

Low Pressure Steel Pipe Fittings (Equal Size Pipe Threads)

Tees / Caps / Plug / Round Nipples / Double Long Nipples / Hexagon Nipples

Low Pressure Steel Pipe Fittings – Tees

Type	Material	Surface Treatment
SGPPT	FCMB270	Hot Zinc Plating
SUTPT	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Caps

Type	Material	Surface Treatment
SGPPC	FCMB270	Hot Zinc Plating
SUTPC	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Plug

Type	Material	Surface Treatment
SGPPP	SWCH10R Equiv.	Trivalent Chromate
SUPPP	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Round Nipples

Type	Material	Surface Treatment
SGPNP	SGP	Hot Zinc Plating
SUTNP	304 Stainless Steel	—

Low Pressure Steel Pipe Fittings – Double Long Nipples

Type	Material	Surface Treatment
SGPNPR	SGP	Hot Zinc Plating
SUTNPR	304 Stainless Steel	—

Low Pressure Steel Pipe Fittings – Hexagon Nipples

Type	Material	Surface Treatment
SGPNR	FCMB270	Hot Zinc Plating
SUTNR	CF-8 Stainless Steel Cast	—
SUTNRS	CF-8M Stainless Steel Cast	—

Operating Conditions of Fittings

Fluid State	Max. Operating Pressure (MPa)
Steam / Air / Gas / Oil: Up to 300°C	1.0
Steam / Air / Oil / Pulsating Water: Up to 200°C	1.4
Static Flow Water: Up to 120°C	2.0

Part Number Example
 Part Number: **SGPPT8A**
 SGPPT8A - 75

*Pulsating Water is a stream of water that is generated under steady operating conditions and variation of pressure and flow rate occurs in cycles. (Except for transitional change).
 *Static Flow Water is a non-pulsating stream of water.
 *As fittings are cast products, () dimensions such as (D) and (L2) are for reference, not guaranteed.

Part Number	Rc (PT)	(D)	(L)	A	(D)	(L)	A
SGPPT							
6A	1/8	15	24.5	17	18	28	19
8A	1/4	19	28.5	19	22	30	19
10A	3/8	23	34.5	23	26	36	23
15A	1/2	27	40.5	27	30	42	27
20A	3/4	33	48.5	32	36	50	32
25A	1	41	58.5	38	44	60	38
32A	1 1/4	50	71	46	53	72.5	46
40A	1 1/2	56	76	48	60	78	48
50A	2	69	91.5	57	73	93.5	57

Part Number	Rc (PT)	(D)	L	(D)	L
SGPPC					
6A	1/8	19	14	18	16
8A	1/4	22	15	22	18
10A	3/8	23	17	26	20
15A	1/2	27	20	30	21
20A	3/4	33	24	36	24
25A	1	41	28	44	28
32A	1 1/4	50	30	53	30
40A	1 1/2	56	32	60	32
50A	2	69	36	73	36

Part Number	R (PT)	Square Size H	t	L	
SGPPP					
6A	1/8	7	7	16	16
8A	1/4	9	8	19	19
10A	3/8	12	9	21	21
15A	1/2	14	10	26	25
20A	3/4	17	11	29	28
25A	1	19	12	31	31
32A	1 1/4	23	13	35	35
40A	1 1/2	26	14	36	36
50A	2	32	15	41	41

*Shape of H Part: No.6A-50A = Square

Part Number	R (PT)	D	L	d	
SGPNP					
6A	1/8	10.5	24	6.5	6.5
8A	1/4	13.8	26	8.7	9.7
10A	3/8	17.3	28	12.1	13.1
15A	1/2	21.7	34	15.8	15.5
20A	3/4	27.2	38	21.6	21.3
25A	1	34.0	42	27.8	28.1
32A	1 1/4	42.7	50	35.9	35.8
40A	1 1/2	48.6	50	41.9	41.8
50A	2	60.5	58	53.2	53.6

Part Number	(L)	R (PT)	(D)		(d)		Available Types											
			SGPNPR	SUTNPR	SGPNR	SUTNR	L50	L75	L100	L125	L50	L75	L100	L125				
6A		1/8	10.5	—	6.2	—	•	•	•	•	•	•	•	•	•	•	•	
8A	50	1/4	13.4	13.8	9.2	9.4	•	•	•	•	•	•	•	•	•	•	•	
10A	75	3/8	17.4	17.3	12.9	12.7	•	•	•	•	•	•	•	•	•	•	•	
15A	100	1/2	21.9	21.7	16.5	16.1	•	•	•	•	•	•	•	•	•	•	•	
20A	125	3/4	27.2	27.2	21.5	21.4	•	•	•	•	•	•	•	•	•	•	•	

*The dimension D of SGPNPR has a tolerance of +0.5 mm.

Part Number	R (PT)	B	L		(ℓ)		d		Available Types											
			SGPNR	SUTNR	SGPNR	SUTNR	SGPNR	SUTNR	SUTNRS	1-9 pcs(s)	10-29 pcs.	1-19 pcs(s)	20-49 pcs.	1-19 pcs(s)	20-49 pcs.					
6A	1/8	14	32	32	11	11	5	5	5	•	•	•	•	•	•	•	•			
8A	1/4	17	34	34	12.5	13.5	7	7	6.8	•	•	•	•	•	•	•	•			
10A	3/8	21	36	36	13	13.5	9	9	9	•	•	•	•	•	•	•	•			
15A	1/2	26	43	42	16.5	18	13	13	13.2	•	•	•	•	•	•	•	•			
20A	3/4	32	48	47	18.5	19.5	18	16	15.8	•	•	•	•	•	•	•	•			
25A	1	38	52	52	20.5	20.5	24	22	21.7	•	•	•	•	•	•	•	•			
32A	1 1/4	46	56	56	22.5	22.5	32	30	30.1	•	•	•	•	•	•	•	•			
40A	1 1/2	54	60	60	23.5	23.5	37	35	—	•	•	•	•	•	•	•	•			
50A	2	63	66	66	25.5	25.5	48	47	—	•	•	•	•	•	•	•	•			

*Shape of B Part: No.6A-40A=Hex, 50A=Octagon. SUTNRS is not available for part type No. 40A and 50A.

Low Pressure Steel Pipe Fittings (Equal Size Pipe Threads)

Unions / Cross / Flange / Flange for Welding / Blind Flanged for Welding / 3-Way Elbow

Feature: These fittings can be removed by loosening the nuts, and thus, require no twist of pipes themselves.

Low Pressure Steel Pipe Fittings – Unions

Type	Material	Surface Treatment
SGPPU	FCMB270	Hot Zinc Plating
SUTPU	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Cross

Type	Material	Surface Treatment
SGPCS	FCMB270	Hot Zinc Plating
SUTCS	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Flange

Type	Material	Surface Treatment
SGPFR	FCMB270	Hot Zinc Plating
SUTFR	CF-8 Stainless Steel Cast	—

Low Pressure Steel Pipe Fittings – Flange for Welding

Type	Material
SGPFRW	1018 Carbon Steel or Equivalent
SUTFRW	304 Stainless Steel

Low Pressure Steel Pipe Fittings – Blind Flanged for Welding

Type	Material
SGPFRB	1018 Carbon Steel or Equivalent
SUTFRB	304 Stainless Steel

Low Pressure Steel Pipe Fittings – 3-Way Elbow

Type	Material	Surface Treatment
SGSTL	FCMB270	Hot Zinc Plating

Part Number Example
 Part Number: **SGPFR15A**

Check out misumiusa.com for the most current pricing and lead time.

Part Number	Rc (PT)	B ₁	(L)	(A)	B	B ₁	(L)	(A)	B
SGPPU									
6A	1/8	15	30	13	25	14	30	13	25
8A	1/4	19	33.5	13.5	31	18	33.5	13.5	31
10A	3/8	23	38	16	37	22	37.5	16	37
15A	1/2	27	41	17	42	26	40.5	17	42
20A	3/4	33	51	18.5	49	32	42.5	17	50
25A	1	41	54	20	59	41	51	20	59

*Shape of B₁ Part: SUTPU6A / 8A: 2-Flat / SUTPU10A, 15A: Hex / SUTPU20A / 25A: Octagon / SGPPU: Octagon

Part Number	Rc (PT)	(D)	L	(D)	L
SGPPU					
8A	1/4	19	19	22	19
10A	3/8	23	23	26	23
15A	1/2	27	27	30	27
20A	3/4	33	32	36	32
25A	1	41	38	44	38

Part Number	Rc (PT)	D	(T)	(t)	(B)	(f)	(g)	P.C.D.	d	Applicable Bolt Diameter
15A	1/2	95	18	12	38	1	51	70	15	M12
20A	3/4	100	19	14	42	1	56	75	15	M12
25A	1	125	23	14	49	1	67	90	19	M16
32A	1 1/4	135	25	16	64	2	76	100	19	M16
40A	1 1/2	140	25	16	68	2	81	105	19	M16
50A	2	155	29	16	82	2	96	120	19	M16

Part Number	Rc (PT)	D	(T)	(t)	(B)	P.C.D.	d	Applicable Bolt Diameter
15A	1/2	95	16	12	30	70	15	M12
20A	3/4	100	20	14	36	75	15	M12
25A	1	125	20	14	44	90	19	M16
32A	1 1/4	135	22	16	53	100	19	M16
40A	1 1/2	140	24	16	60	105	19	M16
50A	2	155	24	16	73	120	19	M16

Part Number	D	(T)	P.C.D.	d	d ₁	Applicable Bolt Diameter
10A	90	12	65	15	17.8	M12
15A	95	12	70	15	22.2	M12
20A	100	14	75	15	27.7	M12
25A	125	14	90	19	34.5	M16

Part Number	D	(T)	P.C.D.	d	Applicable Bolt Diameter
10A	90	12	65	15	M12
15A	95	12	70	15	M12
20A	100	14	75	15	M12
25A	125	14	90	19	M16

Part Number	Rc (PT)	(D)	A
15A	1/2	27	27
20A	3/4	33	32
25A	1	41	38


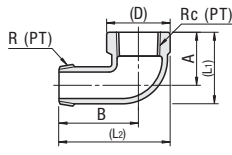

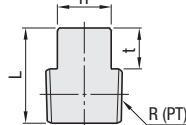

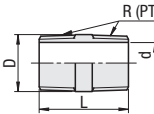

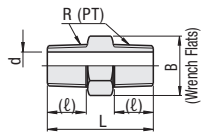

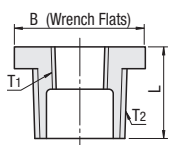
Operating Conditions of Fittings

Fluid State	Max. Operating Pressure Mpa
Steam / Air / Gas / Oil: Up to 300°C	1.0</

Low Pressure Steel Pipe Fittings (With Seal Coating)

Female / Male Elbow / Plug / Round Nipples / Hexagon Nipples / Bushings

Feature: Male threads are coated. Provides immediate out of the box operation.

<p>Low Pressure Steel Pipe Fittings – Female / Male Elbow</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGCEL</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUCEL</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>Allowable temperature: 150°C</p>	Type	Material	Surface Treatment	SGCEL	FCMB270	Hot Zinc Plating	SUCEL	CF-8 Stainless Steel Cast	—
Type	Material	Surface Treatment								
SGCEL	FCMB270	Hot Zinc Plating								
SUCEL	CF-8 Stainless Steel Cast	—								
<p>Low Pressure Steel Pipe Fittings – Plug</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGCPP</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUCPP</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>Allowable temperature: 150°C</p>	Type	Material	Surface Treatment	SGCPP	FCMB270	Hot Zinc Plating	SUCPP	CF-8 Stainless Steel Cast	—
Type	Material	Surface Treatment								
SGCPP	FCMB270	Hot Zinc Plating								
SUCPP	CF-8 Stainless Steel Cast	—								
<p>Low Pressure Steel Pipe Fittings – Round Nipples</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGCNP</td><td>SGP</td><td>Hot Zinc Plating</td></tr> <tr><td>SUCNP</td><td>304 Stainless Steel</td><td>—</td></tr> </table>  <p>Allowable temperature: 150°C</p>	Type	Material	Surface Treatment	SGCNP	SGP	Hot Zinc Plating	SUCNP	304 Stainless Steel	—
Type	Material	Surface Treatment								
SGCNP	SGP	Hot Zinc Plating								
SUCNP	304 Stainless Steel	—								
<p>Low Pressure Steel Pipe Fittings – Hexagon Nipples</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGCNR</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUCNR</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>Allowable temperature: 150°C</p>	Type	Material	Surface Treatment	SGCNR	FCMB270	Hot Zinc Plating	SUCNR	CF-8 Stainless Steel Cast	—
Type	Material	Surface Treatment								
SGCNR	FCMB270	Hot Zinc Plating								
SUCNR	CF-8 Stainless Steel Cast	—								
<p>Low Pressure Steel Pipe Fittings – Bushings</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGCPB</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUCPB</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>Allowable temperature: 150°C</p>	Type	Material	Surface Treatment	SGCPB	FCMB270	Hot Zinc Plating	SUCPB	CF-8 Stainless Steel Cast	—
Type	Material	Surface Treatment								
SGCPB	FCMB270	Hot Zinc Plating								
SUCPB	CF-8 Stainless Steel Cast	—								

Part Number		R Rc (PT)	(D)	(L ₁)	(L ₂)	A	B	(D)	(L ₁)	(L ₂)	A	B	
Type	No.	SGCEL						SUCEL					
		6A	1/8	19	23	36	17	26	14.5	22	33	17	26
		8A	1/4	22	26	42	19	30	21	26	41	19	30
		10A	3/8	27	31	48	23	35	25	32	48	23	35
		15A	1/2	31	38	56	27	40	29	38	55	27	40
		20A	3/4	36	45	66	32	47	36	46	65	32	47
25A	1	45	55	76.5	38	54	44	55	76	38	54		

Part Number		R (PT)	Square Size H	t	L		
Type	No.	SGCPP		SUCPP			
		6A	1/8	7	7	16	16
		8A	1/4	9	8	19	19
		10A	3/8	12	9	21	21
		15A	1/2	14	10	26	25
		20A	3/4	17	11	29	28
25A	1	19	12	31	31		

Part Number		R (PT)	D	L	d		
Type	No.	SGCNP		SUCNP			
		6A	1/8	10.5	24	6.5	6.5
		8A	1/4	13.8	26	8.7	9.7
		10A	3/8	17.3	28	12.1	13.1
		15A	1/2	21.7	34	15.8	15.5
		20A	3/4	27.2	38	21.6	21.3
25A	1	34	42	27.8	28.1		

Part Number		R (PT)	B	L		(ℓ)	d			
Type	No.	SGCNR		SUCNR		SGCNR	SUCNR			
		8A	1/4	17	34	34	12.5	12	7	7
		10A	3/8	21	36	36	13	13	9	9
		15A	1/2	26	43	42	16.5	16	13	13
		20A	3/4	32	48	47	18.5	18	18	16
		25A	1	38	52	52	20	20	24	22


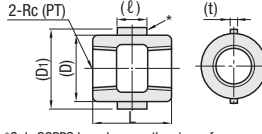

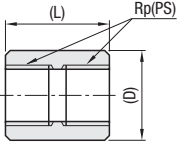

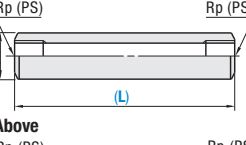
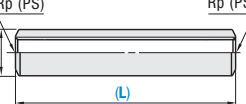

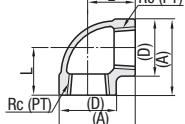

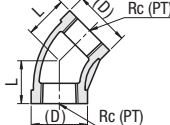

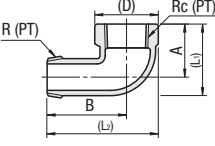
Part Number		Rc (PT)	R (PT)	L	B	
Type	No.	T ₁	T ₂			
		12	1/8	1/4	17	17
		13	1/8	3/8	18	21
		23	1/4	3/8	18	21
		24	1/4	1/2	21	26
		34	3/8	1/2	21	26
		36	3/8	3/4	24	32
46	1/2	3/4	24	32		

CAUTIONS

- Not applicable to steam plumbing.
- Once fittings are used, the function of the thread coating resin is impaired. Thus, wrap seal tape around fittings before use.

Low Pressure Steel Pipe Fittings (Equal Size Pipe Threads)

Socket / Parallel Tapped (PS) Socket / Long Sockets / Elbow / 45° Elbow / Female / Male Elbow

<p>Low Pressure Steel Pipe Fittings – Socket</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGPPS</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUTPS</td><td>304 Stainless Steel</td><td>—</td></tr> <tr><td>SUTPSS</td><td>316 Stainless Steel</td><td>—</td></tr> </table>  <p>RoHS 10</p> <p>*Only SGPPS has claws on the circumference.</p>	Type	Material	Surface Treatment	SGPPS	FCMB270	Hot Zinc Plating	SUTPS	304 Stainless Steel	—	SUTPSS	316 Stainless Steel	—
Type	Material	Surface Treatment											
SGPPS	FCMB270	Hot Zinc Plating											
SUTPS	304 Stainless Steel	—											
SUTPSS	316 Stainless Steel	—											
<p>Low Pressure Steel Pipe Fittings – Parallel Tapped (PS) Socket</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGPRP</td><td>Carbon Steel Pipes</td><td>Zinc Electroplating</td></tr> <tr><td>SUTRP</td><td>304 Stainless Steel</td><td>—</td></tr> </table>  <p>RoHS 10</p>	Type	Material	Surface Treatment	SGPRP	Carbon Steel Pipes	Zinc Electroplating	SUTRP	304 Stainless Steel	—			
Type	Material	Surface Treatment											
SGPRP	Carbon Steel Pipes	Zinc Electroplating											
SUTRP	304 Stainless Steel	—											
<p>Low Pressure Steel Pipe Fittings – Long Sockets</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SUTPSR</td><td>304 Stainless Steel</td><td>—</td></tr> </table> <p>No. 6A, 8A, 10A-75</p>  <p>Other Than Above</p>  <p>RoHS 10</p>	Type	Material	Surface Treatment	SUTPSR	304 Stainless Steel	—						
Type	Material	Surface Treatment											
SUTPSR	304 Stainless Steel	—											
<p>Low Pressure Steel Pipe Fittings – Elbow</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGPPE</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUTPE</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> <tr><td>SUTPES</td><td>CF-8M Stainless Steel Cast</td><td>—</td></tr> </table>  <p>RoHS 10</p>	Type	Material	Surface Treatment	SGPPE	FCMB270	Hot Zinc Plating	SUTPE	CF-8 Stainless Steel Cast	—	SUTPES	CF-8M Stainless Steel Cast	—
Type	Material	Surface Treatment											
SGPPE	FCMB270	Hot Zinc Plating											
SUTPE	CF-8 Stainless Steel Cast	—											
SUTPES	CF-8M Stainless Steel Cast	—											
<p>Low Pressure Steel Pipe Fittings – 45° Elbow</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGPHE</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUTHE</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>RoHS 10</p>	Type	Material	Surface Treatment	SGPHE	FCMB270	Hot Zinc Plating	SUTHE	CF-8 Stainless Steel Cast	—			
Type	Material	Surface Treatment											
SGPHE	FCMB270	Hot Zinc Plating											
SUTHE	CF-8 Stainless Steel Cast	—											
<p>Low Pressure Steel Pipe Fittings – Female / Male Elbow</p> 	<table border="1"> <tr><th>Type</th><th>Material</th><th>Surface Treatment</th></tr> <tr><td>SGPEL</td><td>FCMB270</td><td>Hot Zinc Plating</td></tr> <tr><td>SUTPEL</td><td>CF-8 Stainless Steel Cast</td><td>—</td></tr> </table>  <p>RoHS 10</p>	Type	Material	Surface Treatment	SGPEL	FCMB270	Hot Zinc Plating	SUTPEL	CF-8 Stainless Steel Cast	—			
Type	Material	Surface Treatment											
SGPEL	FCMB270	Hot Zinc Plating											
SUTPEL	CF-8 Stainless Steel Cast	—											

Part Number Example: SGPT8A - L
SGPNR8A - 75

Part Number		Rc (PT)	(D)	L	(D ₁)	(ℓ)	(t)	(D)	L	Available Types					
Type	No.	SGPPS								SUTPS / SUTPSS					
		6A	1/8	15	22	19	13	4	15	23	•	•	•	•	•
		8A	1/4	19	25	22	17	4	19	29	•	•	•	•	•
		10A	3/8	23	30	27	18	5	22	30	•	•	•	•	•
		15A	1/2	27	35	31	20	6	27	38	•	•	•	•	•
		20A	3/4	33	40	37	24	6	33	40	•	•	•	•	•
		25A	1	41	45	46	25	8	40	45	•	•	•	•	•
		32A	1 1/4	50	50	54	28	8	49	51	•	•	•	•	•
		40A	1 1/2	56	55	61	32	9	55.5	54	•	•	•	•	•
		50A	2	69	60	75	34	9	68	64	•	•	•	•	•

SUTPSS is not available for part type No. 6A, 32A, 40A and 50A.

Part Number		Rp (PS)	(D)	(L)	(D)	(L)	
Type	No.	SGPRP		SUTRP			
		6A	1/8	15	19	13.8	20
		8A	1/4	19	27	17	25
		10A	3/8	23	28	21	26
		15A	1/2	28	37	25	33
		20A	3/4	34.5	39	31	36
25A	1	41.5	46	38	43		
32A	1 1/4	51	51	47	48		

Part Number		(L)	Rp (PS)	(D)
Type	No.	50	1/8	15
			1/4	19
			3/8	23
			1/2	26.5
			3/4	33

Part Number		Rc (PT)	(D)	L	(A)	(D)	L	(A)	Available Types					
Type	No.	SGPPE								SUTPE / SUTPES				
		6A	1/8	15	17	24.5	18	19	28	•	•	•	•	•
		8A	1/4	19	19	28.5	22	19	30	•	•	•	•	•
		10A	3/8	23	23	35	26	23	36	•	•	•	•	•
		15A	1/2	27	27	41	30	27	42	•	•	•	•	•
		20A	3/4	33	32	49	36	32	50	•	•	•	•	•
		25A	1	41	38	59.5	44	38	60	•	•	•	•	•
		32A	1 1/4	50	46	71.5	53	46	72.5	•	•	•	•	•
		40A	1 1/2	56	48	76.5	60	48	78	•	•	•	•	•
		50A	2	69	57	92	73	57	93.5	•	•	•	•	•

SUTPES is not available for part type No. 32A, 40A and 50A.

Part Number		Rc (PT)	(D)	L	(D)	L	
Type	No.	SGPHE		SUTHE			
		6A	1/8	18	16	17	16
		8A	1/4	22	17	21	17
		10A	3/8	23	19	25	19
		15A	1/2	27	21	28	21
20A	3/4	33	25	35	25		
25A	1	41	29	42	29		

Part Number		R / Rc (PT)	(D)	(L ₁)	(L ₂)	A	B	(D)	(L ₁)	(L ₂)	A	B	
Type	No.	SGPEL						SUTPEL					
		6A	1/8	18	23	35	17	26	14.5	22	33	17	26
		8A	1/4	22	26	41	19	30	19	24.3	39.5	19	30
		10A	3/8	26	31	48	23	35	23	29.8	46.5	23	35
		15A	1/2	30	38	55	27	40	27	35.8	53.5	27	40
		20A	3/4	36	45	65	32	47	33	43.3	63.5	32	47
		25A	1	44	55	76	38	54	41	52.5	74.5	38	54
		32A	1 1/4	53	67	88.5	46	62	50	64	87	46	62
		40A	1 1/2	60	72	98	48	68	56	68.5	96	48	68
		50A	2	73	87	115.5	57	79	69	83	113.5	57	79