

Use and Maintenance Manual



Extraction Arms ERGO-FLEX LUX

Contents:

1.	Introductory Remarks	3
2.	Application	3
3.	Reservations of Producer	3
4.	Technical Data	4
5.	Structure and Function	7
6.	Assembly and Start-up	7
7.	Operational Use	8
8.	Troubleshooting Guide	9
9.	Maintenance	9
10.	Occupational Health and Safety	9
11.	Transport and Storage	10
12.	Terms of warranty	10
13.	Sample of the Declaration of Conformity	13

1. Introductory Remarks

The purpose of the present Use and Maintenance Manual is to supply User with directions within the range of application, installation, start-up and the use of the **ERGO-FLEX LUX Extraction Arms**.

Installing, start up and operational use are exclusively admissible after getting acquainted with the contents of the Use and Maintenance Manual.

With regard to continuity of work carried on improvement of our products, we reserve for ourselves the revision possibility of the draft and technological changes improving their functional features and safety.

The construction of the **ERGO-FLEX LUX Extraction Arms** meets the requirements of the current state of technology as well as the safety and health assurances included in:

- **2006/42/EC Machinery Directive** of the European Parliament and of the Council of 17 May, 2006 on machinery – amending the 95/16/EC (recast) /*Journal of Laws EC L157 of 09.06.2006, page 24/*

The appliance meets following harmonized standard:

- **PN-EN ISO 12100:2012** – “Safety of machinery. Basic concepts, general principles for design. Risk assessment and risk reduction”.

2. Application

ERGO-FLEX LUX Extraction Arms have been developed for capturing the welding dust particles and welding gas as well as other fine dust particles, directly at the emission source, in order to avoid the contamination expanding within the process room/hall and protect the people in the vicinity from inhaling the contamination.

The extraction arms are manufactured in hanging and standing version. They can work independently, in a single configuration with one extraction fan, or in a group of extraction arms, connected to the main collecting ducting (with a central fan).

3. Reservations of Producer

- Manufacturer is not liable for any consequences following from the operational use that is in contradiction to the purpose of application.
- Do not install any additional elements not belonging to the normal device structure or accessory set.
- Any structural changes or modifications on the appliance on one's own are not permitted.
- Protect the flexible elements of the arm from mechanical damage.
- Before the installing, check the load carrying capacity of the wall / building structure in places where the appliance shall be installed. Unsure mounting could cause damage of the device, risk to personnel / people in the vicinity.
- The appliance must not be used for conveying the air containing aggressive contamination.**

4. Technical Data

Table No.1

Type	D [mm]	L [m]	A [mm]	B [mm]	C [mm]	E [mm]	n x F [mm]	G [mm]	Weight [kg]
ERGO-FLEX LUX-2	Ø160	2	930	435	355	Ø194	6 x Ø6,5	Ø295	8,5
ERGO-FLEX LUX-3		3	1510	846					9,6
ERGO-FLEX LUX-4		4	1890	1435					10,2
ERGO-FLEX LUX-2-R		2	1230	435					8,4
ERGO-FLEX LUX-3-R		3	1810	846					9,1
ERGO-FLEX LUX-4-R		4	2190	1435					9,8

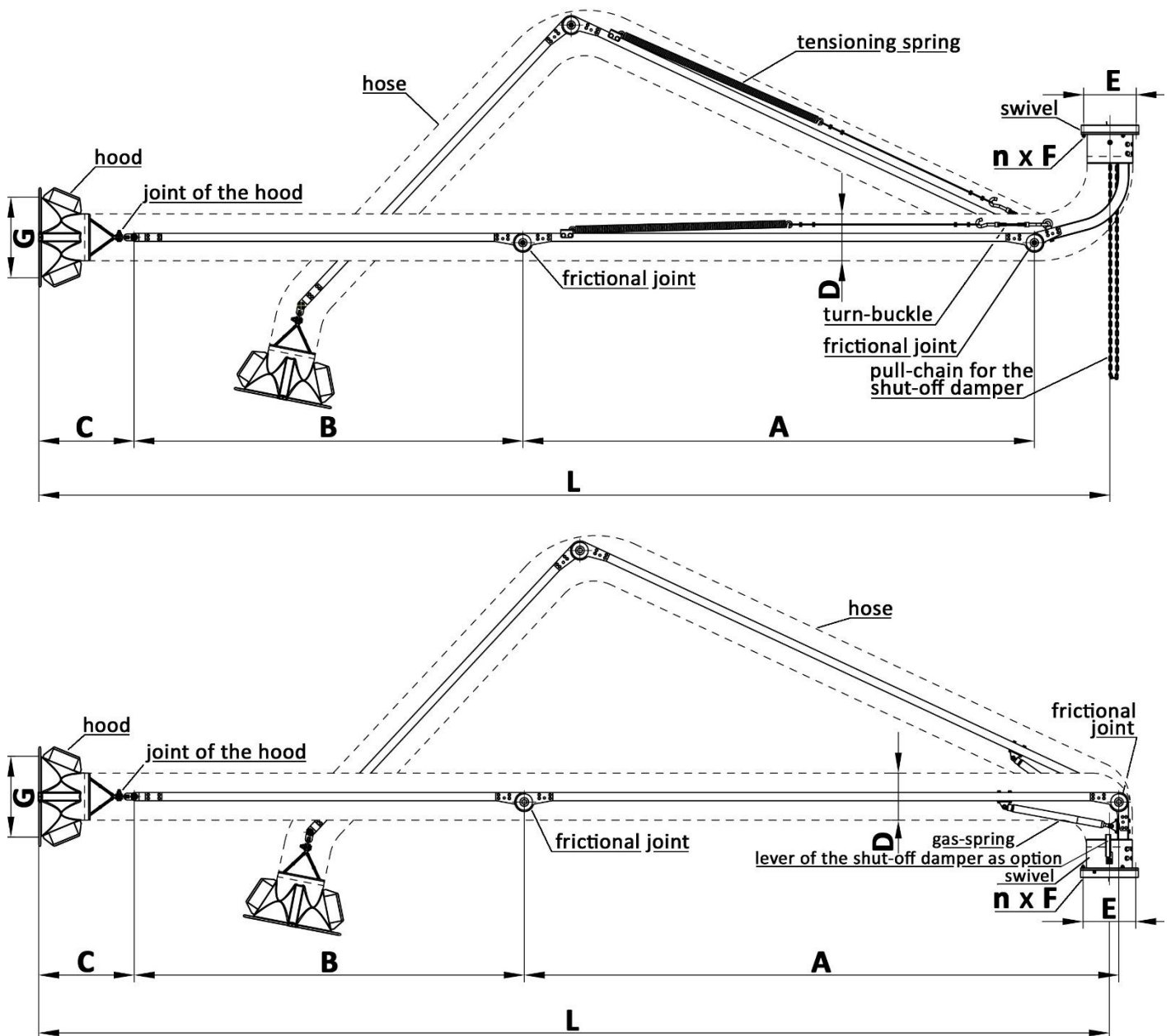
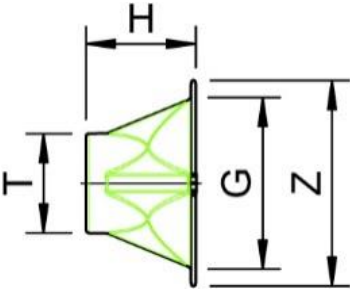
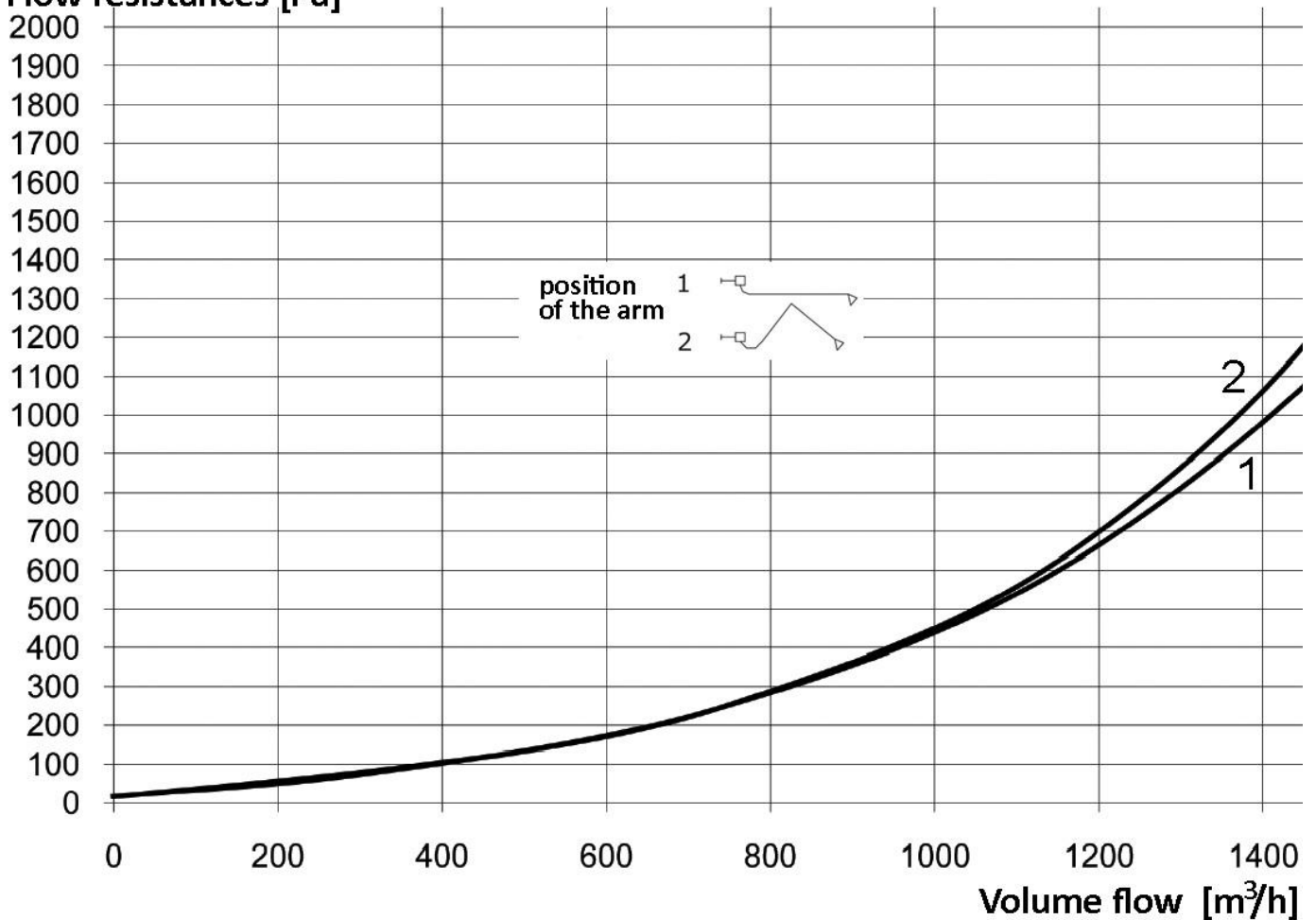


Fig. No.1 – Dimensions of the extraction arms type ERGO-FLEX LUX

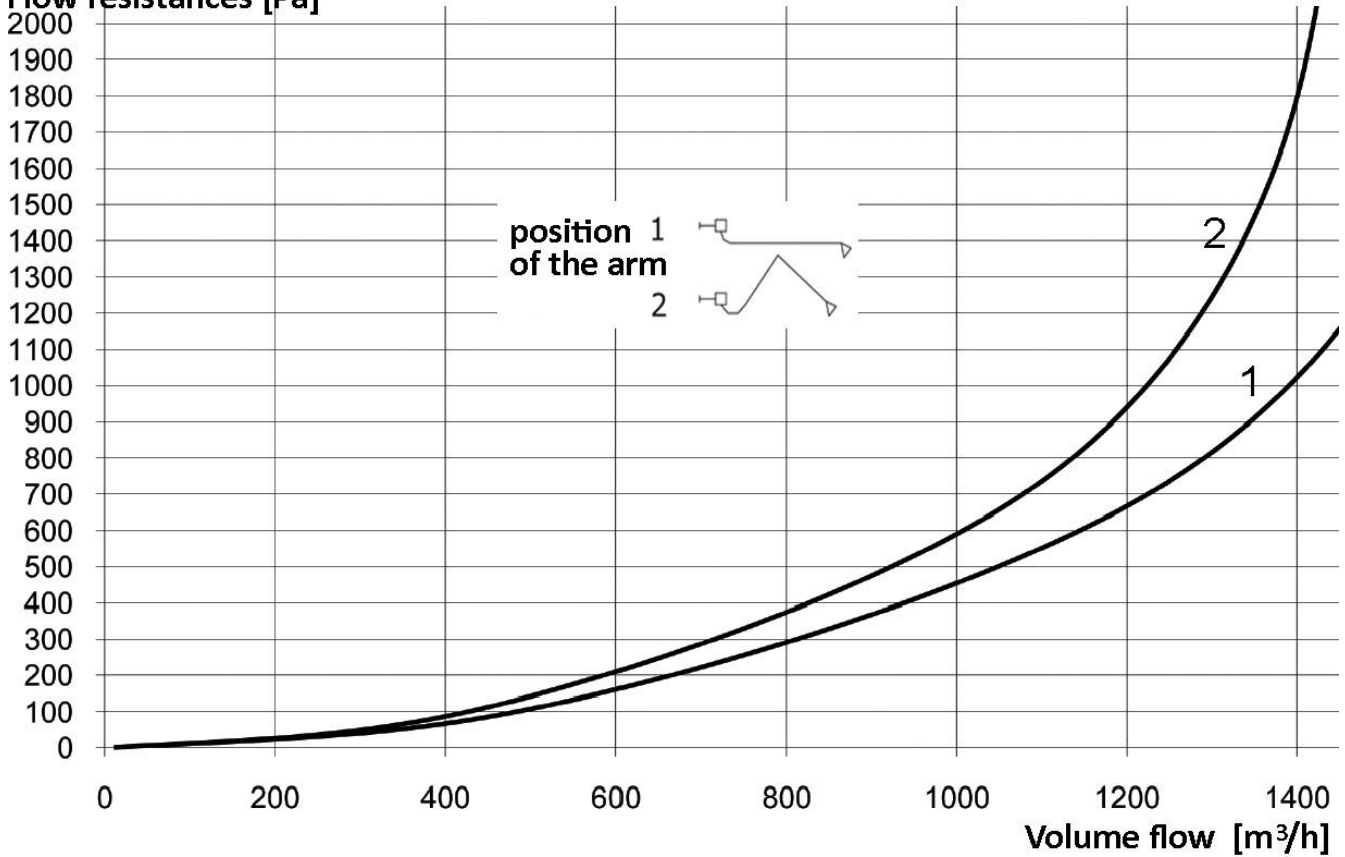
Table No.2 – Hood

	Type	G [mm]	Z [mm]	T [mm]	H [mm]	Application	Weight [kg]
	LST	Ø295	Ø365	Ø170	190	ERGO-FLEX LUX-2 ERGO-FLEX LUX-3 ERGO-FLEX LUX-4 ERGO-FLEX LUX-2-R ERGO-FLEX LUX-3-R ERGO-FLEX LUX-4-R	0,42

Flow chart ERGO-FLEX LUX-2
Flow resistances [Pa]


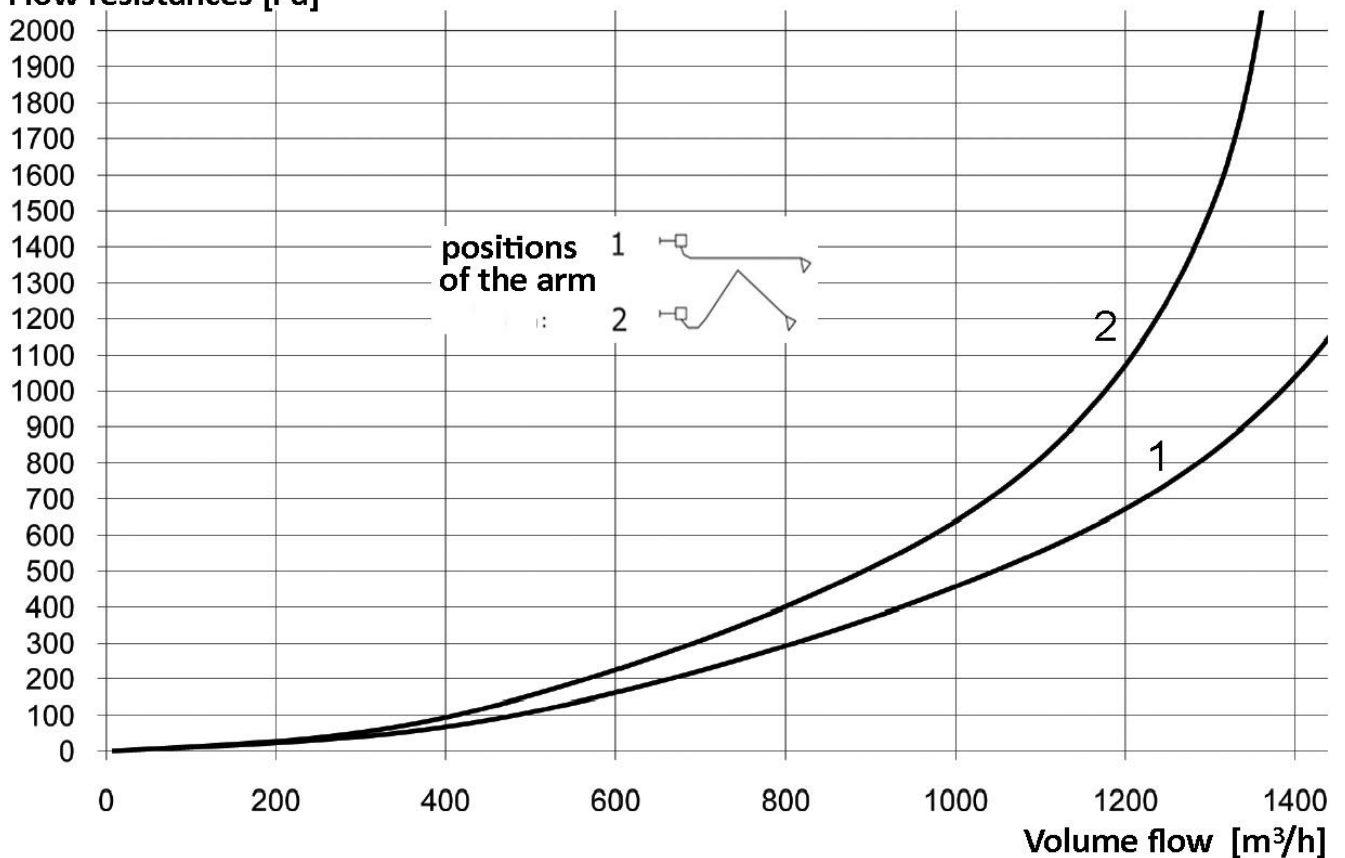
Flow chart ERGO-FLEX LUX-3

Flow resistances [Pa]



Flow chart ERGO-FLEX LUX-4

Flow resistances [Pa]



5. Structure and Function

The extraction arm consists of subsequent assemblies:

- swivel with integrated shut-off damper
- hood
- hose sleeved onto the supporting structure of aluminium profiles.

For installing the extraction arm on a wall or column is applied a wall bracket. Additionally, the same bracket can also serve for mounting the **WPA-E-N** flange-type fan. Moreover, the extraction arm can be installed at the end of a **RO**-type rotational arm.

Adequately adjusted frictional joints, (in co-function with a spring), provide the comfort of easy manoeuvring with the extraction arm.

6. Assembly and Start-up

ERGO-FLEX LUX extraction arms, along with the hoods, are delivered in separate cardboard packages. The suction hood has to be fastened according to the “Assembly instruction of the ERGO-FLEX LUX extraction arms” on page 11.

Diameters and the hole pattern for the mounting bolts are identical in the wall bracket and in the swivel (6 bolts M6x40 – 8,8).

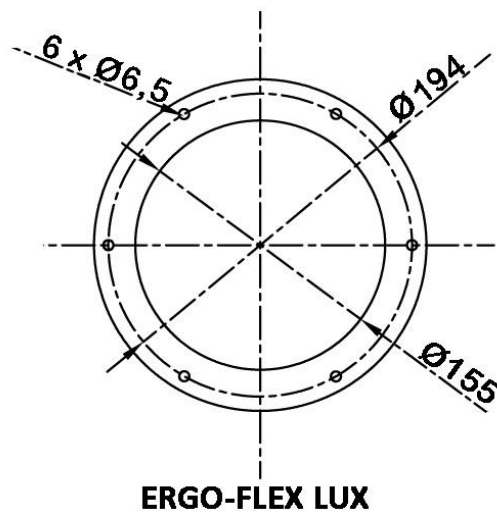


Fig. No.2

Do not install the ERGO-FLEX LUX extraction arm directly to the ventilation installation system, as it (usually) is not constructed to carry such loads during the use of the device. First install the extraction arm on a wall bracket, then make connection between the extraction arm and the ventilation system.

START-UP

- Prior to beginning of the work, check if the extraction fan is functioning or make sure if the discharge ductwork is working properly.
- Adjust the hood into suitable position: not more than 30 cm from the welding arc, and not less than 20 cm – as the welding chippings (spatters) could damage the hood and, on the other hand, the hood suction could interrupt the protection gas shield (CO₂, argon). Simultaneously, the hood should capture the fume effectively, whereby, the extraction arm shall not cause barrier to User.
- By means of the shut-off damper lever adjust the intake air volume to eliminate the fume and/or dustiness most efficiently.
- During the operational use, the position of the hood and the damper lever can be changed many times, so User can adjust them best to the current needs.
- After the work is completed – the extraction arm can be left in the ultimate used position (operational state), or if it causes obstacle – set the arm into the home position.
- Switch off the extraction fan; in case where the extraction arm works in a ventilation system – close the shut-off damper.

7. Operational Use

In general, the device construction guarantees a safe and reliable function without continuous routine servicing and special handling.

If necessary, undertake the adjustment of the frictional joints. First take off the hose clamp, and and sleeve the hose off until the joint is accessible.

The bolts and nuts in the joints are fine-threaded (1 mm pitch). The adjustment of the frictional brakes is carried out by increasing or reducing the tension of the nuts upon the frictional elements.

In general, the brake adjustment in the following joints ought to be executed in such a way that provides stability and self-supporting features of the extraction arm (which is important to keep the stable arm position). Whereas, on the other hand, this cannot cause any excessive friction resistance while User is changing the arm position.

Having completed the adjustment, tighten up the counter-nuts.

8. Troubleshooting Guide

Table No.3

	Problem	Possible reason and corrective action
1.	The extraction arm is falling.	Incorrectly adjusted frictional brake. Increase the tension upon frictional disks of the brake in the joint by tightening the adjustment nuts.
2.	The extraction arm is automatically setting always in the same position.	The rotation axis of the arm is not positioned vertically. Carry out the positioning of the mounting flange of the ERGO-FLEX LUX extraction arm to set the rotation axis vertically.
3.	Drop in the air suction rate along with the increased noise level in the extraction installation and in the extraction arm.	Improper impeller rotation sense of the extraction fan. Change the phase connection sequence (3-phase motor only).
		The inlet mesh net is clogged. Clean the inlet mesh using a wire brush or replace the inlet mesh for a new one.

9. Maintenance

Generally, the maintenance activity consists in following steps executed periodically:

- Periodically clean the surfaces of the suction hood and the inlet mesh from the deposited dusts particles and impurities, to obtain the most efficient capture. In application for welding dusts, sprinkle additionally them with the anti-gluing (anti-spattering) fluid against chip-pings.
- In case when the extraction arm is losing its self-supporting properties – undertake the adjustment of its frictional brakes.
- Lubricate the swivel every 3 months using solid grease (lubrication nipple is located on the swivel flange).
- After 1 operational year submit the device to a technical revision and repair or replace the spotted faulty (worn out) element.
- Clean the internal surfaces of the extraction conduits from the deposited impurities. The frequency depends on the intensity of use. **Every 3 months, examine the pollution degree of the extraction conduits, clean them if necessary.**

10. Occupational Health and Safety

The ERGO-FLEX LUX extraction arms will not cause any risk under the condition that they are firmly and correctly mounted to the wall or another structural element of the building. Unsure installing could result in an uncontrolled detachment of the device and cause serious risk to personnel / people in the vicinity.

Having completed the work, leave the extraction arm in the ultimately used operational position. In case when it constitutes obstacle to personnel, set in into the home position. Prior to installing check the load carrying capacity of the building structure.

11. Transport and Storage

ERGO-FLEX LUX extraction arms have to be stored and transported in partly assembled state and in special packages. The devices ought to be stored in dry rooms and of efficient ventilation.

During the transport / reloading protect the device from scratching, indents and pay attention that the markings and labels would not get detached.

12. Terms of warranty

The period of warranty for the purchased device is indicated in the “Card of Warranty”.

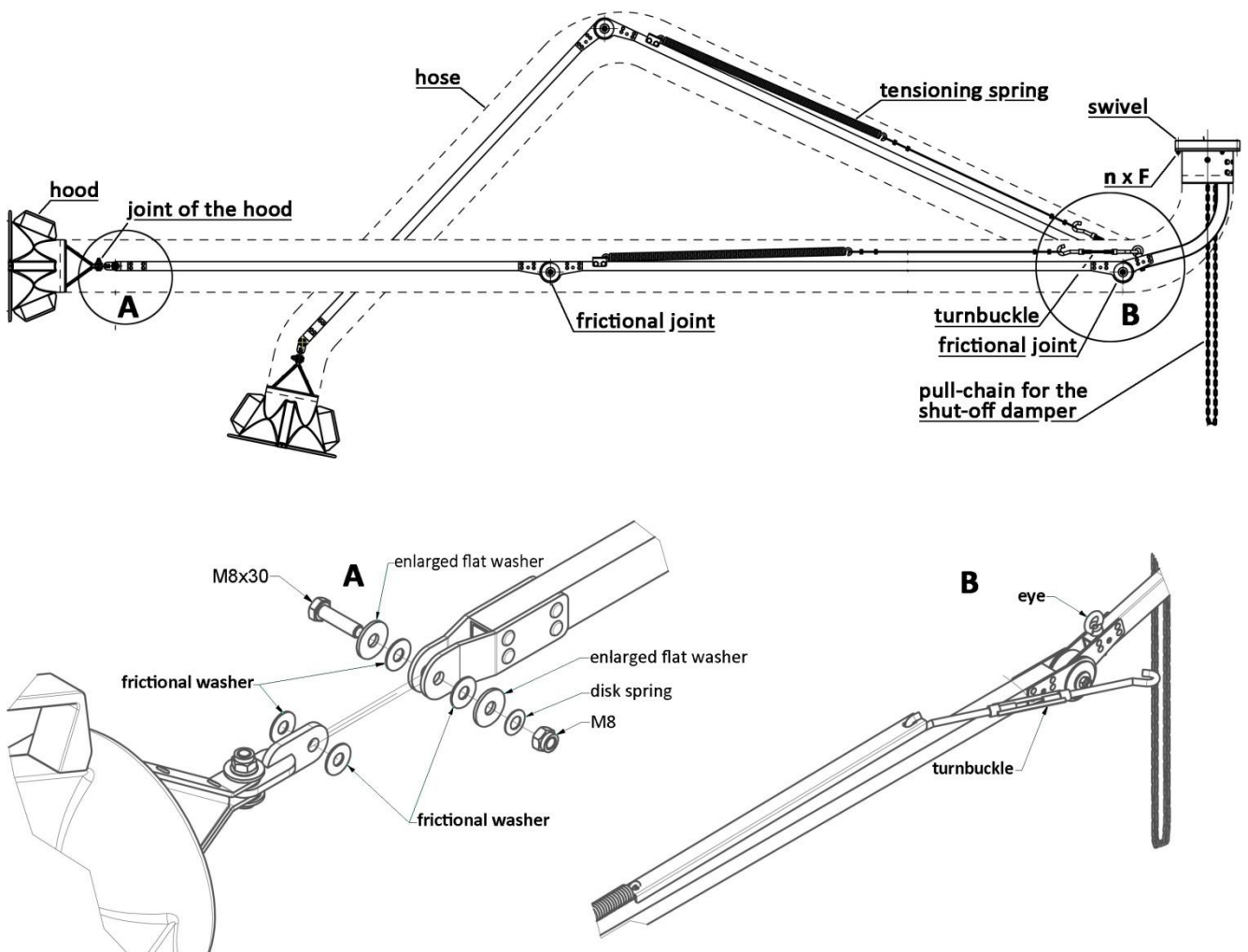
The warranty does not comprise:

- device failures caused during use which was in contradiction with the purpose of operational use and with the present Use and Maintenance Manual,
- mechanical / electrical damages and malfunctions caused by User,
- modifications and changes on the appliance undertaken by User on one’s own,
- inefficiency or malfunctions following from the normal operational exhaustion / wear.

Infringement of the section 3 “Reservations of Producer” of the Use and Maintenance Manual and especially modifications undertaken by User on one’s own shall result in the loss of warranty validity.

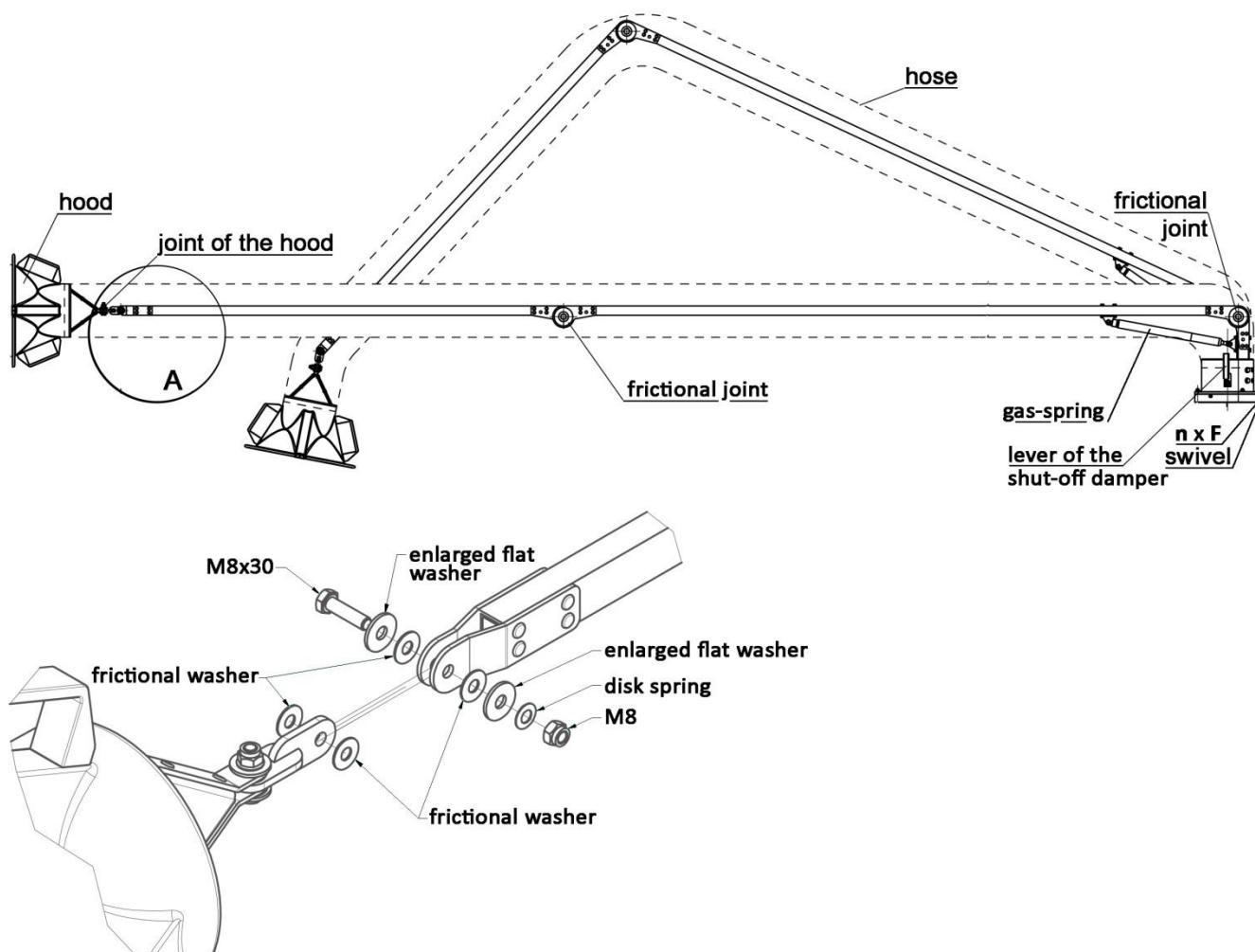
Assembly instruction of the extraction arms type – ERGO-FLEX LUX (hanging version)

1. Take out the extraction arm and the hood from the package and put it stably on an even surface.
2. Pull the arm segments apart to enable further assembly.
3. Put the turnbuckle hook into the eye and screw them together – see Detail B.
CAUTION: Screw together the turnbuckle to the moment, when (at the maximum vertical position), the tensioning mechanism (the spring) would not disconnect.
4. Adjust the frictional joint (at the swivel) in such a way, that the extraction arm is easy to manoeuvre and is stable in keeping the requested arm position.
5. Sleeve the hose onto the swivel and fold up the hose edge inwards and subsequently secure it with a hose clamp.
6. Adjust the middle joint similarly, as in Clause 4.
7. Install the hood at the extraction arm, according to the Detail A. Adjust the frictional joint (of the hood) in such a way, that it is easy to manoeuvre with the hood and it is keeping the requested operational position.
8. Sleeve the other end of the hose, onto the hood. It is important to fold inwards the hose edge and secure them with a hose clamp.
9. Mount the ERGO-FLEX LUX extraction arm on the wall bracket.



Assembly instruction of the extraction arms type – ERGO-FLEX LUX-R (standing version)

1. Take out the extraction arm and the hood from the package and put it stably on an even surface.
2. Pull the arm segments apart to enable further assembly.
3. Adjust the frictional joint (at the swivel) in such a way, that the extraction arm is easy to manoeuvre and is stable in keeping the requested arm position.
4. Sleeve the hose onto the swivel and fold up the hose edge inwards and subsequently secure it with a hose clamp.
5. Adjust the middle joint similarly, as in Clause 3.
6. Install the hood at the extraction arm, according to the Detail A. Adjust the frictional joint (of the hood) in such a way, that it is easy to manoeuvre with the hood and it is keeping the requested operational position.
7. Sleeve the other end of the hose, onto the hood. It is important to fold inwards the hose edge and secure them with a hose clamp.
8. Mount the ERGO-FLEX LUX-R extraction arm on the wall bracket.



13. Sample of the Declaration of Conformity

Declaration of conformity EC No.

Manufacturer (eventually the authorized representative / importer):

name: **KLIMAWENT S.A.**

address: **81-571 Gdynia, Chwaszczyńska 194**

A person, authorized for issuing the technical documentation: Teodor Świrbutowicz, KLIMAWENT S.A.

hereby declares that the appliance:

name: **extraction arm**

type/model: **ERGO-FLEX LUX; ERGO-FLEX LUX-R**

serial number: year of production:

meets the requirements of the subsequent European Directives:

- **2006/42/EC Machinery Directive** of the European Parliament and of the Council of 17 May, 2006 on machinery – amending the 95/16/EC (recast) *Journal of Laws EC L157 of 09.06.2006, page 24*

The device has been constructed and produced on the basis of following harmonized standards:

- **PN-EN ISO 12100:2012** – “Safety of machinery. Basic concepts, general principles for design. Risk assessment and risk reduction”.

.....
place, date

.....
signature of authorised person

.....
name, surname, function
of the signatory

KLIMAWENT S.A.

Supported Employment Enterprise

81-571 Gdynia, ul. Chwaszczyńska 194

phone: +49 58 829 64 80

email: klimawent@klimawent.com.pl

www.klimawent.com.pl

District Court Gdańsk-Północ
in Gdańsk, VII Wydział Gospodarczy
of the National Register of Court
KRS 0000308902 company stock
13.779.200 zł paid in total

NIP: 958 159 21 35

REGON: 220631262

Bank Account: **Santander Bank Polska S.A.**

56 1500 1025 1210 2007 8845 0000

NOTES:

NOTES:



Producer:

KLIMAWENT S.A.

81-571 Gdynia, ul. Chwaszczyńska 194

tel. 058 629 64 80

fax 058 629 64 19

e-mail: klimawent@klimawent.com.pl

www.klimawent.com.pl

810R42	ERGO-FLEX LUX-2	10.01.2019/EN
810R43	ERGO-FLEX LUX-3	10.01.2019/EN
810R44	ERGO-FLEX LUX-4	10.01.2019/EN
810R45	ERGO-FLEX LUX-2-R	10.01.2019/EN
810R46	ERGO-FLEX LUX-3-R	10.01.2019/EN
810R47	ERGO-FLEX LUX-4-R	10.01.2019/EN