CONDUCTIX wampfler Balancer Instruction Manual

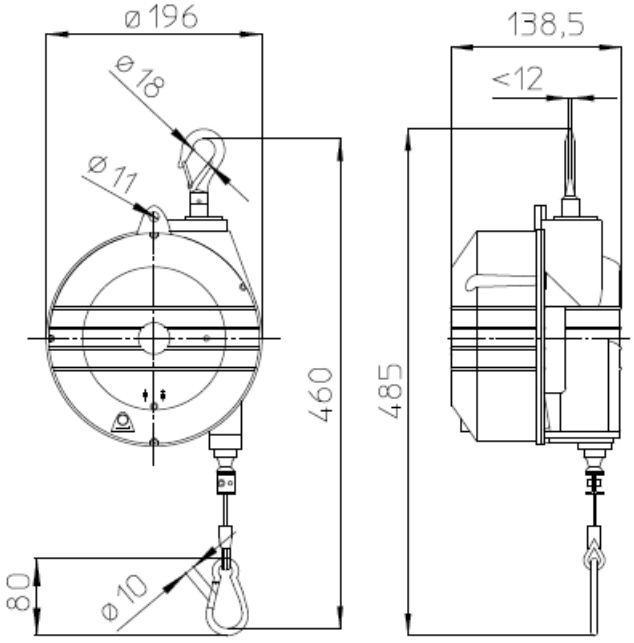
Contents

CONDUCTIX wampfler Balancer

Operating Instructions

Order number

- 040874-014×2,0
- 040874-018×2,0
- 040874-022×2,0
- 040874-025×2,0

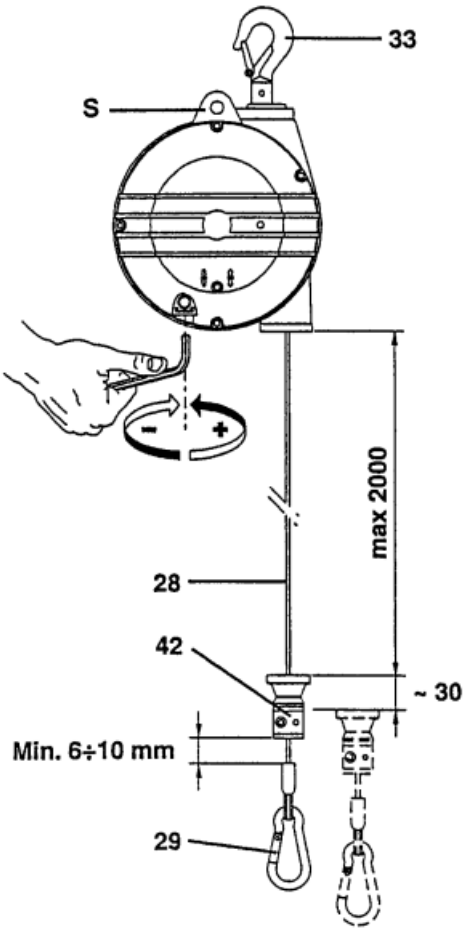


Putting into operation of the balancer

This type of balancer can be used on an assembly line as well as on individual working places.

Observation about the total load:
The tool, the accessories and the parts of the hoses and cables to be supported have to be taken into consideration.
The total load must lie within the load capacity of the chosen balancer.
For an optimal service, suspend the balancer hook (reference no. 33, drawing A) on a working height within the middle of the pullout area of the wire.
For the hanging up, use a solid stationary bracket or an horizontal carriage.
If the load to be pulled has not been attached vertically under the balancer, make sure it can freely move, in order to avoid important wear.

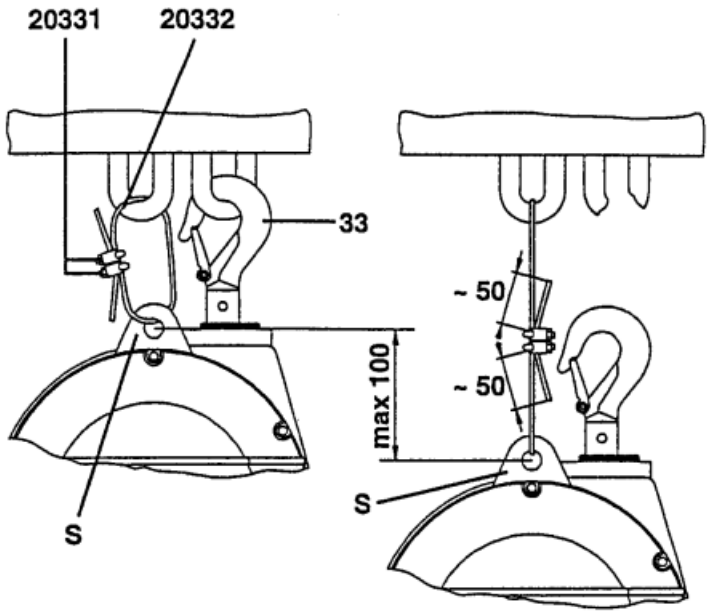
Drawing A



Please note! The “S” suspension of the balancer has always to be attached on a suitable bracket with the appropriated accessory
(NOT THE SAME ON WHICH THE HOOK (33) HAS BEEN SUSPENDED). Whereas an additional pullout of max. 100 mm has to be taken into consideration (DIN 15112) (Drawing B).

Fastening of the accessory wire 20332:
Make sure the wire lays correctly; the clamp 20331 must lock both parts of the superposed wire.
After the first screwing down, we recommend to fasten the clamp with a 4Nm torque, in order to compensate the slackening, between the wire and the clamp, generated during the first clamping stage (Drawing B).

Drawing B

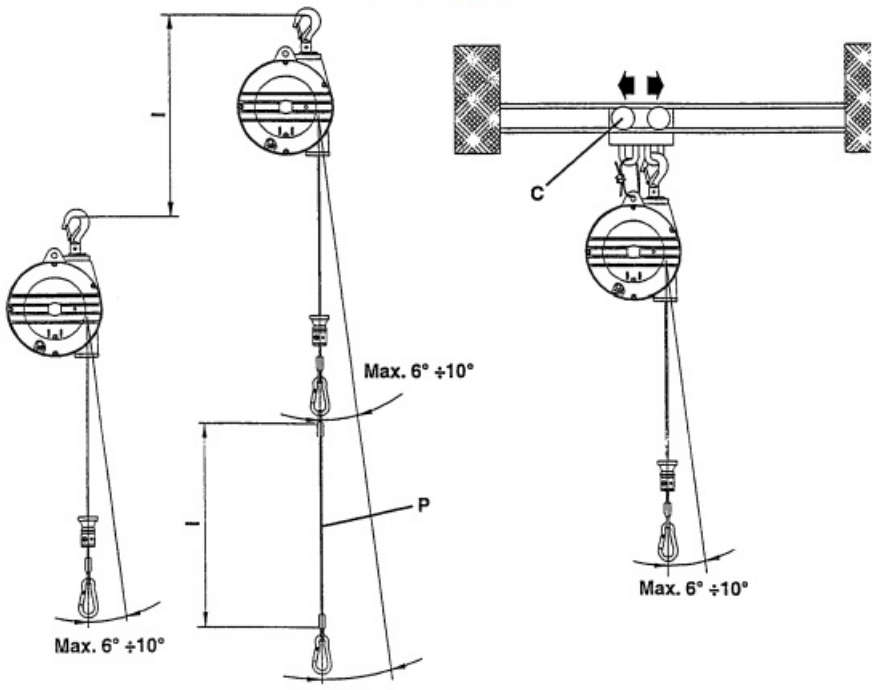


Please note!
When using screw fastening devices for the installation of the balancer or for the fastening of the safety wire on point “S”, self-closing systems and / or splints must be used.

- Suspend the load on the safety hooks (29).
- Never lubricate the balancer with inflammable or volatile fluids. Never remove the labels. All damaged labels have to be replaced.

If an horizontal displacement is necessary, which needs a larger angle than the maximum scheduled one, there are two possibilities:
Install the balancer further above by using an extension (P-Option). Whereby the dimension “l” has to be taken into consideration (drawing C). Hang the balancer on a sliding carriage (C). Thanks to its horizontal movement, the required working position can be reached.

Drawing C

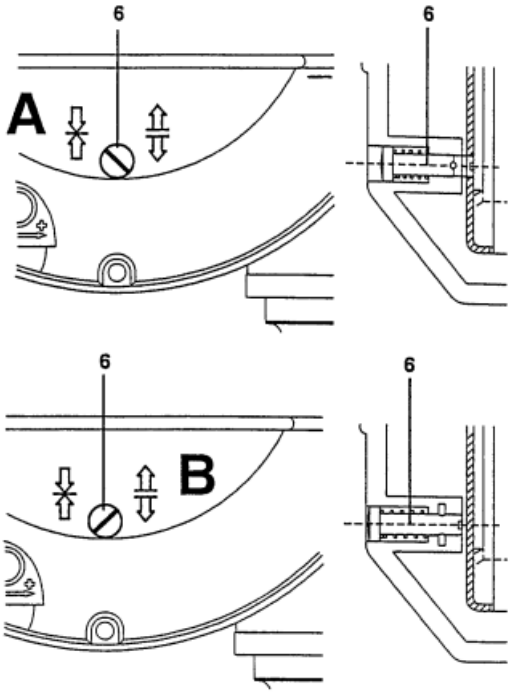


Safety and adjustment indications

The locking screw (6) can take 2 positions:

- Position „A“ : The reel is locked.
- Position „B“ : The reel is released.
  (Drawing E)

Drawing E

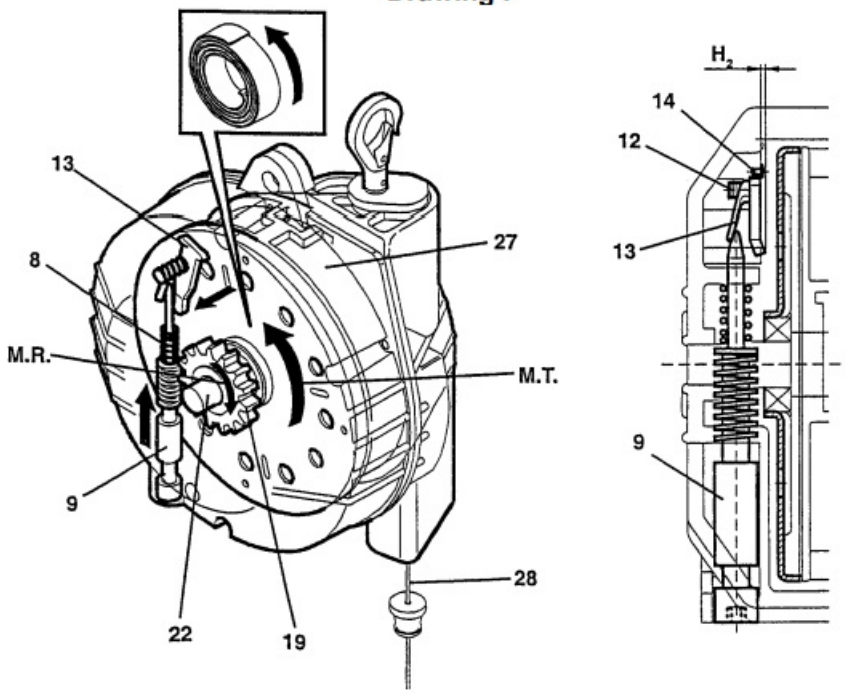


Please note! Never release the balancer with a drafted wire and without screwed load (6)!

- The wire should resile and cause personal injury or material damages!
- If the spiral spring breaks, the lowering of the load will be locked.
- If the load capacity has been adjusted under the permitted minimum, the load should also be locked during lowering. If operating under above conditions, the load has to be supported or a safety bracket, against falling, has to be installed. It is strictly forbidden, also during maintenance, to access the spring/drum unit (27).
- The spring/drum unit (27) will be delivered assembled.
- In case of damages, the complete unit has to be replaced.

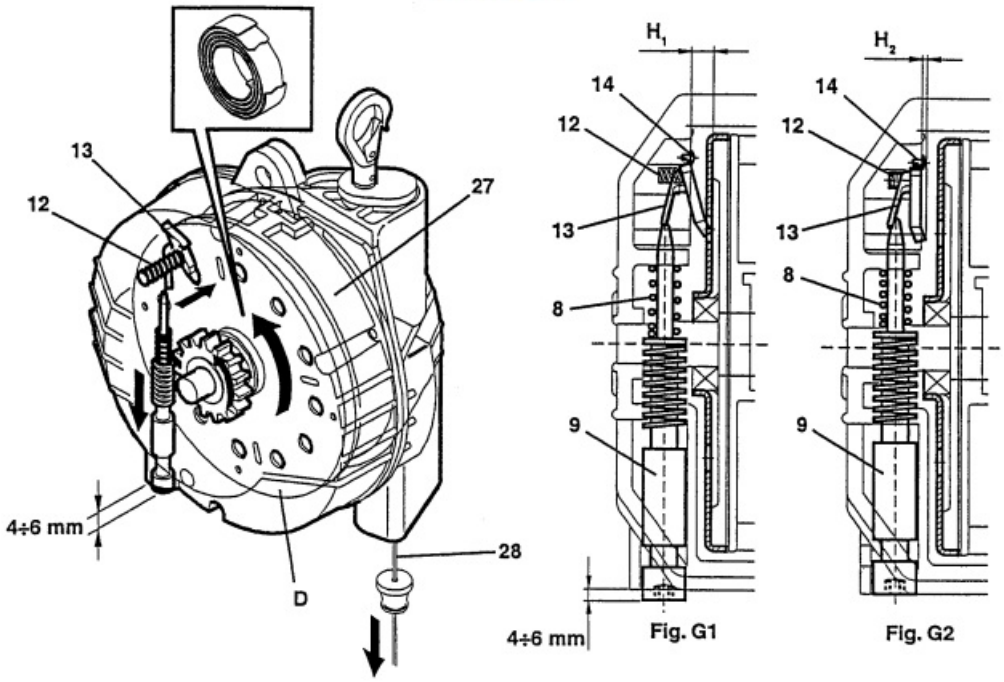
Anti fall guard:
Under normal conditions, the spring/drum (27) exercises a torque on the gear (19). Whereby the end of the screw (9) pushed upward locks the safety device (13). (drawing F)

Drawing F



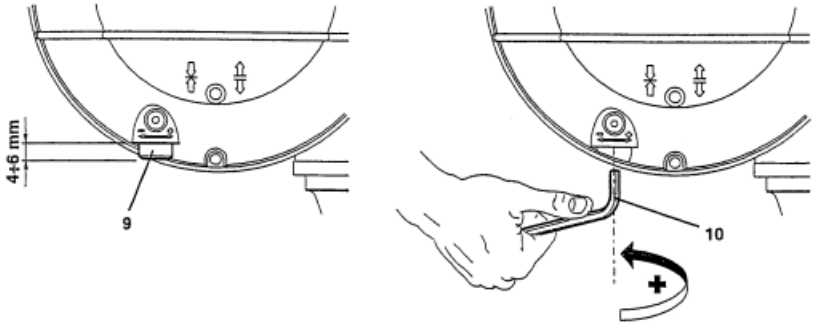
If the spring/drum (27) breaks, the spring (12) squeezes the device (13) toward the washer (D). Thereby the torque of the drum (27) is locked and consequently the load lowering is interrupted (drawing G1).

Drawing G



If a load which is to small has been suspended, the washer (D) should be even locked. This happens principally in the upper pullout area and can be recognised through the 4-6 mm protruding of the screw (9). (Drawing H)

Drawing H



To eliminate this fault, proceed as it follows:

1. Turn the screw (9) clockwise, min. 20 turns, by the means of a 6 mm socket wrench (10).
   The torque of the spring-type terminal moves the shaft (22), the gear (19) and the screw (9) upward. The screw end locks the safety device (13), whereby the torque of the drum is released again.
2. Restrict the pullout to a minimum by adjusting the clamp (42) upward. If thereby the drum does not release, a balancer with a smaller load capacity must be installed.

For the adjustment of the counterweight screw (9):

- turn clockwise with a socket-wrench (10), to increase the load capacity
- turn counter clockwise, to reduce the load capacity (drawing A).
  After the load has been adjusted, verify if the wire (28) moves freely: the complete stressed spring (27) must not limit the pullout.
- During the operation, the wire must not be pulled up to the stopper.
  It has to stop at min. 30 mm before the lifting end position (drawing A).
- If necessary, move and lock the clamp, to limit the course upward.
- To lock the load at the required height, turn the screw (6) at 90° (pos. A, drawing E). Thereon pay attention, the screw (6) reaches the end position.
  The rotation can only occur by pushing with the screwdriver (drawing E).

To loosen the locking, repeat the procedure in reverse order. This must only occur with a hanging load. Otherwise a dangerous impact may occur, caused by the resiling wire.

Application of the balancer

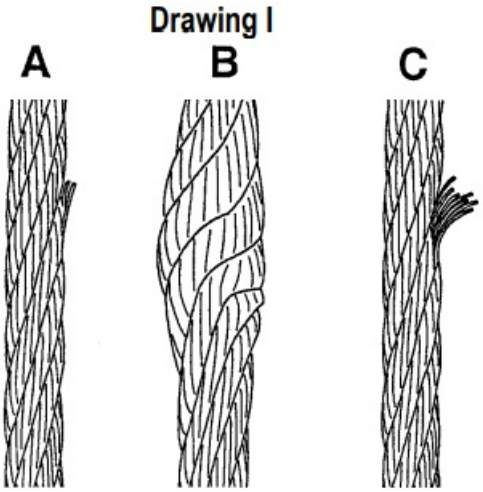
- After having attached the load, verify if the working conditions are accurate (easy pullout).
- For a safety use, the upper suspensions, the hook (33) and the safety hook have to be controlled regularly. If screws are used, the self-closing system and/or the splint have to be verified.
  Control also the installed brackets as well as the total safety suspension (S).

Control regularly the wear of the supporting parts (spring safety hook, wire, parts of the suspension and connection of the tool).
The spring of the safety hook (29) and of the hook (33) have to be kept in working order. The safety lock must close properly.

Verification

Verify the complete wire.

- Damage A (break of a few cores only) : the wire can be still used.
- Damage B or C (break of a wire strand) : the wire has to be replaced immediately. (Drawing I)



Maintenance on the installed balancer:
Grease with wire grease (BEACON 325 from ESSO, or equivalent grease)

Exceptional maintenance of the balancer:

- Before taking the load from the balancer, the wire must be completely retracted; the rubber stop must lie on the guiding surface.
- A pulled off wire, with stressed spring, may resile very fast and cause personal injury or material damages.
- Be very careful, when taking the balancer from the bracket!

Opening of the balancer

Before each intervention, the spring/drum (27) must be released For that, turn the screw (9) counterclockwise.

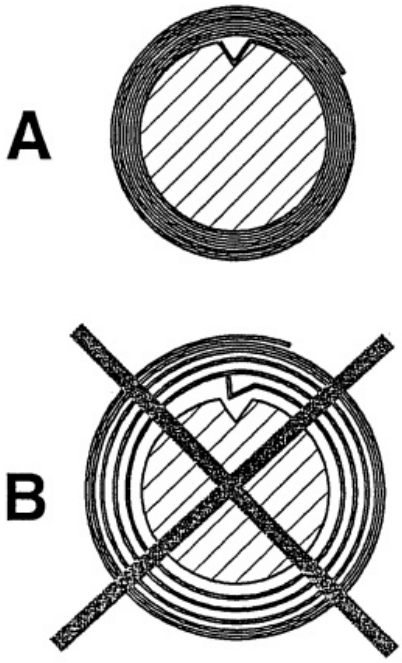
There are two possibilities to verify it:

1. About 4-6 mm protruding of the screw (9) (drawing H)
2. Little movement of the drum (27), when turning it with the wire by handcraft.
    - Install the balancer on an horizontal and stable surface. Remove all 4 screws (1), lift the cap (11) and pull the wire (28) completely off.
    - The inner diameter of the spring must be stranded on the shaft (drawing L).
    - Verify the wire: if it shows wears according to type B or C, replace it immediately (drawing I).
    - erify the function of all gears during operation: frictionless axial running and twisting of the screw (9).
    - Make sure that the spring (12) squeezes the safety device (13) clamped with the screw (14) in Position H1 > 8 mm (drawing G).
    - If squeezing the screw (9) down to the bottom, the screw end operates on the inclined surface of the device (13) and make it fall in the position H2 < 2,5 mm (drawing G).

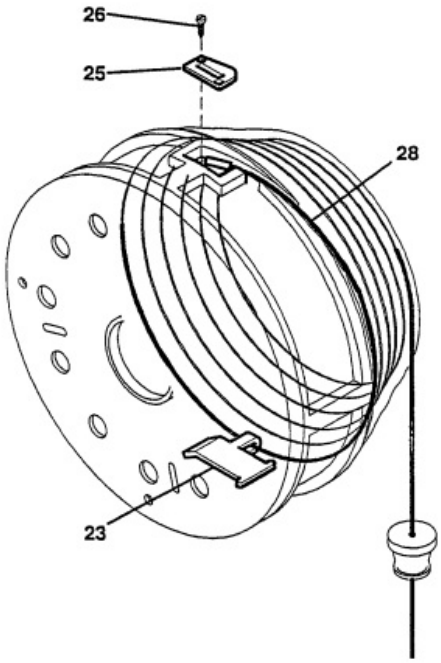
The screw (14) must hold back the safety device (13) in such a way it can freely move. So the pressure between H1 and H2 will be changed without any friction and resistance.

- Make sure that the wire (28) is perfectly hold through the lock (25) and that the fastening screw (26) does not protrude (drawing M).

Drawing L



Drawing M



Montage of the balancer

Fasten the cap (11) with the screw (1) and the washer (36) on the balancer.
Turn the screw (9) clockwise.
Thereby the gear-wheel (19) and the drum (27) operate the coiling of the wire (28).
Make sure that the wire is coiling into all the slots of the drum (27) one after another without superposition.
When the load approaches the min. load capacity of the balancer, the reaction moment “M.R.” of the spring operates the axial movement of the screw (9), compressing the spring (8), and in that way also the safety device (13), until the position H2 has been reached (drawing G2)
Turn the screw as far as the required load capacity has been reached.

To reach the middle load capacity of the balancer the following approx. number of screw (9) turns are necessary:

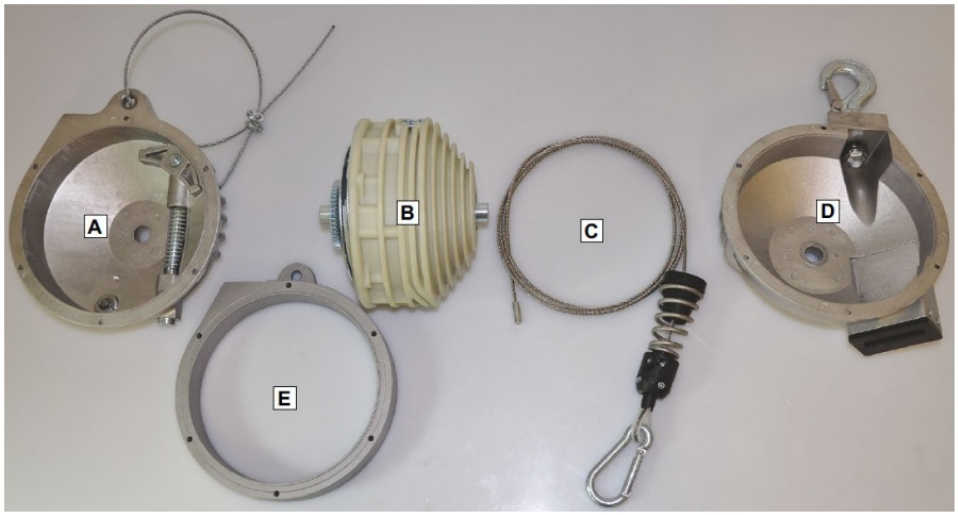
- For 040874-014X2,0 n. 90 turns
- For 040874-018X2,0 n. 50 turns
- For 040874-022X2,0 n. 130 turns
- For 040874-025X2,0 n. 120 turns

All repair works must be executed through a skilled and authorised specialist. In case of doubt, ask Company Conductix-Wampfler.

Characteristics

Order number	Load capacity (kg)	Cable travel (m)	Weight (kg)
040874-014×2,0	10 – 14	2,0	5,5
040874-018×2,0	14 – 18	2,0	6,0
040874-022×2,0	18 – 22	2,0	6,5
040874-025×2,0	22 – 25	2,0	6,5

Spare parts drawing



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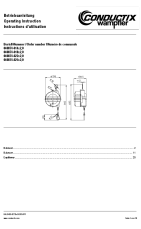
Documents / Resources

	CONDUCTIX wampfler Balancer [pdf] Instruction Manual 040874-014x2 0, 040874-018x2 0, 040874-022x2 0, 040874-025x2 0, Balancer

References

- Conductix Wampfler Global | We move your business