

# 1.1 ProMinent® Beta b 4 & 5 Metering Pumps

1.1.1

ProMinent® Beta



- Capacity range 0.74 - 32 l/h, 2 - 25 bar
- Continuous stroke length adjustment from 0 - 100 % (recommended 30-100%)
- Supplied in PP, PVC, Acrylic/PVC, PVDF, PTFE, stainless steel
- Patented coarse/fine, manual bleeding on PP, PVC and PVT Acrylic/PVC versions
- Self-deaerating dosing head type in PP and Plexi/PVC
- HV liquid end for highly viscous media
- 10-setting stroke frequency adjustment from 10 - 100 %
- External control via volt-free contacts
- External contact input with pulse control as standard 1:64 to 64:1
- Connector for dual-setting level switch
- 3 LED display for operation, warning and fault indication
- Wide range power supply 100-230 volt 50/60 Hz

The Beta range represents a new generation of ProMinent® solenoid diaphragm Metering Pumps. These micro-processor controlled pumps set new standards of operating safety and versatility: power surge compensation, wide-ranging power-supply adaptability, triple LED operating-status display and flexible control options, including external contact, volt-free ON/OFF control, and external frequency adjustment via volt-free contacts make these pumps ideal for the water treatment industry.

The 10 settings used to adjust dosing-frequency, along with “external”, “stop” and “test” settings are selected using a multi-function knob. Dosing heads are specifically designed in materials which withstand the chemicals used in this field: acids, alkalis, disinfectants, flocculation additives. In “test” mode, the pump operates at maximum frequency. On release, the spring-loaded button returns to “stop”. Variable stroke length adjustment enables precise selection of dosing capacity.

These settings options result in accurate dosing, and precise reproducibility of the required frequency. High frequencies ensure thorough blending of chemicals. A longer stroke length and correct installation ensures reliable dosing of highly viscous liquids. Self-deaerating dosing heads are available for gaseous chemicals. To complete the safety package we offer an optional dual-setting level switch to monitor chemical levels in containers. The hard-wearing drive systems for these solenoid diaphragm pumps meet the usual ProMinent® high standards of quality. The housing is made from glass-fibre reinforced PPE and carries IP 65 protection.

Foot and injection valves and 7m tube pack are included as standard, (PP/PVC only).

This universal pump offers an excellent cost of ownership ratio.

# Beta b ProMinent® Metering Pumps

## Technical Data

Beta® pump type	Max. Pump Capacity at Maximum Back Pressure			Max. Pump Capacity at Medium Back Pressure			Stroke Freq.	Connector Sizes Outer Ø x Inner Ø	Suction Lift**	Delivery Weight	
	bar	l/h	ml/ stroke	bar	l/h	ml/ stroke				PP, NP, PC, TT	SS
	bar	l/h	ml/ stroke	bar	l/h	ml/ stroke	strokes/ min.	mm	mWC	approx. kg	
BT4b 1000	10	0.74	0.069	5.0	0.82	0.076	180	6 x 4	6.0**	2.9	3.6
BT4b 0700 ***	7	0.8	0.074	3.5	0.8	0.074	180	6 x 4	6.0**	2.9	3.6
BT4b 0400 ***	4	0.84	0.078	2.0	0.84	0.078	180	6 x 4	6.0**	2.9	3.6
BT4b 2001	20	0.96	0.089	10.0	1.5	0.13	180	6 x 3	6.0**	3.1	3.9
BT4b 1601	16	1.1	0.10	8.0	1.4	0.13	180	6 x 4	6.0**	3.1	3.9
BT4b 1001 ***	10	1.3	0.12	5.0	1.5	0.14	180	6 x 4	3.0**	3.1	3.9
BT4b 0701 ***	7	1.4	0.13	3.5	1.5	0.14	180	6 x 4	2.0**	3.3	4.4
BT4b 0401 ***	4	1.5	0.14	2.0	2.0	0.18	180	6 x 4	6.0**	2.9	3.6
BT4b 2002	20	1.7	0.16	2.8	0.26	0.13	180	6 x 3	6.0**	2.9	3.6
BT4b 1602	16	2.2	0.20	8.0	2.5	0.24	180	6 x 4	6.0**	2.9	3.6
BT4b 1002 ***	10	2.4	0.22	5.0	2.8	0.26	180	6 x 4	6.0**	3.1	3.9
BT4b 0702 ***	7	2.6	0.24	3.5	3.1	0.29	180	6 x 4	6.0**	3.1	3.9
BT4b 0402 ***	4	2.8	0.26	2.0	3.9	0.36	180	6 x 4	3.0**	3.1	3.9
BT4b 1604	16	3.6	0.33	8.0	4.3	0.40	180	6 x 4	2.0**	3.3	4.4
BT4b 1004 ***	10	3.9	0.36	5.0	4.7	0.44	180	6 x 4	5.0**	2.9	3.6
BT4b 0704 ***	7	4.2	0.39	3.5	5.1	0.47	180	6 x 4	5.0**	2.9	3.6
BT4b 0404 ***	4	4.5	0.42	2.0	5.6	0.52	180	6 x 4	5.0**	2.9	3.6
BT4b 0708	7	7.1	0.66	3.5	8.4	0.78	180	8 x 5	6.0**	3.1	3.9
BT4b 0408 ***	4	8.3	0.77	2.0	10.0	0.93	180	8 x 5	4.0**	3.1	3.9
BT4b 0413	4	12.3	1.14	2.0	14.2	1.31	180	8 x 5	3.0**	2.9	3.6
BT4b 0220	2	19.0	1.76	1.0	20.9	1.94	180	12 x 9	2.0**	2.9	3.6
BT5b 2504	25	2.9	0.27	12.5	3.7	0.34	180	8 x 4	4.0**	3.1	3.9
BT5b 1008	10	6.8	0.63	5.0	8.3	0.76	180	8 x 5	3.0**	3.3	4.4
BT5b 0713	7	11.0	1.02	3.5	13.1	1.21	180	8 x 5	3.0**	4.5	5.3
BT5b 0420	4	17.1	1.58	2.0	19.1	1.77	180	12 x 9	3.0**	4.7	5.8
BT5b 0232	2	32.0	2.96	1.0	36.2	3.35	180	12 x 9	2.0**	5.1	6.6

### Beta b® Metering Pumps with self-bleeding dosing head \*

BT4b 1601	16	0.59	0.55	8.0	0.80	0.072	180	6 x 4	1.8**	2.9	–
BT4b 1001	10	0.72	0.067	5.0	0.60	0.08	180	6 x 4	2.1**	2.9	–
BT4b 0701	7	0.84	0.078	3.5	1.12	0.10	180	6 x 4	2.7**	3.1	–
BT4b 0401	4	0.90	0.083	2.0	1.2	0.11	180	6 x 4	2.0**	3.1	–
BT4b 2002	20	0.78	0.07	10.0	1.8	0.17	180	6 x 3	2.0**	3.1	–
BT4b 1602	16	1.4	0.13	8.0	1.74	0.174	180	6 x 4	2.0**	3.3	–
BT4b 1002	10	1.7	0.16	5.0	2.0	0.072	180	6 x 4	1.8**	2.9	–
BT4b 0702	7	1.8	0.17	3.5	2.2	0.20	180	6 x 4	2.1**	2.9	–
BT4b 0402	4	2.1	0.19	2.0	2.5	0.23	180	6 x 4	2.7**	3.1	–
BT4b 1604	16	2.7	0.25	8.0	3.6	0.33	180	6 x 4	2.0**	3.1	–
BT4b 1004	10	3.3	0.30	5.0	3.9	0.36	180	6 x 4	2.0**	3.1	–
BT4b 0704	7	3.6	0.33	3.5	4.0	0.37	180	6 x 4	2.0**	3.3	–
BT4b 0404	4	3.9	0.36	2.0	4.2	0.39	180	6 x 4	1.8**	2.9	–
BT4b 0708	7	6.6	0.61	3.5	7.5	0.69	180	8 x 5	2.1**	2.9	–
BT4b 0408	4	7.5	0.64	2.0	8.1	0.77	180	8 x 5	2.7**	3.1	–
BT4b 0413	4	10.8	1.0	2.0	12.6	1.17	180	8 x 5	2.0**	3.1	–
BT4b 0220	2	16.2	1.50	1.0	18.0	1.67	180	12 x 9	2.0**	3.3	–
BT5b 1008	10	6.3	0.58	5.0	7.5	0.69	180	8 x 5	3.0**	4.5	–
BT5b 0713	7	10.5	0.97	3.5	12.3	1.14	180	8 x 5	2.5**	4.5	–
BT5b 0420	4	15.6	1.44	2.0	17.4	1.61	180	12 x 9	2.5**	4.7	–

**Beta® pumps with liquid ends for highly viscous media have 10-20 % less metering capacity and are not self-priming. G 3/4-DN connector with d16-DN10 nozzle union.**

\* The values given in the capacity data tables are guaranteed minimum values, using medium hardness water at room temperature. Bypass bleed size 6x4 all sizes.

\*\* Suction lift readings when liquid end and suction tubing are full, or for self-degassing liquid end when the suction tubing contains air.

\*\*\* Reduced pressure 4, 7 and 10 bar pump types are available for specialised applications, e.g. for use in swimming pool systems.

\*\*\*\* 6 mm inner diameter in stainless steel version.

# Beta b ProMinent® Metering Pumps

## 1.1.3 Beta 4 and Beta 5 ProMinent® Metering Pump

### BT4b Beta version b

<b>BT4b 1000, 1601, 1602, 1604</b>	PP	<b>BT5b 1008, 0713, 0420</b>	PP
also <b>2001, 1001, 0701, 0401</b>	PV	also <b>2504</b>	PV
<b>2002, 1002, 0702, 0402</b>	NP		NP
<b>1004, 0704, 0404</b>	TT	<b>Note: 2504, 2002, 2001 only NP &amp; SS</b>	TT
	SS		SS
<b>BT4b 0708, 0413, 0220</b>	PP	<b>BT5b 0232</b>	PP
also <b>0408</b>	PV		PV
	NP		NP
	TT		TT
	SS		SS

<b>Liquid End Materials / Seals</b> *** Note: not all stocked ***
<b>PPE</b> Polypropylene/EPDM
<b>PPB</b> Polypropylene/Viton (FPM-B) <i>not stocked</i> FPM-B = Fluorine Rubber
<b>NPE</b> Plexiglass/EPDM <i>not stocked</i>
<b>NPB</b> Plexiglass/Viton
<b>PVT</b> PVDF/PTFE, for L/E type 2 <i>not 0232</i> & type 4 <i>only 1005/1605, 0708/1008, 0413/0713, 0220/420</i>
<b>TTT</b> PTFE/PTFE
<b>SST</b> Stainless Steel 1.4571/PTFE

<b>Liquid End Version</b>
<b>0</b> Non bleed, no valve springs, <b>ONLY available for TT, SS and type 0232 ONLY</b>
<b>1</b> Non bleed, with valve springs, <b>ONLY available for TT, SS and type 0232 ONLY</b>
<b>2</b> Bleed function, no valve springs for PP, NP, & PVT - <b>NOT type PP 0232</b>
<b>3</b> Bleed function, with valve springs for PP, NP, & PVT - <b>NOT type PP 0232</b>
<b>4</b> Version for highly viscous media, <b>Beta 4 only PVDF type 0708, 0413, 0220 (see note below)</b>
<b>9</b> Version for highly viscous media, <b>Beta 5 only PVDF type 1008, 0713, 0420 (see note below)</b>
<b>9</b> Self bleed, <b>for PP, NP only all sizes EXCEPT type 1000 and 0232</b>

<b>0</b>	<b>Hydraulic Connections</b> Standard according to technical data
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<b>0</b>	<b>Design</b> Housing RAL 5003, Hood RAL 2003
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<b>0</b>	<b>Logo</b> With ProMinent Logo
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	<b>Power Supply</b>
<b>U</b>	100 - 230 V, ±10%, 50/60 Hz
<b>M</b>	12-24 V DC (only BT4b) with 2 m open-ended cable <b>ONLY</b>
<b>N</b>	24 V DC with 2 m open-ended cable <b>ONLY</b>

	<b>Cable &amp; Plug</b>
<b>C</b>	2m Australian
<b>1</b>	2m Open ended Cable for 12-24V pumps <b>ONLY</b>

	<b>Relay</b>
<b>0</b>	No Relay
<b>1</b>	Fault indicating relay (N/C) (changeover relay) <b>Preferred</b>
<b>3</b>	Fault indicating relay (N/O) (changeover relay)
<b>4</b>	As for 1 + pacing relay (1 input each)
<b>5</b>	As for 3 + pacing relay (1 input each)

	<b>Accessories</b>
<b>0</b>	No accessories
<b>1</b>	Foot valve & Injection Valve - <b>NOT for PTFE or SS</b>

	<b>Electronic Locking</b>
<b>0</b>	No lock
<b>1</b>	With electronic lock

<b>0</b>	<b>Control Variant</b> Standard
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<b>0</b>	<b>Pause</b> Standard
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<b>0</b>	<b>Control Variant</b> Standard
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<b>P*</b>	<b>Prepack Option</b> See options
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**Prepacks = P\***  
**P0** - includes 5m of delivery and 2m suction tube  
**P2** - includes 5m of delivery and 2m suction tube a 2m Control Cable if required.  
**P5** - as P2 but with 5m control Cable  
**PX** - as P2 but with 10m control Cable  
**Note:** 1601, 1602, 1605 pumps are supplied with 5.0m PTFE tube, other tube is available on request.

BT4b1601PPE 2 0 0 0 U C 0 1 0 0 0 0 P0

# Beta ProMinent® Metering Pumps CAN Bus ONLY

## Technical Data

Beta® pump type	Max. Pump Capacity at Maximum Back Pressure			Max. Pump Capacity at Medium Back Pressure			Stroke Freq.	Connector Sizes Outer Ø x Inner Ø	Suction Lift**	Delivery Weight	
	bar	l/h	ml/ stroke	bar	l/h	ml/ stroke				PP, NP, PC, TT	SS
BT4a 1000***	10	0.74	0.07	5	0.82	0.08	180	6 x 4	6.0**	2.9	3.6
BT4a 1601***	16	1.1	0.10	8	1.4	0.13	180	6 x 4	6.0**	2.9	3.6
BT4a 1602***	16	2.1	0.19	8	2.5	0.24	180	6 x 4	6.0**	2.9	3.6
BT4a 1005***	10	4.4	0.41	5	5.0	0.46	180	8 x 5****	6.0**	3.1	3.9
BT4a 0708***	7	7.1	0.66	3.5	8.4	0.78	180	8 x 5	6.0**	3.1	3.9
BT4a 0413	4	12.3	1.14	2	14.2	1.31	180	8 x 5	3.0**	3.1	3.9
BT4a 0220	2	19.0	1.76	1	20.9	1.94	180	12 x 9	2.0**	3.3	4.4
BT5a 1605	16	4.1	0.38	8	4.9	0.45	180	8 x 5****	6.0**	4.5	5.3
BT5a 1008	10	6.8	0.63	5	8.3	0.76	180	8 x 5	6.0**	4.5	5.3
BT5a 0713	7	11.0	1.02	3.5	13.1	1.21	180	8 x 5	4.0**	4.5	5.3
BT5a 0420	4	17.1	1.58	2	19.1	1.77	180	12 x 9	3.0**	4.7	5.8
BT5a 0232	2	32.0	2.96	1	36.2	3.35	180	12 x 9	2.0**	5.1	6.6

### Beta a® Metering Pumps with self-bleeding dosing head \*

BT4a 1601	16	0.59	0.06	8	0.78	0.07	180	6 x 4	1.8**	2.9	-
BT4a 1602	16	1.4	0.13	8	1.7	0.16	180	6 x 4	2.1**	2.9	-
BT4a 1005	10	3.6	0.33	5	4.0	0.37	180	8 x 5	2.7**	3.1	-
BT4a 0708	7	6.6	0.61	3.5	7.5	0.69	180	8 x 5	2.0**	3.1	-
BT4a 0413	4	10.8	1.00	2	12.6	1.17	180	8 x 5	2.0**	3.1	-
BT4a 0220	2	16.2	1.50	1	18.0	1.67	180	12 x 9	2.0**	3.3	-
BT5a 1605	16	3.3	0.31	8	3.8	0.35	180	8 x 5	3.0**	4.5	-
BT5a 1008	10	6.3	0.58	5	7.5	0.69	180	8 x 5	3.0**	4.5	-
BT5a 0713	7	10.5	0.97	3.5	12.3	1.14	180	8 x 5	2.5**	4.5	-
BT5a 0420	4	15.6	1.44	2	17.4	1.61	180	12 x 9	2.5**	4.7	-

### Beta® pumps with liquid ends for highly viscous media have 10-20 % less metering capacity and are not self-priming. G 3/4-DN connector with d16-DN10 nozzle union.

\* The values given in the capacity data tables are guaranteed minimum values, using medium hardness water at room temperature. Bypass bleed size 6x4 all sizes.

\*\* Suction lift readings when liquid end and suction tubing are full, or for self-degassing liquid end when the suction tubing contains air.

\*\*\* Reduced pressure 4, 7 and 10 bar pump types are available for specialised applications, e.g. for use in swimming pool systems. Further information on request.

\*\*\*\* 6 mm inner diameter in stainless steel version.

## Materials on each Model in Contact with Chemicals

	dosing head	suction/pressure connector	seals	balls
PPE	Polypropylene	Polypropylene	EPDM	ceramic
PPB	Polypropylene	Polypropylene	FPM (Viton®)	ceramic
PCE	PVC	PVC	EPDM	ceramic
PCB	PVC	PVC	FPM (Viton®)	ceramic
NPE	Acrylic	PVC	EPDM	ceramic
NPB	Acrylic	PVC	FPM (Viton®)	ceramic
PVT	PVDF	PVDF	PTFE	ceramic
TTT	PTFE with carbon	PTFE with carbon	PTFE	ceramic
SST	stainless steel no. 1.4404	stainless steel no. 1.4404	PTFE	ceramic

Self-degassing version available in PP and NP only. Supplied with Hastelloy valve springs, PVDF valve core.

Dosing diaphragm with PTFE-coating.

Viton® is a registered trademark of DuPont Dow Elastomers.

Reproducible dosing accuracy  $\pm 2$  % under correct conditions (see operating instructions).

Ambient temperature -10 °C to +45 °C.

Medium power consumption Type 1000-0220: 17 W Type 1605-0232: 22 W

Type of enclosure: IP 65, insulation class F

**Metering Pumps supplied with mains power cable (2 m) and plug, hose/pipe connector set as tables.**

# Beta ProMinent® Metering Pumps

## CAN Bus ONLY

### 1.1.3 Beta 4 and Beta 5 ProMinent® Metering Pump

**BT4a Beta version a**

<b>BT4a 1000, 1601, 1602,</b> also 0700, 0400 1001, 0701, 0401 1002, 0702, 0402	PPE PVT NPB TTT SST	<b>BT5a 1605, 1008, 0713, 0420</b>	PPE PVT NPB TTT SST
<b>BT4a 1005, 0708, 0413, 0220</b> also 0405, 0705 0408,	PPE PVT NPB TTT SST	<b>BT5a 0232</b>	PPE PVT NPB TTT SST

<b>PPE</b>	<b>Liquid End Materials / Seals *** Note: not all stocked ***</b>
<b>PPB</b>	Polypropylene/EPDM
<b>NPE</b>	Polypropylene/Viton (FPM-B) <i>not stocked</i> FPM-B = Fluorine Rubber
<b>NPB</b>	Plexiglass/EPDM <i>not stocked</i>
<b>PVT</b>	Plexiglass/Viton
<b>TTT</b>	PVDF/PTFE, for L/E type 2 <i>not 0232</i> & type 4 <i>only 1005/1605, 0708/1008, 0413/0713, 0220/420</i>
<b>SST</b>	PTFE/PTFE
	Stainless Steel 1.4571/PTFE

<b>0</b>	<b>Liquid End Version</b>
<b>1</b>	Non bleed, no valve springs, <b>ONLY available for TT, SS and type 0232 ONLY</b>
<b>2</b>	Non bleed, with valve springs, <b>ONLY available for TT, SS and type 0232 ONLY</b>
<b>3</b>	Bleed function, no valve springs for PP & PVT - <b>NOT type 0232</b>
<b>4</b>	Bleed function, with valve springs for PP, NP, & PVT - <b>NOT type PP 0232</b>
<b>9</b>	Version for highly viscous media, <i>only PVDF type 1005, 1605, 0708, 1008, 0413, 0713, 0220, 0420</i>
	Self bleed, <b>for PP, NP only - NOT available for types 1000 and 0230</b>

<b>0</b>	<b>Hydraulic Connections</b>
	Standard according to technical data

<b>0</b>	<b>Design</b>
	With ProMinent Logo

	<b>Power Supply</b>
<b>A</b>	200 - 230 V, ±10%, 50/60 Hz ***** CAN Bus ONLY *****
<b>U</b>	100 - 230 V, ±10%, 50/60 Hz ***** CAN Bus ONLY *****

	<b>Cable &amp; Plug</b>
<b>C</b>	2m Australian
<b>1</b>	2m Open ended Cable for 12-24V pumps <b>ONLY</b>

	<b>Relay</b>
<b>0</b>	No Relay
<b>1</b>	Fault indicating relay (N/C) (changeover relay) <b>Preferred</b>
<b>3</b>	Fault indicating relay (N/O) (changeover relay)
<b>4</b>	As for 1 + pacing relay (1 input each)
<b>5</b>	As for 3 + pacing relay (1 input each)

	<b>Accessories</b>
<b>0</b>	No accessories
<b>1</b>	Foot valve & Injection Valve - <b>NOT for PTFE or SS</b>

	<b>Electronic Locking</b>
<b>0</b>	No lock
<b>1</b>	With lock: manual operation locked when external cable is plugged in.

	<b>Options on request</b>
<b>0</b>	Standard
<b>D</b>	CANopen for Dulcomarin® II

<b>0 0</b>	no options
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<b>P*</b>	<b>Prepack Option</b>
	See

**Prepacks = P\***  
**P0** - includes 5m of delivery and 2m suction tube a CANbus cable, if specified.  
**Note:** 1601, 1602, 1605 pumps are supplied with 5.0m PTFE tube, other tube is available on request.

BT4a1601PPE 2 0 0 A C 0 1 0 0 00 P0

# 1.1.4 ProMinent Beta4 b Metering Pumps - Spare Part Sets

## 1.1.4 Beta4 & 5 ProMinent® Metering Pumps - Spare Part Sets

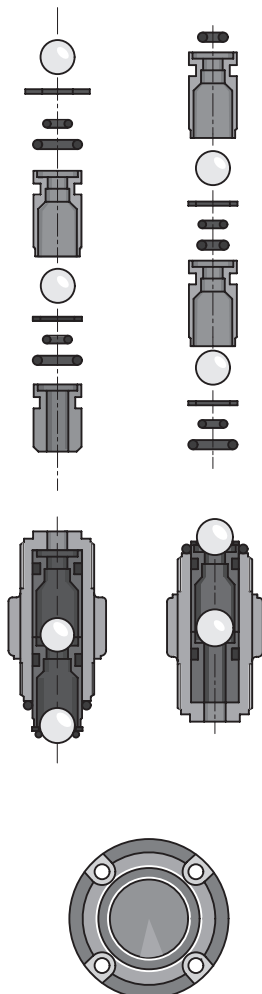
**Replacement part sets for ProMinent® Beta, consisting of:**

- 1 dosing diaphragm
- 1 suction valve
- 1 delivery valve
- 2 valve balls
- 1 set seals
- 1 connector set

*Note: Does not include valves for SS*

**Spare parts kits Beta®**

Type 1000	PPT, NPT, PVT	1023107
	TTT	1001737
	SST	1001729
Type 1601	PPT, NPT, PVT	1023108
	TTT	1001738
	SST	1001730
Type 1602	PPT, NPT, PVT	1023109
	TTT	1001739
	SST	1001731
Type 1604 and Type 2504	PPT, NPT, PVT	1035332
	PVT HV	1035342
	TTT	1035330
Type 0708 and Type 1008	PPT, NPT, PVT	1023111
	PVT HV	1019067
	TTT	1001741
Type 0413 and Type 0713	SST	1001733
	PPT, NPT, PVT	1023112
	PVT HV	1019069
Type 0220 and Type 0420	TTT	1001742
	SST	1001734
	PPT, NPT, PVT	1023113
Type 0232	PVT HV	1019070
	TTT	1001754
	SST	1001735
Type 0232	PPT, NPT, PVT	1023124
	TTT	1001755
	SST	1001736



# 1.1.5 Accessories

## ProMinent Beta4 & 5 & Gamma L Spare Parts Set

### 1.1.5 Spare Parts Sets

Replacement part sets for ProMinent® Beta,

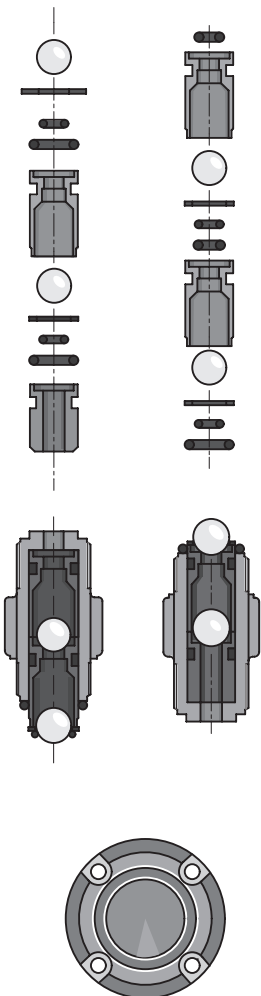
consisting of:

- 1 dosing diaphragm
- 1 suction valve
- 1 delivery valve
- 2 valve balls
- 1 set seals
- 1 connector set

*Note: Does not include valves for SS*

**Note: Gamma L Spare Parts Sets are the same as the Beta listed here**

Beta replacement part set	Part no.	Price
BT4a 1000	PPE	1001644
	PPB	1001652
	PCE/NPE	1001713
	PCB/NPB	1001721
	PVT	1023107
	TTT	1001737
BT4a 1601	SST	1001729
	PPE	1001645
	PPB	1001653
	PCE/NPE	1001714
	PCB/NPB	1001722
	PVT	1023108
BT4a 1602	TTT	1001738
	SST	1001730
	PPE	1001646
	PPB	1001654
	PCE/NPE	1001715
	PCB/NPB	1001723
BT4a 1005 & BT5a 1605	PVT	1023109
	TTT	1001739
	SST	1001731
	PPE	1001647
	PPB	1001655
	PCE/NPE	1001716
BT4a 0708 & BT5a 1008	PCB/NPB	1001724
	PVT	1023110
	PVT/HV	1019066
	TTT	1001740
	SST	1001732
	PPE	1001648
BT4a 0413 & BT5a 0713	PPB	1001656
	PCE/NPE	1001717
	PCB/NPB	1001725
	PVT	1023111
	PVT/HV	1019067
	TTT	1001741
BT4a 0220 & BT5a 0420	SST	1001733
	PPE	1001649
	PPB	1001657
	PCE/NPE	1001718
	PCB/NPB	1001726
	PVT	1023112
BT5a 0232	PVT/HV	1019069
	TTT	1001742
	SST	1001734
	PPE	1001650
	PPB	1001658
	PCE/NPE	1001719
	PCB/NPB	1001727
	PVT	1023113
	PVT/HV	1019070
	TTT	1001754
	SST	1001735
	PPE	1001651
	PPB	1001659
	PCE/NPE	1001720
	PCB/NPB	1001728
	PVT	1023124
	TTT	1001755
	SST	1001736



# 1.1.5 Accessories

## ProMinent Beta4 & 5 & Gamma L Spare Parts Set

### Notes

Replacement part sets for ProMinent® Beta with self-deaerating head, consisting of:	Replacement part set: Beta with self-deaerating head		Part no.	Price
1 dosing diaphragm	BT4a 1601	PPE9	1001756	
1 suction valve		PPB9	1001762	
1 delivery valve		NPE9	1001660	
1 pressure control valve complete		NPB9	1001666	
2 valve balls	BT4a 1602	PPE9	1001757	
1 set seals		PPB9	1001763	
1 connector set		NPE9	1001661	
		NPB9	1001667	
	BT4a 1604	PPE9	1035335	
		PPB9	1035336	
		NPE9	1035333	
		NPB9	1035334	
	BT4a 1005 & BT5a	PPE9	1001758	
		PPB9	1001764	
		NPE9	1001662	
		NPB9	1001668	
	BT4a 0708 and BT5a 1008	PPE9	1001759	
		PPB9	1001765	
		NPE9	1001663	
		NPB9	1001669	
	BT4a 0413 & BT5a 0713	PPE9	1001760	
		PPB9	1001766	
		NPE9	1001664	
		NPB9	1001670	
	BT4a 0220 & BT5a 0420	PPE9	1001761	
		PPB9	1001767	
		NPE9	1001665	
		NPB9	1001671	

Note: Does not include valves for SS

#### Beta/GALA

#### sizes of NP & PP Liquid Ends

These no's engraved on side of Dosing Head

70 x 10 = 1000

70 x 12.5 = 1601

90 x 23 = 1005/1605

90 x 29 = 0708/1008

90 x 37 = 0413/0713

90 x 44 = 0220/0420

110 x 59 = 0232

#### Replacement diaphragms for beta & Gamma L range

BT4a 1000	all materials	1000244.
BT4a 1601	all materials	1000245.
BT4a 1602	all materials	1000246.
BT4b 1604 & 2504	all materials	1034612.
BT4a 1005 & BT5a 1605	all materials	1000247.
BT4a 0708 & BT5a 1008	all materials	1000248.
BT4a 0413 & BT5a 0713	all materials	1000249.
BT4a 0220 & BT5a 0420	all materials	1000250.
BT5a 0232	all materials	1000251.

#### Replacement O-ring kits for beta & Gamma L range

PPE2 1000, 1601, 1602, 1005, 1605	EPDM	1001775.
0708, 0413, 1008, 0713, 0220, 0420, 0232	EPDM	1001776.
NPB2 & PPB2 1000, 1601, 1602, 1005, 1605	Viton	1001773.
0708, 0413, 1008, 0713, 0220, 0420, 0232	Viton	1001774.
PPE9 1601, 1602, 1005, 1605	EPDM	1001674.
0708, 0413, 1008, 0713, 0220, 0420, 0232	EPDM	1001675.
NPB9 1601, 1602, 1005, 1605	Viton	1001672.
0708, 0413, 1008, 0713, 0220, 0420, 0232	Viton	1001673.