

# ProCam

DIAPHRAGM AND PLUNGER METERING PUMPS



For more than 80 years, Bran+Luebbe - now SPX Flow Technology – has been providing customers with high quality metering, processing and analysing equipment. As part of the global SPX Corporation, we are one of the world's most reputable manufacturers of metering and process pumps, process systems as well as analyzing technologies. Our engineers have comprehensive process and applications knowledge across a wide range of markets. This has resulted in product innovations and developments which harness the latest technology while meeting the highest quality standards.

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global, multi-industry manufacturing leader with approximately \$5 billion in annual revenue, operations in more than 35 countries and over 14,000 employees. The company's highly-specialized, engineered products and technologies are concentrated in Flow Technology and energy infrastructure. Many of SPX's innovative solutions are playing a role in helping to meet rising global demand for electricity and processed foods and beverages, particularly in emerging markets. The company's products include food processing systems for the food and beverage industry, critical Flow components for oil and gas processing, power transformers for utility companies, and cooling systems for power plants. For more information, please visit [www.spx.com](http://www.spx.com).

## ProCam Metering Pumps

ProCam is an economical range of dosing pumps, designed for use in many industrial or hygienic processes. The mechanically actuated diaphragm pumps offer safe and reliable operation for hazardous liquids with a plunger pumphead option for high pressure, low flow duties. The pumps are suitable for single & multi-stream processes and auto-control using variable speed, electric stroke or a combination of both.

### TYPICAL CONFIGURATIONS



## Typical product applications

THE IDEAL MODEL FOR A WIDE RANGE OF APPLICATIONS



### Chemical Processing



### Power & Energy



### Food & Beverage



### Pharmaceutical & Biotechnology



### Water and Wastewater Treatment

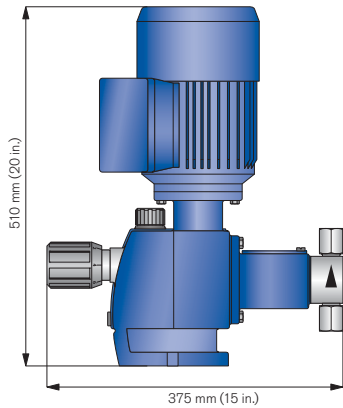


# ProCam Plunger Metering Pumps

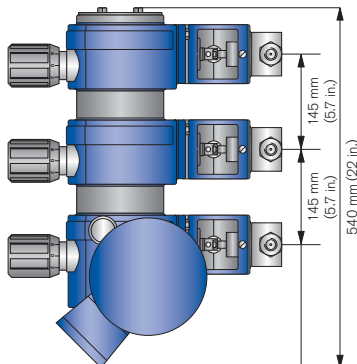
The robust, compact design of the ProCam plunger pump provides safe, reliable, and economical operation.



Plunger metering pump with stainless steel pumphead and manual flow rate control.



Type PS 3 up to PS 25  
(Maximum dimensions shown)



Type PS 3 up to PS 25  
(Maximum dimensions shown)

## AT A GLANCE

- Economic metering of non-hazardous fluids
- Operating pressure up to 80 bar (1,160 psig)
- Flow rates from 0,16 to approx. 60 lt/hr (0.04 to 15.8 GPH)
- Robust gear technology with proven lost motion design for continuous operation at max. flow / pressure conditions
- Linear stroke adjustment with manual or electric options
- Safe, reliable operation



## GENERAL

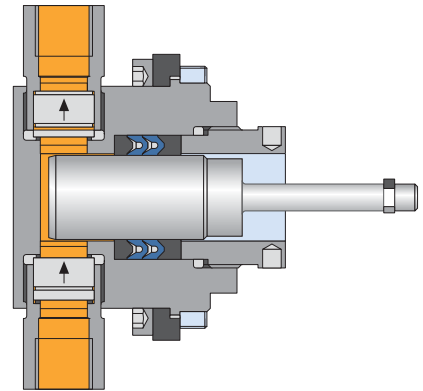
- Gear box in a rugged cast iron housing
- Integrated worm gear
- Splash lubrication
- Electric motor (IEC, IP55, NEMA)

## STANDARD

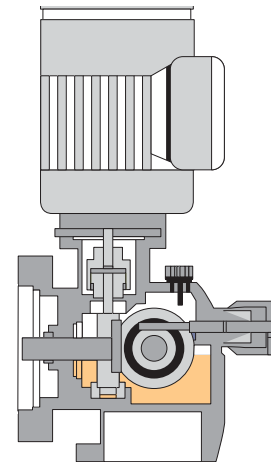
- Single pump with plunger pump head
- Manual stroke adjustment
- Electric motor with fixed speed
- Materials for pump head and valve housing
  - Stainless steel

## OPTIONS

- Multiplex pumps with up to 6 plunger pump heads are available
- Can be combined with ProCam diaphragm metering pump
- Electric flow rate control (also with integrated controller)
- Electric motor with variable speed
- Hazardous area design (up to Zone 1, IIC, T4)



Principle of stainless steel pump head



Principle of a spring cam gear

## FLOW RATE AND PRESSURES

MAX. FLOW RATE LT/HR (GPH\*)

TYPE	STROKE FREQUENCY				MAX. PRESSURE	MATERIAL IN CONTACT WITH METERED LIQUID
	50 (60)	72 (86)	100 (120)	144 (172)	bar (psig)	
PS 3	0,16 (0.05)	0,23 (0.07)	0,32 (0.10)	0,46 (0.14)	80 (1160)	1,4571 (316 SS)
PS 5	0,45 (0.14)	0,64 (0.20)	0,90 (0.28)	1,29 (0.40)	80 (1160)	1,4571 (316 SS)
PS 8	1,15 (0.36)	1,65 (0.52)	2,3 (0.73)	3,3 (1.04)	80 (1160)	1,4571 (316 SS)
PS 10	3,4 (1.1)	4,8 (1.5)	6,7 (2.1)	9,7 (11.6)	80 (1160)	1,4571/1,4581 (316 SS)
PS 16	8,6 (2.7)	12,4 (3.9)	17,2 (5.5)	24,8 (7.9)	80 (1160)	1,4571/1,4581 (316 SS)
PS 25	21,0(6.7)	30,2 (9.6)	42,0 (13.3)	60,4 (19.1)	32 (465)	1,4571/1,4581 (316 SS)

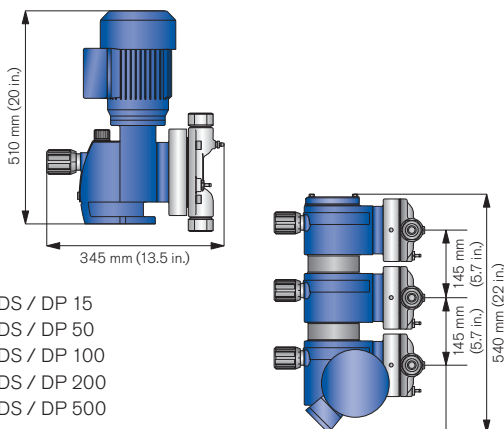
\* @ 60 Hz

# ProCam Diaphragm Metering Pumps

Our Classic series of mechanically actuated double diaphragm pumps for low to medium range applications, brings the advantages and security of the double diaphragm concept to a wide variety of applications at an economical price.

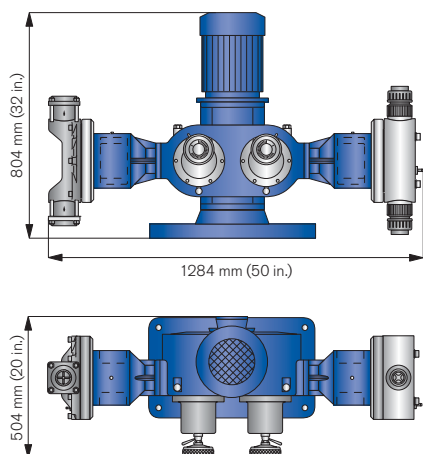


Designed for operating pressures up to 20 bar (290 psig)  
and flow rates up to 3.000 lt/hr (793 gph)



DS / DP 15  
DS / DP 50  
DS / DP 100  
DS / DP 200  
DS / DP 500

(Maximum dimensions shown)



Double headed pump design  
2 DS/2 DP 850 - 2 DS/2 DP 3000  
(Maximum dimensions shown)

## AT A GLANCE

- Hermetically sealed pump head with mechanically operated PTFE double diaphragm allowing
  - safe metering of hazardous liquids
  - contamination free operation (important in potable water production)
- Provides economic operation without sacrificing safety and reliability
- 2 years warranty of PTFE double diaphragm
- Diaphragm condition monitoring
- Outstanding corrosion resistance due to high quality PTFE double diaphragm

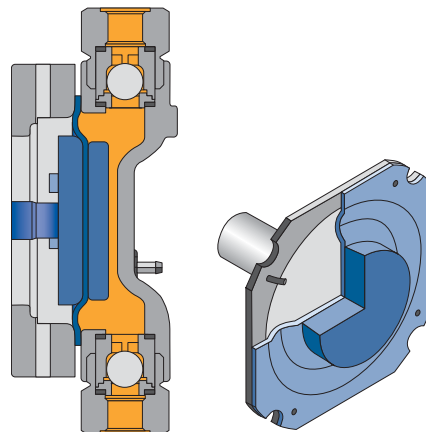


## GENERAL

- Gear box in a rugged cast iron housing
- Integrated worm gear
- Splash lubrication
- Electric motor (IEC, IP55, NEMA)

## STANDARD

- Diaphragm pump with a single pump head
- Manual stroke adjustment
- Drive with fixed speed
- Materials for pump head and valve housing
  - Stainless steel \*)
  - PVC

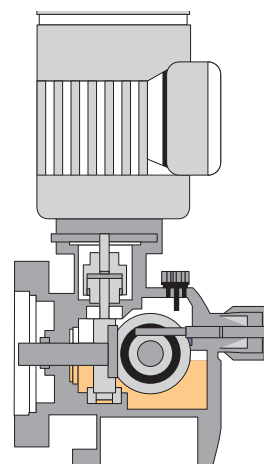


Principle of the product chamber with PTFE diaphragm

## OPTIONS

- Multiplex pumps with up to 6 heads are available  
(DS/DP15 – DS/DP500) or 2 heads  
(DS/DP850 and DS/DP3000)
- Electric flow rate control (also with integrated controller)
- Electric motor with variable speed
- Hazardous area design (up to Zone 1, IIC, T4)

\*) Pumps to standard configuration are also available as ProCam Smart (type DS15 to DS500).



Principle of a spring cam gear

## FLOW RATE AND PRESSURE

MAX. FLOW RATE LT/HR (GPH\*\*)

TYPE	STROKE FREQUENCY		SPM	MAX. PRESSURE*	
	50 (60)	72 (86)	100 (120)	144 (172)	bar (psig)
DS/DP 15	5 (1.6)	7,5 (2.4)	10 (3.2)	15 (4.7)	20 (290)
DS/DP 50	17,5 (5.5)	25 (29)	35 (11.1)	50 (15.8)	10 (145)
DS/DP 100	35 (11.1)	50 (15.8)	70 (22.2)	100 (31.6)	4 (60)
DS/DP 200	70 (22.2)	100 (31.6)	140 (44.4)	200 (63.4)	12 (175)
DS/DP 500	175 (55.5)	250 (79.3)	350 (111)	500 (158.5)	5 (75)
DS/DP 850	300 (9.5)	430 (136)	600 (190)	860 (273)	3 (45)
DS/DP 3000	1040 (330)	1500 (475)	2080 (660)	3000 (950)	5 (75)

\* Operating pressure for plastic pump heads: 10 bar (145 psig). With multiple pumps (4 - 6 heads) the max. operating pressure is only 50% of the indicated pressure.

\*\* @ 60 Hz

# ProCam Hygienic

Diaphragm pump EHEDG\* certified – designed according to EHEDG guidelines, 3A approved.

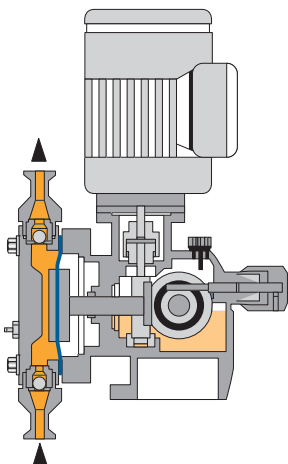
\*European Hygienic Engineering and Design Group.



Clamp-connection and ball valve in SS316L with Ra 0,8, PTFE gaskets (FDA approved)



Principle of a ProCam Hygienic



## AT A GLANCE

- CIP (cleaning-in-place) at 83°C (180°F)
- Covers requirements in hygienic and sterile applications
- Specifically designed for applications in the pharmaceutical industry, biotechnology, cosmetics, personal care, food and beverage industry
- Flexible multi-pump head design



## FACTS

- Metering pump with PTFE double diaphragm (FDA approved) and diaphragm condition monitoring by pressure switch
- Hygienic valve design
- Little residence time in the product chamber of the pump head
- Double diaphragm and valve gaskets are made of PTFE (FDA)
- Coating according to FDA requirements
- Front cover, valves, connections in material SS 316 L with surface roughness RA 0.8 (optional Ra 0.4)



## FLOW RATE AND PRESSURES

MAX. FLOW RATE LT/HR (GPH\*)

TYPE	STROKE FREQUENCY SPM				MAX. PRES-SURE*	CONNECTIONS
	50 (60)	72 (86)	100 (120)	144 (172)	bar (psig)	
DS 15	5 (1.6)	7,5 (2.4)	10 (3.2)	15 (4.7)	20 (290)	½" Clamp
DS 50	17,5 (5.5)	25 (7.9)	35 (11.1)	50 (15.8)	10 (145)	½" Clamp
DS 100	35 (11.1)	50 (15.8)	70 (22.2)	100 (31.6)	4 (60)	½" Clamp
DS 200	70 (22.2)	100 (31.6)	140 (44.4)	200 (63.4)	12 (175)	½" Clamp
DS 500	175 (55.5)	250 (79.3)	350 (111)	500 (158.5)	5 (75)	1" Clamp

\* With multiple pumps (4 – 6 heads) the max operating pressure is only 50% of the indicated pressure.

\*\* @ 60 Hz

# ProCam Compact Metering Station

Compact design – based on the ProCam metering pump this is a convenient solution for chemical preparation and metering.



## SOLID DESIGN

- Stable base plate for pumps up to 50 kg (110 lbs.)
- Fluid temperature up to 60°C (140°F)
- Tank UV stabilized for outdoor use
- Polyethylene tank material corrosion resistant against many chemicals
- Brackets for floor mounting available

## COMPLETE SOLUTION AND OPTIONS

- Tank sizes from 60 to 500 litres (15 to 125 gal.) (or on request)
- Standard equipment includes metering pump, tank, suction pipe, inlet valve, manual mixer and stable mounting plate for pumps
- Easy to read liquid level due to scale moulded into the tank wall
- Wide filling port with manual screw lid for easy handling

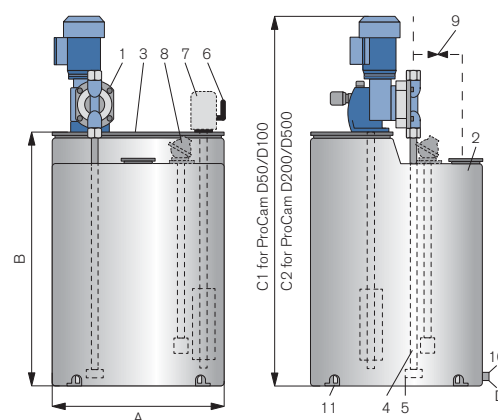
### Options:

- Motor driven mixer
- Level switches (1 or 2 contacts)
- Pressure relief valve with return to the tank
- Tank drain



## SCOPE OF SUPPLY

- 1 ProCam metering pump
- 2 Tank (PE)
- 3 Base plate (PVC)
- 4 Suction pipe (PVC)
- 5 Foot valve (PVC)
- 6 Manual mixer (PVC)
- 7 Option: Motor driven mixer
- 8 Option: Level switches
- 9 Option: Pressure relief valve
- 10 Option: Drain
- 11 Option: 4 brackets (PE) for floor mounting



Principle of  
ProCam Compact Metering Station

## AT A GLANCE

- Chemical industry e.g. metering of additives or inhibitors
- Water treatment plants
- CIP systems in the food & beverage industry
- Applications in the galvanizing industry
- Preparation of fertilizer solutions

## VOLUME AND DIMENSIONS

TANK	Ø A MM (IN.)	B	C1	C2	D
60 l (15 gal.)	450 (18)	545 (21)	925 (36)	965 (38)	1/2"
100 l (25 gal.)	470 (19)	730 (29)	1110 (44)	1150 (45)	1/2"
200 l (50 gal.)	610 (24)	875 (34)	1255 (49)	1295 (51)	1/2"
300 l (75 gal.)	680 (27)	950 (37)	1330 (52)	1370 (54)	1"
500 l (125 gal.)	830 (33)	1065 (42)	1445 (57)	1485 (59)	1"



## Global locations

### USA

#### SPX GLOBAL HEADQUARTERS

13320 Ballantyne Corporate Place  
Charlotte, NC 28277  
United States of America  
Phone: +1 704 752 4400

### EMEA

#### SPX FLOW TECHNOLOGY

Werkstraße 4  
D-22844 Norderstedt  
Phone: +49 (0) 40 - 522 02 -0  
Fax: +49 (0) 40 - 522 02 -444

#### SPX FLOW TECHNOLOGY

Ironstone Way  
Brixworth, Northants, NN69UD  
Phone: +44 (0) 1604 881751  
Fax: +44 (0) 1604 880145

### APAC

#### SPX FLOW TECHNOLOGY

25 International Business Park  
#03-03/12, German Centre,  
Singapore 609916  
Phone: +65 6568 1568  
Fax: +65 6265 9133  
E-Mail: [asia.pacific@spx.com](mailto:asia.pacific@spx.com)

#### SPX FLOW TECHNOLOGY

611 Sugar Creek Road  
Delavan, WI 53115  
P: (800) 252-5200 or +1 (262) 728-1900  
F: (262) 728-4904  
E: [branluebbe@spx.com](mailto:branluebbe@spx.com) • [www.spx.com](http://www.spx.com)

SPX reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit [www.spx.com](http://www.spx.com).

The green ">" is a trademark of SPX Corporation, Inc.