CLAIMS

1. A line protective guide for lines like for example cables or hoses for a clean room application, comprising an elongate flexible encasement (700, 900) which is displaceable reciprocatingly, in particular with the formation of a movable upper run (1), a stationary lower run (3) and a direction-changing arc (4) between the movable upper run (1) and the stationary lower run (3), and has at least one receiving means (702, 902, 1002) for guiding at least one line;

wherein each receiving means (702, 902, 1002) extends channel-like in a longitudinal direction (L) from a first end to a second end;

wherein the encasement (700, 900) has at least one encasing unit (701, 901, 1001) forming at least one receiving means (702, 902, 1002); and

the encasing unit (701, 901, 1001) includes a first fixing strip (720, 920, 1002) at one longitudinal side and a second fixing strip (721, 921, 1021) at the other longitudinal side;

characterised in that

the first and the second fixing strips (720, 721, 920, 921, 1020, 1021) are arranged in opposite relationship and adapted to be connected to each other for a releasable connection by positively locking and/or force-locking engagement in mutually matching relationship and in a joining direction (V) transversely to the longitudinal direction (L) to releasably fix together a plurality of encasing units (701, 901, 1001) with mutually matching fixing strips (720, 721, 920, 921, 1020, 1021) by connection of the first and the second fixing strips (720 721, 920, 921, 1020, 1021) in the joining direction (V) transversely to the longitudinal direction (L), wherein the first and the second fixing strips (720, 721, 920, 921, 1020, 1021) are respectively in one piece with the encasing unit (701, 901, 1001).

2. A line protective guide according to claim 1 characterised in that the encasement (700, 900) includes a multiplicity of separate encasing units (701, 901, 1001) and each encasing unit (701, 901, 1001) has the first fixing

strip (720, 920, 1002) and the second fixing strip (721, 921, 1021) which are in opposite relationship on both sides and which are in one piece with the encasing unit (701, 901, 1001), adjacent encasing units (701, 901, 1001) are connected together in parallel relationship by the the first fixing strip (720, 920, 1002) and the second fixing strip (721, 921, 1021) and provided at the first and the second end is a respective clamping device (130), with which the multiplicity of separate encasing units (701, 901, 1001) of the encasement (700, 900) are respectively secured at the first and the second end.

3. A line protective guide according to claim 2 characterised in that provided in a receiving means (902) of at least one encasing unit (901) is a support chain (135) for supporting the encasement (900) upon displacement.

4. A line protective guide according to claim 2 or claim 3 characterised in that each encasing unit (1001) has two cooperating closure profiles (1011, 1012) of a closure for dust-tightly closing an opened state in which a line (6) can be inserted into or removed from a receiving means (1002) transversely relative to the longitudinal direction (L).

5. A line protective guide according to claim 3 characterised in that each encasing unit (1001) is of a one-piece configuration, forms a plurality of parallel receiving means (1002) and provided for each receiving means (1002) is a pair of cooperating closure profiles (1011, 1012) in one piece with the encasing unit (1001).

6. A line protective guide according to one of the preceding claims characterised in that each receiving means (702, 902, 1002) is of an elongatedly round or oval, in particular ogival cross-section and a respective fixing profile (720, 721, 920, 921, 1020, 1021) as the fixing strip is provided at each narrow side of the encasing unit (701, 901, 1001), in particular in one piece with the encasing unit (701, 901, 1001).

7. A line protective guide according to claim 1, claim 2 or claim 3 characterised in that the encasement (700) includes a multiplicity of separate and peripherally closed encasing units (701), wherein each encasing unit respectively forms precisely one receiving means (702) and each encasing unit (701) has two fixing strips (720, 721) which are in opposite relationship at both sides and which are in one piece with the encasing units (701).

8. A line protective guide according to one of the preceding claims characterised in that each encasing unit (901) is of a cross-section which remains the same in the longitudinal direction, wherein in particular the first and the second fixing strips (921, 921) are of a cross-section which remains the same in the longitudinal direction (L), in particular with an interengaging hook and claw profile.

9. A line protective guide according to one of the preceding claims characterised in that the receiving means (1302) are connected together in parallel relationship by strip-shaped intermediate regions (1333) which predetermine a neutral fibre (N) and the first and second fixing strips or profiles (1321A, 1322A) are disposed at a level of the neutral fibre (N) of the encasement, wherein preferably a thinner strip-shaped intermediate region (1333) is provided between each fixing strip (1321A, 1322A) and an adjoining receiving means (1302).

10. An encasing unit (901, 1201, 1401, 1601) of plastic for an elongate flexible encasement of a line protective guide for a clean room application, wherein the encasing unit (901, 1201, 1401, 1601) forms at least one receiving means (902, 1402, 1602) for guiding at least one line(6), which extends channel-like in a longitudinal direction (L) from a first end to a second end;

wherein the encasing unit (901, 1401, 1601) includes a first fixing profile (920, 1421, 1621) at one longitudinal side and a second fixing profile (921, 1422, 1622) at the other longitudinal side;

characterised in that

the first and the second fixing profiles (920, 921, 1421, 1422, 1621, 1622) are arranged in opposite relationship and adapted to be connected to each other for a releasable connection by positively locking and/or force-locking engagement in mutually matching relationship and in a joining direction (V) transversely to the longitudinal direction (L) to releasably fix together a plurality of encasing units (901, 1401, 1601) with mutually matching the first and the second fixing profiles (920, 921, 1421, 1422 1621, 1622) by connection of the first and the second fixing profiles (920, 921, 1421, 1422 1621, 1622) in the joining direction (V) transversely to the longitudinal direction (L), wherein the first and second fixing profiles (920, 921, 1421, 1422 1621, 1622) are respectively in one piece with the encasing unit (901, 1401, 1601).

11. An encasing unit (901, 1401, 1601) according to claim 10 characterised in that the first and the second fixing profiles (920, 921, 1421, 1422, 1621, 1622) are designed in mutually congruent relationship and of a cross-section which is the same throughout in the longitudinal direction (L), that cooperate in mutually engaging relationship.

12. An encasing unit (1601) according to claim 10 or claim 11 characterised in that the first fixing profile (1321A, 1321C) and/or the second fixing profile (1322A, 1322C) has at least one inclined insertion portion (1332) extending inclinedly relative to the joining direction (V).

13. An encasing unit (1601) according to claim 10, claim 11 or claim 12 characterised in that the first and the second fixing profiles (1321A, 1322A, 1321C, 1322C) are symmetrical relative to a central plane, in particular the neutral fibre (N), wherein the first fixing profile (1321A, 1321C)

and/or the second fixing profile (1322A, 1322C) have two symmetrically arranged inclined insertion portions (1332).

14. An encasing unit (1601) according to one of claims 10 to 13 characterised in that the first and the second fixing profiles (1321A, 1322A, 1321C, 1322C) are so designed that in comparison with the connection of mutually matching the first and the second fixing profiles (1321A, 1322A, 1321C, 1322C) in the joining direction (V) they are releasable only with a higher application of force in opposite relationship to the joining direction (V) or are releasable only in the longitudinal direction (L), wherein the first and the second fixing profiles (1321A. 1322A, 1321C, 1322C) are preferably of a cross-section with a barb function.

15. An encasing unit (901, 1001, 1101) according to one of claims 10 to 14 characterised in that the encasing unit (901, 1001, 1101) forms a plurality of tubular receiving means (902, 1002, 1102) for separate guidance of respectively at least one line (6).

16. An encasing unit (1001)according to one of claims 10 to 15 characterised in that each receiving means (1002) has two cooperating closure profiles (1011, 1012) of a closure, that extend in the longitudinal direction (L), for dust-tightly closing an opened state in which a line (6) can be introduced into or removed from one of the receiving means (1002) transversely to the longitudinal direction.

17. An arrangement of a line guide for a clean room application, including

- an elongate flexible encasement (900) which is reciprocatingly displaceable, in particular with the formation of a movable upper run (1), a stationary lower run (3) and a direction-changing arc (4) between the movable upper run (1) and the lower stationary run (3), wherein the encasement (900) has a number of encasing units (901) which respectively

form at least one receiving means (902), wherein each receiving means (902) extends channel-like in a longitudinal direction (L) from a first end to a second end;

- at least one support chain (135), in particular comprising individual chain links, which is adapted to predetermine a direction-changing radius of the direction-changing arc (4) and/or to support a self-supporting run (1) in the straight position, characterised in that

each encasing unit (901) has a first fixing strip (920) at one longitudinal side and a second fixing strip (921) at the other longitudinal side, wherein the first and second fixing strips (720 721, 920, 921, 1020, 1021) are respectively in one piece with the encasing unit (701, 901, 921), wherein the first and the second fixing strips (920, 921) are adapted to be connected to each other for a releasable connection by positively locking and/or force-locking engagement in mutually matching relationship to releasably fix together a plurality of encasing units (901) with mutually matching fixing strips (920, 921), and that each support chain (135) is guided in an associated encasing unit (901) which receives exclusively an associated support chain or chains (135) so that with the associated encasing unit (901) the support chain or chains (135) are replaceable separately from the lines (6) guided in the encasement (900).

18. An arrangement according to claim 17 characterised in that the arrangement comprises a plurality of encasements (900) wherein at least some and preferably all encasements (900) are designed according to one of claims 1 to 9.