

**ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΕΡΕΥΝΑΣ ΚΑΙ ΤΕΧΝΟΛΟΓΙΚΗΣ ΑΝΑΠΤΥΞΗΣ (Ε.Κ.Ε.Τ.Α.)/
ΙΝΣΤΙΤΟΥΤΟ ΧΗΜΙΚΩΝ ΔΙΕΡΓΑΣΙΩΝ ΚΑΙ ΕΝΕΡΓΕΙΑΚΩΝ ΠΟΡΩΝ (ΙΔΕΠ)**

6^ο χλμ. Χαριλάου – Θέρμης
57001 Θέρμη, Θεσσαλονίκη

Θέρμη Θεσσαλονίκης, 11-03-2016
Αριθμ. Πρωτ.: 263/11-03-2016

ΠΡΟΣΚΛΗΣΗ ΕΝΔΙΑΦΕΡΟΝΤΟΣ ΚΑΙ ΚΑΤΑΘΕΣΗΣ ΠΡΟΣΦΟΡΩΝ
ΓΙΑ ΤΗΝ ΑΝΑΘΕΣΗ ΤΗΣ ΠΡΟΜΗΘΕΙΑΣ:

«Προμήθεια Αναλωσίμων»

Το Εθνικό Κέντρο Έρευνας και Τεχνολογικής Ανάπτυξης (ΕΚΕΤΑ)/ Ινστιτούτο Χημικών Διεργασιών και Ενεργειακών Πόρων (ΙΔΕΠ), νομικό πρόσωπο ιδιωτικού δικαίου, μη κερδοσκοπικού χαρακτήρα, που εδρεύει στη Θέρμη Θεσσαλονίκης (6^ο χλμ. Οδού Χαριλάου-Θέρμης), προσκαλεί κάθε ενδιαφερόμενο (φυσικό ή νομικό πρόσωπο ή ενώσεις και κοινοπραξίες αυτών) να υποβάλει πρόταση – προσφορά, μη δεσμευτική για το ΕΚΕΤΑ, σύμφωνα με τις τεχνικές προδιαγραφές της παρούσας πρόσκλησης, για την ανάθεση της προμήθειας:

«Προμήθεια Αναλωσίμων»

στα πλαίσια του έργου «APT-STEP: Unlocking APTL's Scientific and Technological Research Potential in Green Mobility» που εντάσσεται στο Πρόγραμμα FP7-REGPOT-2012-2013-1 (315871).

Η συνολική δαπάνη της προμήθειας δεν πρέπει να υπερβαίνει το ποσό των **δεκαεννέα χιλιάδων ευρώ (19.000,00 €)** μη συμπεριλαμβανομένου του Φ.Π.Α.

Οι υποψήφιοι θα πρέπει να έχουν αποδεδειγμένη επαγγελματική εμπειρία στην υλοποίηση αντίστοιχων προμηθειών και η προσφορά τους να πληροί τις Τεχνικές Προδιαγραφές της παρούσας Πρόσκλησης.

Οι ενδιαφερόμενοι παρακαλούνται όπως υποβάλουν κλειστό (σφραγισμένο) φάκελο έγγραφης προσφοράς, στην Ελληνική ή στην Αγγλική γλώσσα, για το σύνολο της προμήθειας που αποτελεί αντικείμενο της παρούσας πρόσκλησης, όπως προσδιορίζεται στις τεχνικές προδιαγραφές αυτής, με τα εξής στοιχεία:

ΠΡΟΣΦΟΡΑ για την:

«Προμήθεια Αναλωσίμων»

Οι προσφορές πρέπει να υποβληθούν μέχρι και την **Πέμπτη 17 Μαρτίου 2016 και ώρα 13:00** στην ακόλουθη διεύθυνση:

*Εθνικό Κέντρο Έρευνας και Τεχνολογικής Ανάπτυξης (ΕΚΕΤΑ)/
Ινστιτούτο Χημικών Διεργασιών και Ενεργειακών Πόρων (ΙΔΕΠ)
Α' Πτέρυγα, 2^{ος} Όροφος, Γραφείο 310
6^ο χλμ. οδού Χαριλάου – Θέρμης
57001 Θέρμη – Θεσσαλονίκη
Υπόψη: κας. Θωμαΐδας Αχίλλα*

Για τη λήψη της τελικής απόφασης και επιλογής, μεταξύ των προσφορών που πληρούν τις τεχνικές προδιαγραφές της παρούσας Πρόσκλησης, θα συνεκτιμηθούν το ύψος της οικονομικής προσφοράς, η πληρότητα και αρτιότητα της πρότασης, η τεχνική και επαγγελματική ικανότητα των υποψηφίων, η διαθεσιμότητα και ο χρόνος παράδοσης.

Η υποβολή προσφοράς συνεπάγεται την πλήρη και ανεπιφύλακτη αποδοχή από τον υποψήφιο Ανάδοχο όλων των όρων της παρούσας πρόσκλησης.

Ο Ανάδοχος υποχρεούται να προσκομίσει φορολογική και ασφαλιστική ενημερότητα για την εξόφλησή του.

Επί του αρχικού συμβατικού τιμήματος, χωρίς Φ.Π.Α. και κατά την πληρωμή της σύμβασης παρακρατείται 0,10% υπέρ της Ενιαίας Ανεξάρτητης Αρχής Δημοσίων Συμβάσεων (ΕΑΑΔΗΣΥ), σύμφωνα με τον Ν. 4013/2011.

Για περισσότερες πληροφορίες και διευκρινήσεις οι ενδιαφερόμενοι μπορούν να απευθύνονται στην κα. Μαρίνα Χρυσικοπούλου, τηλ: 2310-498429, e-mail: mchrysi@cperi.certh.gr.

Για το ΕΚΕΤΑ/ΙΔΕΠ

Ε. Κακαράς
Διευθυντής ΙΔΕΠ

ΤΕΧΝΙΚΕΣ ΠΡΟΔΙΑΓΡΑΦΕΣ ΑΝΑΛΩΣΙΜΩΝ

Περιγραφή:

ΕΞΑΡΤΗΜΑΤΑ ΣΩΛΗΝΩΣΕΩΝ

Τα επιμέρους είδη με τις αντίστοιχες ποσότητες για κάθε είδος φαίνονται συνοπτικά στον ακόλουθο Πίνακα:

A/A	Εξαρτήματα σωληνώσεων	Ποσότητα
1	Union Cross, 1/4 in.	14
2	Union Cross, 3/8 in.	10
3	Male Tube Adapter, 1/4 in.	10
4	Male Tube Adapter, 1/2 in.	5
5	Female Tube Adapter, 1/4 in.	10
6	Female Tube Adapter, 1/4 in.	10
7	Male Connector, 1/4 in.	10
8	Male Elbow 1/4 in.	10
9	321 Stainless Steel Flexible Tubing	5
10	321 SS Flexible Tubing	5
11	321 SS Flexible Tubing	5
12	Adapter for Convolute Vacuum Tubing	25
13	Union 1/4 in	20
14	Union 3/8 in	15
15	Union Elbow 1/2 in.	10
16	Union, 3/4 in.	5
17	SS Poppet Check Valve, Fixed Pressure, 1/4 in.	10
18	SS Poppet Check Valve Fixed Pressure 3/8 in.	5
19	SS Poppet Check Valve, Adjustable Pressure, 1/4 in.	5
20	SS Poppet Check Valve, Adjustable Pressure, 1/4 in.	2
21	SS High-Pressure Proportional Relief Valve, 1/4 in.	2
22	Blue Spring Kit for R3A Series Proportional Relief Valves	2
23	SS Ferrule Set, 1/16 in.	50
24	SS Ferrule Set, 1/4 in.	40
25	SS Ferrule Set, 3/8 in.	20
26	SS Ferrule Set, 1/2 in.	20
27	Bulkhead Union, 3/8 in.	10
28	Bulkhead Union, 1/4 in.	10
29	Male Connector 1/4 in. Tube OD x 1/8 in.	10
30	Male Connector, 1/4 in. Tube OD x 3/8 in.	10
31	Male Connector, 1/4 in. Tube OD x 3/8 in.	10
32	Male Connector, 3/8 in. Tube OD x 1/2 in.	10
33	Male Connector, 1/4 in. Tube OD x 1/8 in.	10
34	Male Connector, 1/4 in. Tube OD x 1/4 in.	10
35	Male Connector, 1/4 in. Tube OD x 3/8 in.	5
36	Male Connector, 3/8 in. Tube OD x 3/8 in.	5
37	Male Connector, 3/8 in. Tube OD x 1/2 in.	5
38	Union Tee, 1/8 in.	5
39	Union Tee, 1/4 in.	20
40	Union Tee, 3/8 in.	10
41	Union Tee, 1/2 in.	6
42	Male Run Tee, 1/4 in. Tube OD x 1/4 in.	5

A/A	Εξαρτήματα σωληνώσεων	Ποσότητα
43	Male Branch Tee, 1/4 in. Tube OD x 1/4 in.	5
44	Female Elbow, 1/4 in. Tube OD x 1/8 in.	5
45	Female Elbow 1/4 in. OD x 1/4 in.	5
46	Female Elbow 1/4 in. Tube OD x 3/8 in.	5
47	Female Elbow 1/2 in. OD x 1/4 in.	5
48	Reducing Port Connector 1/2 in. x 1/4 in.	5
49	Reducing Port Connector, 1/2 in. x 3/8 in.	5
50	Reducing Port Connector 3/8 in. x 1/4 in.	5
51	Port Connector 1/4 in.	5
52	Port Connector 3/8 in.	5
53	Reducing Union, 3/4 in. x 1/2 in.	5
54	Hex Nipple, 1/2 in.	2
55	Reducing Union, 1/4 in. x 1/8 in.	15
56	Reducing Union, 3/8 in. x 1/4 in.	5
57	Reducing Union, 1/2 in. x 1/4 in.	5
58	Union Elbow, 1/4 in.	10
59	Union Elbow, 1/2 in.	5
60	316 Stainless Steel Nut, 1/8 in.	30
61	316 Stainless Steel Nut, 1/4 in.	50
62	316 Stainless Steel Nut, 3/8 in.	20
63	316 Stainless Steel Nut, 1/2 in.	20
64	SS Gasket, 1/8 in	10
65	SS Gasket, 1/4 in	10
66	SS Gasket, 3/8 in	10
67	SS Gasket, 1/2 in	10
68	Copper Gasket, 1/8 in.	50
69	Copper Gasket, 1/4 in.	50
70	Copper Gasket, 3/8 in.	50
71	Copper Gasket, 1/2 in.	10
72	SS Cap, 1/8 in.	15
73	SS Cap, 1/4 in.	20
74	SS Cap, 3/8 in.	10
75	SS Cap, 1/2 in.	5
76	SS Plug, 1/8 in.	15
77	SS Plug, 1/4 in.	30
78	SS Plug, 3/8 in.	10
79	SS Plug, 1/2 in.	10
80	Male Connector, 1/4 in Tube OD x 1/8 in	10
81	Male Connector, 1/4 in. Tube OD x 1/4 in.	10
82	Male Connector, 1/8 in. Tube OD x 1/8 in.	10
83	Male Connector 3/8 in. Tube OD X 1/4 in.	10
84	Male Connector 1/2 in. Tube OD x 3/8 in	6
85	Bored through reducer, 1/16 in. x 1/8 in.	5
86	Reducer, 1/8 in. x 1/8 in.	10
87	Reducer, 1/4 in. x 1/8 in.	10
88	Reducer, 1/4 in. x 1/4 in.	10
89	Reducer, 1/4 in. x 3/8 in.	10
90	Reducer, 1/4 in. x 1/2 in.	10
91	Reducer, 3/8 in. x 1/4 in.	10

A/A	Εξαρτήματα σωληνώσεων	Ποσότητα
92	Reducer, 3/8 in. x 3/8 in.	10
93	Reducer, 3/8 in. x 1/2 in.	10
94	Reducing Bushing 3/4 in. Male NPT x 3/8 in.	5
95	Pipe Plug, 3/8 in.	5
96	Union Elbow, 3/8 in.	6
97	Female Connector 1/4 in. Tube OD x 3/8 in.	5
98	Bored Through Male Connector, 3/8 in Tube OD x 1/2 in.	5
99	Female Adapter, 1/4 in. Tube OD x 1/8 in.	6
100	Female Connector, 3/8 in. Tube OD x 1/4 in.	1
101	Bulkhead Union, 1/4 in.	10
102	Ball Valve, 0.6 Cv, 1/4 in.	5
103	Ball Valve, 1.4 Cv, 1/4 in.	5
104	4-Way Ball Valve, 0.08 Cv, 1/8 in. FNPT	2
105	SS Union Tee, 1 in.	5
106	SS Union, 1 in	5
107	SS Front Ferrule, 1 in.	10
108	SS Back Ferrule, 1 in.	10
109	SS Bulkhead Reducing Union, 6 mm x 1/4 in.	5
110	SS Reducing Union Tee, 6 mm Tube OD x 6 mm Tube OD x 6 mm	5
111	SS 3-Piece High-Pressure Ball Valve, PCTFE Seats, 1/4 in.	5
112	SS Integral Bonnet Needle Valve, 0.37 Cv, 1/4 in.	5

Τα απαιτούμενα τεχνικά χαρακτηριστικά για κάθε είδος των υπό προμήθεια αναλωσίμων συνοψίζονται παρακάτω:

1. Union Cross, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Cross
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1/4 in.
- Connection 3 Type Tube Fitting
- Connection 4 Size 1/4 in.
- Connection 4 Type Tube Fitting

2. Union Cross, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Cross
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 3/8 in.
- Connection 3 Type Tube Fitting
- Connection 4 Size 3/8 in.

- Connection 4 Type Tube Fitting

3. Male Tube Adapter, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Body Type Male Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Male NPT

4. Male Tube Adapter, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Adapter
- Body Type Male Connector
- Connection 2 Size 1/2 in.
- Connection 2 Type Male NPT

5. Female Tube Adapter, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Body Type Female Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Female ISO Tapered Thread

6. Female Tube Adapter, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Body Type Female Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Female ISO Tapered Thread

7. Male Connector, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Male ISO Tapered Thread

8. Male Elbow, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting

- Body Type Male Elbow
- Connection 2 Size 1/4 in.
- Connection 2 Type Male ISO Tapered Thread

9. 321 Stainless Steel Flexible Tubing

- Body Material 321 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Flex Tube End
- Connection 2 Size 1/4 in.
- Connection 2 Type Flex Tube End
- Feature Length 4"

10. 321 SS Flexible Tubing

- Body Material 321 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Flex Tube End
- Connection 2 Size 1/4 in.
- Connection 2 Type Flex Tube End
- Feature Length 6"

11. 321 SS Flexible Tubing

- Body Material 321 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Flex Tube End
- Connection 2 Size 1/4 in.
- Connection 2 Type Flex Tube End
- Feature Length 12"

12. Adapter for Convolute Vacuum Tubing

- Body Material 304 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Flex Tube Ins
- Connection 2 Size 1/4 in.
- Connection 2 Type Male Vacuum Seal Ftg (Ultra-Torr)

13. Union 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

14. Union, 3/8 in.

- Body Material 316 Stainless Steel

- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting

15. Union Elbow, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Fitting

16. Union, 3/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/4 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 3/4 in.
- Connection 2 Type Tube Fitting

17. SS Poppet Check Valve, Fixed Pressure, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Cracking Pressure 1 psi (0.07 bar, 0.007 MPa)

18. SS Poppet Check Valve, Fixed Pressure 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting
- Cracking Pressure 1 psi (0.07 bar, 0.007 MPa)

19. SS Poppet Check Valve Adjustable Pressure, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Cracking Pressure 3 to 50 psi (0.21 to 3.5 bar, 0.021 to 0.35 MPa)

20. SS Poppet Check Valve, Adjustable Pressure 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Cracking Pressure 50 to 150 psi (3.5 to 10.4 bar, 0.35 to 1.04 MPa)

21. SS High Pressure Proportional Relief Valve 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- MaxTemp 250
- MinTemp 0
- Size 1/8 in.

22. Blue Spring Kit for R3a Proportional Relief Valves

- Feature 50-350 PSI (Adjustable)
- Rupture Pressure 50-350 PSI (Adjustable)

23. SS Ferrule Set, 1/16 in.

- 316 SS Ferrule Set (1 Front Ferrule/1 Back Ferrule) for 1/16 in.

24. SS Ferrule Set, 1/4 in.

- 316 SS Ferrule Set (1 Front Ferrule/1 Back Ferrule) for 1/4 in.

25. SS Ferrule Set, 3/8 in.

- 316 SS Ferrule Set (1 Front Ferrule/1 Back Ferrule) for 3/8 in.

26. SS Ferrule Set, 1/2 in.

- 316 SS Ferrule Set (1 Front Ferrule/1 Back Ferrule) for 1/2 in.

27. Bulkhead Union, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Bulkhead Union
- Bulkhead Bulkhead
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting

28. Bulkhead Union, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.

- Connection 1 Type Tube Fitting
- Body Type Bulkhead Union
- Bulkhead Bulkhead
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

29. Male Connector, 1/4 in. Tube OD x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Male ISO Parallel Thread

30. Male Connector, 1/4 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Male ISO Parallel Thread

31. Male Connector, 1/4 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Male ISO Parallel Thread

32. Male Connector, 3/8 in. Tube OD x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/2 in.
- Connection 2 Type Male ISO Parallel Thread

33. Male Connector, 1/4 in. Tube OD x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Male NPT

34. Male Connector, 1/4 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Male NPT

35. Male Connector, 1/4 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Male NPT

36. Male Connector, 3/8 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Male NPT

37. Male Connector, 3/8 in. Tube OD x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/2 in.
- Connection 2 Type Male NPT

38. Union Tee, 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Connection 2 Size 1/8 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1/8 in.
- Connection 3 Type Tube Fitting

39. Union Tee, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting

- Body Type Tee
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1/4 in.
- Connection 3 Type Tube Fitting

40. Union Tee, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 3/8 in.
- Connection 3 Type Tube Fitting

41. Union Tee, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1/2 in.
- Connection 3 Type Tube Fitting

42. Male Run Tee, 1/4 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Connection 2 Size 1/4 in.
- Connection 2 Type Male NPT
- Connection 3 Size 1/4 in.
- Connection 3 Type Tube Fitting

43. Male Branch Tee, 1/4 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1/4 in.
- Connection 3 Type Male NPT

44. Female Elbow, 1/4 in. Tube OD x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Female Elbow
- Connection 2 Size 1/8 in.
- Connection 2 Type Female NPT

45. Female Elbow, 1/4 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Female Elbow
- Connection 2 Size 1/4 in.
- Connection 2 Type Female NPT

46. Female Elbow, 1/4 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Female Elbow
- Connection 2 Size 3/8 in.
- Connection 2 Type Female NPT

47. Female Elbow, 1/2 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Female Elbow
- Connection 2 Size 1/4 in.
- Connection 2 Type Female NPT

48. Reducing Port Connector, 1/2 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Connection 2 Size 1/2 in.
- Connection 2 Type Port Connector

49. Reducing Port Connector, 1/2 in. x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Adapter
- Connection 2 Size 1/2 in.
- Connection 2 Type Port Connector

50. Reducing Port Connector, 3/8 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Adapter
- Connection 2 Size 1/4 in.
- Connection 2 Type Port Connector

51. Port Connector, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Body Type Port Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Port Connector

52. Port Connector, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Adapter
- Body Type Port Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Port Connector

53. Reducing Union, 3/4 in. x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/4 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Fitting

54. Hex Nipple, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Male NPT
- Connection 2 Size 1/2 in.
- Connection 2 Type Male NPT

55. Reducing Union, 1/4 in. x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/8 in.
- Connection 2 Type Tube Fitting

56. Reducing Union, 3/8 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

57. Reducing Union, 1/2 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

58. Union Elbow, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Union Elbow
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

59. Union Elbow, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Union Elbow
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Fitting

60. 316 Stainless Steel Nut for 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.

61. 316 Stainless Steel Nut for 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.

62. 316 Stainless Steel Nut for 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.

63. 316 Stainless Steel Nut for 1/2 in.

- Body Material 316 Stainless Steel

- Connection 1 Size 1/2 in.

64. SS Gasket, 1/8 in.

- Body Material Stainless Steel/Fluorocarbon FKM
- Connection 1 Size 1/8 in.

65. SS Gasket, 1/4 in.

- Body Material Stainless Steel/Fluorocarbon FKM
- Connection 1 Size 1/4 in.

66. SS Gasket, 3/8 in.

- Body Material Stainless Steel/Fluorocarbon FKM
- Connection 1 Size 3/8 in.

67. SS Gasket, 1/2 in.

- Body Material Stainless Steel/Fluorocarbon FKM
- Connection 1 Size 1/2 in.

68. Cooper Gasket, 1/8 in.

- Body Material Cooper
- Connection 1 Size 1/8 in.

69. Cooper Gasket, 1/4 in.

- Body Material Cooper
- Connection 1 Size 1/4 in.

70. Cooper Gasket, 3/8 in.

- Body Material Cooper
- Connection 1 Size 3/8 in.

71. Cooper Gasket, 1/2 in.

- Body Material Cooper
- Connection 1 Size 1/2 in.

72. SS Cap, 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Tube Fitting
- Configuration Cap

73. SS Cap, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Configuration Cap

74. SS Cap, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Configuration Cap

75. SS Cap, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Configuration Cap

76. SS Plug, 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Tube Fitting
- Configuration Plug

77. SS Plug, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Configuration Plug

78. SS Plug, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Configuration Plug

79. SS Plug, 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Configuration Plug

80. Male Connector 1/4 in Tube OD x 1/8 in

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Male Pipe Weld

81. Male Connector, 1/4 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel

- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Male Pipe Weld

82. Male Connector, 1/8 in. Tube OD x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Male Pipe Weld

83. Male Connector 3/8 in. Tube OD X 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Male Pipe Weld

84. Male Connector 1/2 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/2 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Male Pipe Weld

85. Bored through reducer 1/16 in. x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/16 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/8 in.
- Connection 2 Type Tube Adapter

86. Reducer, 1/8 in. x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/8 in.
- Connection 2 Type Tube Adapter

87. Reducer, 1/4 in. x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/8 in.
- Connection 2 Type Tube Adapter

88. Reducer, 1/4 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Adapter

89. Reducer, 1/4 in. x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Adapter

90. Reducer, 1/4 in. x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Adapter

91. Reducer, 3/8 in. x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Adapter

92. Reducer, 3/8 in. x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 3/8 in.

- Connection 2 Type Tube Adapter

93. Reducer, 3/8 in. x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Reducer
- Connection 2 Size 1/2 in.
- Connection 2 Type Tube Adapter.

94. Reducing Bushing 3/4 in. Male NPT x 3/8in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/4 in.
- Connection 1 Type Male NPT
- Body Type Reducing Bushing
- Connection 2 Size 3/8 in.
- Connection 2 Type Female NPT

95. Pipe Plug, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Male NPT
- Configuration Plug

96. Union Elbow, 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Union Elbow
- Connection 2 Size 3/8 in.
- Connection 2 Type Tube Fitting

97. Female Connector 1/4 in. Tube OD x 3/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Female Connector
- Connection 2 Size 3/8 in.
- Connection 2 Type Female ISO Parallel Gauge Thread

98. Bored Through Male Connector 3/8 in Tube OD x 1/2 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Male Connector
- Connection 2 Size 1/2 in.

- Connection 2 Type Male NPT
- Feature Bored Through

99. Female Adapter 1/4 in. Tube OD x 1/8 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Adapter
- Body Type Female Connector
- Connection 2 Size 1/8 in.
- Connection 2 Type Female ISO Tapered Thread

100. Female Connector, 3/8 in. Tube OD x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 3/8 in.
- Connection 1 Type Tube Fitting
- Body Type Female Connector
- Connection 2 Size 1/4 in.
- Connection 2 Type Female NPT

101. Bulkhead Union, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Body Type Bulkhead Union
- Bulkhead Bulkhead
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

102. Ball Valve, 0.6 Cv, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- MaxTemp 300
- Orifice 0.125 in /3.2 mm

103. Ball Valve, 1.4 Cv, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- MaxTemp 300
- cv 1.4

104. 4-Way Ball Valve, 0.08 Cv, 1/8 in. FNPT .

- Body Material 316 Stainless Steel
- Connection 1 Size 1/8 in.
- Connection 1 Type Female NPT
- TempPressCode 402
- Connection 2 Size 1/8 in.
- Connection 2 Type Female NPT
- Connection 3 Size 1/8 in.
- Connection 3 Type Female NPT
- Connection 4 Size 1/8 in.
- Connection 4 Type Female NPT
- MaxTemp 150
- Flow Path Standard (4-way)
- MinTemp 50

105. SS Union Tee, 1 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1 in.
- Connection 1 Type Tube Fitting
- Body Type Tee
- Cleaning Process Standard Cleaning and Packaging (SC-10)
- Connection 2 Size 1 in.
- Connection 2 Type Tube Fitting
- Connection 3 Size 1 in.
- Connection 3 Type Tube Fitting

106. SS Union, 1 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1 in.
- Connection 1 Type Tube Fitting
- Body Type Union /Reducing Union
- Connection 2 Size 1 in.
- Connection 2 Type Tube Fitting

107. SS Front Ferrule, 1 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1 in.

108. SS Back Ferrule, 1 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1 in.

109. SS Bulkhead Reducing Union, 6 mm x 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 6mm.
- Connection 1 Type Tube Fitting

- Body Type Bulkhead Union
- Bulkhead Bulkhead
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting

110. SS Reducing Union Tee, 6 mm Tube OD x 6 mm Tube OD x 6 mm.

- Body Material 316 Stainless Steel
- Connection 1 Size 6 mm
- Connection 1 Type Tube Fitting
- Connection 2 Size 6 mm
- Connection 2 Type Tube Fitting
- Connection 3 Size 6 mm
- Connection 3 Type Tube Fitting

111. SS 3-Piece High-Pressure Ball Valve, PCTFE Seats, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- Feature PCTFE Seat

112. SS Integral Bonnet Needle Valve, 0.37 Cv, 1/4 in.

- Body Material 316 Stainless Steel
- Connection 1 Size 1/4 in.
- Connection 1 Type Tube Fitting
- Connection 2 Size 1/4 in.
- Connection 2 Type Tube Fitting
- MaxTemp 450
- MinTemp -65
- Max Temperature with Pressure Rating 450°F @ 3435 PSIG /232°C @ 236 BAR

