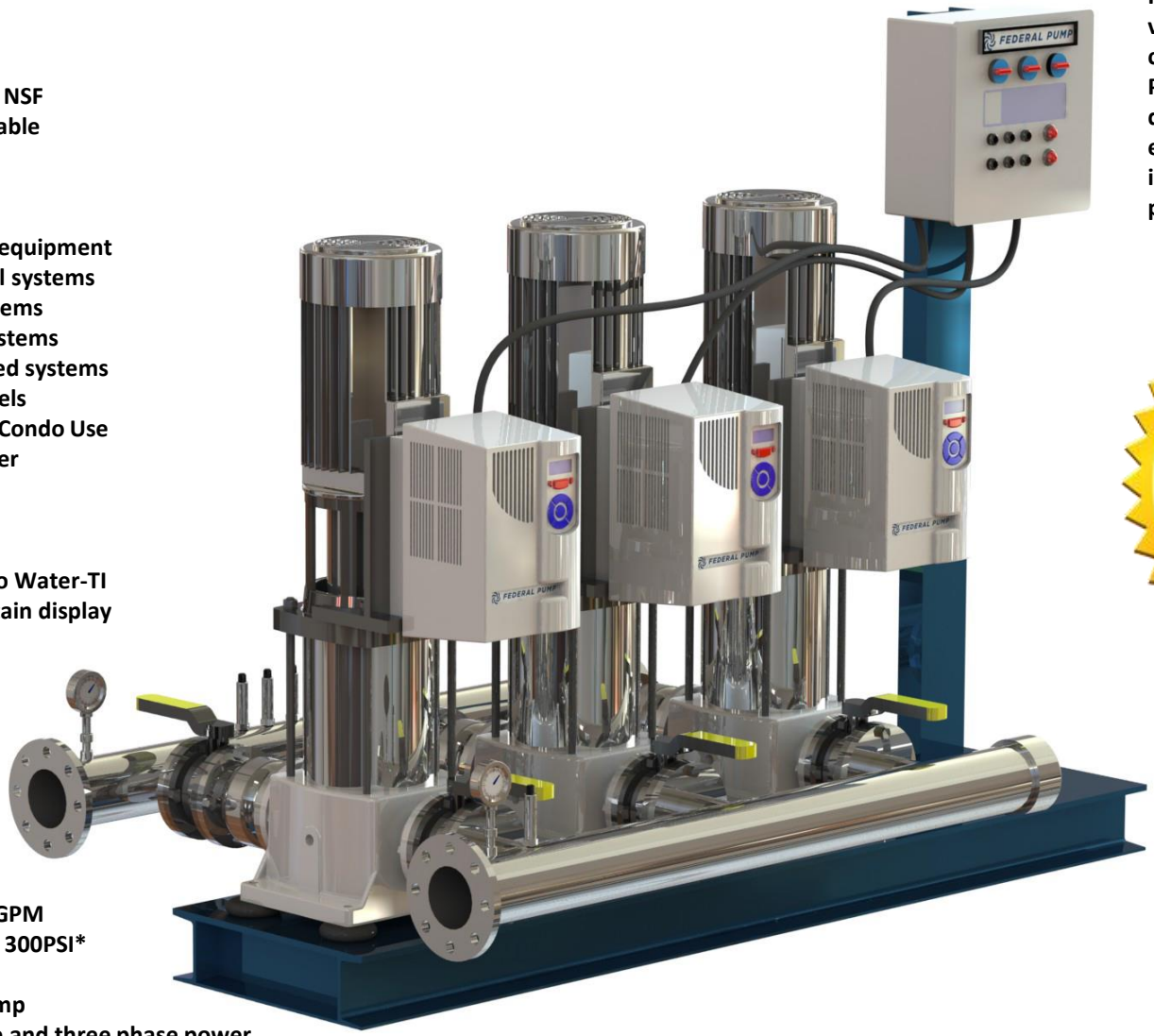
FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Federal Pump VSPV Triplex variable speed booster system combines over 87 years of Federal Pump product reliability with new designs that reduce energy costs, extend product life and provide innovative solutions where water pressure challenges exist.

Meets SDWA and NSF standards for potable water use.

- Mechanical equipment
- Roof tank fill systems
- Booster systems
- Irrigation systems
- Chemical feed systems
- Marine vessels
- Apartment/Condo Use
- Cooling tower
- High Rise
- Hospital
- Universities
- Hotel/Casino Water-TI
- Water fountain display



EXTENDED 3 YEARS WARRANTY

Capacities to 900GPM
Pressure Boost to 300PSI*
Sizes 2 to 6”
HP to 50 each pump
Available in single and three phase power
*Higher pressure available-Consult local sales office

- Low Installed Costs
- Built-In-Reliability
- Energy Saver
- Quiet Operation
- Certified and Tested
- Backed by Federal Pump 87 year tradition
- Supported by USA Distribution Network
- Automatic Operation 24/7
- Three year extended warranty**

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Vertical multistage stainless steel pumps energy efficient design with working pressures to 475 PSI.

Energy efficient vertical motors coupled to stainless steel liquid end pump shaft.

Discharge stainless steel isolating valves installed on each pump working pressures to 400PSI.

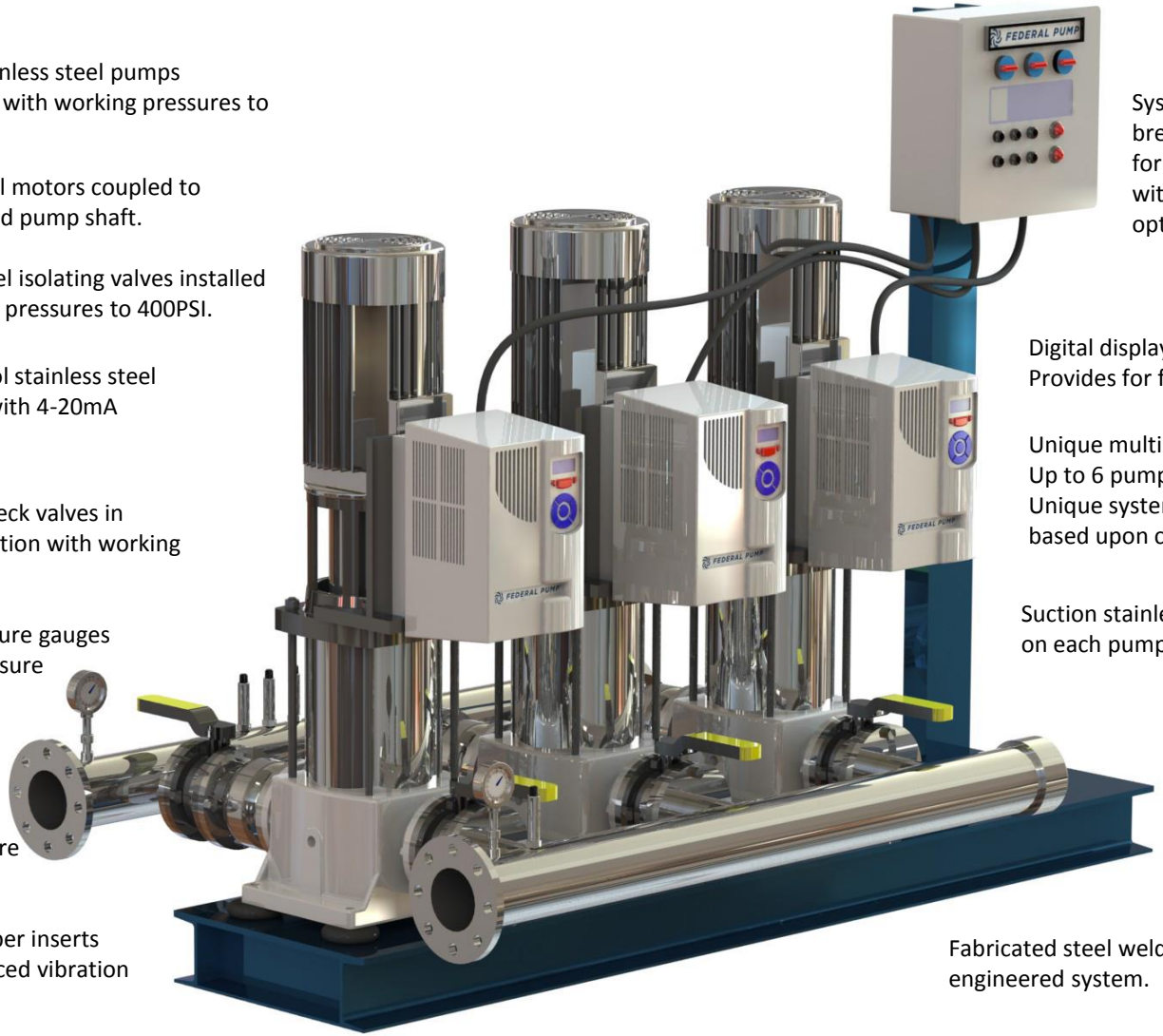
Individual pump control stainless steel pressure transducers with 4-20mA control wiring.

Spring loaded silent check valves in stainless steel construction with working pressures to 400PSI.

System mounted pressure gauges to 400PSI working pressure

Flanged stainless steel manifold connections from 4”-6” rated for 400PSI working pressure

Cushion mounted rubber inserts below pumps for reduced vibration



System mounted circuit breaker central panel for central system controls with system monitoring options.

Digital display of pump system performance. Provides for field adjustable set points.

Unique multiplexing variable speed drives
Up to 6 pumps controlled and alternated.
Unique system drives interact and alternate based upon cycle times and system settings

Suction stainless steel isolating valves installed on each pump working pressures to 200PSI.

Fabricated steel welded base plate supporting engineered system.

Flow and pressure tested from 0-100% of system performance.

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

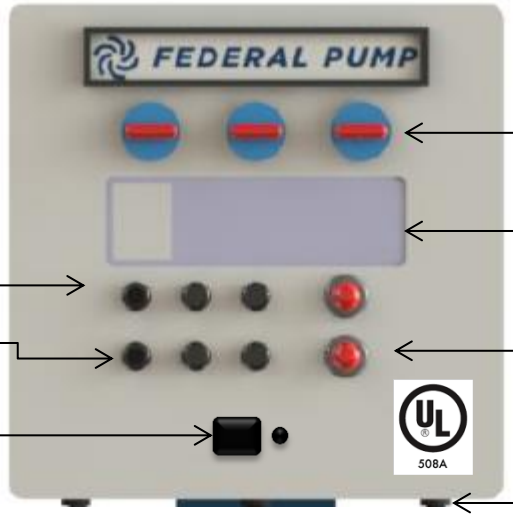
Standard construction includes all stainless steel components ensuring quality construction with long lasting corrosion resistant life exceeding SDWA (Safe Drinking Water Act) and NSF/ANSI Standard 61 requirements of maximum 0.25% lead content. **System has 0% lead content**

Note: For applications including distilled water, sea water or other fluids where 316 Stainless Steel construction is preferred, consult with factory regarding specific gravity of fluid, temperature and applications as these may effect the selection of the mechanical seals and may alter the HP selection due to the specific gravity of the fluid pumped.

Item	Material-Standard
Pump Suction Case	Stainless Steel 316
Impeller	Stainless Steel 316
Shaft	Stainless Steel 316
Outer Casing	Stainless Steel 316
Suction Isolation Valve	Stainless Steel 316
Suction Piping	Stainless Steel 304
Discharge Isolation valve	Stainless Steel 316
Discharge Check Valve-Spring Loaded	Stainless Steel 304
Discharge piping	Stainless Steel 304
Transducers	Stainless Steel 316
Tank Isolation valve	Stainless Steel 316
Cushion Tank Liner	Polypropylene
Base Plate	Channel Steel

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System



Individual Pump/Drive Circuit Breakers

H-O-A Selector Switch

Monitor Screen: Digital Read Out
- System Pressure
- System Flow
- Alarm Condition

Pump Run Lights

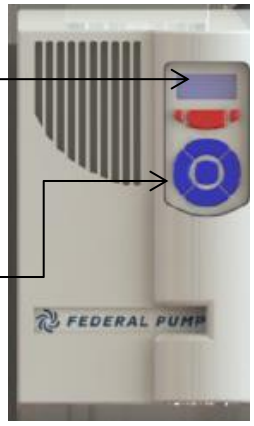
Alarm Lights
- Low Suction Pressure
- Pump/Drive failure
- Other

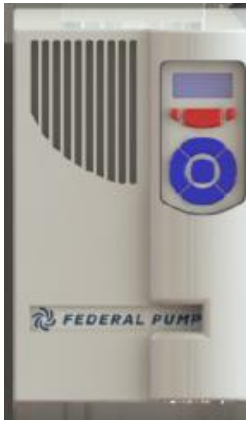
Common alarm horn with silence push button

Option for Building Management System connections

Individual back-up alarm conditions for each variable speed drive.

Drive function controlled at each pump with monitoring function at central controller.





System Control and Monitor :

Federal Pump VSPV system control monitors system performance and provides central power connection. Control monitors and displays critical system functions and provides visual and audible alarm conditions. Control system also includes back-up alarm status for each pump and variable speed drive at drive location.

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

System Operation

- Pump Genius software monitors system pressure or flow and references low / high set point and run time requirements. The lead and lag pumps are cycled on and off based on motor run times.
  - – Starting motors are selected based on run time - motor with least amount of run time
  - – Stoping motors are selected based on run time - motor with highest amount of run time
  - – All pumps are dynamically alternated based on run times and system set point requirements
  - – System faults are monitored and alarmed
  - – Motor faults are monitored and alarmed
  - – Drive faults are monitored and alarmed
  - – Up to 6 pumps dynamically alternated and controlled

Performance Features

- 2-75 HP @ 230V / 2-600HP @ 480V
- Overload capacity: nominal 110% for 60sec. (150% peak)
- Starting torque: 100% at 3 Hz
- Motor preheat function
- Adjustable accel/decel: 0.1 to 6000 sec.
- Controlled speed range: 40:1
- Critical frequency rejection: 3 selectable, adjustable bands
- Torque-limiting: 30-180%
- Energy Saving control
- Torque boost: full range, auto
- Power loss ride-thru: 2 sec
- Auto restart after power loss or resettable fault, selectable, programmable
- Feedback signal loss detection
- Serial communications loss detection
- "Up / Down" floating point control capability (PI)
- Stationary motor auto-tuning
- Pump Sleep function
- Run-permissive input

Pump Control Features

- Operator Keypad with intuitive pump language
- Hand-Off-Auto
- Programmable Pump Process Set Point
- Pump Start Level & Start Time
- Sleep Protection
- Simplex, Duplex, Triplex, and Multiplex Control
- Automatic System Restart
- No Flow Detection

Pump Control Features (cont)

- Low and High Feedback set points
- Pre-Charge Low Level Control
- Thrust Bearing Control
- Automatic System Stabilization
- Motor Condensation Pre-Heat Function

Protective Features

- Current-limited stall prevention
- Heat sink over-temperature, speed fold-back
- Bi-directional start into rotating motor
- Current-limiting DC bus fuse
- Optically-isolated controls
- Short circuit protection: Phase-phase and phase-neutral
- Ground fault protection
- Short circuit withstand rating: 100K RMS
- Electronic motor overload: UL
- Current limit
- Fault display: last 10 faults
- Fault circuit: OC, OV, OT
- Over torque and under torque protection

Pump Protective Features

- Dry Well
- Air in System
- Blocked Impeller
- Pump over Cycling
- No Flow Protection
- Loss of Prime
- Transducer Loss
- Over Torque
- Anti-Cavitation

FEDERAL PUMP CORP

FEDERAL PUMP BOOSTER SYSTEM PRODUCT OFFERING

Selection and Sizing Booster Systems: Flow Rate

Total system design conditions can be determined by using the fixture flow unit values and conversion Tables shown below

Determine System Flow Rate (1)

Fixture Type	Public	Semi-Public	Private
Water Closet			
Flush Valve	10	8	6
Flush tank	5	4	3
Urinal			
Flush Valve, pedestal	10	8	0
Flush Valve, stall or wall	5	4	3
Flush tank	3	2	0
Bath Tub	4	3	2
Shower	4	3	2
Lavatory (sink)	2	1	1
Bathroom Group (Water closet plus lavatory plus Tub/Shower)			
With flush valve	0	0	8
With flush tank	0	0	6
Sink:			
Kitchen	4	3	2
General	3	2	0
Service	3	2	2
Lavatory	0	2	0
Bar	3	2	0
Dishwasher			
General	6	4	2
Pot and Pans	3	3	0
Garbage Disposal, sink	3	3	2
Washing machine	0	6	4
Laundry Tub	0	3	3
Drinking fountain	2	1	1
Ice Cube machine	1	1	1
Steam tables	1	1	0
Hose Connections, 3/4"	0	4	4
Fire Sprinkler	10	10	0

(1) Select Building type

Building Type

PUBLIC
Hospitals, hotels, factories, retail schools, etc.

SEMI-PUBLIC
Office buildings, clubs, motels

PRIVATE:
Apartment buildings, homes etc.

Note:
Fixture Flow Tables do not include air-conditioning, swimming pool, boiler make-up or other mechanical equipment requirements.
Actual GPM requirements for these demand factors should be added.

Fixture Flow Unit Conversion

FFU	GPM	FFU	GPM
100	40	2000	210
200	70	2500	240
300	80	3000	270
400	90	3500	320
500	100	4000	350
750	115	5000	410
1000	120	6000	450
1250	150	7000	520
1500	170	8000	590
1750	190	9000	620

The above is a guideline to be used in estimating the flow requirements for a pressure booster system. Where possible, consult with local licensed plumbing engineer to ensure all parameters of the building have been taken into consideration!

Sizing the Booster System

The below is a guideline to be used in estimating the pressure and flow requirements for a pressure booster system. Where possible, consult with local licensed plumbing engineer to ensure all parameters of the building have been taken into consideration!

Discharge Pressure requirements

Total system pressure requirements can be determined once the system flow conditions have been calculated using the below estimates

- Building height in feet (from pump to top remote fixture)
- Pressure requirement of remote fixture
- Friction loss through piping at peak flow
- Friction loss through specialty valves or fittings

- Minimum Suction Pressure (dynamic while flowing)

- Total Dynamic head (TDH) = System conditions – suction pressure

Example

12 story office building located in downtown NYC with 40 PSI minimum suction pressure with remote plumbing fixture requirement of 21 PSI on the 12th floor. Piping has been designed at 6" diameter riser with peak flow rate of 300 GPM. Building has 12' per floor and booster system is located 2 floors below ground:

• Building height : (12 stories + 2 below ground" X 12' =	144'
• Pressure at remote fixture: 21 PSI X 2.31 =	49'
• Friction loss thru piping: 300 GPM/6"pipe/144' length=	12'
• Friction loss through special water filter device=	15'
Total System: at peak demand	220'
Subtract minimum suction pressure: (40 psi X 2.31)	(92')
TDH (Total Dynamic Head)=	128'
Pump Pressure rating: 128'TDH/2.31 =	**55 PSI**

The above is a guideline to be used in estimating the pressure requirements for a pressure booster system. Where possible, consult with local licensed plumbing engineer to ensure all parameters of the building have been taken into consideration!

FEDERAL PUMP CORP

1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Selection Table

Select the model number based upon system flow and pressure requirements from the table below!

Refer to attached suggested specifications for system operation.

Model No: VSPV-10040-2-T

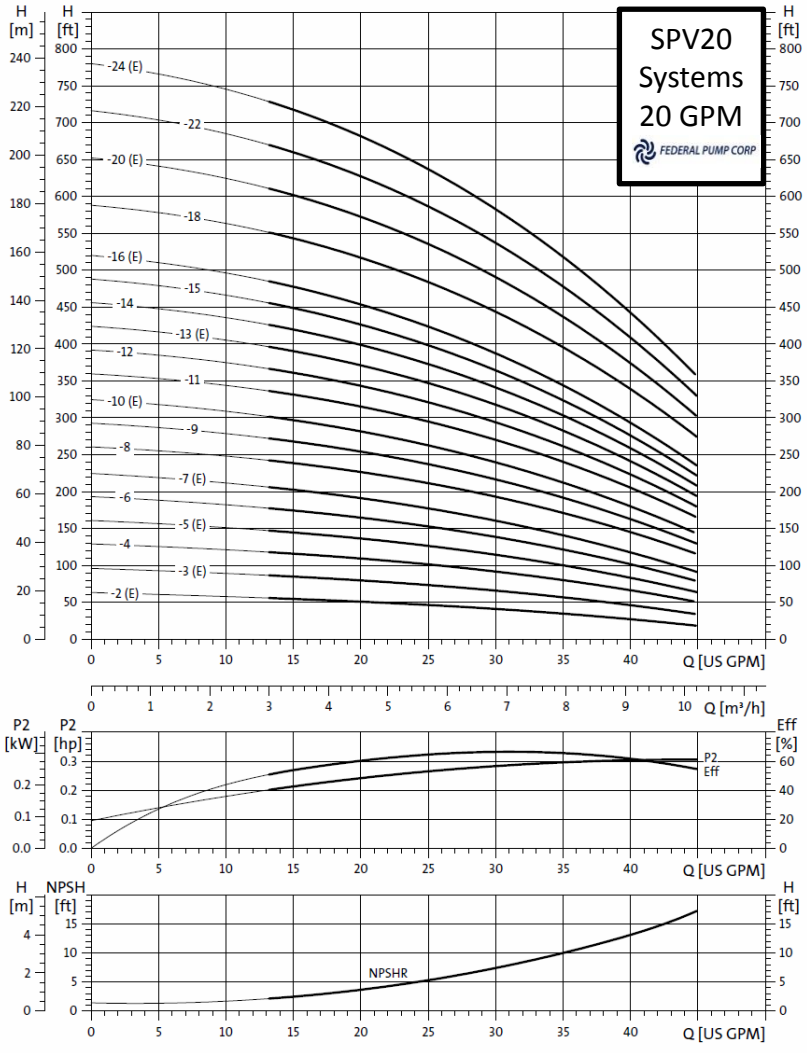
- Triplex
- 2=3600RPM
- Pressure: PSI
- Flow: GPM (each Pump)

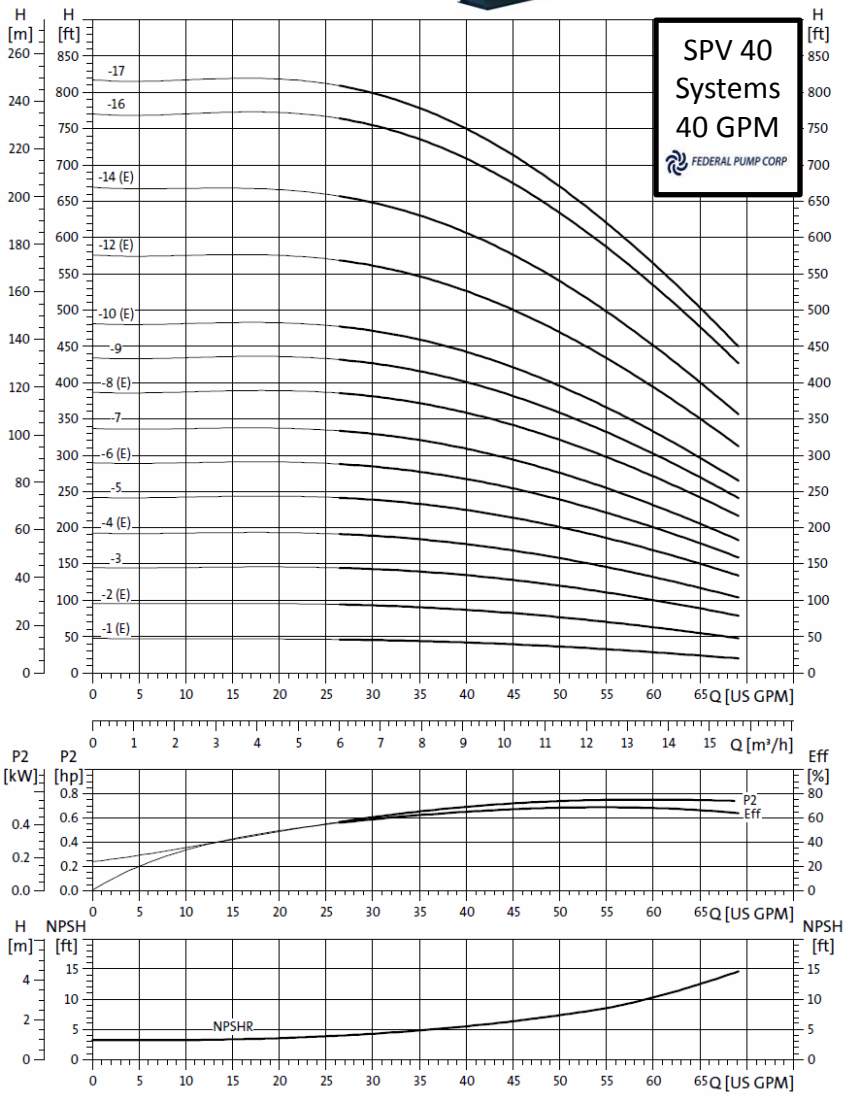
			Pump Flow Rate Required-Each Pump											
PSI	TDH	Model No	20 GPM	40 GPM	60 GPM	80 GPM	100 GPM	125 GPM	150 GPM	175 GPM	200 GPM	225 GPM	250 GPM	300 GPM
40	92	VSPV-	2040-2 1.5 HP	4040-2 1.5 HP	6040-2 5 HP	8040-2 5 HP	10040-2 5 HP	12540-2 7.5 HP	15040-2 7.5 HP	17540-2 7.5 HP	20040-2 7.5 HP	**22540-2 7.5 HP**	**25040-2 10 HP**	**30040-2 10 HP**
60	139	VSPV-	2060-2 1.5 HP	4060-2 3 HP	6060-2 5 HP	8060-2 5 HP	10060-2 7.5 HP	12560-2 7.5 HP	15060-2 7.5 HP	17560-2 15 HP	20060-2 15 HP	**22560-2 15 HP**	**25060-2 10 HP**	**30060-2 10 HP**
80	185	VSPV-	2080-2 3 HP	4080-2 3 HP	6080-2 7.5 HP	8080-2 7.5 HP	10080-2 7.5 HP	12580-2 10 HP	15080-2 10 HP	17580-2 15 HP	20080-2 15 HP	**22580-2 15 HP**	**25080-2 20 HP**	**30080-2 20 HP**
100	231	VSPV-	20100-2 3 HP	40100-2 5 HP	60100-2 7.5 HP	80100-2 10 HP	100100-2 10 HP	125100-2 15 HP	150100-2 15 HP	175100-2 20 HP	200100-2 20 HP	**225100-2 20 HP**	**250100-2 25 HP**	**300100-2 25 HP**
120	277	VSPV-	20120-2 5 HP	40120-2 5 HP	60120-2 10 HP	80120-2 15 HP	100120-2 15 HP	125120-2 15 HP	150120-2 20 HP	175120-2 20 HP	200120-2 20 HP	**225120-2 25 HP**	**250120-2 30 HP**	**300120-2 30 HP**
140	323	VSPV-	20140-2 5 HP	40140-2 7.5 HP	60140-2 15 HP	80140-2 15 HP	100140-2 15 HP	125140-2 20 HP	150140-2 20 HP	175140-2 25 HP	200140-2 25 HP	**225140-2 30 HP**	**250140-2 40 HP**	**300140-2 40 HP**
160	370	VSPV-	20160-2 5 HP	40160-2 7.5 HP	60160-2 15 HP	80160-2 15 HP	100160-2 20 HP	125160-2 20 HP	150160-2 25 HP	175160-2 30 HP	200160-2 30 HP	**225160-2 30 HP**	**250160-2 40 HP**	**300160-2 40 HP**
180	416	VSPV-	20180-2 5 HP	40180-2 7.5 HP	60180-2 15 HP	80180-2 20 HP	100180-2 20 HP	125180-2 25 HP	150180-2 25 HP	175180-2 30 HP	200180-2 30 HP	**225180-2 40 HP**	**250180-2 40 HP**	**300180-2 50 HP**
200	462	VSPV-	20200-2 5 HP	40200-2 10 HP	60200-2 15 HP	80200-2 20 HP	100200-2 20 HP	125200-2 25 HP	150200-2 30 HP	175200-2 30 HP	200200-2 50 HP	**225200-2 40 HP**	**250200-2 50 HP**	**300200-2 50 HP**
225	**520**	**VSPV-**	**20225-2 7.5HP**	**40225-2 10 HP**	**60225-2 20 HP**	**80225-2 20 HP**	**100225-2 25 HP**	**125225-2 30 HP**	**150225-2 30 HP**	**175225-2 40 HP**	**200225-2 40 HP**	225225-2 50 HP	250225-2 50 HP	300225-2 60 HP
250	**578**	**VSPV-**	**20250-2 7.5 HP**	**40250-2 15 HP**	**60250-2 20 HP**	**80250-2 20 HP**	**100250-2 30 HP**	**125250-2 30 HP**	**150250-2 30 HP**	**175250-2 40 HP**	**200250-2 50 HP**	225250-2 50 HP	250250-2 50 HP	300250-2 100 HP
275	**635**	**VSPV-**	**20275-2 7.5 HP**	**40275-2 15 HP**	**60275-2 25 HP**	**80275-2 25 HP**	**100275-2 30 HP**	**125275-2 30 HP**	**150275-2 40 HP**	**175275-2 50 HP**	**200275-2 50 HP**	225275-2 50 HP	250275-2 50 HP	300275-2 RTF
300	**693**	**VSPV-**	**20300-2 7.5 HP**	**40300-2 15 HP**	**60300-2 25 HP**	**80300-2 25 HP**	**100300-2 40 HP**	**125300-2 40 HP**	**150300-2 40 HP**	**175300-2 50 HP**	**200300-2 50 HP**	225300-2 60 HP	250300-2 60 HP	300300-2 RTF

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

3600RPM Performance Curves

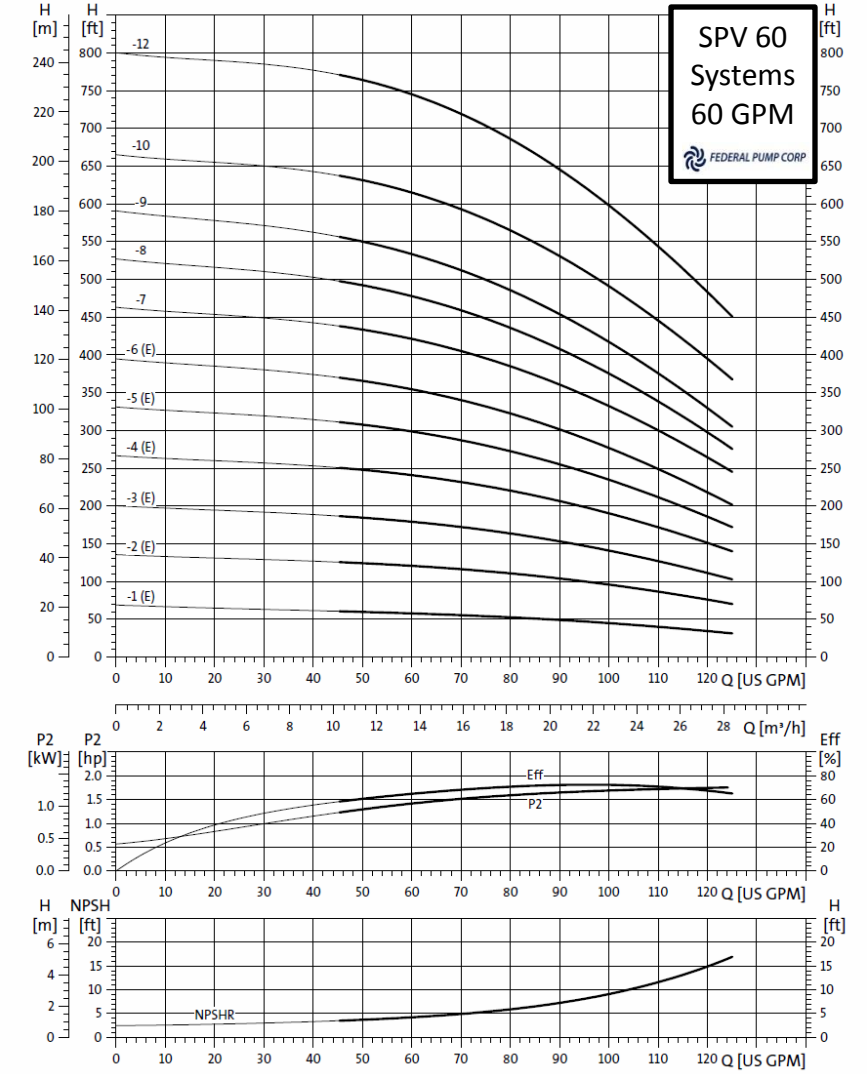


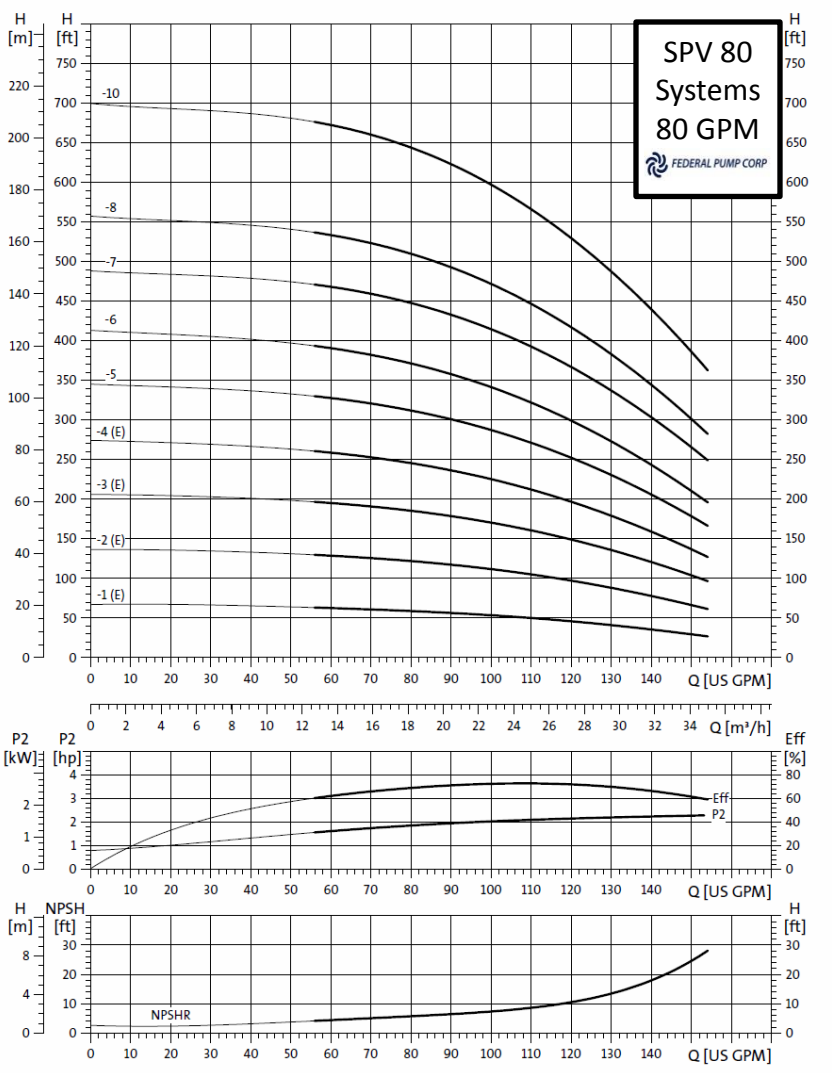


FEDERAL PUMP CORP

Series VSPV-Triplex Booster System

3600RPM Performance Curves

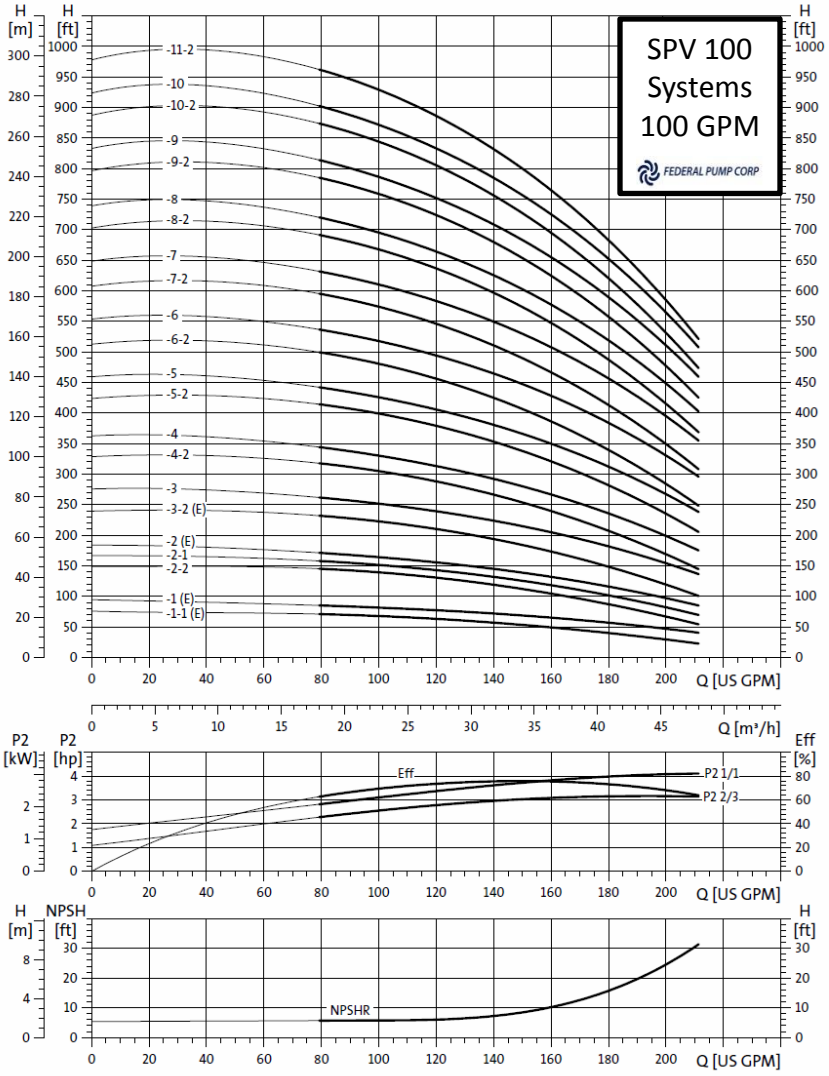


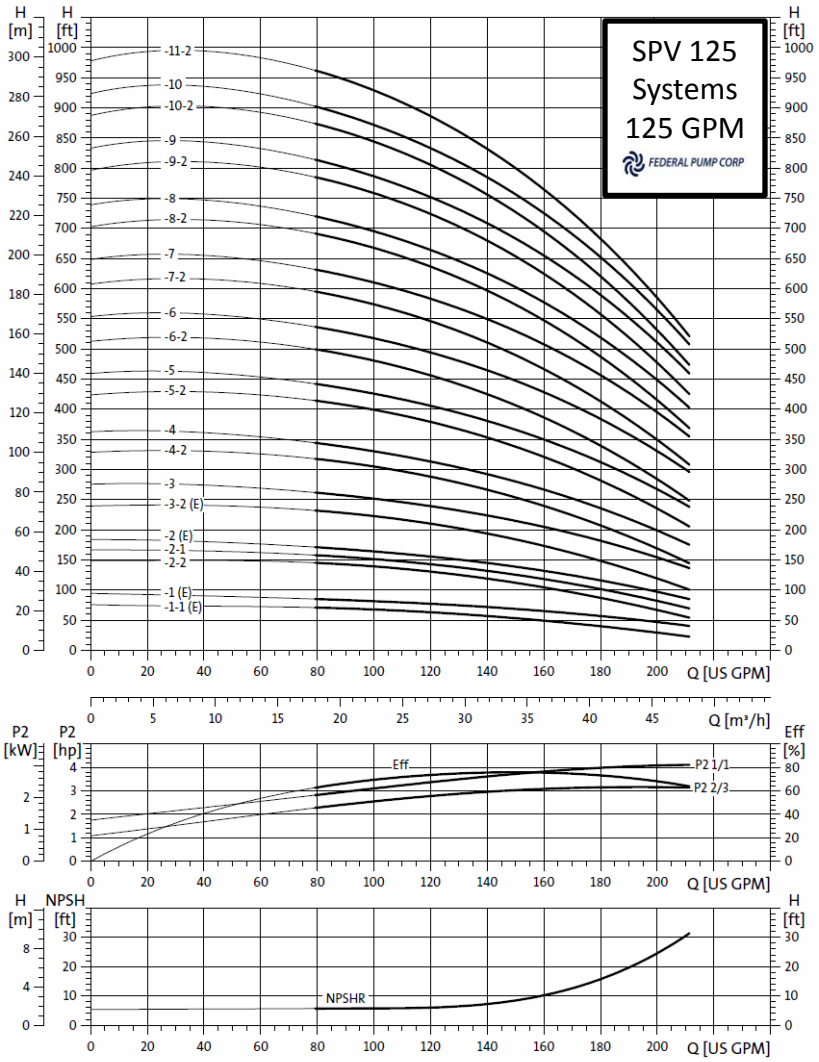


FEDERAL PUMP CORP

Series VSPV-Triplex Booster System

3600RPM Performance Curves

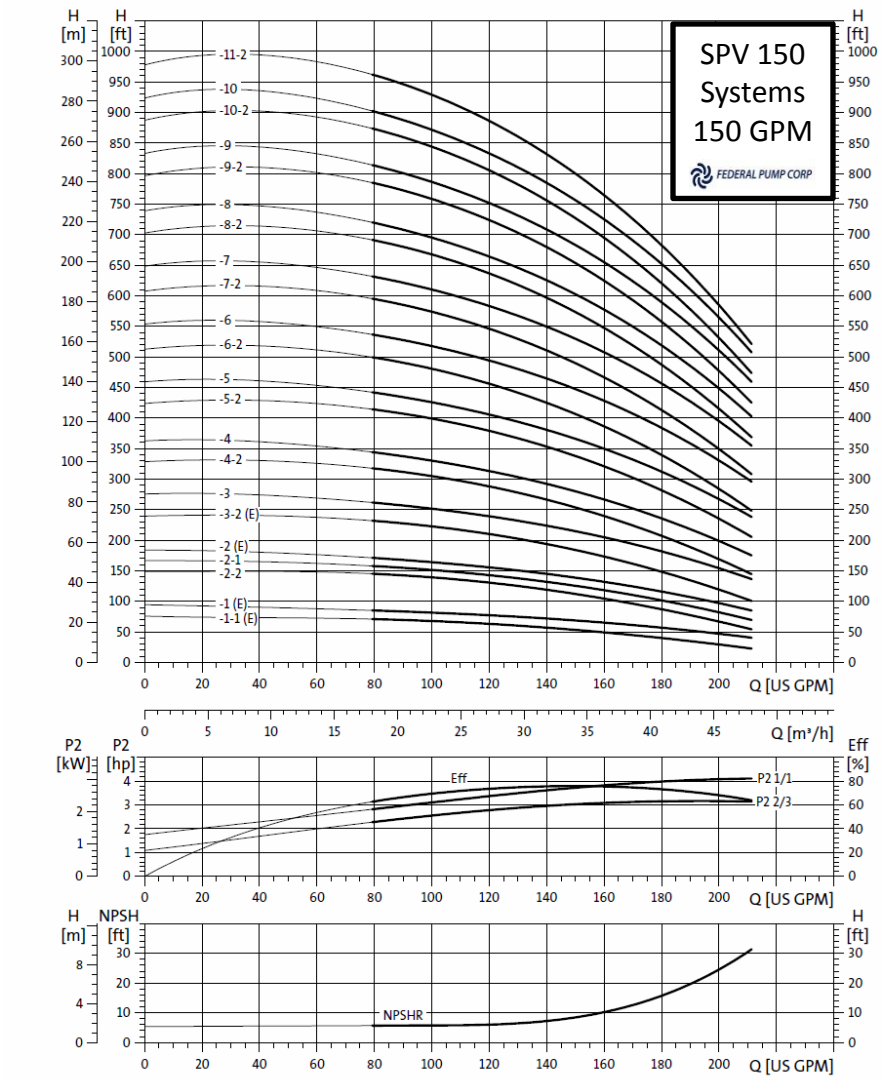


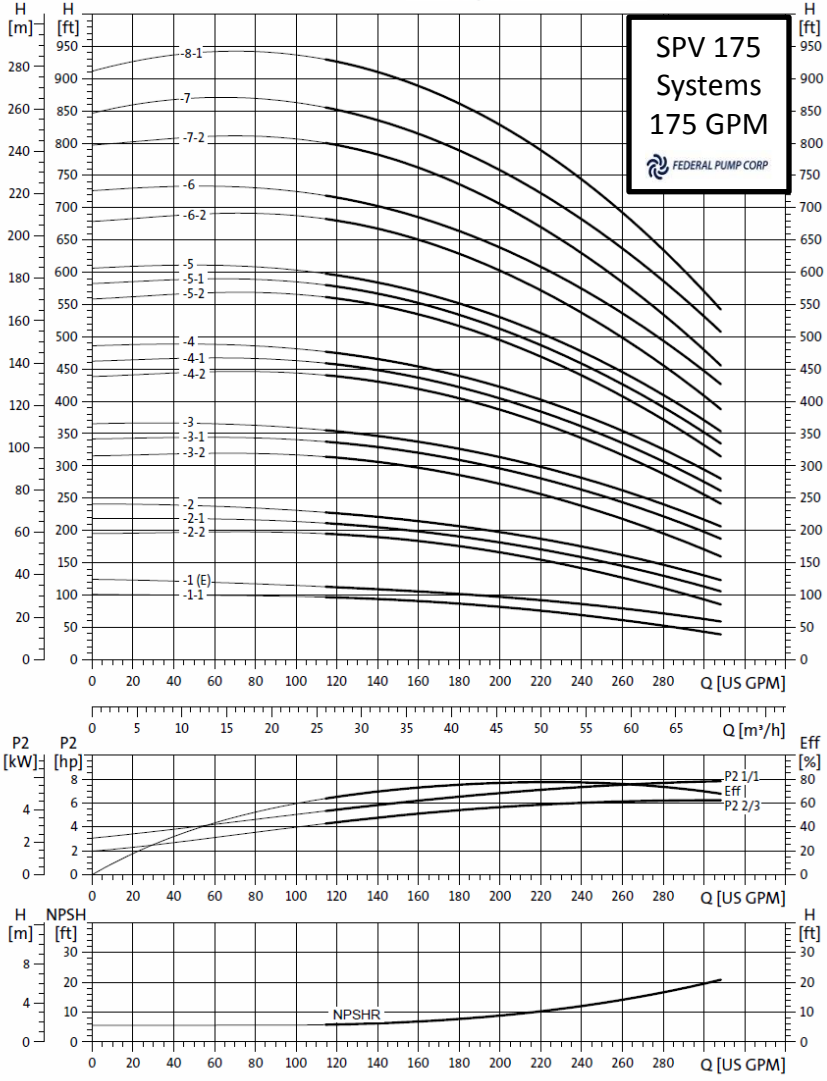


FEDERAL PUMP CORP

Series VSPV-Triplex Booster System

3600RPM Performance Curves

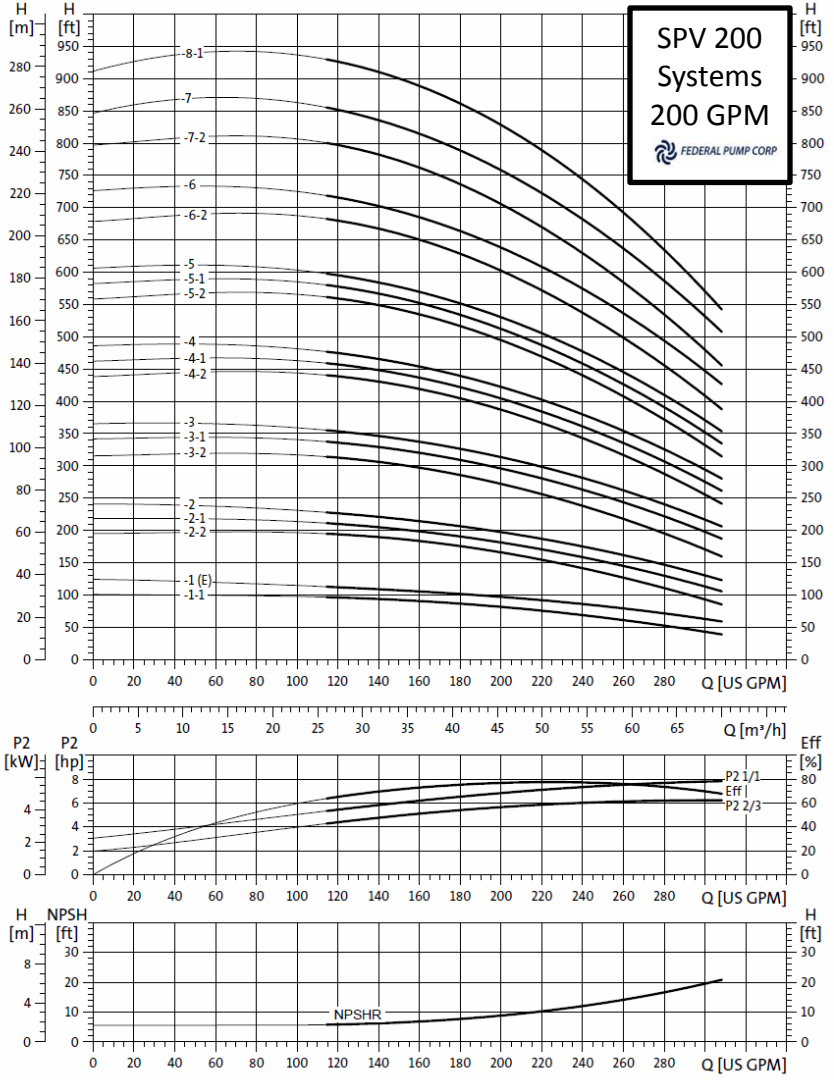


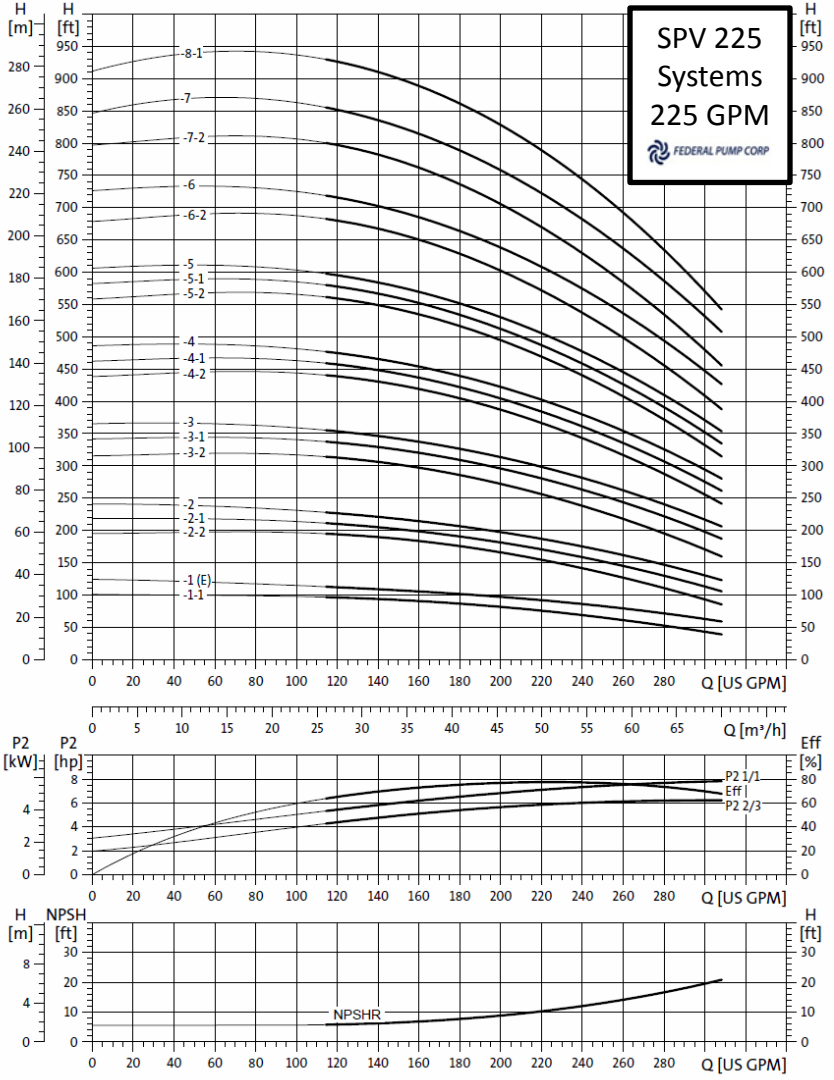


FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

3600RPM Performance Curves

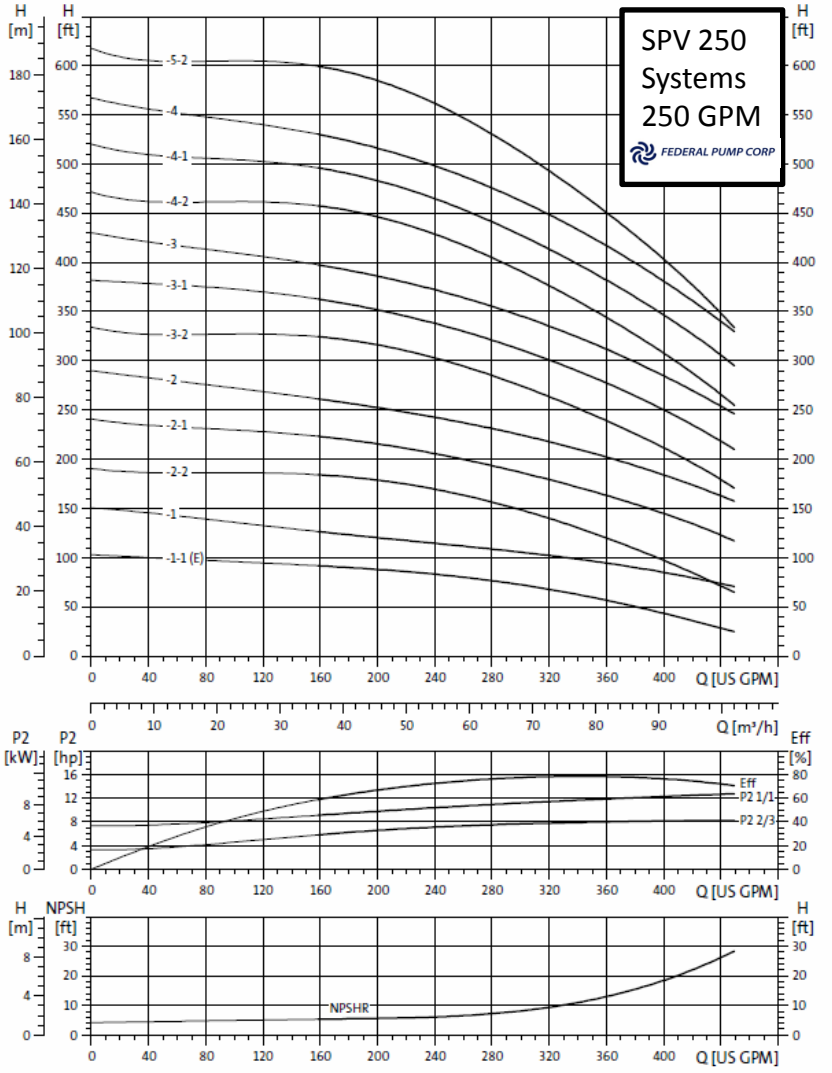


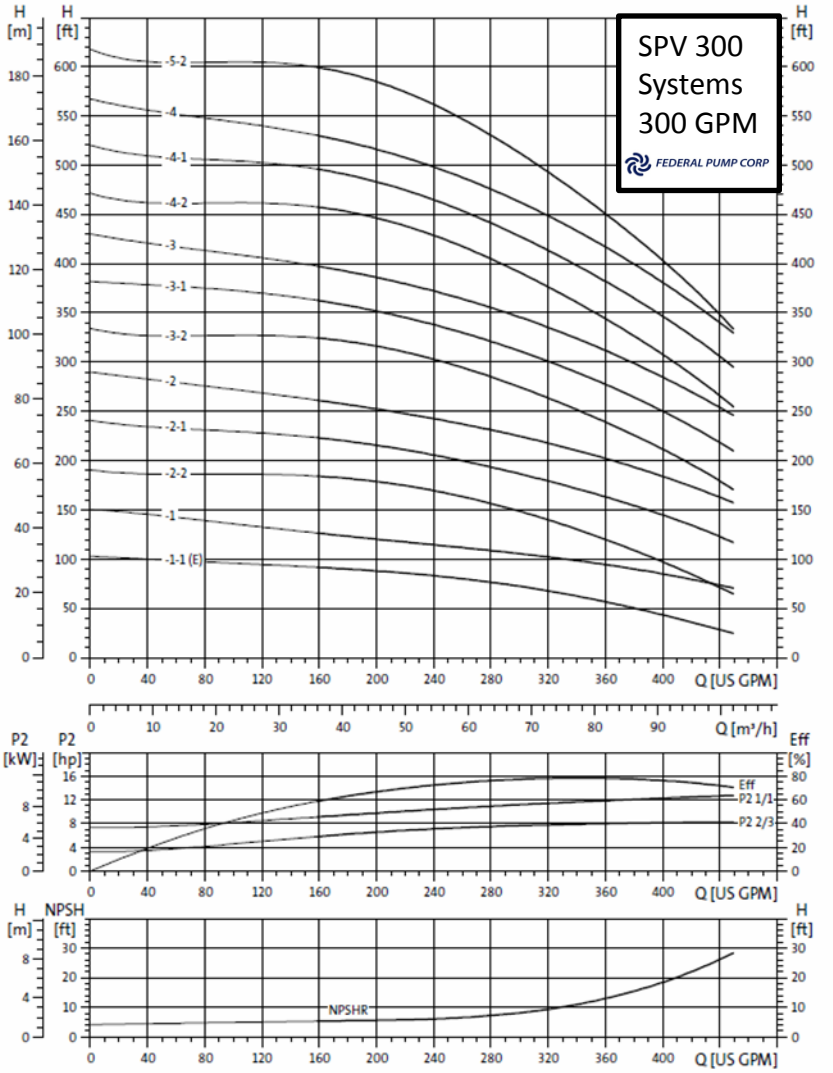


FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

3600RPM Performance Curves





FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Suggested Specifications

General Product Overview
Furnish and install where shown in the plans a Federal Pump Series VSPV Triplex Variable Speed prefabricated system designed to deliver the scheduled flow and pressure differential as shown in the plans. System will require a single power connection to the System Monitor Panel and a single suction and single discharge piping connection. All other wiring and piping internal to the prefabricated system will be provided by the pump manufacturer. Complete system shall be a product manufacturered in the City of New York by a licensed and registered USA pump manufacturer. Pump system shall be warranted for a period of 3 years from the date of shipment

System Materials:
System shall include stainless steel fitted vertical multistage pumps each rated GPM and PSI as shown in the plans. Motor HP, RPM and voltage shall be supplied to meet system design conditions and rated as shown in the plans. Pumps shall be stainless steel fitted constriction and provided with mechanical seals. Pumps shall be rated 125% of system design pressure. Interconnecting piping shall be supplied in 304 stainless steel construction with all isolation valves and check valves provided in stainless steel construction. All potable water pump system materials will exceed SDWA requirement for 100% zero lead as amended 1.1.2014. Pumps, valves piping and controls shall be fabricated and tested for 100% performance range testing and hydrostatic tested to 125% of design pressure. System shall include suction and discharge mounted pressure gauges for visual indication o system conditions.

System Controls:
Booster system will be provided with individual pump variable frequency drives sequenced through multiplexing design and provided with individual pressure transducers. The pressure transducers will be installed in the system manifolds and monitor system pressure set point. Each variable frequency drive will be provided with a power disconnect switch that will control the power to the drive. The pressure transducer will provide a 4-20mADC proportional signal to each drive to increase or decrease the speed of the pump and ensure system design conditions are maintained. Each variable frequency drive will include HOA selector switch, programmable pump process set point, operator keypad with intuitive pump language, multiplex controller where the three drives interact with one another in meeting system requirements, digital readout of RRM, Amps, Hertz, pressure, delay timers (sleep protection) for pump off operation, auto restart after power loss, triplex alternation based upon run times and system set point requirements, low suction pressure cutout and alarm signal.

Sequence of Operation:
The system discharge pressure transducers will monitor the discharge pressure of the system to ensure system pressure requirements are maintained. In the event of a drop in system pressure below the set point the pressure transducer will signal the variable speed drive to initiate lead pump operation and increase motor speed thereby increasing pressure output from the pump. The pump will continue increasing speed until such time that system pressure conditions are met. The pump will increase or decrease speed as required by system demand. When system demand is satisfied, the variable speed controller will, after a time delay, terminate pump operation. If system demand is not met and pressure falls below the set point, the lag pump will start and run in parallel with the lead pump to meet system conditions. The controller will include system set point adjustments that allow the pressure settings and time delay settings to be adjusted as may be required by the system. The controller will include digital display of those set points. Upon meeting system conditions the lag pump will terminate operation followed by the lead pump, after a timed delay. The system will select the lead pump for the next cycle based upon the least run time of each of the pumps.

Low Suction Cut-Off:
In the event of low suction condition, the suction pressure transducer will sense the decline in pressure below the acceptable low suction pressure point and terminate operation of the pump and display a red light alarm light condition. The digital display board will also communicate the alarm condition and failure reason.

The VSPV system will not include any special programmable logic controller (PLC) or proprietary software devices to operates the system.

Visual and Audible System Monitor Panel
Provide a visual indication control panel mounted and wired on the system package. The visual indication control panel will house the pump circuit breakers and include system alarm and operating conditions including: pump/drive failure alarm, low suction pressure cutoff and alarm, system flow in GPM, system pressure in PSI. All alarms will be provided with red alarm lights and connected to a common alarm horn for visual and audible alarm signal. System will be provided in NEMA 1 enclosure (or as required in the plans) with alarm and indicator panel mounted on the front cover.

Start-Up
Upon completion of installation by the contractor, the pump manufacturer's representative will review the Installation to ensure proper connections, witness the performance of the VSPV System from 0 to 100% system pressure and monitor and test low suction pressure cut-off and document completion of the commissioned system. The representative will train the onsite personnel in operating the system.

(Optional): If the system is provided with a charged cushion tank, the pump manufacturers representative will ensure the tank is charged to the appropriate pre-charge condition to ensure proper operation of the system.

Operation manuals
A complete set of system operation manuals will be provided at completion of system start-up.

Maintenance Agreement: The pump manufacturer's representative will provide an 18 month maintenance agreement where the representative will review the installation every 6 months to ensure proper operation of the system and suggest any necessary adjustments due to actual system performance over the period. A separate agreement will be submitted to the customer and included in the base price of the equipment purchase.

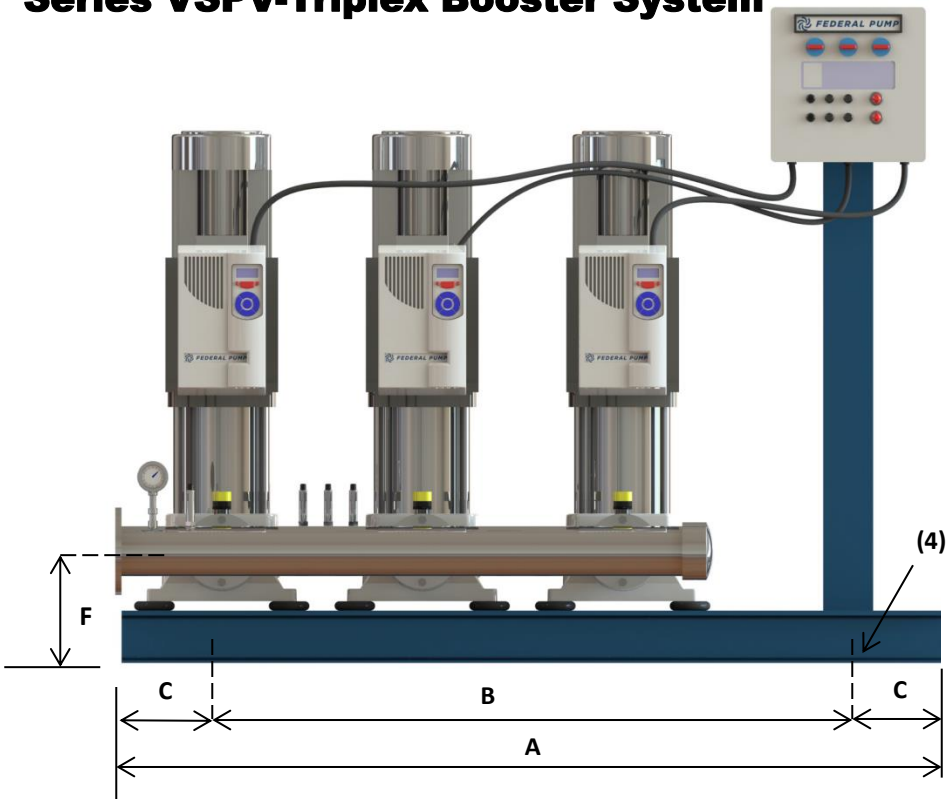
Warranty: The pump manufacturer will provide a three year limited warranty for material and workmanship and take unit responsibility of the system components.

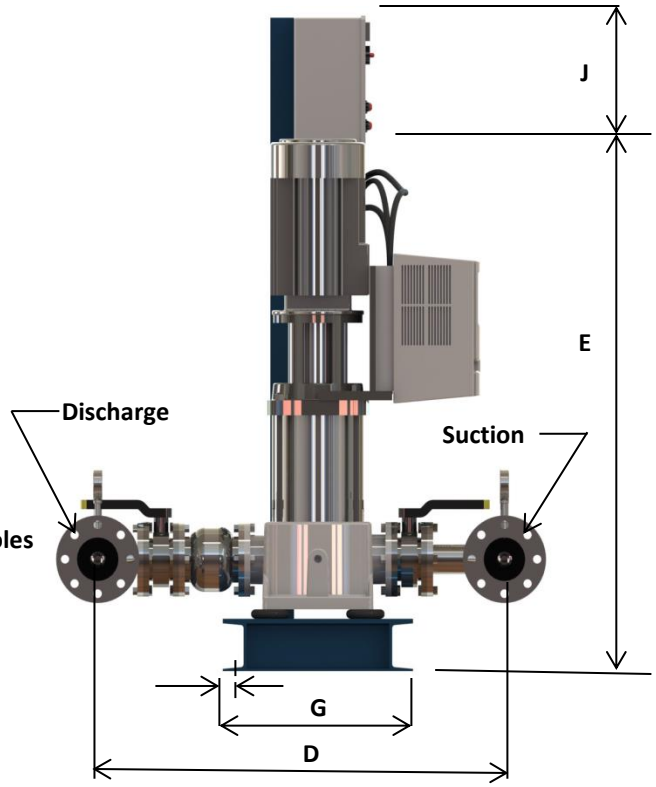
FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Dimensional Data
Release Date: 6.30.14

In the interest of continuous product development , dimensional data is subject to change without notice. Consult Factory for certified dimensional prints.

Series VSPV-Triplex Booster System





Note: 1. Dimensions may vary for custom systems where larger HP units require baseplate mounted controls. Consult factory for certified dimensions for pump motor/drives in excess of 40HP each.
Note: 2. Pumps provided with 150 LB rated manifolds for systems rated up to 150PSI.
Note: 3. Pumps provided with 300 LB rated flanges for systems rated 150PSI to 300PSI.
Note: 4. Standard Triplex systems are not provide with cushion tank. If cushion tank required refer to “cushion tank selection” data in attached sections.
Note: 5. System dimensions are provided for ODP or TEFC motors with NEMA 12 controls. Dimensions may vary if Explosion Proof motors or NEMA 4 or 7 enclosures are required.

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Each Pump Rated: 20 GPM
System Max Rating: 60 GPM

All dimensions are in inches

Model Numbers	Suction NPT	Discharge NPT	A	B	C	D	E	F	G	H	J	Weight (lbs.)
2020	2	2	41	37	2	24	22	5	10	5/8	12	510
2040	2	2	41	37	2	24	25	5	10	5/8	12	520
2060	2	2	41	37	2	24	34	5	10	5/8	12	520
2080	2	2	41	37	2	24	35	5	10	5/8	12	535
20100	2	2	41	37	2	24	37	5	10	5/8	12	600
20120	2	2	41	37	2	24	40	5	10	5/8	12	620
20140	2	2	41	37	2	24	40	5	10	5/8	12	625
20160	2	2	41	37	2	24	42	5	10	5/8	12	630
20180	2	2	41	37	2	24	44	5	10	5/8	12	640
20200	2	2	41	37	2	24	46	5	10	5/8	12	645
20225	2	2	41	37	2	24	48	5	10	5/8	12	690
20250	2	2	41	37	2	24	48	5	10	5/8	12	710
20275	2	2	41	37	2	24	50	5	10	5/8	12	715
20300	2	2	41	37	2	24	52	5	10	5/8	12	720

Note: 1. Dimensions may vary for custom systems where larger HP units require baseplate mounted controls. Consult factory for certified dimensions for pump motor/drives in excess of 40HP each.
Note: 2. Pumps provided with 150 LB rated manifolds for systems rated up to 150PSI.
Note: 3. Pumps provided with 300 LB rated manifolds for systems rated 150PSI to 300PSI.
Note: 4. Standard Triplex systems are not provide with cushion tank. If cushion tank required refer to “cushion tank selection” data in attached sections.
Note: 5. System dimensions are provided for ODP or TEFC motors with NEMA 12 controls. Dimensions may vary if Explosion Proof motors or NEMA 4 or 7 enclosures are required.

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Each Pump Rated: 40 GPM
System Max Rating: 120 GPM

All dimensions are in inches

Model Numbers	Suction NPT	Discharge NPT	A	B	C	D	E	F	G	H	J	Weight (lbs.)
4020	2.5	2.5	41	37	2	24	22	5	10	5/8	12	510
4040	2.5	2.5	41	37	2	24	25	5	10	5/8	12	520
4060	2.5	2.5	41	37	2	24	34	5	10	5/8	12	520
4080	2.5	2.5	41	37	2	24	35	5	10	5/8	12	535
40100	2.5	2.5	41	37	2	24	37	5	10	5/8	12	600
40120	2.5	2.5	41	37	2	24	40	5	10	5/8	12	620
40140	2.5	2.5	41	37	2	24	40	5	10	5/8	12	625
40160	2.5	2.5	41	37	2	24	42	5	10	5/8	12	630
40180	2.5	2.5	41	37	2	24	44	5	10	5/8	12	640
40200	2.5	2.5	41	37	2	24	46	5	10	5/8	12	645
40225	2.5	2.5	41	37	2	24	48	5	10	5/8	12	690
40250	2.5	2.5	41	37	2	24	48	5	10	5/8	12	710
40275	2.5	2.5	41	37	2	24	50	5	10	5/8	12	715
40300	2.5	2.5	41	37	2	24	52	5	10	5/8	12	720

Note: 1. Dimensions may vary for custom systems where larger HP units require baseplate mounted controls. Consult factory for certified dimensions for pump motor/drives in excess of 40HP each.
Note: 2. Pumps provided with 150 LB rated manifolds for systems rated up to 150PSI.
Note: 3. Pumps provided with 300 LB rated manifolds for systems rated 150PSI to 300PSI.
Note: 4. Standard Triplex systems are not provide with cushion tank. If cushion tank required refer to “cushion tank selection” data in attached sections.
Note: 5. System dimensions are provided for ODP or TEFC motors with NEMA 12 controls. Dimensions may vary if Explosion Proof motors or NEMA 4 or 7 enclosures are required.

FEDERAL PUMP CORP
1144 Utica Ave, Brooklyn, NY 11203

Series VSPV-Triplex Booster System

Each Pump Rated: 60 GPM
System Max Rating: 180 GPM

All dimensions are in inches

Model Numbers	Suction NPT	Discharge NPT	A	B	C	D	E	F	G	H	J	Weight (lbs.)
4020	2.5	2.5	41	37	2	24	22	5	10	5/8	12	510
4040	2.5	2.5	41	37	2	24	25	5	10	5/8	12	520
4060	2.5	2.5	41	37	2	24	34	5	10	5/8	12	520
4080	2.5	2.5	41	37	2	24	35	5	10	5/8	12	535
40100	2.5	2.5	41	37	2	24	37	5	10	5/8	12	600
40120	2.5	2.5	41	37	2	24	40	5	10	5/8	12	620
40140	2.5	2.5	41	37	2	24	40	5	10	5/8	12	625
40160	2.5	2.5	41	37	2	24	42	5	10	5/8	12	630
40180	2.5	2.5	41	37	2	24	44	5	10	5/8	12	640
40200	2.5	2.5	41	37	2	24	46	5	10	5/8	12	645
40225	2.5	2.5	41	37	2	24	48	5	10	5/8	12	690
40250	2.5	2.5	41	37	2	24	48	5	10	5/8	12	710
40275	2.5	2.5	41	37	2	24	50	5	10	5/8	12	715
40300	2.5	2.5	41	37	2	24	52	5	10	5/8	12	720

Note: 1. Dimensions may vary for custom systems where larger HP units require baseplate mounted controls. Consult factory for certified dimensions for pump motor/drives in excess of 40HP each.
Note: 2. Pumps provided with 150 LB rated manifolds for systems rated up to 150PSI.
Note: 3. Pumps provided with 300 LB rated manifolds for systems rated 150PSI to 300PSI.
Note: 4. Standard Triplex systems are not provide with cushion tank. If cushion tank required refer to “cushion tank selection” data in attached sections.
Note: 5. System dimensions are provided for ODP or TEFC motors with NEMA 12 controls. Dimensions may vary if Explosion Proof motors or NEMA 4 or 7 enclosures are required.