Yamada
Diaphragm
Pumps Catalog

کاتالوگ
پمپ های دیافراگمی
یامادا

درباره شرکت آتور صنعت

شرکت آتور صنعت با تکیه بر تجربه و شناخت عمیق از نیازهای صنعت، فعالیت خود را در حوزه تأمین تجهیزات صنعتی از جمله انواع پمپ دیافراگمی آغاز کرده و در طول سال‌ها، دامنه محصولات خود را متناسب با تغییرات بازار و فناوری گسترش داده است. ما به‌خوبی می‌دانیم که در بسیاری از صنایع، انتقال مواد شیمیایی، سیالات با ویسکوزیته متفاوت یا مایعات حاوی ذرات جامد، نیازمند راهکاری است که هم عملکرد پایدار داشته باشد و هم در برابر سایش و خوردگی مقاوم باشد.

در این راستا، آتور صنعت مجموعه‌ای از پمپ‌های دیافراگمی برند Yamada را در اختیار مشتریان قرار می‌دهد؛ محصولاتی که به دلیل طراحی مهندسی‌شده، قابلیت کارکرد خشک (Dry Run) و توانایی جابه‌جایی طیف وسیعی از سیالات، در صنایع مختلف از جمله شیمیایی، رنگ و رزین، غذایی، دارویی، تصفیه‌خانه‌ها و عملیات صنعتی سنگین مورد استفاده قرار می‌گیرند.

انتخاب هر پمپ دیافراگمی بر اساس معیارهایی همچون دبی، فشار کاری، جنس بدنه و دیافراگم، سازگاری شیمیایی و نوع سیال انجام می‌شود تا بهترین عملکرد در شرایط کاری موردنظر تضمین گردد. محصولات Yamada به دلیل راندمان بالا، مصرف هوای بهینه و طراحی مقاوم، یکی از انتخاب های برتر در پروژه‌هایی هستند که به انتقال دقیق و ایمن سیالات نیاز دارند.

شرکت آتور صنعت علاوه بر تأمین محصول، خدمات مشاوره فنی نیز ارائه می‌دهد تا صنعتگران محترم بتوانند با آگاهی کامل، مدلی را انتخاب کنند که بیشترین انطباق را با شرایط کاری و الزامات فرآیندی آن‌ها داشته باشد. پیش از عرضه، مشخصات فنی محصولات با دقت بررسی می‌شود تا اطمینان حاصل گردد که با استانداردهای لازم همخوانی دارد.

هدف ما تنها فروش محصول نیست، بلکه ایجاد رابطه‌ای پایدار و مبتنی بر اعتماد با مشتریان است. حتی پس از خرید نیز تیم پشتیبانی ما همراه شما خواهد بود و راهنمایی‌های لازم را در زمینه نصب، بهره‌برداری و نگهداری پمپ‌ها ارائه می‌دهد؛ چرا که می‌دانیم در بسیاری از تجهیزات صنعتی، از جمله پمپ‌های تخصصی، اهمیت خدمات پس از فروش و تأمین قطعات یدکی گاه فراتر از خود فرآیند تأمین تجهیز است و این موضوع همواره در اولویت کاری ما قرار دارد.

در این کاتالوگ تلاش کرده‌ایم علاوه بر معرفی دقیق پمپ های دیافراگمی Yamada ، اطلاعات فنی و نکات کاربردی لازم را نیز در اختیار شما قرار دهیم تا انتخابی مطمئن و بهینه داشته باشید.

با آتور صنعت، جریان سیال را با اطمینان، کیفیت و دوام تجربه کنید.

درباره شرکت یـامـادا

تاریخچه و آغاز فعالیت

ریشـه‌های برنـد یامـادا بـه اوایـل قـرن بیسـتم در ژاپـن بازمی‌گـردد؛ زمـانی کـه گـروهی از مهندسـان بـا راه انـدازی کارگاهی کوچـک در توکیـو، تولیـد اتصـالات و تجهیـزات صنعـتی را آغـاز کردنـد و پایه‌هـای شـرکتی را بنـا نهادنـد کـه بعدهـا بـه یـکی از نام‌هـای معتبـر صنعـت پمپسـازی بـدل شـد. رشـد پایـدار و نـگاه آینده‌نگـر، در طـول دهه‌هـا دامنـه‌ی محصـولات را گسـترش داد و آن‌هـا را از ابزارهـای دسـتی و تجهیـزات پنوماتیک به پمپ‌های تخصصی که پاسخگوی نیازهای صنایع گوناگون هستند رساند.

در میانـه قـرن بیسـتم، تمرکـز شـرکت بـر توسـعه پمپ‌هـای دیافراگـمی پنوماتیـک شـکل گرفـت و ایـن مسیـر بـا تلفیـق دانـش مهنـدسی ژاپـنی و نـوآوری مسـتمر ادامـه یافـت. امـروزه یامـادا بـا شـبکه‌ای جهـانی از دفاتـر، نمایندگی‌هـا و مراکـز خدمـات، به‌عنـوان یـکی از نام‌هـای معتبـر در حـوزه پمپ‌هـای دیافراگـمی شناخته می‌شود و راهکارهای قابل اعتماد خود را به صنایع متنوع در سراسر دنیا ارائه می‌دهد.

مأموریت و فلسفه کاری یامادا

نـوآوری مـداوم: بهبـود پیوسـته طـراحی و فرآیندهـا بـرای ارائـه محصـولاتی کـه پاسـخگوی نیازهای امـروز و فردای صنعت باشند.

کیفیـت بی‌قیـد و شـرط: هـر پمـپ نتیجـه‌ی مهنـدسی دقیـق، مـواد ممتـاز و آزمون‌هـای سـخت‌گیرانه است تا مشتریان با آرامش خاطر از دوام و عملکرد آن بهره‌مند شوند.

مسـئولیت در قبـال جامعـه و محیـط زیسـت: توسـعه محصـولاتی کـه ضمـن افزایـش بهـره‌وری، اثـرات زیست‌محیطی را به حداقل می‌رسانند و ایمنی کاربران را تضمین می‌کنند.

یامـادا بـاور دارد کـه اعتمـاد مشـتریان حاصـل صداقـت، تخصـص و تلاش مـداوم بـرای خلـق ارزش پایـدار است؛ مسیری که هر روز با انگیزه و تعهد در آن گام برمی‌دارد.

مزیت‌ها و تمایز های یامادا

عملکرد بدون لغزش (Stall-Free) :

طـراحی دریچـه هـوا و مسیـر عبـور هوا/سیـال طـوری اسـت کـه پمـپ در مقابـل شـرایط کار سـخت مقاومت دارد و دچار توقف ناگهانی نمی‌شود.

بدون قطعات دوار و روان‌کاری خارجی:

ایـن ویـژگی باعـث کاهـش نیـاز بـه نگهـداری سـنگین، کاهـش خطـر آلـودگی سیـال و افزایـش بـازدهی در کاربردهای حساس می‌شود.

مطابقت با استانداردهای بهداشتی و صنعتی:

بـرای کاربردهـایی مثـل صنایـع غـذایی، دارویی، آرایـشی بهداشـتی و سـایر محیط‌هـایی کـه تمیـزی و خلوص سیال اهمیت دارد، مدل‌های پرمیوم با سطوح آبکاری شده یا بدنه مخصوص ارائه می‌شوند.

حوزه‌های کاربرد: صنایع غذایی، نوشیدنی و دارویی، شیمیایی و رنگ‌سازی، معدن، سرامیک و پوشش‌های صنعتی، تصفیه‌خانه‌ها و خطوط آب و فاضلاب و تولید مواد آرایشی و بهداشتی.

مزایای انتخاب یامادا

شبکه گسترده نمایندگی و خدمات پس از فروش در سراسر دنیا

تنوع در اندازه و جنس بدنه برای سازگاری با هر محیط و سیال

رعایت کامل استانداردهای زیست‌محیطی و بهداشتی

عملکرد پایدار و بدون توقف به لطف سیستم هوای اختصاصی و طراحی ضد گیرکردن

طول عمر بالا به دلیل استفاده از مواد اولیه مقاوم در برابر سایش و خوردگی

نگهداری آسان؛ قطعات پمپ به‌گونه‌ای طراحی شده‌اند که سرویس و تعویض دیافراگم یا شیرها به سرعت انجام شود

ایمنی و بهداشت؛ مدل‌های بهداشتی یامادا مطابق با استانداردهای صنایع غذایی، دارویی و آرایشی تولید می‌شوند

انعطاف در کاربردها؛ قابلیت انتقال مایعات چسبناک، سیالات خورنده، محلول‌های حساس یا حاوی ذرات جامد

پمپ‌های دیافراگمی یامادا با ترکیب دوام، کارایی و نوآوری، راه‌حلی ایده‌آل برای انتقال انواع سیالات در شرایط گوناگون صنعتی هستند. این محصولات انتخابی مطمئن برای کسانی است که به دنبال کیفیت جهانی و خدمات حرفه‌ای هستند.

سری NDP در واقع خانواده‌ی اصلی پمپ‌های دیافراگمی پنوماتیک یامادا می باشد و تقریباً هسته‌ی سبد محصولات این برند را تشکیل می‌دهد. این پمپ‌ها به دلیل طراحی ساده، دوام بالا و قابلیت کار با انواع سیالات در صنایع مختلف شناخته می‌شوند.

پمپ‌های دیافراگمی یامادا - سری NDP

سری NDP شامل مدل های متنوعی از پمپ های دیافراگمی دو طرفه (AODD) است که با هوای فشرده کار می کنند و برای انتقال مایعات گوناگون از مواد شیمیایی خورنده تا محصولات بهداشتی و غذایی طراحی شده اند.

زیرسری‌های رایج:

NDP-۵ / NDP-۱۰

سایز کوچک، مناسب برای آزمایشگاه‌ها، صنایع دارویی و خطوط با دبی کم

NDP-۱۵ / NDP-۲۰ / NDP-۲۵

ظرفیت متوسط برای کاربردهای عمومی در صنایع شیمیایی، غذایی و تصفیه آب

NDP-۳۲ / NDP-۴۰ / NDP-۵۰ / NDP-۸۰

مدل‌های صنعتی با دبی بالا، مناسب انتقال حجم زیاد مایعات یا دوغاب در کارخانه‌ها و معادن

مدل‌های بهداشتی (Sanitary) در همین سری، برای کاربردهای غذایی و دارویی با سطوح صیقلی و قابل شست‌وشو تولید می‌شوند.

NDP-5 Specifications

Port Dimensions	(3.1 GPM Max.)
Intake & discharge	1/4" Female NPT
Air inlet (incl. ball valve):	1/4" Female NPT
Air exhaust (internal silencer):	3/8" Female NPT

Maximum Liquid Temperature
Fitted with PTFE diaphragm

Pump Material	*Temperature*
Groundable Acetal	180°F (82°C)
Polypropylene (PPG)	180°F (82°C)
Aluminum (ADC-12)	212°F (100°C)
Kynar® (PVDF)	212°F (100°C)
Stainless Steel (316)	212°F (100°C)

Air Supply Pressure (All Models)
20 – 100 PSI (1.4 – 7 kfg/cm)

Discharge Volume Per Cycle
0.0078 gallons (29 cc)

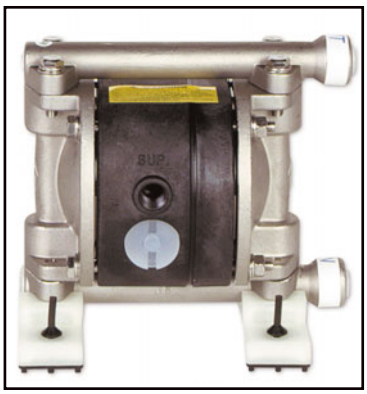
Maximum Cycles Per Minute: 400

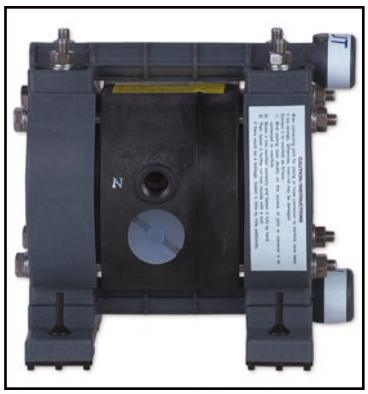
Maximum Dry Suction Lift: 5-feet

Pump Air Motor
Ryton® air motor standard

Model Number Nomenclature

Polypropylene (PPG)	NDP-5FPT
Kynar® (PVDF)	NDP-5FVT
Groundable Acetal	NDP-5FDT
Aluminum (ADC-12)	NDP-5FAT
Stainless Steel (316)	NDP-5FST





Aluminum
Dimensions: 6.1" W × 5.87" H
Net Wt.: 3.3 lbs. (1.5 kg)
Shipping Wt.: 4.3 lbs.

Stainless Steel
Dimensions: 6.1" W × 5.87" H
Net Wt.: 5.9 lbs. (2.68 kg)
Shipping Wt.: 6.9 lbs.

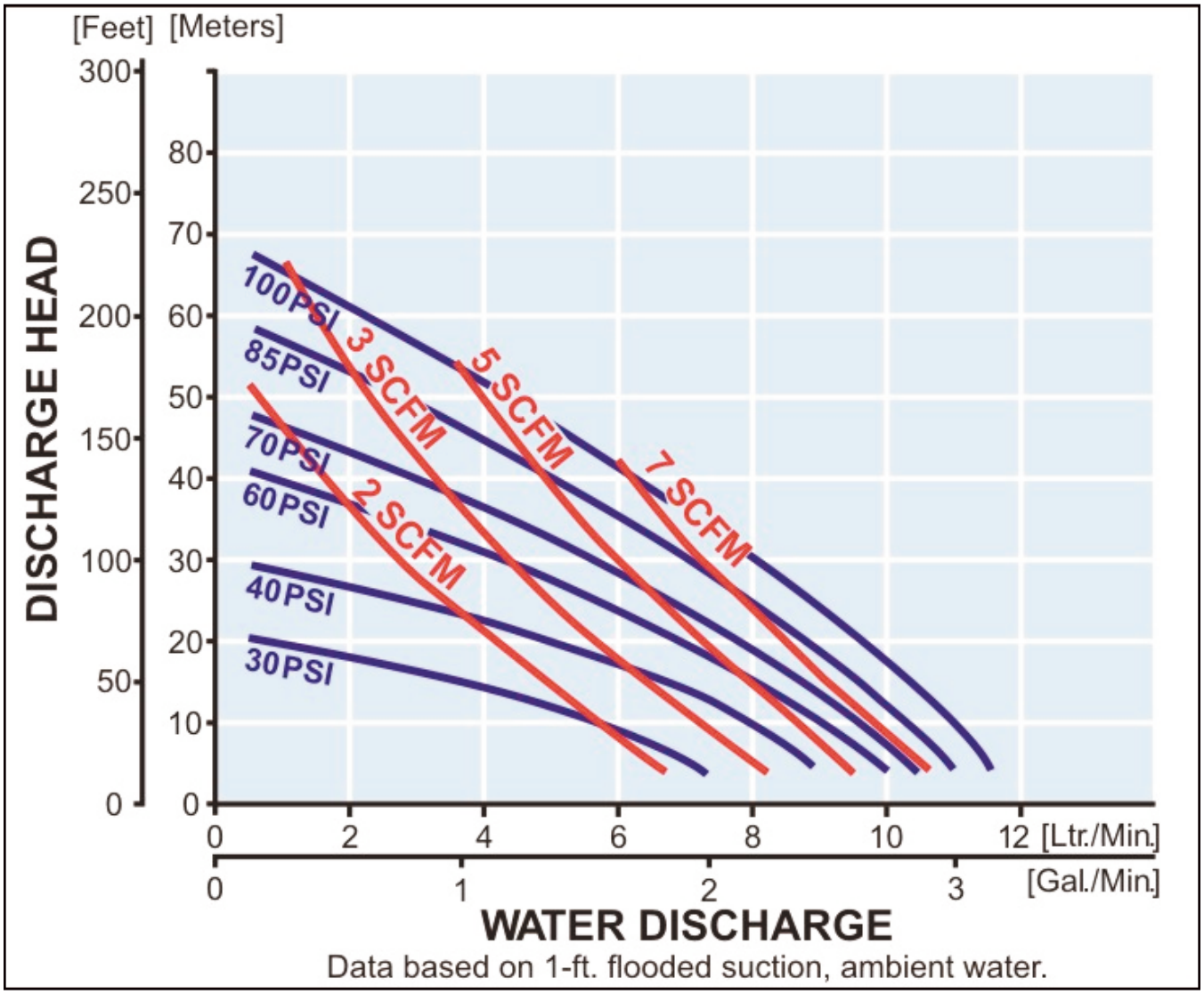
Kynar® (PVDF)
Dimensions: 6.14" W × 5.79" H
Net Wt.: 3.7 lbs. (1.67 kg)
Shipping Wt.: 4.7 lbs.

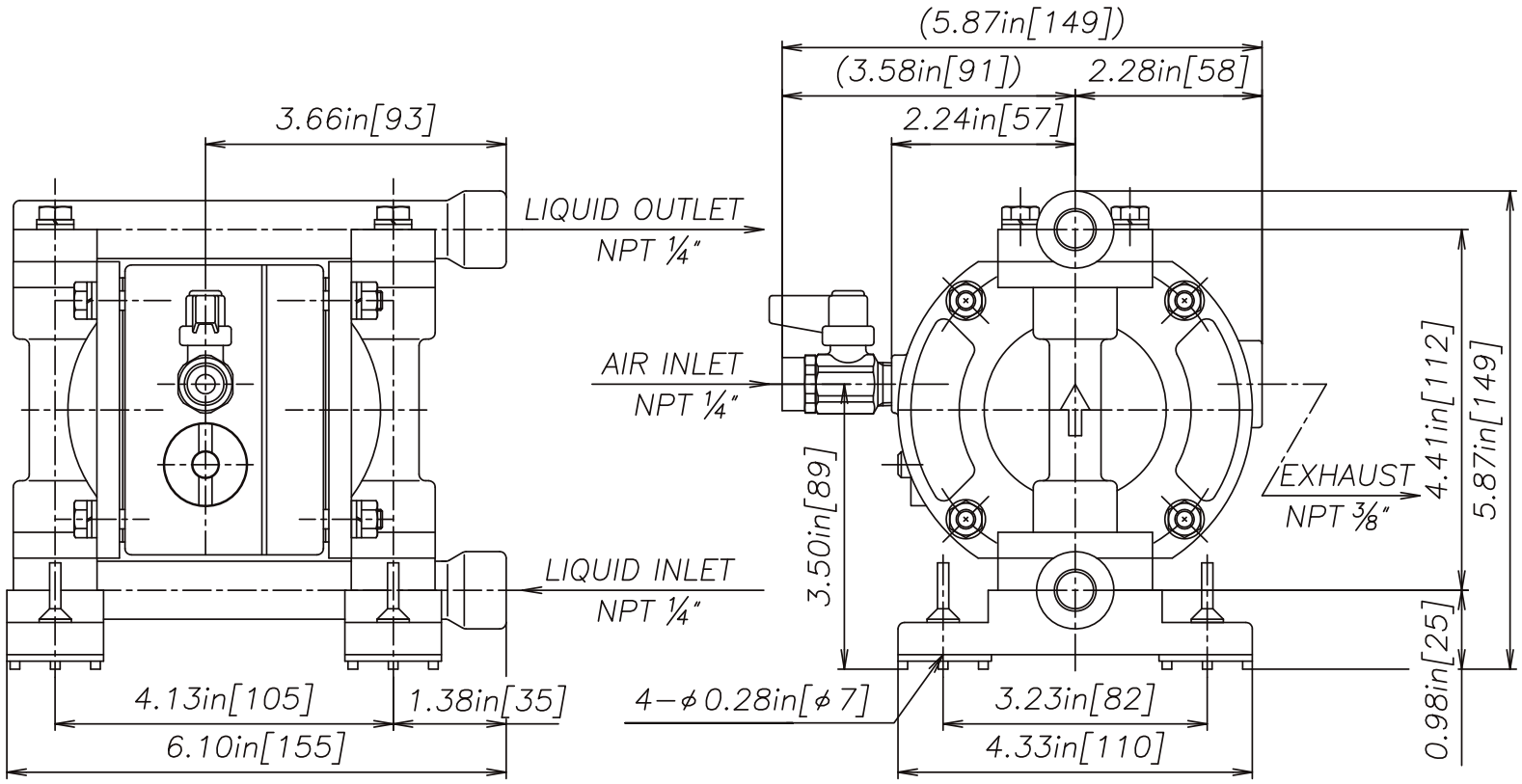
Groundable Acetal
Dimensions: 6.14" W × 5.79" H
Net Wt.: 3.7 lbs. (1.67 kg)
Shipping Wt.: 4.7 lbs.

Polypropylene
Dimensions: 6.14" W × 5.79" H
Net Wt.: 3.0 lbs. (1.36 kg)
Shipping Wt.: 4 lbs.

NDP-5 Performance Curve

All Diaphragm Materials





REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/08/06 APPROVED BY S.K.

THIRD ANG.PROJ.

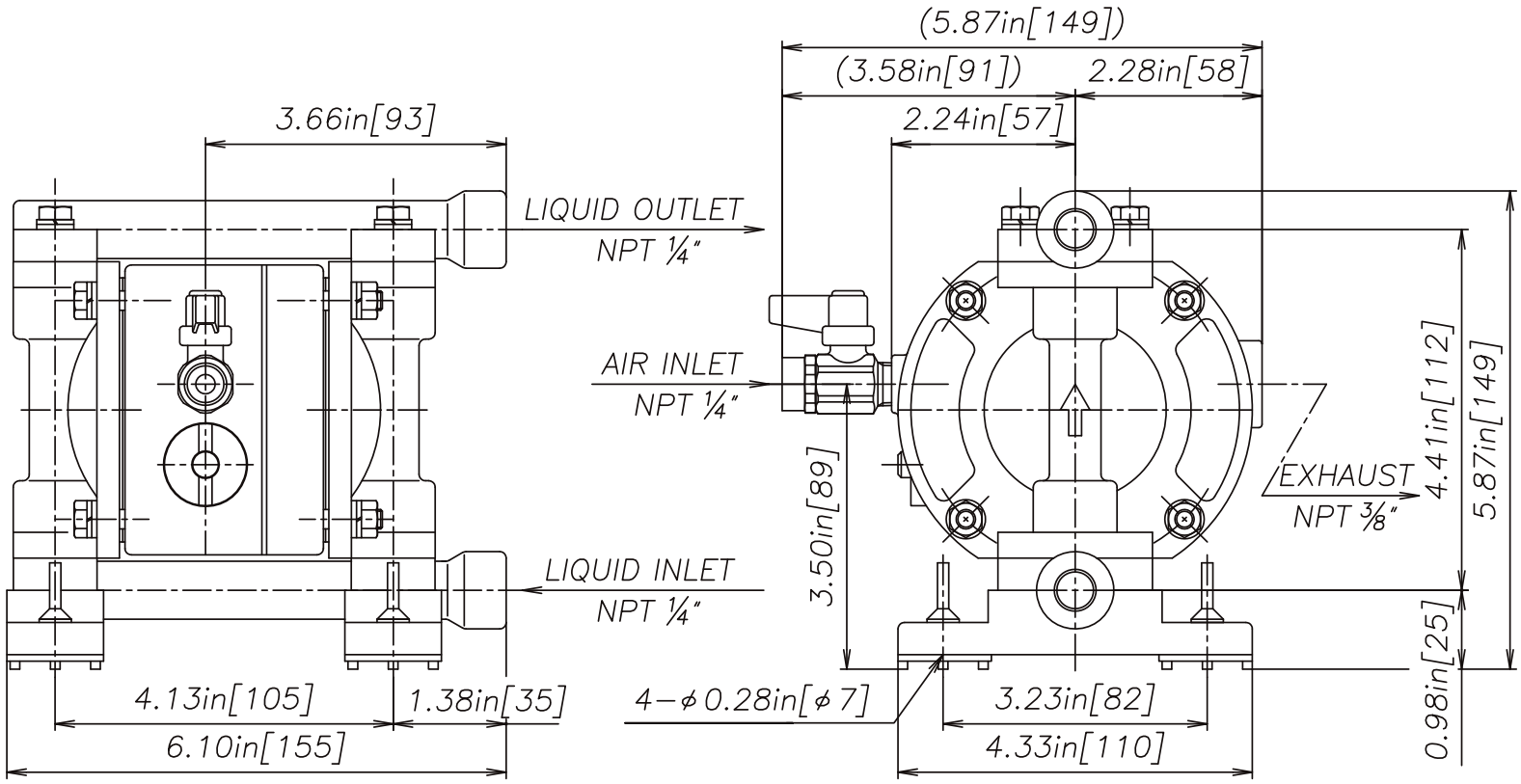
DRAWING NUMBER: NDP-5FA

REV 0

YAMADA AMERICA, INC.

1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800-990-7867 OR 630-231-4083



REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/08/06 APPROVED BY S.K.

THIRD ANG.PROJ.

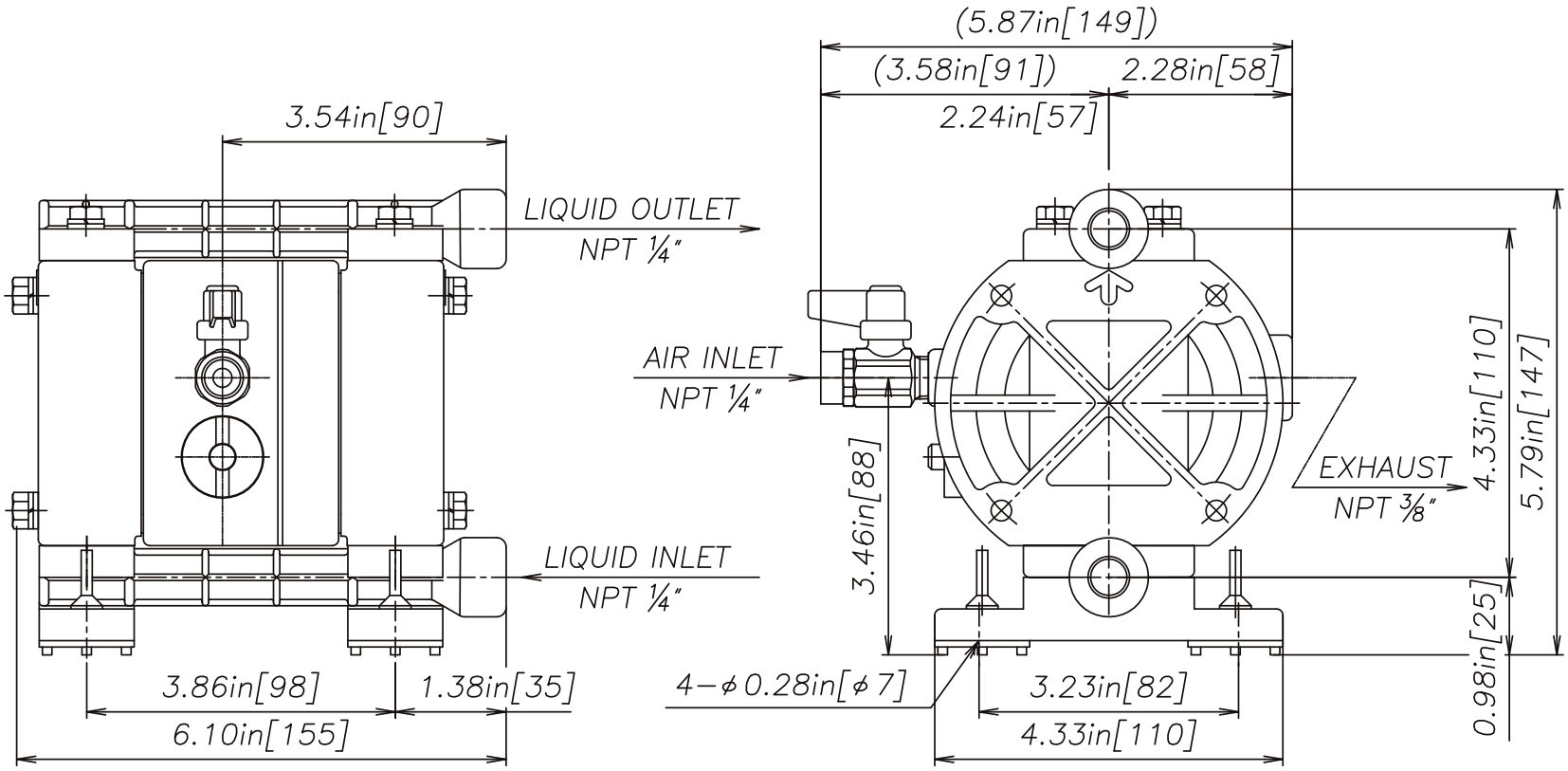
DRAWING NUMBER: NDP-5FS

REV 0

YAMADA AMERICA, INC.

1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800-990-7867 OR 630-231-4083



REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/10/06 APPROVED BY S.K.

THIRD ANG.PROJ.

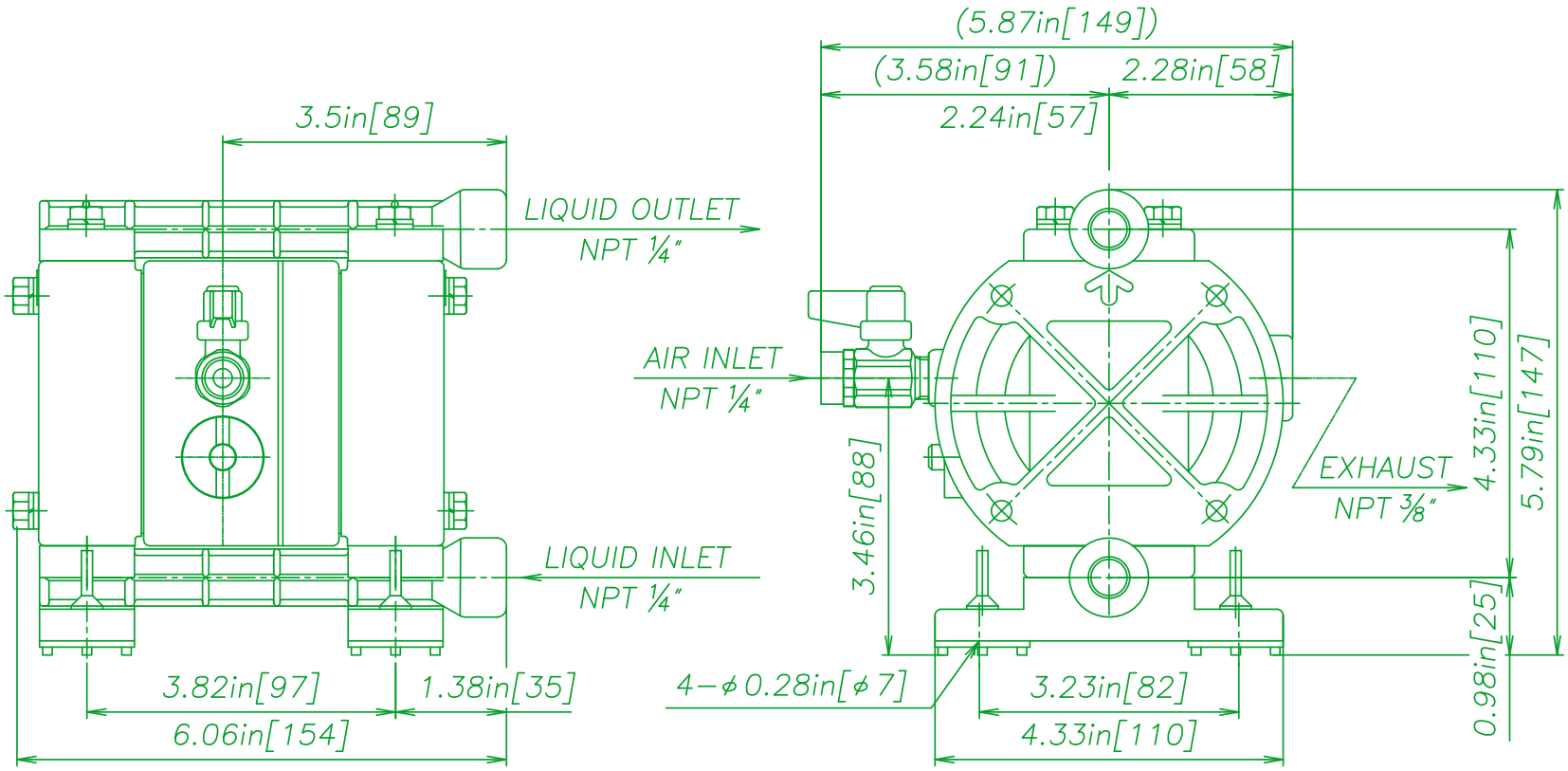
DRAWING NUMBER: NDP-5FP/FD

REV 0

YAMADA AMERICA, INC.

1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800-990-7867 OR 630-231-4083



REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/10/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP-5FV

REV 0

YAMADA AMERICA, INC.

1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800–990–7867 OR 630–231–4083

Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-15 Specifications

Port Dimensions	(13.5 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG) ■	1/2" Female NPT
Kynar® (PVDF) ◆	1/2" Female NPT
Groundable Acetal ◆	1/2" Female NPT
Aluminum (ADC-12) ▲	1/2" Female NPT
Stainless Steel (316) ▲	1/2" Female NPT
Air inlet (includes ball valve):	1/4" Female NPT
Air exhaust (internal silencer):	3/8" Female NPT

■ Polypropylene pumps may be fitted with ball or flat check valves. Ball-type check valves are recommended for flooded suction applications. Flat-type check valves are recommended for suction lift applications.

◆ Kynar® and Groundable Acetal pumps are fitted with flat check valves only.

▲ Aluminum and Stainless Steel pumps are fitted with ball check valves only.

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

*The maximum liquid temperature for metal and Kynar® fitted pumps is determined by the elastomer (diaphragm material). Polypropylene and Groundable Acetal pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20 – 100 PSI (1.4 – 7 kfg / cm)

Discharge Volume Per Cycle
0.0338 gallons (128 cc)

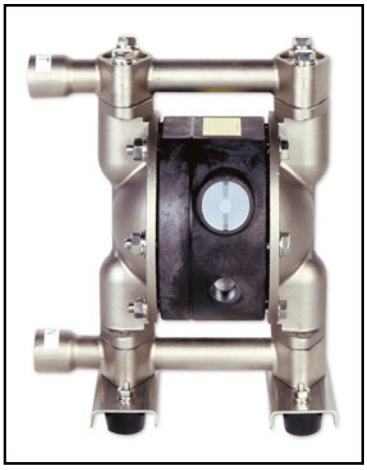
Maximum Cycles Per Minute
All diaphragms: 400

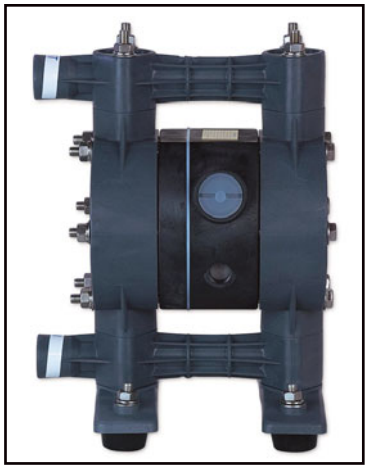
Maximum Size Solid: 1/32" (1 mm)

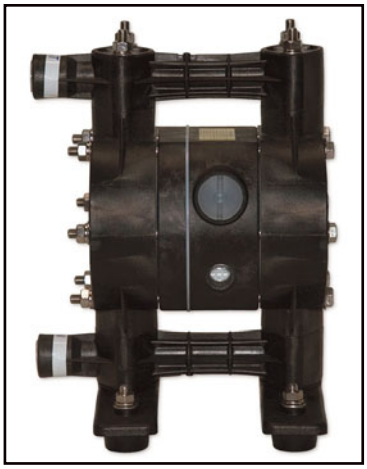
Maximum Dry Suction Lift
Flat-type check valve: 8-feet
Ball-type check valve: 5-feet

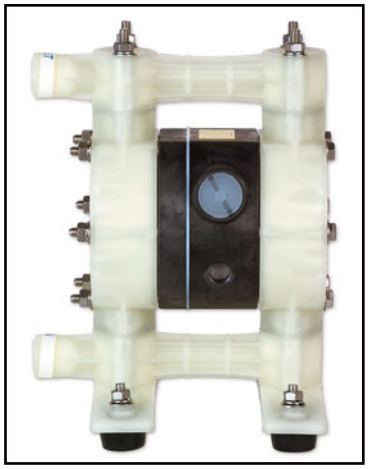
Pump Air Motor: Ryton® air motor standard

Notes: Hytrel® fitted pumps include Buna N wetted o-rings. Santoprene® fitted pumps include EPDM wetted o-rings.









Aluminum
Dimensions: 8.66" W × 10.71" H
Net Wt.: 9 lbs. (4 kg)
Shipping Wt.: 11 lbs.

Stainless Steel
Dimensions: 8.31" W × 9.7" H
Net Wt.: 13.6 lbs. (6.16 kg)
Shipping Wt.: 15.5 lbs.

Kynar® (PVDF)
Dimensions: 8.66" W × 11.73" H
Net Wt.: 9.4 lbs. (4.2 kg)
Shipping Wt.: 11 lbs.

Groundable Acetal
Dimensions: 8.66" W × 11.73 H"
Net Wt.: 9 lbs. (4 kg)
Shipping Wt.: 11 lbs.

Polypropylene
Dimensions: 8.66" W × 11.73 H"
Net Wt.: 7.7 lbs. (3.5 kg)
Shipping Wt.: 9.5 lbs.

Model Number Nomenclature

NDP-15 x x x

Series:
NDP-15
Pump

Valve Type:
B = Ball
F = Flat*

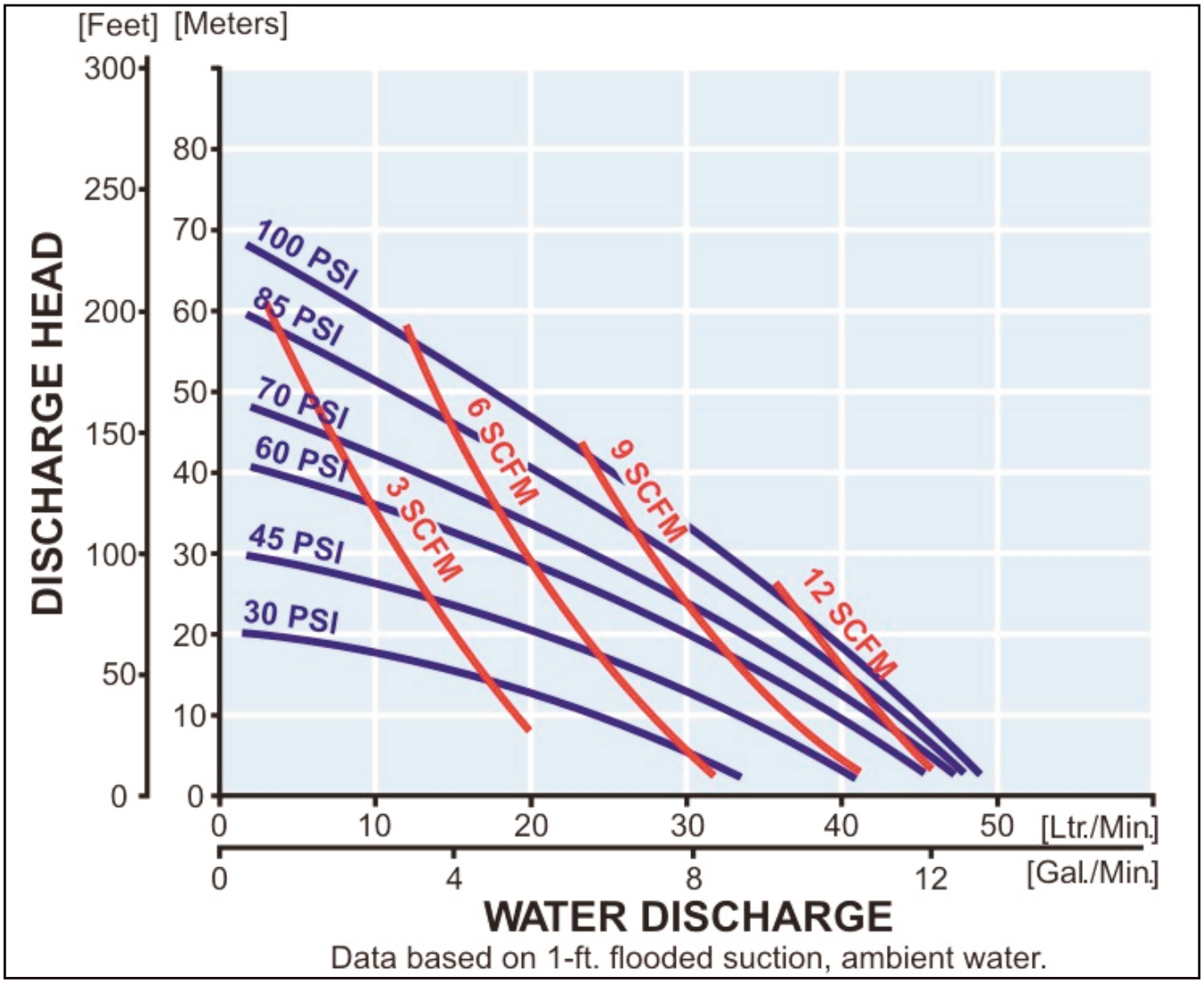
Body Material:
P = Polypropylene
V = Kynar® (PVDF)
D = Groundable Acetal
A = Aluminum

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FPM)

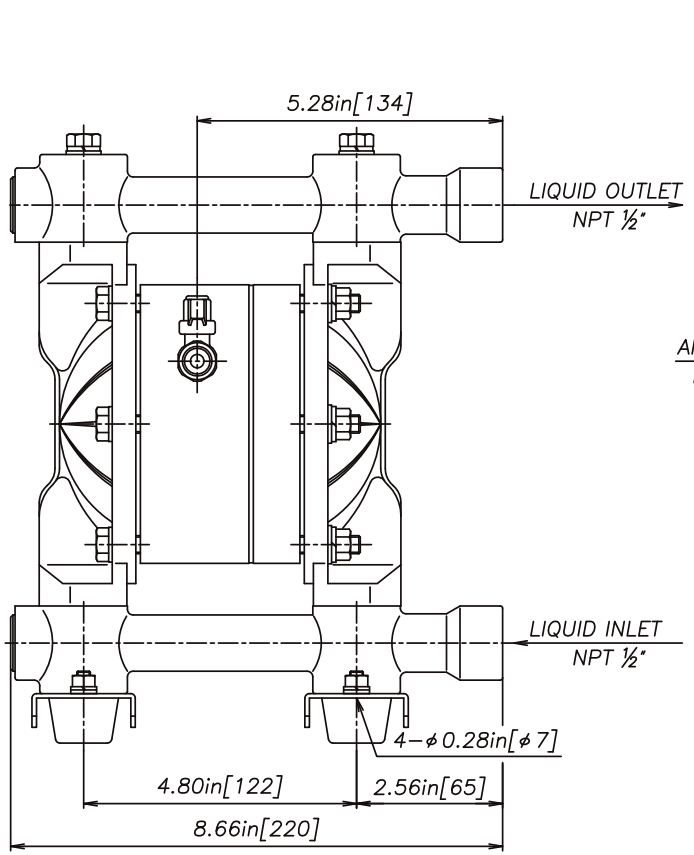
** Flat valves are available for plastic pumps only.*

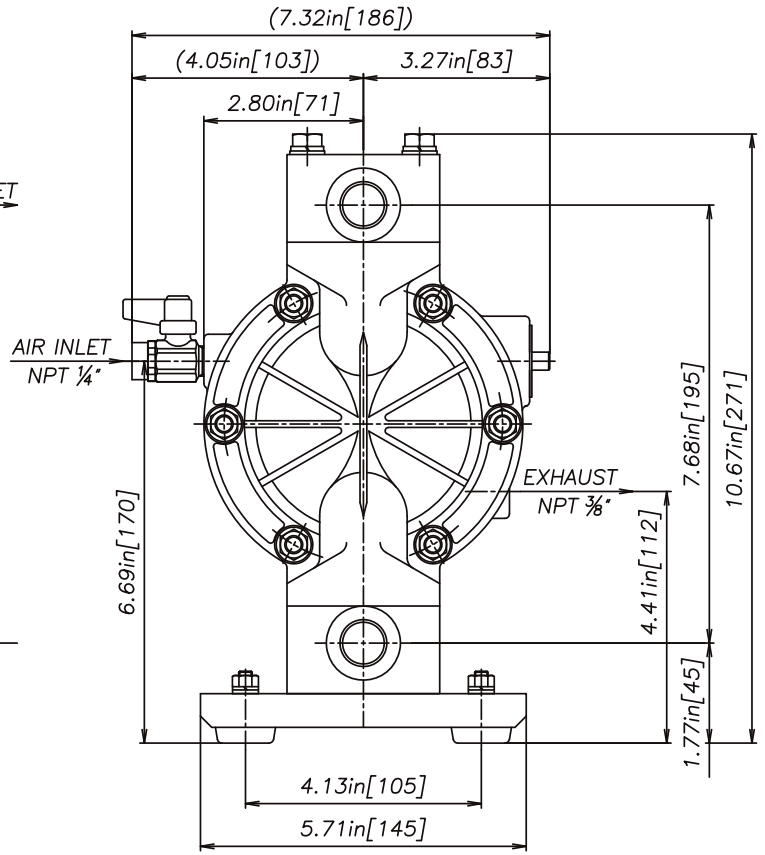
NDP-15 Performance Curve – All Valves

All Diaphragm Materials



To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.





REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

YAMADA AMERICA, INC.
1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185
TOLL FREE 800–990–7867 OR 630–231–4083

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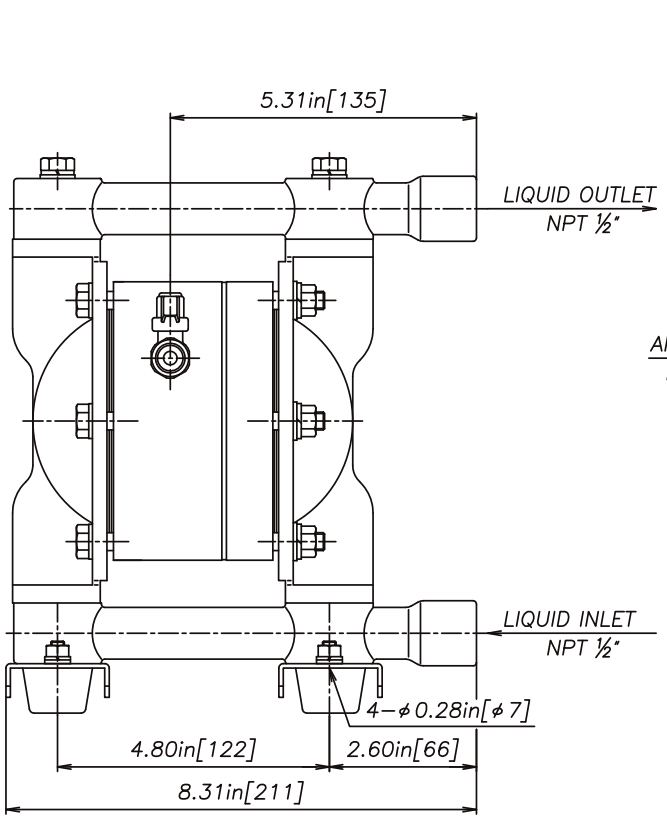
SCALE 1 : 1 DRAWN BY YJI

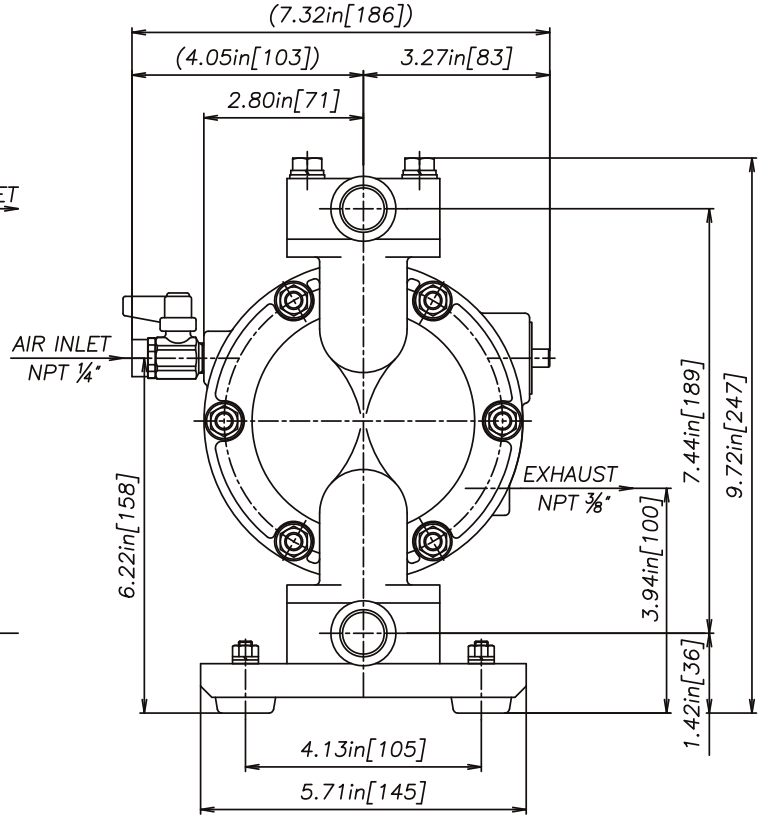
DATE 02/08/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP–15BA

REV 0





REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

YAMADA AMERICA, INC.
1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185
TOLL FREE 800–990–7867 OR 630–231–4083

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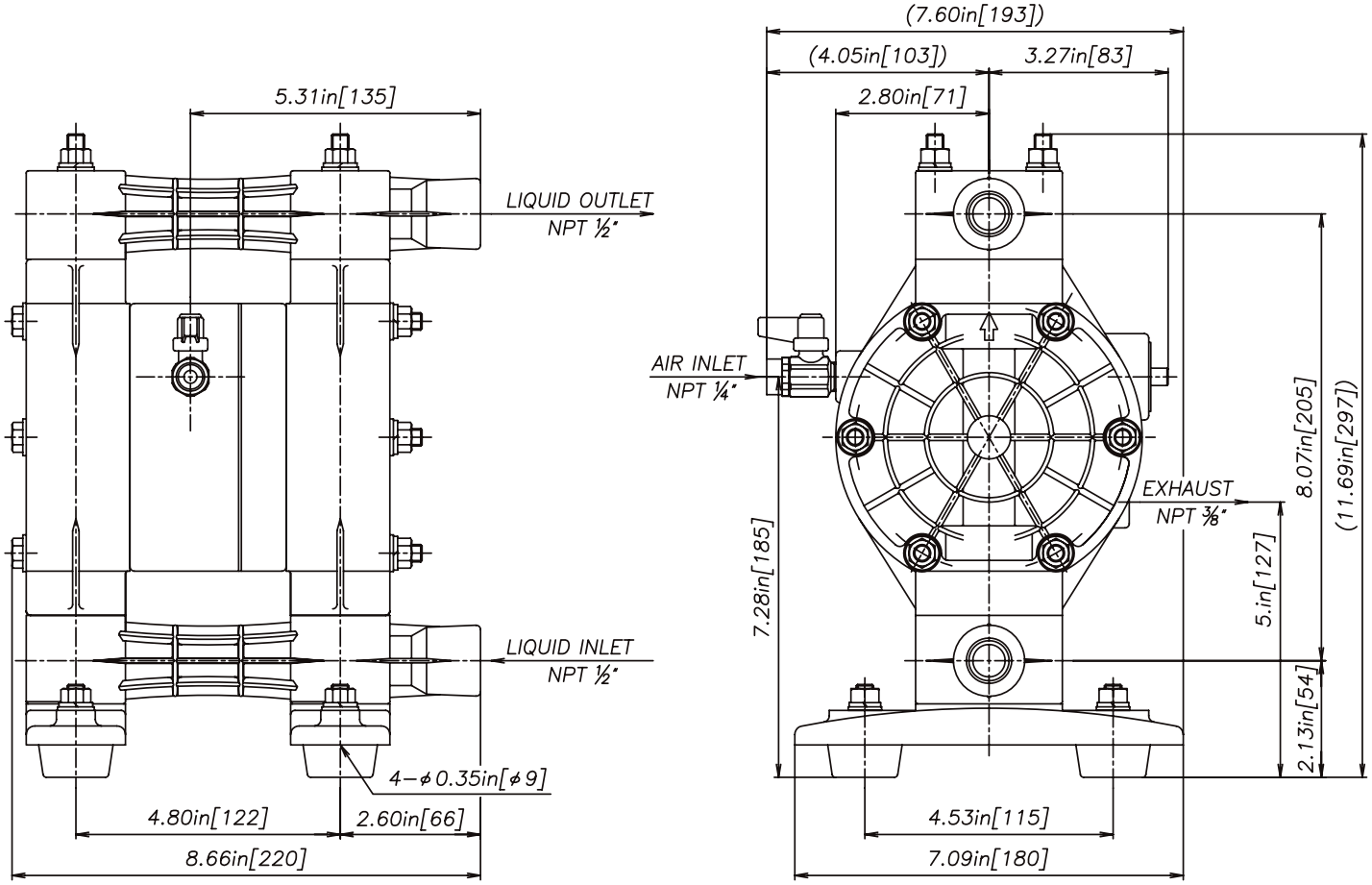
THIRD ANG.PROJ.

DRAWING NUMBER: NDP–15BS

REV 0



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DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/08/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP–15F/B PLASTIC

REV 0

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1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800–990–7867 OR 630–231–4083

Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-20 Specifications

Port Dimensions	(31.7 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG)	3/4" Female NPT
Aluminum (ADC-12)	3/4" Female NPT
Stainless Steel (316)	3/4" Female NPT
Air inlet (incl. ball valve):	1/4" Female NPT
Air exhaust (incl. silencer):	3/4" Female NPT

***ANSI Flange** also available — consult Yamada.*

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
EPDM	212°F (100°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

* The maximum liquid temperature for metal and Kynar® fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20 – 100 PSI (1.4 – 7 kfg / cm)

Discharge Volume Per Cycle
Rubber diaphragm: 0.163 gallons (615 cc)
PTFE diaphragm: 0.143 gallons (539 cc)

Maximum Cycles Per Minute
Rubber diaphragm: 195
PTFE diaphragm: 195

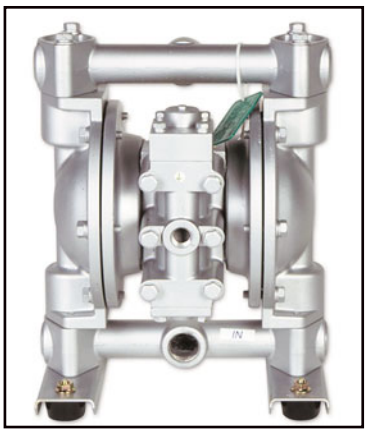
Maximum Size Solid
1/16" (2.0 mm)

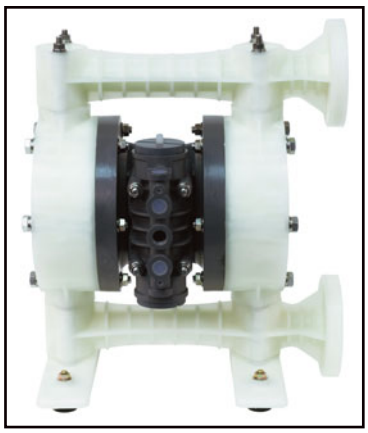
Maximum Dry Suction Lift
Rubber-fitted pump capability: 18-feet

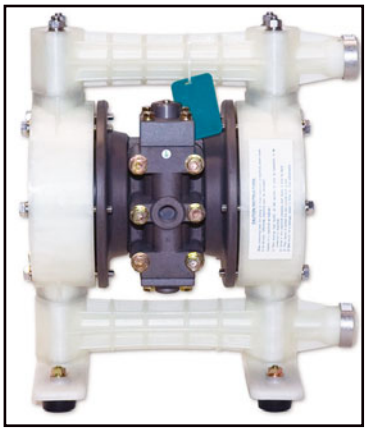
Air Motors
Aluminum air motor is standard on metal pumps. Polypropylene air motor is standard on polypropylene and Kynar® pumps.
Optional air motors: Polypropylene air motor for metal pumps; PTFE grey coating (XP) for aluminum motors.

Optional Split Manifold—contact Yamada

Notes: Hytrel® fitted pumps include Buna N check balls & wetted o-rings. Santoprene® fitted pumps include Santoprene® check balls & EPDM wetted o-rings







Aluminum (NPT)
Dimensions: 9.80" W × 12.60" H
Net Wt.: 19.8 lbs. (9.0 kg)
Shipping Wt.: 23 lbs.

Polypropylene
ANSI Flange Dimensions:
12.44" W × 14.75" H
NPT Dimensions:
12.44" W × 14.50" H
Net Wt.: 17.6 lbs. (8.2 kg)
Shipping Wt.: 22.6 lbs.

Stainless Steel (NPT)
Dimensions: 9.80" W × 12.60" H
Net Wt.: 30.8 lbs. (13.9 kg)
Shipping Wt.: 32 lbs.

Model Number Nomenclature

NDP-20 B x x

Series:
NDP-20
Pump

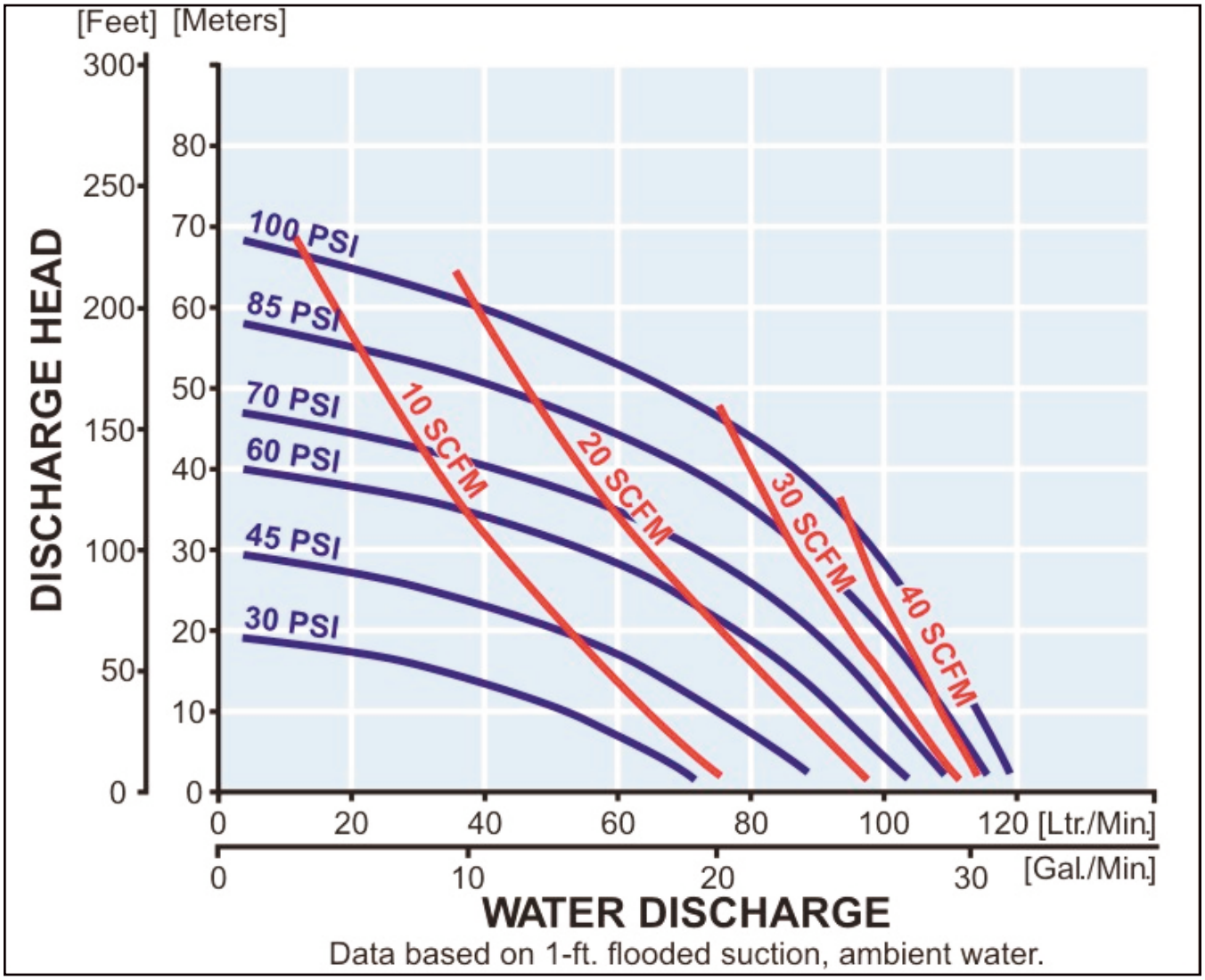
Valve Type:
B = Ball

Body Material:
P = Polypropylene
A = Aluminum
S = Stainless Steel

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
E = Nordel™ (EPDM)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FKM)
H = Hytrel® (TPE)

NDP-20 Performance Curve – Rubber

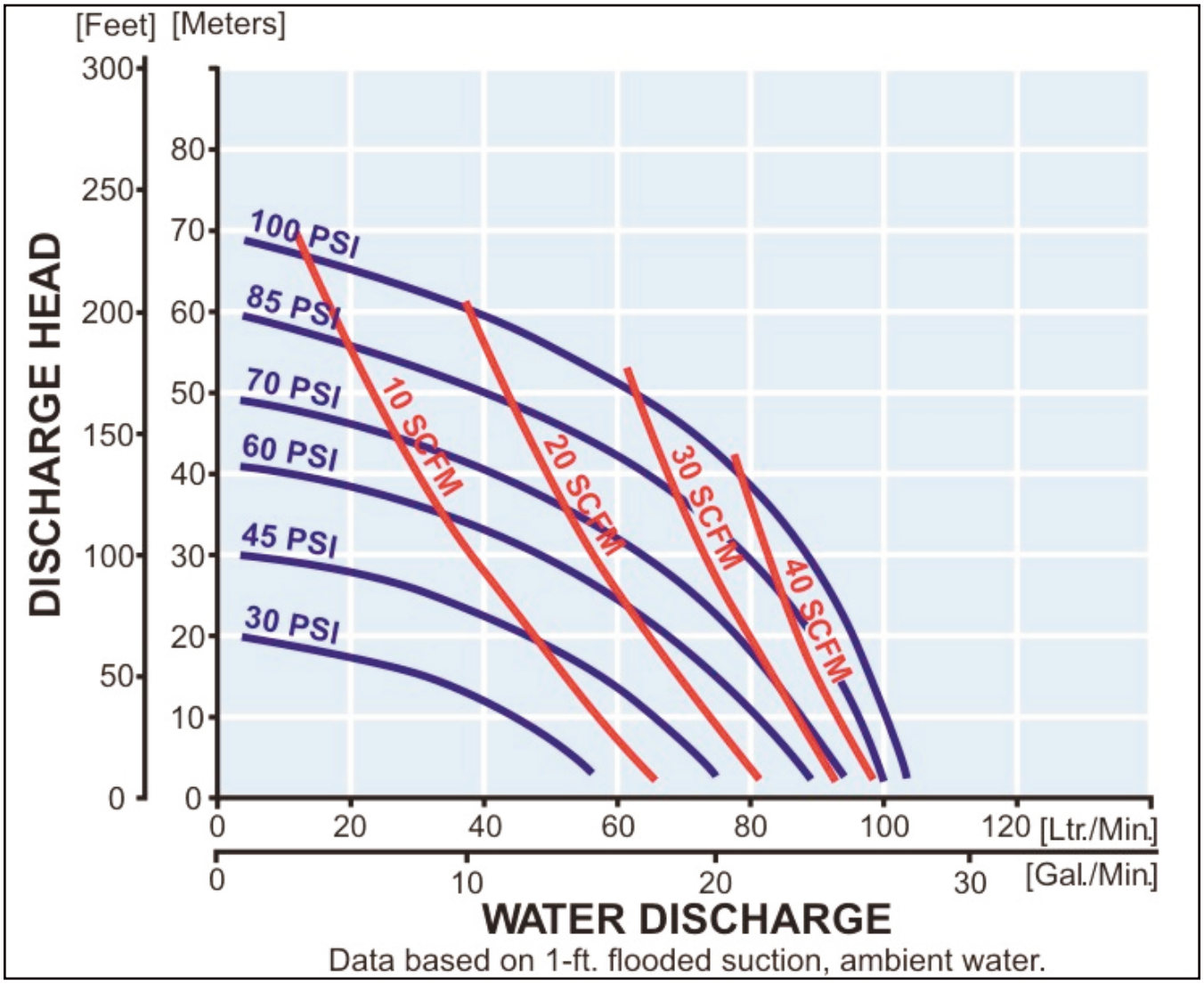
Rubber Diaphragm Performance Curve



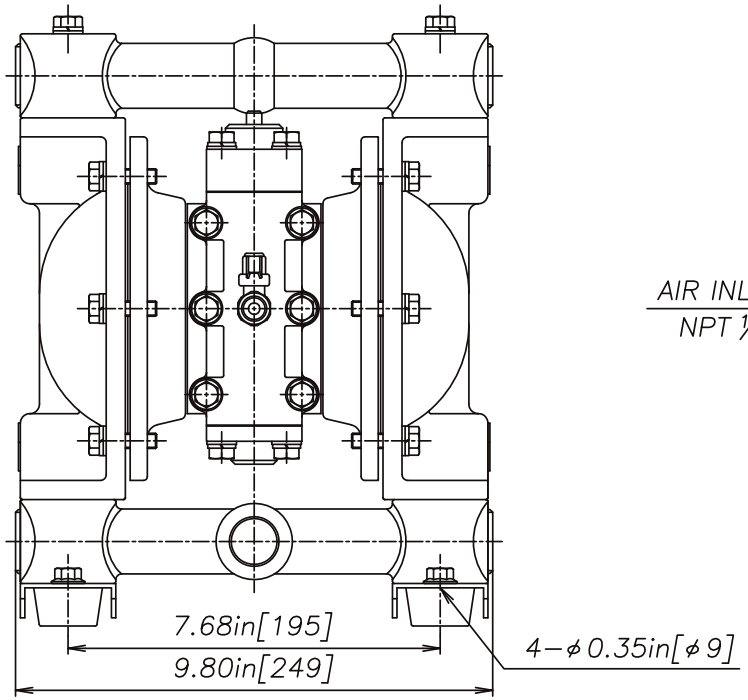
To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

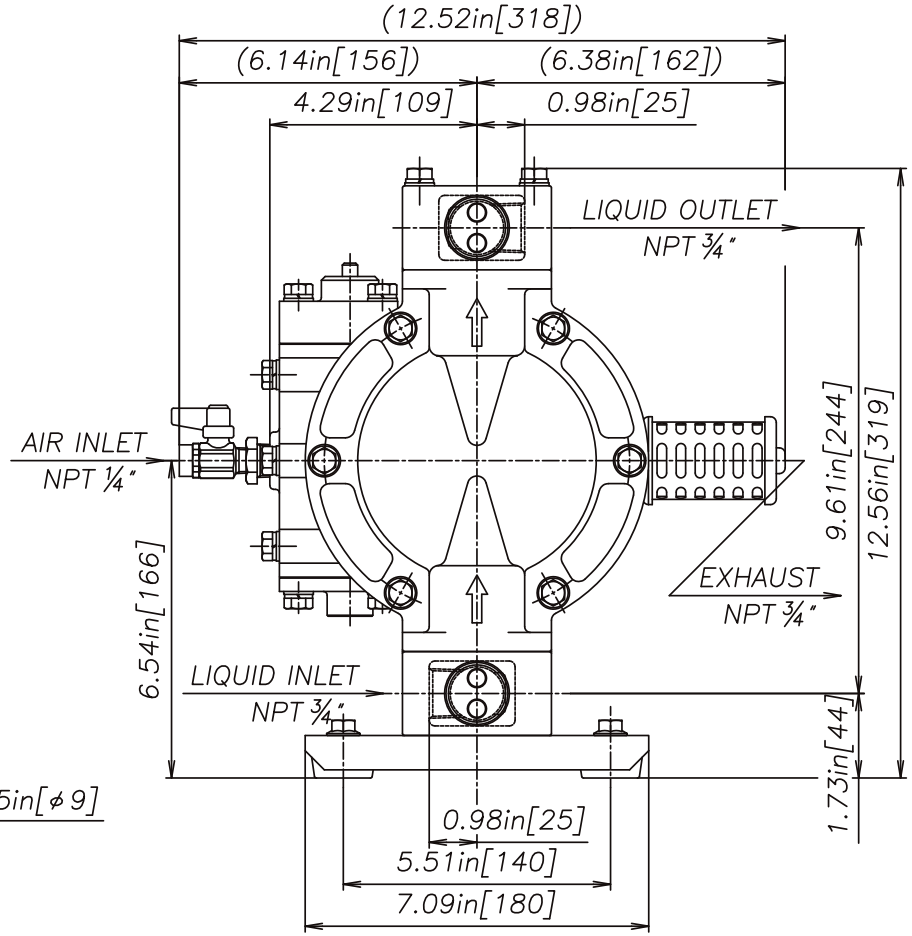
NDP-20 Performance Curve – PTFE

PTFE Diaphragm Performance Curve



To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.





REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/02/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP–20BA

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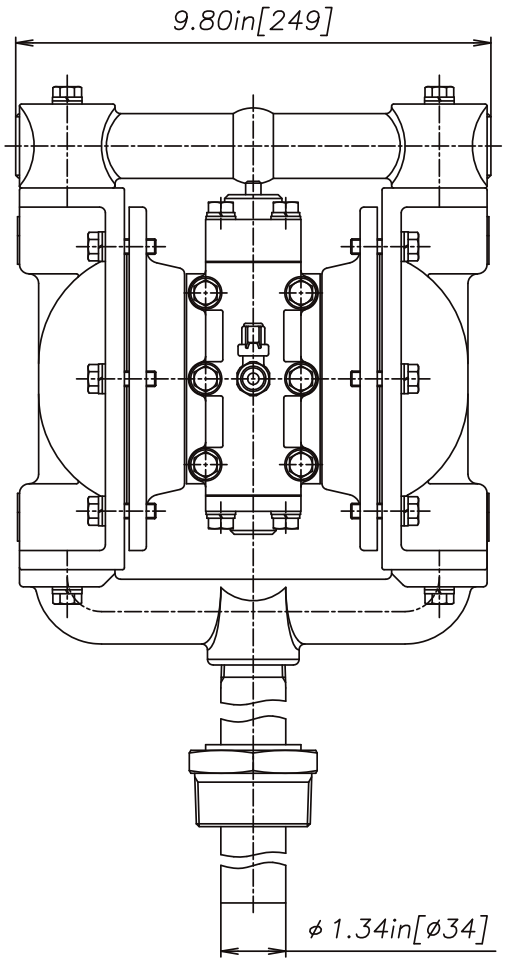
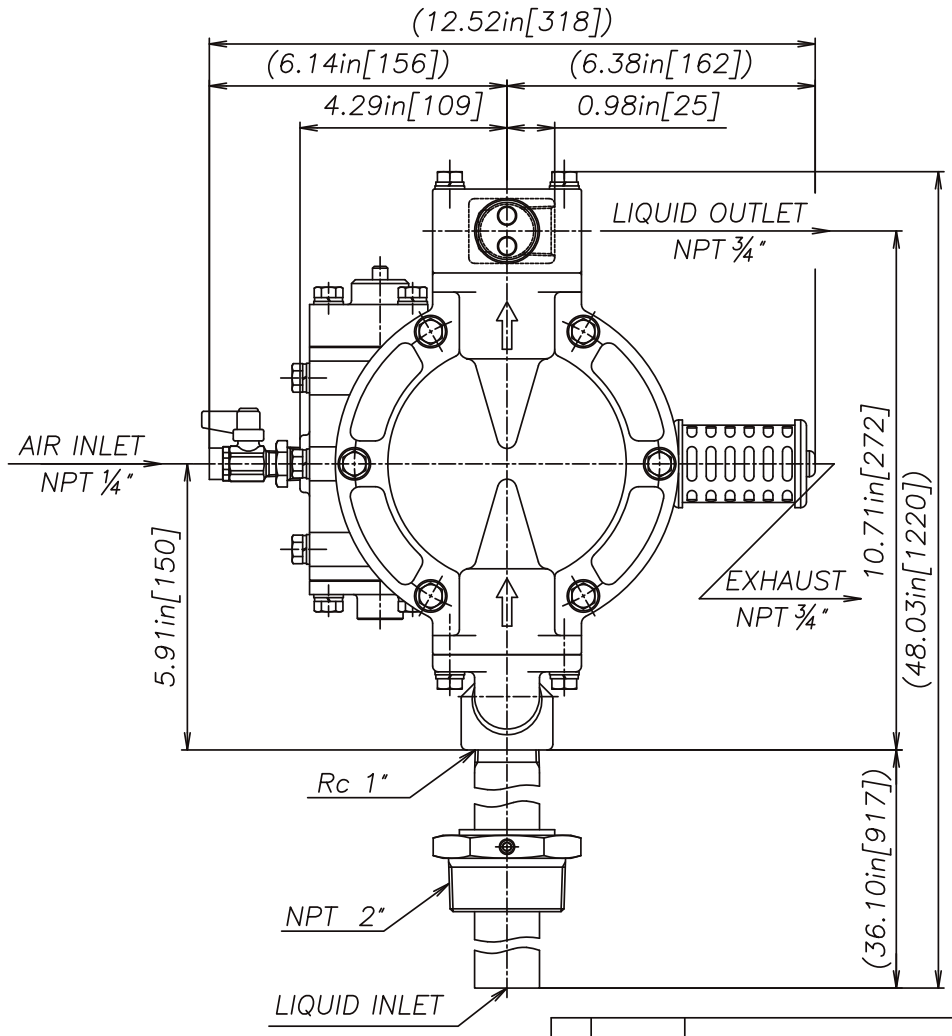
1200 NUCLEAR DRIVE – WEST CHICAGO, ILLINOIS 60185
TOLL FREE 800–990–7867 OR 630–231–4083





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DIAPHRAGM PUMP ASSEMBLY

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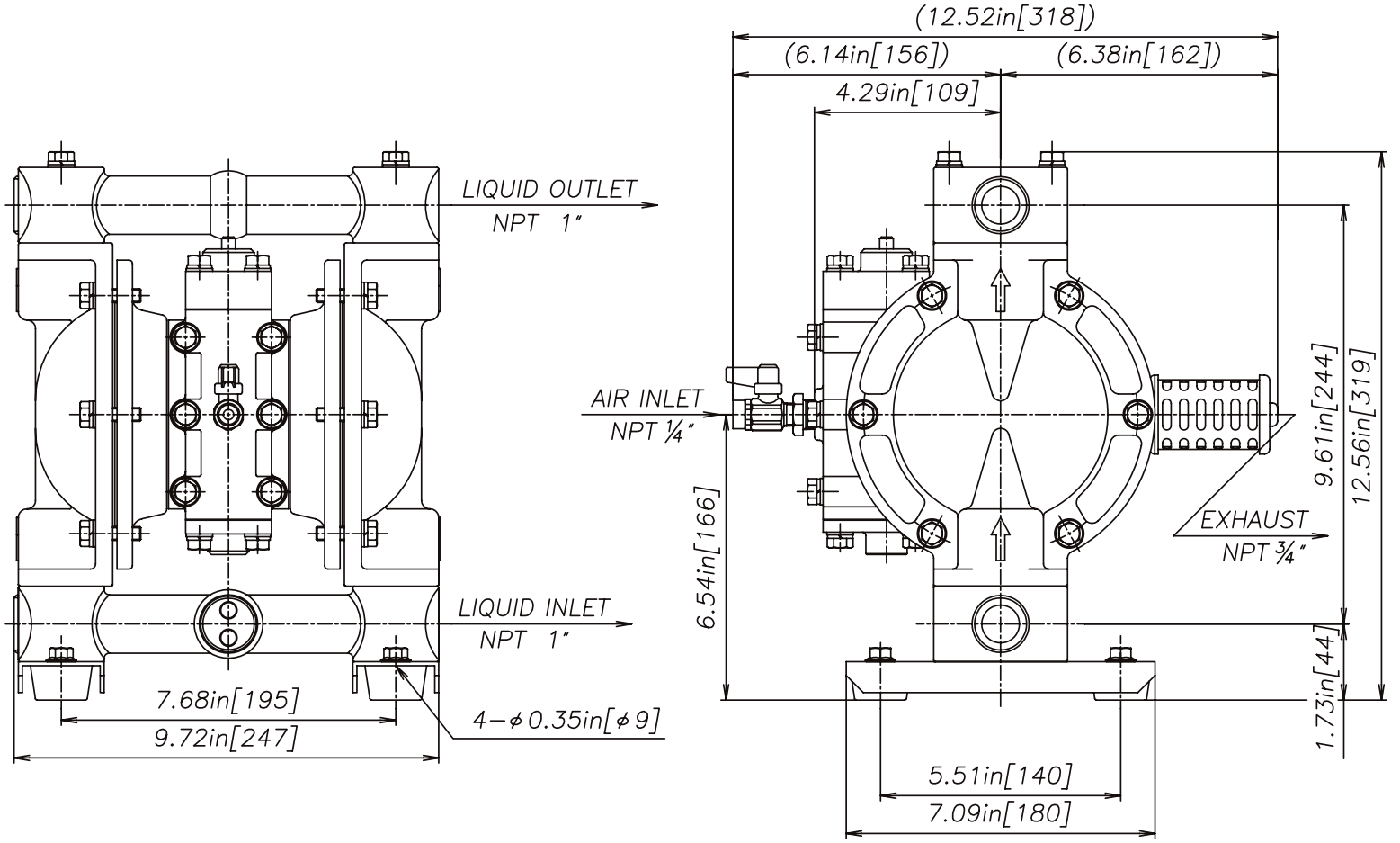
DRAWING NUMBER: NDP–20BA–D

REV 0



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DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/02/06 APPROVED BY S.K.

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DRAWING NUMBER: NDP–20BA–1S

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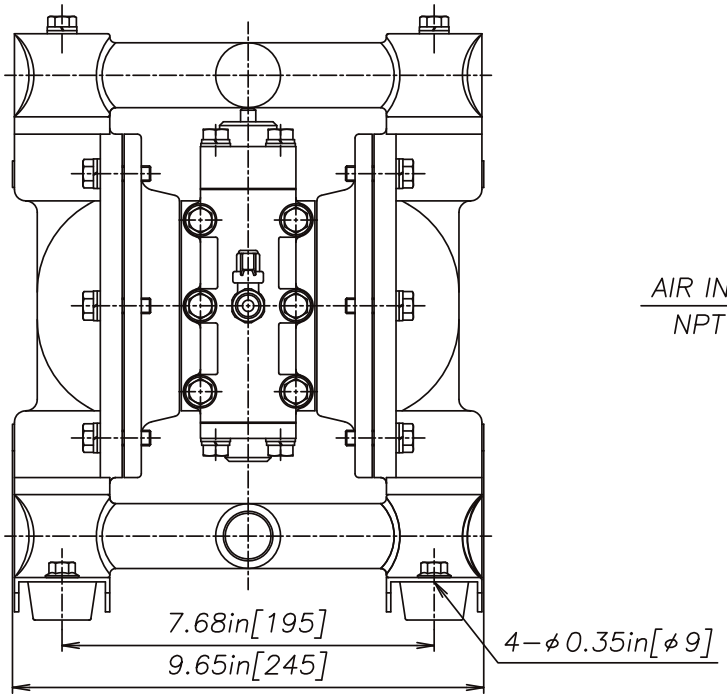

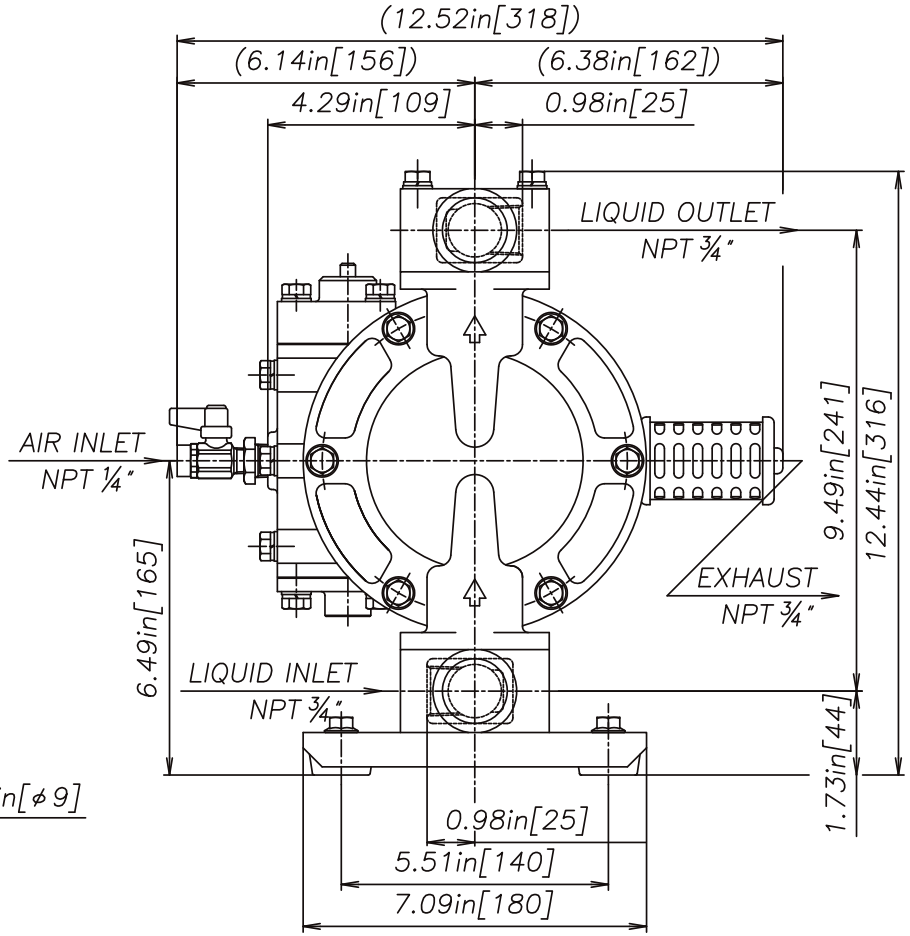

REV	DATE	DESCRIPTION	APPR'D

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DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

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DRAWING NUMBER: NDP−20BS

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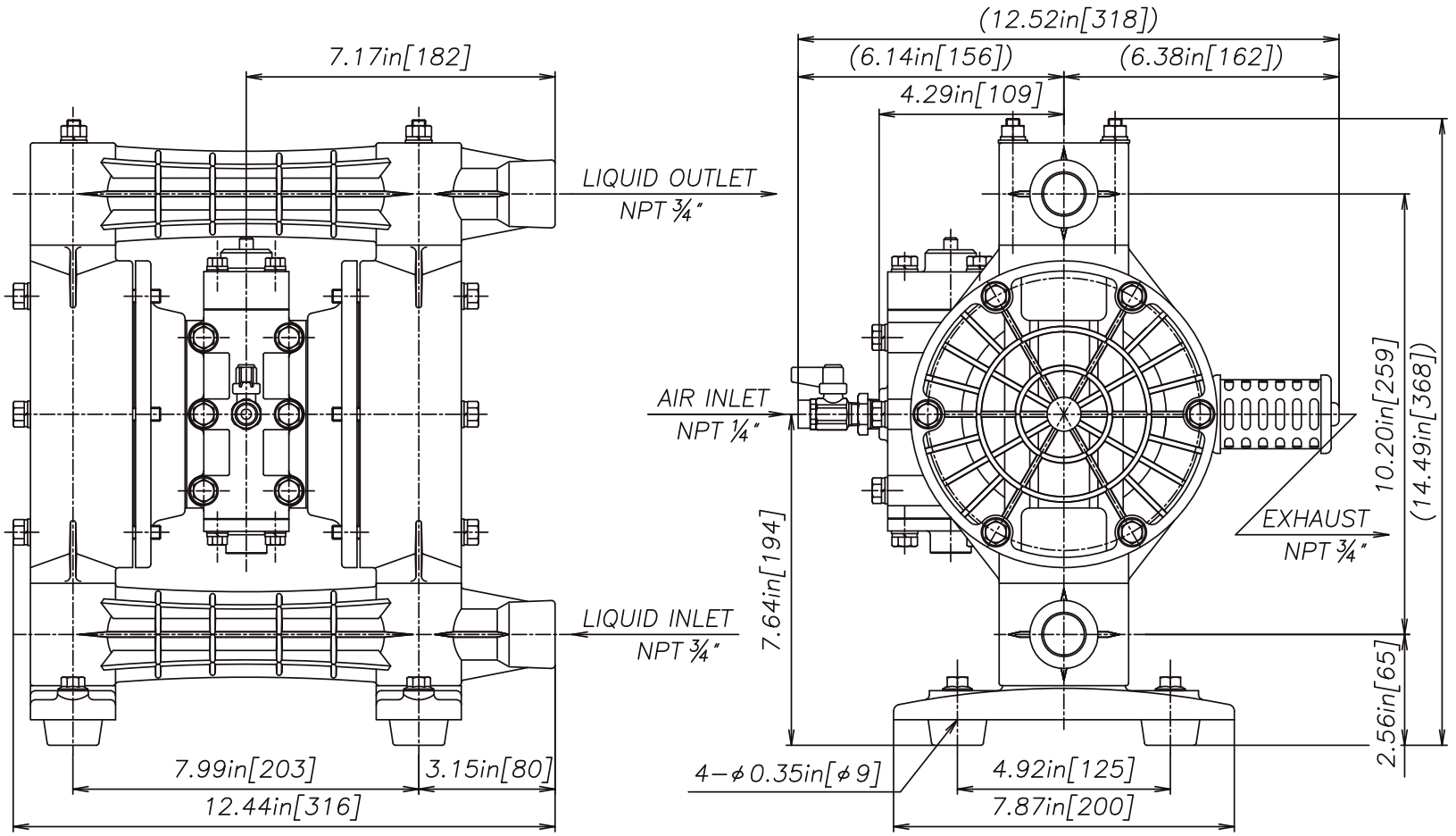

REV	DATE	DESCRIPTION	APPR'D

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SCALE 1 : 1 DRAWN BY YJI

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DRAWING NUMBER: NDP-20BP NPT

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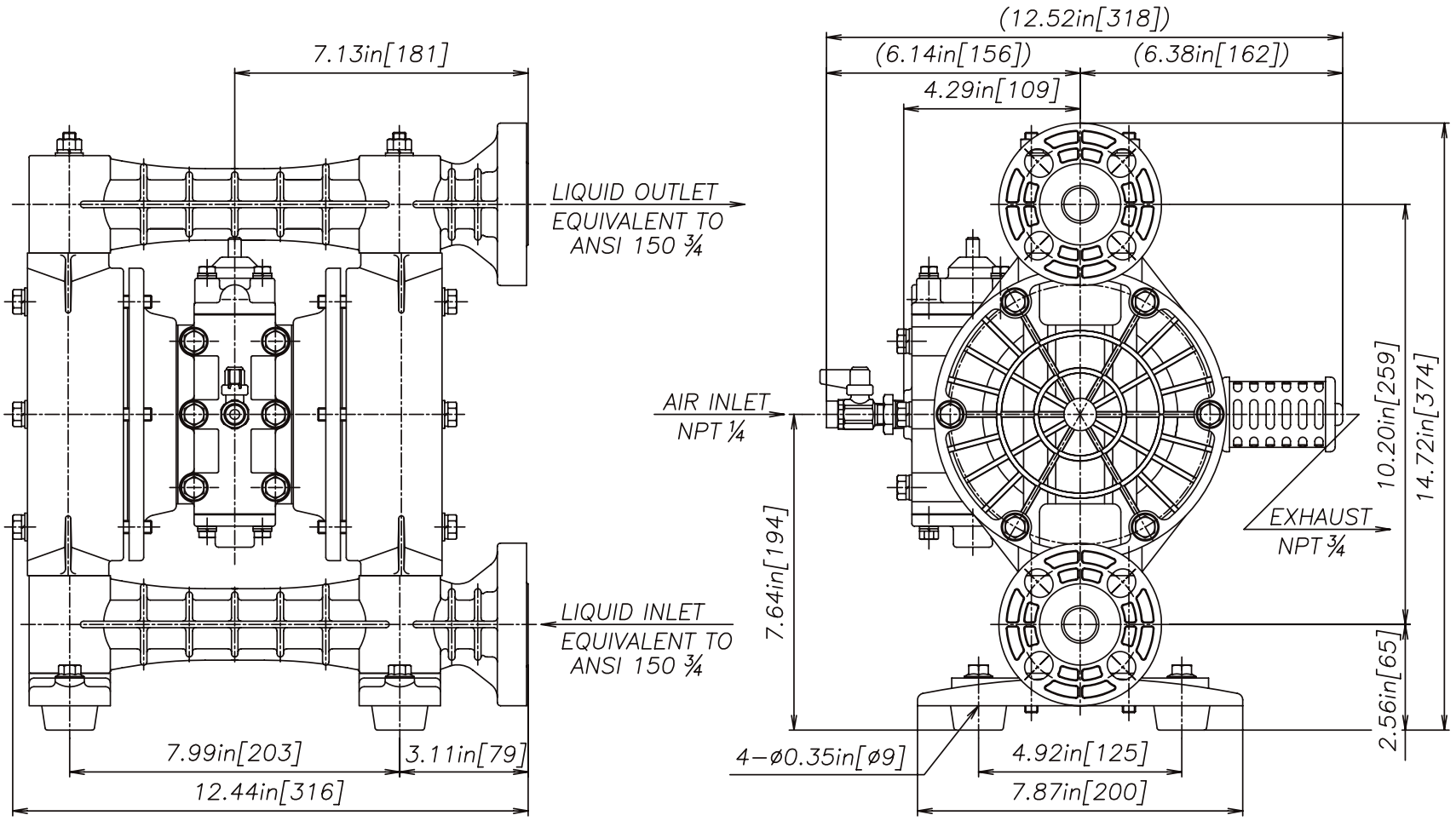

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DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

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THIRD ANG.PROJ.

DRAWING NUMBER: NDP−20BP FLANGE

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1200 NUCLEAR DRIVE − WEST CHICAGO, ILLINOIS 60185

TOLL FREE 800−990−7867 OR 630−231−4083

Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-25 Specifications

Port Dimensions	(46.2 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG)	1" Female NPT
Kynar® (PVDF)	1" Female NPT
Aluminum (ADC-12)	1" Female NPT
Stainless Steel (316)	1" Female NPT
Cast Iron	1" Female NPT
Air inlet (incl. ball valve):	3/8" Female NPT
Air exhaust (incl. silencer):	3/4" Female NPT

***ANSI Flange** also available — consult Yamada.*

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
EPDM	212°F (100°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20–100 PSI (1.4–7 kfg/cm)

Discharge Volume Per Cycle
Rubber diaphragm: 0.22 gallons (833 cc)
PTFE diaphragm: 0.21 gallons (787 cc)

Maximum Cycles Per Minute
Rubber diaphragm: 210
PTFE diaphragm: 210

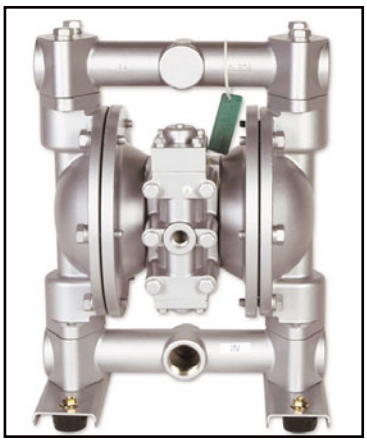
Maximum Size Solid
3/16" (4.8 mm)

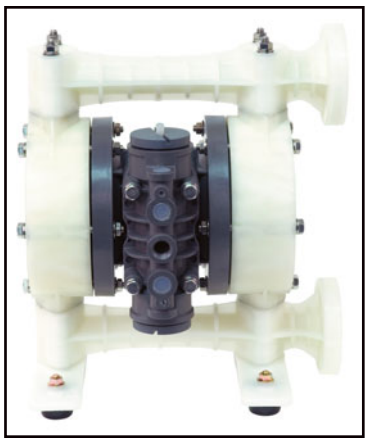
Maximum Dry Suction Lift
Rubber-fitted pump capability: 18-feet

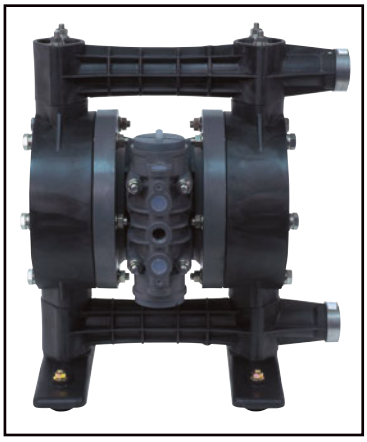
Air Motors: Aluminum air motors are standard on metal pumps; glass-filled polypropylene air motors are standard on plastic and Kynar® pumps.

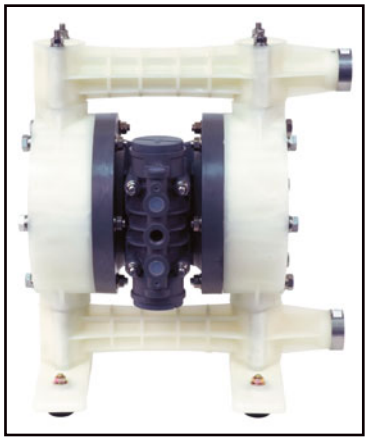
Optional: Split manifold—contact Yamada

Notes: Santoprene® fitted pumps include EPDM wetted o-rings. Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or PTFE include PTFE check balls & o-rings. Kynar®/EPDM fitted pumps include EPDM check balls & o-rings. Viton® fitted pumps include Viton® balls & o-rings.









Aluminum
Dimensions: 11.30" W × 15.08" H
Net Wt.: 27 lbs. (13.0 kg)
Shipping Wt.: 31 lbs.

Kynar® (PVDF)
ANSI Flange Dimensions:
14.40" W × 17.40 "H
NPT Dimensions:
14.40" W × 16.90" H
Net Wt.: 29.7 lbs. (13.4 kg)
Shipping Wt.: 33 lbs.

Polypropylene
ANSI Flange Dimensions:
14.40" W × 17.40 "H
NPT Dimensions:
14.40" W × 16.90" H
Net Wt.: 29 lbs. (10.9 kg)
Shipping Wt.: 30 lbs.

Cast Iron or S.S.
Dimensions: 11.30" W × 15.08" H
Net Wt.: 43 lbs. (19.9 kg)
Ship Wt.: 46 lbs.

Model Number Nomenclature

NDP-25 B x x

Series:
NDP-25
Pump

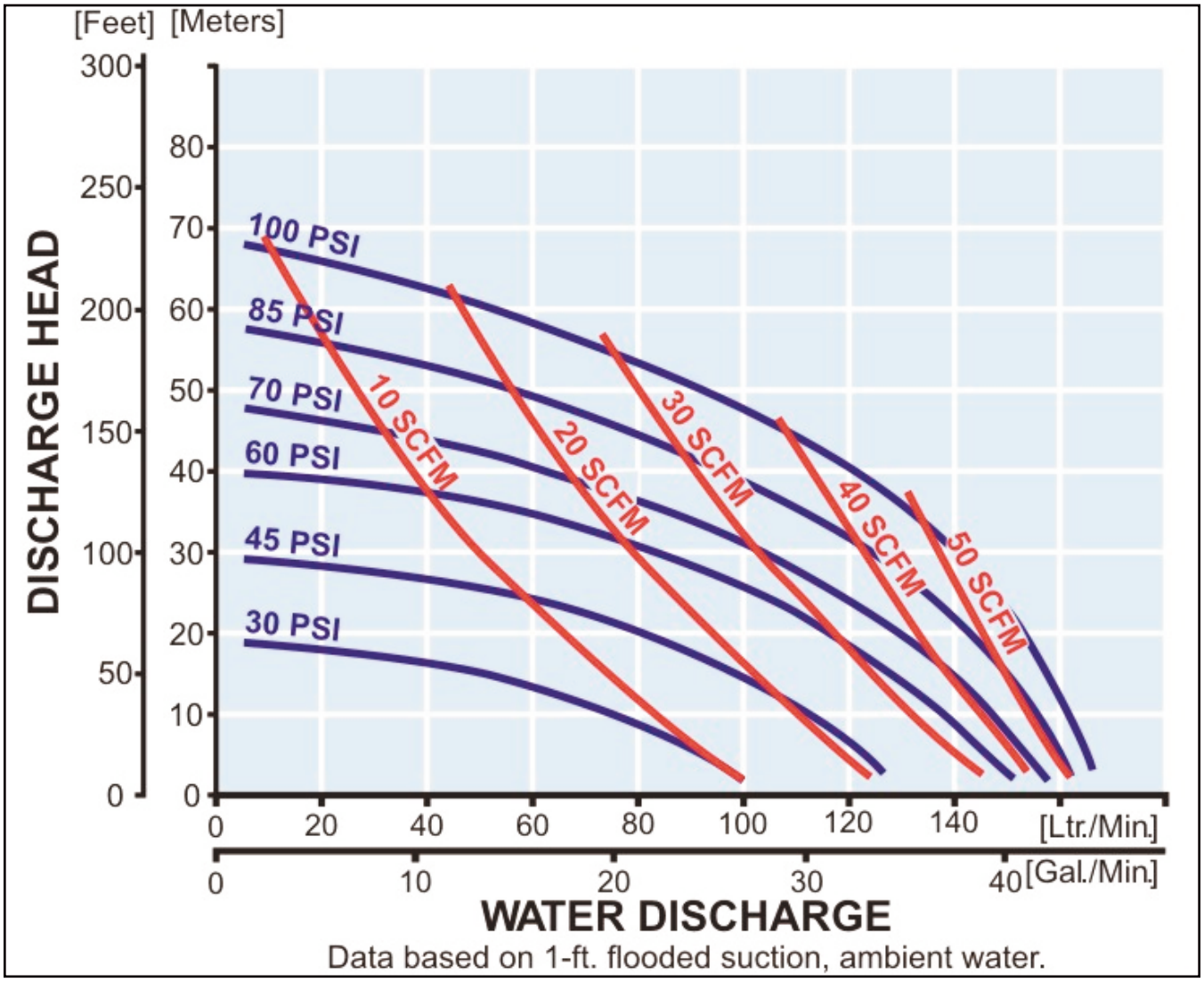
Valve Type:
B = Ball

Body Material:
P = Polypropylene
A = Aluminum
S = Stainless Steel
F = Cast Iron
V = Kynar®

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
E = Nordel™ (EPDM)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FPM)
H = Hytrel® (TPE)

NDP-25 Performance Curve – Rubber

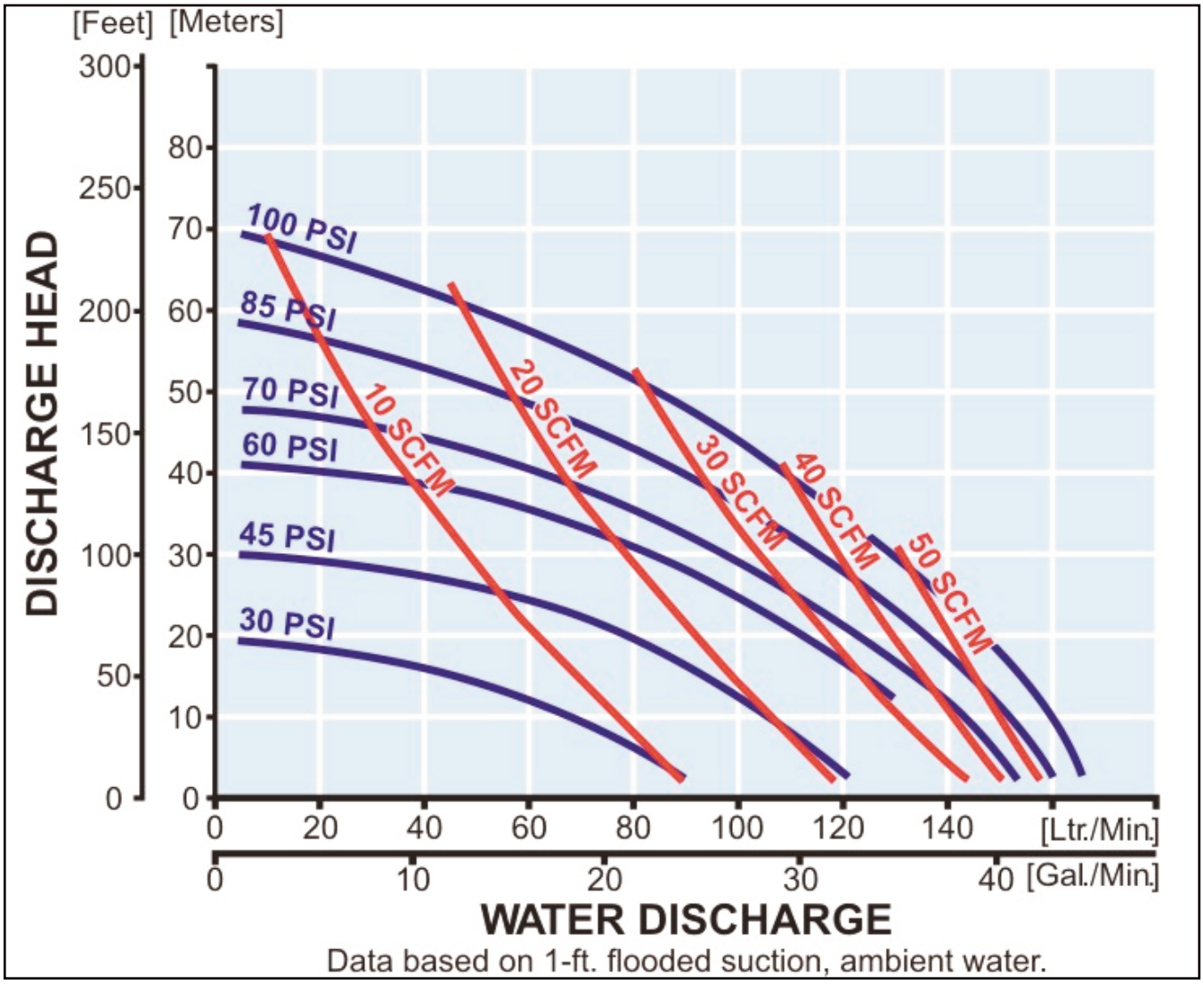
Rubber Diaphragm Performance Curve



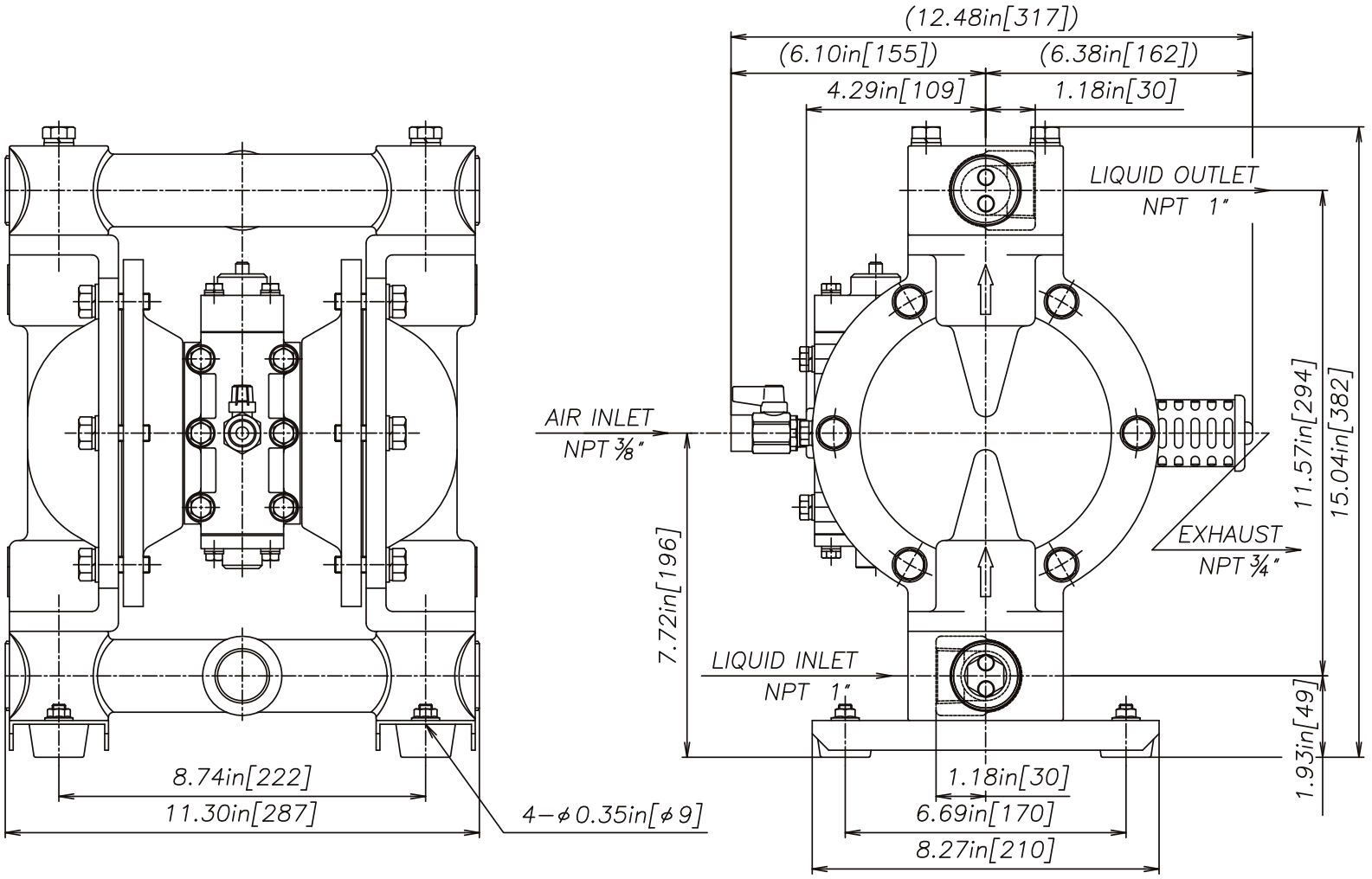
To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

NDP-25 Performance Curve – PTFE

PTFE Diaphragm Performance Curve



To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.



REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/02/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP−25BA

REV 0

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1200 NUCLEAR DRIVE − WEST CHICAGO, ILLINOIS 60185
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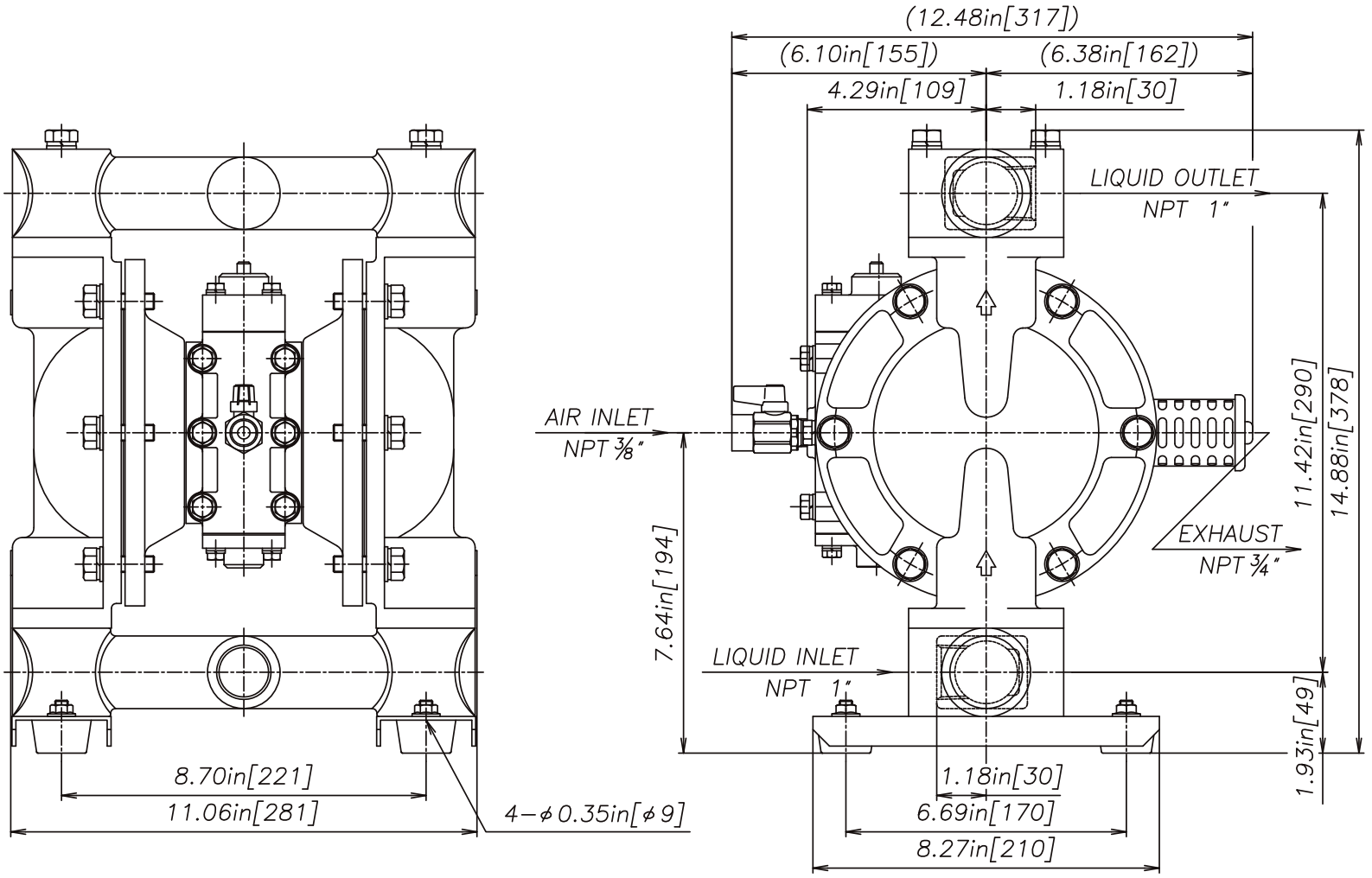

REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/02/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP-25BS

REV 0

YAMADA AMERICA, INC.
1200 NUCLEAR DRIVE - WEST CHICAGO, ILLINOIS 60185
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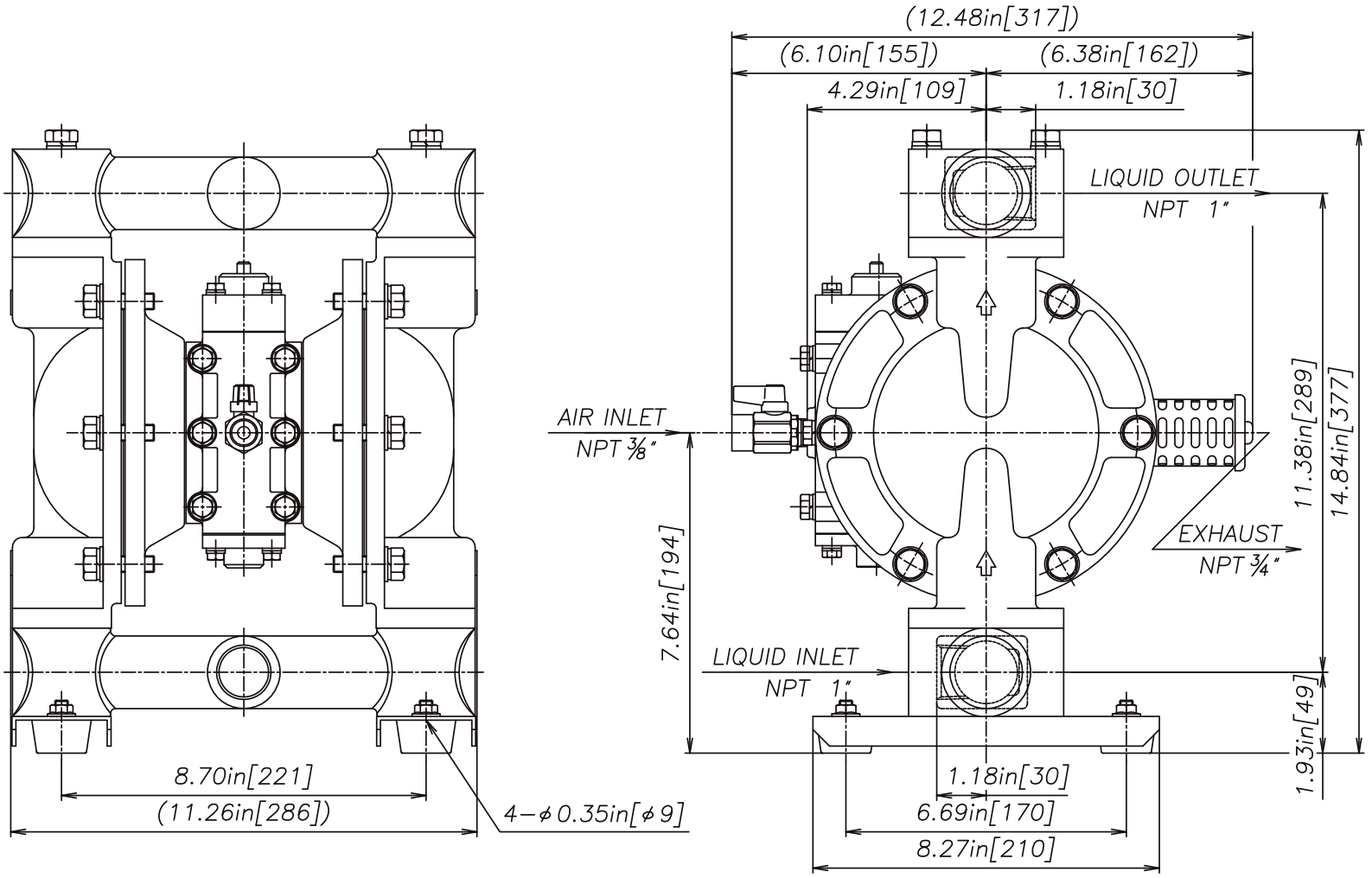

REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 02/02/06 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP-25BF

REV 0

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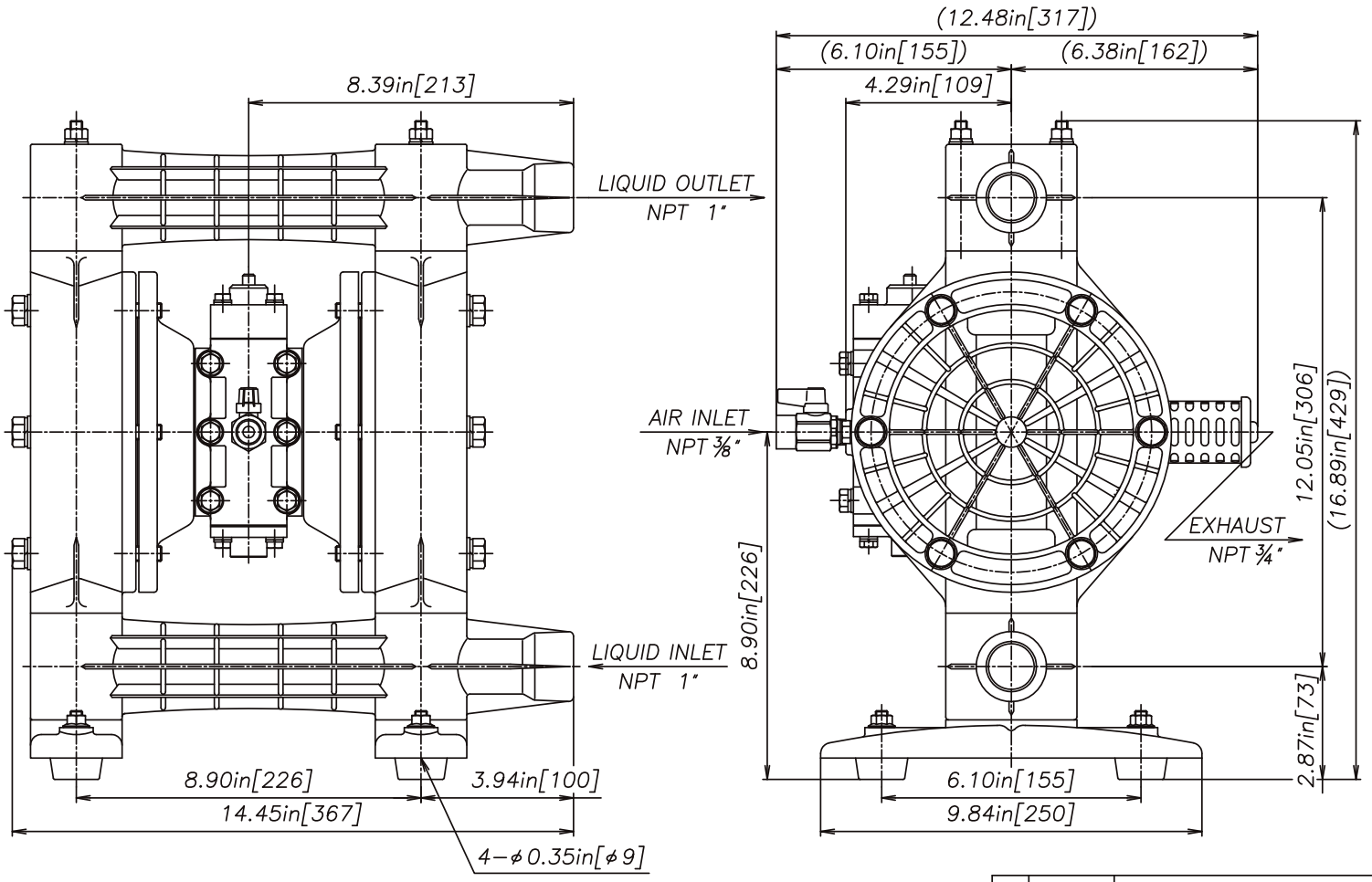

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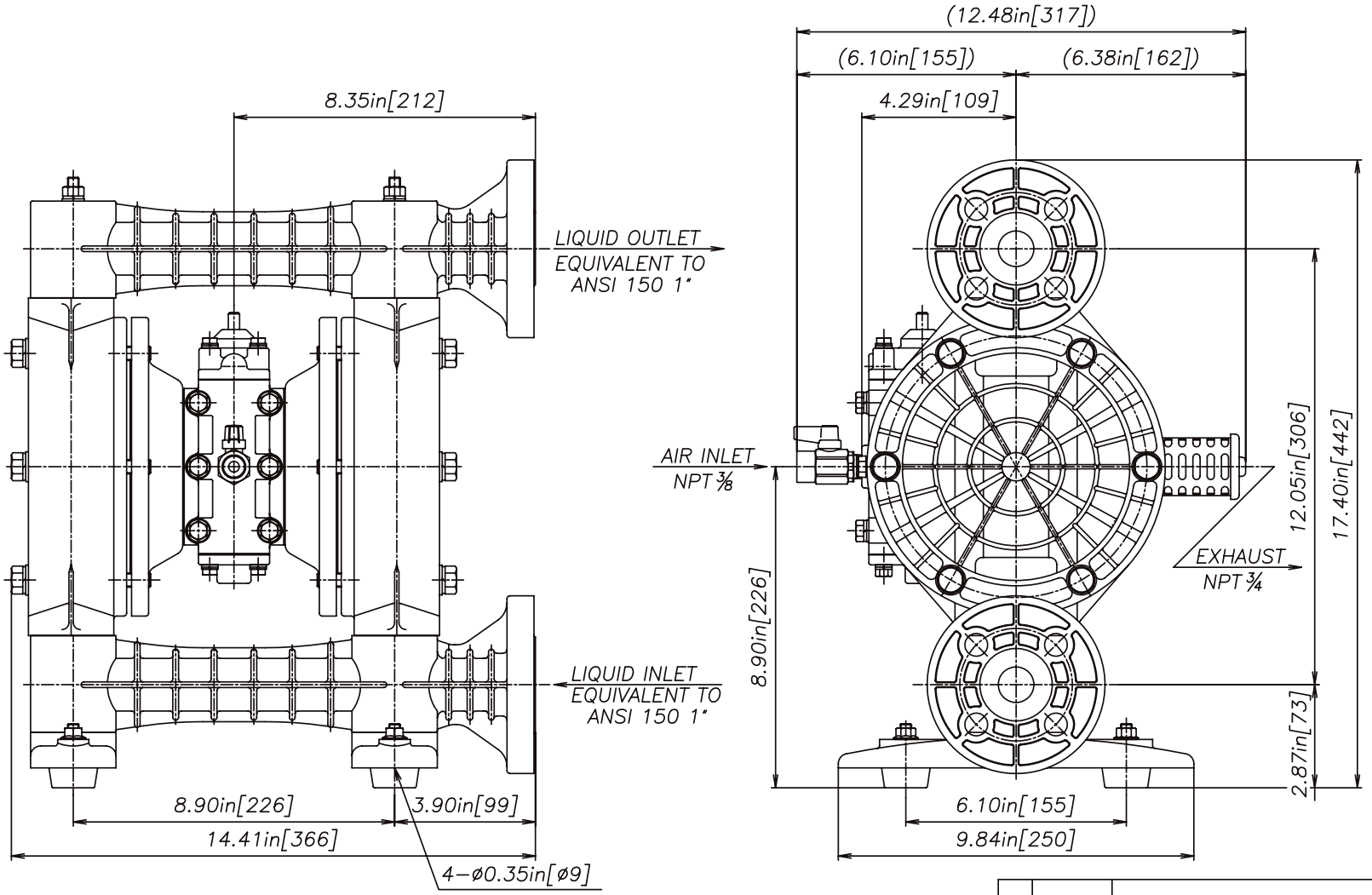
THIRD ANG.PROJ.

DRAWING NUMBER: NDP-25BP NPT

REV 0



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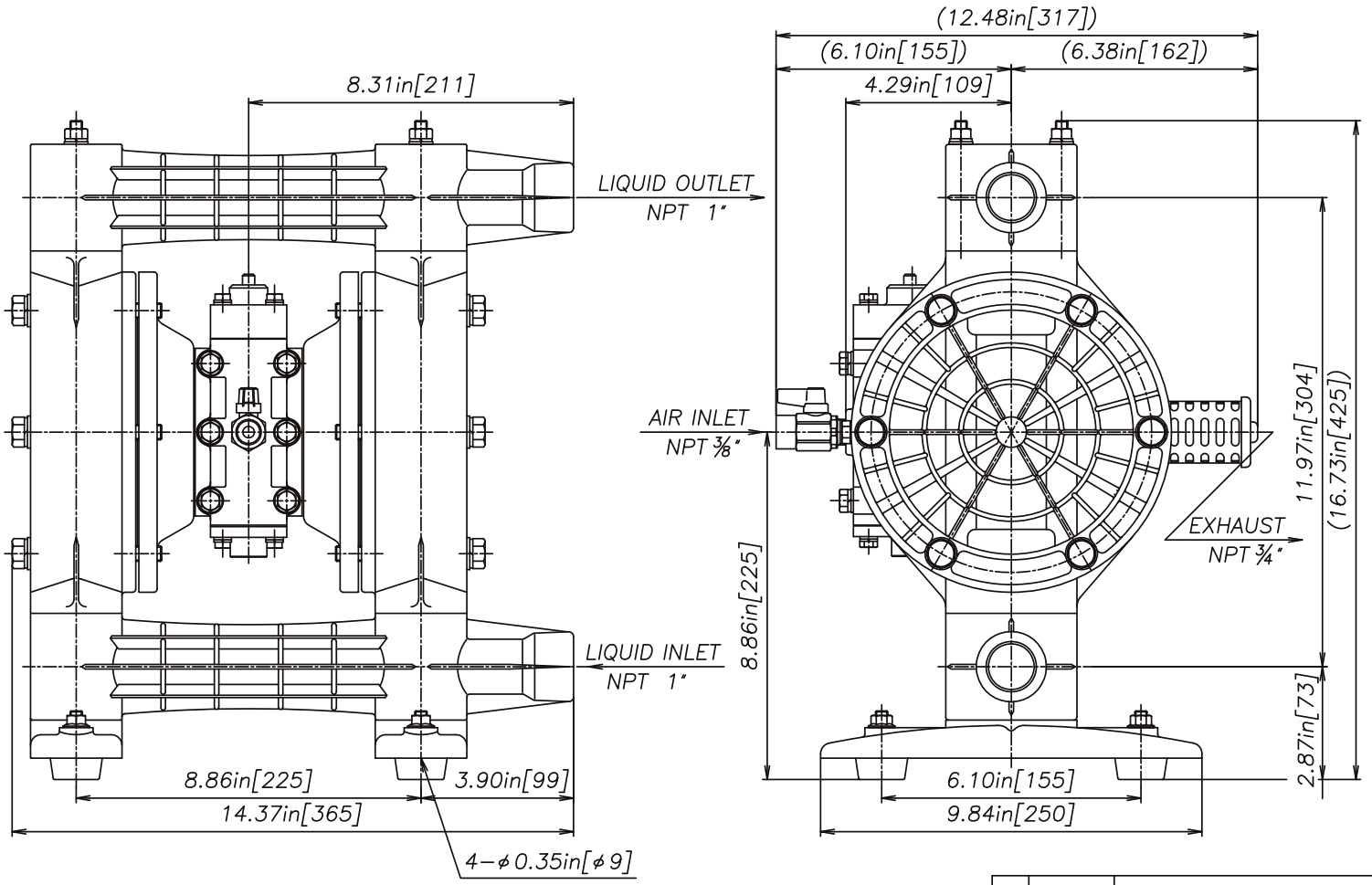
THIRD ANG.PROJ.

DRAWING NUMBER: NDP-25BP FLANGE

REV 0



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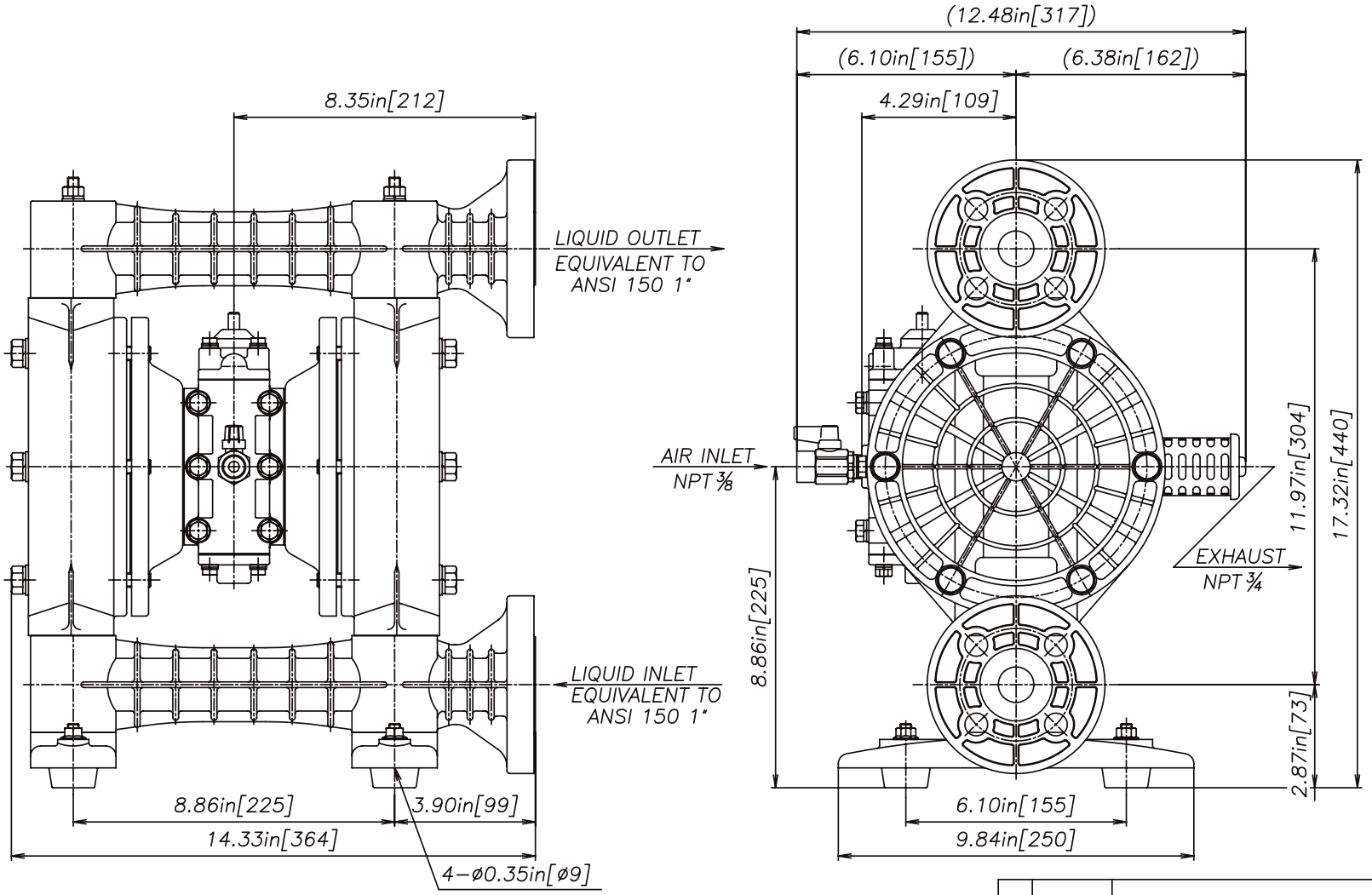
THIRD ANG.PROJ.

DRAWING NUMBER: NDP-25BV NPT

REV 0



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THIRD ANG.PROJ.

DRAWING NUMBER: NDP–25BV FLANGE

REV 0

Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-40 Specifications

Port Dimensions	(107 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG)	1-1/2" ANSI B16.5 #150
Kynar® (PVDF)	1-1/2" ANSI B16.5 #150
Aluminum (ADC-12)	1-1/2" ANSI B16.5 #150 (with tapped 1-1/2" Female NPT)
Stainless Steel (316)	1-1/2" ANSI B16.5 #150 or 1-1/2" Female NPT
Cast Iron	1-1/2" Female NPT
Air inlet (incl. ball valve):	1/2" Female NPT
Air exhaust (incl. silencer):	1" Female NPT

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
EPDM	212°F (100°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20–100 PSI (1.4–7 kfg/cm)

Discharge Volume Per Cycle
Rubber diaphragm: 0.73 gallons (2.74 liters)
PTFE diaphragm: 0.37 gallons (1.40 liters)

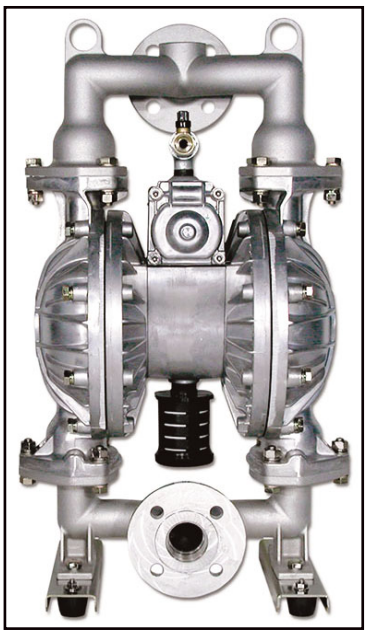
Maximum Cycles Per Minute
Rubber diaphragm: 148
PTFE diaphragm: 270

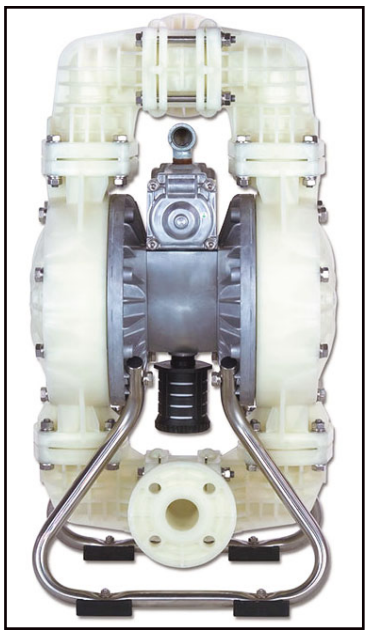
Maximum Size Solid
9/32" (7 mm)

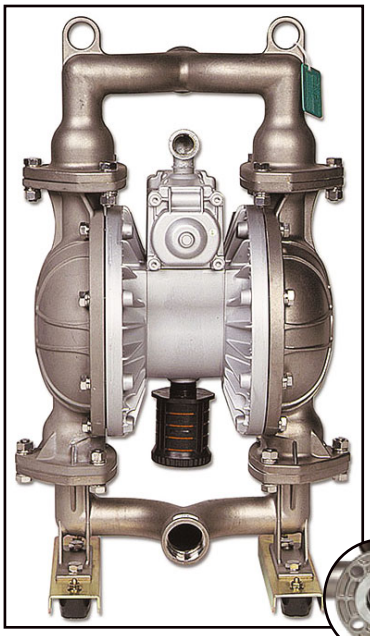
Maximum Dry Suction Lift
Rubber-fitted pump capability: 18-feet

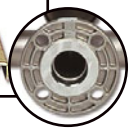
Air Motor
Aluminum Air Motor–Standard
Optional coating: PTFE grey coated (XP)

Notes: Hytrel® fitted pumps include Buna N wetted o-rings. Santoprene® fitted pumps include EPDM wetted o-rings. Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or PTFE include PTFE check balls and o-rings.









Aluminum (top left)
Dimensions: 16.18" W × 27.91" H
Net Wt.: 68 lbs. (28.9 kg)
Shipping Wt.: 75 lbs.

Polypropylene or Kynar® (top right)
Dimensions: 15.75" W × 29.61" H
Net Wt.: 70 lbs. (29.9 kg)
Shipping Wt.: 78 lbs.

Cast Iron or Stainless Steel (left)
Dimensions: 16.18" W × 27.75" H
Net Wt.: C. Iron: 112 lbs. (59.8 kg)
SS: 98 lbs. (39.9 kg)
Ship Wt.: C. Iron: 120 lbs.
SS: 106 lbs.

Note: ANSI Flange available for Stainless Steel

Model Number Nomenclature

NDP-40 B x x

Series:
NDP-40 Pump

Valve Type:
B = Ball

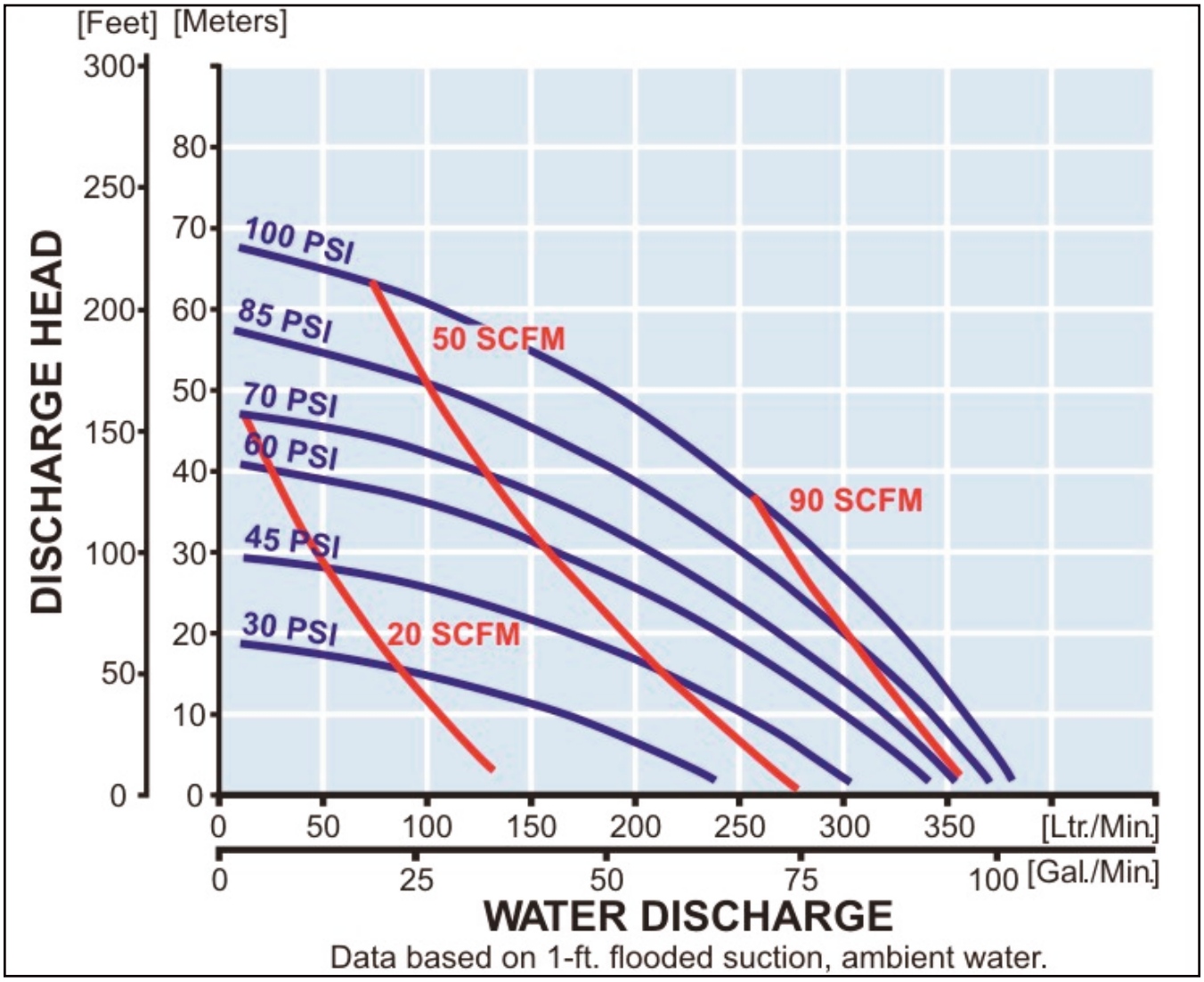
Body Material:
P = Polypropylene
V = Kynar®
A = Aluminum
S = Stainless Steel
F = Cast Iron

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
E = Nordel™ (EPDM)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FKM)
H = Hytrel® (TPE)

Note: For NPT-fitted Stainless Steel, add "NPT" at end of model number nomenclature.

NDP-40 Performance Curve – Rubber

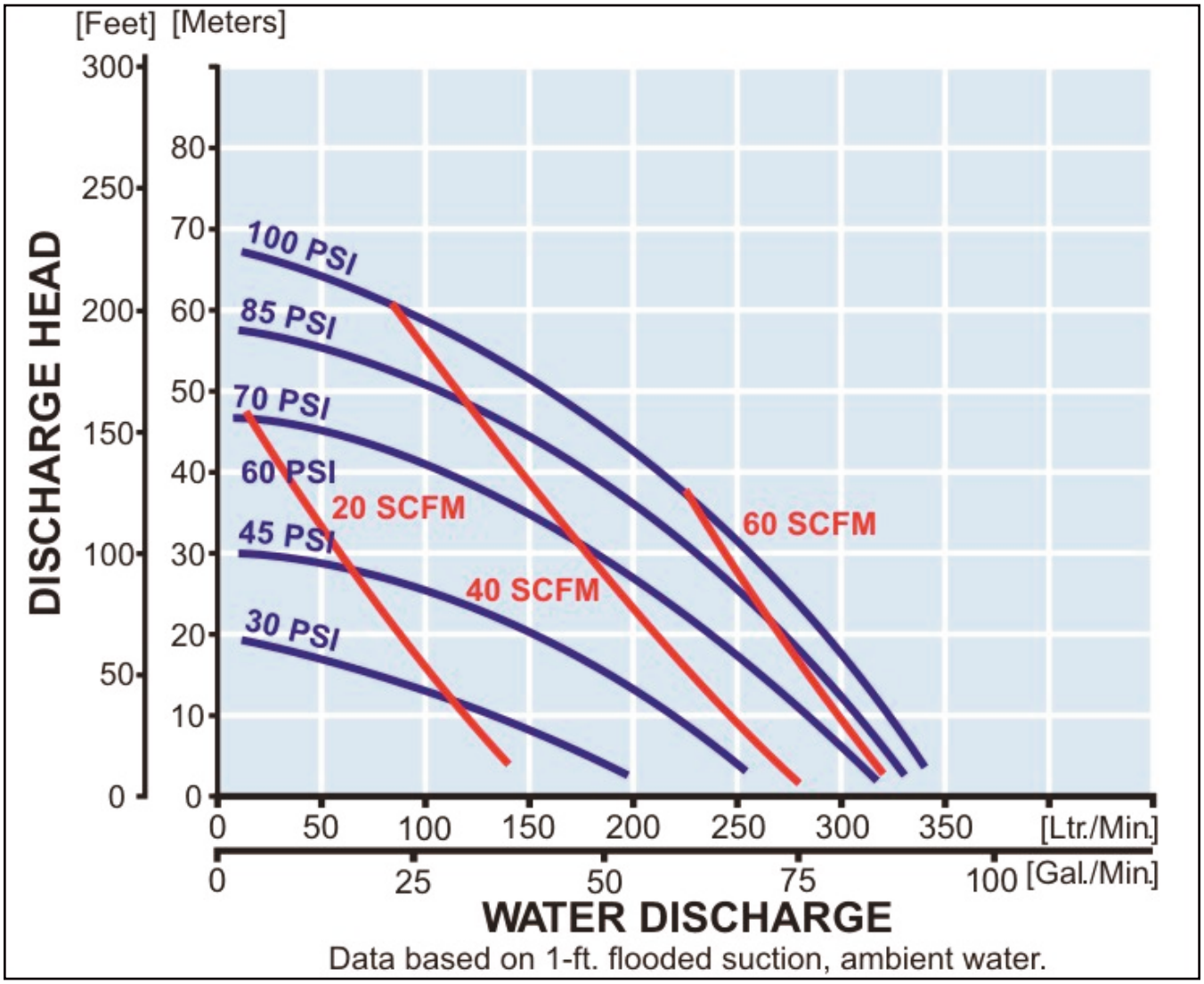
Rubber Diaphragm Performance Curve



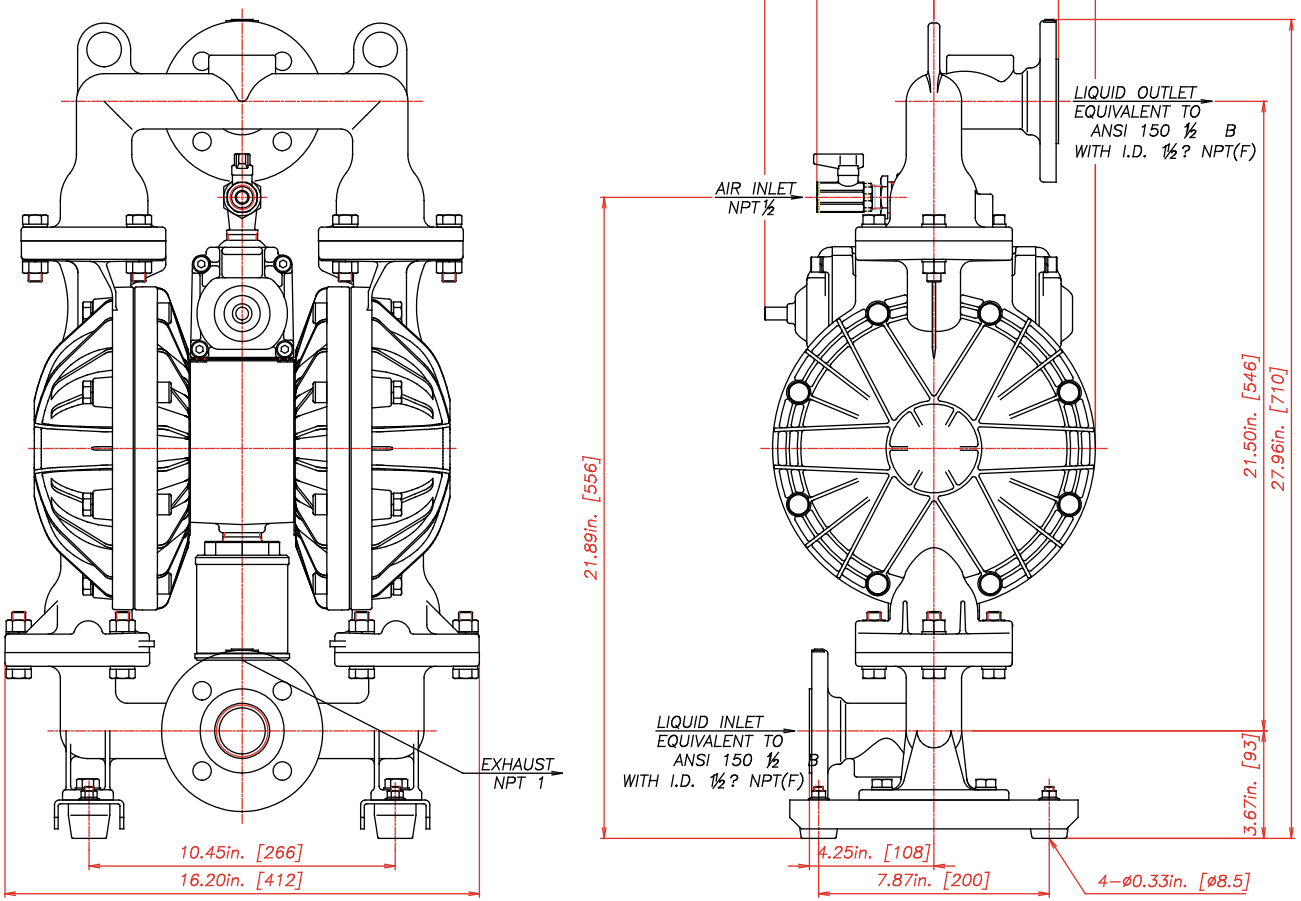
To calculate performance for Santoprene and Hytrel-fitted pumps, use Rubber Diaphragm Curve.

NDP-40 Performance Curve – PTFE

PTFE Diaphragm Performance Curve



To calculate performance for Santoprene and Hytrel-fitted pumps, use Rubber Diaphragm Curve.



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THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

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DATE 01/09/12 APPROVED BY S.K.

THIRD ANG.PROJ. DRAWING NUMBER: NDP-40BA REV 1

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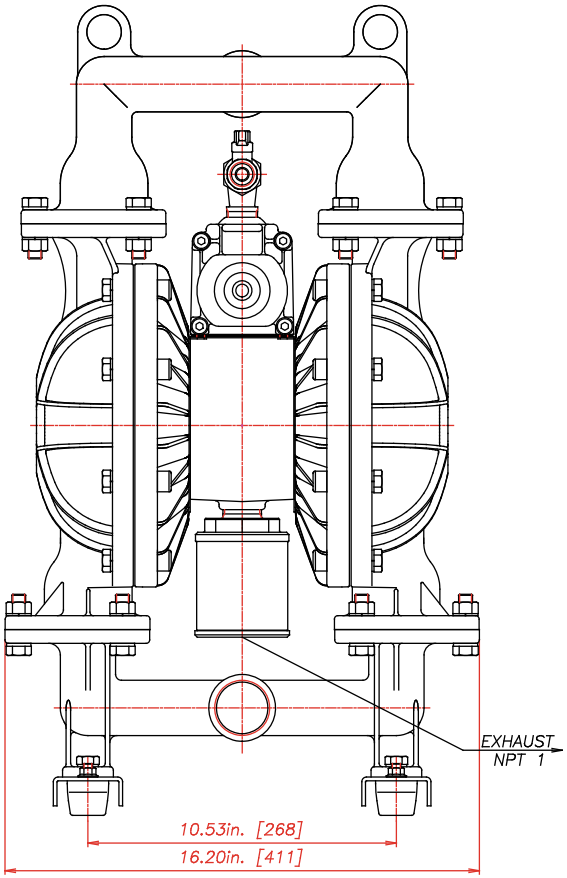

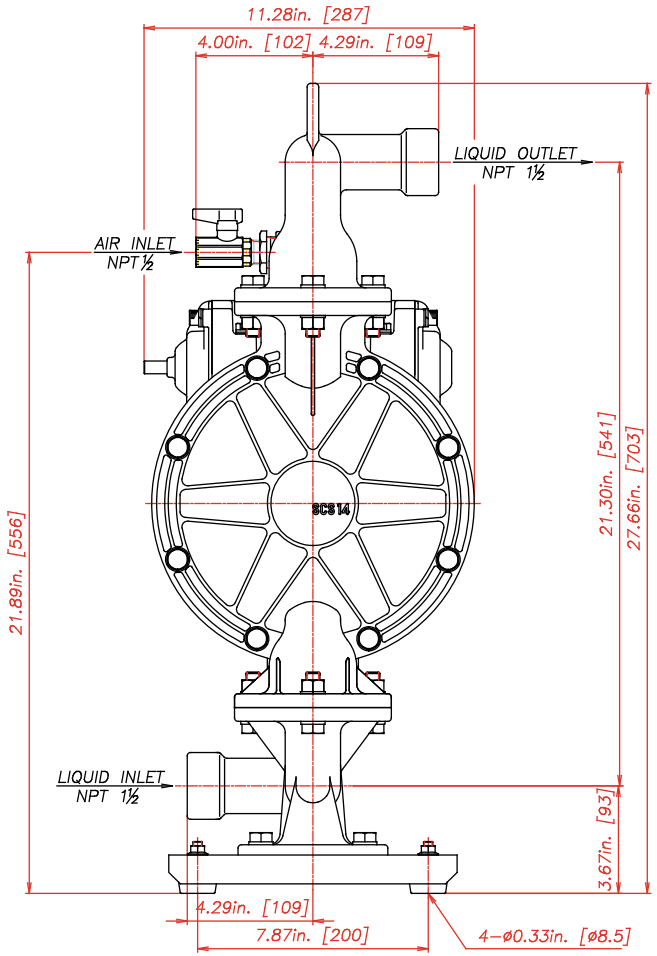

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THIRD ANG.PROJ.

DRAWING NUMBER: NDP-40BS NPT

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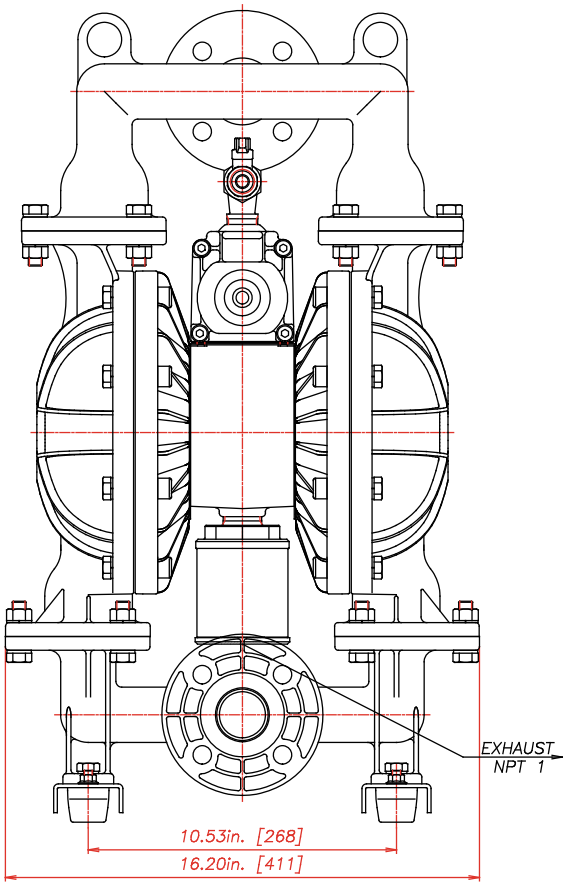

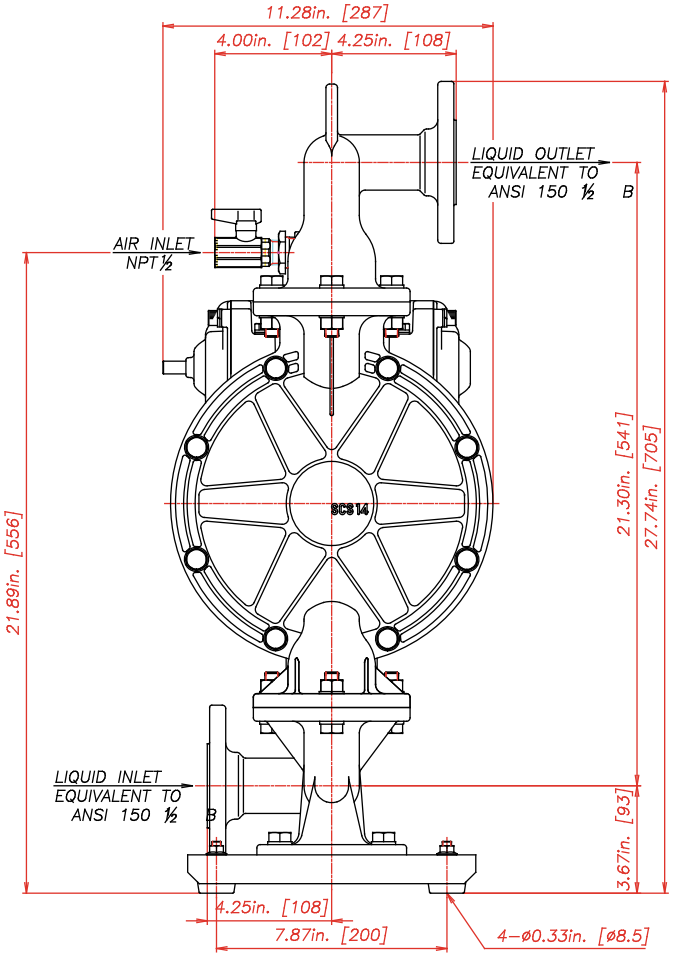

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THIRD ANG.PROJ.

DRAWING NUMBER: NDP-40BS FLANGE

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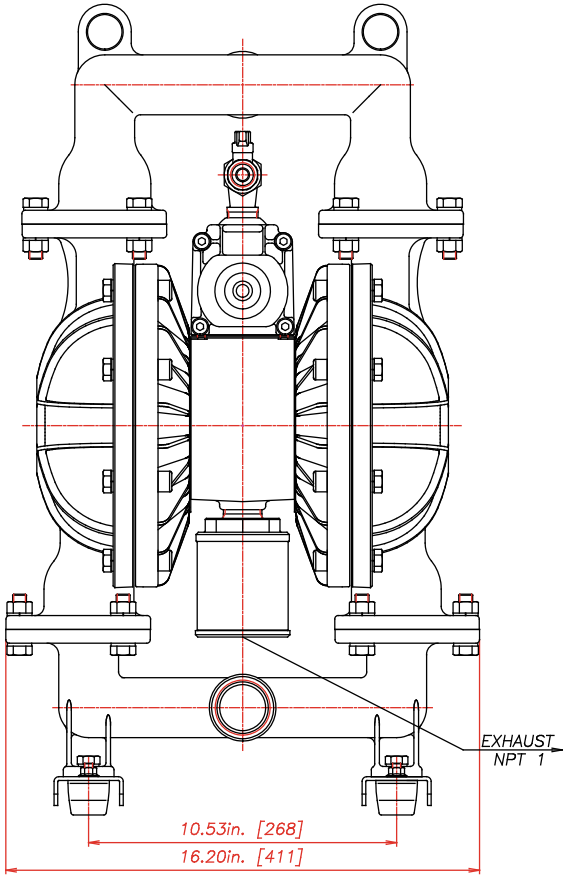

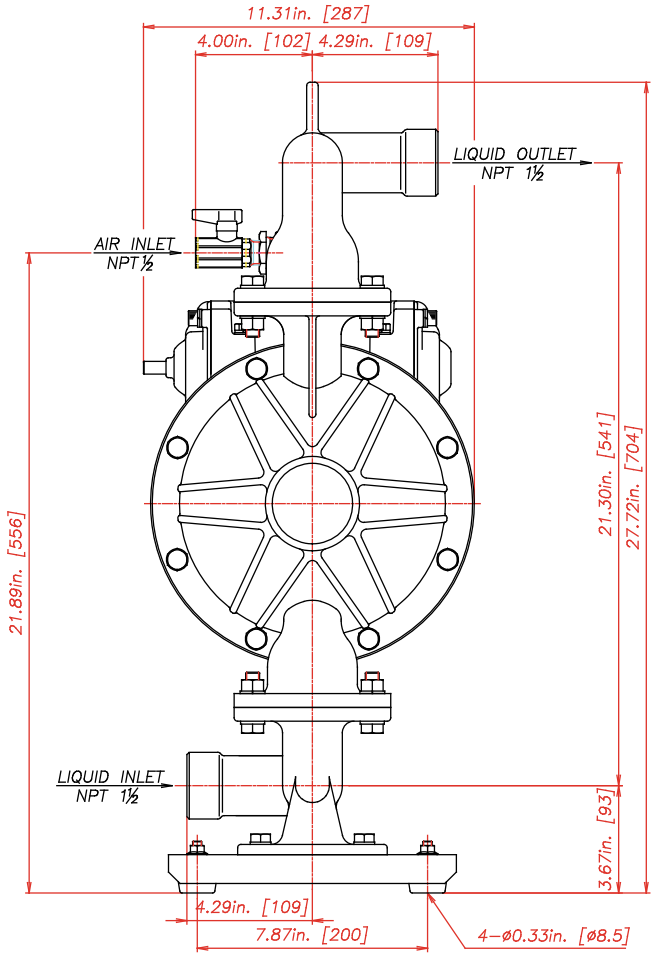

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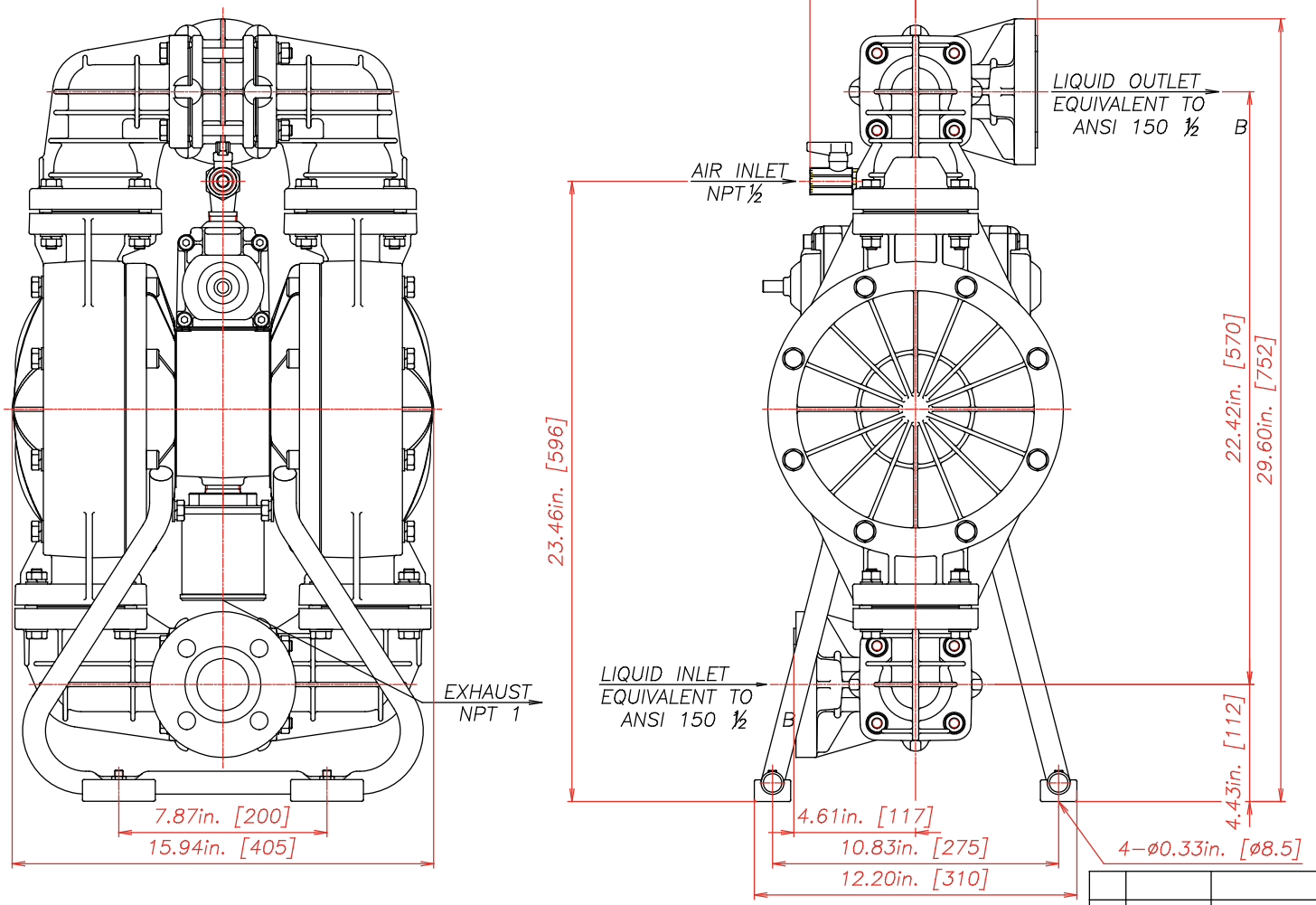

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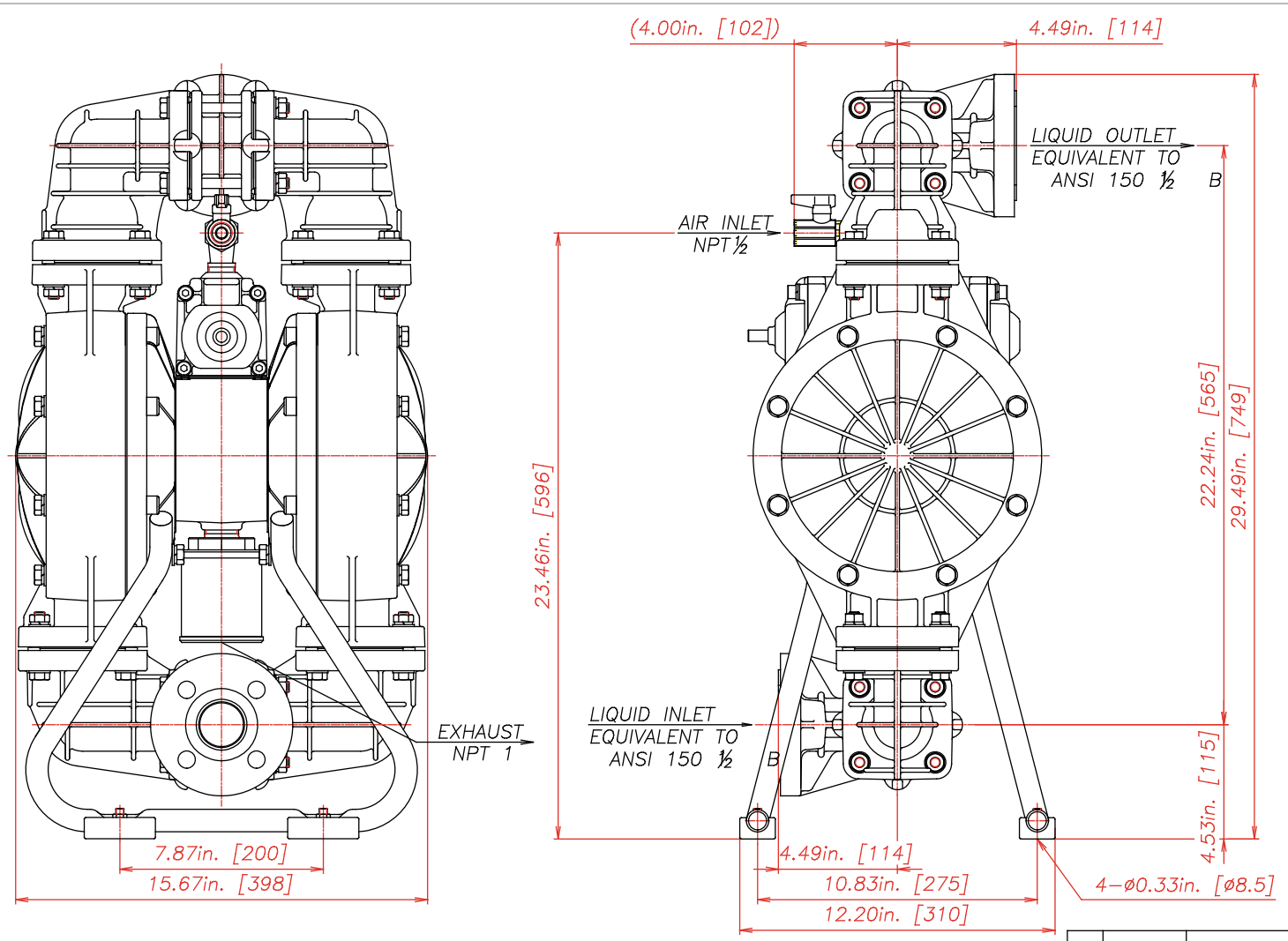

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Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-50 Specifications

Port Dimensions	(164 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG)	2" ANSI B16.5 #150
Kynar® (PVDF)	2" ANSI B16.5 #150
Aluminum (ADC-12)	2" ANSI B16.5 #150 (with tapped 2" Female NPT)
Stainless Steel (316)	2" ANSI B16.5 #150 or 2" Female NPT
Cast Iron	2" Female NPT
Air inlet (incl. ball valve):	3/4" Female NPT
Air exhaust (incl. silencer):	1" Female NPT

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
EPDM	212°F (100°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20–100 PSI (1.4–7 kfg/cm)

Discharge Volume Per Cycle
Rubber diaphragm: 1.12 gallons (4.25 liters)
PTFE diaphragm: 0.69 gallons (2.61 liters)

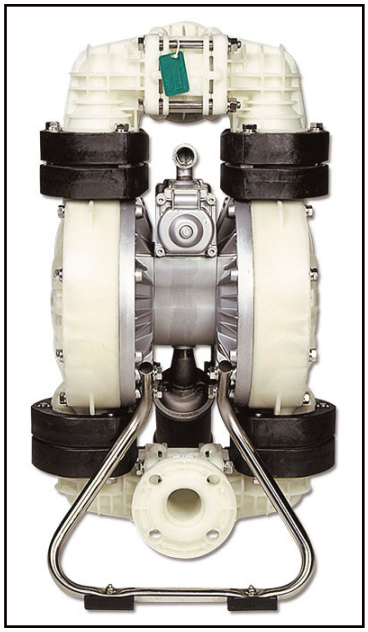
Maximum Cycles Per Minute
Rubber diaphragm: 146
PTFE diaphragm: 220

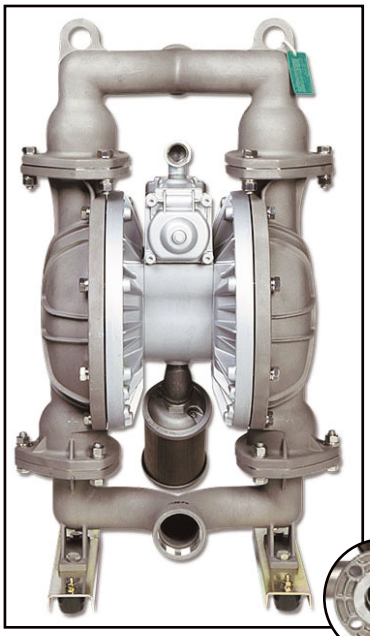
Maximum Size Solid
5/16" (8 mm)

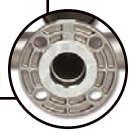
Maximum Dry Suction Lift
Rubber-fitted pump capability: 19-feet

Air Motor
Aluminum Air Motor–Standard
Optional coating: PTFE grey coated (XP)

Notes: Hytrel® fitted pumps include Buna N wetted o-rings. Santoprene® fitted pumps include EPDM wetted o-rings. Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or PTFE include PTFE check balls and o-rings.







Aluminum (top left)
Dimensions: 17.68" W × 30.67" H
Net Wt.: 88 lbs. (39.9 kg)
Shipping Wt.: 99 lbs.

Polypropylene or Kynar® (top right)
Dimensions: 18.63" W × 32.32" H
Net Wt.: 84 lbs. (38.1 kg)
Shipping Wt.: 108 lbs.

Cast Iron or Stainless Steel (left)
Dimensions: 17.72" W × 30.55" H
Net Wt.: Cast Iron –159 lbs. (72.1 kg)
SS –162 lbs. (73.5 kg)
Shipping Wt.: Cast Iron –168 lbs.
SS –173 lbs.

Note: ANSI Flange available for Cast Iron and Stainless Steel

Model Number Nomenclature

NDP-50 B x x ___

Series:
NDP-50 Pump

Valve Type:
B = Ball

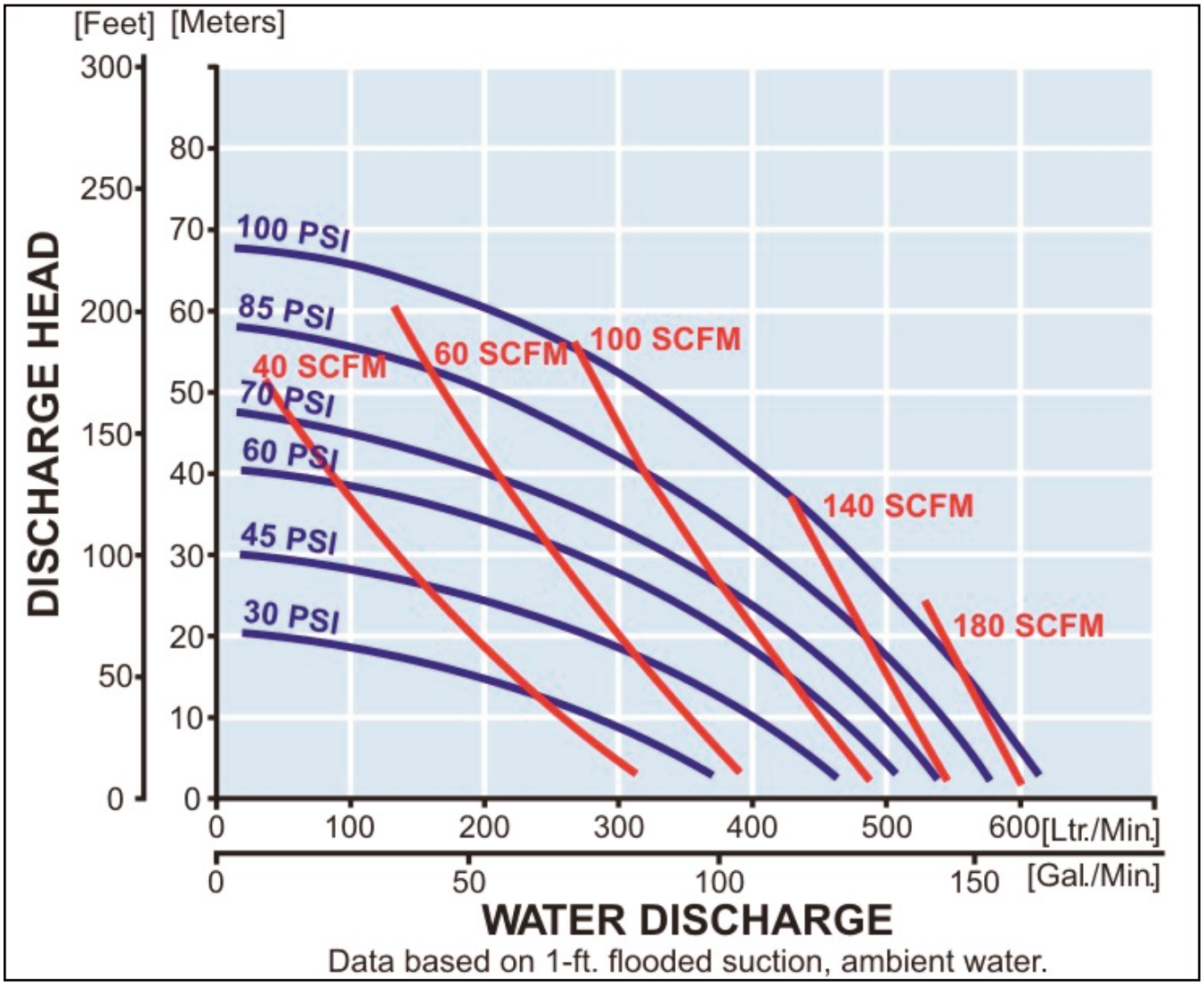
Body Material:
P = Polypropylene
A = Aluminum
S = Stainless Steel
F = Cast Iron
V = Kynar®

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
E = Nordel™ (EPDM)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FKM)
H = Hytrel® (TPE)

Note: For NPT-fitted Stainless Steel, add "NPT" at end of model number nomenclature.

NDP-50 Performance Curve – Rubber

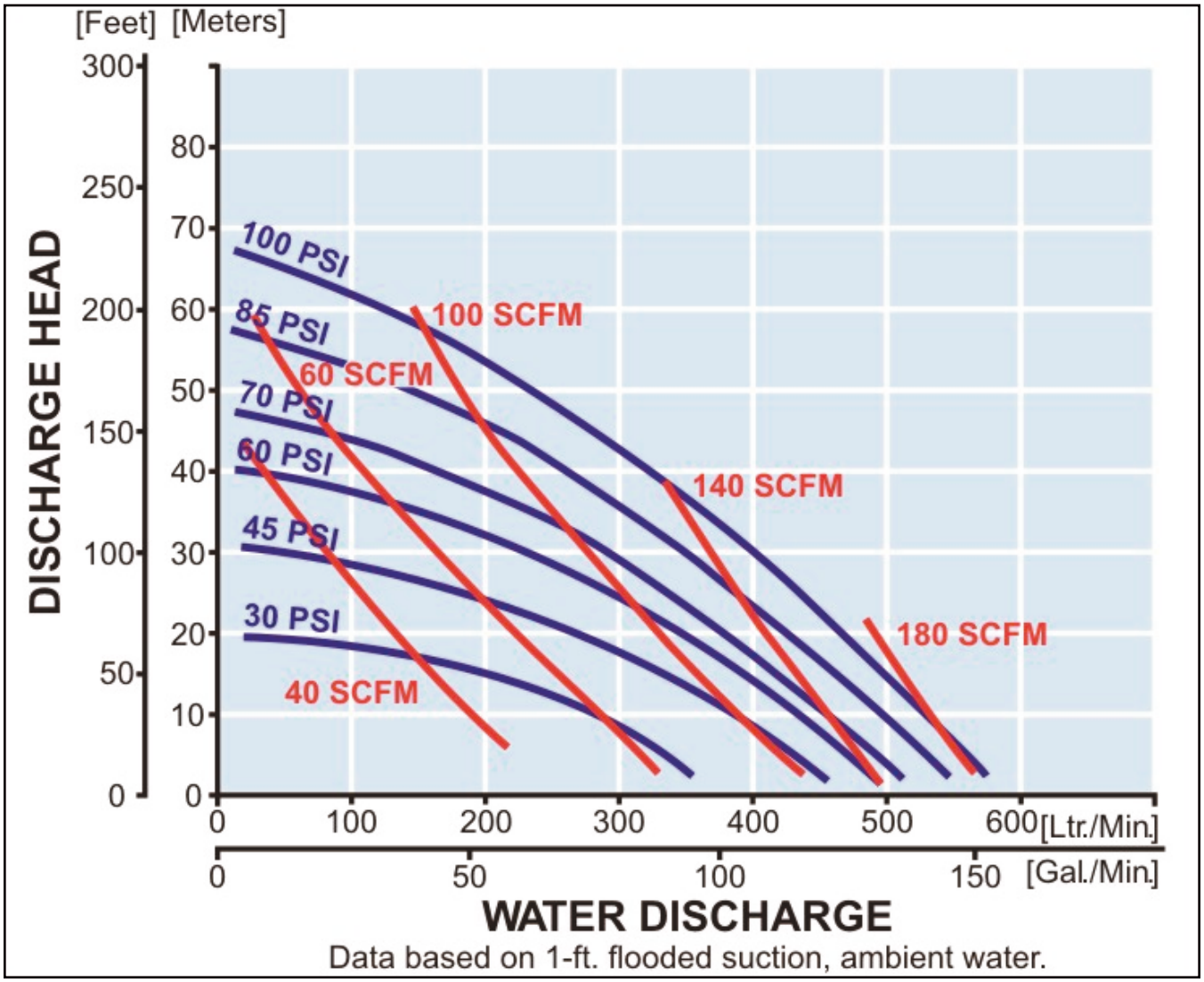
Rubber Diaphragm Performance Curve



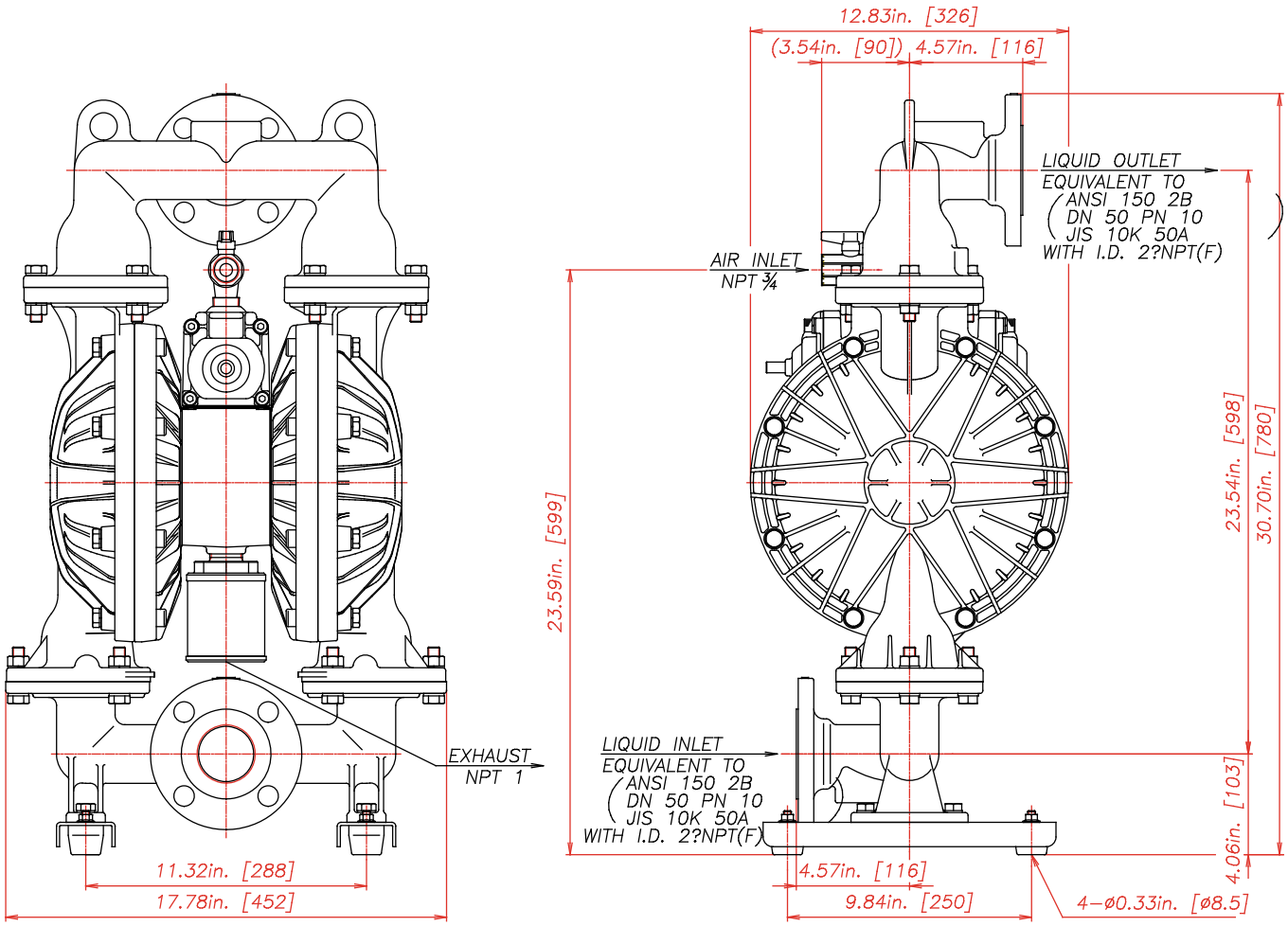
To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

NDP-50 Performance Curve – PTFE

PTFE Diaphragm Performance Curve



To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.



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THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

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DRAWING NUMBER: NDP-50BA

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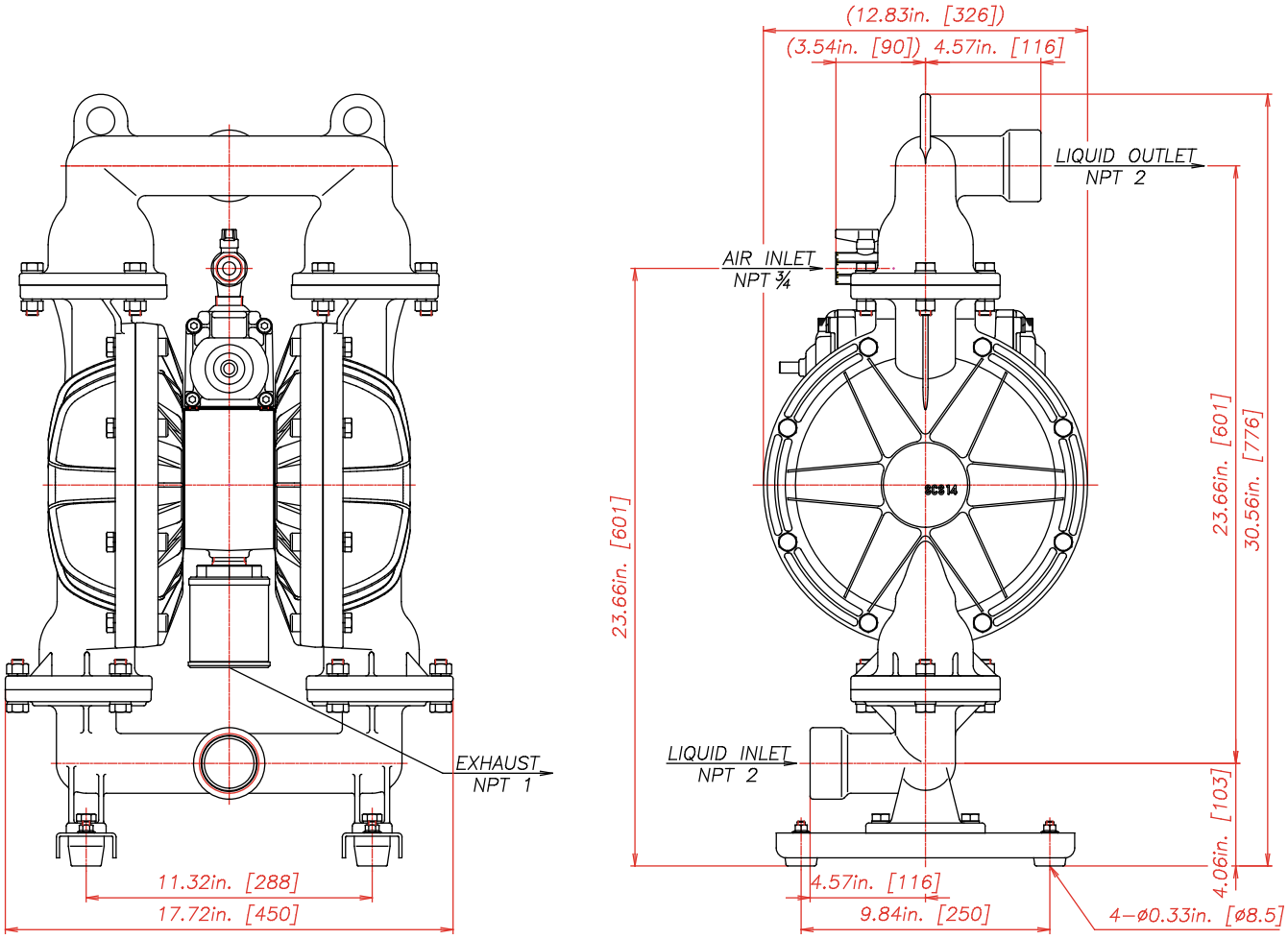

REV	DATE	DESCRIPTION	APPR'D

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DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 01/09/12 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP-50BS NPT

REV 1

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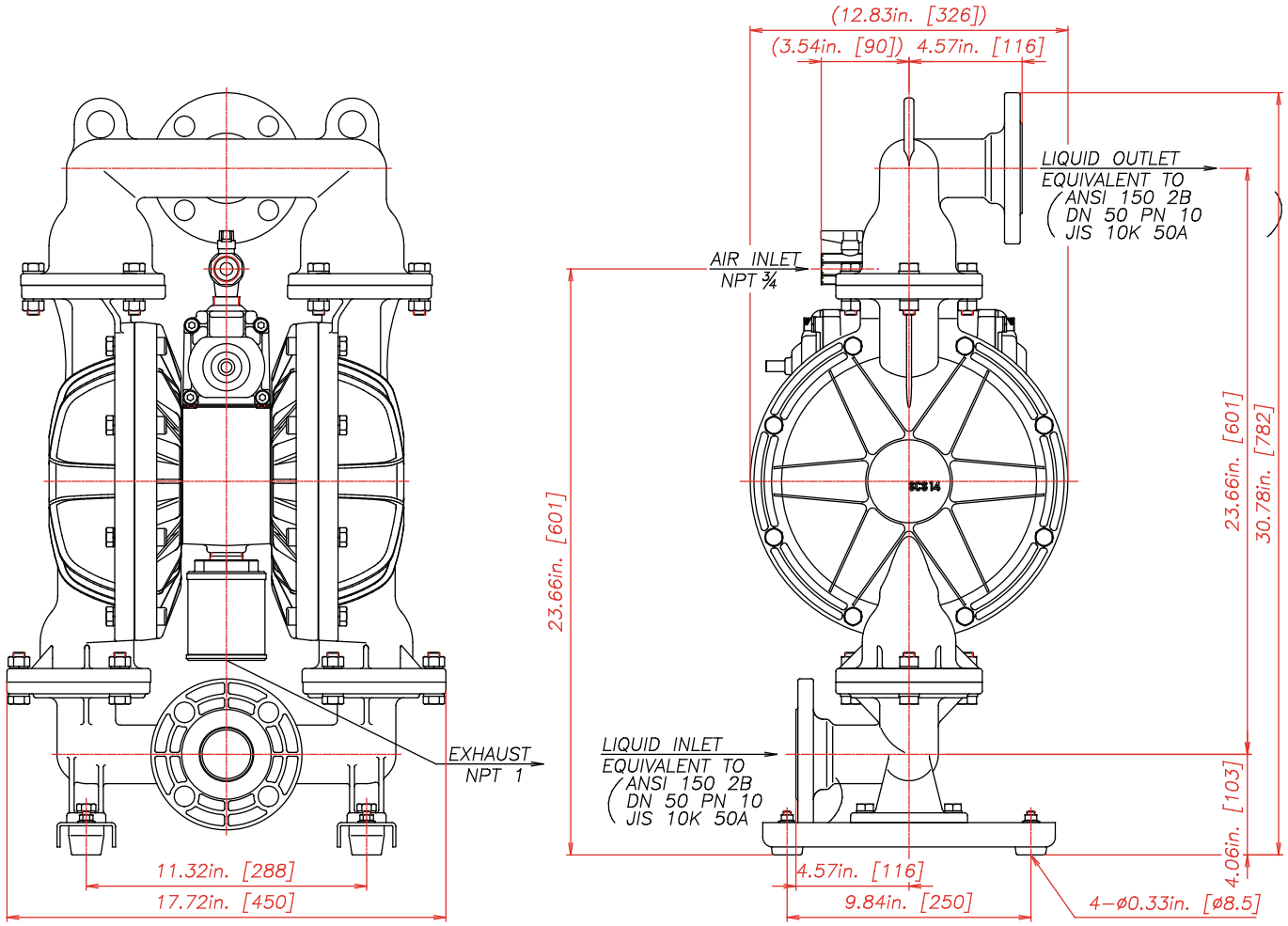

REV	DATE	DESCRIPTION	APPR'D

THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 01/09/12 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP-50BS FLANGE

REV 1

YAMADA AMERICA, INC.

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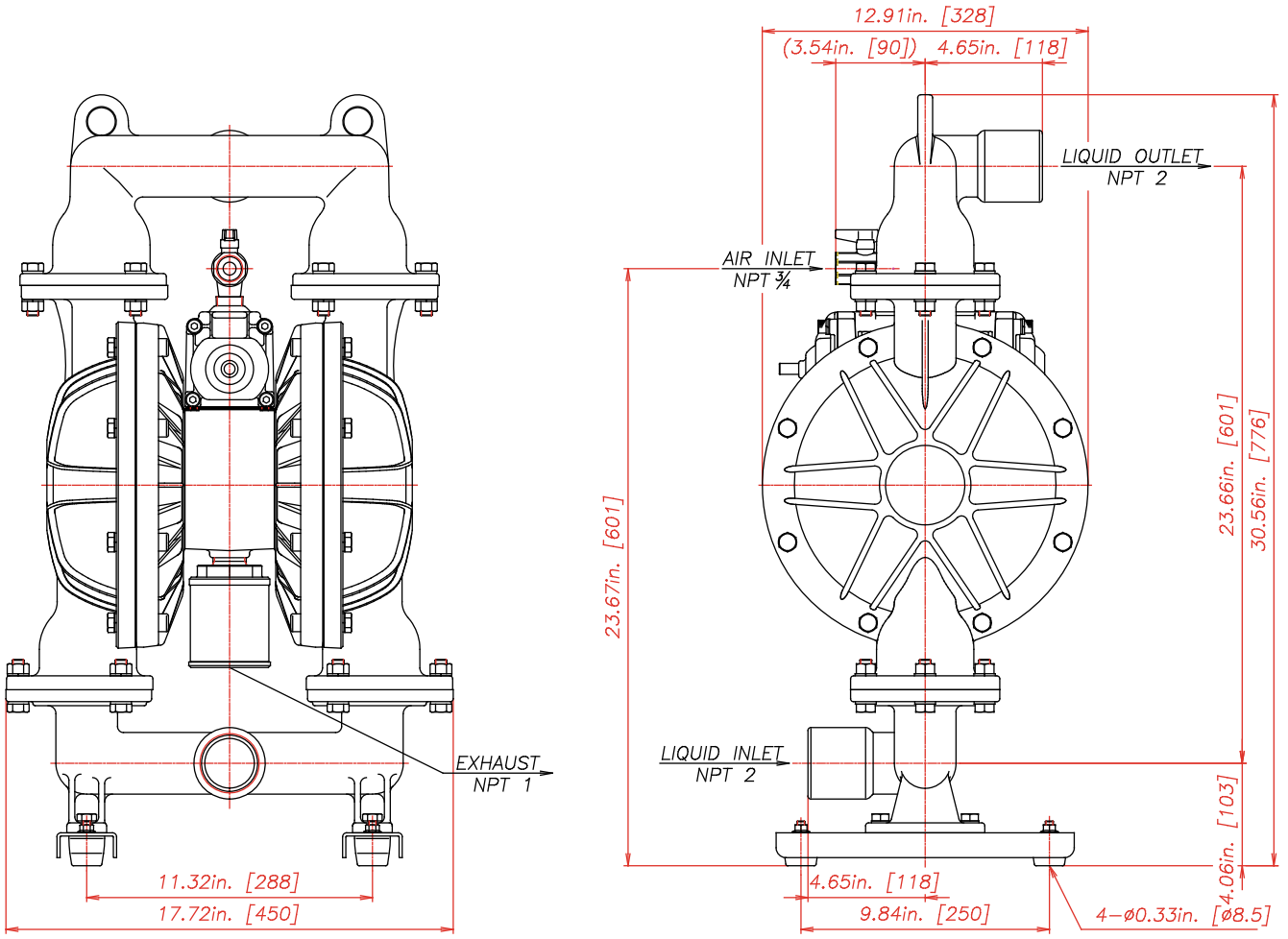

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THE DWG.OF:

DIAPHRAGM PUMP ASSEMBLY

SCALE 1 : 1 DRAWN BY YJI

DATE 01/09/12 APPROVED BY S.K.

THIRD ANG.PROJ.

DRAWING NUMBER: NDP–50BF

REV 1

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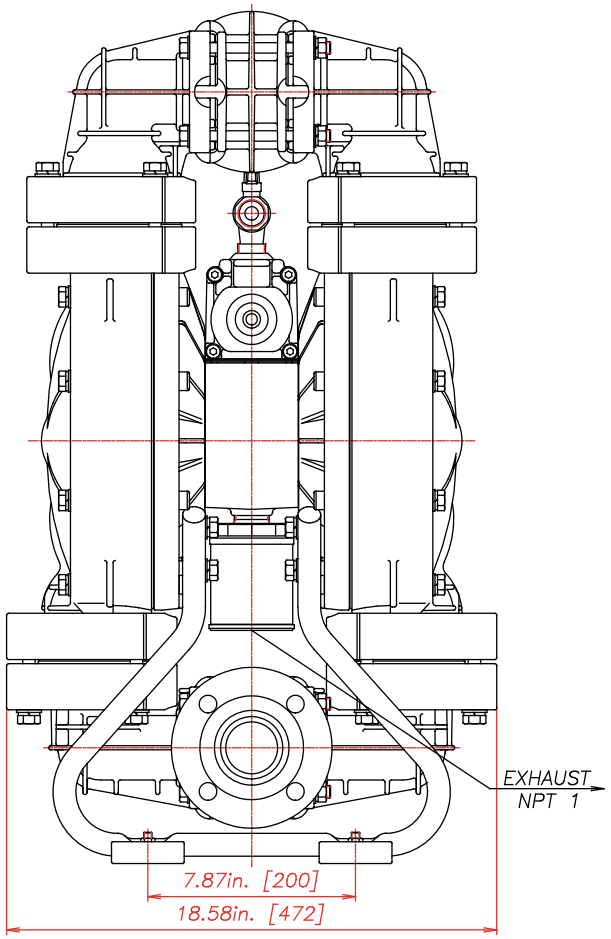

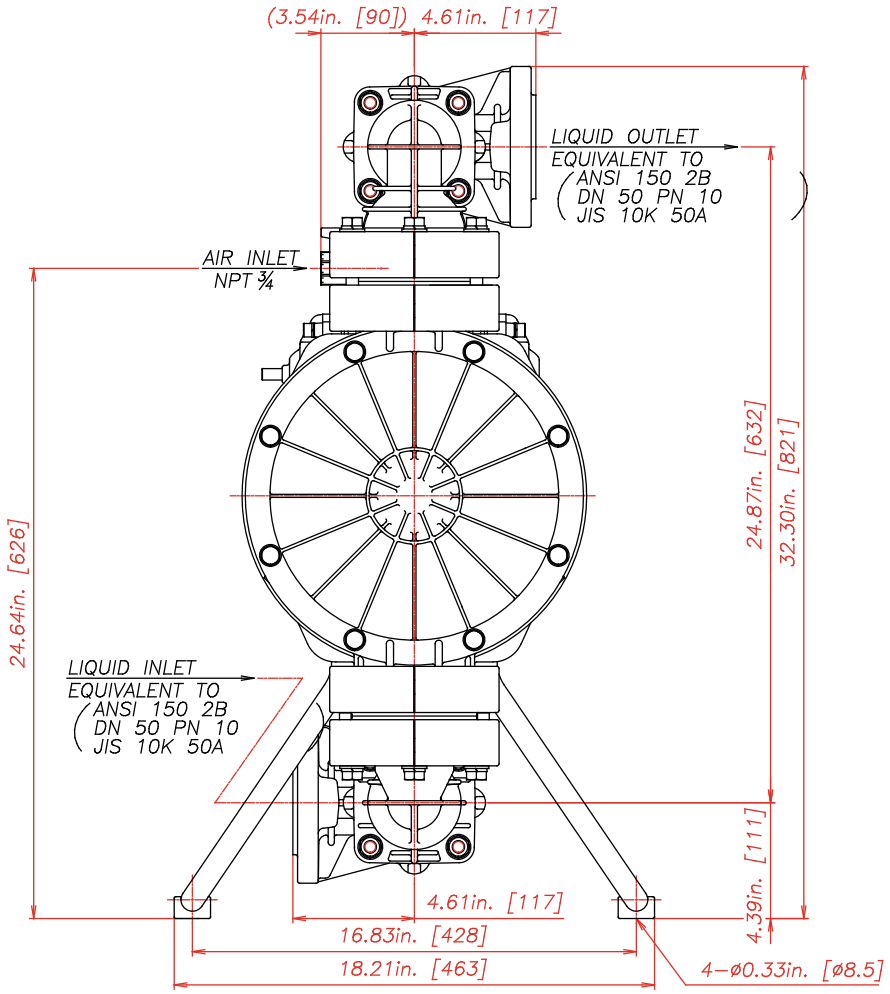

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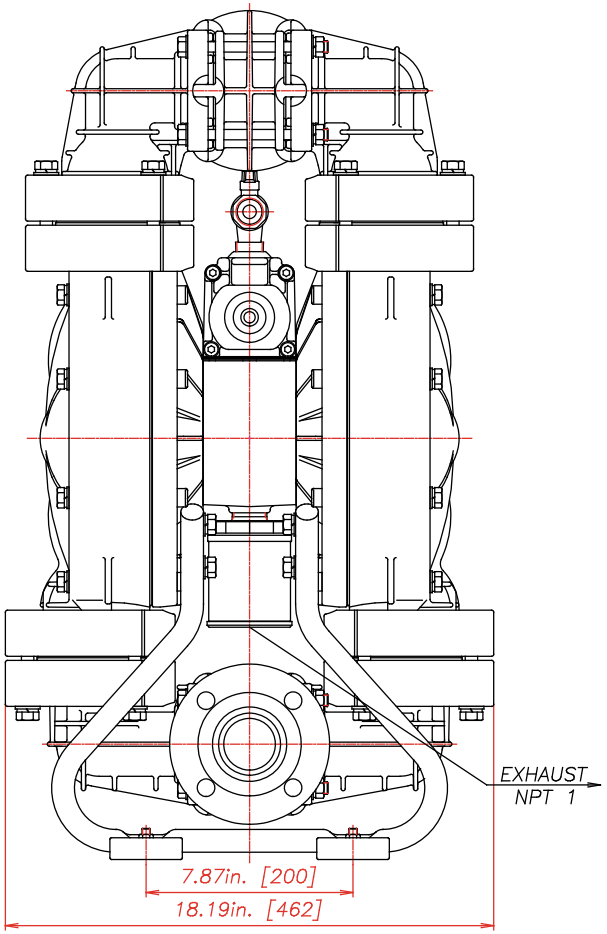

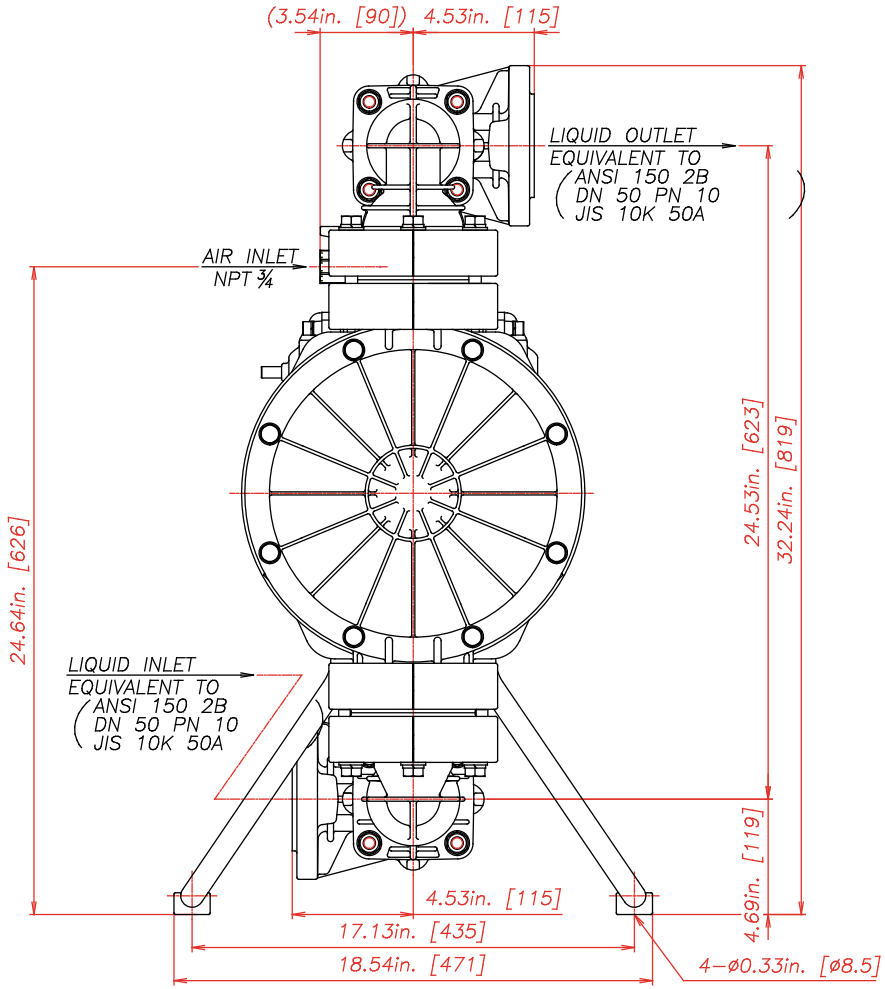

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Due to Yamada's continued commitment to product improvement, specifications may change without notice.

NDP-80 Specifications

Port Dimensions	(215 GPM Max.)
Intake & discharge connection:	
Polypropylene (PPG)	3" ANSI B16.5 #150
Aluminum (ADC-12)	3" ANSI B16.5 #150 (with tapped 3" Female NPT)
Stainless Steel (316)	3" ANSI B16.5 #150 or 3" Female NPT
Cast Iron	3" Female NPT
Air inlet (incl. ball valve):	3/4" Female NPT
Air exhaust (incl. silencer):	1" Female NPT

Maximum Liquid Temperature*

Diaphragm Material	*Temperature*
Buna N	180°F (82°C)
Neoprene	180°F (82°C)
Santoprene® (TPO)	180°F (82°C)
EPDM	212°F (100°C)
PTFE	212°F (100°C)
Hytrel® (TPEE)	248°F (120°C)
Viton® fluoroelastomer	248°F (120°C)

*The maximum liquid temperature for metal pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 180°F (82°C) regardless of diaphragm material.

Air Supply Pressure (All Models)
20 – 100 PSI (1.4 – 7 kfg / cm)

Discharge Volume Per Cycle
Rubber diaphragm: 2.26 gallons (8.57 liters)
PTFE diaphragm: 1.0 gallons (3.8 liters)

Maximum Cycles Per Minute
Rubber diaphragm: 95
PTFE diaphragm: 160

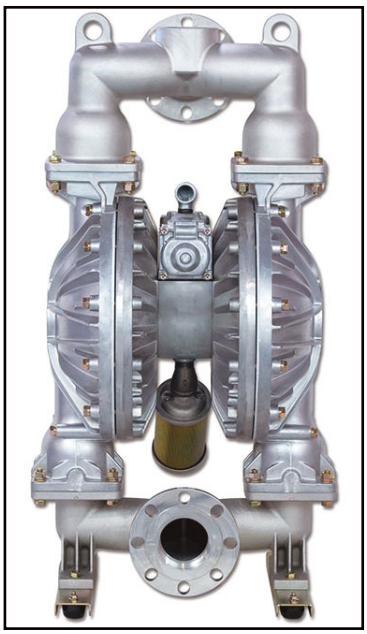
Maximum Size Solid
13/32" (10 mm)

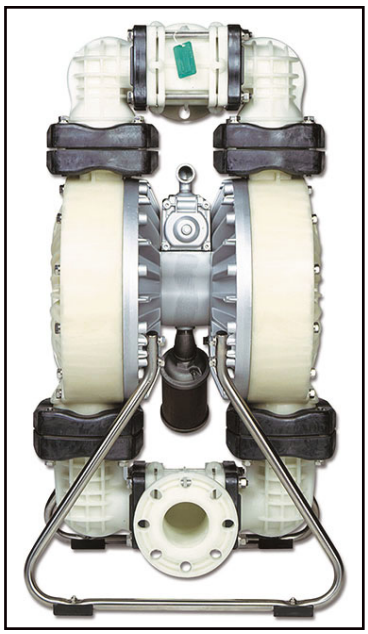
Maximum Dry Suction Lift
Rubber-fitted pump capability: 19-feet

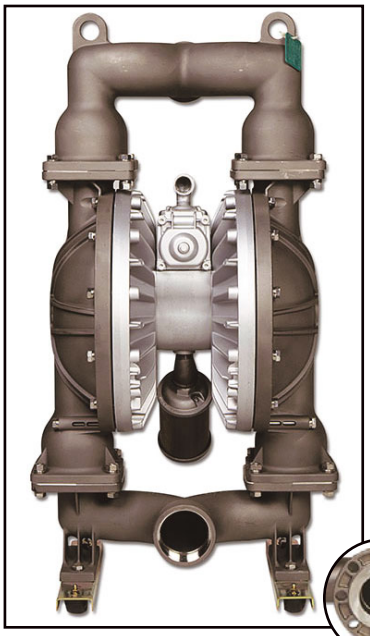
Air Motor
Aluminum Air Motor–Standard
Optional coating: PTFE grey coated (XP)

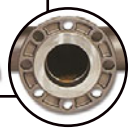
Notes: Hytrel® fitted pumps include Buna?N wetted o-rings. Santoprene® fitted pumps include EPDM wetted o-rings.

AutoCAD® drawings are available on CD ROM or at yamadapump.com









Aluminum (top left)
Dimensions: 20.43" W × 40.75" H
Net Wt.: 151 lbs. (68.5 kg)
Shipping Wt.: 165 lbs.

Polypropylene (top right)
Dimensions: 22.83" W × 41.10" H
Net Wt.: 162 lbs. (73.5 kg)
Shipping Wt.: 177 lbs.

Cast Iron or Stainless Steel (left)
Dimensions: 20.54" W × 38.74" H
Net Wt.: Cast Iron – 271 lbs. (122.9 kg)
SS – 244 lbs. (110.7 kg)
Shipping Wt.: Cast Iron – 277 lbs.
SS – 263 lbs.

Note: ANSI Flange available for Stainless Steel

Model Number Nomenclature

NDP-80 B x x ___

Series:
NDP-80 Pump

Valve Type:
B = Ball

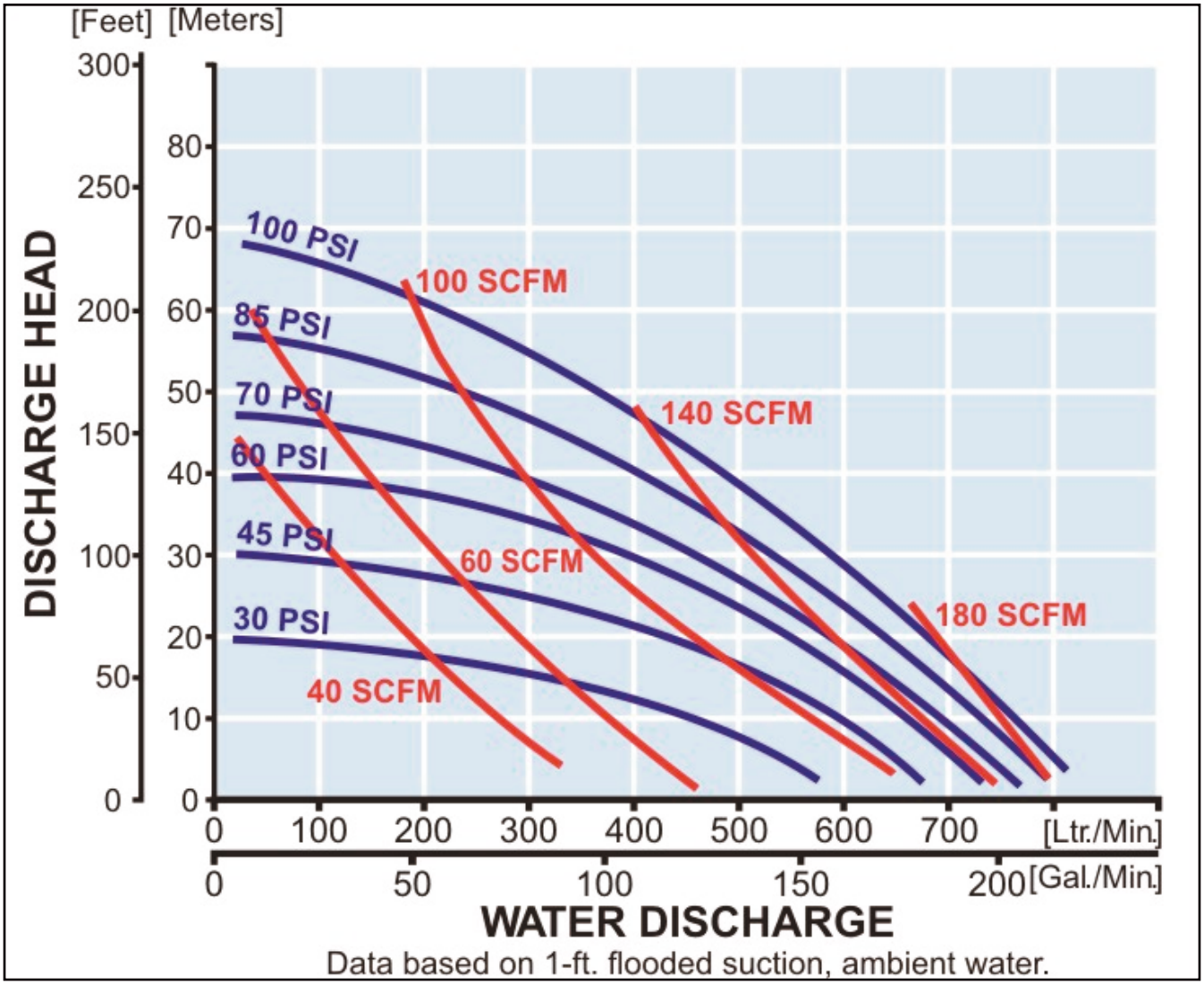
Body Material:
P = Polypropylene
A = Aluminum
S = Stainless Steel
F = Cast Iron

Diaphragm Material:
C = Neoprene (CR)
N = Buna N (NBR)
E = Nordel™ (EPDM)
S = Santoprene® (TPO)
T = PTFE
V = Viton® (FKM)
H = Hytrel® (TPE)

Note: For NPT-fitted Stainless Steel, add "NPT" at end of model number nomenclature.

NDP-80 Performance Curve – Rubber

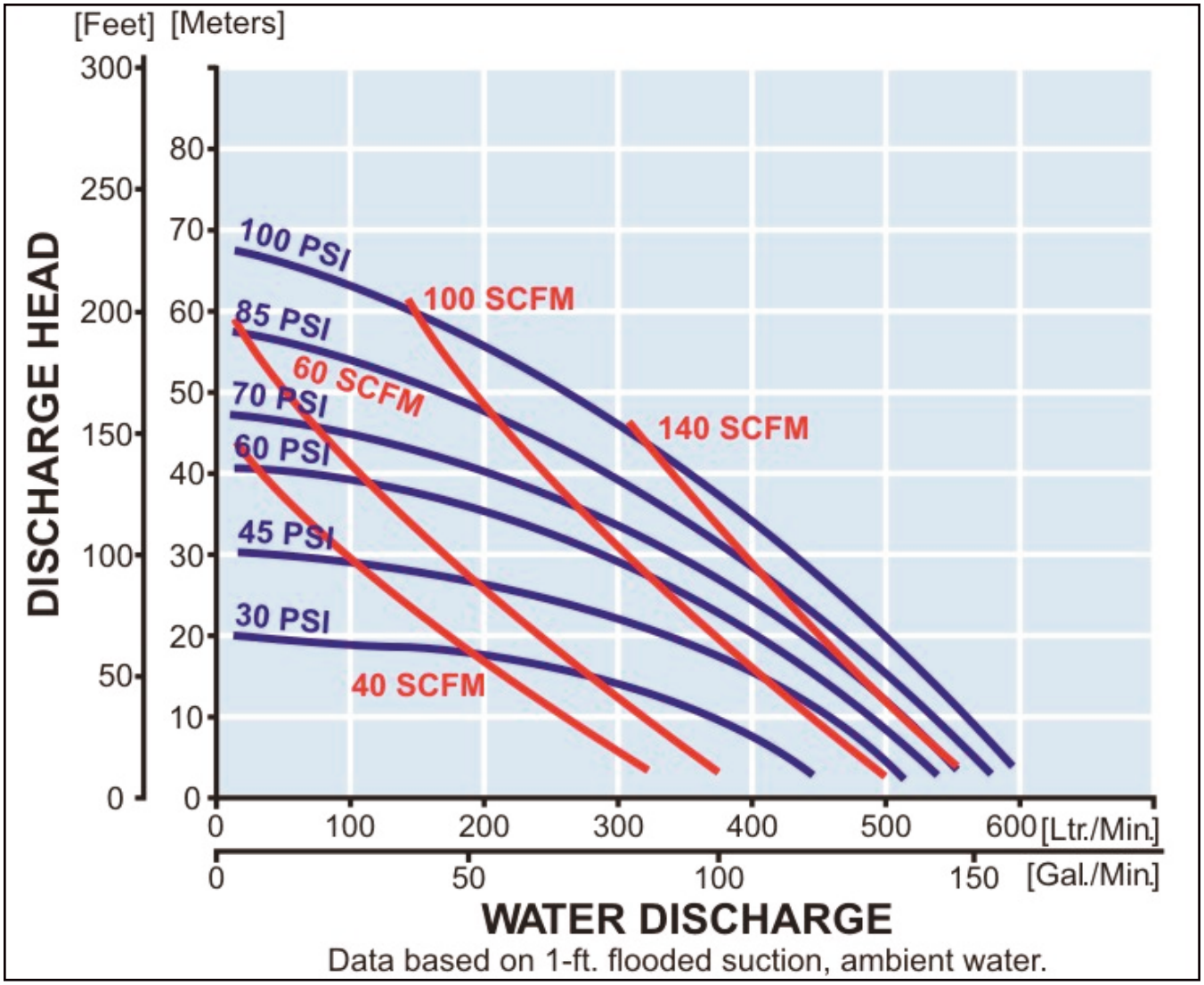
Rubber Diaphragm Performance Curve



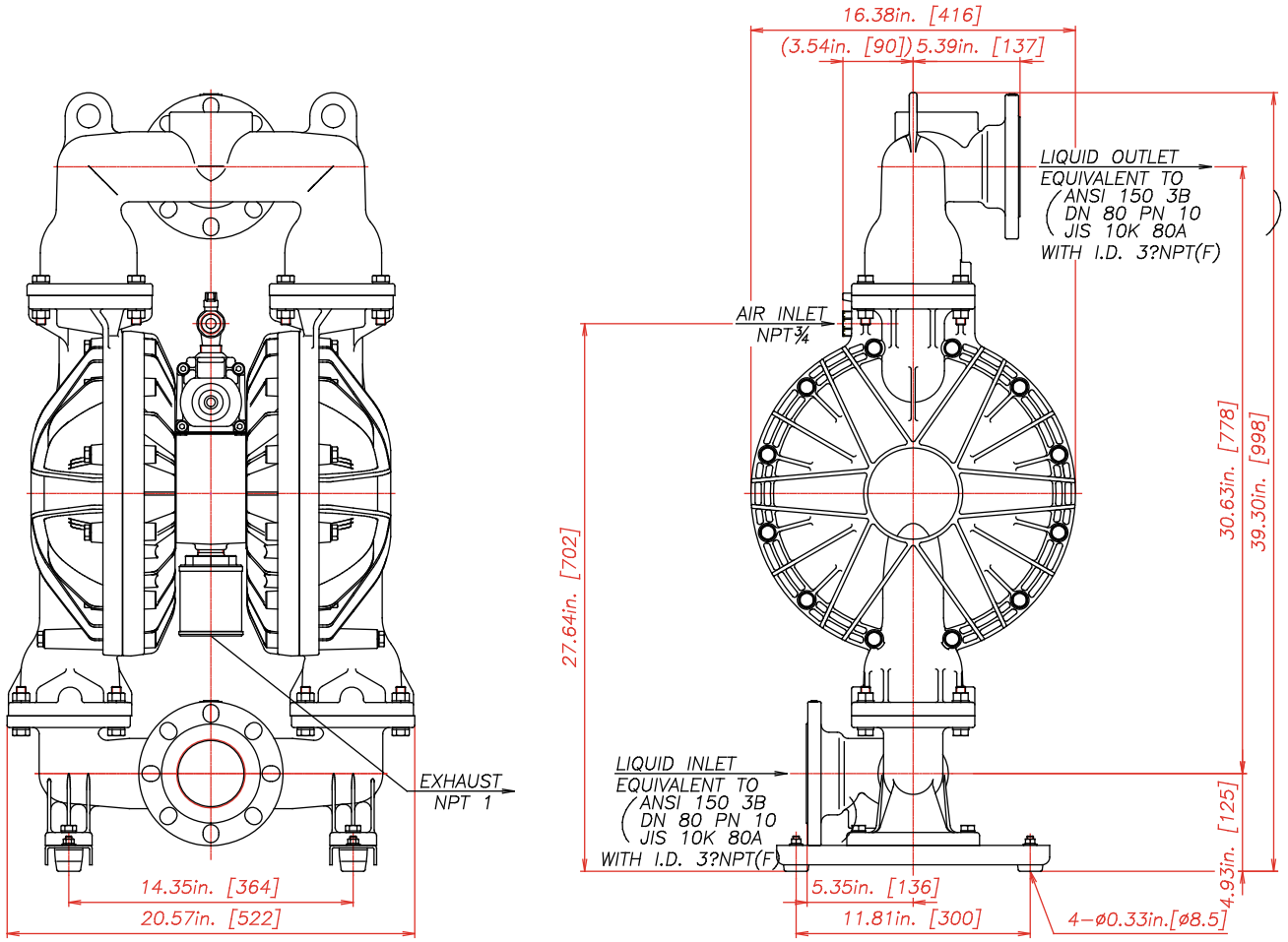
To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

NDP-80 Performance Curve – PTFE

PTFE Diaphragm Performance Curve



To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.



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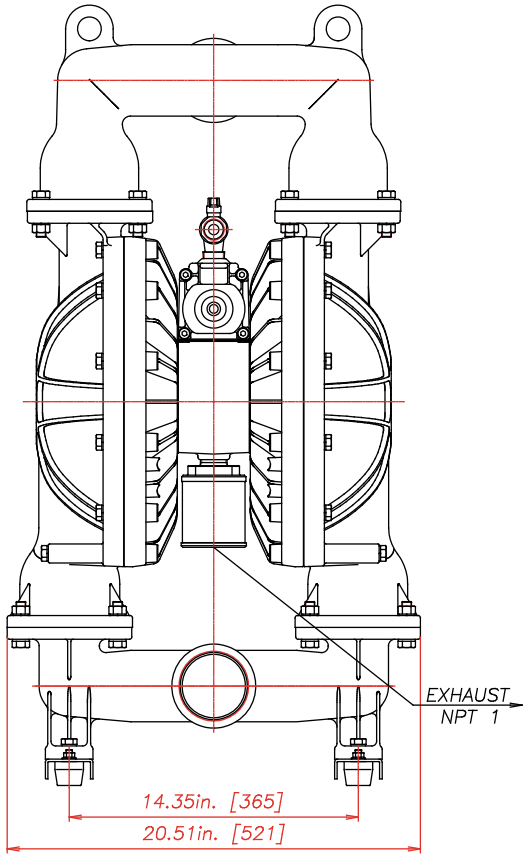

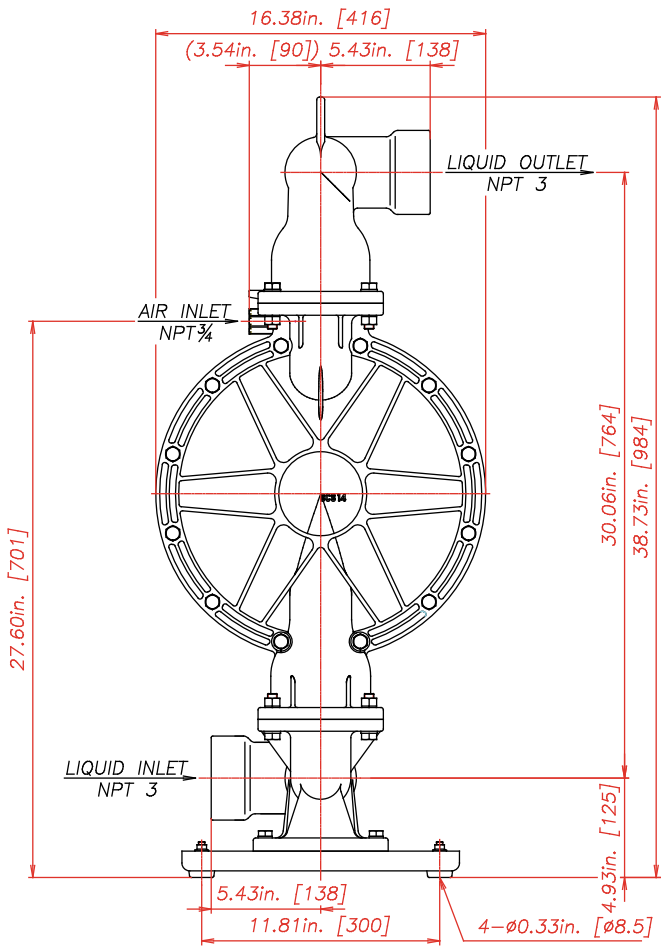

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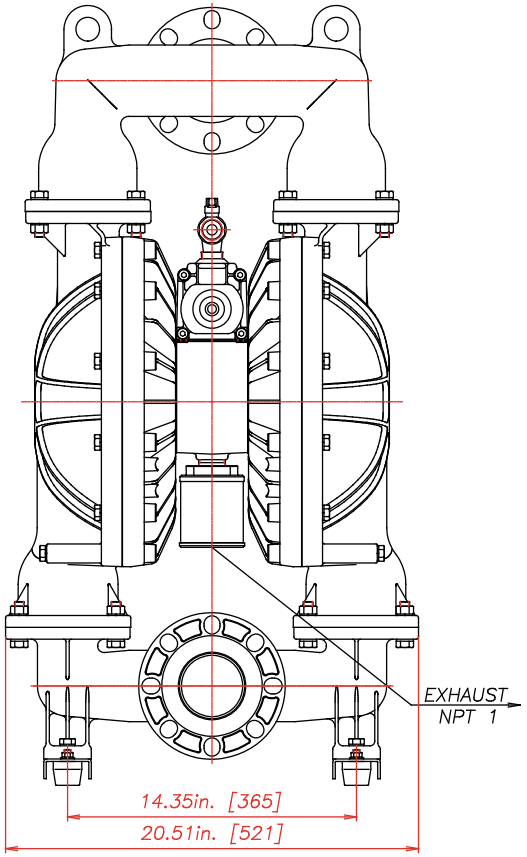

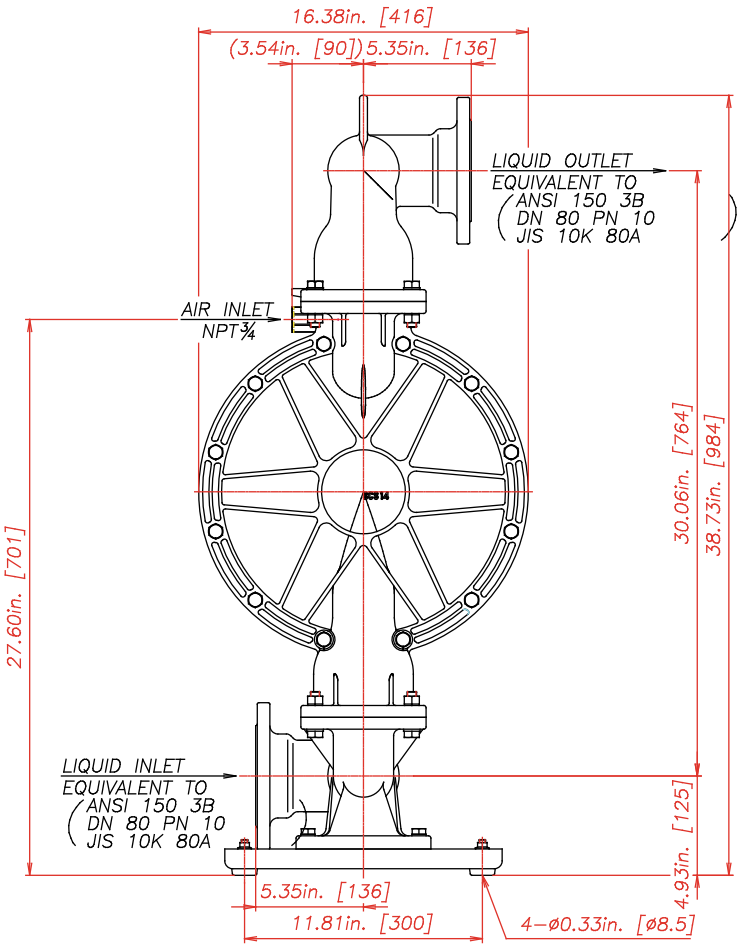

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DRAWING NUMBER: NDP-80BS FLANGE

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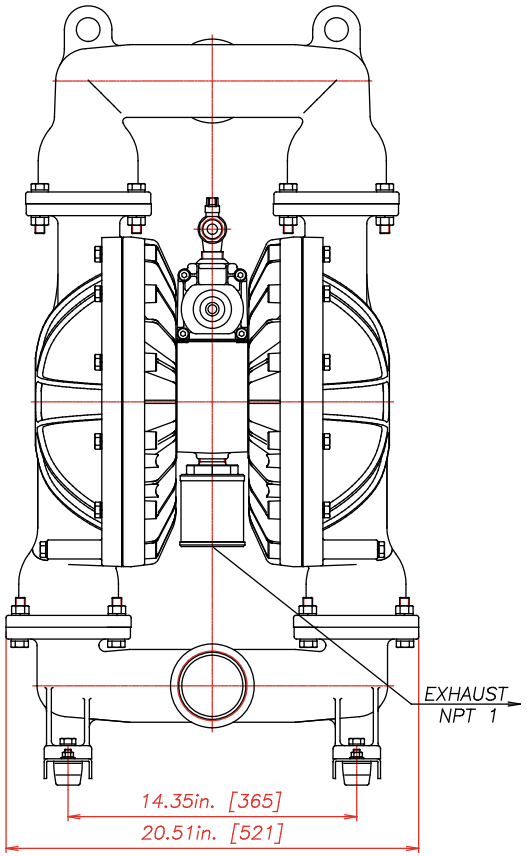

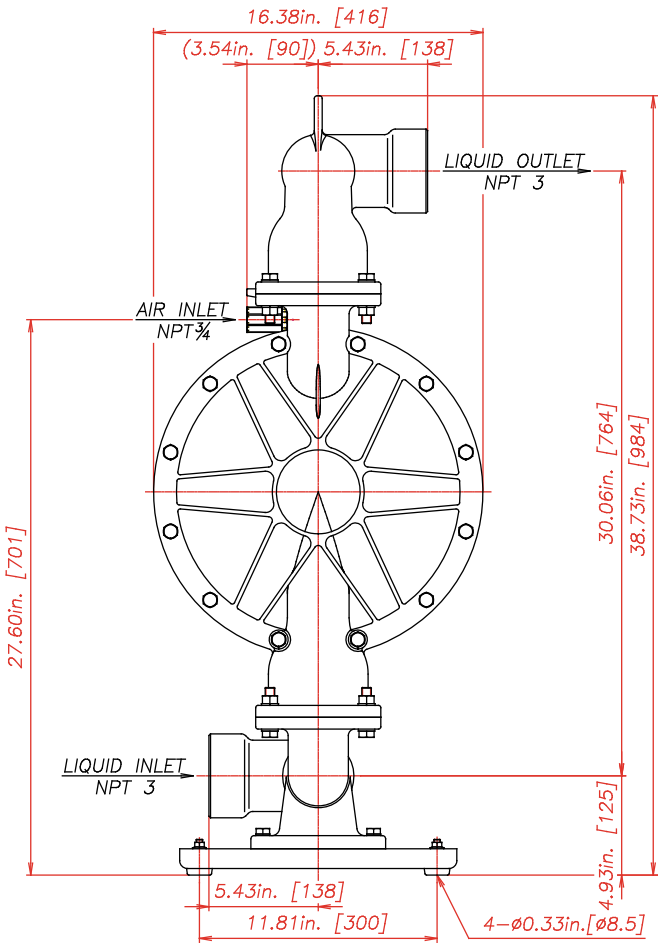

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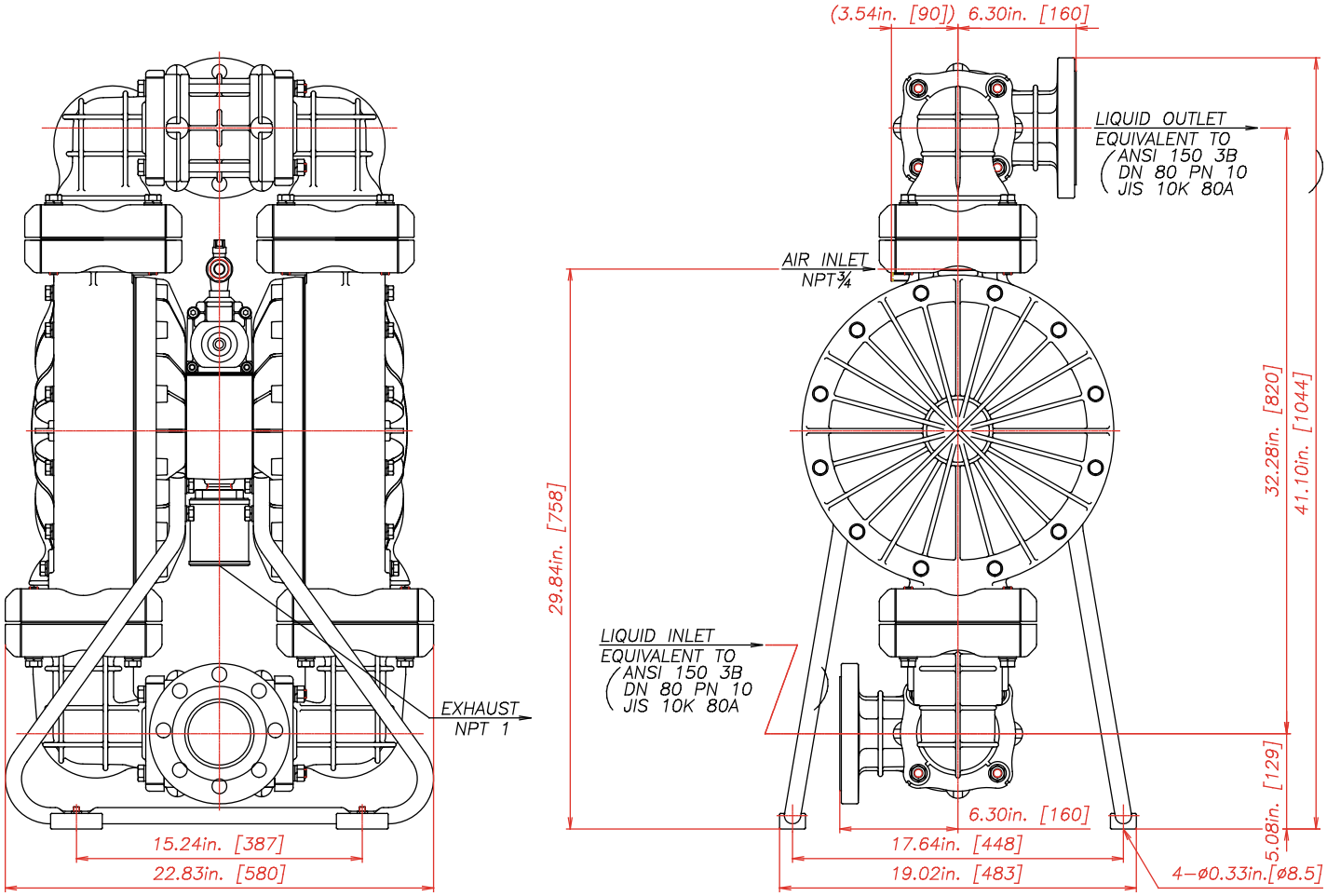

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