BADU JET

Counterswim Units

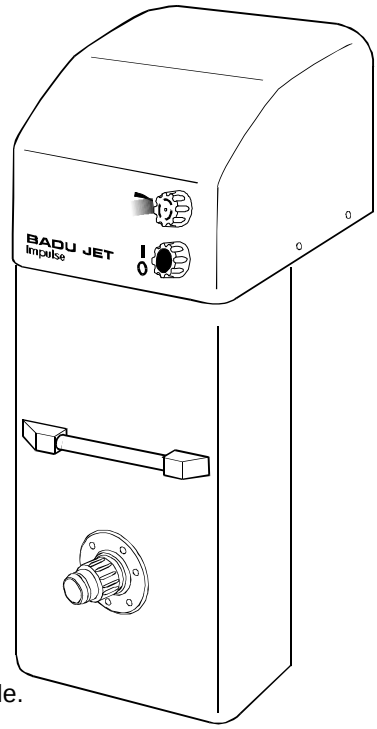
Table of Contents

Installation, Mounting and Operating Instructions Counterswim Units for inground and above-ground swimming pools

B A D U J E T standard* / impulse*
B A D U J E T swing* / action*

*also available as:
tele (Telescoping Safety Support)
spot (Underwater luminaire)

These Counterswim Units are designed for operation on swimming pools. The instructions contained in the Installation, Mounting and Operating Manual should be followed closely, since pumps for use at swimming pools are subject to special requirements.



Part 1 - Mounting

1. Select mounting site and prepare in accordance with Fig. 7. Whenever the unit is used for an aboveground pool, the telescoping safety support must be used. Se PP 10, 12, and 18.

2. Make sure the shipment contains all parts enumerated in the packing list.

3. Deposit unit on the pool rim and mark mounting holes.

4. Lift off unit and drill holes of 10 mm dia.at markings.

5. Insert brass expanding bolt (25) and screw on bonded metal (rubber metal) buffer (see Fig. 1) Make sure that the bolts are securely anchored in the base plate so that the unit will be totally stable.

6. Place unit onto bonded-metal buffers and fasten by means of hex bolts (32) with lock washers (31) plus a washer (30) (See Fig. 1).

7. By equalizing the distance, the actual distance between the unit housing and the pool rim is adjusted. This will result in added stability for the unit.

8. Plug in woven-fabric flexible tubing (6), 14 mm dia., for air bubble bath onto the nozzle of the air regulator and fasten by means of clamp (7) (see Fig.2). The connection is located inside the cowl (cover)..

9. Push plastic tubing (8) (Fig. 2), 1,5 mm dia. from the pneumatic pushbutton onto the nozzle of the pressure transducer at the terminal box.

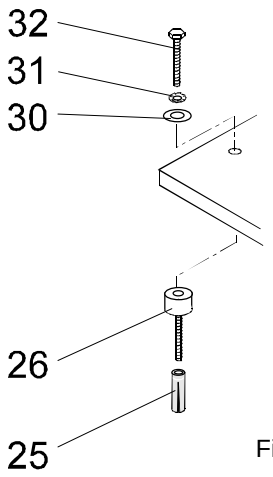


Fig. 1

10. Before connecting the power supply, please, read Part 3, “Electrical Connection”, and Part 4, “Electrical Connection at Installation Site” carefully.

11. Connection to power supply in accordance with Part 3, “Electrical Connection”

12. ATTENTION! - This is important!
When reattaching the cover , make sure that the latter snaps snugly into place over the position switch. Then fasten cover securely to the base plate: only then the circuit is closed when ever the position switch is actuated.

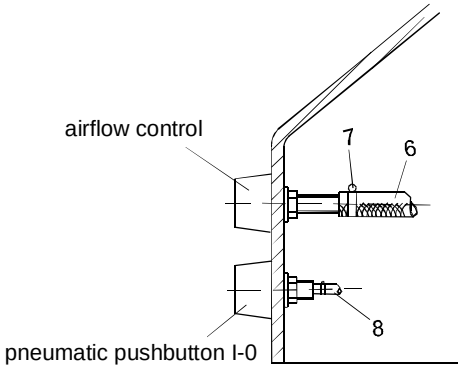


Fig. 2

13. Fastening the cover
Fasten the cover on the base plate. See Fig. 2a

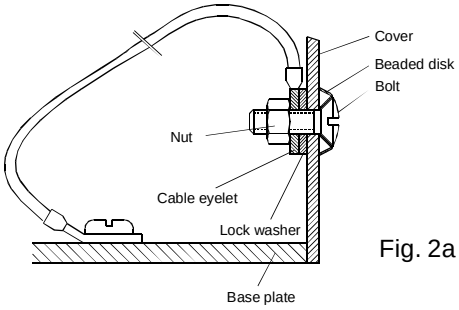


Fig. 2a

Part 2. Filling the Unit and Startup

1a) With BADU JET impulse, push massage hose onto nozzle, then push a hose (e.g garden hose) into the nozzle and cover the residual orifice with your hand. Open air drain cock and fill unit with water. Make sure that the unit is well aerated. After water seeps out of the air drain cock, close cock and remove water hose.

1b) With BADU JET standard, insert water hose (e.g. garden hose) into the nozzle and cover the residual aperture with your hand. Open air drain cock and fill unit with water. Be sure that the unit is sufficiently aerated. Once water is seeping out of the air drain cock , shut cock and remove water hose.

1c) With BADU JET swing and action, lift off the red filler plug and fill unit by means of a watering hose or a watering can (approx. 20 liters). Then insert red filler plug and tighten carefully by hand. Then the pump will self-prime.

2) Press position switch and briefly switch unit ON and OFF in order to ascertain the direction of rotation. Note the Directional arrow on the pump. In case of incorrect direction of rotation, switch 2 phases.

3) Put cover (oder: cowl) on and screw in place. When assembling, mind the position switch!

4) After verifying that all pertinent rules and regulations have been observed, start unit by means of push button.

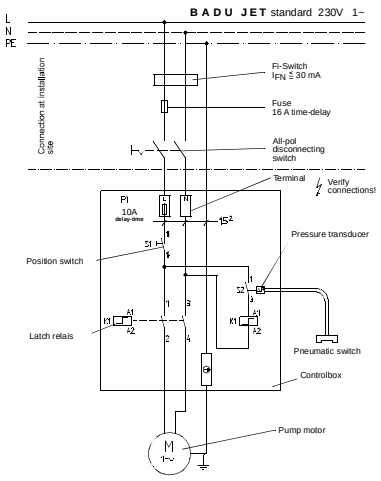
Part 3 - Electrical Connection

Power source: single-phase, 230 V, 50 Hz or 3N-phase, 4000/230V 50 Hz.

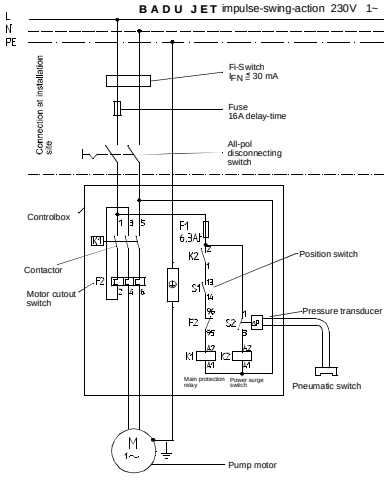
All electrical connections should be made by a licensed electrician under strict observation of the rules and regulations of EN 60335-2-41 : 1996; IEC 64/906/FDIS; E DIN IEC 64/906/FDIS und VDE 0100 Teil 702/ A1 : 1997, or local standards and regulations. The unit should be connected to the power supply as indicated in the wiring diagram.
The conduit for the underground cable must be buried at least 60 - 80 cm below the surface. A plastic armored conduit should be used.

Attention!
The motor housing must be connected to the equipotential bonding strap. For this pupose terminal has been provided at the motor housing.

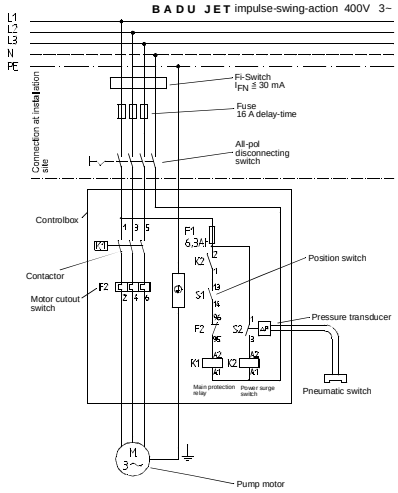
Badu Jet standard
230V 50 Hz



Badu Jet impulse/swing/action
230V 50 Hz



Badu Jet impulse/swing/action
400V 50 Hz



Part 4 Connection at Installation Site

These parts are not included in the scope of the delivery and must be provided for at the installation site.

1. Fi-Switch, IFN ≤ 30 mA.

2. Fuse 16 A, time lag at 230 V and 400 V.

3. All-pole switch with O and 1 markings.

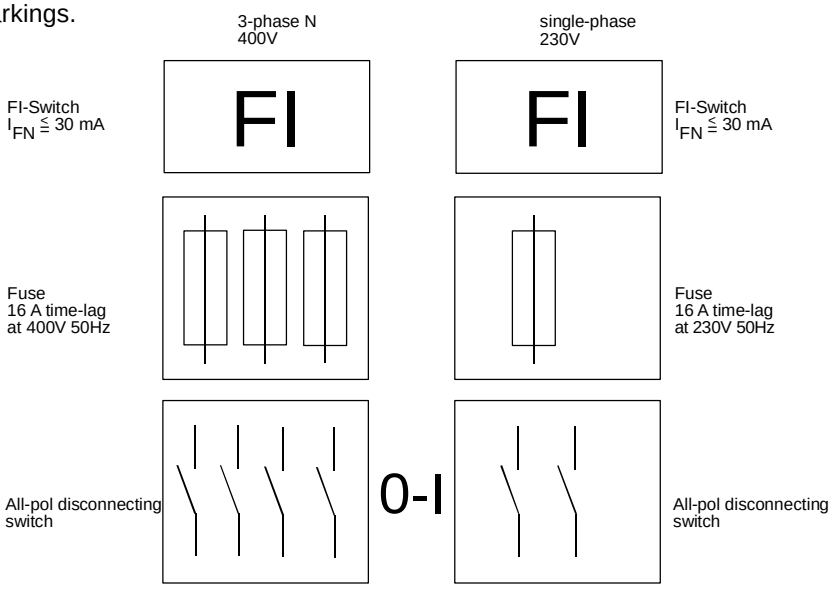


Fig. 5

Part 5. - Suggestion for Installation

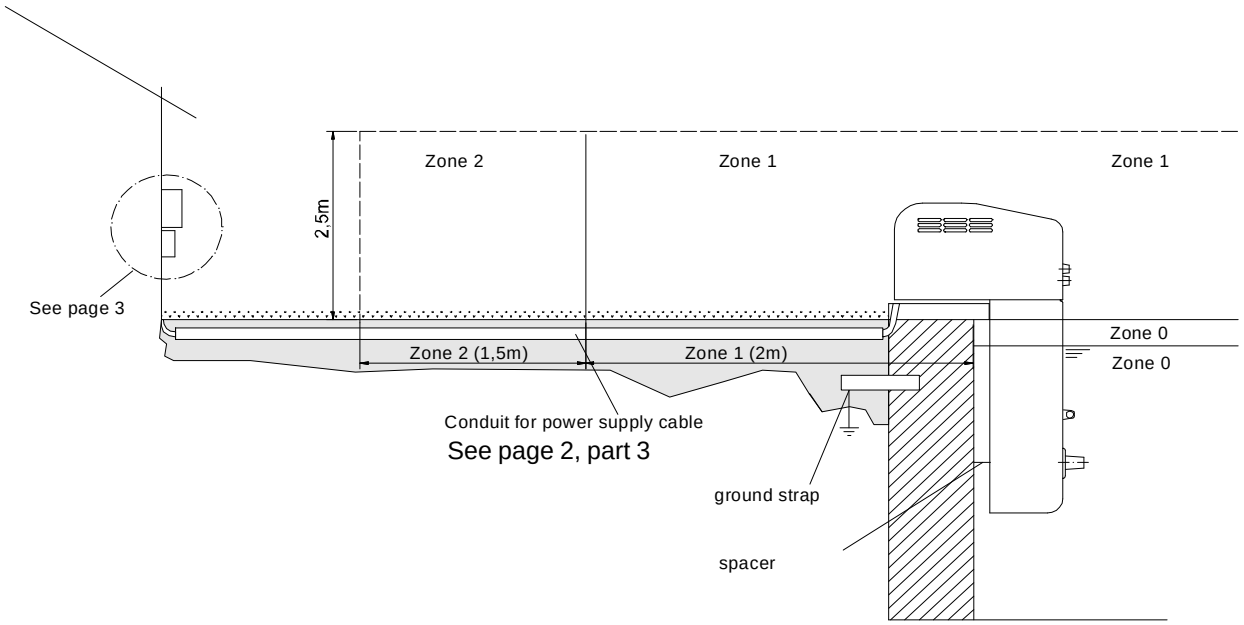


Fig. 6

Unit dimensions (dimensions in cm)

B A D U J E T standard/ impulse

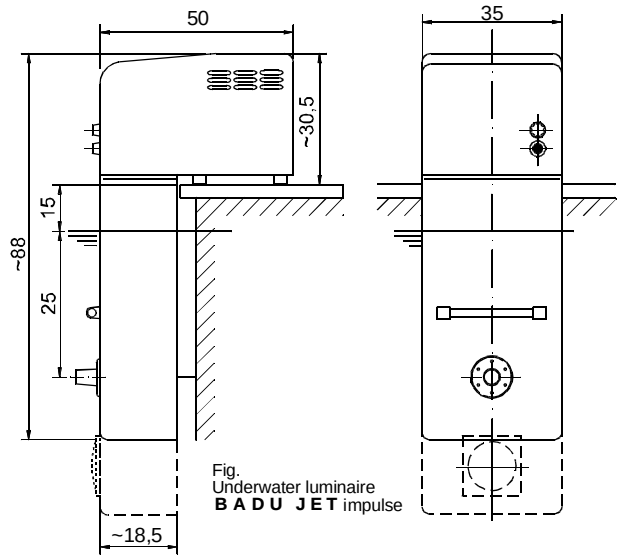


Fig.
Underwater luminaire
B A D U J E T impulse

B A D U J E T swing/ action

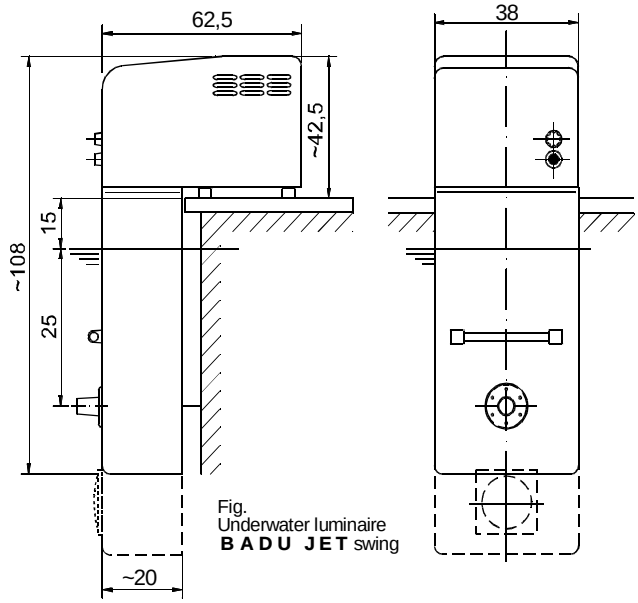


Fig.
Underwater luminaire
B A D U J E T swing

o.Abb. **B A D U J E T** action with 2 nozzles

Fig. 7

Part 6. Operation

1. Switching the unit ON or OFF is done by pressing the pneumatic pushbutton built into the cover (cowl) (Fig. 2) The pushbutton can be actuated from inside the pool.

2. The air regulator enables the intake of air in order to achieve a bubble bath effect. The airflow can be regulated from
inside the pool (Fig. 2).

3. The ball-type nozzle swivels . Normally it should be in vertical position, i,e, pointing slightly upward. This will produce the optimal effect for counterswimming.

4. Attention! Do not step on the cover!

5. For winterizing, the unit should be taken out of the pool basin. I should be completely drained and stored in a dry place.

6. Attention! Watch out for maximal water level (See Fig. 7 as well as the marking on the unit).

Scope of delivery (only for Badu Jet impulse)

- Massage hose for large nozzle, 40 mm
- Pulsator for large nozzle, 40 mm

Accessories (optional)

- Massage hose for large nozzle, 40 mm
- Massage hose for small nozzle, 28 mm
- Massage hose with pulsating massage nozze for large nozzle, 40 mm
- Massage hose with pulsating massage nozzle for small nozzle, 28 mm
- Pulsator for large nozzle, 40 mm
- Pulsator for small nozzle, 28 mm
- Pinpoint massage nozzle for large nozzle, 40 mm
- Pinpoint massage nozzle for small nozzle, 28 mm
- Cap coupling for large nozzle, 40 mm
- Cap coupling for small nozzle, 28 mm
- Teleskoping safety support for above-ground pools

Using the massage hose

a) The massage hose, i.e. water massage in general, should only be used after consulting a physician. **Do not allow children to use the massage hose!**

b) The air regulator should be shut off before massage, because otherwise water may be forvced out through it due to the increased pressure.

Part 7 Servicing and Maintenance

- The unit should be periodically tested for operational safety, especially the following areas:

1. Watertight connection between hydraulic parts and motor
2. Stability of unit. All impurities should be removed.
3. All electrical contacts in general should be checked.
4. Separate potential connection

<u>Please also observe VDE 0100 Part 620</u>

- The pump may only be repaired by the manufacturer or a repair shop designated by the latter.
- In case of pump leakage, the pump may not be operated and must be separated from the power source.

We reserve the right to make technical changes.

Part 8 - Model SPOT with Underwater Luminaire (underwater floodlight)

This model - in contrast to the basic unit - has additional

- Cover plate extended below
- Separately included buffer (or: isolating) transformer 12 V, 300 VA / 12 V A.C. 50 VA
- built-in underwater luminaire (floodlight) with 300 W, 173 mm dia./ 50 W, 100 mm dia.
- junction box with buffer transformer terminal

The buffer transformer which has been tested in accordance with VDE 0551 or EN 60742, respectively, comes with a potted 2 m power cord. It has a thermic overload switch as well as short-circuit protection and has a potted cable of 10 m length on the secondary side. The transformer itself is hoseproof.

The 300 W 50 Hz luminaires have been tested according to DIN VDE 0711 Part 1 and/or EN 60598-2-18, respectively. Existing safety regulations demand that a temperature sensing switch be provided inside the luminaire housing. During prolonged operation of the 300 W luminaire the latter may switch off automatically and - after cooling down again - come on again automatically.)

These luminaires are operated at 12 V, eliminating any. danger of electric shock.

Before replacing a defective luminaire bulb the entire unit must be pulled out of the pool.

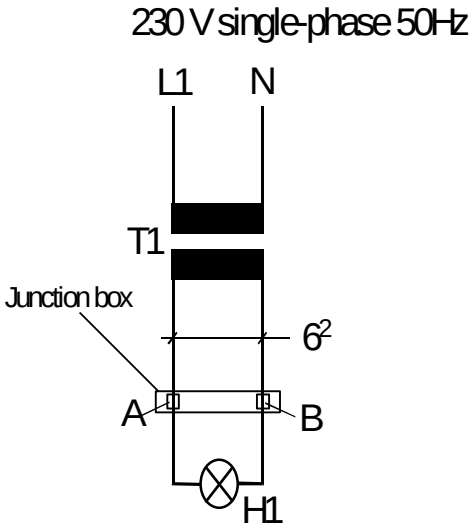
Electrical Connection

1. The buffer transformer must be installed outside the protected zone (at least 3.5 m away from the pool rim). An ON/OFF switch for the luminaire must be provided at the installation site.

2. The luminaire cable is pre-assembled inside the junction box of the buffer transformer and is joined with the bipolar cable of the buffer transformer at the terminals.

3. The underwater luminaire should only be operated under water.

Electrical Wiring Diagram of the Underwater Luminaire



B A D U J E T impulse swing action

300 W / 50 W
12 V A.C.
300 VA / 50 VA

B A D U J E T standard

Exchanging the Luminaire Bulb

For technical reasons the luminaire bulb must be exchanged together with the luminaire unit 300 W.

To make sure that the luminaire bulb is defective, i.e. that it was not just switched off by the thermostat (see Part 8 of the Operations Manual), the luminaire should be switched on again after approx. 30 minutes.

When removing the luminaire unit proceed as follows:

1. Switch unit OFF at the cover plate.
2. Separate pump and luminaire from the power supply.
3. Unscrew cover
4. Remove unit from the pool rim.
5 Pull unit from the pool and lay it down.
6. Detach luminaire cable from the junction box and pull it out.
7. Remove the two screws at the luminaire mantlet
8. Pull luminaire assembly together with connecting cable from the housing
9. Return luminaire assembly to your dealer- or directly to the manufacturer- for replacement.
10. Reassemble the luminaire assembly in reversed order.

Technical Data at 50 Hz

	B A D U J E T **standard**	B A D U J E T **impulse**
JET- Pump	21-40/55 G	21-50/43 T
Voltage A.C.	Single-phase 230 V	3N~400V / 230V / Single-phase 230 V
Flow Rate of Pump (m^3/h)	~ 25	~ 40
Power input P_1 (kW)	1,40	2,1 / 2,3
Power output P_2 (kW)	1,00	1,60 / 1,60
Exit pressure at nozzle (bar)	0,80	0,90
Rate of flow 2m away f. of nozzle (m/s)	0,80	1,10
Massage pressure (bar) max.	1,20	1,80 / 1,80
No of nozzles/Diameter (mm)	1/ 28	1/ 40 variable
Nozzle swivels (degrees)	60	60
Type of control	Pneumatic	Pneumatic
ON/OFF switch accessible f. inside pool	yes	yes
Plug-on massage hose	optional	included
Plug-on Pulsator	optional	included
Telescoping safety support	optional	optional
Weight (kg)	ca. 37-55*	ca. 36-59*

*)Depending on the model, e.g. standard, standard-tele, or standard-tele-spot

We reserve the right to make technical changes

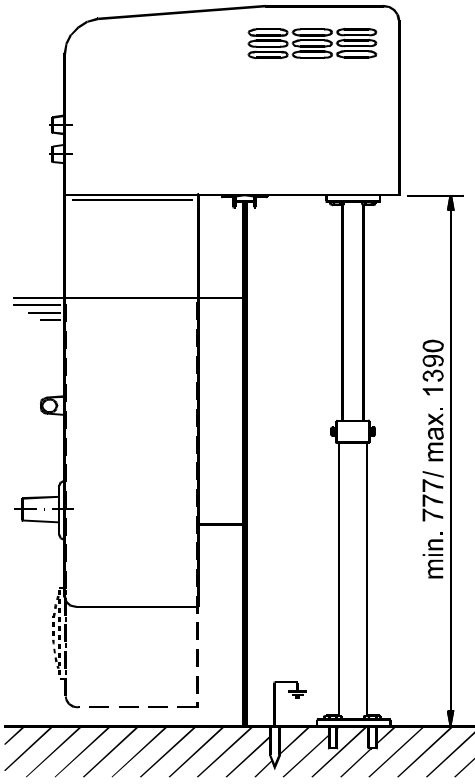
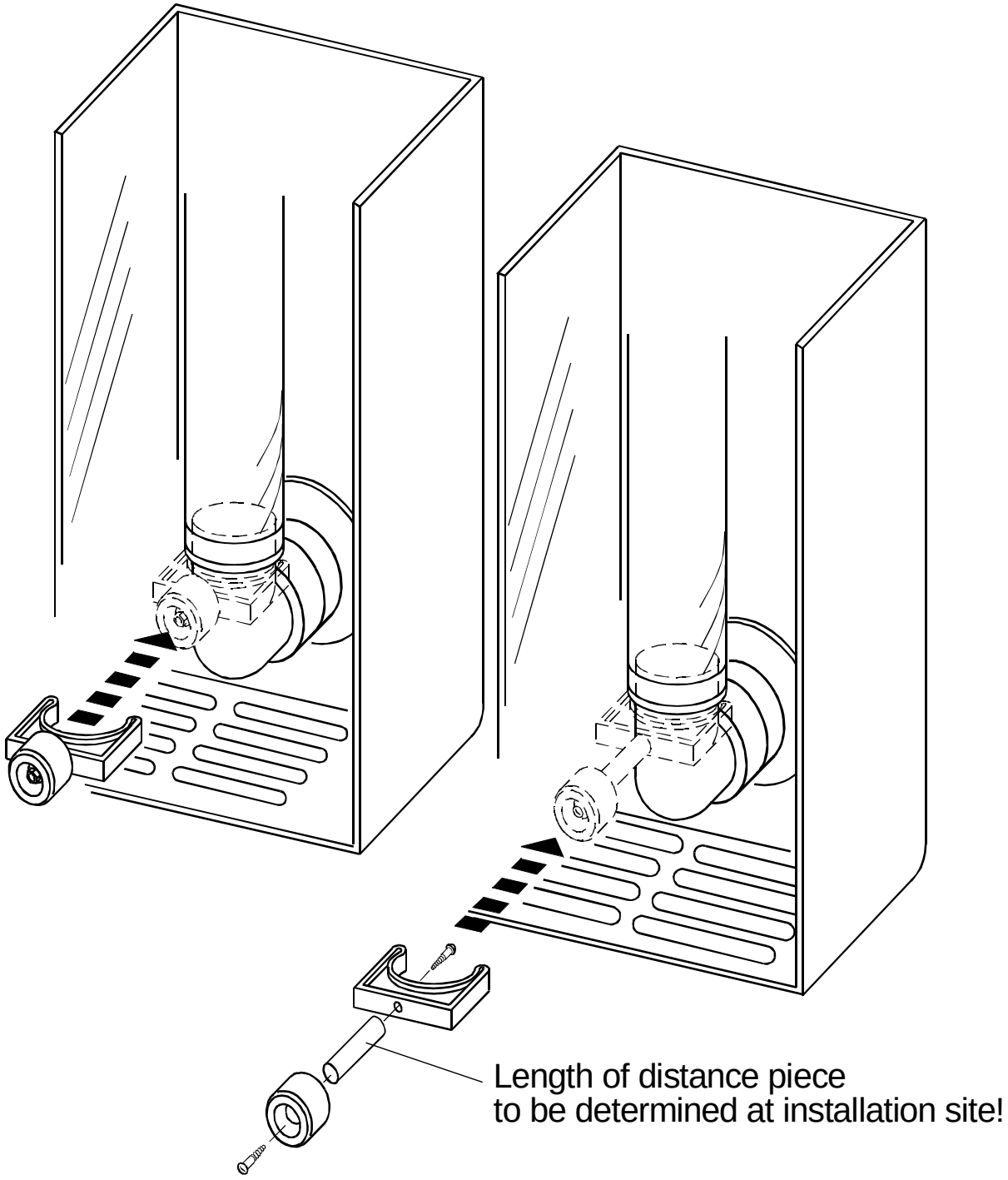


Fig.
B A D U J E T impulse

Fig. 8

Only for BADU JET standard



If necessary, fasten spacer at the angle of the intake pipe as shown in the above drawing !

Technical Data at 50 Hz

	B A D U J E T **swing**			B A D U J E T **action**		
JET- Pump	21-80/32 S			21-80/33 S		
Voltage A.C.	3N ~400/230V	/	1~ 230 V	3N~400V/ 230V	/	1~ 230 V
Flow Rate of Pump (m^3/h)	~ 58	/	54	~ 75	/	54
Power input P_1 (kW)	3,3	/	2,9	3,80	/	2,90
Power output P_2 (kW)	2,6	/	2,2	3,0	/	2,20
Exit pressure at nozzle (bar)	1,1	/	1,0	1,0	/	1,0
Rate of flow 2m away f. of nozzle (m/s)	1,2	/	1,15	1,40	/	1,15
Massage pressure (bar) max.	1,6	/	1,6	1,60	/	1,60
No of nozzles/Diameter (mm)	1/ 40 variable			2/ 40 variable		
Nozzle swivels (degrees)	60			60		
Type of control	Pneumatic			Pneumatic		
ON/OFF switch accessible f. inside pool	yes			yes		
Plug-on massage hose	optional			optional		
Plug-on Pulsator	optional			optional		
Telescoping safety support	optional			optional		
Weight (kg)	ca. 52-69*			ca. 54-71*		

*)Depending on the model, e.g. standard, standard-tele, or standard-tele-spot

We reserve the right to make technical changes

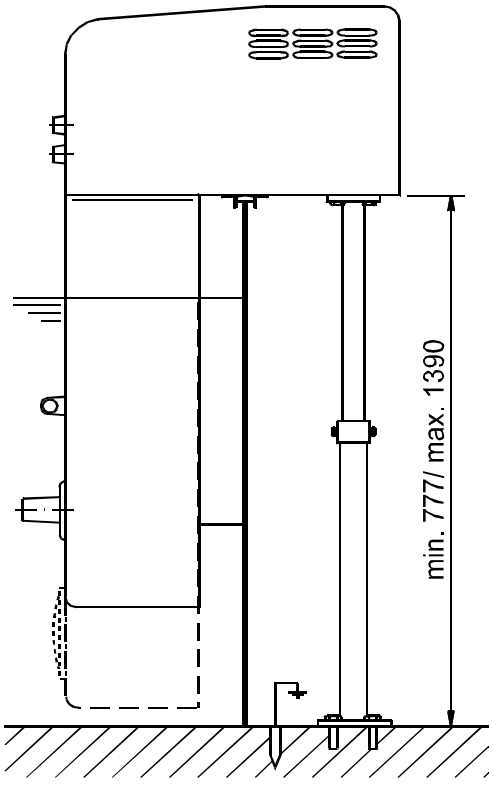
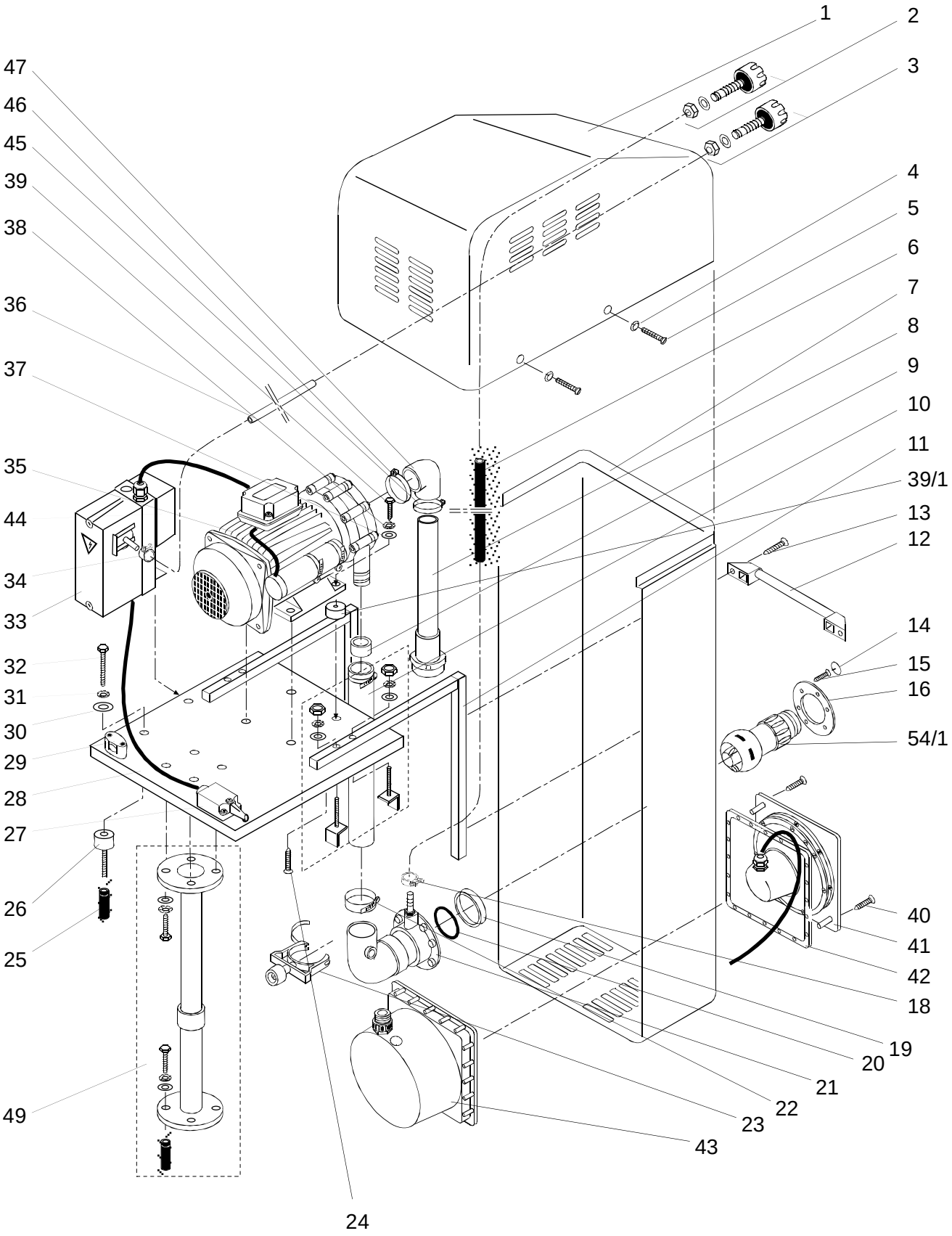


Fig.
B A D U J E T swing/ action

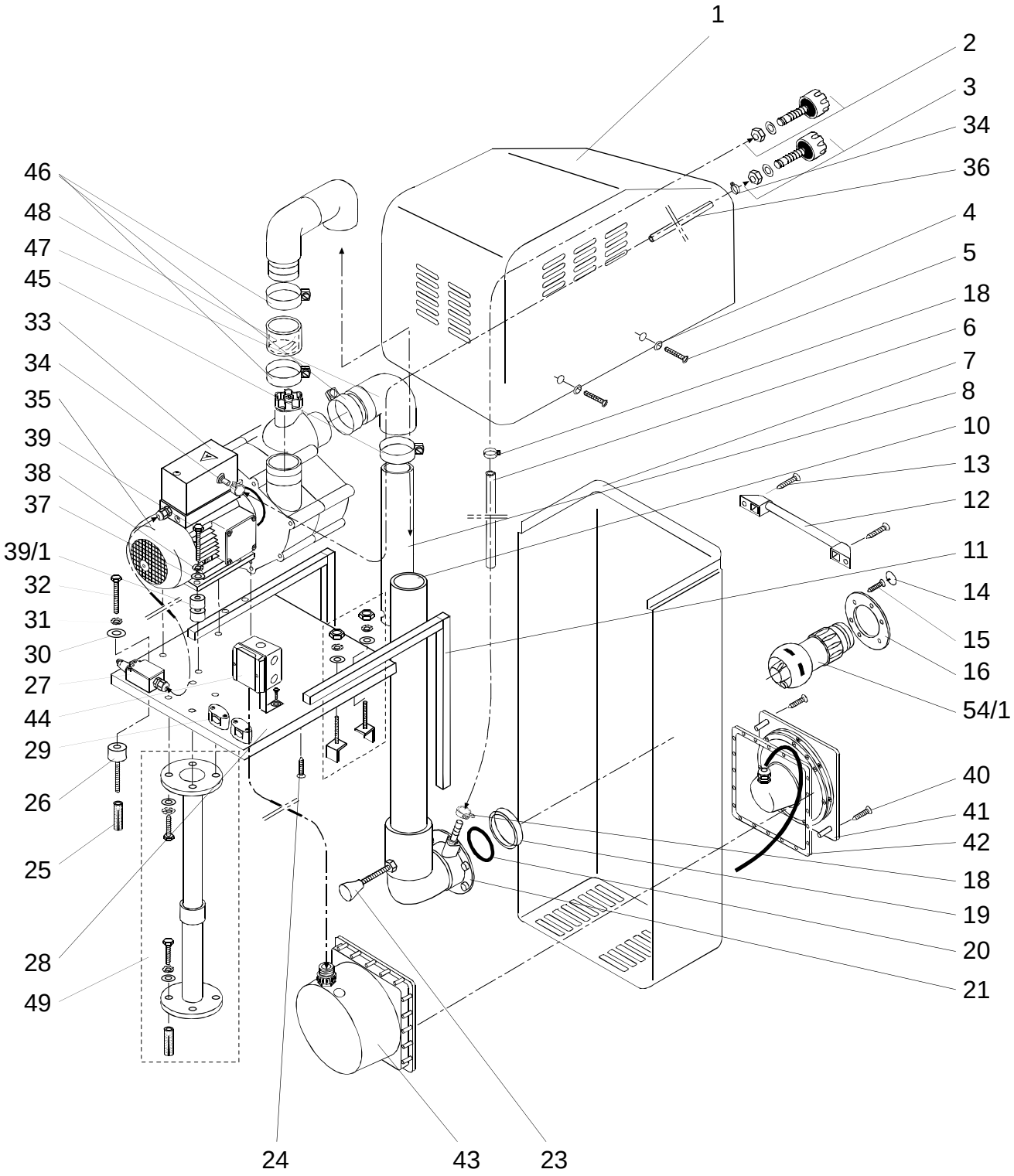
BADU JET standard / tele / spot
BADU JET impulse / tele / spot



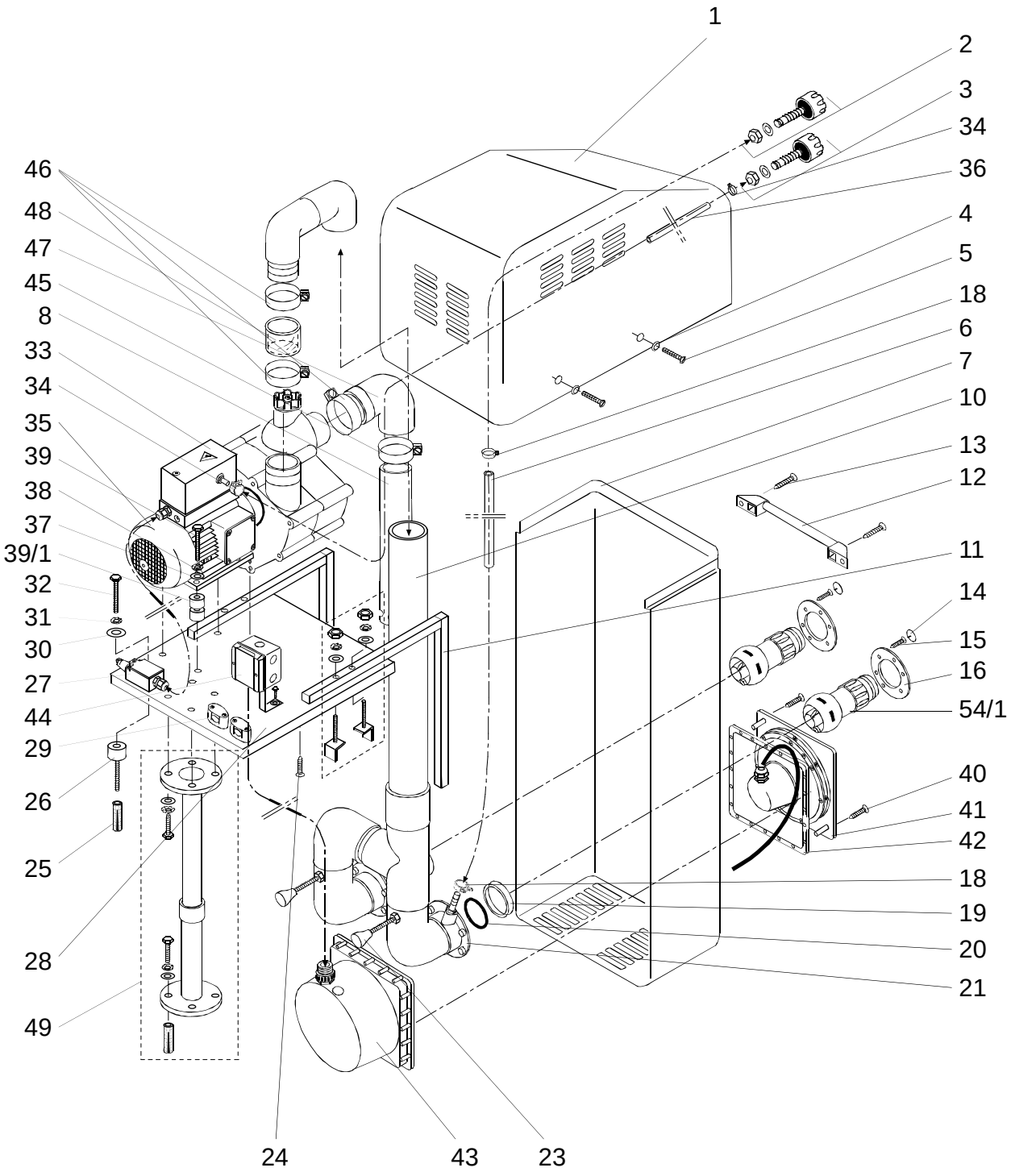
B A D U J E T standard – tele - spot (50 W)
B A D U J E T impulse – tele - spot (300 W)

Part #	Qty.	Description
1	1	Cover standard and impulse
2	1	Air regulator, complete
3	1	Pneumatic pushbutton, complete
4	4	Beaded disk for M5, brass - nickel-plated
5	4	Oval head countersunk screw M 5 x 16 mm, A 2
6	1	PVC tubing, 1 m, 8 x3 mm, crystal-clear with woven fabric
7	1	Mantlet (long mantlet for Model spot), white, matte
8	1	Intake line with back pressure valve (non-return valve)
9	1	Adapter, PVC tubing 40 mm, 40 x 5 mm, crystal-clear
10	1	Pressure line, PVC tubing 400 mm, 50 x 5 mm, crystal-clear
11	2	Connecting angle
12	1	Handgrip complete
13	2	Sheet metal screw (self-tapping screw)
14	6	Decorative cap for Philips screwhead
15	6	Contersunk head screw (flat head bolt?) 5.5 x 19 mm, A 2
16	1	Housing flange
54/1	1	Ball nozzle, variable, dia. 40 mm (standard - dia. 28 mm, non-variable
18	2	Hose clamp, 14 mm, A 4
19	1	Retainer ring
20	2	Hose clamping ring, 4 mm
21	1	Nozzle housing with connecting angle and hose nozzle
22	2	Hose clamp, 40 - 60 mm, A 4
23	1	Spacer for pool rim
23/!	!	Spacer entension with screws (bolts?) (not shown in explosion drawing)
24	2	Sheet metal screws, 6.3 x 38 mm, A4
25	4	Expanding bolt M 8, brass
26	4	Rubber/metal buffers, M8 x 36 mm
27	1	Position switch
28	1	Base plate with threaded inserts
29	1	Strain relief clamp
30	4	Washer
31	4	Lock washer (star washer, serrated washer)
32	2	Hex bolt M8 x 30 mm, A 2, for rear
32/1	2	Hex bolt, M8 x 50 mm, A 2, for front
33	1	Junction box
33/1	1	Junction box mounting assembly (not shown in explosion drawing)
34	1	Hose clamp 9/9, A 2
35	1	Pump
36	1	PVC tubing, 700 mm , 3 x 1.5 mm, crystal-clear
37	4	Washer, dia. 8.4 mm, A2
38	4	Lock washer, dia. 8.4 mm, A2
39	4	Hex bolt M8 x 20 mm, A 2
39/1	4	Rubber/metal buffers
40	2	Hex bolt M4 x 40 mm
41	1	Luminaire complete with mantlet, socket, lamp 300 W (standard - 50 W) and cable
42	1	Mounting frame
43	1	Housing
45	1	Hose clamp 40 - 60 W 4
46	1	Hose clamp 75 galvanized
47	1	Rubber angle dia. 52 - 63
49	1	Telescoping safety support

BADU JET swing / tele / spot



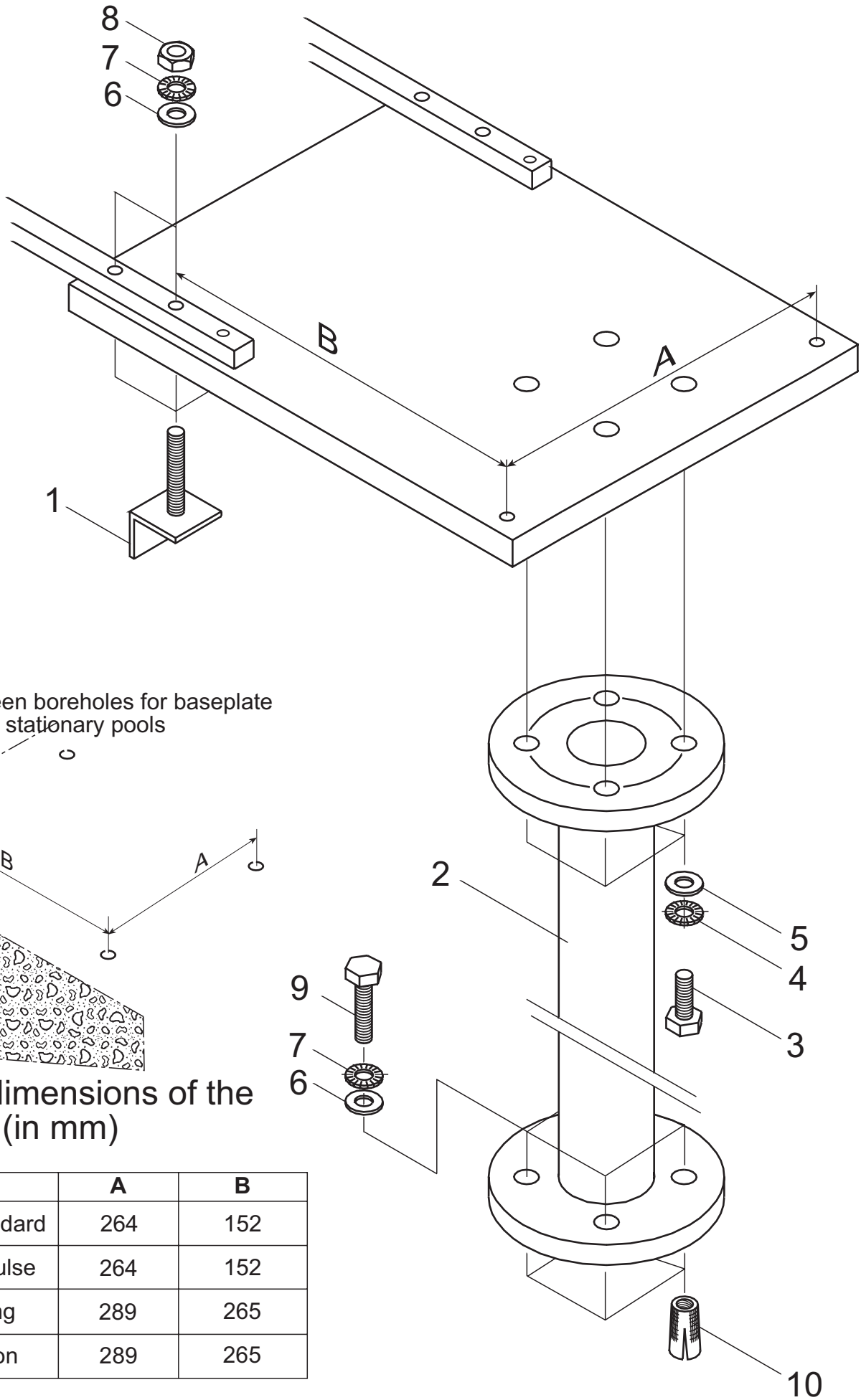
BADU JET action / tele / spot



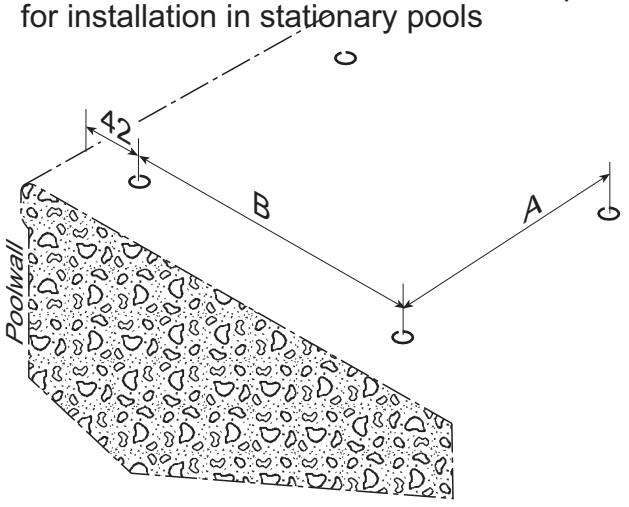
B A D U J E T swing / tele / spot
B A D U J E T action / tele / spot

Part #	Qty	Description
1	1	Cover (cowl) for swing and action
2	1	Air regulator, complete
3	1	Pneumatic pushbutton complete
4	4	Beaded disk for M 5, brass, nickel-plated
5	4	Oval head contersunk screw M 5 x 16 mm, A 2
6	1	PVC tubing, 1 m, 8 x 3 mm, crystal-clear with woven fabric
7	1	Mantlet (long mantlet for Model sport), white, matte
8	1	Intake line
10	1	Pressure line
11	1	Connecting angle
12	1	Handgrip, complete
13	2	Sheet metal (self-tapping) screw 6,3 x 19 mm, A2
14	6 (12)	Decorative cap for Philips screw
15	6 (12)	Countersunk head screw , 5.5 x 19 mm, A2
16	1 (2)	Housing flange
54/1	1 (2)	Ball nozzle, variable dia. 40 mm (action single-phase die 28 mm, non-variable)
18	2 (4)	Hose clamp, 14 mm, A 4
19	1 (2)	Retainer ring
20	2 (4)	Hose clamping ring, 4 mm / 1 mm
21	1 (2)	Nozzle housing and pressure pipe glued together
23	1 (2)	Spacer extension with bolts
24	2	Sheet metal (self-tapping) screw, 6.3 x 38 mm, A 4
25	4	Expanding bolt M8, brass
26	4	Rubber/metal buffer, M8 x 36 mm
27	1	Position switch
28	1	Base plate with threaded inserts
29	1	Strain relief clamp
30	4	Washer, dia. = 8.4 mm, A 2
31	4	Lock washer, dia. = 8.4 mm, A 2
32	2	Hex bolt, M 8 x 30 mm, A 2 (for rear)
32/1	2	Hex bolt, M 8 x 50 mm. A 2 (for front)
33	1	Junction box
33/1	1	Junction box mounting assembly (not shown in explosion drawing)
34	1	Hose clamp 9/9, A 2
35	1	Pump
36	1	PVC tubing, 700 mm, 3 x 1.5 mm, crystal-clear
37	4	Washer, dia = 8.4 mm, A 2
38	4	Lock washer, dia. = 8.4 mm, A 2
39	4	Hex bolts M 8 x 20 mm, A 2
39/1	4	Rubber/metal buffer
40	2	Flathead countersunk bolt M4 x 40 mm
41	1	Luminaire, complete, with mantlet, socket, lamp 300 W (standard - 50 W) and cable
42	1	Mounting frame
43	1	Housing
44	1	Junction Box
25	1	Hose clamp 87 x 20
46	1	Hose clamp 90 x 20
47	1	Rubber angle
48	1	Telescoping safety support

Telescoping Safety Support



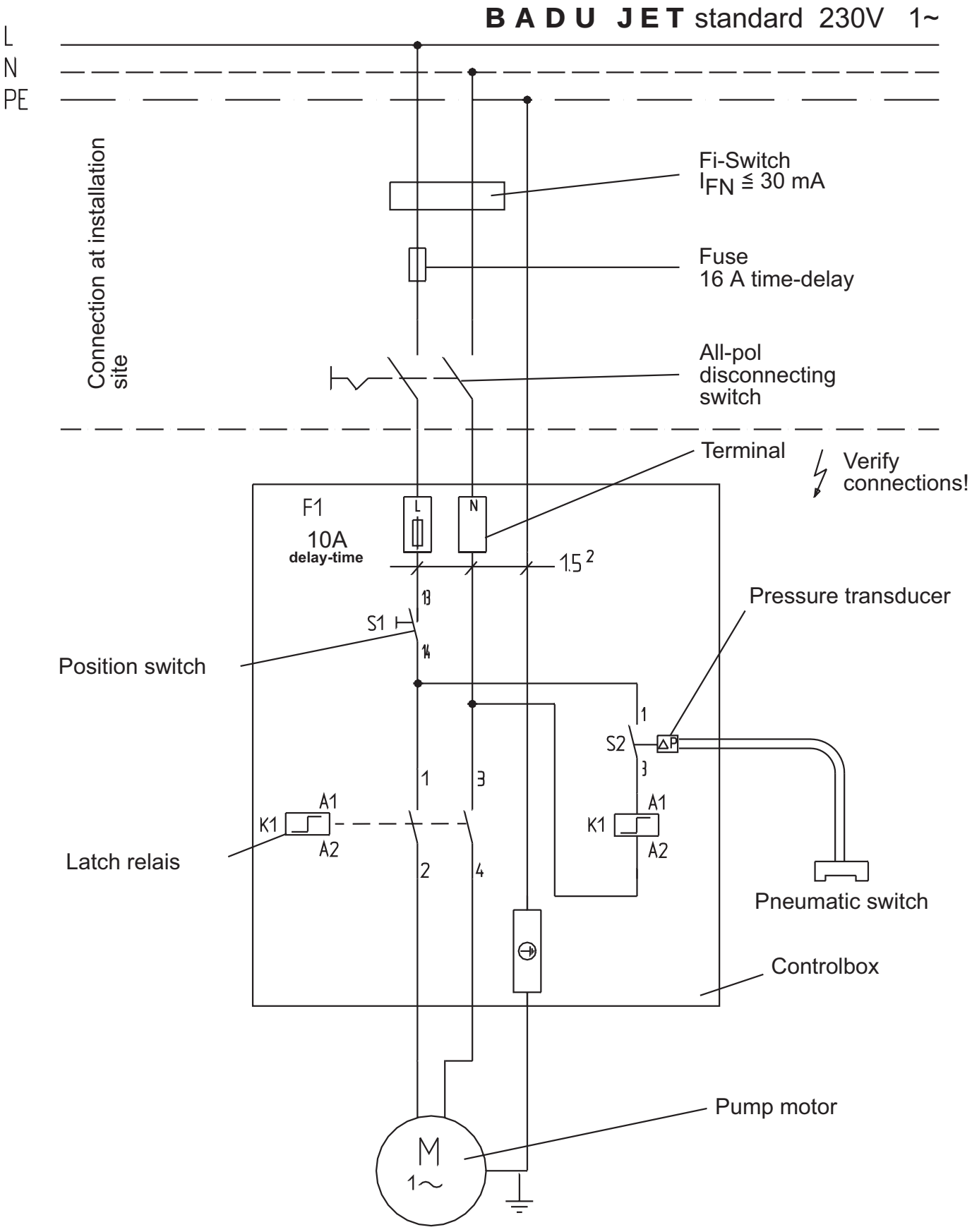
Distances between boreholes for baseplate for installation in stationary pools



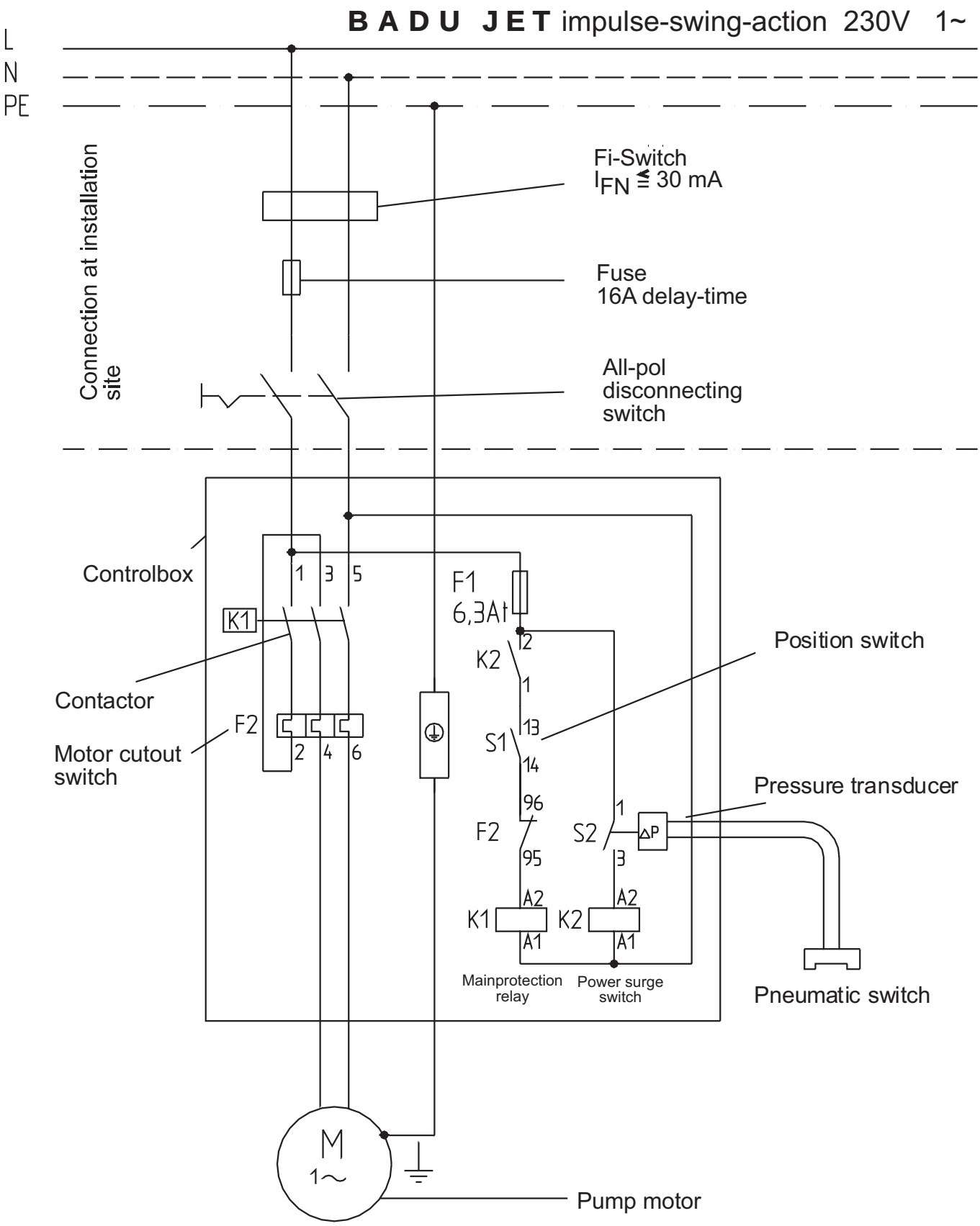
Mounting dimensions of the base plate (in mm)

Typ	A	B
BADU JET standard	264	152
BADU JET impulse	264	152
BADU JET swing	289	265
BADU JET action	289	265

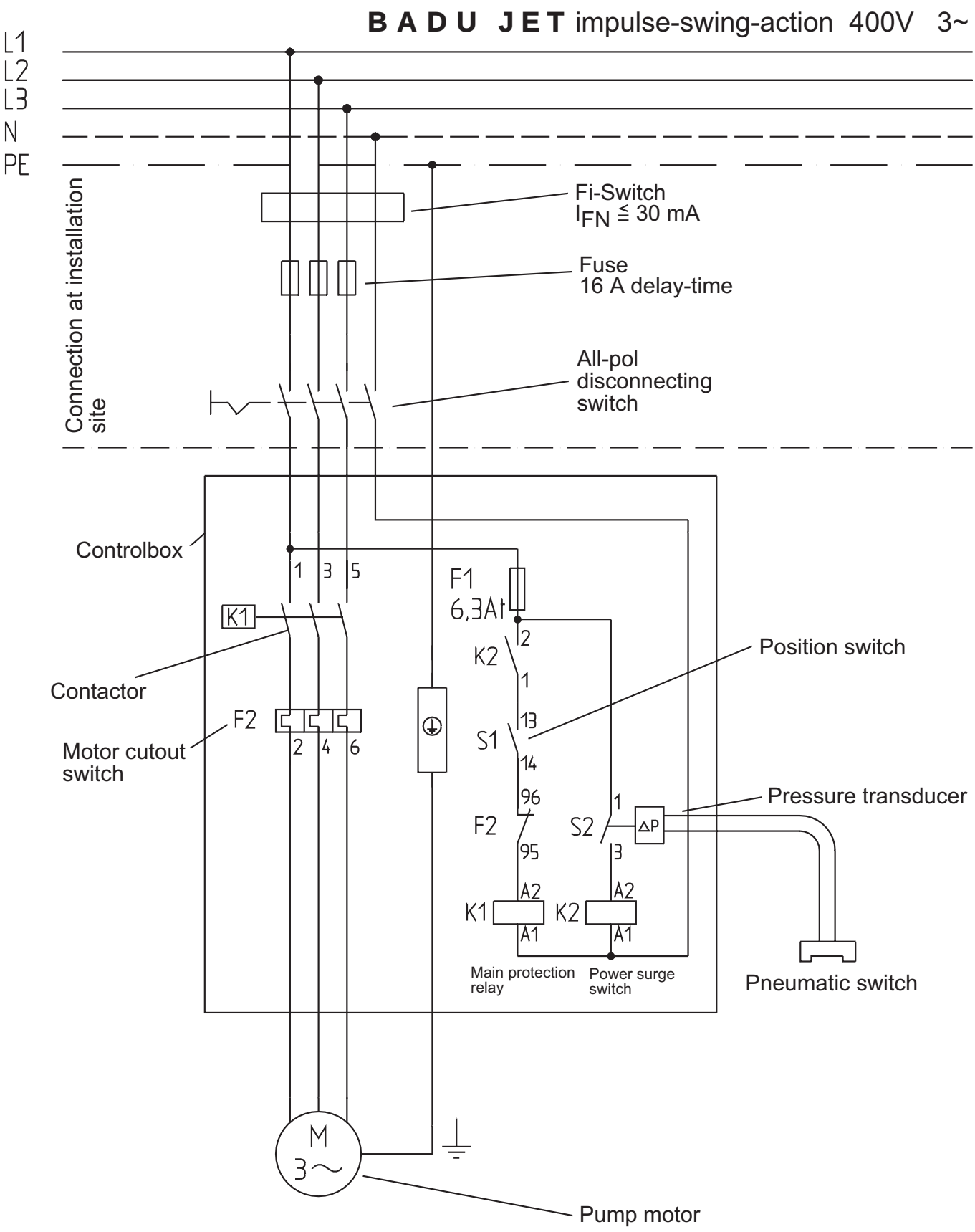
Appendix I


BADU JET standard 230V 1~
L
N
PE
Connection at installation site
Fi-Switch
I_{FN} ≦ 30 mA
Fuse
16 A time-delay
All-pol disconnecting switch
Terminal
Verify connections!
F1
10A
delay-time
L
N
1.5 2
13
S1
14
Position switch
Pressure transducer
1
S2
ΔP
3
1
3
A1
K1
A2
2
4
Latch relais
Pneumatic switch
Controlbox
Pump motor
M
1~

Appendix II


B A D U J E T impulse-swing-action 230V 1~
L
N
PE
Connection at installation site
Fi-Switch
$I_{FN} \leq 30$ mA
Fuse
16A delay-time
All-pol disconnecting switch
Controlbox
1 3 5
K1
Contactor
F2
Motor cutout switch
2 4 6
F1
6,3A
2
K2
1
13
S1
14
96
F2
95
A2
K1
A1
Mainprotection relay
1
S2
ΔP
3
A2
K2
A1
Power surge switch
Position switch
Pressure transducer
Pneumatic switch
M
1~
Pump motor

Appendix III



EG-Konformitätserklärung

Déclaration CE de conformité / EC declaration of conformity **/** Dichiarazione CE di conformità / EG-verklaring van overeenstemming / EU-yhtäpitävyysilmoitus / Declaracion de conformidad

im Sinne der EG-Maschinenrichtlinie 89/392/EWG, Anhang II A

conformément à la directive CE relative aux machines 89/392/CEE , Annex II A / as defined by machinery directive 89/392/EEC Annexe II A / ai sensi della direttiva CE 89/392 relativa a macchinari, Appendice II A / inzake richtlijn van de raad betreffende machines 89/392/EEG, bijlage II A / määriteltynä konedirektiivin 89/392/EEC liite ll mukaan / segun se define en la directriz para maquinas de la CE 89/392/CEE, Anexo II A

Hiermit erklären wir, dass das Pumpenaggregat
Par la présente, nous déclarons le groupe moteur-pompe **/** Herewith we declare that the pump unit / Si dichiara, che la pompa **/** hiermede verklaren wij, dat het pompaggregaat **./** Täten ilmoitamme, että pumppulaite / Por la presente declaramos que la unidad de bomba:

Type:_____
Type: **/** Type: **/** Tipo: **/** Type: **/** Malli: / Tipo:

Auftrags- Nr:_____
N° d´ ordre: **/** Order no.: / Numero d´ordine: **/** Opdracht-Nr.: **/** Tilausnumero: / N° pedido:

Baureihe
Série: / Series: **/** Serie: **/** Serie: **/** Mallisarja:/ Serie:

- ❑ **BADU Jet active**
- ❑ **BADU Jet standard**
- ❑ **BADU Jet impulse**
- ❑ **BADU Jet swing**
- ❑ **BADU Jet action**

folgenden einschlägigen Bestimmungen entspricht:
correspond aux dispositions pertinentes suivantes: **/** complies with the following provisions applying to it: **/** è conforme alle sequenti disposizioni pertinenti: **/** in de door ons geleverde uitvoering voldoet aan de eisen van de in het vervolg genoemde bepalingen: **/** cumple las siguientes disposiciones pertinentes: **/** vastaa seuraavia asiaan kuuluvia määräyksiä:

EG-Maschinenrichtlinie 98/37/EG:
CE-Directives européennes 98/37/CE: / EC-machinery directive 98/37/EC: **/** CE-Direttiva Macchine 98/37/CE: **/** EG-Machinerichtlijn 98/37/EG: **/** EU-konedirektiivi 98/37/EU: **/** directiva europea de maquinaria 98/37 CEE:

EMV-Richtlinie 89/336/EWG, i.d.F. 93/68/EEC:
Directives relatives à la basse tension 89/336/CEE modifiées par 93/68/CEE: **/** EMC-machinery directive 89/336/EEC, in succession 93/68/EEC / Direttiva di compatibilità elettromagnetica 89/336/CEE mod.93/68/CEE: **/** Richtlijn 89/336/EEG, gewijzigd door 93/68/EEG: **/** Sähkömagneettinen yhteensopivuus (EMC) konedirektiivi 89/336/EEC, jota on muutettu direktiivillä 93/68/EEC: / directiva 89/336/CEE: **/**

EG-Niederspannungsrichtlinie 73/23/EWG i.d.F. 93/68/EWG:
CE-Directives basse tension 73/23/CEE suivies de 93/68/CEE: **/** EC-Low voltage directive 73/23/EEC in succession 93/68/EEC: / CEE-Direttiva di bassa tensione 73/23/CEE mod. 93/68/CEE: **/** EG-laagspanningsrichtlijn 73/23/EEG in dit geval 93/68/EEG: **/** EU- pienjännitedirektiivi 73/23/EEC, jota on muutettu direktiivillä 93/68/EEC: / directiva de baja tension 73/23/CEE:

Angewendete harmonisierte Normen, insbesondere
Normes harmonisées utilisées, notamment: **/** Applied harmonized standard in particular / Norme armonizzate applicate in particolare **/** Gebruikte geharmoniseerde normen, in het bijzondere **/** Käytettyjä harmonisoituja normeja, erityisesti / Normas armonizadas aplicadas, especialmente

EN 809
EN 292 T 1,
EN 292 T 2
EN 60335-1
EN 60335-2
EN 50081-1-2
EN 50082-1-2
EN 60335-2-41:1990/A1

D-91205 Lauf,	**09.03.2000**	ppa. R. Josua	i.V. A. Torster
Ort	Datum	(Technischer Leiter)	(Verkaufsleiter)
Fait à	le	(Directeur Technique)	(Directeur des Ventes)
Place	date	(Technical director)	(Sales manager)
Localita	data	(Direttore tecnico)	(Direttore vendite)
Plaats	Datum	(Technisch directeur)	(Verkoopleider)
Paikka	Päiväys	(Teknillinen johtaja)	(Myyntipäällikkö)
Lugar	Fecha	(Director tecnico)	(Director de ventas)

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