

Weight Approx. ≈ kg/m	Hose Size			Work. Pressure bar	Test Pressure bar	max. Vacuum bar	Min. Reel Dia. mm	Coil Length ≈ m	Part Number <sup>1)</sup> Type
	ID in.	ID mm	OD mm						



ELAFLEX HD 100 C · EN ISO 1825 C · 20 BAR · EN 12115 NBR 1 · D · Ω/T · EN 1761 · NFPA 407 · EI 1529 C · GRADE 2 · 300 PSI · AS 2683 · VG 95 955 D · 25 BAR · Ω · Ⓢ · MADE IN GERMANY · 4Q-20

**Specification:** Meets Standard **EN ISO 1825** (EN 1361), EI 1529 C, NFPA 407 and AS 2683. Type approved acc. to German military standard VG 95 955. Specified by almost all major oil companies. Further technical data and types see overleaf.

**Marking:** Yellow bands every 4 mtr. and continuous embossing as example above.

0,3	3/8"	10	19	20	40	0,8	140	*)	HD 10 C *)
0,6	3/4"	19	31			0,6	200	40	HD 19 C (HD 19 C NEON)
0,8	1"	25	37			0,5	200	30	HD 25 C (HD 25 C NEON)
1,0	1 1/4"	32	44			0,4	225	40	HD 32 C (HD 32 C NEON)
1,2	1 1/2"	38	51			0,3	270	60	HD 38 C (HD 38 C NEON)
1,9	2"	50	66			0,3	400	80	HD 50 C (HD 50 C NEON)
2,4	2 1/2"	63	79			0,2	600	30	(HD 63 C) HD 63 C NEON
2,8	3"	75	91			-	600	40	HD 75 C (HD 75 C NEON)
3,7	4"	100	116			-	900	40	HD 100 C (HD 100 C NEON <sup>2)</sup> )

\*) sensing hose for aircraft dispensers, differing coil length

### Type HD-C

EN ISO 1825 – type C



**'Yellow Band'** aircraft refuelling hoses, suitable for all aviation gasolines and jet fuels (JET A 1), deicing fluids and motor oils. Temperature range -30° up to +90° Celsius. Electrical resistance between 10<sup>3</sup> and 10<sup>6</sup> Ohm.

Lining : Nitrile rubber (NBR), antistatic, no fuel solubility

Reinforcement : Textile braids **without** metallic strands  
Cover : Chloroprene (CR), conductive, ozone and flame resistant, highly abrasion resistant

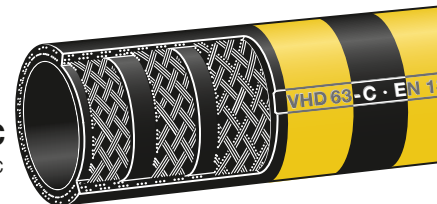
Standard type 'HD-C' with two textile braids. Light weight, flexible hose for pressure service.

**Application:** Hydrant inlet and into-plane hose. Up to size 2 1/2" as deck hose. The hose does not kink with a permanent pressure of least 0,5 bar.

1,4	1 1/2"	38	52	20	40	0,6	400	40	(VHD 38 C) VHD 38 C NEON
2,0	2"	50	67			0,5	500	25	(VHD 50 C) VHD 50 C NEON
2,8	2 1/2"	63	81			0,4	550	30	(VHD 63 C) VHD 63 C NEON
3,4	3"	75	93			0,2	600	40	(VHD 75 C) VHD 75 C NEON
4,4	4"	100	118			-	-	35	VHD 100 C VHD 100 C NEON <sup>2)</sup>
						-	-	40	

### Type VHD-C

EN ISO 1825 - type C



Special type 'VHD' with **three textile braids** and thicker wall for lower bending radii and good suction rates.

**Application:** Fortified hose suitable for reel-, into-plane and hydrant inlet operations, as well as riser systems. In non pressure situations this type is more stable against kinking and flattening.

1,5	1 1/2"	38	54	20	40	0,8	400	25	PHD 38 F (PHD 38 F NEON)
2,1	2"	50	67			0,8	500	30	PHD 50 F (PHD 50 F NEON)
2,9	2 1/2"	63	81			0,7	550	40	PHD 63 F (PHD 63 F NEON)
3,6	3"	75	93			0,6	600	40	PHD 75 F (PHD 75 F NEON)

### Type PHD-F

EN ISO 1825 - type F



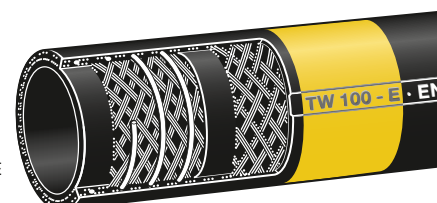
Special type 'PHD' with non metallic **plastic helix** and thick wall for enhanced lateral stability.

**Application:** For alternative fuelling and defuelling operation. Up to size 2 1/2" the diameter remains stable even with low bending radii.

0,8	1"	25	37	20	40	0,8	200	40	TW 25 E
1,0	1 1/4"	32	44				225		TW 32 E
1,4	1 1/2"	38	51				400		TW 38 E
2,1	2"	50	66				500		TW 50 E
2,8	2 1/2"	63	79				550		TW 63 E
3,3	3"	75	91				600		TW 75 E
4,7	4"	100	117				900		TW 100 E

### Type TW-E

EN ISO 1825 - type E

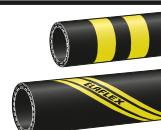


Suction-/discharge hard wall hose with galvanized **steel helix** for high suction and for gravity discharge.

**Application:** For tank trucks and the connection between truck and trailer as well as riser systems (see overleaf). Not approved for hydrant inlet and into-plane fuelling.

<sup>1)</sup> 'NEON' type: with reflecting bands.

<sup>2)</sup> For hydrant inlet hoses NEON marking in spiral form.



Comparable Technical Data		Requirements to EN ISO 1825	Test Results Conti / ELAFLEX
Tensile Strength	Tube Cover	min. 7,0 N / mm <sup>2</sup> min. 7,0 N / mm <sup>2</sup>	12,5 N / mm <sup>2</sup> 16,0 N / mm <sup>2</sup>
Swelling of Tube in 'Liquid B' 48 h, 40° Celsius		max. 50 %	29 %
Extraction of Tube in 'Liquid B' Method EN ISO 1825		max. 4 %	3 %
Abrasion of Cover to EN ISO 4649		max. 140 mm <sup>3</sup>	120 mm <sup>3</sup>
Adhesion	dry	min. 3,0 N / mm	4,5 N / mm
	swollen	min. 2,0 N / mm	3,5 N / mm
Burst Pressure		min. 80 bar	> 100 bar

### GENERAL QUALITY DATA

'Yellow Band' aircraft refuelling hoses are distinguished by their high operational safety. The minimum requirements set by standards (i.e. with abrasion and kink resistance) are far exceeded. This results in a superior service life. The well proven design **with braided reinforcements** allows light weight and user friendly hoses with burst characteristics that regularly exceed **100 bar**. Spiral or coiled reinforcements are not used. Every hose is pressure tested by the manufacturer before shipment. **In order to maintain its outstanding characteristics for years and avoid embrittlement of the tube by penetrating ozone the ends have to be capped during transport and storage.**

### APPROVALS

ELAFLEX aircraft refuelling hoses and couplings are approved by almost all international major oil companies as well as the German and various other foreign airforces.

### SPECIAL TYPES

#### 'LT' Low Temperature Type for Use in Particularly Cold Areas

All aircraft refuelling hoses can be produced in a special soft and cold flexible 'LT' version (LOW TEMPERATURE). This hose may be used without risk of cracking at temperatures down to - 50° Celsius. Because of the softer tube the max. vacuum resistance of type HD-LT and VHD-LT is slightly lower, and the extraction and swelling of the tube slightly increases.

#### Type 'B' with Metallic Conductive Elements

HD and VHD hoses shown overleaf can additionally be supplied with two crossed copper strand wires according to EN ISO 1825 type B. The electrical resistance is below 10 Ohm if the metallic elements of the hose are bonded with the couplings. For into-plane and hydrant inlet hoses, metallic elements are not permitted at civilian airports.

#### Hoses for Riser Systems

In order to avoid kinking type E hoses with steel helix are often the best solution for riser systems. Depending on the construction of your riser system the types VHD and PHD can also be used. N.B.: Often too short lengths are chosen. Please ask us in case of any doubt.

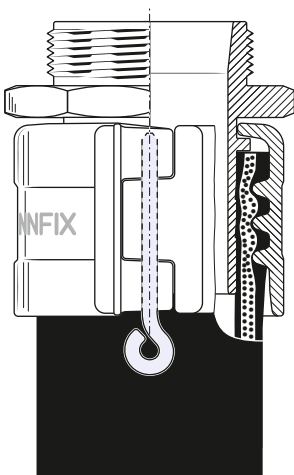
### SAFETY CLAMPS

ELAFLEX offers the three illustrated alternatives for the safe assembling of the couplings: The systems only differ by the kind of attachment of the clamp halves. The pull-off values up to burst pressure and the tightness are absolutely identical because of the active clamping of the hose shanks through the safety collar. Description see page 298. Available designs with permitted tolerances see pages 221-229.

Aviation fuelling guidelines of international major oil companies require the use of tinned hose couplings, available ex stock from ELAFLEX.

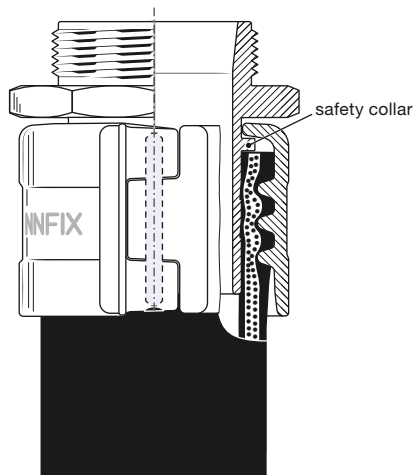
### SPANNFIX

- pinned safety clamps
- reattachable



### SPANNFIX NR

- pinned safety clamps
- non-reattachable
- approved as swaged on



### SPANNLOC

- bolted safety clamps
- reattachable

