

SPX quick coupling

Hydraulic | High pressure



Quick, clean-break connections for high pressure hydraulic circuits



Connection under residual pressure option







Dust protection option

Colour option on panel mounting versions

Clean-break

Flush-face, non-spill technology for the efficient protection of hydraulic circuits and the working environment:

- No pollution of hydraulic circuits due to penetration by external agents.
- No pollution of the working environment due to spillage of hydraulic fluid.

Easy connection

A large guiding cone on the front face of the socket plays an important role in precentring the plug for "blind" connection.

Performant design

With a particularly robust locking, the SPX range ensures a reliable connection even in harsh environments.

Ergonomic and automatic

The ergonomic shape of the socket sleeve provides a good grip for disconnection. Connection and disconnection are done one-handed.

3D models

Available on request, for a perfect connection integration in projects from their conception.

Applications

High pressure hydraulic circuits connections.



The opportunity to spend less and contribute to a sustainable development programme

With Stäubli rely on:

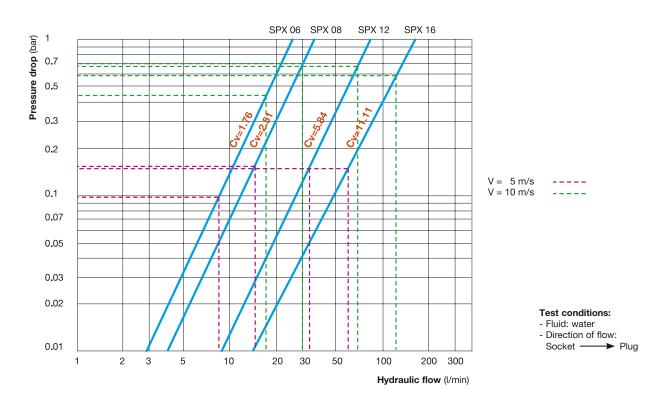
- the performance of the equipment,
- reliability of long-term investments,
- no workplace pollution.

Technical characteristics

		SPX 06	SPX 08	SPX 12	SPX 16
Nominal diameter DN (mm)		6	8	12	16
Maximum allowable pressur	e PS (bar)	450	450	350	350
Shut-off	double	→ + ←	→ + ←	->+ < ←	->+
Flow (I/min) for speed 5 m/s	8.5	15	34	60	
Flow (I/min) for speed 10 m/s	17	30	68	120	
Maximum allowable residual with socket under residual p Socket SPX xx /PA -> Plug SR	ressure (bar)	-	150	150	150
Maximum allowable residual with plug under residual pre Plug SPX xx /PA -> Socket Si	40	90	35	60	

For a fluid speed comprised between 5 and 10 m/s, the max. allowable temperature must not exceed 60 °C.

Hydraulic flow rate / pressure drop charts





Options

	Description	Code *	Allowable tempe		Construction					
			Minimum	Maximum						
Construction	Standard	no code			High mechanical strength stainless steel					
Construction	Corrosive environment	IB			High mechanical strength and high corrosion resistance stainless steel					
	Oils - greases	no code	- 15	+ 100	Nitrile (NBR)					
Tightness		JV	- 10	+ 150	Fluorocarbon (FPM)					
	Skydrol ®	41B8	- 15	+ 150	Ethylene-Propylene (EPDM)					
	Important! It is strongly recommended not to use or bring EPDM seals into contact with fluids of mineral origin (oil, grease, etc).									
Connection under pressure	Residual pressure relief device	Brass Stainless steel								
under pressure	The min. and max. temperatur	es depends on the	e seals selected previo	ously.						
0-1	Colourless	no code								
Colour	Red	KR								
identification	Blue	КВ								
Protective	Standard	no code	- 20	+ 100	Chloroprene (CR) and POM					
dust caps	Metallic red	BMR	- 30	+ 150	OAD aluminum and stainless steel cable					
Dust	Protector	PP **	- 10	+ 150	Fluorocarbon (FPM)					
protection	. 10100101		10	, 100	riadiodalbori (i i ivi)					
					DACC and stainly and stail					
Safety locking	Safety sleeve	VS **	- 20	+ 100	PA66 and stainless steel cable					
	Socket side only.									
	<u> </u>									

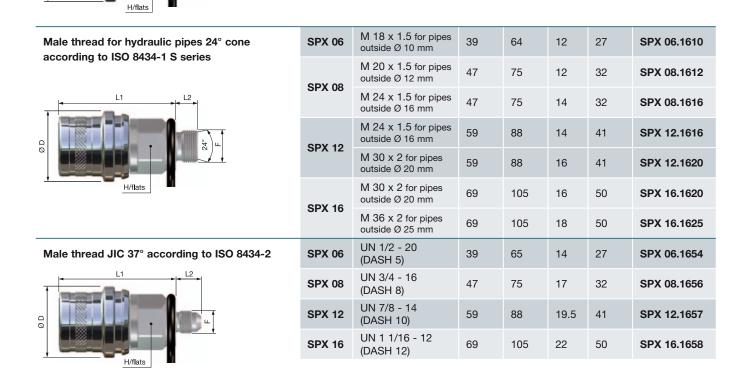
 $^{^{\}star}\,$ Add the option codes to the part-numbers (pages 6 to 10). Example: SPX 08.1103/JV/PA/BMR.

 $^{^{\}star\star}$ PP and VS options cannot be combined and are only available for Mono versions.

Part numbers

Sockets

Description	Model	Fitting or	Dime	nsions (mr	Dark combine		
Description	Model	Fitting	ØD	L1	L2	H/flats	Part numbers
Female thread		G 3/8	39	77		27	SPX 06.1102
L1 .	SPX 06	NPT 3/8	39	75		27	SPX 06.1202
		UN 9/16-18 (a)	39	77		27	SPX 06.1314
		G 1/2	47	90		32	SPX 08.1103
	SPX 08	NPT 1/2	47	88		32	SPX 08.1203
		UN 3/4-16 (a)	47	88		32	SPX 08.1319
H/flats dust cap strip		G 3/4	59	103		41	SPX 12.1104
- Trillates	SPX 12	NPT 3/4	59	99		41	SPX 12.1204
		UN 1 1/16-12 (a)	59	104		41	SPX 12.1327
		G 3/4	69	117		50	SPX 16.1104
		G 1	69	119.5		50	SPX 16.1105
		NPT 3/4	69	114		50	SPX 16.1204
		NPT 1	69	120		50	SPX 16.1205
(a) UN thread according to SAE J 1926-1		UN 1 5/16-12 (a)	69	119		50	SPX 16.1333
BSP male thread with 60° cone and sealing	SPX 06	G 3/8	39	66.5	12	27	SPX 06.1152
with front O-ring seal	SPX 08	G 1/2	47	76	14	32	SPX 08.1153
L1 L2	SPX 12	G 3/4	59	90	16	41	SPX 12.1154
	SPX 16	G 3/4	69	105	16	50	SPX 16.1154

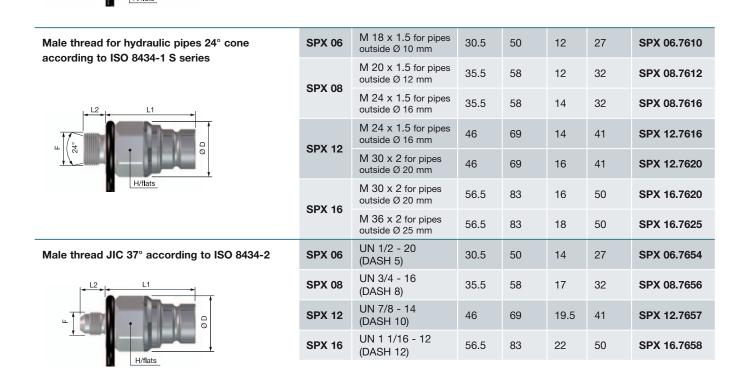


All sockets are delivered as standard with a protective dust cap.



Plugs

Description	Model	Fitting	Dimen	sions (m	m)		Part numbers
Description	Model	Fitting	ØD	L1	L2	H/flats	Fait Hullibers
Female thread		G 3/8	30.5	62		27	SPX 06.7102
	SPX 06	NPT 3/8	30.5	60		27	SPX 06.7202
<u>L1</u>		UN 9/16-18 (a)	30.5	62		27	SPX 06.7314
		G 1/2	35.5	73		32	SPX 08.7103
u 0 0	SPX 08	NPT 1/2	35.5	70		32	SPX 08.7203
<u> </u>		UN 3/4-16 (a)	35.5	70		32	SPX 08.7319
dust cap strip H/flats	SPX 12	G 3/4	46	84		41	SPX 12.7104
		NPT 3/4	46	80		41	SPX 12.7204
		UN 1 1/16-12 (a)	46	85		41	SPX 12.7327
	SPX 16	G 3/4	56.5	94		50	SPX 16.7104
		G 1	56.5	97		50	SPX 16.7105
		NPT 3/4	56.5	91		50	SPX 16.7204
(a) UN thread according to SAE J 1926-1		NPT 1	56.5	97		50	SPX 16.7205
		UN 1 5/16-12 (a)	56.5	97		50	SPX 16.7333
BSP male thread with 60° cone and sealing	SPX 06	G 3/8	30.5	52	12	27	SPX 06.7152
with front O-ring seal	SPX 08	G 1/2	35.5	59	14	32	SPX 08.7153
. L2 . L1 .	SPX 12	G 3/4	46	71	16	41	SPX 12.7154
+ L 1 + + + + + + + + + + + + + + + + +	SPX 16	G 3/4	56.5	83	16	50	SPX 16.7154



All plugs are delivered as standard with a protective dust cap.

Part numbers

Panel mounted sockets - Mono version

Panel mounted sockets - Mo	no vers	sion						
Bassisian	Model	Fishing a	Dime	ension	s (mm)			Doub words and
Description	Model	Fitting 	ØD	L1	L2	L3	H/flats	Part numbers
Plates fitted with a socket female thread		G 3/8	39	44	33.5		27	SPX 06.2102
L1 L2	SPX 06	NPT 3/8	39	44	31.5		27	SPX 06.2202
		UN 9/16-18 (a)	39	44	33.5		27	SPX 06.2314
-		G 1/2	47	50	40.5		32	SPX 08.2103
00	SPX 08	NPT 1/2	47	50	38		32	SPX 08.2203
- ·		UN 3/4-16 (a)	47	50	38		32	SPX 08.2319
dust cap strip H/flats		G 3/4	59	58	45.5		41	SPX 12.2104
	SPX 12	NPT 3/4	59	58	41.5		41	SPX 12.2204
Dimensions (mm) Model A B Max. panel Panel dilling (UN 1 1/16-12 (a)	59	58	46		41	SPX 12.2327
A B thickness drilling Ø		G 3/4	69	68	49		50	SPX 16.2104
SPX 08 53 40 10 37.5		G 1	69	68	52		50	SPX 16.2105
SPX 12 65 52 10 48 SPX 16 70 57 10 58	SPX 16	NPT 3/4	69	68	46		50	SPX 16.2204
(a) UN thread according to SAE J 1926-1		NPT 1	69	68	52		50	SPX 16.2205
		UN 1 5/16-12 (a)	69	68	51		50	SPX 16.2333
Plates fitted with a socket BSP male thread	SPX 06	G 3/8	39	44	22.8	12	27	SPX 06.2152
with 60° cone and sealing with front O-ring seal	SPX 08	G 1/2	47	50	26.5	14	32	SPX 08.2153
L1 + L2 + L3 +	SPX 12	G 3/4	59	58	32.5	16	41	SPX 12.2154
	SPX 16	G 3/4	69	68	37.5	16	50	SPX 16.2154
Plates fitted with a socket male thread	SPX 06	M 18 x 1.5 for pipes	39	44	21	12	27	SPX 06.2610
for hydraulic pipes 24° cone	3FX 00	outside Ø 10 mm M 20 x 1.5 for pipes						
according to ISO 8434-1 S series	SPX 08	outside Ø 12 mm M 24 x 1.5 for pipes	47	50	25.5 25.5	12	32	SPX 08.2612 SPX 08.2616
		outside Ø 16 mm M 24 x 1.5 for pipes	59	58	30.5	14	41	SPX 12.2616
242	SPX 12	outside Ø 16 mm M 30 x 2 for pipes outside Ø 20 mm	59	59	30.5	16	41	SPX 12.2620
H/flats		M 30 x 2 for pipes outside Ø 20 mm	69	68	37.5	16	50	SPX 16.2620
	SPX 16	M 36 x 2 for pipes outside Ø 25 mm	69	68	37.5	18	50	SPX 16.2625
Plates fitted with a socket male thread JIC 37° according to ISO 8434-2	SPX 06	UN 1/2 - 20 (DASH 5)	39	44	21	14	27	SPX 06.2654
L1	SPX 08	UN 3/4 - 16 (DASH 8)	47	50	25.5	17	32	SPX 08.2656

UN 7/8 - 14

(DASH 10) UN 1 1/16 - 12

(DASH 12)

59

69

68

37

30.5 19,5 41

22

50

SPX 12.2657

SPX 16.2658

SPX 12

SPX 16

All sockets are delivered as standard with a protective dust cap.

Panel mounted plugs - Mono version

			_									
Description						Model	Fitting	Dimer	sions (m			Part numbers
								ØD	L1	L2	H/flats	
Plates fitted v	vith a pl	ug fe	ema	le thread		SPX 06	G 3/8	29	33.5		27	SPX 06.5102
L2	• •	L1	-				NPT 3/8	29	31.5		27	SPX 06.5202
							UN 9/16-18 (a)	29	33.5		27	SPX 06.5314
-							G 1/2	33	40.5		32	SPX 08.5103
ш	1 14	Ŋ.				SPX 08	NPT 1/2	33	38		32	SPX 08.5203
-		-					UN 3/4-16 (a)	33	38		32	SPX 08.5319
H/flats		du	st cap	strip			G 3/4	39.5	45.5		41	SPX 12.5104
						SPX 12	NPT 3/4	39.5	41.5		41	SPX 12.5204
	Nodel Dimensions (mm) A B Max. panel drilling Ø		Panel		UN 1 1/16-12 (a)	39.5	46.5		41	SPX 12.5327		
< m				_		G 3/4	46	49		50	SPX 16.5104	
	SPX 08	53	40	10	37.5		G 1	46	52		50	SPX 16.5105
BA	SPX 12 SPX 16	65 70	52 57	10	48 58	SPX 16	NPT 3/4	46	46		50	SPX 16.5204
1+	(a)) UN t	hreac	d according to	SAE J 1926-1		NPT 1	46	52		50	SPX 16.5205
							UN 1 5/16-12 (a)	46	51		50	SPX 16.5333
Plates fitted v	vith a nl	ua F	SP	male thre	ad	SPX 06	G 3/8	29	23	12	27	SPX 06.5152
with 60° cone		_				SPX 08	G 1/2	33	26.5	14	32	SPX 08.5153
L3 L	2	L1	-			SPX 12	G 3/4	39.5	32.5	16	41	SPX 12.5154
					(6)	SPX 16	G 3/4	46	37.5	16	50	SPX 16.5154
H/flats												

H/IIats							
Plates fitted with a plug male thread for hydraulic pipes 24° cone	SPX 06	M 18 x 1.5 for pipes outside Ø 10 mm	29	21	12	27	SPX 06.5610
according to ISO 8434-1 S series	SPX 08	M 20 x 1.5 for pipes outside Ø 12 mm	33	25.5	12	32	SPX 08.5612
L3 L2 L1	3FA 00	M 24 x 1.5 for pipes outside Ø 16 mm	33	25.5	14	32	SPX 08.5616
	SPX 12	M 24 x 1.5 for pipes outside Ø 16 mm	39.5	30.5	14	41	SPX 12.5616
F 65	5PA 12	M 30 x 2 for pipes outside Ø 20 mm	39.5	30.5	16	41	SPX 12.5620
H/flats	SPX 16	M 30 x 2 for pipes outside Ø 20 mm	46	37.5	16	50	SPX 16.5620
_	3FA 10	M 36 x 2 for pipes outside Ø 25 mm	46	37.5	18	50	SPX 16.5625
Plates fitted with a plug male thread JIC 37° according to ISO 8434-2	SPX 06	UN 1/2 - 20 (DASH 5)	29	21	14	27	SPX 06.5654
L3 L2 L1	SPX 08	UN 3/4 - 16 (DASH 8)	33	25.5	17	32	SPX 08.5656
	SPX 12	UN 7/8 - 14 (DASH 10)	39.5	30,5	19.5	41	SPX 12.5657
<u> </u>	SPX 16	UN 1 1/16 - 12 (DASH 12)	46	37.5	22	50	SPX 16.5658
		(DASH 12)					

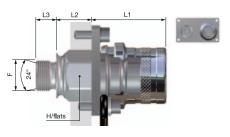
All plugs are delivered as standard with a protective dust cap.

Part numbers

Panel mounted sockets and plugs - Duo version

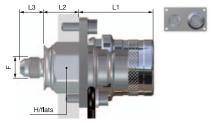
Dose	cription		Model	Fitting	Dimen	sions (m	m)		Part numbers								
Desc	яю	LIOIT									Model	Fitting	L1	L2	L3	H/flats	Part Humbers
Plate	Plates fitted with a socket and a plug							nd a	a plug			G 3/8	44	33.5		27	SPX 06.0102
fema	female thread							L1		SPX 06	NPT 3/8	44	31.5		27	SPX 06.0202	
, , , , , ,								=				UN 9/16-18 (a)	44	33.5		27	SPX 06.0314
(a) UN to SAE			cordi	ng			d					G 1/2	50	40.5		32	SPX 08.0103
				L	1		W				SPX 08	NPT 1/2	50	38		32	SPX 08.0203
<u>" </u>	3_ _	Н	-				Ж	1				UN 3/4-16 (a)	50	38		32	SPX 08.0319
			OÚT-						0		SPX 12	G 3/4	58	45.5		41	SPX 12.0104
	9	1				H/f	lats		dust on	n atrin		NPT 3/4	58	41.5		41	SPX 12.0204
F	dust cap strip					UN 1 1/16-12 (a)	58	46.5		41	SPX 12.0327						
	Dimensions (mm)					G 3/4	68	49		50	SPX 16.0104						
Model	Α	В	С	D	E	F	G	Н	Max. pane thickness	Panel drilling Ø		G 1	68	52		50	SPX 16.0105
SPX 06 SPX 08	97	95 110	53	42 50		5.5 6.5	-	58	10	37.5	SPX 16	NPT 3/4	68	46		50	SPX 16.0204
SPX 08	122	-	75	62		6.5	-	-	10	48	SFX 10	NPT 1	68	52		50	SPX 16.0204
SPX 16	137	150	80	67	45	6.5	35	80	10	58							
												UN 1 5/16-12 (a)	68	51		50	SPX 16.0333
Plate	es fi	itte	w b	th	a so	cke	et a	and a	a plug BS	SP male	SPX 06	G 3/8	44	23	12	27	SPX 06.0152
threa	ad v	with	60	cc	ne	and	l se	alin	g with fr	ont	SPX 08	G 1/2	50	26.5	14	32	SPX 08.0153
O-rir	ng s	seal									SPX 12	G 3/4	58	32.5	16	41	SPX 12.0154
		ŀ	L3	-	L2	-	43	L1	-		SPX 16	G 3/4	68	37.5	16	50	SPX 16.0154
) (),							

Plates fitted with a socket and a plug male thread for hydraulic pipes 24° cone according to ISO 8434-1 S series



SPX 06	M 18 x 1.5 for pipes outside Ø 10 mm	44	21	12	27	SPX 06.0610
SPX 08	M 20 x 1.5 for pipes outside Ø 12 mm	50	25.5	12	32	SPX 08.0612
3PA 00	M 24 x 1.5 for pipes outside Ø 16 mm	50	25.5	14	32	SPX 08.0616
	M 24 x 1.5 for pipes outside Ø 16 mm	58	30.5	14	41	SPX 12.0616
SPX 12	M 30 x 2 for pipes outside Ø 20 mm	58	30.5	16	41	SPX 12.0620
SPX 16	M 30 x 2 for pipes outside Ø 20 mm	68	37	16	50	SPX 16.0620
3FX 10	M 36 x 2 for pipes outside Ø 25 mm	68	37	18	50	SPX 16.0625
SPX 06	UN 1/2 - 20 (DASH 5)	44	21	14	27	SPX 06.0654
SPX 08	UN 3/4 - 16 (DASH 8)	50	25.5	17	32	SPX 08.0656
SPX 12	UN 7/8 - 14 (DASH 10)	58	30.5	19,5	41	SPX 12.0657
SPX 16	UN 1 1/16 - 12 (DASH 12)	68	37.5	22	50	SPX 16.0658

Plates fitted with a socket and a plug male thread JIC 37° according ISO 8434-2



All sockets and plugs are delivered as standard with a protective dust cap.

Connection under residual pressure (/PA option)

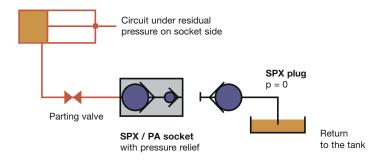
A central relief valve built into the socket or the plug valve allows for the reduction of the residual pressure in the circuit.

Situation 1: socket under residual pressure

Return to tank on the plug side.

SPX xx / PA socket SPX xx plug



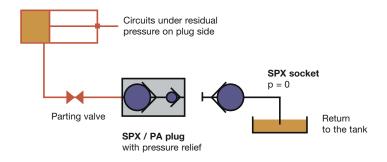


Situation 2: plug under residual pressure

Return to tank on the socket side.

SPX xx / PA plug SPX xx socket

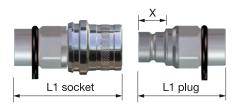




Overall dimensions in connected position

L = (L1 socket + L1 plug) - X

Model	X (mm)
SPX 06	18.5
SPX 08	21
SPX 12	25.5
SPX 16	31.5





■ Stäubli Units O Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com

