

RADIATOR THROTTLE VALVES For Oil Filled Transformer

Size : 80mm to 125mm



VIAT

INSTRUMENTS

VI-06 (R0)



THROTTLE VALVE FOR TRANSFORMER RADIATORS

Size 80mm. Pad Lockable Type. Forged Steel Body



FEATURES

- Maximum allowable leakage through flap less than 1 cc/minute with transformer oil at 1 kg/cm².
- Forged steel body.
- 100% pressure testing for leakage through flap.
- Strong and sturdy construction for maintenance free service.
- Metal to metal contact between flap and body (No "O" Ring).
- Locking possible at both open and shut position.
- 20microns zinc plating on all valves. Additional paint protection to any shade upto 100 microns on request.

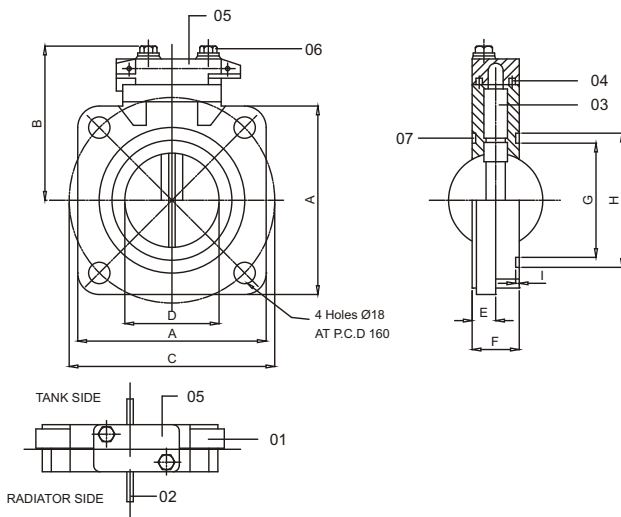
Description

The valve mainly consists of machined flange, flap, spindle and locking cap. The flap is machined to fit the bore. The spindle is riveted to the flap and can be rotated in either direction to operate the valve. The cap on top of spindle locks the valve in the open or closed position, which is indicated on the exposed plate marked open/shut.

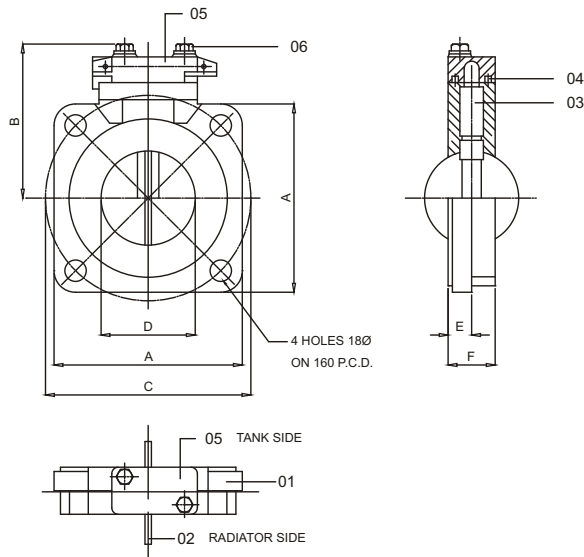
Operation

To operate the valve, loosen bolts and remove locking cap. Rotate the spindle in the direction indicated on the cap, to open or close the flap. Place the cap back in position (the cap will fit only in one position corresponding to the flap position) and tighten bolts.

Model - 203 With Grooved Flange



Model - 203 With Plain Flange



Parts List

PART NO.	QTY.	DESCRIPTION	MATERIAL
01.	1	FLANGE	STEEL St 52-3 DIN 17100
02.	1	FLAP	ALUMINIUM
03.	1	SPINDLE	MILD STEEL
04.	1	WASHER RUBBER	NITRILE BUTADIENE
05.	1	LOCKING CAP	ALUMINIUM PRESSURE DIE CASTING
06.	2	'O' RING	NITRILE BUTADIENE
07.	2	BOLT & WASHER	STAINLESS STEEL

BORE	DIMENSIONS								
	D (±0.1)	A ±2	B ±2	C ±2	E ±0.5	F ±0.5	G ±0.5	H ±0.5	I (^{-0.5} / _{+0.0})
78	152	119	160	17	35	100	113	3.5	
78	150	122	160	17	36	N.A	N.A	N.A	

THROTTLE VALVE FOR TRANSFORMER RADIATORS

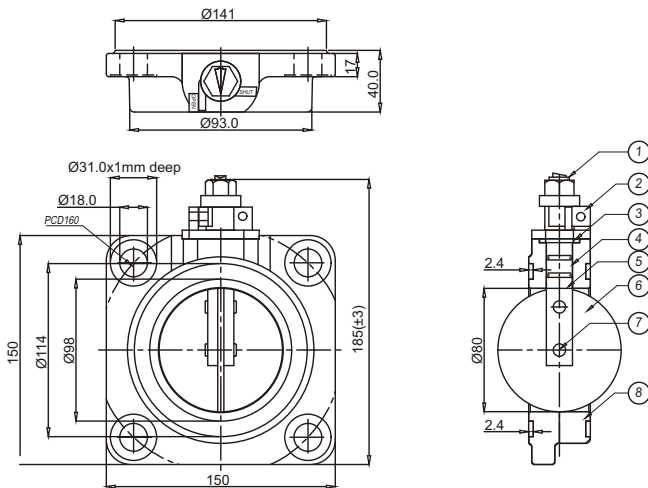
Size 80mm. (Bolt On Type) Pad Lockable. Forged Steel Body



FEATURES

- Maximum allowable leakage through flap less than 1 cc/minute with transformer oil at 1 kg/cm².
- Forged steel body.
- 100% pressure testing for leakage through flap.
- Strong and sturdy construction for maintenance free service.
- Metal to metal contact between flap and body (No "O" Ring).
- Locking possible at both open and shut position.
- Complete surface protection.
- Hex top made of forged SS.

Model - 209 With Grooved Flange



Parts List

PART NO.	DESCRIPTION	MATERIAL
01.	PAD LOCK LATCH	STAINLESS STEEL
02.	PAD LOCK GLAND	STAINLESS STEEL
03.	GASKETS	NITRILE RUBBER
04.	'O' RING	NITRILE RUBBER
05.	SPINDLE	MILD STEEL
06.	DISC	ALUMINIUM
07.	RIVET	MILD STEEL
08.	BODY	FORGED STEEL St 52-3 to DIN 17100

Technical Specification

Flap: Metal to metal sealing.

Nominal bore: 80mm.

Operating torque: ≤10Nm.

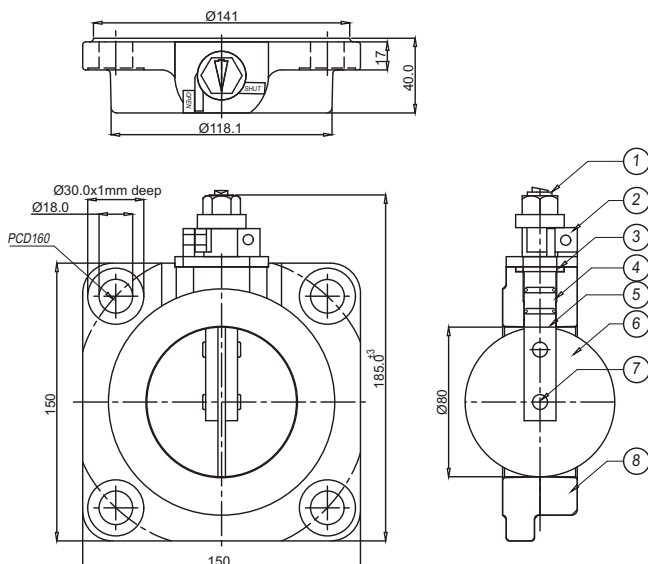
Closing torque: ≤70Nm.

Opening torque: ≤40Nm.

Ambient temperature: -20°C to +80°C

Oil temperature: -20°C to +110°C

Model - 209 With Plain Flange



Surface Protection

1. Standard 20 microns zinc plating
2. Additional quote of PU paint to any shade on request.

THROTTLE VALVE FOR TRANSFORMER RADIATORS

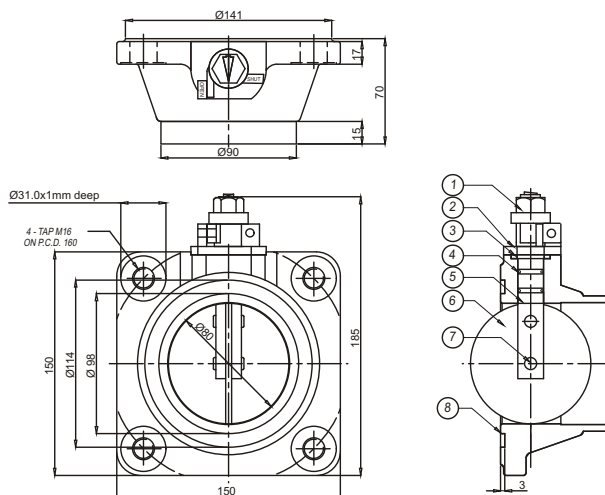
Size 80mm. (Welding Neck Type) Pad Lockable. Forged Steel Body



FEATURES

- Maximum allowable leakage through flap less than 1 cc/minute with transformer oil at 1 kg/cm².
- Forged steel body.
- 100% pressure testing for leakage through flap.
- Strong and sturdy construction for maintenance free service.
- Metal to metal contact between flap and body (No "O" Ring).
- 20microns zinc plating on all valves. Additional paint protection to any shade upto 100 microns on request.
- Hex top made of forged SS.

Model - 210 Pad Lock Type With Grooved Flange



Parts List

PART NO.	DESCRIPTION	MATERIAL
01.	PAD LOCK LATCH	STAINLESS STEEL
02.	PAD LOCK GLAND	STAINLESS STEEL
03.	GASKETS	NITRILE RUBBER
04.	'O' RING	NITRILE RUBBER
05.	SPINDLE	MILD STEEL IS 9550
06.	DISC	ALUMINIUM
07.	RIVET	MILD STEEL
08.	BODY	FORGED STEEL St 52-3 to DIN 17100

Technical Specification

Flap: Metal to metal sealing.

Nominal bore: 80mm.

Operating torque: ≤10Nm.

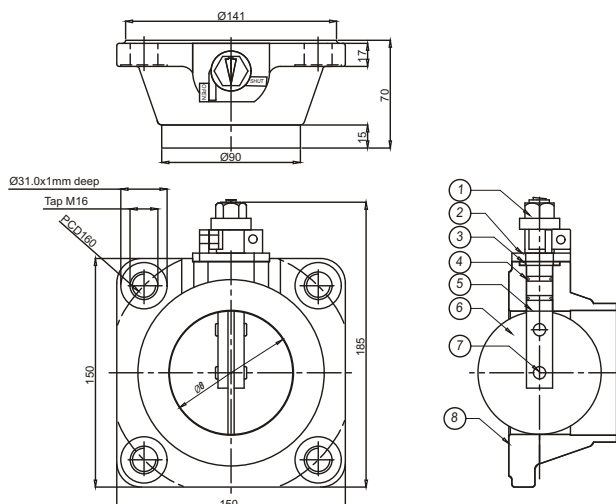
Closing torque: ≤70Nm.

Opening torque: ≤40Nm.

Ambient temperature: -20°C to +80°C

Oil temperature: -20°C to +110°C

Model - 210 Pad Lock Type With Plain Flange



Surface Protection

1. Standard 20 microns zinc plating
2. Additional quote of PU paint to any shade on request.

THROTTLE VALVE FOR TRANSFORMER RADIATORS

Size 80mm. (Bolt on Type) With Aluminium Body, Zero Leakage



FEATURES

- Pressure die cast Aluminium body, flap and operating handle.
- Aluminium flap with NBR "O" Ring ensures zero leakage when the valve is closed.
- Optional M16 fixing screws.
- Mounting gasket supplied with the valves.
- Spring loaded screws with double "O" Ring provides fool proof sealing from shaft.
- Suitable for highly corrosive outdoor applications.
- Very light and sturdy construction.
- NBR "O" Ring easily replaceable.

Material List

PART NO.	NAME	MATERIAL	QUANTITY
1.	BODY	AL LM24	1
2.	FLAP	AL LM24	1
3.	SHAFT	BRASS	1
4.	LATCH	AL LM24	1
5.	O-RING	NBR	2
6.	O-RING	NBR	1
7.	O-RING	NBR	2
8.	WASHER	ALUMINIUM	2
9.	SCREW M5	STAINLESS STEEL	1
10.	SCREW M4	STAINLESS STEEL	2
11.	SPRING	SPRING STEEL	1
12.	THRUST NUT	ALUMINIUM	1
13.	M16 FIXING SCREW	MILD STEEL	4

Technical Specification

Flap : NBR / Viton "O" Ring on flap.

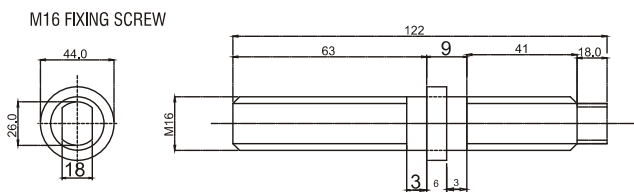
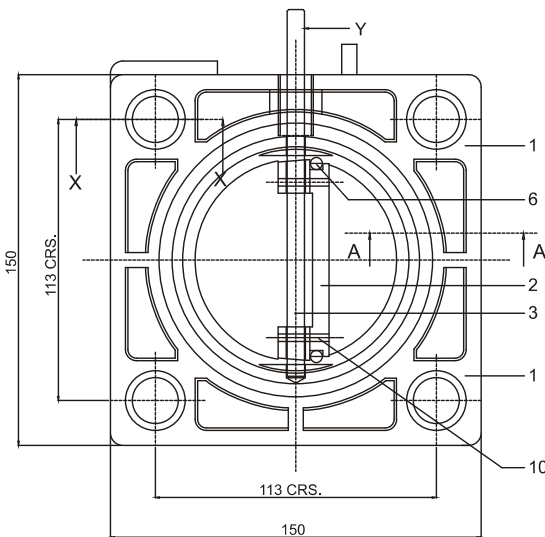
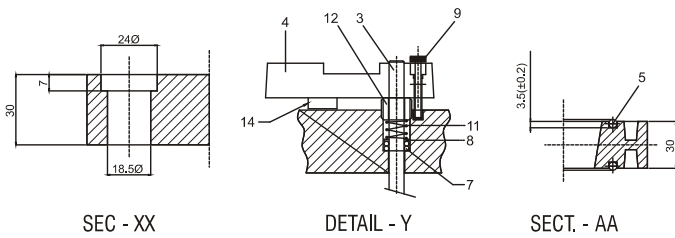
Leakage : No leakage at full vacuum or 1kg/cm² oil pressure.

Ambient temperature : -20°C to +80°C.

Oil temperature : -20°C to +110°C.

Mounting bolts : Optional - MS bolts zinc plated to 20microns.

Mounting gasket : Two NBR "O" Rings supplied with each valve.



THROTTLE VALVE FOR TRANSFORMER RADIATORS

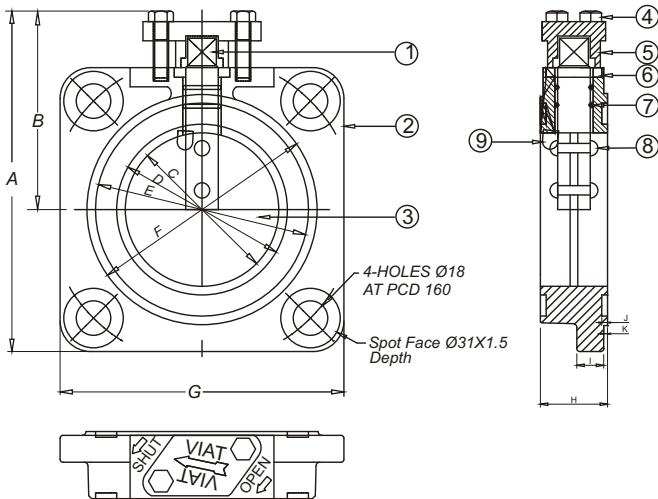
Size 80mm. (Bolt on Type) Economy Model With Cast Iron Body



FEATURES

- Graded cast iron body to FG260 of IS210.
- All machining and drilling by CNC machines.
- Leakage through flap within 1 cc per minute at 1.0kg/cm².
- 100% valves tested for porosity and leakage.
- All valves are epoxy powder coated to provide complete surface protection for all weather conditions.
- No leakage from top spindle even without the protective cap.
- Protective cap will fit the valve top only when arrow shows the correct open/close position.

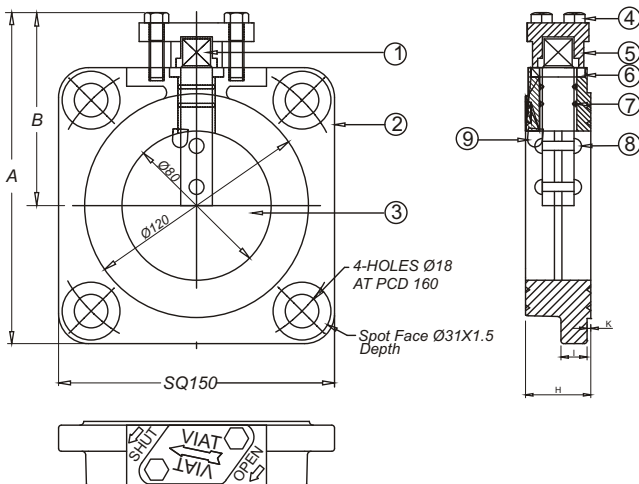
Model - 211 With Grooved Flange



Material List

ITEM NO	DESCRIPTION	MATERIAL
1	Spindle	MS-IS:9550
2	Valve Body	Grey Cast Iron IS-210 FG260
3	Flap	Steel (Fe-410-WA TO IS 2062)
4	Bolt	MS Zinc Plated / SS
5	Cap	Aluminium
6	Gasket	NBR
7	"O" Ring	NBR
8	Rivet	MS-IS:9550
9	Flap Stopper Pin	MS-IS:9550

Model - 212 With Plain Flange



Testing:

TESTING: With oil pressure of 1.0kg/cm ²		
a.	Leakage through valve body	NIL
b.	Leakage around diaphragm	Max 1ml/min.
c.	Leakage around top spindle with or without cap	NIL

DIMENSIONS IN MM												
Size	Type	A	B	C(Ø)	D(Ø)	E(Ø)	F(Ø)	G(SQ.)	H	I	J	K
80	211	183	106	80	89	111	120	150	35	14	3	2
80	212	183	108	80	N.A	N.A	120	150	35	14	N.A	2

THROTTLE VALVE FOR TRANSFORMER RADIATORS

Bore Size - 5 inch (125mm) Steel Body, Zero Leakage

FEATURES

- 100% pressure tested at 25 psi.
- 100% tested to withstand full vacuum.
- Valves supplied with mounting "O" Ring, cover plate.
- Valve coated with epoxy primer, optional powder coating to any shade.
- NBR gaskets suitable for transformer oil. Optional Viton gasket.

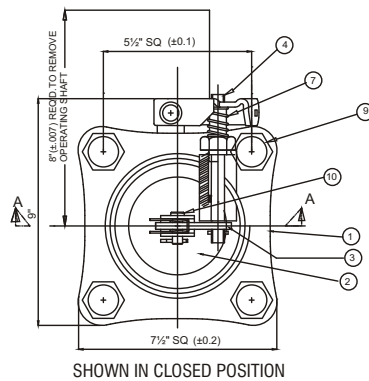
Description

The valve mainly consists of forged steel body (1) with a flap assembly (2). The flap can be rotated with a stem (4) and locked either in the open or close position. The gasket on the flap seals against the machined surface of the flange on the body.

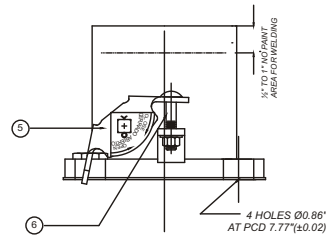
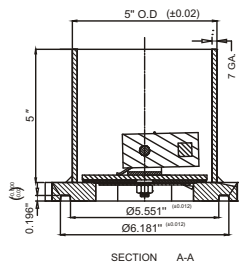
Operation

To operate the valve, remove locking nut and bolt (8) and rotate the stem in the direction indicated on the indicator plate (5). The flap assembly will rotate to its extreme position by approximately 90°. Tighten the locking nut and bolt after operating the valve.

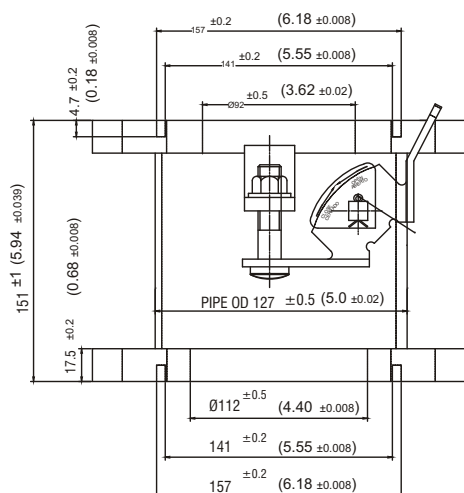
Model - 205 Welding Neck Type



SHOWN IN CLOSED POSITION



Model - 205 Flange Type



Material List

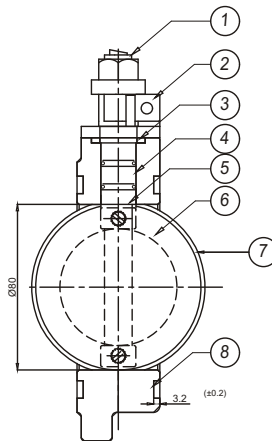
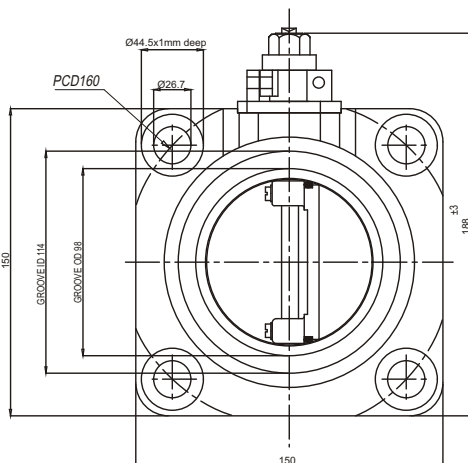
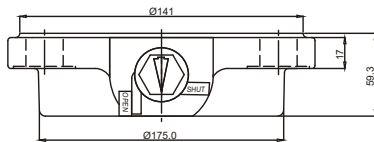
PART NO.	DESCRIPTION	MATERIAL
1.	FLANGE	STEEL IS: 2062 (GRADE II)
2.	FLAP	MS
3.	FLAP ASSEMBLY SEALING	NBR
4.	STEM	SS 304
5.	INDICATOR PLATE	BRASS
6.	MOUNTING HARDWARE	STEEL
7.	SPRING	STAINLESS STEEL
8.	LOCKING BOLT & NUT	STAINLESS STEEL
9.	PACKING NUT	BRASS
10.	SPIRAL PIN	SS 304

THROTTLE VALVE FOR TRANSFORMER RADIATORS

Size 80mm. (Bolt On Type) Pad Lockable. Forged Steel Body, Zero Leakage



Model - 213 Pad Lock Type With Grooved Flange



FEATURES

- Forged steel body.
- NBR "O" Ring on flapper.
- Zero leakage valve.
- Pad lockable.
- Each valve tested for leakage.
- Bore size 80mm.
- Mounting NBR "O" Ring supplied with each valve.
- Viton gaskets optional.

Parts List

PART NO.	DESCRIPTION	MATERIAL
01.	PAD LOCK LATCH	STAINLESS STEEL
02.	PAD LOCK GLAND	STAINLESS STEEL
03.	GASKETS	NITRILE RUBBER
04.	'O' RING	NITRILE RUBBER
05.	SPINDLE	MILD STEEL
06.	FLAP	ALUMINIUM
07.	RIVET	MILD STEEL
08.	BODY	FORGED STEEL St 52-3 to DIN 17100

Due to our policy of continuous product improvement, dimensions and designs are subject to change.



VIAT INSTRUMENTS PVT. LTD.

2701 to 2704, Shilpangan Phase-II, Block LB-1
Sector-III, Salt Lake, Kolkata - 700 098, INDIA
Phones : (91-33) 9903805104, 23352925 ● Fax : (91-33) 23352926
E-mail : viatin@viatin.com ● Website : www.viatin.com

VIAT AMERICA, INC.

30 Shepard, Irvine, CA 92620
Tel: 949-679-0950 Fax: 949-417-1358
E-mail : sales@viatamerica.com
Website : www.viatamerica.com