SMC

Expertise – Passion – Automation

Optimise air consumption during stops

Stand-by valve

VEX-X115 Series

Stand-by valve
VEX-X115 Series

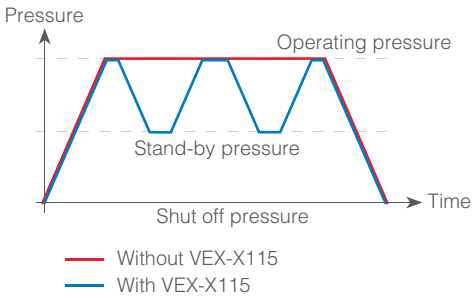
- **Reduce air consumption during short stops or shut it off during long ones. With one product**
- **Extend the life of the pneumatic components** – Lower pressure, lower stress
- **Choose how to operate it yourself** – Controlled by a flow switch or through fieldbus inputs.

Main features

VEX-X115 Series: The concept

VEX-X115 Series is capable of modulating the pressure according to 3 different levels:
- Operating pressure
- Stand-by mode - Reduces pressure to a chosen value during short pauses
- Shut off mode - Shuts off the air completely over long stops.

Accommodating the pressure to the actual machine needs provides considerable air savings in terms of air generation and air usage, including air leaks.



Modular connection

Easy installation in FRL units.

Compatible communication protocols:
- DeviceNet™
- CC-Link
- PROFIBUS

Independent operation – PLC not necessarily required

VEX-X115 Series can operate autonomously, by connecting a flow switch to it.
The flow switch ensures the pressure is reduced automatically.

Practical example

Let's assume we have an automatic machine with static leakage.

Conditions

Pressure	0.7 MPa
Equivalent leakage size (Ø)	4 mm
Operation hours	24 hours/day
Operation days	250 days/year
Air cost	0.02 €/Nm³

Operation time distribution

Production time	60 % of the total
Pause time	40 % of the total

Yearly cost of leakage: **7531 €/year**

Yearly cost of leakage at pauses: **3012.4 €/year**

Stand-by valve
Pressure at pauses is reduced to 0.3 MPa

23 % saving
1721 €

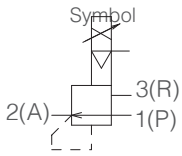
Product variations

	Port sizes (P, A ports)					
	1/2	3/4	1	1–1/4	1–1/2	2
VEX130	●					
VEX150	●	●	●			
VEX170			●	●		
VEX190					●	●

Technical information

How to order

VEX1 □ 00 – □ □ – □ – □ □ □ □ □ – □ – X115-Q
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩



① Body size

3
5
7
9

② Port size (P, A port)

04	1/2”
06	3/4”
10	1”
12	1 1/4”
14	1 1/2”
20	2”

③ Thread type

—	Rc
T	NPTF
F	G
N	NPT

④ Option (packed with it)

—	W/O option
B	Bracket
P	Plug for port 3 (R)
V	Valve (VT307-5D1-02)

∗ When specifying more than one option, order symbols alphabetically.

⑤ ITV model

		VEX130	VEX150	VEX170	VEX190
—	ITV1000 type	●			
	ITV2000 type			●	●
1	ITV1000 type		●		
2	ITV2000 type		●		

⑥ Input signal

0	Current 4 to 20 mA (sink type)
1	Current 0 to 20 mA (sink type)
2	Voltage 0 to 5 VDC
3	Voltage 0 to 10 VDC
40	Preset input type (Negative common)
52	16 points preset input (switch output/NPN output)
53	16 points preset input (switch output/PNP output)
CC	CC-Link
DE	DeviceNet™
PR	PROFIBUS DP
RC	RS-232C communication

1) IO-Link compatible version is also available. Ask our salesmen for more information.

⑦ Monitor output

1	Analogue input – DC 1 to 5 V
2	Switch output – NPN output
3	Switch output – PNP output
4	Analogue output – DC 4 to 20 mA (sink type)
—	Without monitor output (preset input type)

⑧ Cable connector type

S	Straight type 3 m
L	Right angle type 3 m
N	Without cable connector

⑨ Pressure display unit

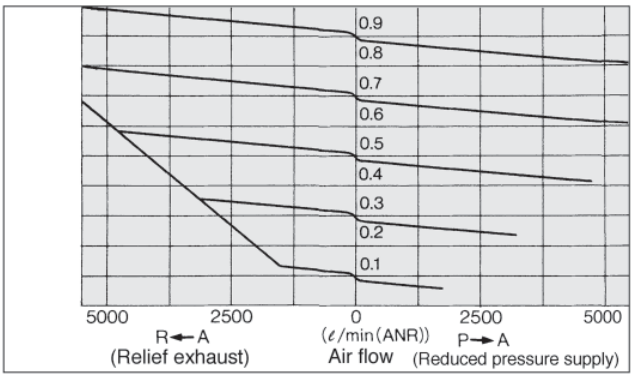
—	MPa
2	kgf/cm^2
3	bar
4	PSI
5	kPa

⑩ Installation direction of ITV

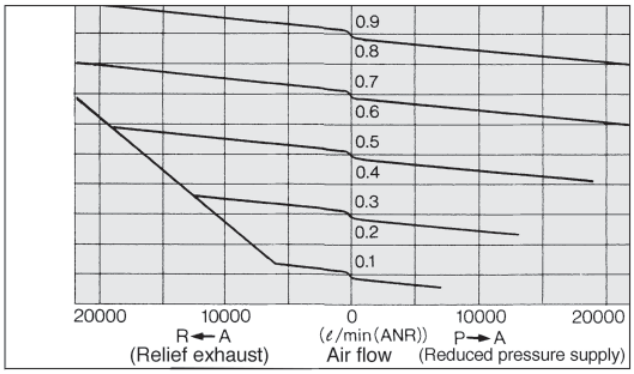
		VEX130	VEX150	VEX170	VEX190
—	Digital pressure display R port side	●	●	●	●
R	Digital pressure display bracket mounting side		●	●	●

Flow characteristics

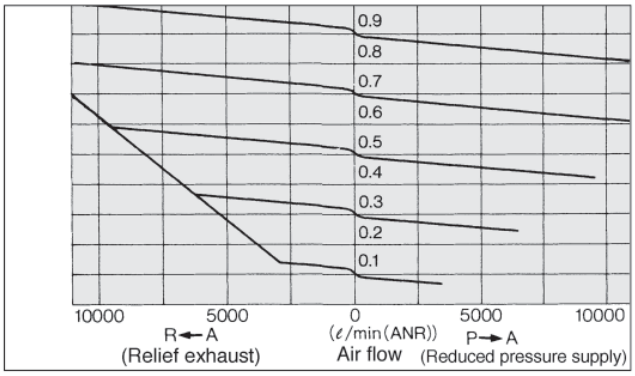
VEX130 Port 2 (A) pressure [MPa] Port 1 (P) pressure 1.0 MPa



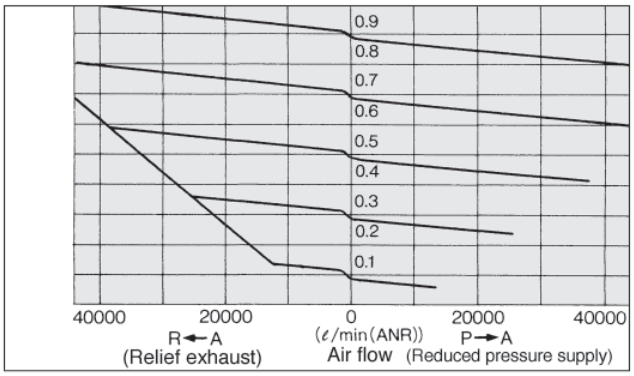
VEX170 Port 2 (A) pressure [MPa] Port 1 (P) pressure 1.0 MPa



VEX150 Port 2 (A) pressure [MPa] Port 1 (P) pressure 1.0 MPa



VEX190 Port 2 (A) pressure [MPa] Port 1 (P) pressure 1.0 MPa



Specifications

		VEX130	VEX150	VEX170	VEX190
Pilot type		Internal			
Supply pressure		(Set pressure) +0.1 MPa to 1 MPa			
Setting pressure		0.01 to 0.9 MPa			
Power supply voltage		24 VDC ±10 %			
Current consumption (24VDC)		<0.12 A			
Electro-pneumatic regulator		ITV105		—	—
		—	ITV205		
Input Signal (impedance)	**Current type**	4-20 mADC, 0-20 mADC (250 kΩ) [1]			
	Voltage type	0-5 VDC, 0-10 VDC (6.5 kΩ)			
	Preset input	4 points (negative common), 16 points (no common polarity) (4.7 kΩ)			
	Digital input	10 bit (4.7 kΩ)			
Linearity [2]		±1.0 % F.S. or less			
Hysteresis [2]		0.5 % F.S. or less			
Repeatability [2]		± 0.5 % F.S. or less			
Sensitivity [2]		0.2 % F.S. or less			
Ambient and fluid temperature		0 to 50 °C			
Pressure display	**Accuracy**	±2 % F.S. or less			
	Min unit	0.001 MPa, 0.01 kgf/cm², 0.01 bar, 1 PSI, 1kPa			
Protection enclosure		Main unit: IP65, cable connector: IP67			

1) Value for the state with no over current.
2) Guide value, not guaranteed.
3) Make sure you read specific product precautions before handling, in ITV catalogue at www.smc.eu.

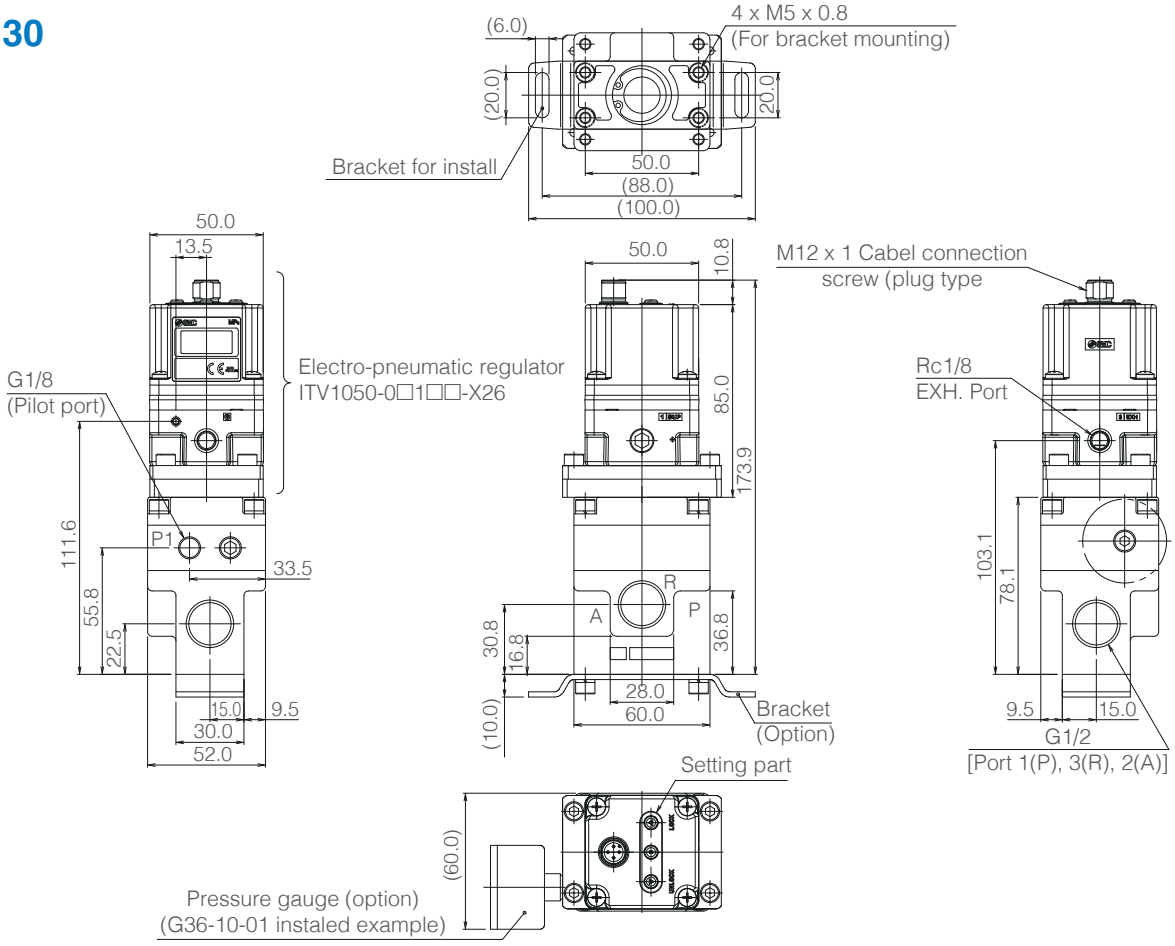
Cable connectors

Please order the cable separately.

Part number	Connection	Connector type	Length [m]
P398020-500-3	Power supply	M12, 4 pins	3
P398020-502-3	Input signal	M12, 5 pins	

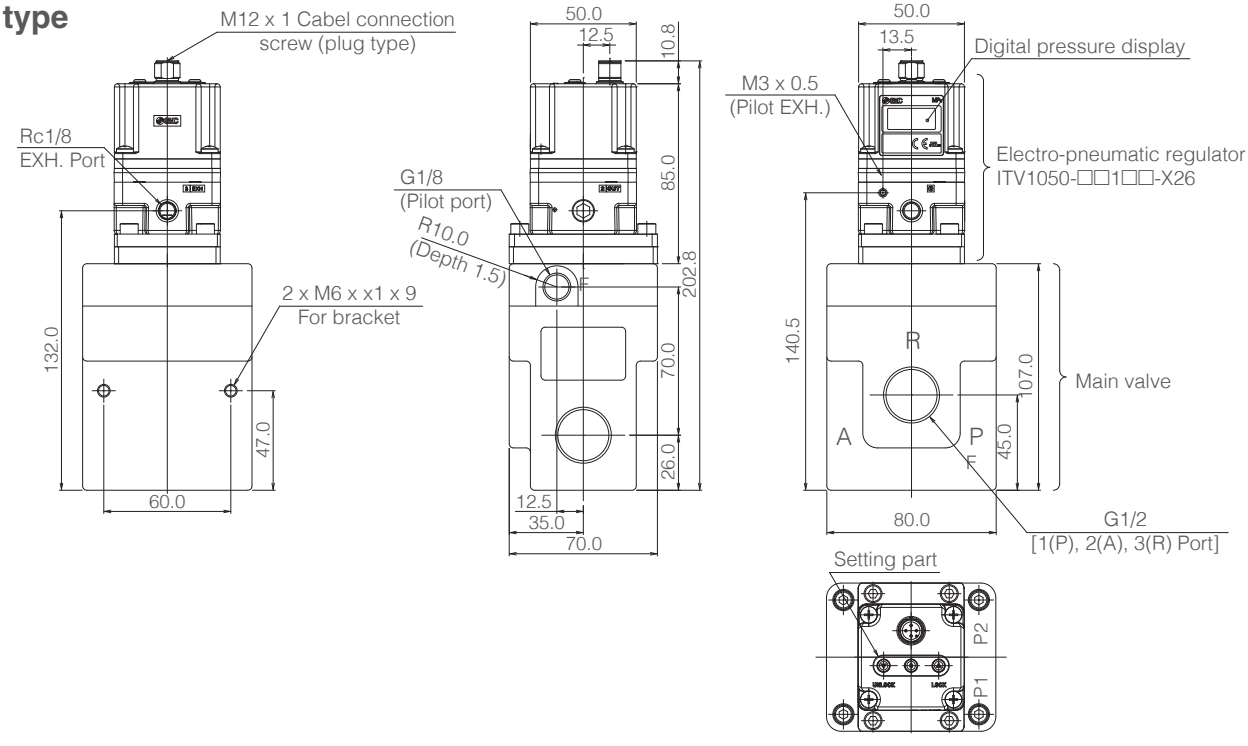
Dimensions

VEX130

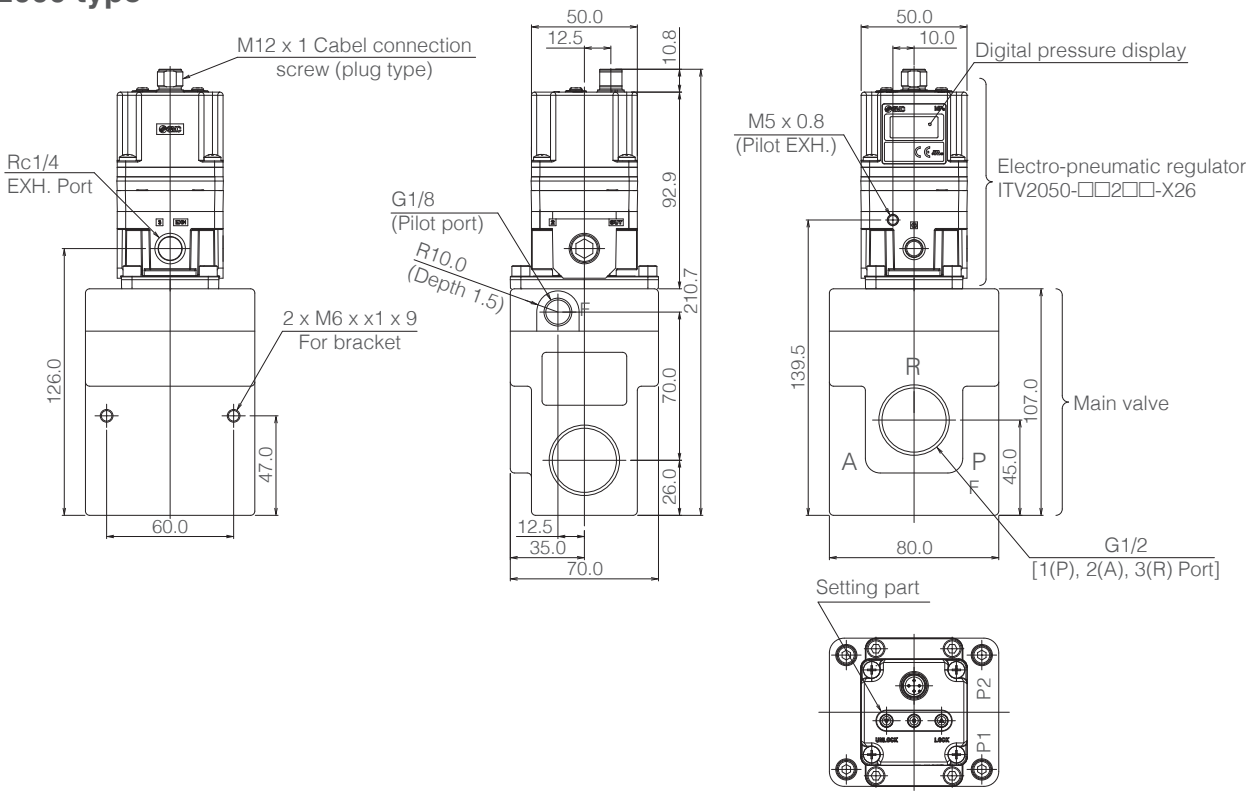


VEX150

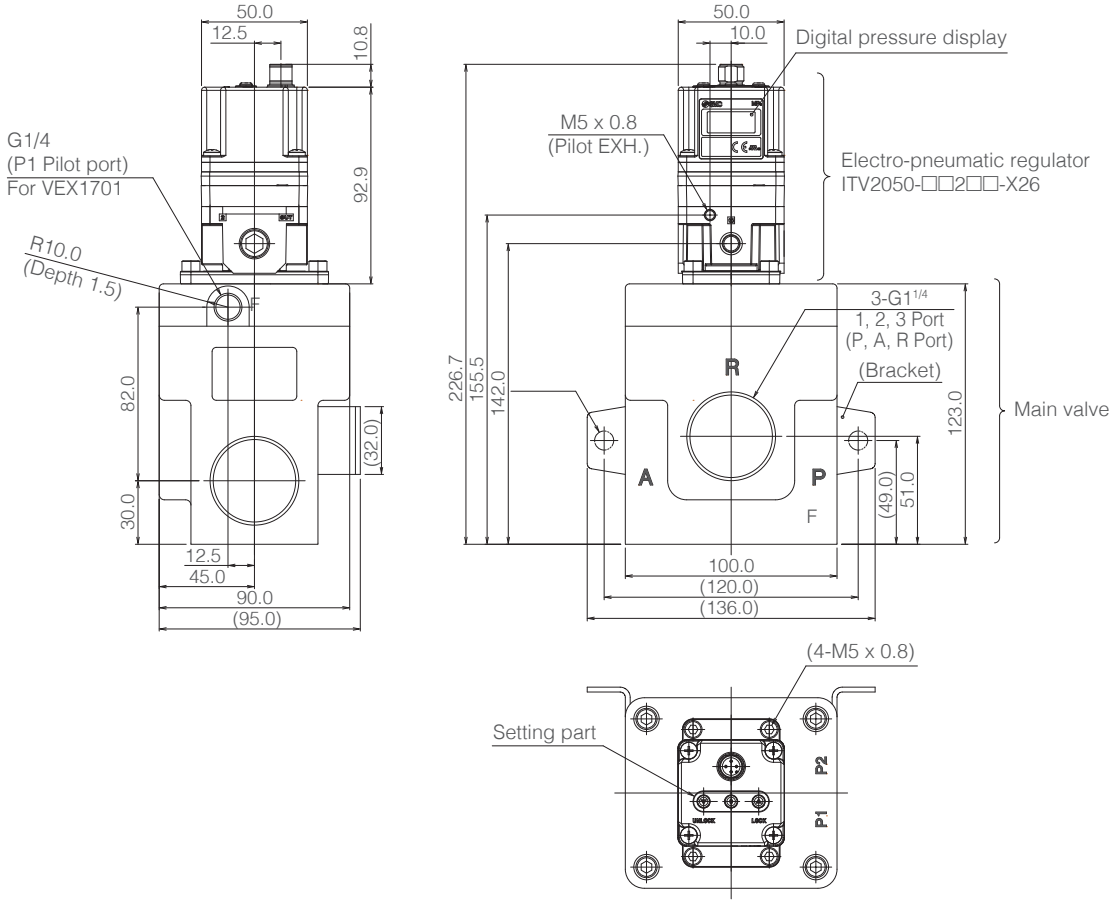
ITV 1000 type



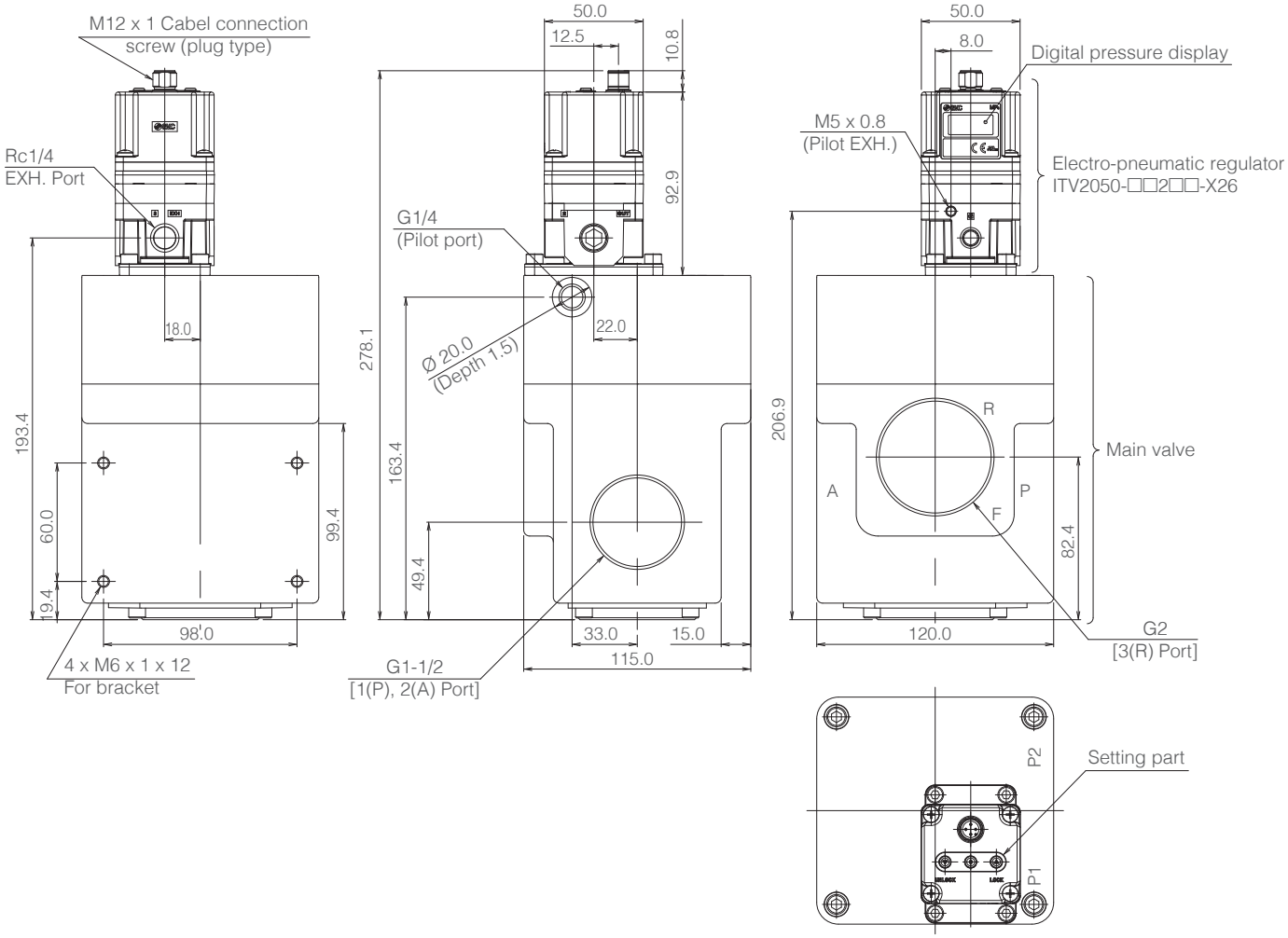
VEX150
ITV 2000 type



VEX170



VEX190



Energy saving related products

Automatic leakage detection system
ALDS Series

Detect and locate leaks.

Digital flow switches
PF3A & PFMC Series

Monitor main line consumption.

Air amplifier
ZH-X185 Series

Multiply the flow.

Air saving speed controllers
AS-R/AS-Q Series

Reduce the pressure introduced in the actuators at return strokes only.

Booster regulator
VBA Series

Increase pressure only where it is needed.

Vacuum unit
ZK2 Series

Generate vacuum and maintain it with the minimum supply air.

Expertise – Passion – Automation

SMC Corporation
Akihabara UDX 15F, 4-14-1
Sotokanda, Chiyoda-ku, Tokyo 101-0021, JAPAN
Phone: 03-5207-8249
Fax: 03-5298-5362

Austria	+43 (0)2262622800	www.smc.at	office@smc.at
Belgium	+32 (0)33551464	www.smcpneumatics.be	info@smcpneumatics.be
Bulgaria	+359 (0)2807670	www.smc.bg	office@smc.bg
Croatia	+385 (0)13707288	www.smc.hr	office@smc.hr
Czech Republic	+420 541424611	www.smc.cz	office@smc.cz
Denmark	+45 70252900	www.smcdk.com	smc@smcdk.com
Estonia	+372 6510370	www.smcpneumatics.ee	smc@smcpneumatics.ee
Finland	+358 207513513	www.smc.fi	smcfi@smc.fi
France	+33 (0)164761000	www.smc-france.fr	info@smc-france.fr
Germany	+49 (0)61034020	www.smc.de	info@smc.de
Greece	+30 210 2717265	www.smchellas.gr	sales@smchellas.gr
Hungary	+36 23513000	www.smc.hu	office@smc.hu
Ireland	+353 (0)14039000	www.smcpneumatics.ie	sales@smcpneumatics.ie
Italy	+39 0292711	www.smcitalia.it	mailbox@smcitalia.it
Latvia	+371 67817700	www.smclv.lv	info@smclv.lv
Lituania	+370 5 2308118	www.smclt.lt	info@smclt.lt
Netherlands	+31 (0)205318888	www.smcpneumatics.nl	info@smcpneumatics.nl
Norway	+47 67129020	www.smc-norge.no	post@smc-norge.no
Poland	+48 222119600	www.smc.pl	office@smc.pl
Portugal	+351 226166570	www.smc.eu	postpt@smc.smces.es
Romania	+40 213205111	www.smcromania.ro	smcromania@smcromania.ro
Russia	+7 8127185445	www.smc-pneumatik.ru	info@smc-pneumatik.ru
Slovakia	+421 (0)413213212	www.smc.sk	office@smc.sk
Slovenia	+386 (0)73885412	www.smc.si	office@smc.si
Spain	+34 902184100	www.smc.eu	post@smc.smces.es
Sweden	+46 (0)86031200	www.smc.nu	post@smc.nu
Switzerland	+41 (0)523963131	www.smc.ch	info@smc.ch
Turkey	+90 212 489 0 440	www.smcpnomatik.com.tr	info@smcpnomatik.com.tr
UK	+44 (0)845 121 5122	www.smcpneumatics.co.uk	sales@smcpneumatics.co.uk

Printing WS 02 Printed in Spain
LEAF-VEX-X115-A-UK