



**24L, 24B
Series**

- Disc Blow Out Protection
- Dry but Field Liquid Fillable
- Excellent Corrosion Resistance
Stainless Steel Case

- Electrical Polished Crimped Ring
- Brass Wetted Parts

HAWK 24L and 24B series bourdon tube stainless steel case pressure gauges are designed to fulfill the requirements of high quality from various industries. It is offered with waterproof and corrosion resistant case. Widely pressure ranges can be chosen. It is suitable to measure pressure of air, oil, gas, water or any other medium which does not clog the pressure port or corrode copper alloy. Liquid Filling is available to diminish the effects of vibration, pulsation and shock and further enhances the gauge life.

Typical Application

- Hydraulic monitoring systems
- Power generating stations
- Compressors
- Valve positioners
- Pneumatic systems
- Regulators
- Pumps

Specification

Operating

Steady: 75%*full scale value
Pulsation: 50%*full scale value
Sudden: 100%*full scale value

The appropriate operating range falls in the middle half of the gauge (25% to 75% of full scale). If you choose the unsuitable range, the fatigue of bourdon tube may be resulted. HAWK Supplies a wide selection of range from vacuum to 15000 PSI including compound range.

Temperature limit

Ambient:
-25 to 60°C(Dry Gauge)
Media: max 60°C-Standard

Temperature effect

Accuracy of measurement will be effected by the temperature change. This inaccuracy may as high as $\pm 0.3\%$ for 12°C temperature change.

Dial Size

2 1/2"(63mm), 3"(75mm), 4"(100mm)

Case&Ring

Stainless Steel 304(SS316-option), polished bayonet ring

Socket

Brass

Movement

Brass

Bourdon Tube

Brass

Window

Plain Glass-standard
Tempered safety, Polycarbonate or laminated safety glass-optional

Pointer

Anodized aluminum with black finish

Accuracy

$\pm 2-1-2\%$ of span
(Grade 1A to ASME B40.1)

Scale

PSI, kPa, Mpa, bar, kg/cm², inHg, cmHg, torr, mmHg (single or dual scale)

Connection

1/2", 3/8", 1/4", 1/8" NPT standard, JIS, DIN, M14*1.0 and M20*1.5 available

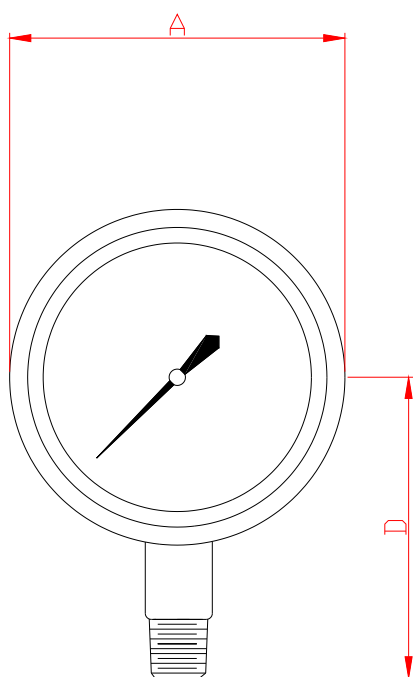
Mounting

Stem or Flushing U-clamp mounting

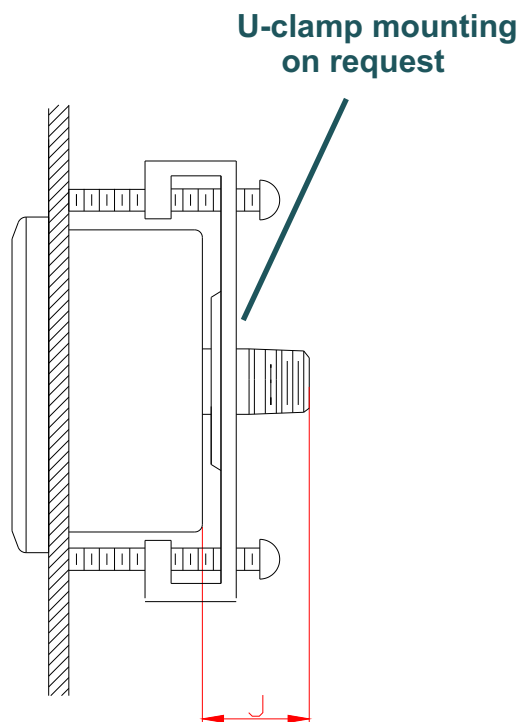
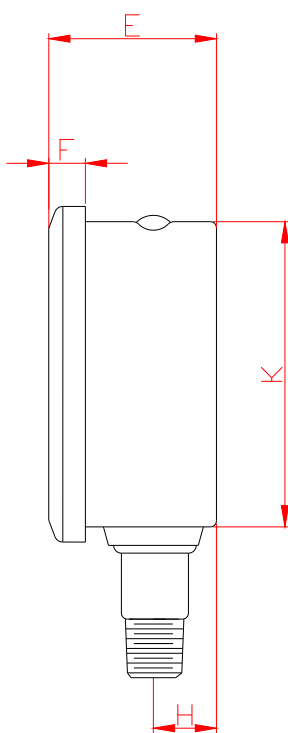
Weatherproof

NEMA 4X/IP65 enclosure

Dimensions



24L (Bottom Connection)



24B (Center Back Connection)

Dimensions, in.(mm)

Type No	Dial Size	A	B	C	D	E	F	G	H	J	K	L	Weight
24L	2.5"	2.71" (69)			2.21" (56)	1.26" (32)	0.28" (7)		0.51" (13)		2.44" (62)		0.15-0.20 Kg
24B	2.5"	2.71" (69)				1.26" (32)	0.28" (7)			0.91" (23)	2.44" (62)		0.15-0.20 Kg

Type No	Dial Size	A	B	C	D	E	F	G	H	J	K	L	Weight
24L	3"	3.43" (87)			3.07" (78)	1.34" (34)	0.32" (8)		0.51" (13)		3.15" (80)		0.20-0.28 Kg
24B	3"	3.43" (87)				1.34" (34)	0.32" (8)			0.91" (23)	3.15" (80)		0.20-0.28 Kg

Type No	Dial Size	A	B	C	D	E	F	G	H	J	K	L	Weight
24L	4"	4.21" (107)			3.27" (83)	1.34" (34)	0.32" (8)		0.51" (13)		3.94" (100)		0.30-0.40 Kg
24B	4"	4.21" (107)				1.34" (34)	0.32" (8)			0.91" (23)	3.94" (100)		0.30-0.40 Kg

Pressure Range

- The other scales and ranges(DIN) are available in request.
- Not all listed ranges and scales are in stock, consult your distributors for available.

Pressure Ranges

SINGLE SCALE				DUAL SCALE			
PSI	Bar	KPa	Kg/cm2	Bar & PSI	Kpa & PSI	Kg/cm2 & PSI	
Code Range	Code Range	Code Range	Code Range	Code Range	Code Range	Code Range	Code Range
P29 6	R1 0.4	K29 40	G1 0.4	X9 0.4 Bar/PSI	Y16 40 kPa/PSI	W9 0.4 Kg/cm2/PSI	
P30 8	R2 0.6	K31 60	G2 0.6	X11 0.6 Bar/PSI	Y18 60 kPa/PSI	W11 0.6 Kg/cm2/PSI	
P32 15	R3 1	K33 100	G3 1	X12 1 Bar/PSI	Y22 100 kPa/PSI	W12 1 Kg/cm2/PSI	
P33 20	R4 1.6	K34 160	G4 1.6	X13 1.6 Bar/PSI	Y25 160 kPa/PSI	W13 1.6 Kg/cm2/PSI	
P35 30	R5 2	K35 200	G5 2	X14 2 Bar/PSI	Y26 200 kPa/PSI	W14 2 Kg/cm2/PSI	
P37 40	R6 2.5	K36 250	G6 2.5	X15 2.5 Bar/PSI	Y27 250 kPa/PSI	W15 2.5 Kg/cm2/PSI	
P38 50	R7 3	K37 300	G7 3	X16 3 Bar/PSI	Y28 280 kPa/PSI	W16 3 Kg/cm2/PSI	
P39 60	R8 4	K38 400	G9 4	X18 4 Bar/PSI	Y31 400 kPa/PSI	W18 4 Kg/cm2/PSI	
P40 80	R9 5	K39 500	G10 5	X19 5 Bar/PSI	Y32 500 kPa/PSI	W19 5 Kg/cm2/PSI	
P40A 85	R11 6	K40 600	G11 6	X20 6 Bar/PSI	Y33 600 kPa/PSI	W20 6 Kg/cm2/PSI	
P41 100	R12 7	K41 700	G12 7	X21 7 Bar/PSI	Y34 700 kPa/PSI	W21 7 Kg/cm2/PSI	
P42 150	R13 10	K42 1000	G13 10	X22 10 Bar/PSI	Y36 1000 kPa/PSI	W22 10 Kg/cm2/PSI	
P43 160	R13A 11	K42A 1100	G13A 11	X23 11 Bar/PSI	Y36A 1100 kPa/PSI	W23 11 Kg/cm2/PSI	
P43A 180	R13B 14	K42B 1400	G13C 14	X24 14 Bar/PSI	Y37 1400 kPa/PSI	W24 14 Kg/cm2/PSI	
P44 200	R13C 15	K42C 1500	G13B 15	X25 15 Bar/PSI	Y38 1500 kPa/PSI	W25 15 Kg/cm2/PSI	
P45 250	R14 16	K43 1600	G14 16	X26 16 Bar/PSI	Y39 1600 kPa/PSI	W26 16 Kg/cm2/PSI	
P46 300	R15 20	K44 2000	G15 20	X28 20 Bar/PSI	Y40 2000 kPa/PSI	W28 20 Kg/cm2/PSI	
P47 350	R16 25	K45 2500	G16 25	X29 25 Bar/PSI	Y41 2500 kPa/PSI	W29 25 Kg/cm2/PSI	
P48 400	R16B 28	K55A 2800	G16A 28	X30 28 Bar/PSI	Y42 2800 kPa/PSI	W30 28 Kg/cm2/PSI	
P48A 450	R17 30	K46 3000	G17 30	X31 30 Bar/PSI	Y43 3000 kPa/PSI	W31 30 Kg/cm2/PSI	
P49 500	R18 35	K47 3500	G18 35	X32 35 Bar/PSI	Y44 3500 kPa/PSI	W32 35 Kg/cm2/PSI	
P50 600	R19 40	K48 4000	G19 40	X33 40 Bar/PSI	Y45 4000 kPa/PSI	W33 40 Kg/cm2/PSI	
P51 800	R20 50	K49 5000	G20 50	X34 50 Bar/PSI	Y46 5000 kPa/PSI	W34 50 Kg/cm2/PSI	
P51A 850	R21 60	K50 6000	G21 60	X35 60 Bar/PSI	Y47 6000 kPa/PSI	W35 60 Kg/cm2/PSI	
P52 1,000	R22 70	K51 7000	G22 70	X36 70 Bar/PSI	Y48 7000 kPa/PSI	W36 70 Kg/cm2/PSI	
P53 1,500	R23 100	K52 10000	G23 100	X39 100 Bar/PSI	Y50 10000 kPa/PSI	W39 100 Kg/cm2/PSI	
P53A 1,600	R23A 140	K52B 14000	G23A 140	X40 140 Bar/PSI	Y51 14000 kPa/PSI	W40 140 Kg/cm2/PSI	
P54 2,000	R24 160	K53 16000	G24 160	X42 160 Bar/PSI	Y53 16000 kPa/PSI	W42 160 Kg/cm2/PSI	
P56 3,000	R25 200	K54 20000	G25 200	X43 200 Bar/PSI	Y54 20000 kPa/PSI	W43 200 Kg/cm2/PSI	
P57 3,500	R26 250	K55 25000	G26 250	X44 250 Bar/PSI	Y55 25000 kPa/PSI	W44 250 Kg/cm2/PSI	
P58 4,000	R26A 280	K55A 28000	G26A 280	X44A 280 Bar/PSI	Y56 28000 kPa/PSI	W44A 280 Kg/cm2/PSI	
P58A 4,250	R27 300	K56 30000	G27 300	X45 300 Bar/PSI	Y57 30000 kPa/PSI	W45 300 Kg/cm2/PSI	
P59 5,000	R28 350	K56A 35000	G28 350	X46 350 Bar/PSI	Y58 35000 kPa/PSI	W46 350 Kg/cm2/PSI	
P60 6,000	R29 400	K57 40000	G29 400	X47 400 Bar/PSI	Y59 40000 kPa/PSI	W47 400 Kg/cm2/PSI	
P60B 7,000	R30 500	K58 50000	G30 500	X48 500 Bar/PSI	Y60 50000 kPa/PSI	W48 500 Kg/cm2/PSI	
P61 8,000	R31 600	K59 60000	G31 600	X49 600 Bar/PSI	Y61 60000 kPa/PSI	W49 600 Kg/cm2/PSI	
P62 10,000	R33 700	K60 70000	G32 700	X50 700 Bar/PSI	Y62 70000 kPa/PSI	W50 700 Kg/cm2/PSI	
P63 15,000	R33 1000	K61 100000	G33 1000	X52 1000 Bar/PSI	Y64 100000 kPa/PSI	W52 1000 Kg/cm2/PSI	
P64 20,000	R33A 1400	K61A 140000	G33A 1400	X53 1400 Bar/PSI	Y65 140000 kPa/PSI	W53 1400 Kg/cm2/PSI	
P65 25,000	R34 1600	K62 160000	G34 1600	X55 1600 Bar/PSI	Y67 160000 kPa/PSI	W55 1600 Kg/cm2/PSI	

Vacuum Ranges

SINGLE SCALE

InHg	Bar	KPa	Kg/cm2
Code Range	Code Range	Code Range	Code Range
PV1 -30/0	RV1 -1/0	KV1 -0.04	GV1 -1/0

DUAL SCALE

Bar & PSI	Kpa & PSI	Kg/cm2 & PSI
Code Range	Code Range	Code Range
XV1 -1 Bar/PSI	YV1 -100 kPa/PSI	WV1 -76 cmHg/inHg

Compound Ranges

SINGLE SCALE

PSI	Bar	KPa	Kg/cm2
Code Range	Code Range	Code Range	Code Range
PCA1 VAC/8.5	RCA -1/0.6	KOQ -100/60	GCA -1/0.6
PCA VAC/15	RCB -1/1	KOR -100/100	GCB -1/1
	RCC -1/1.5	KOS -100/150	GCC -1/1.5
PCB VAC/30	RCD -1/2	KOS1 -100/200	GCD -1/2
	RCE -1/2.5	KOS2 -100/250	GCE -1/2.5
	RCF -1/3	KOT -100/300	GCF -1/3
PCC VAC/60	RCG -1/4	KOT2 -100/400	GCG -1/4
	RCH -1/5	KOU -100/500	GCH -1/5
PCD VAC/100	RCJ -1/7	KOU2 -100/700	GCJ -1/7
	RCK -1/9	KOV -100/900	GCK -1/9
PCE VAC/150	RCL -1/10	KOV1 -100/1000	GCL -1/10
PCF VAC/160	RCM -1/11	KOV2 -100/1100	GCM -1/11
PCG VAC/200	RCO -1/14	KOV4 -100/1400	GCO -1/14
	RCP -1/15	KOW -100/1500	GCP -1/15
	RCR -1/19	KOW2 -100/1900	GCR -1/19
PCH VAC/300	RCS -1/20	KOW3 -100/2000	GCS -1/20
	RCT -1/24	KOX -100/2400	GCT -1/24
	RCU -1/25	KOX1 -100/2500	GCU -1/25
PCI VAC/400	RCV -1/27	KOX2 -100/2700	GCV -1/27
	RCW -1/30	KOY -100/3000	GCW -1/30
PCJ VAC/500	RCW1 -1/35	KOZ -100/3500	GCW1 -1/35
PCK VAC/600	RCX -1/40	KOZ1 -100/4000	GCX -1/40
	RCY -1/50	KOZ2 -100/5000	GCY -1/50
	RCZ -1/60	KOZ3 -100/6000	GCZ -1/60
	RC0 -1/100	KOZ7 -100/10000	GC0 -1/100

DUAL SCALE

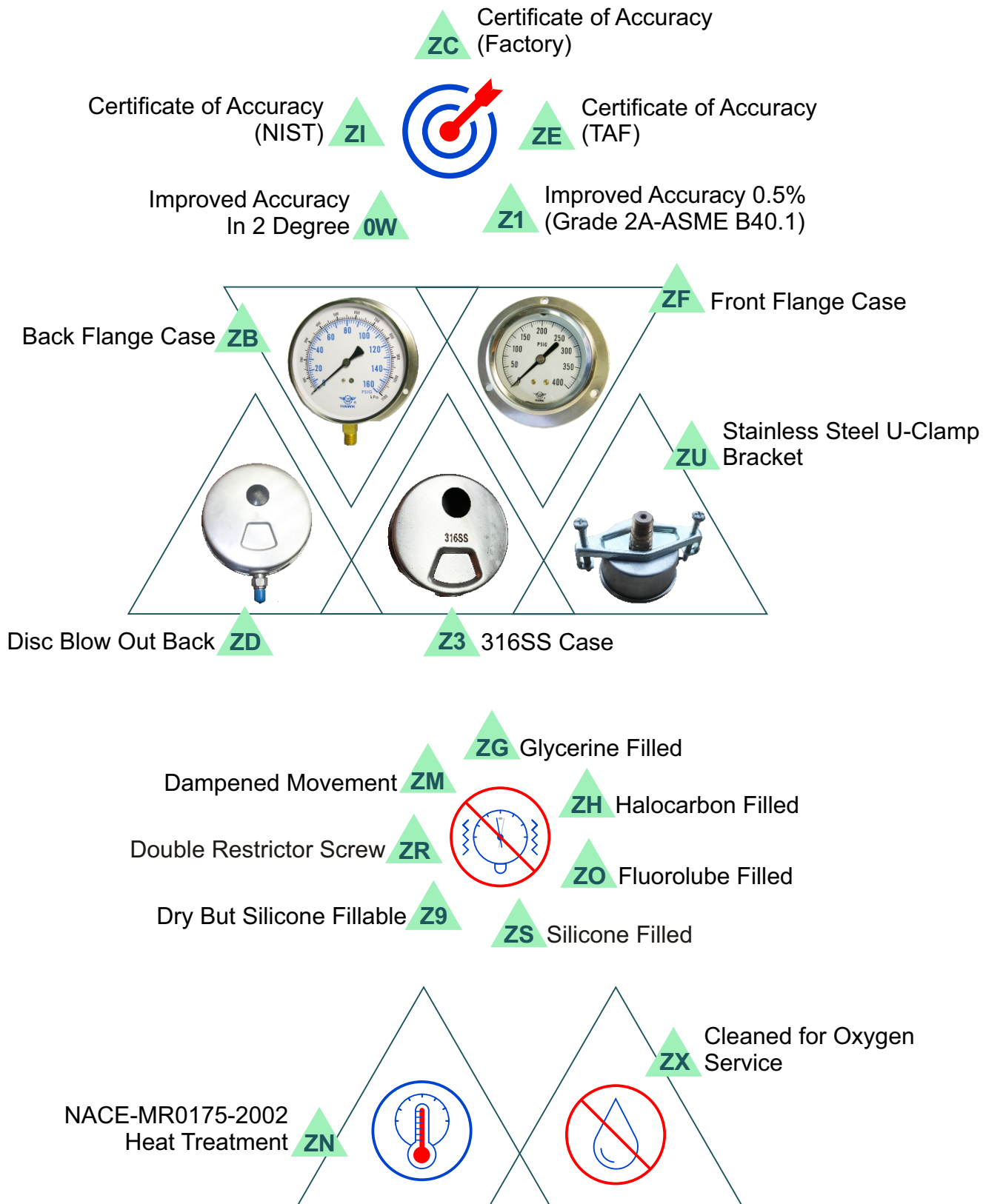
Bar & PSI	Kpa & PSI	Kg/cm2 & PSI
Code Range	Code Range	Code Range
XCA -1/0.6 Bar/PSI	YCA -100/60 kPa/PSI	WCA -76cmHg/0.6 Kg/cm2
XCB -1/1 Bar/PSI	YCB -100/100 kPa/PSI	WCB -76cmHg/1 Kg/cm2
XCC -1/1.5 Bar/PSI	YCC -100/150 kPa/PSI	WCC -76cmHg/1.5 Kg/cm2
XCD -1/2 Bar/PSI	YCD -100/200 kPa/PSI	WCD -76cmHg/2 Kg/cm2
XCE -1/2.5 Bar/PSI	YCE -100/250 kPa/PSI	WCE -76cmHg/2.5 Kg/cm2
XCF -1/3 Bar/PSI	YCF -100/300 kPa/PSI	WCF -76cmHg/3 Kg/cm2
XCG -1/4 Bar/PSI	YCG -100/400 kPa/PSI	WCG -76cmHg/4 Kg/cm2
XCH -1/5 Bar/PSI	YCH -100/500 kPa/PSI	WCH -76cmHg/5 Kg/cm2
XCJ -1/7 Bar/PSI	YCJ -100/700 kPa/PSI	WCJ -76cmHg/7 Kg/cm2
XCK -1/9 Bar/PSI	YCK -100/900 kPa/PSI	WCK -76cmHg/9 Kg/cm2
XCL -1/10 Bar/PSI	YCL -100/1000 kPa/PSI	WCL -76cmHg/10 Kg/cm2
XCM -1/11 Bar/PSI	YCM -100/1100 kPa/PSI	WCM -76cmHg/11 Kg/cm2
XCO -1/14 Bar/PSI	YCO -100/1400 kPa/PSI	WCO -76cmHg/14 Kg/cm2
XCP -1/15 Bar/PSI	YCP -100/1500 kPa/PSI	WCP -76cmHg/15 Kg/cm2
XCR -1/19 Bar/PSI	YCR -100/1900 kPa/PSI	WCR -76cmHg/19 Kg/cm2
XCS -1/20 Bar/PSI	YCS -100/2000 kPa/PSI	WCS -76cmHg/20 Kg/cm2
XCT -1/24 Bar/PSI	YCT -100/2400 kPa/PSI	WCT -76cmHg/24 Kg/cm2
XCU -1/25 Bar/PSI	YCU -100/2500 kPa/PSI	WCU -76cmHg/25 Kg/cm2
XCV -1/27 Bar/PSI	YCV -100/2700 kPa/PSI	WCV -76cmHg/27 Kg/cm2
XCW -1/30 Bar/PSI	YCW -100/3000 kPa/PSI	WCW -76cmHg/30 Kg/cm2
XCX -1/35 Bar/PSI	YCX -100/3500 kPa/PSI	WCX -76cmHg/35 Kg/cm2
XCX -1/40 Bar/PSI	YCY -100/4000 kPa/PSI	WCY -76cmHg/40 Kg/cm2
XCZ -1/50 Bar/PSI	YCY -100/5000 kPa/PSI	WCZ -76cmHg/50 Kg/cm2
XC1 -1/60 Bar/PSI	YC1 -100/6000 kPa/PSI	WC1 -76cmHg/60 Kg/cm2
XC2 -1/100 Bar/PSI	YC2 -100/10000 kPa/PSI	WC2 -76cmHg/100 Kg/cm2

Order Information

Example:

Series	Model	Dial	Wetted Parts	Process Connection	Pressure Range	Option
P - 1F - 24	L	04	B	M 2	P 4 1	H- Z G
	L- Lower (Bottom) Connection	25-2.5" (63mm)	B-Brass	M-Male 2-1/2"NPT	Please refer to the range table and write down the code you need.	ZT-Tempered Safety Glass Lens
		03-2" (75mm)		F-Female 4-1/4"NPT		ZG-Glycerine Filled
	B- Lower Back Connection	04-4" (100mm)		3-3/8"NPT		ZC-Certificate of Calibration
				D-G1/2		ZJ-Maximum Pointer
				H-G3/8	Vacuum	Z1-Improved Accuracy 1.0% (Grade 1A-ASME B40.1)
				E-G1/4	Compound	
				A-R1/2	Pressure	Other options please check the next page
				G-R3/8		
				B-R1/4		
				0L-Others		

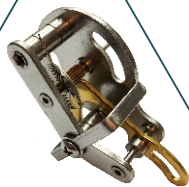
Option



Option

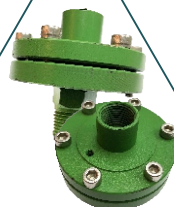
Movement with PTFE or
Titanium Coated Gear

ZQ



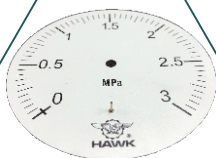
0J

FCFC Painting



0M

Stop Pin at 6 O'clock



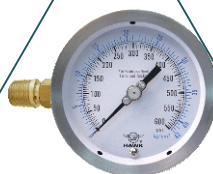
0F

12 O'clock Connection



9 O'clock
Connection

0E



0A

Red Pointer



0P

Stop Pin



0D

3 O'clock Connection



Polycarbonate Lens

ZP



Tempered Safety Glass
Lens

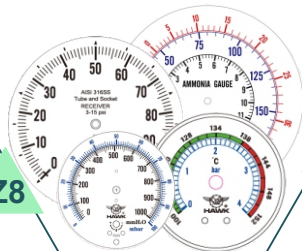
ZT

Laminated Safety Glass
Lens

ZL

Degree C Scale

0I



09

Receiver Scale 0...30 PSI

Altitude Scale

Z8

Z4

Receiver Scale 3...15 PSI

Retard Scale

Z7

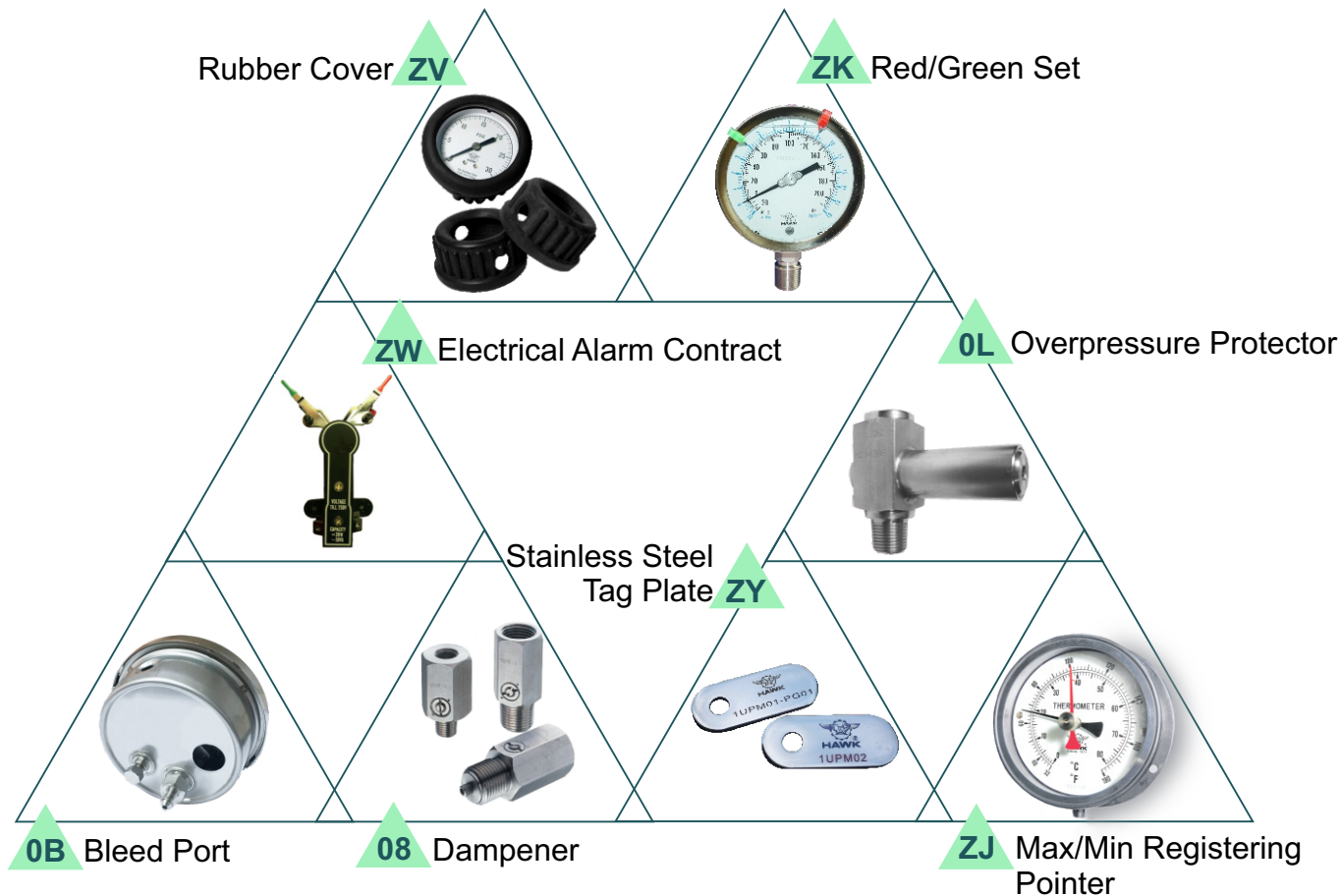
Z5

Ammoniated Scale

Z6

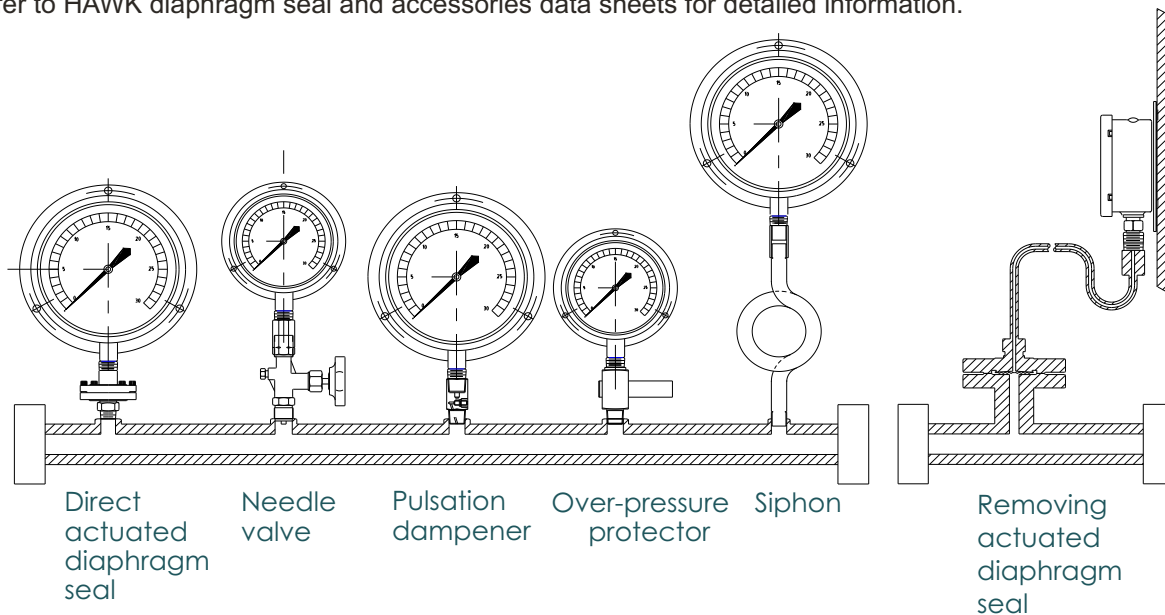
Refrigerant Scale

Option



Accessories

Please refer to HAWK diaphragm seal and accessories data sheets for detailed information.



Limited Warranty and Liability

HAWK GAUGE CO.,LTD warrants all its mechanical instruments to be free from defects in materials and workmanship. HAWK agrees to repair or replace any pressure gauges if returned to our factory, transportation charges prepaid, and after which examination reveals is to be defective due to faculty workmanship or material. This warrant should not apply to subject to the following terms and conditions.

- A. The product has not been subjected to misuse, neglect, abuse , accident, incorrect mounting, improper use or misapplication such as negligence, accident, vandalism, shock or vibration.
- B. The performance of any system of which HAWK's products are a component part.
- C. The product has not been exposed to any other service, range or environment of greater severity than that for which the products were designed.
- D. The product has not been altered or repaired by anyone except HAWK GAUGE or its authorized service agencies.
- E. The serial number or date code has not been removed, defaced or changed.
- F. The actual pressure&temperature occurring exceed the values specified for HAWK Process gauge.

Unless otherwise specified in a manual or warranty card, or agree to in a writing signed by HAWK GAUGE office, HAWK Process gauge products shall be warranted for two years from the date of sale.

This warranty is in lieu of all other warranties expressed or implied, and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use of misuse of instruments sold by it. No agent is authorized to assume for it any liability except as set forth above.

Note

HAWK GAUGE CO.,LTD reserves the right to make product improvements and change its specifications at any time stated throughout this brochure without notification. Please contact the factory on all critical dimensions and specifications for verification.

HAWK GAUGE is not expert in the customer's technical field and therefore doesn't warrant suitability of it's product for the application selected by customer.



Data Sheet No: MKDP1F24A2-E