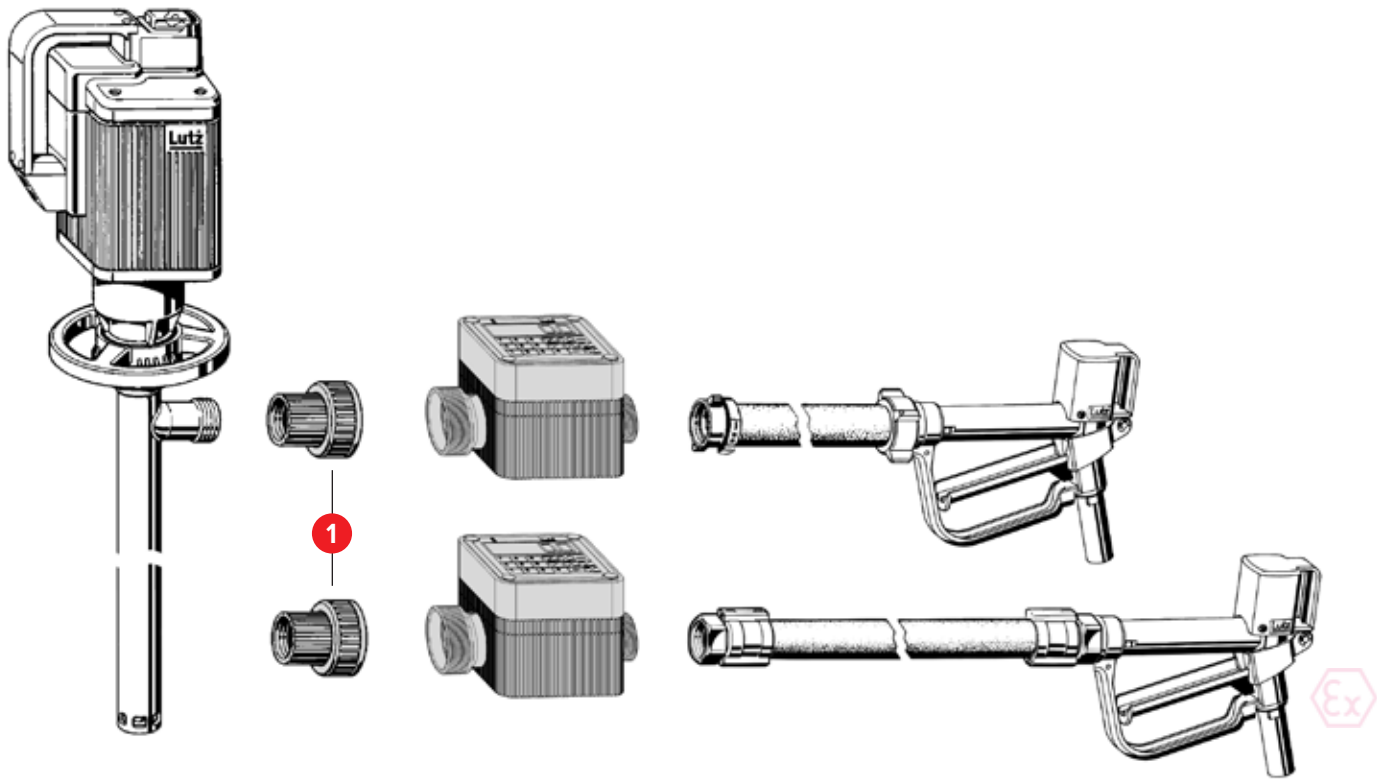



## Flow meter TSB without volume preselection



... Flange version

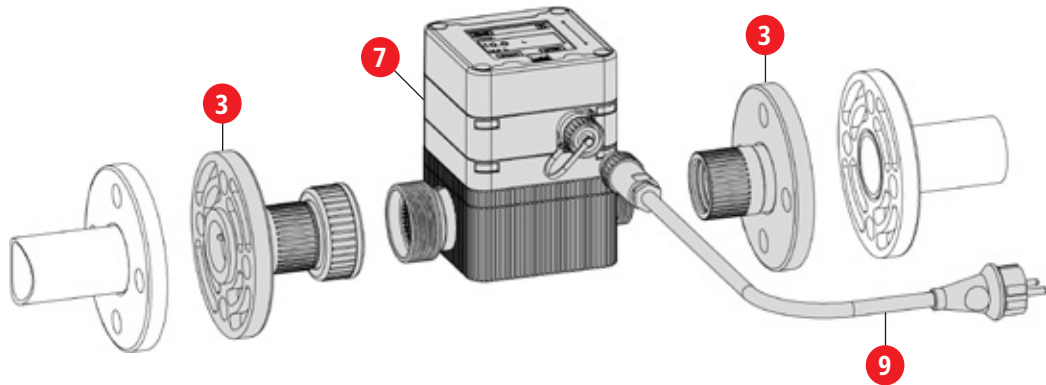
**1** Drum pump connection

Product detail	Specification	Order-No.
	<p><b>1 Drum pump connection</b> Connects the flow meter TSB to a drum and container pump.</p> <p>PPO/FPM G 1 1/4 IG for ST            PPS/FPM-FEP G 1 1/4 IG for LM, UN            Stainless steel/PTFE G 1 1/4 - G 1 1/4 IG for VA            Stainless steel/PTFE G 1 1/4 - G 1 1/2 IG for VA</p>	<p><b>0211-130</b>  <b>0211-132</b> ●  <b>0211-211</b> ●  <b>0211-214</b> ●</p>

FPM is a registered trademark of DuPont Performance Elastomers.

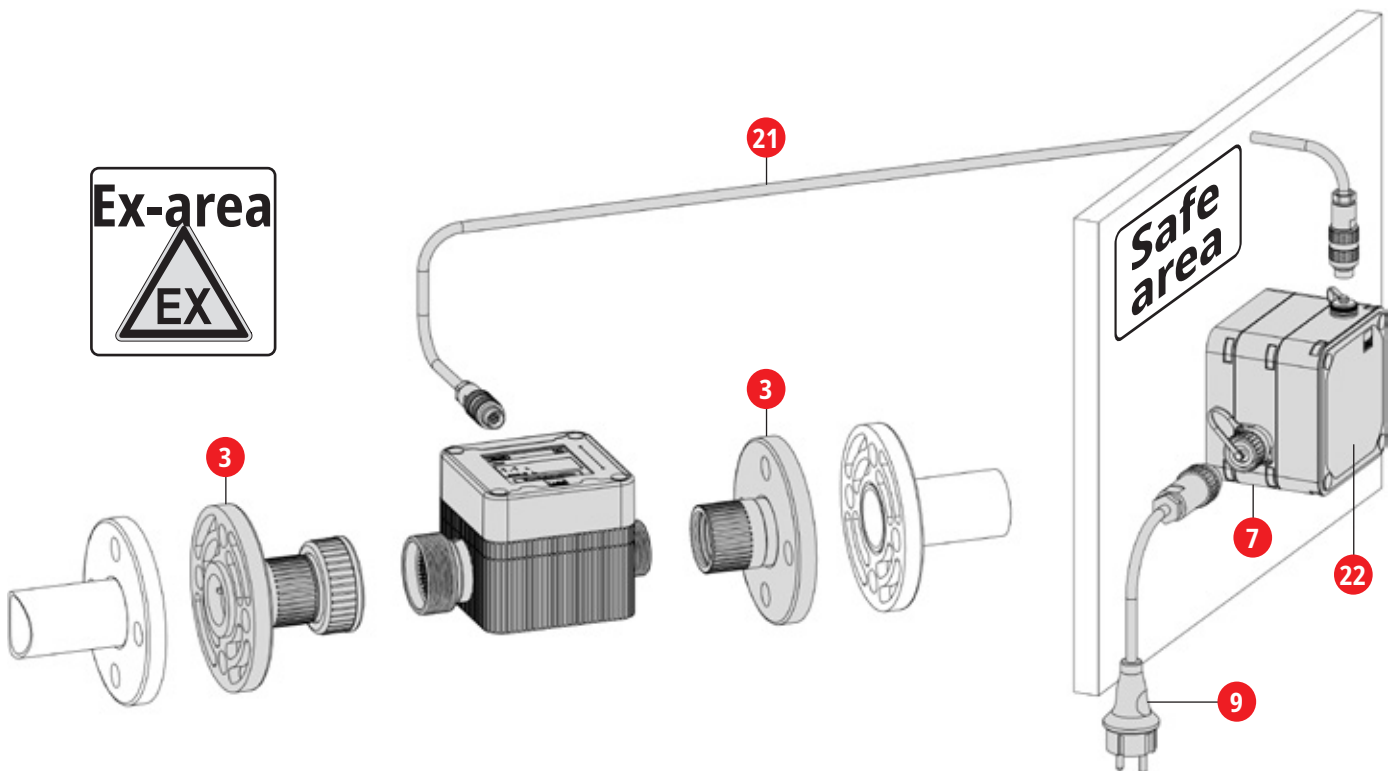
# Accessories

## Flow meter TS without volume preselection



... with power supply unit in plant engineering

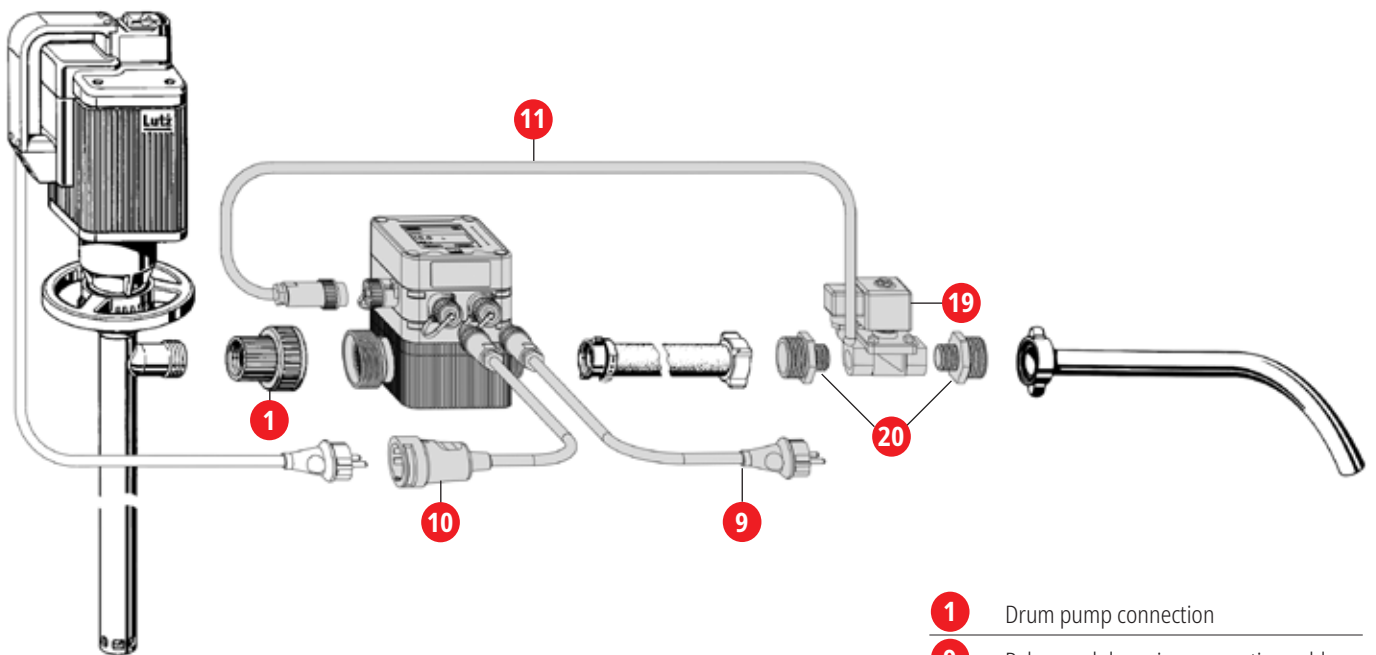
- 3** Flange connection
- 7** Power supply unit NG10
- 9** Mains connection cable



... with power supply unit in plant engineering (Ex)

- 3** Flange connection
- 7** Power supply unit NG10
- 9** Mains connection cable
- 21** Data cable
- 22** Protection cover SH10

## Flow measurement with volume preselection



... Thread version

- 1** Drum pump connection

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- 9** Relay module mains connection cable

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- 10** Motor/Slow connection cable, single

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- 11** Main valve connection cable

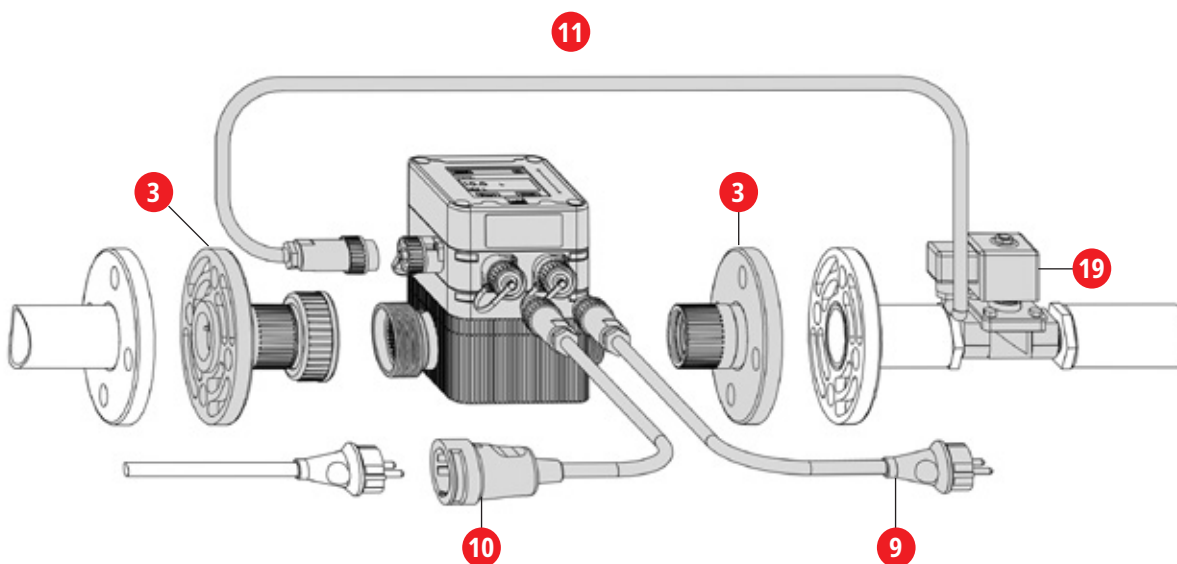
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- 19** Solenoid valve

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- 20** Double nipple

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... Flange version

- 3** Flange connection

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- 9** Relay module mains connection cable

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- 10** Motor/Slow connection cable, single

---

- 11** Main valve connection cable

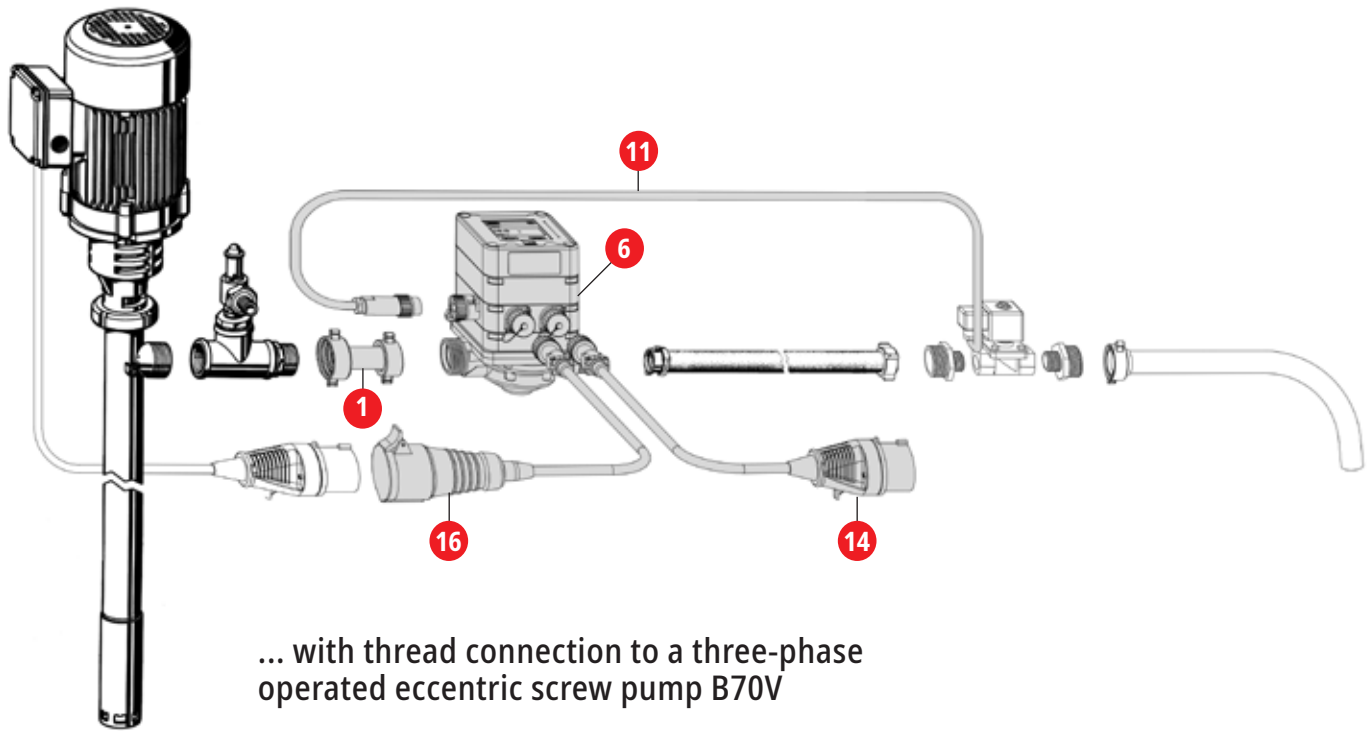
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- 19** Solenoid valve

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# Accessories

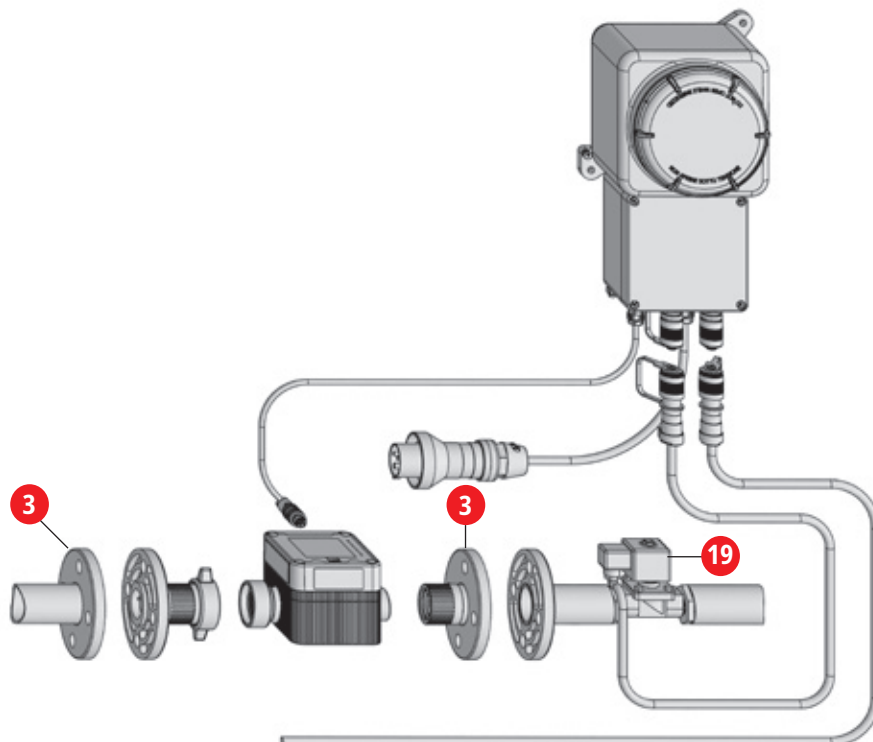
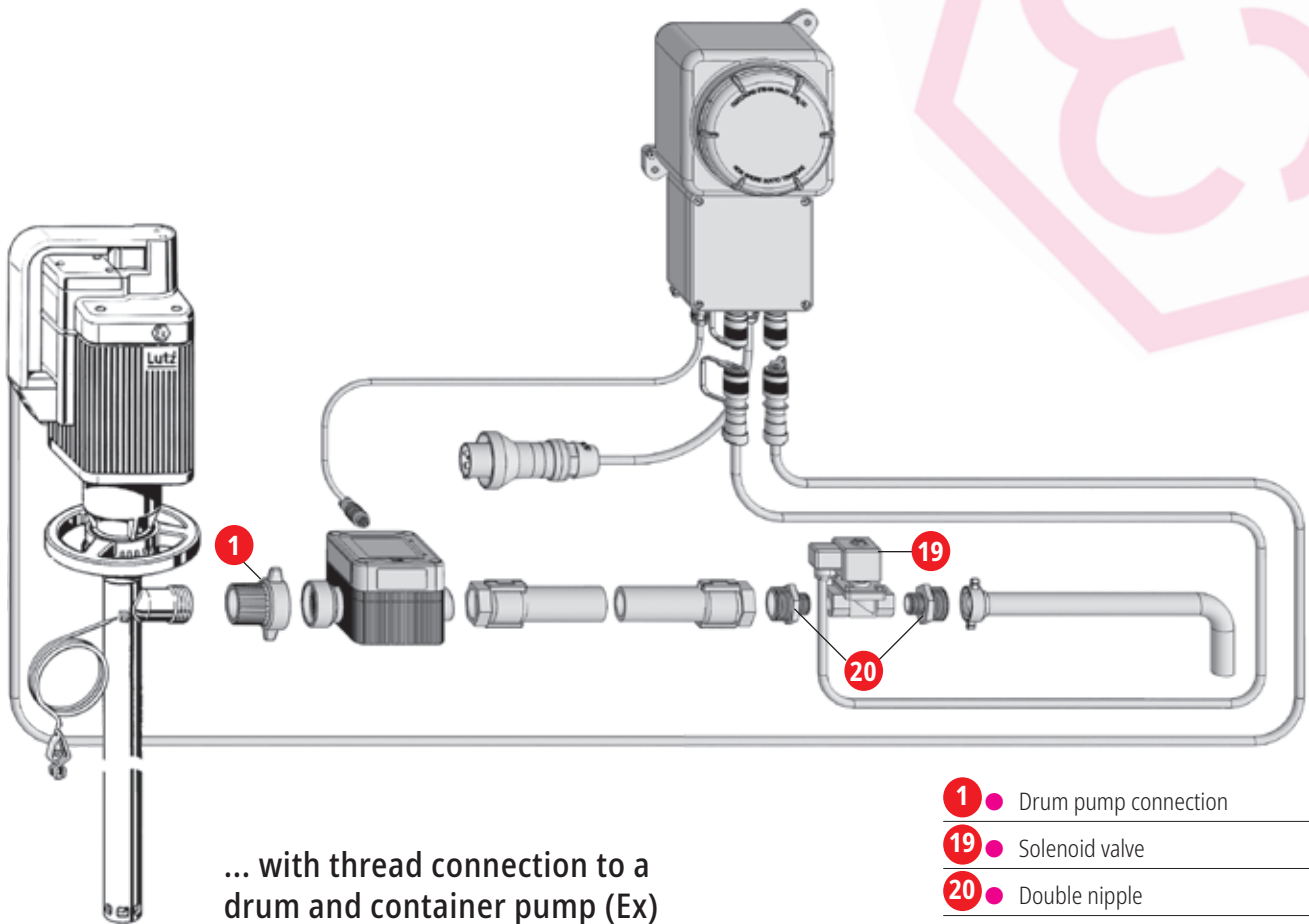
Flow measurement with volume preselection ...



... with thread connection to a three-phase operated eccentric screw pump B70V





- 1** Drum pump connection
- 6** Relay module RM30
- 11** Main valve connection cable
- 14** Mains connection cable RM30 400 V
- 16** Connection cable motor RM30 400 V

Flow measurement with volume preselection ...



# Accessories

## Connection fittings

Product detail	Specification	Order-No.
	<p><b>1 Drum pump connection</b> Connects the flow meter to a drum and container pump.</p> <p>PPO/FPM G 1 1/4 inner tread for ST10, SL10            PPS/FPM-FEP G 1 1/4 inner tread for LM10, UN10            Stainless steel/PTFE G 1 1/4 - G 1 1/4 IT for VA10            Stainless steel/PTFE G 1 1/4 - G 1 1/2 IT for VA10</p>	<p><b>0211-130</b>  <b>0211-132</b> ●  <b>0211-211</b> ●  <b>0211-214</b> ●</p>
	<p><b>1 Drum pump connection</b> Connects the flow meter to an eccentric screw pump B70-V or HD-E</p> <p>PP/PTFE G 1 OT x G 1 1/4 IT for HDO250 P            Stainless steel/PTFE G 1 OT* x G 1 1/4 IT* for HDO250            Stainless steel/PTFE G 1 OT* x G 1 1/2 IT* for HDO250</p>	<p><b>0211-332</b>  <b>0211-330</b> ●  <b>0211-331</b> ●</p>
	<p><b>2 Double nipple</b> Connects the flow meter to a pipeline system</p> <p>PP G 1 OT x G 1 1/4 AG, for drum pump connection G 1 OT x G 1 1/4 IT            Stainless steel G 1 OT x G 1 1/4 OT, for drum pump connection G 1 OT x G 1 1/4 IT            Stainless steel G 1 OT x G 1 1/2 OT, for drum pump connection G 1 OT x G 1 1/2 IT</p> <p>*Spacer ring 0231-545 is additionally required</p>	<p><b>5000-070</b>  <b>5000-073*</b>  <b>0211-340*</b></p>
	<p><b>3 Flange connection</b> Connects the flow meter to a pipeline system.</p> <p>PPO/FPM DN 32, PN 10, two-sided for ST10, SL10            PPS/FPM-FEP DN 32, PN 10, two-sided for LM10, UN10            Stainless steel DN 25, PN 6, one-sided for VA10            Stainless steel DN 32, PN 6, one-sided for VA10            Stainless steel DN 32, PN 10, one-sided for VA10            Stainless steel DN 40, PN 10, one-sided for VA10</p>	<p><b>0211-131</b>  <b>0211-133</b> ●  <b>0208-620</b> ●  <b>0208-621</b> ●  <b>0208-622</b> ●  <b>0208-623</b> ●</p>
	<p><b>4 Thread connection</b> Connects the flow meter to screw-type flanges or threaded screw connections.</p> <p>PPO/FPM G 1 1/4 outer tread for ST10, SL10            PPS/FPM-FEP G 1 1/4 outer tread for LM10, UN10</p>	<p><b>0211-135</b>  <b>0211-136</b> ●</p>
	<p><b>Non-return valve</b> Prevents flow back of the liquid in the hose system.</p> <p>PTFE/FPM for ST10, SL10            PTFE/FPM-FEP for LM10, UN10</p> <p>Opening pressure: 0.05 bar</p>	<p><b>0211-140</b>  <b>0211-141</b> ●</p>

FPM is a registered trademark of DuPont Performance Elastomers.  
 \*OT = Outer Thread / \*IT = Inner Thread





● Suitable for the transfer of combustible and easily inflammable liquids (e.g. ethanol, petrol) and for pumping liquids in potentially explosive environments.

Specification	Order-No.	Product detail
<p><b>5 Relay module RM10</b></p> <p>Facilitates volume preselection in combination with the appropriate connection cables.</p> <p>220-230 V, 50-60 Hz, II (2) G [Ex ib] IIC</p>	<p>for ST10, SL10, VA10 HDO080, HDO120, HDO200, HDO250, HDO400, HDO500</p> <p><b>0230-200</b></p>	
<p><b>5 Relay module Ex-RM10dK (complete version)</b></p> <p>Facilitates the filling with volume preselection in Ex-areas. Ex-plug-type connections „mini CLIX®/eXLink-System®“ With 5 m connecting cable and 3-pole ex-plug (CEAG), incl. data line 5 m and coupling plug 14-pole.</p> <p>220-230 V, 50-60 Hz, II 2G Ex de [ib Gb] IIC T6 Gb</p>	<p>for LM10, UN10, VA10 HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex</p> <p><b>0230-251 ●</b></p>	
<p><b>5 Relay module Ex-RM10dB (basic version)</b></p> <p>Facilitates volume preselection in ex-areas. Without cables, accessories on request, incl. data line 5 m and coupling plug 14-pole.</p> <p>220-230 V, 50-60 Hz, II 2G Ex de [ib Gb] IIC T6 Gb</p>	<p>for LM10, UN10, VA10 HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex</p> <p><b>0230-250 ●</b></p>	
<p><b>6 Relay module RM30</b></p> <p>Facilitates volume preselection in combination with the appropriate connection cables. For controlling rotary current and capacitor motors.</p> <p>400 V, 1.5 kW, 50 Hz resp. 230 V, 0.8 kW, 50 Hz II (2) G [Ex ib] IIC</p>	<p>for ST10, SL10, VA10 HDO080, HDO120, HDO200, HDO250, HDO400, HDO500</p> <p><b>0230-220</b></p>	
<p><b>7 Power supply unit NG10 230V</b></p> <p>Supplies the control unit with power (instead of batteries). This function is already included in relay modules.</p> <p>220-230 V, 50-60 Hz, II (2) G [Ex ib] IIC</p>	<p>for ST10, SL10, VA10 HDO080, HDO120, HDO200, HDO250, HDO400, HDO500</p> <p><b>0230-230</b></p>	

eXLink-System® is a registered trademark of Cooper Crouse-Hinds GmbH








# Accessories

for volume preselection

Product detail	Specification	Order-No.
	<p><b>Communication module</b> allows the communication with external control systems, analog output (0-20mA, 4-20mA, 0-10 V), analog output, RS485 interface, alarm output, Digital input (external start/stop)</p> <p><b>8 Communication module KM10K (complete version)</b> with cable protective covering for ST10, SL10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500</p>	<p><b>0230-101</b></p>
	<p><b>9 Power cable relay module</b> 5 m long 230 V, 50 Hz</p>	<p>for RM10, NG10 <b>0211-155</b></p>
	<p><b>10 Connecting cable Motor/Slow 1-way</b> 0.5 m long 230 V, 50 Hz</p>	<p>for RM10 <b>0211-153</b></p>
	<p><b>Connecting cable motor/slow 3-way</b> 0.5 m long 230 V, 50 Hz</p>	<p>for RM10 <b>0211-154</b></p>

● Suitable for the transfer of combustible and easily inflammable liquids (e.g. ethanol, petrol) and for pumping liquids in potentially explosive environments.






Specification	Order-No.	Product detail
<b>11 Connecting cable main valve</b> 5 m long 230 V, 50 Hz for RM10 and RM30	<b>0211-150</b>	
<b>12 Connecting cable slow-valve</b> 5 m long 230 V, 50 Hz for RM10	<b>0211-151</b>	
<b>13 Extension cable</b> 5 m long 230 V, 50 Hz for RM10	<b>0211-152</b>	
<b>14 Power cable RM30 400 V</b> 5 m long 400 V, 50 Hz, 5-wire for RM30	<b>0211-388</b>	
<b>15 Connector relay module</b> for individual wiring  <b>Plug for motor-/valve connection</b> 230 V, 50 Hz, 4-pole 230 V, 50 Hz, „mini CLIX®/eXLink-System®“  <b>Coupling for mains connection</b> 230 V, 50 Hz, 4-pole	for RM10 for Ex-RM10mK   for RM10	<b>0336-095</b> <b>0336-108*</b>   <b>0336-099</b>
<b>16 Connecting cable motor RM30 400 V</b> 0.6 m long 400 V, 50 Hz, 5-pole for RM30	<b>0211-386</b>	
<b>17 Power cable RM30 230 V</b> 5 m long 230 V, 50 Hz for RM30	<b>0211-387</b>	
<b>18 Connecting cable motor RM30 230 V</b> 0.5 m long 230 V, 50 Hz for RM30	<b>0211-385</b>	

\*special Crimp tool required for connection. eXLink-System® is a registered trademark of Cooper Crouse-Hinds GmbH

# Accessories

for volume preselection







Product detail	Specification	Order-No.
	<p><b>19 Solenoid valve brass</b> FPM seal, connection G 3/4 inner thread 230 V, 50 Hz</p>	<p>for RM10 and RM30 <b>0211-096</b></p>
	<p><b>19 Solenoid valve stainless steel</b> FPM seal, connection G 3/4 inner thread 230 V, 50 Hz</p>	<p>for RM10 and RM30 <b>0211-097</b></p>
	<p><b>19 Solenoid valve PVC*</b> FPM seal, connection G 3/4 inner thread 230 V, 50 Hz</p>	<p>for RM10 and RM30 <b>0211-098</b></p>
	<p><b>19 Solenoid valve brass, Ex</b> PTFE seal, connection G 3/4 inner thread, incl. 5 m connecting cable and „mini CLIX®/eXLink®-plug“ 230 V, 50 Hz, II 2G Ex eb mb IIC T3 Gb</p>	<p>for Ex-RM10mK <b>0211-396</b> ●</p>
	<p><b>19 Solenoid valve stainless steel, Ex</b> PTFE seal, connection G 3/4 inner thread, incl. 5 m connecting cable and „mini CLIX®/eXLink®-plug“ 230 V, 50 Hz, II 2G Ex eb mb IIC T3 Gb</p>	<p>for Ex-RM10mK <b>0211-395</b> ●</p>
	<p><b>20 Double nipple PP</b> G 3/4 outer thread – G 1 1/4 outer thread</p> <p><b>Double nipple brass</b> G 3/4 outer thread – G 1 1/4 outer thread</p> <p><b>Double nipple stainless steel</b> G 3/4 outer thread – G 1 1/4 outer thread</p>	<p><b>0211-606</b></p> <p><b>0204-346</b> ●</p> <p><b>0204-347</b> ●</p>

\*Non-return valve (0211-140 or 0211-141) for full hose system needed.

● Suitable for the transfer of combustible and easily inflammable liquids (e.g. ethanol, petrol) and for pumping liquids in potentially explosive environments.

Specification	Order-No.	Product detail
<p><b>21 Data cable</b> Connects the modules in the case of decentralised installation.</p> <p>14-pole, 5 m long      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-306</b> ●</p> <p>14-pole, 10 m long      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-309</b> ●</p> <p><b>Data cable SPS</b> for the connection of a basic flow meter with protection cap onto a PLC. 14-pole, with a free cable end, 5 m long.      <b>0230-317</b> ●</p>		
<p><b>22 Protection cover SH10 with 1 data socket</b> Protects the modules in the case of decentralised installation.      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-350</b> ●</p> <p><b>22 Protection cover SH20 with 2 data socket</b> Protects the modules in the case of decentralised installation.      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-351</b> ●</p>		
<p><b>Pulse converter</b> for a signal amplification, must be mounted on the basic flow meter if the distance to the next module is more than 5 m</p> <p><b>23 Pulse converter IW10 with 1 data socket</b> for ST10, SL10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-352</b></p> <p><b>23 Pulse converter IW20 with 2 data socket</b> for ST10, SL10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-353</b></p>		
<p><b>24 All-purpose plate</b> For wall-mounting or as a heat protection plate      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-304</b> ●</p>		
<p><b>25 Wall bracket set</b> Additional clamp fixing for DIN rails (TS 35) EN 50022      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-307</b> ●</p> <p>Installation together with all-purpose plate 0230-304. (all-purpose plate not included in wall bracket set)</p>		
<p><b>26 Hose bracket for control unit</b> For decentralised installation of the modules on a hose line.      for ST10, SL10, LM10, UN10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500      <b>0230-303</b> ●</p>		

# Accessories

Product detail	Specification	Order-No.
	<b>27 Control unit BE10</b> for ST10, SL10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500	<b>0230-000</b>
	<b>27 Control unit BE10V</b> With compound-filled electronics for ST10, SL10, VA10, HDO080, HDO120, HDO200, HDO250, HDO400, HDO500	<b>0230-001</b>
	<b>27 Control unit Ex-BE10B</b> II 2G Ex ib IIB T4 Gb for LM10, UN10, VA10, HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex	<b>0230-010</b> ●
	<b>27 Control unit Ex-BE10BV</b> With compound-filled electronics II 2G Ex ib IIB T4 Gb for LM10, UN10, VA10, HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex	<b>0230-011</b> ●
	<b>27 Control unit Ex-BE10C</b> II 2G Ex ib IIC T4 Gb for LM10, UN10, VA10, HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex	<b>0230-020</b> ●
	<b>27 Control unit Ex-BE10CV</b> With compound-filled electronics II 2G Ex ib IIC T4 Gb for LM10, UN10, VA10, HDO080Ex, HDO120Ex, HDO200Ex, HDO250Ex, HDO400Ex, HDO500Ex	<b>0230-021</b> ●




● Suitable for the transfer of combustible and easily inflammable liquids (e.g. ethanol, petrol) and for pumping liquids in potentially explosive environments.

## Basic flow meter for decentralised assembly and external data evaluation

Given larger distances between the measuring and control point or installation locations difficult to access in the plant, the individual modules (basic flow meter, operating unit, relay module, etc.) can be installed in different locations. The data transfer between the components is

established by data cable, protective cover/ pulse converter and plug connection without awkward and complicated wiring.

For data transmission to an external signal processor (e.g. SPS), a communication module is necessary.

Specification	Order No.	Product detail
<p><b>28 Basic flow meter ST10 (FPM)</b> PPO/PPS/BaFe/FPM</p> <p><b>Basic flow meter SL10 (FPM)</b> PPO/PPS/FPM</p> <p><b>Basic flow meter LM10 (FPM-FEP)</b> PPS/LCP/BaFe/FPM-FEP II 2G T4 Gb</p> <p><b>Basic flow meter UN10 (FPM-FEP)</b> PPS/LCP/FPM-FEP II 2G T4 Gb</p>	<p><b>0230-500</b></p> <p><b>0230-510</b></p> <p><b>0230-520 ●</b></p> <p><b>0230-530 ●</b></p>	
<p><b>28 Basic flow meter VA10 (FPM-FEP)</b> Stainless steel 1.4571/PTFE/FEP II 2G T4 Gb</p>	<p><b>0230-540 ●</b></p>	
<p><b>28 Basic flow meter HDO</b> II 2G Ex h IIB T4 Gb (Stainless steel/Alu)</p>	<p><b>on request ●</b></p>	

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