



automatic valve



**DIRECT ACTION PRESSURE  
REGULATORS**

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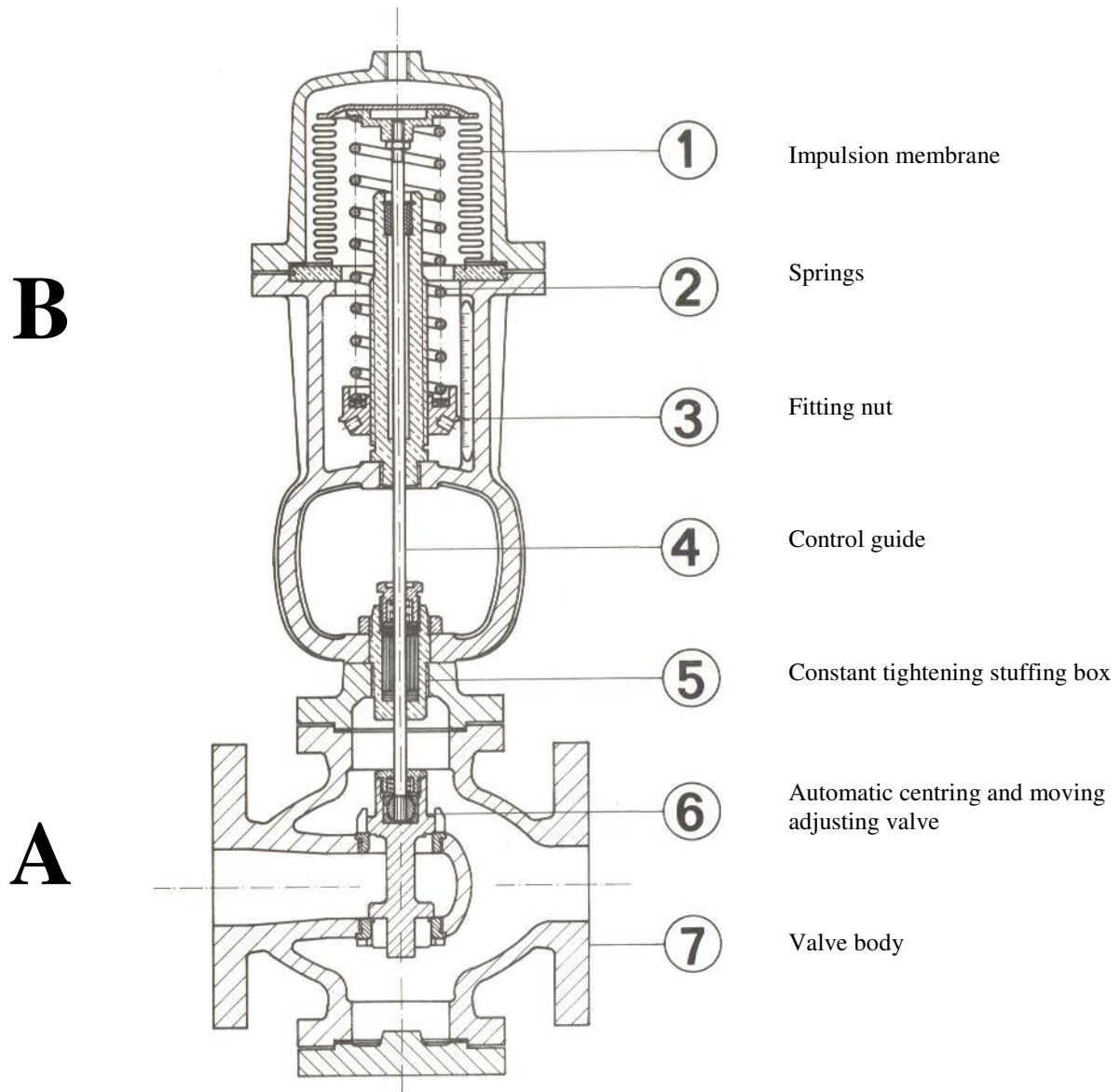
# DESCRIPTION

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## 1. PRINCIPLE

Our direct action pressure regulators are designed from two parts:

- A. a valve
- B. a control head



## 2. WORKING

These direct action pressure regulators have a simple architecture. The working doesn't require any adding energy.

The control head (A part) receive the impulsion from the place where the pressure have to be regulated – for example an autoclave – The regulated pressure,  $P_r$ , act on the impulsion bellow (1), which depending to the valve mounting direction, it open or close the valve. The regulated pressure modification is obtained from the setting of the fitting nut (3).

- The fluid close the valve : direct action
- The fluid open the valve : reverse action

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# CONSTRUCTION MATERIALS

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The standard type pressure regulators are designed in following materials.

- Valve body and lids: Ft 25 D
- Valve seats : Stainless steel Z20 C 13
- Control guide and Automatic centring and moving adjusting system: Stainless steel Z 2 CN 18-10
- Constant tightening stuffing box : brass
- Stuffing box trimming: alternated ring and graphite flock
- Control head : Ft 25 D
- Metallic impulsion bellow : Stainless steel or tombac
- Setting spring : Stainless steel mounted on stopping needle
- Setting nut: Stainless steel Z 20 C 13 or galvanized steel

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## ORIGINAL CHARACTERISTICS

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### 1. IMPULSION BELLOW

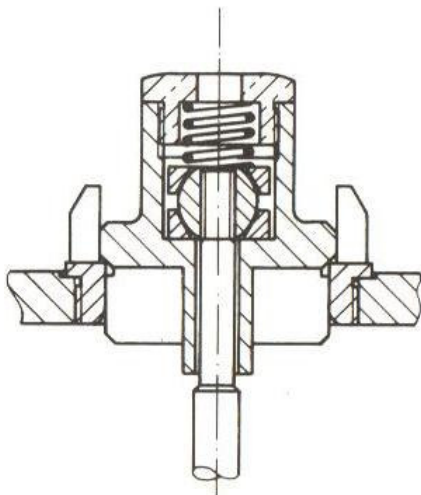


The big diameter metallic impulsion bellow allow the admission of any no-corrosive fluids according to the following pressures and temperatures :

Max pressure 2 bars      ~~~~~ Tombac bellow  
Max temperature 130°C

Max pressure 10 bars      ~~~~~ Stainless steel bellow  
Max temperature 180°C

### 2. AUTOMATIC CENTRING AND MOVING ADJUSTING VALVE

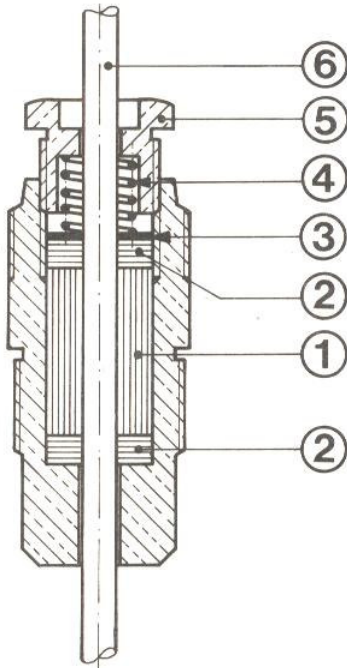


The joining between the valve and the control guide is realised by a knee and spring system which provide:

- The valve auto-centring on seats
- Elimination of any moving in the guide-valve joining.

# CARACTERISTIQUES ORIGINALES

## 3. CONSTANT TIGHTENING STUFFING BOX



The graphite flock (1) is contained between two matrixes rings (2) with graphite strip.

This block is under a metallic disc (3) is compressed by a spring in Stainless steel (4).

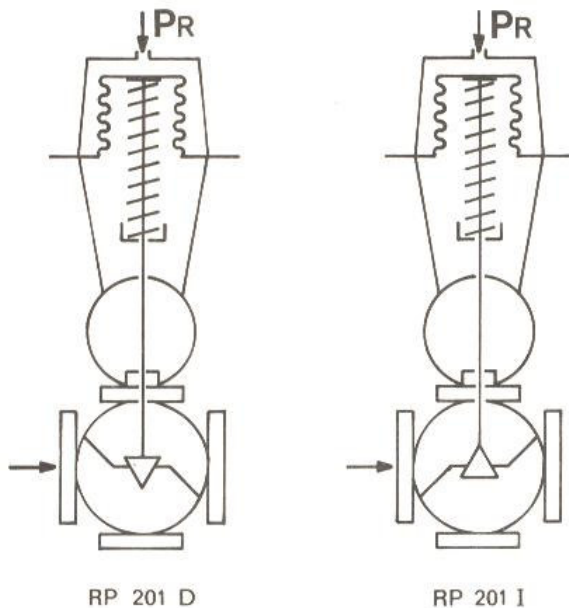
The spring stretching is given by the stuffing box grain (5) it creates a constant tightening of the stuffing box trimming.

A gorge with oil retention is created in the stuffing box grain and gives a permanent lubricant of the control guide (6) in the stuffing box.

## STANDARD TYPES BUILD

### 1. RP 201 D – RP 201 I TYPES SINGLE SEATS

- **RP 201 D** – Direct function – Closing by pressure increasing
- **RP 201 I** – Reverse function – Opening by pressure increasing



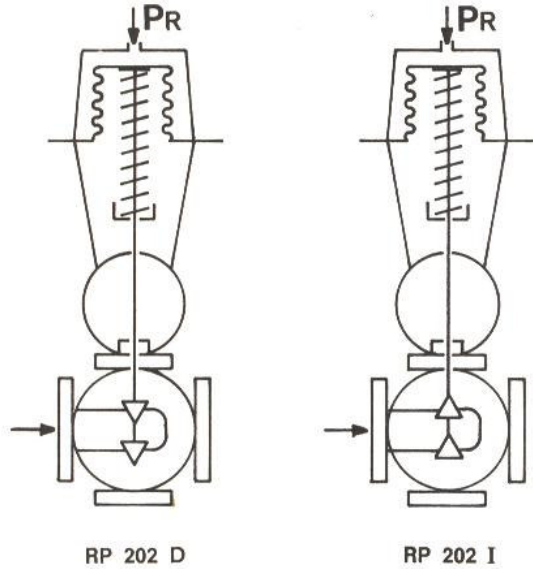
Ø	15	20	25	30	40	50
ΔPv	11	11	8	6	3	2
CV Max	4	6	9	14	21	35

The ΔPv which entering in the control head. The ΔPv values from the table correspond to a 1bar ΔPv.

# STANDARD TYPE OVERALL DIMENSIONS

## 2. RP 202 D – RP 202 I TYPES DOUBLE SEATS

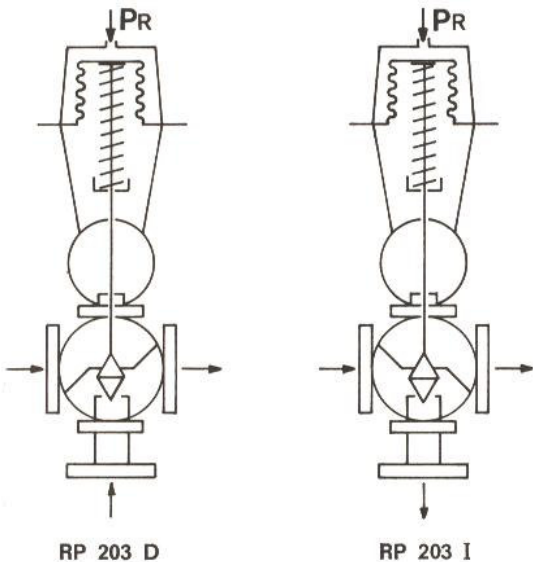
- **RP 202 D** – Direct function – closing with pressure increasing
- **RP 202 I** – Reverse function – Opening with pressure increasing



Ø	15	20	25	30	40	50	65	80
ΔPv	10	10	10	9	9	9	8	8
CV Max	6	8	12	18	28	46	73	100

## 3. RP 203 D – RP 203 I TYPES 3 ways

- **RP 203 D** – Function: Mixing
- **RP 203 I** – Function: Dispenser



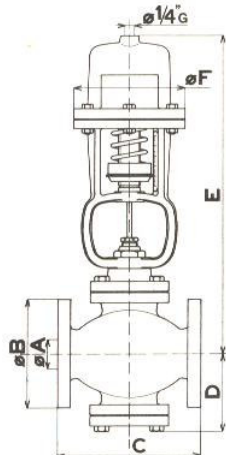
Ø	15	20	25	30	40	50
ΔPv	11	11	8	6	3	2
CV Max	4	6	9	14	21	35

**NOTA** – Upper types are deigned to set Pr pressure over than 0,1bar.

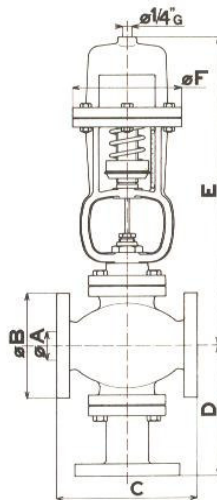
## 4. WITH "C" EQUIPMENT TYPES

All upper seen regulators could be provided with the "C" equipment.  
 This equipment consist in a control head with a membrane neoprene armed with nylon, it's a big diameter, this pack is created for Pr pressure low than 0,1bar, which have to be set with precision. The control head get a strangling settable screw in order to never have a pumping effect.

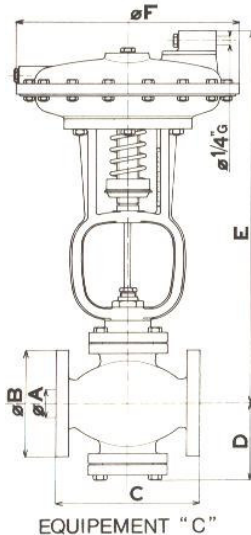
# STANDARD TYPE OVERALL DIMENSIONS



RP 201 et RP 202 D & I



RP 203 D & I



EQUIPEMENT "C"

## 1. RP 201 ET RP 202 TYPES D and I

A	B	Cft	Cac	D	E	F	weight
15	95	150	195	86	425	155	17
20	105	150	195	86	425	155	17
25	115	160	195	90	430	155	18
32	140	180	216	101	440	155	21
40	150	200	235	106	445	155	23
50	165	230	265	118	465	155	29
65	185	290	290	129	480	155	40
80	200	310	310	139	490	155	46
100	200	350	360	164	520	155	68

Cft – cast iron body

Cac – cast steel body

## 2. RP 203 TYPES D and I

A	B	Cft	Cac	D	E	F	weight
15	95	150	195	155	425	155	19
20	105	150	195	155	425	155	19
25	115	160	195	160	430	155	20
32	140	180	216	180	440	155	23
40	150	200	235	185	445	155	26
50	165	230	265	195	465	155	33
65	185	290	290	205	480	155	45
80	200	310	310	215	490	155	51
100	220	350	360	235	520	155	74

Cft – cast iron body

Cac – cast steel body

## 3. EQUIPEMENT « C »

A	B	Cft	Cac	D	E	F	weight
15	95	150	195	86	425	250	20
20	105	150	195	86	425	250	20
25	115	160	195	90	430	250	21
32	140	180	216	101	520	310	28
40	150	200	235	106	525	310	30
50	165	230	265	118	545	310	32
65	185	290	290	129	575	350	48
80	200	310	310	139	585	350	54

Cft – cast iron body

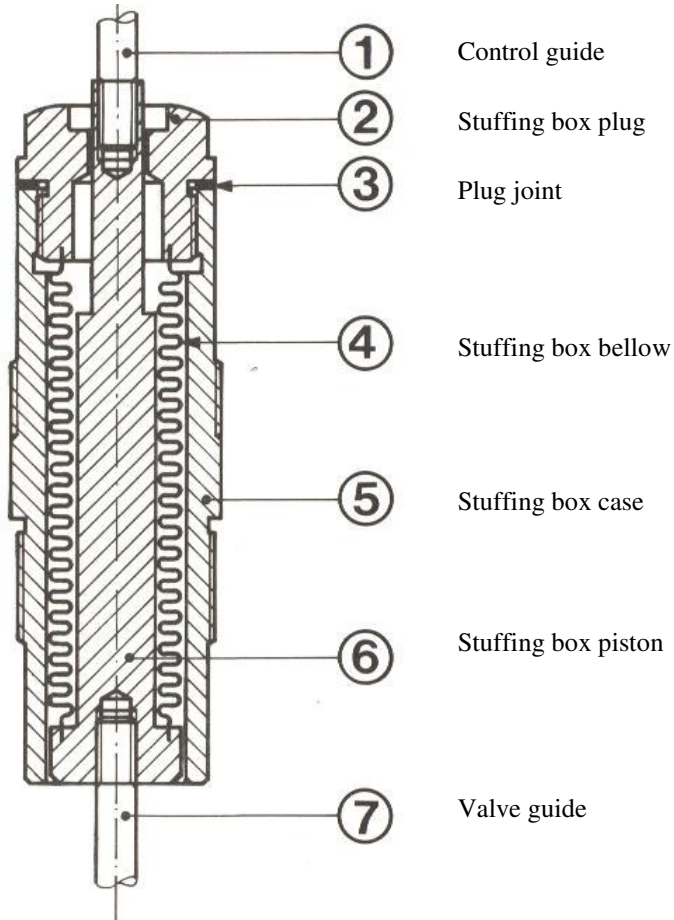
Cac – cast steel body

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## OPTIONS FOR PRESSURE REGULATORS

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1. parabolic profile valve
2. stuffing box in Stainless steel Z20 C 13
3. stuffing box in Stainless steel Z2 CN 10-18
4. tight stuffing box – bellow in stainless steel Z 2 CN 18-10:
  - ✓ brass box
  - ✓ Stainless steel Z 2 CN 18-10 box



Stuffing boxes with bellow are adapted to 6 bars maximum pressure

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## OTHER STANDARD ORDERS

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- Regulator equipped with :
  - Valve body in cast steel
  - Valve body in stainless steel
  - Valve body on bronze
- Bridles corresponding to special norms

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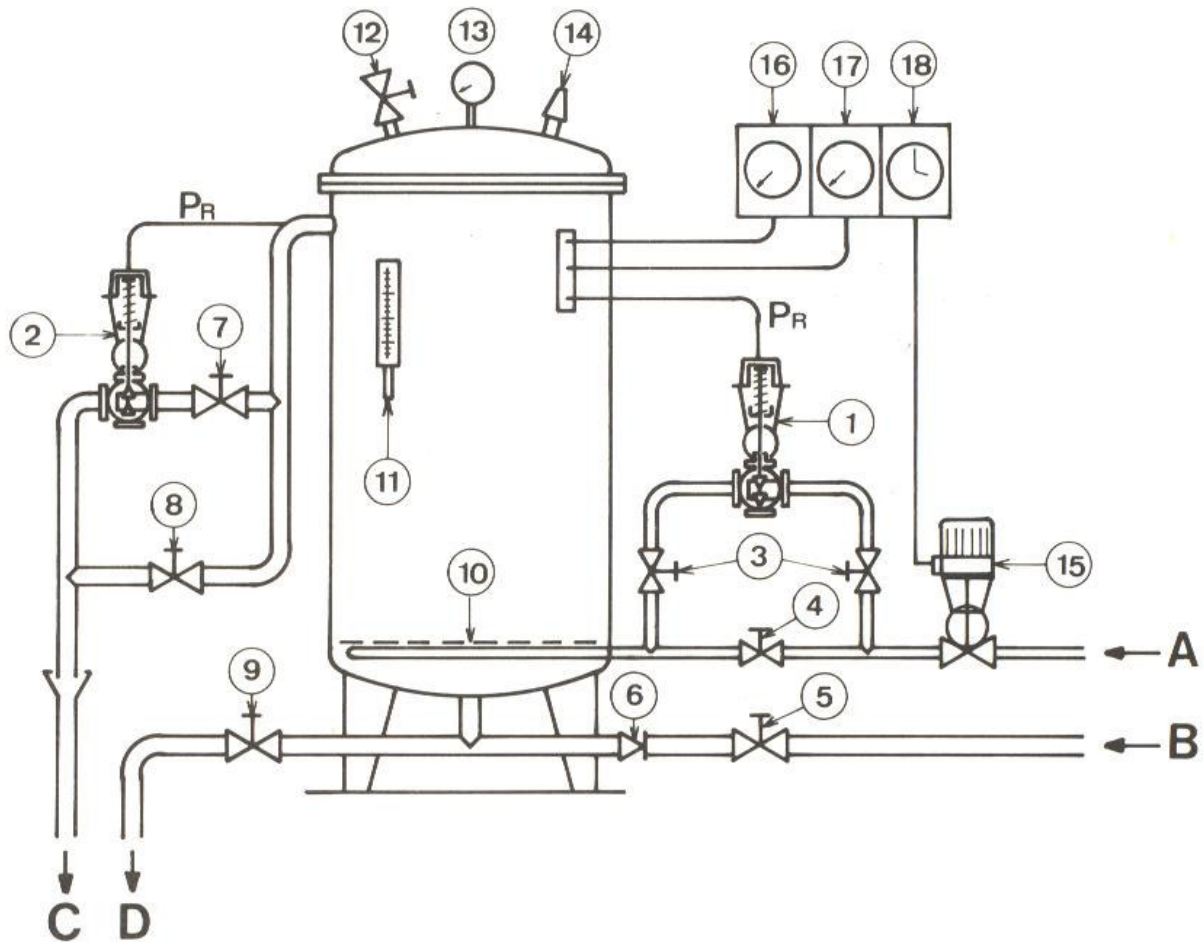
## SPECIALES ORDERS

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- Vacuum regulators:  
pressure regulators could be considered as vacuum regulator. For this ordering, please contact us.

# EXEMPLE D'APPLICATION

## 1. AUTOCLAVE EQUIPMENT WITHOUT ANTI AIR PRESSURE



1. RP 202 D on the steam entry used as temperature regulator
2. RP 202 I on the way out
3. Isolation valves on steam entry
4. By-pass valves on steam entry
5. By-pass valves on cooling water entry
6. No return valve
7. Stopping valve on the way out
8. By pass valve on the way out
9. Manual draining valve
10. Diffuser
11. Thermometer
12. Emptying valve
13. manometer
14. surety valve
15. electric control valve on steam entry
16. Thermometer recorder
17. manometer recorder
18. timer

- A – Steam entry
- B – water cooling entry
- C – way out
- D – Draining