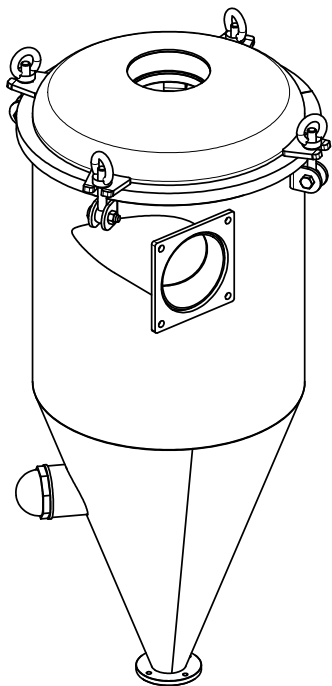
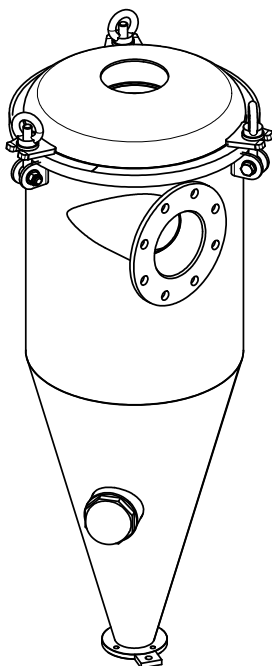
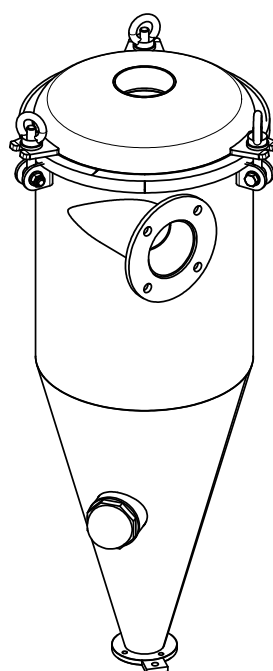
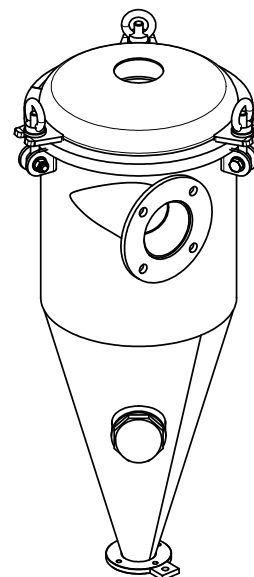


ORIGINAL INSTRUCTIONS

CYCLONE SECONDARY
SHUTOFF PR530CYCLONE SECONDARY
SHUTOFF PR330CYCLONE SECONDARY
SHUTOFF PR200-250CYCLONE SECONDARY
SHUTOFF PR150

TECHNICAL DATA SHEET

CODE 14450 015 00
CODE 14450 016 00
CODE 14450 017 00
CODE 14450 020 00
CODE 14450 022 00
CODE 14450 023 00
CODE 14450 024 00
CODE 14450 025 00



COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

COMPANY WITH
ENVIRONMENTAL SYSTEM
CERTIFIED BY DNV GL
= ISO 14001 =

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= UNI EN ISO 3834-2 =

1. General warnings

This technical data sheet contains technical information concerning cyclone secondary shutoffs suitable for decompressors of the PR series and the main installation and maintenance instructions.

Complying with the instructions contained in this technical data sheet is crucial for the recognition of warranty against defective parts. Upon receiving the goods, ensure that they are intact and have not been accidentally damaged during transport. In the event parts of the accessory must be replaced, **use only genuine spare parts**.

2. Technical data

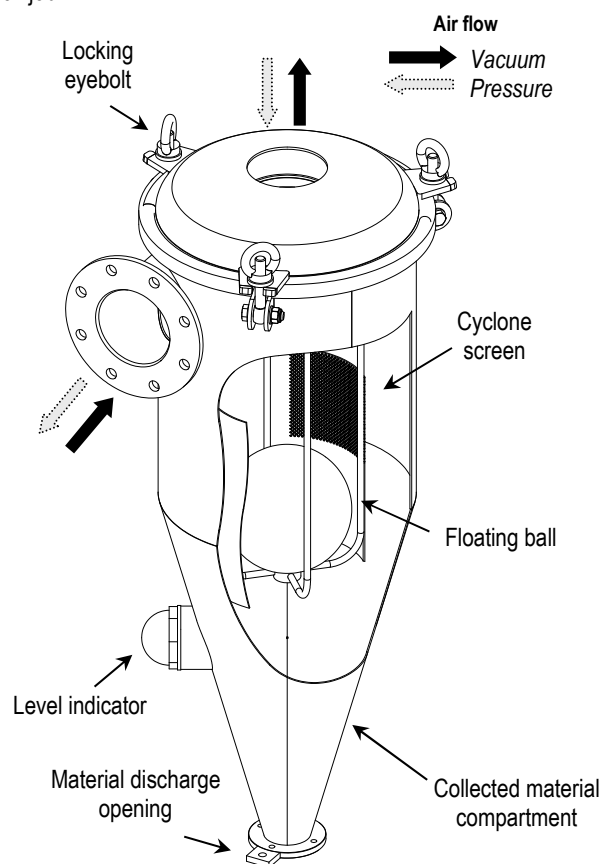
The PR cyclone secondary shutoffs and moisture trap are designed to be installed in correspondence with the intake line of decompressors used to create vacuum inside tanks. The cyclone secondary shutoff and moisture trap prevents foreign bodies (liquids or solids) that could carry over past the primary shutoff from entering inside the decompressor by blocking the intake line with a stainless steel floating ball. The cyclone consists of a vertical cylinder, which tangentially receives the flow to be scrubbed at high speed. As a result of centrifugal force, the various elements contained inside the fluid are separated according to their density. The purified fluid is freed through the upper axial outlet, whereas the material to be recovered is collected in the lower tapered part of the cyclone and discharged after each job.

The PR cyclone shutoffs are available in the following versions:

- **PR150 cyclone shutoff** made of **Mild steel S235JR** (code 14450 020 00) and **Stainless Steel AISI 304L** (code 14450 022 00);
- **PR200 - 250 cyclone shutoff** made of **Mild steel S235JR** (code 14450 025 00) and **Stainless Steel AISI 304L** (code 14450 024 00);
- **PR330 cyclone shutoff** made of **Mild steel S235JR** (code 14450 016 00) and **Stainless Steel AISI 304L** (code 14450 015 00);
- **PR530 cyclone shutoff** made of **Mild steel S235JR** (code 14450 023 00) and **Stainless Steel AISI 304L** (code 14450 017 00).

The following figure shows a schematic diagram of a cyclone secondary shutoff, highlighting the main components.

All the cyclone secondary shutoffs are equipped with one flange for the pipe coming from the tank (side inlet port) and one for the drain pipe (lower outlet). The pump connection pipe (upper discharge port) must be welded to the secondary shutoff (this allows orienting it correctly). The PR secondary shutoff are designed to operate in intake (with the decompressor suctioning from the tank) and in compression (decompressor that pump air inside the tank e.g. discharging, the material contained in it) mode.



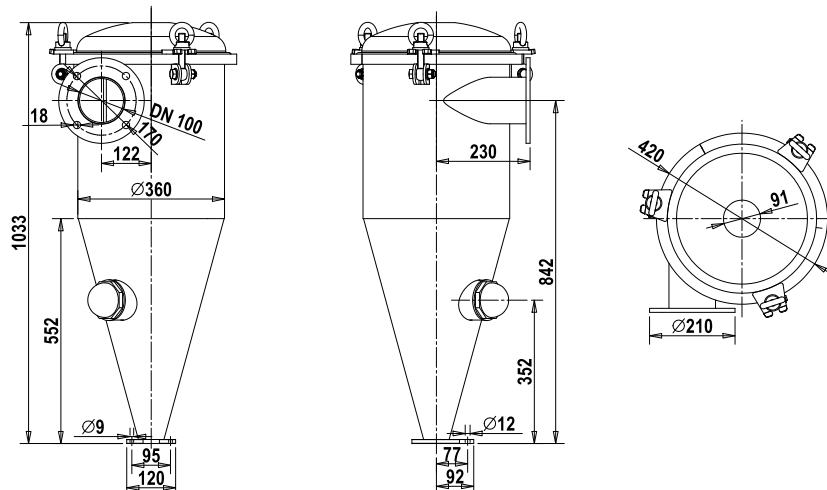
The following table shows the main operating parameters concerning maximum flow rate, design pressure and weight of the cyclone secondary shutoff available.

Operating parameters

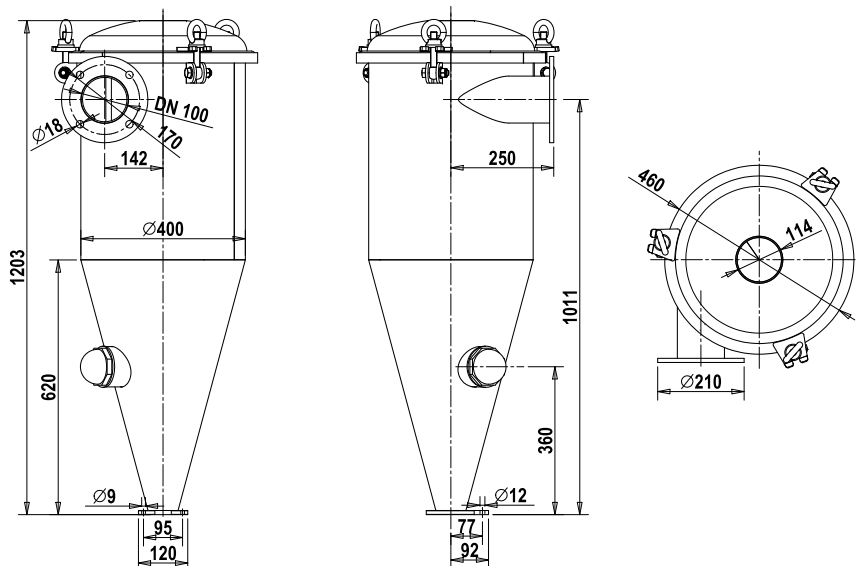
Parameter	PR150 shutoff	PR200-250 shutoff	PR330 shutoff	PR530 shutoff
	code 14450 020 00 (Iron) - 14450 022 00 (Stainless steel)	code 14450 025 00 (Iron) - 14450 024 00 (Stainless steel)	code 14450 016 00 (Iron) - 14450 015 00 (Stainless steel)	code 14450 023 00 (Iron) - 14450 017 00 (stainless steel)
MAXIMUM FLOW RATE	900 m ³ /h	1,550 m ³ /h	2,000 m ³ /h	3,200 m ³ /h
DESIGN PRESSURE	-1 / +4 bar	-1 / +4 bar	-1 / +4 bar	-1 / +4 bar
WEIGHT	42 Kg	55 Kg	88 Kg	107 Kg

The following figures show the overall dimensions of the various types of the cyclone secondary shutoffs available.

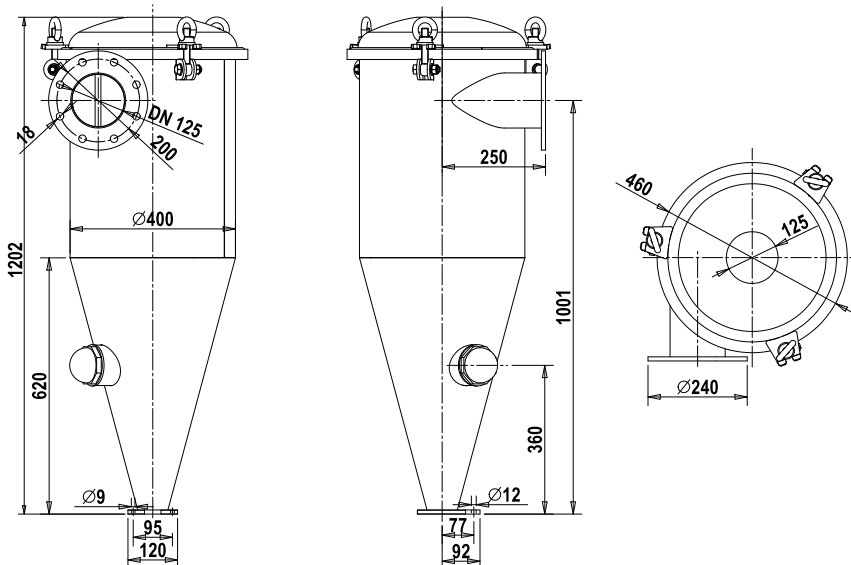
PR150 cyclone secondary shutoff – code 14450 020 00 (MILD STEEL) – code 14450 022 00 (STAINLESS STEEL)



PR200-250 cyclone secondary shutoff – code 14450 025 00 (MILD STEEL) – code 14450 024 00 (STAINLESS STEEL)

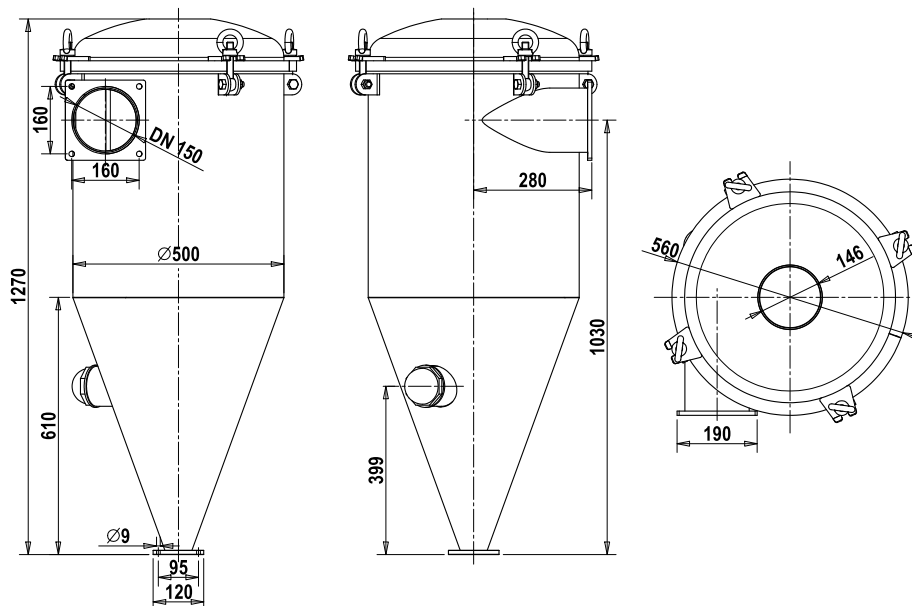


PR330 cyclone secondary shutoff – code 14450 016 00 (MILD STEEL) – code 14450 015 00 (STAINLESS STEEL)



Note: the cyclone secondary shutoffs cod. 1445001500 has coupling flange with 4 holes.

PR530 cyclone secondary shutoff – code 14450 023 00 (MILD STEEL) – code 14450 017 00 (STAINLESS STEEL)



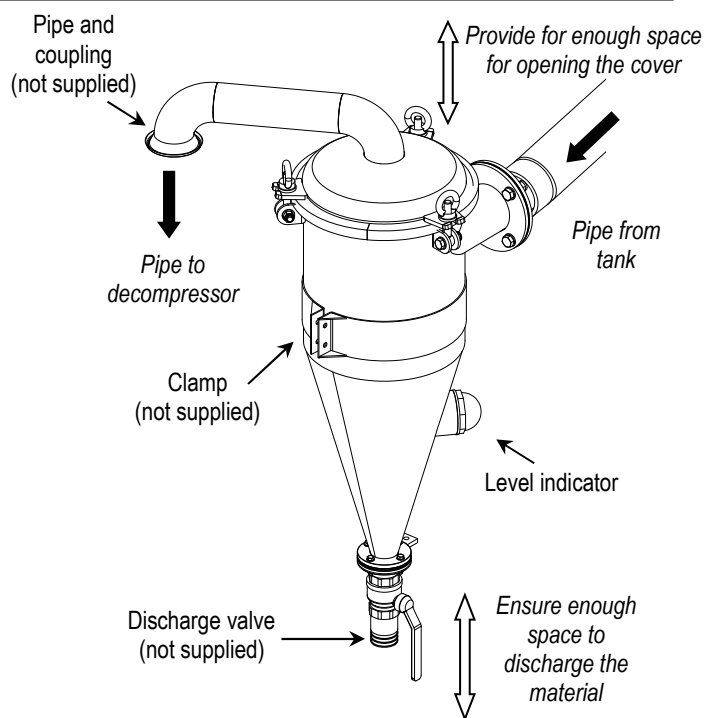
3. Installation

The PR cyclone secondary shutoff is designed to be installed in correspondence of the intake line of a decompressor. To operate correctly, the cyclone secondary shutoff must be installed in a vertical position.

The following figure shows a schematic diagram of a possible installation of the cyclone secondary shutoff (the flow refers to operation in intake/vacuum mode).

To be installed correctly, the cyclone secondary shutoff must be supported by one clamping point for the smaller versions and two clamping points for the larger ones (e.g. with metal clamps, see spare part data sheet). To allow discharging the collected material, a discharge valve must be installed on the lower end of the secondary shutoff. We recommend positioning the secondary shutoff in order for the discharge area to be accessible.

Extraordinary maintenance operations can require removing the upper cover by opening the eyebolts. This is why we recommend ensuring the necessary space for carrying out this operation, as well as an intake pipe coupling.



4. Maintenance

Under ordinary use conditions, we recommend discharging the secondary shutoff on a daily basis. In the event of heavy duty conditions (e.g., intake of high and particularly volatile substances), drain every time the level indicator warns that the cyclone secondary shutoff is full. The material is discharged through the valve installed on the lower side.

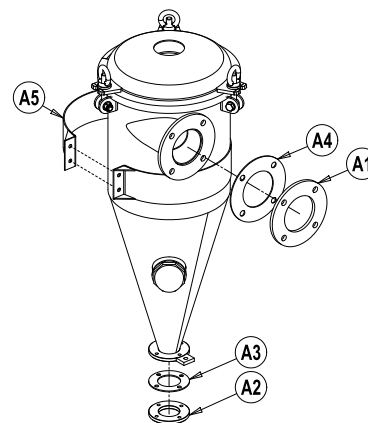
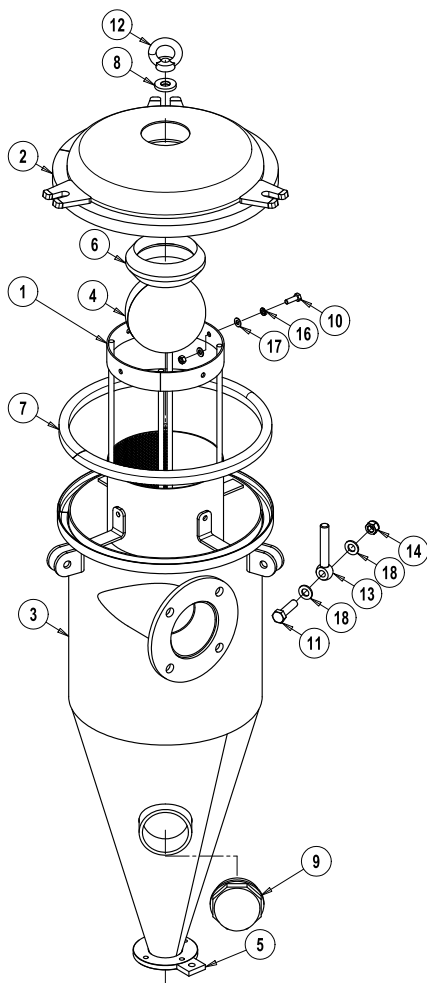
We recommend verifying the operation of the overflow valve periodically, ensuring that the floating ball can move freely.

In presence of material drawn in from the tank (e.g. liquids) along the vacuum line, check the integrity and the correct position of the inner double taper seal and of the s/s floating ball. Replace if worn.



Recover the drained material and dispose of it in compliance with the standards in force.

PR150 CYCLONE SECONDARY SHUTOFF



Accessories available upon request

Pos.	Code	Description	Qty
A1	4026713007	IRON FLANGE DN100 PN6	1
	1610017400	STAINLESS STEEL FL. DN100 PN6	1
A2	1610020900	IRON FLANGE D.120X63 TH.10	1
	1610021000	STAINLESS STEELFL.D.120X63TH.10	1
A3	1680610600	CYCLONE SEAL	1
A4	1680709000	SEAL DN100 PN6	1
A5	1513020000	CLAMP D.360	2

These accessories do not include nuts and bolts.

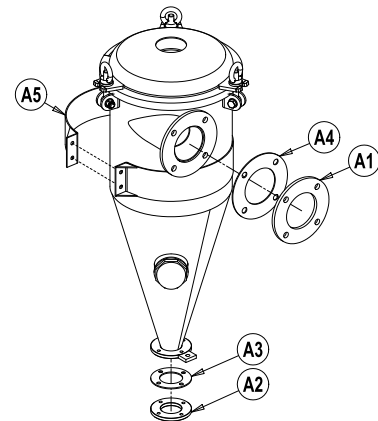
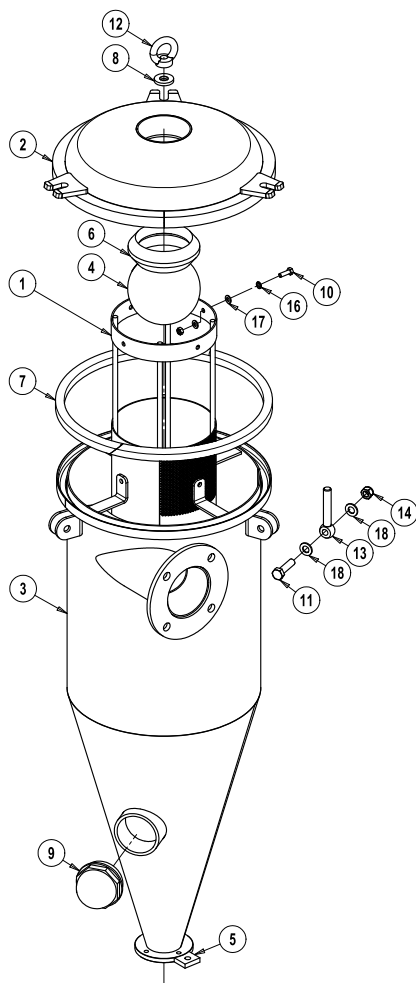
PR150 cyclone secondary shutoff (MILD STEEL) – code 14450 020 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017100	STAINLESS STEEL CYCLONE BASKET PR	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540002000	IRON CYCLONE COVER PR150	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002500	IRON CYCLONE BODY PR150	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000200	STAINLESS STEEL 316 FLOATING B. D.150	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061UB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680601800	DOUBLE TAPER SEAL D.115	1	15	4026308005	GALV. HEX NUT M8	4
7	1680603100	SEAL D.70 FOR PR150	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

PR150 cyclone secondary shutoff (STAINLESS STEEL) – code 14450 022 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017100	STAINLESS STEEL CYCLONE BASKET PR	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540001900	STAINLESS STEEL CYCLONE COVER PR150	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002400	STAINLESS STEEL CYCLONE BODY PR150	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000200	STAINLESS STEEL 316 FLOATING B. D.150	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061AB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680601800	DOUBLE TAPER SEAL D.115	1	15	4026308005	GALV. HEX NUT M8	4
7	1680603100	SEAL D.70 FOR PR150	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

PR200-250 CYCLONE SECONDARY SHUTOFF



Accessories available upon request

Pos.	Code	Description	Qty
A1	4026713007	IRON FLANGE DN100 PN6	1
	1610017400	STAINLESS STEEL FL. DN100 PN6	1
A2	1610020900	IRON FLANGE D.120X63 TH.10	1
	1610021000	STAINLESS STEEL FL.D.120X63TH.10	1
A3	1680610600	CYCLONE SEAL	1
A4	1680709000	SEAL DN100 PN6	1
A5	1513020200	CLAMP D.446	2

These accessories do not include nuts and bolts.

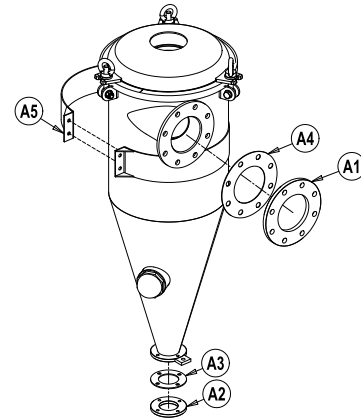
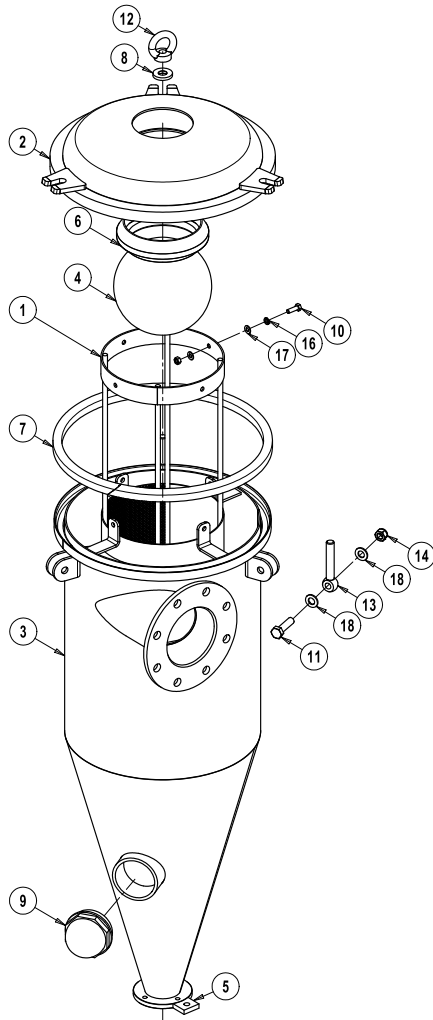
PR200-250 cyclone secondary shutoff (MILD STEEL) – code 14450 025 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017100	STAINLESS STEEL CYCLONE BASKET PR	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540001600	IRON CYCLONE COVER PR200-250	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002100	IRON CYCLONE BODY PR200-250	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000200	STAINLESS STEEL 316 FLOATING B. D.150	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061AB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680601800	DOUBLE TAPER SEAL D.115	1	15	4026308005	GALV. HEX NUT M8 5588	4
7	1680608400	SEAL NBR 25X18 L1320	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

PR200-250 cyclone secondary shutoff (STAINLESS STEEL) – code 14450 024 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017100	STAINLESS STEEL CYCLONE BASKET PR200	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540001500	STAINLESS STEEL CYCLONE COVER PR200	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002000	STAINLESS STEEL CYCLONE BODY PR200	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000200	STAINLESS STEEL 316 FLOATING B.D.150	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061AB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680601800	DOUBLE TAPER SEAL D.115	1	15	4026308005	GALV. HEX NUT M8	4
7	1680608400	SEAL NBR 25X18 L1320	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

PR330 CYCLONE SECONDARY SHUTOFF



Accessories available upon request

Pos.	Code	Description	Qty
A1	4026713008	IRON FLANGE DN125 PN6	1
	4026713708	STAINLESS STEEL FL. DN100 PN6	1
A2	1610020900	IRON FLANGE D.120X63 TH.10	1
	1610021000	STAINLESS STEEL FL.D.120X63TH.10	1
A3	1680610600	CYCLONE SEAL	1
A4	1680604800	SEAL DN125 PN6	1
A5	1513020200	CLAMP D.446	2

These accessories do not include nuts and bolts.

PR330 cyclone secondary shutoff (MILD STEEL) – code 14450 016 00

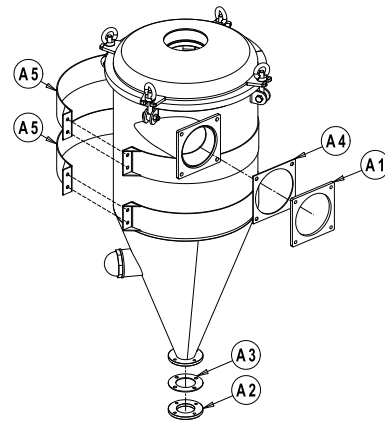
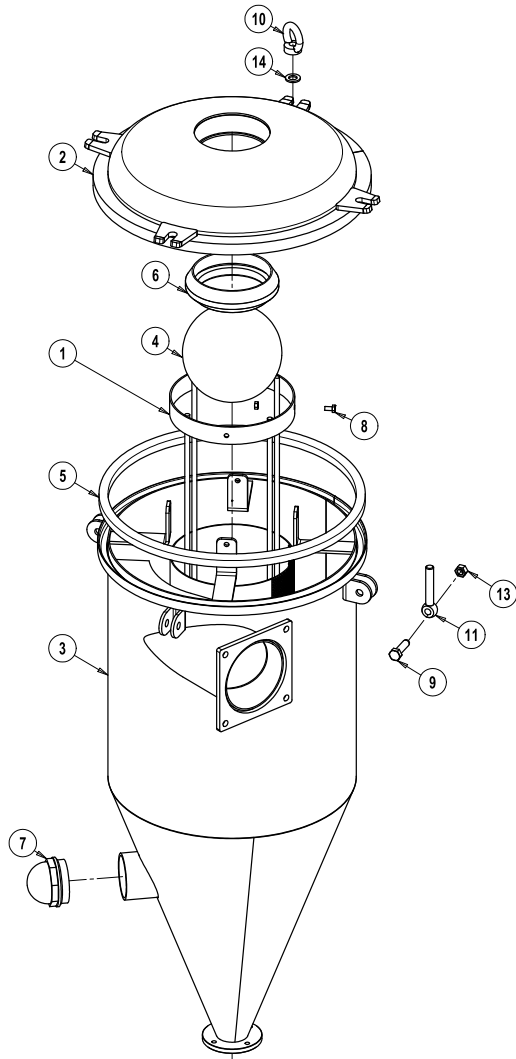
Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017900	STAINLESS STEEL CYCLONE BASKET PR330	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540001800	IRON CYCLONE COVER PR330	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002300	IRON CYCLONE BODY PR330	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000100	STAINLESS STEEL 316 FLOATING B. D.200	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061AB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680605200	DOUBLE TAPER SEAL D.200	1	15	4026308005	GALV. HEX NUT M8	4
7	1680608400	SEAL NBR 25X18 L1320	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

PR330 cyclone secondary shutoff (STAINLESS STEEL) – code 14450 015 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017900	STAINLESS STEEL CYCLONE BASKET PR330	1	10	4026102807	GALV. HEX SCREW 8.8 M8X25	4
2	1540001700	STAINLESS STEEL CYCLONE COVER PR330	1	11	4026103113	GALV. HEX SCREW 8.8 M14X55	3
3	1545002200	STAINLESS STEEL CYCLONE BODY PR330	1	12	4026191103	GALV. FEMALE EYEBOLT M16	3
4	1592000100	STAINLESS STEEL 316 FLOATING B.D.200	1	13	4026191206	GALV.EYELET M16X100 8.8	3
5	1612061AB0	CYCLONE SCREEN	1	14	4026305511	SELF-LOCKING HEX NUT M14	3
6	1680605200	DOUBLE TAPER SEAL D.200	1	15	4026308005	GALV. HEX NUT M8	4
7	1680608400	SEAL NBR 25X18 L1320	1	16	4026350706	GALV. FLAT GROWER WASHER M8	4
8	1685200200	BRASS FASTENER WASHERS D.40X17	3	17	4026357005	GALV. FLAT WASHER M8	8
9	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	18	4026357008	GALV. FLAT WASHER M14	6

Note: the cyclone secondary shutoffs cod. 1445001500 has coupling flange with 4 holes.

PR530 CYCLONE SECONDARY SHUTOFF



Accessories available upon request

Pos.	Code	Description	Qty
A1	1612005900	IRON FLANGE DN150 TH.15	1
	1612005500	STAINLESS STEEL FL. DN150 TH. 15	1
A2	1610020900	IRON FLANGE D.120X63 TH.10	1
	1610021000	STAINLESS STEEL FL.D.120X63TH.10	1
A3	1680610600	CYCLONE SEAL	1
A4	16807X7QA0	SEAL DN150	1
A5	1513033ZB0	CLAMP D.500	4

These accessories do not include nuts and bolts.

PR530 cyclone secondary shutoff (MILD STEEL) – code 14450 023 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017900	STAINLESS STEEL CYCLONE BASKET PR330	1	8	4026101400	SCREW VTE M8X16	4
2	1540002400	IRON CYCLONE COVER PR530	1	9	4026103112	GALV. HEX SCREW 8.8 M14X50	4
3	1545003500	IRON CYCLONE BODY PR530	1	10	4026191103	GALV. FEMALE EYEBOLT M16	4
4	1592000100	STAINLESS STEEL 316 FLOATING B. D.200	1	11	4026191206	GALV.EYELET M16X100 8.8	4
5	1680603200	MANHOLE SEAL 500	1	12	4026308005	GALV. HEX NUT M8	4
6	1680605200	DOUBLE TAPER SEAL D.200	1	13	4026308008	GALV. HEX NUT M14	4
7	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	14	4026357009	GALV. FLAT WASHER M16	4

PR530 cyclone secondary shutoff (STAINLESS STEEL) – code 14450 017 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513017900	STAINLESS STEEL CYCLONE BASKET PR330	1	8	4026101400	SCREW VTE M8X16	4
2	1540002300	STAINLESS STEEL CYCLONE COVER PR530	1	9	4026103112	GALV. HEX SCREW 8.8 M14X50	4
3	1545003400	STAINLESS STEEL CYCLONE BODY PR530	1	10	4026191103	GALV. FEMALE EYEBOLT M16	4
4	1592000100	STAINLESS STEEL 316 FLOATING B. D.200	1	11	4026191206	GALV.EYELET M16X100 8.8	4
5	1680603200	MANHOLE SEAL 500	1	12	4026308005	GALV. HEX NUT M8	4
6	1680605200	DOUBLE TAPER SEAL D.200	1	13	4026308008	GALV. HEX NUT M14	4
7	4022105001	3" LEVEL INDICATOR W/SEAL W/O RING NUT	1	14	4026357009	GALV. FLAT WASHER M16	4