

# General Specifications

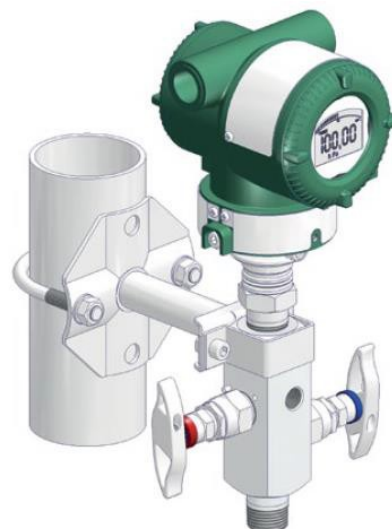
GS 22B01C04-01EN-A

## C13ST Manifolds for In-Line Mount Gauge and Absolute Pressure Transmitters

*Designed and manufactured by AS-Schneider, Yokogawa C13ST-2G Block & Bleed manifolds are designed for mounting to in-line mount gauge and absolute pressure transmitters.*

*Optional needle valve assemblies are available that are compliant with ASME B31.1 (Power) standards, ISO15848 FE Type 1 standards, ISO15848 FE Type 3 standards, or TA-Luft standards.*

*These manifolds can be purchased separately or attached to the pressure transmitter. If attached, the entire assembly can be tested to ANSI B16.5 standard.*



### ■ FEATURES

#### □ Wetted Material

Wetted material conform to NACE standards MR0175 / MR0103 and ISO15156.

#### □ Packing

PTFE and Graphite packings are available for all valve types. When Graphite is selected, the material of flange seal and tape for pipe threads are also Graphite.

#### □ Pressure Test

100% of manifolds are pressure testing to 1.5 times the max allowable (working) pressure in accordance with standard EN 12266-1-P10, P11, and P12 respectively MSS-SP61. Test certificate complies with section 3.1 of EN 10204.

#### □ Material Traceability Certification

Material Traceability Report (MTR) is available upon request. MTR must be requested when ordering the manifold. MTR complies with section 3.1 of EN 10204.

#### □ Rolled Valve Stem Threads

The Valve Stem has cold rolled threads for high strength, smooth operation, and longer life.

#### □ Optional Oxygen Service

An option for Reinforced PTFE Packing is offered cleaned and lubricated for Oxygen Service.

#### □ Fire Safe Tested and Certified

Manifolds with Graphite packing are Fire Safe tested and certified as standard per ISO 10497 / API 607.

#### □ Handle

Ergonomic T-handle design is standard. Anti-tamper and Hand Wheel designs also available.

#### □ Back Seat

Standard metal-to-metal secondary needle seal is of non-removable anti-blowout design.

#### □ Color-Coded Dust Caps

Reinforced plastic dust caps protect the threads from contamination while the color coding ensures proper operation of the valves.

Isolate	Blue
Vent / Test	Red
Equalize	Green

Options are also coded onto the dust caps.

Graphite Packing	Black
Oxygen Service	White

#### □ Optional Transmitter Mounting

As an option, the manifold can be mounted to the transmitter and the entire assembly pressure tested per ANSI B16.5 and a certificate issued.

## ■ Needle Valve Assembly

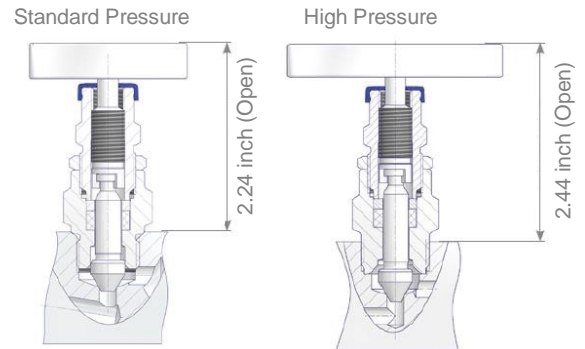
### □ Common Features

- Integral Valve Seat – Metal-to-Metal seated.
- Non-rotating Needle
- External Stem Thread – Packing below stem threads. Stem threads are protected from process media (Threads are non-wetted), helps to prevent stems from galling.
- Stem with cold rolled threads.
- Blow-out proof Needle.
- Back-seat – Metal-to-metal secondary needle seal.
- Color-coded dust cap for operating thread protection.
- Anti-tamper valve handle options available.
- All non-wetted parts are 316 Stainless Steel.

### □ Standard Needle Valves

Common Features plus:

- Screwed Bonnet
- Stem Seal: Packing
- Lock Pin – Eliminates unauthorized removal of the bonnet
- Standard Packing is PTFE with Graphite available as an option.



Standard Valve Assembly

### □ ASME B31.1 (Power) Needle Valves [Packing code P2]

Common Features plus:

- Screw Bonnet
- Stem Seal: Graphite Packing
- Locking Plate - Eliminates unauthorized removal of the bonnet



ASME B31.1 Locking Plate

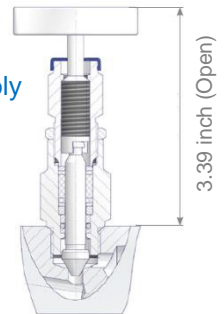
### □ ISO15848 (Fugitive Emissions) Needle Valves

[Packing code D2 or E2]

Common Features plus:

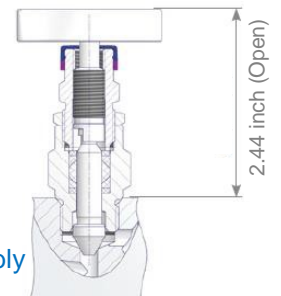
- Screwed Bonnet
- Stem Seal: Type 1 O-Ring + Graphite Packing  
Type 3 PTFE Packing
- Lock Pin – Eliminates unauthorized removal of the bonnet
- FKM O-Ring Needle Seal – RGD (Rapid Gas Decompression) resistant
- PTFE or Graphite Packing
- Also complies with TA-Luft 2002

ISO15848 Valve Assembly



ISO FE Type 1			
Class A	1,500 Cycles	-20°F to +104°F	
Class A	500 Cycles	-20°F to +392°F	
Class B	1,500 Cycles	-20°F to +392°F	

ISO FE Type 3			
Class B	1,500 Cycles	-20°F to +392°F	



TA-Luft Valve Assembly

### □ TA-Luft Needle Valves [Packing code W2]

Common Features plus:

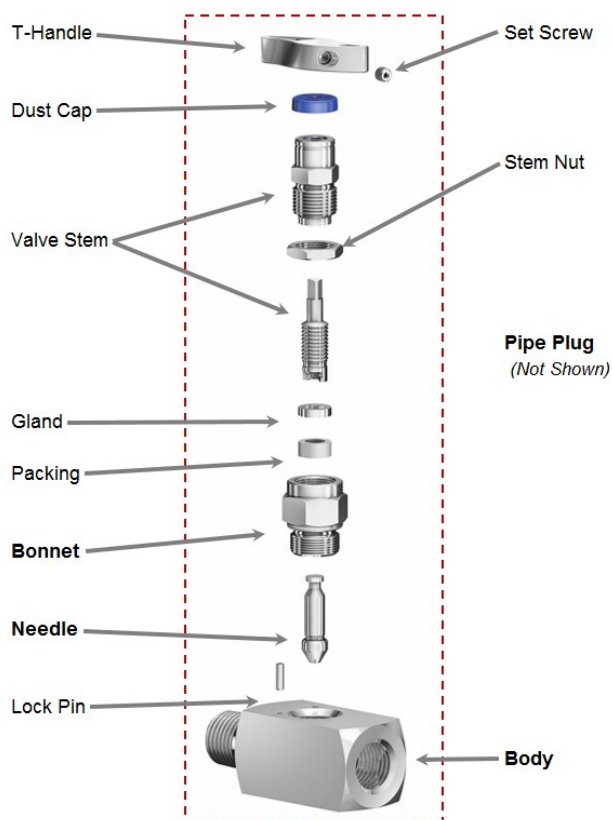
- Cup & Cone Packing (Reinforced PTFE)
- Lock Pin – Eliminates unauthorized removal of the bonnet

## ■ Materials

### □ Material by Manifold Component

	Stainless Steel	Exotic Alloys				
Model Code	S	M	H	E	W	C
Components	Material / Material Standard					
Body	316 / 316L SST	Alloy 400	Alloy C-276	Duplex S31803	Super Duplex S32750	Alloy 625
Bonnet						
Needle						
Pipe Plug						
Valve Stem	316 / 316L SST					
Gland	316 SST					
Packing	PTFE or Graphite					
Stem Nut	316 SST					
Lock Nut	316 SST					
Set Screw	316 SST					
T-Handle	316 SST					
Lock Pin	A4 (316 SST)					

**Bold** Components indicate Wetted Materials

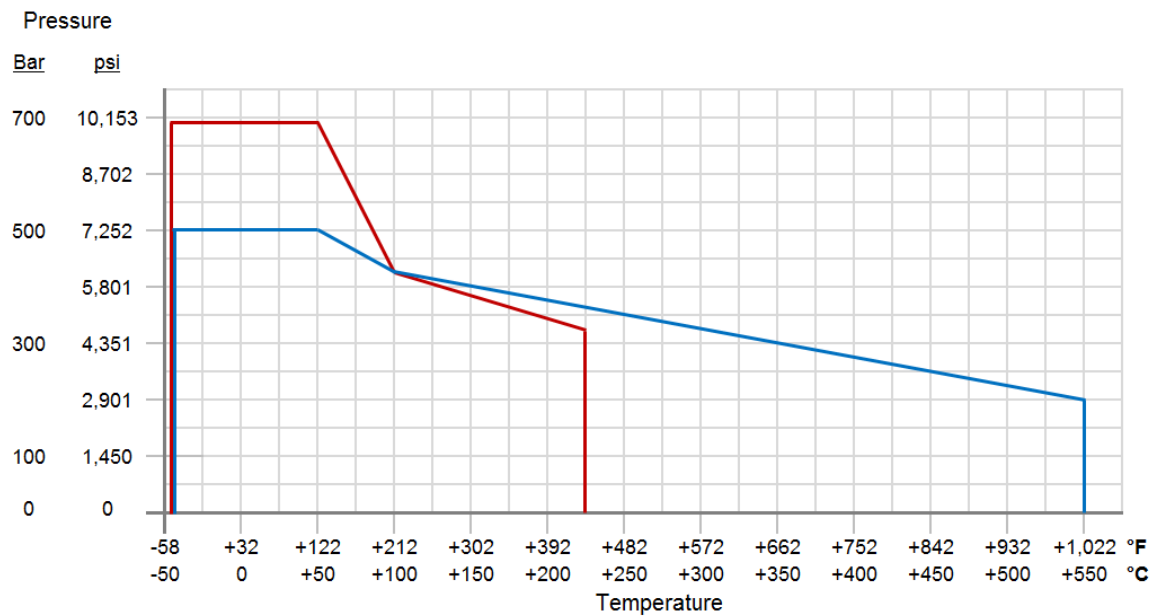


## Material Standards

Material Group	AS Material Designation	Yokogawa Model Code	Material Number	Short Name	Equivalent UNS-No.	Material Grade	
						Per ASTM	Per JIS
Austenitic Stainless Steel	316 Quadruple certified*	<b>S</b>	1.4401	X5CrNiMo17-12-2	S31600	316	SUS316
			1.4404	X2CrNiMo17-12-2	S31603	316L	SUS316L
Austenitic-Ferritic Stainless Steel	Duplex	<b>E</b>	1.4462	X2CrNiMoN22-5-3	S31803	F51	SUS329J3L
	Super Duplex	<b>W</b>	1.4410	X2CrNiMoN25.7.4	S32750	F53	
Nickel Based Alloy	Alloy 400	<b>M</b>	2.4360	NiCu30Fe	N04400		NW4400
	Alloy C-276	<b>H</b>	2.4819	NiMo 16 Cr 15 W	N10276		NW0276
	Alloy 625	<b>C</b>	2.4856	NiCr22Mo9Nb	N06625		NCF 625

\* Quadruple certifies means the material is in compliance with 316 / 316L / 1.4401 / 1.4404

## Pressure-Temperature Rating



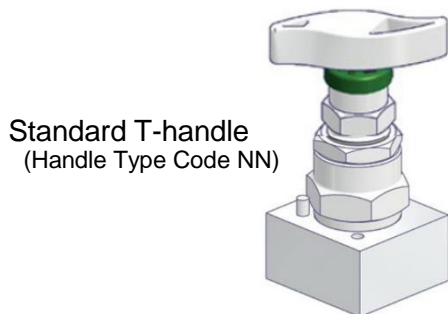
Code	Description	Packing	Low-Temperature Rating (°F)	High-Temperature Rating (°F)	Max. Allowable (Working) Pressure <sup>1</sup>	Graph
<b>-NN</b>	Standard Valve	PTFE	-40	+450	10,000 psi	—
<b>-G2</b>	Standard Valve	Graphite	-40	+1,022	7,252 psi	—
<b>-P2</b>	Power (B31.1)	Graphite	-40	+1,022	7,252 psi	—
<b>-D2</b>	ISO FE Type 1	Graphite	-40	+1,022	7,252 psi	—
<b>-E2</b>	ISO FE Type 3	PTFE	-40	+450	10,000 psi	—
<b>-W2</b>	TA Luft	PTFE	-40	+450	10,000 psi	—
<b>-L2</b>	Arctic	PTFE	-67	+450	10,000 psi	—

**Note 1:** Option codes may affect MWP.

## ■ Handles

### □ T- Handles / Wheel Handles

Yokogawa offers two different handles. The standard is the T-handle design. The wheel-handle is provided as an option.



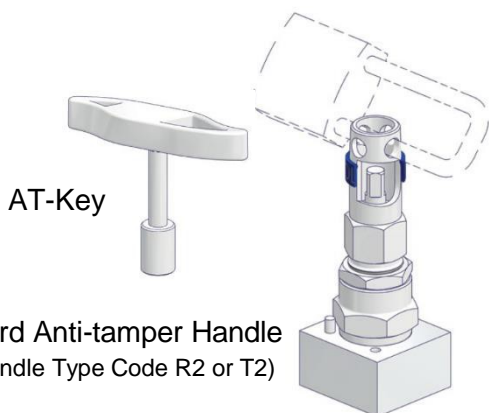
Standard T-handle  
(Handle Type Code NN)



Wheel-handle  
(Handle Type Code H2)

### □ Anti-Tamper Handles

Two types of anti-tamper handles are offered. Both types are lockable with a padlock (not included) or a lock-out tag. The standard anti-tamper design is operated with an AT-key. The AT-key fits in the key guide and turns the valve. Without the key, the valve cannot be turned. The standard design also includes holes to secure it with a padlock. The wheel-handle designs add a locking plate that allows a lock or a lock-out tag to be attached.



Standard Anti-tamper Handle  
(Handle Type Code R2 or T2)



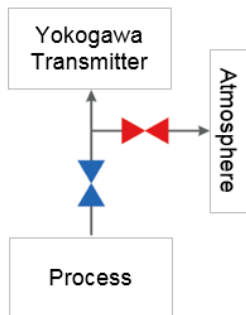
Anti-tamper Wheel-handle  
(Handle Type Code L2)

## ■ Block & Bleed Manifold

### □ Applicable Transmitter Models

DPharp Pressure Transmitter Model	Application	Max Working Pressure (psi)
EJA510E	Absolute Pressure	7,200
EJX510A		7,200
EJX610A		10,150
EJA530E	Gauge Pressure	7,200
EJX530A		7,200
EJX630A		10,150

### □ Manifold Diagram



Isolate	Blue
Vent / Test	Red
Equalize	Green



Packing adjustment may be required during the service life of the valves.

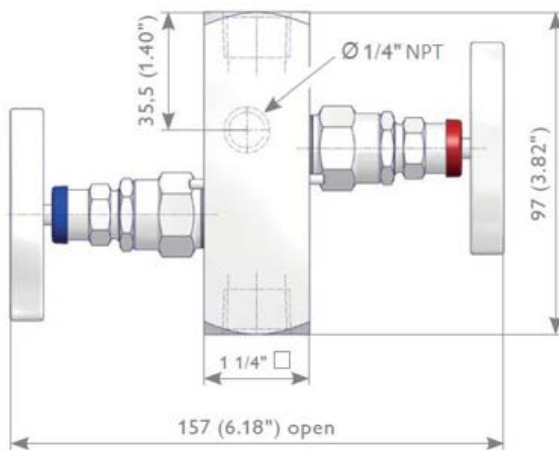


Valves that have not been cycled for a period of time may have a higher initial actuation torque.

### □ Female Threaded Instrument Connection

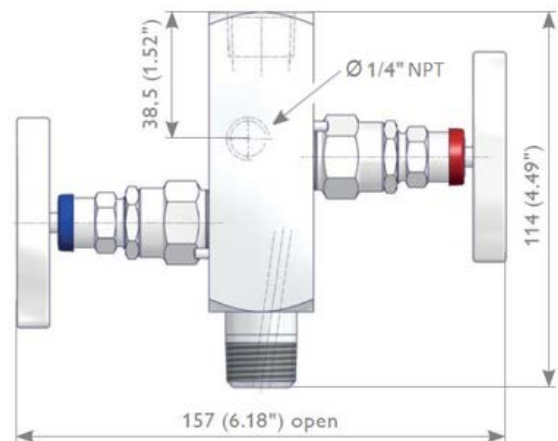
Connection Code D

½ NPT Female Process x ½ NPT Female Instrument



Connection Code E

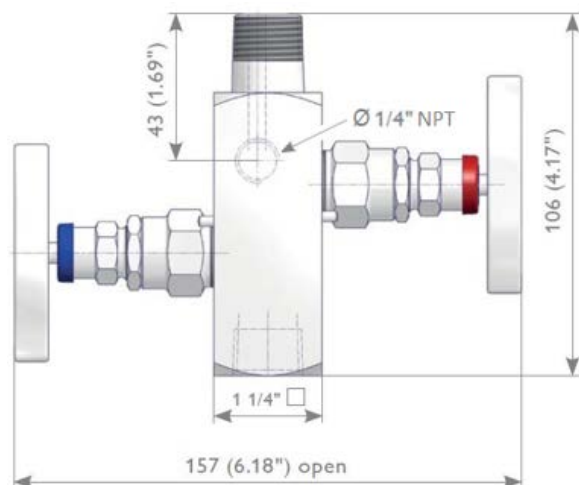
½ NPT Male Process x ½ NPT Female Instrument



## □ Male Threaded Instrument Connection

Connection Code C

½ NPT Female Process x ½ NPT Male Instrument



## □ Plugs

Pipe Plug



Vent Valve Plug



## □ Installation Overview

DPharp Pressure Transmitter Model	Transmitter Installation Code	Block & Bleed Connection Code
EJA510E	4	C
EJA530E		
EJX510A	7	D or E
EJX530A		
EJX610A	8	N/A
EJX630A	9	N/A



Packing adjustment may be required during the service life of the valves.



Valves that have not been cycled for a period of time may have a higher initial actuation torque.

## ■ Model and Suffix Codes

### □ Main Model Code

Model	Suffix Codes	Description
<b>C13ST</b>	.....	Traditional-mount manifold
	<b>-2</b> .....	2-Valve
Style	<b>G</b> .....	Block & Bleed
Material	<b>S</b> ..... <b>H</b> ..... <b>M</b> ..... <b>E</b> ..... <b>W</b> ..... <b>C</b> .....	316 / 316L SST Alloy C-276 Alloy 400 Duplex S31803 Super Duplex S32750 Alloy 625
Connection Type	<b>C</b> ..... <b>D</b> ..... <b>E</b> .....	Process: 1/2 NPT Female Instrument: 1/2 NPT Male <sup>1</sup> Process: 1/2 NPT Female Instrument: 1/2 NPT Female <sup>2</sup> Process: 1/2 NPT Male Instrument: 1/2 NPT Female <sup>2</sup>
Always	<b>T</b> .....	Always
Always	<b>-NN</b> .....	Always
Packing	<b>-NN</b> ..... <b>-G2</b> ..... <b>-P2</b> ..... <b>-D2</b> ..... <b>-E2</b> ..... <b>-W2</b> ..... <b>-L2</b> .....	PTFE Graphite Power (B31.1) ISO FE Type 1 ISO FE Type 3 TA Luft Arctic Operation
Plugs	<b>N</b> ..... <b>P</b> ..... <b>V</b> .....	No Plugs supplied <sup>3</sup> Pipe Plug Vent Valve Plug
Plug Material	<b>N</b> ..... <b>S</b> ..... <b>H</b> ..... <b>M</b> ..... <b>E</b> ..... <b>W</b> ..... <b>C</b> .....	No Plugs supplied <sup>3</sup> 316 / 316L SST Alloy C-276 Alloy 400 Duplex S31803 Super Duplex S32750 Alloy 625



Number of Plugs	N .....	No Plugs supplied <sup>3</sup>
	1 .....	1 Plug
Cleaning for Oxygen Service	-NN .....	Not cleaned for Oxygen Service
	-K2 .....	Cleaned for Oxygen Service
Handle Type	NN ....	Standard T-Handle
	H2 ....	Hand Wheel
	L2 ....	Hand Wheel with locking plate
	R2 ....	Anti-temper with key
	T2 ....	Anti-temper without key

Example Model Code:

**C13ST -2 G S C T -NN -P2 P S 1 -NN NN /□**

#### Notes:

Note 1: Requires *Transmitter* Process Connection code 4.

Note 2: Requires *Transmitter* Process Connection code 7.

Note 3: Plugs are required if option code /HTAS is selected.



Packing adjustment may be required during the service life of the valves.



Valves that have not been cycled for a period of time may have a higher initial actuation torque.

#### □ Option Codes

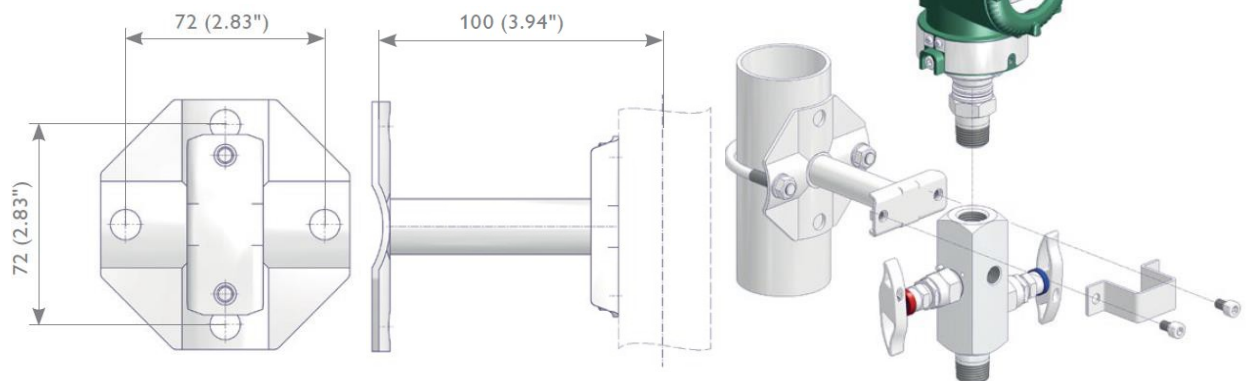
Item	Description	Code
Attachment	Manifold connected to transmitter, but not torqued or pressure tested. Installer must complete assembly.	/ATCH
Attachment / Pressure Test	Manifold attached to transmitter and pressure tested per ANSI B16.5. Certificate issued.	/HTAS

## ■ Accessories

Accessories are sold as a separate line item.

#### Bracket for Block & Bleed 2-valve

(Model Code: C13SA-MSPS0)



Item	Description	Code
Mounting Bracket	For 2-Valve Block & Bleed Manifold	<b>C13SA-MSPS0</b>

Accessories are ordered as separate line items.

Accessories are ordered as separate line items.

### PMI Test Report



Item	Description	Code
PMI Test Report	For Block & Bleed 2-Valve Manifold	C13SA-PMIR2

### AT-Key



Item	Description	Code
AT-Key	Spare AT-Key	C13SA-ATKES

Accessories are ordered as separate line items.

## ■ How to Order

### Ordering Information

1. Select the proper model code from this GS.
2. If an MTR is required, note the requirement on the Purchase Order.
3. If /ATCH or /HTAS option is selected, indicate which transmitter the manifold is to be attached.
4. If a bracket is required, order as a separate line item.
5. If any accessories are required, order as a separate line item.

## ■ Related Products

Product	Type	General Specification
EJA510E	Absolute Pressure Transmitter	GS 01C31F01-01EN
EJX510A	Absolute Pressure Transmitter	GS 01C25F01-01EN
EJX610A	Absolute Pressure Transmitter	GS 01C25F05-01EN
EJA530E	Gauge Pressure Transmitter	GS 01C31F01-01EN
EJX530A	Gauge Pressure Transmitter	GS 01C25F01-01EN
EJX630A	Gauge Pressure Transmitter	GS 01C25F05-01EN

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