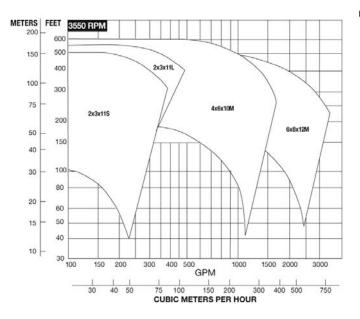
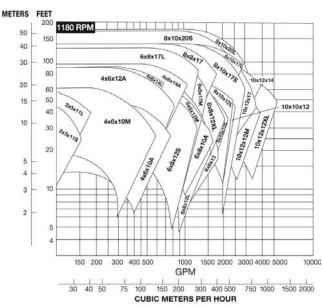
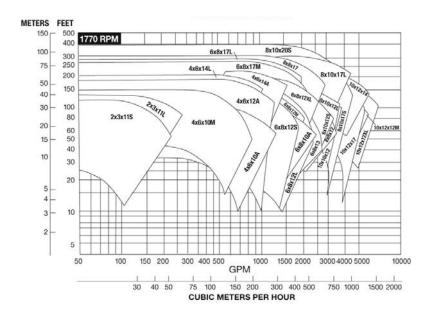


HORIZONTAL SPLIT CASE BASE MOUNTED - DOUBLE SUCTION PUMP PERFORMANCE CURVES







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3500 RPM PUMP CURVES	3-4
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#### **USEFUL PUMP FORMULAS**

Affinity Laws: Effect of change of speed or impeller diameter on centrifugal pumps.

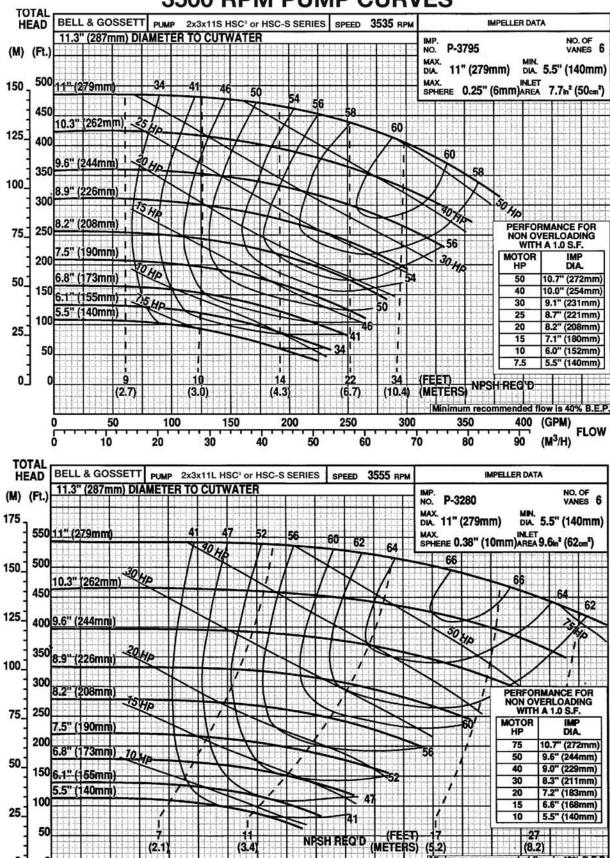
$$\begin{array}{lll} & & & & & & & & & \\ Impeller & & & & & \\ Diameter & & & & \\ Change & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

Where Q = GPM, H = Head, P = BHP, D = Impeller Dia., RPM = Pump Speed

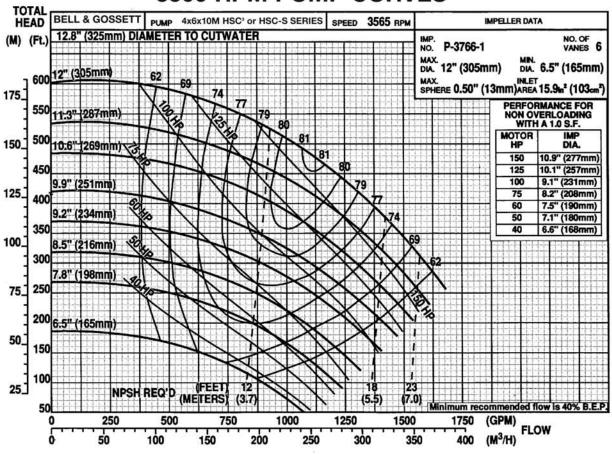
(GPM)

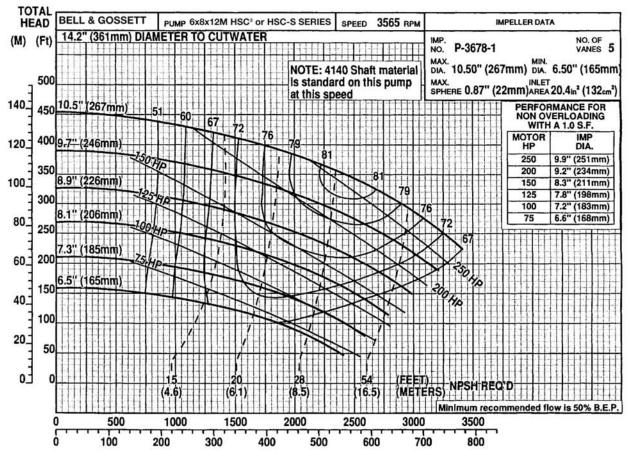
 $(M^3/H)$ 

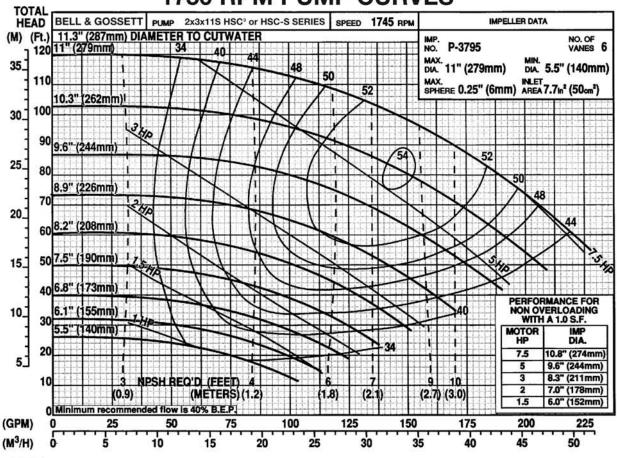
### 3500 RPM PUMP CURVES

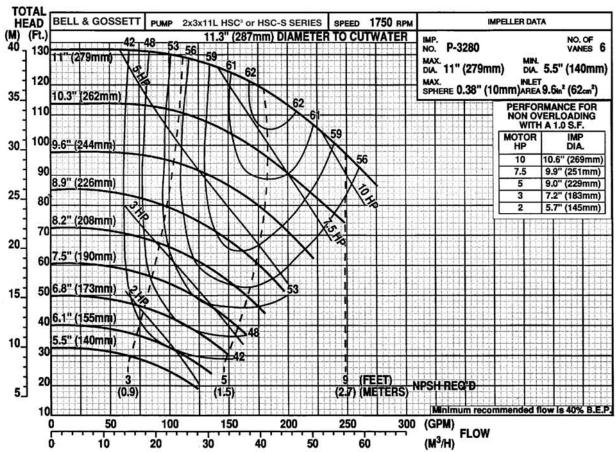


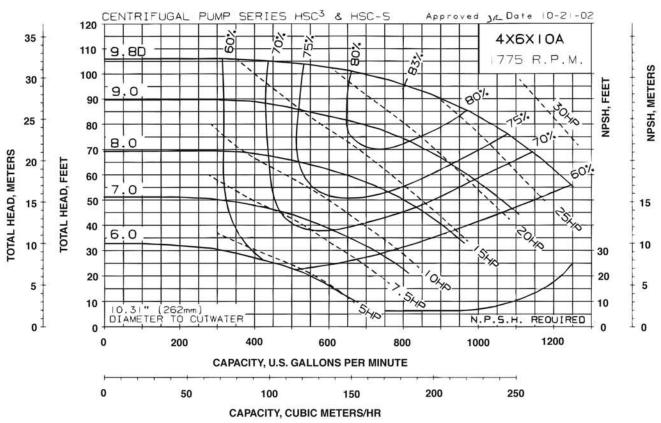
nmended flow is 40% B.E.P

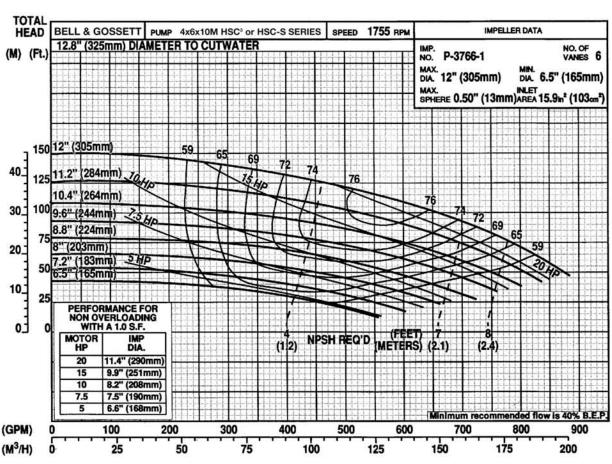


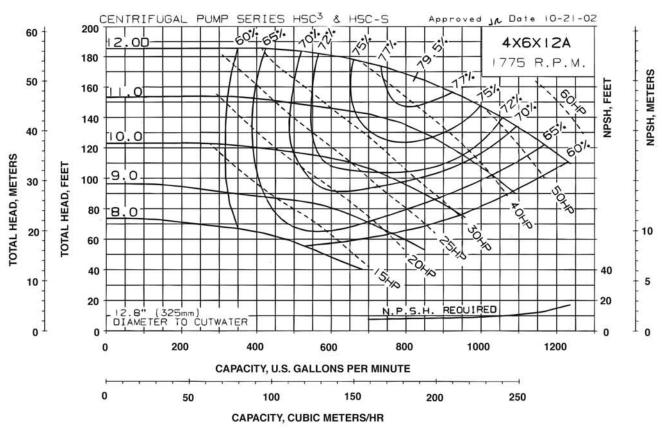


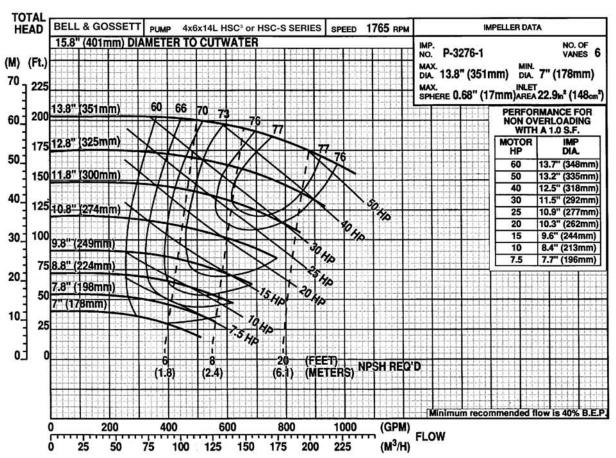


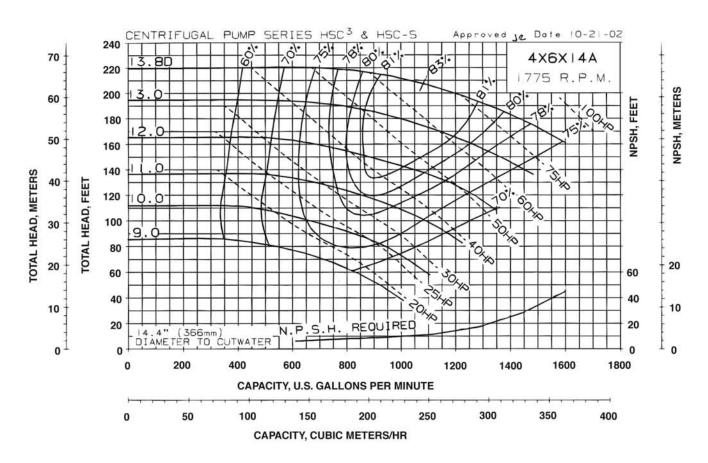


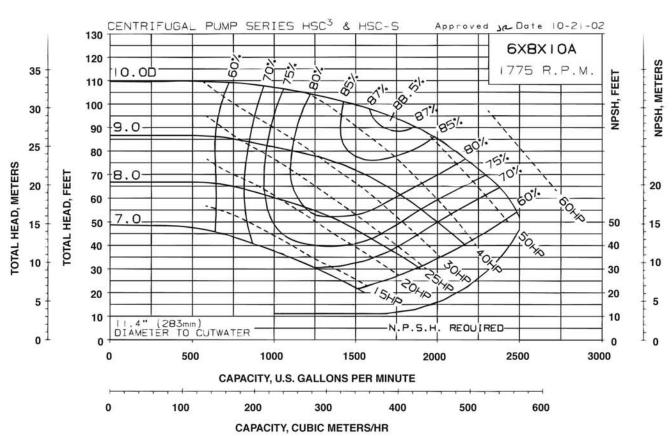


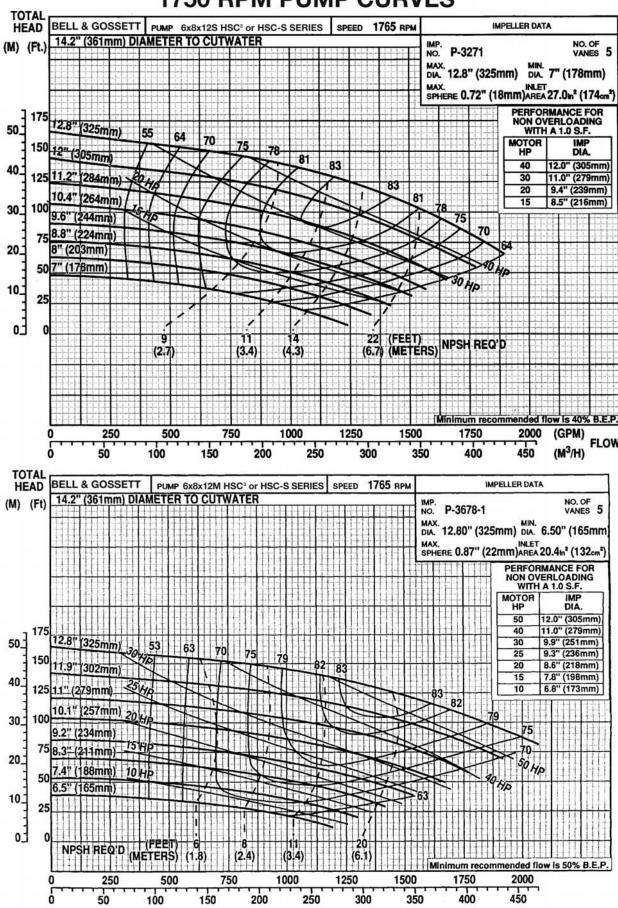


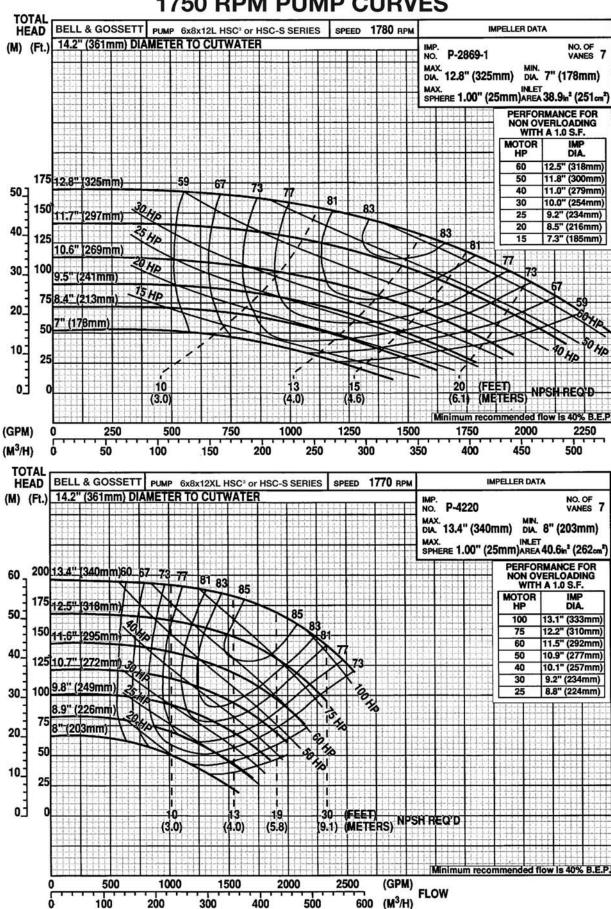


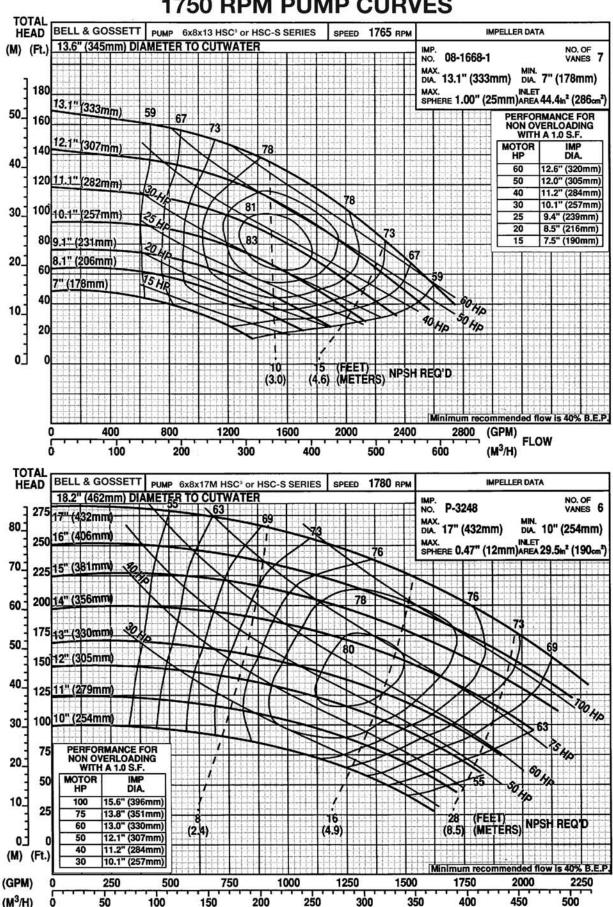


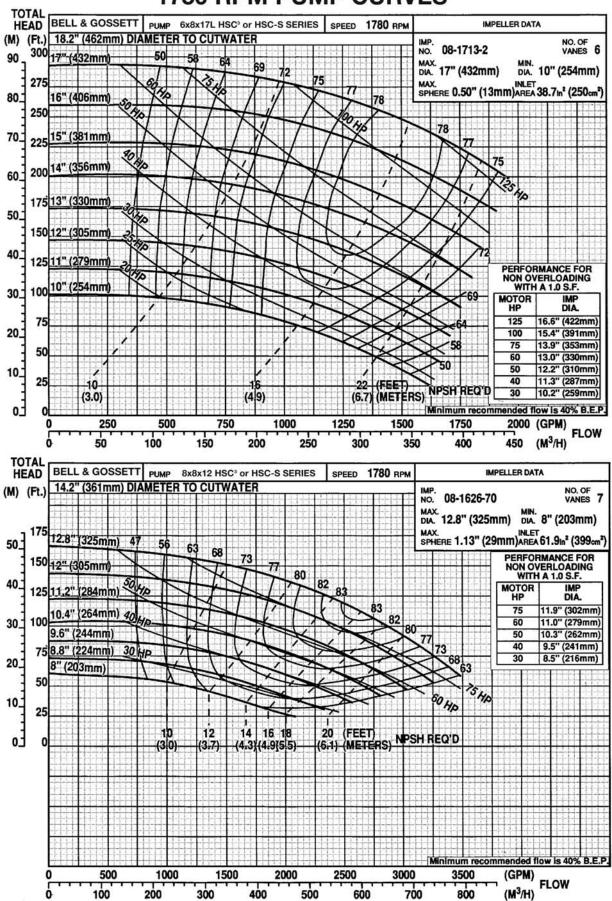












500

100

1000

300

400

200

#### 1750 RPM PUMP CURVES TOTAL BELL & GOSSETT PUMP 8x8x17 HSC3 or HSC-S SERIES IMPELLER DATA HEAD 18.1" (460mm) DIAMETER TO CUTWATER (Ft.) NO. OF VANES 7 17.7" (450mm) P-3984 325 MAX. DIA. 17.7" (450mm) DIA. 10" (254mm) 65 70 300 MAX MAX. SPHERE 0.98" (25mm)AREA 40.2 in<sup>2</sup> (259 cm<sup>2</sup>) 90\_ 74 16.6" (422mm) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. 80 MOTOR IMP DIA 250 15.5" (394mm) 150 16.9" (429mm) 70\_ 125 16.1" (409mm) 15.0" (381mm) 100 14.4" (366mm) ( 76 75 13.6" (345mm) 200 60\_ 60 12.6" (320mm) 11.8" (300mm) 50 13.3" (338mm) 40 11.0" (279mm) 30 10.0" (254mm) 50 150 12.2" (310mm 40\_ (282mm 100 10" (254mm 30\_ 20 (METERS) NPSH REQ'D (5,5)10. (GPM) FLOW 500 1000 1500 2000 2500 $(M^3/H)$ 100 200 300 600 400 500 BELL & GOSSETT PUMP 8x10x12S HSC3 or HSC-S SERIES SPEED 1780 RPM IMPELLER DATA (M) (Ft.) 14.1" (358mm) DIAMETER TO CUTWATER NO. 08-1701-70 MAX. 12.8" (325mm) MIN. 8" (203mm) MAX. SPHERE 1.40" (36mm)AREA 62.9in<sup>2</sup> (406cm<sup>2</sup>) 12.8" (325mm) 50\_ 52 60 67 PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. 13 12" (305mm) 83 85 40\_ 11.2" (284mm) MOTOR HP DIA. 10.4" (264mm) 11.9" (302mm) 11.2" (284mm) 100 60 30\_ 9.6" (244mm 50 10.5" (267mm) 8.8" (224mm 40 9.7" (246mm) 30 8.8" (224mm) 8" (203mm) 20\_ 10\_ 25 30 (FEET) (9.1) (METERS) NPSH REQ'D (3.0)Minimum recommended flow is 40% B.E.F

2500

600

500

3000

700

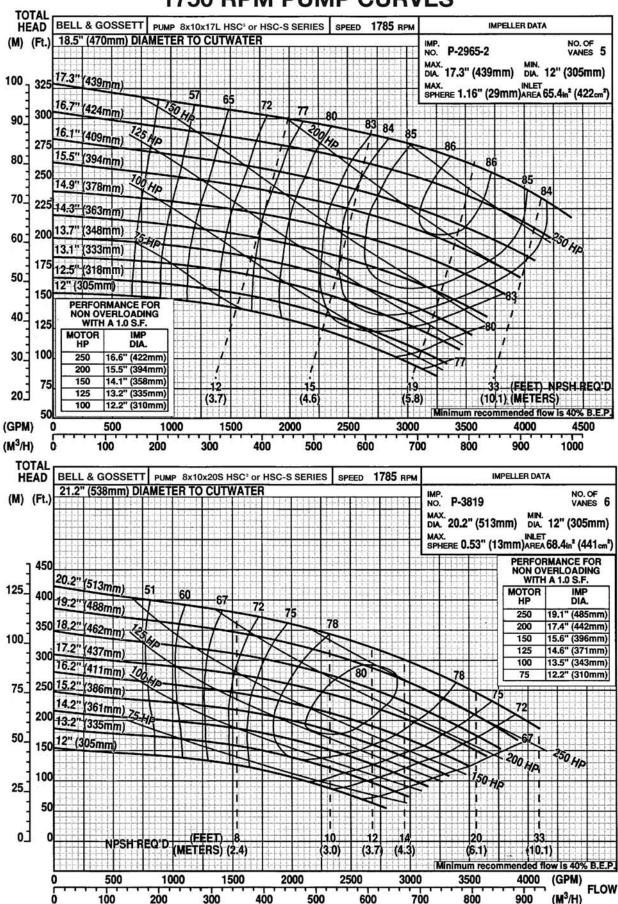
3500

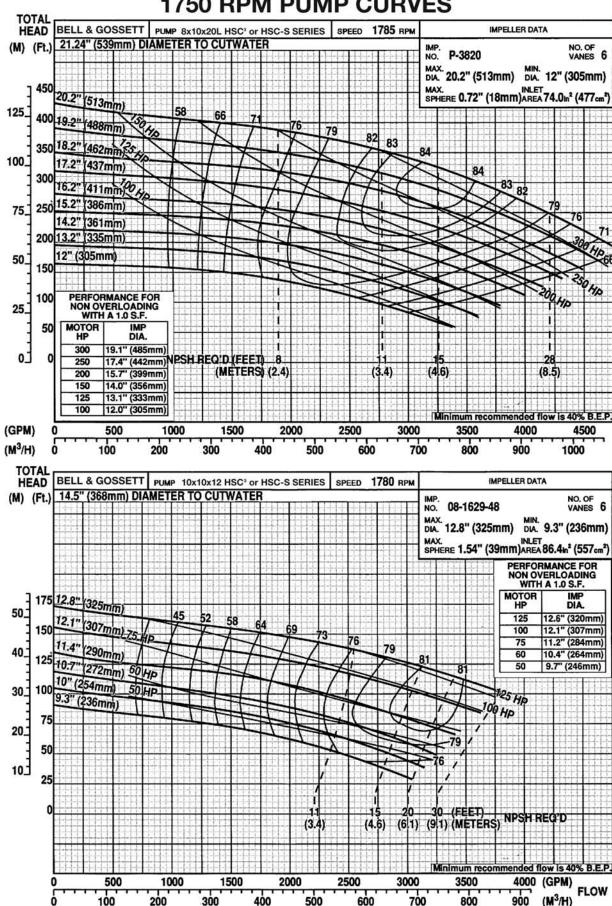
800

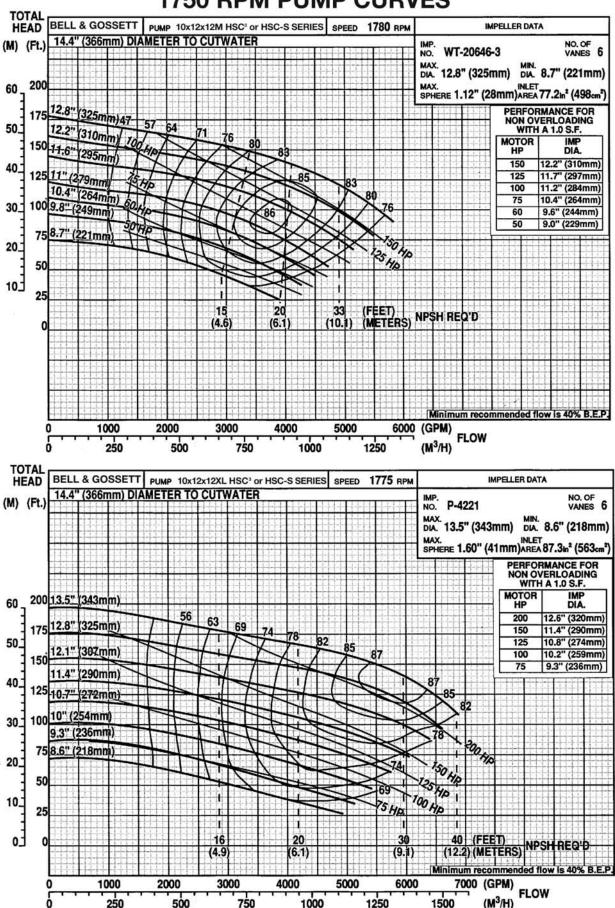
(GPM)

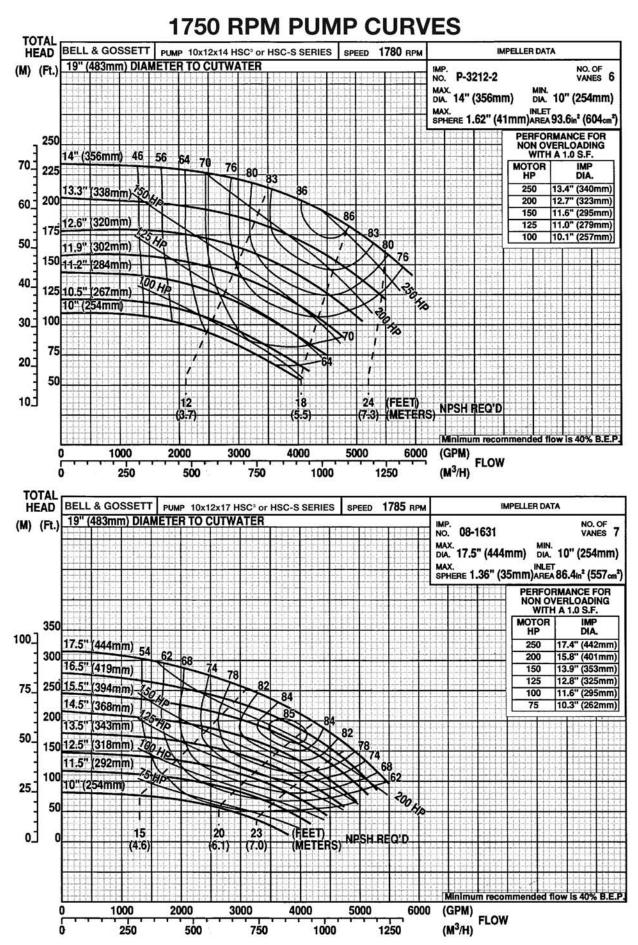
 $(M^3/H)$ 

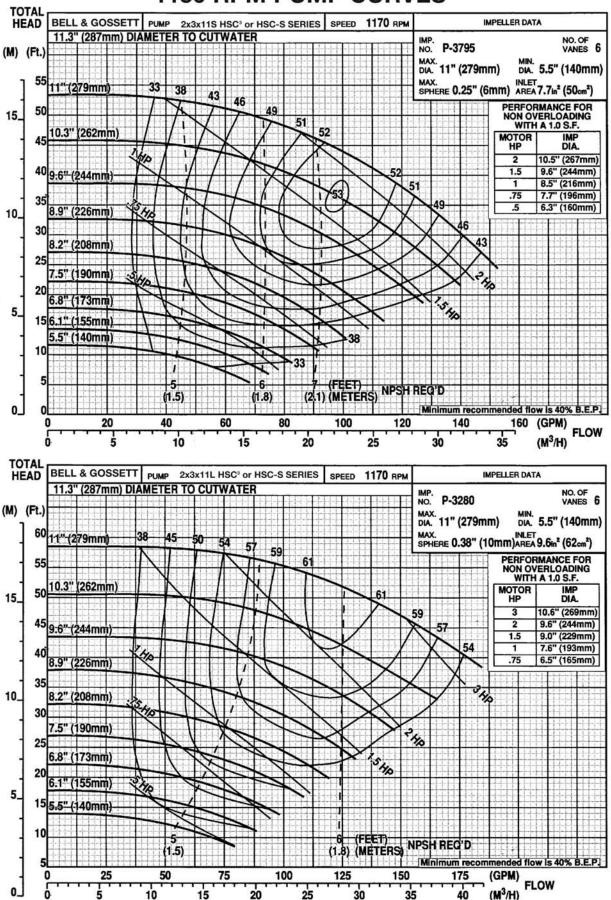
#### 1750 RPM PUMP CURVES TOTAL HEAD BELL & GOSSETT PUMP 8x10x12L HSC3 or HSC-S SERIES SPEED IMPELLER DATA 14.1" (358mm) DIAMETER TO CUTWATER NO. OF VANES 6 P-3062 MAX. DIA. 12.8" (325mm) DIA. 8.5" (216mm) MAX. SPHERE 1.47" (37mm)AREA 57.4in<sup>2</sup> (370cm<sup>2</sup>) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. (325mm) MOTOR IMP DIA 50\_ 67 73 12.6" (320mm) 125 81 12" (305mm 84 12.0" (305mm) 100 75 11.0" (279mm) 11.2" (284mm)<sub>5/</sub> 40 10.2" (259mm) 60 50 9.6" (244mm) 81 10.4" (264mm)40 40 9.0" (229mm) 100 9.6" (244mm) 100 Hp 75 8.5" (216mm) 20 75 HF 50 10\_ Ьo NPSH REQ'D (2.7)(3.0)(4.6) (6.1) (9.1) (METERS) Minimum recommended flow is 40% B.E.P. 3000 (GPM) 500 1000 1500 2000 2500 3500 **FLOW** 800 700 200 100 300 400 500 600 BELL & GOSSETT PUMP 8x10x17S HSC3 or HSC-S SERIES SPEED 1785 RPM IMPELLER DATA 18.5" (470mm) DIAMETER TO CUTWATER P-3091 MAX. DIA. 17.7" (450mm) DIA. 10" (254mm) MAX. SPHERE 0.97" (25mm)AREA 57.5in<sup>2</sup> (371cm<sup>2</sup>) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. MOTOR 16.7" (424mm) 150 15.4" (391mm) 17.7" (450mm) 100\_ 56 125 14.4" (366mm) 64 13.3" (338mm) 100 75 300 78 (419mm) 12.0" (305mm) 75 8 60 11.0" (279mm) 10.3" (262mm) 50 250 (389mm) 15.3" 81 200 14.1" (358mm) (328mm) 60 HP 50. 150 11.7" (297mm) 100 10" (254mm) 25 50 20 (FEET) OJ NPSH-REQ'E (METERS) (3.0)(4.6)(6.1)Minimum recommended flow is 40% B.E.P (GPM) 500 1000 3000 3500 4500 100 700 800 900 1000 $(M^3/H)$ 200 300 400 500 600

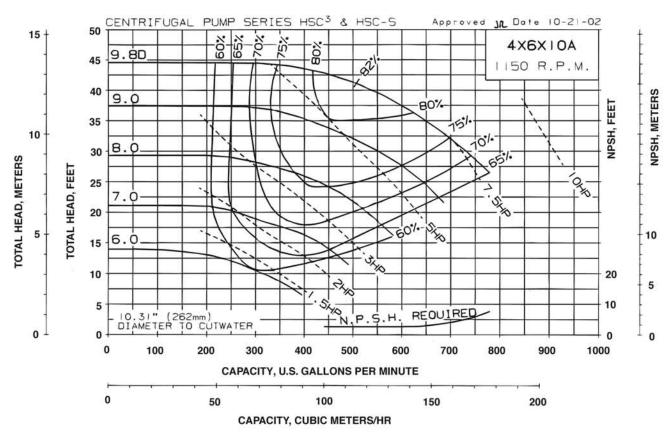


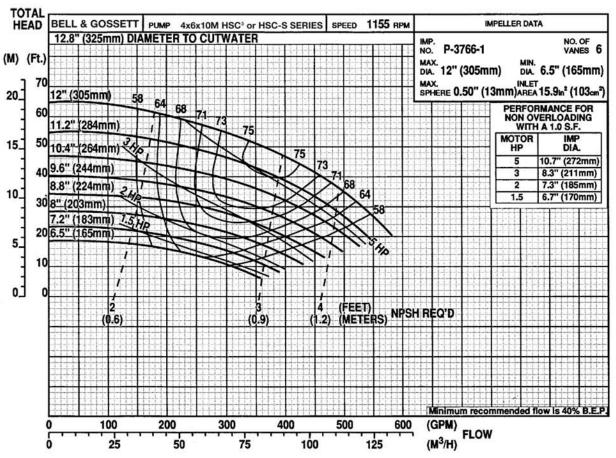


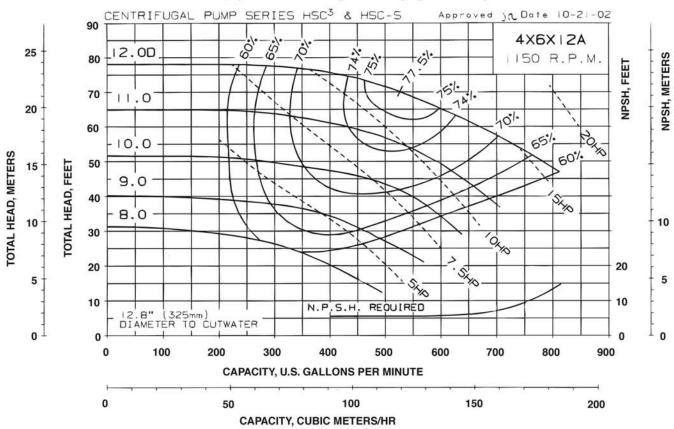


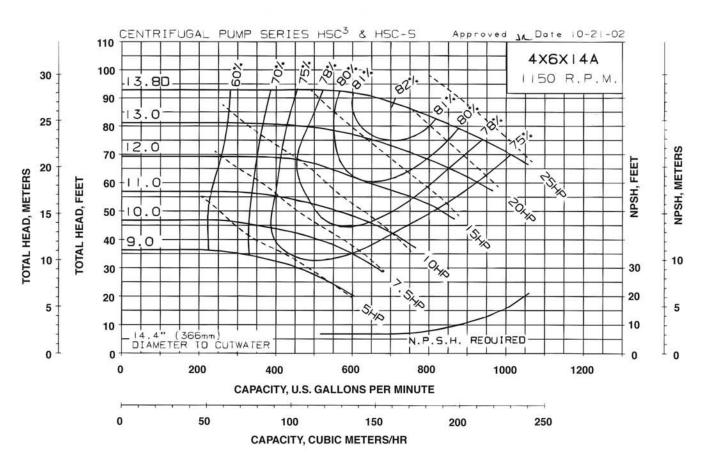


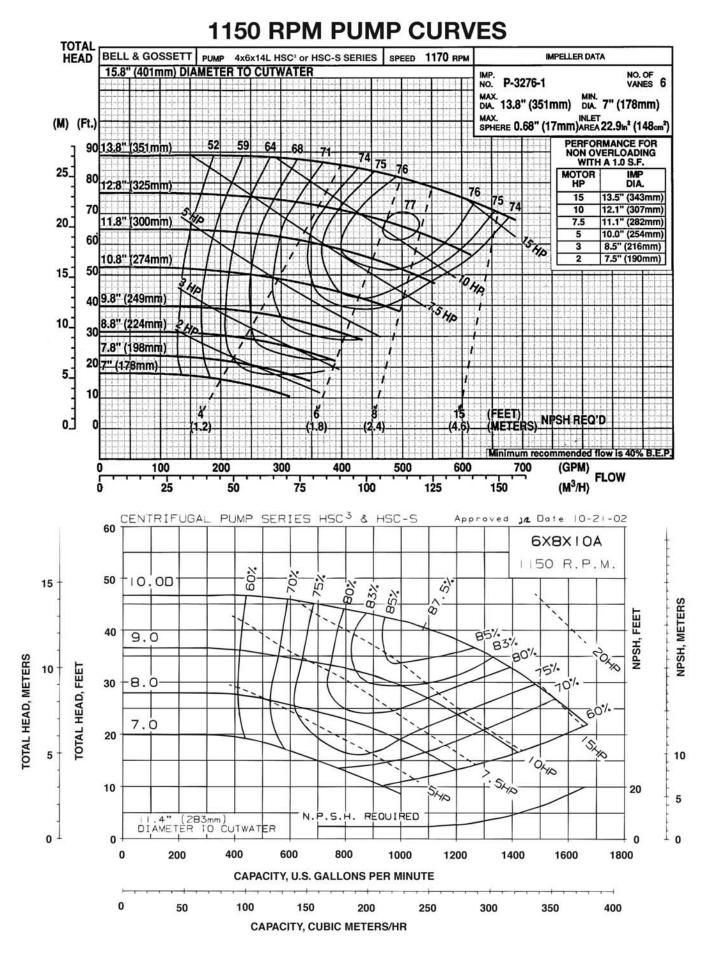


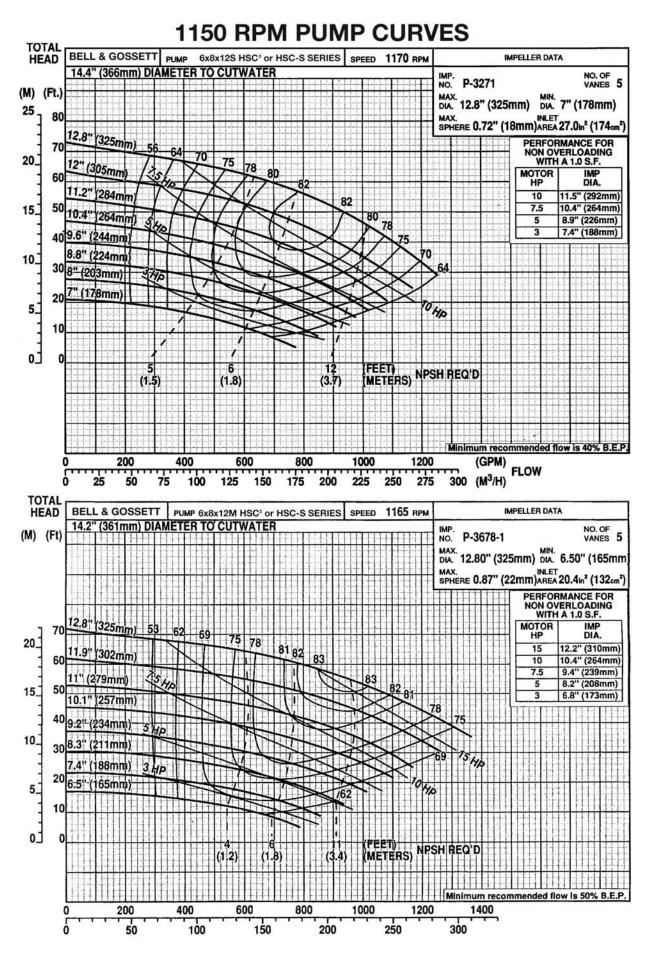


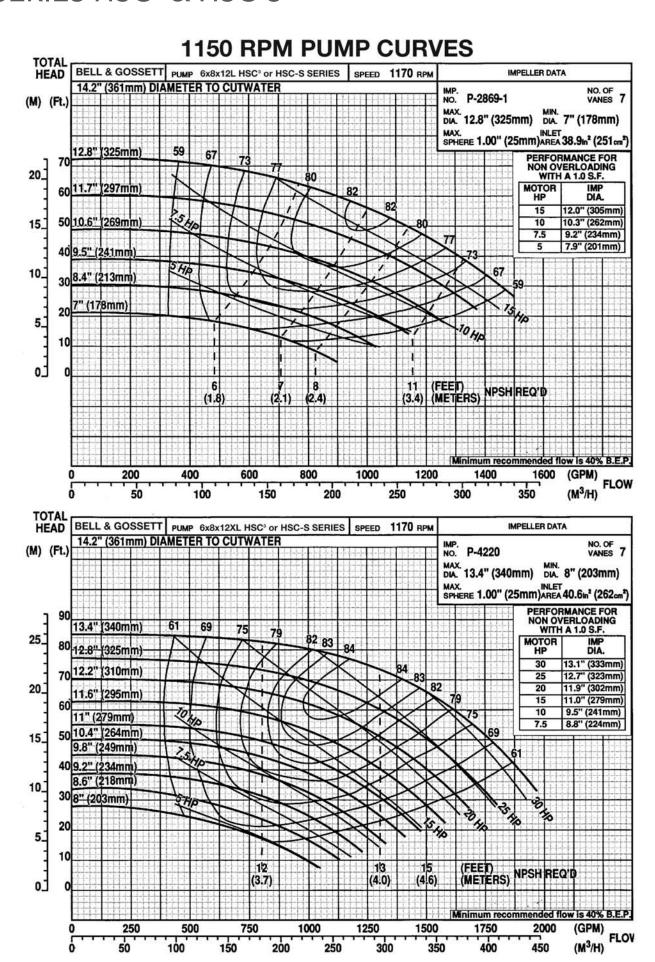


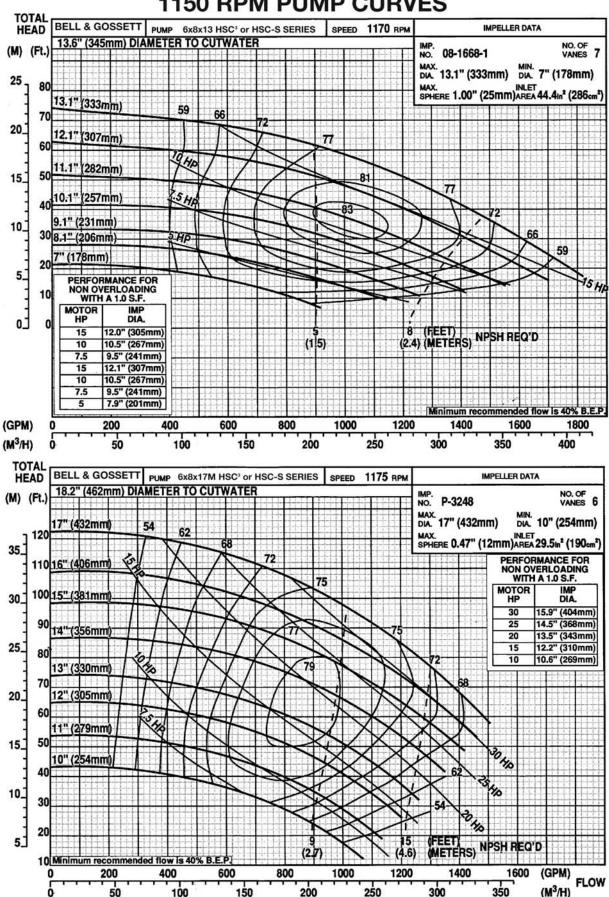


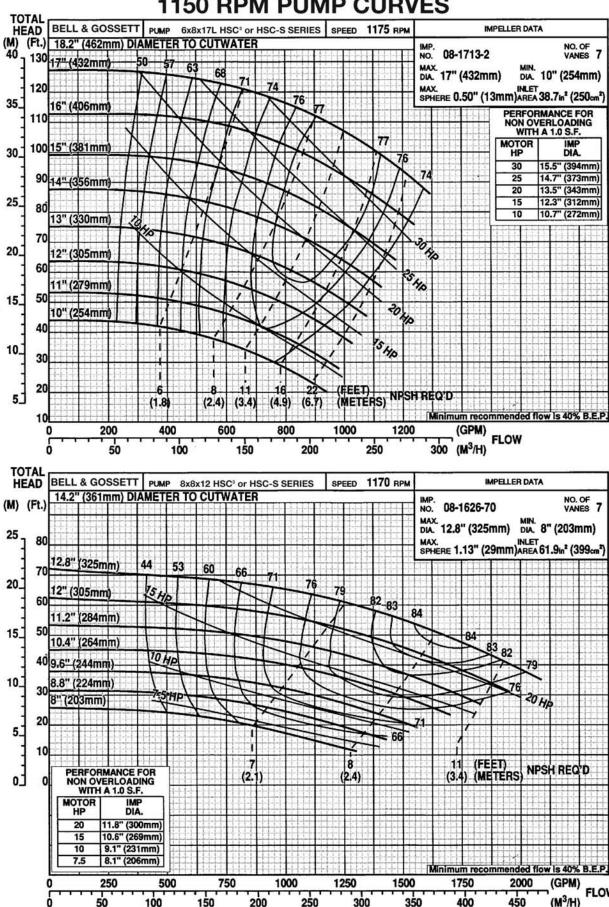


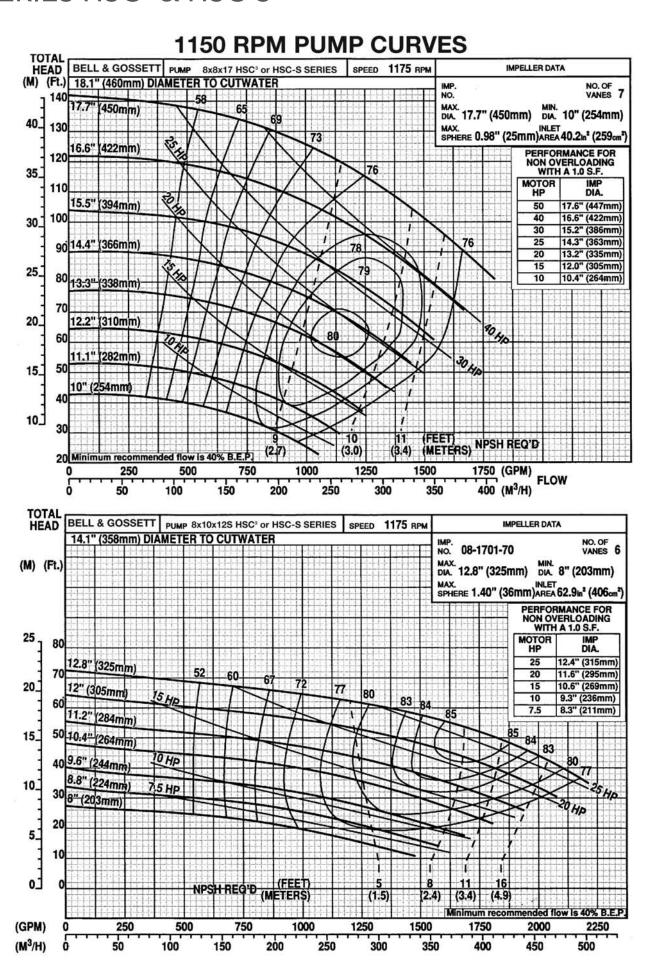


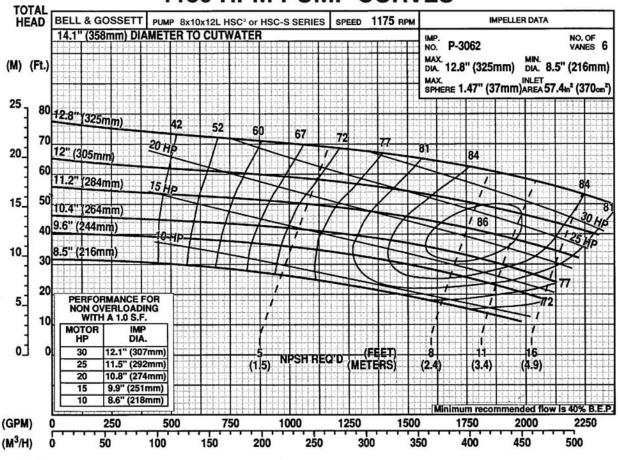


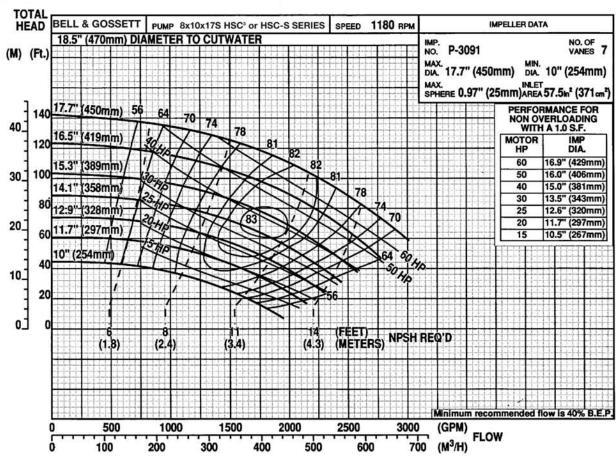












500

200

300

400

500

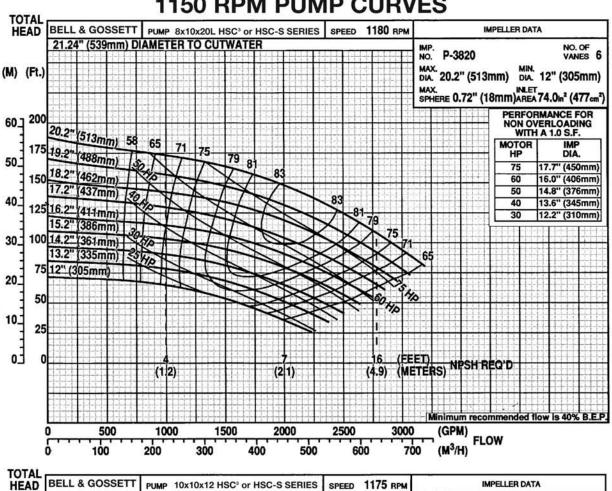
100

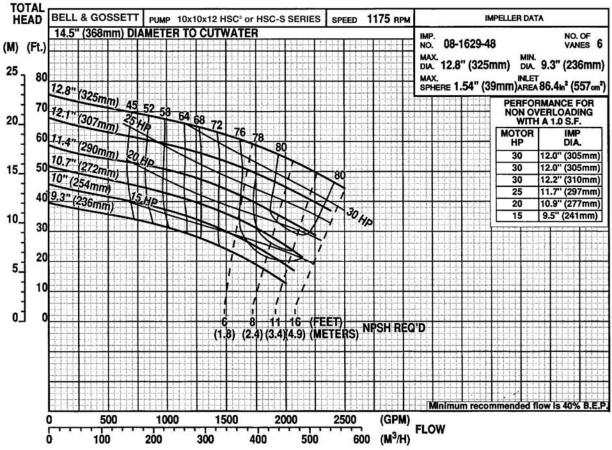
#### 1150 RPM PUMP CURVES TOTAL BELL & GOSSETT PUMP 8x10x17L HSC3 or HSC-S SERIES SPEED HEAD IMPELLER DATA 18.5" (470mm) DIAMETER TO CUTWATER P-2965-2 MAX. 17.3" (439mm) MIN. 12" (305mm) (439mm MAX. SPHERE 1.16" (29mm)AREA 65.4m² (422cm²) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. (424mm) 76 40\_ 80 84 (409mm) 85 MOTOR DIA 35\_ (394mm) 75 16.7" (424mm) 15.7" (399mm) 14.9" (378mm) 50 14.7" (373mm) 13.7" (348mm) 40 100 12.4" (315mm) 30\_ 30 14.3" (363mm) 13.7" (348mm) 25\_ 13.1" (333mm) 12.5" (318mm 12" (305mm) 20\_ 60 15\_ (METERS) NPSH REQ'D 8 10 10] (3.0)(2.1)Minimum recommended flow is 40% B.E.P 500 1000 1500 2000 2500 3000 (GPM) FLOW 100 200 $(M^3/H)$ 300 400 600 BELL & GOSSETT PUMP 8x10x20S HSC3 or HSC-S SERIES IMPELLER DATA SPEED 1180 RPM 21.2" (538mm) DIAMETER TO CUTWATER IMP. No. P-3819 (M) (Ft.) MAX. DIA. 20.2" (513mm) MIN. 12" (305mm) (513mm) 60 180 MAX. SPHERE 0.53" (13mm)AREA 68.4m² (441cm²) 66 71 (488mm) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. 50\_ 18.2" 78 (462mm) MOTOR IMP 17.2" (437mm) 40\_ 19.3" (490mm) 75 16.2" (411mm) 17.7" (450mm) 16.4" (417mm) 15.2" (386mm) 50 15.1" (384mm) 40 30\_ 100 14.2" (361mm) 30 13.6" (345mm) 12.8" (325mm) 25 13.2" (335mm) 12" (305mm) 20 10\_ 16 (FEET) NPSH REQ'D (3.0)(1.2)(1.8) 2000 1000 1500 2500 (GPM)

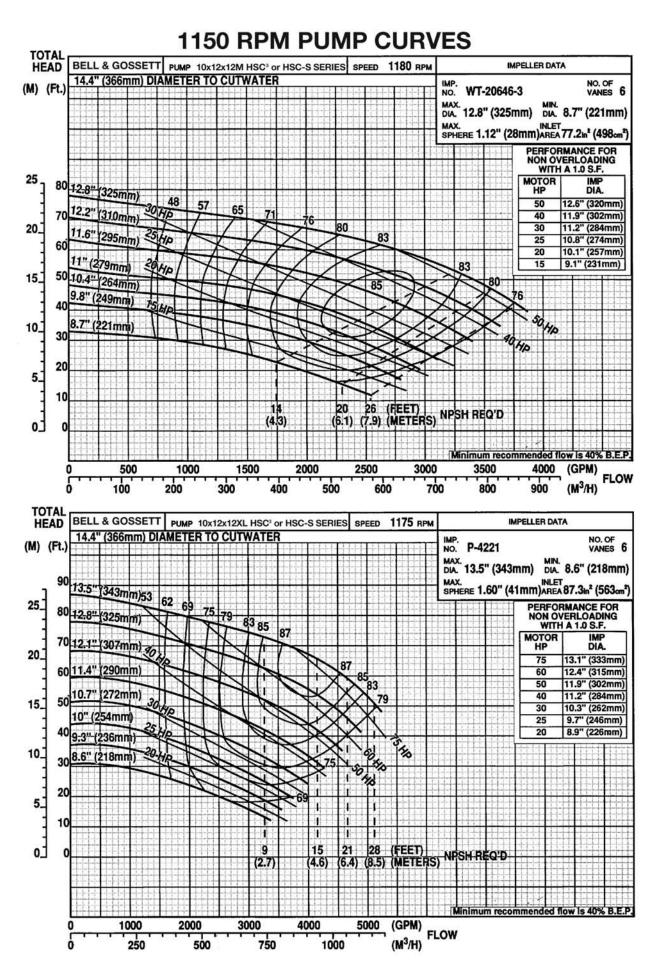
FLOW

 $(M^3/H)$ 

600







#### 1150 RPM PUMP CURVES HEAD BELL & GOSSETT PUMP 10x12x14 HSC3 or HSC-S SERIES IMPELLER DATA (M) (Ft.) 19" (483mm) DIAMETER TO CUTWATER IMP. No. P-3212-2 NO. OF VANES 6 MAX. DIA. 14" (356mm) MIN. DIA. 10" (254mm) MAX. SPHERE 1.62" (41mm)AREA 93.61n2 (604cm2) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. 4" (356mm 47 57 MOTOR 30\_ 83 13.6" (345mm) 75 85 60 12.9" (328mm) 50 12.2" (310mm) 25\_ 40 11.4" (290mm) 10.3" (262mm) (302mm) 20\_ 11.2" (284mm) 10.6" (269mm 50 10" (254mm 15\_ 10\_ (4.0) (METERS) NPSH REQ'D 10 2500 3000 3500 4000 (GPM) 1000 1500 2000 500 FLOV 100 800 900 200 300 400 500 600 $(M^3/H)$ IMPELLER DATA BELL & GOSSETT PUMP 10x12x17 HSC3 or HSC-S SERIES SPEED 1180 RPM 19" (483mm) DIAMETER TO CUTWATER IMP. NO. 08-1631 NO. OF VANES 7 MAX. 17.5" (444mm) MIN. 10" (254mm) MAX. SPHERE 1.36" (35mm)AREA 86.4in2 (557cm2) PERFORMANCE FOR NON OVERLOADING WITH A 1.0 S.F. MOTOR IMP DIA 45 17.5" (444mm) 16.0" (406mm) 14.8" (376mm) 403 16.5" (419mm) 35 13.4" (340mm) 15.5" (394mm) 40 30 11.8" (300mm 30 25 11.0" (279mm) 20 10.1" (257mm) (343mm) *30* 25 12.5" (318mm) 25 Hp 20 11.5" (292mm) 20 15. 103 5. (FEET) NPSH REQ'D (2.4

#### Xylem Inc.

8200 N. Austin Avenue, Morton Grove, Illinois 60053 Phone: (847) 966-3700 Fax: (847) 965-8379 www.xyleminc.com/brands/bellgossett

500

100

1000

200

1500

300

2000

400

2500

3000

3500

(GPM)

 $(M^3/H)$ 

FLOW

