

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G
(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO
RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED
PURSUANT TO RULE 13d-2(b)*

Innovative Solutions and Support, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

45769N 10 5

(CUSIP Number)

December 31, 2000

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1 NAMES OF REPORTING PERSONS. Parker-Hannifin Corporation
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS 34-0451060

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
(a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
Ohio

5 SOLE VOTING POWER
NUMBER OF 5
SHARES 1,458,141

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY 6
EACH None

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 7
1,458,141

8 SHARED DISPOSITIVE POWER
WITH 8
None

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,458,141

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
12.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
CO

*SEE INSTRUCTION BEFORE FILLING OUT!

SCHEDULE 13G

Item 1.

1(a). Name of ISSUER: Innovative Solutions and Support, Inc.

1(b). Address of Issuer's Principal Executive Offices:

420 Lapp Road, Malvern, Pennsylvania 19355

Item 2.

2(a). Name of Person Filing: Parker-Hannifin Corporation

2(b). Address of Principal Business Office or, if None, Residence:

6035 Parkland Boulevard, Cleveland, Ohio 44124

2(c). Citizenship: Ohio

2(d). Title of Class of Securities: Common Stock, \$.001 par value

2(e). CUSIP Number: 45769N 10 5

Item 3. If This Statement is Filed Pursuant to Rules 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

Not Applicable.

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: 1,458,141
- (b) Percent of class: 12.0%
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote: 1,458,141
 - (ii) Shared power to vote or to direct the vote: None
 - (iii) Sole power to dispose or to direct the disposition of: 1,458,141
 - (iv) Shared power to dispose or to direct the disposition of: None

- Item 5. Ownership of Five Percent or Less of a Class
Not Applicable.
- Item 6. Ownership of More Than Five Percent on Behalf of Another Person
Not Applicable.
- Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company
Not applicable.
- Item 8. Identification and Classification of Members of the Group
Not Applicable.
- Item 9. Notice of Dissolution of Group
Not Applicable.
- Item 10. Certifications
Not Applicable.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 12, 2001

(Date)

PARKER-HANNIFIN CORPORATION

/s/ Thomas A. Piraino, Jr.

(Signature)

Vice President, General Counsel and Secretary

(Name/Title)