

NIBCO®



PressACR® Fittings Catalog

C-PACR-1225

Copper Press for
HVACR Applications



QUALITY PRODUCTS SINCE 1904

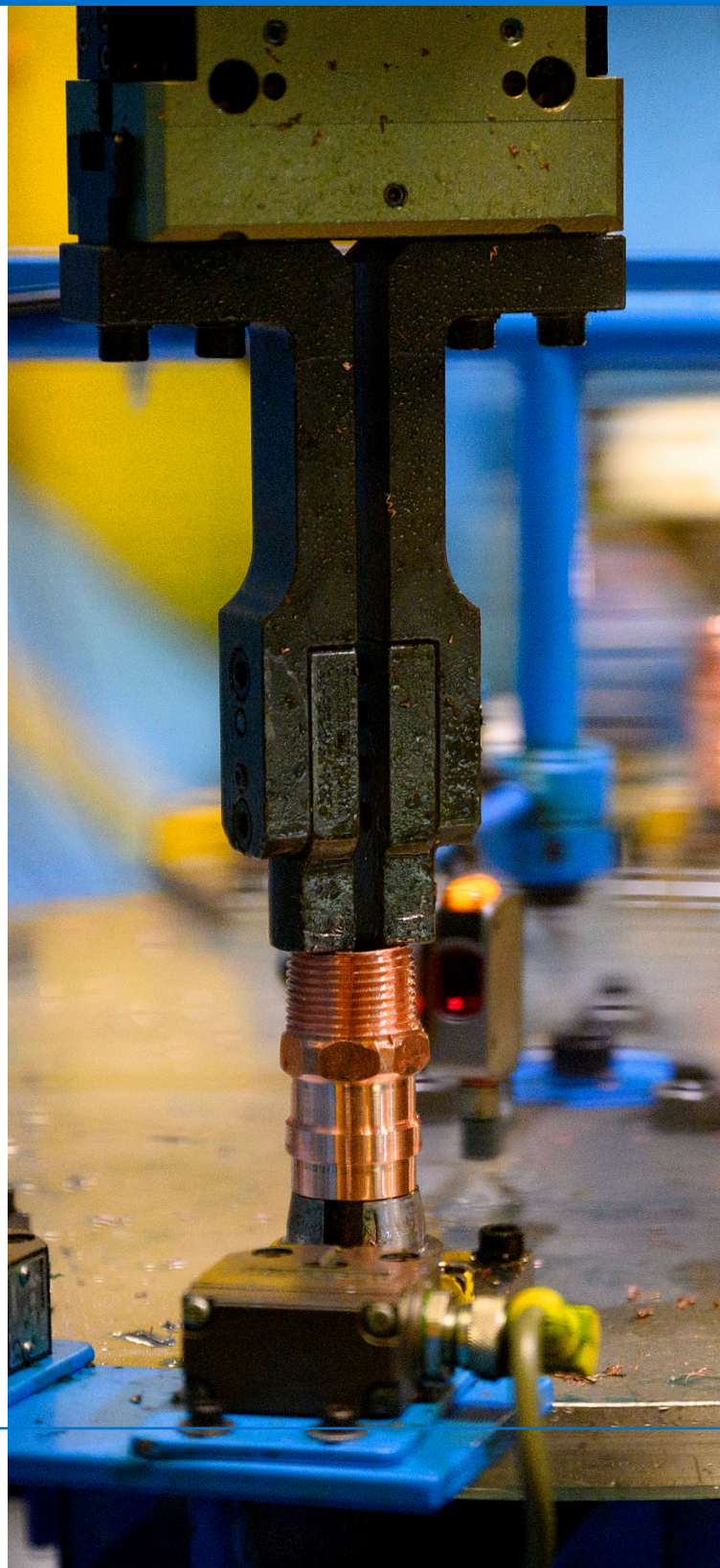
A recognized brand leader bringing flow control products and technologies to market, NIBCO has a history of success and innovation in the plumbing industry.

Headquartered in Elkhart, Indiana, we operate multiple manufacturing plants and distribution centers strategically located throughout the United States and globally, and offer more than 36,000 SKUs, including our NIBCO® family brands, Webstone®, Chemtrol® and Sure Seal®.

We have vertically integrated manufacturing, distribution and networked communications to provide a seamless source of information and service, 24/7. We place great emphasis on personal connections with our factory direct sales, live customer service and technical service support. We also offer unique programs to support our customers' success, including our NIBCO Partner program, Vendor Managed Inventory and EDI for wholesalers.

More than 90 percent of NIBCO-branded products are manufactured in the U.S. using high-quality materials and innovative processes and technologies to improve product performance and quality. For every high-quality valve or fitting made at NIBCO, each is made with pride by the hundreds of NIBCO associates who work there.

Today, NIBCO is a fifth-generation, family- and associate-owned business. Since 1904, we've pioneered many products and processes. As the flow control industry continues to become more demanding, we remain focused on what has made us successful: delivering more than a product and making business better for each of our customers.



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NIBCO® PressACR®

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NIBCO® PressACR®

Quick and Easy

The NIBCO PressACR system is user friendly, quick and easy to install. Installation can be completed in less time than traditional solder, threaded, brazed or flared copper systems. Significant time savings means tight budgets and deadlines are met while project delays and cost overruns are avoided.

Full System Product Offering

NIBCO PressACR is more than just fittings. Our offering also includes a full line of NIBCO tools necessary to complete a total system installation.

Flameless

PressACR is easier and safer to use because there is no flame, solder or flux required.

Reliable

With NIBCO PressACR, a robust joint is formed between the gray HNBR seal and the crimped fitting providing a permanent connection. Reliability you can count on ... NIBCO PressACR fittings are backed by a 120-year-old company and a 15-year written warranty.

Approvals, Standards and Performance

NIBCO PressACR has undergone extensive and rigorous internal and external testing and meets various worldwide, industry and governmental standards and codes. Compliant with the following: ISO 5149-2, ISO 14903 Helium Leak test, ISO 14903 Thermal Cycle test, ISO 14903 Fatigue test, ISO 14903 Freeze test, ISO 14903 Vacuum test, ASME B31.5, ASHRAE 15, ASTM G85 Salt Spray and UL 109 Vibration. Recognized by UL 207 to 700 PSI.

Applications

PressACR can be used in new systems or for repair and maintenance of air conditioning and refrigeration applications.

Professional Appearance

PressACR creates a clean joint without the mess of excess solder or brazing rod.

Joint Integrity

PressACR uses engineered tools and jaws that are tested and approved to ensure a consistent, reliable crimp.

Patented

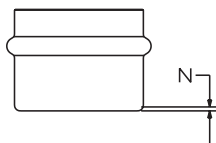
Patent 12,098,784 for press fittings sizes 5/8 OD and above, and patent 9,188,260 for all press fittings.

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NIBCO[®] **PressACR**[®] **Fittings**

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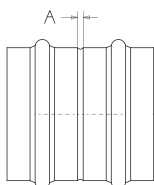
CAPS



PC9617
Cap P – Wrot

OD. SIZE	APPROX. NET WT./LBS.	DIM. N INCHES
1/4	.012	.06
5/16	.015	.06
3/8	.019	.06
1/2	.029	.06
5/8	.046	.08
3/4	.069	.08
7/8	.087	.08
1	.101	.08
1 1/8	.125	.08
1 3/8	.171	.08
1 5/8	.311	.10
2 1/8	.493	.10

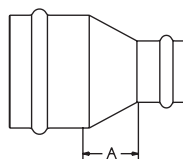
COUPLINGS



PC9600-DS
Coupling P x P – Wrot

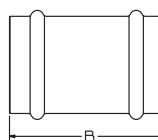
OD. SIZE	APPROX. NET WT./LBS.	DIM. A INCHES
1/4	.022	.12
5/16	.026	.13
3/8	.032	.14
1/2	.054	.15
5/8	.083	.16
3/4	.114	.16
7/8	.157	.16
1	.169	.16
1 1/8	.198	.16
1 3/8	.271	.16
1 5/8	.530	.18
2 1/8	.691	.16

COUPLINGS, cont.



PC9600-R
Reducing Coupling P x P – Wrot

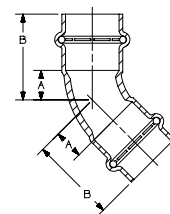
OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES
5/16 x 1/4	.025	.14
1/2 x 1/4	.040	.14
3/8 x 1/4	.028	.11
1/2 x 3/8	.043	.11
5/8 x 1/4	.054	.17
5/8 x 3/8	.056	.14
5/8 x 1/2	.067	.18
3/4 x 5/8	.098	.15
3/4 x 1/2	.080	.18
7/8 x 1/2	.099	.24
7/8 x 5/8	.121	.22
7/8 x 3/4	.131	.17
1 x 7/8	.163	.14
1 1/8 x 1/2	.140	.51
1 1/8 x 5/8	.139	.44
1 1/8 x 3/4	.168	.31
1 1/8 x 7/8	.184	.40
1 3/8 x 7/8	.245	.50
1 3/8 x 1 1/8	.231	.44



PC9601 (No Stop)
Repair Coupling P x P – Wrot

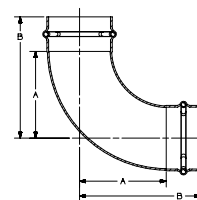
OD SIZE	APPROX. NET WT./LBS.	DIM. B INCHES
1/4	.022	1.56
5/16	.026	1.56
3/8	.025	1.56
1/2	.054	1.75
5/8	.082	1.75
3/4	.114	1.88
7/8	.157	2.25
1	.169	2.25
1 1/8	.190	2.25
1 3/8	.271	2.47
1 5/8	.524	3.34
2 1/8	.691	3.62

ELBOWS



PC9606-LT
45° Elbow P x P – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES	DIM. B INCHES
1/4	.025	.41	1.11
5/16	.030	.41	1.11
3/8	.036	.40	1.11
1/2	.062	.41	1.11
5/8	.092	.38	1.11
3/4	.149	.51	1.24
7/8	.181	.48	1.41
1	.233	.53	1.44
1 1/8	.251	.63	1.50
1 3/8	.403	.78	1.79
1 5/8	.723	.78	1.79
2 1/8	1.019	1.17	2.71

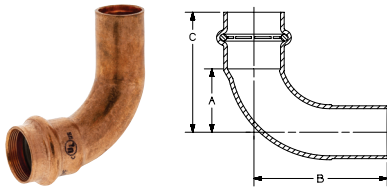


PC9607-LT
90° Elbow P x P – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES	DIM. B INCHES
1/4	.030	.66	1.38
5/16	.036	.66	1.38
3/8	.041	.72	1.44
1/2	.076	.93	1.65
5/8	.110	.72	1.44
3/4	.174	1.12	1.88
7/8	.223	1.09	1.99
1	.286	1.26	2.16
1 1/8	.331	1.44	2.32
1 3/8	.528	1.85	2.89
1 5/8	.895	2.21	3.64
2 1/8	1.480	2.95	4.45

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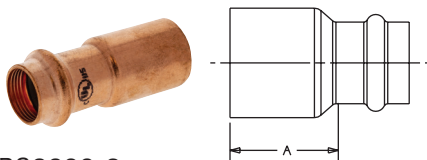
ELBOWS, cont.



PC9607-2-LT
90° Elbow Ftg x P – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIMENSIONS INCHES		
		A	B	C
1/4	.030	.66	1.55	1.38
5/16	.036	.66	1.55	1.38
3/8	.041	.66	1.55	1.38
1/2	.079	.93	1.82	1.65
5/8	.110	.78	1.64	1.47
3/4	.166	1.12	2.01	1.88
7/8	.219	1.05	2.20	1.99
1	.253	1.26	2.34	2.16
1 1/8	.262	1.50	2.60	2.40
1 3/8	.490	1.88	3.09	2.91
1 5/8	.871	2.22	3.94	3.67
2 1/8	1.474	2.89	4.53	4.47

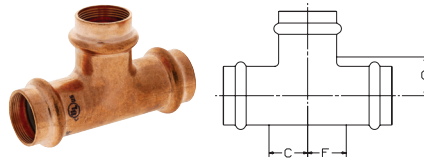
FITTING REDUCERS



PC9600-2
Fitting Reducer Ftg x P – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES
3/8 x 1/4	.021	.86
1/2 x 3/8	.030	.92
5/8 x 3/8	.037	.99
5/8 x 1/2	.044	.92
3/4 x 5/8	.086	1.03
7/8 x 1/2	.097	1.34
7/8 x 5/8	.092	1.42
7/8 x 3/4	.112	1.20
1 1/8 x 7/8	.151	1.39
1 3/8 x 7/8	.175	1.40
1 3/8 x 1 1/8	.181	1.42

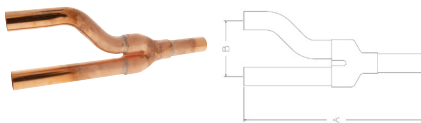
TEES



PC9611
Tee P x P x P – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIMENSIONS INCHES		
		C	F	G
1/4	.037	.30	.30	.30
5/16	.047	.35	.35	.35
3/8	.067	.53	.53	.53
1/2	.110	.53	.53	.53
5/8	.176	.71	.71	.47
3/4	.338	1.13	1.13	.83
7/8	.320	.77	.77	.66
1	.101	.72	.72	.72
1 1/8	.475	.87	.87	.91
1 3/8	.759	1.00	1.00	.91
1 5/8	.311	.95	.95	1.08
2 1/8	2.415	1.40	1.40	1.42

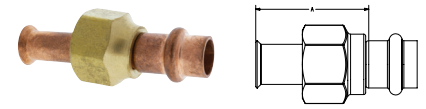
Y-JOINTS



PC9649
Y Joint Ftg x Ftg – Wrot

OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES	DIM. B INCHES
3/8	0.200	8.27	2.76
1/2	0.310	9.45	2.76
5/8	0.510	9.84	3.15
3/4	0.670	10.63	3.15
7/8	1.020	12.60	3.15
1 1/8	1.700	13.39	3.74

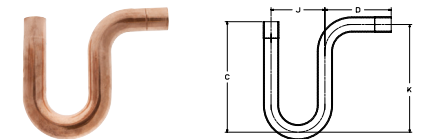
FLARES



PC9635
SAE Flares Adapters Flare X P

OD SIZE	APPROX. NET WT./LBS.	DIM. A INCHES
1/4	0.057	1.45
3/8	0.092	1.53
1/2	0.134	1.66
5/8	0.181	1.73
3/4	0.345	1.89

P-TRAPS



PC9698
Ptrap Ftg x Ftg – Wrot

OD SIZE	APPROX. NET WT./LBS.	C	DIMENSIONS INCHES		
			D	J	K
1/2	.357	6.02	3.68	3.00	6.07
5/8	.357	5.97	3.54	3.00	6.00
3/4	.464	5.81	3.75	3.00	6.00
7/8	.704	5.71	3.64	3.00	6.00
1 1/8	.820	6.16	3.56	3.00	6.00
1 3/8	1.522	6.50	4.00	3.75	6.13

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ACCESSORIES



HNBR (gray) Seal

SIZE	PART No.
1/4	T048080 PP
5/16	T048081 PP
3/8	T048082 PP
1/2	T048083 PP
5/8	T048084 PP
3/4	T048085 PP
7/8	T048086 PP
1	T048090 PP
1 1/8	T048087 PP
1 3/8	T048088 PP
1 5/8	T048076 PP
2 1/8	T048091 PP



PressACR® Depth Gauges

SIZE	PART No.
1/4" OD to 1" OD	K700008RPC
1 1/8" OD to 2 1/8" OD	K700009RPC



PressACR® Crimp Gauges

SIZE	PART No.
1/4" OD to 1 3/8" OD	K700006RPC
1 5/8" OD and 2 1/8" OD	K700007RPC

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NIBCO® PressACR®

Tools and Jaws



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NIBCO® PressACR® Tools

PCR-20M 19kN Tool and Jaws

1/4" through 1 1/8" OD

MATERIAL LIST

MODEL NO.	DESCRIPTION	LBS.
PCR-20M	19kN mini Pressing Tool, 2 - 18V, 2.0 Ah Lithium-ion batteries, 110V charger & small case (NO jaws)	10.10
PCR-20MC	Small Case Empty	7.89
PCR-20ML	19kN mini Pressing Tool, 2 - 18V 1.3Ah Lithium-ion batteries, 11V charger & large case (No Jaws)	17.00
PCR-20MCL	Large Case Empty	9.70
PCR-14M	1/4" OD Jaw	2.80
PCR-516M	5/16" OD Jaw	2.87
PCR-38M	3/8" OD Jaw	2.87
PCR-12M	1/2" OD Jaw	2.88
PCR-1M	5/8" OD Jaw	3.13
PCR-34M	3/4" OD Jaw	3.00
PCR-2M	7/8" OD Jaw	3.70
PCR-4M	1" OD Jaw	3.80
PCR-3M	1 1/8" OD Jaw	3.80
PC-4ML	18V, 2.0Ah Lithium-ion Battery (for PCR-20M)	0.85
PC-7L	18V, 3.0Ah Lithium-ion Battery (for PC-280 or PCR-20M)	1.30
PC-8L	110V Battery Charger (for PC-4ML and PC-7L)	2.20
PC-9L	AC Adapter (for PC-280 or PCR-20M)	1.70
PC-50	1/4" - 1 1/8" OD Deburring Tool	0.42



For use with NIBCO PressACR fittings only.


PCR-20M

Mini Pressing Tool & Small Case


PCR-20MC

Small Case Empty


PCR-20ML

Mini Pressing Tool and Large Case


PCR-20MCL

Large Case Empty


PC-50

PCR Deburring Tool


PC-4ML

18V, 2.0 Ah Lithium-ion Battery


PC-7L

18V, 3.0 Ah Lithium-ion Battery



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PCR-20M FEATURES

TOOLS

Light weight

PCR-20M Mini: 3.7 lbs. (without jaw)

Easy to handle / simple design

Jaws rotate 350°

No calibration necessary

No complicated switches or controls

Mini: Ergonomic compact design is easy to use in tight spaces

Interruptible crimp cycle

Safety feature prevents injuries

Can begin crimp, stop to align and level fitting / tube, and complete crimp

Battery

Can be changed during crimp cycle

Lithium-ion has short charging cycle and larger capacity

• PC-4ML: 15 minute recharge time

• PC-7L: 22 minute recharge time

AC Power Adapter

Converts the tool to electric power

Allows continuous use

Service light

Illuminates at 10,000 cycles

Tool will not stop operating when light illuminates

• RED indicates battery charge status, service intervals, tool functions & faults

• WHITE illuminates the work area

Hydraulic Pressure Check (HPC)

An audible warning signal sounds if adequate working pressure is not achieved


PCR-14M, PCR-516M, PCR-38M, PCR-12M, PCR-34M, PCR-1M, PCR-2M, PCR-3M and PCR-4M

Mini Pressing Jaws


PC-8L

110V Battery Charger


PC-9L

AC Adapter

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NIBCO® PressACR® PC-280 32kN Jaws

MATERIAL LIST

MODEL NO.	DESCRIPTION	LBS.
PCR-14S	1/4 jaw for PC-280 32kN tool	4.29
PCR-516S	5/16" jaw for PC-280 32kN tool	4.29
PCR-38S	3/8" jaw for PC-280 32kN tool	4.27
PCR-12S	1/2" jaw for PC-280 32kN tool	4.25
PCR-1S	5/8" jaw for PC-280 32kN tool	4.20
PCR-34S	3/4" jaw for PC-280 32kN tool	4.29
PCR-2S	7/8" jaw for PC-280 32kN tool	4.25
PCR-4S	1" OD jaw for PC-280 tool	4.65
PCR-3S	1 1/8" jaw for PC-280 32kN tool	4.65
PCR-138S	1 3/8" jaw for PC-280 32kN tool	4.40
PCR-158S	1 5/8" OD Chain for PC-280 Tool	12.53
PCR-218S	2 1/8" OD Chain for PC-280 Tool	12.00
PCR-2C	Metal Case for Large Diameter PressACR Chain	8.70
PC-5	Pressing Chain Adapter Jaw*	7.01

NOTE: Only Approved jaws can be used to crimp NIBCO PressACR™ fittings. Use of any other jaw will void the product warranty

***Must be used with 1 5/8" OD Chain**



**PCR-14S, PCR-516S, PCR-38S, PCR-12S, PCR-1S, PCR-34S, PCR-2S,
PCR-4S, PCR-3S, PCR-138S, PCR-158S, PCR-218S**



PCR-2C
Metal Case for Large Diameter
PressACR Chain



PC-5
Pressing Chain Adapter Jaw

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NIBCO® PressACR®

Engineering Data

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NIBCO® PressACR® — Engineering Data Copper and Copper Alloy Fittings

System Description

The PressACR system is a copper press connection system designed to meet the demands of refrigeration systems. PressACR utilizes a gray HNBR sealing element to provide permanent leak-proof connections in 1/4" through 2 1/8" OD diameters.

Applications

Tubing: PressACR is approved for use with K, L & M hard copper tubing and soft copper tubing in 1/4" through 7/8" OD diameters. PressACR is only approved for use with K, L & M hard copper tubing for sizes 1-1/8" and 1-3/8". PressACR is approved for use with K & L copper tubing only for sizes 1-5/8" and 2-1/8" sizes. All tubing must comply with ASTM B280 ACR tube, ASTM B88 tube, ASTM B-1003 tube, or ASTM B743. PressACR fittings are approved for air conditioning and refrigeration applications using A class refrigerants.

Operating Parameters

- Operating Pressure: 700 psi max
- Vacuum: 150 microns
- O-ring Temperature Rating: -40°F to 300°F
- Continuous Operating Temperature: -40°F to 250°F



System Benefits:

- Fast and Easy to use
- Permanent Connections
- Professional Appearance
- Flame Free
- Environmentally Friendly

Fittings

Fittings are provided with a factory-installed HNBR sealing element which is gray in color.

Approved A1 Refrigerants - UL 207 Listed

R125, R134a, R 404A, R407A, R407B, R407C, R407F, R407G, R407H, R410A, R417A, R421A, R422A, R422B, R422C, R422D, R424A, R426A, R427A, R434A, R437A, R438A, R448A, R449A, R449B, R449C, R450A, R452A, R452C, R456A, R507, R513A, R513B, R718

Compatible A2/A2L/A3 Refrigerants*

R32, R143a, R290, R430A, R431A, R440A, R444A, R445A, R446A, R447A, R451A, R451B, R452B, R454A, R454B, R454C, R455A, R457A, R459A, R512A, R516A, R600, R600a, R1234yf, R1234ze

Approved Lubricants

POE, PAG, MO, PAO, PVE and AB

Listing and Certificates

- UL 207
- ICC-ES PMG 1580

Compliant with:

- ISO 5149-2
- ISO 14903 Helium leak test
- ISO 14903 Thermal cycle test
- ISO 14903 Fatigue test
- ISO 14903 Freeze test
- UL 109 vibration
- ASHRAE 15
- ASME B31.5
- International Residential Code®: IRC
- International Mechanical Code®: IMC
- Uniform Mechanical Code*: UMC

*Uniform Mechanical Code is copyrighted publications of the International Association of Plumbing and Mechanical Officials

Thermal Expansion and Contraction

Thermal expansion and contraction should be accounted for in all system designs. Further guidance on how to account for these stresses can be found in The Copper Development Association's Copper Tube Handbook, Section 3.

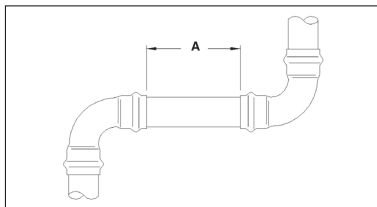
*Additional standards and codes may apply when using flammable refrigerants

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NIBCO® PressACR® — Engineering Data Copper and Copper Alloy Fittings *cont.*

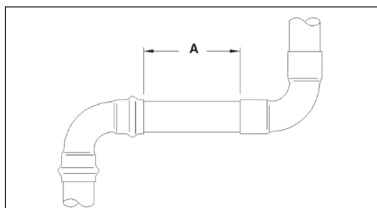
Minimum Distance Between Press Joints

To prevent distortion of the tubing, press fittings require a minimum distance between crimp joints (refer to Chart 1 below). Failure to provide this minimum distance may result in an improper seal.



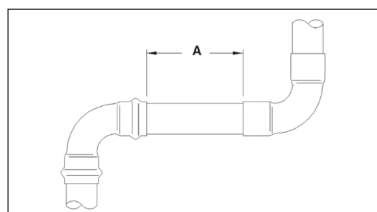
Minimum Distance To Press From an Existing Brazed Connection

To ensure that no oxidation or heat effected tube has been inserted into the press fitting, a minimum distance from an existing brazed connection is shown in the chart to the left.



Minimum Distance To Braze From an Existing Press Connection

To ensure that the O-ring in a press fitting is not harmed by heat transferred through the pipe while brazing nearby a minimum distance to braze from a press fitting is shown in the chart to the left. To further ensure no damage to the O-ring, it is recommended that a wet cloth be wrapped around the press fitting when brazing near a press fitting.



Elbows

Elbows cause a pressure drop due to changing direction of the internal fluid. This results in a pressure drop slightly higher than a straight length of ACR tubing. When calculating the total line length for pressure drop, the chart to the left can be used to account for elbows.

Size	Insertion Depth	Minimum Distance Between Two Pressed Connections
		A (inches)
1/4	11/16	1/4
5/16	11/16	1/4
3/8	11/16	1/4
1/2	11/16	1/4
5/8	11/16	1/4
3/4	11/16	1/4
7/8	7/8	3/8
1	7/8	3/8
1-1/8	7/8	3/8
1-3/8	1	1/2
1-5/8	1-3/8	5/8
2-1/8	1-1/2	5/8

Size	Distance to press fittings from existing brazed fittings
	A (inches)
1/4	3
5/16	3
3/8	3
1/2	3
5/8	5
3/4	5
7/8	5
1	5
1-1/8	6
1-3/8	8
1-5/8	8
2-1/8	8

Size	Distance to braze from existing press fitting
	A (inches)
1/4	16
5/16	16
3/8	16
1/2	16
5/8	22
3/4	22
7/8	22
1	22
1-1/8	24
1-3/8	26
1-5/8	30
2-1/8	30

Pressure Drop: Equivalent Lengths of ACR Tube (ft)	
Line Size (OD)	NIBCO Press Long Radius Elbow
1/4	0.48
5/16	0.50
3/8	0.65
1/2	0.93
5/8	1.04
3/4	1.39
7/8	1.40
1	1.60
1 1/8	1.88
1 3/8	2.95
1 5/8	2.63
2 1/8	3.64

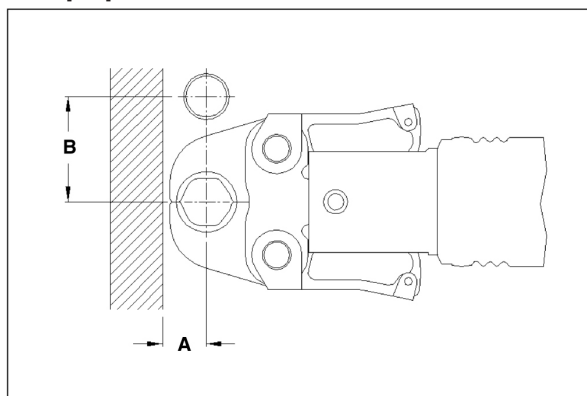
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NIBCO® PressACR® — Engineering Data Tools

Tool & Jaws Compatibility Matrix			
Manufacturer	Model(s)	Size Range	Approved Jaws
NIBCO®	PCR-20M (19 kN)	1/4" to 1 1/8"	PCR-14M 1/4 Jaw, PCR-516M 5/16 Jaw, PCR-38M 3/8 Jaw, PCR-12M 1/2 Jaw, PCR-1M 5/8 Jaw, PCR-34M 3/4 Jaw, PCR-2M 7/8 Jaw and PCR-3M 1 1/8 Jaw
Klauke®	MAP2L19 (19 kN)	1/4" to 1 1/8"	
NIBCO®	PC-280 (32 kN)	1/4" to 2 1/8"	PCR-14S 1/4 Jaw, PCR-516S 5/16 Jaw, PCR-38S 3/8 Jaw, PCR-12S 1/2 Jaw, PCR-1S 5/8 Jaw, PCR-34S 3/4 Jaw, PCR-2S 7/8 Jaw, PCR-3S 1 1/8 Jaw, and PCR-138S 1 3/8 Jaw PC-5 adapter and PCR-158S or PCR-218S are required to crimp 1 5/8" OD and 2 1/8" OD fittings. The adapter and chains are only compatible with the NIBCO tool
RIDGID®	RP 350 (32 kN)	1/4" to 1 3/8"	
	RP 351 (32 kN)	1/4" to 1 3/8"	
	RP 342-XL Long Reach (32 kN)	1/4" to 1 3/8"	
	RP 340-B	1/4" to 1 3/8"	
Milwaukee®	M18™ Force Logic (32 kN)	1/4" to 1 3/8"	
	M18™ Long Throw Force Logic (32 kN)	1/4" to 1 3/8"	
DeWalt®	DCE200 (32 kN)	1/4" to 1 3/8"	
Rothenberger®	Romax 4000 (32 kN)	1/4" to 1 3/8"	

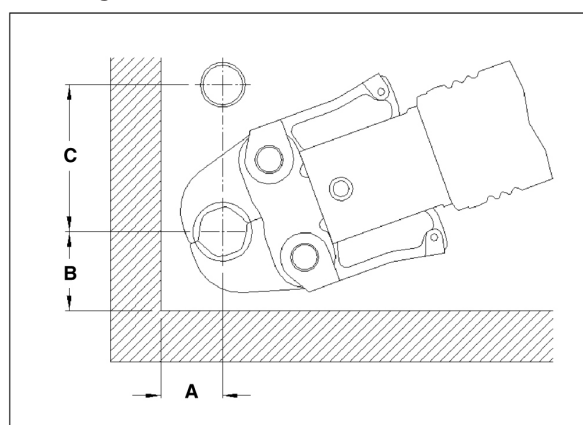
NOTE: Only NIBCO jaws can be used to crimp NIBCO PressACR fittings. Use of any other jaw will void the product warranty.

Tool perpendicular to wall



Clearance		
Size	A (min.) Inches	B (min.) Inches
1/4	1	1 5/8
5/16	1	1 5/8
3/8	1	1 3/4
1/2	1	1 7/8
5/8	1 1/8	2 3/8
3/4	1 1/4	2 5/8
7/8	1 3/8	3
1	1 1/2	3
1 1/8	1 1/2	3
1 3/8	1 1/2	1 3/4
1 5/8	4 3/4	6 1/8
2 1/8	4 3/4	6 1/8

Tool angled to wall



Clearance			
Size	A (min.) Inches	B (min.) Inches	C (min.) Inches
1/4	1 3/8	1 5/8	2 5/8
5/16	1 1/4	1 1/2	3
3/8	1 1/8	1 1/2	2 5/8
1/2	1 1/4	1 3/8	3 1/8
5/8	1 3/8	1 5/8	3
3/4	1 5/8	1 3/4	3 3/8
7/8	1 3/4	1 7/8	3 1/2
1	2	2 1/8	3 5/8
1 1/8	2	2 1/8	3 3/4
1 3/8	1 7/8	2	3 5/8
1 5/8	4 1/2	4 3/4	6 1/8
2 1/8	4 1/2	4 3/4	6 1/8

Visit our website for the most current information.

NIBCO® – Instructions For Cleaning the Press Jaw

1 Dry Cleaning

Recommended frequency:
after use

Instruction:

- Carefully remove coarse dirt, chips or sealant residue with a clean, dry cloth or soft brush.
- No cleaning with water or aggressive cleaning products.
- Moisture can impair the contours and the function of the press jaw.
- Never wash the jaw this contributes to corrosion and jeopardizes functional safety.

2 Lubrication of moving parts (oiling and greasing)

Recommended frequency:

- after each use or daily for commercial use
- weekly with normal use
- in addition, when you face wear, blockages, or uneven running

Instruction:

- Moving parts such as bolts, sliding pieces, joints, rollers, press neck needs to be greased regularly with oil or grease. Please treat only the moving parts and guided points and NOT the press contour.

- Wipe off excess grease with a lint-free cloth to prevent contamination and dust accumulation.
- Always lubricate when clean and dry after cleaning.
- Move the parts while lubricating so that the lubricant is distributed evenly. Avoid using too much oil/grease this attracts dirt. Do not use coarse or abrasive tools when applying.

3 Visual inspection

Recommend monthly by commercial use:

- Review and inspect the jaw for cracks, wear, tear, material cracks, deformations, breakouts, and loose parts.
- Document any conspicuousness immediately and if there is visible wear or damage, do not continue to use the press jaws.

4 Fine cleaning (if necessary, not mandatory)

Recommended frequency:
intermittent, as necessary

Instruction:

- Use a neutral, alcohol-based cleaner and dab the surface carefully
- NO wire brush or nonwoven web

5 Maintenance of manufacture Calibration

Recommended frequency:
yearly or as necessary

Instruction:

- Do a professional Inspection where appropriate and a calibration and the change of the parts subject to regular wear and tear through approved repair facility.

6 Functional testing

Recommended frequency: after each cleaning

Instruction:

- Check the moving parts for smooth movement, play in the joints and blockages.
- Document any issues immediately. Perform a test pressing if the jaws are functioning properly.

7 Storage

Recommended frequency:
always

Instruction:

- Store the jaws dry, dust and moisture protected (like in original case or suitable box)
- Protection of external influences extends service life and functionality.

General Information

- Wipe gently – never immerse or clean with water
- Do not use coarse tools such as wire brushes or abrasive cloths
- Regular maintenance is essential for safety and precision
- Natural wear and tear cannot be ruled out

Visit our website for the most current information.

NIBCO® PressACR® — Engineering Data Tools

DeWalt® Tool and Jaw Compatibility Matrix			
Manufacturer	Model(s)	Size Range	DeWalt® Jaws
DeWalt®	DCE210 (24 kN)	1/4" to 7/8"	DCE214K Kit contains one of each: 1/4" jaw, 3/8" jaw, 1/2" jaw, 5/8" jaw, 3/4" jaw, and 7/8" jaw
Milwaukee®	M12 Force Logic (24 kN)	1/4" to 7/8"	DCE214K Kit contains one of each: 1/4" jaw, 3/8" jaw, 1/2" jaw, 5/8" jaw, 3/4" jaw, and 7/8" jaw



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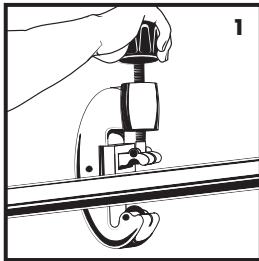
NIBCO® PressACR®

Installation Instructions

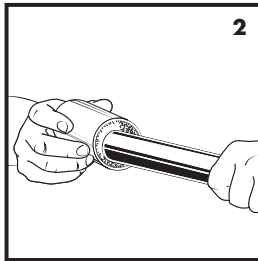
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NIBCO® PressACR® — Fitting Installation Instructions

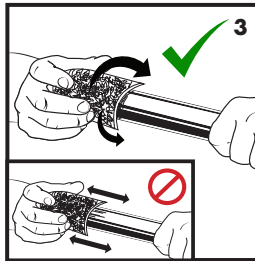
For hard or annealed ACR copper tubing



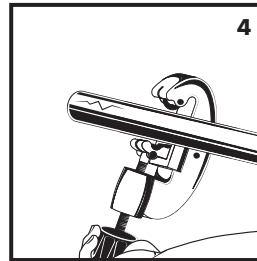
1. Select clean, undamaged copper tube and cut to desired length using a wheel type cutter. Do not use a hacksaw or reciprocating saw. Do not crimp over any etched print on the tube.



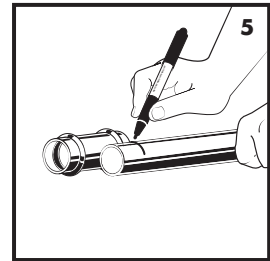
2. Remove all external sharp edges to the tube end. A cone type deburring tool should be used on the tube outer diameter and inner diameter (rotated 5-7 times). A pen type deburring tool may be used on the tube inner diameter. It is critical to visually inspect and feel the end of the tube to make sure it is free of any sharp edges which could damage the fitting seal.



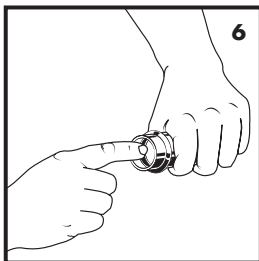
3. Polish the end of the tube with an abrasive pad (such as Scotch-Brite® 7447 Maroon by 3M® or equivalent) in a radial manner for 5-7 seconds. Do not polish axially. The tube end must be free from any oxidation, dirt, debris, and any imperfections. The surface of the tube should be shiny and bright. If sandpaper or emery cloth must be used, polish with 360-400 grit.



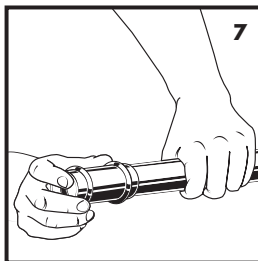
4. Inspect the polished tube end for any imperfections or scratches. Any surface imperfection that cannot be corrected must be cut-off and the tube preparation restarted.



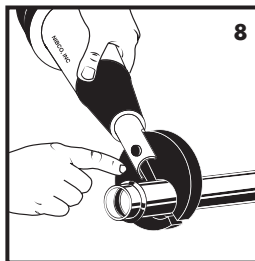
5. Mark the tube with the proper insertion depth using a NIBCO insertion depth tool and a permanent marker. Improper insertion depth may result in an improper seal.



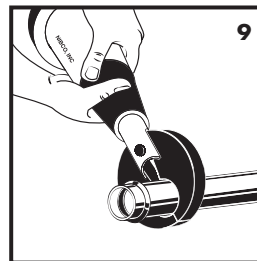
6. Check each opening of the fitting to make sure that the seal is in place. Only original NIBCO gray HNBR seals are to be used. Do not use a fitting that does not have a visible seal.



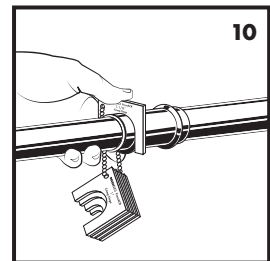
7. Insert the tube into the fitting using a twisting motion to the marked depth. Note that the tubing should contact the fitting tube stop. If tube is difficult to insert, some refrigerant lubricant may be added to the seal. Use only approved lubricants as listed on page 10 of the PressACR catalog.



8. Ensure that the proper pressing jaws are installed in the pressing tool and squeeze jaw arms to open jaw set. Place open jaws around the fitting end and ensure the jaw is properly aligned with the contour of the fitting. For sizes 1-1/8" and above, the jaw has a pipe side and bead side orientation.



9. Before pressing, make sure that the tube is inserted to the proper depth in the fitting. Start the pressing process. Refer to the tool operating instructions for proper tool operation. Squeeze jaw arms to open jaw set and remove from the pressed tube fitting assembly.



10. Use the NIBCO PressACR Crimp Gauge to ensure a quality installation. Place the crimp gauge adjacent to the outside of the bead (copper tube side) where the jaws close. There should be a slight copper deformation in that location. If the gauge is in complete contact with the fitting, the crimp has been successful. Each pressed connection should be gauged using the crimp gauge.

Tube Insertion Depth Chart

Tube Size (In. OD)	Insertion Depth (In.)
1/4 – 3/4	11/16
7/8 – 1-1/8	7/8
1-3/8	1
1-5/8	1-3/8
2-1/8	1-1/2

WARNING

Read press tool operator's manual and fitting manufacturer's installation instructions before using. Failure to follow all instructions may result in extensive property damage and/or serious personal injury. Call the NIBCO Technical Service Department at 1.888.446.4226 if you have any questions or need assistance.

MISE EN GARDE !

Familiarisez-vous avec le mode d'emploi de la presse et les instructions du fabricant des raccords avant d'utiliser l'appareil. Le non-respect de leurs consignes risquerait d'augmenter les risques de dégâts matériels importants et/ou de graves blessures corporelles. Veuillez adresser toutes questions éventuelles ou demandes de mode d'emploi à la NIBCO en composant le 1.888.446.4226.

ADVERTENCIA

Antes de usar, lea el Manual del Operario de esta herramienta de presión y las instrucciones de instalación del acoplamiento proporcionadas por su fabricante. Pueden ocurrir daños materiales de gran envergadura y lesiones corporales de gravedad si no se respetan todas las instrucciones. Si tiene alguna pregunta o desea pedir un manual, llame al Departamento de Servicio Técnico de NIBCO al 1.888.446.4226.

Note: PressACR fittings can only be installed with NIBCO PressACR jaws. Use of any other jaw will void the product warranty.

Not suitable for use with ammonia (R717).

Visit www.NIBCO.com for approved list of refrigerants.

Leak Testing: Once all fittings are installed and pressed, the system may be tested for leaks. Testing for leaks should consist of pressurizing the system with nitrogen and using leak detect fluid or tracer gas to detect leaks. Pressurize system to a minimum of 50% of the maximum rated pressure of the system, but no more than 700 PSI. Check the system for leaks and make repairs/replacements where necessary, and verify.

Visit our website for the most current information.

NIBCO® PressACR® — Fitting Installation Instructions, *cont.*

Properly Prepped Tube ✓

The tube has been deburred and chamfered.

After polishing the tube the surface should be smooth and free from scratches or etched print.



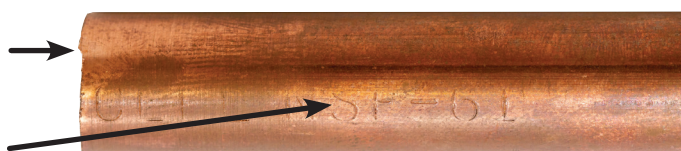
Tube polishing should be done radially with an abrasive pad such as Scotch-Brite® 7447 Maroon by 3M®

Unprepped Tube ❌

The tube has not been deburred or chamfered.

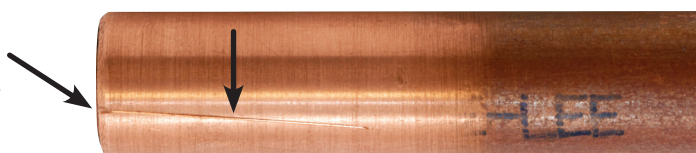
A sharp edge can be seen at the end of the tube. This sharp edge could potentially cause damage to the O-ring during insertion.

Etched markings can also be seen on the tube, these could create leak paths past the O-ring. The etchings should be cut out and replaced with clean, smooth tube.



Improperly Prepped Tube ❌

The tube has been deburred and polished but a deep scratch is still present. The tube should either be polished until the scratch is removed or cut out and a cleaner portion of tube should be chosen.



Tube Insertion

Tube should be marked and fully inserted into the fitting.

The left side of the picture shows the insertion depth marking sticking far away from the end of the fitting. This could cause a leak because the tube may not be fully engaged with the O-ring.



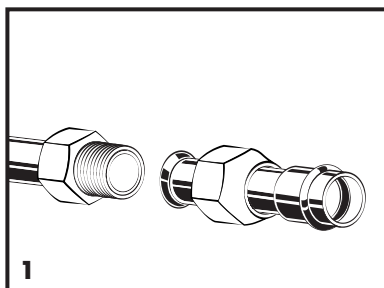
The right side of the picture shows a fully inserted tube. The insertion depth marking should be in contact or inserted into the fitting end.



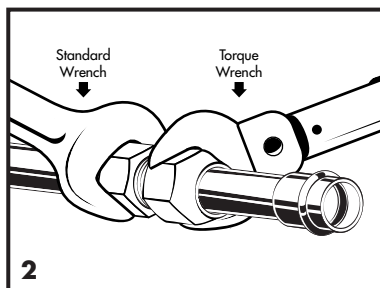
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NIBCO® PressACR® — SAE Flares Installation Instructions

Install PressACR® Female Flare Connector to a Male Flare Connector by making the flare connection prior to pressing the joint.



1. Apply compatible refrigerant lubricating oil to inner and outer surface of flare. To avoid overtightening, do not apply oil to the threads. Hand-tighten nut onto flare.



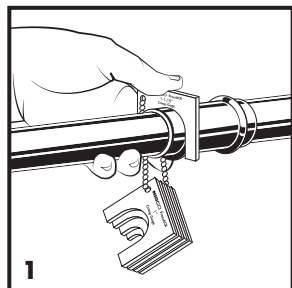
2. Complete joint by applying the specified torque to the nut and flare fittings, as shown in the table below. Always use an open ended wrench and a torque wrench to ensure integrity of fittings. Do not use a pipe wrench. Do not exceed the maximum torque listed below.

Flares Tightening Torque (DO NOT OVERTIGHTEN)

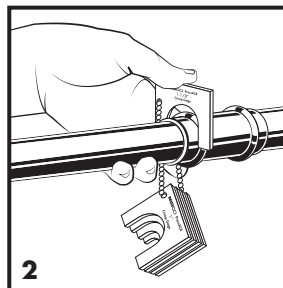
Tube Diameter	Recommended Torque	Maximum Torque
1/4"	12,2 Nm (9 ft. lbs.)	13,5 Nm (10 ft. lbs.)
3/8"	27,0 Nm (20 ft. lbs.)	33,7 Nm (25 ft. lbs.)
1/2"	40,5 Nm (30 ft. lbs.)	47,2 Nm (35 ft. lbs.)
5/8"	60,8 Nm (45 ft. lbs.)	74,2 Nm (55 ft. lbs.)
3/4"	107,0 Nm (79 ft. lbs.)	119,0 Nm (88 ft. lbs.)

*See warning at bottom of page

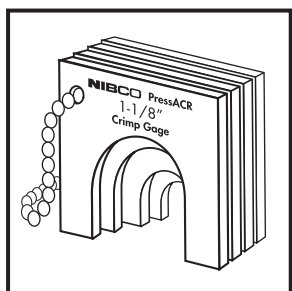
NIBCO® PressACR® — Crimp Gauge Instructions



1. After crimping the PressACR fitting, place the Crimp Gauge adjacent to the outside of the bead (copper tube side) where the jaws close. There should be a slight copper deformation in that location. If the gauge is in complete contact with the copper fitting, the crimp has been successful. Each pressed connection on the fitting should be gauged.



2. If you are unable to obtain complete contact with the copper fitting or see any kind of gap between the gauge and the fitting at the top of the gauge (arch), the crimp has not been successful.



NIBCO offers the PressACR Crimp Gauge to ensure quality installations.

WARNING

Read press tool operator's manual and fitting manufacturer's installation instructions before using. Failure to follow all instructions may result in extensive property damage and/or serious personal injury. Call the NIBCO Technical Service Department at 1.888.446.4226 if you have any questions or need assistance.

MISE EN GARDE !

Familiarisez-vous avec le mode d'emploi de la presse et les instructions du fabricant des raccords avant d'utiliser l'appareil. Le non-respect de leurs consignes risquerait d'augmenter les risques de dégâts matériels importants et/ou de graves blessures corporelles. Veuillez adresser toutes questions éventuelles ou demandes de mode d'emploi à la NIBCO en composant le 1.888.446.4226.

ADVERTENCIA

Antes de usar, lea el Manual del Operario de esta herramienta de presión y las instrucciones de instalación del acoplamiento proporcionadas por su fabricante. Pueden ocurrir daños materiales de gran envergadura y lesiones corporales de gravedad si no se respetan todas las instrucciones. Si tiene alguna pregunta o desea pedir un manual, llame al Departamento de Servicio Técnico de NIBCO al 1.888.446.4226.

Visit our website for the most current information.

Frequently Asked Questions

Q: Can you re-crimp PressACR fittings and do you have to align it like press for water service?

A: Yes, you can re-crimp and it still needs to be aligned with the bead. When doing a second crimp, it is recommended to rotate the head between 30°-90° from the original crimp.

Q: What is the testing protocol?

A: Test with nitrogen and use leak detect fluid or a tracer gas with a detector. Test with at least 50% of maximum design pressure but no more than 700 psi. Refer to the installation guide for more details.

Q: What do I do if the tube is difficult to insert?

A: Some refrigerant lubricant may be added to the seal to allow for easier insertion. Increasing the chamfer on the end of the tube OD will also reduce the force it takes to get the tube past the O-ring.

Q: Can you press both ways?

A: On sizes 7/8" and below you can press both ways. You cannot on the 1-1/8"; the jaw has a gauge that will not allow you to orient them incorrectly.

Q: What is reasoning behind the gauge on the 1-1/8" jaw and putting it on one way?

A: For the 1-1/8", the crimp is deeper on the outboard side of the bead than the inboard side of the bead. That orientation allows the larger diameter fittings to survive the pressure cycle requirements in a high-pressure system.

Q: Is the gauge heavier on one side?

A: Yes, on the 1-1/8".

Q: Is the pressure to crimp adjustable?

A: No, the pressure to crimp is controlled by the tool and cannot be adjusted.

Q: Will our packaging be in plastic?

A: Yes. All PressACR fittings will be in a gray plastic bag.

Q: Do the jaws have a witness mark?

A: No. The smaller sizes did not have room for the witness mark. We wanted to have consistency between all sizes.

Q: Can you tell it has been crimped?

A: Yes, you can visibly see it.

Q: Is using a polishing cloth a new step?

A: Yes, it is only recommended to polish in a radial direction and with an abrasive pad (such as Scotch-Brite® 7447 Maroon by 3M® or equivalent).

Q: Why do we use Scotch Brite® 7447 Maroon by 3M®?

A: There are 2 reasons: The first reason we do it is to provide a smooth and uniform surface for the seal. The second reason is to allow for a nice clean surface for grooves to bite into.

Q: How to address scratches?

A: Scratches that can be felt should be polished until the scratch is removed or cut out and replaced with a clean, undamaged section of tube.

Visit our website for the most current information.

Frequently Asked Questions *cont.*

Q: Are the PressG seals and the PressACR seals the same material?

A: The grey seal in PressACR is HNBR. This seal is not the same as the PressG HNBR yellow seal. The seals are different formulations and dimensionally distinct. They are not interchangeable.

Q: Can PressACR be used with R-22 refrigerants?

A: No, R-22 refrigerants are being phased out.

Q: What is the NIBCO tool calibration requirement?

A: Same as our current tool - 10,000 cycles. Please note, there is a sticker on the jaws suggesting that they are calibrated once a year. We also recommend the jaws are kept clean of any debris and copper shards.

Q: How far do we have to be away from brazed joints?

A: Depending upon existing joints you are crimping, you must be mindful of brazed joints. See chart on page 10.

Q: Can you crimp PressACR fittings directly on a service valve?

A: We do not have a solution for crimping directly to the service valve at this time. NIBCO PressACR fittings require a minimum of 3" from an existing brazed connection.

Q: Can refrigerant leak detector wands be used with PressACR systems?

A: Yes, but certain wand technologies can result in false positive readings. It is important to read the user manual of any leak detection wand to understand the capabilities. Any detections found using a wand should be confirmed using a secondary leak detection method (soap or leak detect fluid).

Q: Can you braze an FTG fitting?

A: No, FTG fittings should only be pressed. Brazing would cause damage to the O-ring.

Visit our website for the most current information.

NIBCO® PressACR® Limited Warranty

NIBCO INC. LIMITED WARRANTY

Applicable to NIBCO PressACR

NIBCO INC. warrants each that the NIBCO PressACR fitting ("Fittings") shall be free from defects in materials and workmanship under normal use, service, and maintenance in accordance with the product specifications (including, but not limited to installation recommendations) and maintenance in accordance with the product specifications for a period of fifteen (15) years from the Warranty Commencement Date. The Warranty Commencement Date for Fittings shall be the date upon which the Fitting is installed.

NIBCO warrants that the PressACR tools ("Tools") shall be free from defects in materials and workmanship under normal use, service, and maintenance in accordance with the product specifications for a period of two (2) years from date of purchase by the contractor.

NIBCO will repair or replace – at its option and at no charge – Fittings or Tools that have been determined by NIBCO, or an authorized representative or agent thereof, to have failed solely because of a defect in materials or workmanship under normal use, service, and maintenance during the warranty period.

This limited warranty applies to all Fittings installed, tested, applied, and used in accordance with NIBCO's approved and published recommendations and instructions and using the approved NIBCO Tools.

This warranty does not cover any failure or damage for or caused by:

1. any product, parts, or systems which are not manufactured or sold by NIBCO;
2. any Fitting or Tool which is used for purposes other than a purpose authorized by NIBCO;
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