

STANDARD**■ Federal Mil A-A-59326A**

The standard for cam & groove couplings is based on the US Military Specification Mil-C-27487. The Mil-C-27487 specified the casting methods, materials, dimensions, tolerances, pressure ratings and inspection procedures. In 1998, the original Mil-C-27487 specification was replaced by a new Federal Military standard: A-A-59326A. Federal Mil A-A-59326A guarantees interchangeability of couplings designed to the same specification.

Interchangeability with other brands

Between manufacturers cam & groove couplings are interchangeable with the exception of 1/2" (12.7 mm), 5" (127 mm) and 8" (203.2 mm).

The A-A-59326A Mil-specification does not apply to 5" and 8" cam & groove couplings, due to the presence of two versions of cam & groove couplings in today's market.

Limitations: Hose shanks with larger serrations are not designed to be assembled with a ferrule or sleeve. Hose damage can result if they are swaged. The larger shank serrations will cut into the inner wall of the hose resulting in leakage or permanent hose failure.

N.B.: Cam & groove couplings must never be used for steam or compressed air applications.

■ EN 14420-7

The European standard EN 14420-7 was approved by CEN in September 2004, and was applied to cam & groove couplings manufactured to American "military specification" MIL-C-27487 / A-A-59326A. This American standard does not apply to the hose connection side, but only to the coupling side.

Cam & groove couplings produced to EN 14420-7 are interchangeable with those produced to the original MIL-C-27487 standard, but differ in terms of hose tail design, thread, part number etc. A flat thread seal has been added to the female threaded parts, and a smooth hose shank complying with EN 14420-2 / DIN 2817 has been added for assembly with RK safety clamps complying with EN 14420-3 / DIN 2817.

N.B.: European standard EN 14420-7 replaces DIN 2828 but does not replace MIL-C-27487 and Federal Mil A-A-59326A.

■ DIN 2828

Couplings produced to DIN 2828 are interchangeable with those produced to the original MIL-C-27487 standard, but differ in terms of hose tail design, thread, part number etc. A flat thread seal has been added to the female threaded parts, and a smooth hose shank complying with DIN 2817 has been added for assembly with RK safety clamps complying with DIN 2817.



OPERATION

To connect

1. Open the coupler by pulling back the locking lever above the cam handles, whilst rotating the handles away from the body of the coupler.
2. Insert the adaptor into the coupler
3. Close the coupler by rotating the cam handles towards the body of the coupler. Locking occurs when the cam handles are closed. The coupler is properly closed when the locking levers on both the cam handles assemblies are flush. For extra security, insert safety clip through the holes above the cam handles. Line pressure, which moves the coupler and adaptor independently, increases the pressure on the cam face, ensuring increased locking leverage. Under normal conditions, safety locks are not necessary, but are recommended. The adaptor and the coupler are designed to minimize the fluid turbulence and the abrasion from dry products when connected.



To disconnect

4. Be sure that the hose-coupling connection is depressurized before disconnecting.
5. Open the coupler by pulling back the locking lever above the cam handles, whilst rotating the handles away from the body of the coupler.
6. Remove the adaptor from the coupler.
7. Close the coupler by rotating the cam handles towards the body of the coupler. Locking the coupler when not in use will help protect it from accidental damage.

FEATURES



1. Stainless steel triangular handles, pin, ring and safety pin are standard on all material versions. Handles manufactured by investment casting.
2. Holes for safety pin inserts
3. Earthing lug
4. Reinforced coupling section for increased mechanical strength
5. Long hose shank to ensure secure fixing
6. Marked with cam & groove type
7. Marked with diameter
8. Marked with standard compliance: MS (Military Specification) or DIN (Deutsche Industrienorm)
9. Marked with material identification: stainless steel, brass, bronze, aluminium, polypropylene
10. Seals are available in NBR (standard), EPDM (for polypropylene), PTFE, CSM, FPM, FEP/Silicone, PTFE/EPDM and PTFE/FPM
11. Safety couplers are available with monoblock safety body
12. Coupling insurance by brand name LMC-Couplings®



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APPLICATION

Cam & groove couplings are used for hose-to-hose or hose-to-pipe / manifold connections for the transfer of liquids or dry bulk products with the exception of liquid gas and steam.



WORKING PRESSURE

INCH	1/2"		3/4"-2"		2.1/2"		3"		4"		5"		6"		8"	
	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi
Working pressure	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi	Bar	Psi
Brass	11	150	18	250	11	150	9	125	7	100	5	75	5	75	-	-
Bronze	-	-	18	250	11	150	9	125	7	100	-	-	-	-	-	-
Aluminium	11	150	18	250	11	150	9	125	7	100	5	75	5	75	5	75
Stainless steel	11	150	18	250	16	225	14	200	7	100	7	100	7	100	3	50

TEMPERATURE RANGE

The working pressures shown above refer to ambient temperatures using elastomer seals. Higher temperatures and / or PTFE seals will reduce the rated coupling pressure. In the case of polypropylene, the maximum working temperature is 70°C / 160°F, at which temperature the working pressures shown above should be reduced by 40%.

Hose, coupling, seal and assembly method must be chosen in relation with the desired application and temperature range.

MATERIAL

■ Coupling

LMC-Couplings cam & groove couplings are available in the following materials:

Stainless steel: ASTM A666 grade 316 / 1.4401

Brass: ASTM B584 grade C85700

Bronze: ASTM B584 grade C84400

Aluminium: ASTM B85 grade 380

Polypropylene: LMC's polypropylene cam & groove couplings contain 25-30% fiberglass reinforcements

Production method

All sizes of brass and bronze cam & groove couplings are shell-moulded or sand cast.

The type of aluminium is a sand cast 713-T5 alloy, which can be anodised if required.

Stainless steel couplings are investment-cast in a range of common sizes and are electro-polished for clean applications.

The stainless steel quality for cam & groove couplings is standard AISI 316 / 1.4401

Polypropylene couplings are made from polypropylene reinforced with 25%-30% acid-resistant fibreglass.



Materials and sizes

INCH ND	1/2"	3/4"-2"	2.1/2"	3"-4"	5"-6"	8"
ND	13	20-50	65	75-100	125-150	200
Brass	■	■	■	■	■	-
Bronze	-	■	■	■	■	-
Aluminium	■	■	■	■	■	■
Stainless steel	■	■	■	■	■	■
Polypropylene	■	■	-	■	-	-

- Available
- Not available

Material

■ Seal

Standard seal

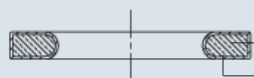
The standard cam & groove seal consists of a standard square-section, available in:



- VLXB... : NBR - Silicone free (standard for all materials, except for polypropylene)
- VLXE... : EPDM (standard for material polypropylene)
- VLXV... : FPM
- VLXH... : CSM

Closed seal

VLXPSG closed cam & groove seals are designed for extreme chemical applications. These seals combine the best properties of two different materials; the pressure set of the rubber Silicone core and the chemical resistance provided by the FEP encapsulation. Encapsulation of the Silicone core ensures improved operational safety, when compared with an open envelope seal. VLXPSG seals are produced without the use of animal derived ingredients, ADI free. This reduces the risk of BSE prion contamination. VLXPSG closed cam & groove seals resist high temperature operation: from -60°C / -76°F up to 204°C / 399°F.

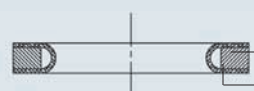


- FEP envelope
- VLXPSG...: Silicone core (standard)
FPM core (on request)



Open envelope seal

The open envelope seal consists of a U-section PTFE envelope and a square-section EPDM core. The construction method used for the open envelope seal ensures excellent compression properties. The PTFE envelope allows the seal to withstand temperatures up to 200°C / 392°F.



- PTFE envelope
- VLXP...: EPDM core (standard)
FPM and Silicone core (on request)

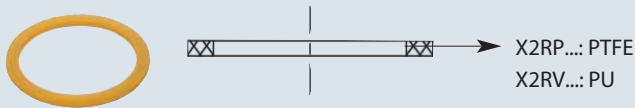
Closed envelope seal

The closed envelope seal removes all contact between chemicals and the seal core. The fully-closed PTFE envelope completely encapsulates the FPM. The maximum temperature for this type is 200°C / 392°F.



Thread seal

Female threaded coupler and adaptor components complying with EN 14420-7 / DIN 2828 standards contain a thread seal. Female threaded cam & groove couplings are sealed by screwing a male BSPT / BSP thread up to the thread seal. Thread seals are available in: PTFE - PU



Properties seals

REF.	ASTM	POLYMER	TRADE NAME	HARDNESS	°C	°F	+	PROPERTIES	-
VLXB...	NBR	Acrylonitrile Butadiene	Perbunan®	60 +/- 5 Shore A	-30°C 120°C	-22°F 248°F	Oil based hydraulic fluid, fats, animal and vegetable oils, flame retardant, liquids, grease, water and air	Ozone, sunlight weather	
VLXE...	EPDM	Ethylene-propylene-Diene Rubber	Keltan®	70 +/- 5 Shore A	-40°C 145°C	-40°F 293°F	Acids, steam, alcohol	Oil, greases	
VLXV...	FPM	Fluorocarbon	Viton®	70 +/- 5 Shore A	-30°C 200°C	-22°F 392°F	Mineral oils and greases, alifatic, aromatic, and also special chlorinated hydrocarbons, petrol, diesel fuels, silicon oils and greases	Steam	
VLXH...	CSM	Chlorosulfonated polyethylene	Hypalon®	70 +/- 5 Shore A	-40°C 140°C	-40°F 284°F	Acids and oils, obsolescent and ozone resistant	Chlorine	
VLXPSG...	FEP / MVQ	Fluorinated ethylene propylene / Silicone	Teflon® FEP / Silicone	60 +/- 5 Shore D	-60°C 204°C	-76°F 399°F	Resistant to almost all kinds of chemical products, steam, oils... Excellent self-lubricating and anti adhesive properties	Hardness	
VLXP...	PTFE / EPDM	Poly tetrafluorethylene /	Teflon® / Keltan®	85 +/-5 Shore D	-25°C 100°C	-13°F 212°F	Alcohols, acids	Hardness Oil, greases	
VLXP...V	PTFE / FPM	Poly tetrafluorethylene / Fluorocarbon	Teflon® / Viton®	85 +/-5 Shore D	-10°C 200°C	14°F 392°F	Mineral oils and greases, alifatics, aromatics	Low temp.	
VLXPG...	PTFE / FPM	Poly tetrafluorethylene / Fluorocarbon	TFM™ PTFE / Viton®	74 +/- 5 Shore D	-15°C 200°C	5°F 392°F	Acids and oils, obsolescent and ozone resistant petrol	Benzene, toluene,	

Perbunan® is a registered trademark of Bayer AG / Keltan® is a registered trademark of DSM / Viton® is a registered trademark of DuPont Performance Elastomer
Hypalon® is a registered trademark of DuPont Performance Elastomer / Teflon® is a registered trademark of DuPont Performance Elastomer
Silplus® is a registered trademark of General Electric Co / TFM™ is a registered trademark of Dyneon.

ASSEMBLY

Hose

Worm drive clamps

RK safety clamps to EN-14420-3 / DIN 2817

RKP safety clamps to EN-14420-3 / DIN 2817

Pipe

FLEXOLINE® safety clamps

Welding: butt welding and socket welding (see pg. A.1.27)

THREADS

Three different types of thread are generally used for cam & groove couplings:

- BSP = British Standard Pipe thread
- BSPT = British Standard Pipe Taper thread
- NPT = National Pipe Taper thread

In Europe, BSP and BSPT threads are more commonly used than NPT threads. NPT threads are typically American threads. Since many American industrial machines and products are exported to European markets, couplings with NPT threads are a regular requirement. The main difference between the three thread types referred to above is the seal method used. Although BSP threads are sealed using a seal or o-ring, BSPT and NPT threads are sealed by their conical thread.

THREAD	DESCRIPTION	STANDARD	TYPICAL CALL OUT	SEALING METHOD	PROPERTIES
BSP	British standard pipe	EN ISO 228-1	G1	<ul style="list-style-type: none"> ■ Parallel thread ■ Pressure tight joint is obtained with a seal or o-ring 	<ul style="list-style-type: none"> ■ 55° degree thread angle ■ Truncation of root and crest are round
BSPT	British standard pipe taper	EN 10226-1 DIN 2999-1	R1	<ul style="list-style-type: none"> ■ Conical thread. ■ Pressure tight joint is achieved by the thread 	<ul style="list-style-type: none"> ■ 55° degree thread angle ■ Truncation of root and crest are round
NPT	National pipe thread <small>(American standard pipe thread)</small>	ANSI B 1.20.1	NPT 1	<ul style="list-style-type: none"> ■ Conical thread ■ Pressure tight joint is achieved by the thread 	<ul style="list-style-type: none"> ■ 60° degree round angle ■ Truncation of root and crest are flat

Cam & groove threads

COUPLING	TYPE	STANDARD	ON REQUEST
ADAPTOR			
Female threaded	A	BSP EN ISO 228-1	NPT ANSI B 1.20.1
Male threaded	F	BSPT EN 10226-1 / DIN 2999-1	NPT ANSI B 1.20.1
COUPLER			
Female threaded	D	BSP EN ISO 228-1	NPT ANSI B 1.20.1
Male threaded	B	BSPT EN 10226-1 / DIN 2999-1	NPT ANSI B 1.20.1

TESTING

The following aspects of LMC's cam & groove couplings are tested by the Research & Development department:

- Adaptor and coupler dimensions
- Material quality
- Handle strength
- Seal properties
- Thread dimensions
- Impact resistance

■ Adaptor and coupler dimensions

High-technology measuring equipment

High-technology measuring tools are used to measure the specific dimensions of cam & groove couplings to ensure compliance with the dimensions required under the Federal Mil A-A-59326A, European EN 14420-7 and the German DIN 2828 standards. Although ordinary measuring systems are unable to give sufficiently precise dimensions for this purpose, our high-technology measuring system is able to measure complex cam & groove coupling product positions and shapes.



Dimension gauges

The shape of the adaptor coupling enables the interchangeability of coupler parts. Specially designed gauges are used in addition to measurement systems. The use of test gauges minimises inspection times, ensures interchangeability and maintains seal properties when using specially-designed seals, such as envelope seals.

Two gauges are used for each dimension; one small and the other larger. In the first stage of testing, the small gauge is passed across the head of the adaptor section. If the gauge can not pass, the adapter head falls within the permissible – (minus) tolerances.

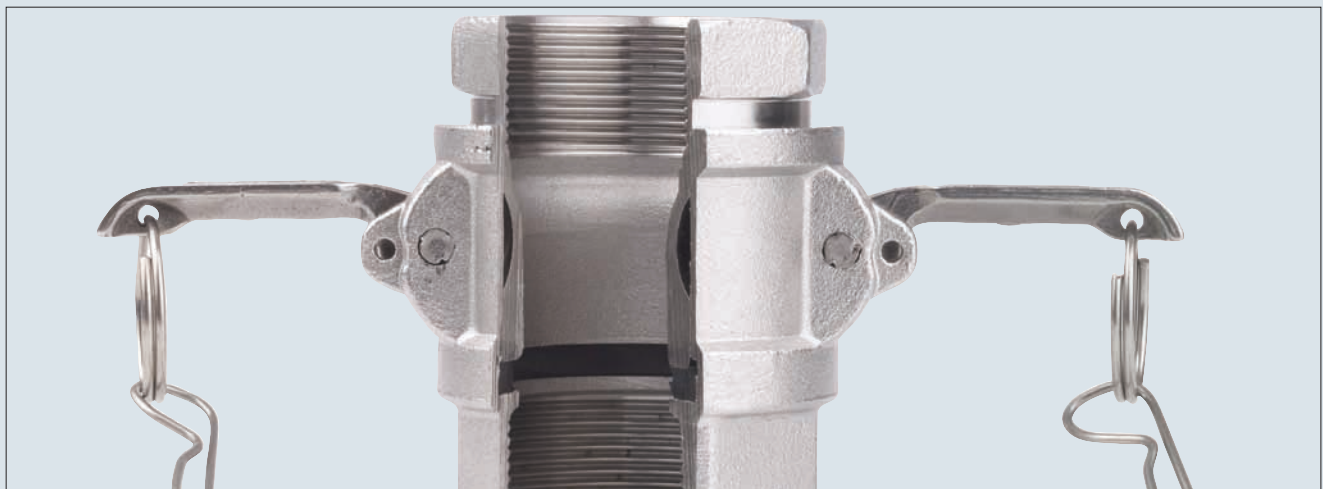
If the larger gauge passes across the adaptor head with no interruption, the component is compliant and its dimensions fall within the permissible + (plus) tolerances.



■ Material quality

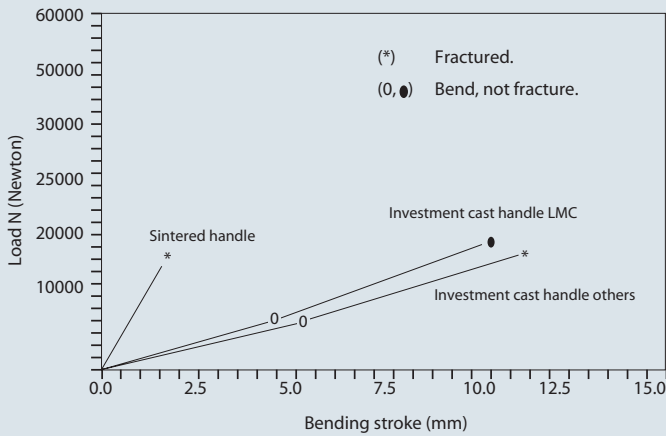
An in-house spectroscope is used to identify the materials used in the cam & groove couplings. The spectroscope analyses the precise quantity of all materials of the coupling.

We can therefore offer our customers a guarantee that the materials used comply fully with the relevant standard.



■ Handle strength

LMC handles are designed to resist a wide range of applications in many industries. All standard handles are investment-cast and triangular in section. The production method and triangular section guarantees excellent mechanical properties. The wear resistance of this material was tested using a Rockwell hardness tester. LMC handles achieve better test results than sintered handles. Sintered handles begin to fracture when subjected to a load of 14710 Newton, LMC handles do not even start to bend until subjected to a load of 9807 Newton. Even when subjected to a load of 23536 Newton LMC cam & groove handles still show no sign of fracture.



Bend investment cast LMC handle



Fractured sintered handle

■ Seal properties

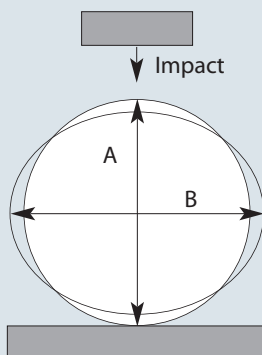
After chemical structure, seal compression set has the next most significant effect on the seal of cam & groove couplings. A seal of correct hardness will ensure that the cam & groove coupling is sealed properly and safely. Cam & groove seal hardness is tested using a durometer.

■ Thread dimensions

All cam & groove threads are tested using thread gauges. Our production site has gauges for all dimensions and all standards.

■ Impact resistance

Impact resistance tests were carried out on 3" and 4" aluminium couplers and seven other brands in order to test the mechanical strength of LMC cam & groove couplings. A 2.3 kg / 5 lbs weight was dropped from a height of 1.5 metres / 5 feet, and the impact on the coupler body measured.



Drop weight impact on bowl of coupler

Original ID: A
 ID after impact: B

BRAND	PRODUCTION METHOD
E	Gravity cast
F	Gravity cast
G	Sand cast
H	High pressure die cast
I	High pressure die cast
J	Squeeze die cast
K	High pressure die cast
LMC	High pressure die cast

Size 3"													
Type	C	C	C	C	C	C	C	B	B	C	C	D	C
Brand	E	F	G	H	H	I	J	K	K	K	K	K	LMC
Original ID A	92.14	91.72	91.98	92.21	92.01	92.53	91.98	92.24	92.42	92.74	92.58	92.15	93.54
1	91.75	89.43	89.86	91.06	91.67	90.98	91.16	91.43	91.12	91.48	91.59	91.31	93.17
2	91.38	88.65		90.57	90.54	90.08	89.57	91.00	90.43	90.68	91.20	90.75	92.57
3	90.73			90.54	90.27	89.06	88.66	90.26	90.30	90.28	91.11	90.38	92.57
4	90.56			90.25	90.09			90.12	89.28		90.68	90.30	92.35
5				90.16	90.05			89.83			90.65	89.78	92.19
6				90.11	90.00						90.47	89.72	91.92
7					89.55							89.49	91.89
8					89.35							89.44	91.87
9					89.37							89.33	91.79
10					89.33								91.77
11					89.22								91.76
12					89.14								91.55
13													91.68
14													91.58
15													91.58
16													91.65
17													91.61
18													91.19
19													91.15
20													91.18
21													91.08
22													90.58
23													90.05

Measurements in mm

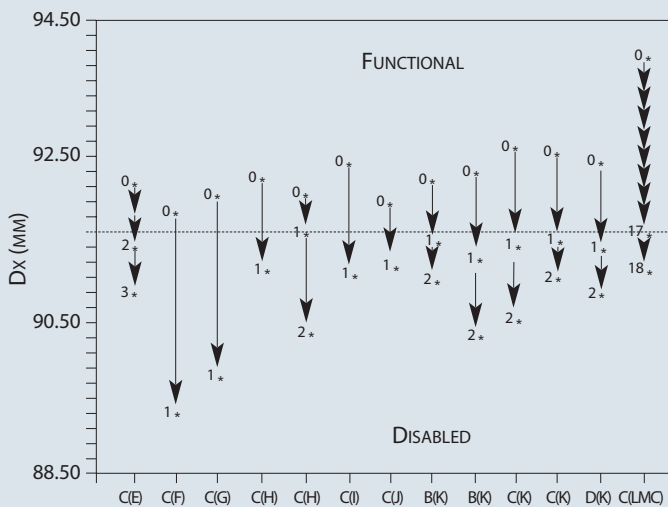
- Adaptor unable to fit in coupler
- Coupler cracked

Test result

The impact resistance test showed that the product quality of cam & groove couplings is variable. Nine couplers from different manufacturers were also tested.

Five brands of adaptor were unable to fit the corresponding coupler following a single impact from a 2.3 kg / 5 lbs weight dropped from a height of 1.5 metres / 5 feet. It took 18 such impacts before LMC-Couplings couplers were unable to fit their adaptors.

The average number of impacts required before fractures became aparent was 4.25. LMC-Couplings couplers resisted 23 impacts before showing signs of fracture; a result far in excess of the average value.



COATINGS

Sometimes standard cam & groove coupling materials, like stainless steel, are not sufficiently resistant to extremely aggressive chemicals. However, at LMC-Couplings, our couplings feature high-resistance coatings, such as:

- ECTFE
 - PTFE
 - PFA
 - PVDF
-
- ECTFE (up to 1000µm)
ECTFE (Ethylene chlorotrifluoroethylene) coatings are designed to resist highly-concentrated and aggressive chemicals. Couplings with an ECTFE-coating show excellent electric isolating and fire properties and resist to temperatures up to 150°C / 302°F.
 - PFA (up to 200µm)
The key quality of a PFA (Perfluoroalkoxy) coating is the temperature resistance up to 260°C / 500°F. Their effective anti-adhesive layer makes PFA coatings particularly well-suited to food and pharmaceutical industry applications.
 - PTFE (up to 40µm)
PTFE (Poly tetrafluoroethylene) coatings are only 40µ thick. PTFE-coated couplings can withstand temperatures up to 260°C / 500°F. Like PFA-coated couplings, PTFE couplings have excellent anti-adhesive qualities and are suitable for food industry applications.
 - PVDF (up to 800µm)
Like ECTFE coatings, PVDF (Polyvinylidene fluoride) coatings can resist highly-concentrated and aggressive chemicals, but with the added advantage of high temperature resistance up to 260°C / 500°F. These couplings are wear-proof and also suitable for food industry applications.

PTFE liner

LMC-Couplings is able to provide his customers PTFE lined couplings. Our PTFE facility has been specially built to meet the highest industrial requirements. This room is separated from other production facilities to ensure a clean and dust-free working environment. PTFE lined couplings are used in the pharmaceutical, cosmetics and food industry for applications with a temperature range of maximum 40°C / 104°F. Contact our sales department for more information.



ACCESSORIES

All LMC-Couplings, cam & groove couplings (stainless steel, brass, bronze, aluminium and polypropylene)* as standard are supplied with stainless steel investment-cast triangular-section handles. Stainless steel provides the best chemical resistance. Their triangular section and investment-casting production method improves the mechanical strength of the handle.

Even greater security and safety is ensured by LMC's cam & groove couplings with patented safety handles. Simply push the nut on the handle downwards and the coupling connection is sealed. The safety version of LMC's cam & groove couplings can be made extra-secure by using the safety pin, as on all standard LMC-Couplings cam & groove couplings.

Where dust caps (type DC) are used to terminate hose or pipe assemblies, LMC's lockable handles offer even higher safety levels. These patented L-shaped handles are physically locked, so that the dust cap can only be removed by unlocking the handles with a key. When using dust caps safety handles are recommended for extra security.

* With exception of 8"



1



2



3



1



2



3

Handle types

TYPE HANDLE	MATERIAL	REFERENCE	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"	5"	6"	8"
Investment-cast triangular handle <small>standard</small>	Stainless steel	VLHRPR	■	■	■	■	■	■	■	■	■	■	■	■
Investment-cast triangular handle	Brass	VLHRPM	-	-	■	■	■	■	-	■	■	-	-	-
Safety locking handle	Stainless steel	VLHRPR S	-	-	-	-	■	■	-	■	■	■	-	-
Cap L-handle	Stainless steel	VLHRPR L	-	-	-	■	■	■	■	■	■	■	■	-

■ available

- not available



8" aluminium with 4 handles

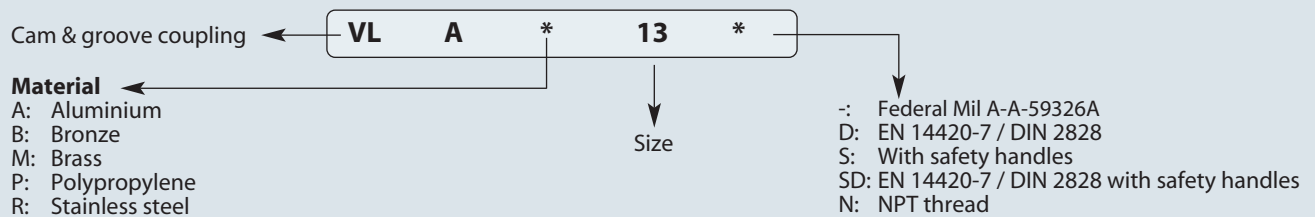
4" polypropylene with 3 handles

1/2" with 1 handle for all materials

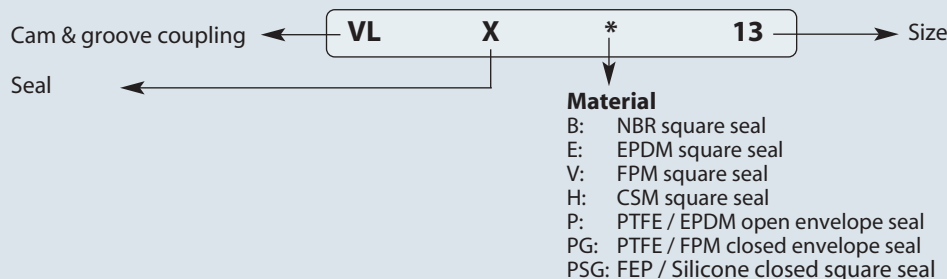
CROSS REFERENCES

Cam & groove couplings

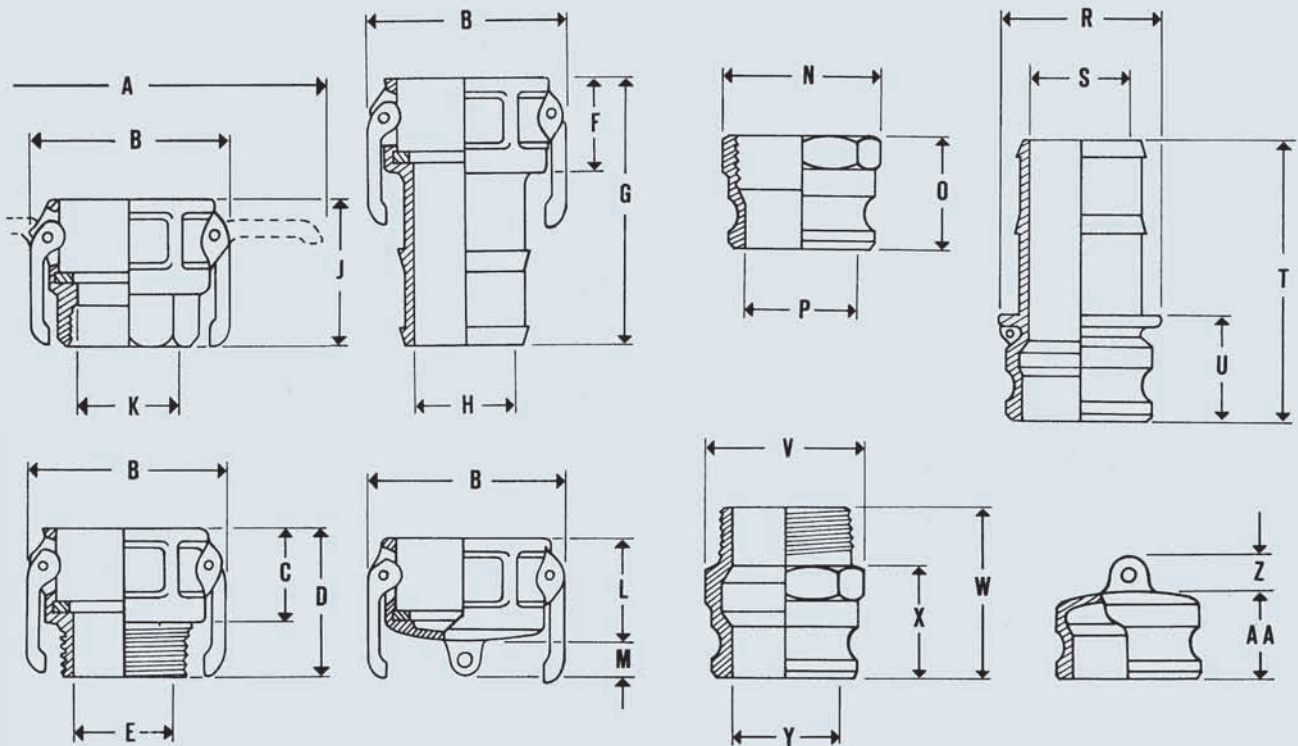
COUPLING	TYPE	DESCRIPTION	EN REFERENCE	COMMON USED REF.
	A	Adaptor, female threaded Federal Mil	-	633-ABS
	A	Adaptor, female threaded EN 14420-7 / DIN 2828 with thread seal	AF	633-ABSF
	B	Coupler, female threaded EN 14420-7 / Federal Mil	BF	633-BB
	C	Coupler, with serrated hose shank Federal Mil	-	633-C
	C	Coupler, with smooth hose shank EN 14420-7 / DIN 2828	CC	633-CC
	D	Coupler, female threaded Federal Mil	-	633-DBS
	D	Coupler, female threaded EN 14420-7 / DIN 2828 with thread seal	DF	633-DBSF
	E	Adaptor, with serrated hose shank Federal Mil	-	633-E
	E	Adaptor, with smooth hose shank EN 14420-7 / DIN 2828	EC	633-EC
	F	Adaptor, male threaded Federal Mil / EN 14420-7	FF	633-FB
	K	Female dust cap Federal Mil / EN 14420-7	DC	634-B
	P	Male dust plug Federal Mil / EN 14420-7	DP	634-A



Cam & groove seals



DIMENSIONS



ND	Inch	A	B	C	D	E	F	G	H	J	K	L
13	1/2"	30	40	31	46	13	31	66	10	46	14	33
20	3/4"	115	50	33	49	19	55	85	14	49	21	34
25	1"	138	62	40	60	24	40	98	20	60	26	41
32	1.1/4"	178	81	46	68	31	46	104	26	70	35	48
40	1.1/2"	185	87	48	70	38	48	109	32	73	38	50
50	2"	195	90	54	79	48	54	124	43	79	46	57
65	2.1/2"	208	111	55	85	62	55	135	54	87	56	59
80	3"	250	143	57	90	75	57	159	66	92	73	62
100	4"	270	171	61	101	100	61	169	89	101	98	65
125	5"	300	-	61	101	122	61	188	118	105	128	65
150	6"	400	254	67	112	150	67	240	140	111	144	73

M	N	O	P	S	T	U	V	W	X	Y	Z	AA
13	24	37	14	10	62	28	24	52	37	14	4	26
13	32	40	19	14	76	25	32	57	40	19	10	26
13	43	48	23	19	92	36	43	69	49	23	10	23
13	50	55	28	25	98	41	58	77	55	28	10	40
13	56	36	36	31	102	44	56	78	56	36	10	42
13	68	62	46	43	117	49	68	87	62	46	10	48
13	85	86	56	56	129	51	85	98	68	56	10	49
13	102	88	73	64	153	51	102	108	70	73	10	51
13	126	78	98	89	168	55	126	118	78	98	12	53
13	-	83	118	118	188	56	-	103	63	118	12	58
16	-	82	150	138	230	60	-	108	68	150	12	58

Dimensions in mm and are given as illustration only.

CAM & GROOVE COUPLINGS



TYPE A: ADAPTOR FEMALE THREADED

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
15	1/2"	G 1/2	Aluminium	0.02	VLAA013
20	3/4"	G 3/4	Aluminium	0.04	VLAA019
25	1"	G 1	Aluminium	0.05	VLAA025
32	1.1/4"	G 1.1/4	Aluminium	0.09	VLAA032
40	1.1/2"	G 1.1/2	Aluminium	0.11	VLAA038
50	2"	G 2	Aluminium	0.15	VLAA050
65	2.1/2"	G 2.1/2	Aluminium	0.24	VLAA063
80	3"	G 3	Aluminium	0.27	VLAA075
100	4"	G 4	Aluminium	0.58	VLAA100
125	5"	G 5	Aluminium	0.90	VLAA125
150	6"	G 6	Aluminium	0.84	VLAA150
200	8"	G 8	Aluminium	2.31	VLAA200
15	1/2"	G 1/2	Stainless steel	0.07	VLAR013
20	3/4"	G 3/4	Stainless steel	0.11	VLAR019
25	1"	G 1	Stainless steel	0.15	VLAR025
32	1.1/4"	G 1.1/4	Stainless steel	0.24	VLAR032
40	1.1/2"	G 1.1/2	Stainless steel	0.32	VLAR038
50	2"	G 2	Stainless steel	0.42	VLAR050
65	2.1/2"	G 2.1/2	Stainless steel	0.71	VLAR063
80	3"	G 3	Stainless steel	0.73	VLAR075
100	4"	G 4	Stainless steel	1.42	VLAR100
125	5"	G 5	Stainless steel	1.92	VLAR125
150	6"	G 6	Stainless steel	3.17	VLAR150
15	1/2"	G 1/2	Brass	0.07	VLAM013
20	3/4"	G 3/4	Brass	0.10	VLAM019
25	1"	G 1	Brass	0.15	VLAM025
32	1.1/4"	G 1.1/4	Brass	0.20	VLAM032
40	1.1/2"	G 1.1/2	Brass	0.29	VLAM038
50	2"	G 2	Brass	0.35	VLAM050
65	2.1/2"	G 2.1/2	Brass	0.72	VLAM063
80	3"	G 3	Brass	0.73	VLAM075
100	4"	G 4	Brass	1.48	VLAM100
125	5"	G 5	Brass	1.79	VLAM125
150	6"	G 6	Brass	3.38	VLAM150
20	3/4"	G 3/4	Bronze	0.12	VLAB019
25	1"	G 1	Bronze	0.16	VLAB025
32	1.1/4"	G 1.1/4	Bronze	0.22	VLAB032
40	1.1/2"	G 1.1/2	Bronze	0.29	VLAB038
50	2"	G 2	Bronze	0.47	VLAB050
65	2.1/2"	G 2.1/2	Bronze	0.81	VLAB063
80	3"	G 3	Bronze	0.80	VLAB075
100	4"	G 4	Bronze	1.46	VLAB100
15	1/2"	G 1/2	Polypropylene	0.02	VLAP013
20	3/4"	G 3/4	Polypropylene	0.02	VLAP019
25	1"	G 1	Polypropylene	0.03	VLAP025
32	1.1/4"	G 1.1/4	Polypropylene	0.05	VLAP032
40	1.1/2"	G 1.1/2	Polypropylene	0.07	VLAP038
50	2"	G 2	Polypropylene	0.09	VLAP050
80	3"	G 3	Polypropylene	0.21	VLAP075
100	4"	G 4	Polypropylene	0.36	VLAP100



Coupling standard: Federal Mil A-A-59326A
 Female thread: EN ISO 228-1, BSP
 ANSI B 1.20.1, NPT on request
 Stainless steel: AISI 316 / 1.4401
 ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE B: COUPLER MALE THREADED

ND	Inch	Thread EN 10226-1	Material	Coupler seal	Handles	Weight/pc Kg	Reference
15	1/2"	R 1/2	Aluminium	NBR	1	0.07	VLBA013
20	3/4"	R 3/4	Aluminium	NBR	2	0.10	VLBA019
25	1"	R 1	Aluminium	NBR	2	0.16	VLBA025
32	1.1/4"	R 1.1/4	Aluminium	NBR	2	0.27	VLBA032
40	1.1/2"	R 1.1/2	Aluminium	NBR	2	0.30	VLBA038
50	2"	R 2	Aluminium	NBR	2	0.35	VLBA050
65	2.1/2"	R 2.1/2	Aluminium	NBR	2	0.43	VLBA063
80	3"	R 3	Aluminium	NBR	2	0.68	VLBA075
100	4"	R 4	Aluminium	NBR	2	0.92	VLBA100
125	5"	R5	Aluminium	NBR	2	1.81	VLBA125
150	6"	R 6	Aluminium	NBR	2	1.78	VLBA150



15	1/2"	R 1/2	Stainless steel	NBR	1	0.12	VLBR013
20	3/4"	R 3/4	Stainless steel	NBR	2	0.20	VLBR019
25	1"	R 1	Stainless steel	NBR	2	0.29	VLBR025
32	1.1/4"	R 1.1/4	Stainless steel	NBR	2	0.47	VLBR032
40	1.1/2"	R 1.1/2	Stainless steel	NBR	2	0.54	VLBR038
50	2"	R 2	Stainless steel	NBR	2	0.67	VLBR050
65	2.1/2"	R 2.1/2	Stainless steel	NBR	2	1.14	VLBR063
80	3"	R 3	Stainless steel	NBR	2	1.35	VLBR075
100	4"	R 4	Stainless steel	NBR	2	1.97	VLBR100
125	5"	R 5	Stainless steel	NBR	2	2.98	VLBR125
150	6"	R 6	Stainless steel	NBR	2	4.11	VLBR150



15	1/2"	R 1/2	Brass	NBR	1	0.17	VLBM013
20	3/4"	R 3/4	Brass	NBR	2	0.21	VLBM019
25	1"	R 1	Brass	NBR	2	0.32	VLBM025
32	1.1/4"	R 1.1/4	Brass	NBR	2	0.45	VLBM032
40	1.1/2"	R 1.1/2	Brass	NBR	2	0.52	VLBM038
50	2"	R 2	Brass	NBR	2	0.64	VLBM050
65	2.1/2"	R 2.1/2	Brass	NBR	2	0.94	VLBM063
80	3"	R 3	Brass	NBR	2	1.38	VLBM075
100	4"	R 4	Brass	NBR	2	1.94	VLBM100
125	5"	R 5	Brass	NBR	2	3.98	VLBM125
150	6"	R 6	Brass	NBR	2	3.65	VLBM150



20	3/4"	R 3/4	Bronze	NBR	2	0.22	VLBB019
25	1"	R 1	Bronze	NBR	2	0.34	VLBB025
32	1.1/4"	R 1.1/4	Bronze	NBR	2	0.53	VLBB032
40	1.1/2"	R 1.1/2	Bronze	NBR	2	0.59	VLBB038
50	2"	R 2	Bronze	NBR	2	0.73	VLBB050
65	2.1/2"	R 2.1/2	Bronze	NBR	2	1.12	VLBB063
80	3"	R 3	Bronze	NBR	2	1.58	VLBB075
100	4"	R 4	Bronze	NBR	2	2.02	VLBB100



15	1/2"	R 1/2	Polypropylene	EPDM	2	0.07	VLBP013
20	3/4"	R 3/4	Polypropylene	EPDM	2	0.08	VLBP019
25	1"	R 1	Polypropylene	EPDM	2	0.11	VLBP025
32	1.1/4"	R 1.1/4	Polypropylene	EPDM	2	0.21	VLBP032
40	1.1/2"	R 1.1/2	Polypropylene	EPDM	2	0.21	VLBP038
50	2"	R 2	Polypropylene	EPDM	2	0.25	VLBP050
80	3"	R 3	Polypropylene	EPDM	2	0.50	VLBP075
100	4"	R 4	Polypropylene	EPDM	3	0.76	VLBP100



Coupling standard: Federal Mil A-A-59326A / EN 14420-7 / DIN 2828

Male thread: EN 10226-1 / DIN 2999-1, BSPT

ANSI B 1.20.1, NPT on request

Stainless steel: AISI 316 / 1.4401

ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE C: COUPLER WITH SERRATED HOSE SHANK

ND	Inch	For hose mm	Collar	Material seal	Coupler	Handles	Weight/pc Kg	Reference
15	1/2"	13	x	Aluminium	NBR	1	0.07	VLCA013
20	3/4"	19	-	Aluminium	NBR	2	0.12	VLCA019
25	1"	25	-	Aluminium	NBR	2	0.17	VLCA025
32	1.1/4"	32	-	Aluminium	NBR	2	0.28	VLCA032
40	1.1/2"	38	-	Aluminium	NBR	2	0.34	VLCA038
50	2"	50	-	Aluminium	NBR	2	0.44	VLCA050
65	2.1/2"	63	-	Aluminium	NBR	2	0.59	VLCA063
80	3"	75	-	Aluminium	NBR	2	0.86	VLCA075
100	4"	100	-	Aluminium	NBR	2	1.25	VLCA100
125	5"	125	-	Aluminium	NBR	2	1.68	VLCA125
150	6"	150	-	Aluminium	NBR	2	2.66	VLCA150
200	8"	200	-	Aluminium	NBR	4	4.75	VLCA200
15	1/2"	13	-	Stainless steel	NBR	1	0.13	VLCR013
20	3/4"	19	x	Stainless steel	NBR	2	0.25	VLCR019
25	1"	25	x	Stainless steel	NBR	2	0.37	VLCR025
32	1.1/4"	32	x	Stainless steel	NBR	2	0.59	VLCR032
40	1.1/2"	38	x	Stainless steel	NBR	2	0.70	VLCR038
50	2"	50	x	Stainless steel	NBR	2	0.81	VLCR050
65	2.1/2"	63	x	Stainless steel	NBR	2	1.34	VLCR063
80	3"	75	x	Stainless steel	NBR	2	1.97	VLCR075
100	4"	100	x	Stainless steel	NBR	2	3.14	VLCR100
125	5"	125	x	Stainless steel	NBR	2	4.96	VLCR125
150	6"	150	x	Stainless steel	NBR	2	6.58	VLCR150
15	1/2"	13	x	Brass	NBR	1	0.15	VLCM013
20	3/4"	19	-	Brass	NBR	2	0.23	VLCM019
25	1"	25	-	Brass	NBR	2	0.36	VLCM025
32	1.1/4"	32	-	Brass	NBR	2	0.49	VLCM032
40	1.1/2"	38	-	Brass	NBR	2	0.62	VLCM038
50	2"	50	-	Brass	NBR	2	0.77	VLCM050
65	2.1/2"	63	-	Brass	NBR	2	1.07	VLCM063
80	3"	75	-	Brass	NBR	2	1.58	VLCM075
100	4"	100	-	Brass	NBR	2	4.13	VLCM100
125	5"	125	-	Brass	NBR	2	3.32	VLCM125
150	6"	150	-	Brass	NBR	2	6.05	VLCM150
20	3/4"	19	-	Bronze	NBR	2	0.25	VLCB019
25	1"	25	-	Bronze	NBR	2	0.39	VLCB025
32	1.1/4"	32	-	Bronze	NBR	2	0.55	VLCB032
40	1.1/2"	38	-	Bronze	NBR	2	0.74	VLCB038
50	2"	50	-	Bronze	NBR	2	0.87	VLCB050
65	2.1/2"	63	-	Bronze	NBR	2	1.32	VLCB063
80	3"	75	-	Bronze	NBR	2	1.96	VLCB075
100	4"	100	-	Bronze	NBR	2	3.01	VLCB100
15	1/2"	13	-	Polypropylene	EPDM	2	0.07	VLCP013
20	3/4"	19	-	Polypropylene	EPDM	2	0.08	VLCP019
25	1"	25	-	Polypropylene	EPDM	2	0.12	VLCP025
32	1.1/4"	32	-	Polypropylene	EPDM	2	0.23	VLCP032
40	1.1/2"	38	-	Polypropylene	EPDM	2	0.23	VLCP038
50	2"	50	-	Polypropylene	EPDM	2	0.31	VLCP050
80	3"	75	-	Polypropylene	EPDM	2	0.64	VLCP075
100	4"	100	-	Polypropylene	EPDM	3	0.90	VLCP100



Coupling standard: Federal Mil A-A-59326A
 Assembly: worm drive clamps, buckling, binding and band clamps
 Stainless steel: AISI 316 / 1.4401
 Hose shank and collar are subject to change without prior notice
 ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE D: COUPLER FEMALE THREADED

ND	Inch	Thread EN ISO 228-1	Material	Coupler seal	Handles	Weight/pc Kg	Reference
15	1/2"	G 1/2	Aluminium	NBR	1	0.06	VLDA013
20	3/4"	G 3/4	Aluminium	NBR	2	0.12	VLDA019
25	1"	G 1	Aluminium	NBR	2	0.16	VLDA025
32	1.1/4"	G 1.1/4	Aluminium	NBR	2	0.28	VLDA032
40	1.1/2"	G 1.1/2	Aluminium	NBR	2	0.32	VLDA038
50	2"	G 2	Aluminium	NBR	2	0.36	VLDA050
65	2.1/2"	G 2.1/2	Aluminium	NBR	2	0.47	VLDA063
80	3"	G 3	Aluminium	NBR	2	0.73	VLDA075
100	4"	G 4	Aluminium	NBR	2	1.21	VLDA100
125	5"	G 5	Aluminium	NBR	2	1.40	VLDA125
150	6"	G 6	Aluminium	NBR	2	2.16	VLDA150
200	8"	G 8	Aluminium	NBR	4	2.60	VLDA200



15	1/2"	G 1/2	Stainless steel	NBR	1	0.13	VLDR013
20	3/4"	G 3/4	Stainless steel	NBR	2	0.23	VLDR019
25	1"	G 1	Stainless steel	NBR	2	0.31	VLDR025
32	1.1/4"	G 1.1/4	Stainless steel	NBR	2	0.49	VLDR032
40	1.1/2"	G 1.1/2	Stainless steel	NBR	2	0.55	VLDR038
50	2"	G 2	Stainless steel	NBR	2	0.70	VLDR050
65	2.1/2"	G 2.1/2	Stainless steel	NBR	2	1.00	VLDR063
80	3"	G 3	Stainless steel	NBR	2	1.30	VLDR075
100	4"	G 4	Stainless steel	NBR	2	2.14	VLDR100
125	5"	G 5	Stainless steel	NBR	2	3.54	VLDR125
150	6"	G 6	Stainless steel	NBR	2	4.61	VLDR150



15	1/2"	G 1/2	Brass	NBR	1	0.16	VLDM013
20	3/4"	G 3/4	Brass	NBR	2	0.22	VLDM019
25	1"	G 1	Brass	NBR	2	0.32	VLDM025
32	1.1/4"	G 1.1/4	Brass	NBR	2	0.46	VLDM032
40	1.1/2"	G 1.1/2	Brass	NBR	2	0.54	VLDM038
50	2"	G 2	Brass	NBR	2	0.67	VLDM050
65	2.1/2"	G 2.1/2	Brass	NBR	2	0.94	VLDM063
80	3"	G 3	Brass	NBR	2	1.40	VLDM075
100	4"	G 4	Brass	NBR	2	2.09	VLDM100
125	5"	G 5	Brass	NBR	2	2.58	VLDM125
150	6"	G 6	Brass	NBR	2	5.02	VLDM150



20	3/4"	G 3/4	Bronze	NBR	2	0.23	VLDB019
25	1"	G 1	Bronze	NBR	2	0.35	VLDB025
32	1.1/4"	G 1.1/4	Bronze	NBR	2	0.50	VLDB032
40	1.1/2"	G 1.1/2	Bronze	NBR	2	0.66	VLDB038
50	2"	G 2	Bronze	NBR	2	0.78	VLDB050
65	2.1/2"	G 2.1/2	Bronze	NBR	2	0.95	VLDB063
80	3"	G 3	Bronze	NBR	2	1.63	VLDB075
100	4"	G 4	Bronze	NBR	2	2.42	VLDB100



15	1/2"	G 1/2	Polypropylene	EPDM	2	0.07	VLDP013
20	3/4"	G 3/4	Polypropylene	EPDM	2	0.08	VLDP019
25	1"	G 1	Polypropylene	EPDM	2	0.13	VLDP025
32	1.1/4"	G 1.1/4	Polypropylene	EPDM	2	0.21	VLDP032
40	1.1/2"	G 1.1/2	Polypropylene	EPDM	2	0.23	VLDP038
50	2"	G 2	Polypropylene	EPDM	2	0.27	VLDP050
80	3"	G 3	Polypropylene	EPDM	2	0.50	VLDP075
100	4"	G 4	Polypropylene	EPDM	3	0.75	VLDP100



Coupling standard: Federal Mil A-A-59326A
 Female thread: EN ISO 228-1, BSP
 ANSI B 1.20.1, NPT on request
 Stainless steel: AISI 316 / 1.4401
 ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE E: ADAPTOR WITH SERRATED HOSE SHANK

ND	Inch	For hose mm	Collar	Material	Weight/pc Kg	Reference
15	1/2"	13	-	Aluminium	0.03	VLEA013
20	3/4"	19	x	Aluminium	0.05	VLEA019
25	1"	25	x	Aluminium	0.09	VLEA025
32	1.1/4"	32	x	Aluminium	0.12	VLEA032
40	1.1/2"	38	x	Aluminium	0.19	VLEA038
50	2"	50	x	Aluminium	0.28	VLEA050
65	2.1/2"	63	x	Aluminium	0.45	VLEA063
80	3"	75	x	Aluminium	0.66	VLEA075
100	4"	100	x	Aluminium	1.13	VLEA100
125	5"	125	x	Aluminium	1.48	VLEA125
150	6"	150	x	Aluminium	2.20	VLEA150
200	8"	200	-	Aluminium	3.60	VLEA200
15	1/2"	13	x	Stainless steel	0.07	VLER013
20	3/4"	19	x	Stainless steel	0.14	VLER019
25	1"	25	x	Stainless steel	0.25	VLER025
32	1.1/4"	32	x	Stainless steel	0.37	VLER032
40	1.1/2"	38	x	Stainless steel	0.56	VLER038
50	2"	50	x	Stainless steel	0.85	VLER050
65	2.1/2"	63	x	Stainless steel	1.17	VLER063
80	3"	75	x	Stainless steel	1.73	VLER075
100	4"	100	x	Stainless steel	2.85	VLER100
125	5"	125	x	Stainless steel	4.05	VLER125
150	6"	150	x	Stainless steel	5.64	VLER150
15	1/2"	13	-	Brass	0.11	VLEM013
20	3/4"	19	x	Brass	0.16	VLEM019
25	1"	25	x	Brass	0.24	VLEM025
32	1.1/4"	32	x	Brass	0.33	VLEM032
40	1.1/2"	38	x	Brass	0.44	VLEM038
50	2"	50	x	Brass	0.73	VLEM050
65	2.1/2"	63	x	Brass	0.96	VLEM063
80	3"	75	x	Brass	1.25	VLEM075
100	4"	100	x	Brass	1.91	VLEM100
125	5"	125	x	Brass	4.54	VLEM125
150	6"	150	x	Brass	5.07	VLEM150
20	3/4"	19	x	Bronze	0.18	VLEB019
25	1"	25	x	Bronze	0.29	VLEB025
32	1.1/4"	32	x	Bronze	0.40	VLEB032
40	1.1/2"	38	x	Bronze	0.56	VLEB038
50	2"	50	x	Bronze	0.80	VLEB050
65	2.1/2"	63	x	Bronze	1.12	VLEB063
80	3"	75	x	Bronze	1.67	VLEB075
100	4"	100	x	Bronze	1.96	VLEB100
15	1/2"	13	x	Polypropylene	0.01	VLEP013
20	3/4"	19	x	Polypropylene	0.03	VLEP019
25	1"	25	x	Polypropylene	0.04	VLEP025
32	1.1/4"	32	x	Polypropylene	0.07	VLEP032
40	1.1/2"	38	x	Polypropylene	0.09	VLEP038
50	2"	50	x	Polypropylene	0.15	VLEP050
80	3"	75	x	Polypropylene	0.35	VLEP075
100	4"	100	x	Polypropylene	0.55	VLEP100



Coupling standard: Federal Mil A-A-59326A
 Assembly: worm drive clamps, buckling, binding and band clamps
 Stainless steel: AISI 316 / 1.4401
 Hose shank and collar are subject to change without prior notice
 ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE F: ADAPTOR MALE THREADED

ND	Inch	Thread EN 10226-1	Material	Weight/pc Kg	Reference
15	1/2"	R 1/2	Aluminium	0.03	VLFA013
20	3/4"	R 3/4	Aluminium	0.07	VLFA019
25	1"	R 1	Aluminium	0.09	VLFA025
32	1.1/4"	R 1.1/4	Aluminium	0.12	VLFA032
40	1.1/2"	R 1.1/2	Aluminium	0.18	VLFA038
50	2"	R 2	Aluminium	0.26	VLFA050
65	2.1/2"	R 2.1/2	Aluminium	0.36	VLFA063
80	3"	R 3	Aluminium	0.51	VLFA075
100	4"	R 4	Aluminium	0.92	VLFA100
125	5"	R 5	Aluminium	1.34	VLFA125
150	6"	R 6	Aluminium	1.44	VLFA150
200	8"	R 8	Aluminium	3.40	VLFA200
15	1/2"	R 1/2	Stainless steel	0.09	VLFR013
20	3/4"	R 3/4	Stainless steel	0.16	VLFR019
25	1"	R 1	Stainless steel	0.26	VLFR025
32	1.1/4"	R 1.1/4	Stainless steel	0.40	VLFR032
40	1.1/2"	R 1.1/2	Stainless steel	0.52	VLFR038
50	2"	R 2	Stainless steel	0.69	VLFR050
65	2.1/2"	R 2.1/2	Stainless steel	0.98	VLFR063
80	3"	R 3	Stainless steel	1.42	VLFR075
100	4"	R 4	Stainless steel	2.52	VLFR100
125	5"	R 5	Stainless steel	3.79	VLFR125
150	6"	R 6	Stainless steel	5.38	VLFR150
15	1/2"	R 1/2	Brass	0.09	VLFM013
20	3/4"	R 3/4	Brass	0.15	VLFM019
25	1"	R 1	Brass	0.23	VLFM025
32	1.1/4"	R 1.1/4	Brass	0.30	VLFM032
40	1.1/2"	R 1.1/2	Brass	0.35	VLFM038
50	2"	R 2	Brass	0.51	VLFM050
65	2.1/2"	R 2.1/2	Brass	0.80	VLFM063
80	3"	R 3	Brass	0.94	VLFM075
100	4"	R 4	Brass	1.71	VLFM100
125	5"	R 5	Brass	3.32	VLFM125
150	6"	R 6	Brass	3.78	VLFM150
20	3/4"	R 3/4	Bronze	0.16	VLFB019
25	1"	R 1	Bronze	0.24	VLFB025
32	1.1/4"	R 1.1/4	Bronze	0.31	VLFB032
40	1.1/2"	R 1.1/2	Bronze	0.42	VLFB038
50	2"	R 2	Bronze	0.66	VLFB050
65	2.1/2"	R 2.1/2	Bronze	0.95	VLFB063
80	3"	R 3	Bronze	1.25	VLFB075
100	4"	R 4	Bronze	2.32	VLFB100
15	1/2"	R 1/2	Polypropylene	0.02	VLFP013
20	3/4"	R 3/4	Polypropylene	0.03	VLFP019
25	1"	R 1	Polypropylene	0.05	VLFP025
32	1.1/4"	R 1.1/4	Polypropylene	0.08	VLFP032
40	1.1/2"	R 1.1/2	Polypropylene	0.10	VLFP038
50	2"	R 2	Polypropylene	0.14	VLFP050
80	3"	R 3	Polypropylene	0.29	VLFP075
100	4"	R 4	Polypropylene	0.42	VLFP100



Coupling standard: Federal Mil A-A-59326A / EN 14420-7 / DIN 2828
 Male thread: EN 10226-1 / DIN 2999-1, BSPT
 ANSI B 1.20.1, NPT on request
 Stainless steel: AISI 316 / 1.4401
 ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE DC: FEMALE DUST CAP

ND	Inch	Material	Coupler seal	Handles	Weight/pc Kg	Reference
15	1/2"	Aluminium	NBR	1	0.05	VLKA013
20	3/4"	Aluminium	NBR	2	0.10	VLKA019
25	1"	Aluminium	NBR	2	0.14	VLKA025
32	1.1/4"	Aluminium	NBR	2	0.24	VLKA032
40	1.1/2"	Aluminium	NBR	2	0.27	VLKA038
50	2"	Aluminium	NBR	2	0.33	VLKA050
65	2.1/2"	Aluminium	NBR	2	0.41	VLKA063
80	3"	Aluminium	NBR	2	0.65	VLKA075
100	4"	Aluminium	NBR	2	0.92	VLKA100
125	5"	Aluminium	NBR	2	1.16	VLKA125
150	6"	Aluminium	NBR	2	1.78	VLKA150
200	8"	Aluminium	NBR	4	4.20	VLKA200
15	1/2"	Stainless steel	NBR	1	0.13	VLKR013
20	3/4"	Stainless steel	NBR	2	0.18	VLKR019
25	1"	Stainless steel	NBR	2	0.25	VLKR025
32	1.1/4"	Stainless steel	NBR	2	0.43	VLKR032
40	1.1/2"	Stainless steel	NBR	2	0.51	VLKR038
50	2"	Stainless steel	NBR	2	0.76	VLKR050
65	2.1/2"	Stainless steel	NBR	2	0.84	VLKR063
80	3"	Stainless steel	NBR	2	1.01	VLKR075
100	4"	Stainless steel	NBR	2	1.73	VLKR100
125	5"	Stainless steel	NBR	2	2.74	VLKR125
150	6"	Stainless steel	NBR	2	4.28	VLKR150
15	1/2"	Brass	NBR	1	0.12	VLKM013
20	3/4"	Brass	NBR	2	0.13	VLKM019
25	1"	Brass	NBR	2	0.27	VLKM025
32	1.1/4"	Brass	NBR	2	0.41	VLKM032
40	1.1/2"	Brass	NBR	2	0.48	VLKM038
50	2"	Brass	NBR	2	0.60	VLKM050
65	2.1/2"	Brass	NBR	2	0.77	VLKM063
80	3"	Brass	NBR	2	1.20	VLKM075
100	4"	Brass	NBR	2	1.87	VLKM100
125	5"	Brass	NBR	2	2.10	VLKM125
150	6"	Brass	NBR	2	3.72	VLKM150
20	3/4"	Bronze	NBR	2	0.18	VLKB019
25	1"	Bronze	NBR	2	0.31	VLKB025
32	1.1/4"	Bronze	NBR	2	0.49	VLKB032
40	1.1/2"	Bronze	NBR	2	0.56	VLKB038
50	2"	Bronze	NBR	2	0.62	VLKB050
65	2.1/2"	Bronze	NBR	2	0.92	VLKB063
80	3"	Bronze	NBR	2	1.30	VLKB075
100	4"	Bronze	NBR	2	2.03	VLKB100
15	1/2"	Polypropylene	EPDM	2	0.07	VLKP013
20	3/4"	Polypropylene	EPDM	2	0.07	VLKP019
25	1"	Polypropylene	EPDM	2	0.10	VLKP025
32	1.1/4"	Polypropylene	EPDM	2	0.20	VLKP032
40	1.1/2"	Polypropylene	EPDM	2	0.22	VLKP038
50	2"	Polypropylene	EPDM	2	0.24	VLKP050
80	3"	Polypropylene	EPDM	2	0.43	VLKP075
100	4"	Polypropylene	EPDM	3	0.67	VLKP100



Coupling standard: Federal Mil A-A-59326A / EN 14420-7 / DIN 2828

Standard hole for chain

Stainless steel: AISI 316 / 1.4401

ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS



TYPE DP: MALE DUST PLUG

ND	Inch	Material	Weight/pc Kg	Reference
15	1/2"	Aluminium	0.02	VLPA013
20	3/4"	Aluminium	0.03	VLPA019
25	1"	Aluminium	0.05	VLPA025
32	1.1/4"	Aluminium	0.07	VLPA032
40	1.1/2"	Aluminium	0.12	VLPA038
50	2"	Aluminium	0.16	VLPA050
65	2.1/2"	Aluminium	0.22	VLPA063
80	3"	Aluminium	0.28	VLPA075
100	4"	Aluminium	0.50	VLPA100
125	5"	Aluminium	0.55	VLPA125
150	6"	Aluminium	0.74	VLPA150
15	1/2"	Stainless steel	0.06	VLPR013
20	3/4"	Stainless steel	0.08	VLPR019
25	1"	Stainless steel	0.13	VLPR025
32	1.1/4"	Stainless steel	0.25	VLPR032
40	1.1/2"	Stainless steel	0.32	VLPR038
50	2"	Stainless steel	0.46	VLPR050
65	2.1/2"	Stainless steel	0.67	VLPR063
80	3"	Stainless steel	0.93	VLPR075
100	4"	Stainless steel	1.59	VLPR100
125	5"	Stainless steel	1.90	VLPR125
150	6"	Stainless steel	3.84	VLPR150
15	1/2"	Brass	0.07	VLPM013
20	3/4"	Brass	0.09	VLPM019
25	1"	Brass	0.13	VLPM025
32	1.1/4"	Brass	0.20	VLPM032
40	1.1/2"	Brass	0.24	VLPM038
50	2"	Brass	0.40	VLPM050
65	2.1/2"	Brass	0.59	VLPM063
80	3"	Brass	0.72	VLPM075
100	4"	Brass	1.03	VLPM100
125	5"	Brass	1.60	VLPM125
150	6"	Brass	1.80	VLPM150
20	3/4"	Bronze	0.10	VLPB019
25	1"	Bronze	0.15	VLPB025
32	1.1/4"	Bronze	0.24	VLPB032
40	1.1/2"	Bronze	0.32	VLPB038
50	2"	Bronze	0.47	VLPB050
65	2.1/2"	Bronze	0.60	VLPB063
80	3"	Bronze	0.90	VLPB075
100	4"	Bronze	1.42	VLPB100
15	1/2"	Polypropylene	0.01	VLPP013
20	3/4"	Polypropylene	0.02	VLPP019
25	1"	Polypropylene	0.02	VLPP025
32	1.1/4"	Polypropylene	0.04	VLPP032
40	1.1/2"	Polypropylene	0.05	VLPP038
50	2"	Polypropylene	0.08	VLPP050
80	3"	Polypropylene	0.22	VLPP075
100	4"	Polypropylene	0.26	VLPP100



Coupling standard: Federal Mil A-A-5932A / EN 14420-7 / DIN 2828

Stainless steel: AISI 316 / 1.4401

ND 200 stainless steel on request available

CAM & GROOVE COUPLINGS EN 14420-7 / DIN 2828



TYPE A: ADAPTOR FEMALE THREADED WITH THREAD SEAL

ND	Inch	Thread EN ISO 228-1	Thread seal	Material	Weight/pc Kg	Reference
20	3/4"	G 3/4	PTFE	Stainless steel	0.11	VLAR019D
25	1"	G 1	PTFE	Stainless steel	0.18	VLAR025D
32	1.1/4"	G 1.1/4	PTFE	Stainless steel	0.31	VLAR032D
40	1.1/2"	G 1.1/2	PTFE	Stainless steel	0.44	VLAR038D
50	2"	G 2	PTFE	Stainless steel	0.60	VLAR050D
65	2.1/2"	G 2.1/2	PTFE	Stainless steel	1.02	VLAR063D
80	3"	G 3	PTFE	Stainless steel	1.12	VLAR075D
100	4"	G 4	PTFE	Stainless steel	1.87	VLAR100D
50	2"	G 2	PU	Brass	0.71	VLAM050D
65	2.1/2"	G 2.1/2	PU	Brass	0.80	VLAM063D
80	3"	G 3	PU	Brass	1.38	VLAM075D
100	4"	G 4	PU	Brass	1.51	VLAM100D



Thread seal

Coupling standard: EN 14420-7 / DIN 2828
 Female thread: EN ISO 228-1, BSP
 Thread seal: PTFE for stainless steel coupling
 PU for brass coupling
 Stainless steel: AISI 316 / 1.4401

TYPE E: ADAPTOR WITH SMOOTH HOSE SHANK

ND	Inch	For hose mm	Material	Weight/pc Kg	Reference
20	3/4"	19	Stainless steel	0.13	VLER019D
25	1"	25	Stainless steel	0.20	VLER025D
32	1.1/4"	32	Stainless steel	0.33	VLER032D
40	1.1/2"	38	Stainless steel	0.45	VLER038D
50	2"	50	Stainless steel	0.58	VLER050D
65	2.1/2"	63	Stainless steel	0.96	VLER063D
80	3"	75	Stainless steel	1.16	VLER075D
100	4"	100	Stainless steel	2.26	VLER100D
20	3/4"	19	Brass	0.14	VLEM019D
25	1"	25	Brass	0.21	VLEM025D
32	1.1/4"	32	Brass	0.35	VLEM032D
40	1.1/2"	38	Brass	0.45	VLEM038D
50	2"	50	Brass	0.66	VLEM050D
65	2.1/2"	63	Brass	0.98	VLEM063D
80	3"	75	Brass	1.26	VLEM075D
100	4"	100	Brass	2.69	VLEM100D



Smooth hose shank and collar

Coupling standard: EN 14420-7 / DIN 2828
 Shank standard: EN 14420-2 / DIN 2828
 Assembly: RK safety clamps EN 14420-3 / DIN 2817, FLEXOLINE® safety clamps (see chapter D)
 Stainless steel: AISI 316 / 1.4401

CAM & GROOVE COUPLINGS EN 14420-7 / DIN 2828



TYPE D: COUPLER FEMALE THREADED WITH THREAD SEAL

ND	Inch	Thread EN ISO 228-1	Thread seal	Material	Coupler seal	Weight/pc Kg	Reference
20	3/4"	G 3/4	PTFE	Stainless steel	NBR	0.18	VLDR019D
25	1"	G 1	PTFE	Stainless steel	NBR	0.29	VLDR025D
32	1.1/4"	G 1.1/4	PTFE	Stainless steel	NBR	0.58	VLDR032D
40	1.1/2"	G 1.1/2	PTFE	Stainless steel	NBR	0.57	VLDR038D
50	2"	G 2	PTFE	Stainless steel	NBR	0.71	VLDR050D
65	2.1/2"	G 2.1/2	PTFE	Stainless steel	NBR	0.96	VLDR063D
80	3"	G 3	PTFE	Stainless steel	NBR	1.28	VLDR075D
100	4"	G 4	PTFE	Stainless steel	NBR	2.01	VLDR100D



Thread seal

Coupling standard: EN 14420-7 / DIN 2828
 Female thread: EN ISO 228-1, BSP
 Thread seal: PTFE - white for stainless steel coupling
 Stainless steel: AISI 316 / 1.4401
 Brass available upon request

TYPE C: COUPLER WITH SMOOTH HOSE SHANK

ND	Inch	For hose mm	Coupler seal	Material	Weight/pc Kg	Reference
20	3/4"	19	NBR	Stainless steel	0.24	VLCR019D
25	1"	25	NBR	Stainless steel	0.35	VLCR025D
32	1.1/4"	32	NBR	Stainless steel	0.59	VLCR032D
40	1.1/2"	38	NBR	Stainless steel	0.68	VLCR038D
50	2"	50	NBR	Stainless steel	0.90	VLCR050D
65	2.1/2"	63	NBR	Stainless steel	1.24	VLCR063D
80	3"	75	NBR	Stainless steel	1.57	VLCR075D
100	4"	100	NBR	Stainless steel	2.59	VLCR100D
20	3/4"	19	NBR	Brass	0.25	VLCM019D
25	1"	25	NBR	Brass	0.38	VLCM025D
32	1.1/4"	32	NBR	Brass	0.63	VLCM032D
40	1.1/2"	38	NBR	Brass	0.69	VLCM038D
50	2"	50	NBR	Brass	0.91	VLCM050D
65	2.1/2"	63	NBR	Brass	1.18	VLCM063D
80	3"	75	NBR	Brass	1.57	VLCM075D
100	4"	100	NBR	Brass	2.71	VLCM100D



Smooth hose shank and collar

Coupling standard: EN 14420-7 / DIN 2828
 Shank standard: EN 14420-2 / DIN 2828
 Assembly: RK safety clamps EN 14420-3 / DIN 2817, FLEXOLINE® safety clamps (see chapter D)
 Stainless steel: AISI 316 / 1.4401

CAM & GROOVE SAFETY COUPLINGS



TYPE D: COUPLER FEMALE THREADED WITH SAFETY HANDLES

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
25	1"	G 1"	Stainless steel	0.47	VLDR025S
40	1.1/2"	G 1.1/2"	Stainless steel	0.82	VLDR038S
50	2"	G 2"	Stainless steel	1.07	VLDR050S
80	3"	G 3"	Stainless steel	1.76	VLDR075S
100	4"	G 4"	Stainless steel	2.48	VLDR100S



Coupling standard: Federal Mil A-A-59326A
 Female thread: EN ISO 228-1, BSP
 Version: monoblock safety body
 Stainless steel: AISI 316 / 1.4401

TYPE B: COUPLER MALE THREADED WITH SAFETY HANDLES

ND	Inch	Thread EN 10226-1	Material	Weight/pc Kg	Reference
25	1"	R 1	Stainless steel	0.45	VLBR025S
40	1.1/2"	R 1.1/2	Stainless steel	0.75	VLBR038S
50	2"	R 2	Stainless steel	0.98	VLBR050S
80	3"	R 3	Stainless steel	1.68	VLBR075S
100	4"	R 4	Stainless steel	2.35	VLBR100S



Coupling standard: Federal Mil A-A-59326A / EN 14420-7 / DIN 2828
 Male thread: EN 10226-1 / DIN 2999-1, BSPT
 Version: monoblock safety body
 Stainless steel: AISI 316 / 1.4401

TYPE C: COUPLER WITH SERRATED HOSE SHANK AND SAFETY HANDLES

ND	Inch	For hose mm	Collar	Material	Weight/pc Kg	Reference
25	1"	25	-	Stainless steel	0.51	VLCR025S
40	1.1/2"	38	x	Stainless steel	0.90	VLCR038S
50	2"	50	x	Stainless steel	1.33	VLCR050S
80	3"	75	x	Stainless steel	2.39	VLCR075S
100	4"	100	x	Stainless steel	3.55	VLCR100S



Coupling standard: Federal Mil A-A-59326A
 Assembly: worm drive clamps, buckling, binding and band clamps
 Version: monoblock safety body
 Stainless steel: AISI 316 / 1.4401
 Collar is subject to change without prior notice

CAM & GROOVE SAFETY COUPLINGS



TYPE C: COUPLER WITH SMOOTH HOSE SHANK AND SAFETY HANDLES

ND	Inch	For hose mm	Material	Weight/pc Kg	Reference
40	1.1/2"	38	Stainless steel	0.79	VLCR038SD
50	2"	50	Stainless steel	1.06	VLCR050SD

Coupling standard: EN 14420-7 / DIN 2828
 Shank standard: EN 14420-2 / DIN 2828
 Assembly: RK safety clamps EN 14420-3 / DIN 2817, FLEXOLINE® safety clamps (see chapter D)
 Version: monoblock safety body
 Stainless steel: AISI 316 / 1.4401



TYPE DC: FEMALE DUST CAP WITH SAFETY HANDLES

ND	Inch	Material	Weight/pc Kg	Reference
25	1"	Stainless steel	0.43	VLKR025S
40	1.1/2"	Stainless steel	0.70	VLKR038S
50	2"	Stainless steel	0.88	VLKR050S
80	3"	Stainless steel	1.58	VLKR075S

Coupling standard: Federal Mil A-A-59326A / EN 14420-7 / DIN 2828
 Standard chain access
 Version: monoblock safety body
 Stainless steel: AISI 316 / 1.4401



SAFETY REBUILDING SET

ND	Inch	Material	Weight/pc Kg	Reference
25	1"	Stainless steel	0.10	VLHRPR2S
32 - 65	1.1/2" - 2"	Stainless steel	0.13	VLHRPR3S
80 - 125	3"-5"	Stainless steel	0.17	VLHRPR4S

Safety rebuilding set: Safety handle stainless steel AISI 304 - 1.4301
 Pull ring stainless steel AISI 304 - 1.4301
 Safety pin stainless steel AISI 304 - 1.4301
 Safety hook stainless steel AISI 304 - 1.4301



VLHRPR2S
VLHRPR3S



VLHRPR4S



SAFETY
HOOK

CAM & GROOVE WELDING COUPLINGS



Butt weld vs socket weld

Cam & groove couplings can be welded on hoses, pipes an other welding couplings by using:

- cam & groove couplings with butt weld connection
- cam & groove couplings with socket weld connection

Butt welding

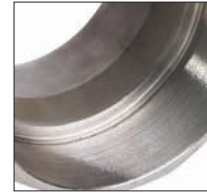
Welding ends with a butt weld connection are used for welding the majority of cam & groove couplings. A butt weld connection consists of a 30° chamfered welding end.



Butt weld connection

Socket welding

In socket welding, the pipe or hose slides partially inside the coupling. Both components are then welded together at the point of insertion. Stainless steel socket welding couplings provide a tight and integral line system that remains unaffected by shock, vibration or termal distortion.

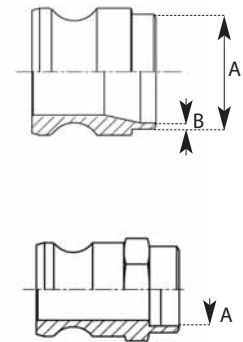


Socket weld connection

Welding dimensions

The welding dimensions for cam & groove couplings are based on inch sizes.

ND	INCH	A mm	B mm
15	1/2"	21.34	2.0
20	3/4"	26.67	2.3
25	1"	33.40	2.6
32	1.1/4"	42.16	2.6
40	1.1/2"	48.26	2.6
50	2"	60.33	2.9
65	2.1/2"	76.03	2.9
80	3"	88.90	3.2
100	4"	114.30	3.6
125	5"	139.70	4.0
150	6"	168.28	4.5



TYPE AWB: ADAPTOR WITH BUTT WELD CONNECTION

ND	Inch	Material	Weight/pc Kg	Reference
15	1/2"	Stainless steel	0.11	VLAWBR013
20	3/4"	Stainless steel	0.16	VLAWBR019
25	1"	Stainless steel	0.26	VLAWBR025
32	1.1/4"	Stainless steel	0.41	VLAWBR032
40	1.1/2"	Stainless steel	0.53	VLAWBR038
50	2"	Stainless steel	0.69	VLAWBR050
65	2.1/2"	Stainless steel	0.96	VLAWBR063
80	3"	Stainless steel	1.38	VLAWBR075
100	4"	Stainless steel	2.04	VLAWBR100
125	5"	Stainless steel	3.52	VLAWBR125
150	6"	Stainless steel	5.14	VLAWBR150



30°

Welding end: butt weld end to inch size
 Stainless steel: AISI 316 / 1.4401



CAM & GROOVE WELDING COUPLINGS



TYPE DWB: COUPLER WITH BUTT WELD CONNECTION

ND	Inch	Material	Weight/pc Kg	Reference
15	1/2"	Stainless steel	0.12	VLDWBR013
20	3/4"	Stainless steel	0.20	VLDWBR019
25	1"	Stainless steel	0.29	VLDWBR025
32	1.1/4"	Stainless steel	0.50	VLDWBR032
40	1.1/2"	Stainless steel	0.54	VLDWBR038
50	2"	Stainless steel	0.67	VLDWBR050
65	2.1/2"	Stainless steel	1.04	VLDWBR063
80	3"	Stainless steel	1.36	VLDWBR075
100	4"	Stainless steel	1.84	VLDWBR100
125	5"	Stainless steel	3.36	VLDWBR125
150	6"	Stainless steel	3.67	VLDWBR150



30°

Welding end: butt weld end to inch size
Stainless steel: AISI 316 / 1.4401

TYPE AWS: ADAPTOR WITH SOCKET WELD CONNECTION

ND	Inch	Material	Weight/pc Kg	Reference
15	1/2"	Stainless steel	0.07	VLAWSR013
20	3/4"	Stainless steel	0.11	VLAWSR019
25	1"	Stainless steel	0.15	VLAWSR025
32	1.1/4"	Stainless steel	0.24	VLAWSR032
40	1.1/2"	Stainless steel	0.27	VLAWSR038
50	2"	Stainless steel	0.42	VLAWSR050
65	2.1/2"	Stainless steel	0.71	VLAWSR063
80	3"	Stainless steel	0.73	VLAWSR075
100	4"	Stainless steel	1.42	VLAWSR100
150	6"	Stainless steel	3.17	VLAWSR150



Welding end: socket weld end to inch size
Stainless steel: AISI 316 / 1.4401

TYPE DWS: COUPLER WITH SOCKET WELD CONNECTION

ND	Inch	Material	Weight/pc Kg	Reference
15	1/2"	Stainless steel	0.13	VLDWSR013
20	3/4"	Stainless steel	0.23	VLDWSR019
25	1"	Stainless steel	0.36	VLDWSR025
32	1.1/4"	Stainless steel	0.48	VLDWSR032
40	1.1/2"	Stainless steel	0.57	VLDWSR038
50	2"	Stainless steel	0.90	VLDWSR050
65	2.1/2"	Stainless steel	1.03	VLDWSR063
80	3"	Stainless steel	1.23	VLDWSR075
100	4"	Stainless steel	2.30	VLDWSR100
150	6"	Stainless steel	4.42	VLDWSR150



Welding end: socket weld end to inch size
Stainless steel: AISI 316 / 1.4401

CAM & GROOVE FLANGE COUPLINGS



TYPE AF: ADAPTOR WITH FIXED FLANGE IN COMPLIANCE WITH EN/DIN

ND	Inch	Material	Welding neck flange	Total length*	Weight/pc Kg	Reference
15	1/2"	Stainless steel	DIN 2633 - PN 10/16	92.0	0.82	VLAFDR013
20	3/4"	Stainless steel	DIN 2633 - PN 10/16	95.0	1.22	VLAFDR019
25	1"	Stainless steel	DIN 2633 - PN 10/16	105.0	1.35	VLAFDR025
32	1.1/4"	Stainless steel	DIN 2633 - PN 10/16	114.0	2.05	VLAFDR032
40	1.1/2"	Stainless steel	DIN 2633 - PN 10/16	119.0	2.45	VLAFDR038
50	2"	Stainless steel	DIN 2633 - PN 10/16	129.0	3.29	VLAFDR050
65	2.1/2"	Stainless steel	DIN 2633 - PN 10/16	133.0	3.85	VLAFDR063
80	3"	Stainless steel	DIN 2633 - PN 10/16	144.0	4.80	VLAFDR075
100	4"	Stainless steel	DIN 2633 - PN 10/16	155.0	7.21	VLAFDR100
125	5"	Stainless steel	DIN 2633 - PN 10/16	160.0	9.82	VLAFDR125
150	6"	Stainless steel	DIN 2633 - PN 10/16	162.0	13.86	VLAFDR150



Coupling standard: Federal Mil A-A-59326A

Flange standard: EN 1092-1/ 11 B1; DIN 2633 form C, PN 10/16

Stainless steel: AISI 316 / 1.4401

*Total length flange coupling in mm and is subject to change without prior notice

TYPE AF: ADAPTOR WITH FIXED FLANGE IN COMPLIANCE WITH ASTM

ND	Inch	Material	Welding neck flange	Total length*	Weight/pc Kg	Reference
15	1/2"	Stainless steel	ASTM - ASA 150 lbs	105.0	0.81	VLAF1R013
20	3/4"	Stainless steel	ASTM - ASA 150 lbs	113.0	0.96	VLAF1R019
25	1"	Stainless steel	ASTM - ASA 150 lbs	123.0	1.36	VLAF1R025
32	1.1/4"	Stainless steel	ASTM - ASA 150 lbs	131.0	1.91	VLAF1R032
40	1.1/2"	Stainless steel	ASTM - ASA 150 lbs	139.0	2.33	VLAF1R038
50	2"	Stainless steel	ASTM - ASA 150 lbs	148.0	3.39	VLAF1R050
65	2.1/2"	Stainless steel	ASTM - ASA 150 lbs	158.0	5.36	VLAF1R063
80	3"	Stainless steel	ASTM - ASA 150 lbs	164.0	6.58	VLAF1R075
100	4"	Stainless steel	ASTM - ASA 150 lbs	180.0	9.54	VLAF1R100
125	5"	Stainless steel	ASTM - ASA 150 lbs	194.0	12.72	VLAF1R125
150	6"	Stainless steel	ASTM - ASA 150 lbs	196.0	16.14	VLAF1R150



Coupling standard: Federal Mil A-A-59326A

Flange standard: ASTM A 182 and ASME B16.5, RF, ASA 150 lbs

Stainless steel: AISI 316 / 1.4401

*Total length flange coupling in mm and is subject to change without prior notice

CAM & GROOVE FLANGE COUPLINGS



TYPE DF: COUPLER WITH FIXED FLANGE IN COMPLIANCE WITH EN/DIN

ND	Inch	Material	Welding neck flange	Total length*	Weight/pc Kg	Reference
15	1/2"	Stainless steel	DIN 2633 PN 10/16	81.0	0.92	VLDFDR013
20	3/4"	Stainless steel	DIN 2633 PN 10/16	90.0	1.16	VLDFDR019
25	1"	Stainless steel	DIN 2633 PN 10/16	96.0	1.39	VLDFDR025
32	1.1/4"	Stainless steel	DIN 2633 PN 10/16	111.0	2.34	VLDFDR032
40	1.1/2"	Stainless steel	DIN 2633 PN 10/16	115.0	2.54	VLDFDR038
50	2"	Stainless steel	DIN 2633 PN 10/16	122.0	3.49	VLDFDR050
65	2.1/2"	Stainless steel	DIN 2633 PN 10/16	125.0	5.44	VLDFDR063
80	3"	Stainless steel	DIN 2633 PN 10/16	132.0	6.56	VLDFDR075
100	4"	Stainless steel	DIN 2633 PN 10/16	137.0	7.01	VLDFDR100
125	5"	Stainless steel	DIN 2633 PN 10/16	142.0	12.56	VLDFDR125
150	6"	Stainless steel	DIN 2633 PN 10/16	150.0	14.67	VLDFDR150



Coupling standard: Federal Mil A-A-59326A

Flange standard: EN 1092-1/ 11 B1; DIN 2633 form C, PN 10/16

Stainless steel: AISI 316 / 1.4401

*Total length flange coupling in mm and is subject to change without prior notice

TYPE DF: COUPLER WITH FIXED FLANGE IN COMPLIANCE WITH ASTM

ND	Inch	Material	Welding neck flange	Total length*	Weight/pc Kg	Reference
15	1/2"	Stainless steel	ASTM - ASA 150 lbs	94.0	0.62	VLDFA1R013
20	3/4"	Stainless steel	ASTM - ASA 150 lbs	108.0	0.90	VLDFA1R019
25	1"	Stainless steel	ASTM - ASA 150 lbs	114.0	1.09	VLDFA1R025
32	1.1/4"	Stainless steel	ASTM - ASA 150 lbs	128.0	1.70	VLDFA1R032
40	1.1/2"	Stainless steel	ASTM - ASA 150 lbs	135.0	1.94	VLDFA1R038
50	2"	Stainless steel	ASTM - ASA 150 lbs	141.0	2.87	VLDFA1R050
65	2.1/2"	Stainless steel	ASTM - ASA 150 lbs	150.0	4.54	VLDFA1R063
80	3"	Stainless steel	ASTM - ASA 150 lbs	152.0	5.16	VLDFA1R075
100	4"	Stainless steel	ASTM - ASA 150 lbs	161.0	7.44	VLDFA1R100
125	5"	Stainless steel	ASTM - ASA 150 lbs	176.0	9.86	VLDFA1R125
150	6"	Stainless steel	ASTM - ASA 150 lbs	184.0	11.77	VLDFA1R150



Coupling standard: Federal Mil A-A-59326A

Flange standard: ASTM A 182 and ASME B16.5, RF, ASA 150 lbs

Stainless steel: AISI 316 / 1.4401

*Total length flange coupling in mm and is subject to change without prior notice

CAM & GROOVE SPOOL COUPLINGS



TYPE AA: SPOOL ADAPTOR

ND	Inch	Material	Weight/pc Kg	Reference
40	1.1/2"	Aluminium	0.20	VLAAA038
50	2"	Aluminium	0.30	VLAAA050
50-80	2" - 3"	Aluminium	0.48	VLAAA050075
65	2.1/2"	Aluminium	0.49	VLAAA063
80	3"	Aluminium	0.47	VLAAA075
80	3" - 4"	Aluminium	0.81	VLAAA075100
100	4"	Aluminium	0.89	VLAAA100
20	3/4"	Stainless steel	0.22	VLAAR019
25	1"	Stainless steel	0.36	VLAAR025
40	1.1/2"	Stainless steel	0.82	VLAAR038
40-50	1.1/2" - 2"	Stainless steel	0.96	VLAAR038050
50	2"	Stainless steel	2.08	VLAAR050
50-80	2" - 3"	Stainless steel	1.46	VLAAR050075
80	3"	Stainless steel	2.08	VLAAR075
80-100	3" - 4"	Stainless steel	2.55	VLAAR075100
100	4"	Stainless steel	3.32	VLAAR100
40	1.1/2"	Brass	0.59	VLAAM038
50	2"	Brass	0.90	VLAAM050
65	2.1/2"	Brass	1.49	VLAAM063
80	3"	Brass	1.45	VLAAM075
100	4"	Brass	2.33	VLAAM100

Coupling standard: Federal Mil A-A-59326A
Version: monoblock
Stainless steel: AISI 316 / 1.4401



TYPE DD: SPOOL COUPLER

ND	Inch	Material	Coupler seal	Weight kg	Reference
40	1.1/2"	Stainless steel	NBR	0.96	VLDDR038
50	2"	Stainless steel	NBR	1.29	VLDDR050
80	3"	Stainless steel	NBR	2.17	VLDDR075
100	4"	Stainless steel	NBR	3.02	VLDDR100

Coupling standard: Federal Mil A-A-59326A
Version: monoblock
Stainless steel: AISI 316 / 1.4401



CAM & GROOVE SPOOL COUPLINGS



TYPE DA: SPOOL COUPLER - ADAPTOR

ND Coupler-Adaptor	Inch Coupler-Adaptor	Material	Weight/pc Kg	Reference
50-80	2" - 3"	Aluminium	0.75	VLDAA050075
80-50	3" - 2"	Aluminium	1.14	VLDAA075050
80-100	3" - 4"	Aluminium	1.30	VLDAA075100
100-50	4" - 2"	Aluminium	1.26	VLDAA100050
100-80	4" - 3"	Aluminium	1.51	VLDAA100075
100-150	4" - 6"	Aluminium	1.92	VLDAA100150

50-80	2" - 3"	Stainless steel	1.75	VLDAR050075
80-50	3" - 2"	Stainless steel	1.85	VLDAR075050
100-80	4" - 3"	Stainless steel	4.31	VLDAR100075
150-100	6" - 4"	Stainless steel	5.71	VLDAR150100

50-80	2" - 3"	Brass	1.96	VLDAM050075
80-50	3" - 2"	Brass	2.80	VLDAM075050
100-50	4" - 2"	Brass	3.22	VLDAM100050
100-80	4" - 3"	Brass	4.31	VLDAM100075
150-100	6" - 4"	Brass	8.16	VLDAM150100

Coupling standard: Federal Mil A-A-59326A
Version: monoblock
Stainless steel: AISI 316 / 1.4401



CAM & GROOVE REDUCING COUPLINGS



TYPE A: REDUCING ADAPTOR FEMALE THREADED

ND - Inch Adaptor	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
20 - 3/4"	G 1/2	Polypropylene	0.03	VLAP019013
40 - 1.1/2"	G 1.1/4	Polypropylene	0.23	VLAP038032



Coupling standard: Federal Mil A-A-59326A
Female thread: EN ISO 228-1, BSP

TYPE B: REDUCING COUPLER MALE THREADED

ND - Inch Coupler	Thread EN 10226-1	Material	Weight/pc Kg	Reference
40 - 1.1/2"	R 1	Aluminium	0.31	VLBA038025
50 - 2"	R 1.1/2	Aluminium	0.37	VLBA050038
80 - 3"	R 2	Aluminium	0.86	VLBA075050
100 - 4"	R 3	Aluminium	1.20	VLBA100075
20 - 3/4"	R 1/2	Polypropylene	0.07	VLBP019013
40 - 1.1/2"	R 1.1/4	Polypropylene	0.23	VLBP038032



Coupling standard: Federal Mil A-A-59326A
Male thread: EN 10226-1, BSPT

TYPE C: REDUCING COUPLER WITH SERRATED HOSE SHANK

ND - Inch Coupler	For hose mm	Material	Weight/pc Kg	Reference
50 - 2"	38	Aluminium	0.44	VLCA050038
80 - 3"	50	Aluminium	0.86	VLCA075050
80 - 3"	100	Aluminium	1.10	VLCA075100
100 - 4"	75	Aluminium	1.20	VLCA100075
20 - 3/4"	13	Polypropylene	0.07	VLCP019013
40 - 1.1/2"	32	Polypropylene	0.24	VLCP038032



Coupling standard: Federal Mil A-A-59326A
Assembly: worm drive clamps, buckling, binding and band clamps

CAM & GROOVE REDUCING COUPLINGS



TYPE D: REDUCING COUPLER FEMALE THREADED

ND - Inch Coupler	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
40 - 1.1/2"	G 1	Aluminium	0.32	VLDA038025
50 - 2"	G 1.1/2	Aluminium	0.39	VLDA050038
80 - 3"	G 2	Aluminium	0.72	VLDA075050
100 - 4"	G 3	Aluminium	1.11	VLDA100075



Coupling standard: Federal Mil A-A-59326A
Female thread: EN ISO 228-1, BSP

TYPE E: REDUCING ADAPTOR WITH SERRATED HOSE SHANK

ND - Inch Adaptor	For hose mm	Material	Weight/pc Kg	Reference
20 - 3/4"	13	Polypropylene	0.03	VLEP019013
40 - 1.1/2"	32	Polypropylene	0.08	VLEP038032



Coupling standard: Federal Mil A-A-59326A
Assembly: worm drive clamps, buckling, binding and band clamps

TYPE F: REDUCING ADAPTOR MALE THREADED

ND - Inch Adaptor	Thread EN 10226-1	Material	Weight/pc Kg	Reference
20 - 3/4"	R 1/2	Polypropylene	0.03	VLFP019013
40 - 1.1/2"	R 1.1/4	Polypropylene	0.09	VLFP038032



Coupling standard: Federal Mil A-A-59326A
Male thread: EN 10226-1, BSPT

CAM & GROOVE SEALS



SQUARE SEAL - NBR

ND	Inch	OD \pm 0.3 mm	ID \pm 0.2 mm	Height \pm 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.5	17.5	4.0	0.002	VLXB013
20	3/4"	35.0	22.0	5.5	0.005	VLXB019
25	1"	40.0	27.0	6.4	0.007	VLXB025
32	1.1/4"	50.0	35.0	6.4	0.009	VLXB032
40	1.1/2"	56.0	41.0	6.4	0.010	VLXB038
50	2"	67.0	51.0	6.4	0.010	VLXB050
65	2.1/2"	80.0	60.0	6.4	0.020	VLXB063
80	3"	95.0	76.0	6.4	0.020	VLXB075
100	4"	124.0	102.0	6.4	0.030	VLXB100
125	5"	150.5	124.0	6.4	0.050	VLXB125
150	6"	180.0	153.0	6.4	0.060	VLXB150
200	8"	232.5	203.5	7.9	0.070	VLXB200



Material: NBR - Silicone free

Colour: Black

Dimensions in compliance with EN 14420-7, with exception of ND 15, ND 125, ND 150 and ND 200

See chapter E for more information regarding chemical resistance

SQUARE SEAL - EPDM

ND	Inch	OD \pm 0.3 mm	ID \pm 0.2 mm	Height \pm 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.5	17.5	4.0	0.002	VLXE013
20	3/4"	35.0	22.0	5.5	0.005	VLXE019
25	1"	40.0	27.0	6.4	0.007	VLXE025
32	1.1/4"	50.0	35.0	6.4	0.009	VLXE032
40	1.1/2"	56.0	41.0	6.4	0.010	VLXE038
50	2"	67.0	51.0	6.4	0.010	VLXE050
65	2.1/2"	80.0	60.0	6.4	0.020	VLXE063
80	3"	95.0	76.0	6.4	0.020	VLXE075
100	4"	124.0	102.0	6.4	0.030	VLXE100
125	5"	150.5	124.0	6.4	0.050	VLXE125
150	6"	180.0	153.0	6.4	0.060	VLXE150



Material: EPDM

Colour: Black yellow marked

Dimensions in compliance with EN 14420-7, with exception of ND 15, ND 125, ND 150 and ND 200

See chapter E for more information regarding chemical resistance

CAM & GROOVE SEALS



SQUARE SEAL - FPM

ND	Inch	OD Ø +/- 0.3 mm	ID Ø +/- 0.2 mm	Height +/- 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.5	17.5	4.0	0.002	VLXV013
20	3/4"	35.0	22.0	5.5	0.005	VLXV019
25	1"	40.0	27.0	6.4	0.007	VLXV025
32	1.1/4"	50.0	35.0	6.4	0.009	VLXV032
40	1.1/2"	56.0	41.0	6.4	0.010	VLXV038
50	2"	67.0	51.0	6.4	0.010	VLXV050
65	2.1/2"	80.0	60.0	6.4	0.020	VLXV063
80	3"	95.0	76.0	6.4	0.020	VLXV075
100	4"	124.0	102.0	6.4	0.030	VLXV100
125	5"	150.5	124.0	6.4	0.050	VLXV125
150	6"	180.0	153.0	6.4	0.060	VLXV150



Material: FPM

Colour: Green

Dimensions in compliance with EN 14420-7, with exception of ND 15, ND 125, ND 150 and ND 200

See chapter E for more information regarding chemical resistance

SQUARE SEAL - CSM

ND	Inch	OD Ø +/- 0.3 mm	ID Ø +/- 0.2 mm	Height +/- 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.5	17.5	4.0	0.002	VLXH013
20	3/4"	35.0	22.0	5.5	0.005	VLXH019
25	1"	40.0	27.0	6.4	0.007	VLXH025
32	1.1/4"	50.0	35.0	6.4	0.009	VLXH032
40	1.1/2"	56.0	41.0	6.4	0.010	VLXH038
50	2"	67.0	51.0	6.4	0.010	VLXH050
65	2.1/2"	80.0	60.0	6.4	0.020	VLXH063
80	3"	95.0	76.0	6.4	0.020	VLXH075
100	4"	124.0	102.0	6.4	0.030	VLXH100
125	5"	150.5	124.0	6.4	0.050	VLXH125
150	6"	180.0	153.0	6.4	0.060	VLXH150



Material: CSM

Colour: Black green marked

Dimensions in compliance with EN 14420-7, with exception of ND 15, ND 125, ND 150 and ND 200

See chapter E for more information regarding chemical resistance

CAM & GROOVE SEALS



CLOSED SEAL - FEP / SILICONE

ND	Inch	OD \pm 0.3 mm	ID \pm 0.2 mm	Height \pm 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.6	17.5	4.0	0.002	VLXPSG013
20	3/4"	35.0	22.2	5.5	0.004	VLXPSG019
25	1"	39.7	27.0	6.5	0.006	VLXPSG025
32	1.1/4"	49.2	34.5	6.5	0.010	VLXPSG032
40	1.1/2"	55.5	41.3	6.5	0.012	VLXPSG038
50	2"	66.7	50.8	6.5	0.014	VLXPSG050
65	2.1/2"	79.4	60.3	6.5	0.018	VLXPSG063
80	3"	95.5	76.2	6.5	0.022	VLXPSG075



Material: FEP encapsulation - Silicone core
 Colour: Translucent outside / red inside
 Seal and seal dimensions not specified by EN 14420-7 / FED MIL A-A59326A
 FDA conformity certificate on request available
 See chapter E for more information regarding chemical resistance



OPEN ENVELOPE SEAL - PTFE / EPDM

ND	Inch	OD \pm 0.3 mm	ID \pm 0.2 mm	Height \pm 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.2	17.5	4.0	0.002	VLXP013
20	3/4"	35.3	21.2	5.5	0.004	VLXP019
25	1"	39.0	23.0	6.4	0.006	VLXP025
32	1.1/4"	49.5	32.4	6.4	0.009	VLXP032
40	1.1/2"	55.2	35.2	6.4	0.012	VLXP038
50	2"	66.0	47.0	6.4	0.014	VLXP050
63	2.1/2"	79.0	58.5	6.4	0.020	VLXP063
80	3"	94.5	76.3	6.4	0.022	VLXP075
100	4"	124.0	102.0	6.4	0.032	VLXP100



Material: PTFE envelope / EPDM core
 Colour: White outside / black inside
 Seal and seal dimensions not specified by EN 14420-7 / FED MIL A-A59326A
 See chapter E for more information regarding chemical resistance

CAM & GROOVE SEALS



OPEN ENVELOPE SEAL - PTFE / FPM

ND	Inch	OD Ø +/- 0.3 mm	ID Ø +/- 0.2 mm	Height +/- 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.2	17.5	4.0	0.002	VLXP013V
20	3/4"	35.3	21.2	5.5	0.004	VLXP019V
25	1"	39.0	23.0	6.4	0.006	VLXP025V
32	1.1/4"	49.5	32.4	6.4	0.009	VLXP032V
40	1.1/2"	55.2	35.2	6.4	0.012	VLXP038V
50	2"	66.0	47.0	6.4	0.014	VLXP050V
65	2.1/2"	79.0	58.5	6.4	0.020	VLXP063V
80	3"	94.5	76.3	6.4	0.022	VLXP075V
100	4"	124.0	102.0	6.4	0.032	VLXP100V



Material: PTFE envelope / FPM core

Colour: White outside / black grey marked inside

Seal and seal dimensions not specified by EN 14420-7 / FED MIL A-A59326A

See chapter E for more information regarding chemical resistance

CLOSED ENVELOPE SEAL - PTFE / FPM

ND	Inch	OD Ø +/- 0.3 mm	ID Ø +/- 0.2 mm	Height +/- 0.2 mm	Weight/pc Kg	Reference
15	1/2"	26.5	13.5	4.5	0.002	VLXPG013
20	3/4"	35.0	18.0	5.7	0.004	VLXPG020
25	1"	41.8	23.5	6.5	0.006	VLXPG025
32	1.1/4"	48.0	30.0	6.5	0.009	VLXPG032
40	1.1/2"	56.0	35.5	6.5	0.010	VLXPG038
50	2"	67.0	46.5	6.5	0.012	VLXPG050
65	2.1/2"	81.5	60.0	6.6	0.016	VLXPG065
80	3"	94.0	76.0	6.6	0.018	VLXPG075
100	4"	122.5	100.5	6.6	0.024	VLXPG100



Material: TFM™ PTFE envelope / FPM core; TFM™ is a registered trademark of Dyneon

Colour: Translucent outside / black inside

FDA conformity certificate on request available

Seal and seal dimensions not specified by EN 14420-7 / FED MIL A-A59326A

See chapter E for more information regarding chemical resistance



On request cam & groove seals made of anti-microbiological rubber available

CAM & GROOVE SEALS



THREAD SEAL - PTFE

ND	Inch	OD Ømm	ID Ø mm	Height mm	Weight/pc kg	Reference
20	3/4"	26.0	19.0	1.5	0.001	X2RP020
25	1"	33.0	24.0	2.0	0.002	X2RP025
32	1.1/4"	42.0	33.0	2.0	0.002	X2RP032
40	1.1/2"	48.0	39.0	2.0	0.003	X2RP038
50	2"	60.0	49.0	2.0	0.004	X2RP050
65	2.1/2"	76.0	63.0	2.5	0.006	X2RP065
80	3"	88.0	77.0	3.0	0.010	X2RP075
100	4"	114.0	100.0	3.0	0.015	X2RP100



Material: PTFE

Colour: White

Seal dimensions in compliance with EN 14420-5

See chapter E for more information regarding chemical resistance

THREAD SEAL - PU

ND	Inch	OD Ømm	ID Ø mm	Height mm	Weight/pc kg	Reference
20	3/4"	26.0	19.0	1.5	0.001	X2RV020
25	1"	33.0	24.0	2.0	0.001	X2RV025
32	1.1/4"	42.0	33.0	2.0	0.001	X2RV032
40	1.1/2"	48.0	39.0	2.0	0.001	X2RV038
50	2"	60.0	49.0	2.0	0.002	X2RV050
65	2.1/2"	76.0	63.0	2.5	0.003	X2RV065
80	3"	88.0	77.0	3.0	0.005	X2RV075
100	4"	114.0	100.0	3.0	0.008	X2RV100



Material: PU

Colour: Brown

Seal dimensions in compliance with EN 14420-5

See chapter E for more information regarding chemical resistance

CAM & GROOVE ACCESSORIES



STANDARD HANDLE

ND	Inch	Material	Weight/pc Kg	Reference
15 - 20	1/2" - 3/4"	Stainless steel	0.02	VLHRPR1
25	1"	Stainless steel	0.03	VLHRPR2
32 - 65	1.1/4" - 2.1/2"	Stainless steel	0.06	VLHRPR3
80 - 100	3" - 4"	Stainless steel	0.11	VLHRPR4
150	6"	Stainless steel	0.25	VLHRPR6
25	1"	Brass	0.04	VLHRPM2
32-65	1.1/4" - 2.1/2"	Brass	0.08	VLHRPM3
80-125	3" - 5"	Brass	0.10	VLHRPM4
150	6"	Brass	0.26	VLHRPM6



Standard handle: Handle stainless steel AISI 304 - 1.4301
 Pull ring stainless steel AISI 304 - 1.4301
 Safety pin stainless steel AISI 304 - 1.4301

SAFETY REBUILDING SET

ND	Inch	Material	Weight/pc Kg	Reference
25	1"	Stainless steel	0.10	VLHRPR2S
32 - 65	1.1/2" - 2"	Stainless steel	0.13	VLHRPR3S
80 - 100	3" - 4"	Stainless steel	0.17	VLHRPR4S

Safety rebuilding set: Safety handle stainless steel AISI 304 - 1.4301
 Pull ring stainless steel AISI 304 - 1.4301
 Safety pin stainless steel AISI 304 - 1.4301
 Safety hook stainless steel AISI 304 - 1.4301



VLHRPR2S
VLHRPR3S

VLHRPR4S

SAFETY
HOOK

PULL RING

ND	Inch	Nr of wires	ID mm	OD mm	Material	Weight/pc kg	Reference
15 - 65	1/2" - 2.1/2"	2	30.0	34.0	Stainless steel	0.005	VLRR1
80 - 150	3" - 6"	3	30.0	34.5	Stainless steel	0.007	VLRR2

Stainless steel AISI 304 - 1.4301



CAM & GROOVE ACCESSORIES



PIN

ND	Inch	Material	Weight/pc Kg	Reference
15-20	1/2" - 3/4"	Stainless steel AISI 304	0.002	VLPR1
25	1"	Stainless steel AISI 304	0.004	VLPR2
32-65	1.1/4" - 2.1/2"	Stainless steel AISI 304	0.008	VLPR3
80-100	3" - 4"	Stainless steel AISI 304	0.014	VLPR4



S-HOOK

Material	Weight/pc Kg	Reference
Stainless steel AISI 304	0.002	KETRS
Brass	0.002	KETMS



SAFETY PIN

Material	Weight/pc Kg	Reference
Galvanized steel	0.018	VLBVS2
Stainless steel AISI 304	0.018	VLBVR2



CHAIN WITH S-HOOK

Length mm	Material	Weight/pc Kg	Reference
200	Stainless steel AISI 304	0.015	KETR200
150	Brass	0.013	KETM150



CAP L-HANDLE 90°

ND	Inch	Material	Weight/pc Kg	Reference
32-65	1.1/4" - 2.1/2"	Stainless steel AISI 304	0.08	VLHRPR3L
80-100	3" - 4"	Stainless steel AISI 304	0.16	VLHRPR4L
150	6"	Stainless steel AISI 304	0.27	VLHRPR6L



L-handle: Patented handle stainless steel AISI 304 - 1.4301
 Pull ring: stainless steel AISI 304 - 1.4301
 Safety pin: stainless steel AISI 304 - 1.4301

