

## Kunststoff Flip

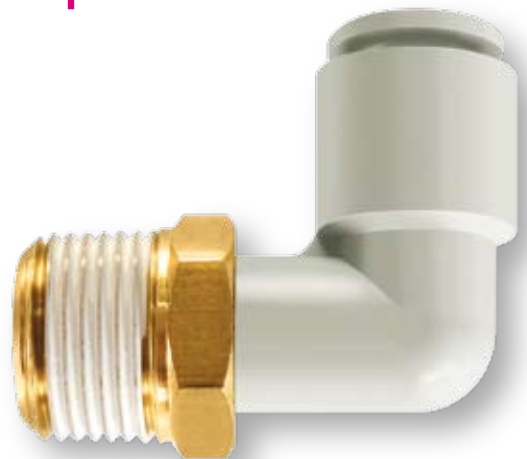
Verschraubungen















## Plastique Flip

Raccords

## Plastic Flip

Unions



	Seite/Page/Page		Seite/Page/Page		Seite/Page/Page
Abschlusszapfen Bouchon d'arrêt Plug	<b>3F.3</b>  <b>FP 30002</b>	Einschraubwinkel Coude mâle Male elbow	<b>3F.7</b>  <b>FP 32450</b>	Y-Verbindung Y égal Y-connector	<b>3F.12</b>  <b>FP 35050</b>
Gerade Verbindung Union double Straight connector	<b>3F.3</b>  <b>FP 31050</b>	Einschraubwinkel überlang Coude mâle prolongé Male elbow extended	<b>3F.8</b>  <b>FP 32550</b>	Y-Einschraubverbindung Y mâle Y-connector male	<b>3F.13</b>  <b>FP 35150</b>
Gerade Verbindung reduziert Union double réduite Straight connector reduced	<b>3F.4</b>  <b>FP 31050 RED</b>	Einstellwinkel Coude enfichable Adjustable elbow	<b>3F.8</b>  <b>FP 32650</b>	Einschraubwinkel 45° Coude mâle 45° Male elbow 45°	<b>3F.13</b>  <b>FP 35250</b>
Einschraubverbindung Union mâle Male connector	<b>3F.4</b>  <b>FP 31150</b>	Einstellwinkel reduziert Coude enfichable réduit Adjustable elbow reduced	<b>3F.9</b>  <b>FP 32650 RED</b>	Y-Einsteckverbinder Y enfichable Y reduction union	<b>3F.14</b>  <b>FP 35650</b>
Aufschraubgewinde kegelig Filetage femelle conique Tapered adaptor thread	<b>3F.5</b>  <b>FP 31250</b>	Schwenkverbindung Coude banjo Banjo connector	<b>3F.9</b>  <b>FP 32850</b>	Einschraubverbindung drehbar Union mâle rotatif Male connector rotary	<b>3F.15</b>  <b>FP 31950</b>
Gerade Schottverbindung Union double pour passage de cloison Panel mount connector	<b>3F.5</b>  <b>FP 31550</b>	T-Verbindung Té égal Tee connector	<b>3F.10</b>  <b>FP 33050</b>	Einschraubwinkel drehbar Coude mâle rotatif Male elbow connector rotary	<b>3F.16</b>  <b>FP 32950</b>
Gerade Einsteckreduzierung Réduction droit enfichable Reduction union	<b>3F.6</b>  <b>FP 31850</b>	T-Einschraubverbindung Té mâle Male tee	<b>3F.11</b>  <b>FP 33750</b>	Einschraubverbindung mit Rückschlagventil Union mâle avec auto obturant Straight connector with non-return valve	<b>3F.16</b>  <b>FP 37350</b>
Winkelverbindung Coude égal Elbow connector	<b>3F.7</b>  <b>FP 32050</b>	L-Einschraubverbindung Té mâle L Male tee L	<b>3F.11</b>  <b>FP 33850</b>	360° schwenk. Drosselrückschlagventil 360° banjo à passage réglable 360° swivel speed controller	<b>3F.18</b>  <b>FP 37750</b>

**Führungshülse / Guide / Guide**  
**Spannring / Douille / Collet**  
**Spannzange / Griffes / Chuck**

Verwendung von Nylon- und Polyurethanschläuchen  
 Hohe Rückhaltekräft  
 Utilisation de tubes nylon et polyuréthane  
 Effort de maintien  
 Accepts nylon, soft nylon and polyurethane tubes  
 Has large retaining force

**Spezialdichtung / Joint profilé / Packing**

Für grossen Druckbereich von -0.099 MPa bis 1 MPa geeignet. Die Spezialdichtung gewährleistet gute Dichtheit, verbunden mit geringem Widerstand beim Einfügen des Schlauches.  
 Large plage de pression du vide de -0.099-Mpa à 1-MPa. L'utilisation d'un profil spécial assure l'étanchéité et réduit l'effort à l'insertion du tube.  
 Can be used for a wide range of pressure -0.099-MPa to 1-MPa. The use of a special profile ensures positive sealing and reduced resistance when the tube is being inserted.

**Druckring (weiss) / Collettere (blanche) / Release button (white)**

Leicht lösbar  
 Beim Betätigen des Druckrings wird die Spannzange gelöst, damit der Schlauch ohne Beschädigung entfernt werden kann.  
 Faible force de dégagement  
 Une simple pression manuelle sur la collettere permet de dégager des griffes et de libérer le tube en évitant toute rayure.  
 Low disconnection force  
 When the fitting is removed from the tubing, the chuck and collet are released, thus preventing them from biting into the tube to an unnecessary degree.

**Kunststoffschlauch / Tube / Tube**

(nur kalibrierte Schläuche verwenden)  
 (n'utiliser que des tubes calibrés)  
 (use only calibrated tubes)

**Körper / Corps / Body**

**O-Ring / Joint torique / O-ring**

**Anschlussstück mit Gewinde / Manchon fileté / Stud**

- Kleiner Einbauraum
- schwenkbar
- mit Dichtung (M3, M5 zylindrisch) oder teflonbeschichtet (R 1/8 konisch)
- Raccordement dans les espaces réduits
- Corps orientable
- Joint plat (M3, M5 cylindrique) ou filetage prétéflonné (R 1/8 conique)
- Effective when piping in a confined space
- The body and threaded portion can turn independently
- With O-ring (M3, M5 cylindrical) or teflon pre-coated (R1/8 taper)

© by SERTO AG, Switzerland

3F

### Technische Daten / Données techniques / Technical notes:

Medium / Fluide / Operating fluid	Druckluft, Wasser <sup>11</sup> /Air comprimé, eau <sup>11</sup> /Compressed air, water <sup>11</sup>
Betriebsdruckbereich / Pression de fonctionnement / Operating pressure range [MPa]	-0.099 (~ 10 Torr) - 1.0 (~ 10-bar)
Prüfdruck / Pression d'épreuve / Proof pressure [MPa]	3.0 (~ 30-bar)
Betriebstemperaturbereich / Température de fonctionnement / Ambient and fluid temperature [°C]	0-60 (Wasser/Eau/Water: +5 - +40°C)
Anschlussmöglichkeiten	M5
Connexions	R 1/8 - R 1/2 konisch / conique / taper thread
Connections	Kunststoffschlauch / Tube / plastic tube
	mit Dichtung / avec joint / with O-ring
	teflonbeschichtet / prétéflonné / teflon pre-coated
	metrisch / métrique / metric

<sup>11</sup> Kein Trinkwasser! Druckspitzen müssen kleiner als der max. zulässige Betriebsdruck sein.

<sup>11</sup> Eau non potable. La pointe de pression doit être inférieure à celle de la pression de fonctionnement max.

<sup>11</sup> Applicable for general industry water. Surge pressure must be under the max. operating pressure.

### Material / Matière / Material

Körper / Corps / Body	PBT (weiss / blanche / white)
Anschlusskörper / Manchon fileté / Stud	Messing / laiton / brass
Spannzange / Griffes / Chuck	Edelstahl / acier inoxydable/ stainless steel Messing / laiton/ brass
Führungshülse / Guide / Guide	Edelstahl / acier inoxydable/ stainless steel Messing / laiton/ brass
Spannring, Druckring / Douille, collettere / Collet, release button	POM
Dichtungen / Joint / Packing, O-ring	NBR

### Kunststoffschläuche / Tubes applicables / Applicable tubes

Material Matière Material	Polyamid PA 11w/12w, Polyurethan Polyamide PA 11w/12w, Polyurethane Polyamide PA 11w/12w, Polyurethane
Aussendurchmesser / Diamètre extérieur du tube / Tube O.D.	4, 6, 8, 10, 12

- Schnelle Montage und Demontage
- Für grossen Druckbereich von -0.099 MPa bis 1 MPa geeignet
- Verwendung von Nylon- und Polyurethanschläuchen

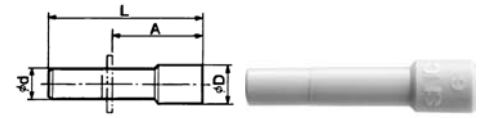
- Montage et démontage économique
- Pour une large plage de pression -0.099 Mpa à 1 Mpa
- Utilisation de tubes nylon ou polyuréthane

- Quick assembling and disassembling
- Can be used for wide range of pressure -0.099 Mpa up to 1 Mpa
- Accepts nylon and polyurethane tubes

# Abschlusszapfen

## Bouchon d'arrêt

### Plug



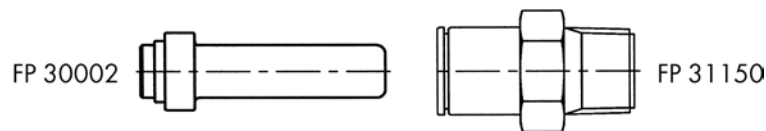
### FP 30002

Type -d	Mat.-Nr.	L	D	A	kg/100
FP 30002-4	TFP.300.0400	32.0	6.0	16.0	0.100
FP 30002-6	TFP.300.0600	35.0	8.0	18.0	0.100
FP 30002-8	TFP.300.0800	39.0	10.0	20.5	0.200
FP 30002-10	TFP.300.1000	43.0	12.0	22.0	0.350
FP 30002-12	TFP.300.1200	45.0	14.0	24.0	0.500

#### Anwendungsbeispiele:

#### Exemples d'utilisation:

#### Sample combinations:



Den Abschlusszapfen FP 30002 bis zum Anschlag in den SERTO-flip einführen. Zur Demontage hellgrauen Druckring leicht andrücken und Abschlusszapfen herausziehen.  
Für Größen 4 + 12 mm:  
Material = Polyamid, blau  
Für Größen 6 - 10 mm: gleicher Abschlusszapfen wie im Kunststoffprogramm.

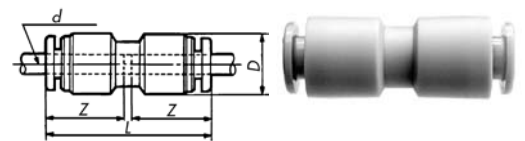
Introduire le bouchon d'arrêt FP 30002 jusqu'au fond dans le SERTO-flip. Pour démonter, presser légèrement le poussoir manuel gris clair et sortir le bouchon d'arrêt du SERTO-flip.  
Pour dim. 4 + 12 mm:  
Matériau = Polyamide, bleu  
Pour dim. 6 - 10 mm: le même bouchon d'arrêt comme dans le programme plastique.

Insert the plug FP 30002 and push it all the way into the SERTO-flip fitting. To dismantle press the light grey release button and withdraw the plug.  
For dim. 4 + 12 mm:  
Material = Polyamide, blue  
For dim. 6 - 10 mm: the same plug as in the plastic programme.

# Gerade Verbindung

## Union double

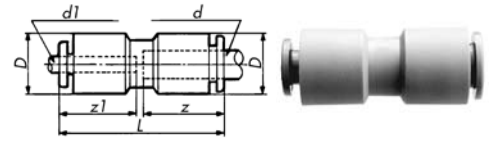
### Straight connector



### FP 31050

Type -d	Mat.-Nr.	L	D	z	g/Stk
FP 31050-4	TFP.310.0400	32.5	10.4	16.0	3.0
FP 31050-6	TFP.310.0600	34.5	12.8	17.0	5.0
FP 31050-8	TFP.310.0800	38.5	15.2	18.5	7.0
FP 31050-10	TFP.310.1000	42.5	18.5	21.0	11.0
FP 31050-12	TFP.310.1200	44.5	20.9	22.0	14.0

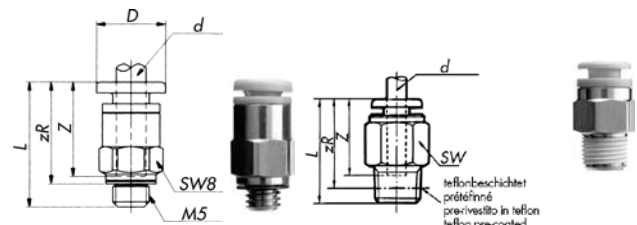
**Gerade Verbindung reduziert**  
**Union double réduite**  
**Straight connector reduced**



**FP 31050 RED.**

Type -d-d1	Mat.-Nr.	L	D	z1	z	g/Stk
FP 31050-6-4	TFP.310.0604	34.5	12.8	16.0	17.0	5.0
FP 31050-8-6	TFP.310.0806	38.5	15.2	17.0	18.5	7.0
FP 31050-10-8	TFP.310.1008	42.0	18.5	18.5	21.0	11.0
FP 31050-12-10	TFP.310.1210	44.5	20.9	21.0	22.0	14.0

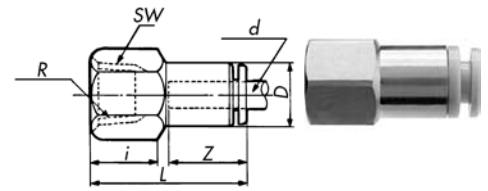
**Einschraubverbindung**  
**Union mâle**  
**Male connector**



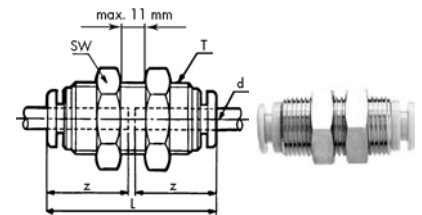
**3F**

**FP 31150**

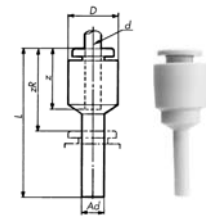
Type -d-R	Mat.-Nr.	SW	L	D	zR	z	g/Stk
FP 31150-4 M5	TFP.311.0441	8	17.0	9.5	14.0	13.0	2.4
FP 31150-6-M5	TFP.311.0641	10	18.5	11.5	15.0	14.0	3.4
FP 31150-4-1/8	TFP.311.0411	10	22.0	9.5	18.0	16.0	3.4
FP 31150-4-1/4	TFP.311.0412	14	19.5	9.5	13.5	16.0	16.0
FP 31150-6-1/8	TFP.311.0611	12	22.5	11.5	18.5	17.0	16.0
FP 31150-6-1/4	TFP.311.0612	14	23.0	11.5	17.0	17.0	14.0
FP 31150-6-3/8	TFP.311.0613	17	22.0	11.5	15.5	17.0	27.0
FP 31150-8-1/8	TFP.311.0811	14	28.0		24.0	18.5	21.0
FP 31150-8-1/4	TFP.311.0812	14	26.5		20.5	18.5	19.0
FP 31150-8-3/8	TFP.311.0813	17	22.0		15.5	18.5	26.0
FP 31150-10-1/8	TFP.311.1011	17	30.0		26.0	21.0	19.0
FP 31150-10-1/4	TFP.311.1012	17	33.5		27.5	21.0	30.0
FP 31150-10-3/8	TFP.311.1013	17	29.0		22.5	21.0	30.0
FP 31150-10-1/2	TFP.311.1014	22	27.0		19.0	21.0	53.0
FP 31150-12-1/4	TFP.311.1212	19	34.5		28.5	22.0	42.0
FP 31150-12-3/8	TFP.311.1213	19	30.0		23.5	22.0	34.0
FP 31150-12-1/2	TFP.311.1214	22	30.0		22.0	22.0	51.0

**Aufschraubgewinde kegelig**
**Filetage femelle conique**
**Tapered adaptor thread**

**FP 31250**

Type -d-R	Mat.-Nr.	SW	L	D	i	z	g/Stk
FP 31250-4-1/8	TFP.312.0411	14	27.0	10.0	11.0	16.0	15.2
FP 31250-4-1/4	TFP.312.0412	17	31.0	10.0	14.0	16.0	22.9
FP 31250-6-1/8	TFP.312.0611	14	27.5	12.0	11.0	17.0	15.3
FP 31250-6-1/4	TFP.312.0612	17	31.0	12.0	13.0	17.0	22.4
FP 31250-6-3/8	TFP.312.0613	19	33.5	12.0	15.0	17.0	24.5
FP 31250-8-1/8	TFP.312.0811	14	29.0	14.0	11.0	18.5	16.5
FP 31250-8-1/4	TFP.312.0812	17	32.5	14.0	13.0	18.5	24.0
FP 31250-8-3/8	TFP.312.0813	19	33.5	14.0	14.0	18.5	23.9
FP 31250-10-1/4	TFP.312.1012	17	34.5	17.0	14.0	21.0	27.0
FP 31250-10-3/8	TFP.312.1013	19	36.5	17.0	15.0	21.0	29.6
FP 31250-12-1/4	TFP.312.1212	19	35.0	19.0	14.0	22.0	35.7
FP 31250-12-3/8	TFP.312.1213	19	37.0	19.0	14.0	22.0	30.6
FP 31250-12-1/2	TFP.312.1214	24	41.0	19.0	18.0	22.0	51.8

**Gerade Schottverbindung**
**Union double pour passage de cloison**
**Panel mount connector**

**FP 31550**

Type -d	Mat.-Nr.	SW	L	T	z	g/Stk
FP 31550-4	TFP.315.0400	14	32.5	M12 x 1.0	16.0	26.0
FP 31550-6	TFP.315.0600	17	34.5	M14 x 1.0	17.0	33.0
FP 31550-8	TFP.315.0800	19	38.0	M16 x 1.0	18.5	52.0
FP 31550-10	TFP.315.1000	24	42.5	M20 x 1.0	21.0	70.0
FP 31550-12	TFP.315.1200	27	44.0	M22 x 1.0	22.0	90.0

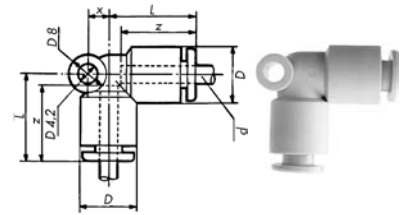
**Gerade Einsteckreduzierung**
**Réduction droit enfichable**
**Reduction union**

**FP 31850**

Type -d -Ad	Mat.-Nr.	L	D	zR	z	g/Stk
FP 31850-4-A6	TFP.318.0406	34.5	10.4	17.5	16.0	2.1
FP 31850-6-A4	TFP.318.0604	37.0	12.8	21.0	17.0	3.0
FP 31850-6-A8	TFP.318.0608	37.0	12.8	18.5	17.0	3.0
FP 31850-6-A10	TFP.318.0610	39.5	12.8	18.5	17.0	3.5
FP 31850-6-A12	TFP.318.0612	42.0	12.8	20.0	17.0	5.2
FP 31850-8-A10	TFP.318.0810	41.0	15.2	20.0	18.5	4.5
FP 31850-8-A12	TFP.318.0812	42.0	15.2	20.0	18.5	5.1
FP 31850-10-A12	TFP.318.1012	44.5	18.5	23.0	21.0	33.0

**Winkelverbindung**

**Coude égal**

**Elbow connector**



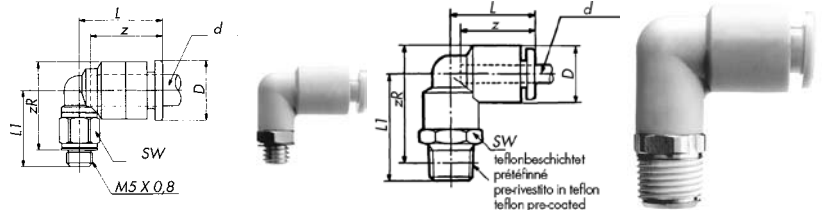
**FP 32050**

Type -d	Mat.-Nr.	L	D	X	z	g/Stk
FP 32050-4	TFP.320.0400	18.0	10.4	4.5	16.0	6.0
FP 32050-6	TFP.320.0600	20.0	12.8	5.3	17.0	7.0
FP 32050-8	TFP.320.0800	23.0	15.2	6.0	18.5	11.0
FP 32050-10	TFP.320.1000	26.5	18.5	6.8	21.0	17.0
FP 32050-12	TFP.320.1200	28.5	20.9	7.5	22.0	21.0

**Einschraubwinkel**

**Coude mâle**

**Male elbow**



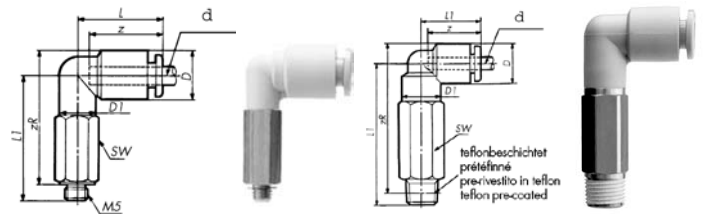
**FP 32450**

Type -d-R	Mat.-Nr.	SW	L	L1	D	zR	z	g/Stk
FP 32450-4-M5	TFP.324.0441	7	16.0	13.5	9.5	15.0	13.0	2.7
FP 32450-6-M5	TFP.324.0641	7	16.0	14.5	11.5	17.0	14.0	3.1
FP 32450-4-1/8	TFP.324.0411	10	18.0	22.0	10.4	23.0	16.0	10.0
FP 32450-4-1/4	TFP.324.0412	14	18.0	26.0	10.4	25.0	16.0	19.0
FP 32450-6-1/8	TFP.324.0611	10	20.0	23.0	12.8	25.5	17.0	12.0
FP 32450-6-1/4	TFP.324.0612	14	20.0	27.0	12.8	27.5	17.0	22.0
FP 32450-6-3/8	TFP.324.0613	17	20.0	29.0	12.8	29.0	17.0	33.0
FP 32450-8-1/8	TFP.324.0811	12	23.0	24.5	15.2	28.0	18.5	13.0
FP 32450-8-1/4	TFP.324.0812	14	23.0	28.5	15.2	30.0	18.5	21.0
FP 32450-8-3/8	TFP.324.0813	17	23.0	30.5	15.2	31.5	18.5	35.0
FP 32450-10-1/4	TFP.324.1012	17	26.5	30.0	18.5	33.0	21.0	26.0
FP 32450-10-3/8	TFP.324.1013	17	26.5	32.0	18.5	34.5	21.0	36.0
FP 32450-12-1/4	TFP.324.1212	17	28.5	31.0	20.9	35.5	22.0	28.0
FP 32450-12-3/8	TFP.324.1213	17	28.5	33.0	20.9	37.0	22.0	38.0
FP 32450-12-1/2	TFP.324.1214	22	28.5	37.0	20.9	39.5	22.0	65.0

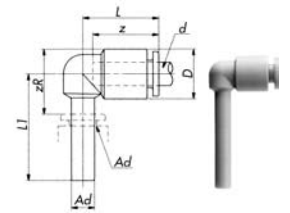
zR=Richtmass bei eingeschraubtem Gewinde  
T=teflonbeschichtet

zR=Dépassement après montage  
T=prétréfinné

zR=Reference dimensions after thread installation  
T=teflon pre-coated

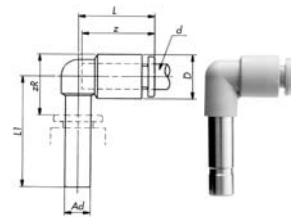
**Einschraubwinkel überlang**
**Coude mâle prolongé**
**Male elbow extended**

**FP 32550**

Type -d-R	Mat.-Nr.	SW	L	L1	D1	D	zR	z	g/Stk
FP 32550-4-M5	TFP.325.0441	8	18.0	30.0	8.0	10.4	32.0	16.0	11.0
FP 32550-6-M5	TFP.325.0641	8	20.0	30.5	8.0	12.8	33.5	17.0	11.0
FP 32550-4-1/8	TFP.325.0411	10	18.0	37.5	8.0	10.4	38.5	16.0	23.0
FP 32550-6-1/8	TFP.325.0611	14	20.0	40.0	8.0	12.8	42.5	17.0	26.0
FP 32550-6-1/4	TFP.325.0612	10	20.0	46.0	10.0	12.8	46.5	17.0	41.0
FP 32550-8-1/8	TFP.325.0811	14	23.0	43.5	12.0	15.2	47.0	18.0	30.0
FP 32550-8-1/4	TFP.325.0812	17	23.0	49.5	12.0	15.2	51.0	18.0	47.0
FP 32550-10-1/4	TFP.325.1012	17	26.5	56.5	17.0	18.5	59.5	21.0	66.0
FP 32550-10-3/8	TFP.325.1013	17	26.5	58.5	17.0	18.5	61.0	21.0	76.0
FP 32550-12-1/4	TFP.325.1212	17	28.5	59.5	17.0	20.9	63.5	22.0	78.0
FP 32550-12-3/8	TFP.325.1213	22	28.5	66.0	17.0	20.9	68.5	22.0	147.0

**Einstellwinkel**
**Coude enfichable**
**Adjustable elbow**

**FP 32650**

Type -d-Ad	Mat.-Nr.	L	L1	D	zR	z	g/Stk
FP 32650-4-A4	TFP.326.0400	18.0	25.0	10.4	14.5	16.0	3.0
FP 32650-6-A6	TFP.326.0600	20.0	27.5	12.8	17.0	17.0	3.0
FP 32650-8-A8	TFP.326.0800	22.5	31.5	15.2	21.0	18.5	5.0
FP 32650-10-A10	TFP.326.1000	25.5	35.5	18.5	23.5	21.0	9.0
FP 32650-12-A12	TFP.326.1200	27.0	37.5	20.9	26.0	22.0	10.0

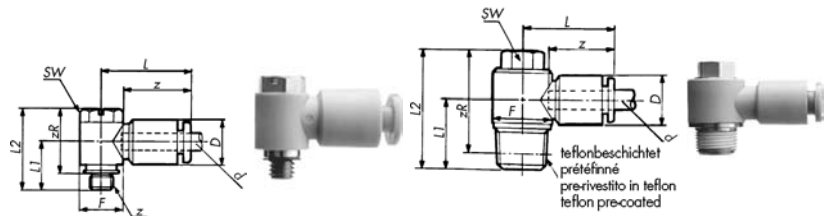
**Einstellwinkel reduziert**  
**Coude enfichable réduit**  
**Adjustable elbow reduced**



**FP 32650 RED.**

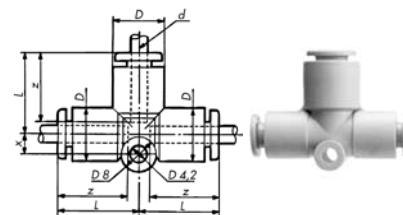
Type -d -Ad	Mat.-Nr.	L	L1	D	zR	z	g/Stk
FP 32650-4-A6	TFP.326.0406	18.0	26.0	10.4	14.5	16.0	3.0
FP 32650-4-A8	TFP.326.0408	18.0	35.0	10.4	22.0	16.0	11.0
FP 32650-6-A8	TFP.326.0608	20.0	36.5	12.8	24.5	17.0	12.0
FP 32650-6-A10	TFP.326.0610	20.0	38.5	12.8	24.0	17.0	19.0
FP 32650-8-A10	TFP.326.0810	23.0	39.5	15.2	26.0	18.5	20.0
FP 32650-8-A12	TFP.326.0812	23.0	40.5	15.2	26.0	18.5	27.0

**Schwenkverbindung**  
**Coude banjo**  
**Banjo connector**



**FP 32850**

Type -d -R	Mat.-Nr.	SW	L	L2	L1	D	F	zR	z	g/Stk
FP 32850-4 M5	TFP.328.0441	8	20.5	18.5	11.0	10.4	9.8	15.0	16.0	6.0
FP 32850-6 M5	TFP.328.0641	8	23.5	18.5	12.0	12.8	9.8	15.0	17.0	7.0
FP 32850-4-1/8	TFP.328.0411	8	22.0	26.5	14.5	10.4	13.4	22.5	16.0	14.0
FP 32850-6-1/8	TFP.328.0611	8	24.0	26.5	14.5	12.8	13.4	22.5	17.0	15.0
FP 32850-6-1/4	TFP.328.0612	10	23.5	31.0	18.5	12.8	15.4	25.0	17.0	26.0
FP 32850-8-1/8	TFP.328.0811	12	28.5	28.5	15.5	15.2	17.6	24.5	18.5	24.0
FP 32850-8-1/4	TFP.328.0812	12	28.5	31.5	18.5	15.2	17.6	25.5	18.5	30.0
FP 32850-8-3/8	TFP.328.0813	14	27.5	36.5	20.5	15.2	20.6	30.0	18.5	47.0
FP 32850-10-1/4	TFP.328.1012	14	31.0	35.5	19.5	18.5	20.6	29.5	21.0	40.0
FP 32850-10-3/8	TFP.328.1013	14	31.0	36.5	20.9	18.5	20.6	30.0	21.0	49.0
FP 32850-12-3/8	TFP.328.1213	17	34.0	38.5	22.0	20.9	25.2	32.0	22.0	63.0
FP 32850-12-1/2	TFP.328.1214	17	34.0	41.5	25.0	20.9	25.2	33.5	22.0	80.0

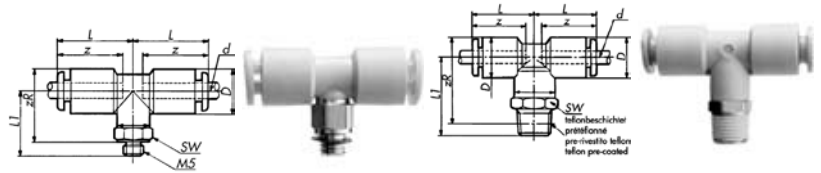
**T-Verbindung**
**Té égal**
**Tee connector**

**FP 33050**

Type -d	Mat.-Nr.	L	D	X	z	g/Stk
FP 33050-4	TFP.330.0400	18.0	10.4	4.5	16.0	8.0
FP 33050-6	TFP.330.0600	20.0	12.8	5.3	17.0	11.0
FP 33050-8	TFP.330.0800	23.0	15.2	6.0	18.5	16.0
FP 33050-10	TFP.330.1000	26.5	18.5	6.8	21.0	25.0
FP 33050-12	TFP.330.1200	28.5	20.9	7.5	22.0	29.0

**T-Einschraubverbindung**

**Té mâle**

**Male tee**



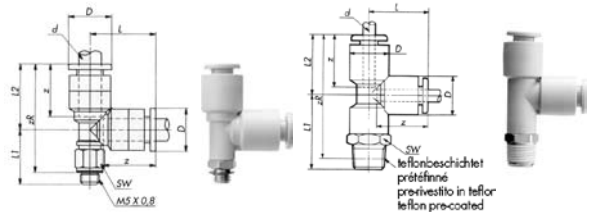
**FP 33750**

Type -d-R-d	Mat.-Nr.	SW	L	L1	D	zR	z	g/Stk
FP 33750-4-M5-4	TFP.337.0441	7	15.5	14.0	9.5	15.5	13.0	3.5
FP 33750-6-M5-6	TFP.337.0641	7	16.0	15.0	11.5	17.5	14.0	4.2
FP 33750-4-1/8-4	TFP.337.0411	10	18.0	22.0	10.4	23.0	16.0	13.0
FP 33750-6-1/8-6	TFP.337.0611	10	20.0	23.0	12.8	25.5	17.0	13.0
FP 33750-6-1/4-6	TFP.337.0612	14	20.0	27.0	12.8	27.5	17.0	21.0
FP 33750-6-3/8-6	TFP.337.0613	17	20.0	29.0	12.8	29.0	18.5	35.0
FP 33750-8-1/8-8	TFP.337.0811	12	23.0	24.5	15.2	28.0	18.5	15.0
FP 33750-8-1/4-8	TFP.337.0812	14	23.0	28.5	15.2	30.0	18.5	23.0
FP 33750-8-3/8-8	TFP.337.0813	17	23.0	30.5	15.2	31.5	18.5	37.0
FP 33750-10-1/4-10	TFP.337.1012	17	26.5	30.0	18.5	33.0	21.0	29.0
FP 33750-10-3/8-10	TFP.337.1013	17	26.5	32.0	18.5	34.5	21.0	39.0
FP 33750-12-1/4-12	TFP.337.1212	17	28.5	31.0	20.9	35.5	22.0	31.0
FP 33750-12-3/8-12	TFP.337.1213	17	28.5	33.0	20.9	37.0	22.0	41.0
FP 33750-12-1/2-12	TFP.337.1214	22	28.5	37.0	20.9	39.5	22.0	68.0

**L-Einschraubverbindung**

**Té mâle L**

**Male tee L**



**FP 33850**

Type -R-d-d	Mat.-Nr.	SW	L	L2	L1	D	zR	z	g/Stk
FP 33850-M5-4-4	TFP.338.0441	7	16.0	15.0	13.5	9.5	25.5	13.0	3.5
FP 33850-M5-6-6	TFP.338.0641	7	17.5	17.5	14.5	11.5	29.0	14.0	4.3
FP 33850-1/8-4-4	TFP.338.0411	10	18.0		22.0	10.4	36.0	16.0	13.0
FP 33850-1/8-6-6	TFP.338.0611	10	20.0		23.0	12.8	39.0	17.0	13.0
FP 33850-1/4-6-6	TFP.338.0612	14	20.0		27.0	12.8	41.0	17.0	21.0
FP 33850-3/8-6-6	TFP.338.0613	17	20.0		29.0	12.8	42.5	17.0	35.0
FP 33850-1/8-8-8	TFP.338.0811	12	23.0		24.5	15.2	43.5	18.5	15.0
FP 33850-1/4-8-8	TFP.338.0812	14	23.0		28.5	15.2	45.5	18.5	23.0
FP 33850-3/8-8-8	TFP.338.0813	17	23.0		30.5	15.2	47.0	18.5	37.0
FP 33850-1/4-10-10	TFP.338.1012	17	26.5		30.0	18.5	50.5	18.5	29.0
FP 33850-3/8-10-10	TFP.338.1013	17	26.5		32.0	18.5	52.0	18.5	39.0
FP 33850-1/4-12-12	TFP.338.1212	17	28.5		31.0	20.9	53.5	22.0	31.0
FP 33850-3/8-12-12	TFP.338.1213	17	28.5		33.0	20.9	55.0	22.0	41.0
FP 33850-1/2-12-12	TFP.338.1214	22	28.5		37.0	20.9	57.5	22.0	68.0

zR=Richtmass bei eingeschraubtem Gewinde  
T=teflonbeschichtet

zR=Dépassément après montage  
T=prétéfänné

zR=Reference dimensions after thread installation  
T=teflon pre-coated

Kunststoff flip

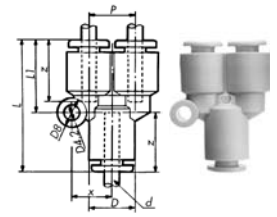
Plastique flip

Plastic flip

**Y-Verbindung**

**Y égal**

**Y-connector**



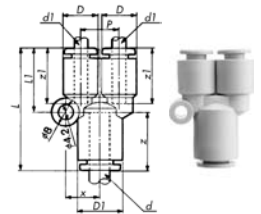
**FP 35050**

Type -d	Mat.-Nr.	L	LI	D1	P	X	z	g/Stk
FP 35050-4	TFP.350.0400	34.0	18.0	10.4	10.4	9.7	16.0	8.0
FP 35050-6	TFP.350.0600	37.0	20.0	12.8	12.8	11.7	17.0	10.0
FP 35050-8	TFP.350.0800	42.5	24.5	15.2	15.2	13.7	18.5	12.0
FP 35050-10	TFP.350.1000	48.0	27.5	18.5	18.5	16.1	21.0	16.0
FP 35050-12	TFP.350.1200	51.0	30.0	20.9	20.9	18.1	22.0	23.0

**Y-Verbindung reduziert**

**Y réduit**

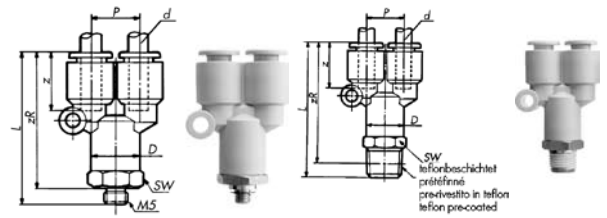
**Y-connector reduced**



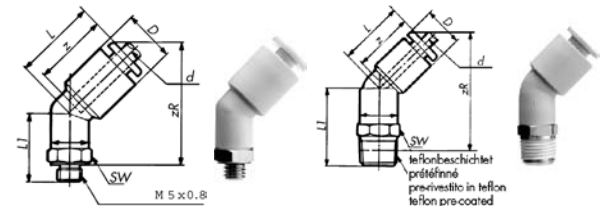
**FP 35050 RED.**

Type -d-d1	Mat.-Nr.	L	LI	D	D1	P	X	z1	z	g/Stk
FP 35050-6-4	TFP.350.0604	35.0	18.0	10.4	12.8	10.4	9.7	16.0	17.0	7.0
FP 35050-8-6	TFP.350.0806	39.5	20.0	12.8	15.2	12.8	11.7	17.0	18.5	12.0
FP 35050-10-8	TFP.350.1008	45.0	24.5	15.2	18.5	15.2	13.7	18.5	21.0	19.0
FP 35050-12-10	TFP.350.1210	49.0	27.5	18.5	20.9	18.5	16.1	21.0	22.0	27.0

**3F**

**Y-Einschraubverbindung**
**Y mâle**
**Y-connector male**

**FP 35150**

Type -d -R	Mat.-Nr.	SW	L	D	P	zR	z	g/Stk
FP 35150-4 M5	TFP.351.0441	11	39.5	10.4	10.4	36.0	16.0	4.0
FP 35150-6 M5	TFP.351.0641	13	42.5	12.8	12.8	39.0	17.0	13.0
FP 35150-4-1/8	TFP.351.0411	11	42.0	10.4	10.4	38.0	16.0	11.0
FP 35150-4-1/4	TFP.351.0412	14	46.0	10.4	10.4	40.0	16.0	20.0
FP 35150-6-1/8	TFP.351.0611	13	45.5	12.8	12.8	41.5	17.0	12.0
FP 35150-6-1/4	TFP.351.0612	14	49.0	12.8	12.8	43.0	17.0	22.0
FP 35150-6-3/8	TFP.351.0613	17	51.0	12.8	12.8	44.5	17.0	35.0
FP 35150-8-1/8	TFP.351.0811	17	52.5	15.2	15.2	48.5	18.5	16.0
FP 35150-8-1/4	TFP.351.0812	17	55.5	15.2	15.2	49.5	18.5	24.0
FP 35150-8-3/8	TFP.351.0813	17	56.5	15.2	15.2	50.0	18.5	36.0
FP 35150-10-1/4	TFP.351.1012	19	61.0	18.5	18.5	55.0	21.0	30.0
FP 35150-10-3/8	TFP.351.1013	19	62.0	18.5	18.5	55.5	21.0	40.0
FP 35150-12-3/8	TFP.351.1213	22	65.5	20.9	20.9	59.0	22.0	40.0

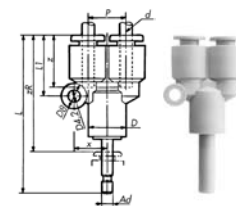
**Einschraubwinkel 45°**
**Coude mâle 45°**
**Male elbow 45°**

**FP 35250**

Type -d -R	Mat.-Nr.	SW	L	L1	D	zR	z	g/Stk
FP 35250-4 M5	TFP.352.0441	8	17.0	14.5	10.4	26.0	16.0	4.0
FP 35250-6 M5	TFP.352.0641	8	18.0	14.5	12.8	26.0	17.0	6.0
FP 35250-4-1/8	TFP.352.0411	10	17.0	20.5	10.4	32.0	16.0	10.0
FP 35250-4-1/4	TFP.352.0412	14	17.0	24.5	10.4	34.0	16.0	19.0
FP 35250-6-1/8	TFP.352.0611	10	18.0	20.5	12.8	33.0	17.0	12.0
FP 35250-6-1/4	TFP.352.0612	14	18.0	24.5	12.8	35.0	17.0	10.0
FP 35250-8-1/8	TFP.352.0811	12	20.5	22.0	15.2	37.0	18.5	13.0
FP 35250-8-1/4	TFP.352.0812	14	20.5	26.0	15.2	39.0	18.5	21.0
FP 35250-8-3/8	TFP.352.0813	17	20.5	28.0	15.2	40.5	18.5	35.0
FP 35250-10-1/4	TFP.352.1012	17	24.0	27.0	18.5	43.5	21.0	26.0
FP 35250-10-3/8	TFP.352.1013	17	24.0	29.0	18.5	45.0	21.0	36.0
FP 35250-12-3/8	TFP.352.1213	17	25.0	29.5	20.9	47.0	22.0	38.0
FP 35250-12-1/2	TFP.352.1214	22	25.0	33.5	20.9	49.5	22.0	65.0

**Y-Einsteckverbinder**

**Y enfichable**

**Y reduction union**

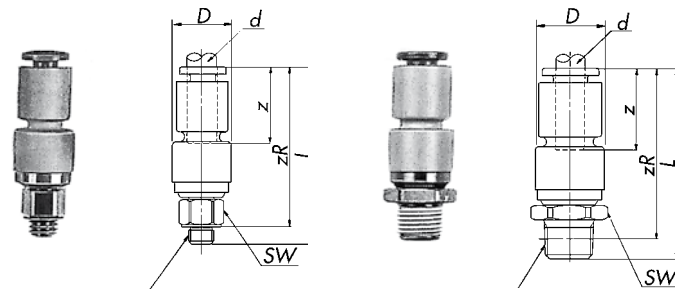


**FP 35650**

Type -d -Ad	Mat.-Nr.	L	L1	D	P	X	zR	z	g/Stk
FP 35650-4-A4	TFP.356.0404	51.5	18.0	10.4	10.4	9.7	35.5	16.0	12.0
FP 35650-6-A6	TFP.356.0606	55.5	20.0	12.8	12.8	11.7	38.5	17.0	19.0
FP 35650-8-A8	TFP.356.0808	65.5	24.5	15.2	15.2	13.7	46.0	18.5	22.0
FP 35650-10-A10	TFP.356.1010	71.5	27.5	18.5	18.5	16.1	50.5	21.0	26.0
FP 35650-12-A12	TFP.356.1212	75.5	30.0	20.9	20.9	18.1	53.5	22.0	32.0

**3F**

**Einschraubverbindung drehbar**  
**Union mâle rotatif**  
**Male connector rotary**



**FP 31950**

**Gleitlager**  
Ölprägnierter Kunststoff  
**Palier lisse**  
Matière plastique imprégnée d'huile  
**Slide bearing**  
Smooth operating and longer life are provided from an oil containing slide bearing

**Rillenkugellager**  
Kugelförmig aus Messing  
**Roulement rainuré à billes**  
Cage en laiton  
**Ball bearing**  
A ball bearing ensures low-torque rotation

**Einschraubteil** Messing vernickelt  
**Parti vissée** laiton nickelé  
**Stud** Threads are coated with a teflon based sealant for quick assembly

**Einsteck-Verbindung**  
**Raccord instantané**  
**Cassette**

**Spezialdichtung** NBR  
**Joint spécial** NBR  
**Rotary seal** A special rotary seal minimises friction while providing an excellent seal

**Holder** Messing vernickelt  
**Support** laiton nickelé  
**Holder** Standard electroless nickel plating allows copper-free applications

**Technische Daten / Données techniques / Technical notes:**

Medium / Fluide / Fluid	Druckluft / Air comprimé / Compressed air				
Arbeitsdruck / Pression de travail / Operating pressure max. [MPa]	1.0 (~ 10 bar)				
Arbeitsdruck / Pression de travail / Operating pressure min. [MPa]	- 0.0987				
Prüfdruck / Pression d'épreuve / Proof pressure [MPa]	3.0 (~ 30 bar)				
Umgebungstemperatur / Température ambiante / Ambient and fluid temperature [°C]	0 - 60				
Drehzahl / Vitesse / Permissible number of rotation min-1	Ø4	Ø6	Ø8	Ø10	Ø12
	500	500	400	300	250
Gewinde / Filetage / Thread	M5, M6 metrisch/métrique/metric, 1/8 - 1/2 konisch/conique/taper				

**Hinweise**

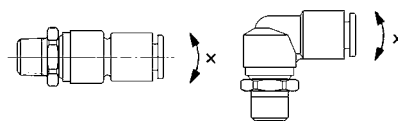
Da Miniaturkugellager verwendet werden, müssen die Querkräfte möglichst klein gehalten werden. In diesen Fällen wird empfohlen, Polyurethanschläuche einzusetzen.

**Remarque**

Etant donné que des roulements à billes miniatures sont utilisés, les forces transversales doivent être maintenues aussi faibles que possible. Dans ces cas, il est recommandé d'utiliser des tuyaux en polyuréthane.

**Caution**

Minimise the load shown below to protect the ball bearing. A flexible polyurethane tube is recommended.



Type	-d	-R	SW	D	L	*zR	z	**e	g
FP 31950 -4	-M5		8	12	36.5	33	16	2.5	9
FP 31950 -6	-M5		8	14	37.5	33.5	17	2.5	12
FP 31950 -4	-1/8		12	12	38	34	16	2.5	14
FP 31950 -6	-1/8		14	14	39.5	35.5	17	4	17
FP 31950 -6	-1/4		14	14	42.5	36	17	4	23
FP 31950 -8	-1/8		17	17	44	40	18.5	6	23
FP 31950 -8	-1/4		17	17	47	41	18.5	6	29
FP 31950 -8	-3/8		17	17	48	41.5	18.5	6	37
FP 31950 -10	-1/4		22	22	54	48	21	7	55
FP 31950 -10	-3/8		22	22	55	48.5	21	7	63
FP 31950 -10	-1/2		22	22	57.5	49.5	21	7	81
FP 31950 -12	-3/8		24	24	57	50.5	22	8	75
FP 31950 -12	-1/2		24	24	60	52	22	8	92

\*\* e = Min. ø

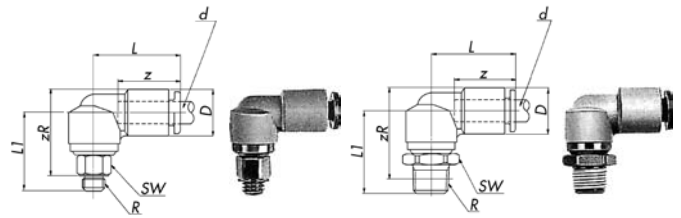
\* Richtmaß bei eingeschraubtem Gewinde

\*\* e = Min. ø

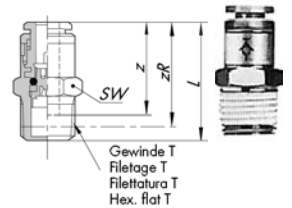
\* Dépassement après montage

\*\* e = Min. ø

\* Reference dimensions after thread installation

**Einschraubwinkel drehbar**
**Coude mâle rotatif**
**Male elbow connector rotary**

**FP 32950**

Type -d -R	Mat.-Nr.	SW	L	L1	D	zR	z	e	g/Stk
FP 32950-4-M5	TFP.329.0441	8	21.0	20.5	10.4	22.0	16.0	2.5	9.0
FP 32950-6 M5	TFP.329.0641	8	23.0	21.0	12.8	23.5	17.0	2.5	12.0
FP 32950-4-1/8	TFP.329.0411	12	21.0	22.0	10.4	23.5	16.0	2.5	14.0
FP 32950-6-1/8	TFP.329.0611	14	23.0	23.0	12.8	25.5	17.0	4.0	17.0
FP 32950-6-1/4	TFP.329.0612	14	23.0	26.0	12.8	26.5	17.0	4.0	23.0
FP 32950-8-1/8	TFP.329.0811	17	26.0	26.5	15.2	30.0	18.5	6.0	23.0
FP 32950-8-1/4	TFP.329.0812	17	26.0	29.5	15.2	31.0	18.5	6.0	29.0
FP 32950-8-3/8	TFP.329.0813	17	26.0	31.0	15.2	32.0	18.5	6.0	38.0
FP 32950-10-1/4	TFP.329.1012	22	31.5	34.0	18.5	37.5	21.0	7.0	56.0
FP 32950-10-3/8	TFP.329.1013	22	31.5	35.0	18.5	38.0	21.0	7.0	64.0
FP 32950-12-3/8	TFP.329.1213	24	34.0	36.5	20.9	40.5	22.0	8.0	76.0
FP 32950-12-1/2	TFP.329.1214	24	34.0	39.5	20.9	42.0	22.0	8.0	93.0

**3F**
**Einschraubverbindung mit Rückschlagventil**
**Union mâle avec auto obturant**
**Straight connector with non-return valve**

**FP 37350**

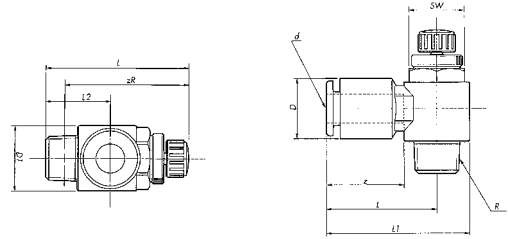
Type -d -R	Mat.-Nr.	SW	L	zR	z	g/Stk
FP 37350-4-1/8	TFP.373.0411	10	26.1	22.1	18.0	8.0
FP 37350-6-1/8	TFP.373.0611	12	37.4	33.4	19.0	16.0
FP 37350-6-1/4	TFP.373.0612	14	28.9	22.9	19.0	14.0
FP 37350-8-1/4	TFP.373.0812	14	45.7	39.7	21.5	27.0
FP 37350-10-1/4	TFP.373.1012	17	50.5	44.5	24.0	34.0

# Schwenkbares Drosselrückschlagventil

## Banjo à passage réglable

### Speed controller

**FP 37650**



**Technische Daten / Données techniques / Technical notes:**

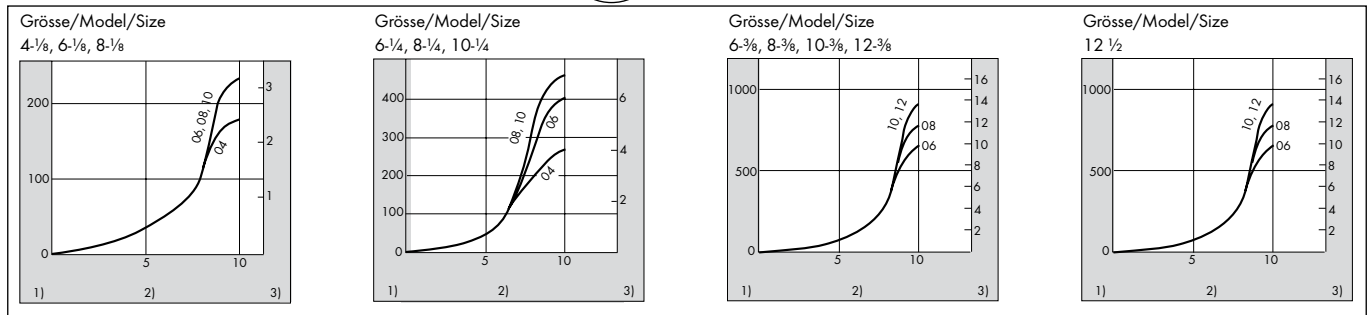
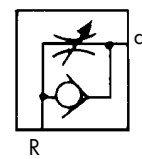
Medium / Fluide / Fluid	Druckluft gefiltert 10 µm, geölt oder ungeölt Air comprimé filtre à 10 microns avec ou sans huile Compressed air filtered 10 µm oiled or not
Anschluss / Raccordement / Stud	Teflon beschichtet / préteflonné / Teflon pre-coated
Aussengewinde / Filetage / Thread	R 1/8, R 1/4, R 3/8, R 1/2
Einstellbereich / Plage de réglage / Number of needle rotation	10 Umdrehungen / tours / turns
Prüfdruck / Pression d'épreuve / Proof pressure	1.5 MPa (~ 15-bar)
Betriebsdruckbereich / Pression d'utilisation / Operating pressure	0.1 - 1.0 MPa (~ 1 - 10-bar)
Betriebstemperaturbereich / Température / Ambient and fluid temperature	5 - 60 °C
Einbaulage / Position de montage / Built-in position	beliebig / quelconque / any

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Kostengünstige Montage</li> <li>• Hoher Durchfluss</li> <li>• Präzise Regulierbarkeit auch bei kleinem Durchfluss</li> <li>• 360° schwenkbar</li> <li>• Für Nylon- und Polyurethanschläuche geeignet</li> </ul> | <ul style="list-style-type: none"> <li>• Montage et démontage économique</li> <li>• Débit optimal</li> <li>• Grand précision de réglage même pour les petits débits</li> <li>• Orientable sur 360°</li> <li>• Utilisation pour tubes en nylon et polyuréthane</li> </ul> | <ul style="list-style-type: none"> <li>• Minimises installation time</li> <li>• Constant speed easily set</li> <li>• Speed may be accurately controlled even at low speed</li> <li>• Body swivels 360°</li> <li>• Accepts nylon and polyurethane tubing</li> </ul> |
|--|--|--|

FP 37650



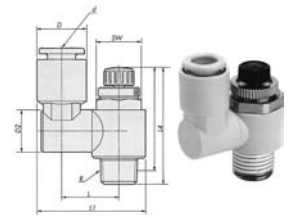
FP 37750



1) Volumenstrom / Débit / Air flow [l/min]      2) Anzahl Nadelumdrehungen / Nombre de tour de vis / Number of needle rotation      3) Aequ. Querschnitt / Section équivalente / Effective orifice [mm<sup>2</sup>]

**Durchfluss / Caractéristique de débit / Air flow**  
Eingangsdruck / Pression d'alimentation / Supply pressure 0.5 - MPa (~ 5 - bar)

Type	-d	-R	SW	D	D1	L	L1	L2	L3	zR	z	g
FP 37650	-4	-1/8	12	9.3	14.2	36.1	27.5	14.3	20.4	32.1	12.7	17
FP 37650	-6	-1/8	12	11.6	14.2	36.1	27.5	14.3	20.4	32.1	13.5	17
FP 37650	-6	-1/4	17	12.8	18.5	40.4	34.4	18.2	25.2	34.4	16.8	32
FP 37650	-6	-3/8	19	12.8	23	46.5	39.3	20.9	27.8	40	16.8	55
FP 37650	-8	-1/8	12	15.2	14.2	36.1	32.4	14.3	25.3	32.1	18.5	19
FP 37650	-8	-1/4	17	15.2	18.5	40.4	36.4	18.2	27.2	34.4	18.5	34
FP 37650	-8	-3/8	19	15.2	23	46.5	41	20.9	29.5	40	18.5	57
FP 37650	-10	-1/4	17	18.5	18.5	40.4	43.2	20	33.9	34.4	21	36
FP 37650	-10	-3/8	19	18.5	23	46.5	43.3	20.9	31.8	40	21	59
FP 37650	-12	-3/8	19	20.9	23	46.5	44.3	20.9	32.8	40	22	61
FP 37650	-12	-1/2	24	20.9	28.6	57.6	48.9	25.4	34.6	49.6	22	101

**360° schwenkbares Drosselrückschlagventil**
**360° banjo à passage réglable**
**360° swivel speed controller**

**FP 37750**

Type -d-R	Mat.-Nr.	SW	L	L1	L2	L3	L4	D1	D2	D	zR	z	g/Stk
FP 37750-4-1/8	TFP.377.0411	12	31.8	24.9	17.5	13.1	36.1	14.2	9.3	9.3	32.1	12.9	18.0
FP 37750-6-1/8	TFP.377.0611	12	37.2	26.9	22.9	14.0	36.1	14.2	10.9	11.6	32.1	13.7	18.0
FP 37750-6-1/4	TFP.377.0612	17	42.6	34.0	25.2	18.4	40.4	18.5	12.9	12.8	34.4	16.8	33.0
FP 37750-6-3/8	TFP.377.0613	19	46.1	38.5	25.2	20.6	46.5	23.0	12.9	12.8	40.0	16.8	56.0
FP 37750-8-1/8	TFP.377.0811	12	41.7	30.9	28.2	16.2	36.1	14.2	12.9	15.2	32.1	18.7	21.0
FP 37750-8-1/4	TFP.377.0812	17	45.6	35.2	28.2	18.3	40.4	18.5	12.9	15.2	34.4	18.7	36.0
FP 37750-8-3/8	TFP.377.0813	19	49.1	39.7	28.2	20.6	46.5	23.0	12.9	15.2	40.0	18.7	59.0
FP 37750-10-1/4	TFP.377.1012	19	54.4	43.7	32.6	23.0	48.8	23.0	16.2	18.5	42.8	20.8	67.0
FP 37750-10-3/8	TFP.377.1013	19	53.5	43.7	32.6	23.0	46.5	23.0	16.2	18.5	40.0	20.8	63.0
FP 37750-12-3/8	TFP.377.1213	19	55.3	44.9	34.4	23.0	46.5	23.0	16.2	20.9	40.0	21.8	65.0
FP 37750-12-1/2	TFP.377.1214	24	61.7	52.0	36.3	26.8	57.6	28.6	19.4	21.7	49.6	21.8	106.0

**3F**