

STAINLESS SOLUTIONS, LLC

SOURCING - INVENTORY - DISTRIBUTION



QUALITY PRODUCTS, COMPETITIVE PRICING AND SERVICE BEYOND YOUR EXPECTATIONS
Phone (408) 980-9078 Fax (408) 980-9155
www.StainlessSolutions.biz



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Product Overview

Vacuum Components & Bellows

Pages 2-6

SSL NW/KF components are a system of stainless steel vacuum flanges for tube sizes from 3/4" through 2" OD. These flanges can operate in high vacuum environments to pressures in the 1×10^{-8} Torr range. The NW/KF flange system is suited for applications requiring frequent assembly and disassembly, using a simple wing nut clamp. NW/KF flanges comply with all ISO specifications for vacuum mounting hardware and are designed to work well with other NW/KF flanges and components. **All NW/KF flanges are available in both 304 and 316L stainless steel.**

SSL ISO/MF flanges are larger stainless steel vacuum flanges for tube sizes ranging from 2-1/2" through 12" OD. These flanges can operate in high vacuum environments to pressures in the 1×10^{-8} Torr range. The ISO/MF flange system is also suited for applications requiring frequent assembly and disassembly, using the required double claw clamps. The ISO/MF flanges comply with all ISO specifications for vacuum mounting hardware and are designed to work well with other ISO flanges and components. **All ISO flanges are available in both 304 and 316L stainless steel.**

Tube OD Weld Fittings

Pages 7-9

SSL Tube OD Weld Fittings provide superior fit and corrosion resistance for many applications. These fittings will be provided with close tolerances on all critical dimensions, thus allowing for a smooth connection with our vacuum flanges.

SSL Tube OD Weld Fittings are used in a wide variety of applications where polished finishes are not required. **However our standard finish creates a consistent uniformed appearance that will separate our fittings from other suppliers.**

SSL Tube OD Weld Fittings are offered in sizes 3/4" through 10" in Both 304 and 316L stainless. Standard wall thickness is as follows: 1/2" - 3" .065, 4" .083, and 6" - 10" .083-.120

Bellows

Page 10

SSL has an assortment of both flexible and rigid metal hose assemblies with NW / ISO flanges in 304 and 316L stainless, usually available from stock. Bellows with tube od weld ends and many other configurations.

Tubing

Page 11

Tubing is manufactured to extremely close tolerances and is in compliance with ASTM specifications A269. Domestic micro-weld tubing for all 3/4" - 4" requirements. Other specifications and seamless tubes are also available.

Tubing is stocked in 20' lengths in both 304/304L and 316/316L. Our tubing is stocked to match the wall thickness of our Tube OD fittings: 1/2" - 3" .065, 4" .083, and 6" - 10" .083-.120. (6"-10" A778 Spec)

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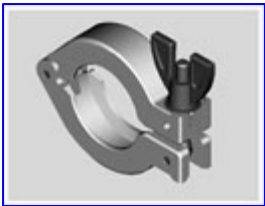
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NW/KF Vacuum Components 3/4" - 2"



Aluminum Wing Nut Clamps

FLANGE SIZE	Material	Part #
NW/KF 16	Aluminum	WNC-16
NW/KF 25	Aluminum	WNC-25
NW/KF 40	Aluminum	WNC-40
NW/KF 50	Aluminum	WNC-50



Stainless Steel Centering Ring Assembly / O-Ring

FLANGE SIZE	O-Ring Material	304 Part #	316L Part #
NW/KF 16	Viton	CRV-16	CRV-16-6L
NW/KF 25	Viton	CRV-25	CRV-25-6L
NW/KF 40	Viton	CRV-40	CRV-40-6L
NW/KF 50	Viton	CRV-50	CRV-50-6L



Stainless Steel Overpressure Ring

FLANGE SIZE	Material	Part #	Max Pressure
NW/KF 16	304 SS	OPR-16	100 PSIG
NW/KF 25	304 SS	OPR-25	100 PSIG
NW/KF 40	304 SS	OPR-40	75 PSIG
NW/KF 50	304 SS	OPR-50	50 PSIG

NW/KF Vacuum Components 3/4" - 2"

Stainless Steel Bored Blank Flanges (Tubing .065 standard)



TUBE OD	FLANGE SIZE	304 Part #	316L Part #
3/4"	NW/KF 16	BBF-16	BBF-16-6L
1"	NW/KF 25	BBF-25	BBF-25-6L
1.5"	NW/KF 40	BBF-40	BBF-40-6L
2"	NW/KF 50	BBF-50	BBF-50-6L

Reducing Flanges Available Upon Request

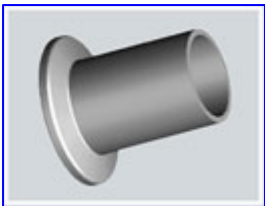
Stainless Steel Short Weld Flanges (Tubing .065 Standard)



TUBE OD	Length	FLANGE SIZE	304 Part #	316L Part #
3/4"	.50	NW/KF 16	SWF-16	SWF-16-6L
1"	.50	NW/KF 25	SWF-25	SWF-25-6L
1.5"	.75	NW/KF 40	SWF-40	SWF-40-6L
2"	.75	NW/KF 50	SWF-50	SWF-50-6L

Reducing Flanges Available Upon Request

Stainless Steel Long Weld Flanges (Tubing .065 Standard)



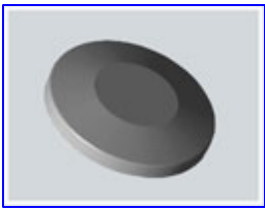
TUBE OD	LENGTH	FLANGE SIZE	304 Part #	316L Part #
3/4"	1.57"	NW/KF 16	LWF-16	LWF-16-6L
1"	1.57"	NW/KF 25	LWF-25	LWF-25-6L
1.5"	1.57"	NW/KF 40	LWF-40	LWF-40-6L
2"	1.57"	NW/KF 50	LWF-50	LWF-50-6L

Reducing Flanges Available Upon Request

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NW/KF Vacuum Components 3/4" - 2"



Stainless Steel Blank Flanges

TUBE OD	FLANGE SIZE	304 Part #	316L Part #
3/4"	NW/KF 16	BOF-16	BOF-16-6L
1"	NW/KF 25	BOF-25	BOF-25-6L
1.5"	NW/KF 40	BOF-40	BOF-40-6L
2"	NW/KF 50	BOF-50	BOF-50-6L



Stainless Steel Trapped Centering Ring *NEW ITEM*

FLANGE SIZE	O-Ring Material	304 PART #	316L PART #
NW/KF 40	Viton	CRV-T-40	CRV-T-40-6L
NW/KF 50	Viton	CRV-T-50	CRV-T-50-6L
Includes SS Centering Ring, O-ring and 304 SS Outer Ring			

Other Sizes Available Upon Request



Stainless Steel MPT x Flange Adapter

MPT	FLANGE SIZE	304 PART #	316L PART #
3/4"	NW/KF 16	MPT-16	MPT-16-6L
1"	NW/KF 25	MPT-25	MPT-25-6L
1 1/2"	NW/KF 40	MPT-40	MPT-40-6L
2"	NW/KF 50	MPT-50	MPT-50-6L

** Reducing Sizes Shown in picture Available Upon Request

ISO/MF Vacuum Components 2.5" – 6"



Stainless Steel Bored Blank Flanges

TUBE OD	FLANGE SIZE	304 PART #	316L PART #
2.5"	ISO 63	BBF-63	BBF-63-6L
3"	ISO 80	BBF-80	BBF-80-6L
4"	ISO 100	BBF-100	BBF-100-6L
6"	ISO 160	BBF-160	BBF-160-6L

Bored Flanges Available up to ISO 320 – 12" Tube OD



Stainless Steel Blank Flanges

TUBE OD	FLANGE SIZE	304 PART #	316L PART #
2.5"	ISO 63	BOF-63	BOF-63-6L
3"	ISO 80	BOF-80	BOF-80-6L
4"	ISO 100	BOF-100	BOF-100-6L
6"	ISO 160	BOF-160	BOF-160-6L

Blank Flanges Bored to Smaller Tube OD sizes can create low profile reducers



Stainless Steel Centering Ring Assembly / O-Ring

FLANGE SIZE	O-Ring Material	304 PART #	316L PART #
ISO 63	Viton	CRV-63	CRV-63-6L
ISO 80	Viton	CRV-80	CRV-80-6L
ISO 100	Viton	CRV-100	CRV-100-6L
ISO 160	Viton	CRV-160	CRV-160-6L

Centering Rings Available up to ISO 320- 12"

ISO/MF Vacuum Components 2.5” – 6”

Stainless Steel Centering Ring Assembly W/ Overpressure Ring



FLANGE SIZE	O-Ring Material	304 PART #	316L PART #
ISO 63	Viton	CRV-63-OPR	CRV-63-6L-OPR
ISO 80	Viton	CRV-80-OPR	CRV-80-6L-OPR
ISO 100	Viton	CRV-100-OPR	CRV-100-6L-OPR
ISO 160	Viton	CRV-160-OPR	CRV-160-6L-OPR

Aluminum Double Claw Clamps



FLANGE SIZE	Bolt	Clamps Required	Part #
ISO 63	M8	4	DCC-63/100
ISO 80	M8	4	DCC-63/100
ISO 100	M8	4	DCC-63/100
ISO 160	M10	8	DCC-160/250

Single Claw Clamps are also Available

Medium Wall Bellow ISO Flanges



FLANGE SIZE	HOSE Thickness	304 PART #	316L PART #
ISO 63	.012	MWB-63	MWB-63-6L
ISO 80	.016	MWB-80	MWB-80-6L
ISO 100	.016	MWB-100	MWB-100-6L
ISO 160	.016	MWB-160	MWB-160-6L

Turn to Page 10 for other Bellow Assembly Options

Tube OD Weld Fittings 3/4" - 6"

Dimensions: Inches

TUBE OD WELD 90'S (No Tangent)

Tube OD	Centerline	Wall	304 PART #	316L PART #
3/4"	1.125	.065	2WC-750	2WC-750-6L
1"	1.50	.065	2WC-100	2WC-10-6L
1.5"	2.25	.065	2WC-150	2WC-150-6L
2"	3.00	.065	2WC-200	2WC-200-6L
2.5"	3.75	.065	2WC-250	2WC-250-6L
3"	4.50	.065	2WC-300	2WC-300-6L
4"	6.00	.083	2WC-400	2WC-400-6L
6"	9.00	.083	2WC-600	2WC-600-6L

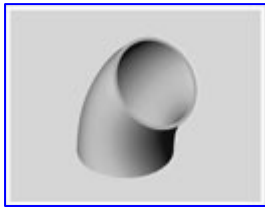
Large OD Fittings Available Upon Request



TUBE OD WELD 45'S (No Tangent)

Tube OD	Centerline	Wall	304 PART #	316L PART #
3/4"	.466	.065	2WK-750	2WK-750-6L
1"	.625	.065	2WK-100	2WK-100-6L
1.5"	.937	.065	2WK-150	2WK-150-6L
2"	1.25	.065	2WK-200	2WK-200-6L
2.5"	1.56	.065	2WK-250	2WK-250-6L
3"	1.82	.065	2WK-300	2WK-300-6L
4"	2.50	.083	2WK-400	2WK-400-6L
6"	3.75	.083	2WK-600	2WK-600-6L

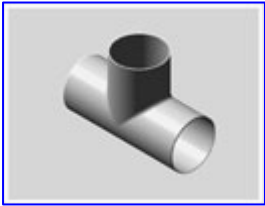
Large OD Fittings Available upon Request



Tube OD Weld Fittings 3/4" - 4"

Dimensions: Inches

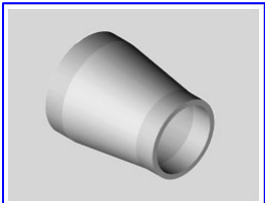
TUBE OD WELD TEE



Tube OD	Centerline	Wall	304 PART #	316L PART #
3/4"	1.87	.065	7W-750	7W-750-6L
1"	1.87	.065	7W-100	7W-100-6L
1.5"	2.25	.065	7W-150	7W-150-6L
2"	3.00	.065	7W-200	7W-200-6L
2.5"	3.00	.065	7W-250	7W-250-6L
3"	3.25	.065	7W-300	7W-300-6L
4"	3.87	.083	7W-400	7W-400-6L

Reducing Tee Available Upon Request

TUBE OD WELD CONCENTRIC REDUCER W TANGENT



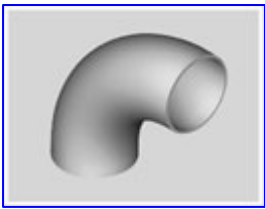
Size x Size		Length	Wall	304 PART #	316 PART #
1.00"	.75"	1.38"	.065	31W-100-750-T	31W-100-750-6L-T
1.50"	1.00"	2.375"	.065	31W-150-100-T	31W-150-100-6L-T
2.00"	1.00"	2.375"	.065	31W-200-100-T	31W-200-100-6L-T
2.00"	1.50"	2.375"	.065	31W-200-150-T	31W-200-150-6L-T
2.50"	2.00"	3.625"	.065	31W-250-200-T	31W-250-200-6L-T
3.00"	1.50"	3.625"	.065	31W-300-150-T	31W-300-150-6L-T
3.00"	2.00"	3.625"	.065	31W-300-200-T	31W-300-200-6L-T
3.00"	2.50"	3.625"	.065	31W-300-250-T	31W-300-250-6L-T
4.00"	1.50"	3.625"	.065	31W-400-150-T	31W-400-150-6L-T
4.00"	2.00"	3.625"	.083	31W-400-200-T	31W-400-200-6L-T
4.00"	3.00"	3.625"	.083	31W-400-300-T	31W-400-300-6L-T

Reducers without tangent and Eccentric Reducers also Available from Stock

Tube OD Weld Fittings 3/4" - 4"

Dimensions: Inches

TUBE OD WELD 90'S W/ TANGENTS



Tube OD	Centerline	Wall	304 PART #	316L PART #
1"	2.06	.065	2WS-100	2WS-100-6L
1.5"	2.93	.065	2WS-150	2WS-150-6L
2"	4.06	.065	2WS-200	2WS-200-6L
2.5"	5.18	.065	2WS-250	2WS-250-6L
3"	6.31	.065	2WS-300	2WS-300-6L
4"	8.31	.083	2WS-400	2WS-400-6L

TUBE OD WELD 45'S W/ TANGENTS



Tube OD	CENTERLINE	Wall	304 PART #	316L PART #
1"	1.18	.065	2WKS-100	2WKS-100-6L
1.5"	1.62	.065	2WKS-150	2WKS-150-6L
2"	2.31	.065	2WKS-200	2WKS-200-6L
2.5"	3.00	.065	2WKS-250	2WKS-250-6L
3"	3.68	.065	2WKS-300	2WKS-300-6L
4"	4.81	.083	2WKS-400	2WKS-400-6L

Metal Hose Bellows

Thin Wall Bellow NW/KF Flanged (Flexible)

FLANGE SIZE	HOSE	LENGTH	304 PART #	316L PART #
NW/KF 25	.006	4"	TWB-25-4	TWB-25-4-6L
NW/KF 40	.006	4"	TWB-40-4	TWB-40-4-6L
NW/KF 50	.006	4"	TWB-50-4	TWB-50-4-6L

Many other configurations available please ask a sales rep for your application requirements.
316L bellows listed are available from stock



Medium Wall Bellow NW/KF Flanged

FLANGE SIZE	HOSE	LENGTH	304 PART #	316L PART #
NW/KF 25	.008	6"	MWB-25	MWB-25-6L
NW/KF 40	.010	6"	MWB-40	MWB-40-6L
NW/KF 50	.012	6"	MWB-50	MWB-50-6L

Many other configurations available please ask a sales rep for your application requirements.
316L Bellows listed are available from stock

Thin Wall Bellow ISO/MF Flanged (Flexible)

FLANGE SIZE	HOSE	LENGTH	304 PART #	316L PART #
ISO 63	.006	6"	TWB-63	TWB-63-6L
ISO 80	.008	6"	TWB-80	TWB-80-6L
ISO 100	.008	6"	TWB-100	TWB-100-6L
ISO 160	.010	8"	TWB-160	TWB-160-6L

Many other configurations available please ask a sales rep for your application requirements.
316L Bellows listed are available from stock in most cases



Medium Wall Bellow ISO/MF Flanged

FLANGE SIZE	HOSE	LENGTH	304 PART #	316L PART #
ISO 63	.012	6"	MWB-63	MWB-63-6L
ISO 80	.016	6"	MWB-80	MWB-80-6L
ISO 100	.016	6"	MWB-100	MWB-100-6L
ISO 160	.016	6"	MWB-160	MWB-160-6L

Many other configurations available please ask a sales rep for your application requirements.
316L Bellows listed are available from stock in most cases



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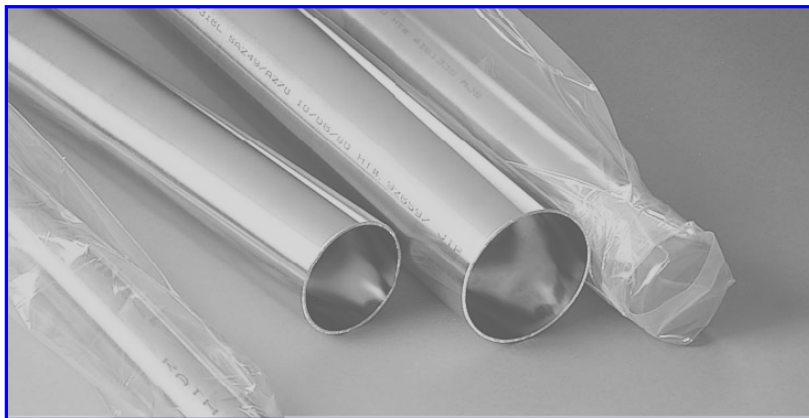
VACUUM GRADE TUBING A269

Dimensions: Inches & Feet

Stocking Sizes & Lengths for A269 Domestic Tubing Bright Annealed

TUBE OD	WALL	LENGTH	304 PART #	316 PART #
3/4"	.065	20'	TUBE-BA-750-065W	TUBE-BA-750-065W-6L
1.00"	.065	20'	TUBE-BA-100-065W	TUBE-BA-100-065W-6L
1.50"	.065	20'	TUBE-BA-150-065W	TUBE-BA-150-065W-6L
2.00"	.065	20'	TUBE-BA-200-065W	TUBE-BA-200-065W-6L
2.50"	.065	20'	TUBE-BA-250-065W	TUBE-BA-250-065W-6L
3.00"	.065	20'	TUBE-BA-300-065W	TUBE-BA-300-065W-6L
4.00"	.065	20'	TUBE-BA-400-065W	TUBE-BA-400-065W-6L
4.00"	.083	20'	TUBE-BA-400-083W	TUBE-BA-400-083W-6L

To order Polished OD tubing simply change the "BA" in # to "OD"
 Seamless & Welded Instrumentation Tubing Available from Stock
 Large OD Tubing available from 6" – 12" Mill Finish , A778 Specification
 *O2 Cleaning and Packaging



Dimensional Tolerances

Outside Diameter		Wall Thickness
1"	±0.005"	±10%
1-1/2" - 3"	±0.010"	±10%
4"	±0.015"	±10%



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Quote Request/ Order Form

Company Name: _____
 Requested By: _____

Phone #: _____
 Fax #: _____

Quantity	Description	Part #	Unit Price	Total	Delivery Date*
Total Pcs		Order Value		\$	

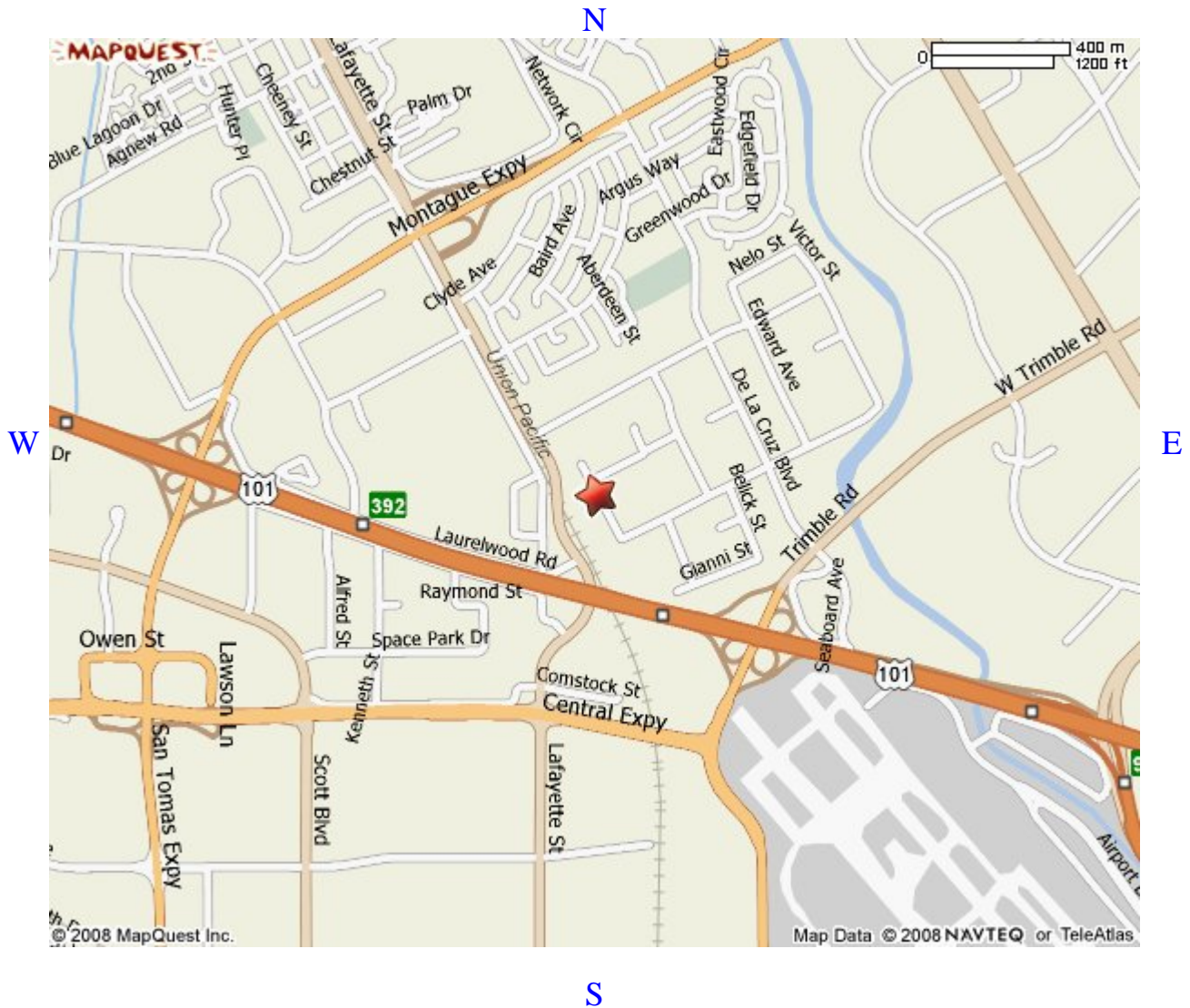
Job Name: _____
 Ship Via: _____
 Date Requested: _____
 P.O.# _____

Ship TO: _____
 Address: _____
 City: _____
 State, Zip: _____

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Santa Clara, CA. 95054



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