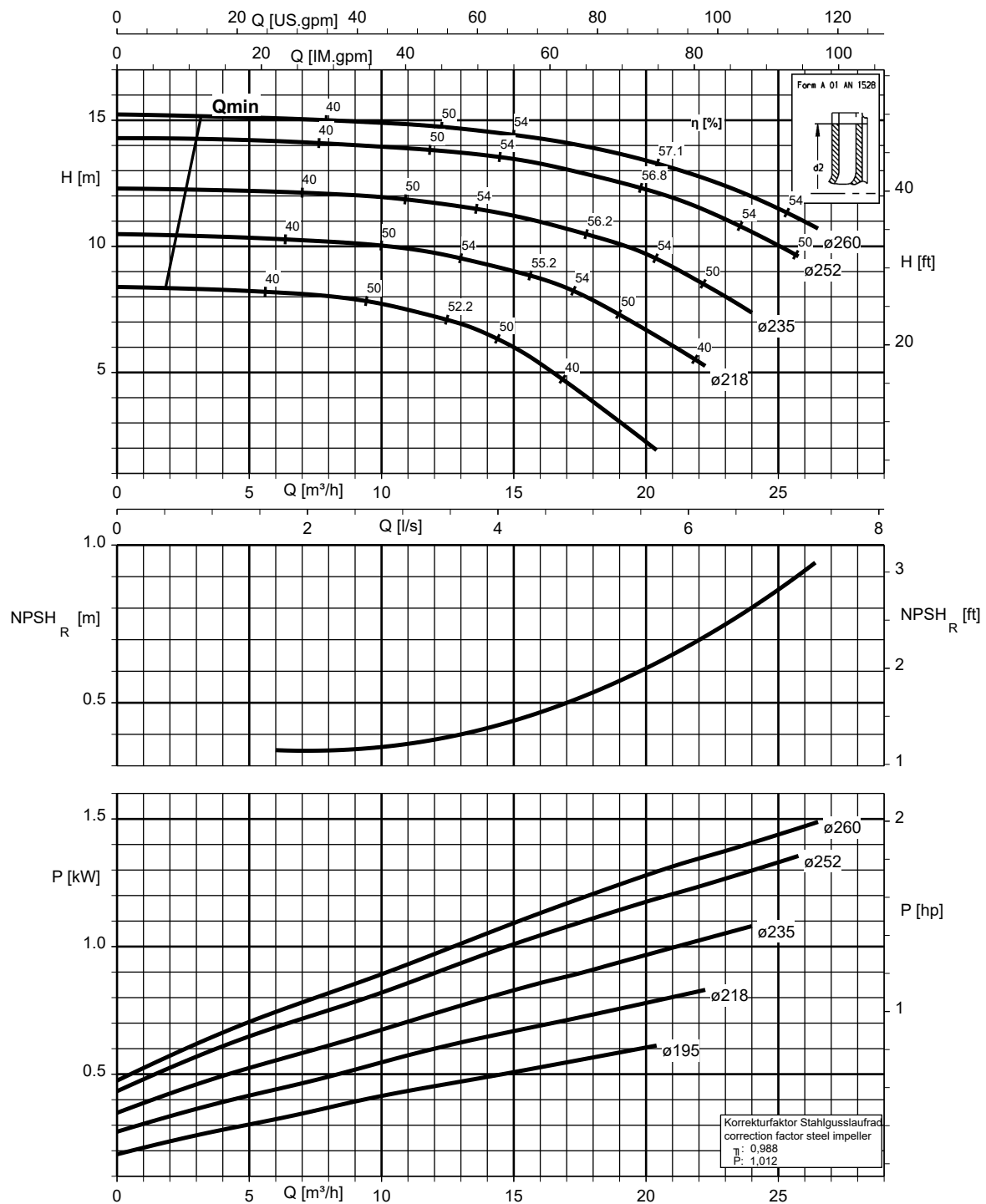
Etanorm SYT, Etabloc



K1311.466/27/1

Etanorm 065-040-250, $n = 1160 \text{ min}^{-1}$

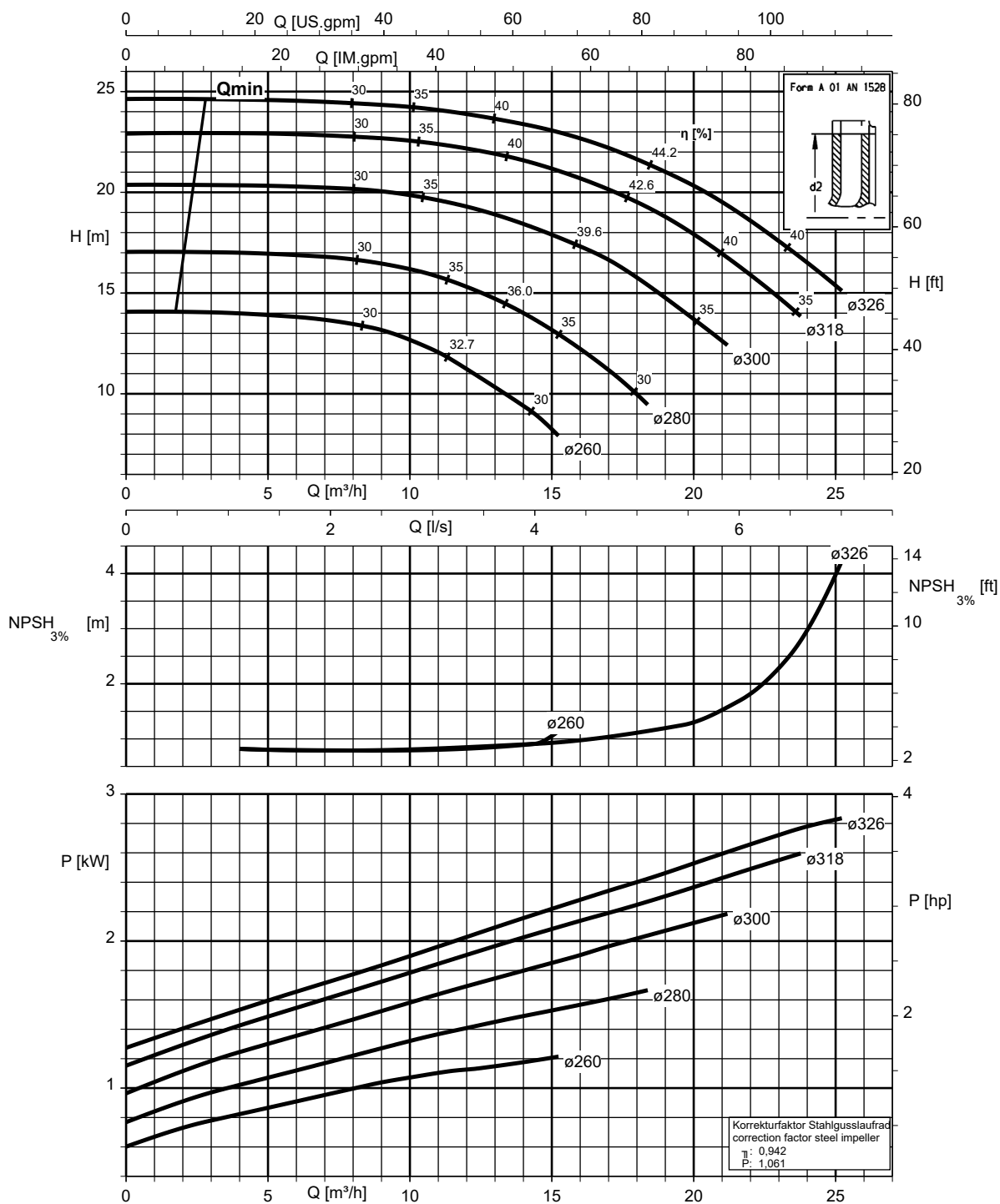
Etanorm SYT, Etabloc



K1311.466/28/2

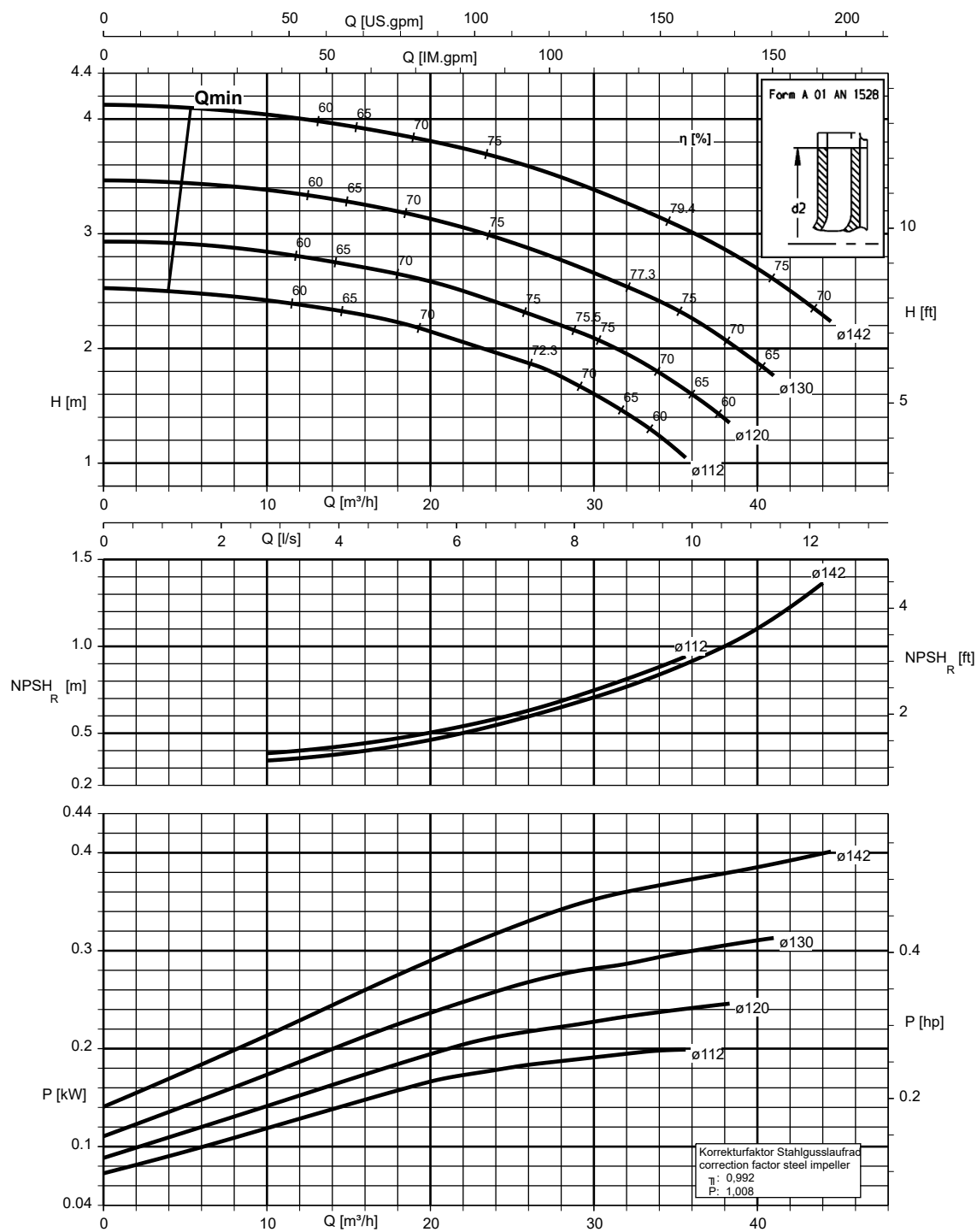
Etanorm 065-040-315, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 065-050-125, $n = 1160 \text{ min}^{-1}$

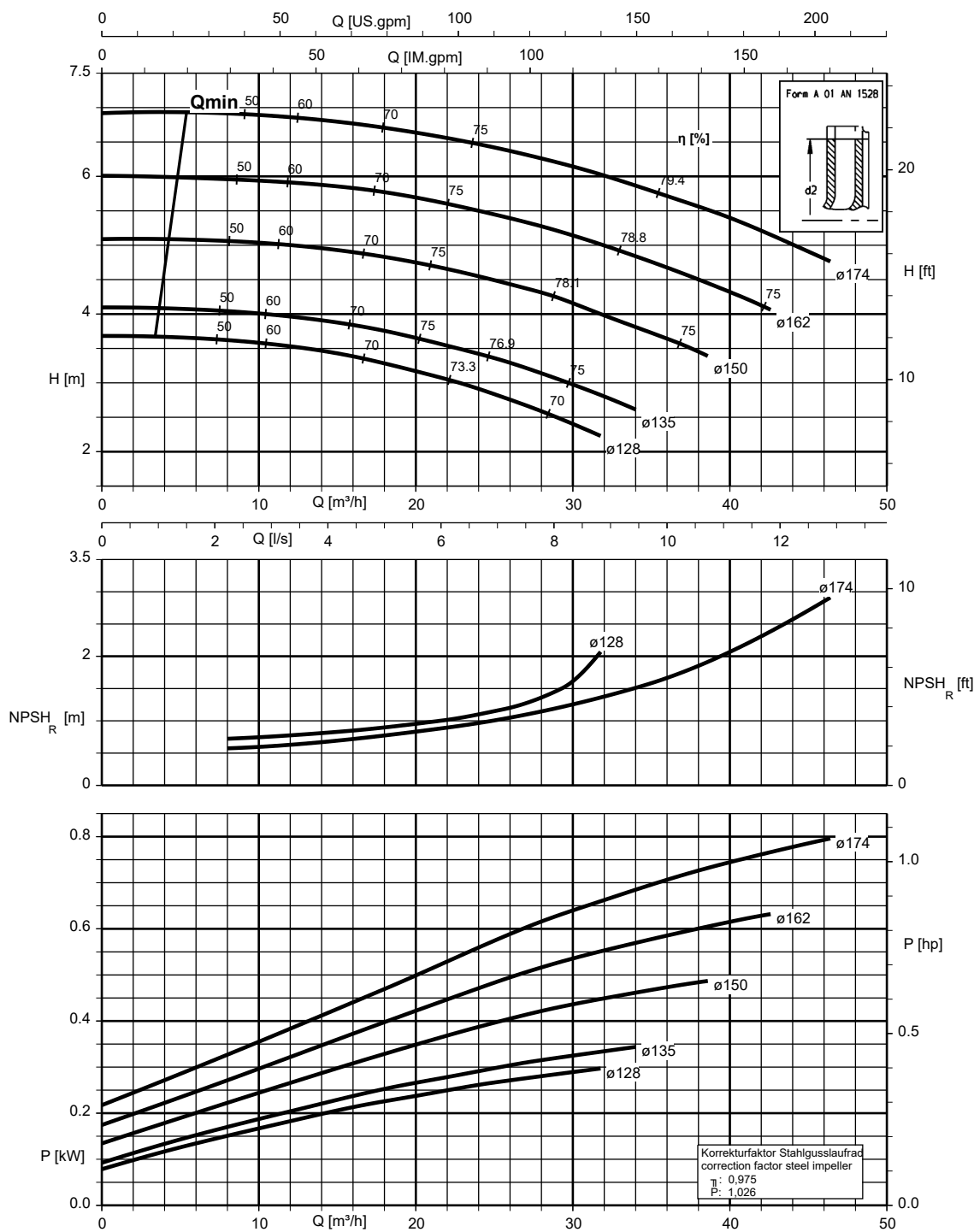
Etabloc



K1311.466/30/1

Etanorm 065-050-160, $n = 1160 \text{ min}^{-1}$

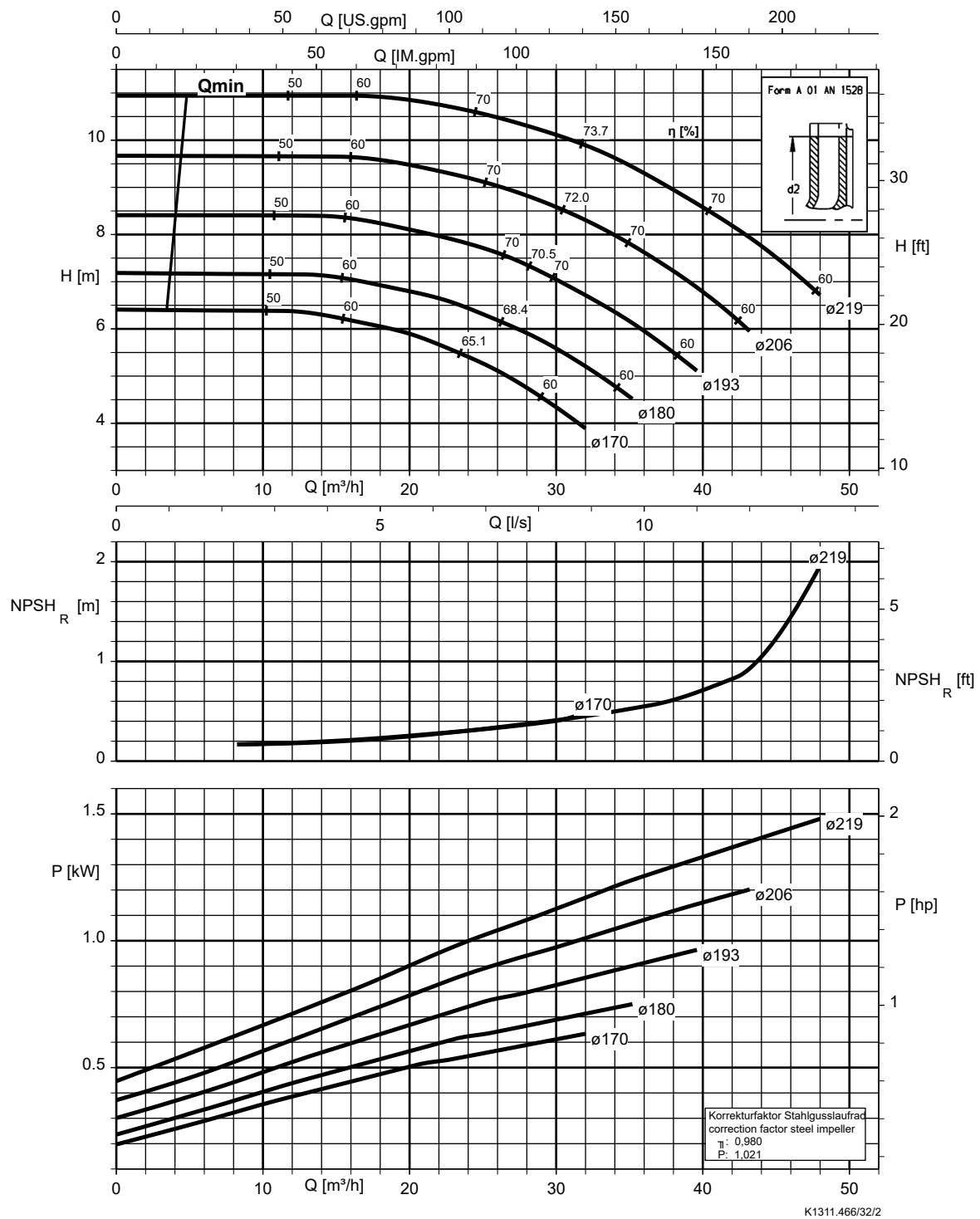
Etanorm SYT, Etabloc



K1311.466/31/1

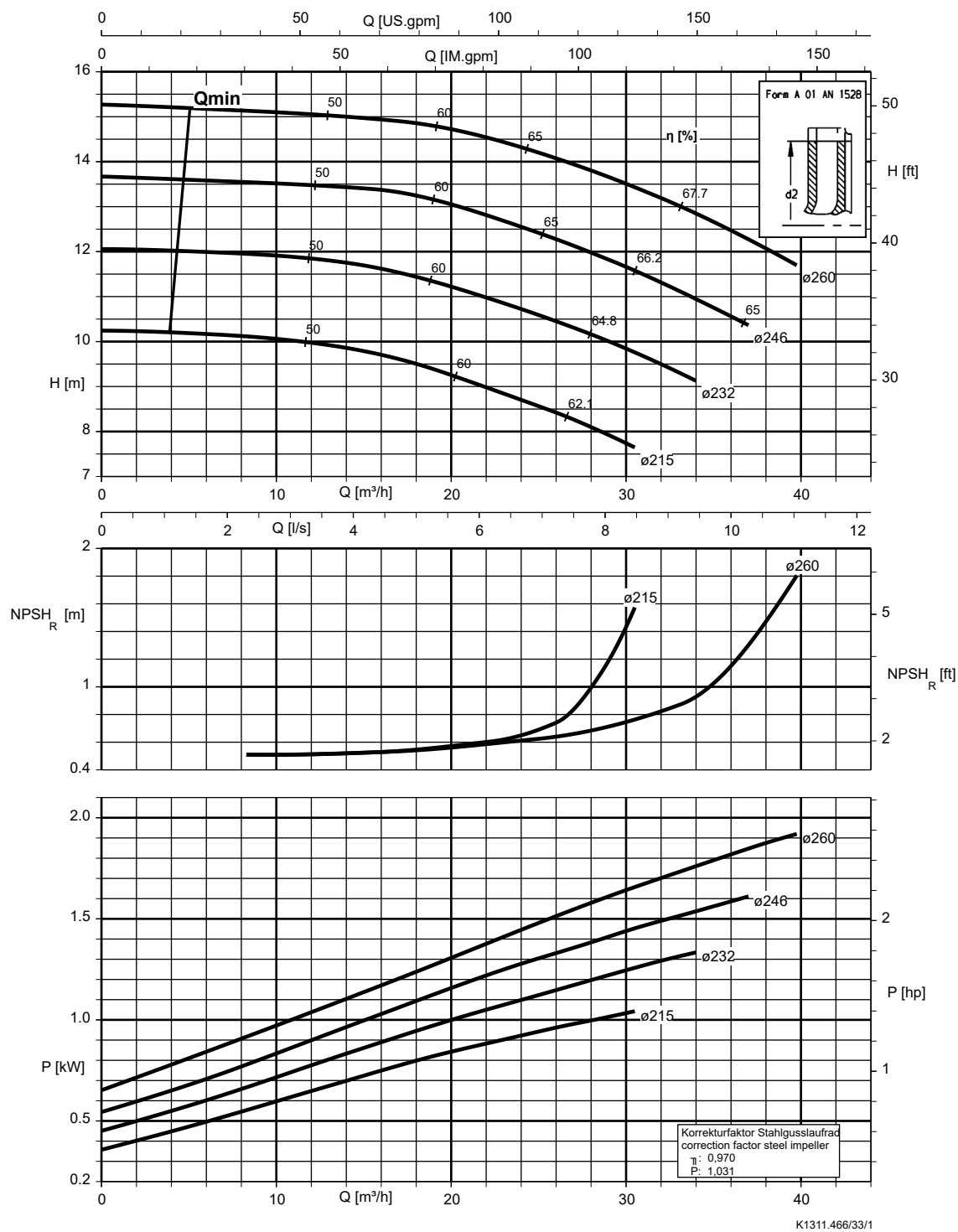
Etanorm 065-050-200, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



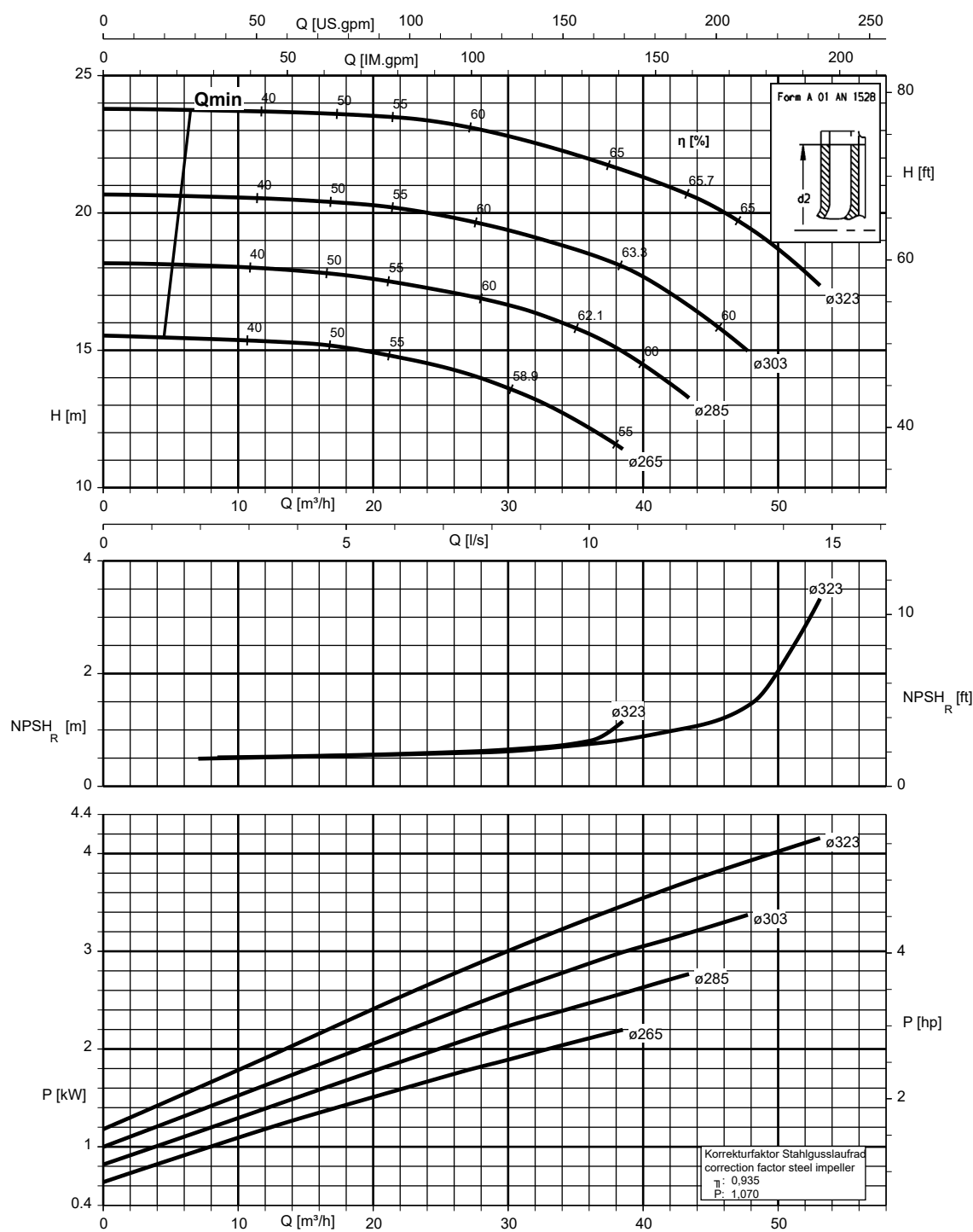
Etanorm 065-050-250, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 065-050-315, $n = 1160 \text{ min}^{-1}$

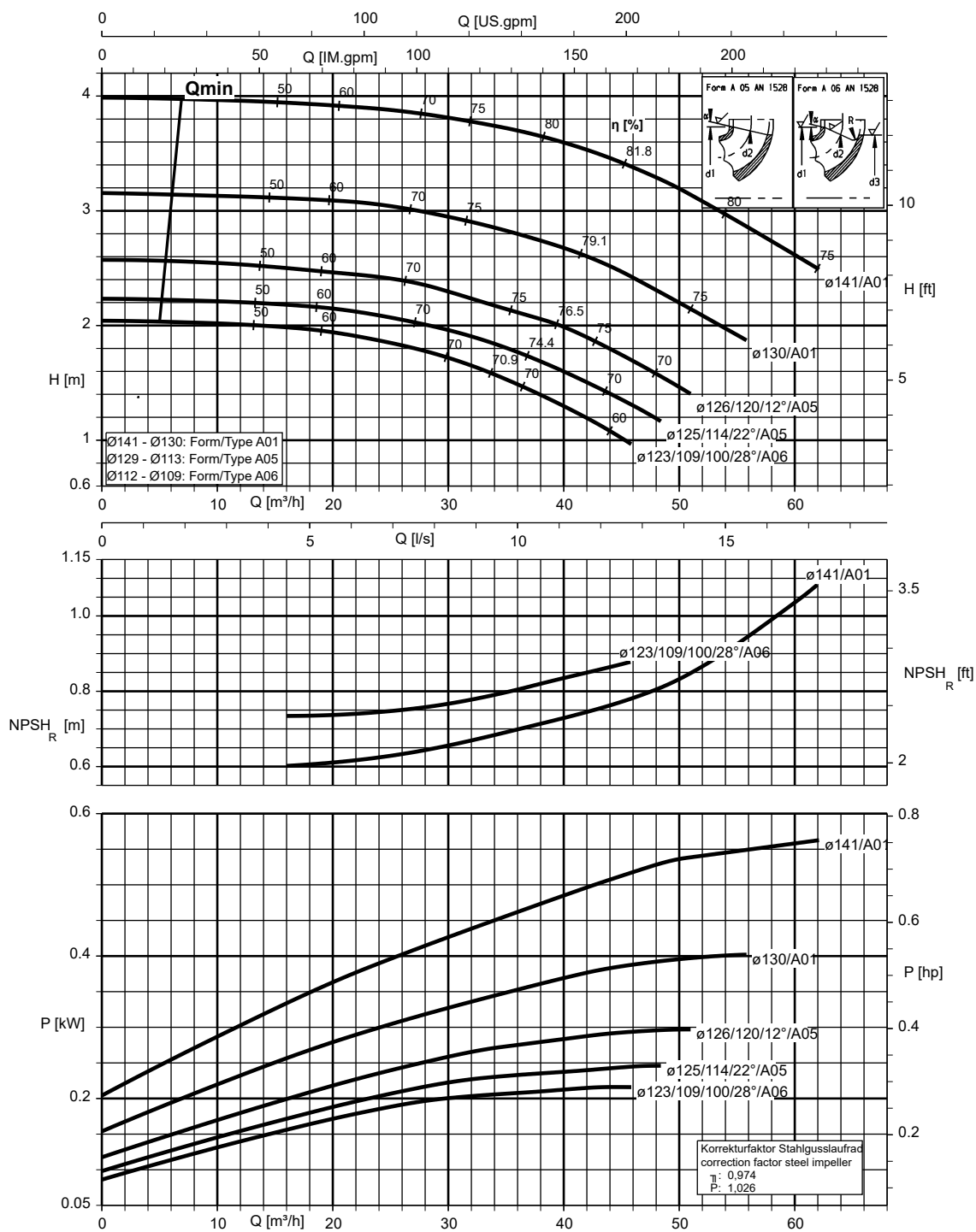
Etanorm SYT, Etabloc



K1311.466/34/2

Etanorm 080-065-125, $n = 1160 \text{ min}^{-1}$

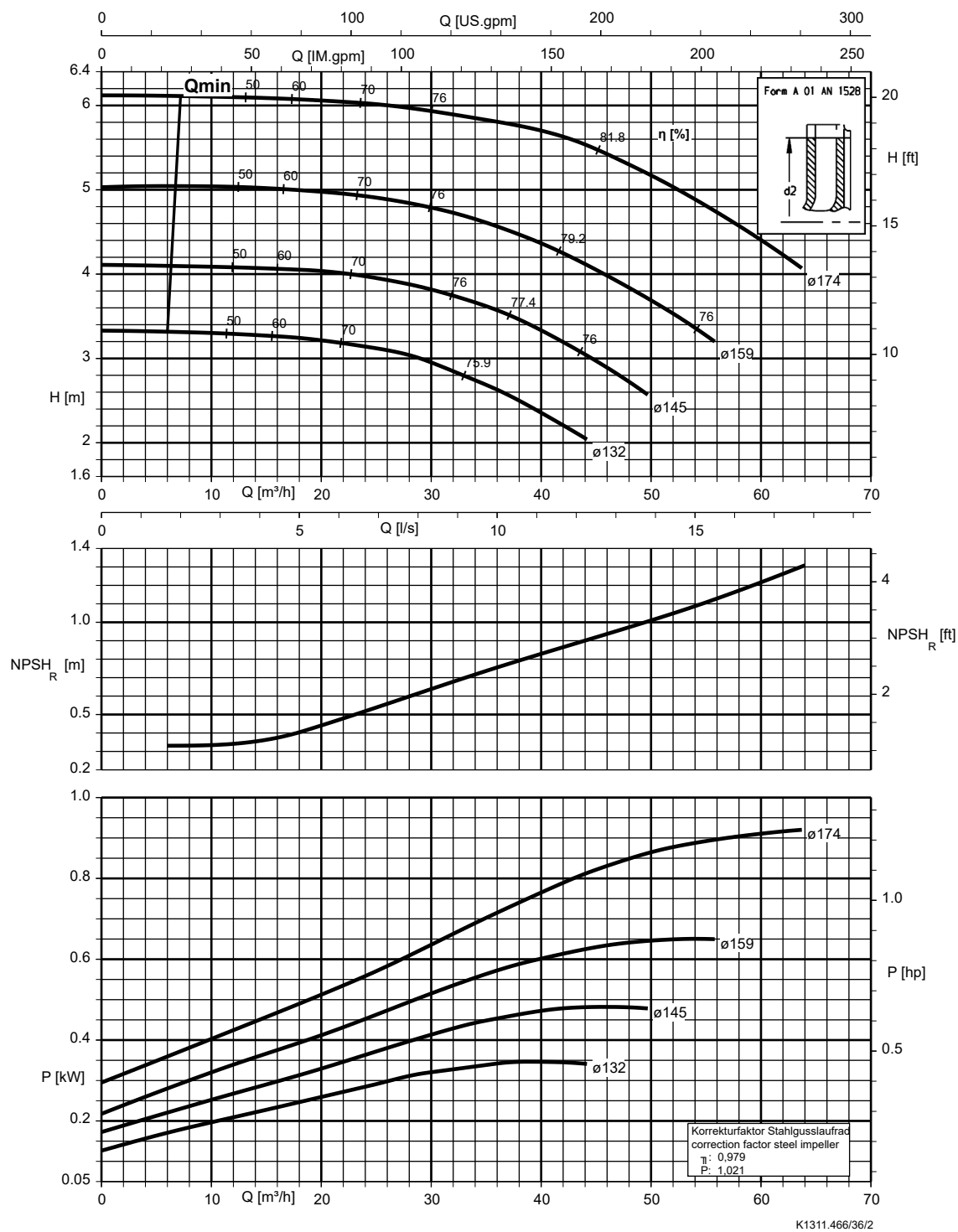
Etabloc



K1311.466/35/2

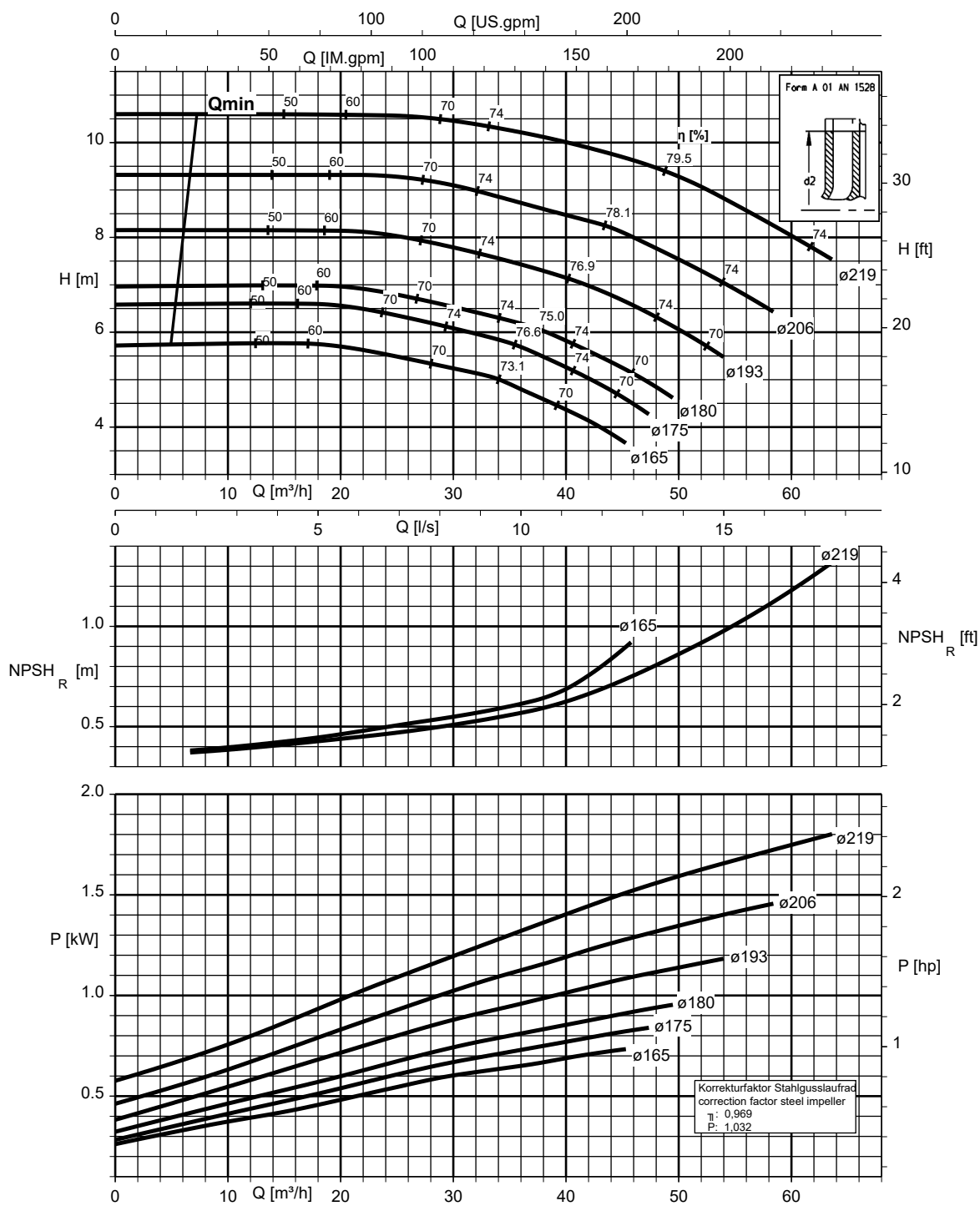
Etanorm 080-065-160, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 080-065-200, $n = 1160 \text{ min}^{-1}$

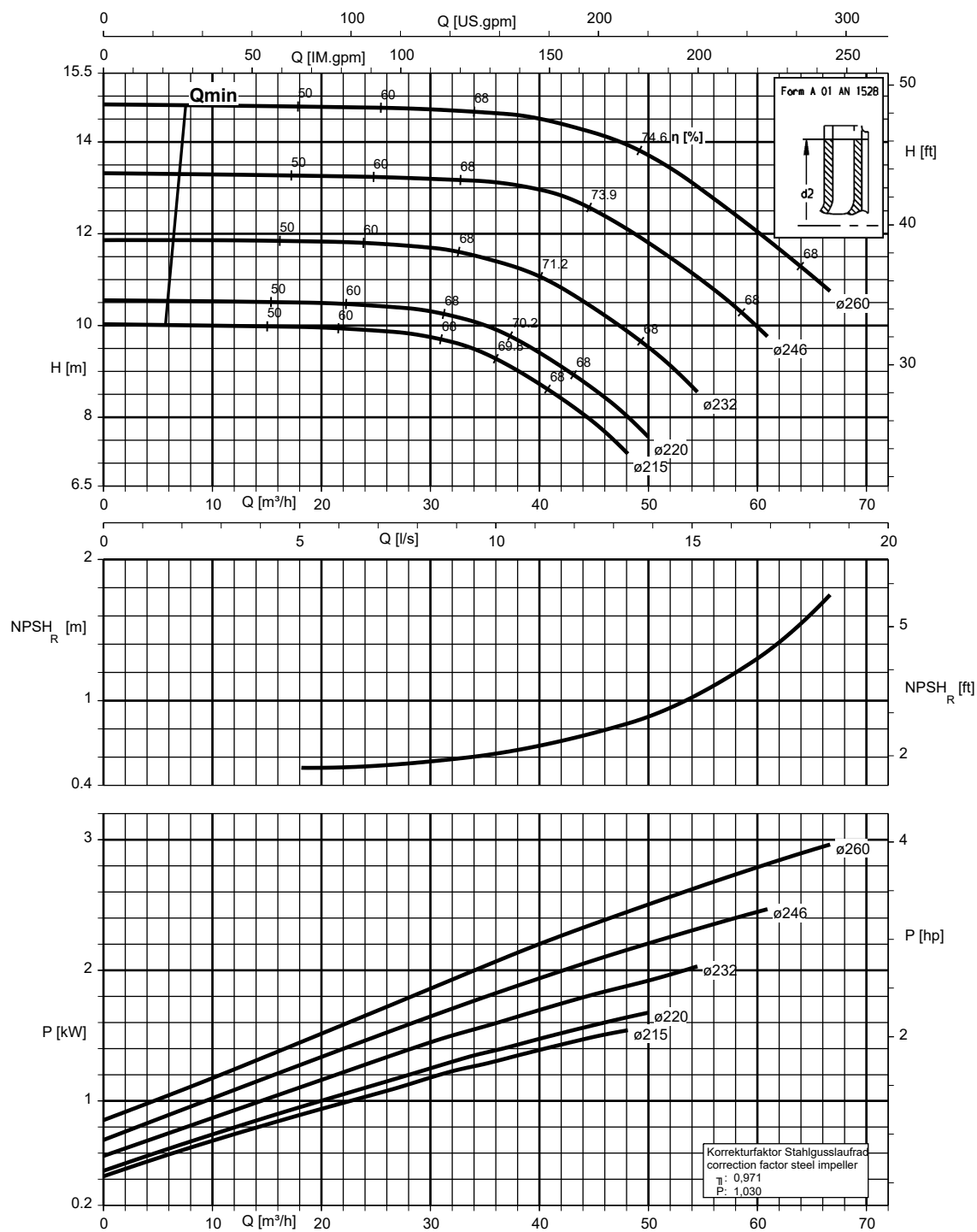
Etanorm SYT, Etabloc



K1311.466/37/2

Etanorm 080-065-250, $n = 1160 \text{ min}^{-1}$

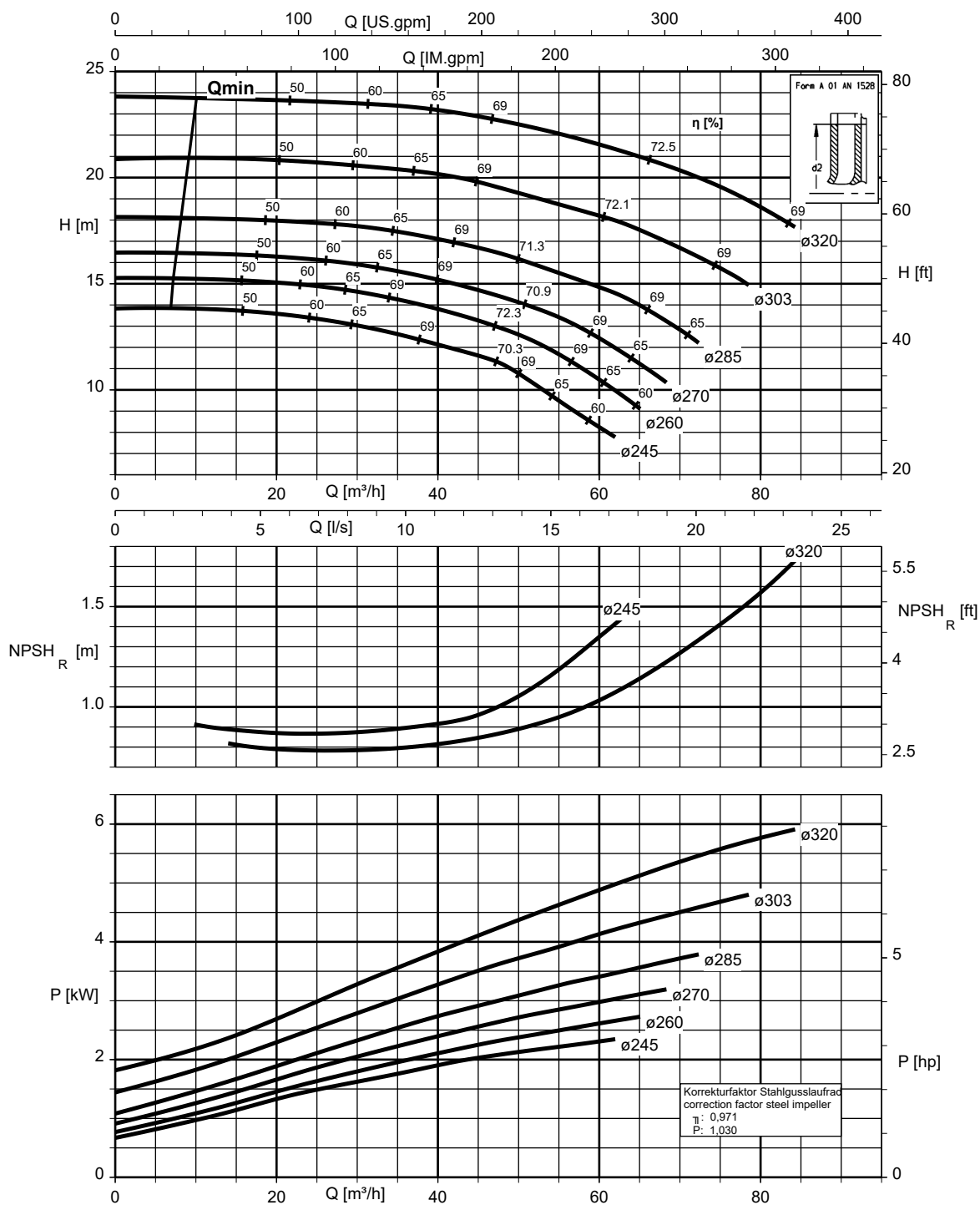
Etanorm SYT, Etabloc



K1311.466/38/2

Etanorm 080-065-315, $n = 1160 \text{ min}^{-1}$

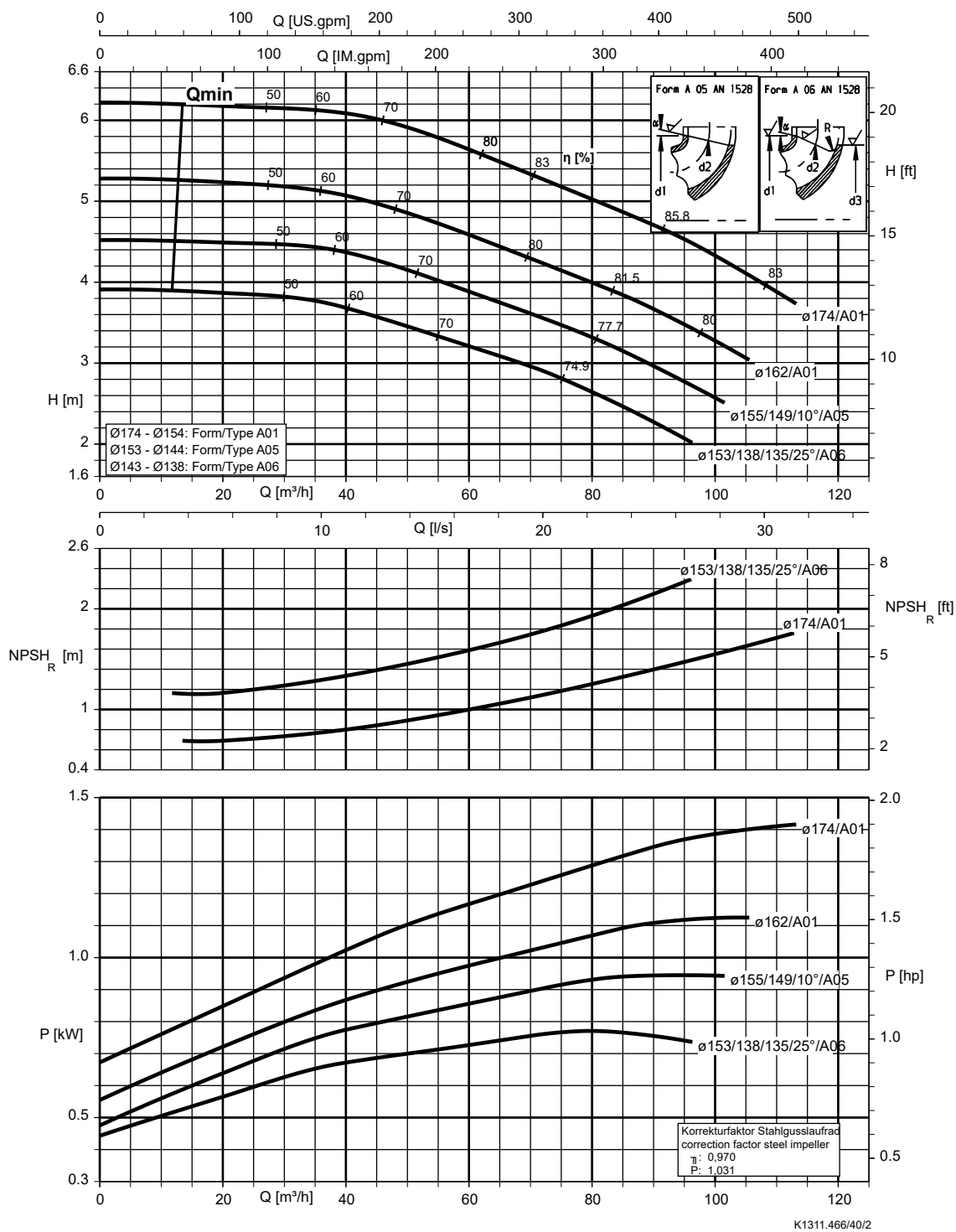
Etanorm SYT, Etabloc



K1311.466/39/2

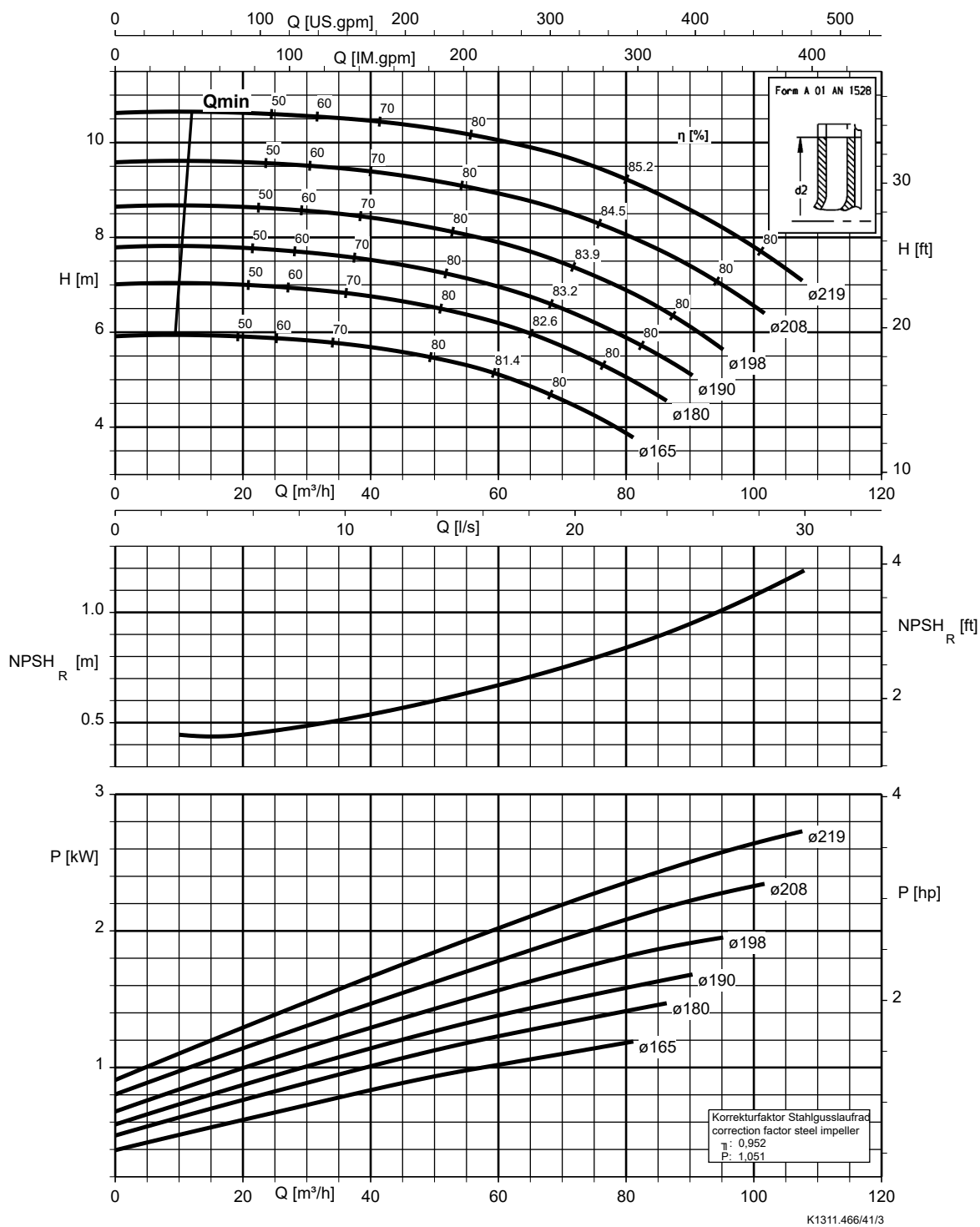
Etanorm 100-080-160, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



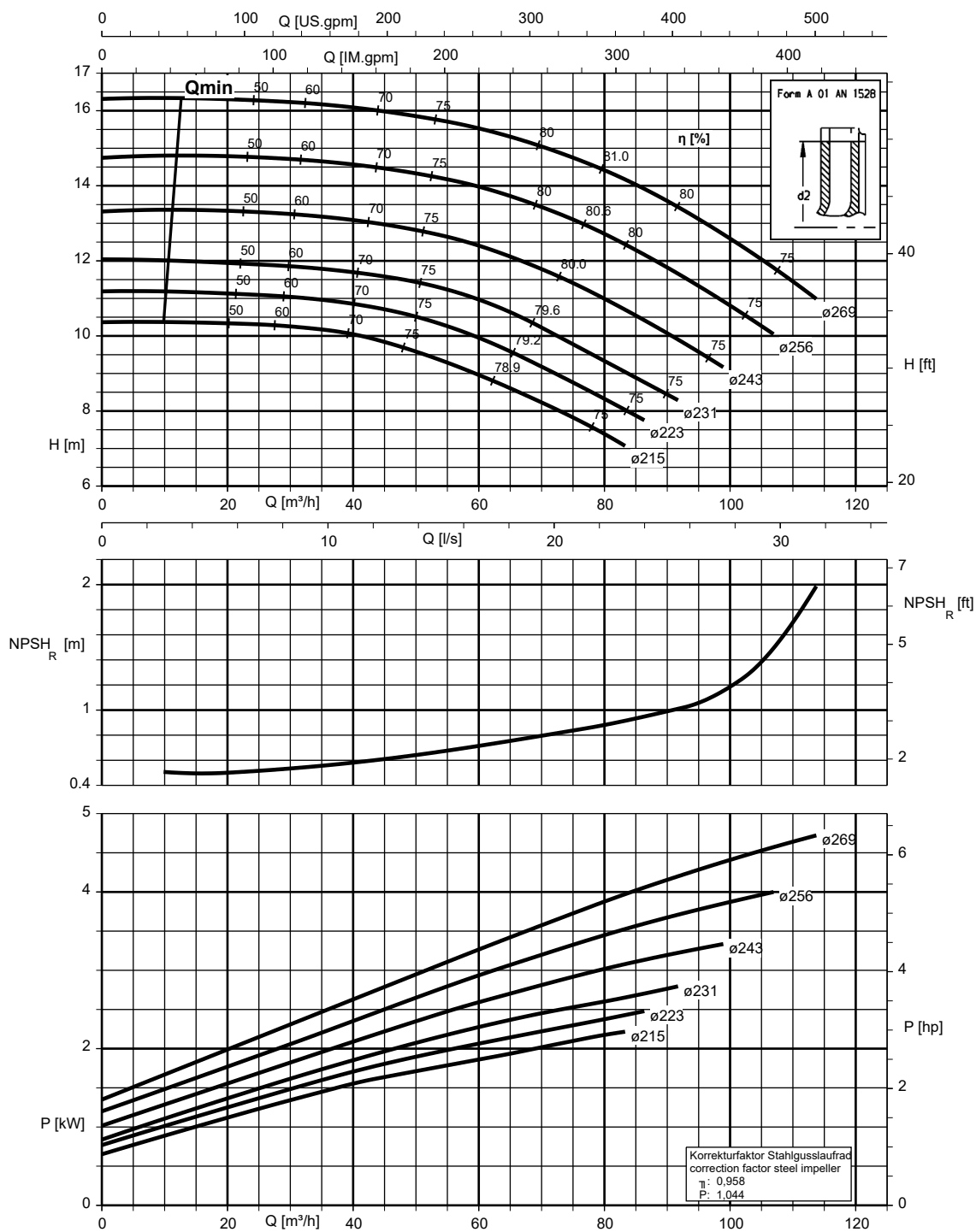
Etanorm 100-080-200, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 100-080-250, $n = 1160 \text{ min}^{-1}$

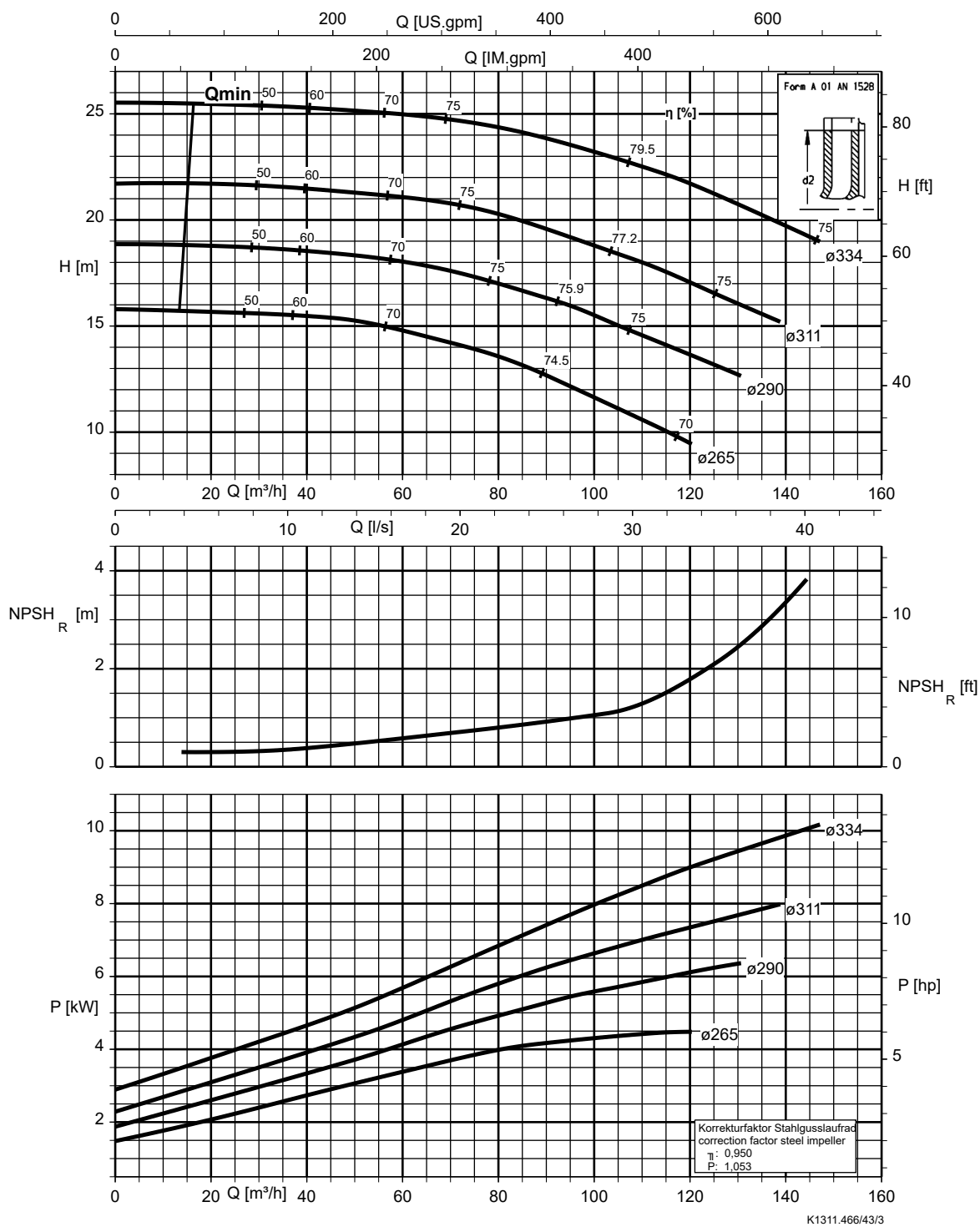
Etanorm SYT, Etabloc



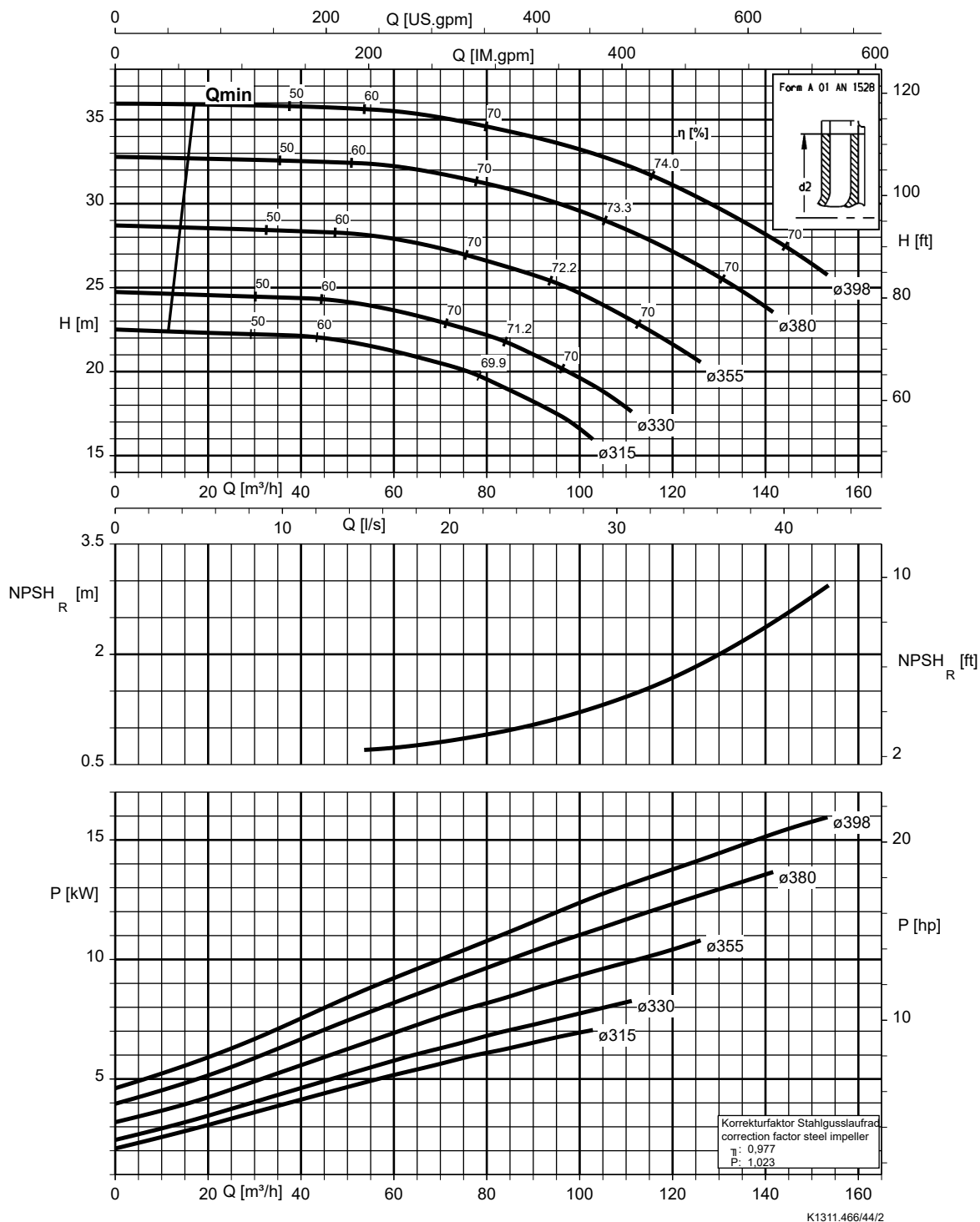
K1311.466/42/2

Etanorm 100-080-315, $n = 1160 \text{ min}^{-1}$

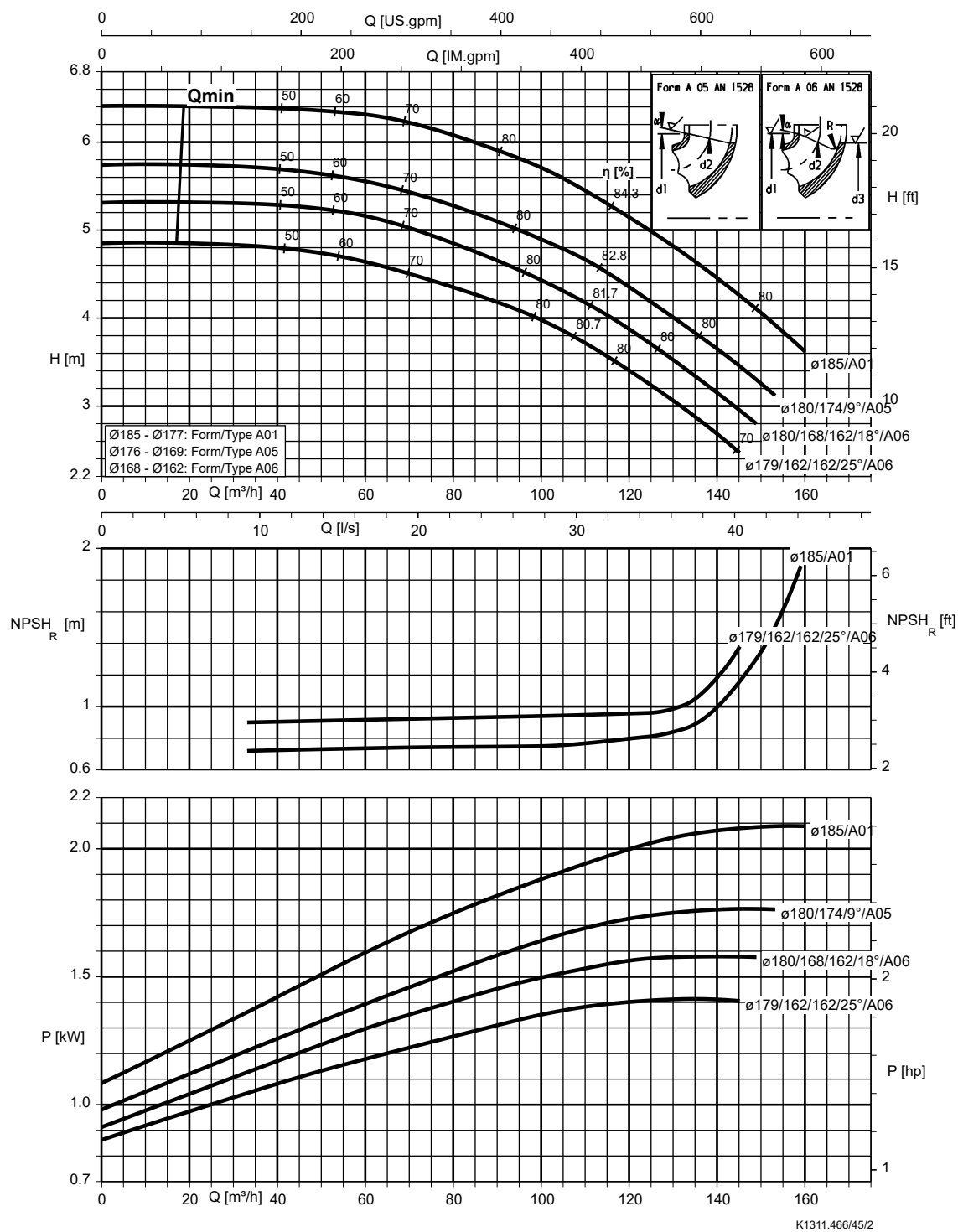
Etanorm SYT, Etabloc



Etanorm 100-080-400, $n = 1160 \text{ min}^{-1}$



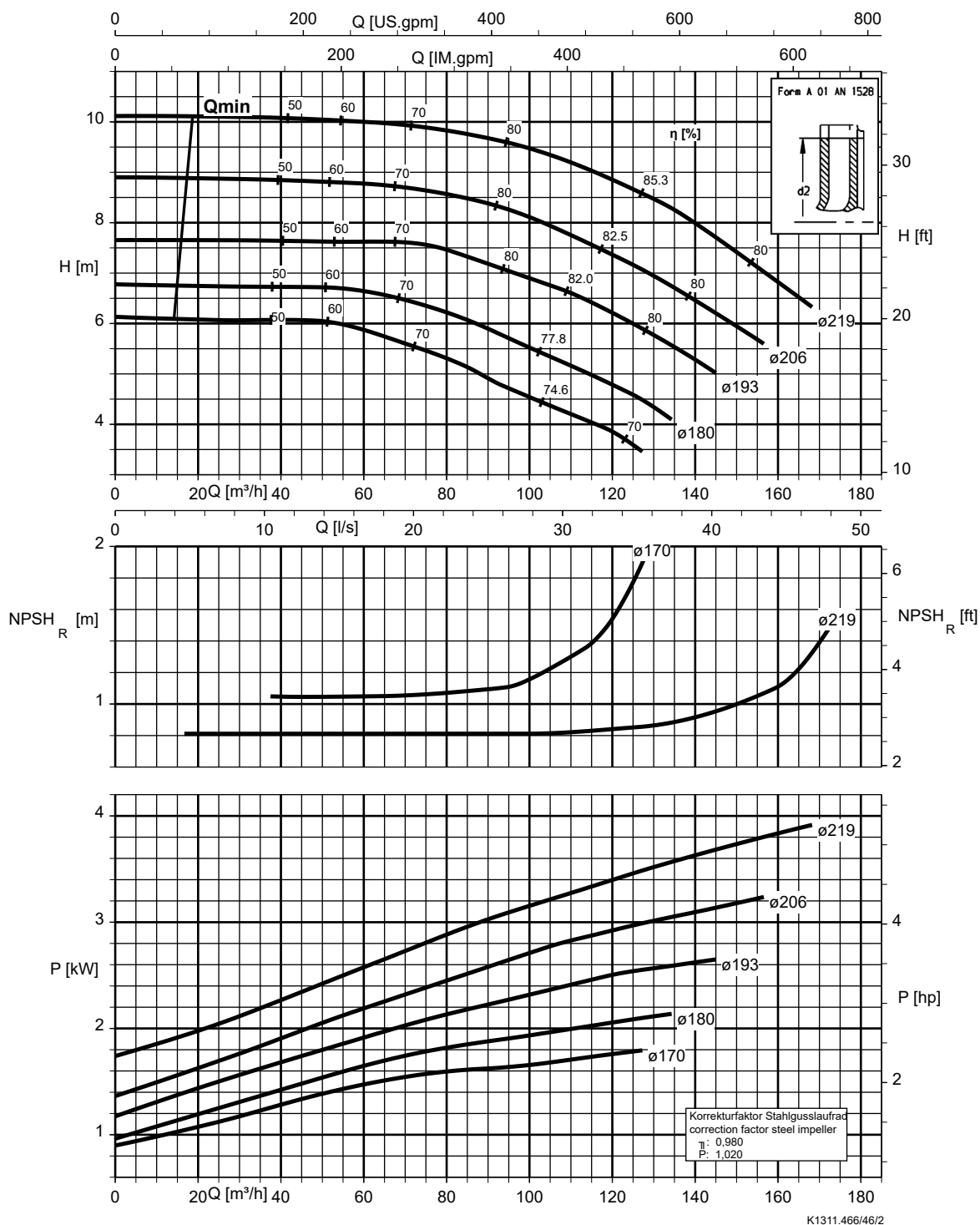
Etanorm SYT, Etabloc



1311.46/11-DE

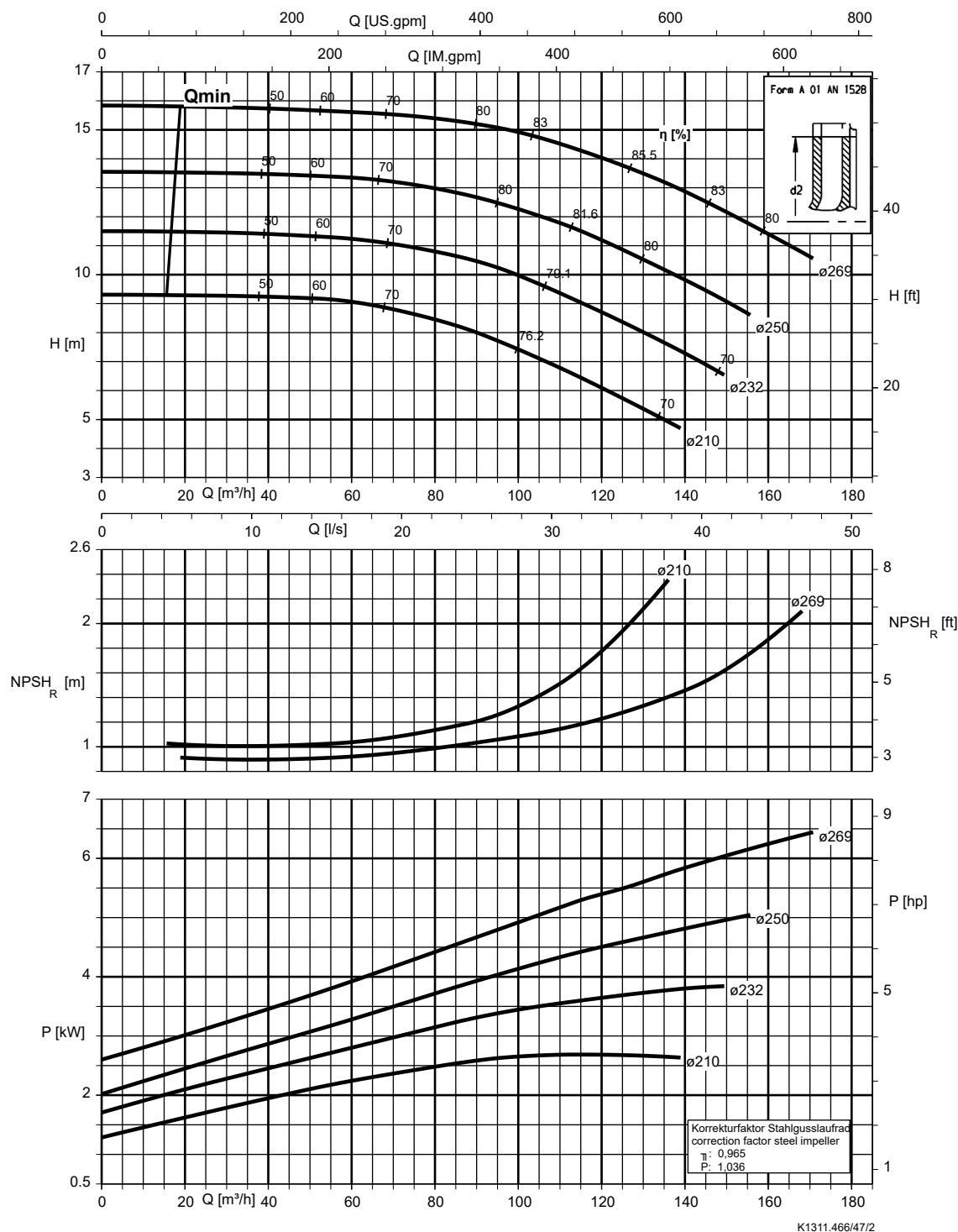
Etanorm 125-100-200, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



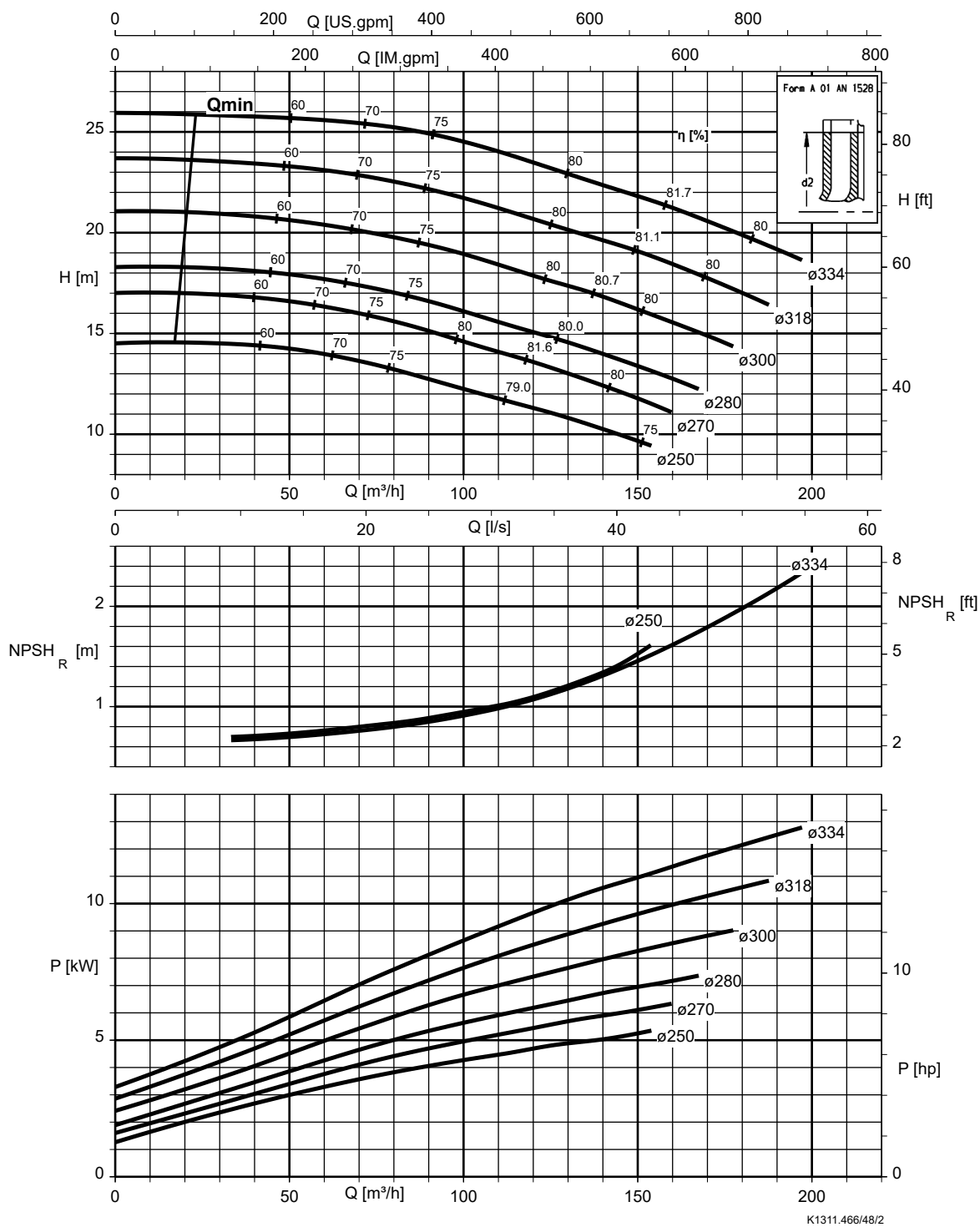
Etanorm 125-100-250, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc

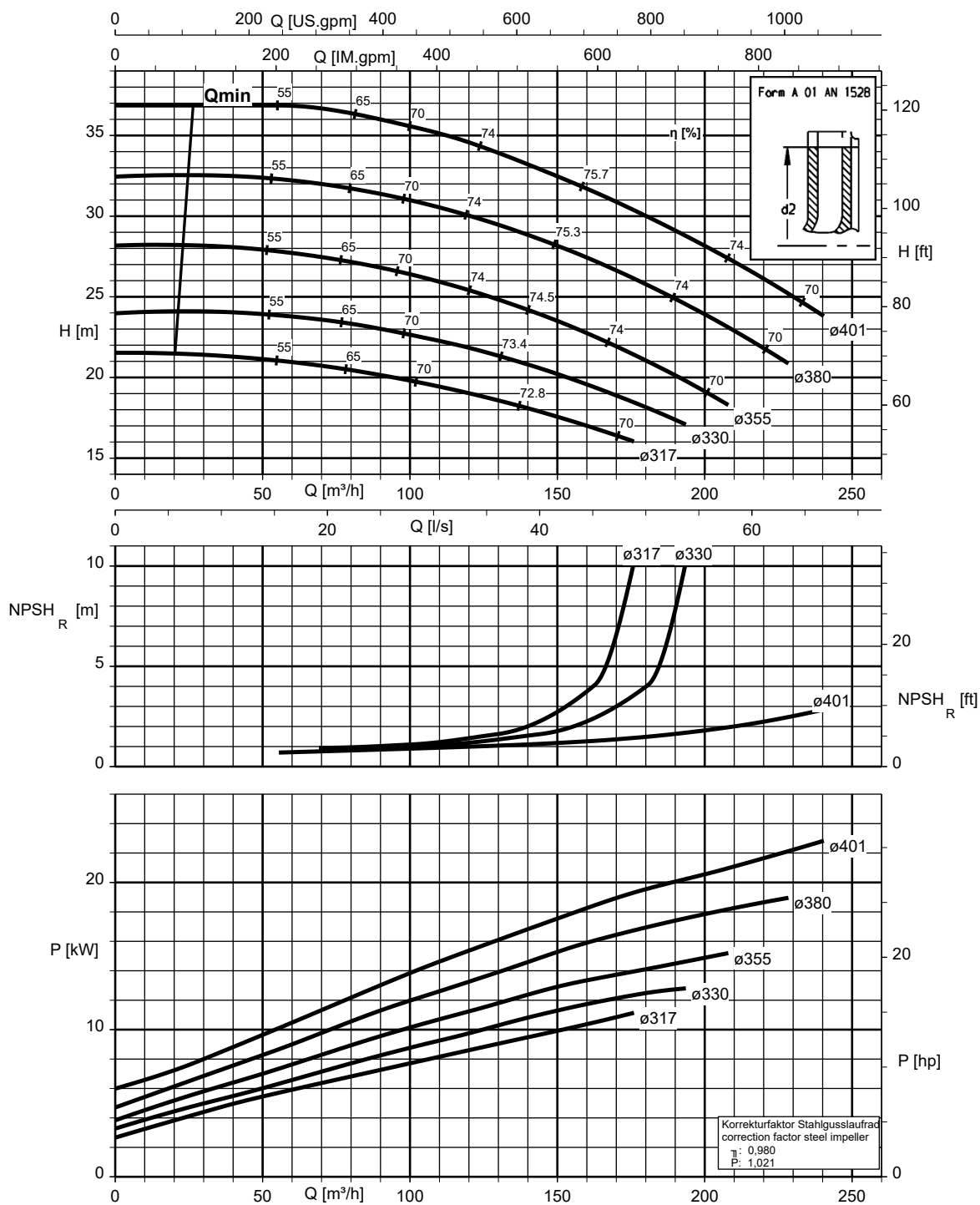


Etanorm 125-100-315, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



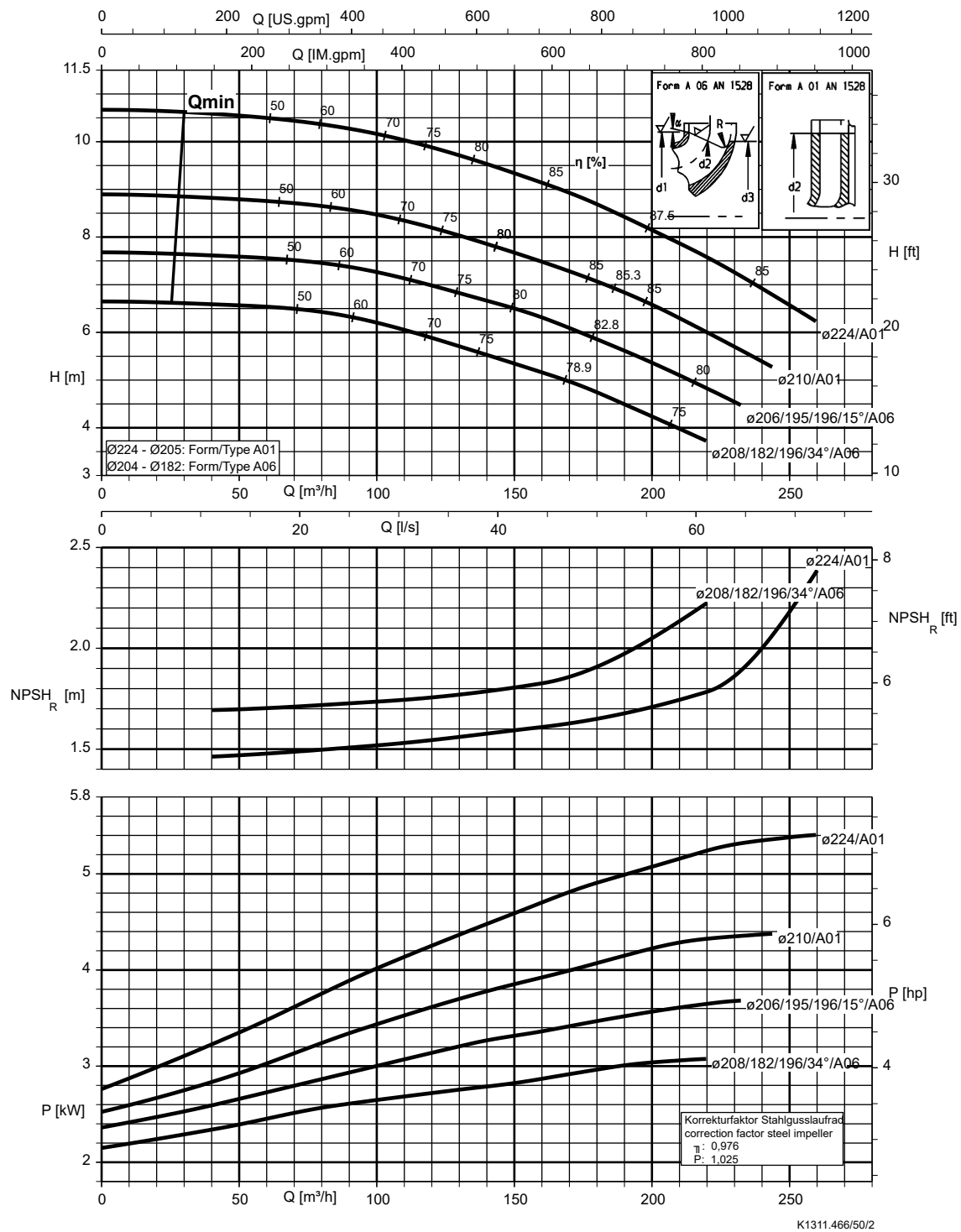
Etanorm 125-100-400, $n = 1160 \text{ min}^{-1}$



K1311.466/49/2

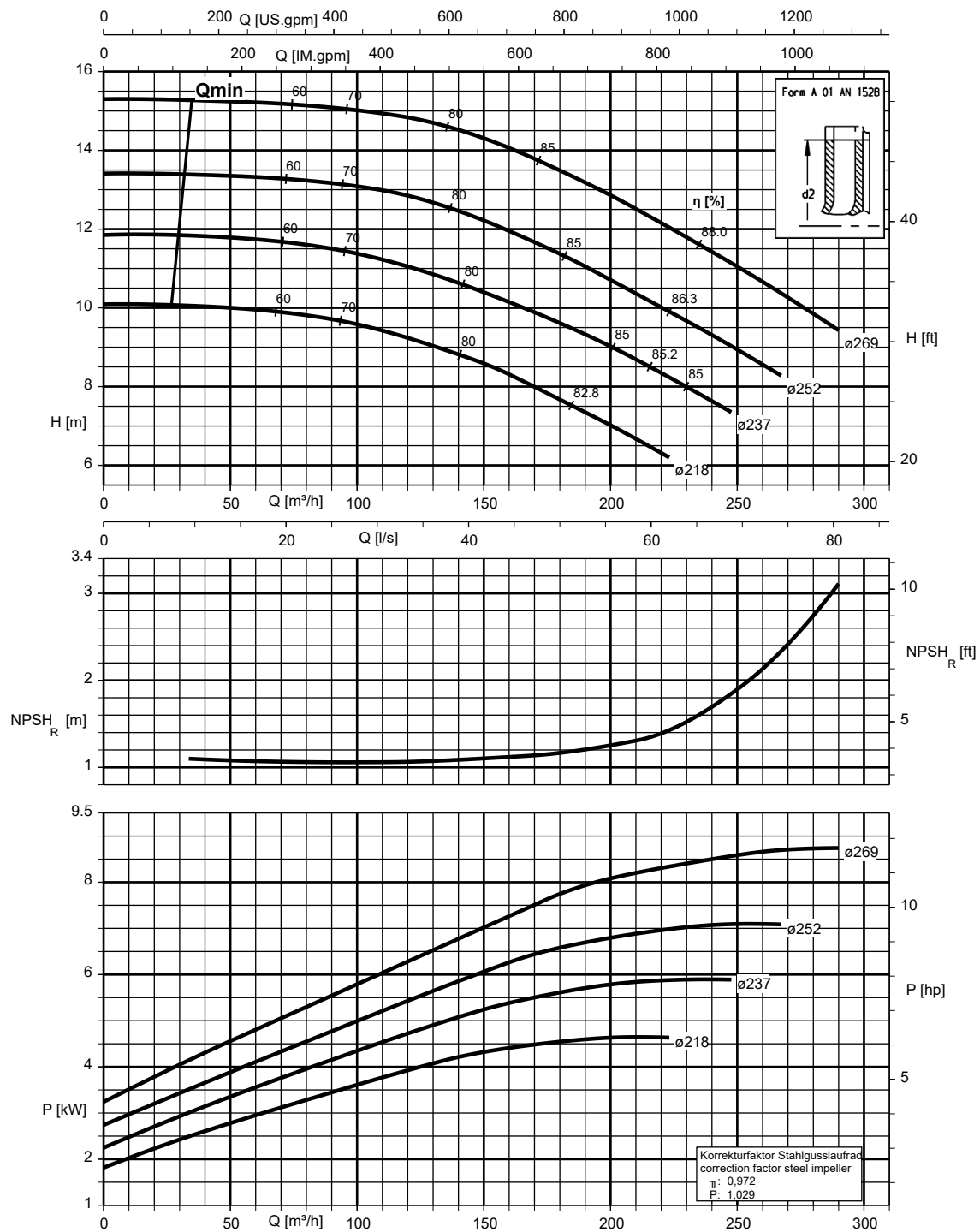
Etanorm 150-125-200, $n = 1160 \text{ min}^{-1}$

Etanorm SYT, Etabloc



Etanorm 150-125-250, $n = 1160 \text{ min}^{-1}$

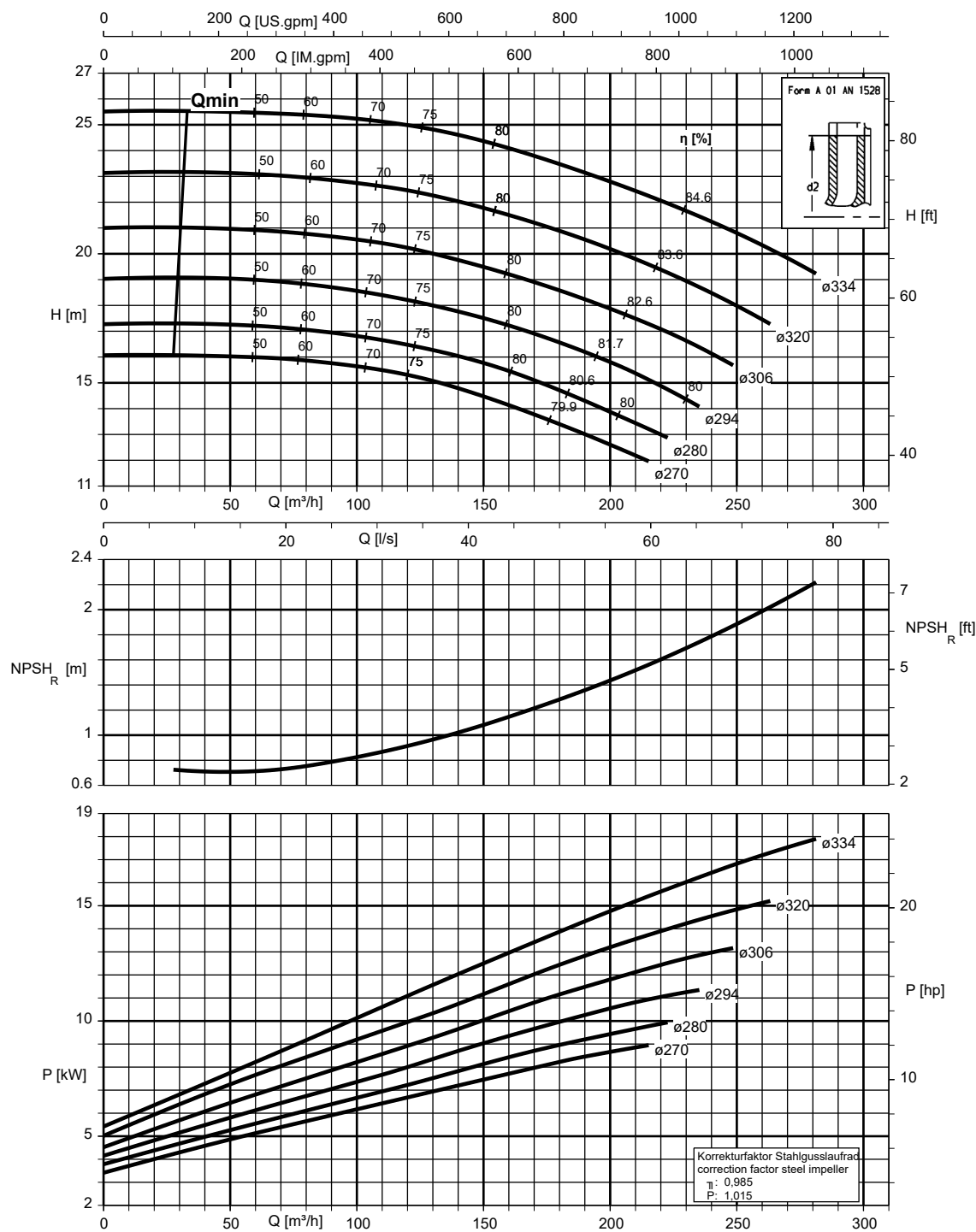
Etanorm SYT, Etabloc



K1311.466/51/2

Etanorm 150-125-315, $n = 1160 \text{ min}^{-1}$

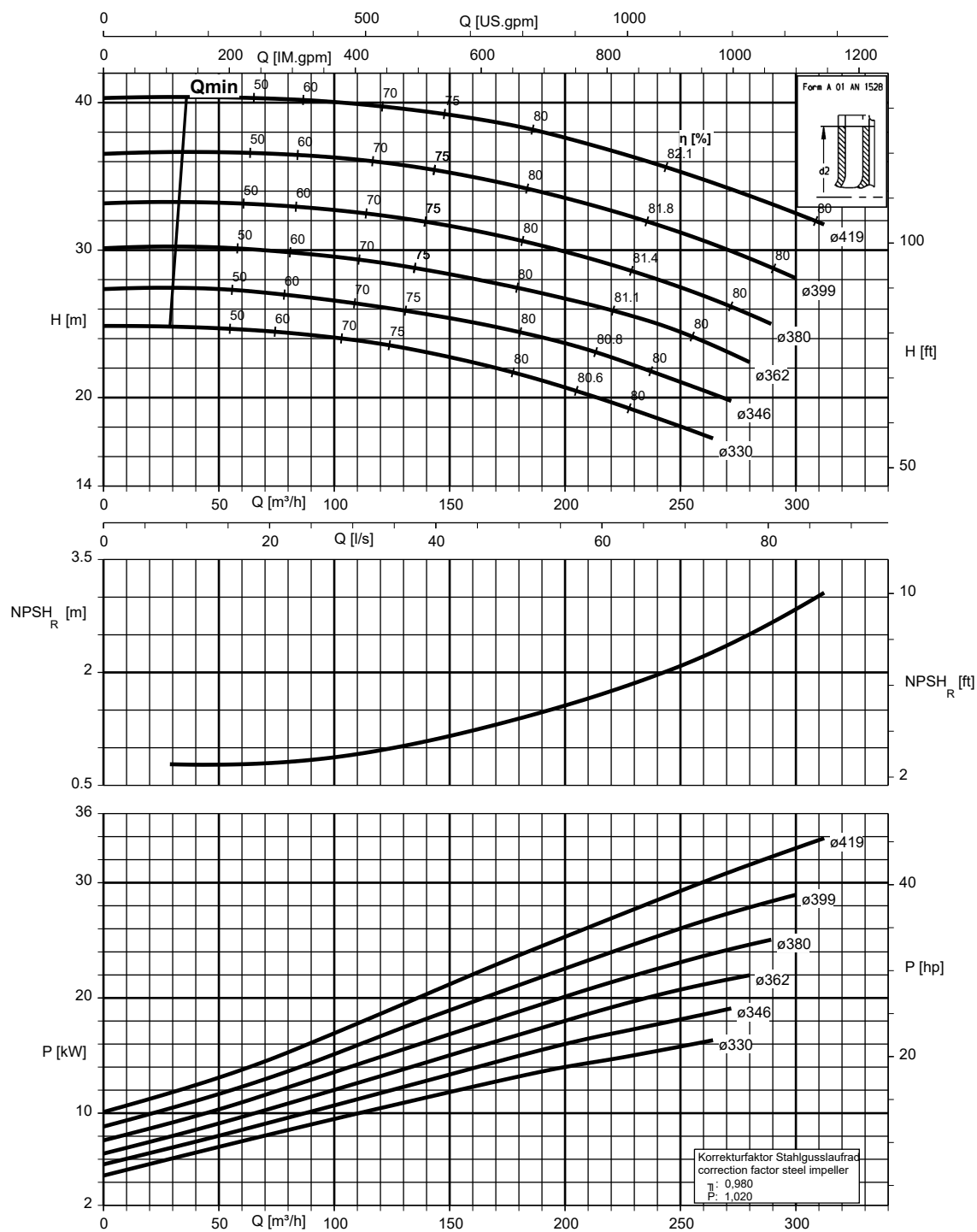
Etanorm SYT



K1311.466/52/2

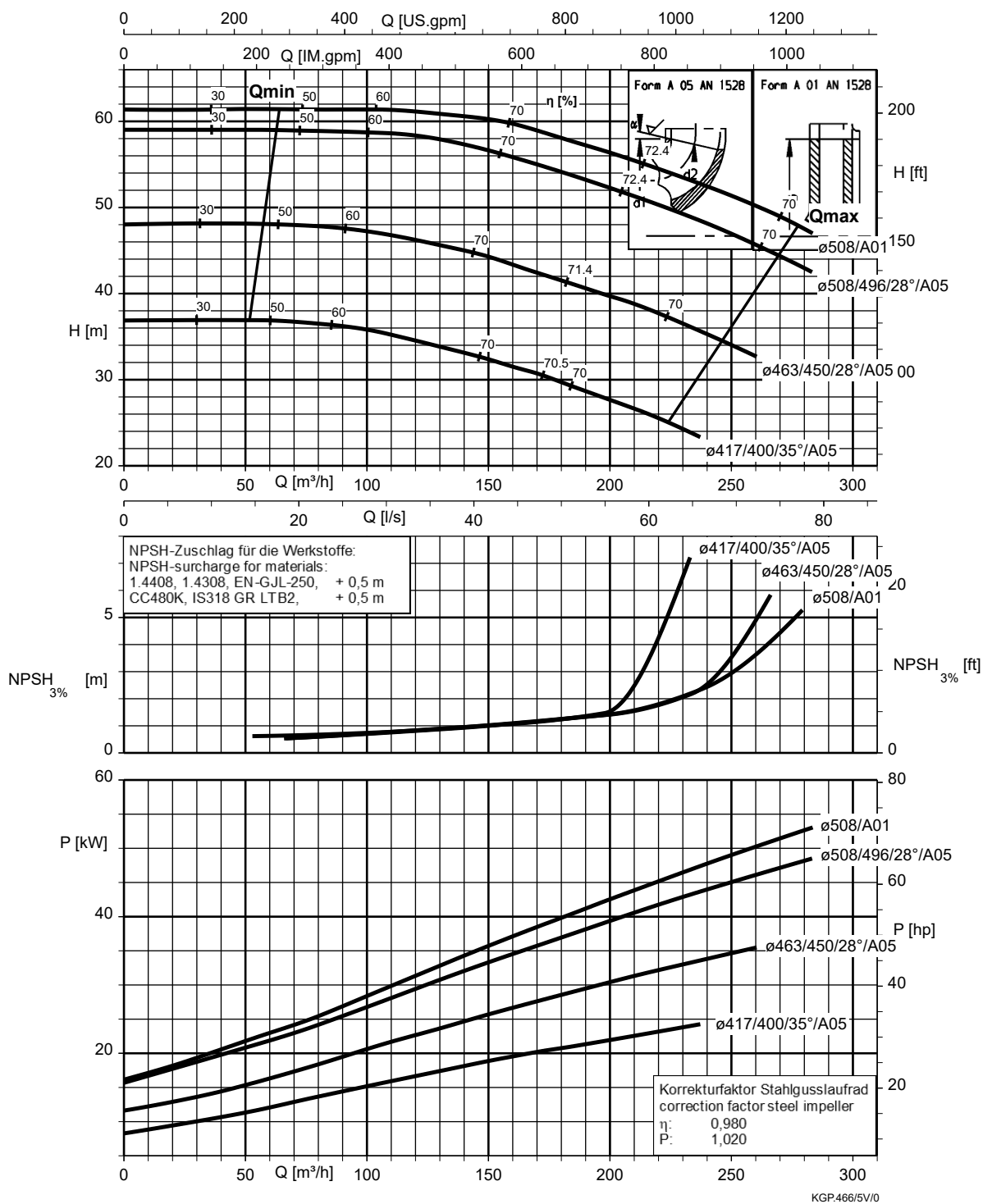
Etanorm 150-125-400, $n = 1160 \text{ min}^{-1}$

Etanorm SYT



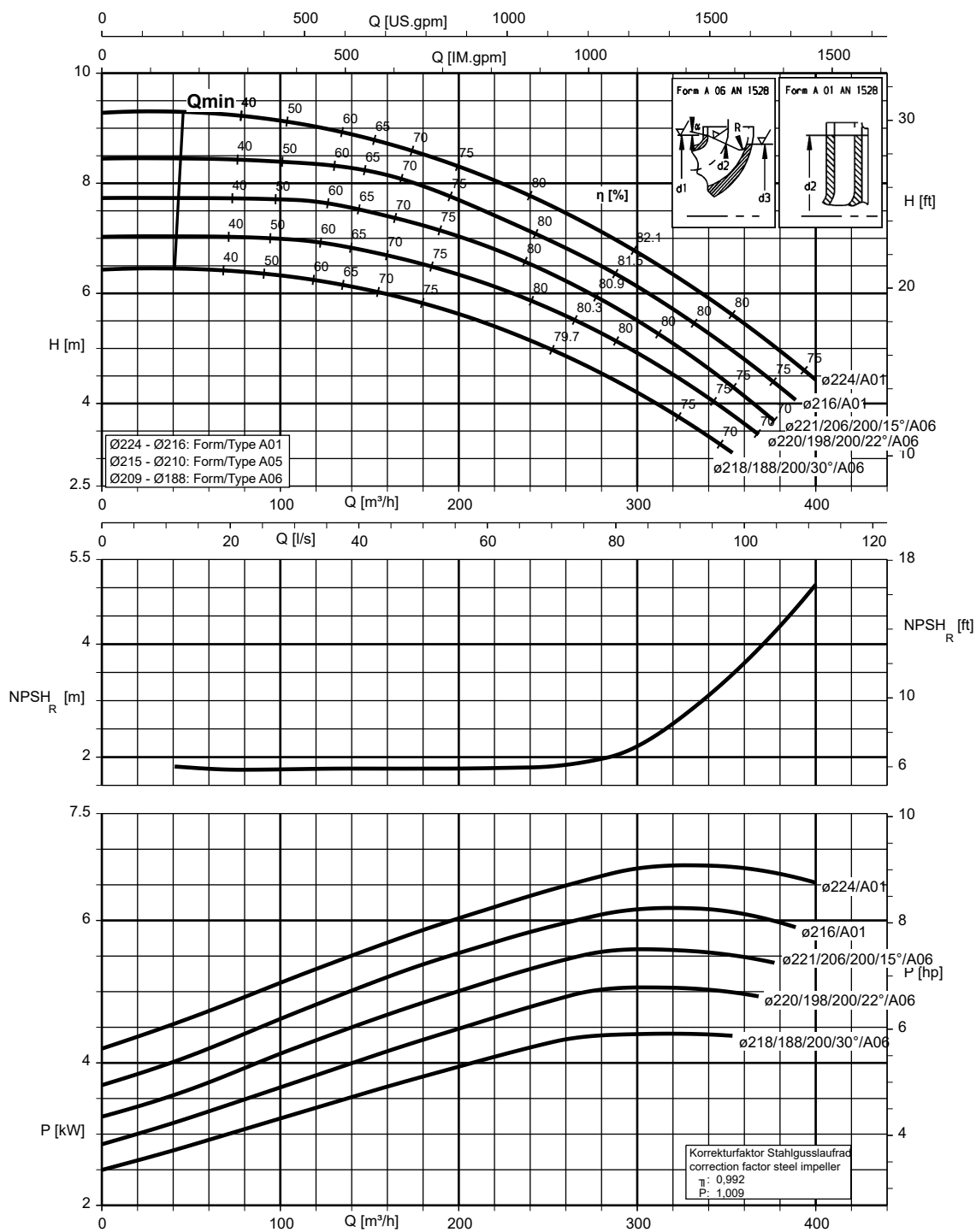
K1311.466/53/2

Etanorm 150-125-510, $n = 1160 \text{ min}^{-1}$



Etanorm 200-150-200, n = 1160 min⁻¹

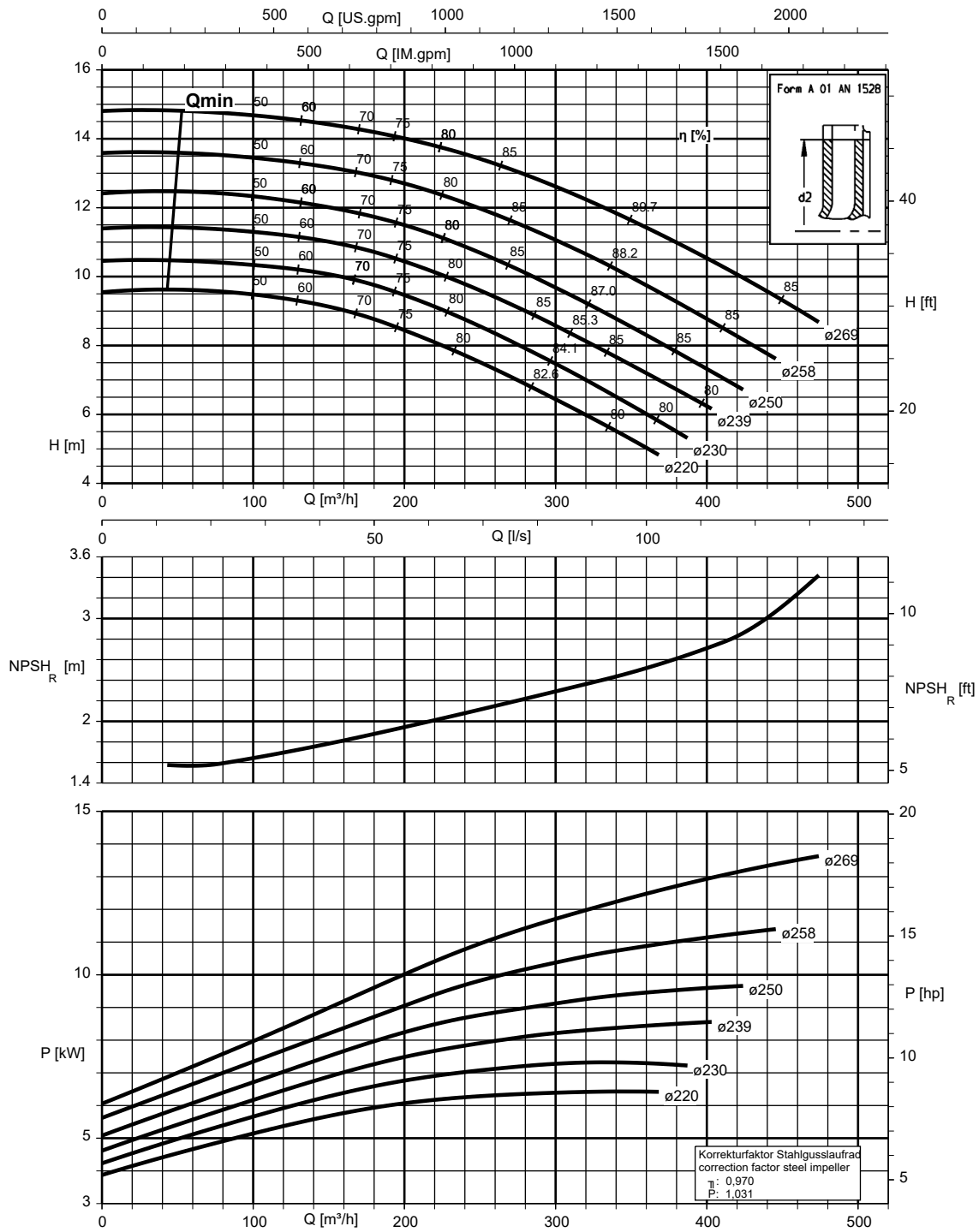
Etabloc



K1311.466/55/2

Etanorm 200-150-250, $n = 1160 \text{ min}^{-1}$

Etabloc

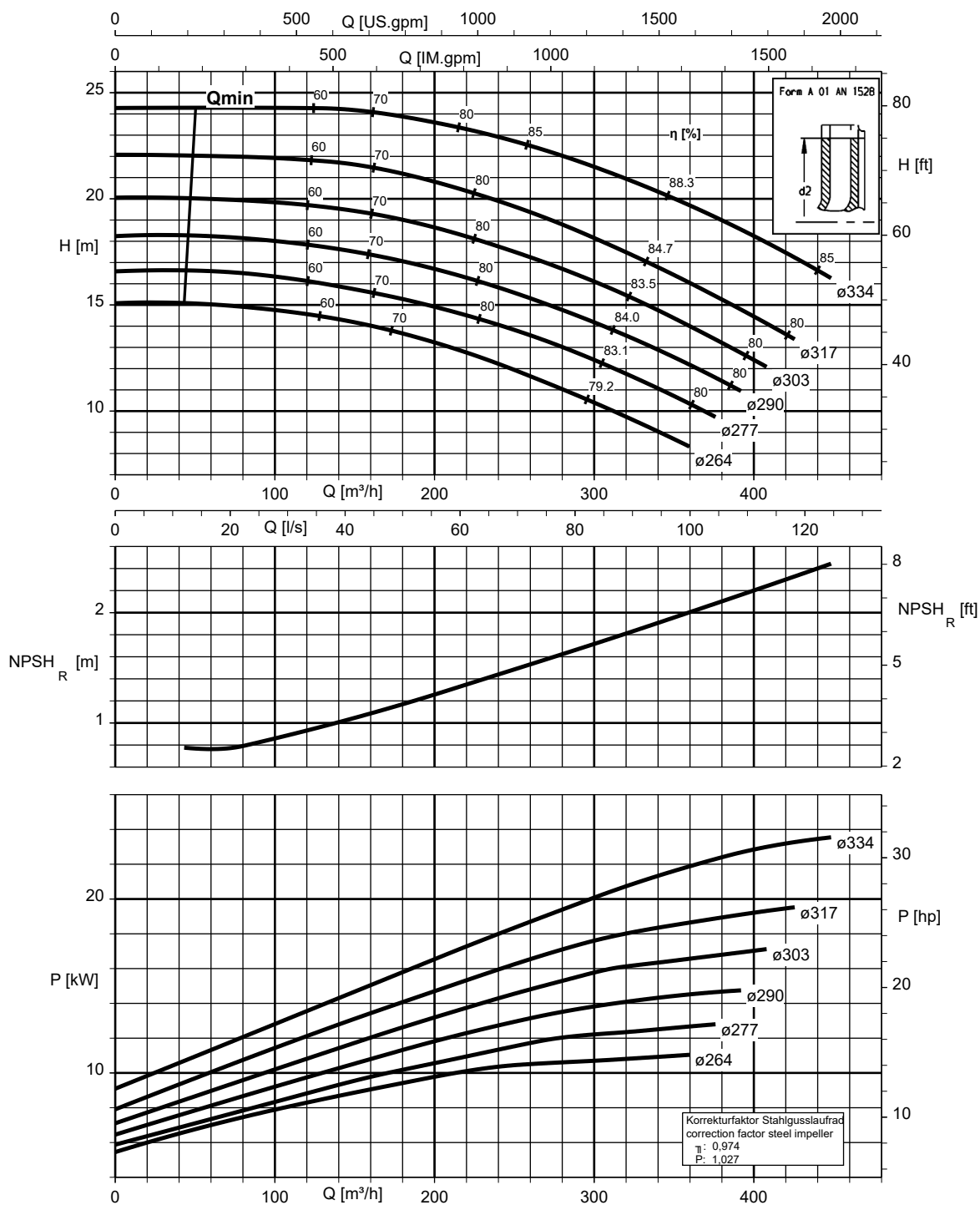


K1311.466/56/2

1311.46/11-DE

Etanorm 200-150-315, $n = 1160 \text{ min}^{-1}$

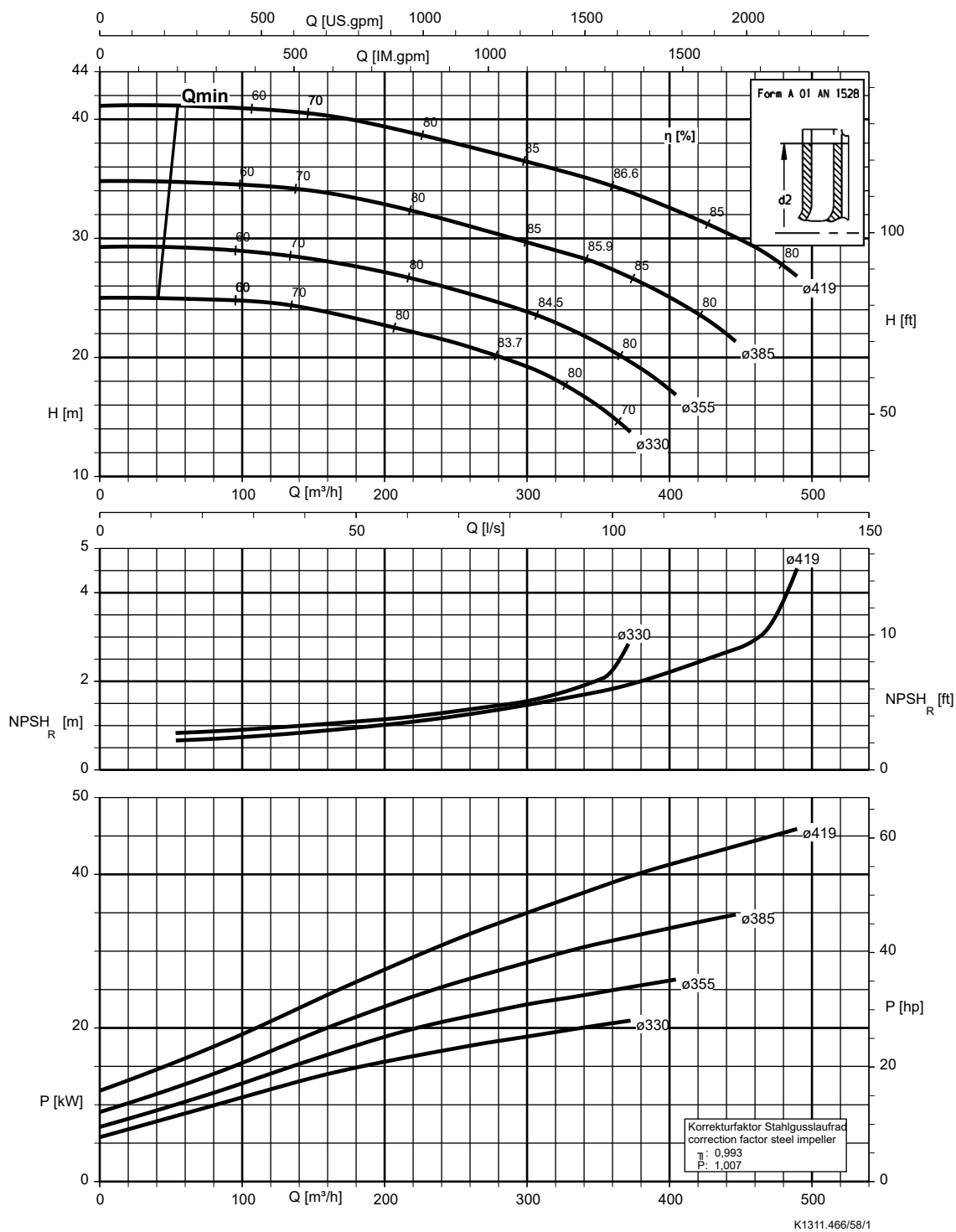
Etanorm SYT



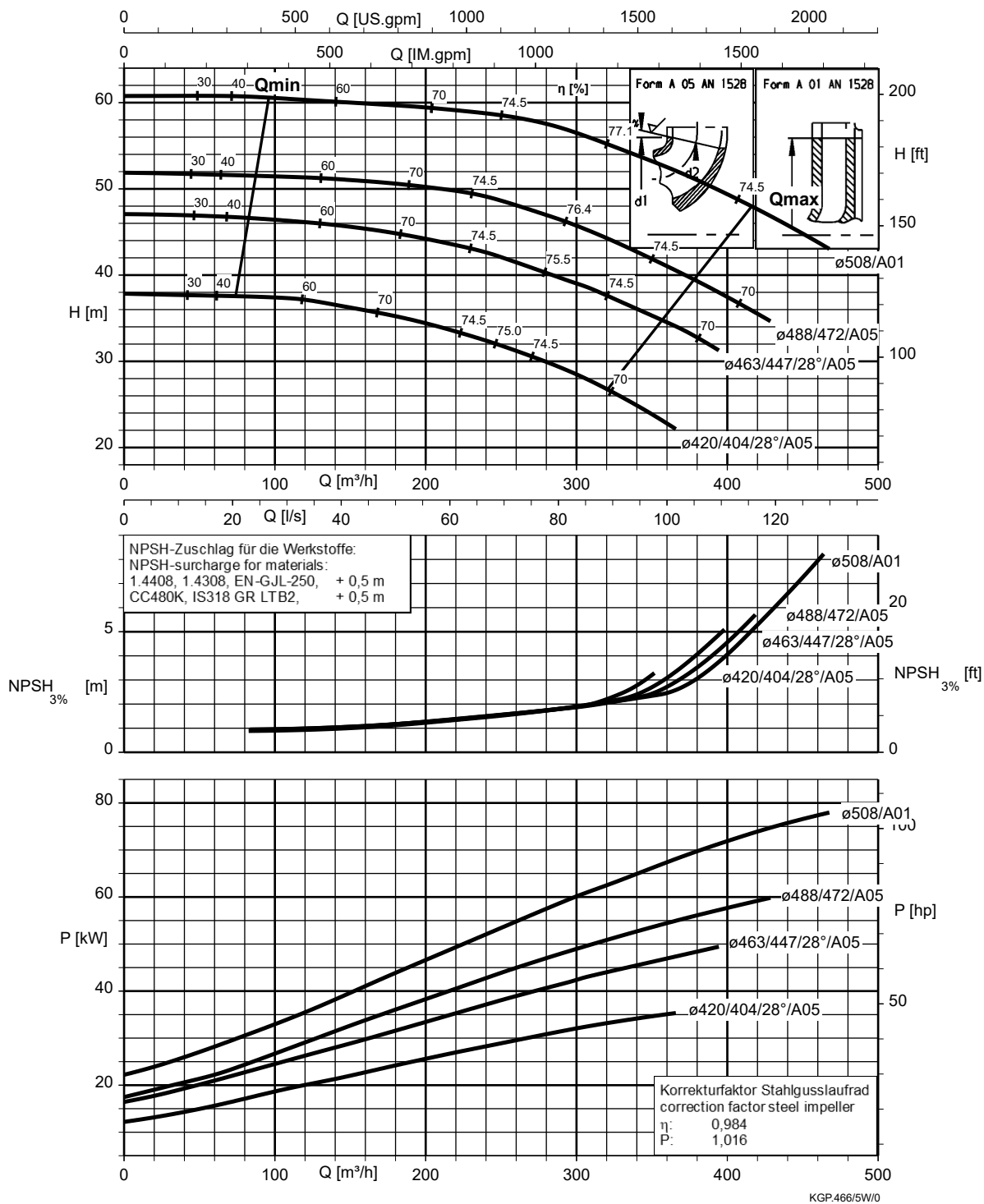
K1311.466/57/3

Etanorm 200-150-400, $n = 1160 \text{ min}^{-1}$

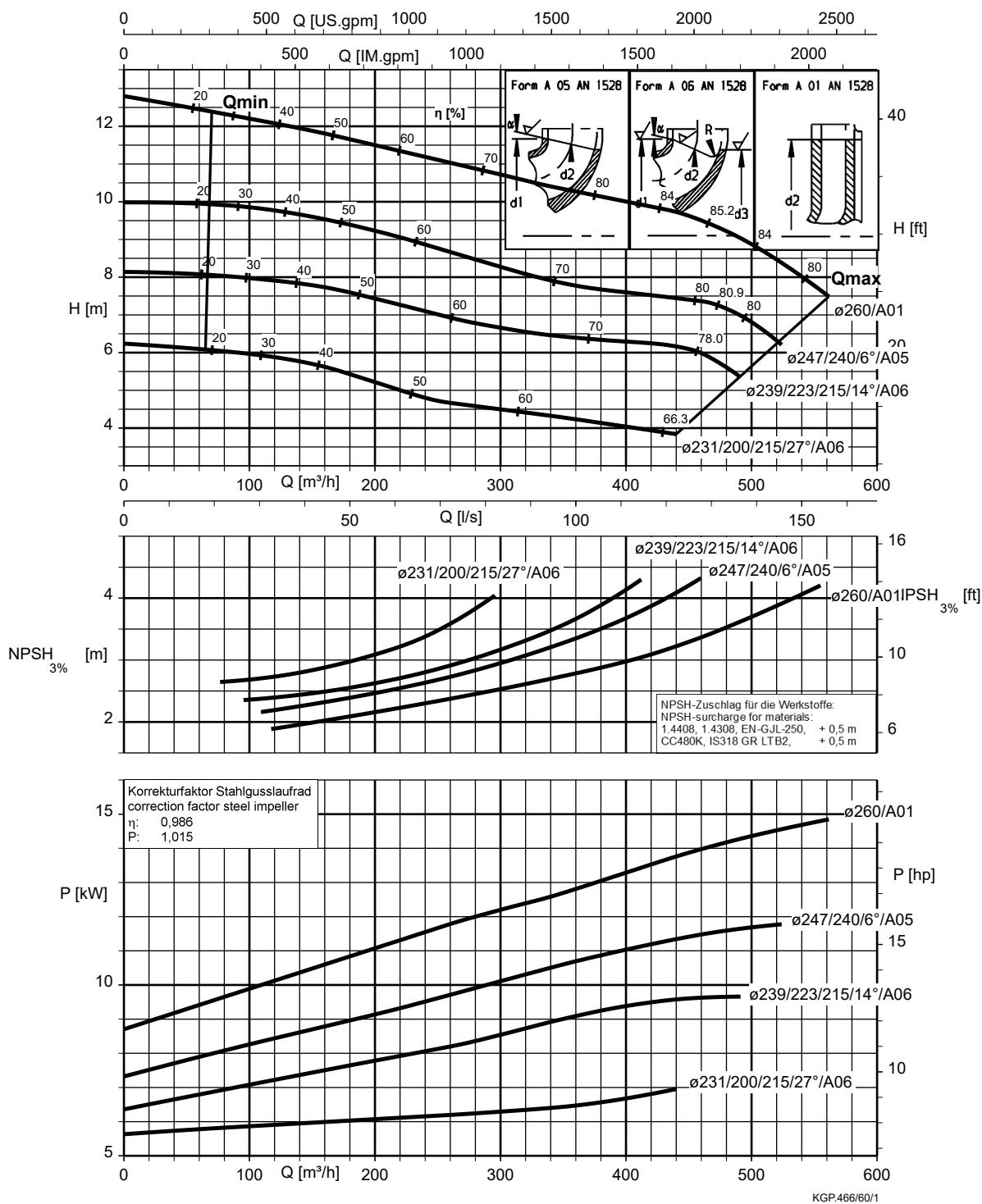
Etanorm SYT



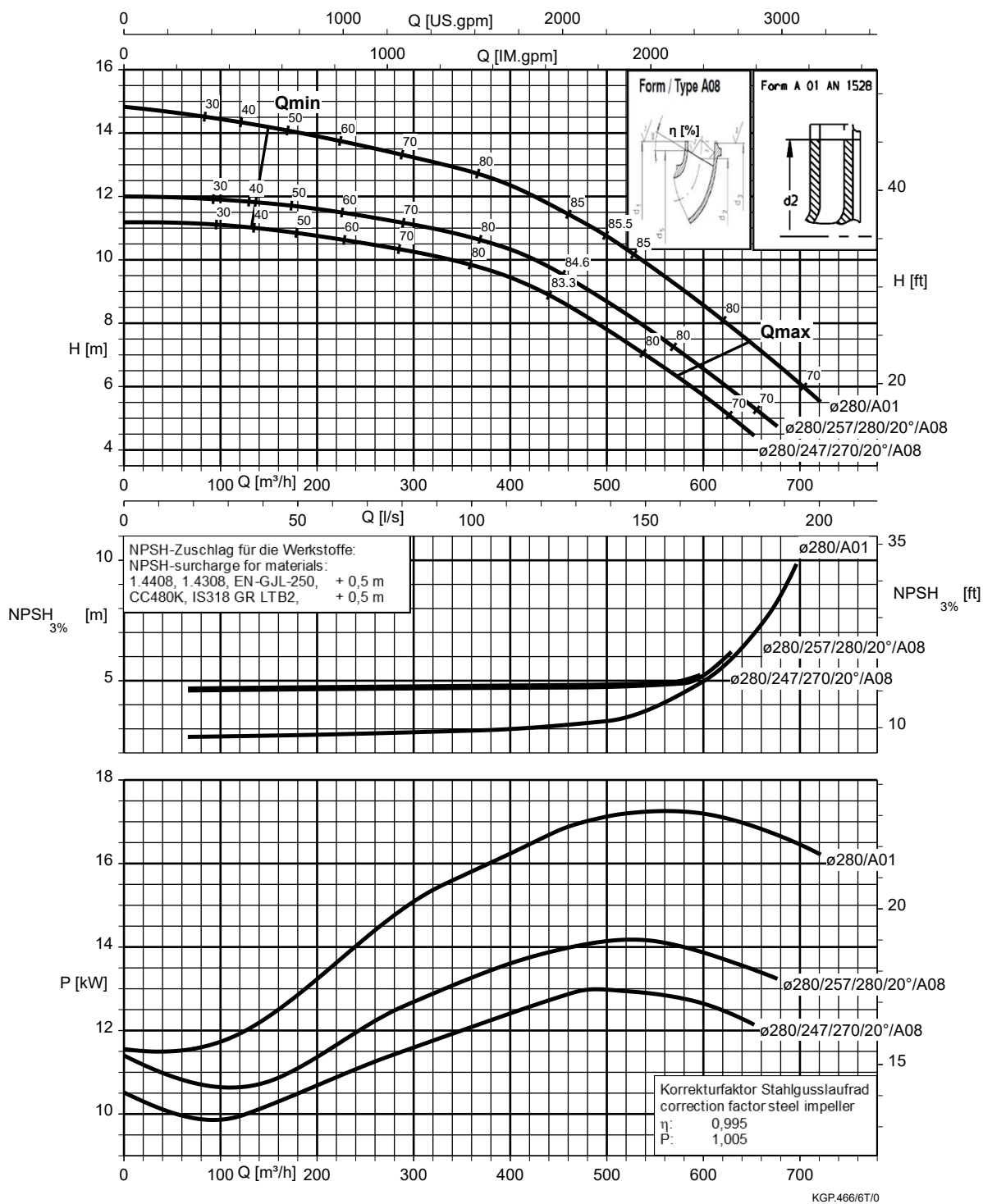
Etanorm 200-150-510, $n = 1160 \text{ min}^{-1}$



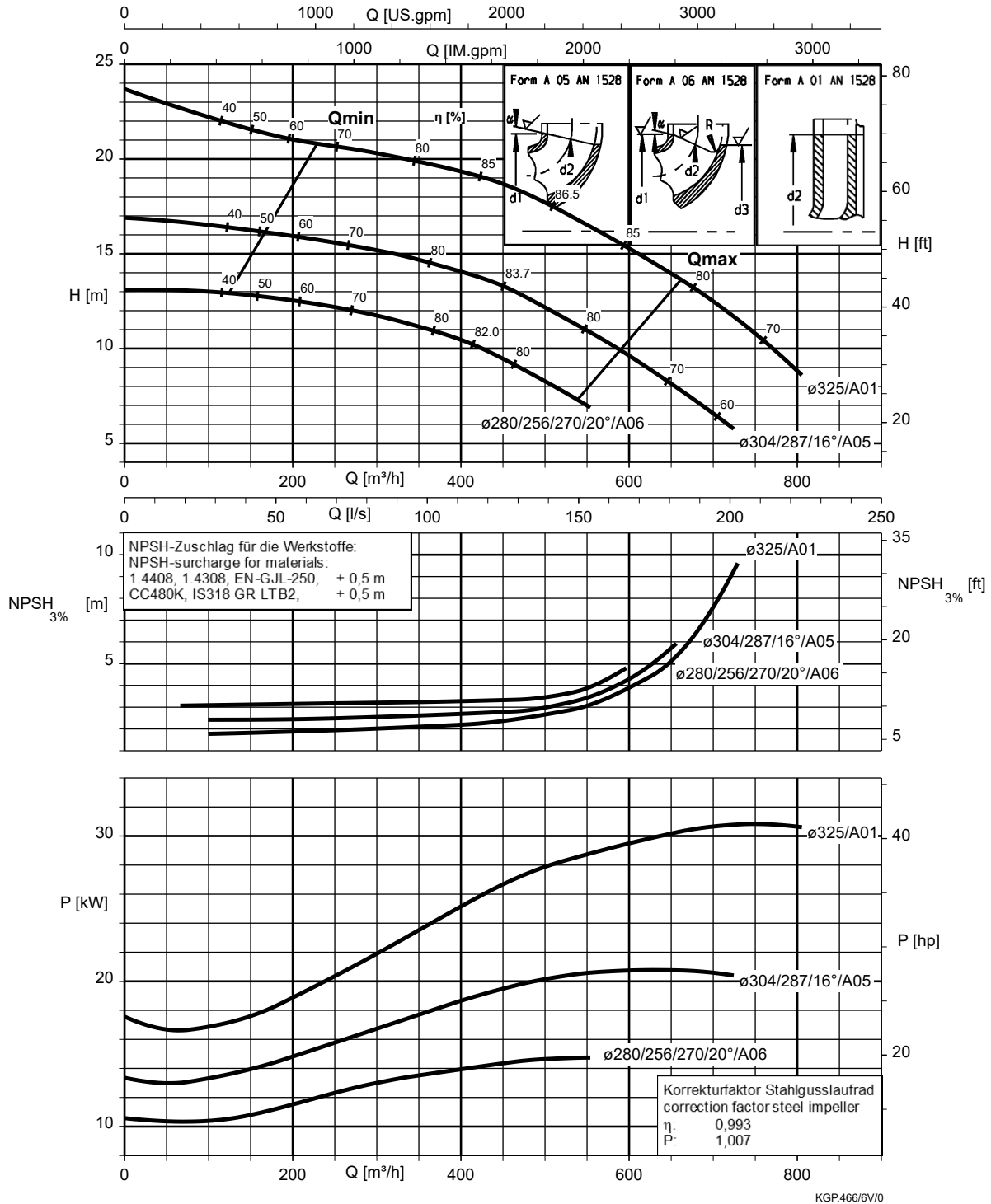
Etanorm 200-200-250, $n = 1160 \text{ min}^{-1}$



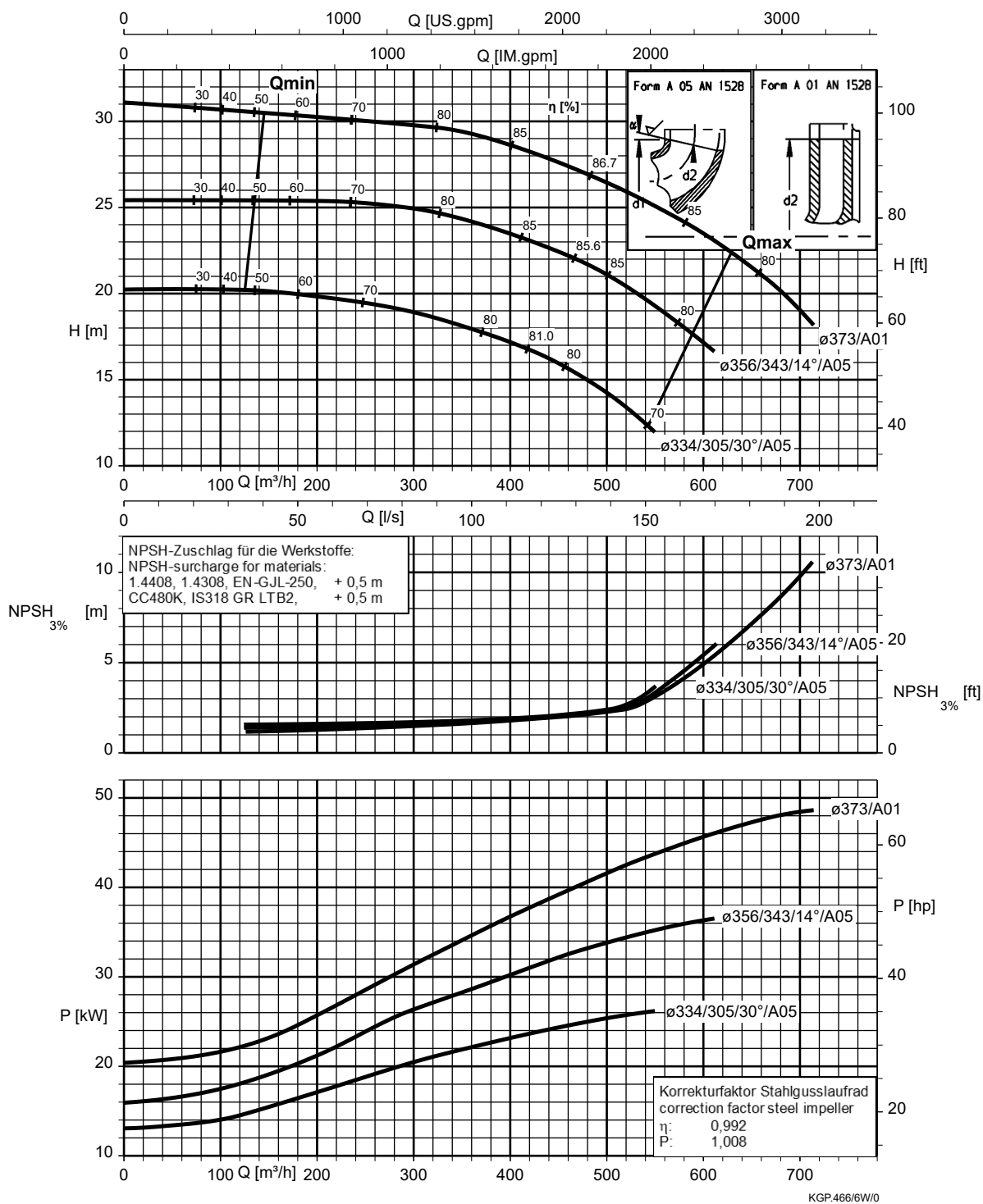
Etanorm 250-200-275, $n = 1160 \text{ min}^{-1}$



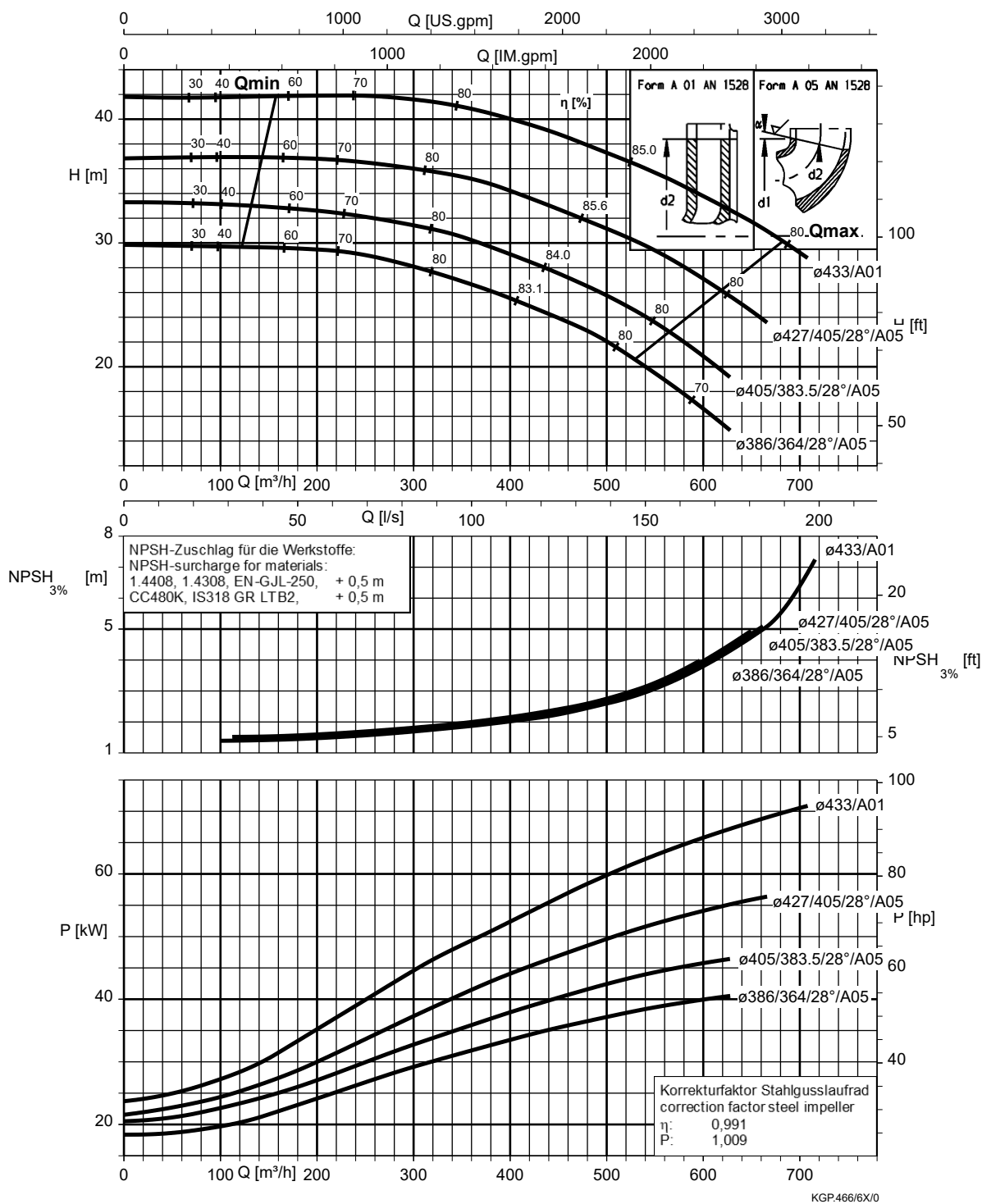
Etanorm 250-200-320, $n = 1160 \text{ min}^{-1}$



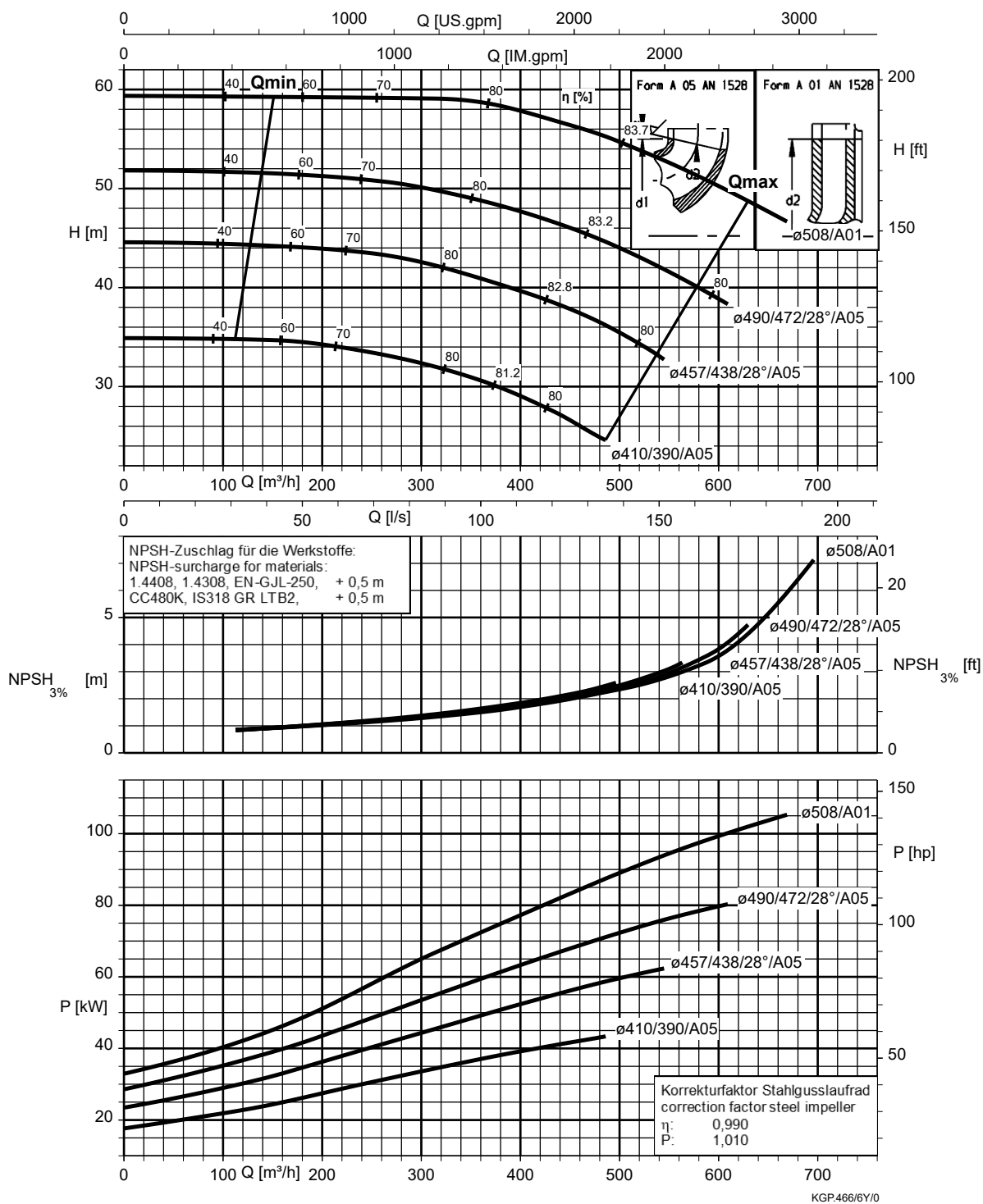
Etanorm 250-200-375, $n = 1160 \text{ min}^{-1}$



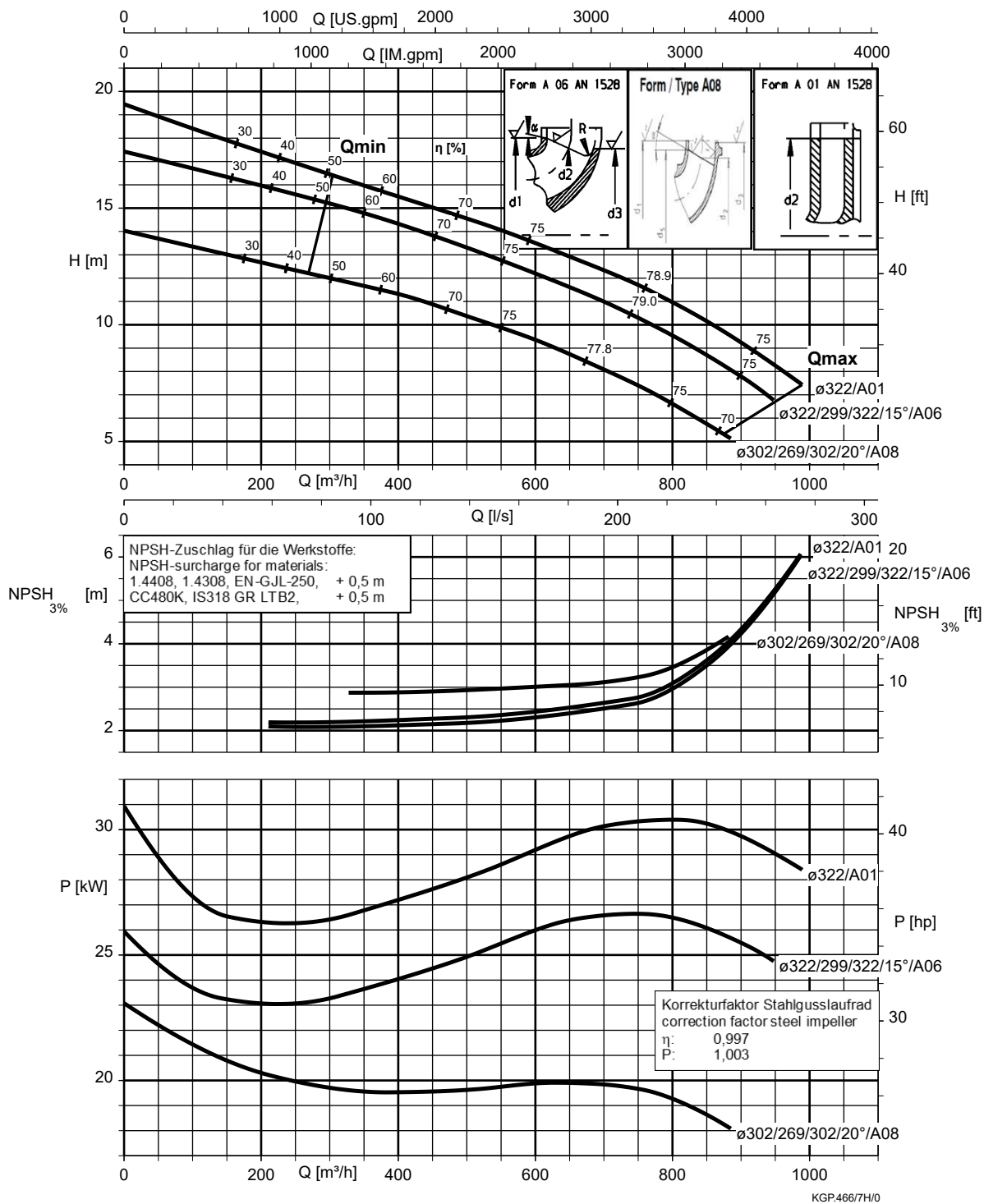
Etanorm 250-200-435 , $n = 1160 \text{ min}^{-1}$



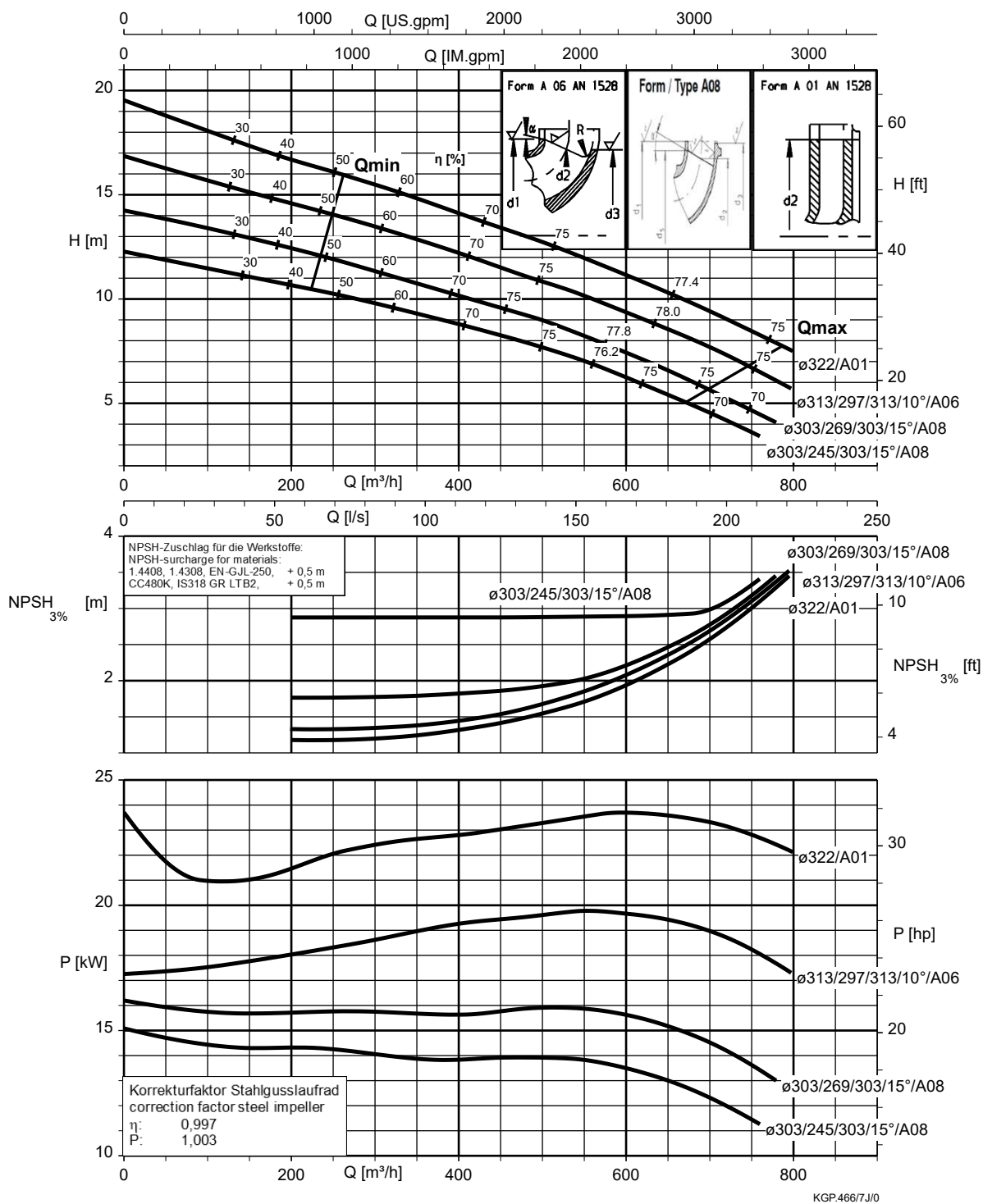
Etanorm 250-200-510 , $n = 1160 \text{ min}^{-1}$



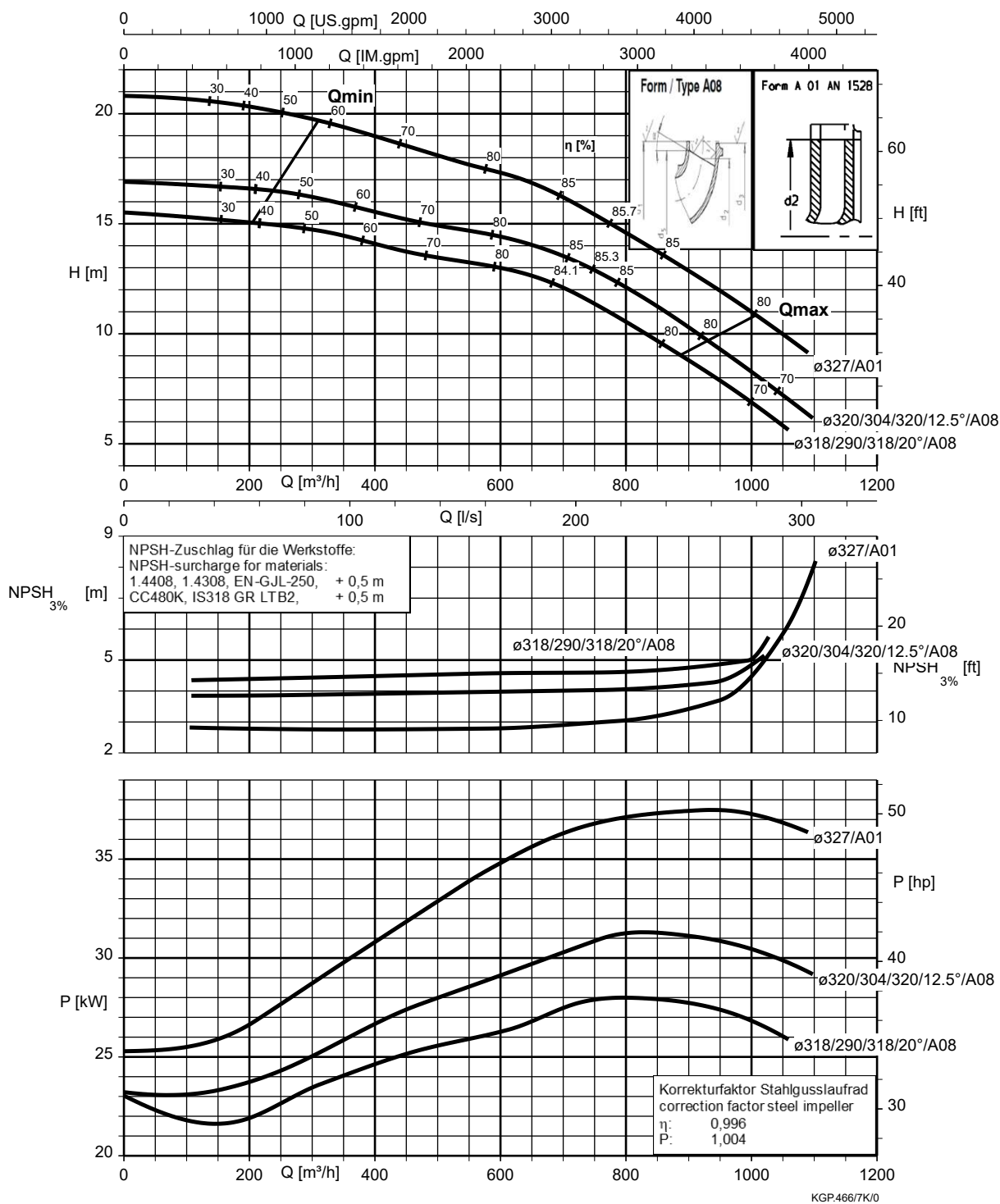
Etanorm 300-250-295, $n = 1160 \text{ min}^{-1}$



Etanorm 300-250-295.1, $n = 1160 \text{ min}^{-1}$



Etanorm 300-250-320 , $n = 1160 \text{ min}^{-1}$



Technical Drawing of KGP 466/7M/0 Centrifugal Pump

Top Graph: Performance Curves

Y-axis: Head H [m] (left, 10 to 30) and H [ft] (right, 50 to 100).
 X-axis: Flow rate Q [US.gpm] (top, 0 to 5000), Q [IM.gpm] (top, 0 to 4000), Q [m³/h] (bottom, 0 to 1200), and Q [l/s] (bottom, 0 to 300).
 Curves shown: Q_{min} (minimum flow), Q_{max} (maximum flow), and efficiency η [%] (30, 40, 50, 60, 70, 80).
 Inset diagrams: Form A 05 AN 152B, Form A 06 AN 152B, and Form A 01 AN 152B, showing impeller dimensions $d1$, $d2$, $d3$, R , and α .
 Specific speed curves: $\phi 373/A01$, $\phi 354/334/16^\circ/A05$, and $\phi 326/299/314/20^\circ/A06$.

Middle Graph: NPSH Surchage

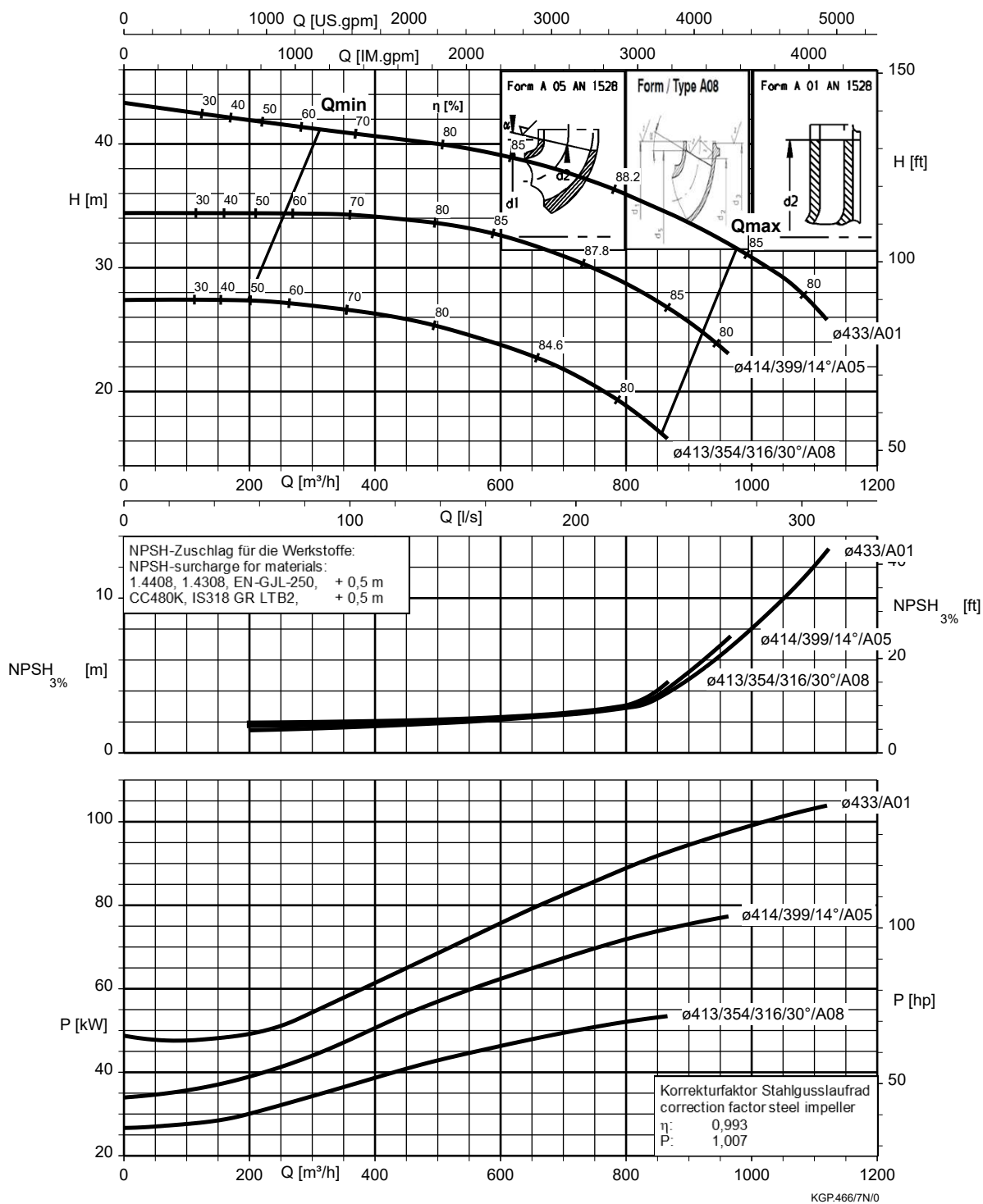
Y-axis: NPSH [m] (left, 0 to 10) and NPSH 3% [ft] (right, 0 to 30).
 X-axis: Flow rate Q [m³/h] (bottom, 0 to 1200).
 Curves shown: $\phi 373/A010$, $\phi 354/334/16^\circ/A05$, and $\phi 326/299/314/20^\circ/A06$.
 Boxed text: NPSH-Zuschlag für die Werkstoffe: 1.4408, 1.4308, EN-GJL-250, + 0,5 m; CC480K, IS318 GR LTB2, + 0,5 m.

Bottom Graph: Power Requirements

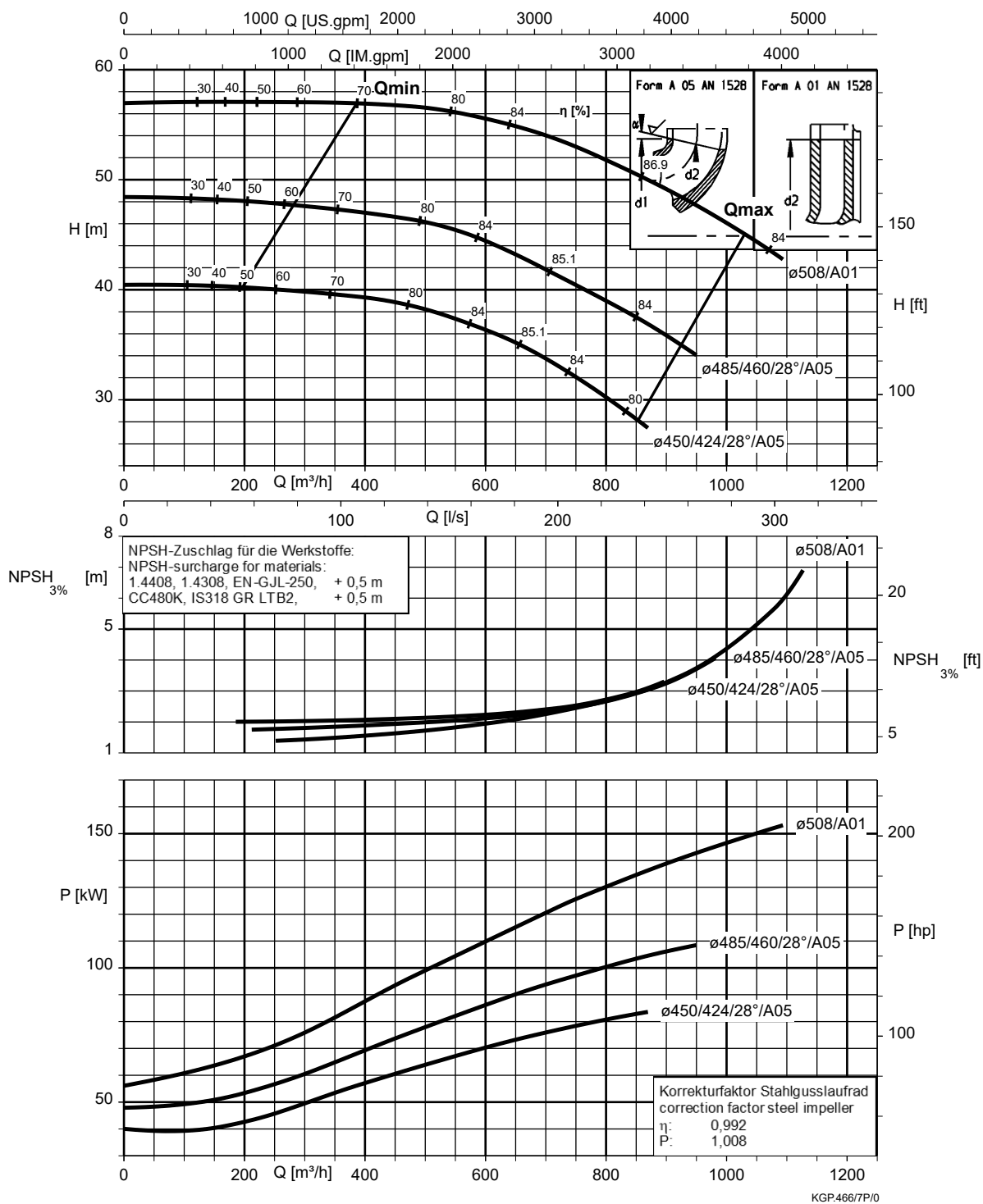
Y-axis: Power P [kW] (left, 20 to 60) and P [hp] (right, 40 to 80).
 X-axis: Flow rate Q [m³/h] (bottom, 0 to 1200).
 Curves shown: $\phi 373/A01$, $\phi 354/334/16^\circ/A05$, and $\phi 326/299/314/20^\circ/A06$.
 Boxed text: Korrekturfaktor Stahlgusslaufrad correction factor steel impeller: η : 0,994; P : 1,006.

Bottom Right: KGP.466/7M/0

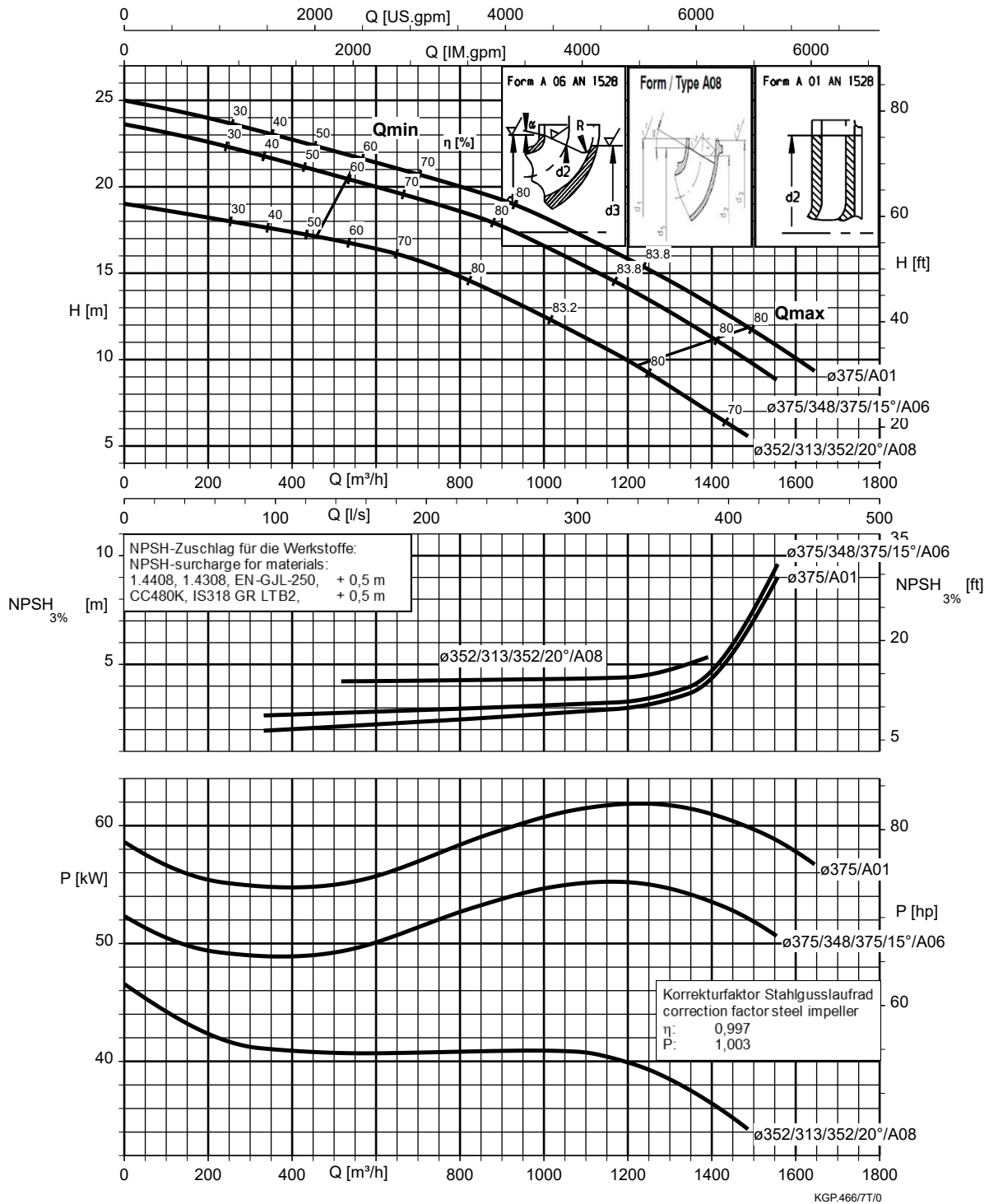
Etanorm 300-250-435, $n = 1160 \text{ min}^{-1}$



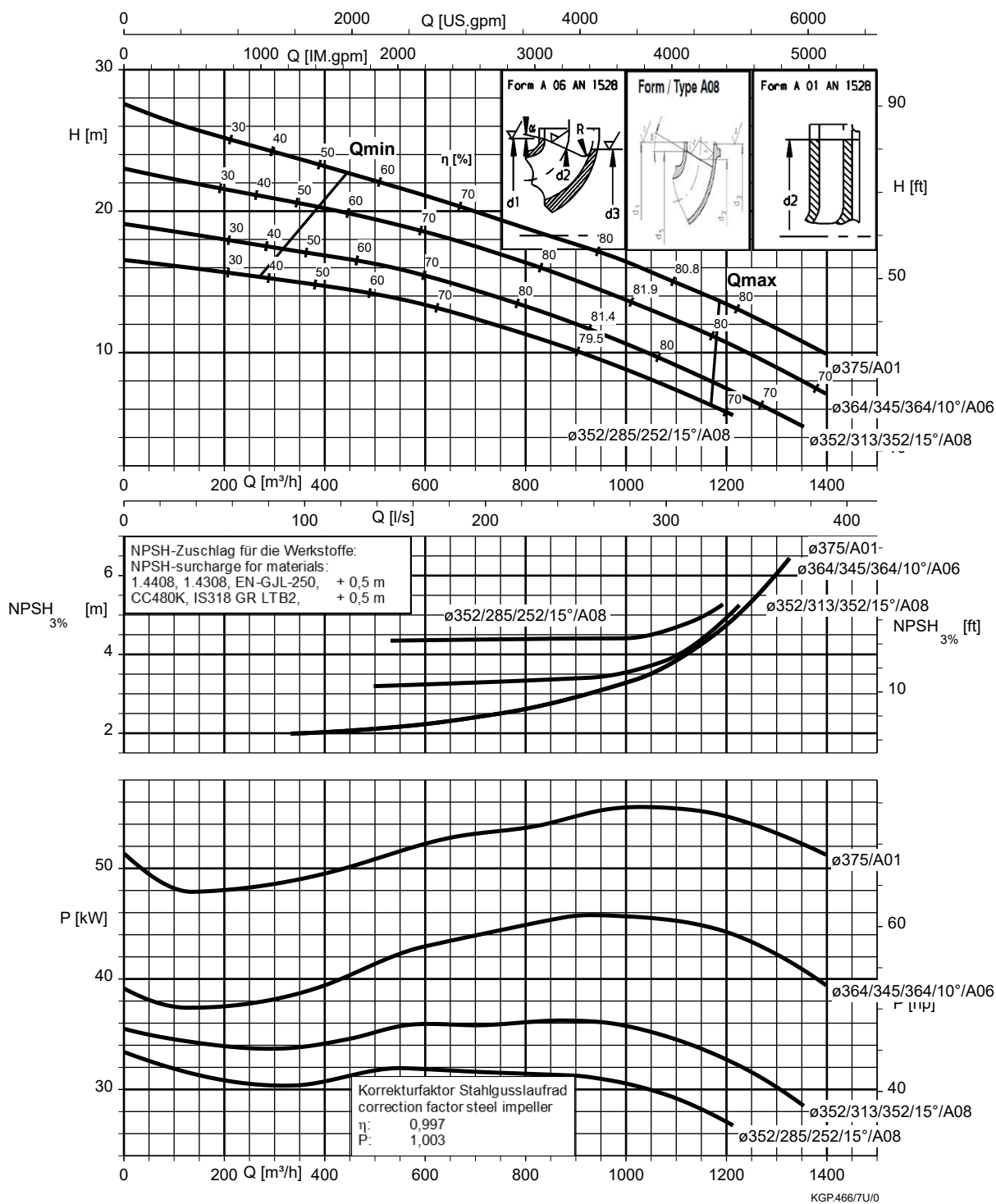
Etanorm 300-250-510, $n = 1160 \text{ min}^{-1}$



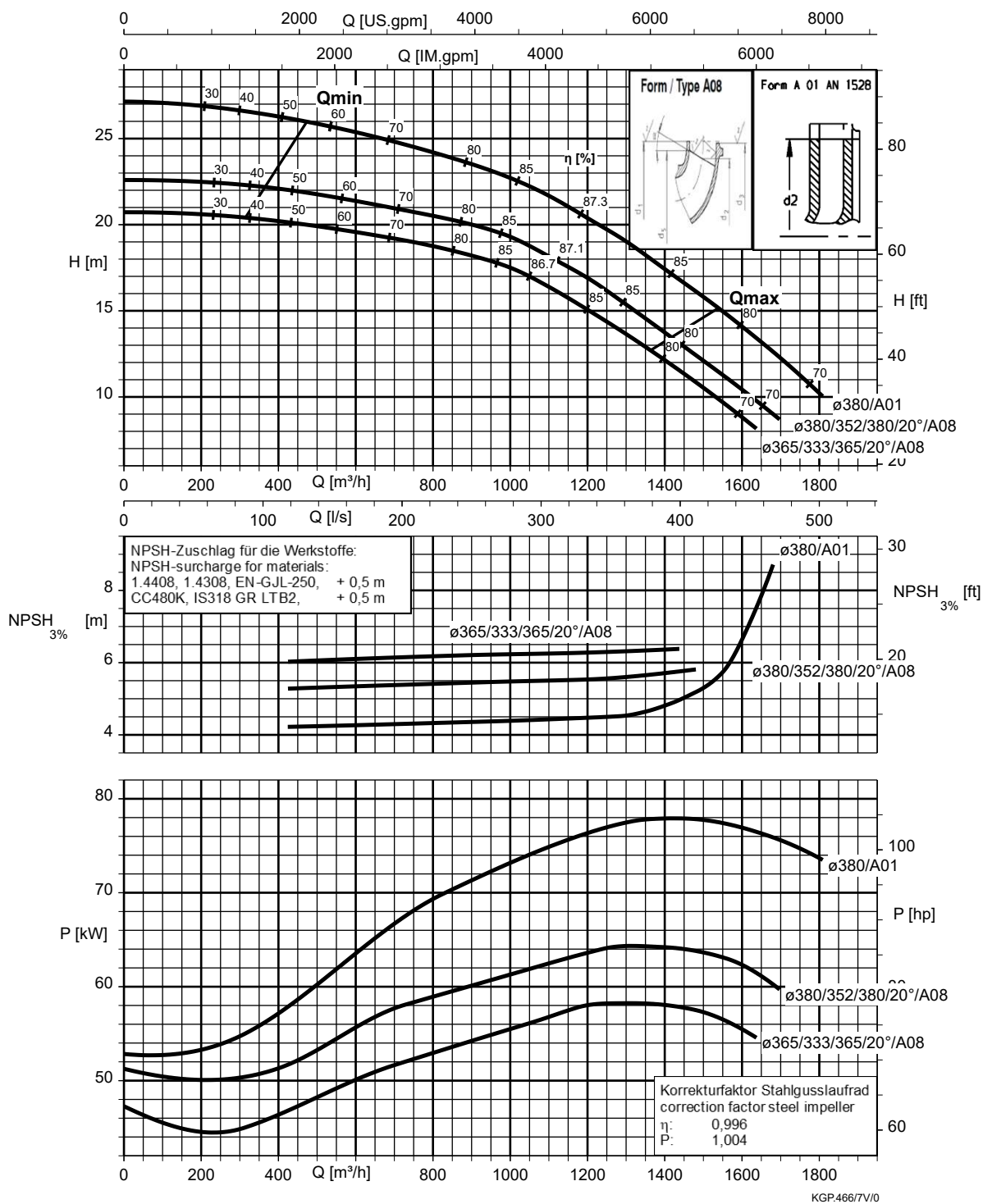
Etanorm 350-300-350, $n = 1160 \text{ min}^{-1}$



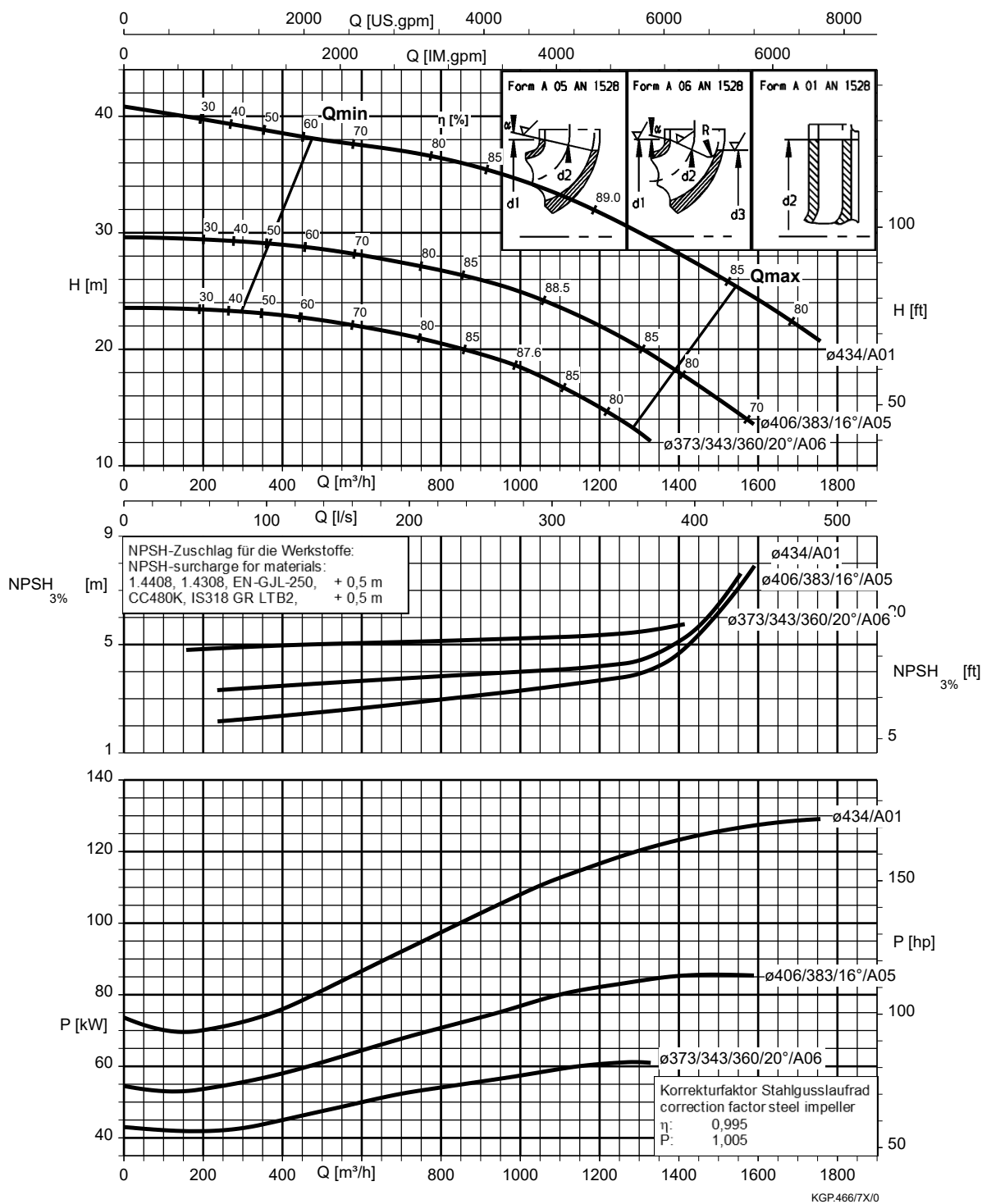
Etanorm 350-300-350.1, $n = 1160 \text{ min}^{-1}$



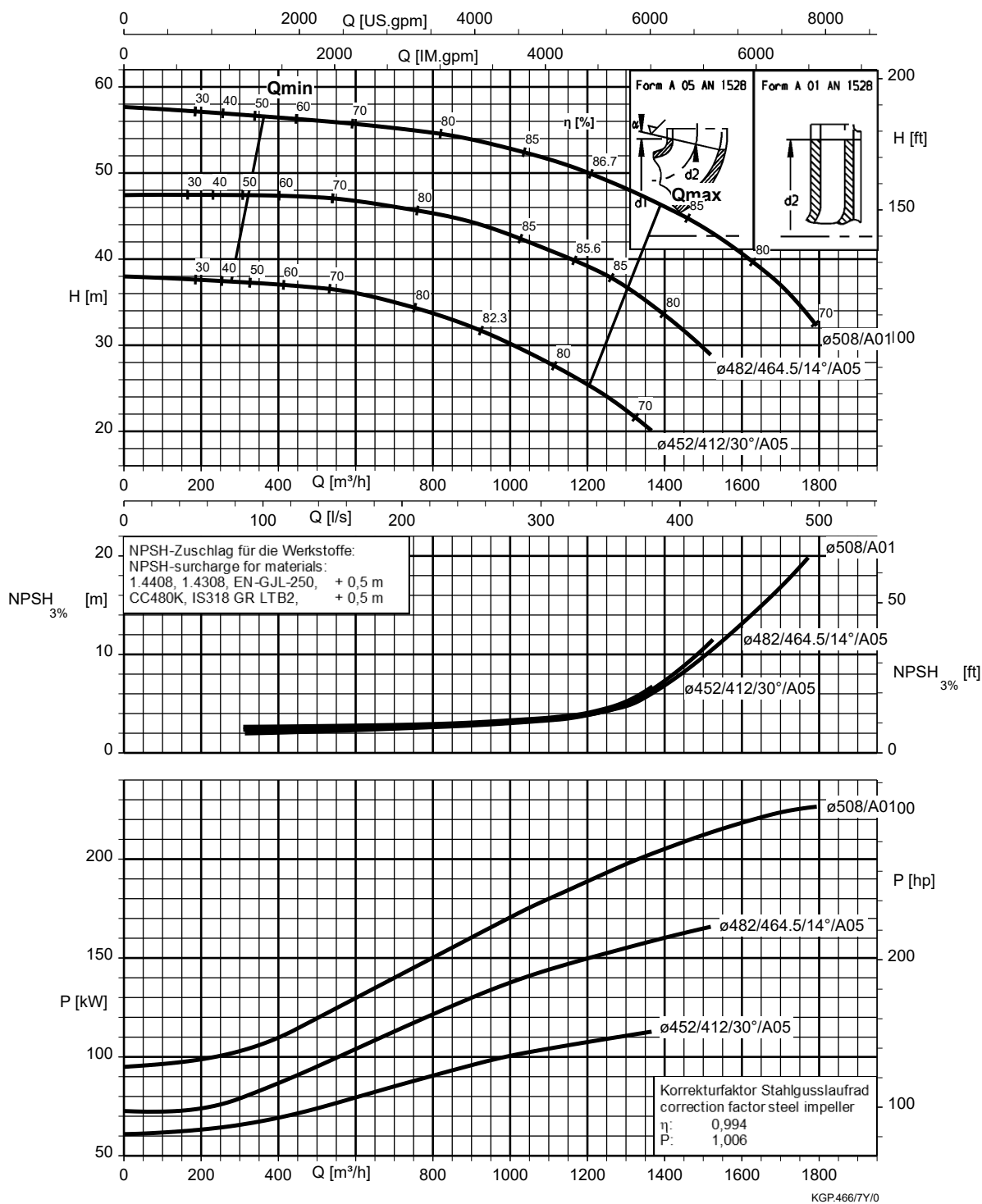
Etanorm 350-300-375, $n = 1160 \text{ min}^{-1}$



Etanorm 350-300-435, $n = 1160 \text{ min}^{-1}$



Etanorm 350-300-510 , $n = 1160 \text{ min}^{-1}$



Etanorm-RSY 125-500.2, n = 1160 min⁻¹

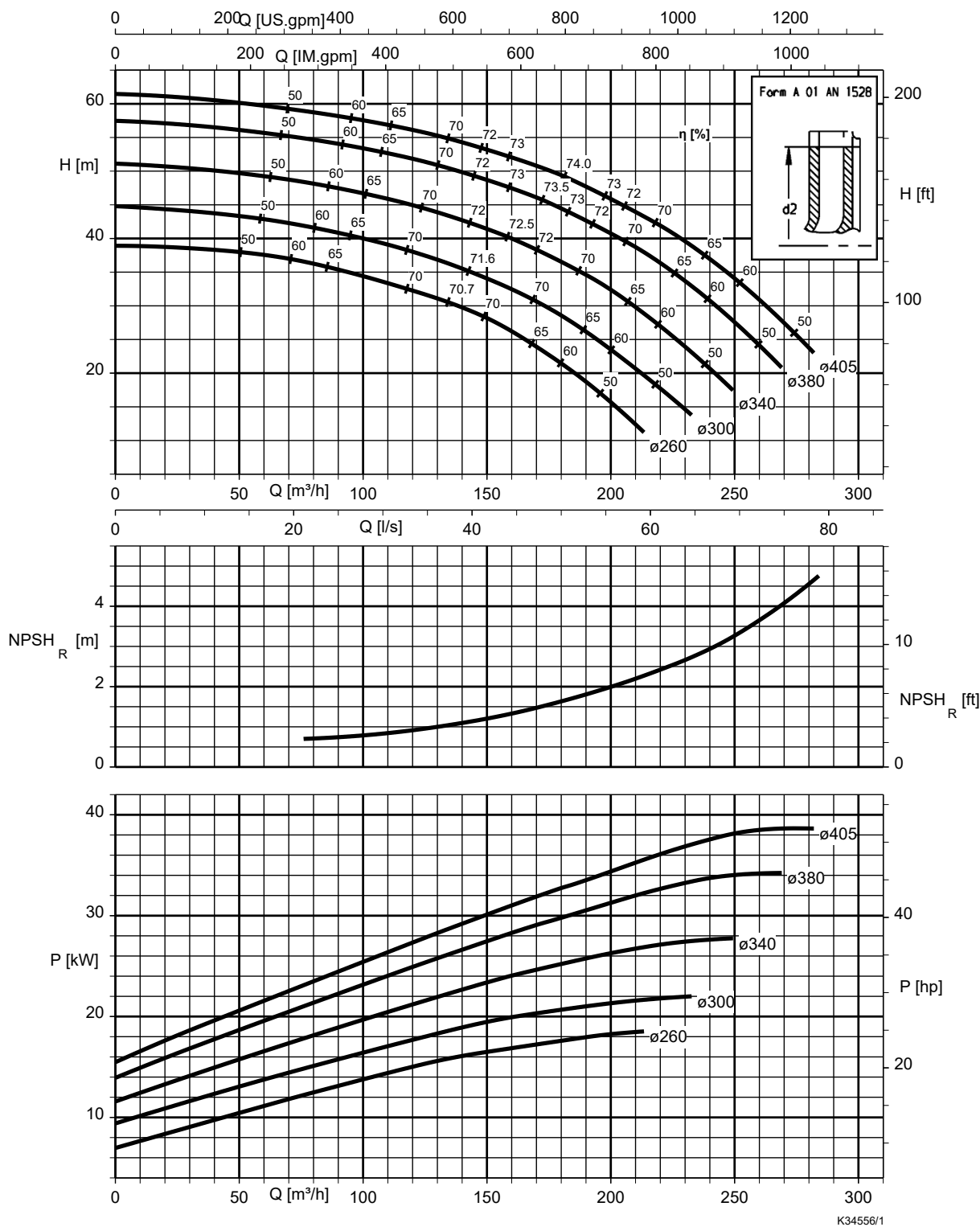


Tabelle 13: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 150-500.1, $n = 1160 \text{ min}^{-1}$

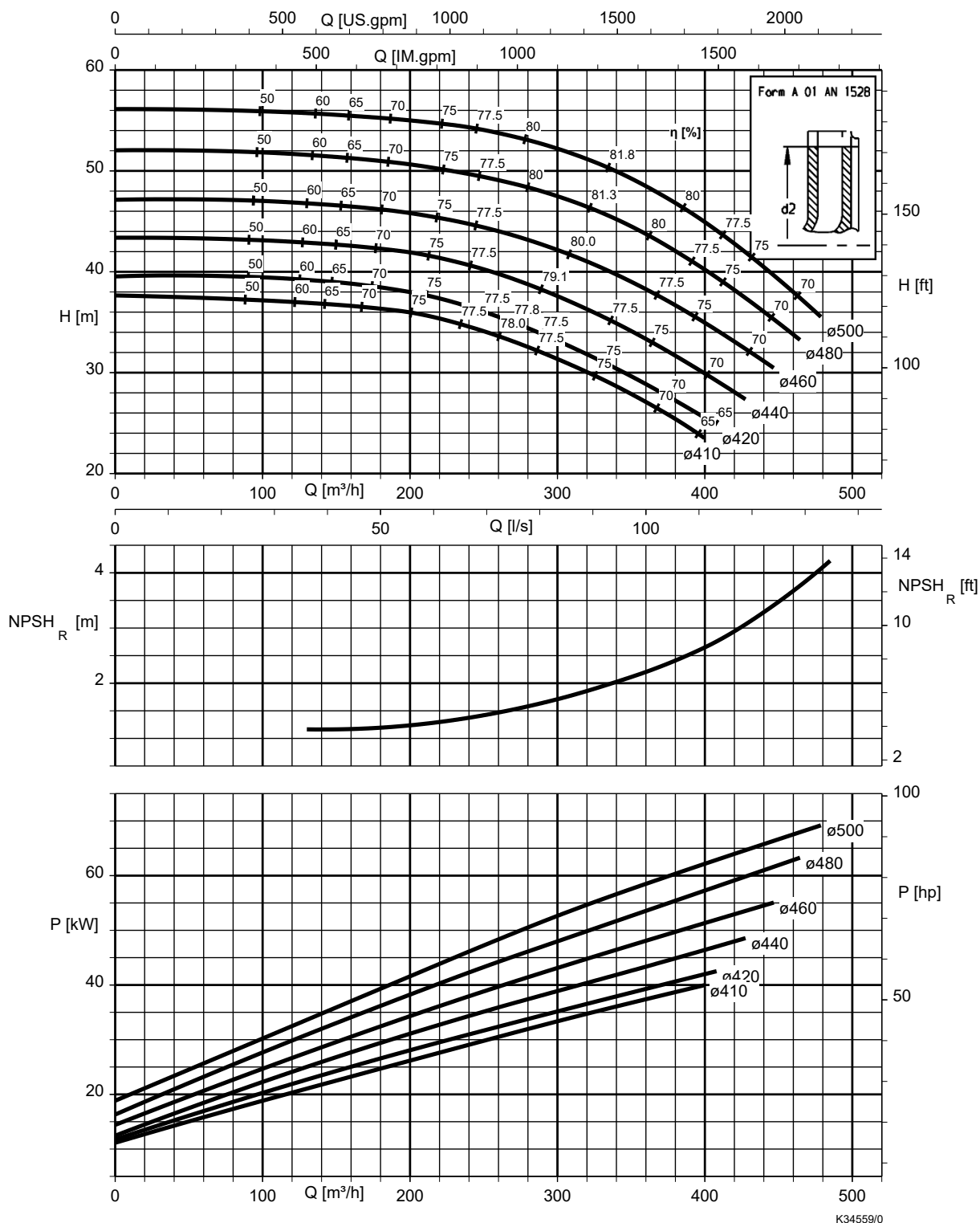


Tabelle 14: Korrekturwerte

Laufradwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 200-330, $n = 1160 \text{ min}^{-1}$

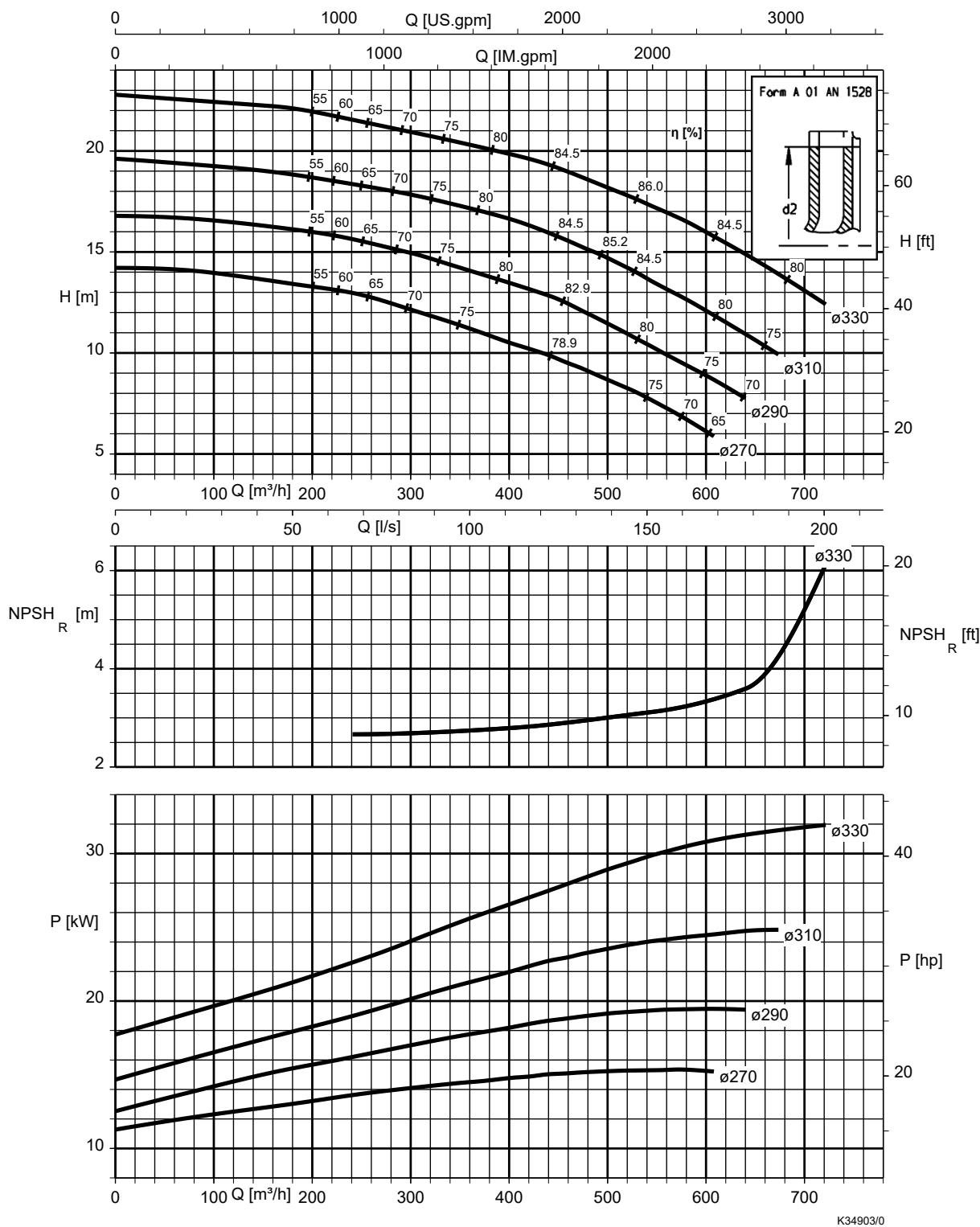


Tabelle 15: Korrekturwerte

Laufradwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 200-400, $n = 1160 \text{ min}^{-1}$

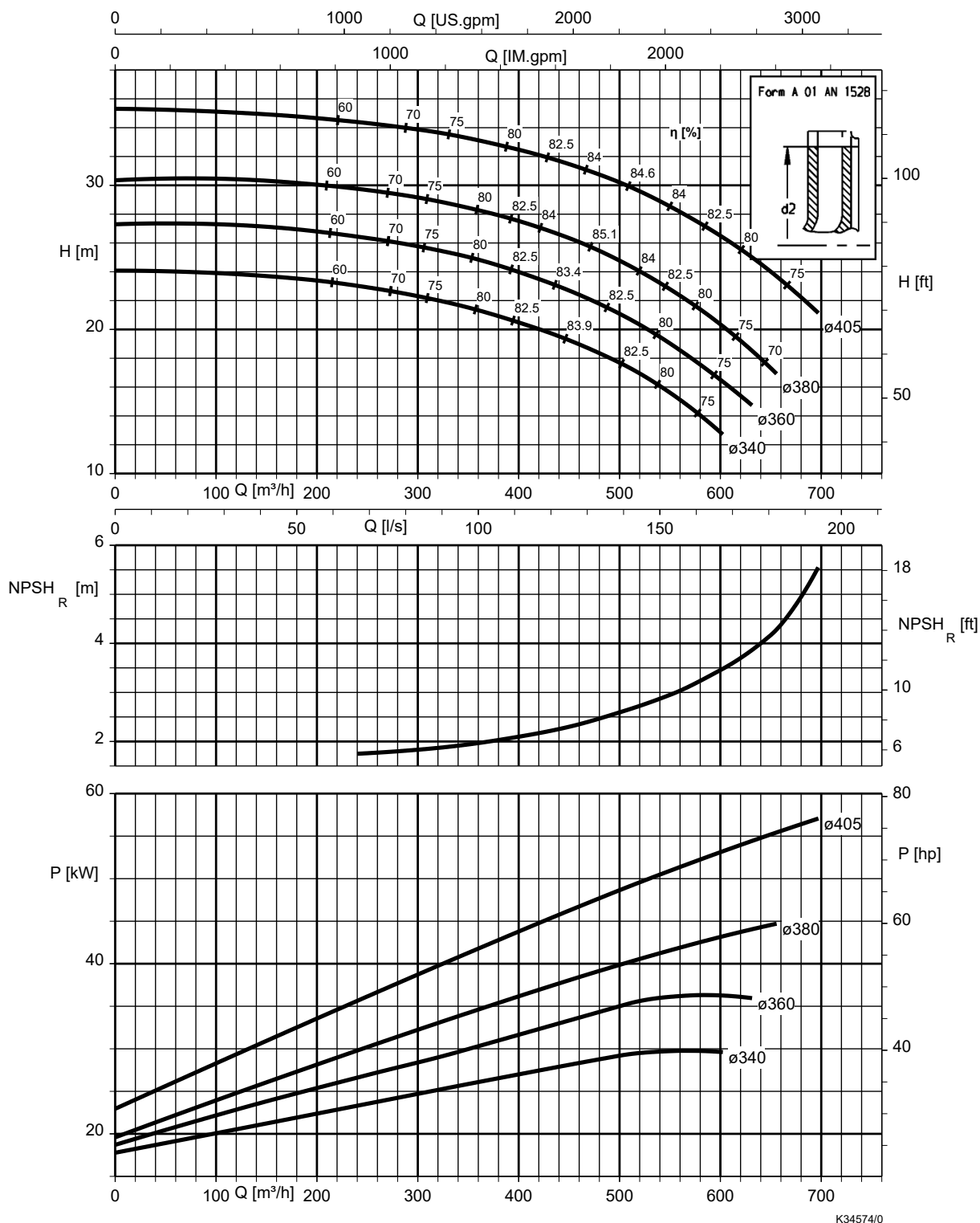


Tabelle 16: Korrekturwerte

Laufradwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 200-500, $n = 1160 \text{ min}^{-1}$

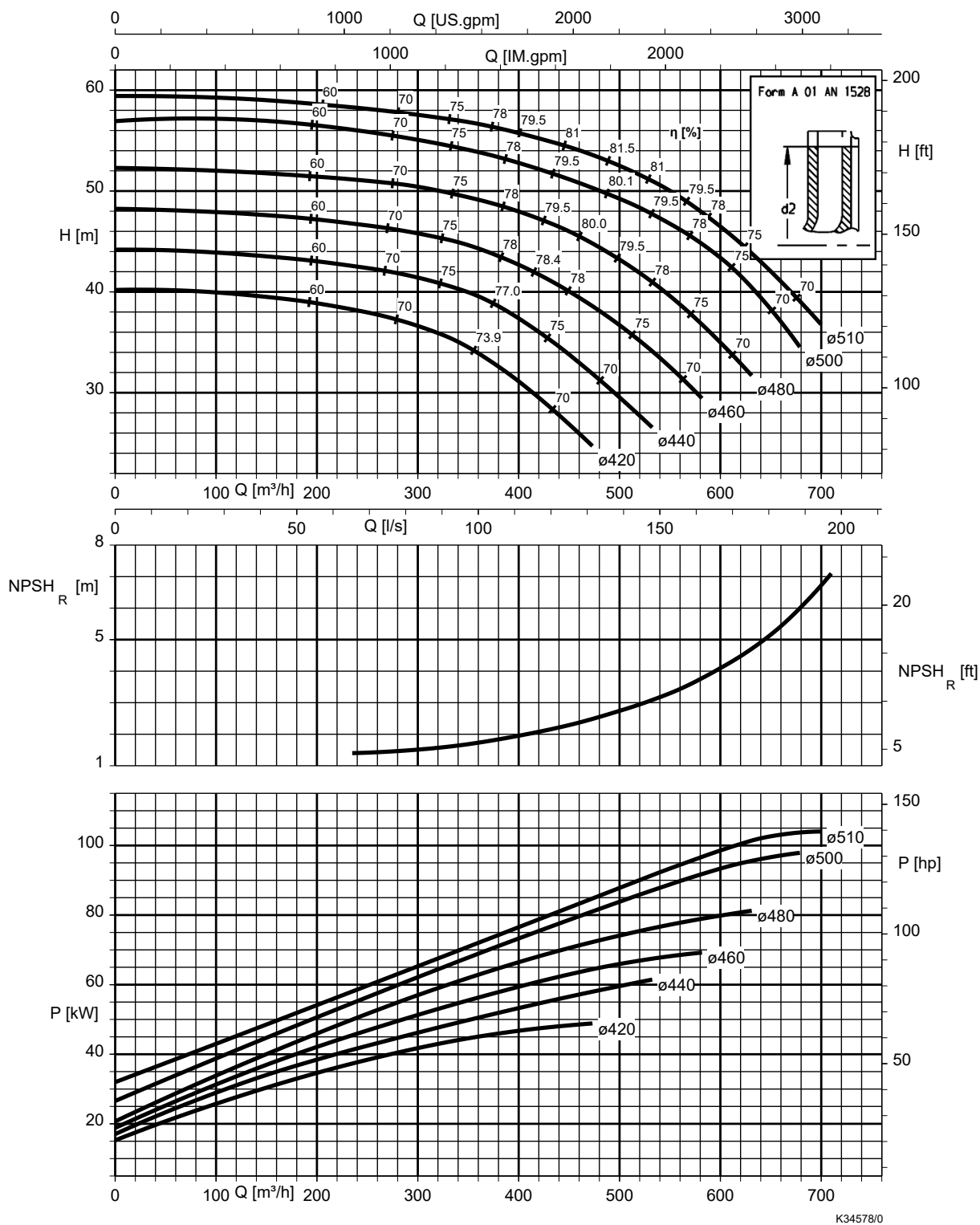


Tabelle 17: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	0,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 250-330, $n = 1160 \text{ min}^{-1}$

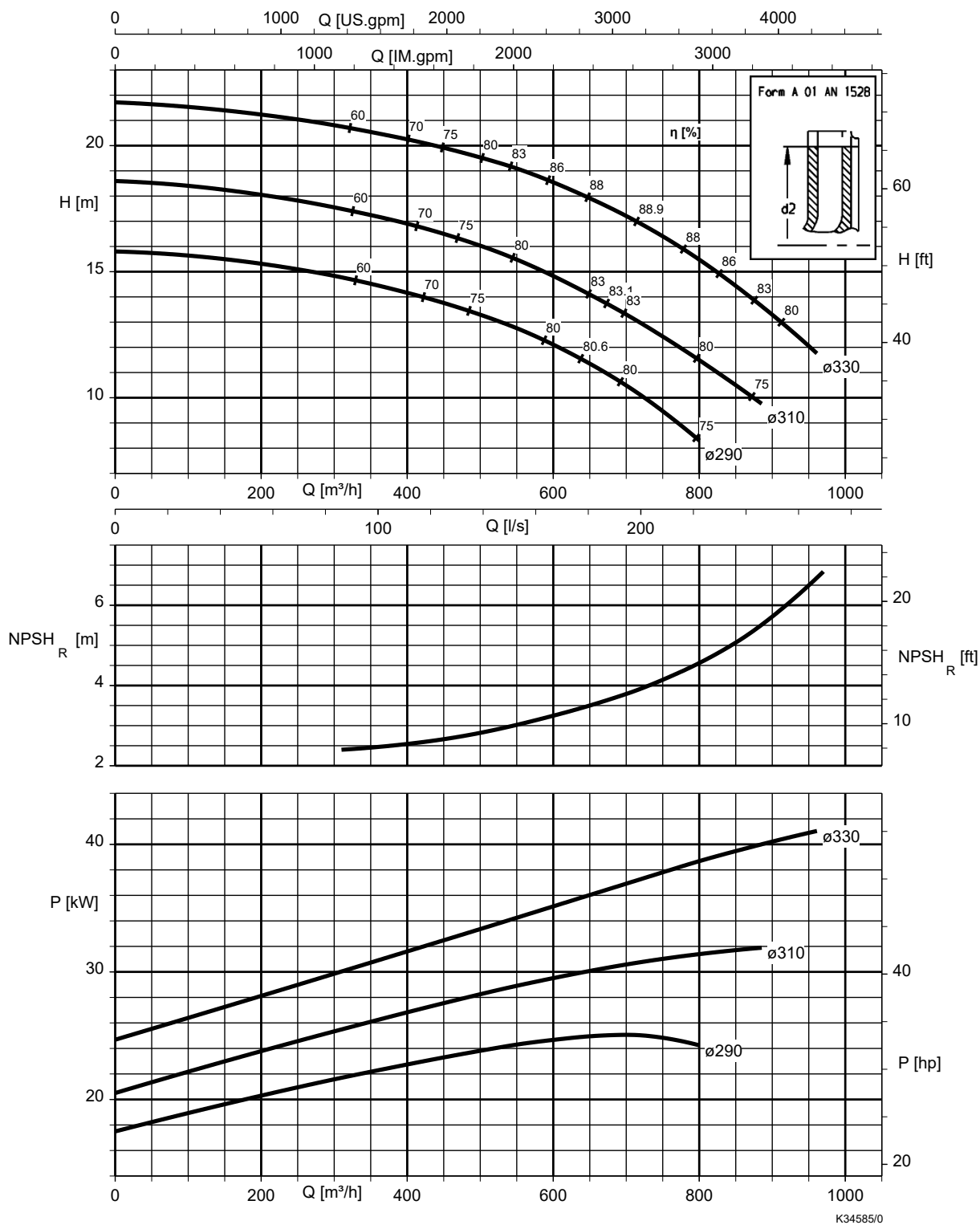


Tabelle 18: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	1,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 250-400, $n = 1160 \text{ min}^{-1}$

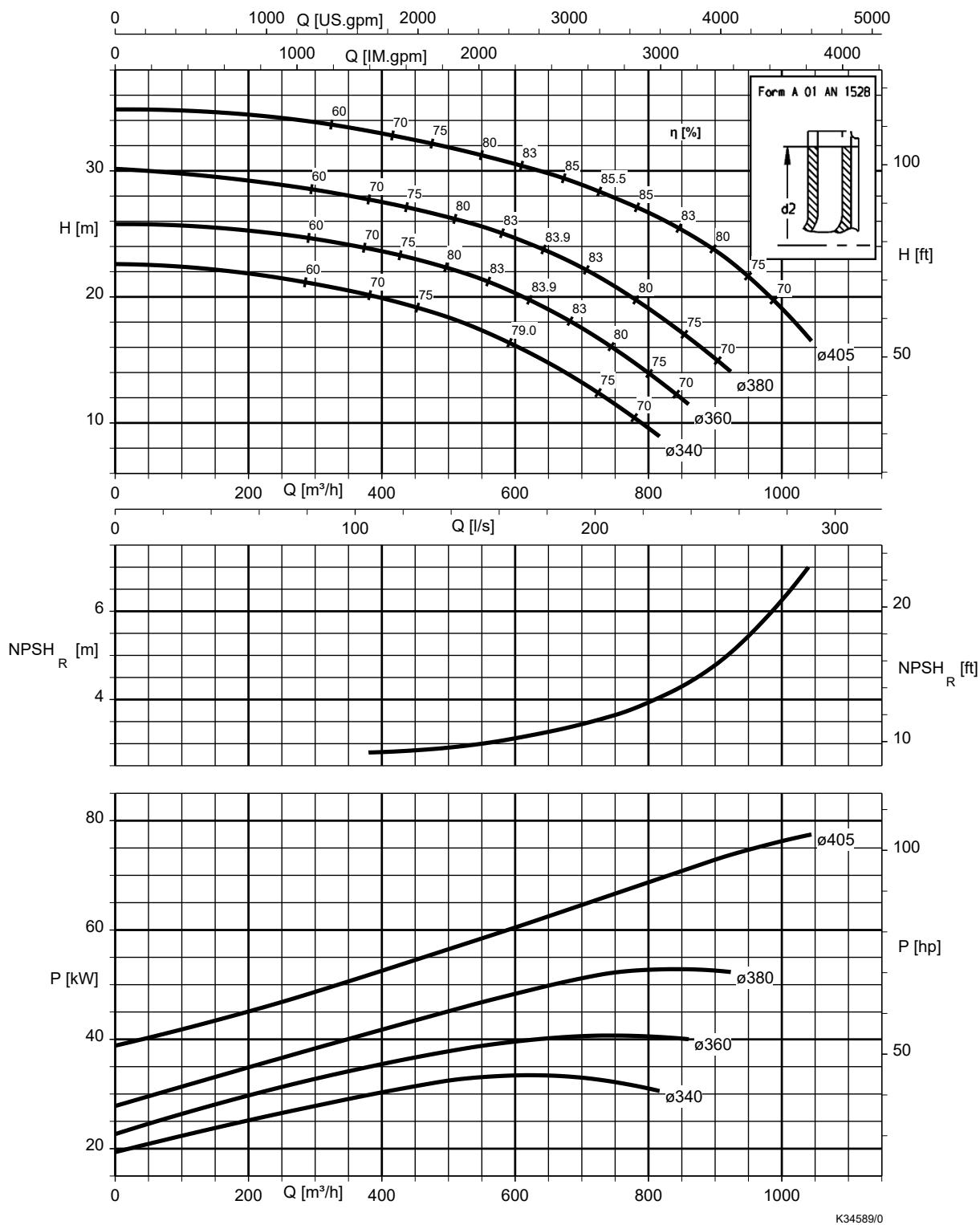


Tabelle 19: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	1,0	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 250-500, $n = 1160 \text{ min}^{-1}$

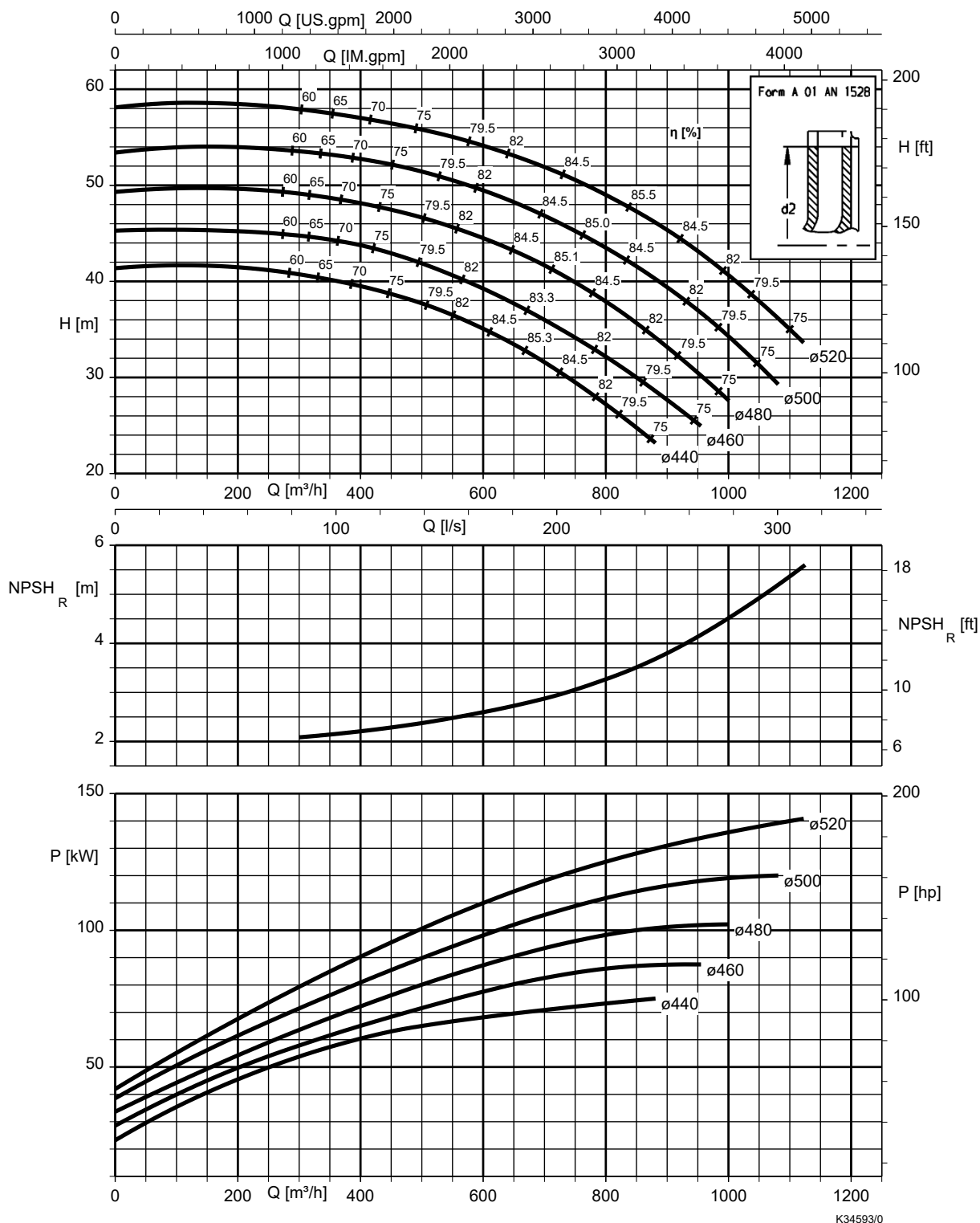


Tabelle 20: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	1,0	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

Etanorm-RSY 300-340, $n = 1160 \text{ min}^{-1}$

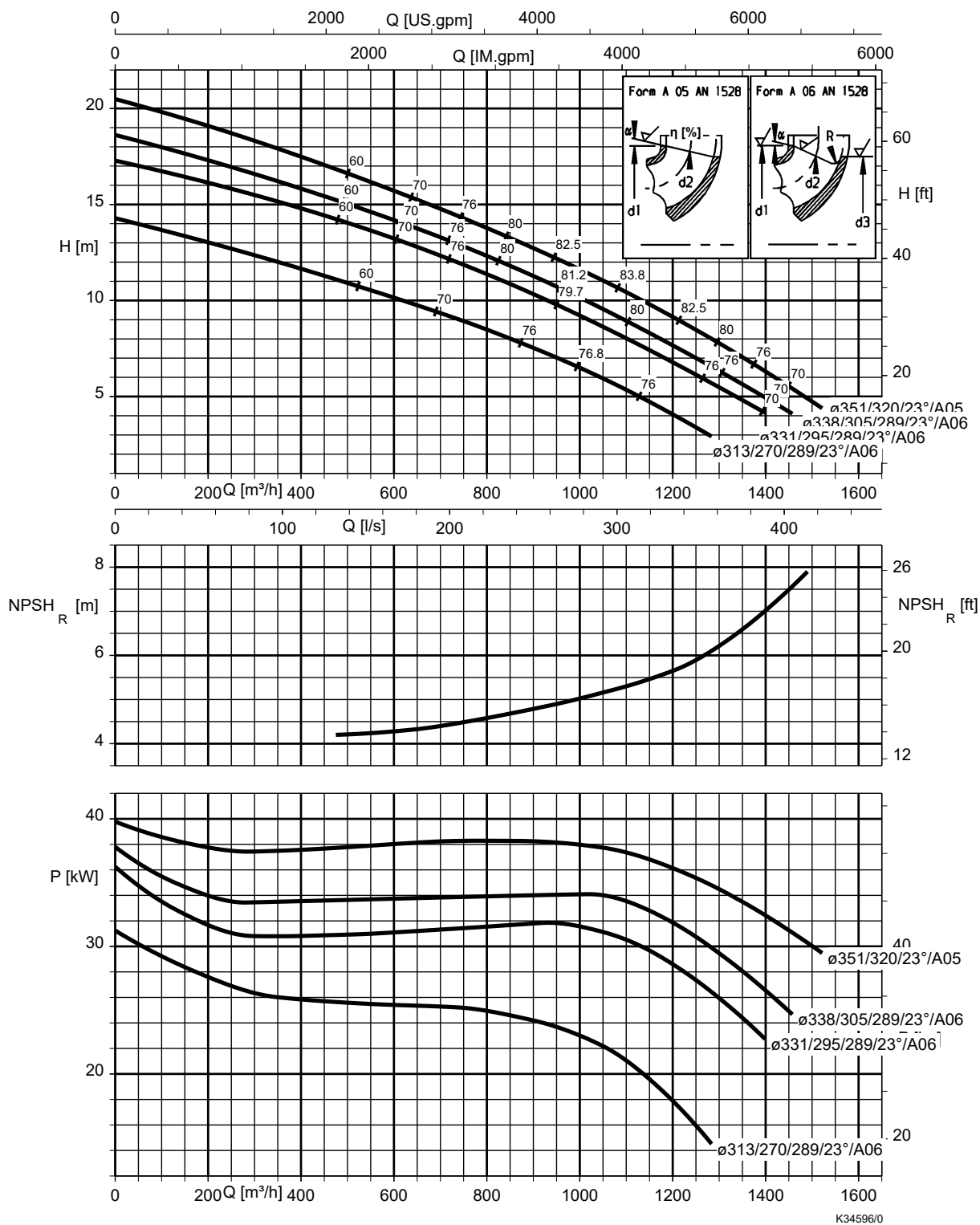


Tabelle 21: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	3,0	$\text{NPSH}_{\text{Anlage}} \geq \text{NPSH} + \text{Korrekturwert S}$
CC480K-GS	1,5	
1.4408	0,5	

Etanorm-RSY 300-360, $n = 1160 \text{ min}^{-1}$

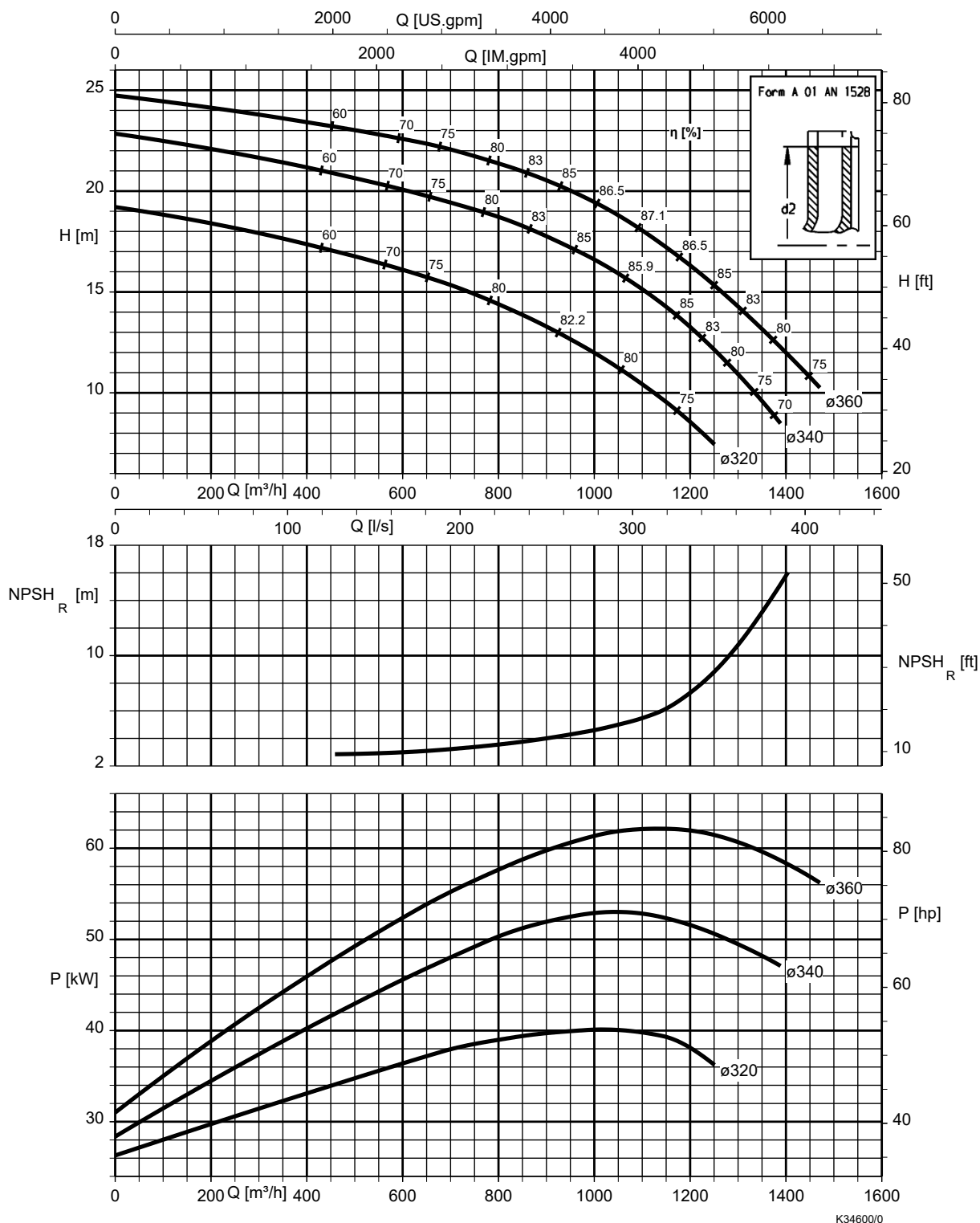


Tabelle 22: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	1,8	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	1,0	
1.4408	0,5	

Etanorm-RSY 300-500, $n = 1160 \text{ min}^{-1}$

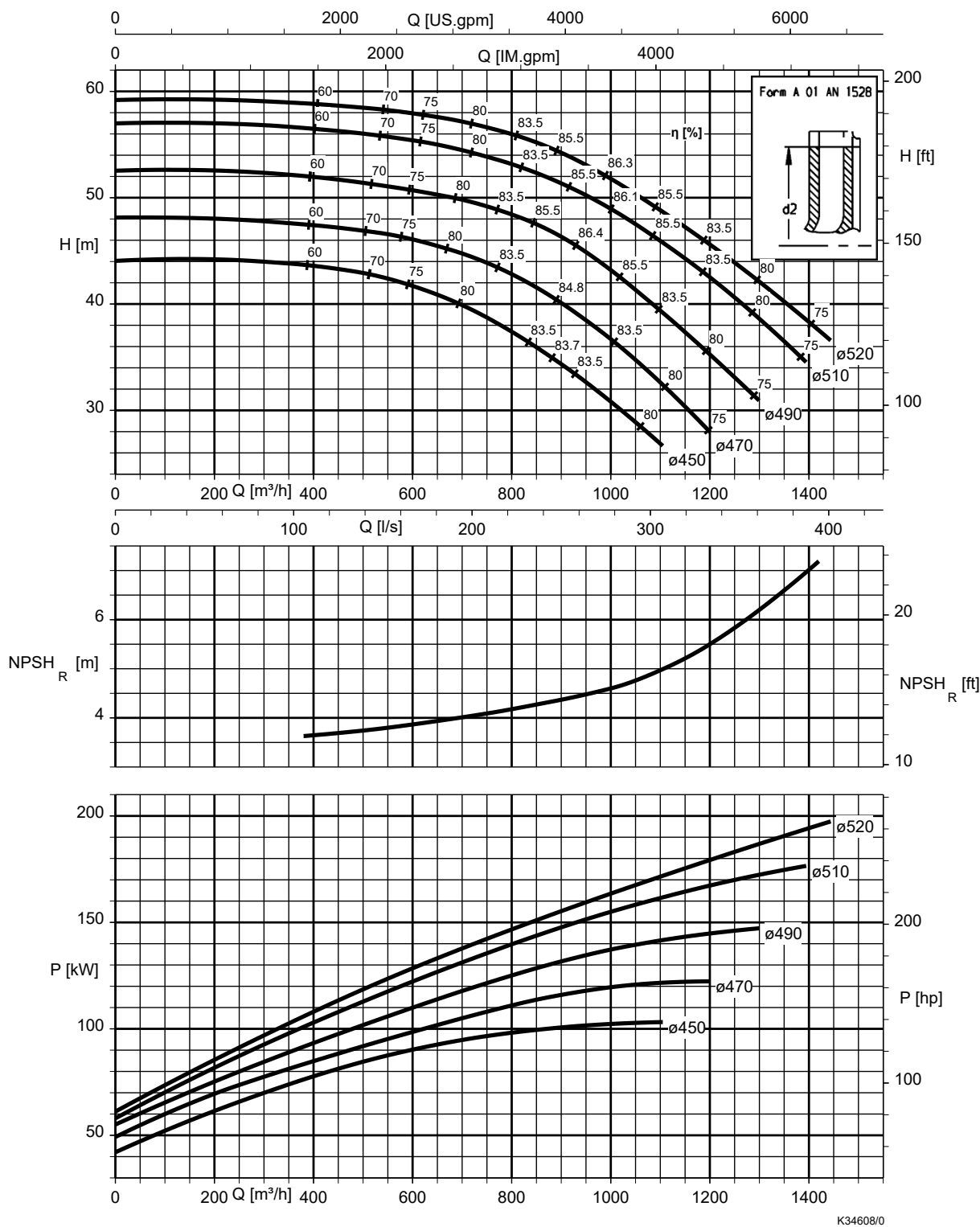


Tabelle 23: Korrekturwerte

Laufwerkstoff	Korrekturwert S [m]	Berechnung
EN-GJL-250	1,5	$NPSH_{Anlage} \geq NPSH + \text{Korrekturwert S}$
CC480K-GS	0,5	
1.4408	0,5	

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