

Bredel



SPX

The perfect
pump for the perfect
application



SPX Hose Pumps

Improve your process performance

**THE POSITIVE DISPLACEMENT
PUMP OF CHOICE, PERFECT FOR:**

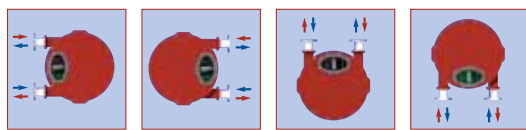
- Corrosives
- Abrasives
- Shear sensitive fluids
- High viscosity fluids
- High density fluids
- Large solids
- Metering ($\pm 1\%$ accuracy)



Good news... a pump without seals or valves that can wear, clog, or leak.

Like you, we aim for perfection. It is no coincidence that Bredel Hose Pumps are the world's leading manufacturer of peristaltic pumps with the largest range of pumps and pump element materials.

Today Bredel Hose Pumps have more than 75,000 peristaltic pumps working non-stop around the globe. With operating pressures up to 1,600 kPa [16 bar] and flow rates up to approximately 100 m³/h, Bredel hose pumps save time and money by successfully handling the toughest applications in a broad range of industries. ➤



ABRASIVE SLURRIES



A leading brewer had been using diaphragm pumps to meter highly diatomaceous earth slurry but was experiencing high downtime due to abrasive wear. The brewer replaced these pumps with Brexel hose pumps, dramatically reducing maintenance and all but eliminated downtime. Based on this success, the brewer installed 6 hose pumps to transfer abrasive slurry of spent yeast. The pumps replaced rotary lobe pumps which required excessive maintenance to replace mechanical seals and lobes.

Brexel

SAVE TIME AND MONEY

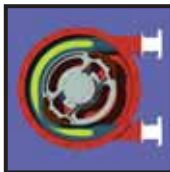
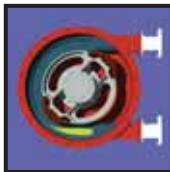
- ◆ **Chemical**
corrosive acids and bases
- ◆ **Water and wastewater treatment**
lime, kalic, sodium hypochlorite, ferric chloride and sludges
- ◆ **Paint and pigments**
dispersion mill feed, pigment and latex transfer
- ◆ **Pulp and paper**
dyes, sizing agents, retention aids and titanium dioxide
- ◆ **Mining and mineral separation**
tailing slurries, sludges and reagents
- ◆ **Ceramics and glass**
fine china
- ◆ **Construction**
cement, coatings, spray concrete, brick and roof tiles, colorants, and foam agents
- ◆ **Breweries**
yeast, diatomaceous earth, flocculants, stabilizers, filter press feed
- ◆ **Printing and packaging**
varnishes, inks, coatings and adhesives
- ◆ **Food and beverage**
CIP applications, wine, brewery, dairy, bakery, flavourings and additives
- ◆ **Textiles**
fibres, dyes and acids
- ◆ **OEM**
versions available for system suppliers

The fastest growing pump type



ENGINEERED SIMPLICITY

The pumping action results from alternately compressing and relaxing a machined pump element between the pump housing and the compressing shoes. The fluid ahead of the shoe is pushed towards the discharge, while the rebounding pump element behind the shoe draws more fluid in. Due to 100% compression at all times, the pump does not slip, providing very high metering accuracy and pressure



performance. The absence of pump seals, seats or valves, means that abrasive slurries are no problem.

Because the fluid only makes contact with the inner wall of the pump element, the pump is perfect for aggressive products.

High maintenance diaphragm, rotary lobe, or progressive cavity pumps cannot match the rugged, reliable 24/7 dependability of the SPX which:

- ◆ doesn't require expensive ancillary equipment: no check valves, sealing water flush systems, or run dry protection - it's simple to own and operate
- ◆ pumps abrasive slurries, corrosive acids, gaseous liquids, as easily as water - no vapour locking
- ◆ is ideal for high viscosity or shear sensitive products
- ◆ can run dry indefinitely without damage
- ◆ has one wetted component: the pump element - no seals, ball valves, diaphragms, glands, immersed rotors, stators or pistons that can leak, clog or corrode
- ◆ is fully reversible to blow out clogged suction and drain lines safely
- ◆ has a suction lift capability up to 9.5 meters and is self-priming
- ◆ does not slip, giving true positive displacement for accurate and repeatable metering

DOWNTIME IS MONEY

Save both time and money with the SPX by reducing your maintenance. To completely rebuild a SPX all you need is a wrench, a pump element, and a few minutes. Drain the lubricant, unbolt the flanges, replace the old pump element and you're back up and running. No complex parts lists, no special tools, and no need to bring the pump to an expensive maintenance shop.

FEATURES

- ✓ Self priming (95% vacuum)
- ✓ Dry running (no product in line)
- ✓ Reversible
- ✓ EHEDG certified
- ✓ No metal to metal contact
- ✓ Fluid contained within the pump element
- ✓ Easy maintenance, low cost, short down time

SOLIDS NO PROBLEM



When wood chips are cooked in a digestion liquid, a treated residue known as black liquor soap is derived from the digestion process. Paper mills usually use a large gear pump or other rotary type pump to handle this soap, often with considerable difficulty. Suction problems, dry running, and small wood particles only make things worse. The Bredel hose pump provides the optimum solution: It is abrasive resistant, very capable of handling solids, and because there are no shaft seals, it is allowed to run dry.

Bredel

SPX-THE APEX OF PUMP EVOLUTION

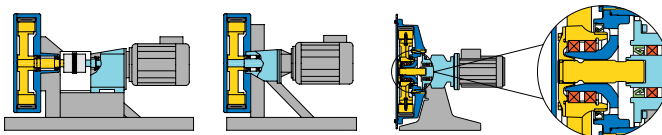
With over 50 years experience, Bredel Hose Pumps lead the way in industrial hose pump technology, engineering the new standard for peristaltic pumping with its unique SPX direct-coupled design.

The SPX combines the small footprint of close-coupled pumps with the reliability and ease of maintenance of long-coupled designs.

While close-coupled pumps are extremely compact, a technology still used by other peristaltic pump manufacturers relies on the gearbox to seal the pump housing and support the heavy overhung load of the pump rotor. While close-coupled pump competitors offer optional long-coupled pumps to improve gearbox and bearing life, this comes at the cost of a substantially increased footprint and the added complexity of coupling alignment and maintenance.

The SPX patented direct-coupled design incorporates heavy-duty rotor bearings within the pump rotor, which eliminate any overhung load. Ultra compact SPX high-torque gear drives then align directly to the pump housing and are fully protected by an innovative buffer zone. No other pump achieves the reliability, simplicity, and compactness of the SPX hose pump.

COMPARE THE ADVANTAGES OF SPX



Comparative advantages

Ease of maintenance

Protected gearbox - lubricant seal in pumphead

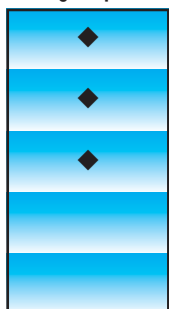
Reliability - bearings in pumphead

Compact footprint

Faster installation - no drive alignment

TOTAL

Long-coupled



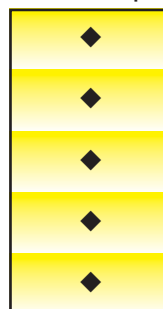
3

Close-coupled



2

SPX direct-coupled



5

The pump element is the key

The machined pump element is the single most vital component for the performance, durability, and efficiency of the hose pump. To ensure perfect compression and consistent, reliable performance, Bredel Hose Pumps manufacture pump elements from high quality compounded rubbers, reinforced with four individual layers of braided nylon and finished by high precision machining. Perfect compression eliminates slip which in other pumps

can destroy shear sensitive products, reduce metering accuracy, or allow abrasive slurries to wreak havoc on wetted parts.

Bredel Hose Pumps engineer pump elements to meet the flow, pressure and temperature characteristics of your toughest applications. We are the only hose pump manufacturer to machine our own pump elements. None of our competitors take this degree of care.

DESIGNED TO PERFECTION

Bredel Hose Pumps use cutting edge technology to engineer, manufacture and test their pumps.

Innovation: As the global leader in peristaltic pumps, we pride ourselves on new

ideas and innovative products that bring the benefits of hose pumps to our customers in an ever expanding range of applications. For example, retractable pressing shoes bring ultimate clean-in-place capability.

And new pump element materials have now made our pumps impervious to tough hydrocarbons - once off limits to hose pumps.

Design: Using tools such as finite element analysis (FEA), we design our pump elements to perfection - right down to the position of the reinforcing layers, angles and thickness of the cord reinforcement, and the thickness of the rubber. Everything from the geometry of the pressing shoe to the pump housing is engineered to optimize the performance of the pump element.

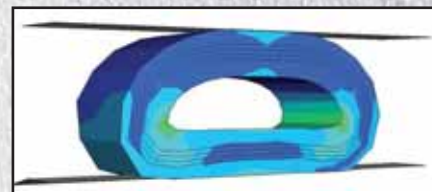
Production: Unique in the world,

Bredel's state-of-the-art automated pump element grinding facility carefully machines every pump element within fine tolerances - guaranteeing proper compression for efficiency and longevity.

At our ISO 9001:2000 factory, each pump and pump element is constructed to the most rigorous quality control standards.

PRECISION MACHINED PUMP ELEMENTS ENSURE:

- tight tolerances for low stress on bearings
- perfect compression for long life
- excellent suction performance; 9.5 metres suction lift
- high pressure capability; 1,600 kPa [16 bar]
- repeatable volumetric accuracy to +/- 1%
- consistent capacity independent of varying suction and discharge conditions
- exceptional performance when handling high viscosity products



1



2



1. Because even a 1 mm variation in wall thickness can impact pump element life by 25%, every pump element is precision machined to ensure repeatable performance.

2. At our research and design facility, pumps are running non-stop every day to enhance the performance of the best hose pumps on the market today, and to develop new innovations for the future.

PUMP ELEMENT CONSTRUCTION

A pump element constructed of layers of rubber, reinforced with several layers of braided nylon cords forms the essential component of the high-performance hose pumps. The inner and outer layers are extruded. The inner layer is available in a range of rubber compounds. After the hose pump element is constructed, it is then machined. Machining is the final step in pump element manufacture and is critical to ensure that exact tolerances are met.

1. Inner layer in various types of rubber
2. Reinforced with layers of braided nylon
3. Outer layer precision machined
4. Rough outer surface before machining



NATURAL RUBBER (NR)
Outstanding abrasion resistance. Generally resistant to diluted acids and alcohols.
Max. fluid temp. 80 °C
Min. fluid temp. -20 °C



NITRILE-BUNA N (NBR)
Meets FDA and 3A. Resistant to oils, greases, alkalis and detergents.
Max. fluid temp. 80 °C
Min. fluid temp. -10 °C



EPDM
Excellent chemical resistance, especially to alcohols and concentrated acids.
Max. fluid temp. 90 °C
Min. fluid temp. -10 °C



HYPALON® (CSM)
Outstanding resistance to strong, oxidising products, and concentrated acids and bases
Max. fluid temp. 80 °C
Min. fluid temp. -10 °C

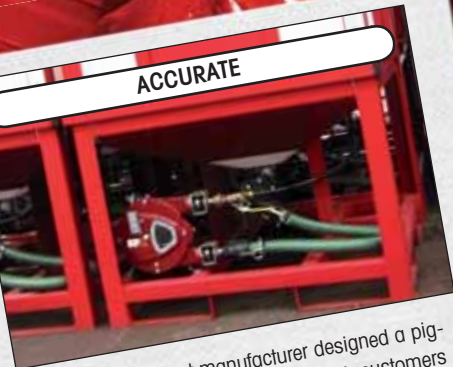


PETROPROOF
Chemical resistance to hydrocarbon liquids
Max. fluid temp. 40 °C
Min. fluid temp. 10 °C



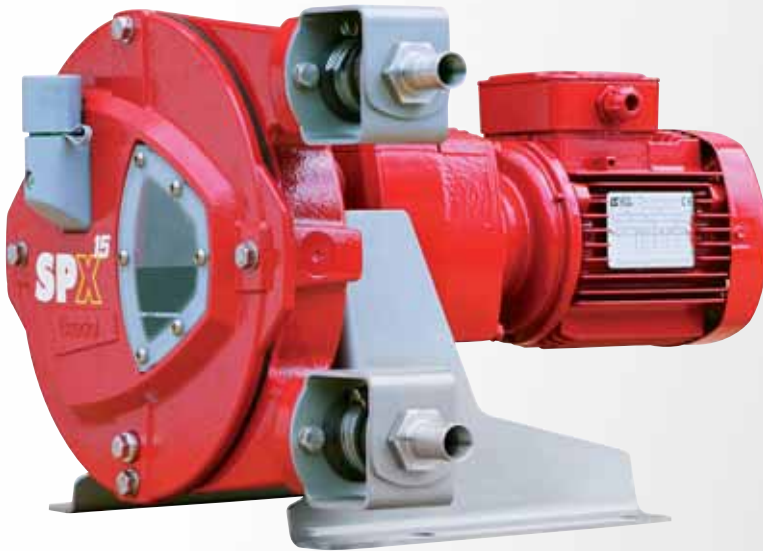
BIOPRENE®
Meets FDA standards, resistant to: alcohols, acids and oxidising products
Max. fluid temp. 60 °C
Min. fluid temp. 0 °C

ACCURATE

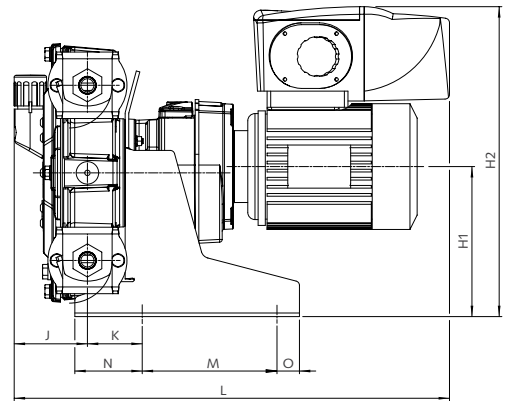
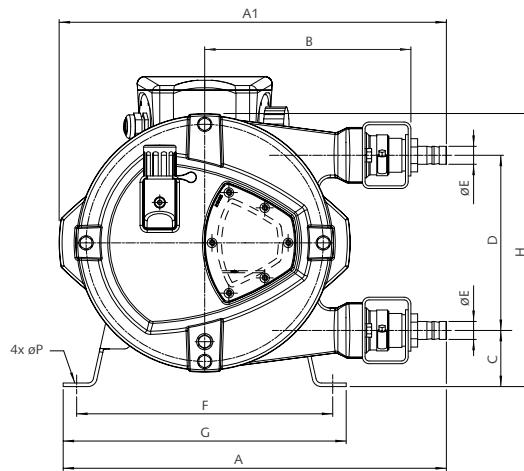


A concrete pigment manufacturer designed a pigment dosing system that allowed their customers to accurately and repeatedly dose their pigments, resulting in perfect concrete colouring for every batch. However, the pigments were continuously clogging the diaphragm pumps, which led to the batches being repeatedly ruined. They then decided to standardize on hose pumps, which not only resulted in perfect metering accuracy but also eliminated maintenance.

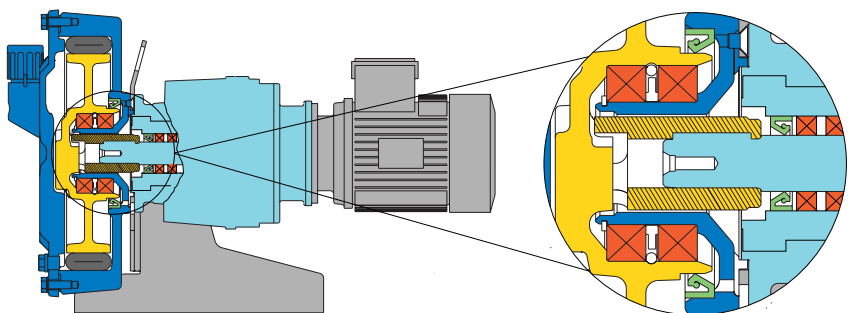
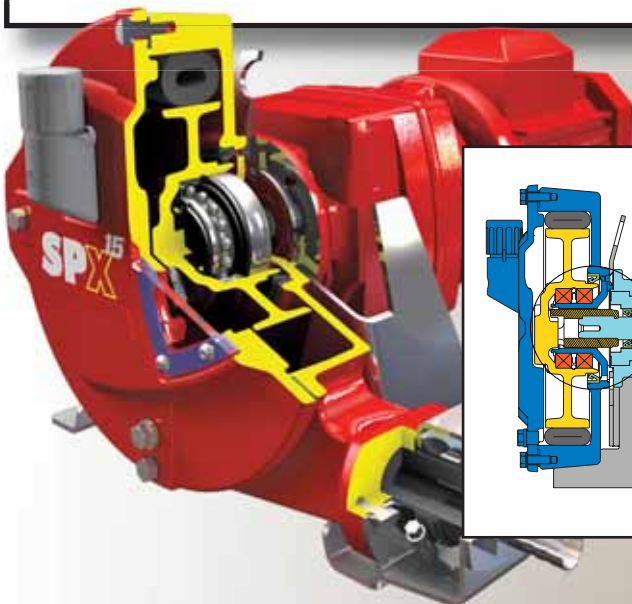
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SPX10 SPX15

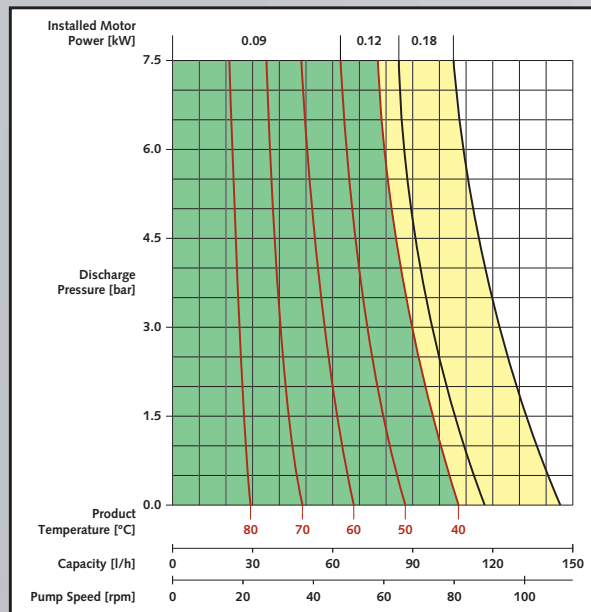


Type	A	A1	B	C	D	E	F	G	H	H1	H2 max	J	K	L max	L1	L2 max	M	N	O	P
SPX10	337	311	171	62	116	Ø16	235	265	225	127	319	78	51	522	46	398	150	65	25	Ø12
SPX15	427	431	230	63	195	Ø20	285	315	304	167	359	82	61	526	46	398	150	75	25	Ø12



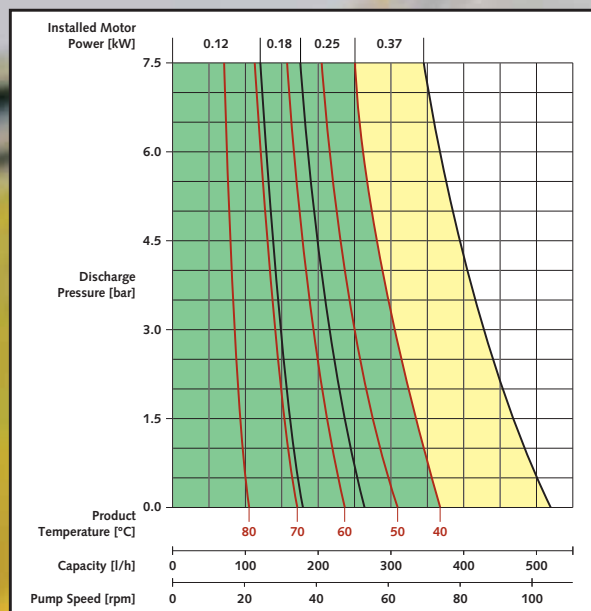
SPX10

- Maximum flow: 145 L/h
- Capacity: 0.022 L/rev
- Maximum discharge pressure: 750 kPa [7.5 bar]
- Inner diameter pump element: Ø 10 mm
- Lubricant required: 0.25 litres
- Minimum starting torque: 47 Nm



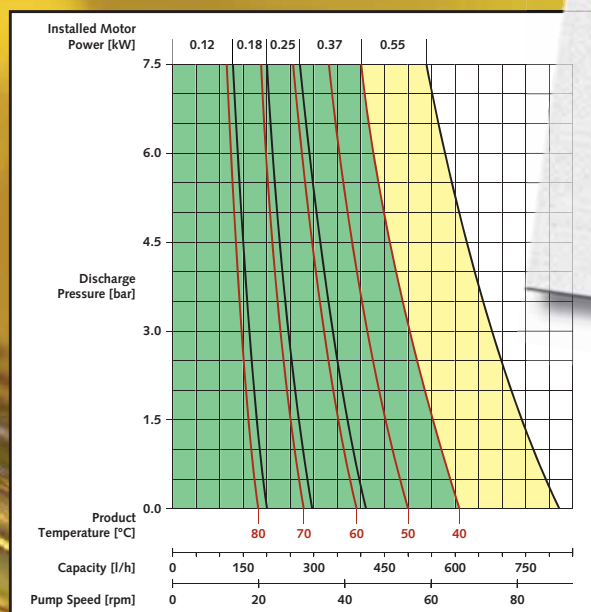
SPX15

- Maximum flow: 520 L/h
- Capacity: 0.083 L/rev
- Maximum discharge pressure: 750 kPa [7.5 bar]
- Inner diameter pump element: Ø 15 mm
- Lubricant required: 0.5 litres
- Minimum starting torque: 60 Nm



SPX15, with 20 mm pump element

- Maximum flow: 820 L/h
- Capacity: 0.152 L/rev
- Maximum discharge pressure: 750 kPa [7.5 bar]
- Inner diameter pump element: Ø 20 mm
- Lubricant required: 0.5 litres
- Minimum starting torque: 85 Nm



NOTE: READ 'HOW TO USE THE CURVES' ON PAGE 23.

Continuous Duty
Intermittent Duty

Maximum 2 hours of operation followed by a minimum 1 hour stop

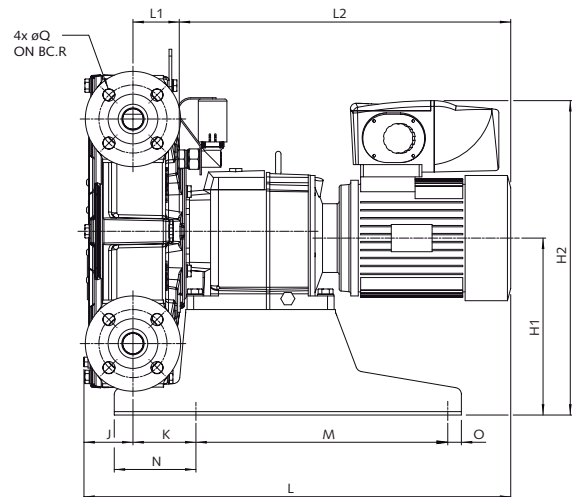
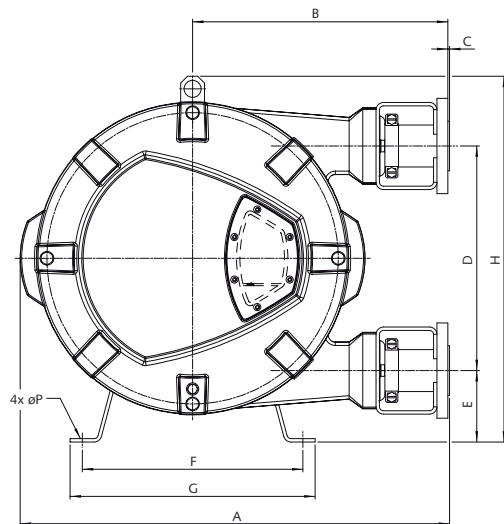


During the manufacture of high quality salad dressings and mayonnaise, the way in which a SPX40 pump handled viscosities up to 30,000 cP (and particulates including mustard seeds, whole 'mini' capers, kibbled onion, chopped olives, rosemary, and diced red bell peppers) was much preferred to the performance of air-operated diaphragm pumps. Low-shear pumping, which prevents product thinning or damage to particulate ingredients in the dressings was regarded as one of the main peristaltic benefits.

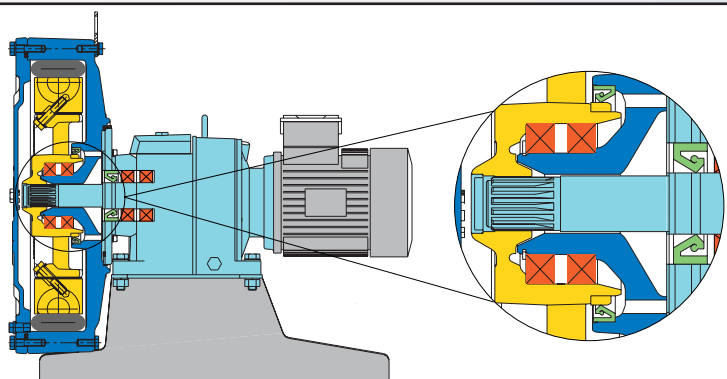
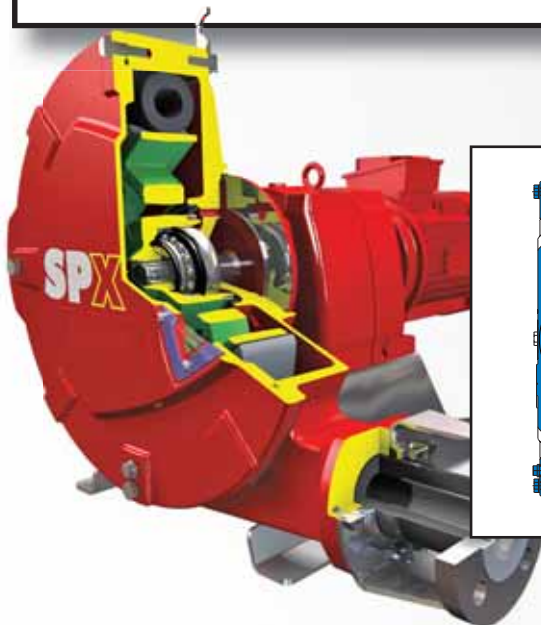
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SPX25 SPX32

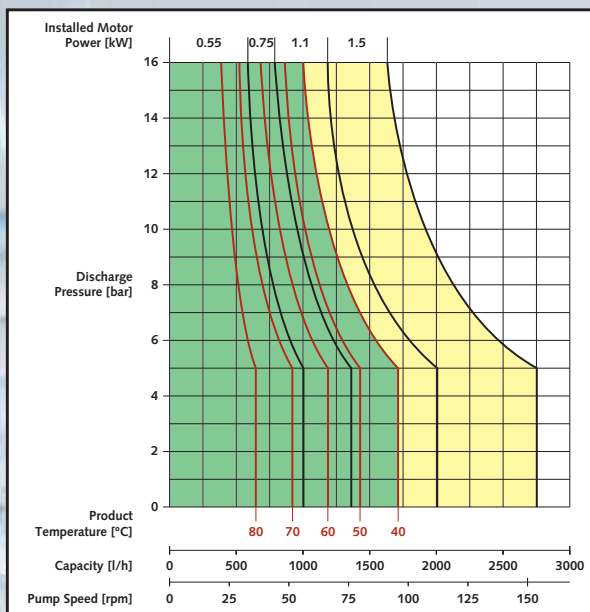


Type	A	B	C	D	E	F	G	H	H1	H2 max	J	K	L max	L1	L2 max	M	N	O	P	Q	R
SPX25	521	304	2.5	264	98	279	315	460	222	424	66	97	588	58	464	305	120	15	Ø12	Ø14	85
SPX32	631	375	2.5	330	105	324	360	538	260	467	72	93	684	68	544	370	120	20	Ø12	Ø18	100



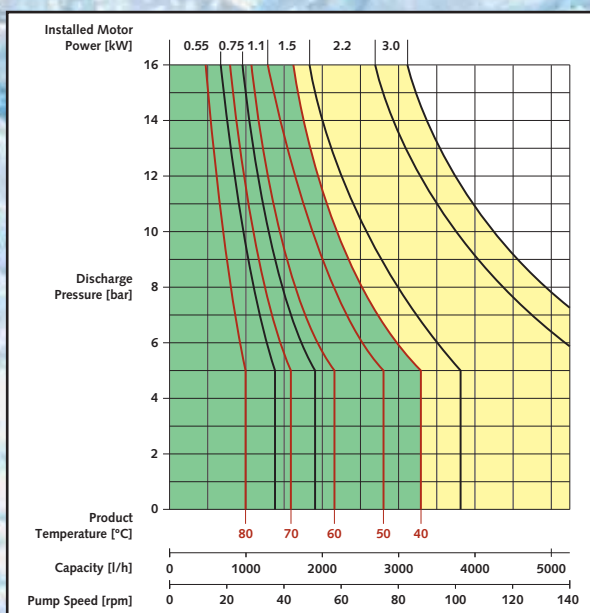
SPX25

- Maximum flow: 2,740 L/h
- Capacity: 0.300 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 25 mm
- Lubricant required: 1,5 litres
- Minimum starting torque: 115 Nm



SPX32

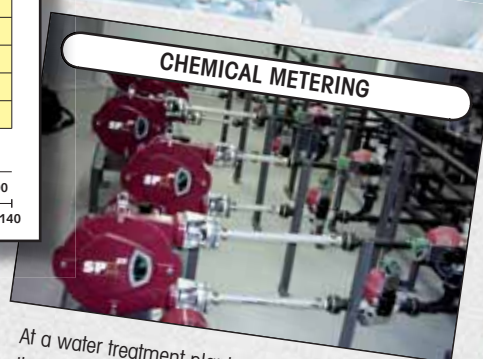
- Maximum flow: 5,250 L/h
- Capacity: 0.625 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 32 mm
- Lubricant required: 3.5 litres
- Minimum starting torque: 210 Nm



NOTE: READ 'HOW TO USE THE CURVES' ON PAGE 23.

- Continuous Duty
- Intermittent Duty

Maximum 2 hours of operation followed by a minimum 1 hour stop

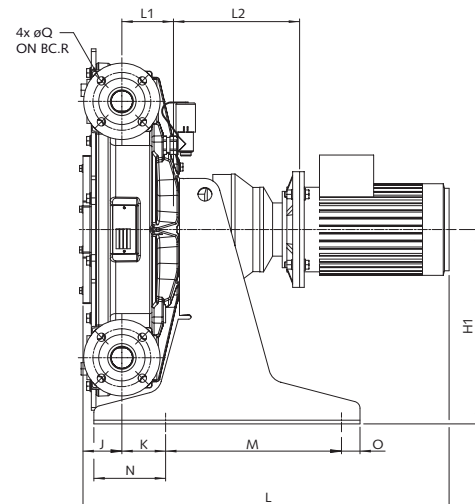
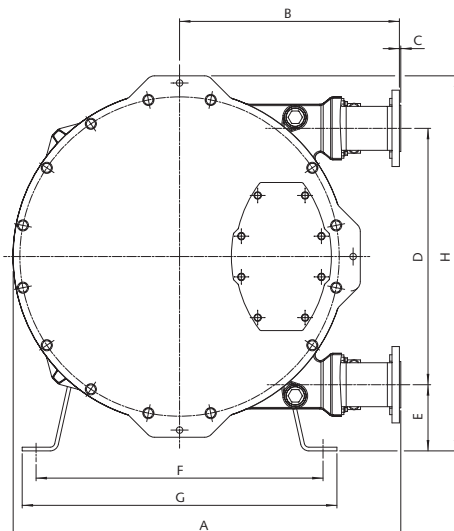


At a water treatment plant, influent is received through several very long pipelines. After preliminary processing, the influent goes through a scrub-down to reduce hydrogen sulphide content from as much as 250 ppm to less than 0.1 ppm. Diaphragm and PC pumps were replaced after experiencing long downtimes, high maintenance costs and poor performance. Bredel hose pumps are used in this process to transfer and meter sodium hypochlorite, sodium hydroxide, and sodium bisulphate.

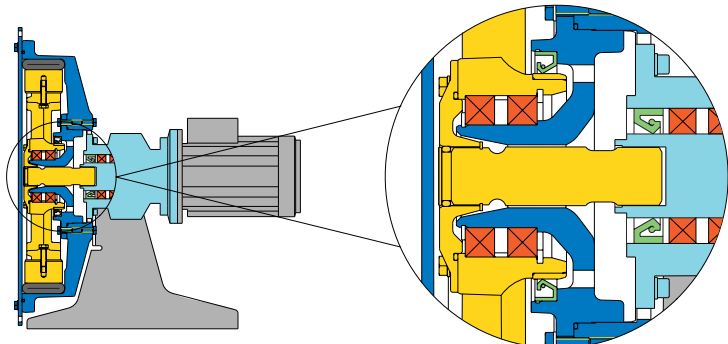
Bredel



SPX40 SPX50

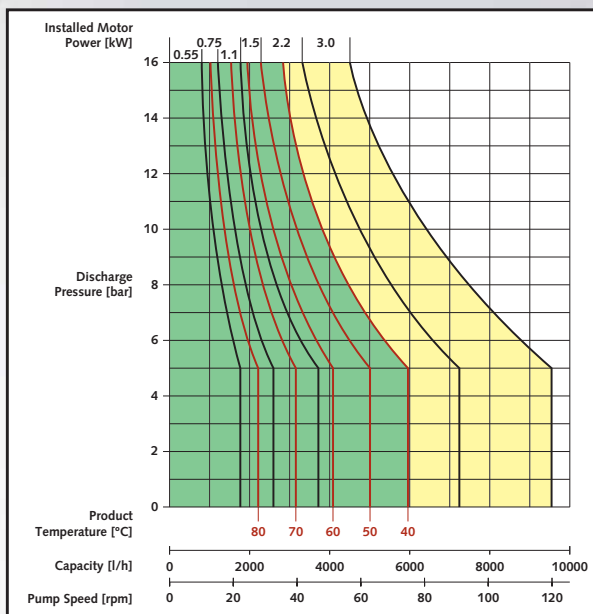


Type	A	B	C	D	E	F	G	H	H1	J	K	L max	L1	L2 max	M	N	O	P	Q	R
SPX40	705	412	2.5	430	110	490	540	643	325	73	84	711	91	234	300	120	30	Ø18	Ø18	110
SPX50	838	475	3	554	143	620	680	811	420	83	95	840	112	312	380	155	40	Ø18	Ø18	125



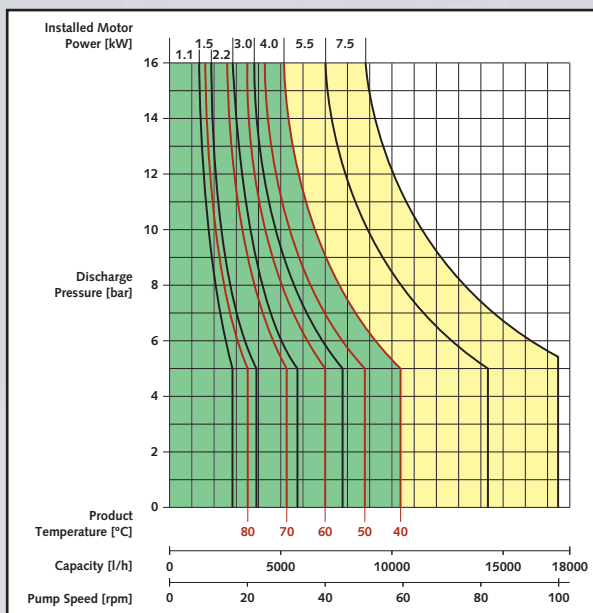
SPX40

- Maximum flow: 9,600 L/h
- Capacity: 1.33 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 40 mm
- Lubricant required: 5 litres
- Minimum starting torque: 320 Nm
- CIP version available as SP model, for easy clean-in-place



SPX50

- Maximum flow: 17,500 L/h
- Capacity: 2.92 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 50 mm
- Lubricant required: 10 litres
- Minimum starting torque: 620 Nm
- CIP version available as SP model, for easy clean-in-place



NOTE: READ 'HOW TO USE THE CURVES' ON PAGE 23.

Continuous Duty
Intermittent Duty

Maximum 2 hours of operation followed by a minimum 1 hour stop

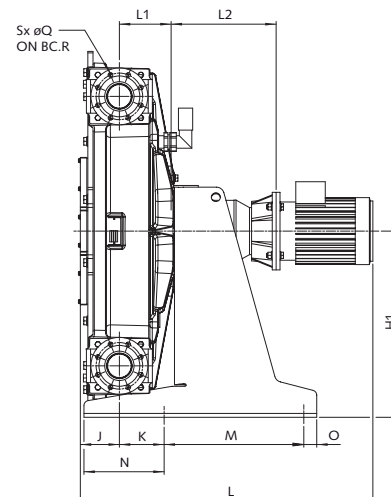
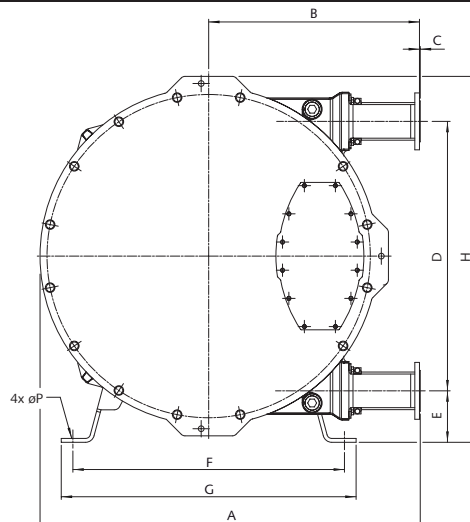


A plant that produces fine quality bone china was using a two-stroke reciprocating type piston pump to transfer slip from the slip house to the casting shop. Due to entrained air in the slip, pinholes were forming in the surface of the cast body, which was impairing the quality of the finished product. The slip is thixotropic and highly abrasive. Changing over to a peristaltic pump eliminated this problem. Its glandless construction prevented the ingress of air.

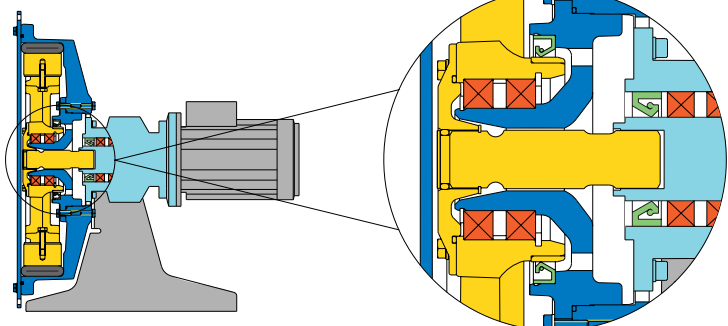
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SPX65 SPX80 SPX100

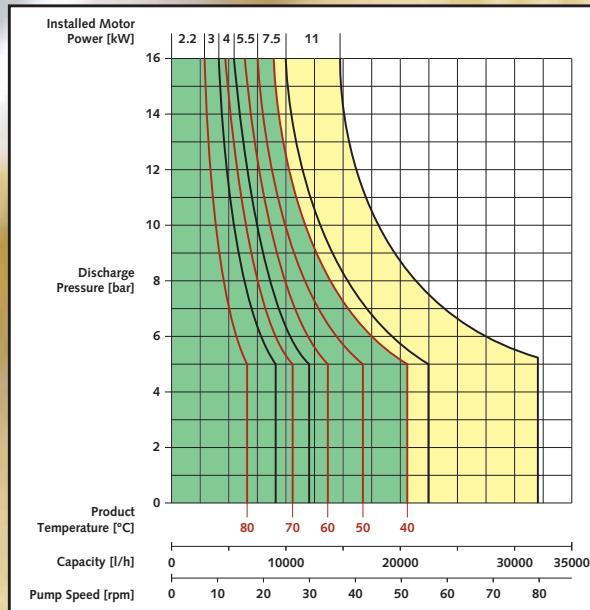


Type	A	B	C	D	E	F	G	H	H1	J	K	L max	L1	L2 max	M	N	O	P	Q	R	S
SPX65	1058	580	3	746	152	680	740	1036	525	104	137	1241	141	517	415	220	50	Ø18	Ø18	145	4
SPX80	1257	700	4	876	182	900	990	1218	620	124	153	1351	166	582	525	275	50	Ø22	Ø18	160	8
SPX100	1468	813	3	1042	199	1050	1140	1415	720	151	173	1392	200	489	540	310	50	Ø22	Ø18	180	8



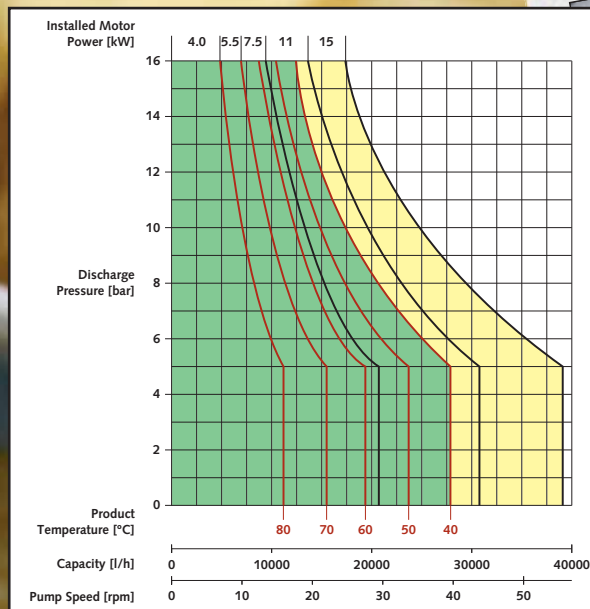
SPX65

- Maximum flow: 32,200 L/h
- Capacity: 6.7 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 65 mm
- Lubricant required: 20 litres
- Minimum starting torque: 1150 Nm
- Duplex version also available



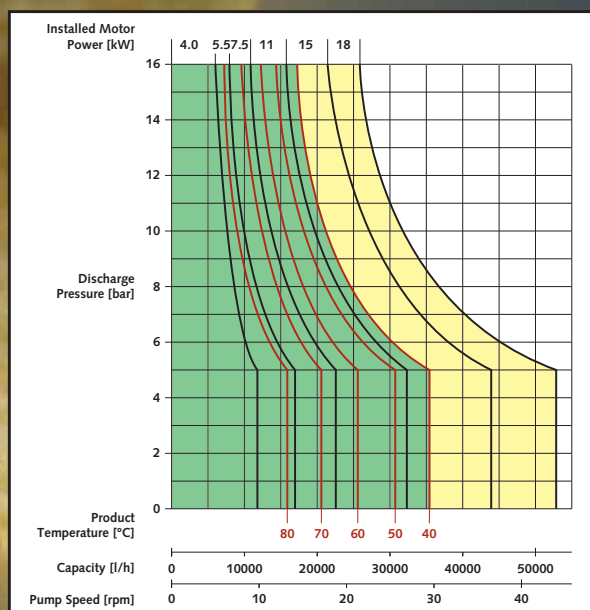
SPX80

- Maximum flow: 39,100 L/h
- Capacity: 11.7 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 80 mm
- Lubricant required: 40 litres
- Minimum starting torque: 2000 Nm
- Duplex version also available



SPX100

- Maximum flow: 52,900 L/h
- Capacity: 20.0 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 100 mm
- Lubricant required: 60 litres
- Minimum starting torque: 3100 Nm
- Duplex version also available



NOTE: READ 'HOW TO USE THE CURVES' ON PAGE 23.

Continuous Duty
Intermittent Duty

Maximum 2 hours of operation followed by a minimum 1 hour stop

SLURRIES

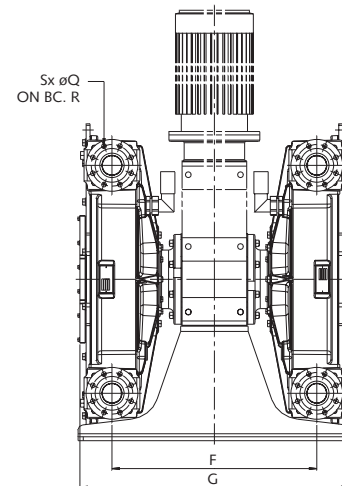
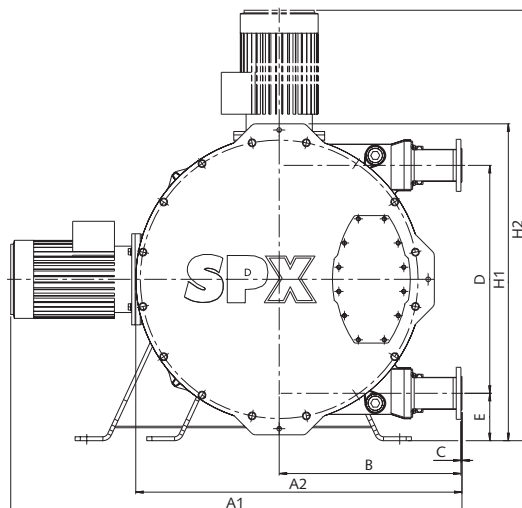


Peristaltic pumps can efficiently handle abrasive waste slurry consisting of potato peelings, water and sand. Progressive cavity pumps as previously used by the company proved to be too expensive in maintenance cost due to the abrasive nature of the slurry.

Bredel



SPX65D SPX80D SPX100D



Type	A1 max	A2	B	C	D	E	F	G max	H1	H2 max	Q	R	S
SPX65D	*	*	580	3	746	197	788	996	1081	*	Ø18	145	4
SPX80D	*	*	700	4	876	227	838	1085	1263	*	Ø18	160	8
SPX100D	*	*	813	3	1042	224	906	1208	1440	*	Ø18	180	8

* For more information, please consult your Bredel representative. Duplex executions are also available for the series SPX10 up to SPX50.

- Very limited floor space required.



SPX65D

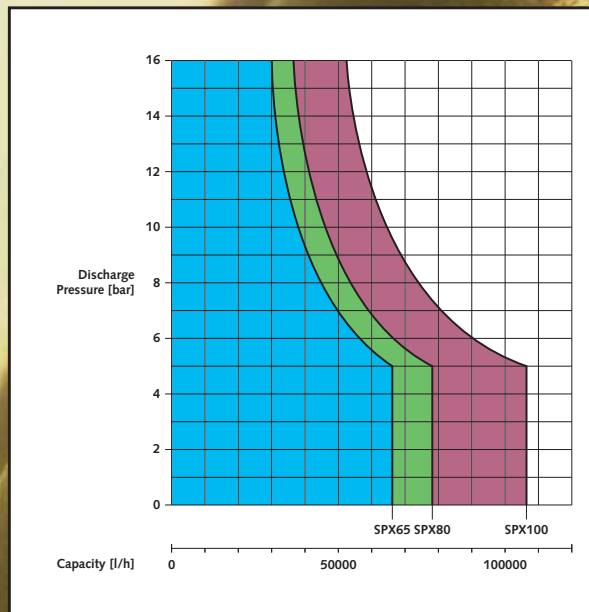
- Maximum flow: 64,400 L/h
- Capacity: 13.4 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 65 mm
- Lubricant required: 40 litres
- Minimum starting torque: 2,000 Nm

SPX80D

- Maximum flow: 78,200 L/h
- Capacity: 23.4 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 80 mm
- Lubricant required: 80 litres
- Minimum starting torque: 3,400 Nm

SPX100D

- Maximum flow: 105,800 L/h
- Capacity: 40,0 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 100 mm
- Lubricant required: 120 litres
- Minimum starting torque: 5,300 Nm



A large mining company needed several pumps to transfer sludge with flow rates up to 68 m³/h. The unique duplex hose pump was the solution for this application. This unit has two pump heads mounted on a single drive. With the pump shoes positioned at 90 degree intervals, the pump is capable of producing higher flow rates than a single pump, but with much smaller power and space requirements than two pumps.

Bredel



PetroProof:

first heavy duty hose pump ever for hydrocarbons and oils



The hose pump is only as good as its pump element with respect to the pump element's mechanical-

dynamical- and fatigue properties, as well as its resistance to chemicals. By carefully designing the pump element, an optimum can be achieved in these often-conflicting parameters. Up until now rubber based compounds have been used to manufacture the pump elements.

HYDROCARBONS AND OIL PRODUCTS

'Petrochemicals' however, are difficult to handle using the various rubber based compounds. The NBR and CSM type of compounds might just be able to cope with small traces of these products, but in most cases the chemicals will attack the pump element. Commonly used oil resistant rubbers, such as 'fluor elastomers', have poor dynamical properties resulting in very low lifetimes. The new PetroProof pump element is hydrocarbons and oil resistant and has the ideal properties for performing as a peristaltic pump element.

UP TO 825 LITRES/HOUR

The PetroProof hose pump elements are available for the Bredel pump types SP/10, SP/15, SP/15 with 20 mm pump element and SP/25.

Flow rates up to 825 L/h with pressures up to 750 kPa [7.5 bar] are currently possible.

Technical specification

PetroProof pumps	series		10-10	10-15	15-15	15-20	25-25
Inner diameter pump element	[mm]		10	15	15	20	25
Flow	[L/h]	①	25-130	45-215	100-380	145-540	330-825
Capacity per revolution	[L/rev]	②	0.029	0.048	0.084	0.12	0.28
Pump speed	[rpm]		15-75	15-75	20-75	20-75	20-50
Starting torque	[Nm]	③	120	120	300	300	1000
Running torque 750 kPa	[Nm]	④	18	22	37	50	100
Shaft diameter	[mm]	⑤	18	18	22	22	30
Maximum discharge pressure	[kPa]	750 [7.5 bar]					
Maximum product temperature	[°C]	40*					

* When product temperature > 40 °C, please consult your Bredel representative.

How to select your PetroProof pump?

- Select pump type (required capacity) [L/h] ①
- Calculate the number of revolutions (required capacity [L/h] divided by the capacity per revolution [L/rev] divided by 60 [min] ②
- Select your drive; consider calculated number of revolutions & starting torque ③ & running torque ④
- Select a suitable coupling; calculated number of revolutions & starting torque ③ & running torque ④ & shaft dimension of pump ⑤ and drive.



A producer of polycarbonate resin pellets, was experiencing problems pumping effluent containing plastic waste strips up to 25 cm long. The strips had become trapped in the double-diaphragm pump the company was using to transport the effluent to a filter press. Constantly blocked, the diaphragm pump was, in effect, acting as a filter. The Bredel hose pump now transfers the effluent easily, virtually eliminating downtime. It has also improved the effectiveness of the filter press by as much as 35 times.

Bredel

The answer for aggressive liquids: **SPX DuCoNite®**

The SPX **DuCoNite®** pump is used for the most challenging applications. A high-tech surface-protection method has rendered the pump ultra-resistant to aggressive liquids. The **DuCoNite®** hose pumps are available in four pump sizes - with capacities up to 5,250 L/h and pressures up to 1,600 kPa [16 bar].

The **DuCoNite®** hose pump reliably handles a variety of harsh materials, such as sodium hypochlorite, titanium dioxide, sodium hydroxide, catalytic agents, sulphuric acid, lime slurry, acidic liquids, solvents and resins.

For graphs and dimensional drawings, please see the pages in this brochure that refer to the specific SPX10-SPX15 and SPX25-SPX32 series.

Please consult your Bredel representative for the optimal selection for your specific application.

SPX10 **DuCoNite®**

- Maximum flow: 145 L/h
- Maximum discharge pressure: 750 kPa [7.5 bar]

SPX15 **DuCoNite®**

- Maximum flow: 520 L/h
- Maximum discharge pressure: 750 kPa [7.5 bar]

The SPX15 **DuCoNite®** with a 20 mm pump element

- Maximum flow: 820 L/h
- Maximum discharge pressure: 750 kPa [7.5 bar]

The SPX25 **DuCoNite®**

- Maximum flow: 2,740 L/h
- Maximum discharge pressure: 1,600 kPa [16 bar]

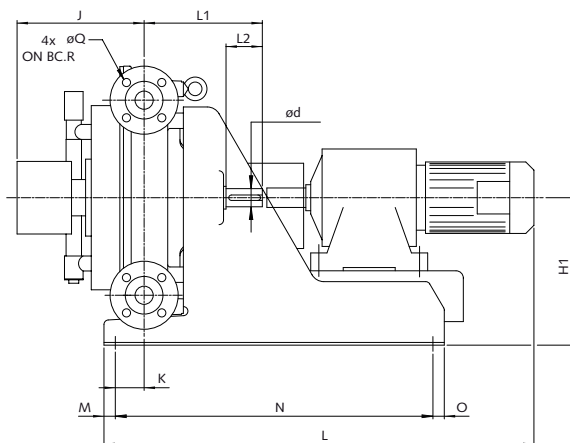
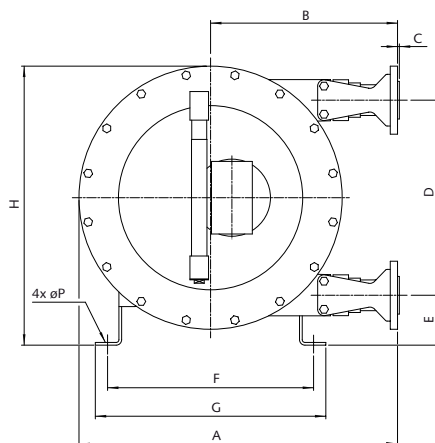
The SPX32 **DuCoNite®**

- Maximum flow: 5,250 L/h
- Maximum discharge pressure: 1,600 kPa [16 bar]



Cleaning-In-Place hose pumps

Series SP/40 and SP/50



			ANSI 316	PVC/PP/PVDF																	
Type	A	B	C	C	D	Ødxl	E	F	G	H	H1	J _{max}	K	L	L1	L2 _{max}	M	N	O	P	
SP/40	702	412	2,5	10	430	40k6x80	110	454	508	615	325	414	64	*	260	674	700	25	25	18	
SP/50	835	475	3	10	554	50k6x100	123	444	496	760	400	433	78	*	325	758	870	25	25	18	

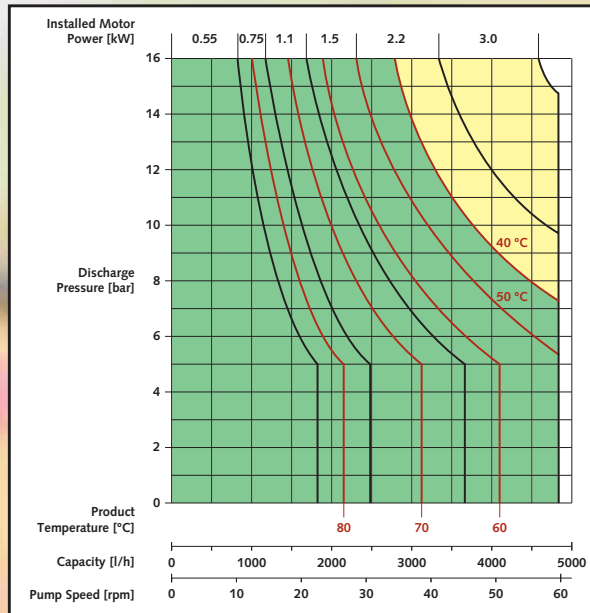
The SP-models 40 and 50 can be supplied with the retracting shoes option for non-intrusive cleaning, for CIP-applications.

FEATURES

- ✓ Recommended for sanitary processes, or other applications requiring regular cleaning of the process lines
- ✓ High-fluid speed for pump and system C.I.P cleaning
- ✓ Maximum sterilization temperature 120 °C
- ✓ EHEDG certified
- ✓ Food approved pump element available
- ✓ NSF® registered food grade lubricant
- ✓ Stainless steel sanitary connectors available
- ✓ Process pressures up to 1,600 kPa [16 bar]
- ✓ Shoes on the rotor retract automatically for cleaning of pump element inside
- ✓ Cam actuated electrically, pneumatically or manually

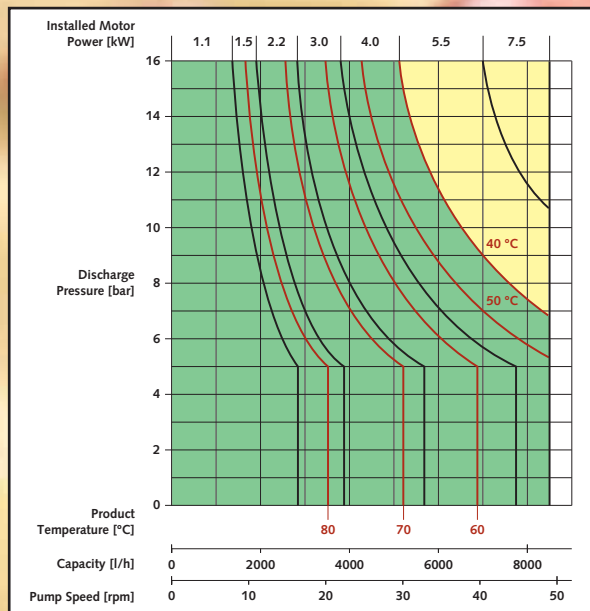
SP/40 CIP

- Maximum flow: 4,800 L/h
- Capacity: 1.33 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 40 mm
- Lubricant required: 10 litres
- Minimum starting torque: 320 Nm



SP/50 CIP

- Maximum flow: 8,500 L/h
- Capacity: 2.92 L/rev
- Maximum discharge pressure: 1,600 kPa [16 bar]
- Inner diameter pump element: Ø 50 mm
- Lubricant required: 20 litres
- Minimum starting torque: 620 Nm



NOTE: READ 'HOW TO USE THE CURVES' ON PAGE 23.

- Continuous Duty
- Intermittent Duty

Maximum 2 hours of operation followed by a minimum 1 hour stop



A canning operation uses a Bredel hose pump to transfer peaches from holding tanks to its canning line. The company had been using centrifugal pumps, but was experiencing a high percentage of damaged peaches. The soft pumping action of the peristaltic pump eliminates shear and has dramatically reduced the amount of damaged or unacceptable production. The company also likes the dependability, low maintenance and ability of the pump to run 24/7 throughout the entire canning season.

Bredel

THE ACCESSORIES TO FULFIL ANY LIQUID TRANSFER DEMAND

1. DISCHARGE PULSATION DAMPER

This hose pump accessory operates in the discharge line by means of a reinforced flexible pump element within a steel cylinder, surrounded by a volume of compressed air or gas. The damper unit can also be used as a pressure relief and injection valve.

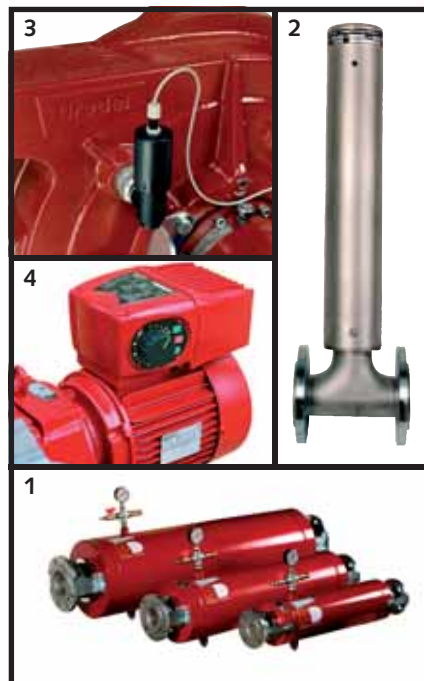
THE PULSATION DAMPER
ADVANTAGES INCLUDE:

- eliminates up to 90% of the pump discharge pulsations
- protects pump, pipeline and instrumentation
- reduces pipe vibration, hammer and noise
- increases pump performance and pump element life
- increases efficiency of the pump installation
- in-line, through bore easy to clean
- simple installation, can be mounted both horizontally and vertically
- flange connections in accordance to DIN, ANSI or JIS

2. INLET PULSE ACCUMULATOR (IPA)

The installation of this hose pump accessory on the suction side is only recommended to eliminate the impulse losses and to achieve optimum pump element life. When the inlet conditions cannot be improved, the solution is to

mount the Inlet Pulse Accumulator in a vertical position against the pump inlet flange. Findings show that positive and negative pressure spikes in the suction line during pump operation can be effectively eliminated, resulting in quieter operation and extended pump element life. For a specific recommendation, please contact your representative. Please also supply the application data.



3. THE LUBRICANT LEVEL CONTROL

The lubricant level control will switch the pump off in case of a high liquid level. If a pump element fails, the product will

be contained within the pump. The lubricant level control sensor plugs directly into the breather and senses a high lubricant/product mixture level inside the housing. This in turn will activate a contact relay, which will switch the pump off.

4. BREDEL VFD; THE VARIABLE FREQUENCY DRIVE

If the pump capacity has to be flexible or the process needs to be set, it can be achieved by using the Bredel VFD. The Bredel VFD is a fully integrated frequency inverter that has:

- a button starting clockwise
- a button to start counterclockwise
- a button to stop, and a large knob to set the speed of the pump

This pump control is self-evident. The VFD is fully set by Bredel and is ready to use. Only the power supply needs to be connected. This feature is very much appreciated during loading and unloading of the pump element.

VACUUM ASSIST

For difficult suction conditions and high viscosity fluids, Bredel Hose Pumps can also use the vacuum assist option to create an under pressure in the pump housing. This under pressure helps the pump element to recover and to increase its fill capacity.

Select A Bredel Hose Pump

File Edit Reset SP/SPX Help

System Arrangement

Model	Rpm	Flow	Inlet	Disch.	Net kW
SP/10	0,0	0,0	-165,90	333,82	0,00
SP/15	0,0	0,0	-24,23	50,48	0,00
SP/25	138,9	2500,0	0,63	5,91	1,46
SP/32	66,7	2500,0	0,73	2,15	0,87
SP/40	31,3	2500,0	0,52	0,96	0,75
SP/50	14,3	2500,0	0,70	0,61	0,80
SP/65	6,3	2500,0	0,75	0,51	1,50
SP/80	3,6	2500,0	0,75	0,48	2,00
SP/100	2,1	2500,0	0,75	0,47	2,00
2SP/60	1,8	2500,0	0,75	0,47	4,00
2SP/100	1,0	2500,0	0,75	0,46	4,00

☐ Inlet Bar.a
☐ Disch. Bar

Flow rate Required

2500,000 Max Min, %
 2500,000 Min

Housing Pressure

100 Amend Pipe Sizes

Fluid Data

Supply Container: ☐ Above Pump ☒ Below Pump
 Pump Discharge: ☐ 1. Horizontal Top ☐ 2. Horizontal Btm ☐ 3. Upwards ☐ 4. Downward
 Discharge Container: ☐ Above Pump ☐ Below Pump
☐ Inlet Pulse Acc. ☐ Pulsation Damper

Dimensions: ☒ metres ☐ Feet ☐ Inches
 Pressure Units: ☒ Bar ☐ kPa ☐ Psi

Inlet Line		Discharge Line	
Actual Line Length	5,00	Actual Line Length	10,00
Equip. Press. Drop	0,00	Equip. Press. Drop	0,00
Inlet Fittings	None	Disch. Fittings	None

BRAINS

All Bredel Application Engineers around the globe are factory trained, highly experienced, and equipped with Bredel's computerised pump sizing program BRAINS to accurately specify pump and pipe sizes, layout, speeds, pump element material, and every other factor necessary to optimise the efficiency of each installation.

How to use the curves

1. Determine the effect of the product temperature: if $> 40^{\circ}\text{C}$ - see note below.
2. Determine the required capacity (relative to the rpm).
3. Determine the discharge pressure.
4. Select the motor power (to identify the motor power, follow the selected area up to the top axis).

Note: The area of continuous operation diminishes with increased product temperatures. For product temperatures $> 40^{\circ}\text{C}$, the area of continuous operation reduces to the corresponding red temperature line.



Breidel: global supplier of industrial high pressure hose pumps.

Breidel

Breidel Hose Pumps B.V.

A member of the Spirax-Sarco Engineering Group

Sluisstraat 7. P.O. Box 47
NL-7490 AA Delden. The Netherlands
Tel.: +31 74 3770000. Fax: +31 74 3761175
Email: hosepumps@breidel.com
Internet: www.breidel.com

YOUR REPRESENTATIVE



t (08) 8234 2090
f (08) 8443 4184
amepumps.com.au

Head Office | 65 -- 67 Ashwin Parade, Torrensville, South Australia, 5031
Northern Service Centre | Lot 141 Industry Drive, Whyalla Playford, 5600
ABN 24 250 583 833 | AU736-QC-HSE | ISO 9001:2008 | TQCSI QHSE:2013 | sales@asseteng.com.au

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