



DIN EN ISO 9001:2000

HMEC[®]

SLEWER[™]

Slew Ring



SlewRing^{com}
www.SlewingBearing.cn



CERTIFICATE

The TÜV CERT Certification Body
of TÜV Industrie Service GmbH
TÜV Rheinland Group

certifies in accordance with
TÜV CERT procedures that

HMEC Power Transmission Co., Ltd.
7-D Suntime International Mansion, 450 Fushan Road,
Pudong, Shanghai 200122, P. R. China

has established and applies a quality management system for

**Sales of General Bearings (including Slewing Rings,
Middle/Big-Size & Out-size Bearings, Special Bearings & etc.) Automobile
Bearings (including Wheel Hub Assemblies, clutch release bearing,
tensioner bearing & etc.) Automobile Motors & Components
(Alternators, Starters, Drives, Armature, Stator, Rotor, Carbon Brush etc.) ,
and other Power Transmission Equipments & Industrial Parts.**

An audit was performed, Report No. 038997.

Proof has been furnished that the requirements according to

DIN EN ISO 9001:2000

are fulfilled.

The certificate is valid until 2010-12-13

Certificate Registration No. 01 100 038997



Cologne, 14/12/2004

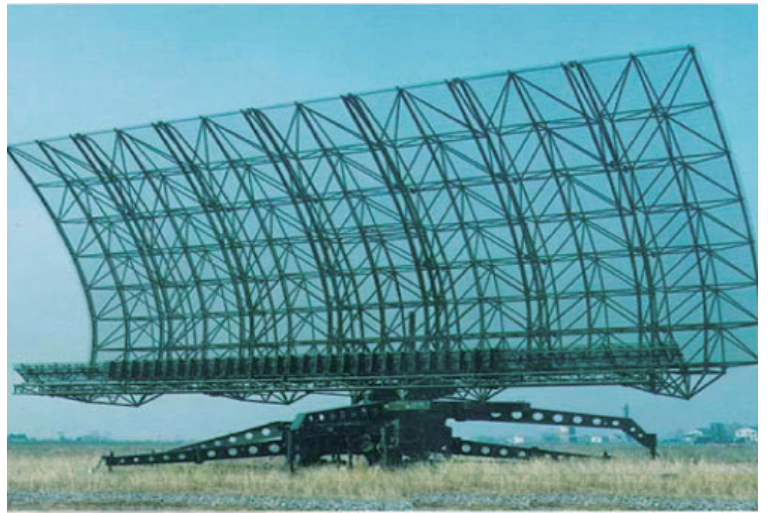


TÜV Rheinland Group

A handwritten signature in black ink, appearing to read 'J. Ulrich'.

TÜV CERT Certification Body of
TÜV Industrie Service GmbH

www.tuv.com

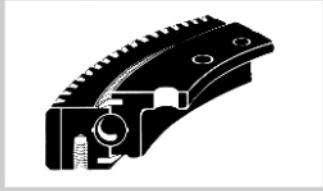
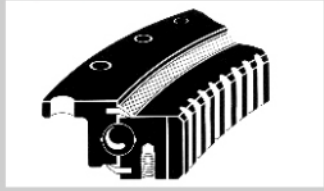

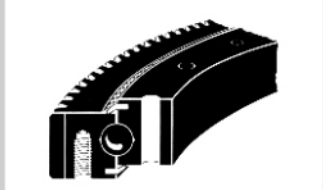
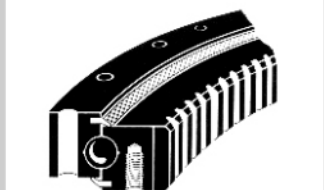
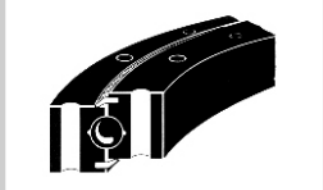

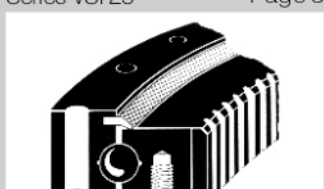

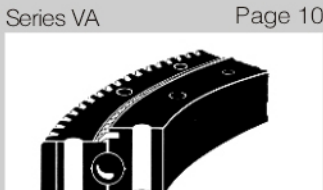
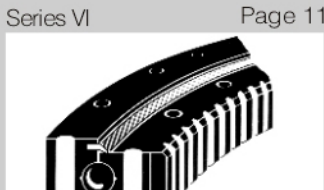
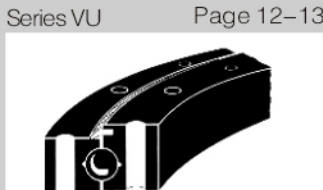
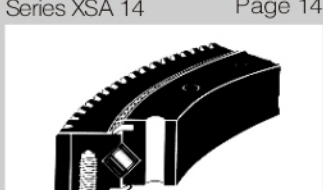

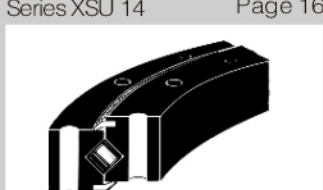
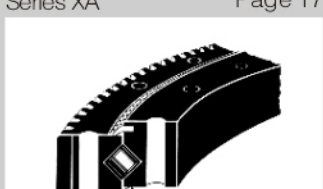
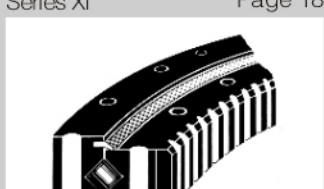
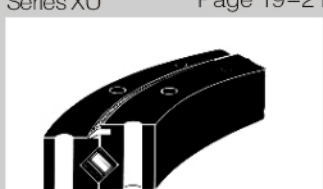



Slewing Ring Applications





Product overview

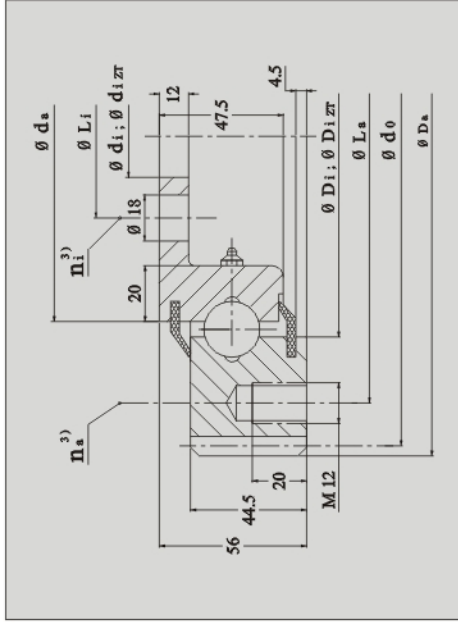
| Four point contact bearings | with external gear teeth | with internal gear teeth | without gear teeth |
|--|--|---|--|
| Light series 20 | Series VLA 20 Page 1  | Series VLI 20 Page 2  | Series VLU 20 Page 3  |
| Standard series 20 | Series VSA 20 Page 4  | Series VSI 20 Page 5  | Series VSU 20 Page 6  |
| Standard series 25 | Series VSA 25 Page 7  | Series VSI 25 Page 8  | Series VSU 25 Page 9  |
| Other four point contact bearings | Series VA Page 10  | Series VI Page 11  | Series VU Page 12–13  |
| Standard series 14 | Series XSA 14 Page 14  | Series XSI 14 Page 15  | Series XSU 14 Page 16  |
| Other crossed roller bearings | Series XA Page 17  | Series XI Page 18  | Series XU Page 19–21  |
| | Series SX Page 22  | | |

All items replacing INA.

Four point contact bearings

light series 20

Series VLA, with external gear teeth



VLA 20

4 lubricating nipples, DIN 71412 - AS X 1
equi - spaced on circumference

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | | Fixing screws | | Gear teeth | | Tooth force | | Basic load ratings | | | | | | |
|-------------------|------------|-----------|-----|------------------------------|--------|------------------------------|--------|------|------------------|------|------------------|--|-------------|---|--------------------|---------|--------|-------|-----|--------|-----|
| | | Da | di | di ZT ²⁾ + IT8 | Di | Di ZT ²⁾ + IT8 | da | La | na ³⁾ | Li | ni ³⁾ | Maximum Radial Load (frictional contact) KN | do | m | z | F znorm | F zmax | Axial | | Radial | |
| VLA200414N | 29.5 | 503.3 | 304 | 306 | 415.5 | 417 | 412.5 | 455 | 10 | 332 | 12 | 41.3 | 495 | 5 | 99 | 15.9 | 23.6 | 169 | 295 | 111 | 110 |
| VLA200544N | 41.5 | 640.3 | 434 | 436 | 545.5 | 547 | 542.5 | 585 | 14 | 462 | 14 | 57.8 | 630 | 6 | 105 | 21.3 | 31.5 | 188 | 385 | 123 | 145 |
| VLA200644N | 48.5 | 742.3 | 534 | 536 | 645.5 | 647 | 642.5 | 685 | 16 | 562 | 16 | 66.1 | 732 | 6 | 122 | 21.3 | 31.5 | 200 | 455 | 131 | 171 |
| VLA200744N | 54.5 | 838.1 | 634 | 636 | 745.5 | 747 | 742.5 | 785 | 18 | 662 | 16 | 74.3 | 828 | 6 | 138 | 21.3 | 31.5 | 211 | 530 | 138 | 198 |
| VLA200844N | 65.5 | 950.1 | 734 | 736 | 845.5 | 847 | 842.5 | 885 | 18 | 762 | 18 | 74.3 | 936 | 8 | 117 | 28.3 | 42.0 | 222 | 600 | 145 | 224 |
| VLA200944N | 71.5 | 1046.1 | 834 | 836 | 945.5 | 947 | 942.5 | 985 | 20 | 862 | 20 | 82.6 | 1032 | 8 | 129 | 28.3 | 42.0 | 231 | 670 | 151 | 250 |
| VLA201094N | 83.5 | 1198.1 | 984 | 986 | 1095.5 | 1097 | 1092.5 | 1135 | 22 | 1012 | 20 | 90.9 | 1184 | 8 | 148 | 28.3 | 42.0 | 244 | 770 | 160 | 290 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

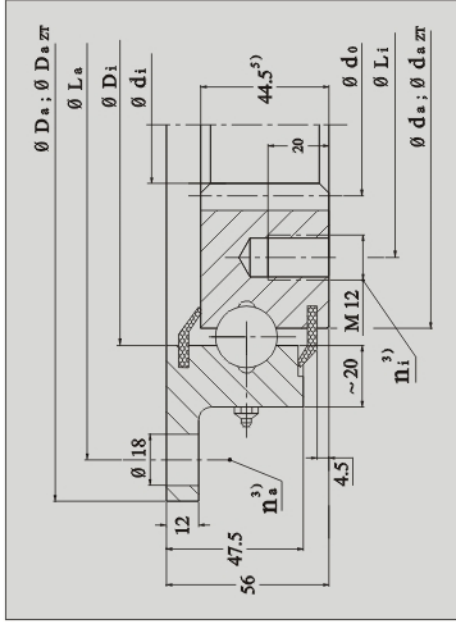
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearings

light series 20

Series VLI, with internal gear teeth



VLI 20

4 lubricating nipples, DIN71412 - A S 8 X 1, equi - spaced on circumference,

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | | Fixing screws | | Gear teeth | | Tooth force | | Basic load ratings | | | | | | | |
|-------------------|------------|-----------|----------------------------|-----|--------|--------------|----------------------------|----|------------------|----|------------------|---|-------------|-----|--------------------|--------|-------|-------|-----|--------|-----|-----|
| | | Da | DaZT ²⁾ -IT8 | di | Di | da | daZT ²⁾ -IT8 | La | na ³⁾ | Li | ni ³⁾ | Maximum Radial Load ⁴⁾ (frictional contact) KN | do | m | z | Fznorm | Fzmax | Axial | | Radial | | |
| VLI200414N | 27.5 | 518 | 516 | 325 | 415.5 | 412.5 | 411 | 8 | 375 | 12 | 49.6 | 335 | 5 | 67 | 17.7 | 26.2 | 169 | 295 | 111 | 110 | 110 | 110 |
| VLI200544N | 38.0 | 648 | 646 | 444 | 545.5 | 542.5 | 541 | 10 | 505 | 16 | 66.1 | 456 | 6 | 76 | 23.7 | 35.0 | 188 | 385 | 123 | 145 | 145 | 145 |
| VLI200644N | 45.0 | 748 | 746 | 546 | 645.5 | 642.5 | 641 | 12 | 605 | 18 | 74.3 | 558 | 6 | 93 | 23.7 | 35.0 | 200 | 455 | 131 | 171 | 171 | 171 |
| VLI200744N | 51.5 | 848 | 846 | 648 | 745.5 | 742.5 | 741 | 12 | 705 | 20 | 82.6 | 660 | 6 | 110 | 23.7 | 35.0 | 211 | 530 | 138 | 198 | 198 | 198 |
| VLI200844N | 61.5 | 948 | 946 | 736 | 845.5 | 842.5 | 841 | 14 | 805 | 20 | 82.6 | 752 | 8 | 94 | 31.4 | 46.7 | 222 | 600 | 145 | 224 | 224 | 224 |
| VLI200944N | 67.5 | 1048 | 1046 | 840 | 945.5 | 942.5 | 941 | 16 | 905 | 22 | 90.9 | 856 | 8 | 107 | 31.4 | 46.7 | 231 | 670 | 151 | 250 | 250 | 250 |
| VLI201094N | 81.5 | 1198 | 1196 | 984 | 1095.5 | 1092.5 | 1091 | 16 | 1055 | 24 | 99.1 | 1000 | 8 | 125 | 31.4 | 46.7 | 244 | 770 | 160 | 290 | 290 | 290 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

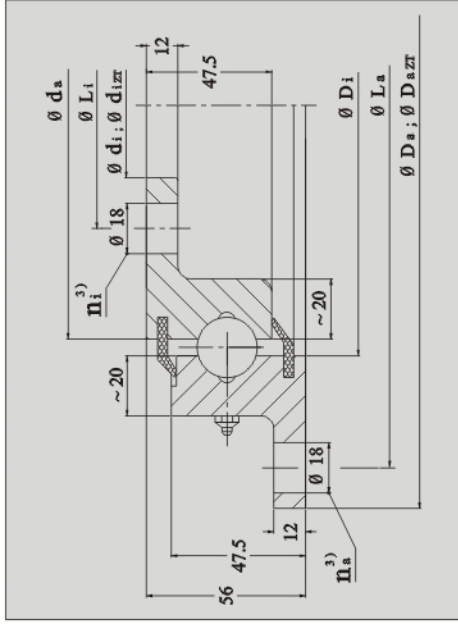
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearing

Light series 20

Series VLU, without gear teeth



VLU 20

4 lubricating nipples, DIN 71412 - A S 8 X 1
equi - spaced on circumference,

| Dimension table . Dimension in mm | | | | | | | | | | | | | | | | |
|-----------------------------------|------------|-------------|---------------------|-----|------------------------------|--------|--------|--------------|------------------|------|--|--------------------|-------|-----|--------|-----|
| Designation | Mass Kg | Dimension | | | | | | Fixing holes | | | Fixing screws Maximum Radial Load ⁴⁾ (frictional contact) KN | Basic load ratings | | | | |
| | | Da - IT8 | Da ZT ²⁾ | di | di ZT ²⁾ + IT8 | Di | da | La | na ³⁾ | Li | | ni ³⁾ | Axial | | Radial | |
| VLU200414 | 23.5 | 518 | 516 | 304 | 306 | 415.5 | 412.5 | 490 | 8 | 332 | 12 | 55 | 169 | 295 | 111 | 110 |
| VLU200544 | 31.0 | 648 | 646 | 434 | 436 | 545.5 | 542.5 | 620 | 10 | 462 | 14 | 72.5 | 188 | 385 | 123 | 145 |
| VLU200644 | 37 | 748 | 746 | 534 | 536 | 645.5 | 642.5 | 720 | 12 | 562 | 16 | 85.5 | 200 | 455 | 131 | 171 |
| VLU200744 | 42.5 | 848 | 846 | 634 | 636 | 745.5 | 742.5 | 820 | 12 | 662 | 16 | 93.6 | 211 | 530 | 138 | 198 |
| VLU200844 | 48.0 | 948 | 946 | 734 | 736 | 845.5 | 842.5 | 920 | 14 | 762 | 18 | 109.2 | 222 | 600 | 145 | 224 |
| VLU200944 | 54.0 | 1048 | 1046 | 834 | 836 | 945.5 | 942.5 | 1020 | 16 | 862 | 20 | 124.8 | 231 | 670 | 151 | 250 |
| VLU201094 | 62.5 | 1198 | 1196 | 984 | 986 | 1095.5 | 1092.5 | 1170 | 16 | 1012 | 20 | 124.8 | 244 | 770 | 160 | 290 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

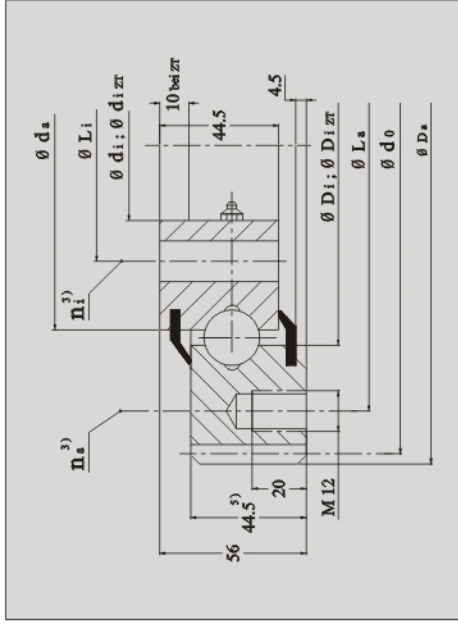
3) Number of holes per ring.

4) Screw load carrying capacity

Four point contact bearings

Standard series 20

Series VSA, with external gear teeth



VSA 20

4 lubricating nipples, DIN 71412 - A S 8 X 1
equi - spaced on circumference

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | | Fixing screws | | Gear teeth | | Tooth force | | Basic load ratings | | | | | | | | |
|--------------------|------------|-----------|------|------------------------------|--------|------------------------------|--------|------|------------------|------|------------------|--|-------------|-----|--------------------|---------------|--------------|-----------------|-------------------|-----------------|-------------------|--------|-----|
| | | Da | di | di ZT ²⁾ + IT8 | Di | Di ZT ²⁾ + IT8 | da | La | na ³⁾ | Li | ni ³⁾ | Maximum Radial Load ⁴⁾ (frictional contact) KN | do | m | z | F znorm KN | F zmax KN | Dyn. C KN | Stat. Co KN | Dyn. C KN | Stat. Co KN | Radial | |
| VSA 200414N | 31 | 503.3 | 342 | 344 | 415.5 | 417 | 412.5 | 455 | 20 | 368 | 24 | 495 | 5 | 99 | 15.9 | 23.6 | 169 | 560 | 111 | 248 | 248 | 248 | 248 |
| VSA 200544N | 43 | 640.3 | 472 | 474 | 545.5 | 547 | 542.5 | 585 | 28 | 498 | 32 | 630 | 6 | 105 | 21.3 | 31.5 | 188 | 740 | 123 | 325 | 325 | 325 | 325 |
| VSA 200644N | 52 | 742.3 | 572 | 574 | 645.5 | 647 | 642.5 | 685 | 32 | 598 | 36 | 732 | 6 | 122 | 21.3 | 31.5 | 200 | 880 | 131 | 385 | 385 | 385 | 385 |
| VSA 200744N | 59 | 838.1 | 672 | 674 | 745.5 | 747 | 742.5 | 785 | 36 | 698 | 40 | 828 | 6 | 138 | 21.3 | 31.5 | 211 | 1010 | 138 | 445 | 445 | 445 | 445 |
| VSA 200844N | 71 | 950.1 | 772 | 774 | 845.5 | 847 | 842.5 | 885 | 36 | 798 | 40 | 936 | 8 | 117 | 28.3 | 42.0 | 222 | 1150 | 145 | 510 | 510 | 510 | 510 |
| VSA 200944N | 77 | 1046.1 | 872 | 874 | 945.5 | 947 | 942.5 | 985 | 40 | 898 | 44 | 1032 | 8 | 129 | 28.3 | 42.0 | 231 | 1280 | 151 | 570 | 570 | 570 | 570 |
| VSA 201094N | 91 | 1198.1 | 1022 | 1024 | 1095.5 | 1097 | 1092.5 | 1135 | 44 | 1048 | 48 | 1184 | 8 | 148 | 28.3 | 42.0 | 244 | 1490 | 160 | 660 | 660 | 660 | 660 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

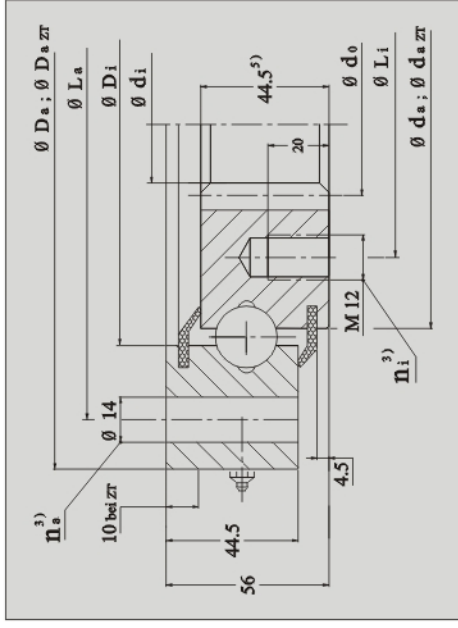
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearings

Standard series 20

Series VSI, with internal gear teeth



VSI 20

4 lubricating nipples, DIN 71412 - A S 8 X 1
equi - spaced on circumference

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | | Fixing screws | | Gear teeth | | Tooth force | | Basic load ratings | | | | |
|-------------------|------------|------------------|--------|------------------|-------|--------------|------------------|------|------------------|--|------------|---|-------------|---------------|--------------------|-------|------|--------|-----|
| | | Da 2) -IT8 | Di | da 2) -IT8 | da ZT | La | na ³⁾ | Li | ni ³⁾ | Maximum Radial Load 4) (frictional contact) KN | do | m | z | F znorm KN | F zmax KN | Axial | | Radial | |
| VSI200414N | 31 | 486 | 415.5 | 412.5 | 411 | 460 | 24 | 375 | 24 | 99.1 | 335 | 5 | 67 | 17.7 | 26.2 | 169 | 560 | 111 | 248 |
| VSI200544N | 42 | 616 | 545.5 | 542.5 | 541 | 590 | 32 | 505 | 32 | 132.2 | 456 | 6 | 76 | 23.7 | 35.0 | 188 | 740 | 123 | 325 |
| VSI200644N | 50 | 716 | 645.5 | 642.5 | 641 | 690 | 36 | 605 | 36 | 148.7 | 558 | 6 | 93 | 23.7 | 35.0 | 200 | 880 | 131 | 385 |
| VSI200744N | 58 | 816 | 745.5 | 742.5 | 741 | 790 | 40 | 705 | 40 | 165.2 | 660 | 6 | 110 | 23.7 | 35.0 | 211 | 1010 | 138 | 445 |
| VSI200844N | 69 | 916 | 845.5 | 842.5 | 841 | 890 | 40 | 805 | 40 | 165.2 | 752 | 8 | 94 | 31.4 | 46.7 | 222 | 1150 | 145 | 510 |
| VSI200944N | 76 | 1016 | 945.5 | 942.5 | 941 | 990 | 44 | 905 | 44 | 181.7 | 856 | 8 | 107 | 31.4 | 46.7 | 231 | 1280 | 151 | 570 |
| VSI201094N | 91 | 1166 | 1095.5 | 1092.5 | 1091 | 1140 | 48 | 1055 | 48 | 198.2 | 1000 | 8 | 125 | 31.4 | 46.7 | 244 | 1490 | 160 | 660 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

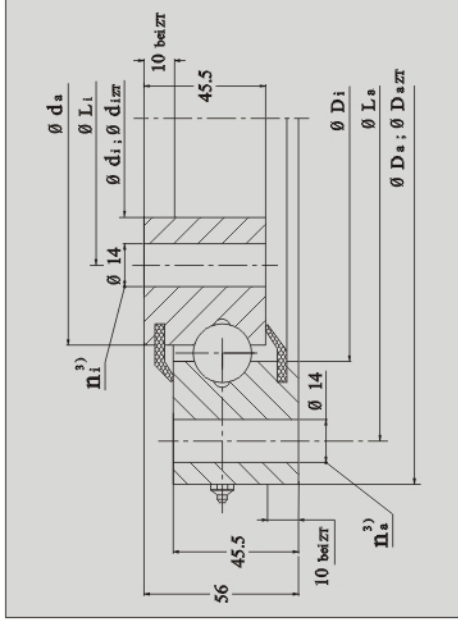
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearing

Standard series 20

Series VSU, without gear teeth



VSU 20

4 lubricating nipples, DIN 71412 - A S 8 X 1
equi - spaced on circumference

| Dimension table . Dimension in mm | | | | | | | | | | | | | | | | |
|-----------------------------------|------------|------------------------------------|------------------------------------|------|------|--------|------------------|--------------|------------------|-------|---|--------------------|-----------------|-------------------|-----|-----|
| Designation | Mass Kg | Dimension | | | | | | Fixing holes | | | Fixing screws Maximum Radial Load (frictional contact) KN | Basic load ratings | | | | |
| | | Da Da ZT ²⁾ - IT8 | di di ZT ²⁾ + IT8 | Di | da | La | na ³⁾ | Li | ni ³⁾ | Axial | | Radial | | | | |
| | | | | | | | | | | | Dyn. C KN | Stat. Co KN | Dyn. C KN | Stat. Co KN | | |
| VSU200414 | 29 | 486 | 484 | 342 | 344 | 415.5 | 412.5 | 460 | 24 | 368 | 24 | 99.1 | 169 | 560 | 111 | 248 |
| VSU200544 | 37 | 616 | 614 | 472 | 474 | 545.5 | 542.5 | 590 | 32 | 498 | 32 | 132.2 | 188 | 740 | 123 | 325 |
| VSU200644 | 44 | 716 | 714 | 572 | 574 | 645.5 | 642.5 | 690 | 36 | 598 | 36 | 148.7 | 200 | 880 | 131 | 385 |
| VSU200744 | 52 | 816 | 814 | 672 | 674 | 745.5 | 742.5 | 790 | 40 | 698 | 40 | 165.2 | 211 | 1010 | 138 | 445 |
| VSU200844 | 60 | 916 | 914 | 772 | 774 | 845.5 | 842.5 | 890 | 40 | 798 | 40 | 165.2 | 222 | 1150 | 145 | 510 |
| VSU200944 | 67 | 1016 | 1014 | 872 | 874 | 945.5 | 942.5 | 990 | 44 | 898 | 44 | 181.7 | 231 | 1280 | 151 | 570 |
| VSU201094 | 77 | 1166 | 1164 | 1022 | 1024 | 1095.5 | 1092.5 | 1140 | 48 | 1048 | 48 | 198.2 | 244 | 1490 | 160 | 660 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

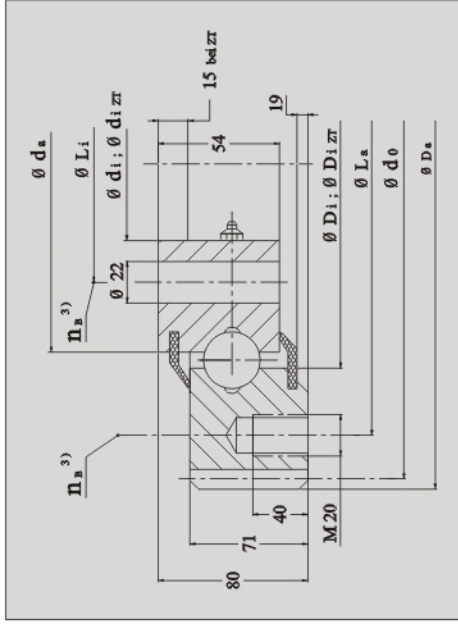
3) Number of holes per ring.

4) Screw load carrying capacity

Four point contact bearings

Standard series 25

Series VSA, with external gear teeth



VSA 25

4 lubricating nipples, DIN 71412 - AM 10 X 1, approximately equi - spaced on circumference

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | Fixing screws Maximum Radial Load (frictional contact) KN | Gear teeth | | Tooth force | | Basic load ratings | | | | | | | |
|-------------------|------------|-----------|-----|------------------------------|------|------------------------------|------|---|------------|----|------------------|--|--------------------|-----|------|---------|--------|-----------------|-------------------|-----------------|
| | | Da | di | di ZT ²⁾ + IT8 | Di | Di ZT ²⁾ + IT8 | da | | La | Li | nB ³⁾ | Maximum Radial Load (frictional contact) KN | do | m | z | F znorm | F zmax | Dyn. C KN | Stat. Co KN | Dyn. C KN |
| VSA250755N | 128 | 898 | 655 | 657 | 753 | 755 | 757 | 816 | 695 | 24 | 290.4 | 882 | 9 | 98 | 55.1 | 80.2 | 460 | 2250 | 300 | 1010 |
| VSA250855N | 145 | 997 | 755 | 757 | 853 | 855 | 857 | 916 | 795 | 32 | 338.8 | 981 | 9 | 109 | 55.1 | 80.2 | 485 | 2550 | 315 | 1150 |
| VSA250955N | 155 | 1096 | 855 | 857 | 953 | 955 | 957 | 1016 | 895 | 36 | 363.0 | 1080 | 9 | 120 | 55.1 | 80.2 | 500 | 2850 | 330 | 1280 |
| VSA251055N | 171 | 1198 | 955 | 957 | 1053 | 1055 | 1057 | 1116 | 995 | 40 | 363.0 | 1180 | 10 | 118 | 61.2 | 89.0 | 520 | 3150 | 340 | 1410 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

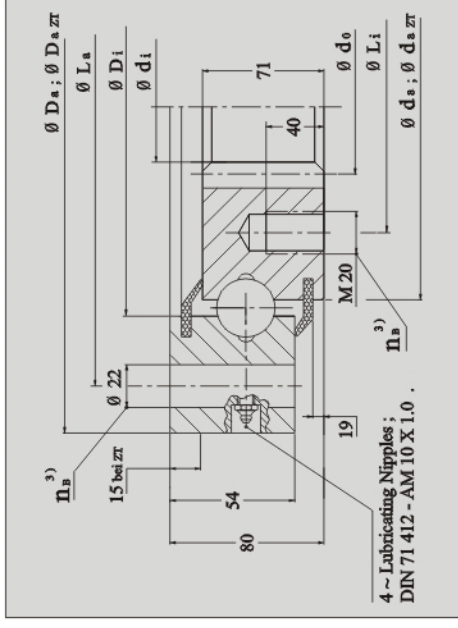
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearings

Standard series 25

Series VSI, with internal gear teeth



VSI 25

4 lubricating nipples, DIN 71412 - AM 10 X 1 approximately equi - spaced on circumference and countersunk

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | Fixing holes | | Fixing screws Maximum Radial Load (frictional contact) KN | Gear teeth | | Tooth force | | Basic load ratings | | | | | | | |
|-------------------|------------|-------------|------------------------------|-----|------|--------------|------------------------------|---|------------|----|------------------|-----|--------------------|----|---------|--------|------|-------|-------|--------|
| | | Da - IT8 | Da ZT ²⁾ - IT8 | di | Di | da | da ZT ²⁾ - IT8 | | La | Li | nB ³⁾ | do | m | z | F znorm | F zmax | Dyn. | Stat. | Axial | Radial |
| VSI250755N | 119 | 855 | 853 | 610 | 753 | 757 | 755 | 815 | 694 | 24 | 290.4 | 630 | 10 | 63 | 68.0 | 98.9 | 460 | 2250 | 300 | 1010 |
| VSI250855N | 137 | 955 | 953 | 710 | 853 | 857 | 855 | 915 | 794 | 28 | 338.8 | 730 | 10 | 73 | 68.0 | 98.9 | 485 | 2550 | 315 | 1150 |
| VSI250955N | 149 | 1055 | 1053 | 810 | 953 | 957 | 955 | 1015 | 894 | 30 | 363.0 | 830 | 10 | 83 | 68.0 | 98.9 | 500 | 2850 | 330 | 1280 |
| VSI251055N | 165 | 1155 | 1153 | 910 | 1053 | 1057 | 1055 | 1115 | 994 | 30 | 363.0 | 930 | 10 | 93 | 68.0 | 98.9 | 520 | 3150 | 340 | 1410 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

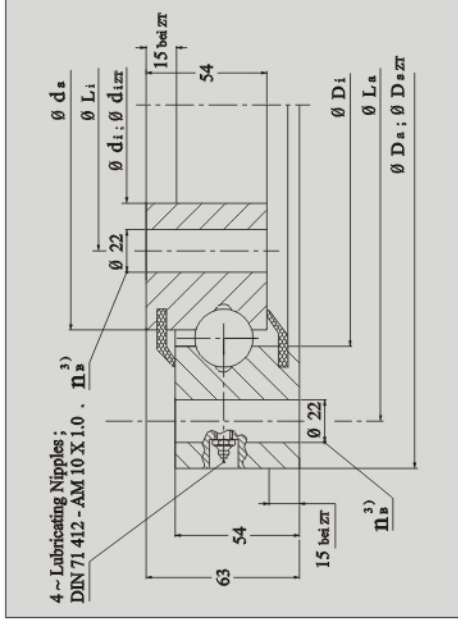
3) Number of holes per ring.

4) Screw load carrying capacity.

Four point contact bearing

Standard series 25

Series VSU, without gear teeth



VSU 25

4 lubricating nipples, DIN 71412 - A S 10 X 1, equi - approximately spaced on circumference and countersunk

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | | Fixing holes | | | Fixing screws | | Basic load ratings | | | | |
|------------------|------------|------------|---------------------|------------|---------------------|------|--------------|------|-----|------------------------------|---|--------------------|-------------------|-----------------|-------------------|--------|
| | | Da -IT8 | Da ZT ²⁾ | di +IT8 | di ZT ²⁾ | Di | da | La | Li | n _B ³⁾ | Maximum Radial Load ⁴⁾ (frictional contact) KN | Dyn. C KN | Stat. Co KN | Dyn. C KN | Stat. Co KN | Radial |
| VSU250755 | 90 | 855 | 853 | 655 | 657 | 753 | 757 | 815 | 695 | 24 | 290.4 | 460 | 2250 | 300 | 1010 | 1010 |
| VSU250855 | 101 | 955 | 953 | 755 | 757 | 853 | 857 | 915 | 795 | 28 | 333.8 | 485 | 2550 | 315 | 1150 | 1150 |
| VSU250955 | 115 | 1055 | 1053 | 855 | 857 | 953 | 957 | 1015 | 895 | 30 | 363.3 | 500 | 2850 | 330 | 1280 | 1280 |
| VSU251055 | 128 | 1155 | 1153 | 955 | 957 | 1053 | 1057 | 1115 | 995 | 30 | 363.3 | 520 | 3150 | 340 | 1410 | 1410 |

2) Bearing with centring (suffix ZT), see above drawing for centring depth.

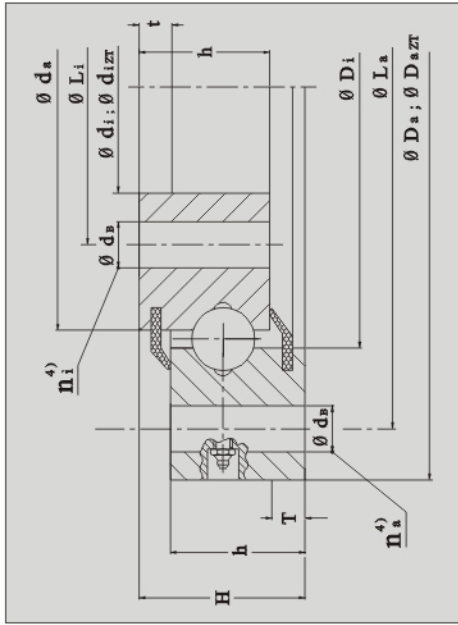
3) Number of holes per ring.

4) Screw load carrying capacity.

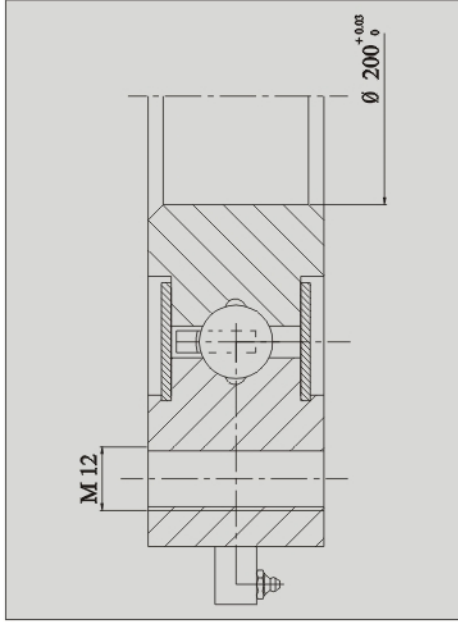
Four point contact bearing

Series VU, without gear teeth

Page 1



VU
Item ③



VU
Item ③

VU
Items ①, ②, ④ to ⑥
Lubricating nipple, DIN 71412,
approximately equ - spaced on circumference and countersunk

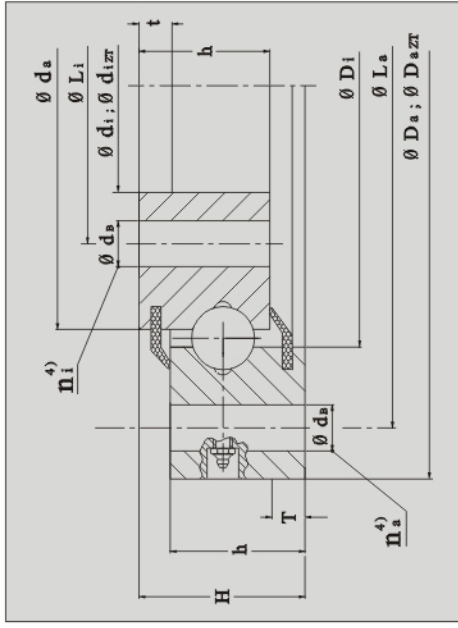
| Dimension table . Dimension in mm | | Dimension | | | | | | | | | | Fixing holes | | Fixing screws | | Basic load ratings | | | | Comments | |
|-----------------------------------|------------|-----------|---------------------|-------|---------------------|-------|------|------|------|------|------|--------------|-------|------------------|------------------|--|-------|-------|--------|----------|--------------------------------|
| Designation | Mass Kg | Da | Da ZT ³⁾ | di | di ZT ³⁾ | Di | da | H | h | T | t | La | Li | na ⁴⁾ | ni ⁴⁾ | Maximum Radial Load (frictional contact) KN | Axial | | Radial | | Through hardened inner ring |
| | | -IT8 | +IT8 | -IT8 | +IT8 | -IT8 | +IT8 | -IT8 | +IT8 | -IT8 | +IT8 | -IT8 | +IT8 | -IT8 | +IT8 | | Dyn. | Stat. | Dyn. | Stat. | |
| ① VU140179 | 7 | 234 | 232 | 124.5 | 126.5 | 178 | 180 | 35 | 30 | 5 | 5 | 214 | 144.5 | 12 | 12 | 33.6 | 115 | 255 | 75 | 114 | |
| ② VU200220 | 16 | 302 | 300 | 138 | 140 | 219 | 221 | 46 | 41 | 6 | 6 | 270 | 170 | 10 | 10 | 78.0 | 201 | 435 | 132 | 197 | |
| ③ VU130225 | 6 | 290 | - | 200 | - | 237.6 | 213 | 24 | 24 | - | - | 270 | - | 6 | - | 19.8 | 49 | 87 | 46 | 39.5 | Through hardened inner ring |
| ④ VU200260 | 15 | 329 | 327 | 191 | 193 | 259 | 261 | 46 | 41 | 7 | 7 | 305 | 215 | 20 | 20 | 82.6 | 217 | 520 | 143 | 233 | |
| ⑤ VU140325 | 12 | 380 | 378 | 270 | 272 | 324 | 326 | 35 | 30 | 5 | 5 | 360 | 290 | 24 | 24 | 67.2 | 146 | 460 | 95 | 208 | |
| ⑥ VU250380 | 44 | 485 | 483 | 275 | 277 | 379 | 381 | 55 | 50 | 8 | 8 | 453 | 307 | 16 | 16 | 124.8 | 350 | 800 | 230 | 360 | |

3) Bearing with centring (suffix ZT), centring depths (T, t), see above drawing for centring depth.
Item number ③ are not available in ZT execution.
4) Number of holes per ring.
5) Screw load carrying capacity

Four point contact bearing

Series VU, without gear teeth

Page 2



VU

Items ⑦ to ⑬

Lubricating nipple, DIN 71412, approximately equi-spaced on circumference and countersunk

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | | | | | | | Fixing holes | | | Fixing screws | | Basic load ratings | | | | Comments | | | | | | | |
|-------------------|------------|-----------|--------------------|------|--------------------|------|------|----|----|----|----|--------------|------|------------------------------|------------------------------|----|---|---------------------|----------------------|-----|----------|----|---|----|----|----|--|--|
| | | Da | DaZT ³⁾ | di | diZT ³⁾ | Di | da | H | h | T | t | La | Li | n _a ⁴⁾ | n _i ⁴⁾ | dB | Maximum Radial Load ⁵⁾ (frictional contact) KN | Axial Dyn. Stat. | Radial Dyn. Stat. | C | | Co | C | Co | KN | KN | | |
| ⑦ VU200405 | 25 | 474 | 472 | 336 | 338 | 404 | 406 | 46 | 41 | 7 | 7 | 450 | 360 | 30 | 30 | 14 | 123.9 | 260 | 810 | 169 | 360 | | | | | | | |
| ⑧ VU250433 | 41 | 522 | 520 | 344 | 346 | 432 | 434 | 55 | 50 | 8 | 8 | 490 | 376 | 20 | 20 | 18 | 156.0 | 370 | 910 | 243 | 410 | | | | | | | |
| ⑨ VU300574 | 82 | 680 | 678 | 468 | 470 | 572 | 576 | 68 | 61 | 10 | 10 | 640 | 508 | 20 | 20 | 22 | 242.0 | 495 | 1540 | 325 | 690 | | | | | | | |
| ⑩ Vu360680 | 120 | 795 | 793 | 565 | 567 | 678 | 682 | 79 | 72 | 11 | 11 | 755 | 605 | 30 | 30 | 22 | 363.0 | 640 | 2260 | 415 | 1020 | | | | | | | |
| ⑪ VU400785 | 155 | 900 | 898 | 670 | 672 | 783 | 787 | 86 | 79 | 12 | 12 | 860 | 710 | 36 | 36 | 22 | 435.6 | 760 | 3100 | 495 | 1390 | | | | | | | |
| ⑫ VU360980 | 162 | 1090 | 1088 | 870 | 872 | 978 | 982 | 79 | 72 | 11 | 11 | 1050 | 910 | 44 | 44 | 22 | 532.4 | 730 | 3250 | 480 | 1470 | | | | | | | |
| ⑬ VU201125 | 71 | 1194 | 1192 | 1056 | 1058 | 1124 | 1126 | 56 | 46 | 7 | 7 | 1170 | 1080 | 80 | 80 | 14 | 330.4 | 380 | 2240 | 248 | 1010 | | | | | | | |

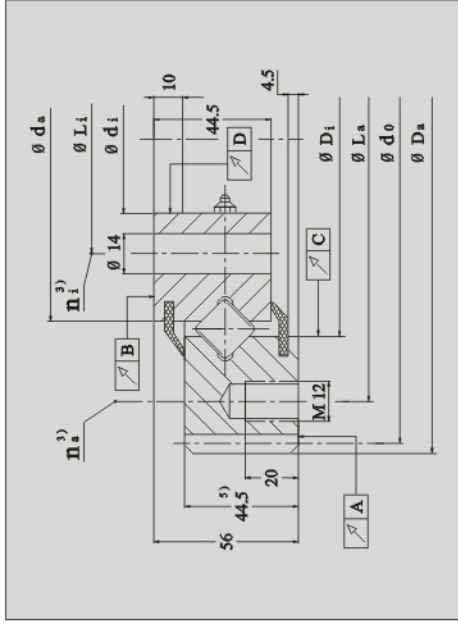
3) Bearing with centring (suffix ZT), centring depths (T, t), see above drawing for centring depth.

4) Number of holes per ring.

5) Screw load carrying capacity

Crossed roller bearings

Standard series 14
Series XSA, with external gear teeth



XSA 14

4 lubricating nipple, DIN 71412 - AM 8X1
equi - spaced on circumference

| Dimension table . Dimension in mm | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------------------------------|------------------------------|--------------|------|---------------------|---|------------|---------------------|-------------|---|--------------------|--------------|-------------|-----------------|-------------------|-----------------|-----------------------------|
| Designation | Mass Kg | Dimension | | | Fixing holes | | | Fixing screws Maximum Radial Load ⁴⁾ (frictional contact) KN | Gear teeth | | Tooth force | | Basic load ratings | | | | | | |
| | | Da | ²⁾ di + IT7 | ²⁾ Di + IT7 | da | La | ³⁾ na | | Li | ³⁾ ni | do | m | z | Fznorm KN | Fzmax KN | Dyn. C KN | Stat. Co KN | Dyn. C KN | Radial Stat. Co KN |
| XSA140414N | 32 | 503.3 | 344 | 417 | 413 | 455 | 20 | 368 | 24 | 82.6 | 495 | 5 | 99 | 15.9 | 23.6 | 229 | 520 | 146 | 250 |
| XSA140544N | 44 | 640.3 | 474 | 547 | 543 | 585 | 28 | 498 | 32 | 115.6 | 630 | 6 | 105 | 21.3 | 31.5 | 270 | 680 | 170 | 330 |
| XSA140644N | 52 | 742.3 | 574 | 647 | 643 | 685 | 32 | 598 | 36 | 132.2 | 732 | 6 | 122 | 21.3 | 31.5 | 290 | 800 | 185 | 395 |
| XSA140744N | 59 | 838.1 | 674 | 747 | 743 | 785 | 36 | 698 | 40 | 148.7 | 828 | 6 | 138 | 21.3 | 31.5 | 315 | 930 | 200 | 455 |
| XSA140844N | 71 | 950.1 | 774 | 847 | 843 | 885 | 36 | 798 | 40 | 148.7 | 936 | 8 | 117 | 28.3 | 42.0 | 340 | 1050 | 215 | 510 |
| XSA140944N | 77 | 1046.1 | 874 | 947 | 943 | 985 | 40 | 898 | 44 | 165.2 | 1032 | 8 | 129 | 28.3 | 42.0 | 360 | 1170 | 227 | 580 |
| XSA141094N | 91 | 1198.1 | 1024 | 1097 | 1093 | 1135 | 44 | 1048 | 48 | 181.7 | 1184 | 8 | 148 | 28.3 | 42.0 | 390 | 1360 | 246 | 670 |

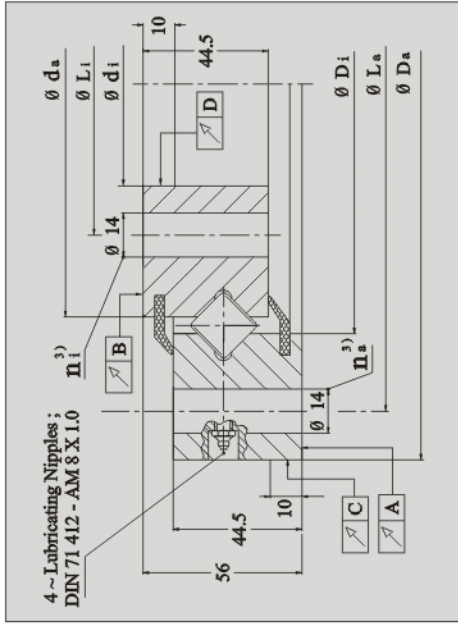
2) Bearing always have centring, see above drawing for centring depth.

3) Number of holes per ring.

4) Screw load carrying capacity.

Crossed roller bearings

Standard Series 14
Series XSU, without gear teeth



XSU 14

4 lubricating nipples, DIN 71412 - A 8 X 1
equi - spaced on circumference and countersunk

| Designation | | Mass | Dimension | | | | Fixing holes | | | Fixing screws | Basic load ratings | | | |
|------------------|----|------|--------------------------|--------------------------|------|------|--------------|------------------|----|-----------------|--------------------|---|-----------------|-------------------|
| | | | Da ²⁾ -IT7 | di ²⁾ +IT7 | Di | da | La | na ³⁾ | Li | | ni ³⁾ | Maximum Radial Load ⁴⁾ (frictional contact) kN | Axial | |
| | Kg | | | | | | | | | Dyn. C kN | Stat. Co kN | | Dyn. C kN | Stat. Co kN |
| XSU140414 | 28 | 484 | 344 | 415 | 413 | 460 | 24 | 368 | 24 | 99.1 | 520 | 146 | 250 | |
| XSU140544 | 38 | 614 | 474 | 545 | 543 | 590 | 32 | 498 | 32 | 132.2 | 680 | 170 | 330 | |
| XSU140644 | 44 | 714 | 574 | 645 | 643 | 690 | 36 | 598 | 36 | 148.7 | 800 | 185 | 395 | |
| XSU140744 | 52 | 814 | 674 | 745 | 743 | 790 | 40 | 698 | 40 | 165.2 | 930 | 200 | 455 | |
| XSU140844 | 60 | 914 | 774 | 845 | 843 | 890 | 40 | 798 | 40 | 165.2 | 1050 | 215 | 510 | |
| XSU140944 | 67 | 1014 | 874 | 945 | 943 | 990 | 44 | 898 | 44 | 181.7 | 1170 | 227 | 580 | |
| XSU141094 | 77 | 1164 | 1024 | 1095 | 1093 | 1140 | 48 | 1048 | 48 | 198.2 | 1360 | 246 | 570 | |

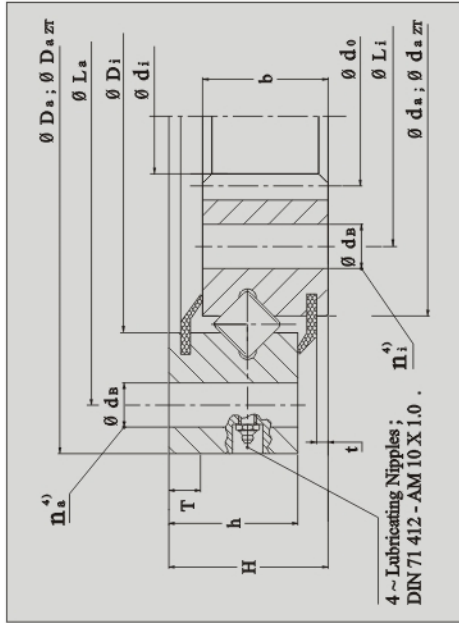
2) Bearing always have centring, see above drawing for centring depth.

3) Number of holes per ring.

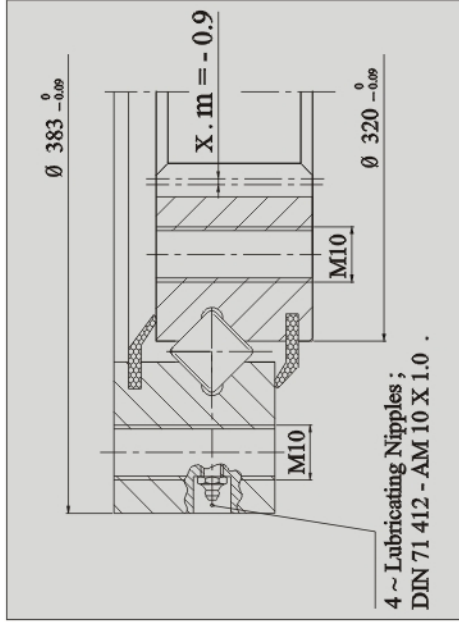
4) Screw load carrying capacity

Crossed Roller bearings

Series XI, with internal gear teeth



4 ~ Lubricating Nipples;
DIN 71 412 - AM 10 X 1.0 .



4 ~ Lubricating Nipples;
DIN 71 412 - AM 10 X 1.0 .

XI
Item ②

XI
Items ①, ③ to ⑧
Lubricating nipple , DIN 71412 ,
approximately equ - spaced on circumference and countersunk

| Designation | Mass Kg | Dimension | | | | | | | | | | Fixing screws | | Gear teeth | | Tooth force | | Basic load ratings | | Comments | | | | | | | | |
|-------------|------------|-----------|------|-------|------|------|------|----|----|---|-----|---------------|------|------------|----|-------------|--|--------------------|----|----------|----|--------|-------|-------|--------|-----|-----|-------------------------------------|
| | | Da | DaZT | di | Di | da | daZT | H | h | T | t | La | Li | na | ni | db | Maximum Radial Load (frictional contact) K.N | do | m | | z | Fznorm | Fzmax | Axial | Radial | | | |
| ① XI120288N | 12 | 340 | 238 | 216 | 289 | 287 | 285 | 38 | 33 | 5 | 2.5 | 324 | 252 | 20 | 20 | 9 | 35.0 | 224 | 4 | 56 | 34 | 12.3 | 47.8 | 150 | 290 | 95 | 141 | |
| ② XI120321V | 15 | 383 | - | 257.2 | 322 | 320 | - | 38 | 33 | - | 2.5 | 357 | 287 | 20 | 20 | - | 56.0 | 261 | 3 | 87 | 34 | 8.0 | 11.8 | 163 | 320 | 104 | 157 | |
| ③ XI120420N | 23 | 486 | 484 | 332 | 421 | 419 | 417 | 39 | 34 | 5 | 2.5 | 482 | 378 | 16 | 16 | 14 | 66.1 | 340 | 4 | 85 | 34 | 12.3 | 17.8 | 189 | 420 | 120 | 206 | Toughened gear teeth, quality 80/26 |
| ④ XI160489N | 35 | 562 | 560 | 384 | 490 | 488 | 486 | 45 | 40 | 6 | 2.5 | 538 | 440 | 40 | 40 | 14 | 130.0 | 396 | 6 | 66 | 40 | 23.0 | 33.5 | 300 | 530 | 192 | 290 | |
| ⑤ XI180635N | 67 | 722 | 750 | 504 | 636 | 634 | 632 | 54 | 47 | 7 | 2.5 | 690 | 580 | 24 | 24 | 18 | 187.2 | 520 | 8 | 65 | 47 | 36.0 | 52.4 | 405 | 900 | 260 | 440 | |
| ⑥ XI200720N | 84 | 812 | 810 | 584 | 721 | 719 | 717 | 58 | 51 | 8 | 2.5 | 790 | 660 | 40 | 40 | 18 | 260.0 | 600 | 8 | 75 | 51 | 39.1 | 56.9 | 500 | 1060 | 315 | 520 | |
| ⑦ XI180865N | 93 | 952 | 950 | 736 | 866 | 864 | 862 | 54 | 47 | 8 | 2.5 | 920 | 810 | 20 | 20 | 18 | 156.0 | 752 | 8 | 94 | 47 | 36.0 | 52.4 | 480 | 1230 | 305 | 600 | |
| ⑧ XI201100N | 150 | 1200 | 1198 | 950 | 1101 | 1099 | 1097 | 70 | 54 | 8 | 9 | 1160 | 1040 | 30 | 30 | 22 | 363.0 | 970 | 10 | 97 | 60 | 57.5 | 83.6 | 630 | 1610 | 400 | 790 | |

3) Bearing with centring (suffix ZT), centring depths (T, t), see above drawing for centring depth.

Item number ② are not available in ZT execution.

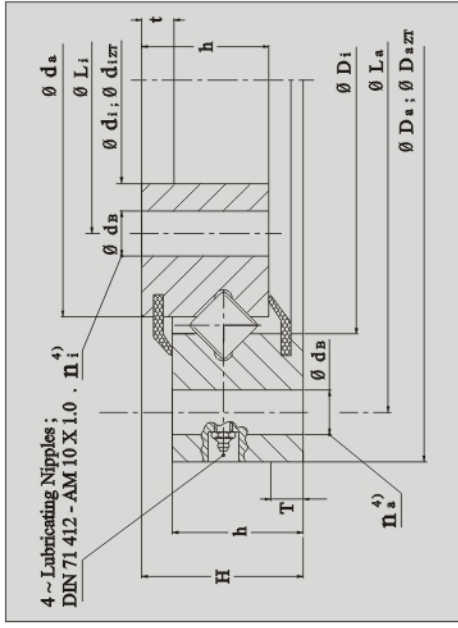
4) Number of holes per ring.

5) Screw load carrying capacity.

Crossed roller bearings

Series XU, without gear teeth

Page 3



XU

Item 12 to 15

Lubrication nipple: DIN 71412, approximately equi - spaced on circumference and countersunk

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | | | | | | | Fixing holes | | | | Fixing screws | | Basic load ratings | | | | Comments | | | | | | | |
|--------------|------------|-----------|-------------------|------|-----|-------------------|--------------------|-----|----|----|----|--------------|------|-----|----|-----------------|-----------------|--------------------|----|-------|---|----------|---------------------|----------------------|---------|---------|---------|---------|--|
| | | Da | DaZ ³⁾ | -IT8 | di | diZ ³⁾ | diZT ³⁾ | Di | da | H | h | T | t | La | Li | n ⁴⁾ | n ⁴⁾ | d _B | ds | ts | Maximum Radial Load (frictional contact) KN | | Axial Dyn. Stat. | Radial Dyn. Stat. | C KN | C KN | C KN | C KN | |
| 12) XU300515 | 115 | 646 | 644 | -IT8 | 384 | 386 | 516 | 514 | 86 | 79 | 12 | 12 | 589 | 432 | 18 | 18 | 26 | - | - | 313.2 | 720 | 1370 | 455 | 670 | | | | | |
| 13) XU280680 | 120 | 795 | 793 | | 565 | 567 | 681 | 679 | 79 | 72 | 11 | 11 | 755 | 605 | 30 | 30 | 22 | - | - | 363.0 | 750 | 1560 | 480 | 760 | | | | | |
| 14) XU300785 | 155 | 900 | 898 | | 670 | 672 | 786 | 784 | 86 | 79 | 12 | 12 | 860 | 710 | 36 | 36 | 22 | - | - | 435.6 | 900 | 2090 | 570 | 1030 | | | | | |
| 15) XU260980 | 158 | 1090 | 1088 | | 870 | 872 | 981 | 979 | 79 | 69 | 11 | 11 | 1050 | 910 | 44 | 44 | 22 | - | - | 532.4 | 840 | 2180 | 530 | 1070 | | | | | |

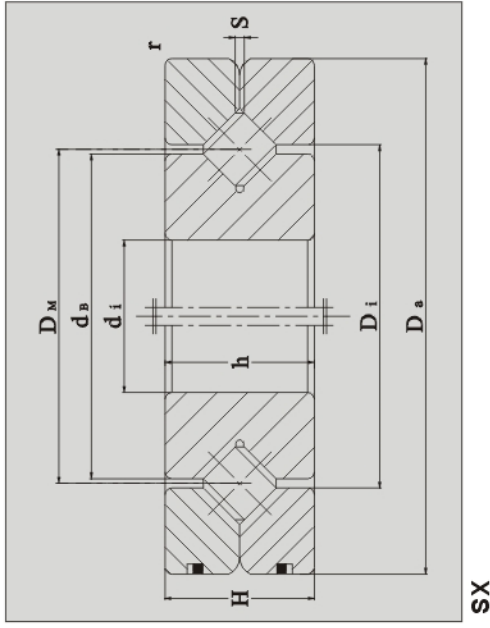
3) Bearing with centring (suffix ZT), centring depths (T, t), see above drawing for centring depth.

4) Number of holes per ring.

5) Screw load carrying capacity.

Crossed roller bearings

Series SX



SX

Dimension table . Dimension in mm

| Designation | Mass Kg | Dimension | | | | | | | | | | Basic load ratings | | | | Limiting speed | | | | | |
|-------------------|------------|-----------|-----|------------|-----|-----------------------|----|--------------|------------------|-----|-----------|--------------------|-------|------|--------|----------------|-----------------------|------|--------------|-----|-----|
| | | Da | di | Di | Dm | da | H | h | r _{min} | S | Dyn. C Kg | Stat. Co Kg | Axial | | Radial | | With normal clearance | | With preload | | |
| | | Dyn. C Kg | | Dyn. Co Kg | | With normal clearance | | With preload | | | | | | | | | | | | | |
| SX011814 | 0.3 | 90 | 70 | 80.5 | 80 | 79.5 | 10 | 10 | 0.6 | 1.2 | 18 | 60 | 12 | 30 | 1910 | 955 | 955 | 1910 | 955 | 955 | 475 |
| SX011818 | 0.4 | 115 | 90 | 102.5 | 102 | 101.5 | 13 | 13 | 1 | 1.2 | 26 | 96 | 17 | 47 | 1500 | 750 | 750 | 1500 | 750 | 750 | 375 |
| SX011820 | 0.5 | 125 | 100 | 112.5 | 112 | 111.5 | 13 | 13 | 1 | 1.2 | 28 | 106 | 18 | 52 | 1360 | 680 | 680 | 1360 | 680 | 680 | 340 |
| SX011824 | 0.8 | 150 | 120 | 135.6 | 135 | 134.4 | 16 | 16 | 1 | 1.5 | 41 | 153 | 26 | 75 | 1130 | 565 | 565 | 1130 | 565 | 565 | 280 |
| SX011828 | 1.1 | 175 | 140 | 157.7 | 157 | 156.3 | 18 | 18 | 1.1 | 1.5 | 64 | 237 | 41 | 116 | 975 | 485 | 485 | 975 | 485 | 485 | 240 |
| SX011832 | 1.7 | 200 | 160 | 180.8 | 180 | 179.2 | 20 | 20 | 1.1 | 1.5 | 69 | 272 | 44 | 133 | 850 | 425 | 425 | 850 | 425 | 425 | 210 |
| SX011836 | 2.3 | 225 | 180 | 202.8 | 202 | 201.2 | 22 | 22 | 1.1 | 2 | 98 | 381 | 63 | 187 | 755 | 375 | 375 | 755 | 375 | 375 | 185 |
| SX011840 | 3.1 | 250 | 200 | 225.8 | 225 | 224.2 | 24 | 24 | 1.5 | 2 | 106 | 425 | 68 | 208 | 680 | 340 | 340 | 680 | 340 | 340 | 170 |
| SX011848 | 5.3 | 300 | 240 | 270.8 | 270 | 269.2 | 28 | 28 | 2 | 2 | 149 | 612 | 95 | 300 | 565 | 280 | 280 | 565 | 280 | 280 | 140 |
| SX011860 | 12.0 | 380 | 300 | 340.8 | 340 | 339.2 | 38 | 38 | 2.1 | 2.5 | 245 | 1027 | 156 | 504 | 450 | 225 | 225 | 450 | 225 | 225 | 110 |
| SX011868 | 13.5 | 420 | 340 | 380.8 | 380 | 379.2 | 38 | 38 | 2.1 | 2.5 | 265 | 1148 | 167 | 563 | 400 | 200 | 200 | 400 | 200 | 200 | 100 |
| SX011880 | 24.0 | 500 | 400 | 451 | 450 | 449 | 46 | 46 | 2.1 | 2.5 | 385 | 1699 | 244 | 833 | 340 | 170 | 170 | 340 | 170 | 170 | 85 |
| SX0118/500 | 44.0 | 620 | 500 | 561.2 | 560 | 558.8 | 56 | 56 | 3 | 2.5 | 560 | 2538 | 355 | 1244 | 275 | 135 | 135 | 275 | 135 | 135 | 65 |



HMEC[®] Slewing Ring Material

Precise design and proper selection of material is the most important guarantee for ensuring HMEC[®] slewing ring with high technical performance and durable reliability.

- Material of rings and rolling elements

As a rule, rolling element of HMEC[®] slewing rings adopt full hardening carbon chromium bearing steel 100Cr6 or 100Cr6SiMn, bearing rings adopt surface quenched steel 42CrMo or 50Mn. Upon special requirements, 42CrMo4 or steel 45# and other surface quenched steel may be adopted.

- Cage material

The cage forms of HMEC[®] slewing rings includes integral type cage, sectional type cage and spacing block type cage & etc. Among them, integral type cage and sectional type cage adopt bronze/carbon steel/cast aluminum and nylon to make. Spacing block type cage adopt polyamide resin/nylon/cast aluminum/bronze and aluminum bronze to make.

- Sealing ring material

The sealing ring material of HMEC[®] slewing ring adopt oil-resistant NBR to make, fluorine rubber may be adopted for high temperature working applications.



HMEC[®] Slewing Ring Clearance

Slewing ring clearance is mainly used to compensate manufacturing error and installation error between bearing supporting part and main machine assembling position so as to ensure bearing normal usage. According to structural style/tolerance grade and rolling element center circle diameter, the clearance value or pre-interference of HMEC[®] slewing ring are listed in table 1 to table 3.

(Table 1) Four point contact ball slewing ring axial clearance (μm)

| Dpw (mm) | | Tolerance grade | | | | | |
|-------------|-------|-----------------|-----|-----|-----|-----|-----|
| | | 0 | | 6 | | 5 | |
| | | Axial clearance | | | | | |
| Over | Up to | Min | Max | Min | Max | Min | Max |
| 250 | 450 | 70 | 170 | 50 | 130 | 30 | 90 |
| 450 | 710 | 100 | 220 | 70 | 170 | 40 | 120 |
| 710 | 1120 | 120 | 280 | 100 | 220 | 50 | 150 |
| 1120 | 1800 | 150 | 350 | 100 | 260 | 60 | 180 |
| 1800 | 2800 | 200 | 440 | 150 | 350 | 80 | 240 |
| 2800 | 4500 | 260 | 540 | 200 | 440 | 100 | 300 |

(Table 2) Cross cylindrical roller slewing ring axial clearance (μm)

| Dpw (mm) | | Tolerance grade | | | | | |
|-------------|-------|-----------------|-----|-----|-----|-----|-----|
| | | 0 | | 6 | | 5 | |
| | | Axial clearance | | | | | |
| Over | Up to | Min | Max | Min | Max | Min | Max |
| 250 | 450 | 50 | 130 | 30 | 90 | 25 | 70 |
| 450 | 710 | 70 | 170 | 40 | 120 | 30 | 90 |
| 710 | 1120 | 100 | 220 | 50 | 150 | 40 | 120 |
| 1120 | 1800 | 100 | 260 | 60 | 180 | 40 | 140 |
| 1800 | 2800 | 150 | 350 | 80 | 240 | 60 | 180 |
| 2800 | 4500 | 200 | 440 | 100 | 300 | 80 | 240 |

(Table 3) Tri-row cylindrical roller combined slewing ring clearance (μm)

| Dpw (mm) | | Tolerance grade | | | | | | | | | | | |
|-------------|-------|-----------------|-----|------------------|-----|-----------------|-----|------------------|-----|-----------------|-----|------------------|-----|
| | | 0 | | | | 6 | | | | 5 | | | |
| | | Axial clearance | | Radial clearance | | Axial clearance | | Radial clearance | | Axial clearance | | Radial clearance | |
| Over | Up to | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 250 | 450 | 30 | 90 | 50 | 130 | 25 | 70 | 30 | 90 | 10 | 50 | 25 | 70 |
| 450 | 710 | 40 | 120 | 70 | 170 | 30 | 90 | 40 | 120 | 15 | 65 | 30 | 90 |
| 710 | 1120 | 50 | 150 | 100 | 220 | 40 | 120 | 50 | 150 | 20 | 80 | 40 | 120 |
| 1120 | 1800 | 60 | 180 | 100 | 260 | 40 | 140 | 60 | 180 | 20 | 100 | 40 | 140 |
| 1800 | 2800 | 80 | 240 | 150 | 350 | 60 | 180 | 80 | 240 | 30 | 130 | 60 | 180 |
| 2800 | 4500 | 100 | 300 | 200 | 440 | 80 | 240 | 100 | 300 | 40 | 160 | 80 | 240 |

HMEC® Slewing Ring Technical Lectotype Parameter List



| | | | | | |
|---|--|---|-----------------|--|----------------------------|
| Company name | | | | | |
| Address | | | | | |
| Person in charge | | | | | |
| Email | | | | | |
| Phone / Fax | | | | | |
| Application technical datas | | | | | |
| Application: (Machine type) | Rotation axis | Bracket mounting way | rpm | Loading stability | Environment temperature |
| | Horizontal <input type="checkbox"/> vertical <input type="checkbox"/> | Seat-type installation <input type="checkbox"/> Suspension installation <input type="checkbox"/> | normal: Max: | Equably & steady <input type="checkbox"/> impact vibration <input type="checkbox"/> | |
| Application property | Just for position <input type="checkbox"/> interval rotation <input type="checkbox"/> continuous rotation <input type="checkbox"/> | | | | |
| | Loading datas | | | | |
| | Min working load | Max working load | Test load | | |
| Axial load parallel to rotation axis | | | | KN | |
| Radial load normal to rotation axis | | | | KN | |
| Moment from axial load | | | | KNm | |
| Moment from radial load | | | | KNm | |
| Total moment | | | | KNm | |
| Drive torque (KNm) | | Number of driving pinion | | | |
| Normal: | Max: | Position: | Space (degree): | | |

Requirements for slewing rings and boundary dimension

| | | | | | |
|-------------------------------------|---|--------|--|------------|----------------------------------|
| Slewing ring type no. (if possible) | | | | | |
| Types of rolling element | Single row ball <input type="checkbox"/> Roller <input type="checkbox"/> Triple row roller <input type="checkbox"/> Double row ball <input type="checkbox"/> Other: Cross roller <input type="checkbox"/> | | | | |
| Boundary dimension | Out Diameter: | | Inner Diameter: | | Assembling height: |
| Mounting holes parameter | Mounting hole center circle of inner ring: | | Mounting hole diameter: | | |
| | Number of mounting holes: | | | | |
| Mounting holes parameter | Mounting hole center circle of outer ring: | | Mounting hole diameter: | | |
| | Number of mounting holes: | | | | |
| Gear parameter | Internal gear <input type="checkbox"/> | | External gear <input type="checkbox"/> | | No gear <input type="checkbox"/> |
| | Large gear | Pinion | | Large gear | Pinion |
| Module (m) | | | Displacement coefficient (x) | | |
| Number of teeth (z) | | | Tip clearance coefficient (c*) | | |
| Pressure angle (α) | | | Tooth width (b) | | |
| Addendum coefficient (β) | | | Accuracy grade | | |

Working conditions description for continuous load and variable loading

| | Axial load (KN) | Radial load (KN) | Tilting moment (KNm) | Rotating speed (r/min) | Working hours % |
|---|-----------------|------------------|----------------------|------------------------|-----------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |

| | | | | | |
|------|--|--|--|--|--|
| Life | Continuous working condition: life at speed of r/min , min hours | | | | |
| | Interval running working condition: at degree of $+/-$ °, min. cycles | | | | |

| | |
|--|--|
| | Special working condition; accuracy required; fit dimension and accuracy; inspection or certification; material test. etc. |
|--|--|

| | |
|--------------------|--|
| Other requirements | |
|--------------------|--|

Signature:

Date:

List of Slewing Rings Used on Excavators

| No. | MODEL | No. | MODEL | No. | MODEL |
|-----|------------------------------|-----|---------------------|-----|-------------------|
| 1 | Komatsu PW60-5 | 51 | Hitachi EX200-5 | 101 | Sumitomo SH120A2 |
| 2 | Komatsu PC60-5 | 52 | Hitachi EX210-5 | 102 | Sumitomo SH120A3 |
| 3 | Komatsu PC60-6 (Z=76) | 53 | Hitachi ZX200 | 103 | Sumitomo SH145 |
| 4 | Komatsu PC60-7 (Z=76) | 54 | Hitachi ZX230 | 104 | Sumitomo SH200A1 |
| 5 | Komatsu PC60-7 (Z=80) | 55 | Hitachi ZX240 | 105 | Sumitomo SH200A2 |
| 6 | Komatsu PC90-6 | 56 | Hitachi EX300-1 | 106 | Sumitomo SH200A3 |
| 7 | Komatsu PC100-5 | 57 | Hitachi EX300-2 | 107 | Sumitomo SH200C3 |
| 8 | Komatsu PC120-5 | 58 | Hitachi EX300-3 | 108 | Sumitomo SH220 |
| 9 | Komatsu PC120-6 (4D95) | 59 | Hitachi EX300-5 | 109 | Sumitomo SH260 |
| 10 | Komatsu PC120-6 (4D102) | 60 | Kobelco SK07-1 | 110 | Sumitomo SH280 |
| 11 | Komatsu PC150-7 | 61 | Kobelco SK07-2 | 111 | Sumitomo SH300 |
| 12 | Komatsu PC20HT | 62 | Kobelco SK07-N2 | 112 | Sumitomo SH330 |
| 13 | Komatsu PC200-1 | 63 | Kobelco SK07-1-N2 | 113 | Sumitomo SH350 |
| 14 | Komatsu PC200-2 | 64 | Kobelco SK03 | 114 | Sumitomo SH40T |
| 15 | Komatsu PC200-3 | 65 | Kobelco SK09 | 115 | Sumitomo SH430 |
| 16 | Komatsu PC220-3 | 66 | Kobelco SK907B | 116 | Daewoo DH55-3 |
| 17 | Komatsu PC200-5 | 67 | Kobelco SK100 | 117 | Daewoo DH55-5 |
| 18 | Komatsu PC220-5 | 68 | Kobelco SK120-5 | 118 | Daewoo DH200-3 |
| 19 | Komatsu PC200-6 (S6D95) | 69 | Kobelco SK200-1 | 119 | Daewoo DH220-3 |
| 20 | Komatsu PC200-6 (S6D102) (1) | 70 | Kobelco SK200-2 | 120 | Daewoo DH220-5 |
| 21 | Komatsu PC200-6 (S6D102) (2) | 71 | Kobelco SK200-3 | 121 | Daewoo DH225-7 |
| 22 | Komatsu PC220-6 | 72 | Kobelco SK200-5 | 122 | Daewoo DH10L |
| 23 | Komatsu PC200-7 (1) | 73 | Kobelco SK200-6 | 123 | Daewoo DH280 |
| 24 | Komatsu PC200-7 (2) | 74 | Kobelco SK235 | 124 | Daewoo DH290 |
| 25 | Komatsu PC220-7 (1) | 75 | Caterpillar CAT110 | 125 | Daewoo DH300-5 |
| 26 | Komatsu PC220-7 (2) | 76 | Caterpillar E200B | 126 | Daewoo DH320 |
| 27 | Komatsu PC228 | 77 | Caterpillar CAT215 | 127 | Daewoo DH330-3 |
| 28 | Komatsu PC300-2 | 78 | Caterpillar CAT215B | 128 | Hyundai R55-7 |
| 29 | Komatsu PC300-3 | 79 | Caterpillar CAT225 | 129 | Hyundai R60-5 |
| 30 | Komatsu PC300-5 | 80 | Caterpillar CAT320B | 130 | Hyundai R60-7 (1) |
| 31 | Komatsu PC300-6 | 81 | Caterpillar CAT320C | 131 | Hyundai R60-7 (2) |
| 32 | Komatsu PC350-6 | 82 | Caterpillar CAT320L | 132 | Hyundai R130-5 |
| 33 | Komatsu PC400-1 | 83 | Caterpillar CAT325 | 133 | Hyundai R130-7 |
| 34 | Komatsu PC400-3 | 84 | Caterpillar CAT325B | 134 | Hyundai R170-5 |
| 35 | Komatsu PC400-5 | 85 | Caterpillar CAT325C | 135 | Hyundai R200 |
| 36 | Komatsu PC400-6 | 86 | Caterpillar CAT330C | 136 | Hyundai R210-3 |
| 37 | Komatsu PC650 | 87 | Kato HD100 | 137 | Hyundai R225-7 |
| 38 | Hitachi EX60-1 | 88 | Kato HD450-7 | 138 | Hyundai R220-5 |
| 39 | Hitachi EX60-2 | 89 | Kato HD450-5 | 139 | Hyundai 290 |
| 40 | Hitachi EX60-3 | 90 | Kato HD700-2 | 140 | Hyundai R300 |
| 41 | Hitachi EX90 | 91 | Kato HD516 | 141 | Samsung PS132 |
| 42 | Hitachi EX100-1 | 92 | Kato HD770-1 | 142 | Samsung PS210 |
| 43 | Hitachi EX120-1 | 93 | Kato HD770-2 | 143 | Samsung MX08-2 |
| 44 | Hitachi EX120-2 | 94 | Kato HD700-5 | 144 | Samsung 292 |
| 45 | Hitachi EX120-3 | 95 | Kato HD700-7 | 145 | Liebherr 924 |
| 46 | Hitachi EX120-5 | 96 | Kato HD770SE | 146 | Liebherr 914 |
| 47 | Hitachi ZX120 | 97 | Kato HD800-7 | 147 | Mitsubishi 230 |
| 48 | Hitachi EX200-1 | 98 | Kato HD820-1 | 148 | Volvo 210 |
| 49 | Hitachi EX200-2 | 99 | Kato HD900-7 | 149 | Volvo 290 |
| 50 | Hitachi EX200-3 | 100 | Sumitomo SH120A1 | | |



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