

#### **MOVICONTROL BIBUS**



# Junções rosca ORFS



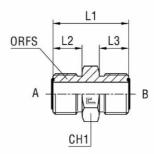
# Acessórios com sistema de vedação ORFS

Os acessórios com vedação tipo ORFS, são fabricados segundo a norma ISO 8434-2/SAE J1453. São normalmente utilizados para alta pressão em sistemas hidráulicos.

A vedação é feita pela união do acessório e do respetivo tubo que foi previamente deformado a 90º e de um o'ring.

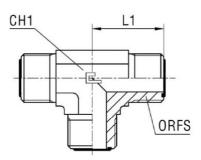


#### **G - ADAPTADOR MACHO/MACHO ORFS**



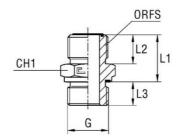
Serie	Bar	Ø Tubo A™	Ø Tubo B™	Ø Tubo A <sup>w</sup>	Ø Tubo B <sup>w</sup>	L1	L2	L3	CH1	ORFS A	ORFS B	Referência
		6	6	1/4	1/4	27,5	10	10	17	9/16-18	9/16-18	JO-G04
ا نہ ا	630	8-10	8-10	5/16-3/8	5/16-3/8	31	11	11	19	11/16-16	11/16-16	JO-G06
UNIVERSAL		12	12	1/2	1/2	35,5	13	13	22	13/16-16	13/16-16	JO-G08
E. I		14-15-16	14-15-16	5/8	5/8	42,5	15,5	15,5	27	1-14	1-14	JO-G10
{	420	18-20	18-20	3/4	3/4	47	17	17	32	13/16-12	13/16-12	JO-G12
		22-25	22-25	7/8-1	7/8-1	49,5	17,5	17,5	41	17/16-12	17/16-12	JO-G16
	280	28-30-32	28-30-32	11/4	11/4	51,5	17,5	17,5	46	111/16-12	111/16-12	JO-G20
	200	35-38	35-38	11/2	11/2	53	17,5	17,5	55	2-12	2-12	JO-G24

#### T- TÊ TUBO/TUBO/TUBO ORFS



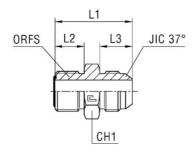
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	CH1	ORFS	Referência
		6	1/4	21,5	14	9/16-18	JO-T04
	630	8-10	5/16-3/8	25	19	11/16-16	JO-T06
AL		12	1/2	28	19	13/16-16	JO-T08
UNIVERSAI		14-15-16	5/8	33,5	27	1-14	JO-T10
	420	18-20	3/4	37,5	30	1 3/16-12	JO-T12
		22-25	7/8-1	41,5	36	1 7/16-12	JO-T16
	280	28-30-32	11/4	44,5	41	1 11/16-12	JO-T20
	200	35-38	11/2	49	48	2-12	JO-T24

#### **GE - ADAPTADOR MACHO/MACHO ORFS/BSP**



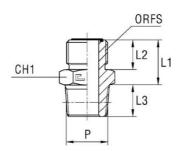
Serie	Bar	Ø Tubo M	Ø Tubo W	G	L1	L2	L3	CH1	ORFS	Referência
		6	1/4	1/8	17,5	10	8	17	9/16-18	JO-GE04X02BSP
	630	8-10	5/16-3/8	1/4	20	11	12	19	11/16-16	JO-GE06X04BSP
		12	1/2	3/8	22,5	13	12	22	13/16-16	JO-GE08X06BSP
		14-15-16	5/8	1/2	27	15,5	14	27	1-14	JO-GE10X08BSP
	420	18-20	3/4	3/4	30	17	16	32	13/16-12	JO-GE12X12BSP
		22-25	7/8-1	1	32	17,5	18	41	17/16-12	JO-GE16X16BSP
	280	28-30-32	11/4	11/4	34	17,5	20	50	111/16-12	JO-GE20X20BSP
	200	35-38	11/2	11/2	35,5	17,5	22	55	2-12	JO-GE24X24BSP
		6	1/4	1/4	19	10	12	19	9/16-18	JO-GE04X04BSP
		6	1/4	3/8	19,5	10	12	22	9/16-18	JO-GE04X06BSP
	630	6	1/4	1/2	21,5	10	14	27	9/16-18	JO-GE04X08BSP
	030	8-10	5/16-3/8	1/8	19,5	11	8	19	11/16-16	JO-GE06X02BSP
		8-10	5/16-3/8	3/8	20,5	11	12	22	11/16-16	JO-GE06X06BSP
		8-10	5/16-3/8	1/2	22,5	11	14	27	11/16-16	JO-GE06X08BSP
4	420	8-10	5/16-3/8	3/4	24	11	16	32	11/16-16	JO-GE06X12BSP
UNIVERSAL	630	12	1/2	1/4	23	13	12	22	13/16-16	JO-GE08X04BSP
VE	030	12	1/2	1/2	24,5	13	14	27	13/16-16	JO-GE08X08BSP
		12	1/2	3/4	26	13	16	32	13/16-16	JO-GE08X12BSP
-		14-15-16	5/8	1/4	26	15,5	12	27	1-14	JO-GE10X04BSP
		14-15-16	5/8	3/8	26,5	15,5	12	27	1-14	JO-GE10X06BSP
		14-15-16	5/8	3/4	28,5	15,5	16	32	1-14	JO-GE10X12BSP
		14-15-16	5/8	1	30	15,5	18	41	1-14	JO-GE10X16BSP
	420	18-20	3/4	1/4	29	17	12	32	13/16-12	JO-GE12X04BSP
	420	18-20	3/4	1/2	30	17	14	32	13/16-12	JO-GE12X08BSP
		18-20	3/4	1	31,5	17	18	41	13/16-12	JO-GE12X16BSP
		18-20	3/4	11/4	33,5	17	20	50	13/16-12	JO-GE12X20BSP
		22-25	7/8-1	1/4	31	17,5	12	41	17/16-12	JO-GE16X04BSP
		22-25	7/8-1	3/4	32	17,5	16	41	17/16-12	JO-GE16X12BSP
		22-25	7/8-1	11/4	34	17,5	20	50	17/16-12	JO-GE16X20BSP
		22-25	7/8-1	11/2	35,5	17,5	22	55	17/16-12	JO-GE16X24BSP
	280	28-30-32	11/4	1	34	17,5	18	46	111/16-12	JO-GE20X16BSP
		28-30-32	11/4	11/2	35,5	17,5	22	55	111/16-12	JO-GE20X24BSP

#### GE- ADAPTADOR MACHO/MACHO ORFS/JIC



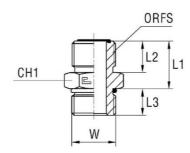
Serie	Bar	Ø Tubo M	Ø Tubo W	Ø Tubo 37° M	Ø Tubo 37° W	L1	L2	L3	CH1	ORFS	JIC 37°	Referência
	450	6	1/4	6	1/4	31,5	10	14	17	9/16-18	7/16-20	JO-GE04X04JIC
		8-10	5/16-3/8	10	3/8	34	11	14,1	19	11/16-16	9/16-18	JO-GE06X06JIC
_	350	12	1/2	12	1/2	39	13	16,7	22	13/16-16	3/4-16	JO-GE08X08JIC
SA	330	14-15-16	5/8	14-15-16	5/8	46,5	15,5	19,3	27	1-14	7/8-14	JO-GE10X10JIC
W		18-20	3/4	18-20	3/4	52	17	21,9	32	13/16-12	11/16-12	JO-GE12X12JIC
UNIVERSAI	290	22-25	7/8-1	25	1	55	17,5	23,1	41	17/16-12	15/16-12	JO-GE16X16JIC
>	240	28-30-32	11/4	30-32	11/4	58,5	17,5	24,3	46	111/16-12	15/8-12	JO-GE20X20JIC
	240	35-38	11/2	38	11/2	63	17,5	27,5	55	2-12	17/8-12	JO-GE24X24JIC
	450	8-10	5/16-3/8	8	5/16	34	11	14	19	11/16-16	1/2-20	JO-GE06X05JIC

#### **GE - ADAPTADOR MACHO/MACHO ORFS/NPTF**



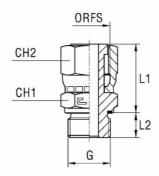
Serie	Bar	Ø Tubo M	Ø Tubo W	Р	L1	L2	L3	CH1	ORFS	Referência
	420	6	1/4	1/8	17,5	10	10	17	9/16-18	JO-GE04X02NPT
	630	8-10	5/16-3/8	1/4	20	11	14,5	19	11/16-16	JO-GE06X04NPT
	030	12	1/2	3/8	22,5	13	14,5	22	13/16-16	JO-GE08X06NPT
		14-15-16	5/8	1/2	27	15,5	19	27	1-14	JO-GE10X08NPT
	420	18-20	3/4	3/4	30	17	19	32	13/16-12	JO-GE12X12NPT
		22-25	7/8-1	1	32	17,5	24	41	17/16-12	JO-GE16X16NPT
	280	28-30-32	11/4	11/4	34	17,5	25	46	111/16-12	JO-GE20X20NPT
	200	35-38	11/2	11/2	35,5	17,5	26	55	2-12	JO-GE24X24NPT
		6	1/4	1/4	17,5	10	14,5	17	9/16-18	JO-GE04X04NPT
AL		6	1/4	3/8	17,5	10	14,5	17	9/16-18	JO-GE04X06NPT
UNIVERSAL	630	8-10	5/16-3/8	3/8	20	11	14,5	19	11/16-16	JO-GE06X06NPT
NE	030	8-10	5/16-3/8	1/2	20,5	11	19	22	11/16-16	JO-GE06X08NPT
3		12	1/2	1/4	22,5	13	14,5	22	13/16-16	JO-GE08X04NPT
_		12	1/2	1/2	22,5	13	19	22	13/16-16	JO-GE08X08NPT
		12	1/2	3/4	24,5	13	19	27	13/16-16	JO-GE08X12NPT
		14-15-16	5/8	3/8	27	15,5	14,5	27	1-14	JO-GE10X06NPT
	420	14-15-16	5/8	3/4	27	15,5	19	27	1-14	JO-GE10X12NPT
	420	18-20	3/4	1/2	30	17	19	32	13/16-12	JO-GE12X08NPT
		18-20	3/4	1	30	17	24	36	13/16-12	JO-GE12X16NPT
		22-25	7/8-1	3/4	32	17,5	19	41	17/16-12	JO-GE16X12NPT
	280	28-30-32	11/4	1	34	17,5	24	46	111/16-12	JO-GE20X16NPT
	200	35-38	11/2	11/4	35,5	17,5	25	55	2-12	JO-GE24X20NPT

## **GE - ADAPTADOR MACHO/MACHO ORFS/UNF**



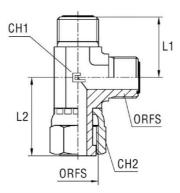
Serie	Bar	Ø Tubo M	Ø Tubo W	w	L1	L2	L3	CH1	ORFS	Referência
		6	1/4	7/16-20	18	10	11	17	9/16-18	JO-GE04X04UNF
	630	8-10	5/16-3/8	9/16-18	20	11	12	19	11/16-16	JO-GE06X06UNF
		12	1/2	3/4-16	22,5	13	14	22	13/16-16	JO-GE08X08UNF
		14-15-16	5/8	7/8-14	27	15,5	16	27	1-14	JO-GE10X10UNF
	420	18-20	3/4	11/16-12	30	17	18,5	32	13/16-12	JO-GE12X12UNF
		22-25	7/8-1	15/16-12	32	17,5	18,5	41	17/16-12	JO-GE16X16UNF
	280	28-30-32	11/4	15/8-12	33,5	17,5	18,5	46	111/16-12	JO-GE20X20UNF
	200	35-38	11/2	17/8-12	35,5	17,5	18,5	55	2-12	JO-GE24X24UNF
		6	1/4	1/2-20	18	10	11	17	9/16-18	JO-GE04X05UNF
		6	1/4	9/16-18	19	10	12	19	9/16-18	JO-GE04X06UNF
		6	1/4	3/4-16	19,5	10	14	22	9/16-18	JO-GE04X08UNF
	630	8-10	5/16-3/8	7/16-20	20	11	11	19	11/16-16	JO-GE06X04UNF
		8-10	5/16-3/8	1/2-20	20	11	11	19	11/16-16	JO-GE06X05UNF
AL		8-10	5/16-3/8	3/4-16	20,5	11	14	22	11/16-16	JO-GE06X08UNF
RS		8-10	5/16-3/8	7/8-14	22,5	11	16	27	11/16-16	JO-GE06X10UNF
UNIVERSAL	420	8-10	5/16-3/8	11/16-12	24	11	18,5	32	11/16-16	JO-GE06X12UNF
	630	12	1/2	9/16-18	22,5	13	12	22	13/16-16	JO-GE08X06UNF
	000	12	1/2	7/8-14	24,5	13	16	27	13/16-16	JO-GE08X10UNF
		12	1/2	11/16-12	26	13	18,5	32	13/16-16	JO-GE08X12UNF
		12	1/2	15/16-12	27,5	13	18,5	41	13/16-16	JO-GE08X16UNF
		14-15-16	5/8	3/4-16	27	15,5	14	27	1-14	JO-GE10X08UNF
	420	14-15-16	5/8	11/16-12	28,5	15,5	18,5	32	1-14	JO-GE10X12UNF
	120	18-20	3/4	3/4-16	30	17	14	32	13/16-12	JO-GE12X08UNF
		18-20	3/4	7/8-14	30	17	16	32	13/16-12	JO-GE12X10UNF
		18-20	3/4	15/16-12	31,5	17	18,5	41	13/16-12	JO-GE12X16UNF
		22-25	7/8-1	11/16-12	32	17,5	18,5	41	17/16-12	JO-GE16X12UNF
		22-25	7/8-1	15/8-12	33,5	17,5	18,5	46	17/16-12	JO-GE16X20UNF
	280	28-30-32	11/4	15/16-12	33,5	17,5	18,5	46	111/16-12	JO-GE20X16UNF
	200	28-30-32	11/4	17/8-12	35,5	17,5	18,5	55	111/16-12	JO-GE20X24UNF
		35-38	11/2	15/8-12	35,5	17,5	18,5	55	2-12	JO-GE24X20UNF

#### EGE - UNIÃO FÊMEA MACHO ORFS/BSP



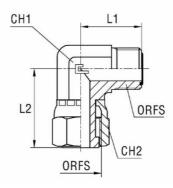
Serie	Bar	Ø Tubo M	Ø Tubo W	G	L1	L2	CH1	CH2	ORFS	Referência
		6	1/4	1/8	26,5	8	17	17	9/16-18	JO-EGE04X02BSP
	630	8-10	5/16-3/8	1/4	28,5	12	19	22	11/16-16	JO-EGE06X04BSP
		12	1/2	3/8	35,5	12	22	24	13/16-16	JO-EGE08X06BSP
		14-15-16	5/8	1/2	38	14	27	30	1-14	JO-EGE10X08BSP
AL.	420	18-20	3/4	3/4	41,5	16	32	36	13/16-12	JO-EGE12X12BSP
UNIVERSAL		22-25	7/8-1	1	49	18	41	41	17/16-12	JO-EGE16X16BSP
🗏	280	28-30-32	11/4	11/4	49	20	50	50	111/16-12	JO-EGE20X20BSP
	200	35-38	11/2	11/2	49	22	55	60	2-12	JO-EGE24X24BSP
		6	1/4	1/4	26,5	12	19	17	9/16-18	JO-EGE04X04BSP
	630	8-10	5/16-3/8	3/8	32,5	12	22	22	11/16-16	JO-EGE06X06BSP
		12	1/2	1/2	34	14	27	24	13/16-16	JO-EGE08X08BSP

#### EL - TÊ ORFS COM FÊMEA ORIENTÁVEL EM L



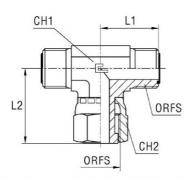
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	L2	CH1	CH2	ORFS	Referência
		6	1/4	21,5	26,5	14	17	9/16-18	JO-EL04
	630	8-10	5/16-3/8	25	29	19	22	11/16-16	JO-EL06
AL		12	1/2	28	38	19	24	13/16-16	JO-EL08
UNIVERS		14-15-16	5/8	33,5	41	27	30	1-14	JO-EL10
NE	420	18-20	3/4	37,5	46,5	30	36	13/16-12	JO-EL12
		22-25	7/8-1	41,5	53,5	36	41	17/16-12	JO-EL16
-	280	28-30-32	11/4	44,5	58	41	50	111/16-12	JO-EL20
	200	35-38	11/2	49	61	48	60	2-12	JO-EL24

#### EW - JOELHO A 90° ORIENTÁVEL M/F ORFS/ORFS



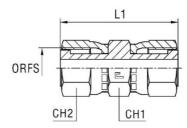
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	L2	CH1	CH2	Referência
		6	1/4	21,5	26,5	14	17	JO-EW04
	630	8-10	5/16-3/8	25	29	19	22	JO-EW06
H		12	1/2	28	38	19	24	JO-EW08
RS		14-15-16	5/8	33,5	41	27	30	JO-EW10
	420	18-20	3/4	37,5	46,5	30	36	JO-EW12
UNIVERSAL		22-25	7/8-1	41,5	53,5	36	41	JO-EW16
-	280	28-30-32	11/4	44,5	58	41	50	JO-EW20
	200	35-38	11/2	49	61	48	60	JO-EW24

#### ET- TÊ ORFS COM FÊMEA ORIENTÁVEL EM T



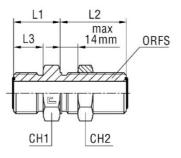
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	L2	CH1	CH2	ORFS	Referência
		6	1/4	21,5	26,5	14	17	9/16-18	JO-ET04
1 1	630	8-10	5/16-3/8	25	29	19	22	11/16-16	JO-ET06
AL		12	1/2	28	38	19	24	13/16-16	JO-ET08
UNIVERSAL		14-15-16	5/8	33,5	41	27	30	1-14	JO-ET10
ĕ	420	18-20	3/4	37,5	46,5	30	36	13/16-12	JO-ET12
		22-25	7/8-1	41,5	53,5	36	41	17/16-12	JO-ET16
-	280	28-30-32	11/4	44,5	58	41	50	111/16-12	JO-ET20
	200	35-38	11/2	49	61	48	60	2-12	JO-ET24

#### **GZ - ADAPTADOR FÊMEA/FÊMEA ORFS**



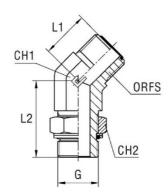
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	CH1	CH2	ORFS	Referência
		6	1/4	39,5	17	17	9/16-18	JO-GZ04
	630	8-10	5/16-3/8	45	19	22	11/16-16	JO-GZ06
AL		12	1/2	51,5	22	24	13/16-16	JO-GZ08
UNIVERSAL		14-15-16	5/8	61,5	27	30	1-14	JO-GZ10
	420	18-20	3/4	68	32	36	13/16-12	JO-GZ12
5		22-25	7/8-1	71,5	41	41	17/16-12	JO-GZ16
	280	28-30-32	11/4	73,5	46	50	111/16-12	JO-GZ20
		35-38	11/2	75	55	60	2-12	JO-GZ24

#### SV - UNIÃO DE PASSAGEM ANTEPARA ORFS



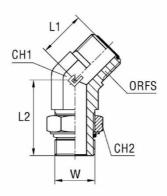
Serie	Bar	Ø Tubo M	Ø Tubo W	L1	L2	L3	CH1	CH2	ORFS	Referência
		6	1/4	16,5	31,5	10	22	22	9/16-18	JO-SV04
25	630	8-10	5/16-3/8	19	34	11	27	27	11/16-16	JO-SV06
UNIVERSAL		12	1/2	22	36,5	13	30	30	13/16-16	JO-SV08
&	420	14-15-16	5/8	26	40,5	15,5	36	36	1-14	JO-SV10
🖺	420	18-20	3/4	27,5	41,5	17	41	41	13/16-12	JO-SV12
5		22-25	7/8-1	28	42	17,5	46	46	17/16-12	JO-SV16
	280	28-30-32	11/4	28	42	17,5	50	50	111/16-12	JO-SV20
		35-38	11/2	28	42	17,5	60	60	2-12	JO-SV24

#### **VEE - JOELHO A 45° ORIENTÁVEL ORFS/BSP**



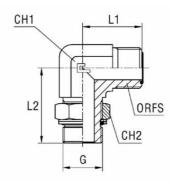
Serie	Bar	Ø Tubo M	Ø Tubo W	G	L1	L2	CH1	CH2	ORFS	Referência
	350	6	1/4	1/8	16	27,5	14	14	9/16-18	JO-VEE04X02BSP
	315	8-10	5/16-3/8	1/4	19	32,5	19	19	11/16-16	JO-VEE06X04BSP
		12	1/2	3/8	20,5	33,5	19	22	13/16-16	JO-VEE08X06BSP
	250	14-15-16	5/8	1/2	23,5	43	27	27	1-14	JO-VEE10X08BSP
		18-20	3/4	3/4	26	46,5	30	36	13/16-12	JO-VEE08X12BSP
	200	22-25	7/8-1	1	30	51	36	41	17/16-12	JO-VEE16X16BSP
	200	28-30-32	11/4	11/4	32	52,5	41	50	111/16-12	JO-VEE20X20BSP
	160	35-38	11/2	11/2	37	52,5	48	55	2-12	JO-VEE24X24BSP
	315	6	1/4	1/4	16	31,5	14	19	9/16-18	JO-VEE04X04BSP
		6	1/4	3/8	17,5	33,5	19	22	9/16-18	JO-VEE04X06BSP
	250	8-10	5/16-3/8	3/8	19	33,5	19	22	11/16-16	JO-VEE06X06BSP
		8-10	5/16-3/8	1/2	20	43	22	27	11/16-16	JO-VEE06X08BSP
UNIVERSAL	315	12	1/2	1/4	20,5	32,5	19	19	13/16-16	JO-VEE08X04BSP
ER	250	12	1/2	1/2	21	43	22	27	13/16-16	JO-VEE08X08BSP
ĺ		12	1/2	3/4	21,5	46,5	27	36	13/16-16	JO-VEE08X12BSP
	315	14-15-16	5/8	1/4	23,5	36	27	19	1-14	JO-VEE10X04BSP
	250	14-15-16		3/8	23,5	37	27	22	1-14	JO-VEE10X06BSP
	200	14-15-16		3/4	23,5	46,5	27	36	1-14	JO-VEE10X12BSP
	200	14-15-16		1	28,5	51	33	41	1-14	JO-VEE10X16BSP
	315	18-20	3/4	1/4	26	40,5	30	19	13/16-12	JO-VEE12X04BSP
	250	18-20	3/4	1/2	26	44,5	30	27	13/16-12	JO-VEE12X08BSP
	200	18-20	3/4	1	29,5	51	33	41	13/16-12	JO-VEE12X16BSP
	315	22-25	7/8-1	1/4	30	41	36	19	17/16-12	JO-VEE16X04BSP
	250	22-25	7/8-1	3/4	30	47	36	36	17/16-12	JO-VEE16X12BSP
	200	22-25	7/8-1	11/4	32	52,5	41	50	17/16-12	JO-VEE16X20BSP
	200	28-30-32	11/4	1	32	52,5	41	41	111/16-12	JO-VEE20X16BSP
	160	28-30-32	11/4	11/2	35,5	52,5	48	55	111/16-12	JO-VEE20X24BSP

#### **VEE - JOELHO A 45° ORIENTÁVEL ORFS/UNF**



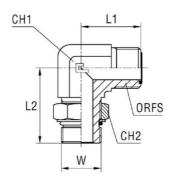
Serie	Bar	Ø Tubo M	Ø Tubo W	w	L1	L2	CH1	CH2	ORFS	Referência
		6	1/4	7/16-20	16	30	14	14	9/16-18	JO-VEE04X04UNF
		8-10	5/16-3/8	9/16-18	19	33	19	17	11/16-16	JO-VEE06X06UNF
	420	12	1/2	3/4-16	20,5	36,5	19	22	13/16-16	JO-VEE08X08UNF
		14-15-16	5/8	7/8-14	23,5	45	27	27	1-14	JO-VEE10X10UNF
		18-20	3/4	11/16-12	26	50	30	32	13/16-12	JO-VEE12X12UNF
	380	22-25	7/8-1	15/16-12	30	52,5	36	41	17/16-12	JO-VEE16X16UNF
	280	28-30-32	11/4	15/8-12	32	53,5	41	50	111/16-12	JO-VEE20X20UNF
	200	35-38	11/2	17/8-12	37	53,5	48	55	2-12	JO-VEE24X24UNF
		6	1/4	9/16-18	16	33	14	17	9/16-18	JO-VEE04X06UNF
		6	1/4	3/4-16	17,5	36,5	19	22	9/16-18	JO-VEE04X08UNF
	420	8-10	5/16-3/8	7/16-20	19	31	19	14	11/16-16	JO-VEE06X04UNF
_		8-10	5/16-3/8	3/4-16	19	36,5	19	22	11/16-16	JO-VEE06X08UNF
UNIVERSAL		8-10	5/16-3/8	7/8-14	20	45	22	27	11/16-16	JO-VEE06X10UNF
ER		8-10	5/16-3/8	11/16-12	19,5	50	27	32	11/16-16	JO-VEE06X12UNF
}		12	1/2	9/16-18	20,5	32,5	19	17	13/16-16	JO-VEE08X06UNF
=		12	1/2	7/8-14	21	45	22	27	13/16-16	JO-VEE08X10UNF
		12	1/2	11/16-12	21,5	50	27	32	13/16-16	JO-VEE08X12UNF
		14-15-16	5/8	3/4-16	23,5	40,5	27	22	1-14	JO-VEE10X08UNF
		14-15-16	5/8	11/16-12	23,5	50	27	32	1-14	JO-VEE10X12UNF
		18-20	3/4	3/4-16	26	40,5	30	22	13/16-12	JO-VEE12X08UNF
		18-20	3/4	7/8-14	26	46	30	27	13/16-12	JO-VEE12X10UNF
	380	18-20	3/4	15/16-12	29,5	52,5	33	41	13/16-12	JO-VEE12X16UNF
	420	22-25	7/8-1	11/16-12	30	51,5	36	32	17/16-12	JO-VEE16X12UNF
		22-25	7/8-1	15/8-12	32	53,5	41	50	17/16-12	JO-VEE16X20UNF
	280	28-30-32	11/4	15/16-12	32	53,5	41	41	111/16-12	JO-VEE20X16UNF
	200	28-30-32	11/4	17/8-12	35,5	53,5	48	55	111/16-12	JO-VEE20X24UNF
		35-38	11/2	15/8-12	37	53,5	48	50	2-12	JO-VEE24X20UNF

#### WEE - JOELHO 90 ORIENTÁVEL ORFS/BSP



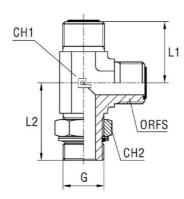
Serie	Bar	Ø Tubo M	Ø Tubo W	G	L1	L2	CH1	CH2	ORFS	Referência
	350	6	1/4	1/8	21,5	30	14	14	9/16-18	JO-WEE04X02BSP
	315	8-10	5/16-3/8	1/4	25	37	19	19	11/16-16	JO-WEE06X04BSP
		12	1/2	3/8	28	38	19	22	13/16-16	JO-WEE08X06BSP
	250	14-15-16	5/8	1/2	33,5	48	27	27	1-14	JO-WEE10X08BSP
		18-20	3/4	3/4	37,5	51,5	30	36	1 3/16-12	JO-WEE12X12BSP
	200	22-25	7/8-1	1	41,5	58,5	36	41	1 7/16-12	JO-WEE16X16BSP
	200	28-30-32	11/4	11/4	44,5	60,5	41	50	1 11/16-12	JO-WEE20X20BSP
	160	35-38	11/2	11/2	49	64	48	55	2-12	JO-WEE24X24BSP
	315	6	1/4	1/4	21,5	35	14	19	9/16-18	JO-WEE04X04BSP
		6	1/4	3/8	23,5	38	19	22	9/16-18	JO-WEE04X06BSP
	250	8-10	5/16-3/8	3/8	25	38	19	22	11/16-16	JO-WEE06X06BSP
_		8-10	5/16-3/8	1/2	28	48	22	27	11/16-16	JO-WEE06X08BSP
UNIVERSAL	315	12	1/2	1/4	28	37	19	19	13/16-16	JO-WEE08X04BSP
ER	250	12	1/2	1/2	30	48	22	27	13/16-16	JO-WEE08X08BSP
1	230	12	1/2	3/4	31,5	51,5	27	36	13/16-16	JO-WEE08X12BSP
-	315	14-15-16		1/4	33,5	42,5	27	19	1-14	JO-WEE10X04BSP
	250	14-15-16	5/8	3/8	33,5	42,5	27	22	1-14	JO-WEE10X06BSP
	200	14-15-16	5/8	3/4	33,5	51,5	27	36	1-14	JO-WEE10X12BSP
	200	14-15-16	5/8	1	37	58,5	33	41	1-14	JO-WEE10X16BSP
	315	18-20	3/4	1/4	37,5	43,5	30	19	1 3/16-12	JO-WEE12X04BSP
	250	18-20	3/4	1/2	37,5	49	30	27	1 3/16-12	JO-WEE12X08BSP
	200	18-20	3/4	1	38	58,5	33	41	1 3/16-12	JO-WEE12X16BSP
	315	22-25	7/8-1	1/4	41,5	52	36	19	1 7/16-12	JO-WEE16X04BSP
	250	22-25	7/8-1	3/4	41,5	57,5	36	36	1 7/16-12	JO-WEE16X12BSP
	200	22-25	7/8-1	11/4	44,5	60,5	41	50	1 7/16-12	JO-WEE16X20BSP
	200	28-30-32	11/4	1	44,5	60,5	41	41	1 11/16-12	JO-WEE20X16BSP
	160	28-30-32	11/4	11/2	48,5	64	48	55	1 11/16-12	JO-WEE20X24BSP

#### WEE - JOELHO A 90° ORIENTÁVEL ORFS/UNF



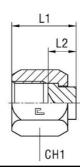
Serie	Bar	Ø Tubo M	Ø Tubo W	w	L1	L2	CH1	CH2	ORFS	Referência
		6	1/4	7/16-20	21,5	32,5	14	14	9/16-18	JO-WEE04X04UNF
		8-10	5/16-3/8	9/16-18	25	37	19	17	11/16-16	JO-WEE06X06UNF
	420	12	1/2	3/4-16	28	40,5	19	22	13/16-16	JO-WEE08X08UNF
		14-15-16	5/8	7/8-14	33,5	50	27	27	1-14	JO-WEE10X10UNF
		18-20	3/4	11/16-12	37,5	55	30	32	1 3/16-12	JO-WEE12X12UNF
	380	22-25	7/8-1	15/16-12	41,5	59,5	36	41	1 7/16-12	JO-WEE16X16UNF
	280	28-30-32	11/4	15/8-12	44,5	62	41	50	1 11/16-12	JO-WEE20X20UNF
	200	35-38	11/2	17/8-12	49	66	48	55	2-12	JO-WEE24X24UNF
		6	1/4	9/16-18	21,5	34,5	14	17	9/16-18	JO-WEE04X06UNF
		6	1/4	3/4-16	23,5	40,5	19	22	9/16-18	JO-WEE04X08UNF
		8-10	5/16-3/8	7/16-20	25	35	19	14	11/16-16	JO-WEE06X04UNF
_		8-10	5/16-3/8	3/4-16	25	40,5	19	22	11/16-16	JO-WEE06X08UNF
UNIVERSAL		8-10	5/16-3/8	7/8-14	28	50	22	27	11/16-16	JO-WEE06X10UNF
E		8-10	5/16-3/8	11/16-12	29,5	55	27	32	11/16-16	JO-WEE06X12UNF
	420	12	1/2	9/16-18	28	37	19	17	13/16-16	JO-WEE08X06UNF
-		12	1/2	7/8-14	30	50	22	27	13/16-16	JO-WEE08X10UNF
		12	1/2	11/16-12	31,5	55	27	32	13/16-16	JO-WEE08X12UNF
		14-15-16	5/8	3/4-16	33,5	46	27	22	1-14	JO-WEE10X08UNF
		14-15-16	5/8	11/16-12	33,5	55	27	32	1-14	JO-WEE10X12UNF
		18-20	3/4	3/4-16	37,5	47	30	22	1 3/16-12	JO-WEE12X08UNF
		18-20	3/4	7/8-14	37,5	51	30	27	1 3/16-12	JO-WEE12X10UNF
	380	18-20	3/4	15/16-12	38	59,5	33	41	1 3/16-12	JO-WEE12X16UNF
	420	22-25	7/8-1	11/16-12	41,5	59	36	32	1 7/16-12	JO-WEE16X12UNF
		22-25	7/8-1	15/8-12	44,5	62	41	50	1 7/16-12	JO-WEE16X20UNF
	280	28-30-32	11/4	15/16-12	44,5	62	41	41	1 11/16-12	JO-WEE20X16UNF
	200	28-30-32	11/4	17/8-12	48,5	66	48	55	1 11/16-12	JO-WEE20X24UNF
		35-38	11/2	15/8-12	49	66	48	50	2-12	JO-WEE24X20UNF

## LEE - TÊ ORIENTÁVEL EM L ORFS/BSP



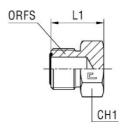
Serie	Bar	Ø Tubo M	Ø Tubo W	G	L1	L2	CH1	CH2	ORFS	Referência
	350	6	1/4	1/8	21,5	30	14	14	9/16-18	JO-LEE04X02BSP
	315	8-10	5/16-3/8	1/4	25	37	19	19	11/16-16	JO-LEE06X04BSP
		12	1/2	3/8	28	38	19	22	13/16-16	JO-LEE08X06BSP
	250	14-15-16	5/8	1/2	33,5	48	27	27	1-14	JO-LEE10X08BSP
		18-20	3/4	3/4	37,5	51,5	30	36	13/16-12	JO-LEE08X12BSP
	200	22-25	7/8-1	1	41,5	58,5	36	41	17/16-12	JO-LEE16X16BSP
	200	28-30-32	11/4	11/4	44,5	60,5	41	50	111/16-12	JO-LEE20X20BSP
	160	35-38	11/2	11/2	49	64	48	55	2-12	JO-LEE24X24BSP
	315	6	1/4	1/4	21,5	35	14	19	9/16-18	JO-LEE04X04BSP
		6	1/4	3/8	23,5	38	19	22	9/16-18	JO-LEE04X06BSP
	250	8-10	5/16-3/8	3/8	25	38	19	22	11/16-16	JO-LEE06X06BSP
		8-10	5/16-3/8	1/2	28	48	22	27	11/16-16	JO-LEE06X08BSP
UNIVERSAL	315	12	1/2	1/4	28	37	19	19	13/16-16	JO-LEE08X04BSP
X	250	12	1/2	1/2	30	48	22	27	13/16-16	JO-LEE08X08BSP
≩		12	1/2	3/4	31,5	51,5	27	36	13/16-16	JO-LEE08X12BSP
5	315	14-15-16	5/8	1/4	33,5	42,5	27	19	1-14	JO-LEE10X04BSP
	250	14-15-16	5/8	3/8	33,5	42,5	27	22	1-14	JO-LEE10X06BSP
	25	14-15-16	5/8	3/4	33,5	51,5	27	36	1-14	JO-LEE10X12BSP
	200	14-15-16	5/8	1	37	58,5	33	41	1-14	JO-LEE10X16BSP
	315	18-20	3/4	1/4	37,5	43,5	30	19	13/16-12	JO-LEE12X04BSP
	250	18-20	3/4	1/2	37,5	49	30	27	13/16-12	JO-LEE12X08BSP
	200	18-20	3/4	1	38	58,5	33	41	13/16-12	JO-LEE12X16BSP
	315	22-25	7/8-1	1/4	41,5	52	36	19	17/16-12	JO-LEE16X04BSP
	250	22-25	7/8-1	3/4	41,5	57,5	36	36	17/16-12	JO-LEE16X12BSP
	200	22-25	7/8-1	11/4	44,5	60,5	41	50	17/16-12	JO-LEE16X20BSP
	200	28-30-32	11/4	1	44,5	60,5	41	41	111/16-12	JO-LEE20X16BSP
	160	28-30-32	11/4	11/2	48,5	64	48	55	111/16-12	JO-LEE20X24BSP

#### VKA - TAMPÃO FÊMEA ORFS/UNF



Serie	Bar	Ø Tubo M	Ø Tubo W	L1	L2	CH1	ORFS	Referência
		6	1/4	16,5	8,5	17	9/16-18	JO-VKA04
	630	8-10	5/16-3/8	18	9,5	22	11/16-16	JO-VKA06
AL.		12	1/2	22	12	24	13/16-16	JO-VKA08
UNIVERSAL		14-15-16	5/8	24,5	12	30	1-14	JO-VKA10
≝	420	18-20	3/4	27	13,5	36	1 3/16-16	JO-VKA12
		22-25	7/8-1	28,5	15	41	1 7/16-12	JO-VKA16
	280	28-30-32	11/4	28,5	15	50	1 11/16-12	JO-VKA20
	200	35-38	11/2	28,5	15	60	2-12	JO-VKA24

#### **ROV - TAMPÃO MACHO ORFS**



Serie	Bar	Ø Tubo M	Ø Tubo W	L1	CH1	ORFS	Referência
		6	1/4	16,5	17	9/16-18	JO-ROV04
	630	8-10	5/16-3/8	19	19	11/16-16	JO-ROV06
AL.		12	1/2	22	22	13/16-16	JO-ROV08
ERS	420	14-15-16	5/8	26	27	1-14	JO-ROV10
I ≅		18-20	3/4	27,5	32	13/16-12	JO-ROV12
UNIV		22-25	7/8-1	28	41	17/16-12	JO-ROV16
	280	28-30-32	11/4	28	46	111/16-12	JO-ROV20
	200	35-38	11/2	28	55	2-12	JO-ROV24





**Encanamentos**