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EBVP & EBVP-PZK Ball Valve Series

Catalog H-1, June 2016



ENGINEERING YOUR SUCCESS.



The ZoomLock Advantage



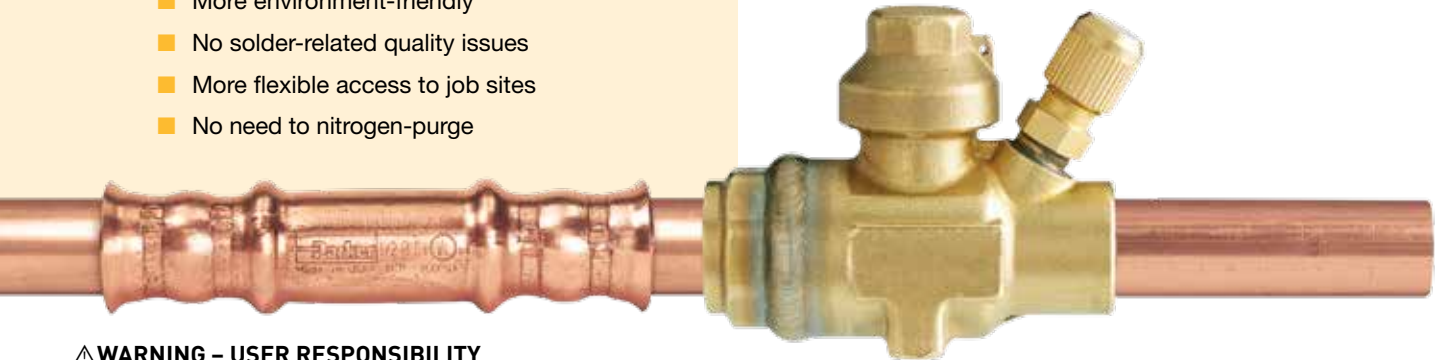
ZoomLock™ compatible EBVP-PZK ball valves and braze-free fittings make your job of joining copper tubes simpler and faster. The one-piece fittings, specially designed to work without brazing, are reliably secure, leak-proof and more repeatable than brazed connections — so there's no compromise on quality or performance. Professionals who have tried ZoomLock braze-free couplings report that their time and labor costs on tube connections are typically reduced 40 – 60% on average by eliminating the need for brazing. The biggest benefit of that improved efficiency is more productivity and increased profit potential, but there are also many other exciting advantages to braze-free tube connecting:

- Less equipment and no gas needed
- Safer conditions, no fire hazards
- No hot work permits required
- More environment-friendly
- No solder-related quality issues
- More flexible access to job sites
- No need to nitrogen-purge

EBVP & EBVP-PZK Series

(with Access Fitting)

- Welded body joint. Factory tested to ensure positive, leak-free performance. Forged brass body construction with extended ODF X ODF or ODM X ODM copper fittings and an access fitting.
- EBVP-PZK with ODM X ODM connections are compatible with ZoomLock™ braze-free fittings. See Catalog K-1 for more information on ZoomLock.
- Full size ports for unrestricted flow on most sizes – EBVP Series – 1/4" (6 mm) through 2-1/8" (54 mm) EBVP-PZK Series – 1/4" through 1-1/8"
- Dual Teflon seals surround the polished, brass ball to prevent leakage. Stem seal and stem washer provide the primary stem seal. Bottom load stem for safety.
- Stainless steel stop plate ensures fully open to fully closed with a 1/4 turn.
- Ball internal relief port design ensures positive shut-off in either flow direction, even during system evacuation.
- All EBVP and EBVP-PZK ball valves are bi-directional and may be installed in any position.
- Full refrigeration service temperature range: -40°F to +300°F (-40°C to +150°C).
- Design working pressure: 700 psig (49 bar).
- U.L. Listed File No. SA13413 (SFJQ)
- EBVP ball valves are suitable for use with R-22, R-134a, R-404A, R-407A, R-407C, R-407F, R-410A, R-422D, R-448A, R-449A, R-450A, R-507 and R-513A.
- **EBVP-PZK ball valves used in combination with ZoomLock braze-free fittings are not approved for use with R-22.**
- Date code stamped into valve body Yr/Mo/Day
- **CE** and RoHS Compliant



⚠ WARNING – USER RESPONSIBILITY

Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

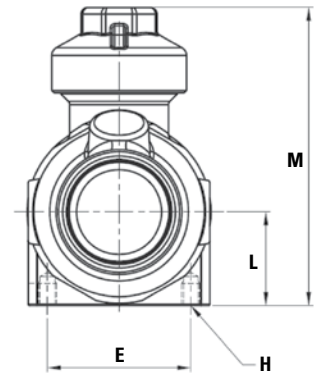
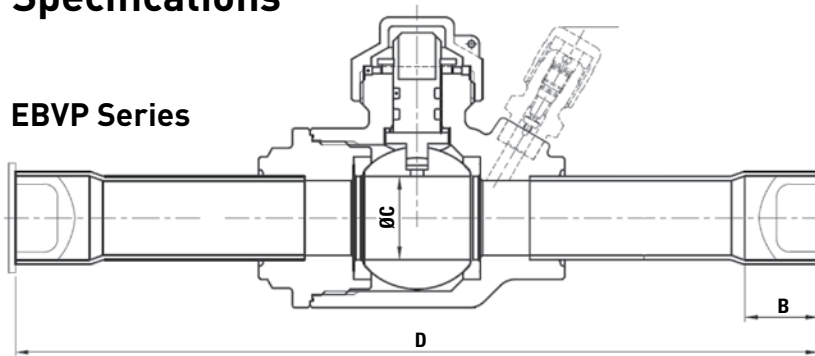
OFFER OF SALE

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed "Offer of Sale" elsewhere in this document or available at www.parker.com.

Catalog H-1, June 2016 supersedes Catalog H-1, October 2009 and all prior publications.

Specifications

EBVP Series



Inches

Zoomlock EBVP-PZK Series		EBVP Series		Overall Length D	Socket Depth B	L	Overall Height M	Port Size C	Mounting Holes E	Mounting Hole Size H	Cv	Weight EBVP (lbs.)
Description	Connection (ODM)	Description	Connection (ODF)									
EBVP-1023-PZK	1/4	EBVP-1020	1/4	6.50	0.31	0.63	2.14	0.50	0.79	#8-36 UNF	2.1	0.725
EBVP-1033-PZK	3/8	EBVP-1030	3/8	6.50	0.31	0.63	2.14	0.50	0.79	#8-36 UNF	4.3	0.725
EBVP-1043-PZK	1/2	EBVP-1040	1/2	6.50	0.38	0.63	2.14	0.50	0.79	#8-36 UNF	7.0	0.725
EBVP-1053-PZK	5/8	EBVP-1050	5/8	6.50	0.50	0.63	2.14	0.50	0.79	#8-36 UNF	13.9	0.725
EBVP-1063-PZK	3/4	EBVP-1060	3/4	7.25	0.63	0.83	2.63	0.75	1.26	#8-36 UNF	21.0	1.375
EBVP-1073-PZK	7/8	EBVP-1070	7/8	7.25	0.75	0.83	2.63	0.75	1.27	#8-36 UNF	30.3	1.405
EBVP-1093-PZK	1-1/8	EBVP-1090	1-1/8	8.50	0.91	1.00	2.98	1.00	1.57	#10-32 UNF	61.3	2.10
—	—	EBVP-1110	1-3/8	9.25	0.97	1.22	3.70	1.25	1.89	#10-32 UNF	85.2	3.36
—	—	EBVP-1130	1-5/8	10.00	1.09	1.53	4.29	1.50	2.36	1/4-28 UNF	212	5.39
—	—	EBVP-1170	2-1/8	11.38	1.34	1.87	5.18	2.00	2.95	1/4-28 UNF	285	10.09
—	—	EBVP-1210	2-5/8	14.37	1.47	2.36	6.06	2.50	2.95	1/4-28 UNF	301	19.25
—	—	EBVP-1250	3-1/8	16.54	1.66	2.81	7.01	3.15	4.10	5/16-24 UNF	420	40.13
—	—	EBVP-2210*	2-5/8	12.88	1.44	1.87	5.18	2.00	2.95	1/4-28 UNF	238	11.11
—	—	EBVP-2250*	3-1/8	14.37	1.66	2.36	6.06	2.50	2.95	1/4-28 UNF	324	19.25

* Reduced port and not a stock item. Minimum order quantity may be required.

Millimeters

EBVP-MM Series		Overall Length D	Socket Depth B	L	Overall Height M	Port Size C	Mounting Holes E	Mounting Hole Size H	Kv	Weight EBVP (lbs.)
Description	Connection (ODF)									
EBVP-6MM	6	165.10	8.00	16.00	54.36	12.70	20.07	#8-36 UNF	1.80	0.725
EBVP-10MM	10	165.10	8.00	16.00	54.36	12.70	20.07	#8-36 UNF	3.67	0.725
EBVP-12MM	12	165.10	10.00	16.00	54.36	12.70	20.07	#8-36 UNF	5.97	0.725
EBVP-16MM	16	165.10	13.00	16.00	54.36	12.70	20.07	#8-36 UNF	11.86	0.725
EBVP-18MM	18	184.15	17.00	21.08	66.80	19.05	32.00	#8-36 UNF	17.93	1.375
EBVP-22MM	22	184.15	20.00	21.08	66.80	19.05	32.00	#8-36 UNF	25.86	1.405
EBVP-28MM	28	215.90	24.00	25.40	75.69	25.40	39.88	#10-32 UNF	52.29	2.10
EBVP-35MM	35	234.95	25.00	31.00	93.98	31.75	48.01	#10-32 UNF	72.68	3.36
EBVP-42MM	42	254.00	28.00	38.86	108.97	38.10	59.94	1/4-28 UNF	181.18	5.39
EBVP-54MM	54	289.50	35.00	47.50	131.57	50.80	74.93	1/4-28 UNF	242.85	10.09
EBVP-64MM	64	365.00	35.00	60.00	153.92	63.50	74.93	1/4-28 UNF	256.16	19.25
EBVP-76MM	76	420.00	38.00	72.00	178.30	80.00	104.00	5/16-24 UNF	359.23	40.13
EBVP-64MM*	64	327.15	35.00	47.50	131.57	50.80	74.93	1/4-28 UNF	202.59	11.11
EBVP-76MM**	76	365.00	38.00	60.00	153.92	63.50	74.93	1/4-28 UNF	276.71	19.25

* Reduced port and not a stock item. Minimum order quantity may be required.

** Under development – not available.

Nomenclature

Inches – Example: EBVP-1030

EBV	P	-	1	03	0	PZK
Valve Type	Access Fitting		Series: 1 = Full Port 2 = Reduced port	Fitting Size: (Eighths of an inch) ie: 03 = 3/8"	Fitting Configuration: 0 = ODF x ODF 3 = ODM x ODM	ZoomLock Compatible

mm – Example: EBVP-10MM

EBV	P	-	10MM	R	
Valve Type	Access Fitting		Metric Fitting Size	Reduced Port	Fitting Configuration: ODF x ODF

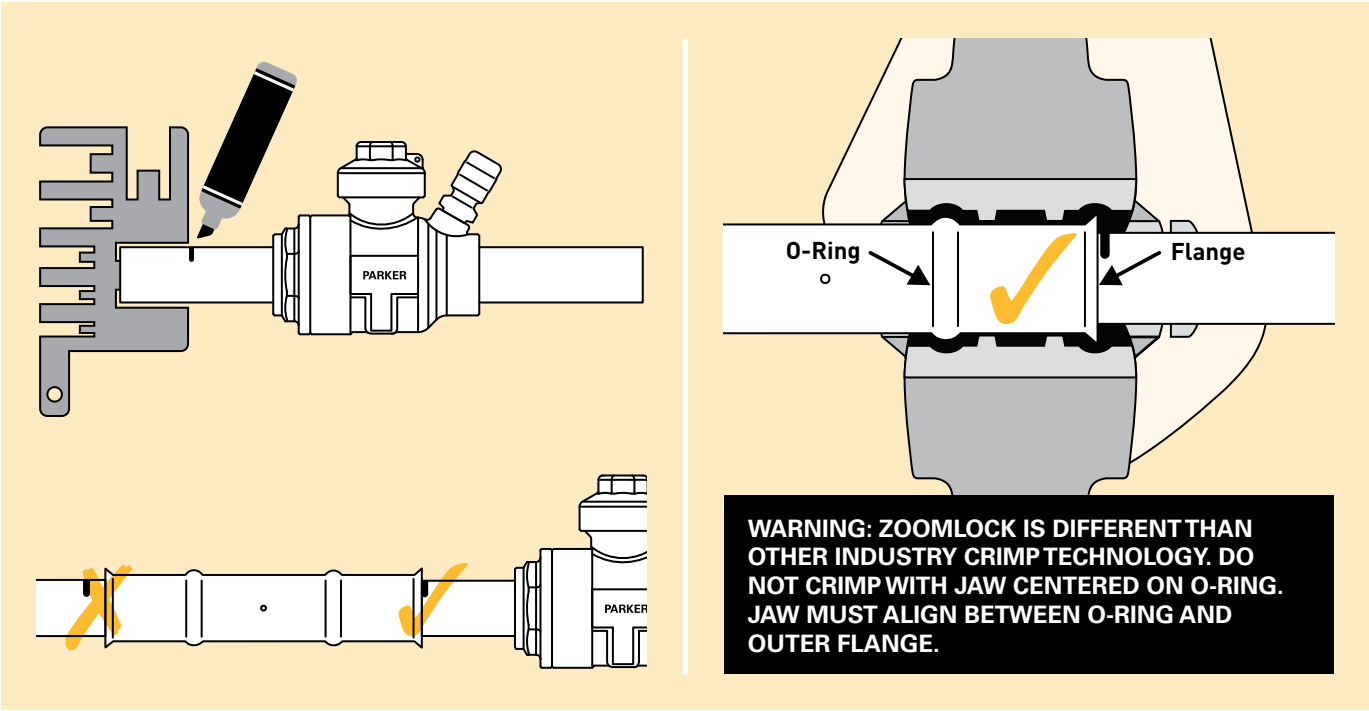
Installation

ZoomLock Instructions

The EBVP-PZK Ball Valve Series with ODM X ODM connections are compatible with ZoomLock™ braze-free fittings. Consult Catalog K-1 for more detailed installation instructions on ZoomLock braze-free fittings.

1. Deburr and clean copper to ensure tube ends are free and clear of any residual burrs, oxidation, dirt or debris. Use the ZoomLock depth gauge to determine the proper insertion depth. Mark the tubing with a permanent marker to indicate proper insertion depth on every tube.
2. Push the ZoomLock fitting onto the tube. Use the mark to assure insertion depth and secure fit.
3. Use the grooves in the jaws as a guide to properly place the crimping jaws onto the fitting. (See

illustration below for proper crimping alignment.) Press and **continue to hold** the trigger on the ZoomLock Crimping Tool until the tool completes its cycle. Remove the Crimping Tool from the fitting and visually inspect for a “RLS” mark on the tube connection, indicating a proper crimp. **WARNING: ZOOMLOCK IS DIFFERENT THAN OTHER INDUSTRY CRIMP TECHNOLOGY. DO NOT CRIMP WITH JAW CENTERED ON O-RING. JAW MUST ALIGN BETWEEN O-RING AND OUTER FLANGE.**



Installation

Brazing Instructions

1. DO NOT DISASSEMBLE.
2. WRAP THE BODY OF THE VALVE WITH A WET RAG (to dissipate heat-overheating causes damage).
3. Bleed dry nitrogen or CO₂ through the valve while brazing.
4. Use flux with silver brazing alloys.
5. Flux not required with phosphor alloys, on copper to copper joints, but flux is recommended for deeper penetration and more uniform results with all alloys.
6. Use large enough torch to rapidly heat joint to brazing temperature. Direct flame away from existing copper to brass joints.
7. Quench to reduce heat spread after brazing.

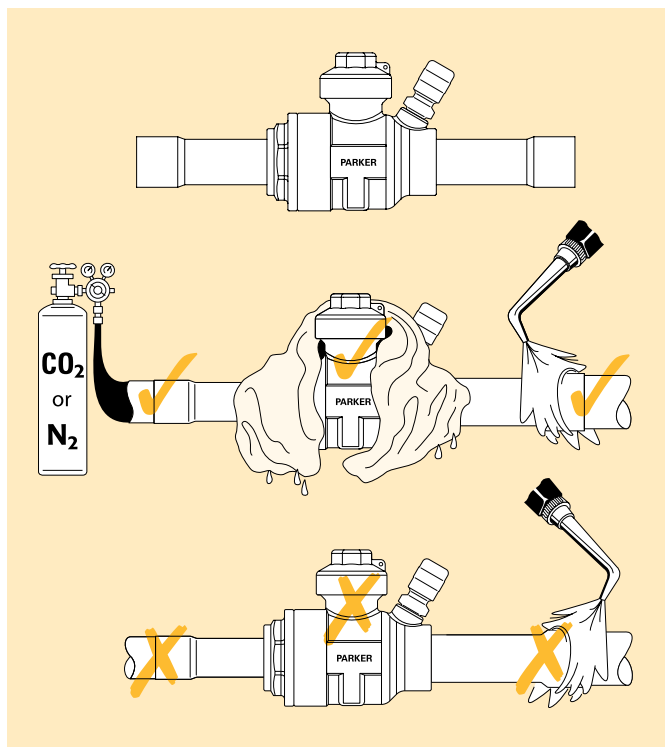
Operation Notes

1. Remove seal cap. **CAUTION:** Pressure may be under seal cap, remove slowly.
2. Rotate stem using adjustable wrench. Turn 90° against the mechanical stops. Align open arrow with refrigerant line for non-directional flow. Turn clock-wise to close; counter-clockwise to open.
3. This valve contains mechanical stops. **DO NOT USE EXCESSIVE FORCE AGAINST STOPS OR PERMANENT DAMAGE MAY OCCUR.**
4. Install seal cap.
5. Valves are designed for use with R-22, R-134a, R-404A, R-407A, R-407C, R-407F, R-410A, R-422D, R-448A, R-449A, R-450A, R-507 and R-513A.

NOTICE: DO NOT DISASSEMBLE VALVE FOR ANY REASON.

For use with CFC, HFC, and HCFC refrigerants listed in CAN/CSA B52 and ANSI/ASHRAE 15 Sec. 9.2 where the saturation vapor pressure at 125°F (52°C) (high side) and 80°F (27°C) (low side) is less than the maximum design working pressure. After charging, mark unit with refrigerant type and oil type.

NOTE: WARRANTY IS VOID IF THESE INSTRUCTIONS ARE NOT FOLLOWED.



OFFER OF SALE

The items described in this document and other documents and descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors ("Seller") are hereby offered for sale at prices to be established by Seller. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in its document, when communicated to Seller verbally, or in writing, shall constitute acceptance of this offer. All goods or work described will be referred to as "Products".

1. **Terms and Conditions.** Seller's willingness to offer Products, or accept an order for Products, to or from Buyer is expressly conditioned on Buyer's assent to these Terms and Conditions and to the terms and conditions found on-line at www.parker.com/sale-terms/. Seller objects to any contrary or additional term or condition of Buyer's order or any other document issued by Buyer.

2. **Price Adjustments; Payments.** Prices stated on the reverse side or preceding pages of this document are valid for 30 days. After 30 days, Seller may change prices to reflect any increase in its costs resulting from state, federal or local legislation, price increases from its suppliers, or any change in the rate, charge, or classification of any carrier. The prices stated on the reverse or preceding pages of this document do not include any sales, use, or other taxes unless so stated specifically. Unless otherwise specified by Seller, all prices are F.O.B. Seller's facility, and payment is due 30 days from the date of invoice. After 30 days, Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law.

3. **Delivery Dates; Title and Risk; Shipment.** All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay. Regardless of the manner of shipment, title to any products and risk of loss or damage shall pass to Buyer upon tender to the carrier at Seller's facility (i.e., when it's on the truck, it's yours). Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective dates indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's changes in shipping, product specifications or in accordance with Section 13, herein.

4. **Warranty.** Seller warrants that the Products sold hereunder shall be free from defects in material or workmanship for a period of twelve months from the date of delivery to Buyer or 2,000 hours of normal use, whichever occurs first. This warranty is made only to Buyer and does not extend to anyone to whom Products are sold after purchased from Seller. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

5. **Claims; Commencement of Actions.** Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 60 days after delivery or, in the case of an alleged breach of warranty, within 30 days after the date within the warranty period on which the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for any amount due to Seller from Buyer) must be commenced within thirteen months from the date of tender of delivery by Seller or, for a cause of action based upon an alleged breach of warranty, within thirteen months from the date within the warranty period on which the defect is or should have been discovered by Buyer.

6. **LIMITATION OF LIABILITY.** UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. **IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT**

SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.

7. **Contingencies.** Seller shall not be liable for any default or delay in performance if caused by circumstances beyond the reasonable control of Seller.

8. **User Responsibility.** The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.

9. **Loss to Buyer's Property.** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

10. **Special Tooling.** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

11. **Buyer's Obligation; Rights of Seller.** To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest. Seller shall have a security interest in, and lien upon, any property of Buyer in Seller's possession as security for the payment of any amounts owed to Seller by Buyer.

12. **Improper use and Indemnity.** Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.

13. **Cancellations and Changes.** Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change product features, specifications, designs and availability with notice to Buyer.

14. **Limitation on Assignment.** Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.

15. **Entire Agreement.** This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression

of the terms of the agreement. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.

16. **Waiver and Severability.** Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.

17. **Termination.** This agreement may be terminated by Seller for any reason and at any time by giving Buyer thirty (30) days written notice of termination. In addition, Seller may by written notice immediately terminate this agreement for the following: (a) Buyer commits a breach of any provision of this agreement (b) the appointment of a trustee, receiver or custodian for all or any part of Buyer's property (c) the filing of a petition for relief in bankruptcy of the other Party on its own behalf, or by a third party (d) an assignment for the benefit of creditors, or (e) the dissolution or liquidation of the Buyer.

18. **Governing Law.** This agreement and the sale and delivery of all Products hereunder shall be deemed to have taken place in and shall be governed and construed in accordance with the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to this agreement. Disputes between the parties shall not be settled by arbitration unless, after a dispute has arisen, both parties expressly agree in writing to arbitrate the dispute.

19. **Indemnity for Infringement of Intellectual Property Rights.** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

20. **Taxes.** Unless otherwise indicated, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of Products.

21. **Equal Opportunity Clause.** For the performance of government contracts and where dollar value of the Products exceed \$10,000, the equal employment opportunity clauses in Executive Order 11246, VEVRAA, and 41 C.F.R. §§ 60-1.4(a), 60-741.5(a), and 60-250.4, are hereby incorporated.



Parker Hannifin Corporation
A/C & Refrigeration Aftermarket
206 Lange Drive, Washington, MO 63090 USA
phone 636 239 1111 • fax 636 239 9130
www.parker.com/coolparts