Proportional Pressure Relief Valves
Direct Opertated
Type EDG...

Introduction and Characteristic

— They can adjust system pressure proportionally
  base on input electricity of proportional solenoids.

— It's flow is small nad usually is used as pilot valve for
  system pressure telecontrol valve and other valves.

— The unloading when pressure is over loading can be
  come true by installing safe insert file ,then it can
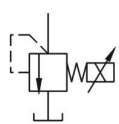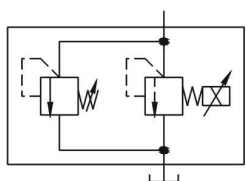 protect proportional solenoid and system .

Ordering details

1	2	3	4	5	6	7	8	9
EDG	– 01	–	–	–	–	–	–	–

Item	Collocate	Code	Explanation
1	Sort	EDG	Direct operated proportional pressure relief valve
2	Size	01	
3	Pressure Adjustment Range	B	0.5～6.9MPa
		C	1.0～15.7MPa
		H	1.2～24.5MPa
4	Over loading Protection	NO	No safe valve
		1	With safe valve
5	Inlet Throttle ①	NO	P port without throttle
		P08	P port with φ0.8mm throttle
		P10	P port with φ1.0mm throttle
		P12	P port with φ1.2mm throttle
6	Outlet Throttle ①	NO	T port without throttle
		T10	T port with φ1.0mm throttle
		T12	T port with φ1.2mm throttle
		T14	T port with φ1.4mm throttle
7	Design Series	10	Could`t install safe valve
		20	Could with safe valve
8	Seal Material ②	NO	NBR
		V	FKM
9			Describe other especial demand

Note：

① For other dimensions throttle controller ,please contact with our company`s technical dep. .

② Please see page 6 on catalog for hydraulic fluid and seal material .

Symbols

| No safe valve	With safe valve

Work theory

EDG-01-......-20

Input control electricity into proportional solenoid coil, output power pass to spool 3 from compress spring 2. To compare hydraulic power on spool, it starts to relief after daff spool when hydraulic power bigger than solenoid power. Otherwise, the valve port will be closed.
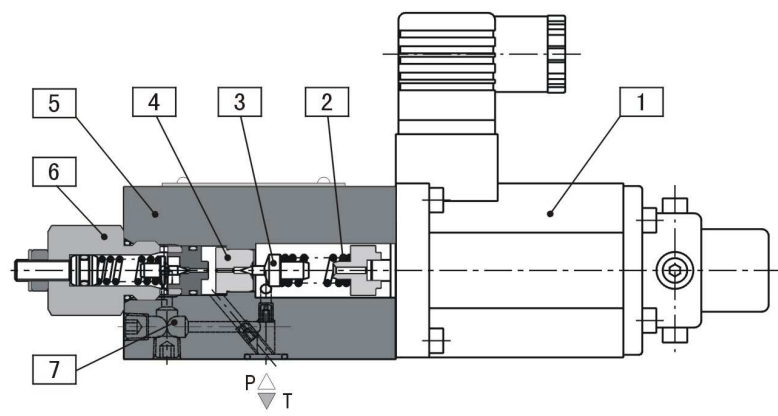
EDG-01-......-10；

The valve can be installed safe valve insert file 6(only for 20 design number type). Oil via pass road 7 to T port and reflow to oil box after opening safe valve's spool when oil pressure bigger than enactment value of safe vavle. There is production when system pressure over load rating.
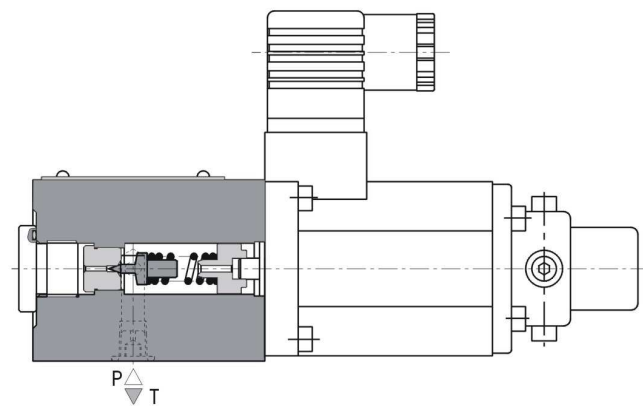
Technical data

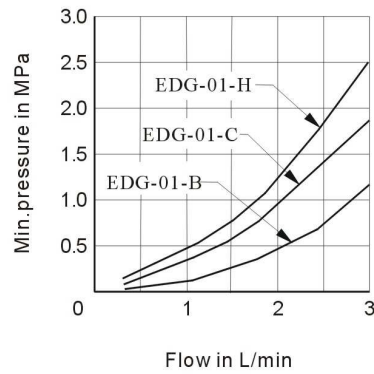| Data		EDG-01-B	EDG-01-C	EDG-01-H
Rating electricity	mA	800	900	950
Max. Pressure	MPa	24.5		
Max.flow	L/min	2		
Min.flow	L/min	0.3		
Pressure adjustment range MPa		See model code		
Coil resistance	Ω	10		
Stagnant loop		＜3%		
Repeat precision		1%		
weight	Kg	2.0		

Characteristic curves

Measure condition for below curves：flow 2l/min
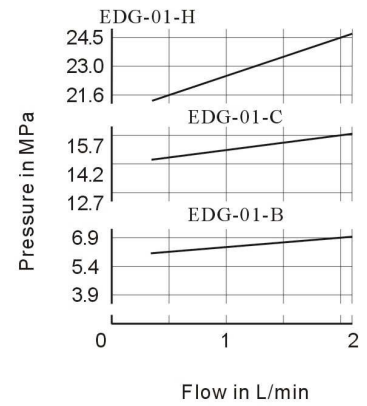Obturation fluid vol. 40cm^3 viscoce 30mm^2/s
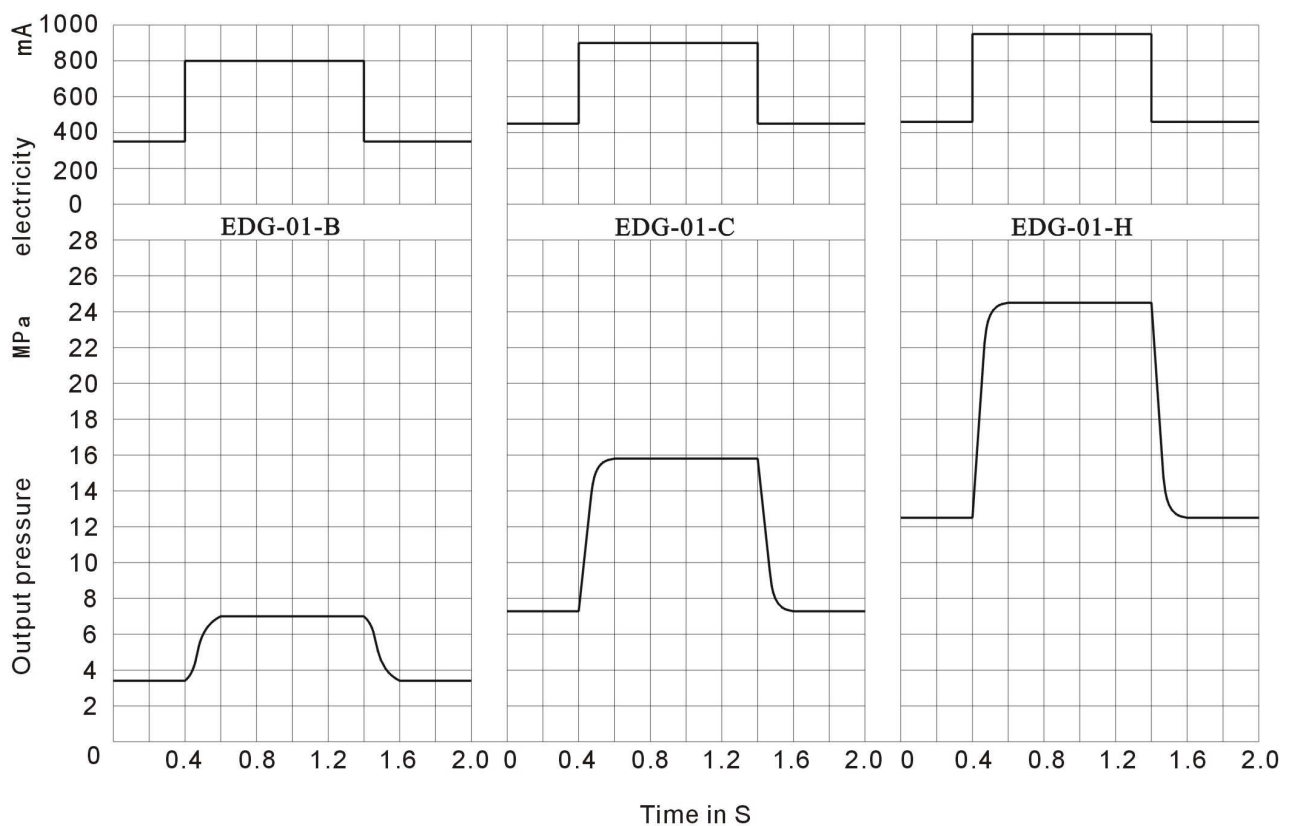
Input electricity-pressure
Characteristic curve
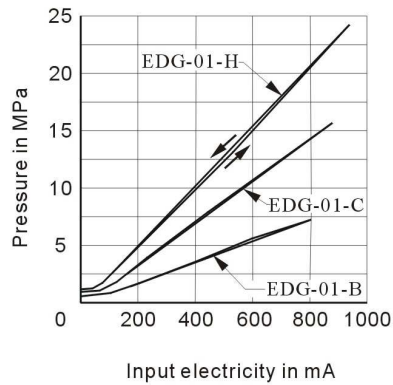
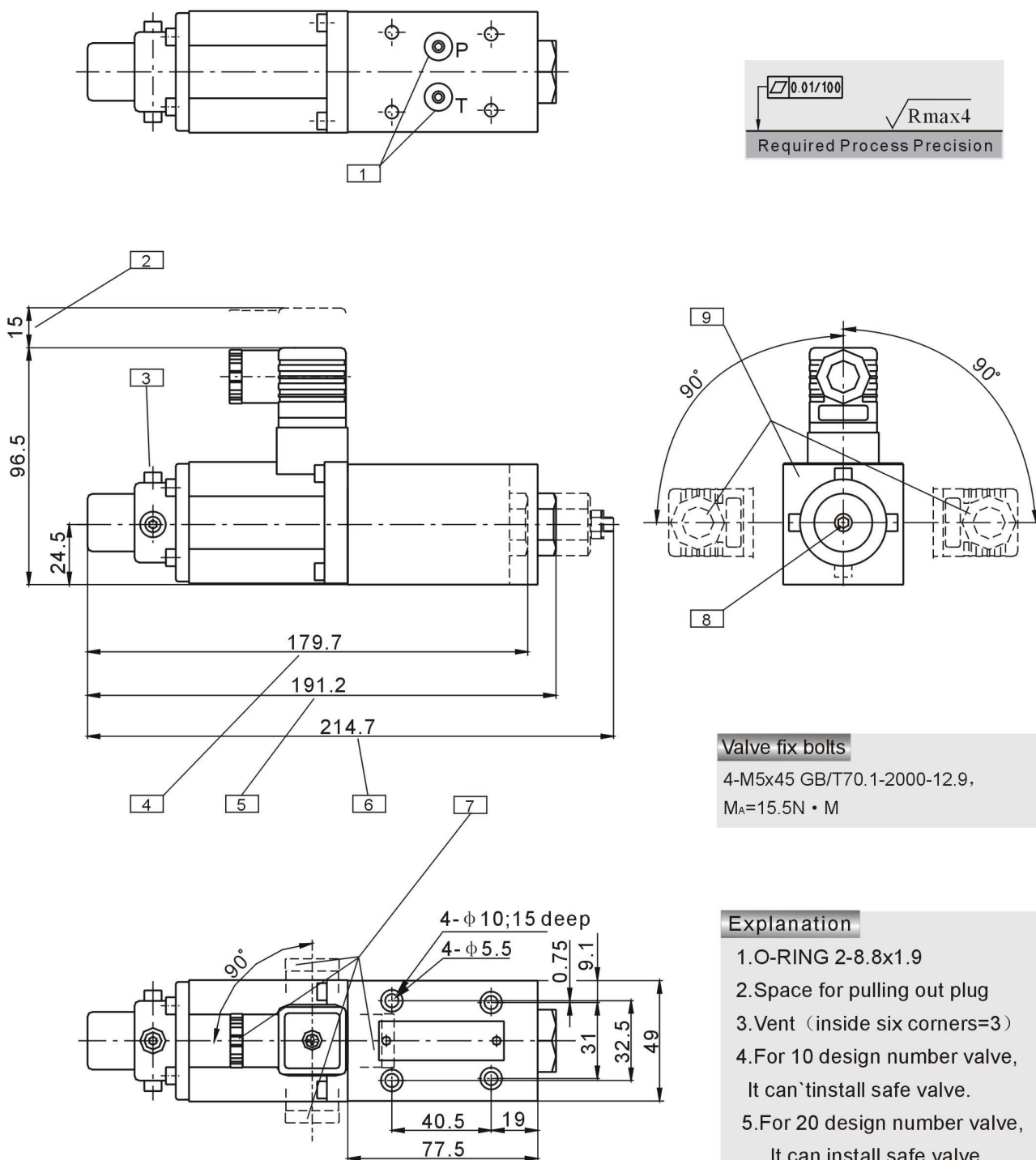Min. Enactment pressure
Characteristic curve

Flow-pressure
Characteristic curve

Pressure jumping response characteristic curves

□ 0.01/100

$\sqrt{Rmax4}$

Required Process Precision

Valve fix bolts

4-M5x45 GB/T70.1-2000-12.9，
M_A=15.5N・M

Explanation

1. O-RING 2-8.8x1.9
2. Space for pulling out plug
3. Vent（inside six corners=3）
4. For 10 design number valve,
   It can`tinstall safe valve.
5. For 20 design number valve,
   It can install safe valve.
6. Space for safe valve
7. Plug installation direction
8. Manual pressure adjustment
   Bolts（inside six corners=3）
9. Installation for solenoid

4-φ10;15 deep
4-φ5.5

EDG01...

Installation surface process dimensions
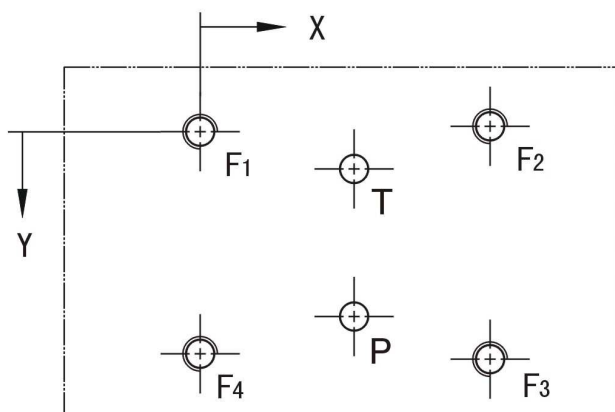
Size	DES. Code	Position		Character	
		X	Y		Deep
	F₁	0	0	M5	10
	F₂	40.5	-0.75	M5	10
EDG01	F₃	40.5	31.75	M5	10
	F₄	0	31	M5	10
	P	21.5	25.8	$\phi 4$	–
	T	21.5	5.2	$\phi 4$	–

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  ┌─────────┐
  │▱│0.01/100│
  └─────────┘
         √Rmax4
Required Process Precision
```
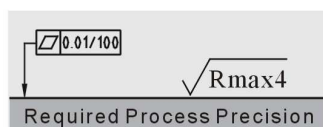
Note!

The installation surface should be bigger
Than valve bottom figure when process
Valve`s installation surface.

Installation and using notice

1.Unloading control
It needs connection pipe which inside dia.is 6mm and length
is 300mm or more short when using the valve as relief valve
to control unloading .If pressure isn't steady ,it needs to add
$\phi 1.0$-1.5 throttle at oil outlet.

2.Return road pressure control
It needs to ensure that loading vol.(obturation fluid vol.)
Is bigger than $40cm^3$ when using the valve to control return
road pressure directly. Return oil pipe's back pressure sho-
uld be smaller than 0.2MPa.

3.Safe valve's enactment pressure
Under max.flow, safe valve pressure is 2MPa（20.4kgf/cm）
higher than max pressure adjustment range. If max work pr-
essure is lower or using different max flow, it needs to adjust
after working out safe valve's pressure enactment follow
below formula. Pressure enactment value=（work pressure
upper limit）+（additional pressure for right photo show）

Additional pressure-flow curve